7210R, 7230R, 7250R, 7270R, 7290R and 7310R Tractors (Serial No. 080001-) European Edition J5

OPERATOR'S MANUAL

7210R, 7230R, 7250R, 7270R, 7290R and 7310R Tractors (Serial No. 080001-) European Edition

OMRE579745 ISSUE J5 (ENGLISH)

John Deere Waterloo Works
European Edition
PRINTED IN U.S.A.

Introduction

Foreword

READ THIS MANUAL carefully to learn how to operate and service your machine correctly. Failure to do so could result in personal injury or equipment damage. This manual and safety signs on your machine may also be available in other languages (see your John Deere™ dealer to order).

THIS MANUAL SHOULD BE CONSIDERED a permanent part of your machine and should remain with the machine when you sell it.

MEASUREMENTS in this manual are given in both metric and customary U.S. unit equivalents. Use only correct replacement parts and fasteners. Metric and inch fasteners may require a specific metric or inch wrench.

RIGHT-HAND AND LEFT-HAND sides are determined by facing the direction of forward travel.

WRITE PRODUCT IDENTIFICATION NUMBERS (P.I.N.) in the Specification or Identification Numbers section. Accurately record all the numbers to help in tracing the machine should it be stolen. Your dealer also needs these numbers when you order parts. File the identification numbers in a secure place off the machine.

SETTING FUEL DELIVERY BEYOND PUBLISHED factory specifications or otherwise overpowering will result in loss of warranty protection for this machine.

BEFORE DELIVERING THIS MACHINE, your dealer performed a predelivery inspection. After operating for an agreed upon period, schedule an after-sale inspection with your John Deere™ dealer to ensure best performance.

THIS TRACTOR IS DESIGNED SOLELY for use in customary agricultural or similar operations ("INTENDED USE"). Use in any other way is considered as contrary to the intended use. The manufacturer accepts no liability for damage or injury resulting from this misuse, and these risks must be borne solely by the user. Compliance with and strict adherence to the conditions of operation, service and repair as specified by the manufacturer also constitute essential elements for the intended use.

THIS TRACTOR SHOULD BE OPERATED, serviced and repaired only by persons familiar with all its particular characteristics and acquainted with the relevant safety rules (accident prevention). The accident prevention regulations, all other generally recognized regulations on safety and occupational medicine and the road traffic regulations must be observed at all times. Any arbitrary modifications carried out on this tractor will relieve the manufacturer of all liability for any resulting damage or injury.

REGISTER USED PRODUCTS. If you purchased used John Deere™ products from an authorized John Deere™ dealer, the warranty registration information was updated by the dealer and requires no further information on your part.

If you purchased any used John Deere™ product from an auction, through a trader or from a farmer, please register it now. John Deere™ and John Deere™ dealers value their customer’s safety and satisfaction. Your local John Deere™ dealer is best equipped and anxious to provide you superior levels of support for your machine. Please enter your product details and your address online, using the John Deere™ website corresponding to your country. Then select the dealer of your choice.

John Deere is a trademark of Deere & Company

RW29387,00000CC -19-16JUN14-1/1

Look For Supplemental Information

Occasionally new or revised information will become available after manuals are printed. To get this up-to-date information into your hands, publication supplements are prepared and supplied to the field in the machine literature package.

Supplements can be supplied in the following forms and are usually identified with one of these titles:

- Direction(s) Sheet
- Installation Instructions
- Publications Supplement

Before your initial review of the Operator's Manual, look through the machine literature package to see if any supplemental information has been provided. If supplied, review this information to determine which operating procedures are impacted or modified by the revised instructions. Pay close attention to "CAUTION" and "IMPORTANT" statements as they address your safety, the safety of others, and safe operation of the machine.

When Operator's Manuals are revised, the supplemental information is incorporated directly into the manual, thereby eliminating the supplement.

TO84419,0000016 -19-27NOV12-1/1

Trademarks

Trademarks	
AccuDepth™	Trademark of Deere and Company
ACS™ (ActiveCommand Steering)	Trademark of Deere and Company
ActiveSeat™	Trademark of Deere and Company
AirCushion™	Trademark of Deere and Company
AMBLYGON™	Trademark of Kluber Lubrication
AMPSEAL 16™	Trademark of Tyco Electronics
AutoLoad™	Trademark of Deere and Company
AutoPowr™	Trademark of Deere and Company
AutoPowr™/IVT™	Trademark of Deere and Company
AutoQuad™ II	Trademark of Deere and Company
AutoQuad™ PLUS	Trademark of Deere and Company
AutoTrac™	Trademark of Deere and Company
Avdel™	Trademark of Avdel UK Limited
Bio Hy-Guard™	Trademark of Deere and Company
Break-In™	Trademark of Deere and Company
Break-In PLUS™	Trademark of Deere and Company
Bluetooth®	Trademark of Bluetooth SIG
CINCH™	Trademark of Cinch Inc.
ClimaTrak™	Trademark of Deere and Company
ComfortCommand™	Trademark of Deere and Company
ComfortGard™	Trademark of Deere and Company
ComfortGard Deluxe™	Trademark of Deere and Company
CommandARM™	Trademark of Deere and Company
CommandCenter™	Trademark of Deere and Company
CommandQuad™	Trademark of Deere and Company
CommandView™	Trademark of Deere and Company
Cool-Gard™ II	Trademark of Deere and Company
CoolScan™	Trademark of Deere and Company
CPC™	Trademark of AMP Incorporated
Cummins®	Trademark of Cummins Inc.
Deere™	Trademark of Deere and Company
DEUTSCH™	Trademark of Deutsch Company
DURABUILT™	Trademark of Camoplast Inc.
e18™	Trademark of Deere and Company
e23™	Trademark of Deere and Company
Efficiency Manager™	Trademark of Deere and Company
FieldCruise™	Trademark of Deere and Company
Field Doc™	Trademark of Deere and Company
Field Office™	Trademark of Deere and Company
GreenStar™	Trademark of Deere and Company
HydraCusion™	Trademark of Deere and Company
Hy-Gard™	Trademark of Deere and Company
ILS™	Trademark of Deere and Company
iPhone®	Trademark of Apple, Inc.
iPod®	Trademark of Apple, Inc.
iPod Touch®	Trademark of Apple, Inc.
iTEC™	Trademark of Deere and Company
iTEC™ Pro	Trademark of Deere and Company
IVT™	Trademark of Deere and Company
IVT Selector™	Trademark of Deere and Company

Continued on next page

Trademarks	
JDLink™	Trademark of Deere and Company
JDOffice™	Trademark of Deere and Company
John Deere™	Trademark of Deere and Company
John Deere FarmSight™	Trademark of Deere and Company
Loctite™	Trademark of Henkel Corporation
MATE-N-LOC™	Trademark of AMP Incorporated
METRIMATE™	Trademark of AMP Incorporated
METRI-PACK™	Trademark of Delphi Packard Electric Systems
NEVER-SEEZ™	Trademark of Bostik-Findley Inc.
Oilscan™	Trademark of Deere and Company
Parallel Tracking™	Trademark of Deere and Company
PLUS-50™ II	Trademark of Deere and Company
PowrQuad™	Trademark of Deere and Company
PowrQuad™ PLUS	Trademark of Deere and Company
PowerTech™	Trademark of Deere and Company
PowerTech™ Plus	Trademark of Deere and Company
Power Zero™	Trademark of Deere and Company
QUICK METAL™	Trademark of Henkel Corporation
Quik-Tatch™	Trademark of Deere and Company
Row-Trak™	Trademark of Deere and Company
Service ADVISOR™	Trademark of Deere and Company
SERVICEGARD™	Trademark of Deere and Company
SiriusXM®	Trademark of Sirius XM Radio Inc.
StarFire™	Trademark of Deere and Company
StarFire™ iTC	Trademark of Deere and Company
STC™	Trademark of Aeroquip Corporation
StellarSupport™	Trademark of Deere and Company
SUMITOMO™	Trademark of Sumitomo Corporation
TEFLON™	Trademark of DuPont Co.
TIA™	Trademark of Deere and Company
TLS™	Trademark of Deere and Company
TLS™ Plus	Trademark of Deere and Company
TouchSet™	Trademark of Deere and Company
Tractor-Implement Automation™	Trademark of Deere and Company
Vari-Cool™	Trademark of Deere and Company
Weather Pack™	Trademark of Packard Electric
YAZAKI™	Trademark of Yazaki Corporation

RW29387,000050B -19-18JUL14-2/2

Quick Reference Specifications

Capacities *(Approximate):*

NOTE: See Specifications Section for Additional Information.

	7210R	7230R	7250R	7270R	7290R	7310R
Fuel Tank, CommandQuad™ with G47/G48 Tires [a]	572 L (151 gal.)		Not Available			
Fuel Tank, CommandQuad™ with G47/G48 Tires [b]	503 L (133 gal.)		Not Available			
Fuel Tank, e23™ with G47/48 Tires [a]	533 L (141 gal.)					
Fuel Tank, e23™ with G47/48 Tires [b]	465 L (123 gal.)					
Fuel Tank, e23™ with G49 Tires [a]	Not Available		552 L (146 gal.)			
Fuel Tank, e23™ with G49 Tires [b]	Not Available		488 L (129 gal.)			
Fuel Tank, IVT™ /AutoPowr™ with G47/G48 Tires [a]	589 L (156 gal.)					Not Available
Fuel Tank, IVT™/AutoPowr™ with G47/G48 Tires [b]	520 L (137 gal.)					
Fuel Tank, IVT™/AutoPowr™, with G49 Tires [a]	Not Available		607 L (160 gal.)			Not Available
Fuel Tank, IVT™/AutoPowr™, with G49 Tires [b]	Not Available		543 L (143 gal.)			
Diesel Exhaust Fluid (DEF) Tank [b]	23 L (6 gal.)					
Cooling System	39.5 L (41.75 qt.)				44.5 L (47 qt.)	
Crankcase, Including Filter	26 L (27.4 qt.)		23 L (24.3 qt.)			
Transmission-Hydraulic System, CommandQuad™ [c]	160 L (42.3 gal.)		Not Available			
Transmission-Hydraulic system, e23™ [c]	160 L (42.3 gal.)					
Transmission-Hydraulic system, IVT™/AutoPowr™ [c]	160 L (42.3 gal.)					
Front PTO	4.0 L (4.25 qt.)					
TLS™ Plus with Differential Lock	10.8 L (2.8 gal.)					
TLS™ Plus with Limited Slip	14.4 L (3.8 gal.)					
1150 MFWD Axle	14.4 L (3.8 gal.)	Not Available				
1300 MFWD Axle	Not Available	14.4 L (3.8 gal.)	Not Available			
Wheel Hubs without Brakes	3.8 L (4.0 qt.)					
Wheel Hubs with Brakes	3.9 L (4.1 qt.)					

[a] US EPA Interim Tier4/EU Stage IIIB
[b] US EPA Final Tier 4/EU Stage IV
[c] Actual volume may vary depending on additional SCV's and tractor options.

CommandQuad is a trademark of Deere & Company
e23 is a trademark of Deere & Company
IVT is a trademark of Deere & Company
AutoPowr is a trademark of Deere & Company

SV81855,000008E -19-01OCT15-1/1

Contents

Page

Safety

Recognize Safety Information 05-1
Understand Signal Words....05-1
Follow Safety Instructions....05-1
Prepare for Emergencies....05-2
Wear Protective Clothing....05-2
Protect Against Noise....05-2
Handle Fuel Safely—Avoid Fires....05-3
Fire Prevention....05-3
In Case of Fire....05-4
Avoid Static Electricity Risk When Refueling....05-4
Use Foldable ROPS and Seat Belt Properly....05-5
Stay Clear of Rotating Drivelines....05-5
Use Steps and Handholds Correctly....05-6
Read Operator's Manuals for ISOBUS Controllers....05-6
Use Seat Belt Properly....05-6
Vibration....05-6
Operating the Tractor Safely....05-7
Avoid Backover Accidents....05-8
Limited Use in Forestry Operation....05-8
Operating the Loader Tractor Safely....05-8
Keep Riders Off Machine....05-9
Passenger Seat....05-9
Use Safety Lights and Devices....05-9
Towing Trailers/Implements Safely (Mass)....05-10
Use Caution On Slopes and Uneven Terrain....05-10
Freeing a Mired Machine....05-11
Avoid Contact with Agricultural Chemicals....05-11
Handle Agricultural Chemicals Safely....05-12
Handling Batteries Safely....05-13
Avoid Heating Near Pressurized Fluid Lines....05-13
Remove Paint Before Welding or Heating....05-14
Handle Electronic Components and Brackets Safely....05-14
Practice Safe Maintenance....05-15
Avoid Hot Exhaust....05-15
Clean Exhaust Filter Safely....05-16
Work In Ventilated Area....05-17
Support Machine Properly....05-17
Prevent Machine Runaway....05-17
Park Machine Safely....05-18
Transport Tractor Safely....05-18
Service Cooling System Safely....05-18
Service Accumulator Systems Safely....05-19
Service Tires Safely....05-19
Service Front-Wheel Drive Tractor Safely....05-19

Page

Tightening Wheel Retaining Bolts/Nuts....05-20
Avoid High-Pressure Fluids....05-20
Do Not Open High-Pressure Fuel System....05-20
Store Attachments Safely....05-21
Decommissioning: Proper Recycling and Disposal of Fluids and Components....05-21

Safety Signs

Operator's Manual....10-1
Seat Belt....10-2
Passenger Seat....10-3
Cab Suspension (If Equipped)....10-4
Rear Hitch Remote Switch (If Equipped)....10-5
Pick-Up Hitch (If Equipped)....10-6
Triple Link Suspension Plus (TLS™ Plus) (If Equipped)....10-6
Front Hitch (If Equipped)....10-7
Brake Accumulator (If Equipped)....10-7

Controls and Instruments

Front Console....15-1
Information Indicators....15-1
Aftertreatment Indicators Overview....15-2
Corner Post Display....15-3
Digital Indicators—Tachometer, Ground Speed, Transmission, and Set Speed....15-4
Gauges—Coolant Temperature, Diesel Exhaust Fluid (DEF) Level and Fuel Level....15-5
CommandARM™ with Generation 4 CommandCenter™ Display....15-5
CommandARM™ Joystick (If Equipped)....15-6
CommandARM™ Secondary Brake Lever (If Equipped)....15-6
CommandARM™ Rear and Front Hitch (If Equipped) Controls....15-7
CommandARM™ SCV Control Levers....15-8
CommandARM™ Climate, Radio and Lighting Controls....15-8
CommandARM™ PTO Control Levers (If Equipped)....15-9
CommandARM™ Left-Hand Side Controls....15-9
CommandARM™ ISOBUS Shortcut Button (ISB)....15-10
Foot Throttle (If Equipped)....15-10
Hitch, SCV and PTO External Switches....15-11

Continued on next page

Original Instructions. All information, illustrations and specifications in this manual are based on the latest information available at the time of publication. The right is reserved to make changes at any time without notice.

COPYRIGHT © 2015
DEERE & COMPANY
Moline, Illinois
All rights reserved.
A John Deere ILLUSTRUCTION ™ Manual

Page

CommandCenter™

Onscreen Help....16-1
Generation 4 CommandCenter™....16-2
Generation 4 CommandCenter™ Processor....16-3
Run Page Structure....16-4
Menu....16-4
Machine Settings Overview....16-4
Operating System Applications Overview....16-7
AMS Applications Overview....16-11
CommandCenter™ Premium Activation....16-11
Demo Activations....16-12
Automation Status Overview....16-12
Navigate Generation 4 CommandCenter™....16-13
Power Display On and Off....16-14
Clean CommandCenter™ Display....16-14
Navigate Run Pages on Main Page....16-14
Shortcut Buttons....16-15
Navigate to Display & Sound....16-15
Display & Sound....16-15
Brightness....16-16
Sound....16-16
Multiple Displays....16-17
Display Calibration....16-19
Navigate to Date & Time....16-20
Date & Time Application....16-20
Change Current Date....16-21
Change Current Time....16-21
Navigate to Language & Units....16-22
Language & Units....16-22
Language & Units Settings....16-22
Change Pages and Values....16-23
Status Center....16-23
Navigate to Software Manager....16-24
Software Manager....16-24
Factory and Service ADVISOR™ Installed Onscreen Help....16-25
Update Display Software....16-25
Activations....16-27
Service ADVISOR™ Remote....16-27
Vehicle Reprogramming....16-28
Troubleshooting - Reprogramming....16-31
System Recovery....16-31
Navigate to File Manager....16-32
File Manager....16-32
USB Drive....16-35
Capture Screen Shots....16-35
Navigate to Diagnostics Center....16-35
Diagnostics Center....16-36
Controller Diagnostics....16-36
Diagnostic Information....16-37
Hide Diagnostic Center....16-37
Diagnostic Trouble Codes....16-37
Readings....16-38
CAN Bus Information....16-39
CAN Bus Values....16-40
Network....16-40

Page

Navigate to Users & Access....16-41
Users & Access....16-41
User Profiles....16-41
Access Groups....16-42
Navigate to Layout Manager....16-43
Layout Manager....16-43
Active Set....16-43
Shortcut Bar....16-44
All Run Pages....16-45
Add, Edit, or Duplicate Run Pages....16-45
Navigate to Fields....16-46
Fields....16-47
Manage Clients, Farms, and Fields....16-48
AutoTrac™ Guidance....16-49
Navigate to Equipment Manager....16-50
Equipment Manager....16-51
Machine Profile....16-51
Machine Profile....16-52
Implement Profile....16-53
Navigate to Machine Monitor....16-54
Machine Monitor....16-54
Navigate to Work Monitor....16-55
Work Monitor....16-55
Work Recording....16-55
Navigate to Maintenance & Calibrations....16-56
Maintenance & Calibrations....16-56
Calibrations....16-56
Radar Calibration....16-57
Wheel Slip Calibration....16-58
Service Intervals....16-59
Service Checks....16-59
Navigate to Controls Setup....16-60
Controls Setup....16-61
Controls....16-61
Automation Status....16-62
Read ISOBUS Controller's Operator's Manual....16-63
ISOBUS VT....16-63
StarFire™ GPS Receiver....16-64
Use Video Display Capability Properly....16-64
Install Video Display Camera....16-65
Three-Camera Video Connectors with Ethernet Cable (If Equipped)....16-66
Navigate to Video Application....16-66
Video Application....16-67
Video Triggers....16-67

Radio Operation

Use Premium Radio....17-1
Select Radio Receiver Wave Band....17-2
Turn Confirmation Beep On/Off (BEEP)....17-2
Adjust Maximum Volume at Power-On (ONVOL)....17-3
Program Type (PTY)....17-3
Treble Reduction During Interference (HCUT)....17-3
Set Key Function (KEY PRG)....17-3
Traffic Information....17-4

Continued on next page

Page

External Sources (Premium Radio) 17-5
Select Radio Source with Generation 4 CommandCenter™ 17-6
FM, MW, LW Home Page 17-7
Premium Radio CD Home Page (If Equipped) ... 17-7
Premium Radio USB Home Page (If Equipped) .. 17-8
Premium Radio Bluetooth® Home Page (If Equipped) 17-8
Auxiliary Home Page 17-9
Pair Bluetooth® Device to Generation 4 CommandCenter™ 17-10
Manage Paired Bluetooth® Devices (If Equipped) 17-11
Phone Operation 17-12
Phone Signal Strength and Battery Charge 17-13
Contact List 17-14
Recent Calls 17-15
Clear Favorites and Call History 17-15

Lights

Light Identification 20-1
Configurable Lights 20-2
Steering Column Light Controls 20-3
Exit Lights 20-4
Operate Turn Signals and High/Low Beam 20-5
Safety Lights and Devices 20-6
CommandARM™ Light Buttons 20-6
Hazard Lights and Extremity Warning Lights 20-7
Rotary Beacon Light (If Equipped) 20-8
7-Pin Outlet 20-9

Operator Station

Cab Classification According to EN 15695-1 (for Application of Crop Protection Chemicals and Liquid Fertilizer) (2010-52-EU) 25-1
Avoid Contact with Agricultural Chemicals 25-2
Adjust Steering Wheel and Column 25-2
Adjust ComfortCommand™ Seat 25-3
Adjust Heated Leather Seat (If Equipped) 25-3
Adjust ActiveSeat™ (If Equipped) 25-4
Adjust ComfortCommand™ with HCS Plus Cab Suspension Seat 25-5
Use Passenger Seat 25-6
Adjust CommandARM™ Position 25-7
Operate Horn 25-7
HVAC Settings—Generation 4 CommandCenter™ 25-8
Operate Front Wiper and Washer 25-9
Operate Rear Wiper and Washer (If Equipped) .. 25-9
Operate Right-Hand Wiper and Washer (If Equipped) 25-9
Install Business Band or Citizens Band (CB) Radio and Antenna 25-10
Auxiliary Power Strip and Accessory Electrical Outlet Use (If Equipped) 25-11
Connect Compatible Electronic Equipment 25-13

Page

Configure Tractor for GPS/Radar 25-14
Machine Sync (If Equipped) 25-15
Mount StarFire™ Receiver 25-15
Install GreenStar™ System Components 25-16
Install Machine Communications Radio (MCR) Antenna (If Equipped) 25-17
Connect AutoTrac™ Assisted Steering System (If Equipped) 25-18
Monitor Bracket Mounts 25-19
Use Manual Mirror (If Equipped) 25-19
Use Electric Mirror (If Equipped) 25-20
Use Telescoping Heated Electric Mirror (If Equipped) 25-20
Pull-Down Sunshade 25-21
Refrigerator (If Equipped) or Storage Space 25-21
Position Left-Hand Steps 25-22
Right-Hand Service Steps 25-23

Engine Operation

Required Machine Stop Warning 30-1
Exhaust Filter System Overview 30-3
Selective Catalytic Reduction (SCR) System Overview 30-4
Restored Operation Option 30-5
Auto Exhaust Filter Cleaning Mode 30-5
Parked Exhaust Filter Cleaning 30-6
Selective Catalytic Reduction (SCR) System - Final Tier 4 and Stage IV Engines .. 30-7
Engine Fuel System and Power Rating 30-8
Battery Disconnect Switch (If Equipped) 30-8
Start the Engine 30-9
Theft Deterrent Systems (If Equipped) 30-10
Run the Engine 30-11
Stop the Engine 30-11
Cold Weather Starting—With Glow Plug Starting Aid (6.8 L Engine) 30-12
Cold Weather Starting—Without Starting Aid (9.0 L Engine) 30-13
Cold Weather Starting—With Starting Aid (9.0 L Engine) 30-14
Change Starting Fluid Canister (If Equipped) ... 30-15
Low Fuel or Low Diesel Exhaust Fluid (DEF) Warning 30-15
Restart Engine That Has Run Out of Fuel 30-15
Reduce Fuel Consumption 30-16
Auxiliary Heaters Use 30-17
Use Battery Booster or Charger 30-18

Tractor Operation

Avoid Contact with Agricultural Chemicals 40-1
Clean Vehicle of Hazardous Pesticides 40-1
Keep Riders Off Machine 40-1
Keep Operator Station Window and Door Closed 40-2
Use Seat Belts 40-2
Use Emergency Exit 40-2

Continued on next page

Page

Disconnect Battery—Final Tier 4 and Stage IV Engines 40-3
Change Tire Size....40-3
Transmission Top Speed Note 40-3
Warm-Up Transmission-Hydraulic System....40-4
Activate and Set FieldCruise™....40-7
Use FieldCruise™ with Different Transmission Modes 40-8
Intelligent Power Management (If Equipped) 40-8
Triple Link Suspension Plus (TLS™ Plus) Front Axle Suspension (If Equipped) 40-9
Operate TLS™ Plus and Cab Suspension (If Equipped)....40-10
Differential Lock....40-11
Change Differential Lock Disengagement Steering Angle 40-12
Mechanical Front-Wheel Drive (MFWD)....40-13
Change Mechanical Front-Wheel Drive (MFWD) Disengagement Steering Angle....40-14
Use AutoClutch (If Equipped)....40-15
Foot Pedal Mode (If Equipped)....40-16
Brake Use....40-18
Use Secondary Brake Lever (If Equipped)....40-20
Hydraulic Trailer Brakes (If Equipped)....40-20
Trailer Air Brakes (If Equipped) 40-21
Backup Alarm (If Equipped)....40-22
Come Home Mode 40-23

Operate CommandQuad™ Transmission
Transmission Description and Controls....41-1
Operate Transmission 41-2
Adjust Set Speeds....41-4
CommandCenter™ Transmission Main Page 41-5
CommandQuad™ Custom Mode Settings 41-6
Advanced Settings Page 41-8
Tractor Speed Displays on Corner Post Display and CommandCenter™ 41-12
Downhill Operation in Slippery Conditions 41-12

Operate e23™ Transmission
Transmission Operation
e23™ Transmission with Right Hand Reverser....44-1
Shifting e23™ Transmission with Right-hand reverser 44-2
e23™ Transmission with Left-Hand Reverser....44-4
Shifting e23™ Transmission with Left-hand reverser 44-5
Set Startup Gears....44-7
Stopping and Parking Tractor....44-10
CommandCenter™ Transmission Main Page ..44-11
Efficiency Manager™ on the e23™ Transmission....44-12
Efficiency Manager™ on e23™ Transmission in Manual Mode 44-13
Custom Transmission Settings....44-14

Page

Operate IVT™/AutoPowr™ Transmission
Controls Identification....45-1
Left-Hand and Right-Hand Reverser Shift Patterns....45-2
Operate the Transmission 45-3
Adjust Set Speeds....45-4
Set Speeds—Guidelines and Examples....45-5
IVT™/AutoPowr™ Modes and Set Maximum Speed 45-6
IVT™/AutoPowr™ Custom Mode Settings....45-7
Adjust Reverse/Forward Set Speed Ratio....45-9
Put Tractor in Motion 45-10
Using Creeper Mode 45-10
Stopping and Parking Tractor....45-11
Downhill Operation in Slippery Conditions 45-12

Intelligent Total Equipment Control (iTEC™)
CommandARM™ Control Functions 47-1
iTEC™ Station Description (2010-52-EU)....47-2
CommandCenter™ Pages Descriptions And Functions 47-2
Status Area....47-3
Set Up A Sequence....47-4
Sequence Step Status....47-5
Execute Sequence 47-10
Delete Sequence....47-11
iTEC Functions—IVT™/AutoPowr™ Transmission....47-11
iTEC™ Functions—Efficiency Manager™ Powershift Transmission 47-12

Tractor-Implement Automation™ (TIA™)
Tractor Implement Automation™ (TIA™)....50-1
Activate Tractor Implement Automation™ Equipment 50-2
TIA™ - Status Page....50-3
Operate Tractor Implement Automation™....50-4
PTO Requirements....50-4
SCV Requirements....50-5
IVT™/AutoPowr™ Requirements....50-6
Powershift Transmission Requirements 50-7
AutoTrac™ Guidance Requirements....50-7
Rear Hitch Requirements 50-8
Operate Drive Strategy Requirements 50-8

TouchSet™ Depth Control
Attaching Implement and Control System 55-1
Using TouchSet™ Depth Controls....55-3

Hydraulics and Selective Control Valves
Configuring Selective Control Valves - Access to Settings....60-1
Configuring Selective Control Valves - Standard Mode....60-2
Activating Independent Mode....60-3

Continued on next page

Page

Configuring Selective Control Valves - Independent Mode 60-4
Configuring Selective Control Valves - Feature Mode 60-5
Total Rear SCV Flow 60-6
Using Six Position SCV Control Levers 60-7
SCV Control Lever—Neutral Position 60-8
SCV Control Lever—Extend and Extend Detent Position 60-8
SCV Control Lever—Retract and Retract Detent Position 60-9
SCV Control Lever—Float Position 60-10
Operator Presence Sensor 60-10
CommandARM™ Joystick (If Equipped) 60-11
SCV and Joystick Flow Response Setting 60-16

Laser Scraper

Laser Scraper—for Scrapers Equipped with Scraper Control Unit 62-1

Remote Hydraulic Connections

Connect Rear Hydraulic Hoses 63-1
Disconnect Rear Hydraulic Hoses 63-2
Connect or Disconnect Hydraulic Hoses - Mid-Mount or Front SCVs (If Equipped) 63-3
Implement Hydraulic Connections 63-5
Hydraulic Motor Return and Case Drain Kits 63-6
Hitch Auxiliary Raise Kit 63-6
Using Load-Sensing Hydraulic System (Power Beyond) 63-7
Load-Sense Hydraulic Connections - Examples 63-8
Using Implements Requiring Large Volumes of Oil 63-9
Connecting Grain Drills or Air Seeders 63-9
Implement Connection - Vacuum Motors with Power Beyond and Motor Case Drain 63-10
Implementation Connections - Hydraulic Motor with Motor Return 63-11
Implement Connections - Vacuum Motor with Motor Return Tip 63-12
Implement Connections - Hitch Auxiliary Raise in Parallel with Hitch Valve 63-13
Implement Connections - Hitch Auxiliary Raise in Parallel with SCV 63-14

Hitch

Hitch (2010-52-EU) 65-1
Rear Hitch 65-2
Hitch Control Lever 65-3
Rear Hitch Lock/Damping 65-4
Adjust Load Depth Control (Draft Response) 65-5
Using Position Control 65-5
Using Draft Control 65-6

Page

Adjust Rear Hitch Upper Limit 65-7
Adjust Rear Hitch Drop Rate 65-8
Adjust Rear Hitch Raise Rate 65-9
Rear Hitch Slip Sensitivity 65-10
Float Operation 65-10
Hitch Components 65-11
Remote Raise and Lower Switches (If Equipped) 65-12
Hitch Manual Lowering 65-13
Correct Center Link Position 65-13
Hydraulic Center Link (If Equipped) 65-14
Adjust Sway Blocks 65-15
Deluxe Stabilizers 65-16
Attach Implement to Quick Coupler 65-18
Level Implement 65-19
Adjust Lateral Float 65-19
Detach Implement from Quick Coupler 65-20
Hitch Conversion—Convertible Quick Coupler 65-21
Operating the Wagon Hitch 65-22
Operating Pick-Up Hitch 65-23
Changing Pick-Up Hitch Coupler 65-24
3 in 1 Hitch System 65-25
Using Front Hitch (If Equipped) 65-26
Front Hitch Single Acting Mode And Position & Set Points 65-28
Adjusting Front Hitch Drop Rate 65-29
Adjusting Front Hitch Raise Rate 65-29

Drawbar and PTO

Stay Clear of Rotating Drivelines 70-1
Operating Instructions (2010-52-EU) 70-2
Drawbar Load Limits Based on Drawbar Position and Length and PTO Type 70-2
Adjusting Drawbar Length, Height and Side to Side 70-4
Installing and Using Clevis Assembly Cat 2 Drawbar 70-4
Installing and Using Clevis Assembly Cat 3 Drawbar 70-5
Installing and Using Clevis Assembly (High Vertical Load Drawbar Support) 70-6
Attaching Rear PTO Driven Implement 70-7
Attaching Front PTO Driven Implement (If Equipped) 70-8
Rear PTO Shield—Type 3 PTO 70-8
Using Correct Engine Speed 70-9
PTO Engagement Rate 70-10
Changing Optional Front PTO Shafts 70-11
Operating Front PTO (If Equipped) 70-12
Operating Rear PTO 70-13
Fine Adjustment To PTO Cruise Speeds 70-14
Select PTO Cruise Speed 70-15
Remote Front PTO Switch (If Equipped) 70-16
Remote Rear PTO Switch (If Equipped) 70-17

Continued on next page

Page

Operating Shiftable 3-Speed Rear PTO (If Equipped) 70-18
Operating Shiftable 2-Speed Rear PTO (If Equipped) 70-19
Changing PTO Stub Shaft (If Equipped) 70-20

Performance Ballasting
Selecting Ballast (2010-52-EU) 75-1
How to Calculate Maximum Permissible Download on Trailer Hitch (2010-52-EU) 75-2
Ballasting Information and Guidelines for Tractors with Single Tires 75-3
General Guidelines for Tractor Weight Based on PTO Horsepower Rating 75-3
General Weight Split Guidelines 75-4
Ballast Types 75-5
Ballasting Suggestions for Specific Types of Implements used with MFWD Tractors 75-7
Determining Ballasted Tractor Weight, Weight Split, Axle Loads, and Required Tire Inflation Pressures 75-9
Tire Sidewall Information 75-11
Controlling Power Hop-MFWD tractors without front suspension 75-11
Unballasted Tractor Weight Charts (7210R and 7230R) 75-12
Unballasted Tractor Weight Charts (7210R and 7230R Continued) 75-17
Unballasted Tractor Weight Charts (7250R and 7270R) 75-22
Unballasted Tractor Weight Charts (7250R and 7270R Continued) 75-27
Unballasted Tractor Weight Charts (7250R and 7270R Continued) 75-31
Unballasted Tractor Weight Charts (7290R and 7310R) 75-33
Unballasted Tractor Weight Charts (7290R and 7310R Continued) 75-38
Unballasted Tractor Weight Charts (7290R and 7310R Continued) 75-42
Installing Quik-Tatch™ Weights 75-43
Using Rear Wheel Weights 75-44
Using Rear Wheel Weights on Flanged Axles 75-45
Ballasting Suggestions for Hitch Mounted Implements 75-45
Adding Rear Ballast For Front Loader 75-46
Using Liquid Ballast 75-47
Liquid Ballast Charts 75-48
Implement Codes 75-49
Measuring Wheel Slip (Manually) 75-50

Front Wheels, Tires, and Treads
Service Tires Safely 80-1
Select Tire Combinations 80-2
Tire Sidewall Information 80-3

Page

Tire Load Index 80-4
Tire Inflation Pressure Guidelines 80-5
Recommended Pressures—Group 42 80-6
Recommended Pressures—Group 43 80-8
Recommended Pressures—Group 43 (Continued) 80-9
Recommended Pressures—Group 44 80-11
Tightening Front Wheel Bolts—MFWD 80-13
Checking Toe-In (MFWD and TLS™ Plus Axles) 80-14
Adjusting Toe-In (MFWD and TLS™ Plus Axles) 80-14
Setting Steering Stop Positions 80-15
Eight Position MFWD Wheel Settings 80-16
Wheels Settings Sixteen Position 80-18
710 mm (28 in.) Extra Wide Deluxe Pivoting Front Fenders - (Early Design) 80-19
Final Fender Positioning 80-19
Fender Settings-MFWD—Deluxe Pivoting Fenders 80-19
Front Tire, Fender, and Steering Stop Settings Table Explanation 80-21
Tire, Steering Stop, and Fender Settings-1150/1300 MFWD Axles 80-22
Tire, Steering Stop, and Fender Settings-TLS Plus Axle 80-27
Tire, Steering Stop, and Fender Settings-1150/1300 MFWD Axles-With Front Hitch 80-30
Tire, Steering Stop, and Fender Settings-TLS Plus Axle with Front Hitch 80-33
Tire, Steering Stop, and Fender Settings-1150/1300 MFWD Axles with Front Loader 80-35
Tire, Steering Stop, and Fender Settings-TLS Plus Axle with Front Loader 80-40
Tire, Steering Stop, and Extra-Wide Fender (710 mm (28 in)) Settings-(Late Design) 80-43

Rear Wheels, Tires, and Treads
Service Tires Safely 81-1
Select Tire Combinations 81-2
Tire Sidewall Information 81-3
Tire Load Index 81-4
Tire Inflation Pressure Guidelines 81-5
Recommended Pressures—Group 47 81-6
Recommended Pressures—Group 47 (Continued) 81-8
Recommended Pressures—Group 48 81-10
Recommended Pressures—Group 48 (Continued) 81-12
Recommended Pressures—Group 48 (Continued) 81-15
Recommended Pressures—Group 49 81-18
16-Position Rear Wheel Settings 81-20

Continued on next page

Page

Installing Rear Drive Wheel to Cast Hub 81-21
Installing Rear Steel Wheel to Hub.....81-21
Adjusting and Tightening Rear Steel Wheels—Cast Hubs.....81-22
Adjusting and Tightening Rear Wheels—Heavy-Duty Cast 10-Cap Screw Hubs.....81-23
Adjusting and Tightening Rear Wheels—Heavy-Duty 12-Cap Screw Hubs ..81-24
Adjusting and Tightening Rear Wheels—Flanged Axle.....81-25
Wheel Tightening Stand 81-25
Rear Wheel, Tire, and Tread Guidelines 81-26
Rear Single Drive Wheel Tread Settings—Flanged Wheels.....81-27
Minimum Tread Setting With Air Trailer Brakes And Inner Wheel Weights 81-27
Rear Single Drive Wheel Tread Settings—Steel Wheels 81-28
Rear Single Drive Wheel Tread Settings—Cast Wheels 81-30
Rear Dual Wheel Tread Settings—Steel Drive Wheels.....81-32
Rear Dual Wheel Tread Settings—Cast Drive Wheels.....81-35
Rear Dual Wheel Row Crop Settings and Dual Hub Extensions—Cast Drive Wheels.....81-37
Clamp-on Dual Usage 81-38

Transporting
Driving Tractor on Roads.....85-1
Transporting with Ballast 85-1
Towed Mass (2010-52-EU).....85-2
Towing Loads.....85-2
Towing Tractor 85-3
Tow Points 85-4
Releasing Park Brake Electrically.....85-5
Freeing a Mired Machine.....85-7
Transporting on Carrier 85-7

Fuel, Lubricants, and Coolant
Diesel Fuel.....90-1
Supplemental Diesel Fuel Additives 90-1
Lubricity of Diesel Fuel 90-2
Handling and Storing Diesel Fuel 90-2
Avoid Static Electricity Risk When Refueling.....90-3
Fill Fuel Tank 90-3
BioDiesel Fuel 90-4
Testing Diesel Fuel 90-5
Fuel Filters.....90-5
Minimizing the Effect of Cold Weather on Diesel Engines 90-6
Fill Diesel Exhaust Fluid (DEF) Tank - FT4/Stage IV Engines.....90-7

Page

Diesel Exhaust Fluid (DEF) — Use in Selective Catalytic Reduction (SCR) Equipped Engines 90-8
Storing Diesel Exhaust Fluid (DEF).....90-8
Refilling Diesel Exhaust Fluid (DEF) Tank.....90-9
Testing Diesel Exhaust Fluid (DEF).....90-10
Disposal of Diesel Exhaust Fluid (DEF) 90-10
John Deere Break-In Plus™ Engine Oil — Interim Tier 4, Final Tier 4, Stage IIIB, and Stage IV 90-10
Determine Tractor Engine Type.....90-11
Diesel Engine Oil — Interim Tier 4, Final Tier 4, Stage IIIB, and Stage IV.....90-11
Engine Oil and Filter Service Intervals — Interim Tier 4, Final Tier 4, Stage IIIB, and Stage IV Engines 90-12
Diesel Engine Oil Service Interval for Operation at High Altitude 90-12
Oil Filters 90-12
Diesel Engine Coolant (engine with wet sleeve cylinder liners).....90-13
Operating in Warm Temperature Climates 90-13
Water Quality for Mixing with Coolant Concentrate.....90-14
Testing Coolant Freeze Point 90-15
Disposing of Coolant 90-15
Transmission and Hydraulic Oil.....90-16
Use Correct Viscosity Front PTO Oil in Cold Weather 90-16
Transmission Recalibration 90-16
Gear Oil 90-17
Grease.....90-17
Mixing of Lubricants.....90-18
Alternative and Synthetic Lubricants 90-18
Lubricant Storage 90-18

Break-In Service (100 Hours or Less)
Perform Break-In Checks 92-1

Maintenance and Service Intervals
Observe Service Intervals 95-1
Service Interval Chart—Daily or 10 Hours, 50 Hours, 250 Hours, 500 Hours and 1000 Hours 95-2
Service Interval Charts 95-3

As Indicated Service
Perform As Indicated Service.....100-1
Replace Primary and Secondary Engine Air Filters.....100-1
Check Coolant Level 100-3
Clean Diesel Particulate Filter (DPF).....100-3
Drain Water Separator.....100-4

As Required Service
Perform As Required Service.....103-1

Continued on next page

Page

Service Engine Air Filter Precleaner System....103-1
Clean Radiator, Coolers, and Air Conditioning Condenser....103-4
Check Engine and Exhaust Compartments for Debris....103-6
Check Air Conditioning System....103-7
Replace Fan Belt....103-8
Check Engine Weep Hole....103-13
Drain Fuel Tank Sump....103-14
Check MFWD or TLS™ Plus (If Equipped) Axle Housing Oil Level....103-15
Check MFWD or TLS™ Plus (If Equipped) Wheel Hub Oil Level....103-16
Bleed Trailer Hydraulic Brakes (If Equipped)....103-17
Bleed Trailer Air Brakes (If Equipped)....103-18
Clean Diesel Exhaust Fluid (DEF) Tank (7310R only)....103-19
Diesel Exhaust Fluid (DEF) Tank Drain Plug (7310R only)....103-19
Clean CommandCenter™ Display....103-20

Daily or 10 Hour Service

Check Engine Oil Level....105-1
Check Transmission-Hydraulic Oil Level....105-2
Lubricate MFWD or TLS™ Plus Kingpins, Tie Rod Ends, Steering Cylinder, Axle Pivot and Panhard Rod....105-3
Lubricate MFWD or TLS™ Plus U-Joints....105-3

50 Hour Service

Perform This and Other Scheduled Services....110-1
Inspect Tires....110-1
Lubricate Rear Hitch....110-1
Lubricate Front Hitch (If Equipped)....110-1

250 Hour Service

Perform This and Other Scheduled Services....115-1
Lubricate Rear Hitch....115-1
Lubricate Deluxe Stabilizers (If Equipped)....115-2
Lubricate Front Hitch (If Equipped)....115-2
Check Manual Brakes....115-3
Manual Brakes....115-4
Check Neutral Start System....115-5
Check Transmission PARK System....115-6
Check Front PTO Housing Oil Level (If Equipped)....115-7
Lubricate Wagon Hitch and Check for Wear....115-8
Lubricate Pick-Up Hitch and Check for Wear....115-10

500 Hour Service

Perform This and Other Scheduled Services....120-1
Change Engine Oil and Filter—6.8 L Engine....120-1
Change Engine Oil and Filter—9.0 L Engine....120-3
Lubricate MFWD or TLS™ (If Equipped) Plus Kingpins, Tie Rod Ends, Steering Cylinder, Axle Pivot and Panhard Rod....120-5
Lubricate MFWD or TLS™ Plus (If Equipped) U-Joints....120-6
Tighten Wheel and Wheel Weight Bolts....120-6
Use Wheel Tightening Stand....120-7
Wheel Torque Wrench Adapter....120-8
Tighten Rear Wheel Weight Bolts....120-9
Tighten Front Wheel Bolts....120-9
Tighten Rear Drive Wheel to Cast Hub Bolts....120-10
Tighten Rear Steel Wheel to Hub Bolts....120-10
Tighten Rear Steel Wheels—Cast Hub Bolts....120-11
Tighten Rear Wheel Bolts—Heavy-Duty Cast 10-Bolt Hubs....120-12
Tighten Rear Wheel Bolts—Heavy-Duty 12-Bolt Hubs....120-13
Clean Dual Beam Radar Sensor (If Equipped)....120-13
Replace Fuel Filters....120-14
Inspect Engine Air Intake System—6.8 L Engine....120-15
Inspect Engine Air Intake System - 9.0 L Engine....120-17
Lubricate Cab Suspension System (If Equipped)....120-19
Back Flush Optional Fuel Water Separator (If Equipped)....120-20
Service Optional Fuel Water Separator Filter Element (If Equipped)....120-21

1000 Hour Service

Perform This and Other Scheduled Services....125-1
Cab Classification According to EN 15695-1 (for Application of Crop Protection Chemicals and Liquid Fertilizer) (2010-52-EU)....125-1
Replace Cab Recirculation Air Filter....125-2
Replace Cab Fresh Air Filter....125-3
Clean MFWD or TLS™ Plus (If Equipped) Axle Vent Filter....125-4
Test Coolant Freeze Point....125-4
Check TLS™ Plus Accumulator Charge Pressure (If Equipped)....125-4
Check Cab Suspension Accumulator Charge Pressure (If Equipped)....125-5

Annual Service

Handling Batteries Safely....130-1
Service Batteries and Connections....130-2
Change Engine Oil and Filter....130-3
Test Coolant Freeze Point....130-4
Cab Classification According to EN 15695-1 (for Application of Crop Protection Chemicals and Liquid Fertilizer) (2010-52-EU)....130-5
Replace Cab Recirculation and Fresh Air Filters....130-5

Continued on next page

Page

Inspect Seat Belts....130-6
Inspect Primary and Secondary Engine Air Filters....130-7
Check TLS™ Plus Accumulator Charge Pressure (If Equipped)....130-8
Check Cab Suspension Accumulator Charge Pressure (If Equipped)....130-8

1500 Hour Service
Perform This and Other Scheduled Services....135-1
Change Transmission/Hydraulic Oil and Filter and Clean Sump Screen....135-2
Change MFWD or TLS™ Plus Wheel Hub Oil....135-6
Change MFWD or TLS™ Plus Axle Housing Oil....135-7
Lubricate Draft Link Support Shaft Bushing....135-7
Inspect Fan Belt and Fan Belt Tensioner....135-8
Change Front PTO Housing Oil and Filter (If Equipped)....135-11
Replace Open Crankcase Ventilation Filter—6.8 L Engine....135-12
Fuel Tank Vent Filter....135-13
Replace Diesel Exhaust Fluid (DEF) Tank Vent- Final Tier 4 and Stage IV Engines....135-14
Replace Trailer Air Brake Dryer Filter (If Equipped)....135-15

3000 Hour Service
Perform This and Other Scheduled Services....142-1
Adjust Engine Valve Clearance—Interim Tier 4 and Stage IIIB Engines....142-1
Adjust Engine Valve Clearance—Final Tier 4 and Stage IV Engines....142-1

4500 Hour Service
Perform This and Other Scheduled Services....145-1
Replace Transmission Drive Shaft Damper....145-1
Access Diesel Exhaust Fluid (DEF) Dosing Unit and Tank Vent Filters—Final Tier 4 and Stage IV Engines....145-2
Changing Diesel Exhaust Fluid (DEF) Dosing Unit Filter....145-3

5000 Hour Service
Perform Service And All Subordinate Services....148-1
Replace Engine Crankshaft Damper....148-1

6000 Hour Service
Perform This and Other Scheduled Services....150-1
Drain, Flush, and Refill Cooling System (6.8 and 9.0 L Engines)....150-1

Page

General Service
Jack Up the Tractor - Lifting Points and Support Stand Placement (2010-52-EU)....155-1
Servicing and Connecting Snap to Connect Fittings....155-3
Use High-Pressure Washers....155-3
Diesel Particulate Filter Service....155-4
Exhaust Filter/Diesel Particulate Filter (DPF) Ash Handling and Disposal....155-4
Exhaust Filter Disposal....155-5
Do Not Modify Fuel System....155-5
Do Not Open High-Pressure Fuel System....155-5
Bleed Fuel System....155-5
Identify Zinc-Flake Coated Fasteners....155-6
Metric Bolt and Screw Torque Values....155-6
Unified Inch Bolt and Screw Torque Values....155-7

Electrical System Service
Introduction to Electrical Service Section....160-1
Disconnect Battery - Final Tier 4 and Stage IV Engines....160-1
Load Center Fuses....160-2
Master Fuses....160-6
Welding Near Electronic Control Units....160-7
Keep Electronic Control Unit Connectors Clean....160-7
Use Compressed Air....160-7
Use High-Pressure Washers....160-8
Service Implement Power Relay Module....160-9
Handle Halogen Light Bulbs Safely....160-10
Replace Front HID/LED Light Assembly....160-10
Adjust Front Grille Lights....160-11
Aim Headlights....160-12
Replace Front, Side And Rear Cab Roof Light Assembly....160-13
Replace Brake or Turn Signal Light Bulb....160-14
Replace Dome Light Bulb....160-15
Replace Courtesy Light Bulb....160-16
Replace Map Light Bulb....160-17
Replace Extremity Warning Light Bulb (If Equipped)....160-18

Troubleshooting
Engine Troubleshooting....165-1
Transmission Troubleshooting....165-4
Hydraulic System Troubleshooting....165-5
Hitch Troubleshooting....165-6
Selective Control Valve (SCV) Troubleshooting....165-8
Depth Control....165-9
Electrical System Troubleshooting....165-10
Operator Enclosure Troubleshooting....165-12
Tractor Operation Troubleshooting....165-13
Steering....165-14
Premium Radio....165-15

Continued on next page

Page

Diagnostic Trouble Codes
STOP, Service Alert, and Information Indicators....170-1
Access Diagnostic Trouble Codes....170-3

Storage
Place Tractor in Storage....175-1
Long-Term Storage....175-2
Paint Finish Care....175-2

Specifications
Engine....180-1
Capacities....180-3
Hydraulic....180-4
Electrical System....180-4
Transmission and Drive Train....180-5
Hitch, Drawbar and PTO....180-7
Other Equipment....180-8
Sound Level (2010-52-EU)....180-8
Tractor Load/Weights—Drawbar Static Vertical Load....180-9
Tractor Load/Weights—Average Standard Weight....180-10
Overall Dimensions....180-11
Loads and Weights - (For Tractors 7210R and 7230R) (2010-52-EU)....180-12
Loads and Weights - (For Tractors 7250R, 7270R, 7290R, 7310R) (2010-52-EU)....180-13
How to Calculate Permissible Mass (2010-52-EU)....180-14
Ground Speeds 40 km/h CommandQuad™ ECO Transmission....180-15
Ground Speeds With CommandQuad™ ECO Transmission — 50 km/h (31 mph) (7210R, 7230R)....180-16
Ground Speeds With e23™ Transmission 40 km/h (24.8 mph) (7210R, 7230R)....180-17
Ground Speeds With e23™ Transmission 40 km/h (24.8 mph) (7250R, 7270R, 7290R and 7310R)....180-18
Ground Speeds With e23™ Transmission 50 km/h (31 mph) (7210R, 7230R)....180-20
Ground Speeds With e23™ Transmission 50 km/h (31 mph) (7250R, 7270R, 7290R and 7310R)....180-21
Ground Speeds With — IVT™/AutoPowr™ Transmission....180-22
Required Emission-Related Information....180-22
Front Loader Installation - Front Loader Mounting Frames (2010-52-EU)....180-23

Identification Numbers
Serial Number Plates....185-1

Page

Record Product Identification Number....185-1
Record Engine Serial Number....185-2
Record Cab Serial Number....185-2
Keep Proof of Ownership....185-4
Keep Machines Secure....185-5

Lubrication and Maintenance Records
50 Hour Service Record....190-1
250 Hour Service Record....190-1
500 Hour Service Record....190-2
1000 Hour Service Record....190-2
Annual Service Record....190-3
1500 Hour Service Record....190-3
3000 Hour Service Record....190-4
4500 Hour Service Record....190-4
5000 Hour Service Record....190-4
6000 Hour Service Record....190-5

Glossary
Glossary of Terms....195-1

Recognize Safety Information

This is a safety-alert symbol. When you see this symbol on your machine or in this manual, be alert to the potential for personal injury.

Follow recommended precautions and safe operating practices.



T81389 —UN—28JUN13

DX,ALERT -19-29SEP98-1/1

Understand Signal Words

A signal word—DANGER, WARNING, or CAUTION—is used with the safety-alert symbol. DANGER identifies the most serious hazards.

DANGER or WARNING safety signs are located near specific hazards. General precautions are listed on CAUTION safety signs. CAUTION also calls attention to safety messages in this manual.



TS187 —19—30SEP88

DX,SIGNAL -19-03MAR93-1/1

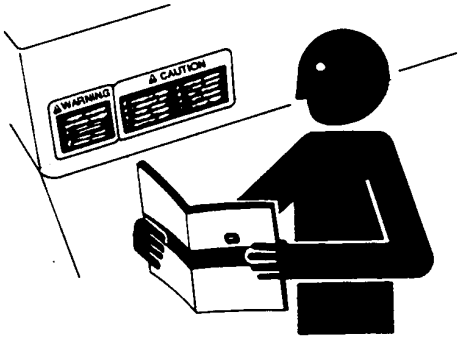
Follow Safety Instructions

Carefully read all safety messages in this manual and on your machine safety signs. Keep safety signs in good condition. Replace missing or damaged safety signs. Be sure new equipment components and repair parts include the current safety signs. Replacement safety signs are available from your John Deere dealer.

There can be additional safety information contained on parts and components sourced from suppliers that is not reproduced in this operator's manual.

Learn how to operate the machine and how to use controls properly. Do not let anyone operate without instruction.

Keep your machine in proper working condition. Unauthorized modifications to the machine may impair the function and/or safety and affect machine life.



TS201 —UN—15APR13

If you do not understand any part of this manual and need assistance, contact your John Deere dealer.

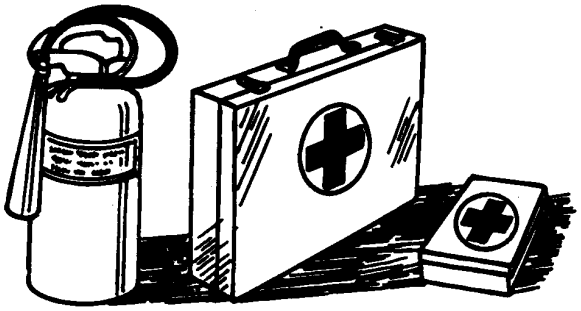
DX,READ -19-16JUN09-1/1

Prepare for Emergencies

Be prepared if a fire starts.

Keep a first aid kit and fire extinguisher handy.

Keep emergency numbers for doctors, ambulance service, hospital, and fire department near your telephone.



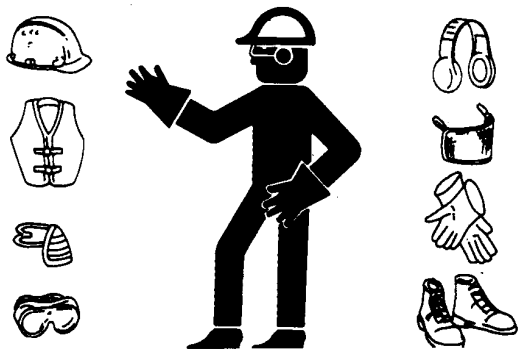
TS291 —UN—15APR13

DX,FIRE2 -19-03MAR93-1/1

Wear Protective Clothing

Wear close fitting clothing and safety equipment appropriate to the job.

Operating equipment safely requires the full attention of the operator. Do not wear radio or music headphones while operating machine.



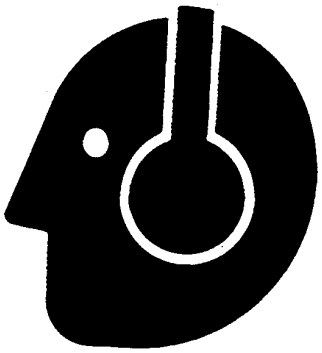
TS206 —UN—15APR13

DX,WEAR2 -19-03MAR93-1/1

Protect Against Noise

Prolonged exposure to loud noise can cause impairment or loss of hearing.

Wear a suitable hearing protective device such as earmuffs or earplugs to protect against objectionable or uncomfortable loud noises.



TS207 —UN—23AUG88

DX,NOISE -19-03MAR93-1/1

Handle Fuel Safely—Avoid Fires

Handle fuel with care: it is highly flammable. Do not refuel the machine while smoking or when near open flame or sparks.

Always stop engine before refueling machine. Fill fuel tank outdoors.

Prevent fires by keeping machine clean of accumulated trash, grease, and debris. Always clean up spilled fuel.

Use only an approved fuel container for transporting flammable liquids.

Never fill fuel container in pickup truck with plastic bed liner. Always place fuel container on ground before refueling. Touch fuel container with fuel dispenser nozzle before removing can lid. Keep fuel dispenser nozzle in contact with fuel container inlet when filling.



TS202 —UN—23AUG88

Do not store fuel container where there is an open flame, spark, or pilot light such as within a water heater or other appliance.

DX,FIRE1 -19-12OCT11-1/1

Fire Prevention

To reduce the risk of fire, your tractor should be regularly inspected and cleaned.

- Birds and other animals may build nests or bring other flammable materials into the engine compartment or onto the exhaust system. The tractor should be inspected and cleaned prior to the first use each day.
- A build up of grass, crop material and other debris may occur during normal operation. This is especially true when operating in very dry conditions or conditions where airborne crop material or crop dust is present. Any such build up must be removed to ensure proper machine function and to reduce the risk of fire. The tractor must be inspected and cleaned periodically throughout the day.
- Regular and thorough cleaning of the tractor combined with other routine maintenance procedures listed in the Operator's Manual greatly reduce the risk of fire and the chance of costly downtime.
- Do not store fuel container where there is an open flame, spark, or pilot light such as within a water heater or other appliance.
- Check fuel lines, tank, cap, and fittings frequently for damage, cracks or leaks. Replace if necessary.

Follow all operational and safety procedures posted on the machine and the Operator's Manual. Be careful of hot engine and exhaust components during inspection and cleaning. Before carrying out any inspection or cleaning, always shut OFF the engine, place the transmission in PARK or set parking brake, and remove the key. Removal of the key will prevent others from starting the tractor during inspection and cleaning.

DX,WW,TRACTOR,FIRE,PREVENTION -19-12OCT11-1/1

In Case of Fire

CAUTION: Avoid personal injury.

Stop machine immediately at the first sign of fire. Fire may be identified by the smell of smoke or sight of flames. Because fire grows and spreads rapidly, get off the machine immediately and move safely away from the fire. Do not return to the machine! The number one priority is safety.

Call the fire department. A portable fire extinguisher can put out a small fire or contain it until the fire department arrives; but portable extinguishers have limitations. Always put the safety of the operator and bystanders first. If attempting to extinguish a fire, keep your back to the wind with an unobstructed escape path so you can move away quickly if the fire cannot be extinguished.

Read the fire extinguisher instructions and become familiar with their location, parts, and operation before a fire starts. Local fire departments or fire equipment distributors may offer fire extinguisher training and recommendations.

If your extinguisher does not have instructions, follow these general guidelines:



TS227 —UN—15APR13

1. Pull the pin. Hold the extinguisher with the nozzle pointing away from you, and release the locking mechanism.
2. Aim low. Point the extinguisher at the base of the fire.
3. Squeeze the lever slowly and evenly.
4. Sweep the nozzle from side-to-side.

DX,FIRE4 -19-22AUG13-1/1

Avoid Static Electricity Risk When Refueling

The removal of sulfur and other compounds in Ultra-Low Sulfur Diesel (ULSD) fuel decreases its conductivity and increases its ability to store a static charge.

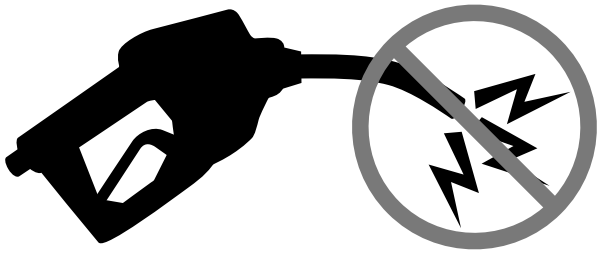
Refineries may have treated the fuel with a static dissipating additive. However, there are many factors that can reduce the effectiveness of the additive over time.

Static charges can build up in ULSD fuel while it is flowing through fuel delivery systems. Static electricity discharge when combustible vapors are present could result in a fire or explosion.

Therefore, it is important to ensure that the entire system used to refuel your machine (fuel supply tank, transfer pump, transfer hose, nozzle, and others) is properly grounded and bonded. Consult with your fuel or fuel system supplier to ensure that the delivery system is in compliance with fueling standards for proper grounding and bonding practices.



RG22142 —UN—17MAR14



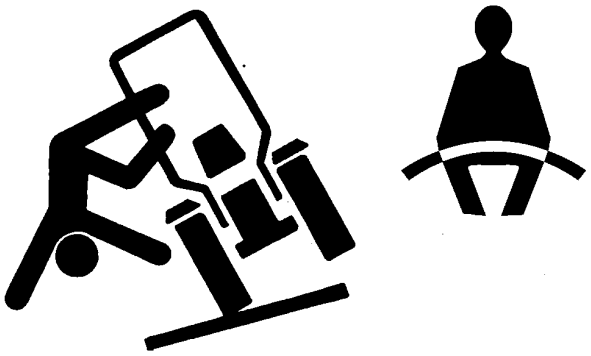
RG21992 —UN—21AUG13

DX,FUEL,STATIC,ELEC -19-12JUL13-1/1

Use Foldable ROPS and Seat Belt Properly

Avoid crushing injury or death during rollover.

- If this machine is equipped with a foldable rollover protective structure (ROPS), keep the ROPS in the fully extended and locked position. USE a seat belt when you operate with a ROPS in the fully extended position.
  - Hold the latch and pull the seat belt across the body.
  - Insert the latch into the buckle. Listen for a click.
  - Tug on the seat belt to make sure that the belt is securely fastened.
  - Snug the seat belt across the hips.
- If this machine is operated with the ROPS folded (for example, to enter a low building), drive with extreme caution. DO NOT USE a seat belt with the ROPS folded.
- Return the ROPS to the raised, fully extended position as soon as the machine is operated under normal conditions.



TS1729 —UN—24MAY13

DX,FOLDROPS -19-22AUG13-1/1

Stay Clear of Rotating Drivelines

Entanglement in rotating driveline can cause serious injury or death.

Keep tractor master shield and driveline shields in place at all times. Make sure rotating shields turn freely.

Wear close fitting clothing. Stop the engine and be sure that PTO driveline is stopped before making adjustments, connections, or cleaning out PTO driven equipment.

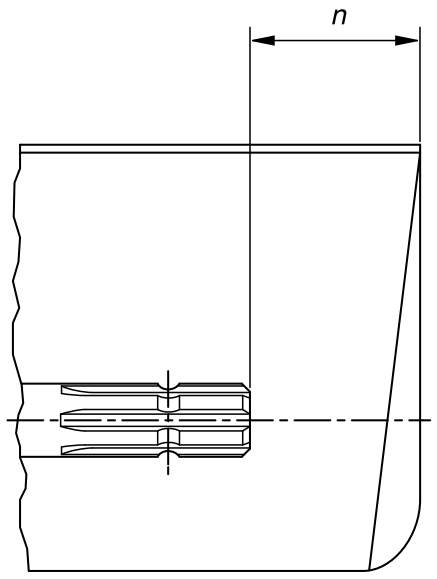
Do not install any adapter device between the tractor and the primary implement PTO drive shaft that will allow a 1000 rpm tractor shaft to power a 540 rpm implement at speeds higher than 540 rpm.

Do not install any adapter device that results in a portion of the rotating implement shaft, tractor shaft, or the adapter to be unguarded. The tractor master shield shall overlap the end of the splined shaft and the added adaptor device as outlined in the table.

PTO Type	Diameter	Splines	n ± 5 mm (0.20 in.)
1	35 mm (1.378 in.)	6	85 mm (3.35 in.)
2	35 mm (1.378 in.)	21	85 mm (3.35 in.)
3	45 mm (1.772 in.)	20	100 mm (4.00 in.)



TS1644 —UN—22AUG95



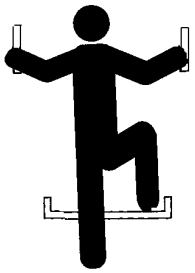
H96219 —UN—29APR10

DX,PTO -19-30JUN10-1/1

Use Steps and Handholds Correctly

Prevent falls by facing the machine when getting on and off. Maintain 3-point contact with steps, handholds, and handrails.

Use extra care when mud, snow, or moisture present slippery conditions. Keep steps clean and free of grease or oil. Never jump when exiting machine. Never mount or dismount a moving machine.



T133468 —UN—15APR13

DX,WW,MOUNT -19-12OCT11-1/1

Read Operator's Manuals for ISOBUS Controllers

In addition to GreenStar™ Applications, this display can be used as a display device for any ISOBUS Controller that meets ISO 11783 standard. This includes capability to control ISOBUS implements. When used in this manner, information and control functions placed on the display are provided by the ISOBUS Controller and are the responsibility of the ISOBUS Controller manufacturer.

GreenStar is a trademark of Deere & Company

Some of these functions could pose a hazard to either the operator or a bystander. Read the Operator's Manual provided by the ISOBUS Controller manufacturer and observe all safety messages in manual and on ISOBUS Controller product prior to use.

NOTE: ISOBUS refers to the ISO Standard 11783

DX,WW,ISOBUS -19-15JUL15-1/1

Use Seat Belt Properly

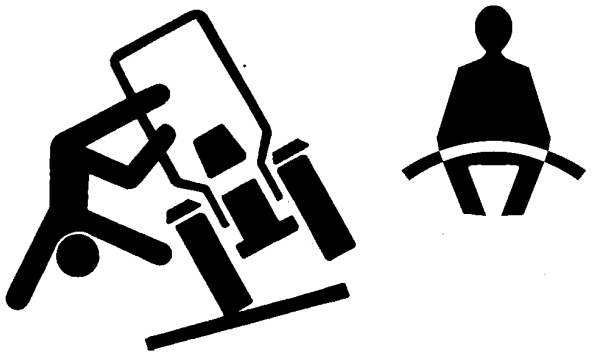
Avoid crushing injury or death during rollover.

This machine is equipped with a rollover protective structure (ROPS). USE a seat belt when you operate with a ROPS.

- Hold the latch and pull the seat belt across the body.
- Insert the latch into the buckle. Listen for a click.
- Tug on the seat belt latch to make sure that the belt is securely fastened.
- Snug the seat belt across the hips.

Replace entire seat belt if mounting hardware, buckle, belt, or retractor show signs of damage.

Inspect seat belt and mounting hardware at least once a year. Look for signs of loose hardware or belt damage, such as cuts, fraying, extreme or unusual wear, discoloration, or abrasion. Replace only with replacement parts approved for your machine. See your John Deere dealer.



TS1729 —UN—24MAY13

DX,ROPS1 -19-22AUG13-1/1

Vibration

All operator's seats approved by John Deere are component type-approved in accordance with 78/764/EEC, being allocated an average of the vibration acceleration actually measured at the seat (a_{wS}), equivalent to ≤ 1.25 m/s^2.

This value must NOT be used to calculate vibration stress as per 2002/44/EC! Local John Deere dealers can provide assistance in assessing vibration stress.

Measures to reduce vibration may include:

- Appropriate style of driving, e.g. not too fast
- Suspended front axle
- Suspended cab
- Correctly adjusted operator's seat
- Correct tire pressure

DX,VIBRATION,EU -19-19AUG09-1/1

Operating the Tractor Safely

You can reduce the risk of accidents by following these simple precautions:

- Use your tractor only for jobs it was designed to perform, for example, pushing, pulling, towing, actuating, and carrying a variety of interchangeable equipment designed to conduct agricultural work.
- This tractor is not intended to be used as a recreational vehicle.
- Read this operator's manual before operating the tractor and follow operating and safety instructions in the manual and on the tractor.
- Follow operation and ballasting instructions found in the operator's manual for your implements/attachments, such as front loaders
- Make sure that everyone is clear of machine, attached equipment, and work area before starting engine or operation.
- Keep hands, feet, and clothing away from power-driven parts

Driving Concerns

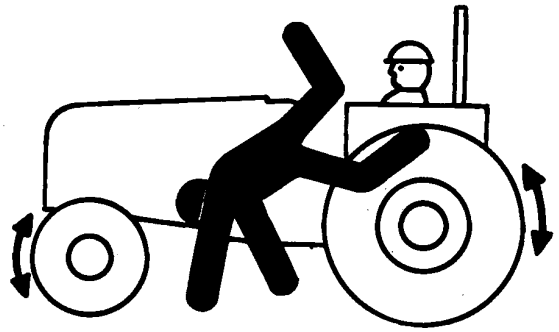
- Never get on or off a moving tractor.
- Keep all children and nonessential personnel off tractors and all equipment.
- Never ride on a tractor unless seated on a John Deere approved seat with seat belt.
- Keep all shields/guards in place.
- Use appropriate visual and audible signals when operating on public roads.
- Move to side of road before stopping.
- Reduce speed when turning, applying individual brakes, or operating around hazards on rough ground or steep slopes.
- Couple brake pedals together for road travel.
- Pump brakes when stopping on slippery surfaces.

Towing Loads

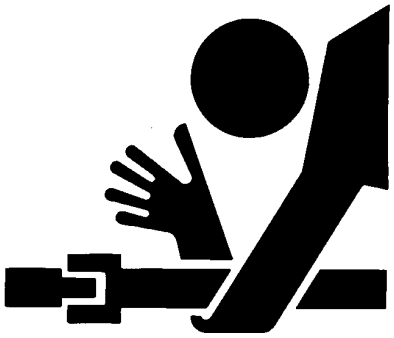
- Be careful when towing and stopping heavy loads. Stopping distance increases with speed and weight of towed loads, and on slopes. Towed loads with or without brakes that are too heavy for the tractor or are towed too fast can cause loss of control.
- Consider the total weight of the equipment and its load.
- Hitch towed loads only to approved couplings to avoid rearward upset.

Parking and Leaving the Tractor

- Before dismounting, shut off SCVs, disengage PTO, stop engine, lower implements/attachments to ground and securely engage park mechanism, including the park pawl and park brake. In addition, if tractor is left unattended, remove key.
- Leaving transmission in gear with engine off will NOT prevent the tractor from moving.
- Never go near an operating PTO or an operating implement.
- Wait for all movement to stop before servicing machinery.



TS290 —UN—23AUG88



TS276 —UN—23AUG88

Common Accidents

Unsafe operation or misuse of the tractor can result in accidents. Be alert to hazards of tractor operation.

The most common accidents involving tractors:

- Tractor rollover
- Collisions with motor vehicles
- Improper starting procedures
- Entanglement in PTO shafts
- Falling from tractor
- Crushing and pinching during hitching

DX,WW,TRACTOR -19-21AUG09-1/1

Avoid Backover Accidents

Before moving machine, be sure that all persons are clear of machine path. Turn around and look directly for best visibility. Use a signal person when backing if view is obstructed or when in close quarters.

Do not rely on a camera to determine if personnel or obstacles are behind the machine. The system can be limited by many factors including maintenance practices, environmental conditions, and operating range.



PC10857XW —UN—15APR13

DX,AVOID,BACKOVER,ACCIDENTS -19-30AUG10-1/1

Limited Use in Forestry Operation

The intended use of John Deere tractors when used in forestry operations is limited to tractor-specific applications like transport, stationary work such as log splitting, propulsion, or operating implements with PTO, hydraulic, or electrical systems.

These are applications where normal operation does not present a risk of falling or penetrating objects. Any forestry applications beyond these applications, such as forwarding and loading, requires fitment of application-specific components including Falling Object Protective Structure (FOPS) and/or Operative Protective Structures (OPS). Contact John Deere dealer for special components.

DX,WW,FORESTRY -19-12OCT11-1/1

Operating the Loader Tractor Safely

When operating a machine with a loader application, reduce speed as required to ensure good tractor and loader stability.

To avoid tractor rollover and damage to front tires and tractor, do not carry load with your loader at a speed over 10 km/h (6 mph).

To avoid tractor damage do not use a front loader or a sprayer tank if the tractor is equipped with a 3 Meter Front Axle.

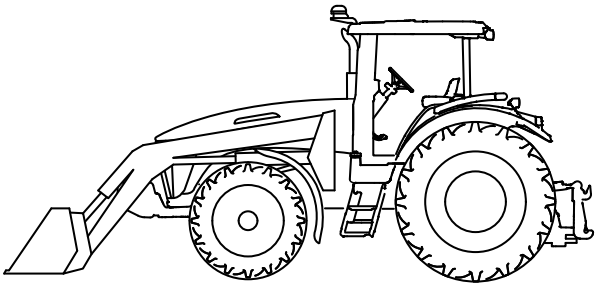
Never allow anyone to walk or work under a raised loader.

Do not use loader as a work platform.

Do not lift or carry anyone on loader, in bucket, or on implement or attachment.

Lower loader to ground before leaving operators station.

The Rollover Protective Structure (ROPS) or cab roof, if equipped, may not provide sufficient protection from load falling onto the operators station. To prevent loads from falling onto the operators station, always use appropriate implements for specific applications (that is, manure forks, round bale forks, round bale grippers, and clampers).



TS1692 —UN—09NOV09

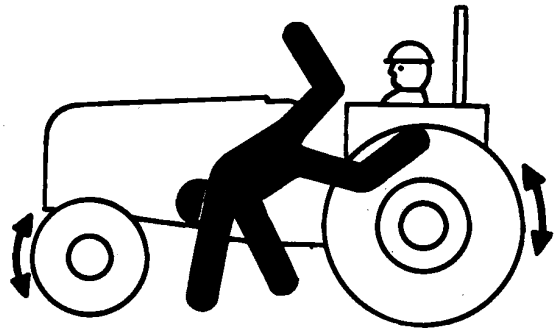
Ballast tractor in accordance to Ballast Recommendations in PREPARE TRACTOR section.

DX,WW,LOADER -19-18SEP12-1/1

Keep Riders Off Machine

Only allow the operator on the machine. Keep riders off.

Riders on machine are subject to injury such as being struck by foreign objects and being thrown off of the machine. Riders also obstruct the operator's view resulting in the machine being operated in an unsafe manner.



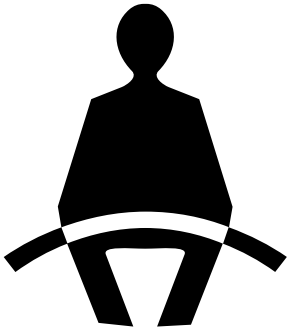
TS290 —UN—23AUG88

DX,RIDER -19-03MAR93-1/1

Passenger Seat

The passenger seat is intended only for transport of a passenger in on-road operations (that is, transport from farm to field).

If it is necessary to transport a passenger, the passenger seat is the only means of transport of a passenger condoned by John Deere.



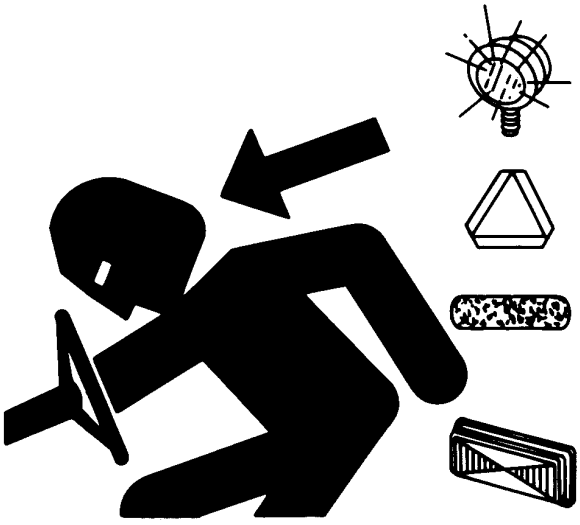
TS1730 —UN—24MAY13

DX,SEAT,EU -19-22AUG13-1/1

Use Safety Lights and Devices

Prevent collisions between other road users, slow moving tractors with attachments or towed equipment, and self-propelled machines on public roads. Frequently check for traffic from the rear, especially in turns, and use turn signal lights.

Use headlights, flashing warning lights, and turn signals day and night. Follow local regulations for equipment lighting and marking. Keep lighting and marking visible, clean, and in good working order. Replace or repair lighting and marking that has been damaged or lost. An implement safety lighting kit is available from your John Deere dealer.

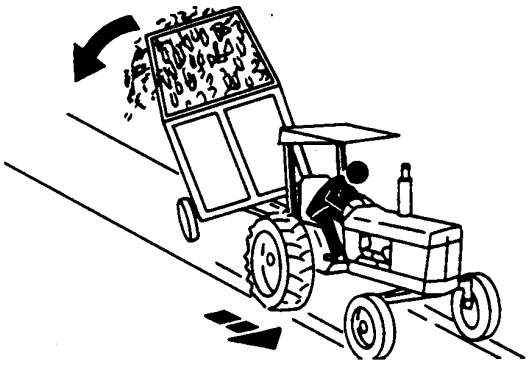


TS951 —UN—12APR90

DX,FLASH -19-07JUL99-1/1

Towing Trailers/Implements Safely (Mass)

Stopping distance increases with speed and mass of trailer/implement, and when transporting on slopes. Towed mass with or without brakes that is too heavy for the tractor or is towed too fast can cause loss of control. Consider the total weight of the equipment and its load.



TS216 —UN—23AUG88

Trailer/implement brake system	Top speed
- unbraked	25 km/h (15.5 mph)
- independent	25 km/h (15.5 mph)
- overrun brake	25 km/h (15.5 mph)
- hydraulic brake	25 km/h (15.5 mph)
- single-line air brake	25 km/h (15.5 mph)
- dual-line air brake	Maximum design speed

There may be legal limits in force that restrict travel speeds to figures lower than those quoted here.

Use additional caution when towing loads under adverse surface conditions, when turning, and on inclines.

DX,TOW3,EU -19-19AUG09-1/1

Use Caution On Slopes and Uneven Terrain

Avoid holes, ditches, and obstructions which cause the tractor to tip, especially on slopes. Avoid sharp uphill turns.

Driving forward out of a ditch, mired condition, or up a steep slope could cause tractor to tip over rearward. Back out of these situations if possible.

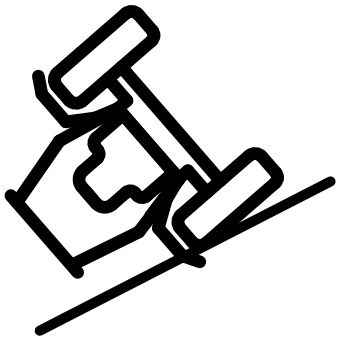
Danger of overturn increases greatly with narrow tread setting, at high speed.

Not all conditions that can cause a tractor to overturn are listed. Be alert for any situation in which stability may be compromised.

Slopes are a major factor related to loss-of-control and tip-over accidents, which can result in severe injury or death. Operation on all slopes requires extra caution

Never drive near the edge of a gully, drop-off, ditch, steep embankment, or a body of water. The machine could suddenly roll over if a wheel goes over the edge or the ground caves in

Choose a low ground speed so you will not have to stop or shift while on a slope.



RXA0103437 —UN—01JUL09

Avoid starting, stopping or turning on a slope. If the tires lose traction, disengage the PTO and proceed slowly, straight down the slope.

Keep all movement on slopes slow and gradual. Do not make sudden changes in speed or direction, which could cause the machine to roll over.

DX,WW,SLOPE -19-12OCT11-1/1

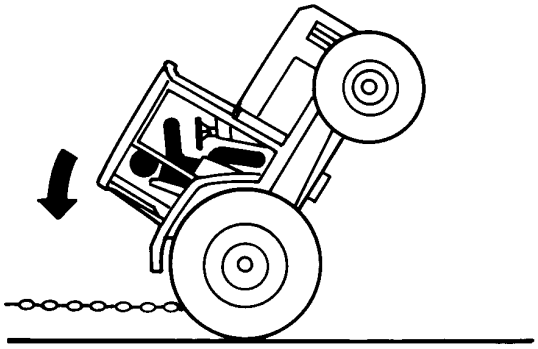
Freeing a Mired Machine

Attempting to free a mired machine can involve safety hazards such as the mired tractor tipping rearward, the towing tractor overturning, and the tow chain or tow bar (a cable is not recommended) failing and recoiling from its stretched condition.

Back your tractor out if it gets mired down in mud. Unhitch any towed implements. Dig mud from behind the rear wheels. Place boards behind the wheels to provide a solid base and try to back out slowly. If necessary, dig mud from the front of all wheels and drive slowly ahead.

If necessary to tow with another unit, use a tow bar or a long chain (a cable is not recommended). Inspect the chain for flaws. Make sure all parts of towing devices are of adequate size and strong enough to handle the load.

Always hitch to the drawbar of the towing unit. Do not hitch to the front pushbar attachment point. Before moving, clear the area of people. Apply power smoothly to take up the slack: a sudden pull could snap any towing device causing it to whip or recoil dangerously.



TS1645 —UN—15SEP95



TS263 —UN—23AUG88

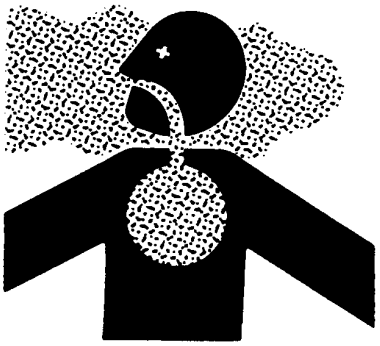
DX,MIRED -19-07JUL99-1/1

Avoid Contact with Agricultural Chemicals

This enclosed cab does not protect against inhaling vapor, aerosol or dust. If pesticide use instructions require respiratory protection, wear an appropriate respirator inside the cab.

Before leaving the cab, wear personal protective equipment as required by the pesticide use instructions. When re-entering the cab, remove protective equipment and store either outside the cab in a closed box or some other type of sealable container or inside the cab in a pesticide resistant container, such as a plastic bag.

Clean your shoes or boots to remove soil or other contaminated particles prior to entering the cab.



TS220 —UN—15APR13



TS272 —UN—23AUG88

DX,CABS -19-25MAR09-1/1

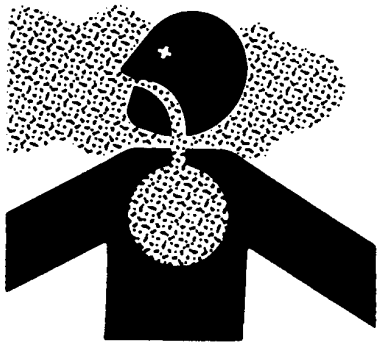
Handle Agricultural Chemicals Safely

Chemicals used in agricultural applications such as fungicides, herbicides, insecticides, pesticides, rodenticides, and fertilizers can be harmful to your health or the environment if not used carefully.

Always follow all label directions for effective, safe, and legal use of agricultural chemicals.

Reduce risk of exposure and injury:

- Wear appropriate personal protective equipment as recommended by the manufacturer. In the absence of manufacturer's instructions, follow these general guidelines:
  - Chemicals labeled **'Danger'**: Most toxic. Generally require use of goggles, respirator, gloves, and skin protection.
  - Chemicals labeled **'Warning'**: Less toxic. Generally require use of goggles, gloves, and skin protections.
  - Chemicals labeled **'Caution'**: Least toxic. Generally require use of gloves and skin protection.
- Avoid inhaling vapor, aerosol or dust.
- Always have soap, water, and towel available when working with chemicals. If chemical contacts skin, hands, or face, wash immediately with soap and water. If chemical gets into eyes, flush immediately with water.
- Wash hands and face after using chemicals and before eating, drinking, smoking, or urination.
- Do not smoke or eat while applying chemicals.
- After handling chemicals, always bathe or shower and change clothes. Wash clothing before wearing again.
- Seek medical attention immediately if illness occurs during or shortly after use of chemicals.
- Keep chemicals in original containers. Do not transfer chemicals to unmarked containers or to containers used for food or drink.



TS220 —UN—15APR13



A34471 —UN—11OCT88

A34471

- Store chemicals in a secure, locked area away from human or livestock food. Keep children away.
- Always dispose of containers properly. Triple rinse empty containers and puncture or crush containers and dispose of properly.

DX,WW,CHEM01 -19-24AUG10-1/1

Handling Batteries Safely

Battery gas can explode. Keep sparks and flames away from batteries. Use a flashlight to check battery electrolyte level.

Never check battery charge by placing a metal object across the posts. Use a voltmeter or hydrometer.

Always remove grounded (-) battery clamp first and replace grounded clamp last.

Sulfuric acid in battery electrolyte is poisonous and strong enough to burn skin, eat holes in clothing, and cause blindness if splashed into eyes.

Avoid hazards by:

- Filling batteries in a well-ventilated area
- Wearing eye protection and rubber gloves
- Avoiding use of air pressure to clean batteries
- Avoiding breathing fumes when electrolyte is added
- Avoiding spilling or dripping electrolyte
- Using correct battery booster or charger procedure.

If acid is spilled on skin or in eyes:

1. Flush skin with water.
2. Apply baking soda or lime to help neutralize the acid.
3. Flush eyes with water for 15—30 minutes. Get medical attention immediately.

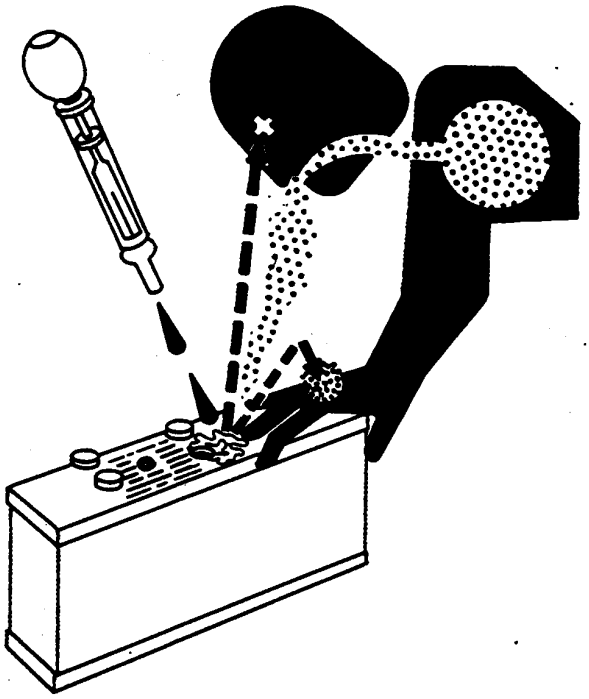
If acid is swallowed:

1. Do not induce vomiting.
2. Drink large amounts of water or milk, but do not exceed 2 L (2 qt.).
3. Get medical attention immediately.

WARNING: Battery posts, terminals, and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm. **Wash hands after handling.**



TS204 —UN—15APR13



TS203 —UN—23AUG88

DX,WW,BATTERIES -19-02DEC10-1/1

Avoid Heating Near Pressurized Fluid Lines

Flammable spray can be generated by heating near pressurized fluid lines, resulting in severe burns to yourself and bystanders. Do not heat by welding, soldering, or using a torch near pressurized fluid lines or other flammable materials. Pressurized lines can accidentally burst when heat goes beyond the immediate flame area.



TS953 —UN—15MAY90

DX,TORCH -19-10DEC04-1/1

Remove Paint Before Welding or Heating

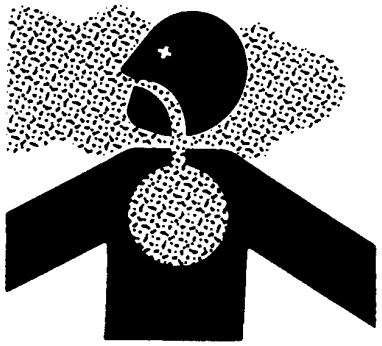
Avoid potentially toxic fumes and dust.

Hazardous fumes can be generated when paint is heated by welding, soldering, or using a torch.

Remove paint before heating:

- Remove paint a minimum of 100 mm (4 in.) from area to be affected by heating. If paint cannot be removed, wear an approved respirator before heating or welding.
- If you sand or grind paint, avoid breathing the dust. Wear an approved respirator.
- If you use solvent or paint stripper, remove stripper with soap and water before welding. Remove solvent or paint stripper containers and other flammable material from area. Allow fumes to disperse at least 15 minutes before welding or heating.

Do not use a chlorinated solvent in areas where welding will take place.



TS220 —UN—15APR13

Do all work in an area that is well ventilated to carry toxic fumes and dust away.

Dispose of paint and solvent properly.

DX,PAINT -19-24JUL02-1/1

Handle Electronic Components and Brackets Safely

Falling while installing or removing electronic components mounted on equipment can cause serious injury. Use a ladder or platform to easily reach each mounting location. Use sturdy and secure footholds and handholds. Do not install or remove components in wet or icy conditions.

If installing or servicing a RTK base station on a tower or other tall structure, use a certified climber.

If installing or servicing a global positioning receiver mast used on an implement, use proper lifting techniques and wear proper protective equipment. The mast is heavy and can be awkward to handle. Two people are required when mounting locations are not accessible from the ground or from a service platform.



TS249 —UN—23AUG88

DX,WW,RECEIVER -19-24AUG10-1/1

Practice Safe Maintenance

Understand service procedure before doing work. Keep area clean and dry.

Never lubricate, service, or adjust machine while it is moving. Keep hands, feet , and clothing from power-driven parts. Disengage all power and operate controls to relieve pressure. Lower equipment to the ground. Stop the engine. Remove the key. Allow machine to cool.

Securely support any machine elements that must be raised for service work.

Keep all parts in good condition and properly installed. Fix damage immediately. Replace worn or broken parts. Remove any buildup of grease, oil, or debris.

On self-propelled equipment, disconnect battery ground cable (-) before making adjustments on electrical systems or welding on machine.

On towed implements, disconnect wiring harnesses from tractor before servicing electrical system components or welding on machine.



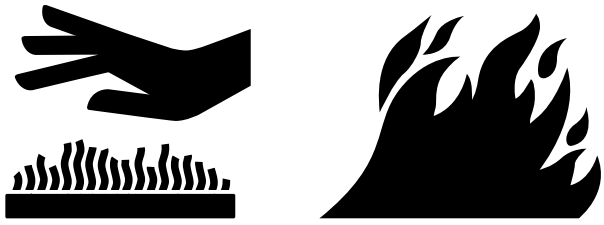
TS218 —UN—23AUG88

DX,SERV -19-17FEB99-1/1

Avoid Hot Exhaust

Servicing machine or attachments with engine running can result in serious personal injury. Avoid exposure and skin contact with hot exhaust gases and components.

Exhaust parts and streams become very hot during operation. Exhaust gases and components reach temperatures hot enough to burn people, ignite, or melt common materials.



RG17488 —UN—21AUG09

DX,EXHAUST -19-20AUG09-1/1

Clean Exhaust Filter Safely

During exhaust filter cleaning operations, the engine may run at elevated idle and hot temperatures for an extended period of time. Exhaust gases and exhaust filter components reach temperatures hot enough to burn people, or ignite or melt common materials.

Keep machine away from people, animals, or structures which may be susceptible to harm or damage from hot exhaust gases or components. Avoid potential fire or explosion hazards from flammable materials and vapors near the exhaust. Keep exhaust outlet away from people and anything that can melt, burn, or explode.

Closely monitor machine and surrounding area for smoldering debris during and after exhaust filter cleaning.

Adding fuel while an engine is running can create a fire or explosion hazard. Always stop engine before refueling machine and clean up any spilled fuel.

Always make sure that engine is stopped while hauling machine on a truck or trailer.

Contact with exhaust components while still hot can result in serious personal injury.

Avoid contact with these components until cooled to safe temperatures.

If service procedure requires engine to be running:

- Only engage power-driven parts required by service procedure
- Ensure that other people are clear of operator station and machine

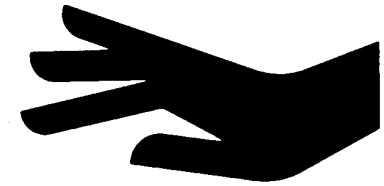
Keep hands, feet, and clothing away from power-driven parts.

Always disable movement (neutral), set the parking brake or mechanism and disconnect power to attachments or tools before leaving the operator's station.

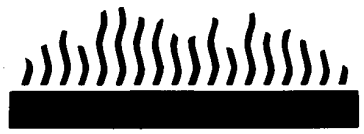
Shut off engine and remove key (if equipped) before leaving the machine unattended.

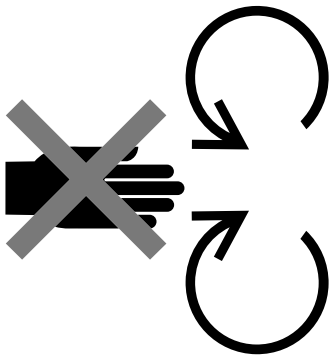


TS227 —UN—15APR13



TS271 —UN—23AUG88





TS1693 —UN—09DEC09



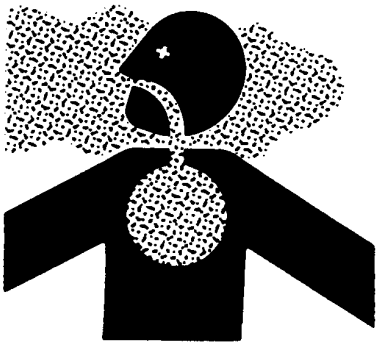
TS1695 —UN—07DEC09

DX,EXHAUST,FILTER -19-12JAN11-1/1

Work In Ventilated Area

Engine exhaust fumes can cause sickness or death. If it is necessary to run an engine in an enclosed area, remove the exhaust fumes from the area with an exhaust pipe extension.

If you do not have an exhaust pipe extension, open the doors and get outside air into the area.



TS220 —UN—15APR13

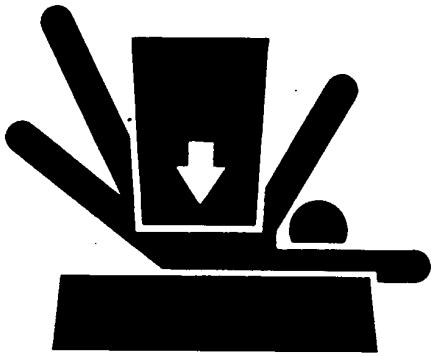
DX,AIR -19-17FEB99-1/1

Support Machine Properly

Always lower the attachment or implement to the ground before you work on the machine. If the work requires that the machine or attachment be lifted, provide secure support for them. If left in a raised position, hydraulically supported devices can settle or leak down.

Do not support the machine on cinder blocks, hollow tiles, or props that may crumble under continuous load. Do not work under a machine that is supported solely by a jack. Follow recommended procedures in this manual.

When implements or attachments are used with a machine, always follow safety precautions listed in the implement or attachment operator's manual.



TS229 —UN—23AUG88

DX,LOWER -19-24FEB00-1/1

Prevent Machine Runaway

Avoid possible injury or death from machinery runaway.

Do not start engine by shorting across starter terminals. Machine will start in gear if normal circuitry is bypassed.

NEVER start engine while standing on ground. Start engine only from operator’s seat, with transmission in neutral or park.



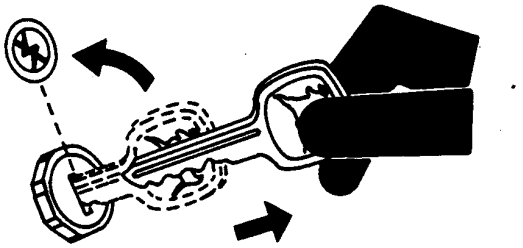
TS177 —UN—11JAN89

DX,BYPAS1 -19-29SEP98-1/1

Park Machine Safely

Before working on the machine:

- Lower all equipment to the ground.
- Stop the engine and remove the key.
- Disconnect the battery ground strap.
- Hang a "DO NOT OPERATE" tag in operator station.



TS230 —UN—24MAY89

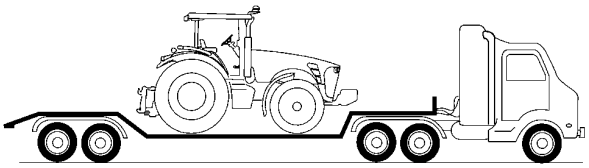
DX,PARK -19-04JUN90-1/1

Transport Tractor Safely

A disabled tractor is best transported on a flatbed carrier. Use chains to secure the tractor to the carrier. The axles and tractor frame are suitable attachment points.

Before transporting the tractor on a low-loader truck or flatbed rail wagon, make sure that the hood is secured over the tractor engine and that doors, roof hatch (if equipped) and windows are properly closed.

Never tow a tractor at a speed greater than 10 km/h (6 mph). An operator must steer and brake the tractor under tow.



RXA0103709 —UN—01JUL09

DX,WW,TRANSPORT -19-19AUG09-1/1

Service Cooling System Safely

Explosive release of fluids from pressurized cooling system can cause serious burns.

Shut off engine. Only remove filler cap when cool enough to touch with bare hands. Slowly loosen cap to first stop to relieve pressure before removing completely.



TS281 —UN—15APR13

DX,WW,COOLING -19-19AUG09-1/1

Service Accumulator Systems Safely

Escaping fluid or gas from systems with pressurized accumulators that are used in air conditioning, hydraulic, and air brake systems can cause serious injury. Extreme heat can cause the accumulator to burst, and pressurized lines can be accidentally cut. Do not weld or use a torch near a pressurized accumulator or pressurized line.

Relieve pressure from the pressurized system before removing accumulator.

Relieve pressure from the hydraulic system before removing accumulator. Never attempt to relieve hydraulic system or accumulator pressure by loosening a fitting.

Accumulators cannot be repaired.



TS281 —UN—15APR13

DX,WW,ACCLA2 -19-22AUG03-1/1

Service Tires Safely

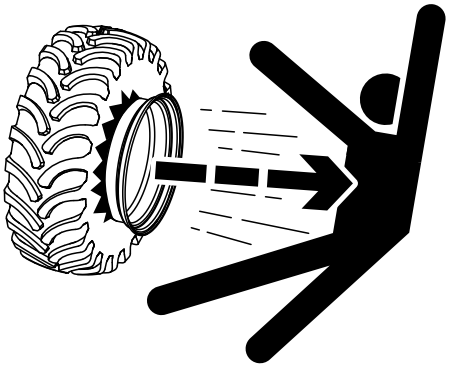
Explosive separation of a tire and rim parts can cause serious injury or death.

Do not attempt to mount a tire unless you have the proper equipment and experience to perform the job.

Always maintain the correct tire pressure. Do not inflate the tires above the recommended pressure. Never weld or heat a wheel and tire assembly. The heat can cause an increase in air pressure resulting in a tire explosion. Welding can structurally weaken or deform the wheel.

When inflating tires, use a clip-on chuck and extension hose long enough to allow you to stand to one side and NOT in front of or over the tire assembly. Use a safety cage if available.

Check wheels for low pressure, cuts, bubbles, damaged rims, or missing lug bolts and nuts.

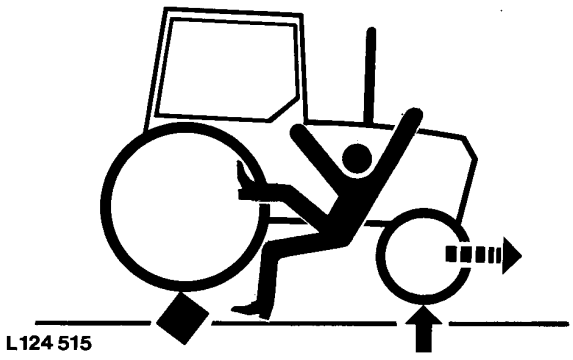


RXA0103438 —UN—11JUN09

DX,WW,RIMS -19-19AUG09-1/1

Service Front-Wheel Drive Tractor Safely

When servicing front-wheel drive tractor with the rear wheels supported off the ground and rotating wheels by engine power, always support front wheels in a similar manner. Loss of electrical power or transmission hydraulic system pressure will engage the front driving wheels, pulling the rear wheels off the support if front wheels are not raised. Under these conditions, front drive wheels can engage even with switch in disengaged position.

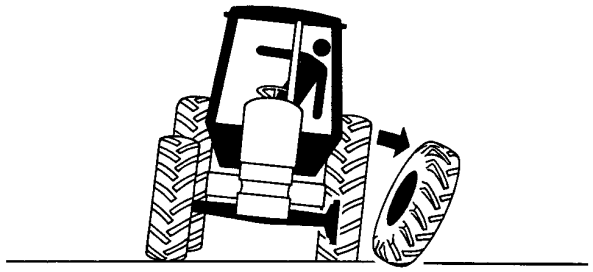


L124515 —UN—06AUG94

DX,WW,MFWD -19-19AUG09-1/1

Tightening Wheel Retaining Bolts/Nuts

Torque wheel retaining bolts/nuts at the intervals specified in section Break-In Period and Service.



L124 516

L124516 —UN—03JAN95

DX,WW,WHEEL -19-12OCT11-1/1

Avoid High-Pressure Fluids

Inspect hydraulic hoses periodically – at least once per year – for leakage, kinking, cuts, cracks, abrasion, blisters, corrosion, exposed wire braid or any other signs of wear or damage.

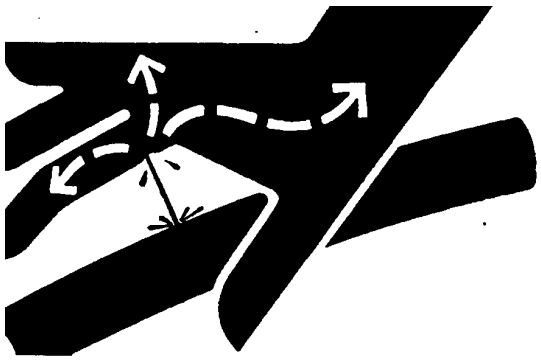
Replace worn or damaged hose assemblies immediately with John Deere approved replacement parts.

Escaping fluid under pressure can penetrate the skin causing serious injury.

Avoid the hazard by relieving pressure before disconnecting hydraulic or other lines. Tighten all connections before applying pressure.

Search for leaks with a piece of cardboard. Protect hands and body from high-pressure fluids.

If an accident occurs, see a doctor immediately. Any fluid injected into the skin must be surgically removed within a few hours or gangrene may result. Doctors unfamiliar with this type of injury should reference a knowledgeable medical source. Such information is available in English from Deere & Company Medical Department in Moline, Illinois, U.S.A., by calling 1-800-822-8262 or +1 309-748-5636.



X9811 —UN—23AUG88

DX,FLUID -19-12OCT11-1/1

Do Not Open High-Pressure Fuel System

High-pressure fluid remaining in fuel lines can cause serious injury. Do not disconnect or attempt repair of fuel lines, sensors, or any other components between the high-pressure fuel pump and nozzles on engines with High Pressure Common Rail (HPCR) fuel system.

Only technicians familiar with this type of system can perform repairs. (See your John Deere dealer.)



TS1343 —UN—18MAR92

DX,WW,HPCR1 -19-07JAN03-1/1

Store Attachments Safely

Stored attachments such as dual wheels, cage wheels, and loaders can fall and cause serious injury or death.

Securely store attachments and implements to prevent falling. Keep playing children and bystanders away from storage area.



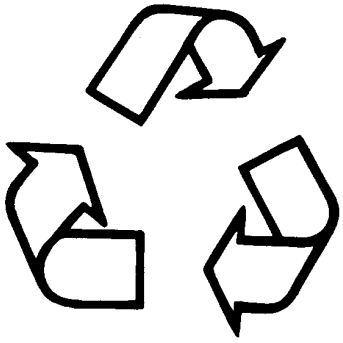
TS219 —UN—23AUG88

DX,STORE -19-03MAR93-1/1

Decommissioning: Proper Recycling and Disposal of Fluids and Components

Safety and environmental stewardship measures must be taken into account when decommissioning a machine and/or component. These measures include the following:

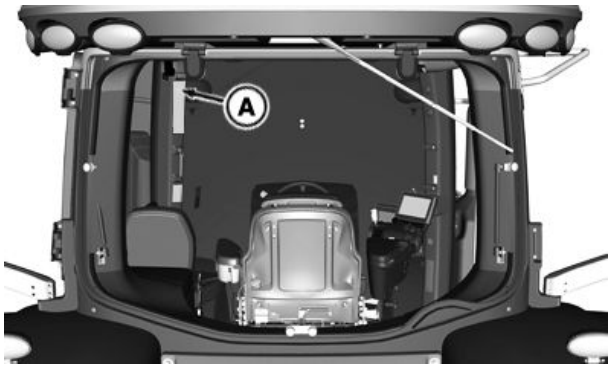
- Use appropriate tools and personal protective equipment such as clothing, gloves, face shields or glasses, during the removal or handling of objects and materials.
- Follow instructions for specialized components.
- Release stored energy by lowering suspended machine elements, relaxing springs, disconnecting the battery or other electrical power, and releasing pressure in hydraulic components, accumulators, and other similar systems.
- Minimize exposure to components which may have residue from agricultural chemicals, such as fertilizers and pesticides. Handle and dispose of these components appropriately.
- Carefully drain engines, fuel tanks, radiators, hydraulic cylinders, reservoirs, and lines before recycling components. Use leak-proof containers when draining fluids. Do not use food or beverage containers.
- Do not pour waste fluids onto the ground, down a drain, or into any water source.
- Observe all national, state, and local laws, regulations, or ordinances governing the handling or disposal of waste fluids (example: oil, fuel, coolant, brake fluid); filters; batteries; and, other substances or parts. Burning of flammable fluids or components in other than specially designed incinerators may be prohibited by law and could result in exposure to harmful fumes or ashes.
- Service and dispose of air conditioning systems appropriately. Government regulations may require a certified service center to recover and recycle air conditioning refrigerants which could damage the atmosphere if allowed to escape.
- Evaluate recycling options for tires, metal, plastic, glass, rubber, and electronic components which may be recyclable, in part or completely.
- Contact your local environmental or recycling center, or your John Deere dealer for information on the proper way to recycle or dispose of waste.



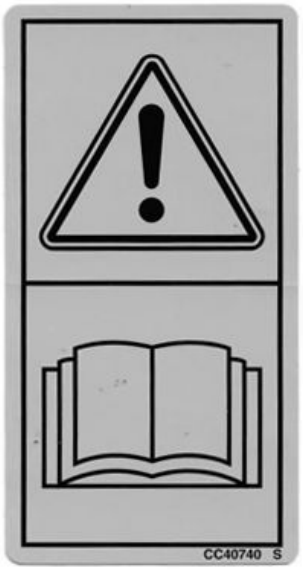
TS1133 —UN—15APR13

DX,DRAIN -19-01JUN15-1/1

Operator's Manual



RXA0143881 —UN—22JUL14



RXA0146616 —UN—13DEC14

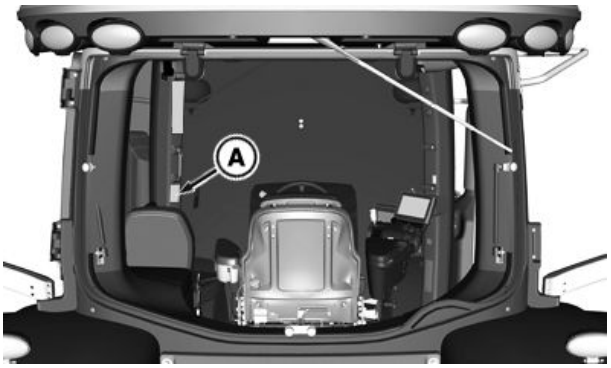
A—Operator's Manual Label

CAUTION: Avoid the risk of injury.

This Operator's Manual contains important information necessary for safe machine operation and explanation of safety signs. Carefully observe all safety rules to avoid accidents.

RD47322,00005C7 -19-08AUG14-1/1

Seat Belt



RXA0143883 —UN—22JUL14



RXA0146617 —UN—22JAN15

A—Seat Belt Label

Use Seat Belt Properly.

CAUTION: Avoid crushing injury or death during rollover.

This machine is equipped with a roll-over protective structure (ROPS).

USE a seat belt when you operate with a ROPS.

• Hold the latch and pull the seat belt across the body.

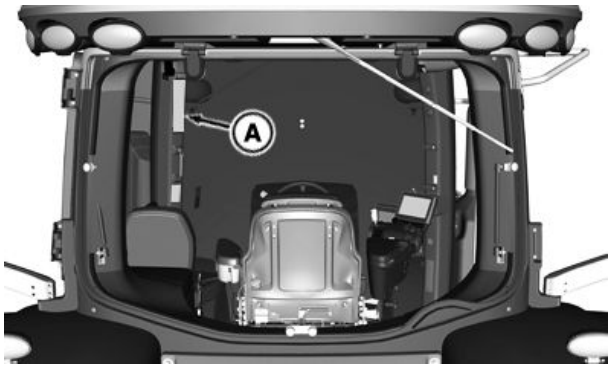
• Insert the latch into the buckle. Listen for a click.

• Tug on the seat belt latch to make sure the belt is securely fastened.

• Snug the seat belt across the hips.

RD47322,0000562 -19-18JUL14-1/1

Passenger Seat



RXA0143882 —UN—22JUL14



RXA0146614 —UN—13DEC14

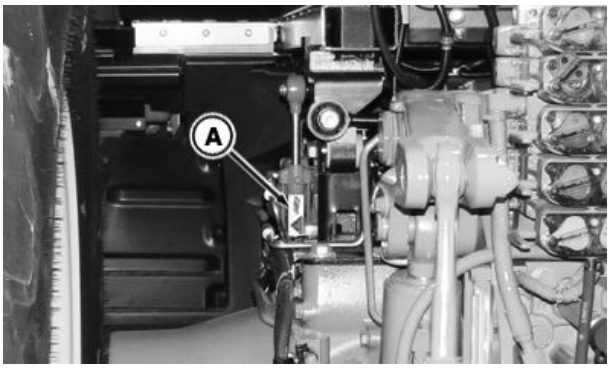
A— Passenger Seat Label

CAUTION: Avoid crushing during rollover.

The passenger seat must NOT be used while in field operation. Riders are permitted only on a properly installed passenger seat that has been approved by John Deere™. When using the passenger seat, always use the seat belt.

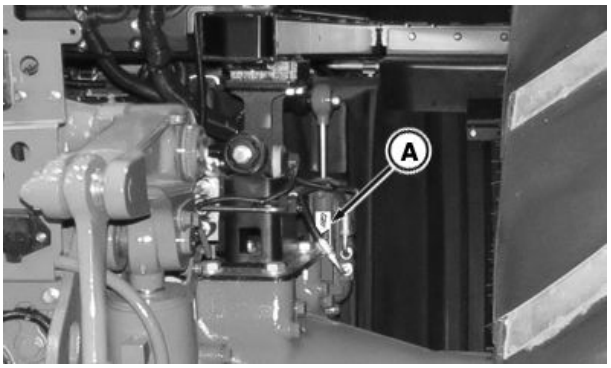
RD47322,0000563 -19-08AUG14-1/1

Cab Suspension (If Equipped)



RXA0134888 —UN—05AUG13

Cab Suspension Cylinder Label - Left Side



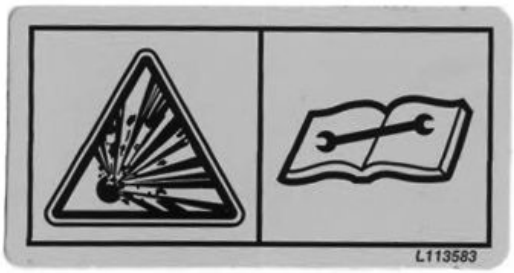
RXA0134889 —UN—05AUG13

Cab Suspension Cylinder Label - Right Side

CAUTION: Avoid crushing and fluid injection.

Releasing pressure may cause machine movement and exposure to fluid under pressure. See dealer for instruction on relieving pressure before servicing system.

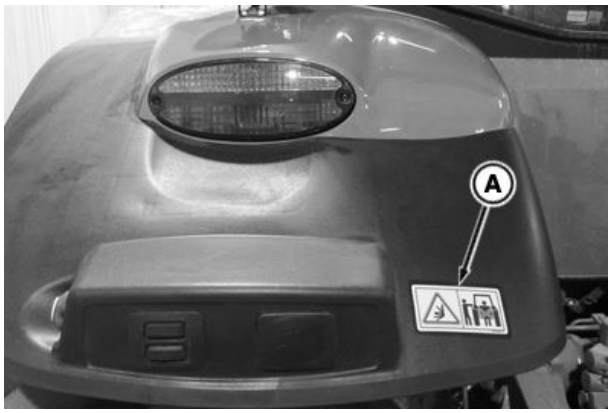
A— Cab Suspension Label



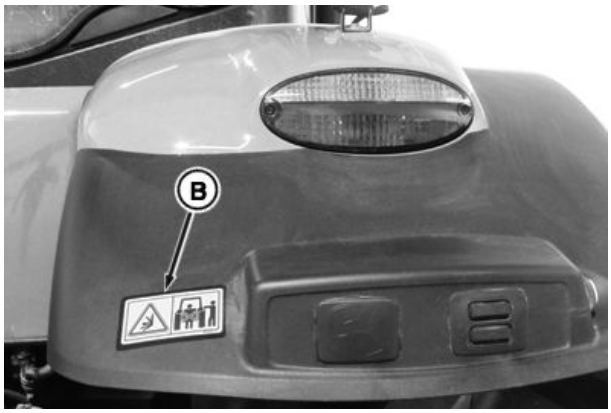
RXA0146611 —UN—13DEC14

RD47322,0000564 -19-05AUG14-1/1

Rear Hitch Remote Switch (If Equipped)



RXA0134423 —UN—05AUG13



RXA0134424 —UN—05AUG13



RXA0146615 —UN—15DEC14



RXA0146621 —UN—15DEC14

A— Left-Hand Label **B— Right-Hand Label**

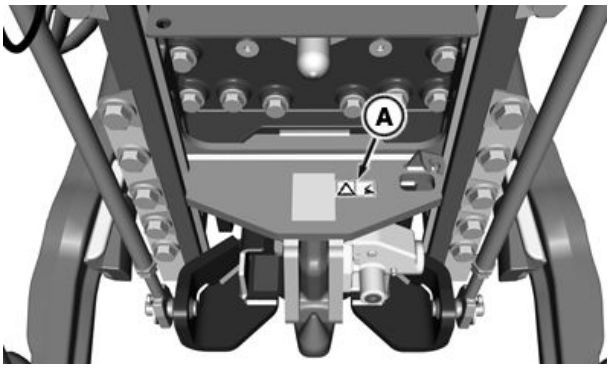
CAUTION: Avoid crushing.

When attaching or detaching an implement, there is a risk of crushing in the area between the tractor and implement.

When attaching to the hitch, stay clear of the area where the three-point hitch rises and do not permit anyone to be in the area.

RD47322,0000565 -19-19MAR15-1/1

Pick-Up Hitch (If Equipped)



RXA0131330 —UN—11SEP13



RXA0146623 —UN—16DEC14

A— Pick-Up Hitch Label

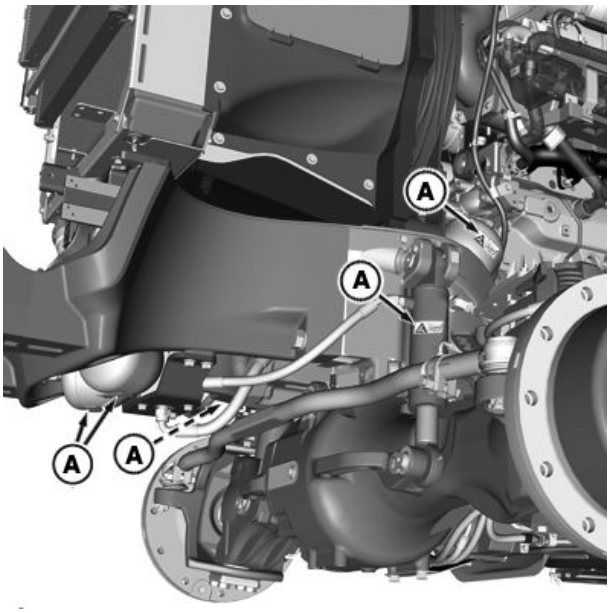
⚠ CAUTION: Avoid crushing and pinching.

When attaching or detaching an implement, there is a risk of crushing in the area between the tractor and implement.

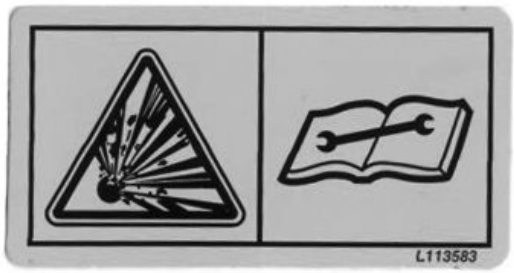
Keep clear of pick-up hitch components while operating the pick-up hitch.

RD47322,0000566 -19-18JUL14-1/1

Triple Link Suspension Plus (TLS™ Plus) (If Equipped)



RXA0134899 —UN—15JUL14



RXA0146611 —UN—13DEC14

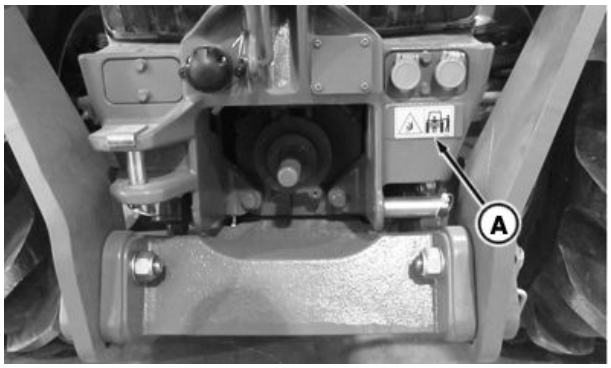
A—TLS™ Plus Label

⚠ CAUTION: Avoid crushing and fluid injection.

Releasing pressure may cause machine movement and exposure to fluid under pressure. See dealer for instruction on relieving pressure before servicing system.

RD47322,00005CC -19-06JAN14-1/1

Front Hitch (If Equipped)



RXA0134881 —UN—05AUG13



RXA0146621 —UN—15DEC14

A—Front Hitch Label

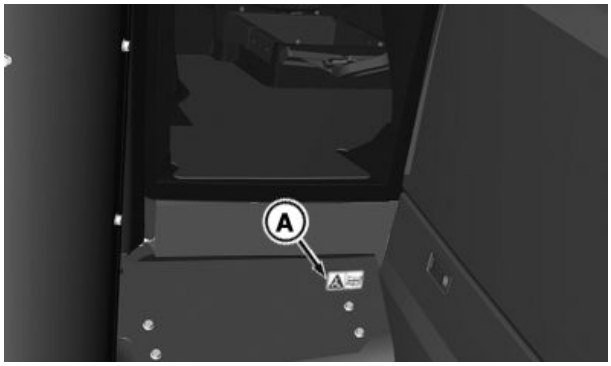
CAUTION: Avoid crushing.

When attaching or detaching an implement, there is a risk of crushing in the area between the tractor and implement.

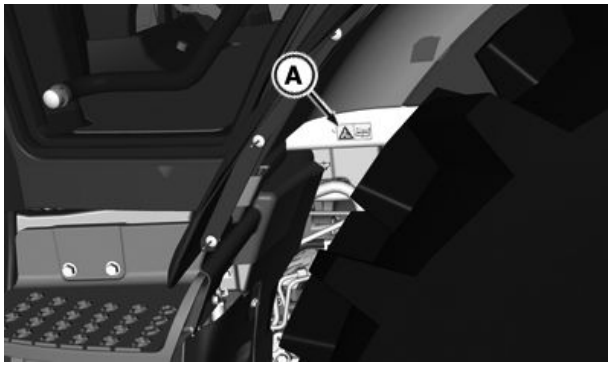
When attaching to the hitch, stay clear of the area where the three-point hitch, stay clear of the area where the three-point hitch rises and do not permit anyone to be in the area.

RD47322,00005CD -19-14JUL14-1/1

Brake Accumulator (If Equipped)



RXA0134946 —UN—28AUG13



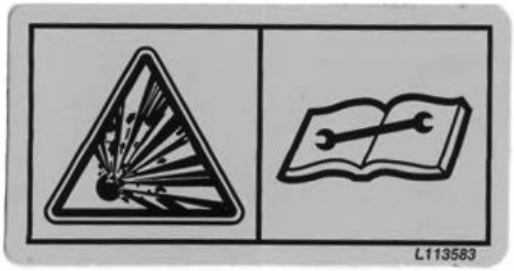
RXA0134947 —UN—07AUG13

Brake Accumulator Label (Right Front Exhaust Shield, Convenience Step Removed For Clarity)

CAUTION: Avoid crushing and fluid injection.

Releasing pressure may cause machine movement and exposure to fluid under pressure. See dealer for instruction on relieving pressure before servicing system.

A—Brake Accumulator Label

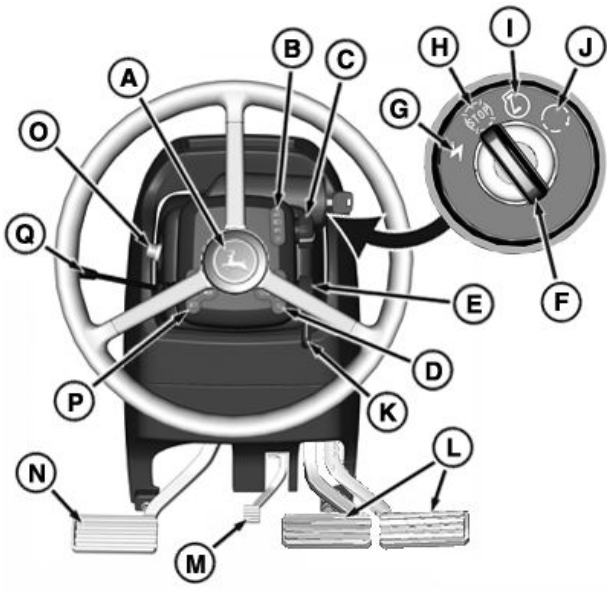


RXA0146611 —UN—13DEC14

RD47322,00005CE -19-04AUG14-1/1

Front Console

A—Steering Wheel Telescope Release
B—Light Selection Cluster
C—Light Selector Knob
D—Windshield Wiper Cluster
E—Windshield Wiper Control Knob
F—Key Switch
G—Accessories
H—OFF (STOP)
I— Run
J— Start
K—Steering Column Tilt Release Lever
L— Brake Pedals
M—Steering Wheel Tilt Release
N—Clutch Pedal
O—Starting Aid Switch (If Equipped)
P—Turn Signal Icon, Road/Field Light Icon and Horn Icon
Q—Turn Signal Lever/Horn



RXA0142885 —UN—19JUN14

Front Console

RD47322,0000150 -19-19JUN14-1/1

Information Indicators

STOP, Service Alert and Information Indicators are accompanied by informative message, diagnostic trouble code, and/or fault description shown on CommandCenter™. For description of indicators and codes, see STOP, Service Alert and Information Indicators in Diagnostic Trouble Codes section of this Operator's Manual.

STOP Indicator (A): Light flashes and alarm sounds continuously.

Service Alert Indicator (B): Light flashes and alarm sounds five times indicating performance or operational problem is detected that needs to be resolved as soon as possible.

Information Indicator (C): Light illuminates continuously and alarm sounds for two seconds, indicating possible fault condition.

CommandCenter is a trademark of Deere & Company

RXA0109847 —UN—20AUG10



Information Indicators on Corner Post Display

A—STOP Indicator
B—Service Alert Indicator
C—Information Indicator

RD47322,0000152 -19-29JUN15-1/1

Aftertreatment Indicators Overview

The Diesel Exhaust Fluid (DEF) indicator illuminates when the DEF is low. Fill DEF tank.

When the DEF indicator is combined with the warning indicator or stop engine indicator engine performance is reduced by the Engine Control Unit (ECU) because the DEF is below a measurable level. Fill DEF tank.

When engine emissions temperature indicator illuminates exhaust gas temperature is high, elevated idle is active, or exhaust filter cleaning is in process. The machine can be operated as normal unless the operator determines the machine is not in a safe location for high exhaust temperatures and disables auto cleaning.

When engine emissions temperature indicator is combined with the warning indicator or stop engine indicator engine performance is reduced by the ECU because the exhaust gas temperature is higher than expected. Follow Diagnostic Trouble Code (DTC) procedure or see your authorized servicing dealer.

When the exhaust filter indicator illuminates the exhaust filter cleaning is in process, aftertreatment system has a fault, or the exhaust filter is in need of cleaning and the operator has disabled auto exhaust filter cleaning. If conditions are safe, the operator should enable the auto exhaust filter clean setting or perform manual service regeneration or follow DTC procedure.

When the exhaust filter indicator is combined with the warning indicator engine performance is reduced by the ECU because there is an aftertreatment system fault or the soot level of the exhaust filter is moderately high. If conditions are safe, the operator should enable the auto exhaust filter clean function. If conditions are not safe, the operator should move the machine to a safe location and engage the auto exhaust filter cleaning mode. Perform manual service regeneration or follow DTC procedure.

When the exhaust filter indicator is combined with the stop engine indicator engine performance is further reduced by the ECU because there is an aftertreatment system fault or the soot level of the exhaust filter is extremely high. If this combination is present, see your authorized servicing dealer.

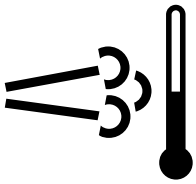
The auto cleaning disabled indicator illuminates when the operator has engaged the request to disable the auto exhaust filter cleaning function. This icon remains illuminated until the operator reengages automatic exhaust filter cleaning from the diagnostic gauge. Disabling auto mode is not recommended for any situation unless it is safety related or if the fuel tank lacks the required fuel to complete the cleaning process.

RG22487 —UN—21AUG13



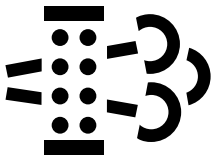
Diesel Exhaust Fluid Indicator

RG22488 —UN—21AUG13



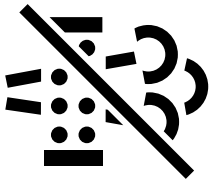
Engine Emissions Temperature Indicator

RG22489 —UN—21AUG13



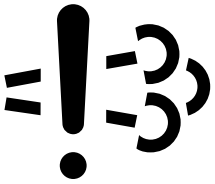
Exhaust Filter Indicator

RG22490 —UN—21AUG13



Auto Cleaning Disabled Indicator

RG22491 —UN—21AUG13



Engine Emissions System Malfunction Indicator

RG22492 —UN—21AUG13



Warning Indicator

RG22493 —UN—21AUG13



Stop Engine Indicator

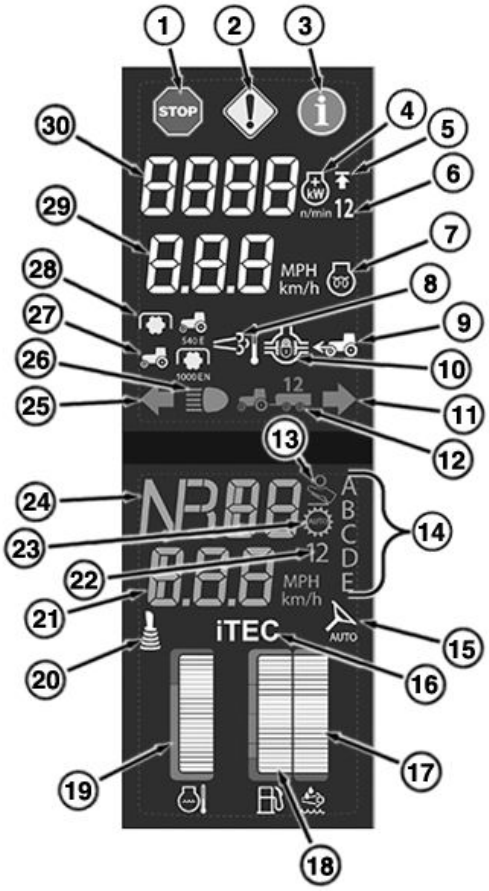
The engine emissions system malfunction indicator illuminates when engine emissions are outside of normal operating range or engine emissions system fault. Follow DTC procedure or see your authorized servicing dealer

When the engine emissions system malfunction indicator is combined with the warning indicator engine performance is reduced by the ECU because the engine emissions are outside of normal operating range or engine emissions system fault. Follow DTC procedure or see your authorized servicing dealer

DX,AFTRTREAT,INDCATRS -19-12JUL13-1/1

Corner Post Display

1— Stop Indicator
2— Service Alert Indicator
3— Information Indicator
4— Intelligent Power Management Indicator
5— FieldCruise™ Indicator
6— FieldCruise™ Selection (1 or 2)
7— Engine Preheat Indicator (For 6.8L Engines Only)
8— Exhaust Filter Cleaning Indicator
9— MFWD Indicator (If Equipped)
10— Differential Lock Indicator (If Equipped)
11— Right Turn Indicator
12— Trailer Indicator (If Equipped)
13— Foot Pedal Mode Indicator (If Equipped)
14— Transmission Range Indicators
15— AutoTrac™ Indicator
16— iTEC™ Indicator
17— Diesel Exhaust Fluid (DEF) Gauge (FT4/Stage IV Engines Only)
18— Fuel Gauge
19— Coolant Temperature Gauge
20— ISOBUS Auxiliary Mode Indicator
21— Set Speed
22— IVT™ AutoPowr™ Forward Speed Band Indicator (If Equipped)
23— Automatic Shifting Indicator
24— Current Gear/Range
25— Left Turn Indicator
26— High Beam Indicator
27— Rear PTO Indicator (If Equipped)
28— Front PTO Indicator (If Equipped)
29— Vehicle Ground Speed
30— Tachometer



RXA0135726 —UN—26SEP13

Corner Post Display

FieldCruise is a trademark of Deere & Company
AutoTrac is a trademark of Deere & Company
iTEC is a trademark of Deere & Company
IVT is a trademark of Deere & Company
AutoPowr is a trademark of Deere & Company

RD47322,0000151 -19-21OCT13-1/1

Digital Indicators—Tachometer, Ground Speed, Transmission, and Set Speed

A—Tachometer: Displays engine speed in multiples of 10. If "- - -" is displayed, no speed signal is being received.

B—Travel Speed Indicator: Displays travel speed in either miles per hour or kilometers per hour, depending on operator selected units (U.S. or Metric).

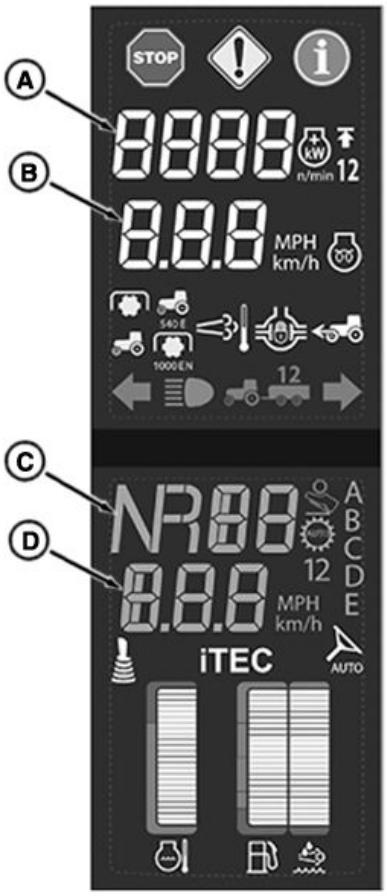
If "- - -" is displayed, no speed signal is being received.

C—Transmission Information: Shows if transmission is in Neutral—N, Forward—F, Reverse—R, or Park—P.

If "- - -" is displayed, no gear signal is being received.

IVT™ /AutoPowr™ Only: Shows speed bands 1 or 2 and speed settings.

D—Set Speed Indicator: Shows what speed is set using set speed adjuster.



RXA0135728 —UN—26NOV13

A—Tachometer
B—Travel Speed Indicator
C—Transmission Information
D—Set Speed Indicator

IVT is a trademark of Deere & Company
AutoPowr is a trademark of Deere & Company

RD47322,0000153 -19-24JUL14-1/1

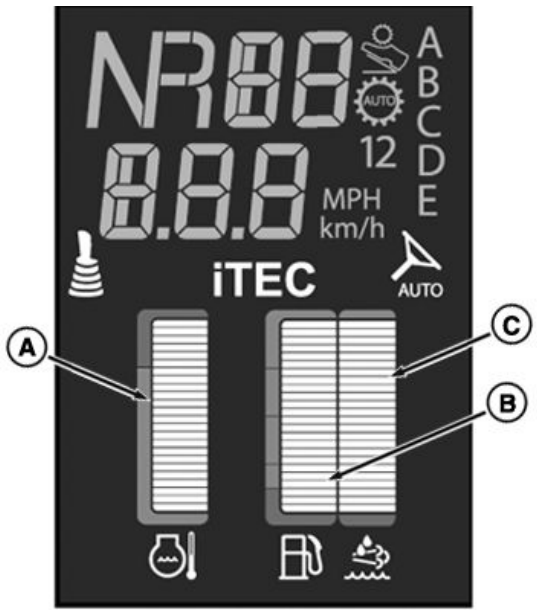
Gauges—Coolant Temperature, Diesel Exhaust Fluid (DEF) Level and Fuel Level

A—Coolant Temperature Gauge: Shows engine coolant temperature between 40—120 °C (104—248 °F). All segments are off when coolant temperature is below 40 °C (104 °F). All segments are lit when temperature is 120 °C (248 °F) and above.

B—Fuel Level Gauge: Displays fuel level in tank. Each lighted segment represents 4% of fuel tank total capacity. When fuel tank is full, all segments are lit. When only bottom segment is lit, tank is nearly empty with approximately 39 L (10 gal) remaining.

NOTE: Diesel Exhaust Fluid (DEF) is only available on FT4/ Stage IV engine equipped tractors. DEF gauge will not show up if not equipped with those engines.

C—Diesel Exhaust Fluid (DEF) Gauge (If Equipped): Displays diesel exhaust fluid level. Each lighted segment represents 4% of DEF fluid tank total capacity. When DEF fluid tank is full, all segments are lit. When only bottom segment is lit, tank is nearly empty. DEF fluid tank should be filled whenever fuel tank is filled.



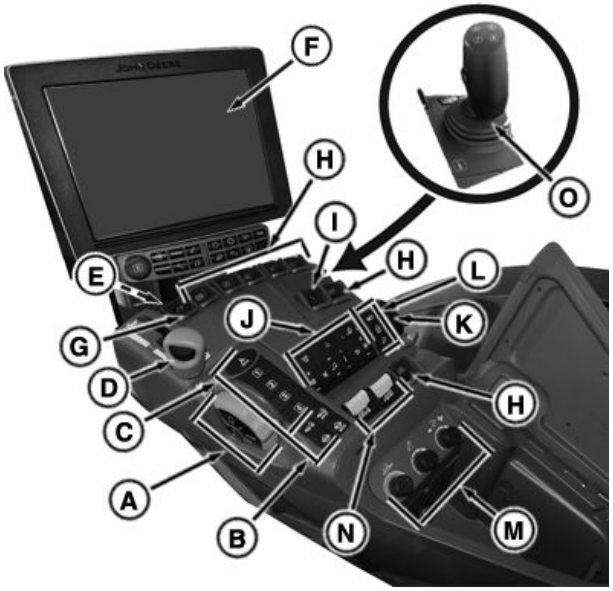
RXA0129338 —UN—05NOV12

A—Coolant Temperature Gauge
B—Fuel Level Gauge
C—Diesel Exhaust Fluid (DEF) Gauge

RD47322,0000154 -19-10NOV14-1/1

CommandARM™ with Generation 4 CommandCenter™ Display

A—Hand Throttle Control
B—Differential Lock & Mechanical Front-Wheel Drive (MFWD) Buttons
C—iTEC™ & AutoTrac™ Resume
D—Speed Control Lever/Transmission Shift Lever
E—SCV Control Lever Lock/ISB Lock
F—Generation 4 Command-Center™
G—Rear Hitch Control Lever
H—SCV Control Levers
I— Front Hitch Control Lever (If Equipped)
J— Climate, Radio and Lighting Controls
K—Depth Adjust Hitch Dial
L— Set/Lock/Resume Buttons
M—Load Depth/Upper Limit/Drop Rate Hitch Dials
N—Front and Rear PTO Control Levers (If Equipped)
O—Joystick (If Equipped)



RXA0144152 —UN—31JUL14

CommandARM™

CommandARM is a trademark of Deere & Company
iTEC is a trademark of Deere & Company
AutoTrac is a trademark of Deere & Company
CommandCenter is a trademark of Deere & Company

RD47322,0000155 -19-13AUG14-1/1

CommandARM™ Joystick (If Equipped)

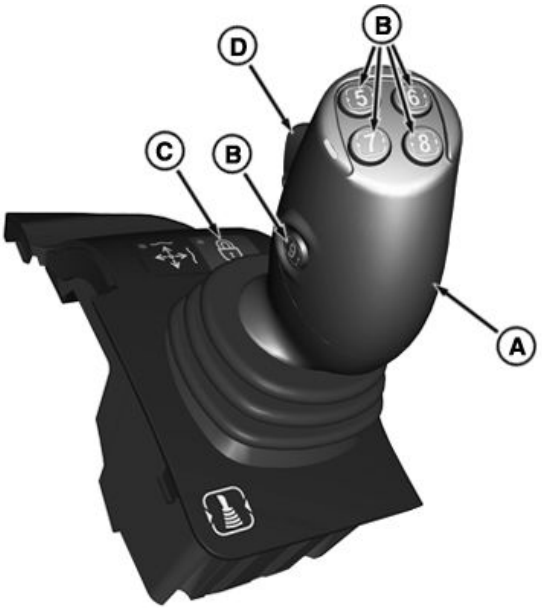
NOTE: Joystick buttons 5-9 (B) cannot be reconfigured at this time. Function may become available for future use.

Controls Setup Icon appears around controls that may be setup to control other functions. Review Controls Setup Page (see Controls Setup in CommandCenter™ section of this Operator's Manual) to verify function of each control.

*NOTE: Process called "***Assignment***" allows operator to assign Joystick various tractor or implement functions. See Controls Setup in CommandCenter™ section of this Operator's Manual for more information.*

Only joystick (front-to-back and side-to-side movements) and rocker switch can be reconfigured.

A— Joystick (If Equipped)
B— Joystick Buttons
C— Joystick Lock Button
D— Joystick Rocker Switch



RXA0133231 —UN—17JUN13

Joystick

RXA0133735 —UN—17JUL13



Controls Setup Icon

CommandCenter is a trademark of Deere & Company

RD47322,000015E -19-11APR14-1/1

CommandARM™ Secondary Brake Lever (If Equipped)

A—Secondary Brake Lever



RXA0143011 —UN—25JUN14

Secondary Brake Lever

KT81203,000014B -19-25JUN14-1/1

CommandARM™ Rear and Front Hitch (If Equipped) Controls

Hitch adjustments shown are for rear hitch. For more information, see Hitch section of this Operator's Manual.

A—Rear Hitch Control Lever
B—Front Hitch Control Lever
C—Set Point Button
D—Rear Hitch Control Lever Lock
E—Return to Lower Set Point
F—Depth Adjust Hitch Dial
G—Drop Rate Hitch Dial
H—Upper Limit Hitch Dial
I— Load Depth Hitch Dial



Front and Rear Hitch Controls

RD47322,000015D -19-07AUG15-1/1

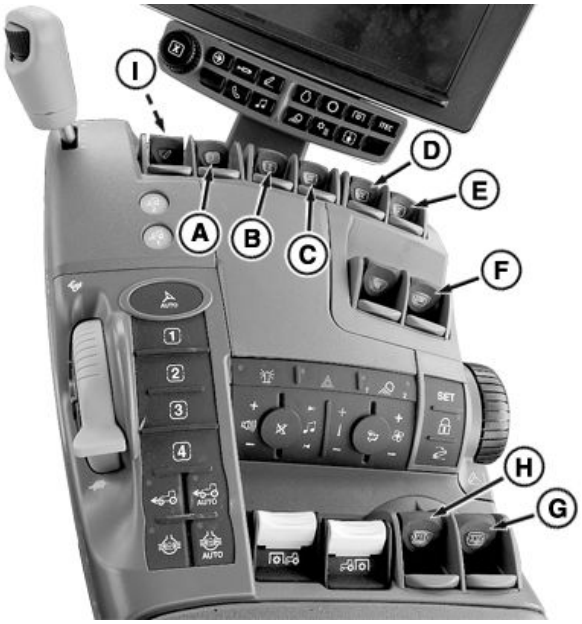
CommandARM™ SCV Control Levers

*NOTE: Reconfigurable SCV Controls allows operator to match device with various implement functions. This process is called "***Assignment***" input to function. See "Controls Setup" in CommandCenter™ section of this Operator's Manual for more information.*

IMPORTANT: SCV control lever lock (I) locks out control of SCVs and Front Hitch (If Equipped) by SCV control levers and front hitch control lever only.

Controls Setup icon appears on SCV control levers that are reconfigurable.

A—SCV 1 Control Lever
B—SCV 2 Control Lever
C—SCV 3 Control Lever
D—SCV 4 Control Lever
E—SCV 5 Control Lever
F—Front Hitch Midstack/SCV 14
G—SCV 15 Control Lever (If Equipped)
H—SCV 6 Control Lever (If Equipped)
I— SCV Control Lever Lock



RXA0149597 —UN—07AUG15

SCV Control Levers

RXA0133735 —UN—17JUL13



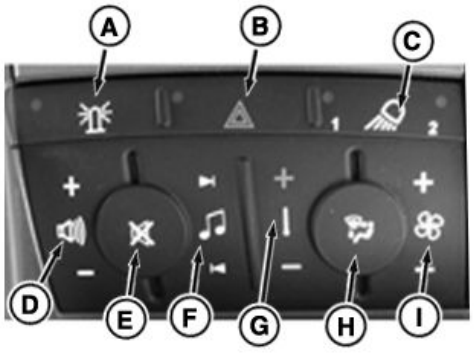
Controls Setup Icon

CommandCenter is a trademark of Deere & Company

RD47322,000015C -19-07AUG15-1/1

CommandARM™ Climate, Radio and Lighting Controls

A—Rotary Beacon Lights Button
B—Hazard Lights Button
C—Field Lights 1 and 2 Toggle Button
D—Radio Volume
E—Radio Mute Button
F—Next/Previous Station, Preset or Track
G—Temperature Control
H—Air Flow Control
I— Fan Control



RXA0141845 —UN—04JUN14

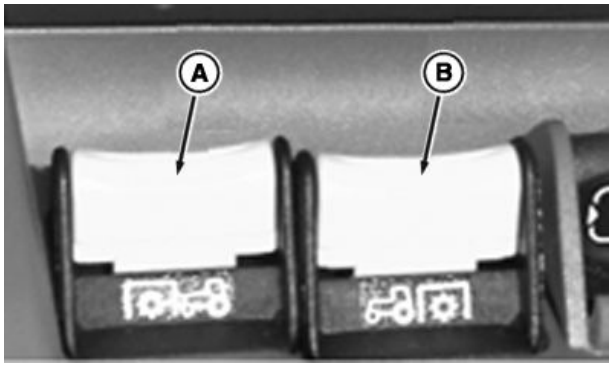
Climate, Radio and Lighting Controls

RD47322,000015B -19-04JUN14-1/1

CommandARM™ PTO Control Levers (If Equipped)

A—Front PTO Control Lever

B—Rear PTO Control Lever



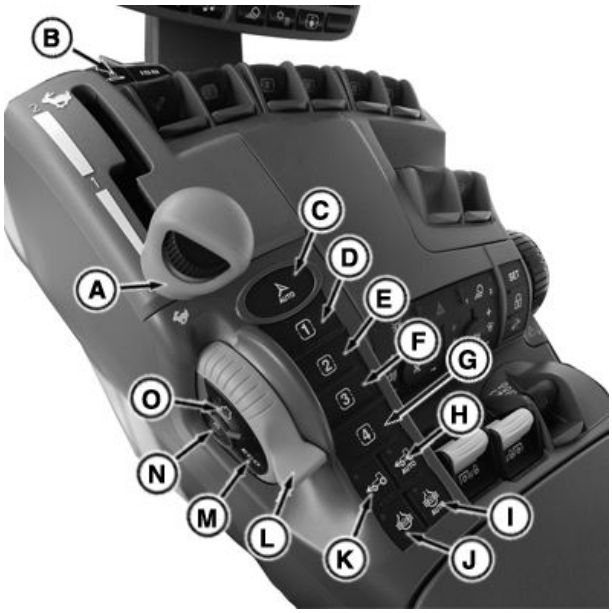
RXA0140969 —UN—11APR14

PTO Control Levers

RD47322,000015A -19-23JUN14-1/1

CommandARM™ Left-Hand Side Controls

A—Speed Control Lever/Transmission Shift Lever
B—SCV Control Lever Lock/ ISB Lock
C—AutoTrac™ Resume Button
D—iTEC™ 1 Button
E—iTEC™ 2 Button
F—iTEC™ 3 Button
G—iTEC™ 4 Button
H—Auto MFWD Button
I— Auto Differential Lock Button
J— Differential Lock Button
K—MFWD Button
L—Hand Throttle Control
M—ECO ON/OFF Button
N—Foot Throttle Lock/Unlock Button
O—FieldCruise™ ON/OFF Button



RXA0144153 —UN—31JUL14

CommandARM™ Left-Hand Side Controls

CommandARM is a trademark of Deere & Company
AutoTrac is a trademark of Deere & Company
iTEC is a trademark of Deere & Company
FieldCruise is a trademark of Deere & Company

RD47322,0000159 -19-13AUG14-1/1

CommandARM™ ISOBUS Shortcut Button (ISB)

In an ISOBUS-system operator can activate function of implement over ISOBUS via Implement's Operator Interface on display. Read ISOBUS controller's operator's manual for more information.

After activation, operator can change screen of display in order to operate another implement or interact with other applications.

Deactivation of functions on first implement is not possible unless operator manually switches back to according screen of first implement. ISB provides a direct method to inform all ISOBUS participants about operators desire to deactivate functions that were activated by an ISOBUS control.



RXA0136449 —UN—06NOV13

CommandARM™ ISOBUS Shortcut Button

A—ISOBUS Shortcut Button (ISB)

⚠ CAUTION: Read appropriate operator's manual. ISB button function is proprietary to implement manufacturer. Verify button function in a safe and open area that is clear of bystanders.

ISOBUS Shortcut Button (ISB): Pressing ISB button (A) sends "Stop All Implement Operations" signal out on ISOBUS. Reaction on ISB is proprietary to receiving control unit.

Example: Implement currently using ISOBUS Class 3 automation (see Tractor Implement Automation™ section of Operator's Manual) goes to its safe state.

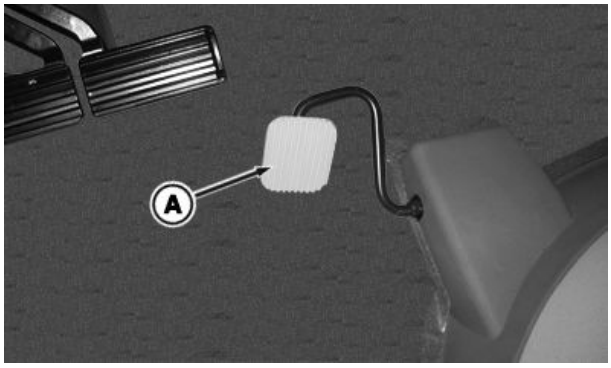
CommandARM is a trademark of Deere & Company
Tractor Implement Automation is a trademark of Deere & Company

SV81855,000008F -19-13APR15-1/1

Foot Throttle (If Equipped)

Foot operated throttle controls engine or ground speed dependent on transmission mode. Depress foot throttle (A) to increase engine rpm or wheel speed.

A—Foot Throttle



RXA0135636 —UN—19SEP13

RD47322,0000157 -19-30JUN14-1/1

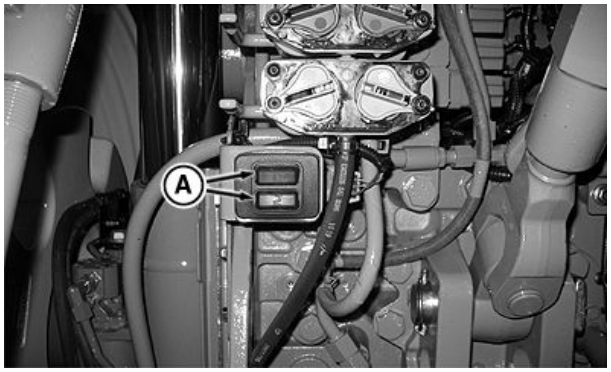
Hitch, SCV and PTO External Switches

CAUTION: To prevent injury or damage caused by tractor movement, be sure transmission is in PARK position before using external raise/lower switches. Stay clear of interference points when using external raise/lower switches.

Tractors without fender extensions have external hitch raise and lower switches (A) mounted on valve stack.

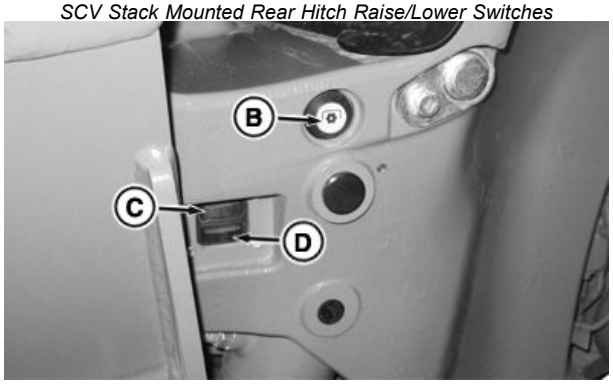
Tractors equipped with front hitch may have front mounted external raise (C) and lower (D) switches. Tractors with front PTO may have external front PTO switch (B).

A—Hitch External Stack Mounted Switch
B—Front PTO Switch (If Equipped)
C—Front Hitch Raise Switch
D—Front Hitch Lower Switch



RXA0112400 —UN—21DEC10

SCV Stack Mounted Rear Hitch Raise/Lower Switches



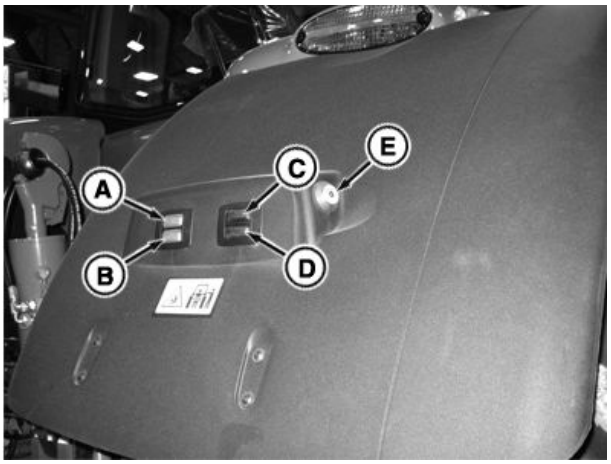
RXA0143012 —UN—26JUN14

RD47322,0000158 -19-10AUG15-1/2

Fender Extension Switches (If Equipped)

Tractors with optional rear fender extensions may have optional raise (C) and lower (D) switches on rear fenders. SCV III extend (A) and retract (B) switches are available for hydraulic center link. External rear PTO switch (E) is also available.

A—Rear SCV Extend Switch (If Equipped)
B—Rear SCV Retract Switch (If Equipped)
C—Rear Hitch Raise Switch
D—Rear Hitch Lower Switch
E—External Rear PTO Switch (If Equipped)



RXA0137125 —UN—18NOV13

Fender Extension Rear Hitch Switches

RD47322,0000158 -19-10AUG15-2/2

Onscreen Help

Generation 4 CommandCenter™ displays are equipped with detailed help information in the software. Onscreen help is available in Help Center or by pressing Information (i) buttons at the top of most pages. Information buttons link directly to help information for that page. Reading both the operator's manual and onscreen help information is recommended.

Navigate to Help Center

1. Select Menu.
2. Select System tab.

CommandCenter is a trademark of Deere & Company

PC15300 —UN—19MAR13



Help Center Application & Information Button

3. Select Help Center application.

HC94949,00002A6 -19-11DEC13-1/1

Generation 4 CommandCenter™

The John Deere Generation 4 CommandCenter™ is designed for maximum ease of use and productivity. One software system provides commonality while hardware options provide a range of price and functionality. The CommandCenter™ display is attached to the CommandARM™. There are 7 and 10 inch display options available.

NOTE: Software in Generation 4 CommandCenter™ is on processor, not display.

4100 CommandCenter™ (7 Inch)

- Run Page Modules same as 10 inch display
- Shortcut Softkeys must be expanded to view.

4600 CommandCenter™ (10 Inch)

- Title Bar displays currently viewed Run Page
- Large Status Center provides more information
- Shortcut Softkeys are always visible.



PC17356 —UN—03DEC13

4100 CommandCenter™



PC17355 —UN—03DEC13

4600 CommandCenter™

CommandCenter is a trademark of Deere & Company
CommandARM is a trademark of Deere & Company

HC94949,00003A3 -19-15DEC14-1/1

Generation 4 CommandCenter™ Processor

Generation 4 CommandCenter™ software runs on a processor separate from the display. There are two processor options available.

NOTE: Maximum capabilities for each processor are listed. Depending on machine configuration, some functions may not be available.

4600 Processor

- 4 Video Camera Inputs
- 4 USB Inputs
- 2 Display Outputs
- Upgradable for future applications

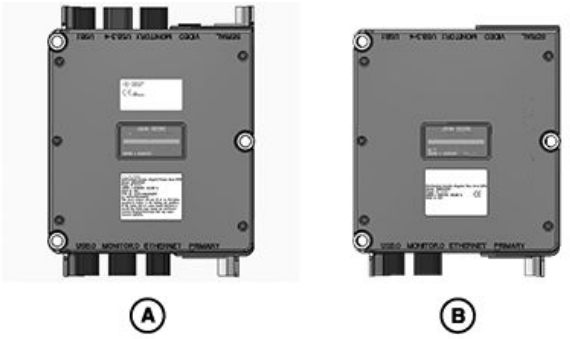
4600 Processor Wi-Fi Capabilities

The CommandCenter™ 4600 processor contains a non-enabled wireless (Wi-Fi) transmitter. Hardware is present to enable future functionality.

Federal Communications Commission Part 15.21 Statement:

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

CommandCenter is a trademark of Deere & Company



PC17396 —UN—15JUL14

4600 and 4100 Processors

A—4600 Processor **B—4100 Processor**

4100 Processor

- 1 Video Camera Input
- 1 USB Input
- 1 Display Output

HC94949,00002A8 -19-15JUL14-1/1

Run Page Structure

Menu (A) lists all applications installed on display and machine.

Shortcut softkeys (B) provide quick access to frequently used applications and functions. On 7 in. display, select expand button to display shortcut softkeys.

Next and Previous Run Page buttons (C) cycle through multiple run pages.

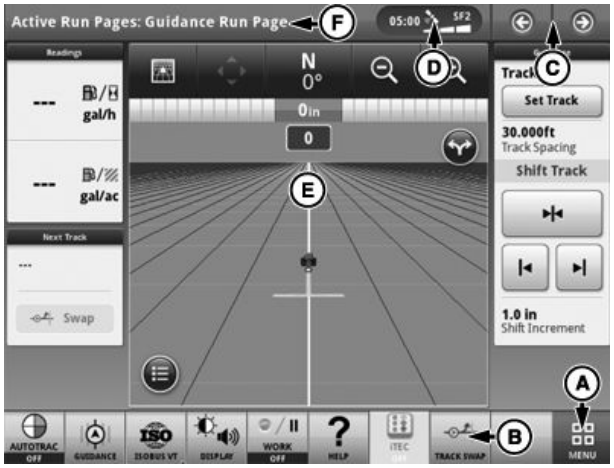
Select the area indicated (D) to display **Status Center**. Important information for display functions is highlighted, such as GPS signal strength and available data storage.

Run page (E) is configured using Layout Manager application.

Only on 10 in. display, press **title bar** (F) to display **Run Page Selection** page. Choose desired run page from list of available pages.

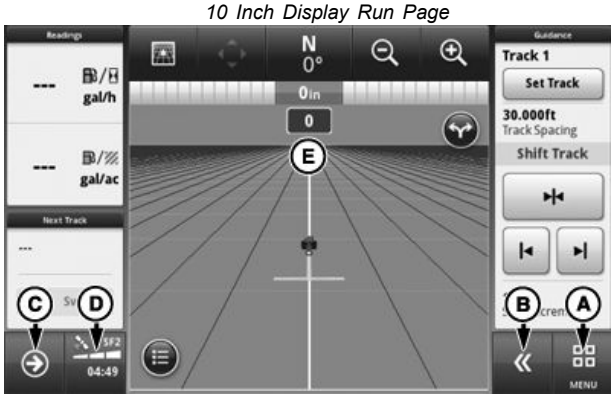
(Refer to Layout Manager application for information about customizing the run page.)

A—Menu
B—Shortcut Softkeys
C—Next or Previous Run Page Buttons
D—Status Center
E—Run Page
F—Title Bar/Run Page Selection



PC17353 —UN—03DEC13

10 Inch Display Run Page



PC17354 —UN—03DEC13

7 Inch Display Run Page

CZ76372,0000649 -19-22OCT14-1/1

Menu

Selecting Menu button lists all applications installed on display and machine. Select left-hand tabs to view different groups of applications.

NOTE: Available applications vary depending on machine configuration.

PC17269 —UN—15JUL13



Menu Button

CZ76372,0000648 -19-11DEC13-1/1

Machine Settings Overview

Machine Settings tab allows selection of application main pages. Available applications vary depending on tractor configuration.

RXA0147924 —UN—13APR15



Continued on next page

KT81203,0000058 -19-24JUL15-1/13

Audio

- Use Audio application to adjust audio settings.
- For more information, see Radio Operation section of this Operator's Manual.

RXA0134978 —UN—07AUG13



Audio

KT81203,0000058 -19-24JUL15-2/13

Engine

- Use engine application to adjust exhaust filter system settings, FieldCruise™ settings, or engine rpm.
- For more information, see Engine Operation and Tractor Operation sections of this Operator's Manual.

FieldCruise is a trademark of Deere & Company

RXA0134955 —UN—07AUG13



Engine

KT81203,0000058 -19-24JUL15-3/13

HVAC

- Use HVAC application to adjust heating, ventilation, and air conditioning settings.
- For more information, see Controls and Instruments section of this Operator's Manual.

RXA0134979 —UN—07AUG13



HVAC

KT81203,0000058 -19-24JUL15-4/13

iTEC™

- Use iTEC™ application to program and repeat common tasks.
- For more information, see iTEC™ section of this Operator's Manual.

iTEC is a trademark of Deere & Company

RXA0134980 —UN—07AUG13



iTEC™

KT81203,0000058 -19-24JUL15-5/13

Lights

- Use Lights application to adjust lights settings.
- For more information, see Lights section of this Operator's Manual.

RXA0134956 —UN—07AUG13



Lights

Continued on next page

KT81203,0000058 -19-24JUL15-6/13

Maintenance and Calibrations

- Use Maintenance and Calibrations application to add/edit service intervals and perform ground radar and wheel slip calibrations.

RXA0134981 —UN—07AUG13



Maintenance and Calibrations

KT81203,0000058 -19-24JUL15-7/13

Phone

- Use Phone application to make/receive calls through CommandCenter™.
- For more information, see Radio Operation section of this Operator's Manual.

RXA0134982 —UN—07AUG13



Phone

CommandCenter is a trademark of Deere & Company

KT81203,0000058 -19-24JUL15-8/13

PTO

- Use PTO application to adjust PTO settings.
- For more information, see Drawbar and PTO section of this Operator's Manual.

RXA0134957 —UN—07AUG13



PTO

KT81203,0000058 -19-24JUL15-9/13

Rear Hitch

- Use Rear Hitch application to adjust rear hitch settings.
- For more information, see Hitch section of this Operator's Manual.

RXA0134958 —UN—07AUG13



Rear Hitch

KT81203,0000058 -19-24JUL15-10/13

SCV

- Use SCV application to adjust SCV settings.
- For more information, see Hydraulics and Selective Control Valves section of this Operator's Manual.

RXA0134983 —UN—07AUG13



SCV

Continued on next page

KT81203,0000058 -19-24JUL15-11/13

Suspension

- Use Suspension application to adjust suspension settings.
- For more information, see Tractor Operation section of this Operator's Manual.

RXA0134976 —UN—07AUG13



Suspension

KT81203,0000058 -19-24JUL15-12/13

Transmission

- Use Transmission application to adjust transmission settings.
- For more information, see appropriate transmission section of this Operator's Manual.

RXA0134984 —UN—07AUG13



Transmission

KT81203,0000058 -19-24JUL15-13/13

Operating System Applications Overview

Operating System applications package is installed at the factory, and is updated with periodic software updates from John Deere. These applications are used for basic functions of display.

PC15302 —UN—19MAR13



HC94949,00003A4 -19-22MAY15-1/20

Date and Time

- Information from Date and Time application is used for several important functions on system. These include error logging, activations, and data recording.
- Date and time are set automatically if a GPS receiver is connected and receiving valid signal. In this case, only set time zone.
- It is found on System tab of the display menu.

PC16674 —UN—18MAR13



Date and Time

HC94949,00003A4 -19-22MAY15-2/20

Diagnostics Center

- Diagnostics Center is the one place to find diagnostics for the entire system.
- It is found on System tab of the display menu.

PC17272 —UN—17JUL13



Diagnostics Center

HC94949,00003A4 -19-22MAY15-3/20

Display and Sound

- Along with display brightness and volume, Display and Sound is used to calibrate display and configure multiple displays.
- It is found on System tab of the display menu.

PC16685 —UN—18MAR13



Display and Sound

Continued on next page

HC94949,00003A4 -19-22MAY15-4/20

File Manager

- Data and setup information can be transferred between displays or compatible desktop software.
- Perform a Factory Data Reset to clear display of user data.
- It is found on System tab of the display menu.

PC16671 —UN—18MAR13



File Manager

HC94949,00003A4 -19-22MAY15-5/20

Language and Units

- Use Language and Units application to change Language, Number Format, and Units of Measurement.
- It is found on System tab of the display menu.

PC16677 —UN—18MAR13



Language and Units

HC94949,00003A4 -19-22MAY15-6/20

Software Manager

- Use Software Manager to update software, activate features, and install onscreen help packages.
- It is found on System tab of the display menu.

PC15346 —UN—11JUL13



Software Manager

HC94949,00003A4 -19-22MAY15-7/20

Users & Access

- Users & Access manages user profiles and locks users out of certain settings.
- It is found on System tab of the display menu.

PC17262 —UN—12JUL13



Users & Access

HC94949,00003A4 -19-22MAY15-8/20

Controls Setup

- Configures an ISOBUS or tractor joystick to control tractor or implement functions.
- It is found on Applications tab of the display menu.

PC15326 —UN—08JUL13



Controls Setup

Continued on next page

HC94949,00003A4 -19-22MAY15-9/20

Equipment Manager

- The Machine Profile allows operator to configure GPS offsets and machine dimensions.
- The Implement Profile allows operator to configure Implement Connection Type, Working Width, Dimensions, and Recording Triggers.
- It is found on Applications tab of the display menu.

PC20410 —UN—22MAY15



Equipment Manager

HC94949,00003A4 -19-22MAY15-10/20

Fields

- Field names are used to organize information so it is easier to find and use data, such as guidance lines.
- Use Fields application to set up clients, farms, and fields.
- Select client, farm, and field to set current location.
- It is found on Applications tab of the display menu.

PC17260 —UN—11JUL13



Fields

HC94949,00003A4 -19-22MAY15-11/20

Help Center

- Onscreen Help about each application and more is available in Help Center.
- Not all Help languages are installed at the factory. Update display software to install Help for all supported languages.
- It is found on Applications tab of the display menu.

PC16684 —UN—18MAR13



Help Center

HC94949,00003A4 -19-22MAY15-12/20

ISOBUS VT

- Monitor and control ISOBUS 11783 compatible controllers and implements.
- It is found on Applications tab of the display menu.

NOTE: Only one ISOBUS controller can be viewed at a time. If more than one controller is connected, select Menu button within ISOBUS VT to view a list of controllers to choose from.

PC16682 —UN—18MAR13



ISOBUS VT

PC15293 —UN—18MAR13



ISOBUS VT Menu

HC94949,00003A4 -19-22MAY15-13/20

Layout Manager

- Use Layout Manager to create and modify run pages and shortcut bar so important information and functions can be accessed from the main page.
- It is found on Applications tab of the display menu.

PC16678 —UN—18MAR13



Layout Manager

Continued on next page

HC94949,00003A4 -19-22MAY15-14/20

Machine Monitor

PC15318 —UN—16MAY13

- Machine Monitor displays machine-specific performance values.
- It is found on Applications tab of the display menu.



Machine Monitor

HC94949,00003A4 -19-22MAY15-15/20

Mapping

PC20413 —UN—11MAY15

- Mapping application is used to view spatial features, such as guidance, coverage, work data, and map based prescriptions. (Prescriptions require a CommandCenter™ Premium or Documentation activation.)
- It is found on Applications tab of the display menu.

CommandCenter is a trademark of Deere & Company



Mapping

HC94949,00003A4 -19-22MAY15-16/20

Remote Display Access

PC17363 —UN—16DEC13

- Remote Display Access (RDA) allows someone from a remote location to view an operating display.
- It is found on Applications tab of the display menu.



Remote Display Access

HC94949,00003A4 -19-22MAY15-17/20

StarFire™

PC17388 —UN—15MAY14

- The StarFire™ application is used to view StarFire™ Receivers. If more than one receiver is connected, select the desired receiver using the application.
- It is found on Applications tab of the display menu.

StarFire is a trademark of Deere & Company



StarFire

HC94949,00003A4 -19-22MAY15-18/20

Work Monitor

PC15317 —UN—16MAY13

- Work Monitor displays averaged and totaled machine and operation-specific values.
- It is found on Applications tab of the display menu.



Work Monitor

Continued on next page

HC94949,00003A4 -19-22MAY15-19/20

Work Setup

- Use Work Setup application when changing implements, fields, applying a different product, or selecting a prescription.
- Work Setup application requires a 4600 processor with a CommandCenter™ Premium or Documentation activation.
- It is found on Applications tab of the display menu.

PC20415 —UN—11MAY15



Work Setup

HC94949,00003A4 -19-22MAY15-20/20

AMS Applications Overview

AMS Applications package is installed at factory, but requires an activation to enable functionality. These applications are installed and updated in packages separate from the Generation 4 Operating System.

PC15301 —UN—19MAR13



AMS Applications Package

HC94949,000038C -19-22MAY15-1/3

Guidance

- The Guidance application is used for steering machines through the field along guidance tracks. Steering can be done manually or automatically using AutoTrac™.
- It is found on Applications tab of the display menu.

AutoTrac is a trademark of Deere & Company

PC16676 —UN—18MAR13



Guidance

HC94949,000038C -19-22MAY15-2/3

Section Control

- Section Control turns work point sections on and off automatically to reduce overlap and improve input management.
- Section Control application requires a 4600 processor with a CommandCenter™ Premium or Section Control activation.
- It is found on Applications tab of the display menu.

CommandCenter is a trademark of Deere & Company

PC20399 —UN—16FEB15



Section Control

HC94949,000038C -19-22MAY15-3/3

CommandCenter™ Premium Activation

A CommandCenter™ Premium activation is required to operate certain features, such as documenting work data, and utilizing Section Control. It is also required to enable certain functions within applications, such as exporting work data in the File Manager application.

Individual activations that are included within the CommandCenter™ Premium activation are listed in Software Manager application. CommandCenter™ Premium is not listed on Activations tab. Select Menu button > System tab > Software Manager application > Activations tab.

Contact your John Deere dealer to purchase a CommandCenter™ Premium activation.

CommandCenter is a trademark of Deere & Company

CZ76372,000074C -19-22MAY15-1/1

Demo Activations

In Software Manager application, demo activations are available to try out features on the display. A blue light next to a feature indicates that demo is turned on.

Demo is available from the factory for 15 hr. of use. For example, AutoTrac™ demo only counts down when it is activated.

AutoTrac is a trademark of Deere & Company

CZ76372,000073A -19-15DEC14-1/1

Automation Status Overview

- Use Automation Status application to see which tractor functions are being controlled and their current status.
- It can be found on Applications tab of the display menu.

RXA0135012 —UN—12AUG13



KT81203,00000A1 -19-15AUG13-1/1

Navigate Generation 4 CommandCenter™

NOTE: Images are reference and may differ by tractor configuration or operator settings. As operator pages through CommandCenter™, more in-depth information is presented, allowing operator to fine tune tractor functions.

Navigating CommandCenter™ Pages

Use Touch Screen CommandCenter™ buttons or icons to make selection. For input boxes use either key pad, or select input box and scroll adjustment dial (C) to desired value. Yellow highlight box appears around selected input box and indicates adjustment dial is active.

A—CommandCenter™: attached to CommandARM™ (B), allows operator to view selected pages required to operate tractor. Display is Touch Screen, allowing operator to touch options on screen to move through pages and access tractor functions.

B—CommandARM™: made up of buttons, joystick (if equipped), switches, and shortcuts allowing operator to manage tractor or implement functions.

C—Adjustment Dial/Close Window Button: allows operator to change values in input boxes. Rotating adjustment dial clockwise raises input box values. Rotating adjustment dial counterclockwise lowers input box values. Push button one time to close window. Push and hold to close all open windows.

D—Shortcut Keys/Buttons: allow operator to access specific functions without going through CommandCenter™ menu.

E—Run Page Modules: allow quick access to functions.

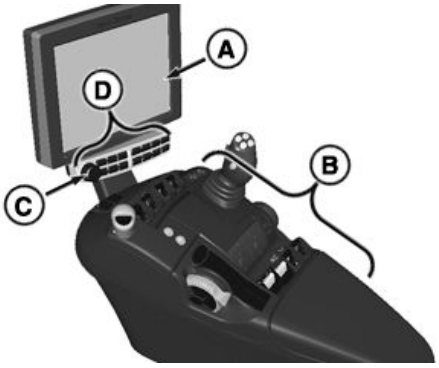
F—Title Bar: select on any run page for drop-down bar to change run page.

G—Menu: lists all applications installed on display and machine. Select left-hand tabs to view different groups of applications.

H—Help/Advanced Settings Buttons: press title bar, while in application, to view help or change settings for current page when available.

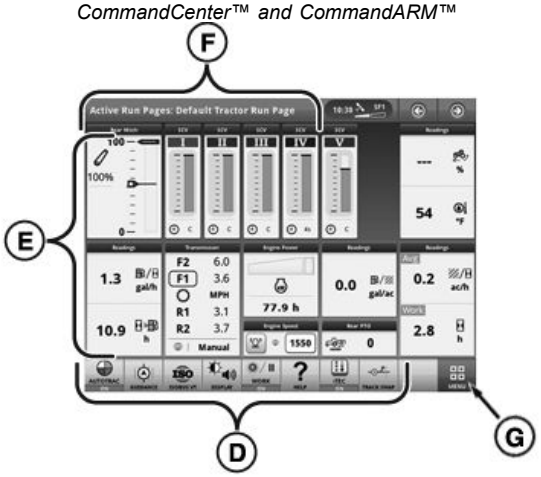
I—Close Button: press to close current page.

J—Increase/Decrease Value Buttons: use to change value within input boxes. Use ++ and - - buttons to make larger incremental changes when adjusting value, rather than touching + or - buttons. For areas that require tighter adjustments, only + and - buttons are available.



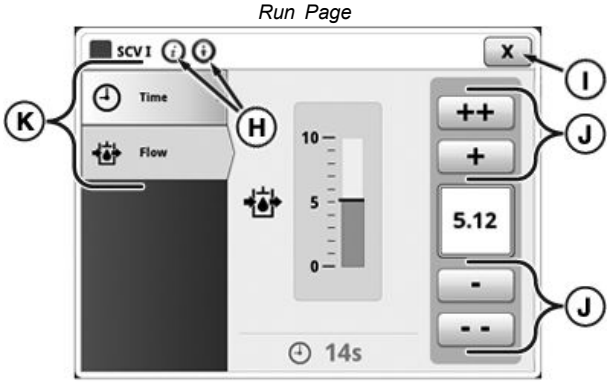
RXA0130496 —UN—09APR13

CommandCenter™ and CommandARM™



RXA0137128 —UN—19NOV13

Run Page



RXA0137084 —UN—13DEC13

Module Functions

K—Tabs: allow operator to change to different section topic.

CommandCenter is a trademark of Deere & Company
CommandARM is a trademark of Deere & Company

KT81203,0000056 -19-10JUN14-1/1

Power Display On and Off

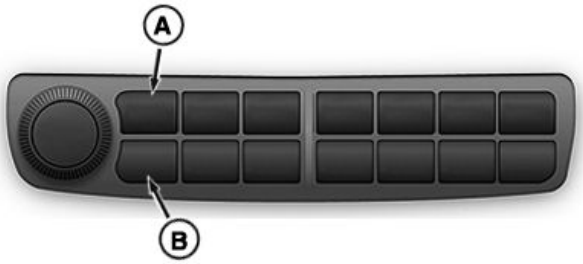
Generation 4 CommandCenter™ display turns on and off with tractor key switch.

- **Warm boot** occurs when CommandCenter™ display has been run within last 24 hours. Display rests in hibernation state for that time. Display powers up quickly (approximately 10 seconds).
- **Cold boot** occurs if display is not operated for 24 hours or more, or if unswitched power has been disconnected. During this period, display shuts down completely to conserve battery power. Next power-up will take approximately 60 seconds.

  NOTE: After turning off engine, avoid turning key switch back on until display screen has gone black.

- **Hard reset** is required when display is unresponsive for more than a few minutes under normal operating conditions.
  Perform hard rest by pressing left-most upper and lower buttons (A and B), of navigation bar, simultaneously for 5 seconds. If display does not reset, pull fuse 9 located in load center fuse panel and replace after 5 seconds.

CommandCenter is a trademark of Deere & Company
John Deere is a trademark of Deere & Company



RXA0148512 —UN—25JUN15

Navigation Bar

A—Upper Button
B—Lower Button

For more information on load center fuse panel, see Load Center Fuses in Electrical System Service section of this Operator's Manual. If problem persists, see your John Deere™ dealer.

KT81203,0000057 -19-25JUN15-1/1

Clean CommandCenter™ Display

IMPORTANT: Always clean display screen with power off. Cleaning screen while operating could result in unintended button selections.

To clean display, power down and wipe screen with a soft cloth sprayed with a non-ammonia based cleaner, such as John Deere glass or multipurpose cleaner.

CZ76372,0000720 -19-27JUN14-1/1

Navigate Run Pages on Main Page

If more than one run page is in Active Set, there are multiple ways to choose which run page is displayed on main page.

Title Bar (A)

Select title bar at top of main page to display a list of all run pages that are in Active Set. Choose a run page to return to main page.

Next and Previous Run Page Buttons (B)

Select either right or left arrows to cycle through run pages.

Finger Swipe (C)

Swipe finger across display, left and right, to cycle through run pages.

Navigation Bar Shortcut Button (D)

Select right arrow below display in CommandCenter™ Navigation Bar.

CommandCenter is a trademark of Deere & Company

PC17357 —UN—03DEC13



PC17358 —UN—03DEC13



PC17359 —UN—03DEC13



A—Title Bar
B—Next and Previous Run Page Buttons
C—Finger Swipe
D—Navigation Bar Shortcut Button

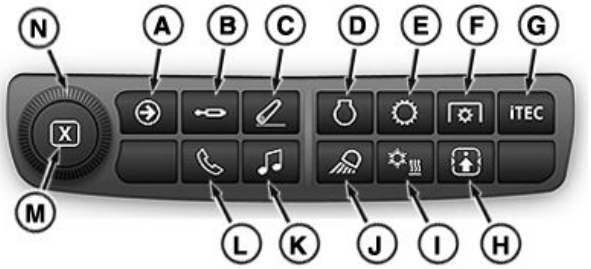
CZ76372,000063D -19-03DEC13-1/1

Shortcut Buttons

Generation 4 CommandCenter™ navigation bar shortcut buttons allow operator direct access to specific applications.

NOTE: If CommandCenter™ is not responding, reset by holding down Next Run Page button (A) and button below (no icon) for five seconds. If resetting CommandCenter™ does not resolve issue, contact John Deere™ dealer.

A—Next Run Page
B—SCV
C—Rear Hitch
D—Engine
E—Transmission
F—PTO
G—iTEC™
H—Controls Setup
I— HVAC
J—Lights
K—Audio
L—Phone
M—Close Button
N—Adjustment Dial



RXA0132501 —UN—15MAY13

Generation 4 CommandCenter™ Navigation Bar

CommandCenter is a trademark of Deere & Company
John Deere is a trademark of Deere & Company

KT81203,0000059 -19-04SEP13-1/1

Navigate to Display & Sound

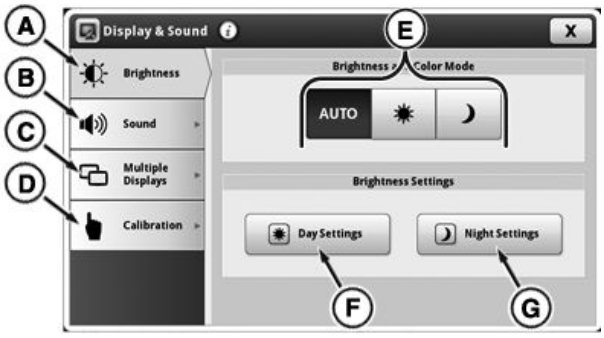
1. Select **Menu.**
2. Select **System tab.**
3. Select **Display & Sound icon.**

A—Brightness Tab
B—Sound Tab
C—Multiple Displays Tab
D—Display Calibration Tab
E—Auto/Day/Night Mode Toggle Bar
F—Day Settings
G—Night Settings

RXA0135345 —UN—30AUG13



Menu → System Tab → Display & Sound Icon



RXA0137085 —UN—19NOV13

Display & Sound Page

KT81203,0000061 -19-14MAR14-1/1

Display & Sound

Display & Sound application adjusts display brightness and volume level.

If multiple displays are connected, use this application to configure which functions appear on each display.

If screen touches do not register in correct location, use Touchscreen Calibration to realign screen.

Navigate to Display & Sound

1. Select Menu.

PC16685 —UN—18MAR13



2. Select System tab.
3. Select Display & Sound application.

CZ76372,0000622 -19-02OCT13-1/1

Brightness

Brightness and Color Mode

- ***Auto Mode***

Auto Mode is recommended setting. This synchronizes display brightness with cab light switch. If cab lights are off, display is in Day Mode. If cab lights are on, display is in Night Mode.

- ***Day and Night Modes***

Select either mode to prevent display brightness from synchronizing with cab light switch.

NOTE: The mode selected does not adjust brightness of a second display. Adjust brightness of that display through its settings.

PC15319 —UN—20MAY13



A—Day Mode **B—Night Mode**

CZ76372,0000621 -19-02OCT13-1/2

Brightness Settings

Select either settings button to display a popup page for corresponding brightness mode.

Depending on mode selected with settings button, adjust display and cab brightness by using plus (+) and minus (-) buttons.

A—Day Settings
B—Night Settings
C—Display Brightness
D—Cab Brightness

PC15320 —UN—20MAY13



PC15321 —UN—20MAY13



CZ76372,0000621 -19-02OCT13-2/2

Sound

Change display volume by selecting increase (+) or decrease (-) buttons.

PC15322 —UN—20MAY13



Display Volume

CZ76372,0000623 -19-02OCT13-1/1

Multiple Displays

PC15323 —UN—20MAY13

Generation 4 CommandCenter™ may be configured to run with the following John Deere displays connected at corner post.

- Original GreenStar™ Display (without Mobile Processor)
- GreenStar™ 2 1800 Display
- GreenStar™ 2 2600 Display
- GreenStar™ 3 2630 Display

Some applications, such as AutoTrac™, cannot run on both displays at the same time.



Multiple Displays

Activations do not transfer between displays. Second display must have its own activations to run AMS applications.

CommandCenter is a trademark of Deere & Company
GreenStar is a trademark of Deere & Company
AutoTrac is a trademark of Deere & Company

Continued on next page

CZ76372,0000624 -19-22MAY15-1/3

Installing a GS2 or GS3 Display

1. Ensure that key switch and CommandCenter™ are off.
2. Attach display harness to corner post connector and 26-pin display connector to back of display.
3. Turn key switch on.
4. CommandCenter™ display searches for second display on implement CAN bus for approximately 60 seconds. If CommandCenter™ was previously in Single Display Mode, it displays a message stating, “Multiple Displays Detected”.
5. Select a configuration preset:

   Single Display

   - Do NOT use this option in this scenario. This mode is only used if second display is not installed.

   Multiple – Compatibility Mode

   - ISOBUS implements only appear on second display, not on CommandCenter™. Use this option if connected to an ISOBUS implement and desire second display to run Auxiliary Reconfigurable Controls.

   Multiple – Implement Viewer

   - ISOBUS implements appear on CommandCenter™ or second display depending on the “Next VT display” setting of implement.

NOTE: If ISOBUS implement does not have “Next VT display” function, implement appears on display that starts up first.

   Custom Setup

   - Manually set configurations.

6. Cycle key switch off and on to save settings.

Removing a GS2 or GS3 Display

1. Ensure that key switch and CommandCenter™ are off.
2. Detach display harness from 26-pin display connector at back of display.
3. Turn key switch on.
4. CommandCenter™ display searches for second display on Implement CAN Bus for approximately 2—3 minutes. If CommandCenter™ was previously in one of the Multiple Display Modes, it displays a message stating, “Second Display Not Found”.



PC20416 —UN—12MAY15

GS3 2630 Display

5. Cycle key switch off and on to save settings.

Operating AutoTrac™ on CommandCenter™

NOTE: Generation 4 OS software versions prior to 8.12.2500-17 are required to operate Precision Agricultural applications (For example, AutoTrac™ or Section Control.) on the CommandCenter™ when a GS2 or GS3 display is also connected. Current Generation 4 OS software is not compatible with this functionality.

After installing a GS3 2630 Display, AutoTrac™ defaults to that display. Follow these instructions to run AutoTrac™ on CommandCenter™.

NOTE: After procedure, GS3 2630 Display will not run any GreenStar™ applications, including Section Control.

1. Ensure CommandCenter™ is in Single Display Mode and GS3 2630 Display is unplugged. Turn key switch off.
2. Plug in GS3 2630 Display and turn key switch on.
3. When CommandCenter™ boots up, select Multiple – Compatibility Mode. Reboot display.
4. On GS3 2630 Display, select Menu button > Display button > Diagnostics softkey > Multiple Displays tab. Turn GreenStar™ application off. Depending on configuration, display may reboot.
5. On CommandCenter™, select Display and Sound application > Multiple Displays tab. Turn Precision Ag Applications on. Reboot display.

Continued on next page

CZ76372,0000624 -19-22MAY15-2/3

Installing an Original GreenStar™ Display

Original GreenStar™ display can be used for non-guidance functions, such as monitoring a SeedStar™ 1 planter.

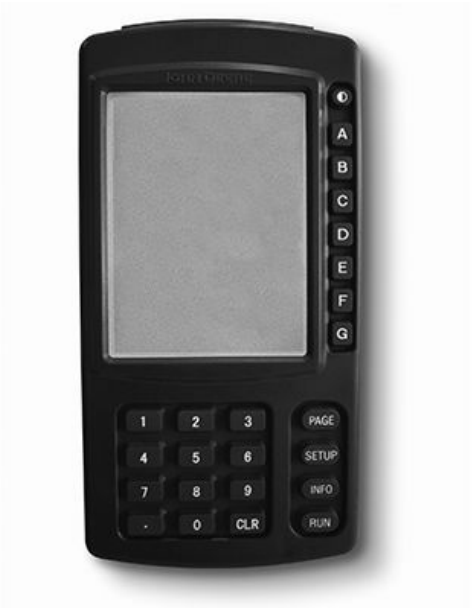
NOTE: Mobile Processor is not compatible. Do not connect to CommandCenter™.

1. Ensure that key switch and CommandCenter™ are off.
2. Attach display harness to corner post connector and display connector.
3. Turn key switch on.
4. Ensure that Tracking is off on Original Display. See Original Display manual for instructions.

IMPORTANT: Ensure that tracking has not been turned on since last reprogram or reset of display memory.

To clear display memory, press and hold E, 2, and Clear buttons and reboot. This procedure clears all data stored on display.

SeedStar is a trademark of Deere & Company



PC20417 —UN—12MAY15

Original GreenStar™ Display

CZ76372,0000624 -19-22MAY15-3/3

Display Calibration

Touch Screen Calibration may be required if screen does not register a touch in a desired location. Touch screen is factory calibrated and should not need to be calibrated under normal service. If calibration does not resolve issue, contact a John Deere dealer.

1. Select Begin Calibration
2. A large "X" and instructions are provided to lead operators through calibration process.
3. Each time “X” is pressed, instructions change and “X” moves to another area of screen.

NOTE: If touch screen malfunctions, a USB mouse may be used. Connect mouse to display’s USB port.

CZ76372,0000625 -19-02OCT13-1/1

Navigate to Date & Time

1. Select **Menu.**
2. Select **System tab.**
3. Select **Date & Time Icon.**

A—12 Hour Time Format Radio Button
B—24 Hour Time Format Radio Button
C—Time Zone Input Field
D—Date Format Input Field
E—Time Input Boxes
F—AM/PM Input Box
G—Date Input Boxes

RXA0126215 —UN—11JUN12

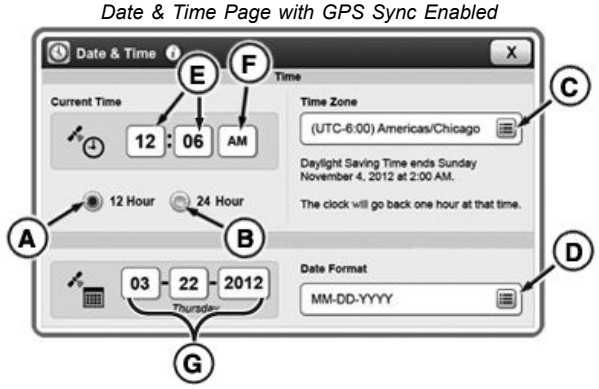


Menu → System Tab → Date & Time Icon



RXA0131038 —UN—25FEB13

Date & Time Page with GPS Sync Enabled



RXA0131113 —UN—01MAR13

Date & Time Page with GPS Sync Disabled

KT81203,000008B -19-18NOV13-1/1

Date & Time Application

Information from Date and Time application is used for several important functions on system. These include error logging, activations, and data recording.

Date and time are set automatically if a GPS receiver is connected and receiving valid signal. In this case, only set time zone.

Current date and time can be found at any time by selecting Status Center at top of main run page.

NOTE: Date and Time setting affects how Guidance and Documentation data are filtered on display and desktop software.

PC15314 —UN—15MAY13



Navigate to Date & Time

1. Select Menu.
2. Select System tab.
3. Select Date & Time application.

CZ76372,0000619 -19-02OCT13-1/1

Change Current Date

Date can only be changed if GPS is not connected or GPS signal is not available. Otherwise, GPS signal determines date.

Date Format does not depend on GPS signal, and can be changed at any time.

1. Select day, month, or year.
2. Use keypad to enter correct value.
3. Select Done to apply changes or Cancel to return to previous page without applying changes.

Date Format

1. Select Date Format box.

PC15315 —UN—15MAY13



A—Date Set by User **B—Date Determined by GPS**

2. Select desired date format from list.
3. Select Done to apply changes or Cancel to return to the previous page without applying changes.

CZ76372,000061A -19-14MAY14-1/1

Change Current Time

Current Time can only be changed if GPS is not connected or GPS signal is not available. Otherwise, GPS signal determines time.

Time Zone and Time Format do not depend on GPS signal, and can be changed at any time.

1. Select hour or minute.
2. Use keypad to enter correct value.
3. Select Done to apply changes or Cancel to return to previous page without applying changes.

Time Zone

1. Select a continent or ocean and select Next.
2. Select a country and select Next.

PC15316 —UN—15MAY13



A—Time Set by User **B—Time Determined by GPS**

3. Select a time zone and select Next.
4. Confirm selected time zone and select OK.

Time Format

Use radio button to select 12 Hour or 24 Hour time format.

CZ76372,000061B -19-02OCT13-1/1

Navigate to Language & Units

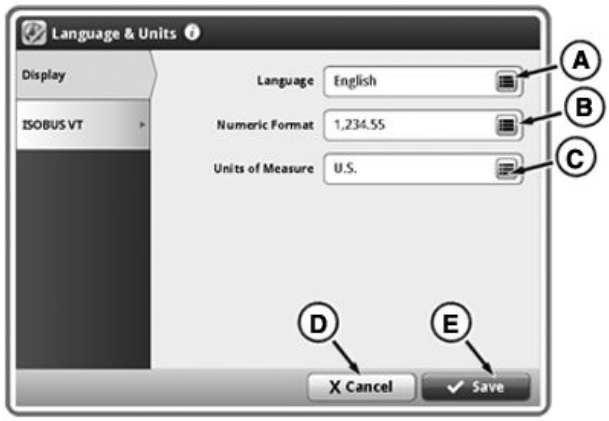
1. Select **Menu.**
2. Select **System tab.**
3. Select **Language & Units icon.**

A—Language button
B—Numeric Format button
C—Units of Measurement button
D—Cancel button
E—Save button

RXA0126213 —UN—17MAY12



Menu → System Tab → Language & Units Icon



RXA0132009 —UN—23APR13

Language & Units Page

KT81203,0000066 -19-26SEP13-1/1

Language & Units

Language & Units is used to change Language, Number Format, and Units of Measurement.

Different settings can be created for both the display and for controllers that are displayed in ISOBUS VT. Select either tab to change settings.

Navigate to Language & Units

1. Select Menu.
2. Select System tab.

PC16677 —UN—18MAR13



3. Select Language & Units application.

CZ76372,0000627 -19-02OCT13-1/1

Language & Units Settings

Display

Select Language, Number Format, and Units of Measurement from list boxes.

ISOBUS VT

It is possible for controllers that display in ISOBUS VT to have different units of measure than rest of display. Remove check from *Use Same Units of Measure as Display* to enable list boxes for:

- Number Format
- Distance
- Area
- Volume
- Mass
- Temperature
- Pressure
- Force

Saving Settings

After new settings are selected, select Save button. Display must reboot to apply changes.

CZ76372,0000628 -19-02OCT13-1/1

Change Pages and Values

Various methods are provided to allow selection and modification of CommandCenter™ pages and values.

- **A—Section Tab:** To change to different section topic, click desired section tab.
- **B—Icons:** Select to open application.
- **C—Bar Graph:** To change value, use increase (+) or decrease (-) buttons.
- **D—Slider Bar:** To change value, select slider bar module and use increase (+) or decrease (-) button.
- **E—Input Box:** Use increase (+) or decrease (-) buttons to adjust value. To enter new values or text, select desired input box.

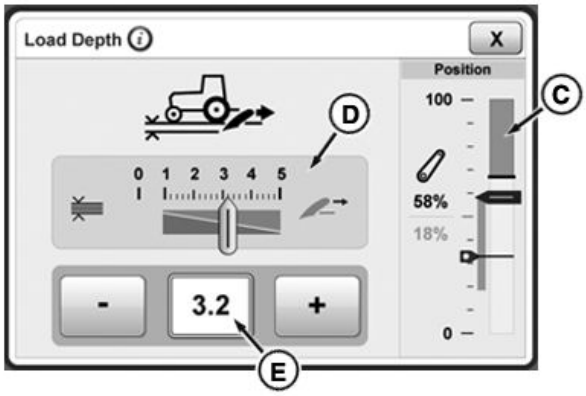
NOTE: When changing values using adjustment dial, increasing speed of adjustment dial rotation increases speed of value changes.

If a large range of values is available a numeric keypad appears, allowing direct input of desired value.



RXA0133414 —UN—27JUN13

Input Fields



RXA0130123 —UN—23APR13

Menu

CommandCenter is a trademark of Deere & Company

KT81203,000005B -19-17JAN14-1/1

Status Center

Status Center highlights important information for display functions, such as GPS signal strength and notifications. It is located in title bar on 10 inch displays, and in lower left corner on 7 inch displays.

Select Status Center to display additional information in a drop down window. The expanded Status Center provides quick access to notifications and settings.

NOTE: Date and Time and Data Storage are always displayed in Status Center.

Additional information is displayed depending on machine configuration and notifications.





PC17275 —UN—13AUG13

A—10 inch Display Status Center

B—7 inch Display Status Center

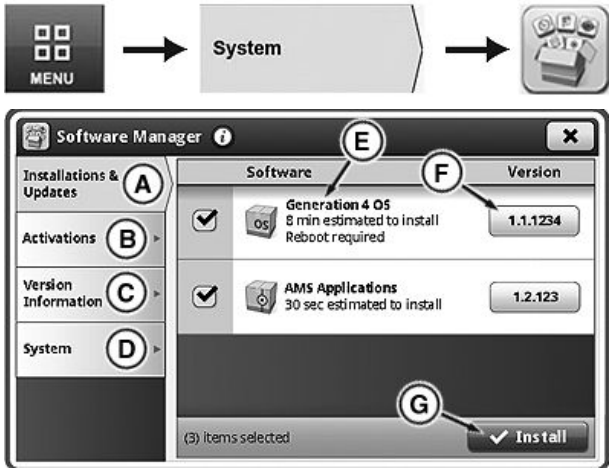
CZ76372,000064C -19-02OCT13-1/1

Navigate to Software Manager

1. Select **Menu.**
2. Select **System tab.**
3. Select **Software Manager icon.**

A—Installations & Updates Tab
B—Activations Tab
C—Version Information Tab
D—System Information Tab
E—Software Type
F—Software Version
G—Install Button

RXA0136061 —UN—11OCT13



RXA0136059 —UN—11OCT13

KT81203,00000B4 -19-20APR15-1/1

Software Manager

Use Software Manager to update software, activate features, and find software version details.

Navigate to Software Manager

1. Select Menu.
2. Select System tab.

PC15346 —UN—11JUL13



Software Manager

3. Select Software Manager application.

CZ76372,000063E -19-28MAY14-1/2

Software Packages

Generation 4 display software and help files are organized into packages. Each package is listed individually on Installations and Updates tab and Version Information tab.

Generation 4 Operating System

- Contains display operating system and basic applications.

Generation 4 Operating System Help

- Contains help files for display applications.

Tractor Applications

- Contains tractor software. A John Deere dealer with Service ADVISOR™ is required to install package.

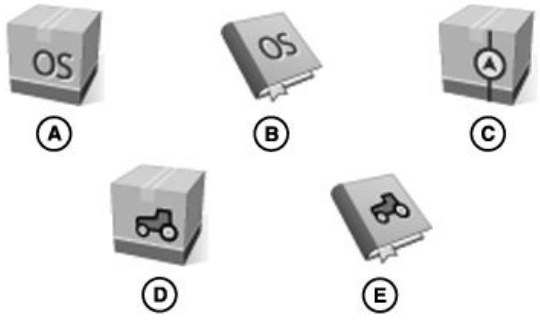
Tractor Applications Help

- Contains help files for tractor applications. Package may be installed without Service ADVISOR™.

AMS Applications

- Contains display software.

Service ADVISOR is a trademark of Deere & Company
StarFire is a trademark of Deere & Company



PC17392 —UN—28MAY14

A—Generation 4 OS
B—Generation 4 OS Help
C—AMS Applications
D—Tractor Applications
E—Tractor Applications Help

NOTE: Currently, Generation 4 display does not update connected controllers, such as StarFire™ receivers.

Onscreen Help packages include each language that the display supports.

CZ76372,000063E -19-28MAY14-2/2

Factory and Service ADVISOR™ Installed Onscreen Help

Tractor Application Help Package is installed at factory and with Service ADVISOR™ or Service ADVISOR™ Remote for eight languages listed below:

- Chinese
- English
- French
- German
- Italian
- Portuguese
- Russian
- Spanish

Service ADVISOR is a trademark of Deere & Company

Generation 4 Operating System Help Package is installed for all languages at factory.

For instructions on how to install and update onscreen help packages, see Update Display Software in this section of this Operator's Manual.

KT81203,00000A7 -19-11NOV13-1/1

Update Display Software

Determine Software Versions on Display

Version numbers for all installed software packages are available in Version Information tab in Software Manager.

Download Software Updates

Software updates are available for download from:

https://my.deere.com/software-downloads/software-manager/

The following items are available:

- Software release notes
- Software Manager utility used to download software to USB drive

PC15348 —UN—11JUL13



USB Drive

- Instructions for using Software Manager utility

Once USB drive has latest software, take it to machine to install update.

Continued on next page

CZ76372,000063F -19-31OCT14-1/2

Install Software Updates

1. Insert USB drive in to upper USB port next to accessory outlet.
2. When "USB Drive Options" page is displayed, select Install Software. Installations & Updates tab of Software Manager is displayed.
3. Only software packages that are newer than what is currently installed are displayed. All packages are selected by default.
4. Select Install button. If an update does not start, follow the onscreen messages to resolve conflicts.

CAUTION: During software installation:

All applications will be shut down.

No system messages will be displayed.

To prevent injury, ensure the machine is in Park and maintain electrical power throughout the installation process.

Do not remove USB drive.

5. Progress indicators display status of each installation step.
6. Message displays when software update is finished. Some software packages require a reboot to finish installation. Select Reboot button to restart display.
7. Remove USB drive and take back to computer. Run Software Manager Utility to upload return files.

NOTE: Return files contain software version information and are used to assist dealers with supporting display and machine.

Troubleshooting

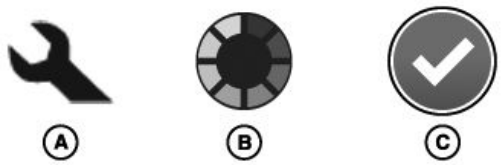
When a software package fails to install, system rolls back all software to version before update started.

Record error message if software update fails. Remove files from USB drive, and reload software update to USB drive. Repeat software installation process.

If software update continues to fail, contact a John Deere dealer.

System Rollback

PC15349 —UN—11JUL13



A—Install Button
B—Progress Indicator
C—Install Successful

System rollback reverts all installations and updates that have occurred since selected date.

NOTE: Backup data before performing system rollback. Data recorded after selected software installation date and time is lost.

1. Select System Information tab.
2. Select System Rollback button.
3. Select Recent Updates input box.
4. Select desired software installation date and time. Select OK button.

NOTE: Dealer update identifies software related to a machine controller update. Cannot roll back to a version previous to a dealer update.

5. Select Rollback button to start System Rollback.

CAUTION: During system rollback:

All applications will be shut down.

No system messages will be displayed.

To prevent injury, ensure the machine is in Park and maintain electrical power throughout the system rollback process.

Do not remove USB drive.

6. If Rollback was successful, a message is displayed.
7. Select Reboot button or display automatically reboots after 30 seconds.

CZ76372,000063F -19-31OCT14-2/2

Activations

Use this tab to manage activations on the display.

StellarSupport.com requires display serial number, challenge code, and may require a confirmation code in order to generate a code. Select Details button to find this information.

A single code may include multiple features, but it can perform only one type of action (activation or deactivation). For example, one code may activate three features, while a separate code would be needed to deactivate two features.

Enter Activation or Deactivation Code

1. Select Enter Code button.

PC15350 —UN—11JUL13



A—Details Button **B—Enter Code Button**

2. Using keyboard, enter activation or deactivation code. Select OK button.
3. Record confirmation code, and enter code at StellarSupport.com.

CZ76372,0000640 -19-02OCT13-1/1

Service ADVISOR™ Remote

Service ADVISOR™ Remote is available in the ISOBUS VT application. Select Menu button within ISOBUS VT and select Remote Software Updates.

Theory of Operation

Service ADVISOR™ is a diagnostic tool used by John Deere dealers to perform diagnostics as well as updates to machine settings and software. Dealers can access diagnostic trouble codes and diagnostic addresses, create readings and recordings, and program controllers. This technology consists of both software and hardware. Technicians attend a minimum of 8 hours of training to become certified in utilizing this tool.

Service ADVISOR™ Remote (SAR) is a function of Service ADVISOR™ that allows the dealer technician to connect to a SAR enabled machine via the JDLink™ network to remotely access diagnostic trouble code information and record diagnostic data, as well as to remotely program controllers on SAR-enabled machines.

Similar to software (payload) updates in the computer industry, SAR enables John Deere to remotely deliver updated software via the JDLink™ hardware onboard. Remote programming gives John Deere the ability to update software to enhance the performance of the machine. This capability can be used to reprogram most machine controllers. The user actively participates with the dealer in this process by both downloading the software update and installing the software update.

NOTE: Some vehicle controllers may not be compatible for SAR reprogramming.

Service ADVISOR is a trademark of Deere & Company
JDLink is a trademark of Deere & Company

PC16682 —UN—18MAR13



ISOBUS VT

PC15293 —UN—18MAR13



ISOBUS VT Menu

PC17281 —UN—10SEP13



Remote Software Updates

Vehicle Compatibility

NOTE: If equipped, Users & Access application provides capability to unlock, partially lock, or lock operator access to specific components. This includes the ability to download and install software updates. Please refer to Users & Access for more details.

For a current list of approved vehicles, please contact a John Deere dealer or visit www.StellarSupport.com.

CZ76372,000064D -19-02OCT13-1/1

Vehicle Reprogramming

With SAR, dealers have the ability to send new software to a vehicle to update controllers. Once the dealer sends the software, a message will appear on the display stating that there is new software available. Pressing Accept will take the user to the software updates page.

If the message is cancelled, access the page by selecting Remote Software Updates from ISOBUS VT menu.



PC12691 —UN—27JUL10

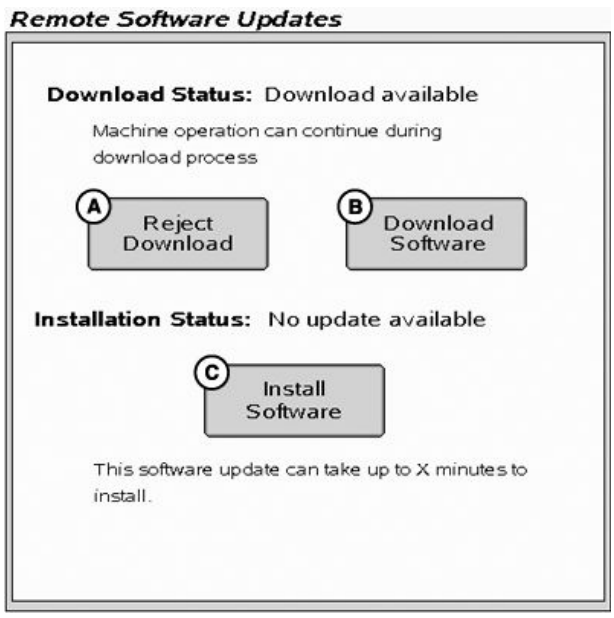
Software Update Available

HC94949,00003D7 -19-02OCT13-1/6

Download Updates

On the Remote Software Updates page, the operator can either reject (A) or download (B) the new software. Pressing the Download Software (B) button will start the download process. This process will continue in the background and normal machine operation can continue.

A—Reject Download Button
B—Download Software Button
C—Install Software Button



PC17279 —UN—10SEP13

Remote Software Updates

Continued on next page

HC94949,00003D7 -19-02OCT13-2/6

Install Updates

Once the software has been downloaded and it is ready for installation, a message will appear on the display. Press the accept button to go to the Remote Software Updates page.

Software installation can take up to 40 minutes. Pressing the cancel button enables you to update the software at a later time if desired.



PC12692 —UN—27JUL10

Update Ready for Install

HC94949,00003D7 -19-02OCT13-3/6



PC12856 —UN—07SEP10



PC12672 —UN—28JUN10

On the Remote Software Updates page, press the Install Software button to begin the installation process.

Once prompted, accept the terms and conditions and then follow the onscreen instructions.

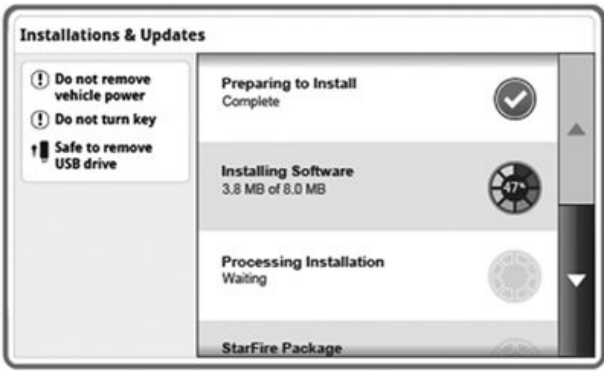
⚠ CAUTION: Some vehicle functions, including lights, may become inoperable during reprogramming. To avoid injury, ensure the vehicle is in a safe location and configuration before reprogramming. Do not reprogram near public roadways or in active work sites.

Continued on next page

HC94949,00003D7 -19-02OCT13-4/6

If a Generation 4 display update is included with software download, the display updates first. When complete, a message appears stating "Software successfully installed" and the display will reboot.

Once display is updated, controller update will begin.



PC17630 —UN—10SEP13

HC94949,00003D7 -19-02OCT13-5/6



PC12857 —UN—07SEP10



PC13582 —UN—09MAY11

If there is a problem during the install process, the system will try a second install. If the second attempt fails, please contact your John Deere dealer.

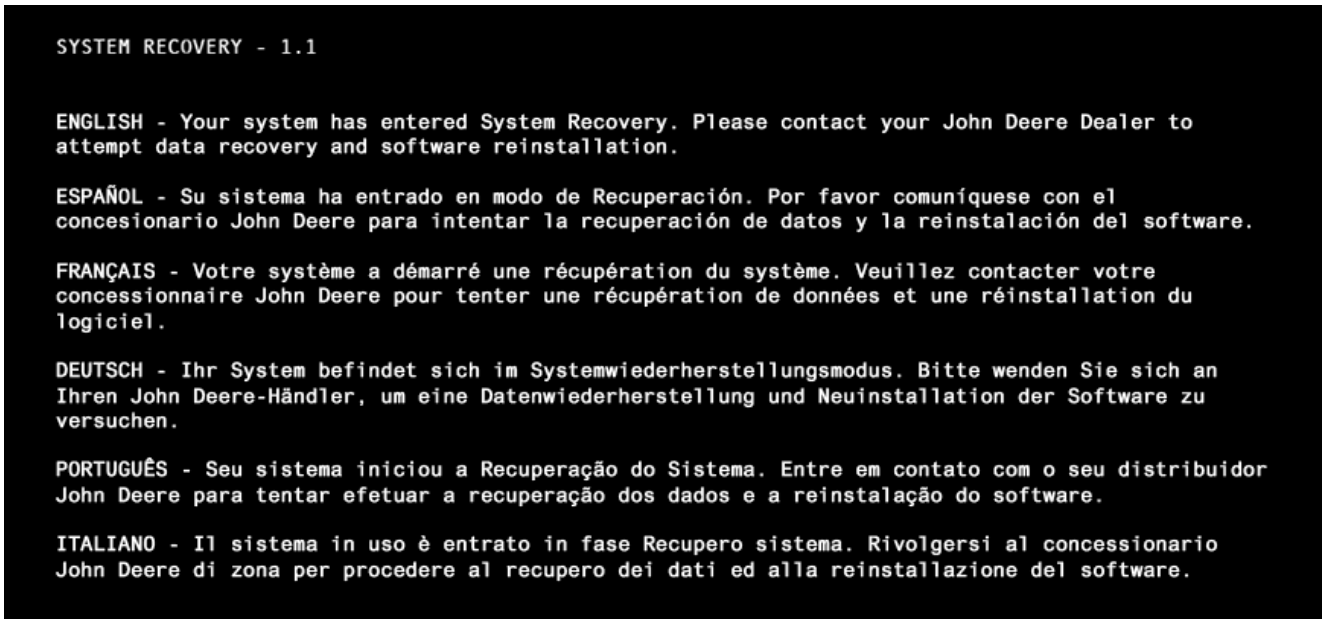
HC94949,00003D7 -19-02OCT13-6/6

Troubleshooting - Reprogramming

Symptom	Problem	Solution
Accessory Power Lost	Engine Started or key turned off	Do not start engine or remove power while software updates are being installed. Turn key off and return to ON position.
Voltage Low	The system voltage is too low to proceed with the software installation.	Turn off or remove accessories that are unnecessary. Check battery voltage and recharge battery if necessary.
Communication Fault	The software installation cannot be completed because of a communications fault	Turn key off and then back to on. Then retry software installation. Contact a John Deere Dealer if communication cannot be established.
Remote Software Updates icon not on display *NOTE: Remote Software Icon shall be available at all times, whether there is a payload or not.*	Cannot access Remote Software Updates page on the display	Check harness and connections to MTG.

JS56696,0000A25 -19-24SEP13-1/1

System Recovery



PC20404 —UN—08MAY15

Follow instructions if system recovery message is displayed.

Your system has entered System Recovery. Please contact your John Deere Dealer to attempt data recovery and software reinstallation.

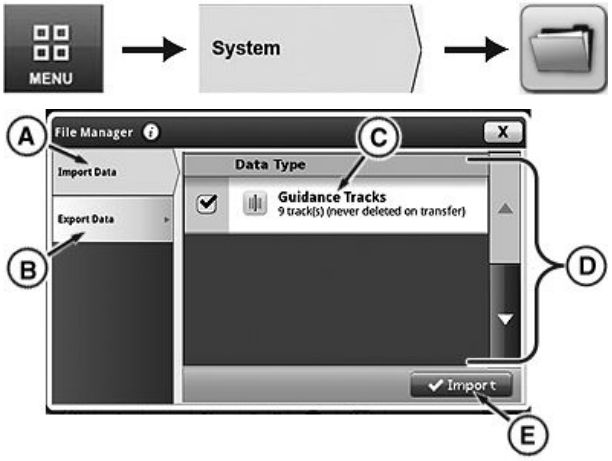
CZ76372,0000747 -19-08MAY15-1/1

Navigate to File Manager

1. Select **Menu.**
2. Select **System tab.**
3. Select **File Manager icon.**

A—Import Data Tab
B—Export Data Tab
C—Data Type
D—Scroll Bar
E—Import Button

RXA0136064 —UN—11OCT13



RXA0136062 —UN—11OCT13

KT81203,00000B5 -19-11OCT13-1/1

File Manager

Data and setup information can be transferred between displays or compatible desktop software using a USB drive. It is also important to backup data to a USB drive periodically.

Display internal memory is intended to have enough capacity to store all data from a machine per season. A message appears when 95% of memory is used. Data should be exported and deleted before memory used exceeds 95%.

Navigate to File Manager

PC16671 —UN—18MAR13



File Manager

1. Select Menu.
2. Select System tab.
3. Select File Manager Application.

CZ76372,0000646 -19-06JUL15-1/6

Factory Data Reset

Select settings at the top of File Manager application to open Factory Data Reset.

Process removes all user data from display and cannot be undone. User data includes setup and documentation data, guidance information, totals, and custom run page layouts. Language and regional settings and activations are not reset. A reboot is required after reset.

Factory Data Reset should be performed prior to selling machine.

PC17398 —UN—22OCT14



Settings

Continued on next page

CZ76372,0000646 -19-06JUL15-2/6

Data Types

- Guidance tracks include guidance lines and associated client, farm, and field names.
- Custom run pages can be transferred between Generation 4 Displays that are the same size. Run pages can be shared between 7 inch displays, or between 10 inch displays.

  NOTE: Imported run pages are available on the All Run Pages tab in Layout Manager.

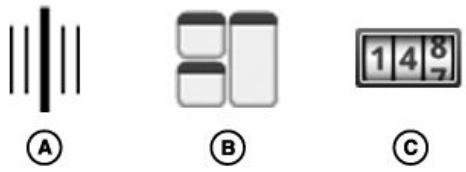
  Some run page modules reset to default settings when imported.

  Run page modules created for ISOBUS VT implement controllers appear as unavailable if controller is not connected to machine.
- Work data includes mapping and totals data. It can be uploaded to MyJohnDeere.com, or unloaded into compatible desktop software. Work data cannot be imported.

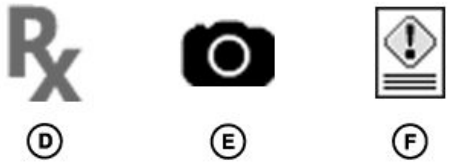
  NOTE: Exporting work data requires a 4600 processor with a Documentation activation. Documentation is available with a CommandCenter™ Premium activation.
- Prescriptions are configured using Work Setup application.

  NOTE: Importing prescriptions requires a 4600 processor with a Documentation activation. Documentation is available with a CommandCenter™ Premium activation.
- Screenshots copy the image displayed on the screen. (Refer to Capture Screenshots for instructions.)
- Error Logs are automatically generated by the display and can be used by John Deere to troubleshoot issues.

PC20408 —UN—22MAY15



PC20409 —UN—01MAY15



A—Guidance Tracks
B—Custom Run Pages
C—Work Data
D—Prescriptions
E—Screenshots
F—Error Logs

CommandCenter is a trademark of Deere & Company

Continued on next page

Import Data

1. Select Import From USB Drive.
2. Select folders with desired data.
3. Select desired data types to import.

Compatibility

Data can be transferred from another Generation 4 Display, GreenStar™ 3 2630 Display, or compatible desktop software.

NOTE: Update Apex™ or third-party desktop application if there are issues with transferring data.

Choose GS3 2630 card format when exporting from Apex™. To use guidance lines from other GreenStar™ displays, unload guidance lines into Apex™ and then export in GS3 2630 card format.

Data Conflicts

When necessary, imported client, farm, and field names are changed. For example, "Field1" is renamed "Field1(1)".

GreenStar is a trademark of Deere & Company
Apex is a trademark of Deere & Company

PC20405 —UN—30APR15



Import Data

If guidance lines are in the same field and created with the same tracking method, the display handles the following conflicts.

Different Name, Same Line

- If lines are the same, name of guidance line on display is replaced by name on USB drive.

Same Name, Different Line

- If there are two different lines with the same name, line on USB drive is renamed when imported. For example, "Track1" is renamed "Track1(1)".

NOTE: A file may fail to import for multiple reasons. To determine which file is causing problems, remove individual files from USB drive and attempt to import remaining files.

CZ76372,0000646 -19-06JUL15-4/6

Export Data

Select export method to transfer desired data types.

- Select Custom Export to transfer run pages and field-specific work data and guidance lines.
- Select Export All Data to quickly transfer all work data, guidance lines, and run pages using default settings.
- Select Diagnostic Data to transfer screenshots and error log files.

PC20406 —UN—30APR15



Export Data

CZ76372,0000646 -19-06JUL15-5/6

Delete Data

Delete data removes selected data types from the display.

- Select Custom Delete to remove work data, guidance lines, and run pages.
- Select Clear Diagnostic Data to remove screenshots and error log files.

PC20407 —UN—30APR15



Delete Data

CZ76372,0000646 -19-06JUL15-6/6

USB Drive

USB Drive Requirements for John Deere Displays

- Format - Windows FAT or FAT32. This display does not recognize NTFS format.
- Capacity - There is no maximum limit to the memory capacity of the drive.
- Connectivity - USB 2.0
- Maximum Dimensions - 9.2 mm (0.36 in.) thick by 21.7 mm (0.85 in.) wide

Best Practices

- After inserting USB drive, wait 10 seconds. Large USB drives may take time to be recognized.
- Use a USB drive that is 4 GB or larger, so multiple backups can be stored.
- Clean all files off the USB drive that are not associated with John Deere displays.

Check Readings tab in Diagnostics Center application to determine if display recognizes USB drive.

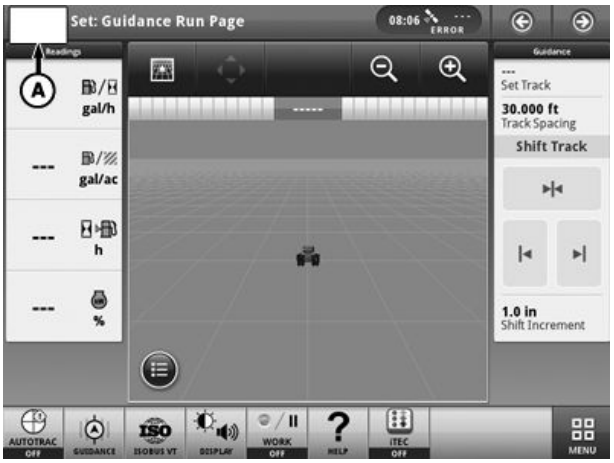
CZ76372,000064E -19-08JUL15-1/1

Capture Screen Shots

Select area highlighted in top left corner of screen. Press and hold until screen flashes and display makes camera shutter sound.

Insert USB drive and select Export Data to transfer screen shots to drive.

A—Screen Shot Area



PC17263 —UN—15JUL13

CZ76372,0000645 -19-02OCT13-1/1

Navigate to Diagnostics Center

1. Select **Menu.**
2. Select **System tab.**
3. Select **Diagnostics Center icon.**

A—Application Diagnostics
B—Controller Diagnostics
C—Diagnostic Trouble Codes
D—Display
E—CAN Bus Info

RXA0127110 —UN—11JUL12



Menu → System Tab → Diagnostics Center Icon



RXA0130617 —UN—31JAN13

Diagnostics Center

KT81203,0000062 -19-23AUG13-1/1

Diagnostics Center

Diagnostics Center is the one place to find diagnostics for the entire system. Select one of the tabs for more information.

Controller Diagnostics

- Access diagnostic addresses, diagnostic trouble codes, and information specific to each device connected on CAN Bus.

Diagnostic Trouble Codes

- View all active or stored diagnostic trouble codes.

Readings

- View diagnostic readings for processor, monitor, and display.

CAN Bus Info

PC17272 —UN—17JUL13



- View diagnostic information for each CAN Bus.

Network

- View MTG diagnostic readings.

Navigate to Diagnostics Center

1. Select Menu.
2. Select System tab.
3. Select Diagnostics Center application.

CZ76372,000061D -19-02DEC13-1/1

Controller Diagnostics

Controller Diagnostics displays the following information for controllers connected on CAN Bus.

Device

- Each device in list is identified by Device ID, CAN Address, and CAN Network location.

Codes

- Indicates if device has diagnostic trouble codes.

Message Count

- Number of CAN messages display has received from controller. Use zero button at bottom of page to reset message count for all devices.

Viewing and Sorting

Select button next to **View by** to change way controllers are displayed. Available views are:

All Devices

- All controllers connected to display are shown.

Implement Bus Devices

- Only controllers on Implement CAN Bus are displayed.

Vehicle Bus Devices

- Only controllers on Vehicle CAN Bus are displayed.

Select button next to **Sort by** to arrange list according to these filters.

Device

- List sorted by device ID.

Has Codes

- List sorted by if device has diagnostic trouble codes.

CZ76372,0000632 -19-02OCT13-1/1

Diagnostic Information

Select a controller from Controller Diagnostics list for more detailed information.

NOTE: Display is set to Diagnostic Mode when a controller is selected. Diagnostic Mode is removed when controller page is closed.

Diagnostic Addresses

IMPORTANT: Changing settings in Diagnostic Addresses may damage machine or implement controllers. Follow instructions, and use caution when changing address values.

Controllers have addresses that store values for different settings. Each Address is identified by an Address Number and Type. Data addresses can only be viewed (for example, software version information) while Input addresses can be edited (for example, calibration settings).

Diagnostic Trouble Codes

Current and stored codes for the selected controller are displayed. Select a code from list to view code details.

Controller Information

Controller Information displays detailed specifications and identification information from controller. This information is useful for ISOBUS diagnostics.

CZ76372,0000633 -19-02OCT13-1/1

Hide Diagnostic Center

Display is set to Diagnostic Mode once a controller is selected. Select Hide Diagnostic Center to minimize application and return to main page.

Hide button is useful for accessing another part of display during a calibration procedure. To return to the same diagnostic page, select Diagnostic Center application from menu.

NOTE: Leaving display in Diagnostic Mode is not recommended, because it can negatively affect performance.

PC15331 —UN—08JUL13



Hide Diagnostics Center

Remove Diagnostic Mode by closing controller page.

CZ76372,0000634 -19-02OCT13-1/1

Diagnostic Trouble Codes

Diagnostic Trouble Codes tab displays all current and stored codes that have occurred on the system.

Select Refresh button to clear, and then retrieve all codes.

Select Clear Codes button to remove all codes from display.

PC15332 —UN—08JUL13



A—Refresh button

B—Clear Codes button

Continued on next page

CZ76372,0000635 -19-02OCT13-1/3

Viewing and Sorting

Select button next to **View by** to change the way codes are displayed. Available views are:

Code

- View by “Code” lists all codes on display. Code Type, Details, Status, and Count are all displayed. Select a code from list to view Code Details.

Device

- View by “Device” lists all controllers on CAN Bus. Device ID, CAN Network, and if device has codes are all displayed. Select a controller in list to view Device Codes.

PC15333 —UN—09JUL13



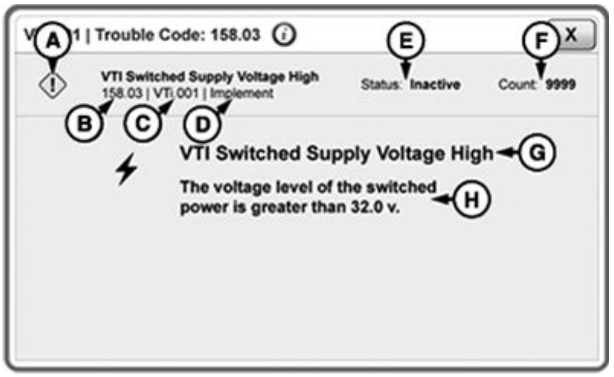
A—Stop Alert
B—Service Alert
C—Info Alert

CZ76372,0000635 -19-02OCT13-2/3

Code Details

Select a diagnostic trouble code to view code details.

A—Diagnostic Trouble Code Type
B—Diagnostic Trouble Code Number
C—Device ID
D—CAN Bus Network
E—Code Status
F—Count
G—Diagnostic Trouble Code
H—Diagnostic Trouble Code Description



PC15334 —UN—09JUL13

Code Details

CZ76372,0000635 -19-02OCT13-3/3

Readings

The following information is available in Readings:

Hardware

- Displays and Processor
  - Part Numbers
  - Serial Numbers
  - Operational Hours
- USB Presence

Electrical

- Unswitched Voltage
- Switched Voltage
- Implement and Vehicle CAN
  - CAN High
  - CAN Low

NOTE: Instantaneous CAN Bus voltage averaged each second.

Other

NOTE: Machine must be equipped to receive certain information.

- Radar Input Status
- Radar Frequency
- Implement Switch Status

CZ76372,0000636 -19-02OCT13-1/1

CAN Bus Information

CAN Bus Information tab displays status of communication between the controllers on CAN Bus. Vehicle CAN Bus connects controllers such as engine, hydraulics, and transmission. Implement CAN Bus connects controllers such as StarFire™ receiver, second ISOBUS display, and ISOBUS implements.

Some values display a green dot or a yellow dot with an exclamation point. A green dot means value is within normal range, while a yellow dot means value is out of normal range. Depending on machine and implement configuration, yellow might be expected.

StarFire is a trademark of Deere & Company

PC15335 —UN—09JUL13



A—Green Indicator, Normal Range

B—Yellow Indicator, Out of Range

CZ76372,0000637 -19-02OCT13-1/1

CAN Bus Values

Network Status

Active

- System is working as expected. In addition to display, at least one controller is connected and communicating on CAN Bus.

Inactive

- Display is not communicating with any other controllers on CAN Bus. If display is only controller on CAN Bus, Total Message Count increases, but Network Status is inactive.

Total Message Count

Total message count is number of messages sent over CAN Bus. When machine is running, this value counts up continuously since there are always messages sent on CAN Bus.

CAN High and CAN Low Voltage

Peak voltage is highest average voltage that has occurred since last cold boot. Voltage measurements are averaged for each second. Peak CAN High and Peak CAN Low voltages normally range between 1.8 and 3.3 Volts.

NOTE: A cold boot occurs after display has been off for 24 hours or after unswitched power has been disconnected from display.

Bus Utilization

Information on CAN Bus is sent in messages between controllers. The John Deere implement CAN Bus is running at a baud rate of 250 kbd, meaning it can switch power up to 256 000 times per second to transmit messages. This is a Bus utilization of 100 percent.

If a controller, such as an implement, is not running as expected, a Bus utilization of 45 percent or higher could be a reason for the issue. Some devices cannot send and receive all necessary messages due to high Bus load.

NOTE: Some ISOBUS implements do not work with Bus loads higher than 25 percent.

A working StarFire™ GPS receiver causes a Bus load of about 5-7 percent.

Unplugging implements or GPS receivers can reduce Bus utilization.

Baud Rate

Baud Rate indicates how fast the Bus is working. ISOBUS and John Deere implement Bus are running at a rate of 250 kbd. Any controller connected to this system must work at 250 kbd, otherwise it will not function properly.

CAN Bus State and Error Counts

Four CAN Bus states are possible:

- Active – CAN Bus is running without any problems.
- Passive – Passive errors have occurred.
- Warn – Bus Warn errors have occurred.
- Off – Bus Off errors have occurred.

If one of these errors occurs, display records number of times it happens.

Passive Error Count

- If value counts up higher than zero, a controller on CAN Bus did not receive all messages. Important information might have been lost. This is most likely due to high CAN Bus Utilization.

BUS Warn Count

- If value counts up higher than zero, a controller on CAN Bus has issues.

BUS Off Count

- If value counts up higher than zero, a controller on CAN Bus has issues. It missed a certain number of messages and does not receive messages anymore. Important information has been lost. It most likely occurs in combination with high CAN Bus Utilization.

Overrun Error Count

- Overrun Error Count indicates that applications or controllers on CAN Bus receive messages faster than they can process them. This results in missing messages and malfunction of the system. It most likely occurs in combination with high CAN Bus Utilization.

CZ76372,0000638 -19-02OCT13-1/1

Network

Network tab displays diagnostic readings from Modular Telematics Gateway (MTG). MTG is one of the main components that enable John Deere telematics solutions, such as JDLink™, Service ADVISOR™ Remote, and John Deere Remote Display Access (RDA).

MTG contains firmware, a cellular modem, and SIM device. It sends and receives data and messages over cellular networks.

RDA requires an uninterrupted cellular connection to function. JDLink™ does not require an uninterrupted cellular connection because the MTG can store up to 1000 hours of data.

CZ76372,0000678 -19-16JUN14-1/1

Navigate to Users & Access

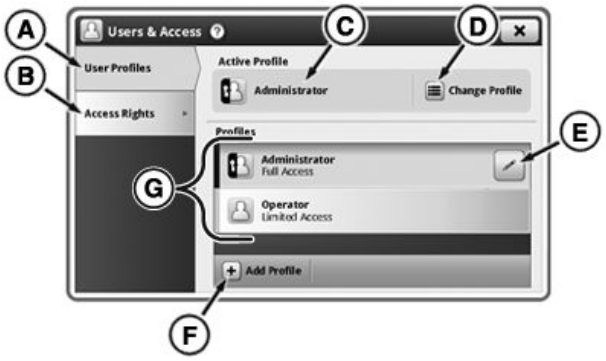
1. Select **Menu.**
2. Select **System tab.**
3. Select **Users & Access icon.**

A—User Profiles Tab
B—Access Rights Tab
C—Active Profile
D—Change Profile Button
E—Edit Button
F—Add Profile Button
G—Profiles List

RXA0129658 —UN—16NOV12



Menu → System Tab → User & Access Icon



RXA0142766 —UN—19JUN14

Users & Access Page

KT81203,0000072 -19-19JUN14-1/1

Users & Access

Users & Access manages user profile settings to lock users out of certain features.

User Profiles tab

- Change display profile and set PIN for administrator access.

Access Groups tab

- Store display features that are locked.

Navigate to Users & Access

PC17262 —UN—12JUL13



Users & Access

1. Select Menu.
2. Select System tab.
3. Select Users & Access application.

CZ76372,0000643 -19-02OCT13-1/1

User Profiles

Display can be set to one of two profiles, Administrator or Operator. The active profile is displayed above profile list.

Administrator Profile

Administrator profile always set to Full Access Group. It allows unlimited access of all features, and ability to lock and unlock features in Operator Profile. A PIN can be set to lock users out of the Administrator Profile.

Operator Profile

Operator profile always set to Limited Access Group. It is restricted to only features it is given access to. Operator

PC17265 —UN—15JUL13



A—Administrator Profile

B—Operator Profile

Profile must be active profile and Administrator Profile must have a PIN for features to be locked.

Continued on next page

CZ76372,0000644 -19-02OCT13-1/2

Change Active Profile

Select Change Profile button and select profile from list.

NOTE: If a PIN has been created for the administrator profile, it must be entered when switching from Operator Profile to Administrator Profile.

Add/Change PIN

Select Edit button for Administrator Profile. Select Add/Change PIN button.

PC17266 —UN—15JUL13



A—Change Profile Button
B—Edit Button
C—View Button

CZ76372,0000644 -19-02OCT13-2/2

Access Groups

Access Groups store display features users have access to. Full Access group is able to use all features on display, while Limited Access group can be restricted to only certain features.

NOTE: Full Access Group can not be edited.

Limited Access groups can only be edited if Administrator Profile is Active Profile.

Select View button to display Access Group Summary. Select Edit Group button to make changes to Access Group.

PC17267 —UN—15JUL13



A—View Button
B—Edit Group Button

CZ76372,0000647 -19-02OCT13-1/2

Edit Access Group

For each application listed, “None Locked” is displayed if no features are locked. When features are locked, they are listed under the application name and icon changes to locked.

Select an application to highlight it and select Edit button.

Edit Access Rights page displays a list of features that can be locked or unlocked by toggling lock/unlock switch. Save changes by closing page.

PC17268 —UN—15JUL13



A—Unlock Icon
B—Lock Icon

CZ76372,0000647 -19-02OCT13-2/2

Navigate to Layout Manager

NOTE: Layout Manager opens in last used run page.

1. Select **Menu.**
2. Select **Applications tab.**
3. Select **Layout Manager icon.**

RXA0126688 —UN—07JUN12



Menu → Applications Tab → Layout Manager Icon

A—Active Set Tab
B—Shortcut Bars Tab
C—All Run Pages Tab



RXA0143562 —UN—10JUL14

Layout Manager Page

KT81203,000006A -19-24APR15-1/1

Layout Manager

Use Layout Manager to create and modify run pages and shortcut bar so important information and functions can be accessed from the main page.

Run pages are made of "modules" or blocks that contain information and buttons. Modules can be added, removed, and rearranged on a run page.

Unlimited run pages can be created and saved. Only one Run Page Set with up to ten run pages can be created.

Navigate to Layout Manager

1. Select Menu.
2. Select Applications tab.
3. Select Layout Manager application.

PC16678 —UN—18MAR13



Layout Manager

CZ76372,0000639 -19-29OCT14-1/1

Active Set

Active Set is a collection of up to ten run pages that are grouped together for an operation (i.e. planting or tillage). Only pages in Active Set appear when cycling through run pages on main page.

Select Active Set to display Edit Run Page Set page.

PC15336 —UN—10JUL13



Active Set

Continued on next page

CZ76372,000063A -19-29OCT14-1/3

Add Run Page to Active Set

Select Add Run Page button to display a list of run pages that can be added to the set. Choose one of the run pages and select OK.

PC15341 —UN—10JUL13



Add Run Page Button

CZ76372,000063A -19-29OCT14-2/3

Edit Run Pages in Active Set

Select one of the run pages to show a row of buttons for editing that run page.

Select Edit button to change the modules on run page.

Select Duplicate button to create a new run page with same modules.

Select Up and Down buttons to change order of run pages. Run page order is used when cycling through pages on main page.

Select Remove button to delete run page from Active Set. Run page is still in All Run Pages list, just no longer in Active Set.

PC15338 —UN—10JUL13



A—Edit Button
B—Duplicate Button
C—Up Button
D—Down Button
E—Remove Button

NOTE: Remove button is not shown if only one run page is in Active Set.

CZ76372,000063A -19-29OCT14-3/3

Shortcut Bar

Shortcut bar is a collection of shortcut softkeys that display status information and provide quick access to application functions.

Select Default Shortcut Bar to Edit the Shortcut Bar.

PC17276 —UN—13AUG13



A—Shortcut Softkeys

CZ76372,000071C -19-16JUN14-1/2

Edit Shortcut Bar

Shortcuts can be added, removed, and rearranged on the shortcut bar.

NOTE: The same shortcut can only be placed on the shortcut bar once.

Select Add Shortcut button and choose application with appropriate content. Applications without available shortcuts are grayed out. From list, find shortcut that performs desired function and select Add button.

Once added to shortcut bar, select shortcut to highlight it. Press and slide shortcut to move it to an open area.

To remove a shortcut, select shortcut to highlight it and select Remove button.

PC17386 —UN—15MAY14



PC17387 —UN—15MAY14



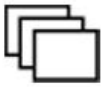
A—Add Button
B—Move Shortcut Icon
C—Remove Shortcut Button

CZ76372,000071C -19-16JUN14-2/2

All Run Pages

All Run Pages tab displays every run page that has been created on display. These include current run pages that are in Active Set, as well as run pages that will be used in future operations.

PC15340 —UN—10JUL13



All Run Pages

CZ76372,000063B -19-02OCT13-1/3

Edit Run Page

Select one of the run pages to show a row of buttons for editing that run page.

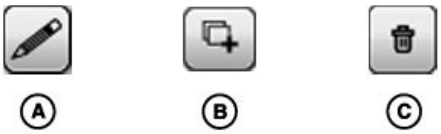
Select Edit button to change the modules on run page.

Select Duplicate button to create a new run page with same modules.

Select Remove button to delete run page from display. This permanently removes run page from display and Active Set.

NOTE: Remove button is not shown if factory default run page is selected.

PC15339 —UN—10JUL13



A—Edit Button
B—Duplicate Button
C—Remove Button

CZ76372,000063B -19-02OCT13-2/3

Create Run Page

Select Add New button to create a new Run Page.

PC15341 —UN—10JUL13



Add New Button

CZ76372,000063B -19-02OCT13-3/3

Add, Edit, or Duplicate Run Pages

The same interface is displayed when adding, editing, or duplicating a run page. A new run page starts out blank, while duplicate or edited run pages have existing modules.

Run Page Name

Every run page must have a unique name. Select Edit button to either name or rename run page.

Add Module

Select Add Module button and choose application with appropriate content. From list, find module with desired information and select Add button.

NOTE: The same module can only be placed on a run page once.

PC15337 —UN—10JUL13



A—Edit Button
B—Add Module Button

NOTE: Start with larger modules before adding smaller modules to fill in space.

Use grid to determine amount of space required for a module.

Continued on next page

CZ76372,000063C -19-02OCT13-1/3

Rearrange Modules

Once added to run page, select module to highlight it. Press and slide module to move it to an open area.

PC15342 —UN—10JUL13



Move Module

CZ76372,000063C -19-02OCT13-2/3

Remove Module

Select module to highlight it, and select Remove button.

PC15343 —UN—10JUL13



Remove Module Button

CZ76372,000063C -19-02OCT13-3/3

Navigate to Fields

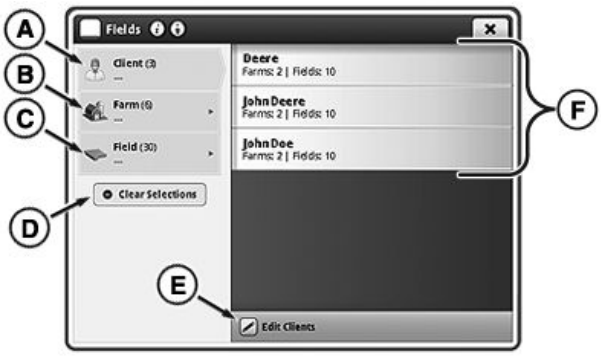
1. Select **Menu.**
2. Select **Application tab.**
3. Select **Fields icon.**

A—Client Tab
B—Farm Tab
C—Field Tab
D—Clear Selections Button
E—Edit Clients Button
F—Client/Farm/Field List

RXA0142762 —UN—19JUN14



Menu → Application Tab → Fields Icon



RXA0142620 —UN—19JUN14

Fields Page

KT81203,0000168 -19-19JUN14-1/1

Fields

Field names organize information so it is easier to find and use data, such as guidance lines. Using field names is optional, and a “---“ appears for undefined names.

Use Fields application to:

- Select field location name used for all other applications.
- Create a client, farm, or field name.
- Change the name of a client, farm, or field.
- Associate a field to a different farm or client.
- Delete a client, farm, or field.

Select inside Set Current Location box to enter current client, farm, and field.

Integration with Guidance

- A field can be associated to a guidance track when the track is created, or by editing the track.
- Guidance track list can be filtered by field name.

Run Page Module

A Location module for the Fields application is available in Layout Manager application. It is available on the default Guidance Run Page, and it can be added to any run page.

PC17260 —UN—11JUL13



Fields Application

Select a field in Location module to:

- Filter guidance track list.
- Associate new tracks to the field when they are created.
- Begin new or continue previous work data.

Navigate to Fields

1. Select Menu
2. Select Applications tab.
3. Select Fields application.

CZ76372,0000641 -19-02JUL15-1/1

Manage Clients, Farms, and Fields

Field Organization

Use the following hierarchy to help organize data:

- Clients are the highest level of organization.
- Farms are the middle level of organization. A farm can be associated with a client.
- Fields are the basic level of organization. A field can be associated with a farm and a client.

A strict hierarchy is not necessary, though it is possible to use only field names, and leave farm and client names blank. It is even possible not to use field names at all.

These decisions depend on amount of data being kept. More data requires structure to find fields.

NOTE: In previous John Deere displays, maps and guidance lines were saved based on field names. In the Generation 4 display, data is saved as latitude and longitude points. The field name is only needed as a way to filter data.

Select and Filter Names

In the Client, Farm, and Field hierarchy, select clients and farms to find fields.

1. Select Client tab.
2. From list, select client. Client name is displayed on Client tab.
3. Farm tab is automatically displayed. Only farms associated with the client are listed.
4. From list, select farm. Farm name is displayed on Farm tab.
5. Field tab is automatically displayed. Only fields associated with the client and farm are listed. Select field.

Remove Filter

Remove filter by selecting Clear Selections button.

Create and Edit Names

PC17389 —UN—15MAY14



A—Client
B—Farm
C—Field

NOTE: Clients, farms, or fields should not be renamed after data is recorded. If renamed, change name in other locations, such as MyJohnDeere Operations Center.

Client, Farm, and Field names cannot be duplicated. Names associated with different clients and farms must be unique.

Client and Farm Tabs

When Client or Farm tabs are selected, select Edit button at bottom of page to display Edit Client or Edit Farm list.

On either list, select one of the client or farm names to edit it, or select New button at bottom of page to create a name.

Field Tab

When Field tab is selected, highlight field name and select edit button to edit a field. Select New button at bottom of the page to create a name.

Delete Names

To delete a name, edit the client, farm, or field, and select the delete button on the edit page.

- Deleting a client also deletes all farms, fields, and guidance tracks associated with client.
- Deleting a farm also deletes all fields and guidance tracks associated with farm.
- Deleting a field also deletes all guidance tracks associated with field.

CZ76372,0000642 -19-08JUL15-1/1

AutoTrac™ Guidance

Use Guidance application for steering machines through field along guidance tracks. Guidance can be done manually, or automatically using AutoTrac™.

Manual Guidance (included feature)

Manual Guidance, also known as Parallel Tracking™, enables operator to steer manually along guidance tracks using onscreen light bar, map, and audible tones. A StarFire™ receiver is required to operate Manual Guidance. Parallel Tracking™ shows the machine's position in a field relative to a track determined during the first pass through the field. Parallel Tracking™ has modes to follow a straight or curve track. Use the machine icon, lightbar, and line on the display to know which way to steer to stay on the path parallel with the last. Audible alerts allow the operator to focus on the field.

AutoTrac™ Guidance (activation required)

AutoTrac™ is an assisted steering system that automatically steers the machine through the field.

AutoTrac is a trademark of Deere & Company
Parallel Tracking is a trademark of Deere & Company
StarFire is a trademark of Deere & Company

PC16676 —UN—18MAR13



AutoTrac™ requires a StarFire™ receiver and an integrated steering system on the machine to operate. After operator enters a reference path (Track 0) in AutoTrac™, machine will steer itself parallel to that track if all conditions are met.

The AutoTrac™ Guidance application provides the tools to:

- Set up a guidance track.
- Change track width.
- Adjust settings to improve guidance performance.
- Engage AutoTrac™.
- View exit codes.

CZ76372,000062F -19-02OCT13-1/1

Navigate to Equipment Manager

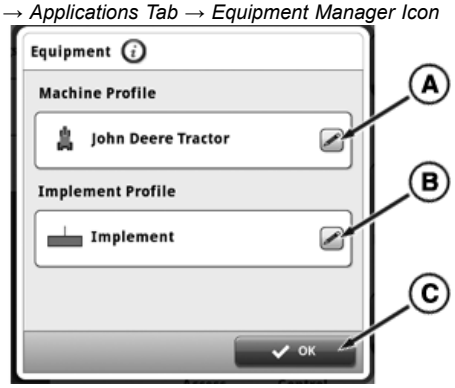
1. Select **Menu.**
2. Select **Applications tab.**
3. Select **Equipment Manager icon.**
4. Press Machine Profile (A) or Implement Profile (B) Selection button.

A—Machine Profile Selection Button
B—Implement Profile Selection Button
C—OK Button
D—General Tab
E—GPS Offsets Tab
F—Connection Offsets Tab
G—Machine Profile Name Input Field
H—Cancel Button
I— Save Button
J— Implement Tab
K—Working Width Tab
L—Dimensions Tab
M—Work Recording Tab
N—Mechanical Delay Tab
O—Implement Profile Name Input Field
P—Connection Type List
Q—Pivot Offset Input Field

RXA0135344 —UN—30AUG13



Menu → Applications Tab → Equipment Manager Icon

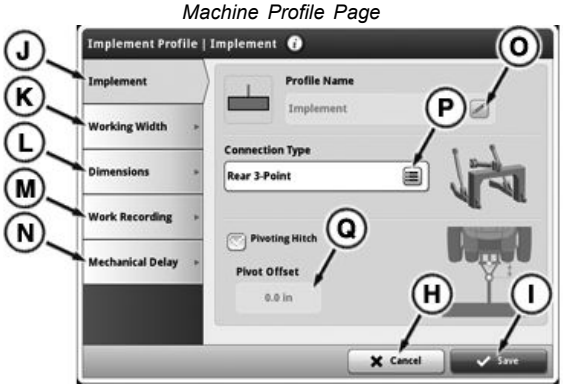


RXA0148518 —UN—25JUN15



RXA0148519 —UN—25JUN15

Machine Profile Page



RXA0148517 —UN—25JUN15

Implement Profile Page

KT81203,000006C -19-25JUN15-1/1

Equipment Manager

Select Equipment Manager application to enter Machine and Implement Profile settings. Profile settings are important for accurate performance of John Deere Precision Agricultural applications, such as AutoTrac™, Section Control, and work data maps.

Navigate to Equipment Manager

1. Select Menu.
2. Select Applications tab.

AutoTrac is a trademark of Deere & Company

PC20410 —UN—22MAY15



3. Select Equipment Manager application.

CZ76372,0000749 -19-22MAY15-1/1

Machine Profile

General Settings

If display detects machine, some information is automatically set by machine controllers. Otherwise, select list box to choose machine type.

Settings specific to certain machine types only appear on page when applicable.

- ***Articulated Tractor Articulation Point***
  Front Axle
  - Distance from articulation point to center of front axle. Articulation point is pivoting point of machine when making a turn.

  Rear Axle
  - Distance from articulation point to center of rear axle. Articulation point is pivoting point of machine when making a turn.
- ***Track Tractor Center of Rotation***
  Center of Rotation
  - Distance from pivot point of machine to rear axle.

GPS Offsets

- ***GPS Lateral Offset***
  - Lateral distance (left or right) from center line of machine to center of GPS receiver. This value is usually set to 0.0 unless GPS receiver is offset left or right of machine center line. Guidance and Mapping applications require GPS Lateral Offset settings.
- ***GPS Inline Offset***
  - Inline distance from center of non-steering axle on machine to center of GPS receiver. Mapping application requires GPS Inline Offset settings.
- ***GPS Height***
  - Vertical distance from GPS receiver to ground.

Connection Offsets

- Inline distance from center of rear axle to connection point. Connection point is location where implement connects to machine. Mapping application requires Connection Offset settings.

Restore Profile to Factory Defaults

Default tractor profile settings are stored in tractor controllers. Changes to these settings are stored in the display. To reset profile to factory defaults, select settings at the top of Machine Profile page. Then, select Reset Profile button.

Use Help Center onscreen help for more information about Equipment Manager and the Machine Profile.

HC94949,0000387 -19-22MAY15-1/1

Machine Profile

General Settings

If display detects machine, some information is automatically set by machine controllers. Otherwise, select list box to choose machine type.

Settings specific to certain machine types only appear on page when applicable.

- ***Articulated Tractor Articulation Point***
  Front Axle
  - Distance from articulation point to center of front axle. Articulation point is pivoting point of machine when making a turn.

  Rear Axle
  - Distance from articulation point to center of rear axle. Articulation point is pivoting point of machine when making a turn.
- ***Track Tractor Center of Rotation***
  Center of Rotation
  - Distance from pivot point of machine to rear axle.

GPS Offsets

- ***GPS Lateral Offset***
  - Lateral distance (left or right) from center line of machine to center of GPS receiver. This value is usually set to 0.0 unless GPS receiver is offset left or right of machine center line. Guidance and Mapping applications require GPS Lateral Offset settings.
- ***GPS Inline Offset***
  - Inline distance from center of non-steering axle on machine to center of GPS receiver. Mapping application requires GPS Inline Offset settings.
- ***GPS Height***
  - Vertical distance from GPS receiver to ground.

Connection Offsets

- Inline distance from center of rear axle to connection point. Connection point is location where implement connects to machine. Mapping application requires Connection Offset settings.

Restore Profile to Factory Defaults

Default tractor profile settings are stored in tractor controllers. Changes to these settings are stored in the display. To reset profile to factory defaults, select settings at the top of Machine Profile page. Then, select Reset Profile button.

Use Help Center onscreen help for more information about Equipment Manager and the Machine Profile.

HC94949,0000387 -19-22MAY15-1/1

Implement Profile

Saving Profile Settings

Select Save button to store settings from all tabs and close Implement Profile page. Selecting Save is not required when switching between tabs.

Implement Profile settings are saved in the display according to the following factors:

- Profile Name
- ISO name of detected implement controller

NOTE: Configure pre-operation settings in implement controller, such as drive configuration, prior to configuring Implement Profile settings. ISO name changes when some implement controller settings change. This includes changing controller setup between fertilizer and seeding.

Automatic Detection of Profile Settings

NOTE: Section Control must be OFF to detect SeedStar™ 2 or SeedStar™ XP planters when first connected to tractor. After first connection, planter is detected whether Section Control is ON or OFF.

If a SeedStar™ 2 or SeedStar™ XP planter is connected, some Implement Profile settings are automatically set by the planter controller. This only happens the first time planter is connected. An alert appears stating "Implement Profile Created", and alert will continue to appear if "Setup Later" is selected.

NOTE: Verify all required settings prior to operation. Work point is not set automatically.

When planter is reconnected in the future, it is identified by its ISO Name and Implement Profile settings saved in the display are loaded. To view currently detected ISO Name, select Diagnostics Center > Controller Diagnostics tab > choose implement controller > Controller Info tab.

Connection Types

- Describes how implement is attached to machine and controls how display determines implement movement behind machine. Connection Type should reflect the connection type of the current implement. Mapping application requires Connection Type setting.

- ***Pivoting Hitch***
  - Some implements have a pivoting hitch that connects to machine's rear 3-point hitch. The offset for this pivoting location is required for display to determine implement movement behind machine. Option is available when rear 3-point is selected as connection type.

Working Width

- Working Width is the width of the area tilled, planted, sprayed, or harvested on each pass through the field. It is used to create work data maps and calculate area worked. Guidance, Mapping, and Area Totals applications require Working Width.

Dimensions

- ***Lateral Offset***
  - Lateral distance from center point of machine to center point of working width of implement. Guidance and Mapping applications require Lateral Offset setting.

- ***Center of Rotation***
  - Inline distance from connection point to implement's center of rotation while in working position. Usually, this is where load bearing parts of implement make contact with ground. Mapping application requires Center of Rotation setting.

- ***Work Point***
  - Inline distance from connection point to point where the operation occurs. For example, where seed or product is dropped, a crop is harvested, or ground is tilled. Mapping application requires Work Point setting.

Work Recording

- Recording Triggers determine when map recording and Work Monitor totals are turned ON and OFF. Not all recording triggers are available for all machines types.

  NOTE: In Manual mode, operator must push Record or Pause button to turn work data map recording ON or OFF.

Mechanical Delay

- Mechanical delay is the average time for product to reach the ground after an ON or OFF command. It may need to change with each machine, implement, and display combination. Mapping application requires Mechanical Delay settings. Settings are critical for Section Control performance.

Use Help Center onscreen help for more information about Equipment Manager and the Implement Profile.

SeedStar is a trademark of Deere & Company

HC94949,0000388 -19-22MAY15-1/1

Navigate to Machine Monitor

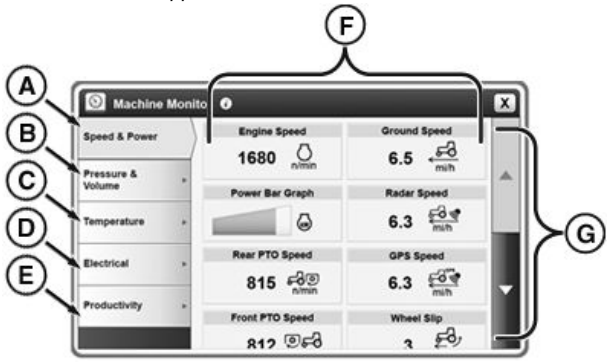
1. Select **Menu.**
2. Select **Applications tab.**
3. Select **Machine Monitor icon.**

A—Speed & Power Tab
B—Pressure & Volume Tab
C—Temperature Tab
D—Electrical Tab
E—Productivity Tab
F—Machine Monitor Measurement Display
G—Scroll Bar

RXA0126813 —UN—12JUN12



Menu → Applications Tab → Machine Monitor Icon



RXA0126814 —UN—12JUN12

Machine Monitor Page

KT81203,000006B -19-20APR15-1/1

Machine Monitor

Machine Monitor displays machine-specific performance values. Groupings of values include:

- Speed and Power
- Fuel and Pressure
- Temperature
- Electrical
- Hours

NOTE: Values available in each group depend on machine model.

Select tabs on left-hand side of the page to switch between groups. Select a value to view a popup of just that value.

If a value is not available, dashes will be shown.

PC15318 —UN—16MAY13



Machine Monitor

Navigate to Machine Monitor

1. Select Menu.
2. Select Applications tab.
3. Select Machine Monitor application.

CZ76372,0000620 -19-02OCT13-1/1

Navigate to Work Monitor

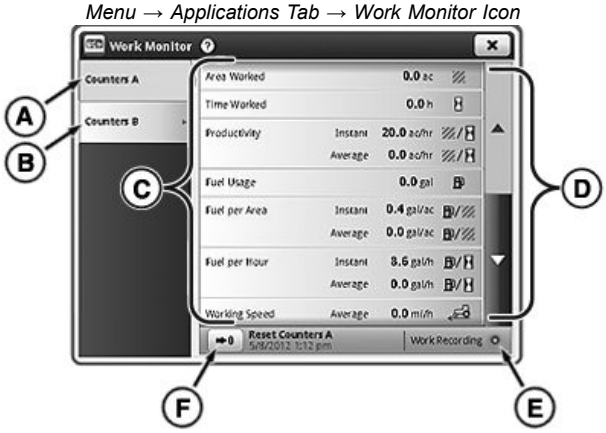
1. Select **Menu.**
2. Select **Applications tab.**
3. Select **Work Monitor icon.**

A—Counters A Tab
B—Counters B Tab
C—Work Monitor List
D—Scroll Bar
E—Work Recording Light
F—Reset Counters Button

RXA0135359 —UN—03SEP13



Menu → Applications Tab → Work Monitor Icon



RXA0142764 —UN—19JUN14

Work Monitor Page

KT81203,0000071 -19-20APR15-1/1

Work Monitor

Work Monitor displays averaged and totaled machine and operation-specific values. Select a value on the page to view a popup window of just that value.

Use the reset button at the bottom of the page to clear all values, except instant values. Date and time of the last reset will be indicated next to the button.

To be calculated correctly, some values require implement working width. Use the Edit Width button on a popup window to change working width. This button opens the Implement Profiles application. For more information, see Implement Profiles section.

PC15317 —UN—16MAY13



Work Monitor

Navigate to Work Monitor

1. Select Menu.
2. Select Applications tab.
3. Select Work Monitor application.

CZ76372,000061E -19-02OCT13-1/1

Work Recording

When Work Recording is ON, map recording and counters that require a recording trigger accumulate. Counters requiring Work Recording include:

- Area Worked
- Time Worked
- Productivity
- Average Fuel Per Area
- Average Working Speed

Select Work Recording in the bottom right hand corner to view a popup window with recording settings.

Recording status is based on the current recording trigger selected in Implement Profiles. If the recording trigger does not fit the current operations, press Edit button to change the selected recording trigger. For more information, see Implement Profiles section.

NOTE: If recording trigger is set to manual, work recording can be switched on or off by pressing the recording button.

CZ76372,000061F -19-02OCT13-1/1

Navigate to Maintenance & Calibrations

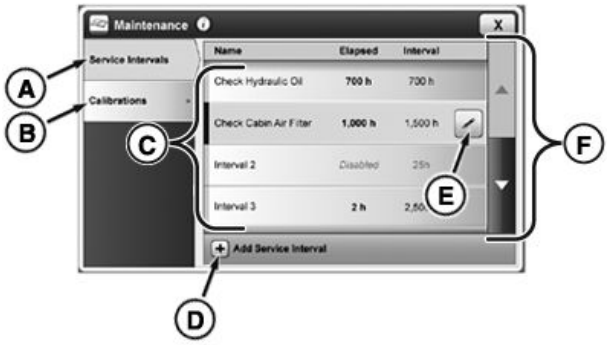
1. Select **Menu.**
2. Select **Machine Settings tab**
3. Select **Maintenance & Calibrations icon.**

A—Service Intervals Tab
B—Calibrations Tab
C—Service Intervals List
D—Add Service Interval Button
E—Edit Service Interval Button
F—Scroll Bar

RXA0147925 —UN—13APR15



Menu → Machine Settings Tab → Maintenance & Calibrations Icon



RXA0135274 —UN—26AUG13

Maintenance & Calibrations Page

KT81203,00000A5 -19-14APR15-1/1

Maintenance & Calibrations

Maintenance & Calibrations application allows the operator to set up service intervals, check on machine functions, and perform calibrations on machine components.

Navigate to Maintenance & Calibrations

1. Select Menu.
2. Select Tractor Settings tab.

PC15324 —UN—21MAY13



3. Select Maintenance & Calibrations application.

CZ76372,000062B -19-14MAY14-1/1

Calibrations

Use this application to perform wheel slip calibration and radar calibration. For a tractor, perform wheel slip calibration and radar calibration within this application.

Radar Calibration

A radar device needs to be calibrated when it is first installed on the machine or there is a difference between radar speed and actual ground speed. Currently, the system supports John Deere dual beam radars.

NOTE: In windy conditions, moving parts such as leaves, dust, or gravel can cause inaccurate radar speed.

Wheel Slip Calibration

Calibrate wheel slip if there is a mismatch between radar speed and wheel speed. For more information, see Machine Monitor .

Perform calibration while driving with an unloaded machine on a hard, dry, clean, and level surface.

PC15325 —UN—01JUL13



A—Radar Calibration

B—Wheel Slip Calibration

NOTE: Wheel slip calibration is only available on a connected and calibrated radar device.

Make sure radar speed is accurate before performing wheel slip calibration.

CZ76372,000062C -19-02OCT13-1/1

Radar Calibration

CAUTION: Avoid injury. Perform calibration in safe and open area that is clear of objects and bystanders.

Perform radar calibration if:

- Radar speed and wheel speed are not equal when wheel slip is not present.
- Radar device was installed/replaced.
- Tire size was changed.
- Ballast of tractor was changed.

1. Select **Menu.**
2. Select **Machine Settings tab.**
3. Select **Maintenance & Calibrations icon.**
4. Select **Calibrations tab.**
5. Select **Radar Calibration icon.**
6. Drive unloaded tractor, on hard, dry and level surface, at approximately 3.2 km/h (2.0 mph).
7. Select Start button (A) to begin radar calibration process.

   NOTE: Radar calibration can be canceled by selecting cancel button (B).

8. Select OK button (C) to complete radar calibration.

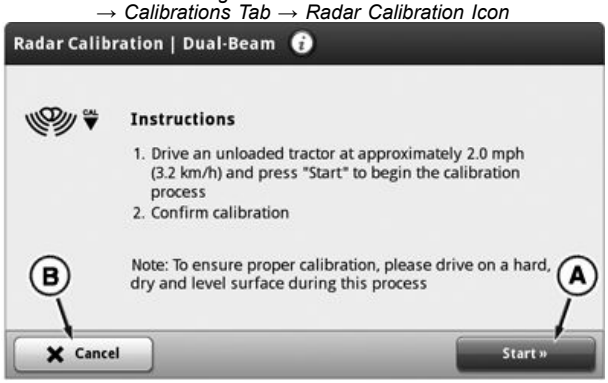
If radar calibration is unsuccessful after three attempts, see your John Deere™ dealer.

A—Start Button
B—Cancel Button
C—OK Button

RXA0147926 —UN—13APR15



Menu → Machine Settings Tab → Maintenance & Calibrations Icon → Calibrations Tab → Radar Calibration Icon



RXA0147580 —UN—10MAR15



RXA0147581 —UN—10MAR15

KT81203,0000205 -19-14APR15-1/1

Wheel Slip Calibration

CAUTION: Avoid injury. Perform calibration in safe and open area that is clear of objects and bystanders.

Perform wheel slip calibration if:

- After radar calibration has been performed.
- Wheel slip is displayed when wheel slip should not be present.
- Tire size was changed.
- Ballast of tractor was changed.

1. Select **Menu.**
2. Select **Machine Settings tab.**
3. Select **Maintenance & Calibrations icon.**
4. Select **Calibrations tab.**

   NOTE: Tractor must be in motion for wheel slip calibration icon to appear.

5. Select **Wheel Slip Calibration icon.**

   NOTE: Wheel slip calibration can be canceled by selecting cancel button (B).

6. Select Start button (A) to begin wheel slip calibration process.
7. Drive unloaded tractor, on hard, dry and level surface, at least 8 km/h (5 mph).
8. Select Calibrate button (C).
9. Select OK button (D) to complete wheel slip calibration.

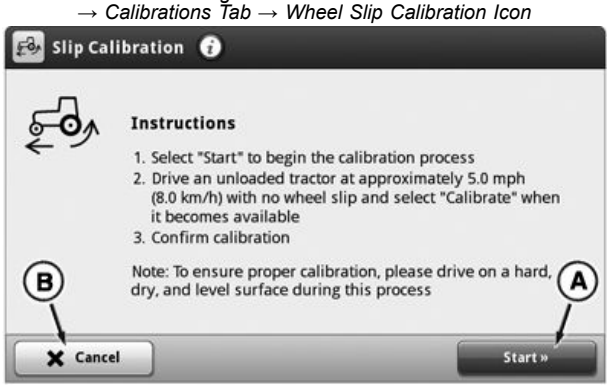
If wheel slip calibration is unsuccessful after three attempts, see your John Deere™ dealer.

A—Start Button
B—Cancel Button
C—Calibrate Button
D—OK Button

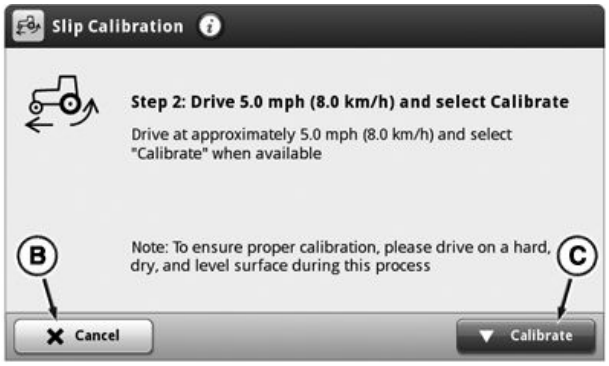
RXA0147928 —UN—13APR15



Menu → Machine Settings Tab → Maintenance & Calibrations Icon → Calibrations Tab → Wheel Slip Calibration Icon



RXA0147582 —UN—10MAR15



RXA0147583 —UN—10MAR15



RXA0147584 —UN—10MAR15

KT81203,0000206 -19-14APR15-1/1

Service Intervals

Service Intervals are reminders of when regular maintenance needs to be performed on a machine.

Select Add Service Interval button to create a new service interval. An unlimited number of service intervals can be added.

Once a service interval is created, it is added to the list and displayed with the name, elapsed time, and interval amount.

- The operator selects the name to identify the specific service interval.
- Elapsed indicates the number of hours since the service interval was reset.
- Interval is the number of hours between each service.

The intervals are sorted from least amount of time due to the most amount of time due. They are then sorted by name, in alpha-numerical order, with priority given to numbers.

Twenty hours before the service interval is due, the system will inform the operator that the machine will need to be serviced soon. Once the message has been acknowledged, the system will inform the operator about the upcoming service at every startup until service interval is reset.

CZ76372,000062D -19-31OCT14-1/1

Service Checks

NOTE: Availability of the Service Checks feature depends on purchase options.

Perform service checks with tractor on level ground and engine off. For accurate readings, wait at least 40 minutes after engine shut down before checking fluid levels.

A light indicates the status of a machine service checkpoint. A green light indicates normal level. A red light indicates either a high level or low level.

The following checkpoints are available:

- Engine Oil Level (A)

PC17385 —UN—15MAY14



A—Engine Oil Level

B—Engine Coolant Level

- Engine Coolant Level (B)

CZ76372,000071B -19-16JUN14-1/1

Navigate to Controls Setup

Controls Setup page allows user to assign device (D) with various tractor and implement functions (G). Once completed, function may be performed by activating assigned device.

NOTE: Some ISOBUS joysticks may not be able to be assigned to tractor and implements functions.

⚠ CAUTION: ISOBUS Controller detected Improper operation can cause unintended machine movement.

To avoid death or serious injury to bystander, understand how this display operates the functions of each machine

Read the ISOBUS controller's operator's manual.

⚠ CAUTION: Improper operation can cause unintended implement movement.

To avoid the risk of death or serious injury to a bystander, ensure:

- **Users know which function is mapped to each control.**
- **Controls are properly labeled.**

Message above occurs when ISOBUS control unit or ISO Aux is enabled. If necessary, review or change ISOBUS joystick assignments. Immediately after message, operator can decline or accept by pressing appropriate buttons. If "Cancel" is selected, all ISOBUS joysticks are disabled. If "Accept" is selected, all ISOBUS joysticks are enabled.

Example—Two switch ISOBUS compliant joystick is used to control drawn sprayer equipped with ISOBUS control unit. Sprayer has two controlled functions: pump on/off and boom on/off. Using Controls Setup feature, each function may be assigned to one of ISOBUS joystick switches.

Controls Setup Page

Use Controls Setup Shortcut Button on Navigation Bar or follow alternative path:

RXA0133715 —UN—16JUL13

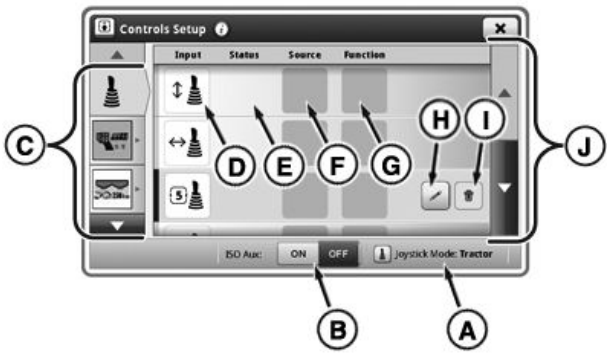


Controls Setup Shortcut Button on Navigation Bar

RXA0130061 —UN—01AUG13



Menu → Applications Tab → Controls Setup Icon



RXA0137961 —UN—18DEC13

Controls Setup Page

A—Joystick Mode Icon
B—ISO Aux On/Off Toggle
C—Device List
D—Input Device
E—Status
F—Source
G—Function
H—Add or Edit Assignment Button
I— Delete Assignment Button
J— Scroll Bar

1. Select **Menu.**
2. Select **Applications tab.**
3. Select **Controls Setup icon.**

KT81203,00000AD -19-02JAN14-1/1

Controls Setup

Controls Setup configures an integrated tractor joystick (optional) or ISOBUS joystick to control tractor or implement functions.

Integrated Tractor Joystick

The integrated tractor joystick can control tractor functions, such as a front hitch or SCVs for a loader.

ISOBUS Joystick

An ISOBUS joystick can control functions of a compatible ISOBUS implement. The implement functions are also called ISO Auxiliary Control functions (ISO Aux).

NOTE: The ISOBUS implement and ISOBUS joystick are required to be Auxiliary Control New (AUX-N) capable.

The following messages are displayed when AUX-N requirements are NOT met:

For ISOBUS implement:

PC15326 —UN—08JUL13



- The connected Source does not meet the input device requirements.

For ISOBUS joystick:

- The connected Auxiliary Input Device does not meet the implement function requirements.

Navigate to Controls Setup

1. Select Menu.
2. Select Applications tab.
3. Select Controls Setup Application.

CZ76372,0000630 -19-22OCT14-1/1

Controls

From the left-hand side of the Controls Setup page, select one of the following controls:

- Tractor joystick
- ISOBUS joystick
- Tractor functions
- ISOBUS implement

Assignments

NOTE: Certain functions are assigned automatically by implement to specific joystick buttons and cannot be modified by operator.

Depending on the selected control, the following combinations (assignments) are possible:

Tractor joystick

PC15329 —UN—08JUL13



Enable or Disable Controls

- Input + Source + Function

ISOBUS joystick

- Input + Implement + Function

Tractor functions

- Functions + Device + Input

ISOBUS implement

- Function + Device + Input

CZ76372,0000631 -19-31OCT14-1/4

Setup and manage the assignments

To add or edit any assignment, select the desired control, select Input or Function, and press either Edit or tap anywhere in the selectable area. Once assignment is completed, a status icon is shown.

PC17393 —UN—28MAY14



A—Add or edit assignment **B—Remove assignment**

Continued on next page

CZ76372,0000631 -19-31OCT14-2/4

ISO Aux

ISO Aux toggle enables ISOBUS joystick messages to be sent to implement.

Set ISO Aux to OFF to deactivate implement functions. Set to ON to activate implement functions and store them in implement.

These functions are stored until operator edits corresponding assignment.

PC17280 —UN—10SEP13



On / Off Toggle

NOTE: If Joystick Mode is set to tractor, the tractor joystick operates tractor functions only.

CZ76372,0000631 -19-31OCT14-3/4

Joystick Mode

Set up tractor joystick for operating tractor functions. Depending on the tractor model and its configuration, the operator can select:

OFF

- Tractor joystick is disabled.

Front or Mid SCVs

- Exclusively operate front/rear or mid/rear SCV functions for 6R tractor.

Tractor Functions

- Operate SCV and (or) Front Hitch tractor functions for 7R, 8R and 9R tractors.

PC15328 —UN—08JUL13



Joystick Mode

NOTE: SCVs with a default control lever assignment, that are also assigned to a Joystick axis, require Joystick Mode set to either "OFF" or "ISOBUS" to be controlled by control levers.

Loader Mode

Tractor joystick is set up for operating front loader for 6R, 7R, 8R tractors. For more information, refer to tractor SCV advanced settings.

CZ76372,0000631 -19-31OCT14-4/4

Automation Status

Automation Status allows control of various tractor functions. Automation Status displays which tractor functions are being controlled and their current status.

SCV Function Example: SCV status set to AUTO. Implement actively controls SCV 1. Implement requests SCV flow to be set at 32% in extend direction.

1. Select **Menu.**
2. Select **Applications tab.**
3. Select **Automation Status icon.**

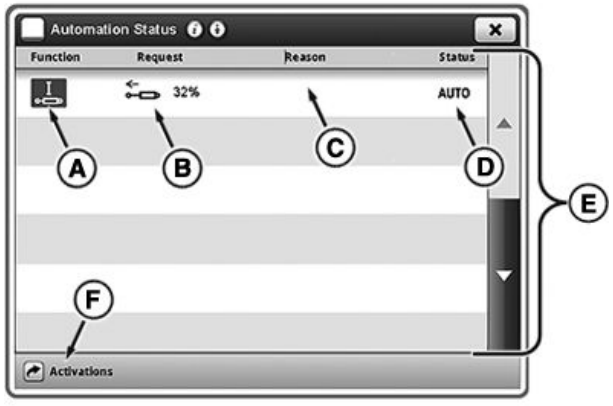
Press Activations button (F) to navigate to Software Manager application.

A—Function
B—Request
C—Reason
D—Status
E—Scroll Bar
F—Activations button

RXA0135014 —UN—12AUG13



Menu → Applications Tab → Automation Status Icon



RXA0135016 —UN—12AUG13

Automation Status Page

KT81203,00000A2 -19-20MAR14-1/1

Read ISOBUS Controller's Operator's Manual

CAUTION: ISOBUS Controller detected

Improper operation can cause unintended machine movement.

To avoid death or serious injury to a bystander, understand how this display operates the functions of the machine.

Read the ISOBUS controller's operator's manual.

Message shown above displays when system detects ISOBUS control unit. For more information, read the ISOBUS controller's operator's manual.

Generation 4 CommandCenter™ display can be used as display device for any control unit meeting ISO 11783 (ISOBUS) standard. This includes capability to control ISOBUS control units. When used in this manner, information and control unit functions placed on the display are provided by control unit and are responsibility of control unit manufacturer. Some of these control unit functions could provide hazard either to operator or bystander. Read operator manual provided by control unit manufacturer and observe all safety messages in manual and on control unit prior to use.

CommandCenter is a trademark of Deere & Company

KT81203,00000AE -19-24APR15-1/1

ISOBUS VT

This John Deere display supports ISOBUS 11783 compatible controllers. These controllers can be viewed and operated within the ISOBUS Virtual Terminal (VT).

When an ISOBUS controller is connected, graphic files for the user interface are loaded into ISOBUS VT. Then ISOBUS VT provides a means for the operator to navigate through and operate all available functions of ISOBUS controller.

Navigate to ISOBUS VT

1. Select Menu.

PC16682 —UN—18MAR13



2. Select Applications tab.
3. Select ISOBUS VT application.

CZ76372,0000629 -19-26JAN15-1/2

Connected ISOBUS Implements and Controllers

The Generation 4 display loads and communicates with different ISOBUS controllers at the same time. A list of all connected ISOBUS controllers is displayed after selecting menu button.

Select desired ISOBUS controller and press OK button to view the user interface.

Troubleshooting

If ISOBUS VT page is no longer operable, but display still is, issue is most likely related to ISOBUS controller. Turn key switch off and restart machine, or unplug ISOBUS controller connector and reconnect.

Run Page Module

PC15293 —UN—18MAR13



Menu Button

ISOBUS VT modules can be added to a run page using the Layout Manager application.

Modules are loaded from implement controller and are only available while controller is connected. The types of modules available are dependent on controller manufacturer. This display is capable of displaying ISOBUS VT version 3.

CZ76372,0000629 -19-26JAN15-2/2

StarFire™ GPS Receiver

The StarFire™ GPS receiver acquires global positioning and differential correction signal through a single receiver.

A Terrain Compensation Module (TCM) is integrated into the receiver and corrects for machine dynamics, such as roll and pitch on side-slopes, rough terrain, or varying soil conditions. An accurate TCM calibration is necessary for proper operation.

See the StarFire™ Receiver operator's manual for setup and calibration instructions.

Navigate to StarFire™ GPS Receiver

StarFire is a trademark of Deere & Company

PC17388 —UN—15MAY14



1. Select Menu.
2. Select Applications tab.
3. Select StarFire™ application.

HC94949,0000389 -19-15MAY14-1/1

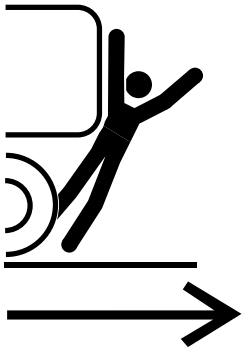
Use Video Display Capability Properly

Avoid Backover Accidents

CAUTION: Before moving machine, be sure that all persons are clear of machine path. Give audible warning by sounding horn. Turn around and look directly for best visibility. Use mirrors to assist in checking all around machine. Keep windows and mirrors clean, adjusted, and in good condition. Use a signal person when backing if view is obstructed or when in close quarters.

Do not rely on a camera to determine if personnel or obstacles are behind the machine. The system can be limited by many factors including maintenance practices, environmental conditions, and operating range.

CAUTION: Do not rely on a camera for collision avoidance or bystander detection. To avoid possible injury or death to operator or others, always remain alert and aware of surroundings when operating the machine. Read and understand AVOID BACKOVER ACCIDENTS in this section.



RXA0109491 —UN—05AUG10

Avoid Backover Accidents

IMPORTANT: Avoid damage to equipment. Correctly understand whether the camera is "mirrored" and whether the video application is mirrored.

- **Mount camera in a sturdy and secure location.**
- **Understand camera's field of view.**
- **Keep camera properly serviced.**
- **Keep camera lens clean.**

TO84419,000007F -19-27NOV12-1/1

Install Video Display Camera

IMPORTANT: Avoid damaging camera by mounting camera securely to equipment and in location where camera will not be pinched, crushed, kicked, or knocked off.

NOTE: Camera placement is limited to video camera cable length. Consider camera field of view when selecting location.

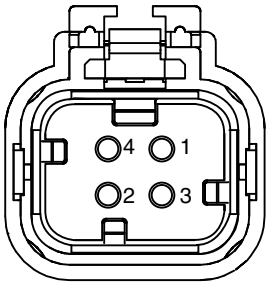
Tractors equipped with 4100 processor will have one camera input connector and 4600 processor will have four camera input connectors.

1. Tractors are equipped with one or four, 4-pin video connector(s) to attach camera(s). Remove rear cab panel cap screws (A). Remove cab rear panel (B) to access each marked video camera connector(s) (C, D, E or F). Chart shows connector pin/function information.

Pin Number	Function
1	Power
2	Ground
3	Signal
4	Signal—Ground

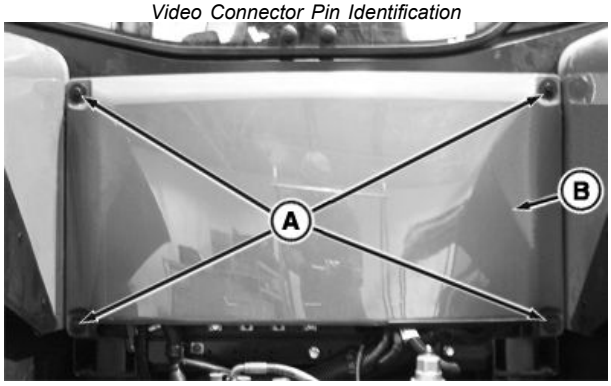
2. Connect camera cable into 4-pin connectors, route cable and mount camera at desired location.
3. Install rear panel on cab and tighten screws.
4. Proceed to Video Triggers in this section of this Operator's Manual to select camera settings.

A—Cap Screws
B—Rear panel
C—Video 1 Connector
D—Video 2 Connector
E—Video 3 Connector
F—Video 4 Connector



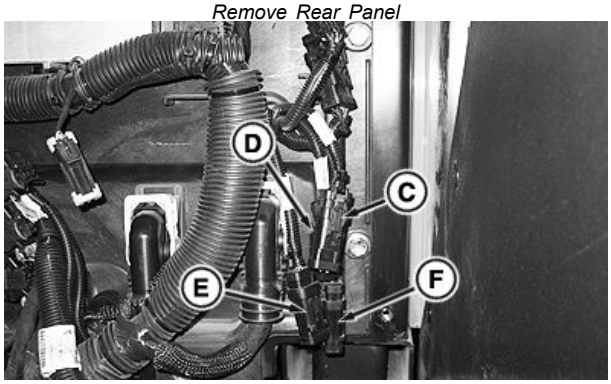
RXA0107925 —UN—28MAY10

Video Connector Pin Identification



RXA0132177 —UN—23APR13

Remove Rear Panel



RXA0132178 —UN—23APR13

Video Connectors Location (Equipped with 4600 Processor)

KT81203,0000155 -19-11NOV14-1/1

Three-Camera Video Connectors with Ethernet Cable (If Equipped)

GreenStar™ (GS3) 2630 Display can support three video inputs for additional visibility when operating tractor.

NOTE: These video inputs are in addition to the Generation 4 CommandCenter™ Display. Display harnesses are available from your John Deere™ dealer.

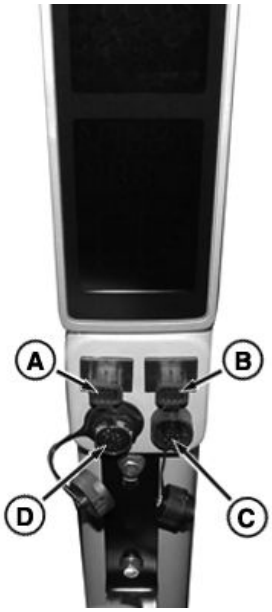
Attach a second monitor display to connector (B). This connector is only available with the 4600 Server.

The back of 2630 Display can be also connected to GreenStar™ connector (D) and Ethernet connector (A).

Ethernet cable (A) with GS3 2630 Display allows remote access for dealer, with customer approval, to view operator GS3 2630 Display.

ISO 11786 connector (C) is used to connect to third-party control unit.

A—Ethernet Connector
B—Monitor Display Connector (Available with 4600 processor)
C—ISO 11786 Standard Connector
D—GreenStar™ Connector



RXA0134950 —UN—07AUG13

Integrated Video Harness with Ethernet Cable

GreenStar is a trademark of Deere & Company
CommandCenter is a trademark of Deere & Company

KT81203,0000075 -19-01JUL14-1/1

Navigate to Video Application

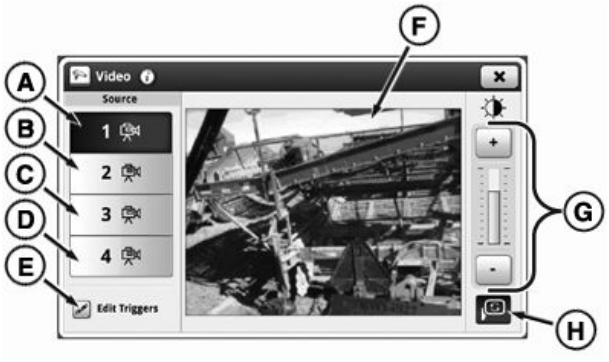
1. Select **Menu.**
2. Select **Applications tab.**
3. Select **Video icon.**

RXA0144375 —UN—06AUG14



Menu → Applications Tab → Video Icon

A—Input 1 button
B—Input 2 button
C—Input 3 button
D—Input 4 button
E—Edit Triggers Button
F—Video Display Screen
G—Brightness Adjustment Bar
H—Mirror Image Button



RXA0131114 —UN—03SEP13

Video Applications Settings Page

KT81203,0000076 -19-06AUG14-1/1

Video Application

CAUTION: Do not rely on a camera for collision avoidance or bystander detection. To avoid possible injury or death to operator or others, always remain alert and aware of surroundings when operating the machine. Read and understand AVOID BACKOVER ACCIDENTS in the safety section.

The Video application is used to observe areas around the machine that are difficult to see from the operator's station. Only one video can be viewed at a time.

4600 processor can support up to four camera inputs, while 4100 processor can support only one camera input.

PC15312 —UN—15MAY13



For more information about the different types of displays, see Display Introduction section.

Navigate to Video

1. Select Menu.
2. Select Applications tab.
3. Select Video application.

CZ76372,0000615 -19-22MAY14-1/2

Switching Cameras

If more than one camera is connected, choose between video inputs by selecting different camera numbers.

Contrast

Adjust video contrast using plus (+) and minus (-) buttons. Brighten video by selecting the plus button, and darken video by selecting minus button.

Mirror Video

Select Mirror Video button to simulate a rear view mirror. This swaps left and right sides of video image.

IMPORTANT: Determine if camera image or video application is mirrored before using Video application.

PC15313 —UN—16MAY13



A—Camera Icon
B—Mirror Icon
C—Contrast Icon

CZ76372,0000615 -19-22MAY14-2/2

Video Triggers

Video can be displayed when certain machine functions are performed (For example: Reversing, PTO engage).

1. Select Edit Triggers to configure settings.
2. Select a trigger.
3. Select camera input for the current trigger. This camera is displayed when trigger is activated.

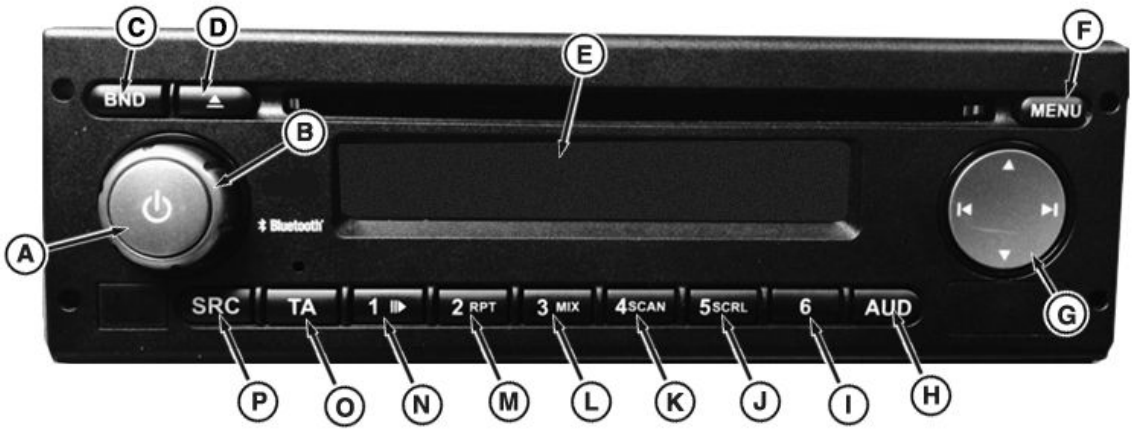
NOTE: To prevent video from displaying for a trigger, select No Camera.

4. Enter video Timeout length. This is the amount of time video is shown after the trigger becomes inactive.

CZ76372,0000616 -19-23JUN15-1/1

Use Premium Radio

Radio faceplate is made up of different buttons, knobs, and switches that perform various audio functions.



RXA0140976 —UN—14APR14

Radio with CD Player

A—Power Button: Press and hold for 2 seconds to turn radio on or off. Press briefly during operation to mute radio.

B—Volume Control Knob: Turn clockwise to increase and counterclockwise to decrease volume.

C—BND Button: Press briefly to select memory level or wave band. Press to accept phone call when call is coming in.

D—CD Eject Button: Press to eject CD.

E—Display: Shows current audio activity/information.

F—Menu Button: Access menu for basic settings. When phone is in use, press to end call

G—Multi-Function Rocker Switch: Use to navigate within display and switch functions. Press left or right to seek up or down to next available station. Press up or down to manually tune frequency and browse folders when using MP3, CD, or USB

H—AUD Button: Press briefly to access audio menu to adjust treble, middle, bass, balance and fade. Press and hold to restore treble, bass and middle back to factory sound setting for currently used audio source. Press and hold to restore balance and fade back to factory sound setting for all audio sources.

Station Buttons 1-6 can be saved as presets. Press and hold to save current station (beep will sound). Press again to bring radio back to saved station. Each station button also has specialized functions as described below.

I—Station Button 6: When CD, MP3, or USB is in use, press to switch between display of elapsed and remaining playing time of current track.

J—Station Button 5/SCRL: When CD, MP3, or USB is in use, press to turn scrolling track information on display on or off.

K—Station Button 4/SCAN: When CD, MP3, or USB is in use, press to play all tracks for approximately 10 seconds each until pressed again.

L—Station Button 3/MIX: When CD is in use, press to play songs at random until pressed again. When MP3 or USB is in use, press to play songs in current playlist at random. Press again to play all songs at random. Press a third time to turn off.

M—Station Button 2/RPT: When CD is in use, press to repeat current track until pressed again. When MP3 or USB is in use, press to repeat track. Press again to repeat all tracks in current playlist. Press a third time to turn off.

N—Station Button 1/Play or Pause Button: When CD, MP3, or USB is in use, press to pause current track. Press again to play.

O—TA Button: Press to switch from user/audio menus to current source, exit radio scan functions, turn priority for traffic announcements on or off, and cancel traffic announcement while in process (Europe only). When USB in use, press and hold to activate playlist mode.

P—SRC Button: Source selection between radio and AUX (also CD, USB and Bluetooth® depending on model) provided medium is inserted or device is connected and turned on.

*NOTE: Playlist must be created on computer and saved as *.m3u or *.pls.*

Bluetooth is a trademark of Bluetooth SIG

KT81203,00000AA -19-07APR15-1/1

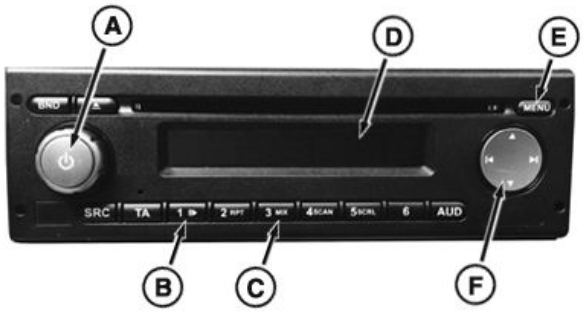
Select Radio Receiver Wave Band

Radio stations cannot be received if correct country-specific wave band is not selected for radio receiver. Select correct wave band:

1. Move key switch into ACC position.
2. Turn OFF radio with ON/OFF button (A).
3. Press and hold ON/OFF button, station button 1 (B) and station button 3 (C) until SETUP appears on display (D).
4. Press menu button (E) until current wave band (e.g. EUROPE, NAFTA, etc) is shown on display. Countries and their associated wave bands are shown in chart.
5. If wave band shown on display is not correct, press multi-function rocker switch (F) left or right until correct wave band is shown.

   NOTE: If radio will not store selected wave band, radio may be CommandCenter™ controlled. See your John Deere™ dealer.

6. Without changing selected wave band, turn radio OFF.



RXA0141571 —UN—13MAY14

Radio Faceplate

A—ON/OFF Button
B—Station Button 1
C—Station Button 3
D—Display
E—Menu Button
F—Multi-Function Rocker Switch

Wave Band	Country		
EUROPE	Austria Belgium Bulgaria Croatia Dutch Denmark England Estonia Finland	France Hungary Italian Lithuania Luxemburg Latvia Netherlands Poland Portugal	Romanian Serbia Slovakia Spain Sweden Switzerland Turkey Ukraine
NAFTA	Canada Dominican Republic	Mexico United States (USA)	
SOTHAMRCA	Argentina Bolivia	Brazil Nicaragua	Uruguay Venezuela
MESTAFRC	Armenia Ethiopian Israel	Guyana Kazakhstan Oman	Russia South Africa Zambia
APAC	China	Japan	Korea
AUSTRLNZ	Australian	New Zealand	
TAIWAN	Taiwan		
PHILIPIN	Philippines		

CommandCenter is a trademark of Deere & Company
John Deere is a trademark of Deere & Company

KT81203,0000149 -19-20MAY14-1/1

Turn Confirmation Beep On/Off (BEEP)

After certain actions (e.g. pressing and holding button) confirmation beep sounds. Confirmation beep can be turned on or off.

1. Press MENU button, on radio faceplate, until BEEP and current setting ON or OFF are displayed.
2. Turn volume control knob counterclockwise or clockwise to change from ON to OFF or vice versa.
3. Press MENU button several times to exit menu.

KT81203,00000FE -19-07APR15-1/1

Adjust Maximum Volume at Power-On (ONVOL)

Maximum volume when turning radio system on can be adjusted in ONVOL menu. Previously selected volume is used at power-on unless it is above setting for maximum volume at power-on. In this case, maximum volume setting is used.

1. Press MENU button, on radio faceplate, until ONVOL and current setting are displayed.
2. Turn volume control knob counterclockwise or clockwise to adjust maximum volume at power-on from 5 to 25.
3. Press MENU button several times to exit menu.

KT81203,00000FF -19-07APR15-1/1

Program Type (PTY)

Besides station name, some FM stations also transmit information on program type. Program types examples include:

- CULTURE
- TRAVEL
- WEATHER
- JAZZ MUSIC
- NEWS
- POP MUSIC

With this function only stations of specific program type can be selected.

When PTY is turned on and PTY scan has been started, the radio automatically changes from current station or from another mode to station of selected program type.

Turn PTY On/Off

1. Select radio mode.
2. Press MENU button, on radio faceplate, until PTY ON or PTY OFF is displayed.
3. Turn volume control knob counterclockwise or clockwise to turn PTY on or off.
4. Press MENU button several times to exit menu.

Select program type

NOTE: PTY must be turned on.

1. Select radio mode.
2. Press MENU button, on radio faceplate, several times until **PTYTYPE** is displayed.
3. Turn volume control knob counterclockwise or clockwise to select program type.
4. Press MENU button several times to exit menu.

Start PTY scan

NOTE: PTY scan is only available if PTY is turned on and AUTOSEEK or BANDSCAN is selected for ◄ and ► keys in KEY PRG menu (see Set Key Function (KEY PRG) in this section of this Operator's Manual).

1. Press ◄ or ► button, on radio faceplate, to start scanning.
2. If station of currently selected program type is found, it will be tuned to station.
3. If no station of this program type is found, previously selected station remains on.

KT81203,0000100 -19-07APR15-1/1

Treble Reduction During Interference (HCUT)

HCUT function improves sound when radio reception is poor. If interference with reception is present, level of interference noise is automatically reduced.

1. Select radio mode.
2. Press MENU button, on radio faceplate, until HCUT and current setting OFF, 1 or 2 are displayed.
3. Turn volume control knob counterclockwise or clockwise to adjust or turn off HCUT.
4. Press MENU button several times to exit menu.

KT81203,0000101 -19-07APR15-1/1

Set Key Function (KEY PRG)

Functions can be assigned to ◄ and ► buttons.

Possible key functions	Description
AUTOSEEK	Automatic search for next receivable station
MANSEEK	Manual frequency change in increments
PRSTSCAN	Scanning of stations stored on currently selected memory level
BANDSCAN	Scanning of stations receivable in currently selected wave band

Set key function

1. Select radio mode.
2. Press MENU button, on radio faceplate, until KEY PRG is displayed.
3. Turn volume control knob counterclockwise or clockwise to change between different settings (see table).
4. Press MENU button several times to exit menu.

KT81203,0000102 -19-07APR15-1/1

Traffic Information

NOTE: Traffic information functions are not available in NAFTA countries.

This function is not available on Premium Radio for North America.

This function is available in CD and AUX modes, only if the FM wave band is selected in radio mode.

Turn traffic information priority ON/OFF

Press TA button to turn traffic information priority on or off for all modes.

Traffic information priority is activated if TA or TP is displayed. When traffic announcement is received, CD and other outputs are interrupted and radio system switches to traffic announcement. TRAFFIC is displayed for duration of announcement.

• Alarm sounds regardless of playback source when leaving transmission range of station broadcasting traffic information and automatic scan does not find alternative station with traffic information.

• Alarm also sounds when changing from station with traffic information to station without traffic information.

In both cases, either turn traffic information priority off or tune into station that broadcasts traffic announcements.

Set volume increase for traffic announcements

Based on currently selected volume, volume for traffic announcements can be increased.

1. Press MENU button, on radio faceplate, several times until TA DIFF and current setting are displayed.
2. Turn volume control knob counterclockwise or clockwise to adjust value from DIFF 0 to DIFF 10. The numbers represent volume increase in relation to selected volume.
3. Press MENU key several times to exit menu.

NOTE: While traffic announcement is broadcasting, volume can be adjusted for duration of announcement using volume control.

Cancel traffic announcements

Press TA button to cancel ongoing traffic announcement and return to previous output source. Traffic information priority will remain on.

KT81203,0000107 -19-07APR15-1/1

External Sources (Premium Radio)

External audio sources can be connected using convenience port located on right-hand console/storage tray. Sources can also be connected using Bluetooth® functions. Use ports to charge certain external audio sources. Examples of external audio sources include portable CD player, MiniDisc player, or MP3 player.

NOTE: Charging some external audio sources, such as smart phones and tablets, via audio USB port is not supported. Attempting to charge device that is not supported may shut off USB port. Device must be removed and cycle radio power to recover.



RXA0143013 —UN—03JUL14

Auxiliary and USB Input

A—Auxiliary Input **B—USB Input**

Activate AUX Input

NOTE: External audio source can only be selected if audio device is connected to external AUX input.

Connect external audio source using Auxiliary Input (A) and press SRC button several times until AUX is displayed on radio.

Activate USB Input

NOTE: USB audio source can only be selected if USB device is connected to external USB input.

Connect USB audio source using USB Input (B) and press SRC button several times until USB is displayed on radio.

Adjust AUX Input Volume

Volume for connected external audio source can be adjusted using radio volume knob after input is selected as audio source using SRC button.

1. Press SRC button several times until installed audio source is displayed.
2. Press MENU button. GAIN and current setting is displayed.
3. Turn volume control knob counterclockwise or clockwise to adjust value from -9 to +9.
4. Press the MENU button several times to exit the menu.

Set Up Bluetooth®

Following steps must be performed before Bluetooth® can be used:

NOTE: Bluetooth® connection only relevant to devices/external audio sources which are Bluetooth® enabled.

Bluetooth is a trademark of Bluetooth SIG
CommandCenter is a trademark of Deere & Company

NOTE: While pairing Bluetooth® device to radio, pairing process cancels if changes are made to radio (ex: changing source or frequency).

1. Enable Bluetooth® on device.
2. Press MENU button, on radio faceplate until BT MODE displays.
3. Wait 2 seconds until BT ON or BT OFF. Turn volume control knob clockwise or counterclockwise to turn Bluetooth® on or off. Display window may take up to 5 seconds to change.
4. Press MENU button until display shows CON-TYPE. Select connection type phone/audio (default).
5. To pair device, press MENU button until BT Pair displays.
6. Enter pin provided into device.

Pairing process may take up to 5 minutes to complete. Bluetooth® symbol flashes while pairing takes place. When device/external audio source is successfully paired, phone calls and audio streaming can be received and placed via radio system. Device information (contact information, call history, music, etc) does not transfer to CommandCenter™.

For further instructions on how to pair device/external audio source, select source for connection, and transfer data, see Pairing Bluetooth® Device—On Generation 4 CommandCenter™ on the CommandCenter™ page in this section of this Operator's Manual.

TO84419,0000085 -19-13APR15-1/1

Select Radio Source with Generation 4 CommandCenter™

Use radio source tabs on Generation 4 CommandCenter™ to select radio source.

When radio is on, radio page navigates to home page of current source selected. When radio is off, content blocker displays.

NOTE: Selecting radio source will not turn radio on. Turn radio on by pressing ON/OFF button on radio faceplate.

To access audio main page, use Audio Shortcut Button on Navigation Bar or follow alternative path:

1. Select **Menu.**
2. Select **Machine Settings tab.**
3. Select **Audio icon.**
4. Select desired radio source.

A—FM, MW, and LW Tab
B—CD/MP3 Tab (Premium Radio Only)
C—USB Tab (Premium Radio Only)
D—Bluetooth® Audio Tab (Premium Radio Only)
E—AUX Tab

RXA0133718 —UN—16JUL13

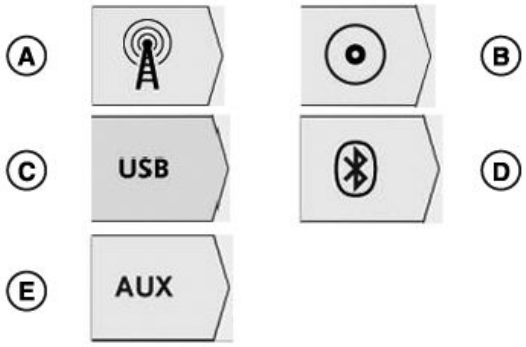


Audio Shortcut Button on Navigation Bar

RXA0147929 —UN—13APR15



Menu → Machine Settings Tab → Radio Icon



RXA0132527 —UN—17MAY13

Source Select Tabs

CommandCenter is a trademark of Deere & Company
Bluetooth is a trademark of Bluetooth SIG

KT81203,0000038 -19-14APR15-1/1

FM, MW, LW Home Page

NOTE: Refer to Select Radio Source with Generation 4 CommandCenter™ in this section of this Operator's Manual, to learn how to navigate to FM/MW/LW home page.

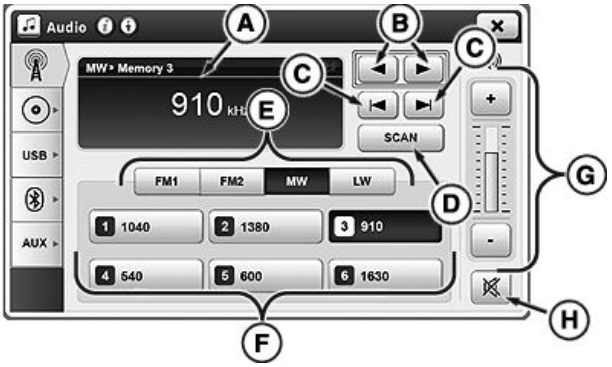
A—Display Area: Displays current radio activity/information.

B—Manually Seek Forward/Back: Select to manually seek to next available station. Each time button is pressed, radio frequency increases or decreases by standard increment.

C—Next/Previous Station: Select to seek next available station before or after current station.

D—Scan Button: Select to cycle through available stations. Each station broadcasts for 5 seconds before moving to next station. Cycle will end if returns to original station or by selecting button again.

E—FM/ LW/MW Button Bar: Cycle through channel presets using toggle bar (FM1, FM2, MW, LW).



FM, MW, LW Home Page

F—Presets: Six presets can be programmed to FM1, FM2, MW and LW banks. To change FM1, FM2, MW and LW presets, press preset for 3 seconds, while on desired station, until "beep" sounds. Press again to tune radio to saved station.

G—Volume Adjustment: Adjust volume.

H—Mute: Silence sound.

CommandCenter is a trademark of Deere & Company

KT81203,0000039 -19-10JUL14-1/1

Premium Radio CD Home Page (If Equipped)

NOTE: Refer to Select Radio Source with Generation 4 CommandCenter™ page, in this section of this Operator's Manual, to learn how to navigate to CD home page.

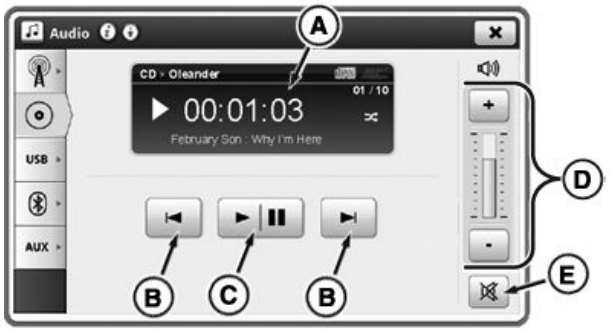
A—Display Area: Displays current CD activity/information.

B—Next/Previous Track: Select to skip back to beginning of current track or ahead to beginning of next track. Press previous button twice to skip to previous track.

C—Play/Pause: Play or pause track.

D—Volume Control: Adjust volume.

E—Mute: Silence sound.



CD Home Page

CommandCenter is a trademark of Deere & Company

KT81203,000003A -19-10JUL14-1/1

Premium Radio USB Home Page (If Equipped)

NOTE: Refer to Select Radio Source with Generation 4 CommandCenter™ in this section of this Operator's Manual, to learn how to navigate to USB home page.

Connect USB using USB input, located on right-hand console/storage tray, to play stored music. For more information, refer to External Sources—Using Premium Radio page in the section of this Operator's Manual.

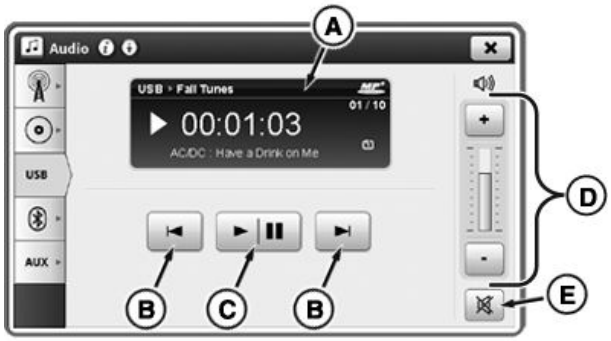
A—Display Area: Displays current USB activity/information.

B—Next/Previous Track: Skip back to beginning of current track or ahead to beginning of next track. Press previous button twice to skip to previous track.

C—Play/Pause: Play or pause track.

D—Volume Controls: Adjust volume.

CommandCenter is a trademark of Deere & Company



RXA0132530 —UN—28JUN13

USB Home Page

E—Mute: Silence sound.

KT81203,000003C -19-10JUL14-1/1

Premium Radio Bluetooth® Home Page (If Equipped)

NOTE: Refer to Select Radio Source with Generation 4 CommandCenter™ page, in this section of this Operator's Manual, to learn how to navigate to Bluetooth® home page.

Connect Bluetooth® enabled device to play stored music.

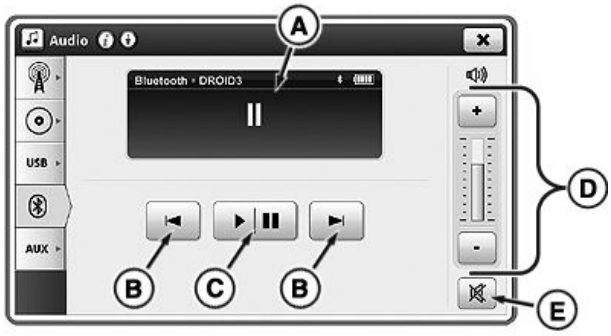
Radio system is equipped with Bluetooth®, which allows data transfer between radio system and paired close-range Bluetooth® device such as cell phone. Music stored on device does not transfer to CommandCenter™

A—Display Area: Displays current Bluetooth® activity/information.

B—Next/Previous Track: Skip back to beginning or ahead to beginning of next track. Press previous button twice to skip to previous track.

C—Play/Pause: Play or pause track.

CommandCenter is a trademark of Deere & Company
Bluetooth is a trademark of Bluetooth SIG



RXA0132549 —UN—28JUN13

Bluetooth® Home Page

NOTE: Not all devices support pause function. Devices may mute sound, but not pause play.

D—Volume Adjustment: Adjust volume.

E—Mute: Silence sound.

KT81203,000003D -19-10JUL14-1/1

Auxiliary Home Page

NOTE: Refer to Select Radio Source with Generation 4 CommandCenter™ page, in this section of this Operator's Manual, to learn how to navigate to Auxiliary home page.

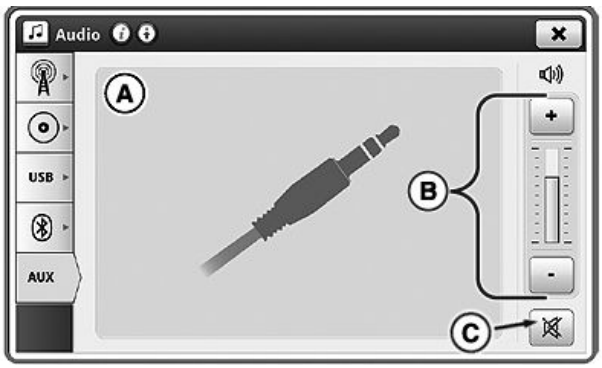
Connect USB using USB input, located on right-hand console/storage tray, to play stored music. For more information, refer to External Sources (Premium Radio) page in the section of this Operator's Manual.

A—Display Area: Displays image shown. Activity/information displays on external device only, not on CommandCenter™ display.

B—Volume Adjustment: Adjust volume.

C—Mute: Silence sound.

CommandCenter is a trademark of Deere & Company



RXA0132550 —UN—28JUN13

Auxiliary Home Page

KT81203,000003E -19-10JUL14-1/1

Pair Bluetooth® Device to Generation 4 CommandCenter™

Radio system is equipped with integrated Bluetooth®, which allows data transfer between radio system and paired close-range Bluetooth® device such as cell phone.

NOTE: Enable Bluetooth® mode on device before trying to pair device to radio. Not ALL devices are able to use Bluetooth® feature on radio.

NOTE: Once Bluetooth® pairing process has been initiated, changes to radio (ex: changing source or frequency) causes pairing to cancel.

To access phone main page, use Phone Shortcut Button on Navigation Bar or follow alternative path:

1. Select **Menu.**
2. Select **Machine Settings tab.**
3. Select **Phone icon.**
4. Enable Bluetooth® mode on device.
5. Select Pair Device button (A) to start pairing process.
6. Enter pairing code displayed in Pairing Code box (B) into device. Pairing process begins immediately.

Once device is connected successfully, **"Pairing Complete"** is displayed. Up to five device pairings can be stored in radio's Bluetooth® feature. To learn about managing stored devices, see Manage Bluetooth® Devices in this section of this Operator's Manual.

Phone book does not appear on CommandCenter™ display.

A—Pair Device Button **B—Pairing Code Box**

RXA0133719 —UN—16JUL13

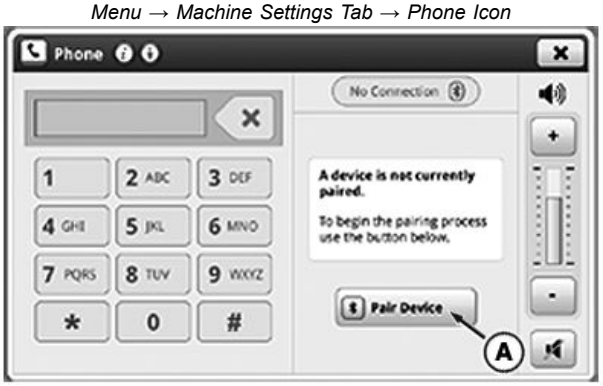


Phone Shortcut Button on Navigation Bar

RXA0147930 —UN—13APR15



Menu → Machine Settings Tab → Phone Icon



RXA0132157 —UN—28JUN13

Pair Device Page



RXA0137741 —UN—13DEC13

Pairing Code Page

Bluetooth is a trademark of Bluetooth SIG
CommandCenter is a trademark of Deere & Company

TO84419,0000090 -19-14APR15-1/1

Manage Paired Bluetooth® Devices (If Equipped)

Use phone advanced settings to connect devices paired to radio or add new devices to paired list.

1. Select **Phone Shortcut button on Navigation Bar.**
2. Select **Advanced Settings icon.**
3. Select **Settings tab.**
4. Select Manage Devices button (A).
5. Choose desired device from list of paired devices and select Connect Device button (B).
6. Select Add New Device button (C) to pair new Bluetooth® device.

Up to 5 device pairings can be stored in radio's Bluetooth® feature. To learn more about pairing devices, see Pair Bluetooth® Device to Generation 4 CommandCenter™ in this section of this Operator's Manual.

A—Manage Devices Button
B—Connect Device Button
C—Add New Device Button

RXA0133719 —UN—16JUL13

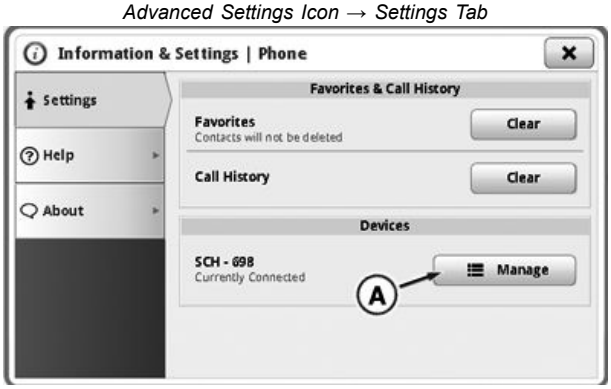


Phone Shortcut Button on Navigation Bar

RXA0147944 —UN—13APR15

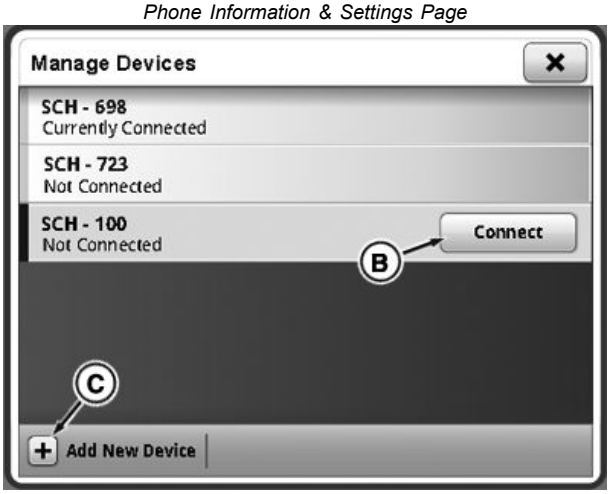


Advanced Settings Icon → Settings Tab



RXA0147734 —UN—30MAR15

Phone Information & Settings Page



RXA0147733 —UN—30MAR15

Manage Devices Page

Bluetooth is a trademark of Bluetooth SIG
CommandCenter is a trademark of Deere & Company

KT81203,0000215 -19-23APR15-1/1

Phone Operation

Use Bluetooth® capability to make or receive phone calls from paired Bluetooth® enabled cell phone. For more information on how to pair Bluetooth® enabled device see Pair Bluetooth® Device—Generation 4 CommandCenter™ in this section of this Operator's Manual.

Press Phone Shortcut button on Navigation Bar or follow alternative path:

1. Select **Menu.**
2. Select **Machine Settings tab.**
3. Select **Phone icon.**

NOTE: Phone options A, B, C and E are not available during call. Use cell phone if another number is needed.

Phone controls on this page are disabled while device is syncing with radio.

A—Input Box: Displays typed digits.

B—Backspace Button: Cancel typed digit. Press and hold to cancel multiple digits.

C—Dial Pad: Enter phone number using number buttons.

D—Dial Pad Tab: Press to display dial pad during phone call.

NOTE: Favorites are stored permanently and can be viewed by any operator. Clear favorites before leaving tractor, if necessary. For more information, see Clear Favorites and Call History is this section of this Operator's Manual.

E—Favorites Button: View/edit favorites contacts.

F—Recent Button: Review previous missed calls, incoming calls or outgoing calls.

G—Volume Control: Adjust volume.

H—Mute Button: Mutes microphone.

I—Battery Icon: Displays battery life.

J—Signal Icon: Displays current phone signal strength.

K—Bluetooth® Icon: If blue, Bluetooth® device is connected. If grayed out, Bluetooth® device is not connected.

L—Call Button: After dialing or selecting number, press to begin call.

M—Privacy Mode Button: Transfers phone audio from cab speakers to phone speakers during call.

Bluetooth is a trademark of Bluetooth SIG
CommandCenter is a trademark of Deere & Company

RXA0133719 —UN—16JUL13

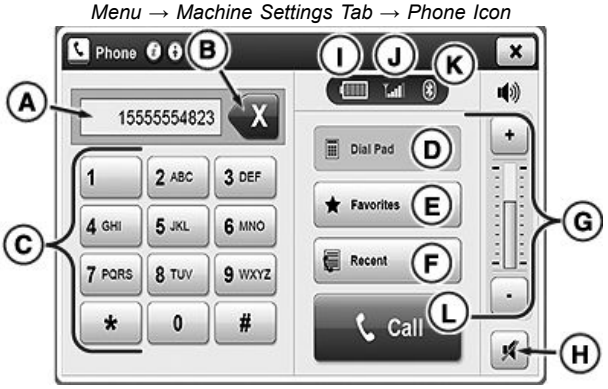


Phone Shortcut Button on Navigation Bar

RXA0147930 —UN—13APR15

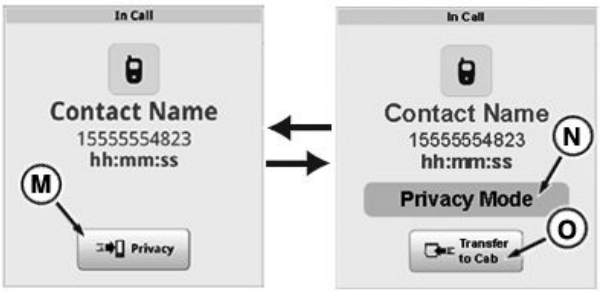


Menu → Machine Settings Tab → Phone Icon



RXA0137742 —UN—11DEC13

Phone Home Page



RXA0147774 —UN—30MAR15

Privacy Mode

N—Privacy Mode Message: Displays when call has entered privacy mode.

O—Transfer to Cab Button: Exits privacy mode and transfers phone audio from phone speakers to cab speakers

TO84419,000008D -19-14APR15-1/1

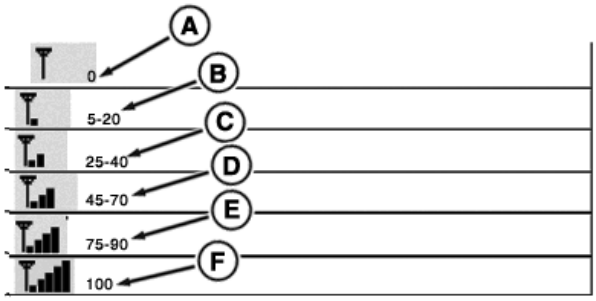
Phone Signal Strength and Battery Charge

Cell phone signal strength is represented by phone signal strength bars (A-F). Signal strength ranges from no signal (A) to 100 percent signal strength (F).

Cell phone battery charge is represented by phone battery charge bars (G-K). Battery charge ranges from no battery charge (G) to 85-100 percent battery charge (K)

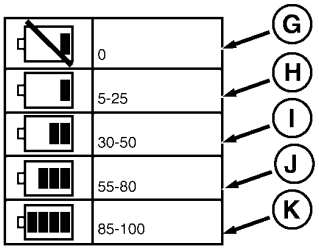
A—No Signal
B—5-20 Percent Signal Strength
C—25-40 Percent Signal Strength
D—45-70 Percent Signal Strength
E—75-90 Percent Signal Strength
F—100 Percent Signal Strength

G—No Battery Charge
H—5-25 Percent Battery Charge
I— 30-50 Percent Battery Charge
J— 55-80 Percent Battery Charge
K—85-100 Percent Battery Charge



RXA0121552 —UN—31OCT11

Signal Strength Display



RXA0121554 —UN—31OCT11

Battery Charge Displays

KT81203,0000213 -19-08APR15-1/1

Contact List

1. Select **Menu.**
2. Select **Machine Settings tab.**
3. Select **Phone icon.**
4. Select **Favorites button.**

NOTE: Device's phone book synchronizes with radio, not CommandCenter™. Contacts must be added and edited manually on display.

Maximum number of phone numbers that can be stored in CommandCenter™ is 25. Maximum number of characters in phone number is 21.

NOTE: Favorites are stored permanently and can be viewed by any operator. Clear favorites before leaving tractor, if necessary. For more information, see Clear Favorites and Call History is this section of this Operator's Manual.

A—Favorite List: List of available contacts.

B—Add Favorite Button: Select to add contact manually

C—Edit Favorite Button: Select to edit current contact.

D—Delete Button: Select to delete contact from favorites.

E—Call Button: Select to call currently selected contact.

F—Scroll Bar: Select to scroll up or down.

G—Edit Favorite First Name: Select to edit first name.

H—Edit Favorite Last Name: Select to edit last name.

I—Edit Favorite Phone Number: Select to edit phone number.

J—Mobile Phone Button: Select to list contact information under mobile phone.

K—Home Phone Button: Select to list contact information under home phone.

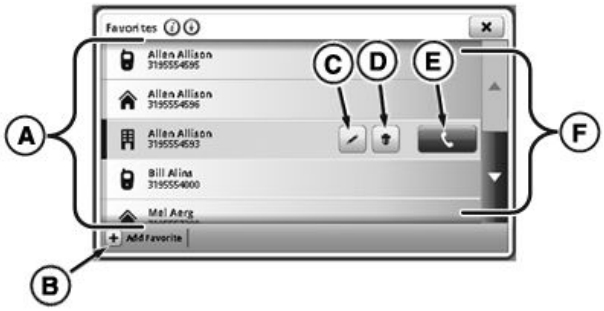
L—Work Phone Button: Select to list contact information under work phone.

CommandCenter is a trademark of Deere & Company

RXA0147931 —UN—13APR15

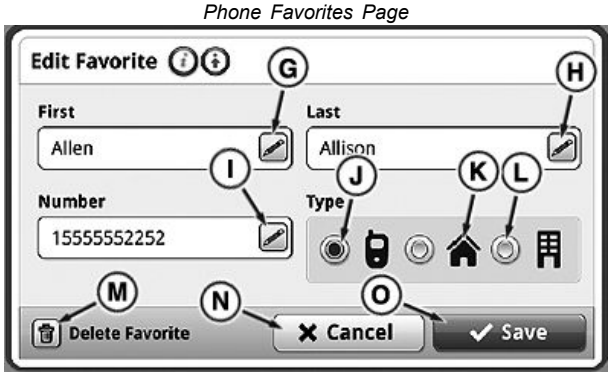


Menu → Machine Settings Tab → Phone Icon → Favorites Button



RXA0132498 —UN—28JUN13

Phone Favorites Page



RXA0132499 —UN—28JUN13

Edit Favorite Page

M—Delete Favorite Button: Select to delete contact.

N—Cancel Button: Select to cancel edits.

O—Save Button: Select to save edits.

TO84419,000008E -19-14APR15-1/1

Recent Calls

Review previous missed, incoming or outgoing calls placed or received through CommandCenter™.

1. Select **Menu.**
2. Select **Machine Settings tab.**
3. Select **Phone icon.**
4. Select **Recent button.**

A—Recent Calls Contact List: List of recently called contacts.

B—Scroll Bars: Use to scroll up or down through recent calls contact list.

C—Add Favorite Button: Select to add contact to favorites.

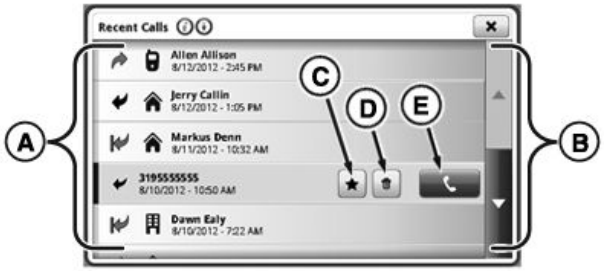
D—Delete Button: Select to delete contact from favorites.

E—Call Button: Select to call currently selected contact.

RXA0147933 —UN—13APR15



Menu → Machine Settings Tab → Phone Icon → Recent Button



RXA0132556 —UN—28JUN13

Recent Calls Page

CommandCenter is a trademark of Deere & Company

TO84419,000008F -19-14APR15-1/1

Clear Favorites and Call History

Use phone advanced settings to clear favorites and call history. Contacts will be cleared on CommandCenter™ display only, not on phone.

1. Select **Phone Shortcut button on Navigation Bar.**
2. Select **Advanced Settings icon.**
3. Select **Settings tab.**
4. Press clear favorites button (A) to erase favorites. Phone contacts will not be deleted.
5. Press clear call history button (B) to erase call history.

A—Clear Favorites Button **B—Clear Call History Button**

RXA0133719 —UN—16JUL13

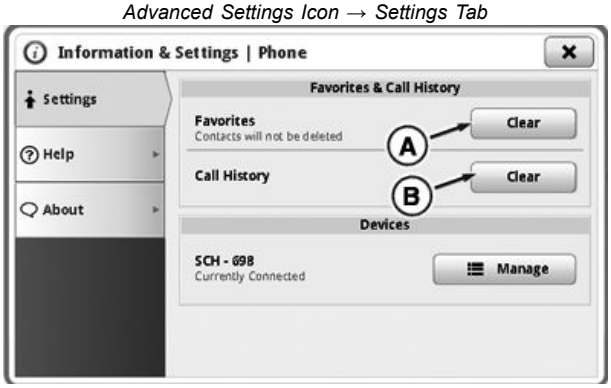


Phone Shortcut Button on Navigation Bar

RXA0147944 —UN—13APR15



Advanced Settings Icon → Settings Tab



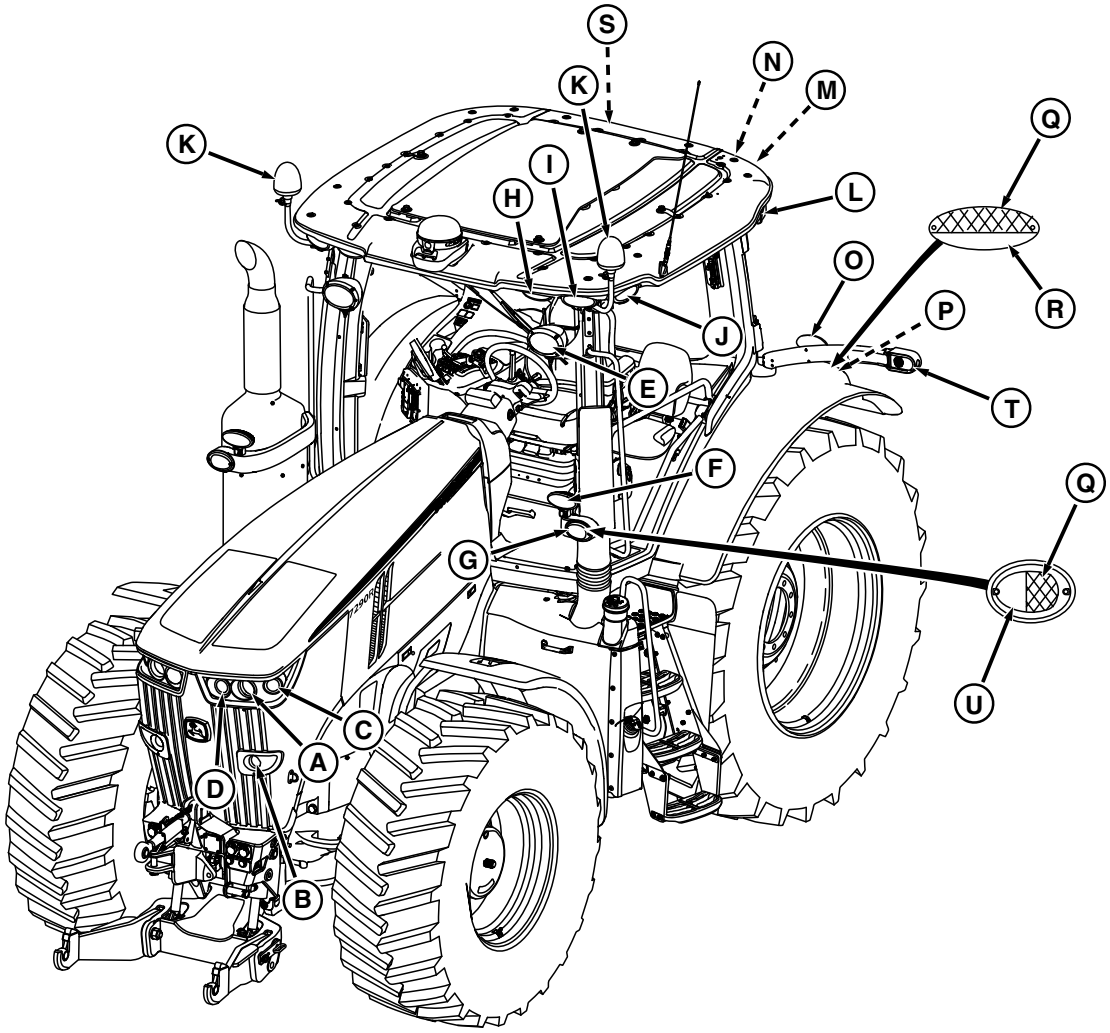
RXA0147732 —UN—30MAR15

Phone Information & Settings Page

CommandCenter is a trademark of Deere & Company

KT81203,0000214 -19-15APR15-1/1

Light Identification



RXA0131126 —UN—29SEP15

A—Road Lights (High Beam)
B—Road Lights (Low Beam)
C—Outer Hood Lights
D—Inner Hood Lights
E—Loader/Road Lights (Low and High Beam)
F—Beltline Lights
G—Beltline Indicator and Clearance Lights
H—Front Inner Roof Lights
I— Front Outer Roof Lights
J— Front Side Roof Light
K—Rotary Beacon Lights (If Equipped)
L—Rear Side Roof Lights
M—Rear Outer Roof Lights
N—Rear Inner Roof Lights
O—Rear Fender Lights
P—Rear Fender Tail/Brake/Indicator Lights
Q—Amber Lens
R—Red Lens
S—License Plate Lights
T—Extremity Indicator Lights
U—White Lens

All lights are same for left and right side of tractor.

White lights are any exterior tractor lights that do not have colored lenses/bulbs.

Lights are configured on CommandCenter™ light page. (See Configurable Lights in this section of this Operator's Manual).

CommandCenter is a trademark of Deere & Company

SV81855,0000045 -19-08AUG14-1/1

Configurable Lights

CAUTION: Avoid injury or death caused by accidental collision with another vehicle. Always comply with traffic regulations when driving tractor on a road. Dim Road Lights to low-beam for oncoming vehicles. Avoid using Field Light position which could blind or confuse other drivers.

Promptly replace or repair damaged or lost lighting devices. See your John Deere™ dealer.

To access lights page, use Lights Shortcut Button on Navigation Bar or follow alternative path:

1. Select **Menu**
2. Select **Machine Settings tab.**
3. Select **Lights icon.**

When Lights page is displayed, operator can select left side tabs (A-F).

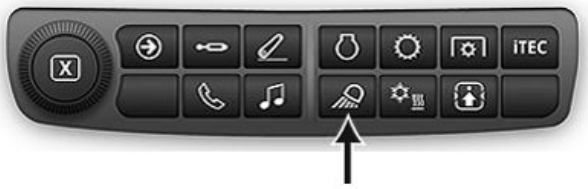
NOTE: Lights page will temporarily show when selector knob transitions from OFF position to the road lights or field lights position.

A—Field 1 Low Beam
B—Field 1 High Beam
C—Field 2 Low Beam
D—Field 2 High Beam
E—Exit Lighting
F—Hood/Beltline Light (If Equipped)

Following buttons can be used by operator to configure lights.

G—Linked Lights: Lights linked or paired together that can be unlinked.
H—Unlinked Lights: Unlinked light pair that can be linked.
I—Paired Lights: Light pair that is always linked.
J—Exit Light Timeout: Allows operator to select how long selected lights remain ON after light selector knob is turned to OFF position.
K—Link/Unlink: Press toggle to link and unlink lights on all pages.
L—Hood/Loader Road Light Toggle: Press to toggle road lights between hood and loader lights position. Feature is only available when light knob is in road mode and tractor is equipped with hood/beltline lights.
M—Implement Lights: Press to activate implement lights. Implement light button only available if there are no fender work lights. If there are fender work lights, implement lights will be controlled by fender work lights button.
N—Light with Fault: Exclamation point indicates light is in error. (i.e. light bulb is burnt out.)

RXA0133717 —UN—16JUL13

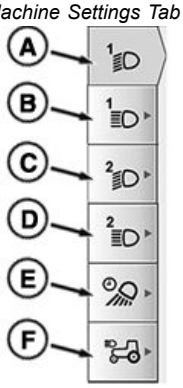


Lights Shortcut Button on Navigation Bar

RXA0147934 —UN—13APR15

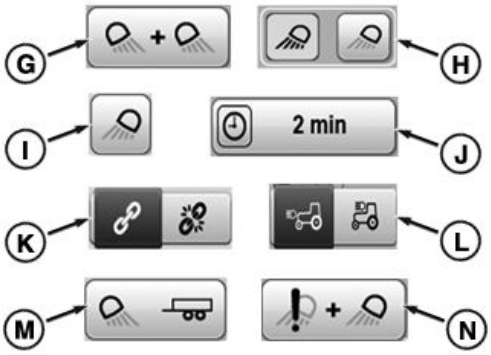


Menu → Machine Settings Tab → Lights Icon



Lights Page Selection Tabs

RXA0137115 —UN—05DEC13



CommandCenter™ Light Controls

RXA0137114 —UN—05DEC13

John Deere is a trademark of Deere & Company
CommandCenter is a trademark of Deere & Company

TO84419,0000093 -19-15APR15-1/1

Steering Column Light Controls

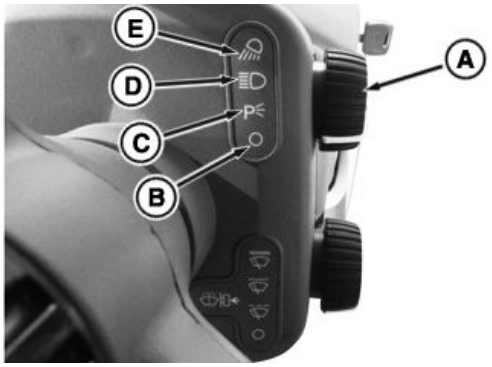
CAUTION: Avoid injury or death caused by accidental collision with another vehicle. Always comply with traffic regulations when driving tractor on a road. Dim Road Lights to low-beam for oncoming vehicles. Avoid using Field Light position which could blind or confuse other drivers.

Promptly replace or repair damaged or lost lighting devices. See your John Deere™ dealer.

Control lights by using Selector Knob (A) on the steering column. Display indicates lighting mode selected (B-E).

A—Selector Knob: Turn knob to OFF, parking lights, road lights, or field lights position.
B—OFF Position: Use selector knob to turn lights OFF.
C—Parking Lights Position: Use selector knob to turn ON parking lights.

John Deere is a trademark of Deere & Company



RXA0142298 —UN—09JUN14

Steering Column Light Switch

D—Road Lights Position: Use selector knob to turn road lights ON.
E—Field Lights Position: Use selector knob to turn field lights ON.

SV81855,00000EA -19-10JUN14-1/1

Exit Lights

Programming exit lighting allows operator to select which lights will remain on and for how long they will remain on after light selector knob is turned to OFF position.

Field exit lighting is all lights chosen on exit lighting page and will be activated for time selected for the Exit Timeout. Field exit lighting will be enabled when light switch has been in “Field” position for at least 10 seconds during the current key switch cycle. Field exit lighting will then be activated when light switch and key switch are turned off. The order which light switch and key switch are turned off do not matter.

Road exit lighting is the low beam road lights only and will be activated for time selected for Exit Timeout. Road exit lighting will be enabled when light switch has been in “Road” position for at least 10 seconds during current key switch cycle. Road exit lighting will then be activated when light switch and key switch are turned off. The order which the light switch and key switch are turned off do not matter.

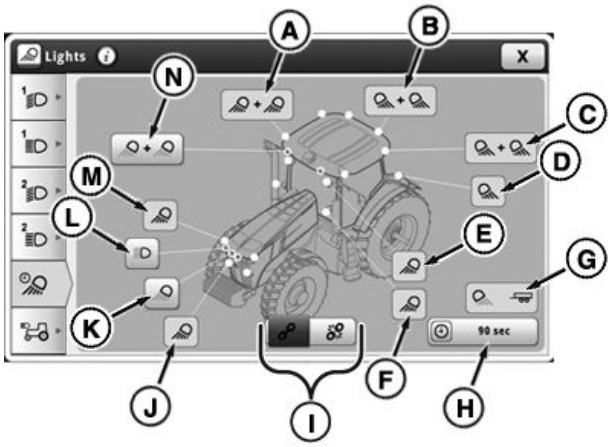
1. Select **Menu.**
2. Select **Machine Settings tab.**
3. Select **Lighting icon.**
4. Select **Exit Lighting tab.**
5. Select desired lights and deselect unwanted lights. Use Link/Unlink Toggle (I) if operator wishes to select a set (linked) or only select the right or left light in a set (unlinked) where applicable. Lights D-G and J-M are always linked and will always select both the left and right lights.
6. Select Exit Light Timeout button (H).
7. When options appear, select desired time interval (O) for when lights automatically turn OFF and select OK button (Q).

NOTE: Not all possible lights for programmable exit lighting are shown. Lights available are dependent on tractor configuration.

RXA0147935 —UN—13APR15

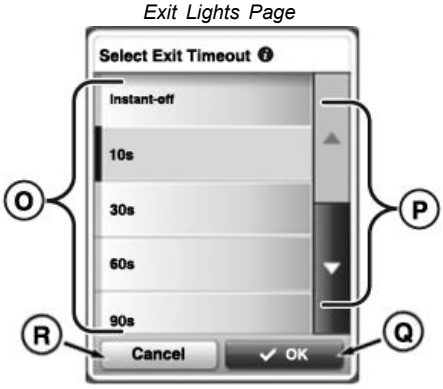


Menu → Machine Settings Tab → Lights Icon →Exit Lighting Tab



RXA0143008 —UN—25JUN14

Exit Lights Page



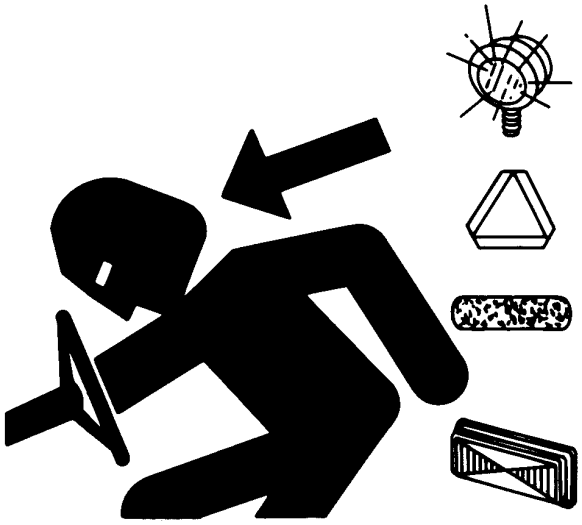
RXA0137119 —UN—05DEC13

Exit Time Selection

A—Front Side Roof Lights Button
B—Rear Inner Roof Lights Button
C—Rear Side Roof Lights Button
D—Rear Fender Lights Button
E—Loader/Road Lights (Low and High Beams) Button
F—Beltline Lights Button
G—Implement Lights Button (If Equipped)
H—Exit Light Timeout Button
I— Link/Unlink Toggle
J— Low Beam Road Lights Button
K—Inner Hood Lights Button
L— High Beam Road Lights Button
M—Outer Hood Lights Button
N—Front Inner Roof Lights Button
O—Time Selection Interval List
P—Scroll Bar
Q—OK Button
R—Cancel Button

TO84419,0000094 -19-23APR15-1/1

Operate Turn Signals and High/Low Beam



TS951 —UN—12APR90



RXA0126178 —UN—29OCT12

A—Turn Signal Lever

CAUTION: Prevent collisions between other road users, slow moving tractors with attachments or towed equipment, and self-propelled machines on public roads. Frequently check for traffic from rear, especially in turns, and use turn signal lights.

Use headlights and turn signals day and night. Follow local regulations for equipment lighting and marking. Keep lighting and marking visible, clean, and in good working order. Replace or repair lighting and marking that has been damaged or lost. See your John Deere™dealer.

NOTE: When turn signal is activated, a short audible chirping sound will be heard.

Turn Signals:

Push Turn Signal Lever (A) up for right turn, or pull down for left turn. Audible chirping sound will start. Return lever to center position after completing turn, chirping sound will end.

John Deere is a trademark of Deere & Company

Self Canceling Turn Signals:

Push turn signal lever (A) up or pull down for less than one second. Return lever to center position. The selected turn signal will continue to flash until distance traveled has been reached or the same turn signal is activated again.

Tractors without trailers	Tractor with one trailer	Tractor with two trailers
50 m (164 ft)	70 m (230 ft)	90 m (295 ft)

High/Low Beam:

Push lever (A) forward to activate high beam headlights; high beam indicator comes on. Pull lever into center position to operate low beam. Pull lever rearward and release to momentarily activate high beams.

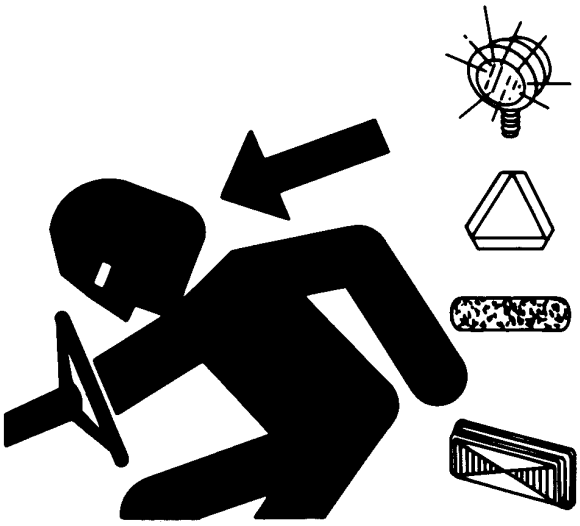
Dim Road Lights to low beam for oncoming vehicles.

KT81203,000018E -19-11NOV14-1/1

Safety Lights and Devices

CAUTION: Avoid injury or death caused by collision with another vehicle, always operate flashing lights when traveling on highway or public roads, except where prohibited by law.

Always use road lights and transport warning lights when operating tractor on road or highway day or night. Extremity Transport Lights alert other vehicles of your extended width. Use flashing warning lights and turn signals day and night. Follow local laws and regulations for equipment lighting and marking.



TS951 —UN—12APR90

While operating tractor on public roadways or highways, day or night:

- Turn on flashing warning lights, except where prohibited by law.
- Turn on headlights by selecting the Road Lights Position of the Light Selector Knob..
- Dim headlights for oncoming vehicles.
- Frequently check for traffic approaching from rear.
- Always use turn signals when turning.
- DO NOT use the Field Light Position of the Light Selector Knob. Extremely bright lights may blind or confuse other drivers.
- Make sure Slow Moving Vehicle (SMV) emblem is installed and visible.
- Make sure all lighting and marking devices are functional and clean.
- Comply with all traffic regulations.
- Promptly replace or repair damaged or lost lighting devices. Implement lighting kit is available from your John Deere™ dealer.

John Deere is a trademark of Deere & Company

TO84419,0000096 -19-10SEP13-1/1

CommandARM™ Light Buttons

NOTE: Field Lights must be adjusted using the Generation 4 CommandCenter™ display.

Operator can control beacon lights (A), hazard lights (B), and field lights (C) from the CommandARM™ rather than from display screens. When lights are on, an LED light is lit up. When off, the LED light is dark. Field Lights 1 and Field Light 2 Toggle button has two LED lights, one for Field Lights 1 and another for Field Lights 2. Appropriate LED light lights up when selected.



RXA0142355 —UN—10JUN14

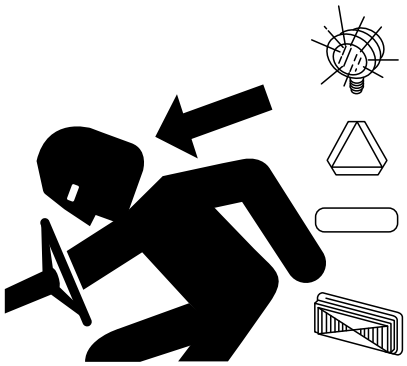
CommandARM™ Buttons

A—Beacon Lights
B—Hazard Lights
C—Field Lights 1 and Field Lights 2 Toggle Button

CommandCenter is a trademark of Deere & Company
CommandARM is a trademark of Deere & Company

TO84419,0000091 -19-25JUN14-1/1

Hazard Lights and Extremity Warning Lights



Use Safety Lights and Devices



RXA0086584 —UN—09FEB06

RXA0142356 —UN—10JUN14

Hazard Light Button

⚠ CAUTION: To prevent possible personal injury, always operate flashing lights when traveling on highway or public roads, except where prohibited by law.

Extremity Warning lights (F) are needed when tractor width exceeds 3.7 m (12 ft). Always use road lights and transport warning lights when operating tractor on road or highway at night OR during the day. Extremity Warning lights alert other vehicles of your extended width. Use flashing warning lights and turn signals day and night. Follow local laws and regulations for equipment lighting and marking.

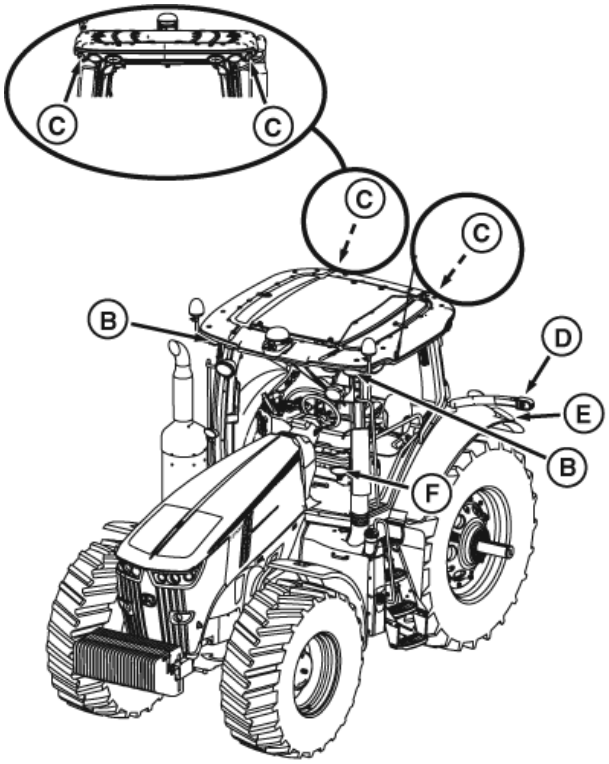
Push Hazard Light button (A) to activate flashing amber hazard lights (B, C, D, E and F).

NOTE: Depending on region and installed equipment lights (B, C, D, E and F) may not all be available as indicator lights when Hazard Switch is activated.

IMPORTANT: To avoid damage, Extremity Warning lights may be retracted when parking tractor in storage building.

Extremity Warning lights operate with Hazard Light button "ON".

Adjust Extremity Warning lights no more than 400 mm (16 in.) from widest point of tractor.



RXA0131296 —UN—10APR13

Hazard and Extremity Lights

A—Hazard Light Button
B—Front Outer Roof Lights
C—Rear Outer Roof Lights
D—Extremity Warning Lights
E—Rear Fender Indicator Lights (Equipped With Amber Lens)
F—Beltline Indicator Lights

SV81855,0000075 -19-28JUL14-1/1

Rotary Beacon Light (If Equipped)

NOTE: If Rotary Beacon light is not installed and Rotary Beacon switch is activated, a Rotary Beacon Diagnostic Trouble Code (DTC) will be generated.

Push Rotary Beacon switch (A) to activate Rotary Beacon light (B).

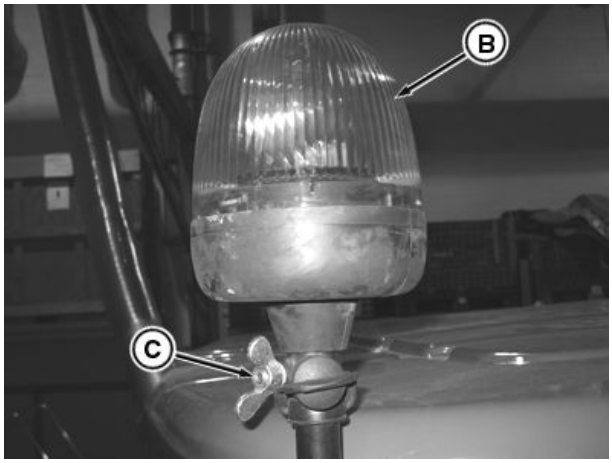
To protect Rotary Beacon light when not to be used for extended periods of time:

- Loosen nut (C) and remove light assembly.
- Install rubber protective cap (D) on connector.

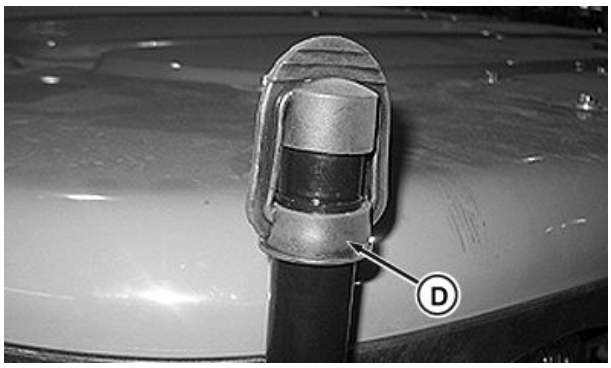
A—Rotary Beacon Switch
B—Rotary Beacon Light
C—Nut
D—Protective Cap



RXA0142357 —UN—10JUN14



RXA0109218 —UN—29JUL10



RXA0100494 —UN—11FEB09

LT63082,0000145 -19-10JUN14-1/1

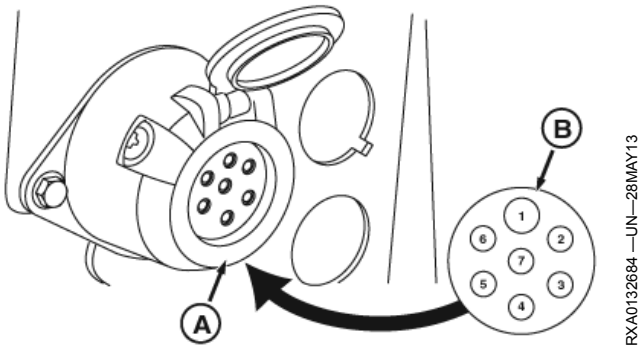
7-Pin Outlet

Rear-mounted 7-pin outlet (A) is used to connect lights, turn signals and other remote trailer or implement electrical equipment to tractor electrical system. Always use auxiliary light on towed implement when tractor rear signals and other lights are obscured.

Contact your John Deere™ dealer for information on methods to connect tractor light switch with 7-pin connector accessory wires.

NOTE: Matching 7-Pin plug is available through your John Deere™ dealer.

NOTE: Accessory fuse F11 is removed. Some trailers use this connection for fog lights. This can be enabled by inserting a 30 A fuse into F11.



RXA0132684 —UN—28MAY13

A—7-Pin Outlet **B—Outlet Numbers**

Outlet Numbers (B)	Function-Rear Connection	Function-Front Connection
1	Left Turn Lights[a]	Left Turn Lights[a]
2	Accessory	Accessory
3	Ground	Ground
4	Right Turn Lights[b]	Right Turn Lights[b]
5	Right Tail Lights[c]	Right Tail Lights[c]
6	Brake Lights	Not Used
7	Left Tail Lights[d]	Left Tail Lights[d]

[a] *Includes left extremity light.*
[b] *Includes right extremity light.*
[c] *Includes right front clearance and right extremity clearance lights.*
[d] *Includes license plate, left front clearance, and left extremity clearance lights.*

John Deere is a trademark of Deere & Company

SV81855,0000072 -19-14MAR14-1/1

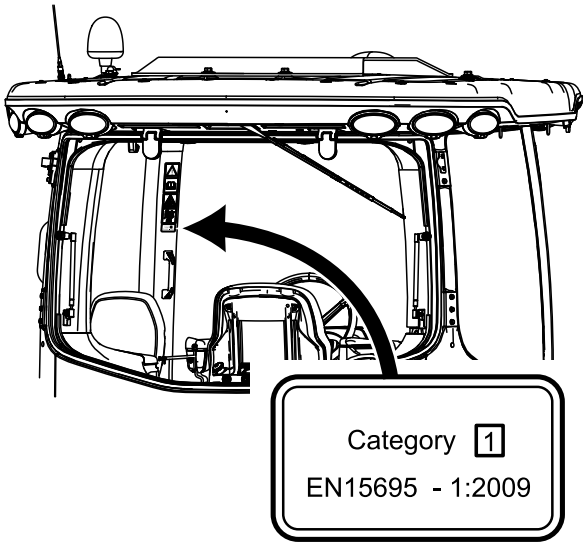
Cab Classification According to EN 15695-1 (for Application of Crop Protection Chemicals and Liquid Fertilizer) (2010-52-EU)

Cab classification according to EN 15695-1 provides information on the effectiveness of protection against harmful substances offered by the cab.

Categories 1 to 4 are used for classification and specified on a label inside the cab.

Replace label if missing or damaged. See your John Deere dealer.

A — Category 1 - The cab does not offer any protection against substances which are harmful to health.
B — Category 2 - The cab offers protection against solid airborne particles such as dust, but not against aerosols and vapors.
C — Category 3 - The cab offers protection against dust and aerosols (liquid airborne substances such as spray), but not against vapors.
D — Category 4 - The cab offers protection against dust, aerosols and vapors.



RXA0125666 —UN—04APR12

Label Shown for Illustration Purposes Only (May Not Indicate the Category of the Cab Installed)

CAUTION: Before working in an environment containing hazardous substances, i.e. when using pesticides, check whether the cab offers sufficient protection. Refer to the product data sheets of the spraying liquid manufacturer specifying the category required for the cab.

CAUTION: In case of category 3 and 4 cabs, find out whether the installed filters have been checked according to EN 15695-2:2009 and whether they are suitable for the chemical being used (refer to the manufacturer's information) before working in an environment containing hazardous substances.

CAUTION: The cab fresh air and recirculation air filters must be serviced as specified.

See "As Indicated or As Required Service", "1000 Hour Service" and "Annual Service" in this Operator's Manual.

CAUTION: Refer to product data sheets and product identification of the crop protection chemicals. These contain important information on how to avoid hazards.

The following requirements must be met to offer best protection:

1. All seals (on door, windows and roof) in good condition
2. Doors, windows and roof closed
3. Grommets for cables in the cab sealed properly
4. Fan ON
5. Cab air filters in good condition

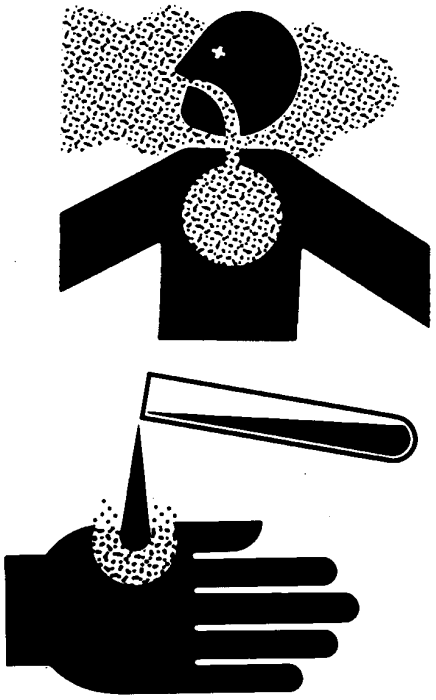
RD47322,000020C -19-26APR13-1/1

Avoid Contact with Agricultural Chemicals

This enclosed cab does not protect against inhaling vapor, aerosol or dust. If pesticide use instructions require respiratory protection, wear an appropriate respirator inside the cab.

Before leaving the cab, wear personal protective equipment as required by the pesticide use instructions. When re-entering the cab, remove protective equipment and store either outside the cab in a closed box or some other type of sealable container or inside the cab in a pesticide resistant container, such as a plastic bag.

Clean your shoes or boots to remove soil or other contaminated particles prior to entering the cab.



TS220 —UN—15APR13

TS272 —UN—23AUG88

DX,CABS -19-25MAR09-1/1

Adjust Steering Wheel and Column

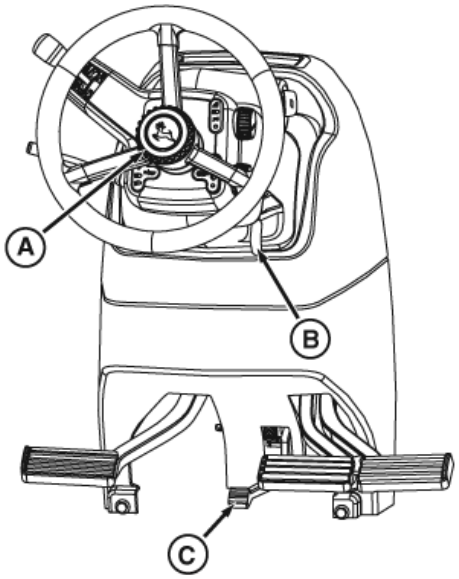
Steering wheel can be adjusted in or out, up or down to provide comfortable driving position. For improved entry or egress, entire steering column can be pivoted up, then returned to previously set position with single control.

Telescope: Rotate steering wheel telescope release knob (A) counterclockwise. Extend or retract steering wheel to desired position. Rotate knob clockwise to lock.

Memory: Push down on steering column tilt release lever (C). Fully raise steering column. Release lever to latch column at top of travel.

Push down on steering column tilt release lever, latch releases. Lower steering column to previous tilt setting.

Tilt: Pull up on steering wheel tilt release lever (B) and move steering wheel to desired position. Release lever to lock.



RXA0126757 —UN—10OCT12

A—Steering Wheel Telescope Release Knob
B—Steering Wheel Tilt Release Lever
C—Steering Column Tilt Release Lever

TO84419,00000A2 -19-10APR15-1/1

Adjust ComfortCommand™ Seat

A—Backrest Tilt Handle - Allows seat back to tilt.

B—Flip Up Armrest - Can be flipped up out of the way.

C—Height Adjustment Switch - Turn key to “ON”. Press lower portion of switch to lower seat or press upper portion of switch to raise seat.

D—Armrest Tilt Adjustment Knob - Turn knob to adjust armrest angle.

E—Fore/Aft Seat Adjustment Handle - Lift up on handle, move seat forward or backward, press handle back down to lock into place.

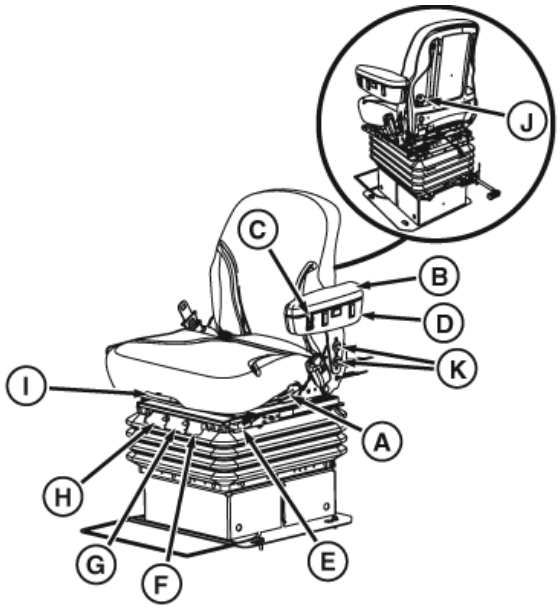
F—Fore/Aft Isolation Handle - Push lever back, lock into place with locking bar. Seat will absorb shock impacts while tractor is in motion. Seat won’t move farther that 25 mm (1 inch) in any direction.

G—Lateral Isolation Handle - Push down on handle to unlock lateral seat suspension. Pull up on handle to lock seat in position.

H—Adjustment Damper Handle - Air Suspension seat only. Controls amount of bounce operator feels while driving. Can be adjusted to reduce bounce in seat.

I—Seat Swivel Handle - Lift on handle to allow seat to swivel. Push down on handle to lock seat in position.

J—Lumbar Adjustment Knob - Turn knob clockwise to add support to lower back. Turn counterclockwise to lessen resistance to lower back.



RXA0131460 —UN—19APR13

K—Arm Rest Adjustment Cap Screws - Loosen cap screws to slide arm rest up or down. Retighten cap screws.

TO84419,000009B -19-08MAY14-1/1

Adjust Heated Leather Seat (If Equipped)

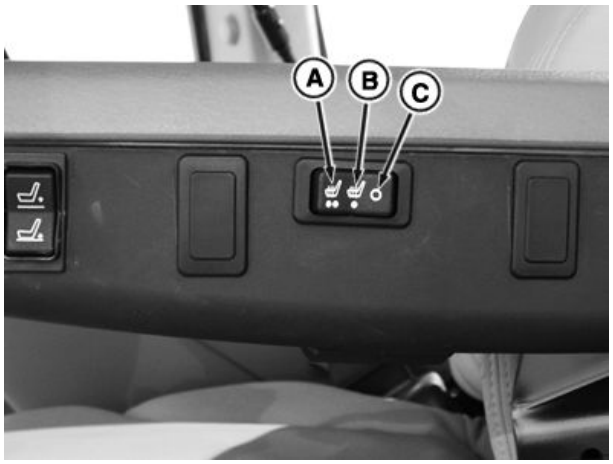
Heated seat provides increased comfort during cold days. Heat is controlled by left armrest switch. Three settings are available. When tractor is shut off, seat also turns off, or after one hour of use heater automatically turns off.

To control system:

A—High Setting - Press switch forward.

B—Low Setting - Press switch to middle position.

C—OFF - Press switch rearward.



RXA0136445 —UN—30OCT13

Heated Leather Switch Left-Hand Armrest

TO84419,000009C -19-16FEB15-1/1

Adjust ActiveSeat™ (If Equipped)

ActiveSeat™ has ride zone protection (RZP), a built-in buffer at high and low end of vertical seat travel, resulting in a much smoother ride. To receive maximum benefit from ActiveSeat™ RZP system, adjust seat to operator's height and weight prior to operating tractor. After adjustment, seat automatically moves into protected zone when operator adjusts seat height position to a level at or near vertical seat travel limits.

A—Back Tilt Handle - Allows seat back to tilt.

B—Flip Up Armrest - Can be flipped up out of the way.

C—Height Adjustment Switch - Turn key to "ON". Press lower portion of switch to lower seat or press upper portion of switch to raise seat.

D—Armrest Tilt Adjustment Knob - Turn knob to adjust armrest angle.

E—Fore/Aft Seat Adjustment Handle - Lift up handle, move seat forward or backward, press handle back down to lock into place.

F—Fore/Aft Isolation Handle - Adjust lever to back setting, lock into place with locking lever. Seat will absorb shock impacts while tractor is in motion. Seat won't move farther that 25 mm in any direction.

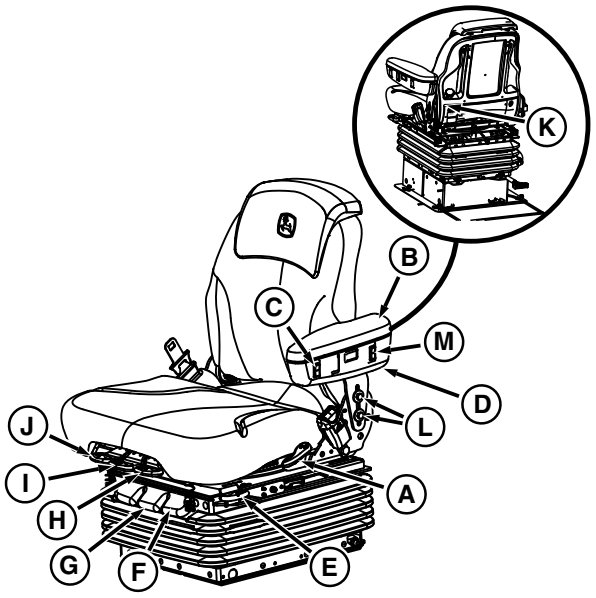
G—Lateral Isolation Handle - Push down on handle to unlock lateral seat suspension. Pull up on handle to lock seat in position.

H—Cushion Height Adjustment - Pull to adjust height of cushion up or down.

I—Seat Swivel Handle - Lift on handle to allow seat to swivel. Push down on handle to lock seat in position.

J—Fore/Aft Cushion Adjustment - Pull to adjust cushion forwards or backwards.

ActiveSeat is a trademark of Deere & Company



RXA0144154 —UN—30SEP15

K—Lumbar Adjustment Knob - Turn clockwise to add support to lower back. Turn counterclockwise to lessen resistance to lower back.

L—Armrest Adjustment Cap Screws - Loosen cap screws to slide arm rest up or down. Retighten cap screws.

M—Firmness Adjustment - Provides three different levels of seat suspension performance. Press upper portion **"+"** of switch for the firmest ride or lower portion **"-"** for the softest ride.

TO84419,000009D -19-31JUL14-1/1

Adjust ComfortCommand™ with HCS Plus Cab Suspension Seat

A— Height Adjustment Switch - Turn key switch to ON. Press lower portion of switch to lower seat or press upper portion of switch to raise seat.

B—Heat/Vent Level Control Switch - Press to adjust level of heat or ventilation.

C—LH Armrest Tilt Adjustment Knob - Turn knob to adjust armrest angle.

D—Seat Back Recliner Adjustment Handle - Pull up to adjust back of seat.

E—Lateral Attenuation Lever - Pull lever up to move seat from side to side. Lock lever into position when at desired location.

F—Ride Firmness Control - Pull lever to one of four positions to adjust the damping of seat.

G—Fore/Aft Attenuation - Adjust seat to control amount of fore/aft movement from tractor. Seat absorbs some movement from shock impacts while driving.

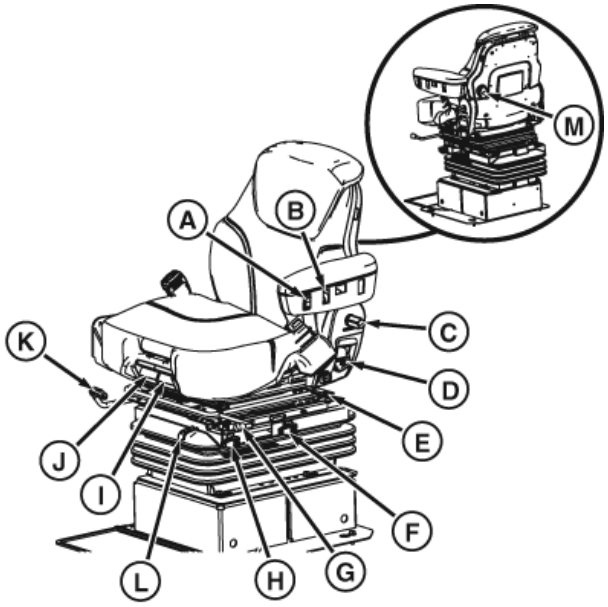
H—Seat Swivel Handle - Lift on handle to allow seat to swivel. Push down on handle to lock seat in position.

I—Cushion Height Adjustment - Pull to adjust height of cushion up or down.

J—Fore/Aft Cushion Adjustment - Pull to adjust cushion forwards or backwards.

K—Fore/Aft Adjustment Lever - Lift up on handle, move seat forward or backward, press handle back down to lock into place.

ComfortCommand is a trademark of Deere & Company



RXA0131464 —UN—09SEP13

ComfortCommand™ with HCS Plus (Hydro-pneumatic Cab Suspension Plus) Cab Suspension Seat

L—Ideal Weight Indicator - Gauge shows when seat is adjusted to operator's weight and height. Green marking will be visible when adjusted.

M—Lumbar Adjustment Knob - Turn knob clockwise to add support to lower back. Turn counterclockwise to lessen resistance to lower back.

TO84419,000009F -19-08APR15-1/1

Use Passenger Seat

CAUTION: Passenger seat is provided only for training operators or diagnosing machine problems. Keep all other riders off tractor and equipment. Always wear seat belt (A).

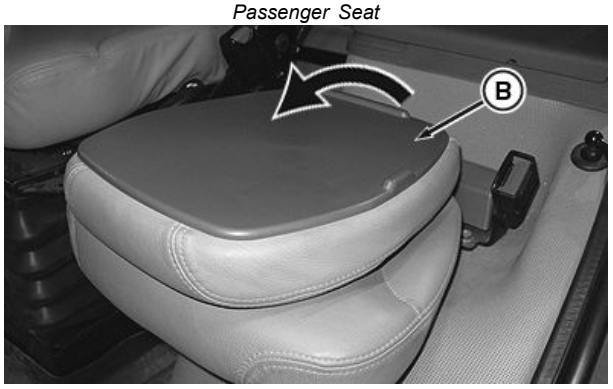
Passenger seat back tilts forward to be used as writing surface (B). Seat flips up (C) to allow easier entrance and egress.

A—Seat Belt
B—Writing Surface
C—Flip Up Seat



RXA0107055 —UN—01APR10

Passenger Seat



RXA0107057 —UN—03JUN10

Passenger Seat Converted To Writing Surface



RXA0107061 —UN—01APR10

Passenger Seat Folded Up For Easier Egress

SV81855,0000153 -19-20NOV14-1/1

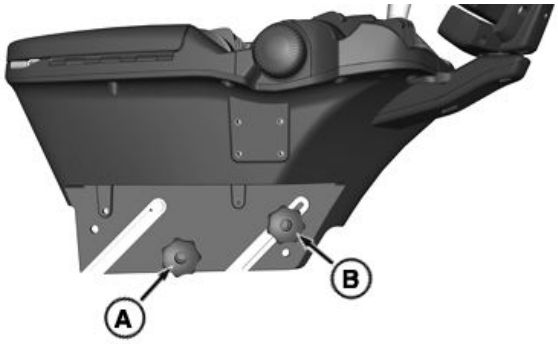
Adjust CommandARM™ Position

1. Turn CommandARM™ Height Adjustment Knob (A) and CommandArm™ Tilt and Height Adjustment Knob (B).

NOTE: Both CommandARM™ Adjustment Knobs (A and B) must be loosened to adjust height of CommandARM™.

2. By turning both knobs, CommandARM™ can slide at an angle to desired position.
3. Once proper position is maintained, turn CommandARM™ Height Adjustment Knob to original position to lock.
4. Turn CommandARM™ Tilt Adjustment Knob (B) to adjust the angle of CommandARM™.
5. Once proper angle is maintained, turn CommandARM™ Tilt Adjustment Knob to original position to lock.

CommandARM is a trademark of Deere & Company



RXA0137805 —UN—08JAN14

CommandARM™ Adjustment Knobs

A—CommandARM™ Height Adjustment Knob

B—CommandARM™ Tilt and Height Adjustment Knob

TO84419,00000A1 -19-19AUG14-1/1

Operate Horn

Push in on end of turn signal lever (A) to sound horn.

A—Turn Signal Lever/Horn



RXA0126178 —UN—29OCT12

TO84419,00000A3 -19-01AUG14-1/1

HVAC Settings—Generation 4 CommandCenter™

To access the main page, use HVAC Shortcut Button on Navigation Bar or follow alternative path:

1. Select **Menu.**
2. Select **Machine Settings tab.**
3. Select **HVAC (Heating, Ventilation, and Air Conditioning) icon.**

A—Set Temperature Module: Select to access Set Temperature page (L).
B—Auto Air Flow Toggle: Select for air flow to be automatically adjusted.
C—Defrost Toggle: Select to activate defrost.
D—Defrost and Floor Toggle: Select to activate defrost and floor vents.
E—Defrost, Floor and Cab Toggle: Select to activate defrost, floor, and cab vents.
F—Cab and Floor Toggle: Select to activate floor and cab vents.
G—Fan OFF: Move slide bar to OFF position to turn fan off.
H—Fan AUTO: Adjust slide bar to AUTO position to have fan speed automatically adjust to maintain set temperature.
I—Fan Increment Bar: Use to adjust fan speed. As slide moves right, fan speed increases. As slide moves left, fan speed decreases.

IMPORTANT: If system is not cooling properly, turn air conditioning switch off to avoid possible compressor damage.

J—A/C Toggle: Use to turn A/C ON or OFF.
K—Outside Temperature Module: Displays the temperature outside of the cab.
L—Set Temperature Page: Page used to adjust cab temperature.
M—Increase Button: Select to increase temperature in cab.
N—Display Temperature Box: Displays the temperature setting.
O—Decrease Button: Select to decrease temperature in cab.

RXA0133716 —UN—16JUL13

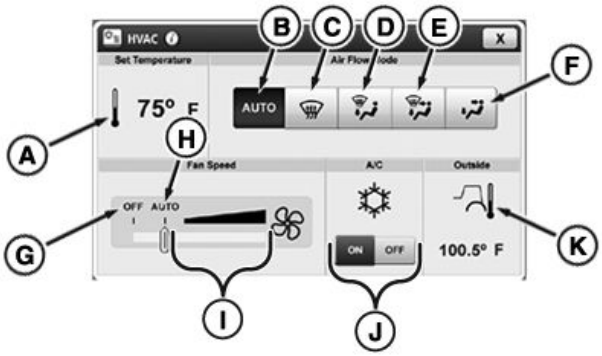


HVAC Shortcut Button on Navigation Bar

RXA0147936 —UN—13APR15

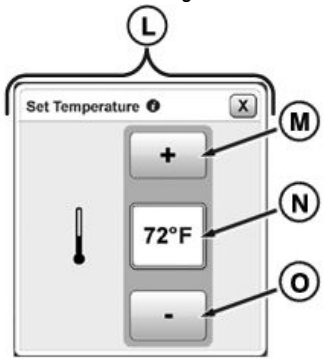


Menu → Machine Settings Tab → HVAC Icon



RXA0133683 —UN—19JUL13

HVAC Page



RXA0133684 —UN—19JUL13

Set Temperature Page

TO84419,00000A4 -19-15APR15-1/1

Operate Front Wiper and Washer

Wiper/washer knob (A) has four positions:

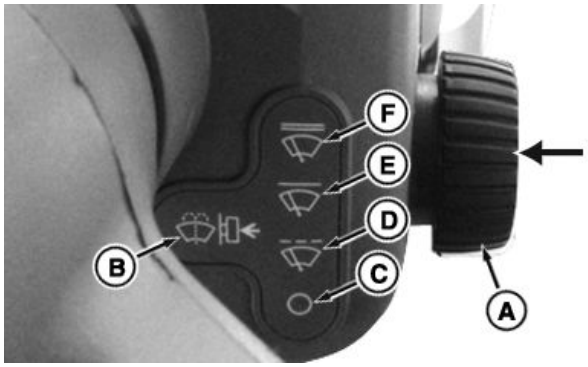
- OFF
- Intermittent Operation
- Slow Speed
- Fast Speed

Push knob in to operate front washer.

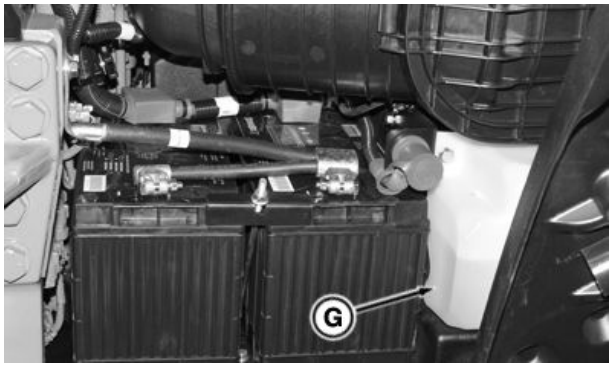
NOTE: Front washer reservoir supplies rear and right hand wipers and washers (if equipped).

Front washer reservoir (G) is behind battery compartment cover. Fill reservoir with a washer fluid. In cold climates be sure to fill with non-freezing windshield washer fluid.

A—Front Wiper/Washer Knob
B—Washer Icon
C—Off
D—Intermittent Speed
E—Slow Speed
F—Fast Speed
G—Front Washer Reservoir



RXA0142299 —UN—09JUN14



RXA0133281 —UN—18JUN13

TO84419,00000A5 -19-25JUN14-1/1

Operate Rear Wiper and Washer (If Equipped)

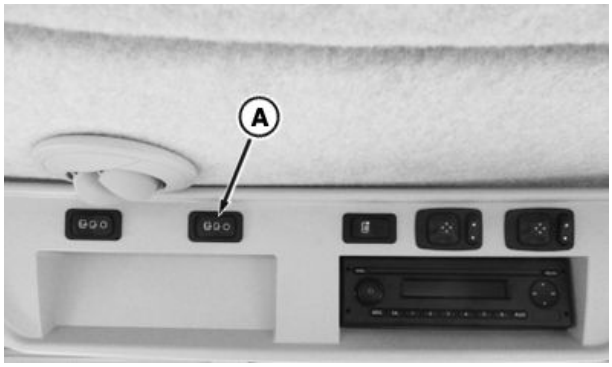
Switch (A) has three positions:

Right—OFF position.

Center—ON position. Rear wiper is activated.

Left—Rear window washer ON when switch is held. Release switch to turn OFF rear window washer.

A—Rear Wiper/Washer Switch



RXA0142297 —UN—09JUN14

TO84419,00000A6 -19-25JUN14-1/1

Operate Right-Hand Wiper and Washer (If Equipped)

Switch (A) has three positions:

Right—OFF position.

Center—ON position. Right-hand wiper is activated.

Left—Right-hand window washer ON when switch is held. Release switch to turn OFF right-hand window washer.

A—Right-Hand Wiper/Washer Switch



RXA0142353 —UN—09JUN14

TO84419,00000A7 -19-13APR15-1/1

Install Business Band or Citizens Band (CB) Radio and Antenna

CAUTION: DO NOT mount business band radio antenna to rear of cab. DO NOT route antenna cable (B) near harness for electrical system controllers or operator controls. Failure to follow these precautions could expose operator to radio frequency energy levels higher than recommended by American National Standards Institute (ANSI) and/or could cause undesirable performance of electronically controlled systems.

CAUTION: Prevent possible personal injury. Disconnect battery ground cable before any electrical repair.

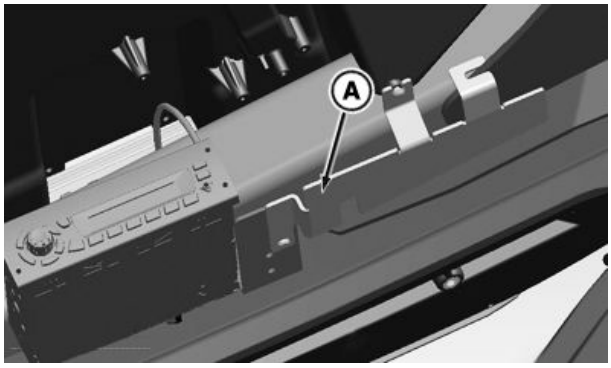
IMPORTANT: Final Tier 4 and Stage IV Engines only: To determine tractor engine type, see Record Engine Serial Number in Identification Numbers section of this Operator's Manual.) Do not disconnect battery until Selective Catalytic Reduction (SCR) system has had enough time to automatically purge system of Diesel Exhaust Fluid (DEF). If adequate time is not allowed for system to be purged, any DEF remaining can crystallize and plug system. At temperatures below -15°C (5°F), unpurged DEF will freeze and damage system components. If equipped with a battery disconnect system, a light next to the disconnect system is illuminated while auto-purge is in progress. It shuts off when complete and safe to disconnect the battery.

If tractor is not equipped with battery disconnect switch, wait at least 4 minutes after tractor stops before disconnecting battery.

NOTE: Only tractors equipped with Business Band Radio Mounting and Wiring Option from factory have business band bracket (A) behind headliner and antenna cables behind right rear corner post cover. See your John Deere™ dealer for Business Band Radio and Antenna Installation Instructions.

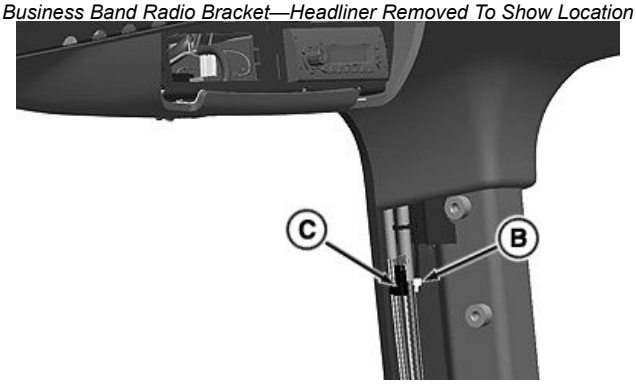
Custom Installation

Custom CB or Business Band radio installation requires special tools and skills to tune antenna for lowest possible VSWR (Voltage Standing Wave Ratio). Qualified professional should be employed or consulted before attempting installation. Contact your John Deere™ dealer for recommendations. Following specifications are useful to installer.



RXA0119184 —UN—27JUL11

Business Band Radio Bracket—Headliner Removed To Show Location



RXA0119185 —UN—27JUL11

Antenna Coaxial Cable And Business Band Radio Power/Ground Plug Coiled Behind Right Rear Corner Post Cover

A—Bracket
B—Antenna Coaxial Cable
C—Business Band Radio Power/Ground Cable

Specifications for Factory Installed Radio Installation Kit

- Roof Antenna Mount: NMO type.
- Cable Specifications: Cable length is 3.6 m (11.8 ft.) from antenna mount to PL-259 radio connector. RG-58/U cable has 50 ohms intrinsic impedance.
- Roof Ground Plane: Grounded large antenna counterpoise foil under green cab roof allows installation of either ¼ or ½ wave antenna.
- CB Antenna: Normal CB antenna can be attached to factory installed NMO antenna mount through use of an appropriate adapter. Special CB antenna already equipped with NMO base may alternatively be used.

John Deere is a trademark of Deere & Company

TO84419,00000A8 -19-22AUG14-1/1

Auxiliary Power Strip and Accessory Electrical Outlet Use (If Equipped)

Auxiliary Power Strip

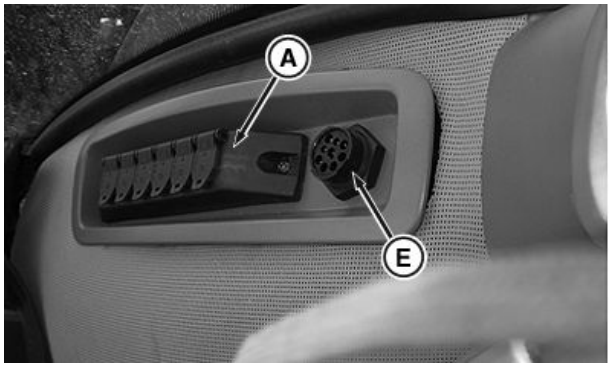
IMPORTANT: Power strip is not surge suppressor. Electrical equipment with program memory requires protection from damage of electrical surges and spikes.

Power strip (A) provides six outlets of 12 volt power with grounds for use when connecting auxiliary equipment. This power is 30 amp switched and 30 amp unswitched.

Adapters plug directly into power strip. To change to switched power on adapter, remove small tab at end of slot on plug and rotate plug 180°.

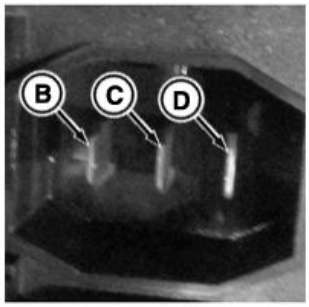
Adapters are available from your John Deere™ dealer for following: Accessory outlet adapters, three-way convenience adapters, and standard adapters.

A—Auxiliary Power Strip
B—Battery (Unswitched)
C—Ground
D—Battery (Switched)
E—Diagnostic Connector (DEALER USE ONLY)



RXA0099078 —UN—25FEB09

Auxiliary Power Strip



RXA0131998 —UN—06MAY13

Auxiliary Power Strip Convenience Outlet

John Deere is a trademark of Deere & Company

Continued on next page

TO84419,00000A9 -19-13APR15-1/2

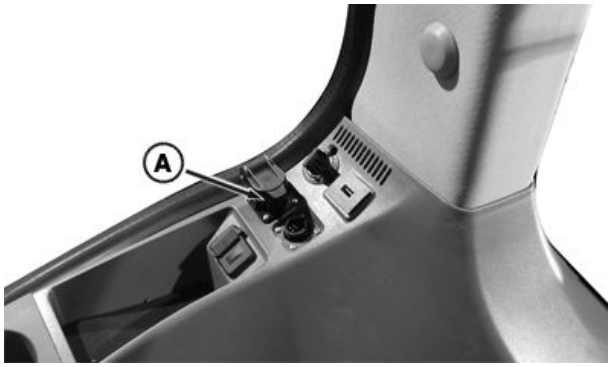
Accessory Electrical Outlets

NOTE: Outlets are protected by a 30 amp fuse.

12 volt accessory outlets (A) located on right-hand console or outlet (B) in storage box are used when connecting auxiliary equipment.

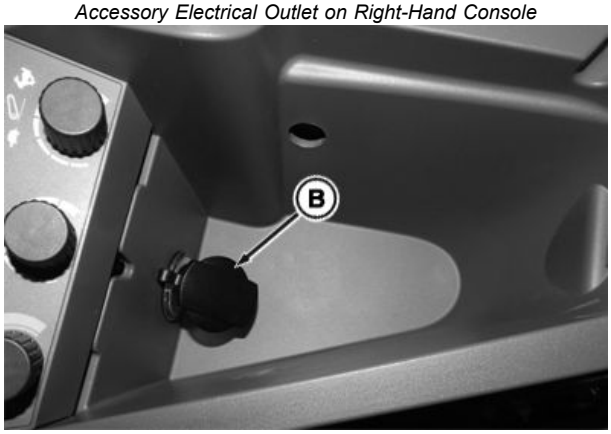
Pin (C) provides battery power (hot), pin (D) provides (key) switched power and pin (E) provides ground. For additional information on connections, see appropriate auxiliary equipment installation instructions or your John Deere™ dealer.

A—Accessory Outlet (Right-Hand Console)
B—Accessory Outlet (In Storage Box)
C—Battery (Unswitched)
D—Switched Circuit
E—Ground



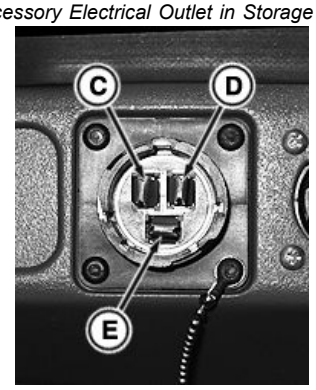
RXA0142570 —UN—17JUN14

Accessory Electrical Outlet on Right-Hand Console



RXA0141390 —UN—02MAY14

Accessory Electrical Outlet in Storage Box



RXA0141391 —UN—02MAY14

Accessory Electrical Outlet Pins

John Deere is a trademark of Deere & Company

TO84419,00000A9 -19-13APR15-2/2

Connect Compatible Electronic Equipment

Tractor is ISOBUS ready and offer connections for implements conforming to both ISO 11786 and 11783 standards. ISO 11786 connector (A) provides radar or GPS speed signal. See Configuring Tractor for GPS/Radar in this section of this Operator's Manual.

GreenStar™ corner post connector (B) allows any GreenStar™ display connection. See your John Deere™ dealer for compatible adapter harnesses.

IMPORTANT: Use ISO 11783 connector (G) with only ISO 11783 compliant components. Other uses could damage tractor electronic components.

ISOBUS ready preparation includes ISO 11783 connector, on right-hand console, and implement connector (F or C) on tractor front (if equipped) or rear, facilitating tractor/implement communications.

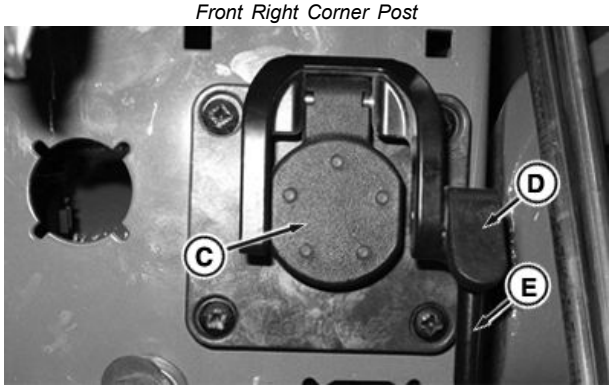
Lift the release (D) when disconnecting implement harness from connector (C) on rear of tractor.

A—ISO 11786 Standard Connector (Corner Post Right)
B—GreenStar™ Connector (Corner Post Left)
C—Implement Connector (Tractor Rear)
D—Release
E—Handle
F—Implement Connector (Tractor Front) (If Equipped)
G—ISO 11783 Standard Connector (Right-Hand Console)



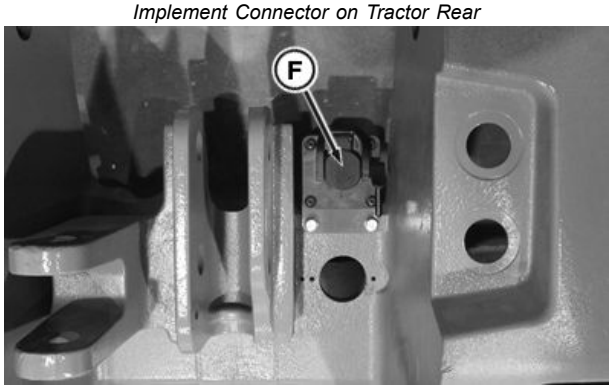
RXA0134922 —UN—06SEP13

Front Right Corner Post



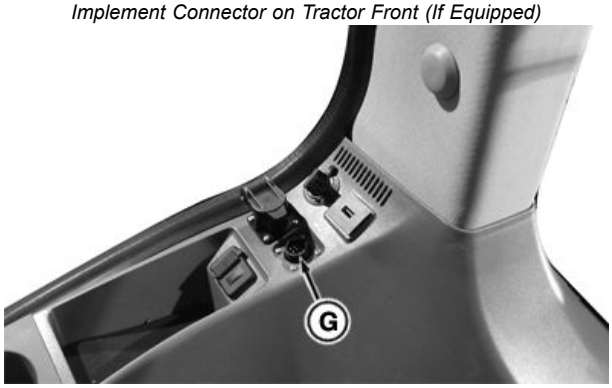
RXA0134921 —UN—07MAR14

Implement Connector on Tractor Rear



RXA0134924 —UN—14AUG13

Implement Connector on Tractor Front (If Equipped)



RXA0147008 —UN—10MAR15

ISO 11783 Connector on Right-Hand Console

John Deere is a trademark of Deere & Company
GreenStar is a trademark of Deere & Company

KT81203,0000126 -19-10MAR15-1/1

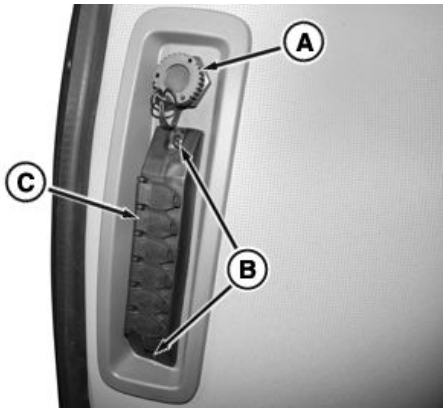
Configure Tractor for GPS/Radar

Tractor comes from factory configured to use radar as ground speed input. To reconfigure tractor to use GPS as the true ground speed input:

1. Remove diagnostic connector cap (A) and retaining nut.
2. Remove retaining screws (B) and remove auxiliary power strip (C) (if equipped) with cover plate.
3. Inside right-hand console locate one wire lead marked **Radar** and one marked **GPS.**
4. On tractors equipped with radar, disconnect tractor harness connector (D) from radar connector (E). Then, proceed to step 6.
5. On tractors not equipped with radar, locate wire lead marked **GPS** and proceed to step 6.
6. Remove dust cap (F) from GPS connector (G).
7. Attach GPS connector to tractor harness connector.
8. Install (or leave installed) dust cap on radar connector
9. Reinstall auxiliary power strip with cover plate.
10. Reinstall diagnostic connector through cover, install cap tether and tighten nut.
11. Reinstall power strip cover retaining screws and attach diagnostic connector cap.

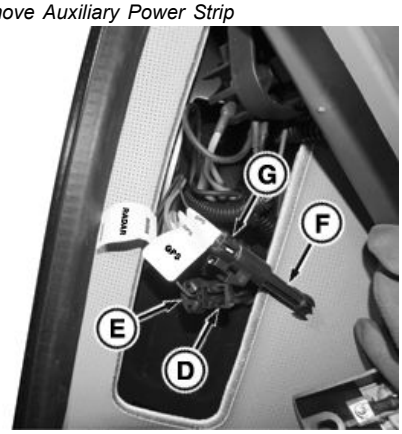
To connect from GPS to radar input, disconnect GPS connector and reconnect radar connector. For information on how to perform radar calibration, refer to Maintenance & Calibrations in CommandCenter™ section of this Operator's Manual.

A—Diagnostic Connector Cap and Nut
B—Screws
C—Auxiliary Power Strip
D—Tractor Harness Connector
E—Radar Connector
F—Dust Cap
G—GPS Connector



RXA0140811 —UN—31MAR14

Remove Auxiliary Power Strip



RXA0140812 —UN—31MAR14

Radar and GPS Connectors



RXA0140813 —UN—31MAR14

Connectors For Radar and GPS

CommandCenter is a trademark of Deere & Company

TO84419,00000AB -19-09APR14-1/1

Machine Sync (If Equipped)

Machine Sync controls synchronized movements between tractor and combine. It guides tractor and grain cart to preset position for unloading relative to specific combine.

Machine Sync utilizes AutoTrac™ and its advanced settings to control tractor. Machine Sync system maintains in line and lateral offset between the combine and tractor using information via the machine and StarFire™ 3000 receiver that is transmitted between machines using the Machine Communication Radio.

Machine Sync system contains three important entities:

- **Operational zone:** area that allows for automation to take over.
- **Calibration zone:** area that allows for calibration of home point.
- **Home point:** in line and lateral offset location relative to combine that tractor will return to every time it syncs with specific combine.

Machine Sync, when engaged, guides tractor and grain cart to home point position set in relation to each specific combine. Tractor and grain cart will maintain that position during operation.

Machine Sync is compatible with:

- GreenStar™ 3 2630 Display
- Machine Communication Radio (MCR)
- StarFire™ 3000 with Shared Signal (update receiver software to latest version)

Refer to John Deere™ Machine Sync operator's manual for more information.

AutoTrac is a trademark of Deere & Company
GreenStar is a trademark of Deere & Company
StarFire is a trademark of Deere & Company
John Deere is a trademark of Deere & Company

KT81203,00000F8 -19-17FEB15-1/1

Mount StarFire™ Receiver

CAUTION: Falling while installing or removing global positioning receiver can cause serious injury. Use ladder or platform to easily reach mounting location.

Use sturdy and secure footholds and hand holds. Do not install or remove receiver in wet or icy conditions.

Mount StarFire™ receiver (A) on StarFire™ receiver bracket (B).

NOTE: Refer to your John Deere™ dealer or to StarFire™ receiver installation instructions for compatibility.

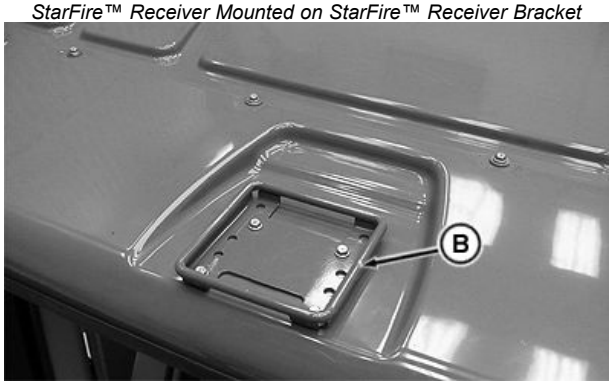
See your John Deere™ dealer for compatible adapter harnesses.

A—StarFire™ Receiver **B—StarFire™ Receiver Bracket**



RXA0107026 —UN—31MAR10

StarFire™ Receiver Mounted on StarFire™ Receiver Bracket



RXA0107027 —UN—31MAR10

StarFire™ Receiver Bracket

StarFire is a trademark of Deere & Company
John Deere is a trademark of Deere & Company

TO84419,00000AC -19-17OCT13-1/1

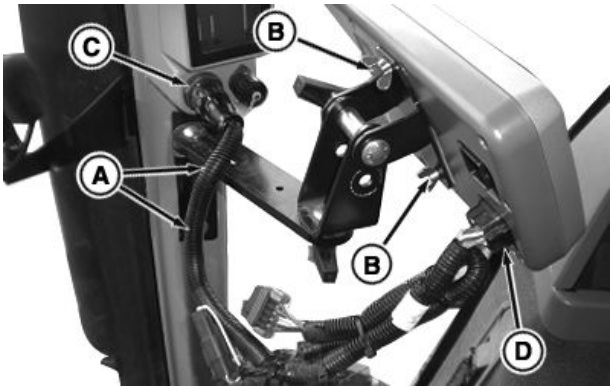
Install GreenStar™ System Components

IMPORTANT: This vehicle employs one or more CAN bus networks. Connecting unapproved devices to vehicle network(s) may cause machine to degrade in performance or fail to perform properly. Further, unapproved devices that attempt control of tractor functions should not be connected to implement network (ISOBUS).

1. Attach bracket to corner post mounts (A).
2. Attach display to bracket using wing nuts (B) (provided with display).
3. Attach harness to corner post connector (C) and lower GreenStar™ display connector (D) on back of display.
4. Position display so it is comfortable to reach and does not obstruct operator view.
5. Connect StarFire™ receiver connector (E) to Starfire™ receiver (F).

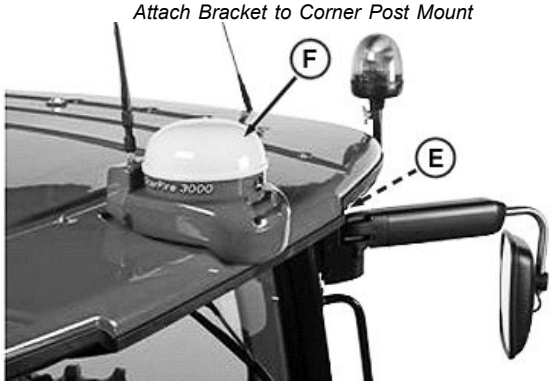
NOTE: See your John Deere™ dealer for compatible adapter harnesses.

A—Corner Post Mounts
B—Wing Nuts
C—GreenStar™ Corner Post Connector
D—GreenStar™ Display Connector
E—StarFire™ Receiver Connector
F—StarFire™ Receiver



RXA0104665 —UN—10SEP09

Attach Bracket to Corner Post Mount



RXA0109999 —UN—20AUG10

Connect StarFire™ Receiver

John Deere is a trademark of Deere & Company
GreenStar is a trademark of Deere & Company
StarFire is a trademark of Deere & Company

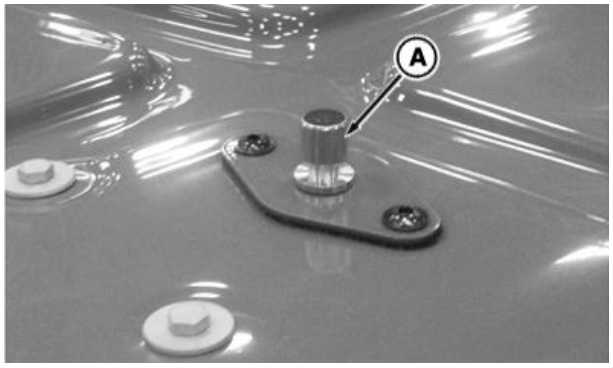
TO84419,00000AD -19-21AUG14-1/1

Install Machine Communications Radio (MCR) Antenna (If Equipped)

NOTE: This antenna is only available for machines that have a factory installed Machine Communications Radio. Refer to John Deere™ Machine Communications Radio operator's manual for more information.

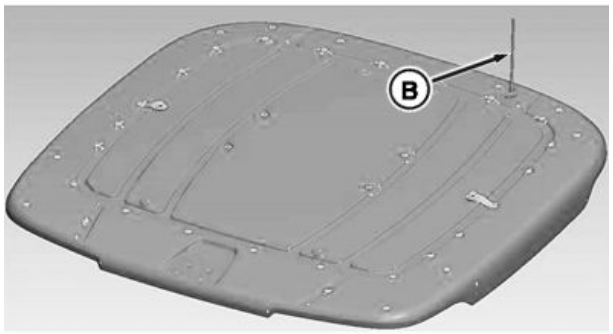
1. Remove antenna from storage under passenger seat.
2. Remove cap from MCR antenna post (A) from rear left roof.
3. Screw MCR antenna (B) onto MCR antenna post.

A—MCR Antenna Post **B—MCR Antenna**



RXA0131714 —UN—15APR13

MCR Antenna Post



RXA0131715 —UN—15APR13

Connect MCR Antenna

John Deere is a trademark of Deere & Company

SV81855,0000078 -19-17FEB15-1/1

Connect AutoTrac™ Assisted Steering System (If Equipped)

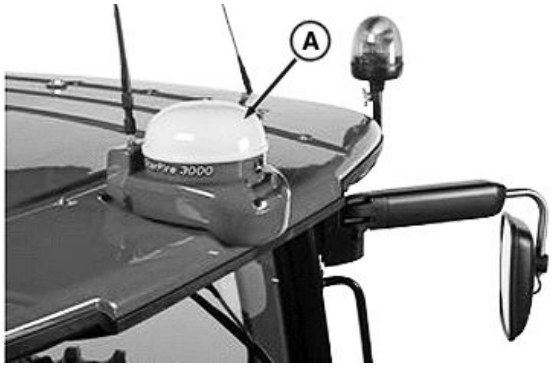
NOTE: Electro-hydraulic steering is required for AutoTrac™ to function.

Refer to Generation 4 Applications Operator's Manual for detailed instructions.

- AutoTrac™ system utilizes StarFire™ position receiver (A) and Generation 4 CommandCenter™ Display (B) to assist operator in steering tractor. Other displays are used as well. See Multiple displays in CommandCenter™ section of this Operator's Manual.
- Operator must take manual control at end of each pass and when field obstacles are encountered. Regain steering control is by turning steering wheel. After turn is made, press AutoTrac™ Resume button (C) to engage AutoTrac™.

NOTE: See your John Deere™ dealer for compatible adapter harnesses.

A—StarFire™ Position Receiver
B—Generation 4 Command-Center™ Display
C—AutoTrac™ Resume Button



RXA0109998 —UN—20AUG10

StarFire™ Receiver



RXA0133300 —UN—08JUL13

Generation 4 CommandCenter™ Display

StarFire is a trademark of Deere & Company
CommandCenter is a trademark of Deere & Company
John Deere is a trademark of Deere & Company
AutoTrac is a trademark of Deere & Company

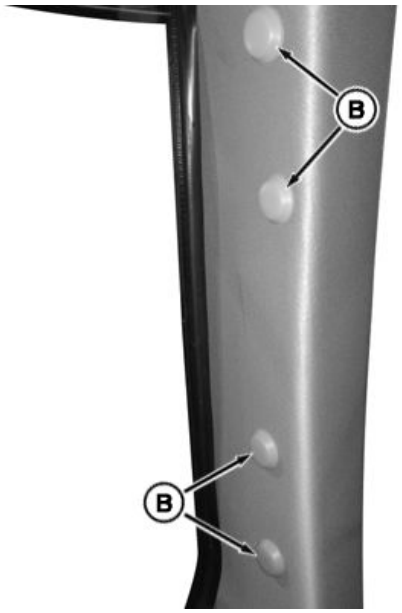
TO84419,00000AE -19-18NOV13-1/1

Monitor Bracket Mounts



RXA0147009 —UN—10MAR15

Front Corner Post Mounting Points



RXA0147010 —UN—10MAR15

Rear Corner Post Mounting Points

A—Front Corner Post Mounting Points **B—Rear Corner Post Mounting Points**

Front corner post mounting points (A) and rear corner post mounting points (B) are used to connect implement monitors to cab using M10 cap screws. See your John Deere™ dealer for brackets that utilize these mounting points.

John Deere is a trademark of Deere & Company

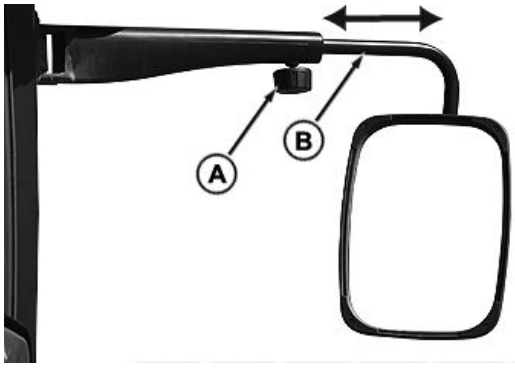
TO84419,00000AF -19-10MAR15-1/1

Use Manual Mirror (If Equipped)

Loosen mirror arm locking knob (A) and slide mirror arm to desired position. Securely tighten locking knob when adjustment is complete. Push on mirror to move surface into desired position.

Using a soft cloth after mirror is adjusted, wipe any smudges off face of mirror.

A—Mirror Arm Adjustment Knob **B—Mirror Arm**

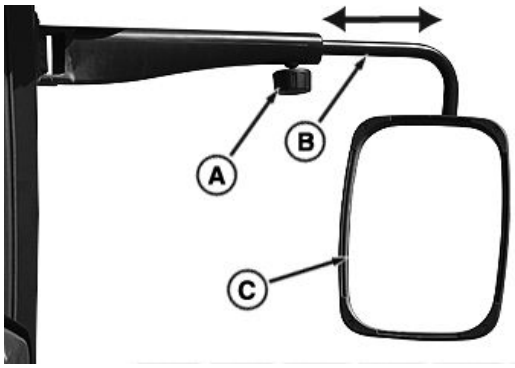


RXA0142552 —UN—12JUN14

Manual Mirror

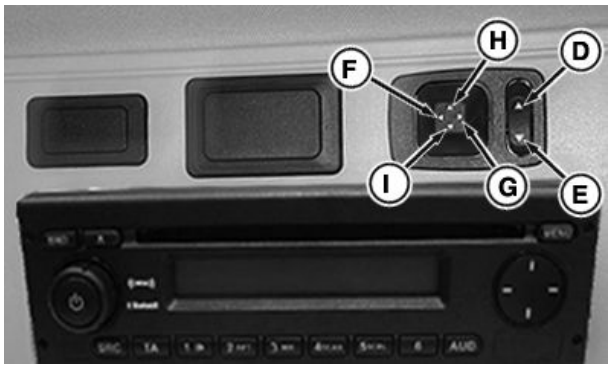
TO84419,00000B0 -19-25JUN14-1/1

Use Electric Mirror (If Equipped)



Electric Rear-View Mirror (Right-Hand Side Shown)

RXA0143014 —UN—08JUL14



RXA0142296 —UN—08JUL14

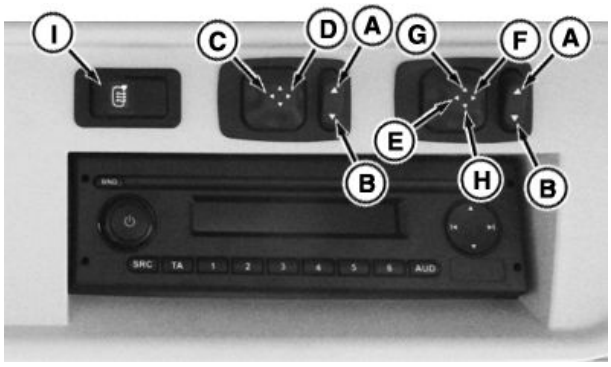
Electric Rear-View Mirror Switches

A—Mirror Arm Adjustment Knob
B—Mirror Arm
C—Electric Rear-View Mirror
D—Selection Switch—Right Mirror
E—Selection Switch—Left Mirror
F—Angle Left
G—Angle Right
H—Tilt Up
I— Tilt Down

1. Loosen mirror arm adjustment knob (A).
2. Slide mirror arm (B) to desired position.
3. Tighten mirror arm adjustment knob.
4. Select right (D) or left (E) mirror.
5. Push adjustment switch to angle mirror (C) left (F) or right (G).
6. Push adjustment switch to tilt mirror up (H) or down (I).

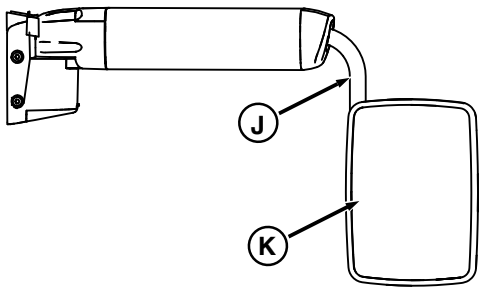
TO84419,00000B1 -19-07JUL14-1/1

Use Telescoping Heated Electric Mirror (If Equipped)



RXA0142300 —UN—09JUN14

Rear-View Mirror Switch



RXA0100486 —UN—06MAR09

Telescoping Electrical Rear-View Mirror (Right-Hand Side Shown)

A—Selection Switch—Right Mirror
B—Selection Switch—Left Mirror
C—Extend
D—Retract
E—Angle Left
F—Angle Right
G—Tilt Up
H—Tilt Down
I— Heating Switch
J— Telescoping Arm
K—Mirror

1. Select right (A) or left (B) mirror.
2. Push adjustment switch to extend (C) or retract (D).
3. Push adjustment switch to tilt mirror up (G) or down (H).
4. Push adjustment switch to angle mirror left (E) or right (F)

Press heating switch (I) to turn mirror heating on or off. When heat is on, switch is illuminated. Heating will continue until it is switched off or key switch is turned OFF. If heating switch is not manually turned off, mirror heating will restart when key switch is turned to accessory or ON position.

TO84419,00000B2 -19-18FEB15-1/1

Pull-Down Sunshade (If Equipped)

Pull-Down Sunshade (A) reduces glare when operating in bright sunlight. The pull-down sunshade allows operator flexibility in amount of window coverage.

A—Pull-Down Sunshade



RXA0133298 —UN—25JUN13

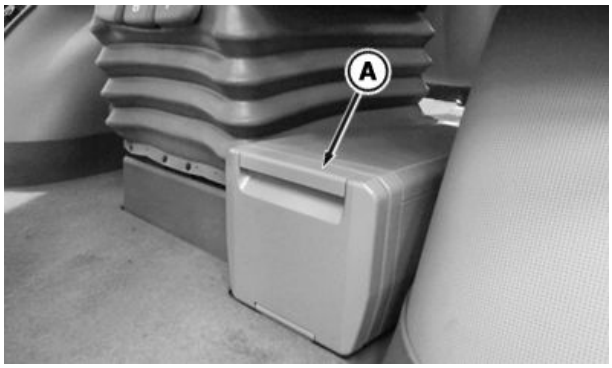
TO84419,00000A6 -19-11JUL13-1/1

Refrigerator (If Equipped) or Storage Space

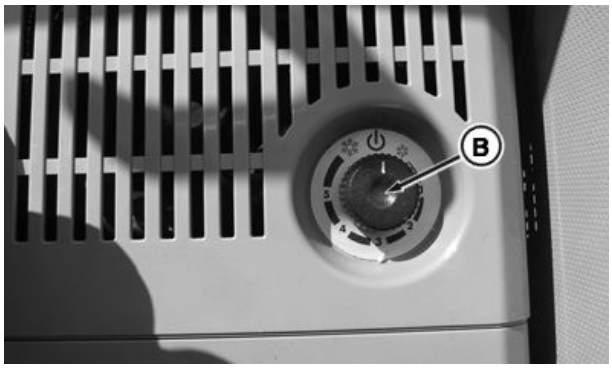
NOTE: Refrigerator only works when key switch is in RUN or accessory positions.

Use refrigerator controls to adjust temperature inside of refrigerator. Levels are from off to 5, with 5 being coldest temperature possible.

A—Refrigerator/Storage Space B—Refrigerator Control



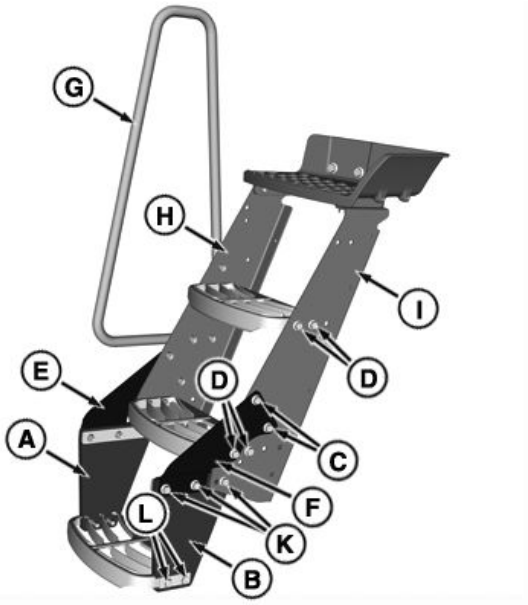
RXA0134926 —UN—15AUG13



RXA0134923 —UN—14AUG13

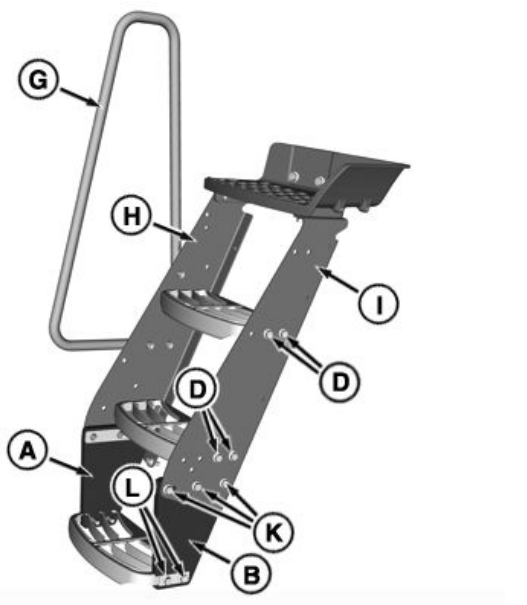
TO84419,00000B3 -19-11NOV14-1/1

Position Left-Hand Steps



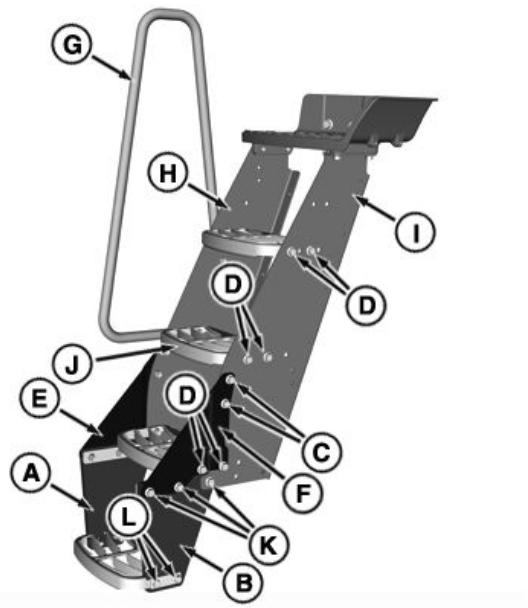
RXA0131506 —UN—10SEP13

Wide Steps and Hand Rails—Tractors Equipped With Group 47/48 Tires



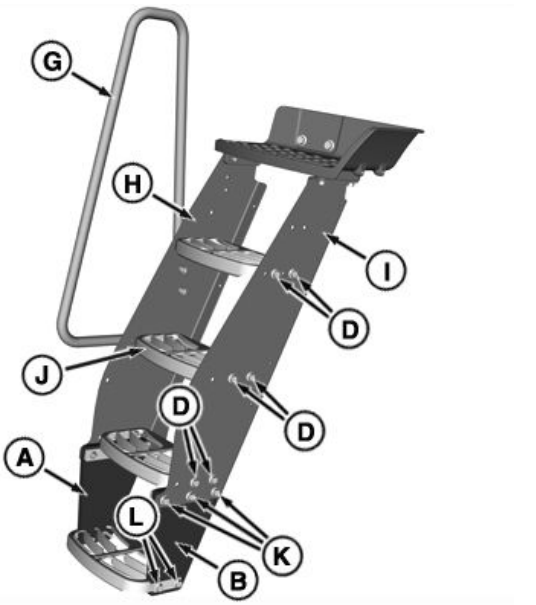
RXA0131470 —UN—10SEP13

Narrow Steps and Hand Rails—Tractors Equipped With Group 47/48 Tires



RXA0131508 —UN—10SEP13

Wide Steps and Hand Rails—Tractors Equipped With Group 49 Tires



RXA0131507 —UN—10SEP13

Narrow Steps and Hand Rails—Tractors Equipped With Group 49 Tires

A—Lower Side Panel 1
B—Lower Side Panel 2
C—Panel Positioning Bolts
D—Step Positioning Bolts
E—Side Bracket 1 (Wide Steps Only)
F—Side Bracket 2 (Wide Steps Only)
G—Handrail
H—Upper Side Panel 1
I— Upper Side Panel 2
J— Middle Step (Group 49 Tires Only)
K—Carriage Bolts
L—Cap Screws

NOTE: Step assembly can be adjusted to either wide or narrow position. For wide positioned steps, use round holes in upper and lower side panels. For narrow steps, use square holes in upper and lower side panels.

Remove steps by removing bolts (D, L).

Remove lower side panels 1 and 2 (A, B) by removing bolts (K) on both sides of step assembly.

To switch from wide position to narrow position, side brackets (E, F) need to be removed, and the lower side panels (A, B) need to be shifted into narrow position as shown.

Continued on next page

TO84419,00000B4 -19-25JUN14-1/2

To switch from narrow position to wide position, attach side brackets 1 and 2 (E, F) to lower and upper side panels (A, B, H, I). Side brackets must be ordered through a dealer for tractors shipped from factory with narrow steps (refer to figure on previous page).

Use bolts (D, L) to adjust individual steps to match step assembly width.

NOTE: Upper side panels (H, I) do not have to be removed to change step positions.

On tractors equipped with Group 49 tires, positioning bolts for middle step (J) are also used to hold handrail (G) in place.

After correctly positioning steps and handrail, tighten cap screws to specified torque.

Part	Part Number
Group 48 Side Bracket 1 (E)	R542430
Group 48 Side Bracket 2 (F)	R542429
Group 49 Side Bracket 1 (E)	R543230
Group 49 Side Bracket 2 (F)	R542654

Item	Measurement	Specification
Panel and Step Positioning Bolts (C, D)	Torque	55 N·m (41 lb-ft)
Carriage Bolts (K)	Torque	15 N·m (11 lb-ft)
Cap Screws (L)	Torque	37 N·m (27 lb-ft)

TO84419,00000B4 -19-25JUN14-2/2

Right-Hand Service Steps

⚠ CAUTION: Exhaust and muffler may be very hot. Do not use right side steps to access front step.

Fixed upper step above right fuel tank (A) allows access to right side of cab for service. Three pivoting middle steps (B) and one bottom extendable step (C) provide access to upper step.

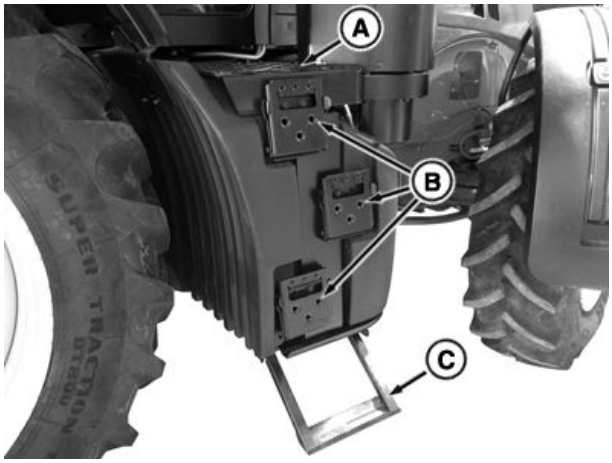
Three middle steps (B) pivot into position. Pull down on step to position. When done using step, lift up, step will latch into place. Bottom step (C) slides under fuel tank when not in use.

⚠ CAUTION: To avoid injury, use handhold slot (D) on lowest right-hand step to lower and raise step.

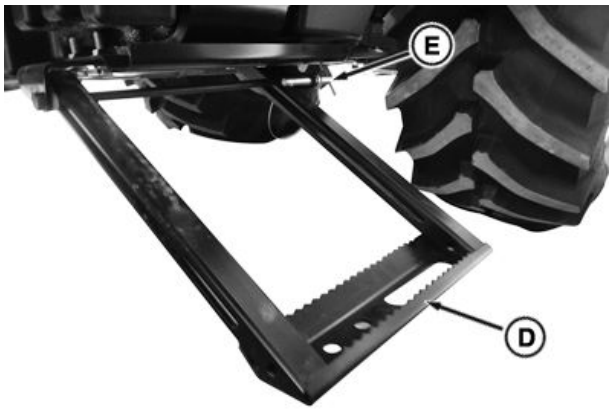
To extend bottom step, pull lock pin (E) forward until completely removed from step support. Grasp step using handhold slot (D) and pull outward and down until completely extended. Fully insert lock pin (E) in step support to secure bottom step when in stored position.

Retract and securely store all middle and lower steps when not in use. Use handholds to move steps.

A—Upper Step
B—Middle Pivoting Steps
C—Bottom Extendable Step
D—Bottom Step Handhold Slot
E—Lock Pin



RXA0137121 —UN—11DEC13



RXA0137123 —UN—11DEC13

TO84419,00000B5 -19-11DEC13-1/1

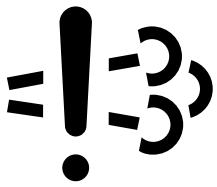
Required Machine Stop Warning

Machine Stop Mandate Occurs

IMPORTANT: In some situations, machine engine power may be reduced as described. On notification, immediately place the machine in a safe state and or move it to a safe location. A mandated machine stop can only be removed by a service technician.

Engine Emissions System Malfunction Indicator illuminates when an emission-related fault occurs.

RG22491 —UN—21AUG13



DX,MACHSTOPWARN,AG -19-11JUN15-1/6

Warning Indicator illuminates when a condition exits which requires operator action.

RG22492 —UN—21AUG13



DX,MACHSTOPWARN,AG -19-11JUN15-2/6

Stop Indicator illuminates when a condition exists which requires immediate operator action and service.

RG22493 —UN—21AUG13



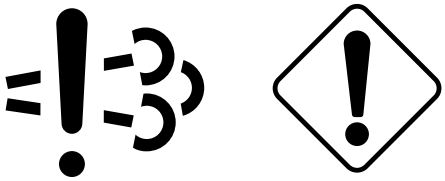
DX,MACHSTOPWARN,AG -19-11JUN15-3/6

Emission System Fault Has Occurred

30 minutes remaining, Emissions System Malfunction, and Warning Indicator are illuminated and alarm sounds to warn operator of emissions-related fault. “Less than 30 minutes to Power Restriction” displayed on machines with display.

- Engine power is normal.
- Machine operation is normal.
- Place machine in a safe state.

RG26361 —UN—04SEP14



- Contact service provider.

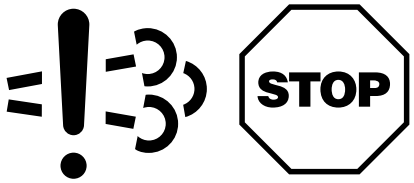
Continued on next page

DX,MACHSTOPWARN,AG -19-11JUN15-4/6

20 minutes remaining, Emissions System Malfunction, and Stop Indicator are illuminated and alarm sounds to warn operator of emissions-related fault. “Less than 20 minutes to Power Restriction” displayed on machines with displays.

- Engine power and torque are reduced.
- Key Off - Key On will temporarily provide full power.
- Place machine in a safe state.
- Contact service provider.

RG26972 —UN—26MAR15

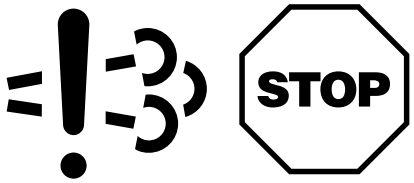


DX,MACHSTOPWARN,AG -19-11JUN15-5/6

2 minutes or less remaining, Emissions System Malfunction and Stop Indicator are illuminated and alarm sounds to warn operator of emissions-related fault which has not been corrected. “Power Restriction” displayed on machines with displays.

- Engine power is idle only.
- Place machine in a safe state.
- Contact service provider.

RG26972 —UN—26MAR15



DX,MACHSTOPWARN,AG -19-11JUN15-6/6

Exhaust Filter System Overview

Machine is equipped with emission compliant engine which cleans and filters exhaust gas. Under normal machine operation and with system in AUTO mode, system requires minimal operator interaction.

To avoid buildup of diesel particulates or soot in exhaust filter system:

- Utilize AUTO Exhaust Filter Cleaning mode.
- Avoid unnecessary idling.
- Use proper engine oil (see Diesel Engine Oil in Fuels, Lubricants, and Coolants Section of this Operator's Manual).
- Use only ultra low sulfur fuel (see Diesel Engine Oil in Fuels, Lubricants, and Coolants Section of this Operator's Manual).

Exhaust Filter System Cleaning

IMPORTANT: Use disable mode (D) when temporarily connected to an indoor ducted exhaust system for diagnostic and repair activities.

Exhaust Filter Cleaning will automatically reset back to AUTO mode after every key cycle.

There are two exhaust filter system modes: AUTO (C) and Disabled (D).

Parked Exhaust Filter Cleaning indicator (A) may be active or inactive (grayed out) depending on exhaust filter restriction level (see Parked Exhaust Filter Cleaning later in this section of this Operator's Manual).

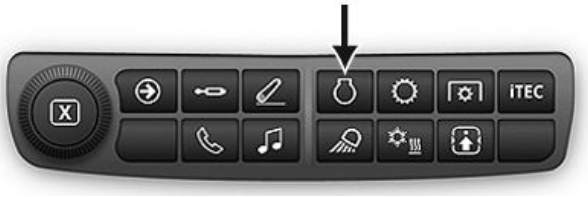
To access engine main page, use Engine Shortcut Button on Navigation Bar or follow alternative path:

1. Select **Menu.**
2. Select **Machine Settings tab.**
3. Select **Engine icon.**
4. Select **AUTO Exhaust Cleaning Mode (B).**
5. Select **Exhaust Filter Cleaning AUTO Mode toggle (C)** to allow exhaust filter system to perform cleaning as required

   IMPORTANT: Avoid Disabled mode unless absolutely necessary. Repeated disabling or ignoring prompts to perform manual / parked cleaning procedure will cause additional engine power limitation and can eventually lead to required dealer service.

6. Select **Disable Exhaust Filter Cleaning Mode toggle (D)** to disable exhaust filter system.

RXA0133711 —UN—16JUL13

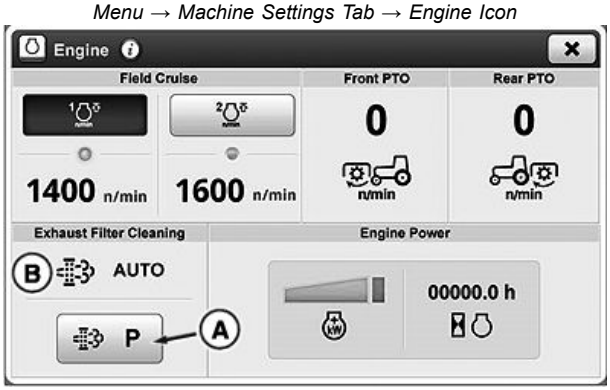


Engine Shortcut Button on Navigation Bar

RXA0147937 —UN—13APR15

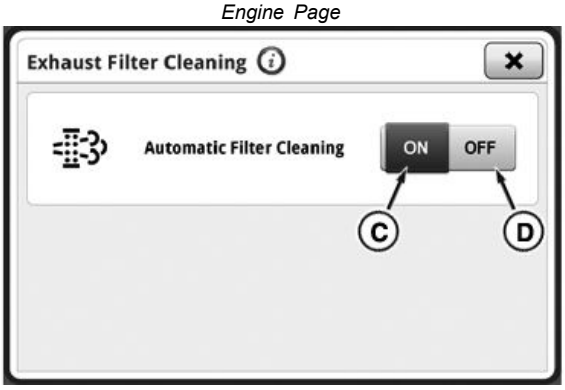


Menu → Machine Settings Tab → Engine Icon



RXA0132838 —UN—04JUN13

Engine Page



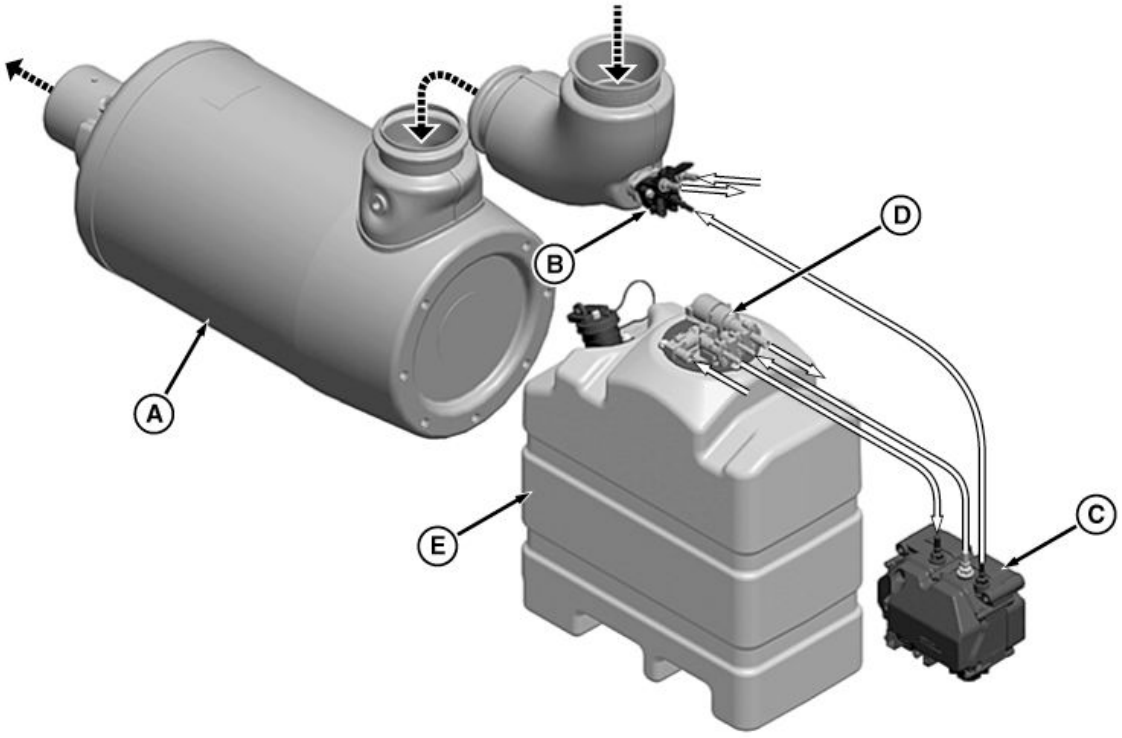
RXA0129965 —UN—07DEC12

Exhaust Filter Cleaning

A—Exhaust Filter Cleaning Mode
B—AUTO Exhaust Cleaning Mode
C—Exhaust Filter Cleaning AUTO Mode Toggle
D—Exhaust Filter Cleaning Disabled Mode Toggle

TO84419,00000B8 -19-15APR15-1/1

Selective Catalytic Reduction (SCR) System Overview



RG22427 —UN—14FEB13

SCR System

A—SCR Catalyst
B—DEF Dosing Injector
C—DEF Dosing Unit
D—DEF Tank Header Assembly
E—DEF Tank

IMPORTANT: Do not remove battery leads for at least 4 minutes after engine stops. The SCR system automatically purges itself of Diesel Exhaust Fluid (DEF) immediately after the engine is stopped. If adequate time is not allowed for lines to be purged, residual DEF can freeze and possibly damage components of the SCR system during cold-weather exposure.

In order to comply with national and local emission requirements, this engine series contains a Selective Catalytic Reduction (SCR) system. The main components of the SCR system include the SCR catalyst (A), DEF dosing injector (B), DEF dosing unit (C), DEF tank header assembly (D), and DEF tank (E). The SCR system is effective at reducing the nitrogen oxides (NOx) emissions. NOx is a major component of smog and acid rain.

During combustion, NOx molecules are formed in the exhaust. DEF is injected into the exhaust stream before the SCR catalyst. Through a chemical reaction in the SCR, NOx is converted into nitrogen and water.

Water vapor is a normal by-product of combustion. During cold-weather operation at low exhaust temperatures, this water vapor can condense and resemble white smoke from the exhaust. This will dissipate as operating temperature increases and the water is further vaporized. This situation is considered normal.

A DEF solution begins to crystallize and freeze at -11 °C (12 °F). With climate temperatures that can range much colder than this, DEF is expected to freeze in the DEF tank. For this reason, the DEF tank contains a heating element that provides rapid thawing of DEF upon start-up. The heating element cycles to maintain fluidity during operation as needed. DEF is not dosed upon initial start-up, therefore it is not necessary to have liquid DEF at cold start-up.

If DEF quality deteriorates and it is no longer within specifications, the engine can derate. DEF should be crystal clear with a light ammonia smell. If DEF appears cloudy, has a colored tint, or has a profound ammonia smell, it is likely not within specification.

DX,SCR,OVERVIEW -19-05SEP14-1/1

Restored Operation Option

NOTE: This is a European Union (EU) only option. Engine must have an EU only emission label. Option is not available for engine with EPA and EU emission label.

IMPORTANT: Operating the engine without emissions related derates could damage the aftertreatment system.

The Restored Operation Option enables a SCR equipped application to operate without emissions related derates for a specified time. After a final emission-related derate, the operator can activate the Restored Operation Option through the operator interface. Once activated, the engine can operate free of emissions-related derates for 30 minutes. The option can be activated three times, for a total of 90 minutes. To reset the Restored Operation Option for future use, the derate condition must be corrected.

DX,SCR,RESTORE,EU -19-07OCT14-1/1

Auto Exhaust Filter Cleaning Mode

Auto Exhaust Filter Cleaning Mode allows Exhaust Filter System to perform exhaust filter cleaning whenever required. Corner Post Display indicators and CommandCenter™ prompts provide operator information related to exhaust filter system activity.

Exhaust Filter Cleaning Indicator (A) illuminates when exhaust filter system is performing exhaust filter cleaning.

IMPORTANT: During exhaust filter cleaning operation, there may be higher exhaust gas temperatures and engine may operate at elevated idle.

Exhaust Filter Restricted—Depending on operating conditions, Exhaust Filter System may request a change in tractor operation. CommandCenter™ prompts describe specific operational changes needed.

A—Exhaust Filter Cleaning Indicator



RXA0135818 —UN—01OCT13

Corner Post Display

CommandCenter is a trademark of Deere & Company

TO84419,00000B9 -19-09FEB15-1/1

Parked Exhaust Filter Cleaning

Parked exhaust filter cleaning is automated to allow system to clean exhaust filter when required. During process engine speed is controlled by system and machine must remain parked to complete procedure. Time required for parked exhaust filter cleaning process is dependent upon level of exhaust filter restriction, ambient temperatures, and current exhaust gas temperature. CommandCenter™ prompts provide estimated time for completion.

Follow path to perform Parked Exhaust Filter Cleaning:

1. Press **Engine Shortcut Button on Navigation Bar.**
2. Select **Parked Exhaust Filter Cleaning button (A).**
3. **Conditions for Parked Exhaust Filter Cleaning to occur are as follows:**
   - Stop tractor motion
   - Set engine speed to low idle
   - Turn off PTO
   - Engage PARK

   If any of these conditions are not met, procedure will not occur.
4. Select **Next button (B)** once conditions are met.

   NOTE: During parked exhaust filter cleaning operation, engine may operate at elevated idle.

   Engine speed will be controlled by machine during filter cleaning.

   NOTE: At any time during parked procedure, process can be canceled by advancing throttle, engaging transmission, selecting cancel button, or stopping engine.

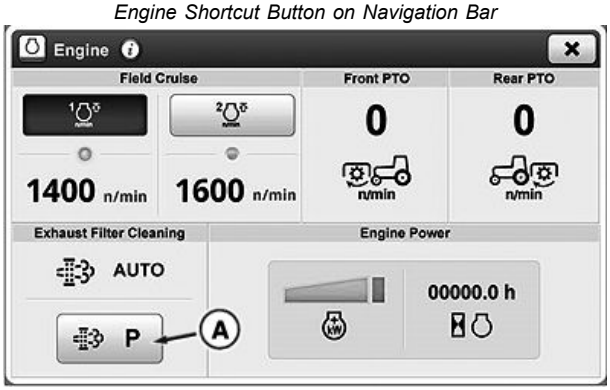
5. Status page appears when process starts. Parked exhaust filter cleaning has two steps: preparation and cleaning. During preparation, exhaust filter system controls engine speed to increase exhaust temperature. During cleaning, diesel particulates or soot are cleaned from exhaust filter system. Parked exhaust filter cleaning may exceed 40 minutes.
6. Once parked exhaust filter cleaning process is complete, select **Close Window button (C)** to return to previously opened screen.

CommandCenter is a trademark of Deere & Company

RXA0133711 —UN—16JUL13

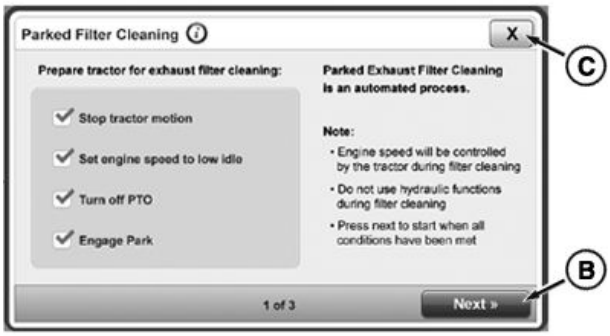


Engine Shortcut Button on Navigation Bar



RXA0132839 —UN—04JUN13

Engine Page



RXA0141402 —UN—02MAY14

Parked Filter Cleaning Conditions

A—Parked Exhaust Filter Cleaning Button
B—Next Button
C—Close Window Button

TO84419,00000BA -19-18FEB15-1/1

Selective Catalytic Reduction (SCR) System - Final Tier 4 and Stage IV Engines

IMPORTANT: To determine tractor engine type, see Record Engine Serial Number in Identification Numbers Section of this Operator's Manual.

IMPORTANT: It is unlawful to tamper with or remove any component of the aftertreatment system. It is also unlawful to use Diesel Exhaust Fluid (DEF) that does not meet the specifications provided or to operate the vehicle with no DEF.

IMPORTANT: Using incorrect or unapproved aftertreatment components can cause damage to vehicle's aftertreatment system and reduce ability of aftertreatment system to function correctly. Never interchange aftertreatment components between Interim Tier 4/Stage III B and Final Tier 4/Stage IV equipped vehicles.

NOTE: SCR system monitors quality of DEF flowing through it. If a fluid other than DEF at correct urea concentration is detected, system will display a diagnostic trouble code and a four hour internal counter starts. After four hours, engine power and speed are derated.



RXA0129256 —UN—01FEB13

Corner Post Display

A—DEF Level Gauge
B—Normal Operation Range
C—DEF Indicator Light
D—Low DEF Level 1
E—Low DEF Level 2

SCR system supplies Diesel Exhaust Fluid (DEF) to engine aftertreatment system. DEF works in conjunction with tractor aftertreatment components to reduce emissions. See Fuel, Lubricants and Coolant section in this Operator's Manual for specifications and information about DEF.

Tractor electronic systems monitor DEF level to assure proper performance. Corner post displays current DEF level (A). When quantity of DEF reaches reduced levels, systems change tractor operation. Refilling DEF tank will cause system to return tractor to normal operation. Refilling DEF tank every time tractor is refueled is recommended. See Filling DEF Tank in Fuel, Lubricants and Coolant section of this Operator's Manual.

DEF level and operation changes:

Normal Operation—When DEF level is within this range (B), DEF symbol is on and tractor operates normally. Always maintain fill within this level for uninterrupted performance.

Low DEF Level 1—When DEF level drops to first red bar (D), DEF indicator light (C) flashes and a diagnostic trouble code is displayed and alarm sounds. Tractor operates normally, but refill of DEF tank is recommended.

Low DEF Level 2—When DEF level falls below this point (E), DEF indicator light stops flashing and constantly illuminates. A diagnostic trouble code is displayed and alarm sounds; engine power and speed are derated. Refill DEF tank and restart tractor to resume normal operation.

DEF freezes at -11 °C (12 °F) and will not flow to the SCR system. Tractor systems sense low temperature and allow engine to start, even with no DEF flow. Engine coolant is used to thaw fluid in DEF tank when engine is running. If system senses that DEF has thawed and SCR system is operating normally within forty minutes, tractor is allowed to continue operation. If DEF flow is not sensed within forty minutes, a diagnostic trouble code is displayed and a four hour internal counter starts. After four hours, engine power and speed are derated. Freezing and thawing of DEF does not degrade it.

RX32825,000074D -19-05AUG14-1/1

Engine Fuel System and Power Rating

Fuel System

IMPORTANT: Modification or alteration of injection system or emission control devices will terminate warranty to purchaser.

Do not attempt to service injection system. Special training and special tools are required. See your John Deere™ dealer.

John Deere is a trademark of Deere & Company

Engine Certification/Power Rating

kW (hp) rating on engine emissions certification label specifies gross engine kW (hp), which is flywheel power without fan.

TO84419,00000BC -19-27NOV12-1/1

Battery Disconnect Switch (If Equipped)

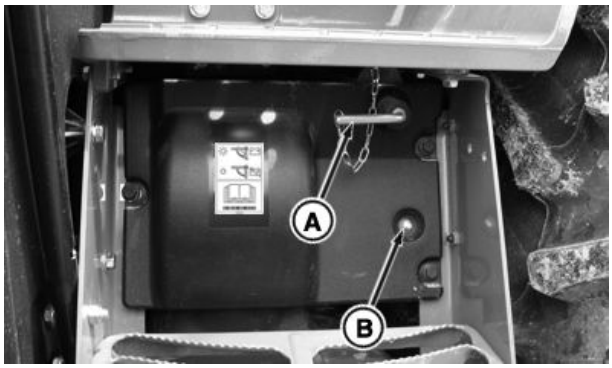
CAUTION: Never turn power off on the battery disconnect switch while the engine is running. This could result in serious damage to the tractor's electrical components.

IMPORTANT: During a long storage period, always turn battery disconnect switch to OFF position. The battery could lose power if the battery disconnect switch is left ON.

(Final Tier 4 and Stage IV Engines only.) To determine which engine your tractor is equipped with, see Record Engine Serial Number in Identification Numbers section of this Operator's Manual. Do not disconnect battery until Selective Catalyst Reduction (SCR) system has had enough time to automatically purge system of Diesel Exhaust Fluid (DEF). If adequate time is not allowed for system to be purged, any DEF remaining can crystallize and plug system. At temperatures below -15°C (5°F), unpurged DEF will freeze and damage system components. If equipped with a battery disconnect system, a light (B) next to disconnect system is illuminated while auto-purge is in progress. It shuts off when complete and safe to disconnect the battery.

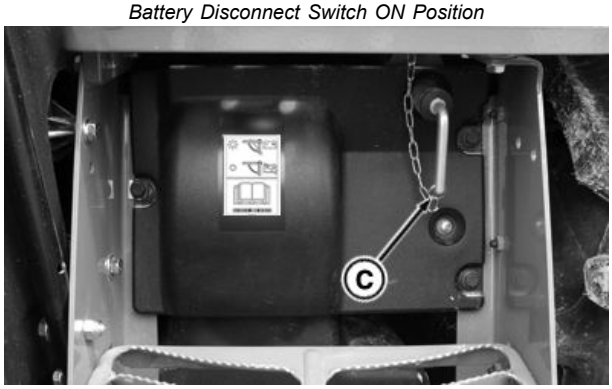
If tractor is not equipped with battery disconnect switch, wait at least 4 minutes after tractor stops before disconnecting battery.

IMPORTANT: Final Tier 4/Stage IV tractor battery disconnect system is equipped with a warning light. Do not move battery disconnect switch to OFF position until the light goes out. Illuminated light indicates SCR system is in process of draining DEF. Full DEF drain process can take up to 4 minutes.



RXA0133425 —UN—28JUN13

Battery Disconnect Switch ON Position



RXA0133426 —UN—28JUN13

Battery Disconnect Switch OFF Position

A—Battery Disconnect Switch ON Position
B—DEF Indicator Light (7310R Final Tier 4/Stage IV Engine)
C—Battery Disconnect Switch OFF Position

When battery disconnect switch is in OFF (C) position, batteries are electrically disconnected from tractor electrical and electronic systems. Moving switch to ON (A) position reconnects batteries into system.

RW29387,000003D -19-18FEB15-1/1

Start the Engine

CAUTION: Avoid possibility of personal injury or death. Engine starting with shift lever in gear indicates malfunction of starting circuit. Repair immediately. See your John Deere™ dealer.

Do not start engine by shorting across starter terminals. Tractor will start in gear if normal circuitry is bypassed. Start engine ONLY from operator seat.



TS177 —UN—11JAN89

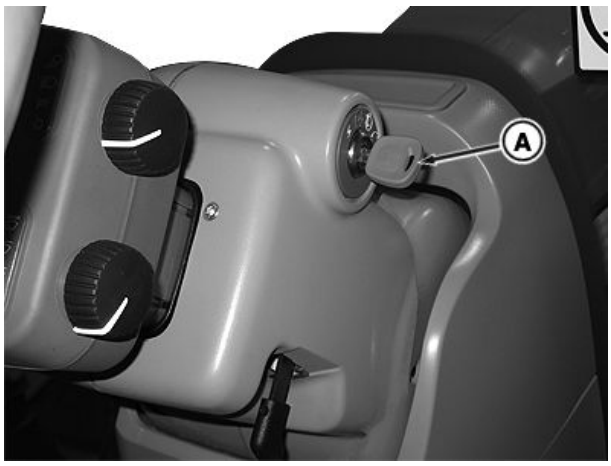
Before Starting Tractor

1. Move SCV levers to NEUTRAL position.
2. Disengage PTO.
3. Move hand throttle to slow idle position.
4. Move transmission shift lever to PARK position.

CAUTION: Avoid possibility of serious injury or death. Be sure tractor and attached equipment are clear of people and other objects.

5. Depress clutch and brake pedals.
6. Sound horn.
7. Turn key switch (A) to engage starter. Release key when engine starts.

IMPORTANT: Avoid starter damage. Do not operate starter more than 30 seconds. Wait at least two minutes before trying again.



RXA0129144 —UN—30OCT12

A—Key Switch

If Engine Fails To Start:

Check quantity and quality of fuel.

Check electrical system.

In cold weather (at or below -6 °C (21 °F)), follow steps listed in appropriate Cold Weather Starting topic in this section of this Operator's Manual.

Engine speed is limited to 1440 rpm based on transmission type and transmission-hydraulic oil temperature:

- IVT™ /AutoPowr™ transmission - temperature below -5 °C (23 °F).
- e23™ and CommandQuad™ transmissions - temperature below -18 °C (0 °F).

If engine fails to start after three attempts, see your John Deere™ dealer.

John Deere is a trademark of Deere & Company
IVT is a trademark of Deere & Company
AutoPowr is a trademark of Deere & Company
e23 is a trademark of Deere & Company
CommandQuad is a trademark of Deere & Company

TO84419,00000BD -19-19FEB15-1/1

Theft Deterrent Systems (If Equipped)

Immobilizer Keys

Immobilizer is a system that must have a programmed key for that tractor. If the key does not have the specific electronic device, the engine starts, but only runs briefly before shutting off. Continued attempts with key not programmed for tractor will result in tractor engine turning over, but will not start.

NOTE: Immobilizer keys (A) can be identified because they are slightly thicker than a normal ignition key (B). Immobilizer keys are programmed for a specific tractor. There is only a limited number of keys available for any given tractor.

Immobilizer equipped tractors are delivered with two keys to the dealer. Up to three additional keys can be ordered through your John Deere™ dealer.

John Deere is a trademark of Deere & Company



RXA0108294 —UN—24JUN10

Immobilizer Key Compared To Standard John Deere Key

A—Immobilizer Key **B—Normal Ignition Key**

KT81203,00000AB -19-21AUG14-1/2

CESAR Datatag

This theft deterrent system helps reduce tractor theft and also helps with recovery of stolen tractors.

Tractors equipped with the CESAR Datatag will have 2 large and 2 small waterproof, triangle shaped, identification plates located around the machine. These tags contain small Radio Frequency Identification (RFID) chips that can be read by a Datatag scanner to identify a machine if the serial numbers have been removed. Other secure items are used to identify tractors and/or tractor components if the machine is stolen.



RXA0117725 —UN—09JUN11

CESAR Datatag

KT81203,00000AB -19-21AUG14-2/2

Run the Engine

IMPORTANT: Do not start engine with throttle pushed completely forward.

Avoid excessive engine idling (more than 5 minutes). Prolonged idling may cause engine coolant temperature to fall below normal range. Prolonged idling causes crankcase oil dilution, due to incomplete fuel combustion, and permits formation of gummy deposits on valves, pistons, and piston rings. It promotes rapid accumulation of engine sludge and unburned fuel in exhaust system.

Operate engine between 1500—2100 rpm. Do not operate engine constantly below 1500 rpm during heavy draft usage or when tractor is under full PTO load.

For maximum tractor performance:

- Ensure that tractor is correctly ballasted (see Performance Ballasting section of this Operator's Manual).
- For CommandQuad™, see Operate the CommandQuad™ Transmission section of this Operator's Manual
- For e23™ transmission, see Operate the e23™ Transmission section of this Operator's Manual.
- For IVT™/AutoPowr™ transmission, see Operate the IVT™/AutoPowr™ Transmission section of this Operator's Manual.

If engine stalls, start immediately to provide lubrication to critical engine parts.

Allow engine to idle for 20 seconds before turning key switch to OFF position.

Contact your John Deere™ dealer if any symptoms that may be early signs of engine problems are detected:

- Sudden drop in oil pressure
- Abnormal coolant temperatures
- Unusual noise or vibration
- Sudden loss of power
- Excessive fuel consumption
- Excessive oil consumption
- Fluid leaks

CommandQuad is a trademark of Deere & Company
e23 is a trademark of Deere & Company
IVT is a trademark of Deere & Company
AutoPowr is a trademark of Deere & Company

KT81203,00000AF -19-19FEB15-1/1

Stop the Engine

IMPORTANT: Before stopping an engine that has been operating at working load, idle engine at least 2 minutes at 1000—1200 rpm to cool hot engine parts. If an Exhaust Filter Cleaning has just been performed, increase engine idle time to 4 minutes. If service work is going to be performed on exhaust filter, increase engine idle time to 10 minutes.

IMPORTANT: Final Tier 4 and Stage IV Engines only: To determine tractor engine type, see Record Engine Serial Number in Identification Numbers section of this Operator's Manual. Do not disconnect battery until Selective Catalytic Reduction (SCR) system has had enough time to automatically purge system of Diesel Exhaust Fluid (DEF). If adequate time is not allowed for system to be purged, any DEF remaining can crystallize and plug system. At temperatures below -15°C (5°F), unpurged DEF will freeze and damage system components. If equipped with a battery disconnect system, a light next to disconnect system is illuminated while auto-purge is in progress. It shuts off when complete and safe to disconnect the battery.

If tractor is not equipped with battery disconnect switch, wait at least 4 minutes after tractor stops before disconnecting battery.

1. Pull throttle back to slow idle position.
2. Depress clutch and brake pedals.
3. Put transmission in PARK position.
4. Lower all equipment to ground.
5. Make sure SCV levers are in NEUTRAL position.
6. Pull rear and front PTO (if equipped) switch rearward to disengage PTO.

CAUTION: Remove key to help prevent accidents.

7. Turn key switch to OFF position and remove key.

RX32825,000074E -19-20FEB15-1/1

Cold Weather Starting—With Glow Plug Starting Aid (6.8 L Engine)

IMPORTANT: To determine tractor engine type, see Record Engine Serial Number in Identification Numbers Section of this Operator's Manual.

IMPORTANT: DO NOT use starting fluid on tractors equipped with glow plugs.

Use of starting fluid on engines with glow plugs can cause pre-detonation when contacting heater components. Engine damage may result.

NOTE: All 6.8 L engines are equipped with glow plugs. Glow plugs are protected by 50 Amp harness in-line fuse.

Use of glow plugs is recommended when cold weather when temperature is at or below -6 °C (21 °F).

1. Turn key switch to RUN position.
2. Engine Preheat Indicator (A), on corner post display, will illuminate when system is activated.
3. Display will start at 15 seconds or less, depending on temperature, and count down until to zero (see table below).
4. At 0, turn key switch to start engine.
5. If engine does not start, return key to OFF position and repeat steps 1-4.

If Engine Fails to Start:

Check quantity and quality of fuel.

Check electrical system.

If engine fails to start after three attempts, it may be necessary to consult your John Deere™ dealer.

Intercooler Outlet Temperature	Wait Time (Seconds)
-15 °C (5 °F)	15
-10 °C (14 °F)	10
-5 °C (23 °F)	5
0 °C (32 °F)	5
5 °C (41 °F)	2
8 °C (46 °F)	0

Wait Time Depending on Intercooler Outlet Temperature

John Deere is a trademark of Deere & Company



RXA0138139 —UN—08JAN14

Corner Post Display

A—Engine Preheat Indicator **B—Glow Plug Wait Time**

RW29387,00006A3 -19-11NOV14-1/1

Cold Weather Starting—Without Starting Aid (9.0 L Engine)

CAUTION: Starting fluid is highly flammable. While using this product do not smoke and make sure to extinguish all flames. Turn off all pilot lights, stoves, heaters, electrical motors, and other sources of ignition while using this product and/or if vapors are still present. Avoid contact of aerosol with battery terminals, solenoid, or other electrical/electronic components. Do not overuse this product. Keep cap on container and store in cool location when not in use.

NOTE: Use of starter fluid is recommended when starting tractor at or below -6 °C (21 °F)(See Cold Weather Starting—With Starting Aid in this section of this Operator's Manual).

A cold weather starting kit is available from your John Deere™ dealer.

1. Spray starting fluid into air intake screen (A) once for two or three seconds.
2. Follow steps as outlined in Starting the Engine in this section of this Operator's Manual.

If Engine Fails to Start:

Check quantity and quality of fuel.

Check electrical system.

If engine fails to start after three attempts, it may be necessary to consult your John Deere™ dealer.

John Deere is a trademark of Deere & Company



TS1356 —UN—18MAR92



RXA0128561 —UN—18OCT12

Air Intake Screen

A—Air Intake Screen

KT81203,00000B0 -19-11NOV14-1/1

Cold Weather Starting—With Starting Aid (9.0 L Engine)

CAUTION: Avoid personal injury and damage to engine. Inject fluid only while engine is turning. Follow safety information on the container. Do not carry starting fluid cans inside cab.

Starting fluid is highly flammable. While using this product do not smoke and make sure to extinguish all flames. Turn off all pilot lights, stoves, heaters, electrical motors, and other sources of ignition while using this product and/or if vapors are still present. Avoid contact of aerosol with battery terminals, solenoid, or other electrical/electronic components. Do not overuse this product. Keep cap on container and store in cool location when not in use.

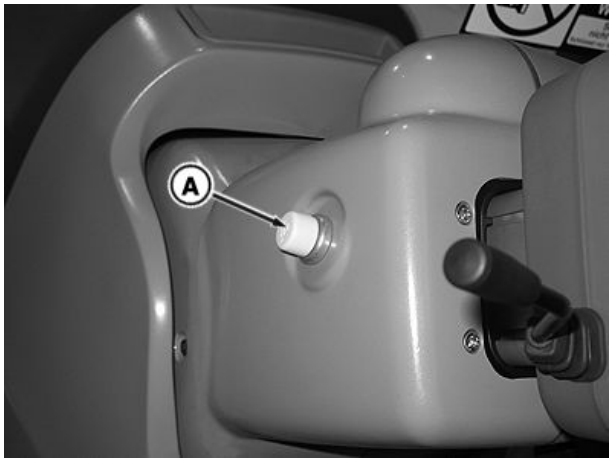
NOTE: Use of cold weather starting option is recommended when starting tractor at or below -6 °C (21 °F).

1. Start tractor as described in Starting the Engine in this section of this Operator's Manual.

IMPORTANT: Avoid starter damage. Do not operate starter more than 30 seconds. Wait at least two minutes before trying again.

When applying starter fluid, if pre-ignition knocking is detected, stop using starter fluid immediately.

2. Following are recommendations to follow if engine refuses to start. Make sure to turn key switch and complete following steps while engine is cranking:
   - Apply starter fluid in series of quick taps rather than stream.



RXA0129150 —UN—05NOV12

Starting Aid

A—Starting Fluid Switch

   - After series of taps (no more than three) on starter fluid button (A) release starter fluid button for three seconds.
   - If engine attempts to start but falters, use tapping motion on starter fluid button sparingly and only until engine runs on its own.

IMPORTANT: Idle engine at approximately 1000 rpm with no load for one to two minutes to assure adequate lubrication. Do not operate under full load until engine has reached normal operating temperature.

KT81203,000000E -19-28JAN15-1/1

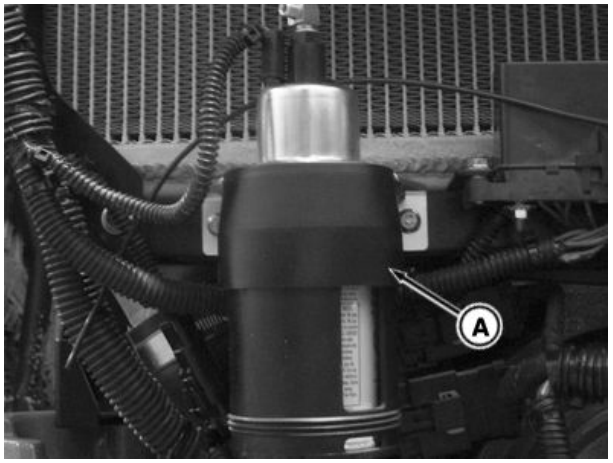
Change Starting Fluid Canister (If Equipped)

CAUTION: Do not use starting fluid near fire, sparks, or flames. Read caution information on container. Protect container against damage. Do not carry starting fluid canisters inside cab.

1. Pull hood release and raise hood to access canister (A).
2. Remove safety cap and plastic spray nozzle from new canister.
3. Loosen canister and remove old can.

IMPORTANT: To avoid drawing dust into engine, always keep starting fluid canister installed bottom side up, clean and in position.

4. Install new can and tighten canister.



RXA0135276 —UN—28AUG13

A—Starting Fluid Canister

TO84419,00000C1 -19-24FEB15-1/1

Low Fuel or Low Diesel Exhaust Fluid (DEF) Warning

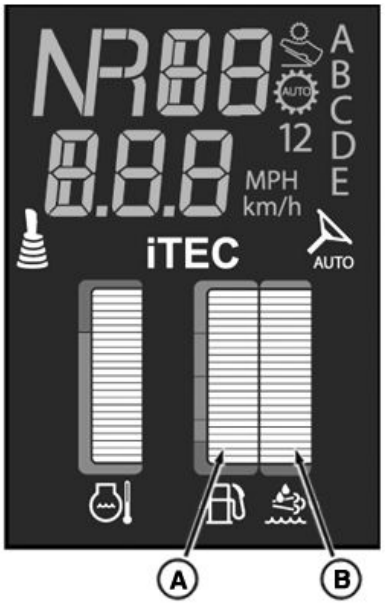
NOTE: It is recommended that DEF tank be filled at each fuel tank fill.

Fuel indicator light (A) will flash and alarm will sound when approximately 39 L (10 gal) of fuel remains.

DEF light (B) will flash and alarm will sound when fluid level is low.

A—Fuel Indicator Light

B—Diesel Exhaust Fluid (DEF) Light



RXA0129257 —UN—31OCT12

Corner Post Display

TO84419,00000C2 -19-24FEB15-1/1

Restart Engine That Has Run Out of Fuel

1. Fill fuel tank.
2. Turn key switch to RUN position to start electric fuel pump and bleed air from fuel system.
3. Allow pump to run for 30 seconds to 1 minute before attempting to restart engine.

Fuel pump will turn off after 1 minute. Key switch must be turned to OFF and back to RUN to turn pump back on.

NOTE: Steps two and three may need to be repeated as necessary if fuel tanks have been removed or drained.

TO84419,00000C3 -19-11NOV14-1/1

Reduce Fuel Consumption

Fuel consumption reduction guidelines:

- Replace air cleaner, fuel, engine oil, and transmission-hydraulic filter elements at specified service intervals (see Maintenance and Service Intervals section of this Operator's Manual) or when indicated by CommandCenter™ display messages.
- Use recommended oils and lubricants only (see Fuel, Lubricants, and Coolant section of this Operator's Manual).
- Adjust hitch function for most efficient operation (see TouchSet™ Depth Control section of this Operator's Manual).
- Check tires for correct pressure weekly (see Front or Rear Wheels, Tires, and Treads section of this Operator's Manual).
- Ballast tractor for conditions (see Performance Ballasting section of this Operator's Manual).

CommandCenter is a trademark of Deere & Company
TouchSet is a trademark of Deere & Company
FieldCruise is a trademark of Deere & Company
IVT is a trademark of Deere & Company
AutoPowr is a trademark of Deere & Company

- For gear transmissions, select correct gear. Always drive in highest possible gear with reduced engine speed. Choose gear so engine speed drops 150-250 rpm when tractor is operating and engine is under load (see appropriate transmission section of this Operator's Manual).

  NOTE: For light work, reduce engine speed below 2000 rpm. Select gear so that engine speed drops 200—300 rpm when operating.

  Using FieldCruise™ may improve fuel economy (see Activate and Set FieldCruise™ and Use FieldCruise™ with Different Transmission Modes in Operate the Tractor section of this Operator's Manual).

- IVT™/AutoPowr™ transmissions provide additional fuel saving advantages (see Operate IVT™ /AutoPowr™ section of this Operator's Manual).

TO84419,00000C4 -19-20FEB15-1/1

Auxiliary Heaters Use

CAUTION: To avoid electrical shock or fire, use 3-wire, 14 AWG (14 gauge), heavy-duty electrical cord with 15 amp rating, suitable for outdoor use. Always plug electrical cord into 220 volt outlet protected by GFI (Ground Fault Interrupter).

Before connecting heater to power source, be sure that element is immersed in coolant. NEVER energize heater in air. Doing so can cause element sheath to burst causing personal injury.

IMPORTANT: Ground fault circuit interrupter on tractor protects tractor only, not electrical wiring supplying power to tractor. Test all ground fault interrupters before each use.

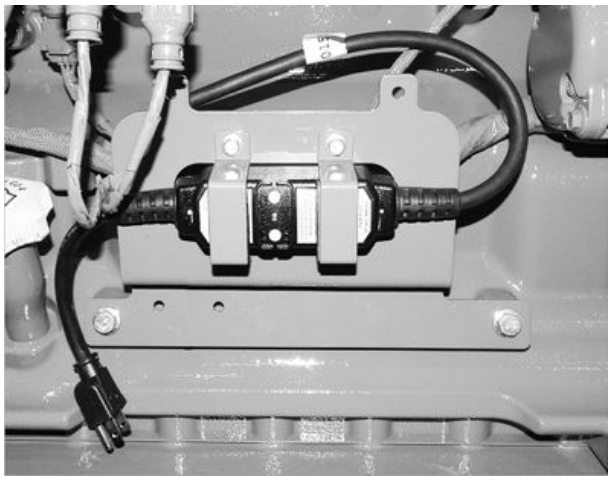
Your John Deere™ dealer has 220 volt ground fault interrupter-equipped heaters:

- Engine Coolant (1000 W)
- Hydraulic Charge Pump (150 W)

Connect heaters and ground fault interrupter to ground fault protected 220 volt electrical outlet.

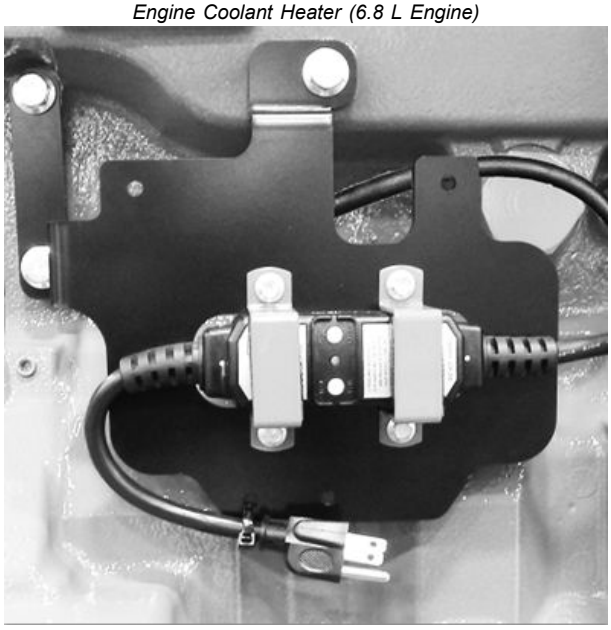


TS210 —UN—23AUG88



RXA0148180 —UN—13MAY15

Engine Coolant Heater (6.8 L Engine)



RXA0148182 —UN—13MAY15

Engine Coolant Heater (9.0 L Engine)

John Deere is a trademark of Deere & Company

KT81203,000016C -19-08JUL15-1/1

Use Battery Booster or Charger

CAUTION: Gas given off by batteries is explosive. Keep sparks and flames away from batteries. Make last connection and first disconnection at point away from booster batteries.

CAUTION: Avoid possible injury or death from machinery runaway.

Do not start engine by shorting across starter terminals. Machine will start in gear if normal circuitry is bypassed.

NEVER start engine while standing on ground. Start engine only from operator's seat, with transmission in neutral or park.

IMPORTANT: Be sure that polarity is correct before making connections. Reversed polarity will damage electrical system or possibly cause battery to explode.

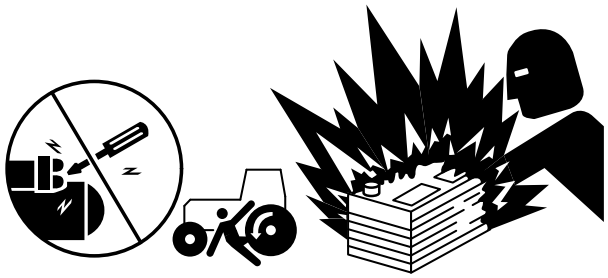
If two or more booster batteries are used, they must be connected in parallel ensuring that booster batteries are producing 12 volt charge.

Final Tier 4 and Stage IV Engines only: To determine tractor engine type, see Record Engine Serial Number in Identification Numbers section of this Operator's Manual. Do not disconnect battery until Selective Catalyst Reduction (SCR) system has had enough time to automatically purge system of Diesel Exhaust Fluid (DEF). If adequate time is not allowed for system to be purged, any DEF remaining can crystallize and plug system. At temperatures below -15°C (5°F), unpurged DEF will freeze and damage system components. If equipped with a battery disconnect system, a light next to disconnect system is illuminated while auto-purge is in progress. It shuts off when complete and safe to disconnect the battery.

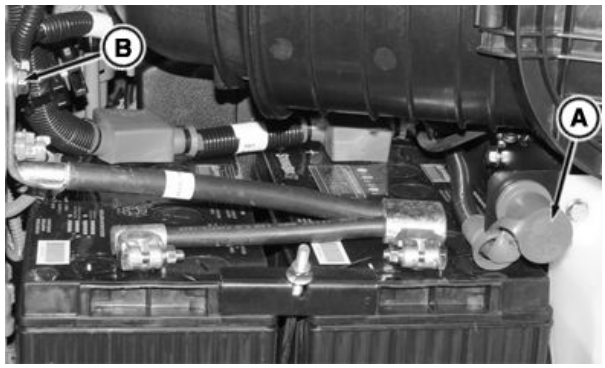
If tractor is not equipped with battery disconnect switch, wait at least 4 minutes after tractor stops before disconnecting battery.

Booster Battery

1. Remove cap and attach red cable to remote positive terminal (A), located on left-hand side of tractor behind battery panel, and positive terminal of booster battery.
2. Attach black cable to negative terminal of booster battery. Attach other end to ground (B) on tractor frame.



RXA0086722 —UN—10FEB06



RXA0143342 —UN—03JUL14

Positive Terminal (Left-Hand Side of Tractor Behind Battery Panel)

A—Positive Terminal **B—Ground**

3. Remove ground cable first when disconnecting.

Battery Charger

IMPORTANT: Set battery charger at nominal 12 volt and no more than 16 volt maximum.

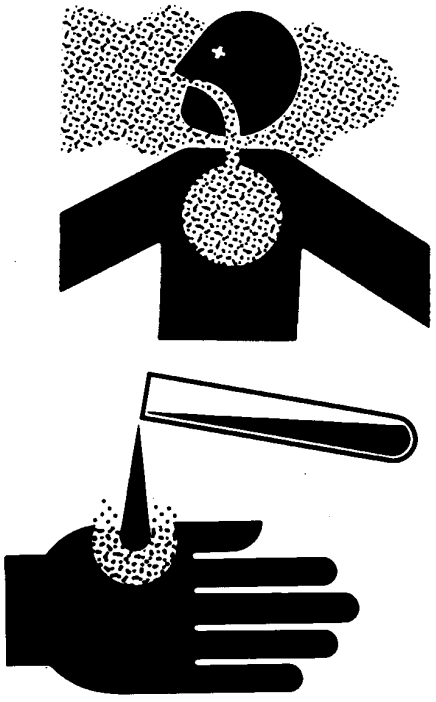
1. Remove cap and attach positive charger lead to positive remote terminal with charger in OFF position. Attach negative charger lead to negative ground at tractor frame, away from batteries.
2. Switch charger to ON and charge battery according to charger manufacturer's instructions.
3. Switch charger to OFF. Remove negative charger lead first, then positive lead.

KT81203,0000172 -19-11NOV14-1/1

Avoid Contact with Agricultural Chemicals

CAUTION: This enclosed cab does not protect against inhaling vapor, aerosol or dust.

1. When operating in an environment where pesticides are present, wear a long-sleeved shirt, long-legged pants, shoes, and socks.
2. If pesticide use instructions require respiratory protection, wear an appropriate respirator inside the cab.
3. Wear personal protective equipment as required by the pesticide use instructions when leaving the enclosed cab:
   - into a treated area
   - to work with contaminated application equipment such as nozzles which must be cleaned, changed or redirected
   - to become involved with mixing and loading activities
4. Before re-entering the cab, remove protective equipment and store either outside the cab in a closed box or some other type of sealable container or inside the cab in a pesticide resistant container, such as a plastic bag.
5. Clean your shoes or boots to remove soil or other contaminated particles prior to entering the cab.



TS220 —UN—15APR13

TS272 —UN—23AUG88

DX,CABS1 -19-25MAR09-1/1

Clean Vehicle of Hazardous Pesticides

CAUTION: During application of hazardous pesticides, pesticide residue can build up on the inside or outside of the vehicle. Clean vehicle according to use instructions of hazardous pesticides.

When exposed to hazardous pesticides, clean exterior and interior of vehicle daily to keep free of the accumulation of visible dirt and contamination.

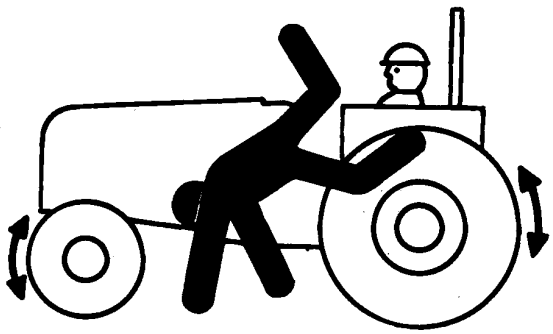
1. Sweep or vacuum the floor of cab.
2. Clean headliners and inside cowlings of cab.
3. Wash entire exterior of vehicle.
4. Dispose of any wash water with hazardous concentrations of active or non-active ingredients according to published regulations or directives.

DX,CABS2 -19-24JUL01-1/1

Keep Riders Off Machine

Only allow the operator on the machine. Keep riders off.

Riders on machine are subject to injury such as being struck by foreign objects and being thrown off of the machine. Riders also obstruct the operator's view resulting in the machine being operated in an unsafe manner.



TS290 —UN—23AUG88

DX,RIDER -19-03MAR93-1/1

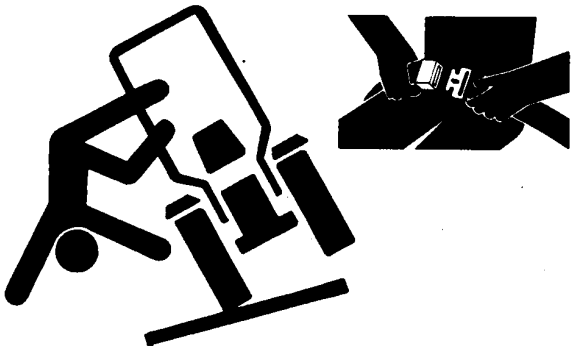
Keep Operator Station Window and Door Closed

CAUTION: Avoid undue exposure to noise and debris. Keep window and door closed during machine operation.

Properly close and latch door and rear window to prevent noise and debris from entering operator station.

RW29387,000004F -19-24FEB15-1/1

Use Seat Belts



TS205 —UN—23AUG88



RXA0129149 —UN—30OCT12

A—Seat Belts

CAUTION: Minimize chance of possible injury from accident. Use seat belts (A) when operating tractor.

Instructional seat is provided only for training operators or diagnosing machine problems.

Keep all other riders off tractor and equipment. Always wear your seat belt.

Inspect seat belts and mounting hardware annually (see Annual Service section of this Operator's Manual).

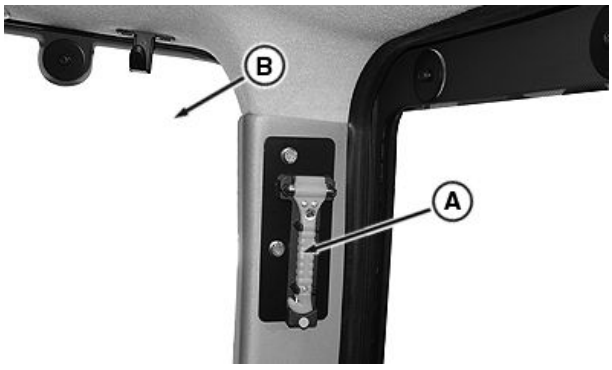
KT81203,000020B -19-24FEB15-1/1

Use Emergency Exit

CAUTION: Use emergency exit only when cab door is blocked. Before using hammer, cover eyes, face and uncovered skin to avoid injury from broken glass.

In case of an emergency and doors are blocked, open rear window (B) to exit. If rear window is also blocked, use hammer (A) in cab to break window and exit.

A—Hammer **B—Rear Window**



RXA0141894 —UN—02JUN14

Emergency Exit Hammer

RW29387,00005FB -19-01AUG14-1/1

Disconnect Battery—Final Tier 4 and Stage IV Engines

IMPORTANT: To determine tractor engine type, see Record Engine Serial Number in Identification Numbers Section of this Operator's Manual.

IMPORTANT: Do not disconnect battery until Selective Catalytic Reduction (SCR) system has had enough time to automatically purge system of Diesel Exhaust Fluid (DEF). If adequate time is not allowed for system to be purged, any DEF remaining can crystallize and plug system. At temperatures below -15°C (5°F), unpurged DEF will freeze and damage system components. If equipped with a battery disconnect system, a light next to disconnect system is illuminated while auto-purge is in progress. It shuts off when complete and safe to disconnect the battery.

If tractor is not equipped with battery disconnect switch, wait at least 4 minutes after tractor stops before disconnecting battery.

RX32825,000074F -19-16JAN15-1/1

Change Tire Size

IMPORTANT: Before changing size of tire, see Using Correct Tire Combinations in Wheels, Tires, and Treads section of this Operator's Manual.

See your John Deere™ dealer to recalibrate for tire size.

Perform wheel slip calibration (see Calibrations in CommandCenter™ section of this Operator's Manual).

John Deere is a trademark of Deere & Company
CommandCenter is a trademark of Deere & Company

RW29387,0000629 -19-11NOV14-1/1

Transmission Top Speed Note

All three transmissions can be manually programmed to limit top speed through a dealer. Tractors programmed for 50 km/h (31 mph) top speed can be permanently downrated to 40 km/h (24.8 mph) top speed. This may be advisable, if particular legal requirements for 50 km/h tractors cannot be met. Examples include a different class of driver's license, or similar restrictions. If top speed is changed, this must be recorded in the vehicle documents.

For more information, contact your John Deere™ dealer.

NOTE: It is only possible to uprate the tractor from 40 km/h (24.8 mph) to 50 km/h (31 mph) if tractor was equipped for 50 km/h before leaving the factory.

John Deere is a trademark of Deere & Company

RW29387,000062A -19-11NOV14-1/1

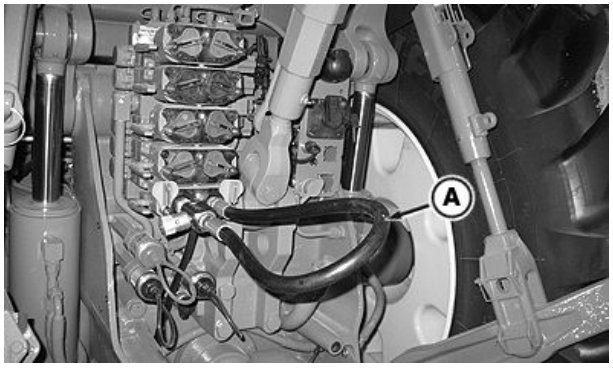
Warm-Up Transmission-Hydraulic System

Set Detent Time

IMPORTANT: Avoid operating tractor under load until transmission-hydraulic system has warmed up. Tractor-hydraulic warm-up procedure is recommended at temperatures at or below -5 °C (23 °F).

1. Install jumper hose (A) into SCV I couplers.
2. Place transmission lever in PARK position before starting tractor.
3. Turn key switch to START position.
4. Press SCV Shortcut Button on Navigation Bar.
5. Select SCV I module.
6. Select SCV I Time tab (C).
7. Select increase (+) button (D) to extend flow time to C (continuous) in input box (E). Adjustment dial (G) can also be used to increase or decrease desired detent time setting.
8. Set SCV II to C using steps 5 through 7.

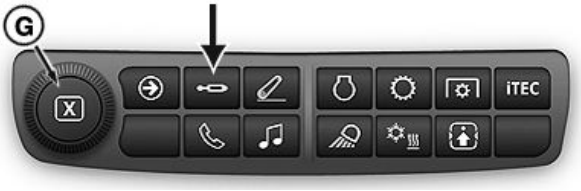
A—Jumper Hose
B—SCV I Detent Flow Tab
C—SCV I Detent Time Tab
D—Increase Time button
E—Input Box
F—Decrease Time button
G—Adjustment Dial



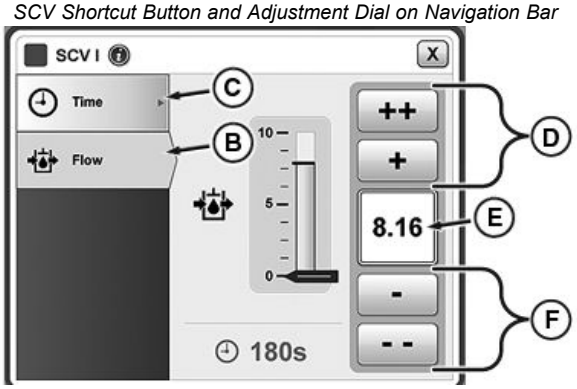
RXA0131636 —UN—28MAR13

Install Jumper Hose Into SCV Coupler

RXA0141641 —UN—22MAY14



SCV Shortcut Button and Adjustment Dial on Navigation Bar



RXA0127834 —UN—24AUG12

SCV Detent Time

Continued on next page

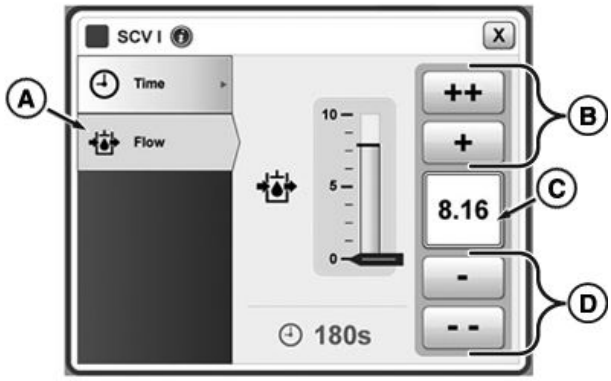
KT81203,000016B -19-30JUL14-1/3

Set Detent Flow

NOTE: Flow is displayed in increments of 0.04 beginning at 0.04 through 10 located in input box (C). Pushing (+) increases flow by 0.04, pushing (++) increases flow by 1.00, and by pushing (-) and (- -) decreases flow setting by same increments.

1. Select SCV I flow tab (A).
2. Set SCV I flow to 8.00 or above (C) by pressing buttons (B) to increase flow or buttons (D) to decrease flow setting. Adjustment dial (G) can be used to increase or decrease desired detent flow setting.
3. Pull SCV I (E) and SCV II (F) levers to extend detent.
4. Operate engine at 1400 rpm.

A—SCV 1 Flow Tab
B—Increase Flow buttons
C—Flow Input Box
D—Decrease Flow buttons
E—SCV I Lever
F—SCV II Lever
G—Adjustment Dial



RXA0131683 —UN—28MAR13

SCV Detent Flow



RXA01142612 —UN—16JUN14

CommandARM™



RXA0131233 —UN—09MAY13

Adjustment Dial on Navigation Bar

Continued on next page

Monitoring Hydraulic Oil Temperature

1. Select **Menu.**
2. Select **Applications tab.**
3. Select **Machine Monitor icon.**
4. Select Temperature tab (A).
5. Select hydraulic oil temperature reading (B) and monitor until temperature reaches 38 °C (100 °F).
6. Return SCV I and SCV II lever to neutral position.
7. Disconnect jumper hose and return to normal operation.

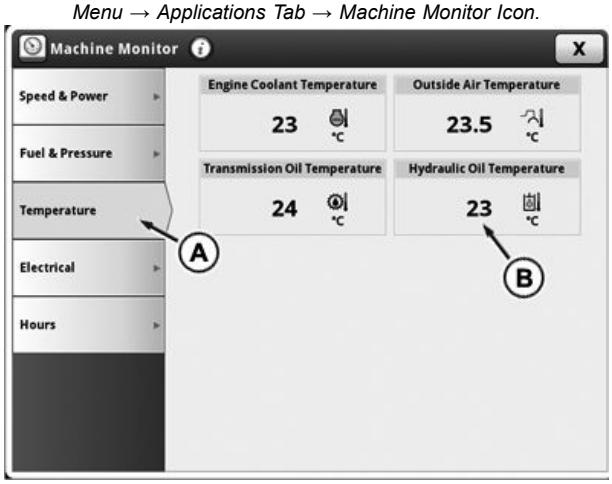
A—Temperature Tab

B—Hydraulic Oil Temperature Reading

RXA0126813 —UN—12JUN12



Menu → Applications Tab → Machine Monitor Icon.



RXA0142555 —UN—12JUN14

Temperature Display on Machine Monitor Page

KT81203,000016B -19-30JUL14-3/3

Activate and Set FieldCruise™

Limiting engine speed in light load situations may improve fuel economy. FieldCruise™ utilizes a constant speed governor curve, providing instant response to varying loads. Two different FieldCruise™ speeds can be set, enabling operator to toggle quickly from one to the other.

Activate FieldCruise™

Engine must be running for FieldCruise™ adjustment to operate.

1. Select Engine Shortcut Button on Navigation Bar
2. When engine page appears, select FieldCruise™ Speed 1 (A) or 2 (B) ON/OFF toggle button.

NOTE: FieldCruise™ can also be activated using FieldCruise™ ON/OFF button (E) on CommandARM™. When CommandARM™ FieldCruise™ ON/OFF button is pressed, last FieldCruise™ mode selected with CommandCenter™ will be activated.

Adjust FieldCruise™ Set Speed

FieldCruise™ is an upper limit to engine speed. Engine speed limit can be adjusted from 1100 to 2150 RPM. Changes to FieldCruise™ take place immediately.

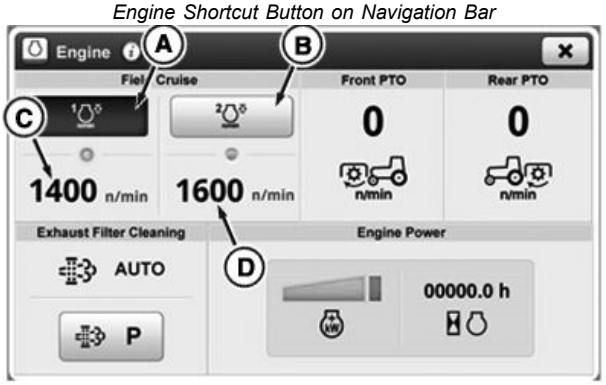
1. Select FieldCruise™ Set Speed 1 (C) or 2 (D) input module.
2. When FieldCruise™ Set Speed 1 or 2 page appears, select desired speed by using FieldCruise™ Set Speed increase (F) or decrease (H) button. “++” and “- -” buttons increase or decrease values at higher rate than “+” and “-” buttons. FieldCruise™ Set Speed value appears in FieldCruise™ Set Speed input box (G).

A—FieldCruise™ Speed 1 On/Off Toggle Button
B—FieldCruise™ Speed 2 On/Off Toggle Button
C—FieldCruise™ Set Speed 1 Input Module
D—FieldCruise™ Set Speed 2 Input Module
E—FieldCruise™ ON/OFF Button
F—FieldCruise™ Set Speed Increase Buttons
G—FieldCruise™ Set Speed Input Box
H—FieldCruise™ Set Speed Decrease Buttons

RXA0133711 —UN—16JUL13

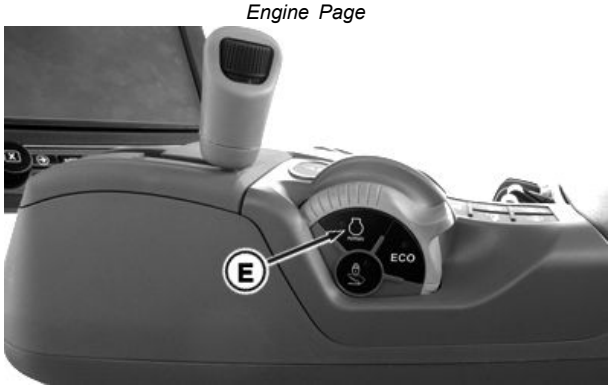


Engine Shortcut Button on Navigation Bar



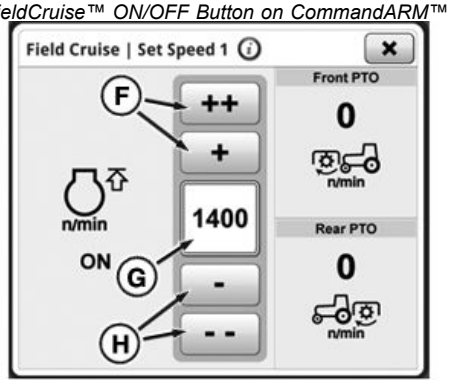
RXA0132500 —UN—15MAY13

Engine Page



RXA0137795 —UN—12DEC13

FieldCruise™ ON/OFF Button on CommandARM™



RXA0141564 —UN—13MAY14

FieldCruise™ Set Speed 1 Page

FieldCruise is a trademark of Deere & Company
CommandARM is a trademark of Deere & Company
CommandCenter is a trademark of Deere & Company

KT81203,0000113 -19-18JUL14-1/1

Use FieldCruise™ with Different Transmission Modes

Change transmission mode by using Transmission Page on CommandCenter™ display. Following is how FieldCruise™ works with different transmission modes:

Full Auto: At full throttle, minimum engine speed is 1200 RPM with PTO off. Transmission downshifts and engine speeds up to FieldCruise™ set speed, to compensate for increasing workloads. Available engine speed range is 1200 RPM to FieldCruise™ set speed.

Custom: Minimum engine speed depends on ECO engine speed setting on transmission page. Transmission downshifts and engine speeds up to FieldCruise™ set speed, to compensate for increasing workloads. Available engine speed range is ECO engine speed setting to FieldCruise™ set speed.

Pedal (If Equipped): FieldCruise™ function is replaced by Engine Set Speed function. Engine speed stays constant at engine speed selected. Hand throttle will take over control of engine speed if moved out of position.

Manual: Operator sets engine speed using hand throttle. Engine speed stays constant, but limited by FieldCruise™ set speed.

CommandCenter is a trademark of Deere & Company
FieldCruise is a trademark of Deere & Company

KT81203,0000114 -19-08JAN14-1/1

Intelligent Power Management (If Equipped)

Intelligent Power Management (IPM) is available as factory or field installed option. IPM provides controlled power boost of up to 26kW (35hp) to tractor when:

- Accelerating at transport speeds, power boost occurs in steps through range of 23-28 km/h (14.3-17.4 mph).
- Decelerating at transport speeds, power boost ramps down in equal steps in range of 23-18 km/h (14.3-11.2 mph).
- PTO is under load and consuming moderate power and tractor is moving at 0.5 km/h (0.3 mph) or more.
- With tractor moving and rear PTO under load or in transport above 23 km/h (14.3 mph), power increase indicator will appear on display and IPM level is displayed on CommandCenter™

Power increase is not provided under draft applications or non-loaded rear PTO applications. Power increase is only provided when required.

1. Press **Engine Shortcut Button on Navigation Bar.**
2. Select IPM module (A) to activate IPM.
3. IPM On/Off toggle appears.
4. Toggle ON IPM (C).
5. IPM engaged icon (E) appears.

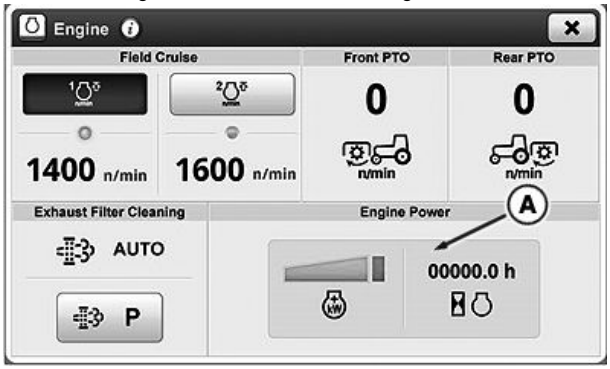
   When IPM is engaged, IPM level is identified by solid portion displayed in IPM Graph (D). Segments to right of solid portion indicate additional engine power above rated.

A—Intelligent Power Management Module
B—Intelligent Power Management Off Toggle
C—Intelligent Power Management On Toggle
D—Intelligent Power Management Graph
E—Intelligent Power Management Engaged Icon

RXA0133711 —UN—16JUL13

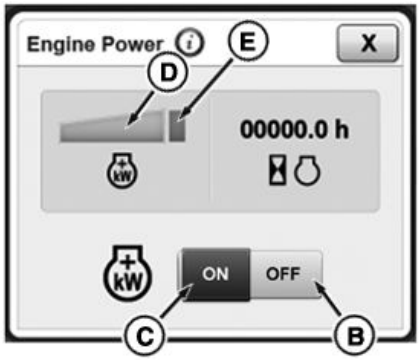


Engine Shortcut Button on Navigation Bar



RXA0135976 —UN—08OCT13

Intelligent Power Management



RXA0141563 —UN—13MAY14

Engine Power Overlay

CommandCenter is a trademark of Deere & Company

KT81203,00000B1 -19-04AUG14-1/1

Triple Link Suspension Plus (TLS™ Plus) Front Axle Suspension (If Equipped)

TLS™ Plus Front Axle Suspension provides suspension for tractor front end using hydro-pneumatic self leveling system. TLS™ Plus can operate simultaneously, yet independently from Load/Depth Control and Hitch Dampening.

Operating Characteristics

CAUTION: Avoid possible injury. Always make sure transmission is in Park position when working in area of TLS™ Plus MFWD.

IMPORTANT: Check for adequate clearance with TLS™ Plus system when attaching front mounted implement.

TLS™ Plus automatically levels when tractor wheel speed is faster than 0.5 km/h (0.3 mph).

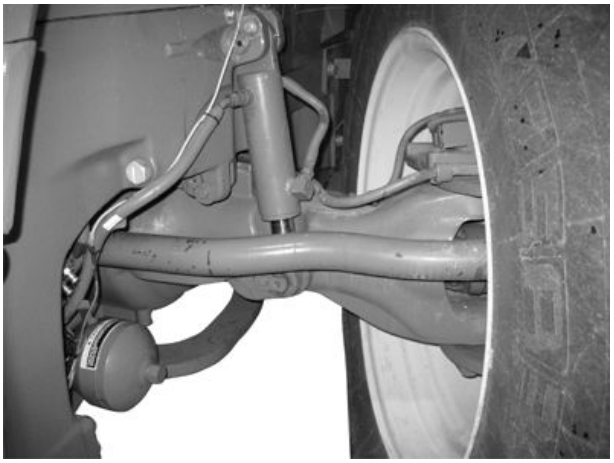
TLS™ Plus self levels with implement attached and hitch is raised or lowered.

Cold Weather Operation

Use normal cold weather procedures. TLS™ Plus system may require extra time to function correctly. TLS™ Plus system may not operate if system has not recentered during first 80 seconds of operation. Several restarts may be required. If it still doesn't start, contact your John Deere™ dealer.

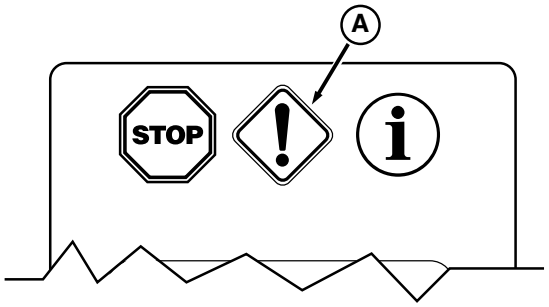
Troubleshooting

If fault occurs in leveling control, Service Alert indicator (A) comes on, and a DTC message appears on CommandCenter™ display. To clear fault, stop and restart engine. If fault reoccurs, contact your John Deere™ dealer.



RXA0110327 —UN—13SEP10

TLS™ Plus



RXA0068147 —UN—22JUN03

A—Service Alert Indicator

TLS is a trademark of Deere & Company
John Deere is a trademark of Deere & Company
CommandCenter is a trademark of Deere & Company

TO84419,00000B6 -19-04FEB15-1/1

Operate TLS™ Plus and Cab Suspension (If Equipped)

IMPORTANT: Cab suspension should never hit end stops. If this occurs, select a stiffer setting.

1. Select **Menu.**
2. Select **Machine Settings tab.**
3. Select **Suspension Icon.**
4. Select desired front axle and cab suspension setting.

TLS™ Plus Front Axle Suspension can be set for two different firmness levels and a manual positioning option: “AUTO” (A), “MAX” (B), and “Manual” (C).

Suspended front axle engages whenever tractor speed exceeds 0.5 km/h (0.3 mph). There is a delay in control after tractor begins moving. Suspension is active anytime transmission is not in PARK.

If "Auto" (A) is selected, suspension reacts in response to surrounding conditions and events. Provides best possible comfort by looking at inputs such as travel speed, surface characteristics, implement weight, implement usage and braking activity.

If ”MAX” (B) is selected, suspension is set to maximum firmness (e.g. for operation with a front loader). When travel speed exceeds 30 km/h (18 mph), ”MAX” setting is deactivated. When travel speed drops below 20 km/h (12 mph) again, ”MAX” setting is reactivated.

When “Manual” (C) is selected, operator is able to adjust chassis height by pressing Raise button (G) or Lower button (H). Manual setting is overridden when travel speed exceeds 5 km/h (3 mph). When overridden, system returns to previously selected mode (Auto or MAX).

Cab Suspension can be set for three different firmness levels: “Auto Soft” (D), “Auto Medium” (E), and “MAX” (F).

“Auto Soft” (D) enables cab suspension to operate from 0%—100% stiffness. Provides best suspension for transport situations. Cab suspension moves most with this setting. If less cab movement is desired, select a stiffer setting.

“Auto Medium” (E) enables cab suspension to operate from 50%—100% stiffness. Provides best suspension for field operation.

“MAX” (F) enables cab suspension to always operate at 100% stiffness. Most suitable for loader operations or operations that require frequent shuttle shifting.

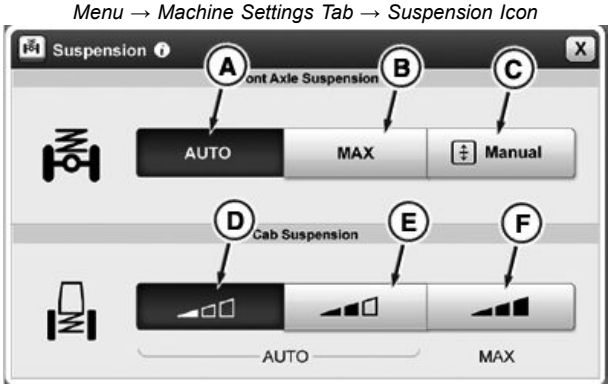
Start Up Mode

- TLS™ Plus does not move until placed into either forward or reverse gear.
- TLS™ Plus flexes when transmission shift lever is placed out of park.
- Automatic leveling is allowed when tractor wheel speed is above 0.5 km/h (0.3 mph).

RXA0147938 —UN—13APR15

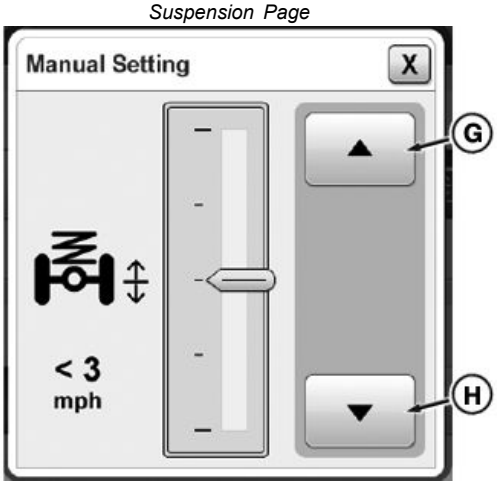


Menu → Machine Settings Tab → Suspension Icon



RXA0131033 —UN—18FEB13

Suspension Page



RXA0131034 —UN—18FEB13

Manual Settings Page

A—Front Axle Suspension Auto Setting button
B—Front Axle Suspension MAX Setting button
C—Manual Positioning Setting button
D—Cab Suspension Auto Soft Setting button
E—Cab Suspension Auto Medium Setting button
F—Cab Suspension MAX Setting button
G—Raise button
H—Lower button

TLS™ Plus in Locked Conditions (Restricted Mode)

- Operator activates hitch raise/lower switch.
- Transmission shift lever placed in PARK position.
- Wheel speed less than 0.5 km/h (0.3 mph).
- Correcting for unlevel condition.
- Operator applies both brake pedals.

Rear Hitch

- Control units limit suspension response when hitch is raised or lowered with front weight load changes

Continued on next page

- Depressing clutch and moving transmission shift lever into gear for four seconds and then back to NEUTRAL adjusts suspension toward mid-point. This can be repeated until tractor levels when attaching and detaching implements.

Parking Tractor

IMPORTANT: Prevent possible damage. Do not park tractor with equipment or items under front end of tractor.

- Front end can settle when tractor is parked. Keep front end of tractor away from equipment or other items.

TLS is a trademark of Deere & Company

TO84419,00000D1 -19-06AUG15-2/2

Differential Lock

IMPORTANT: Engage differential lock before entering situation where wheel slippage may occur or when all wheels appear to be turning at same speed. If engaged after wheels begin to spin, damage to differential could result.

NOTE: On tractors with front and rear differential locks, front axle differential lock engages when rear differential lock engages.

Differential Lock latches wheel axles together to provide best traction possible for slippery field conditions.

When one wheel begins to slip, differential lock can be engaged by selecting either of the two operating positions:

Auto Lock — Enter Auto mode by pressing Auto Lock switch (A) on armrest. When in auto mode, LED in Auto lock switch illuminates. Differential lock indicator (C) illuminates when differential lock is engaged. Auto Lock:

- Disengages when wheel speed is more than 23 km/h (14 mph), one or both brake pedals are depressed or steering angle greater than selected value. For more information on how to change differential lock steering angle see Adjust Steering Angle to Disengage Differential Lock in this section of this Operator's Manual.
- Engages when wheel speed falls below 19 km/h (12 mph), steering angle less than selected value and brakes are released.

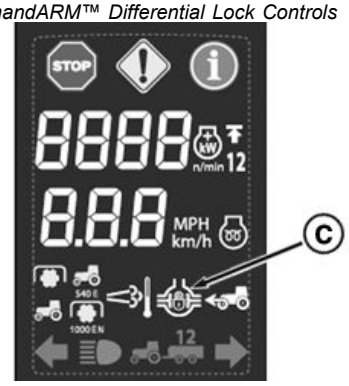
NOTE: When Auto lock switch is pressed, button is always lit until pressed again. Differential lock remains in Auto mode until operator selects Manual Lock (B), Differential Lock floor switch (D) or press Auto Lock switch again. Differential Lock indicator turns on and off depending on the state of differential lock.

Manual Lock — Enter Manual mode by pressing either Manual Lock switch on armrest or Differential Lock floor switch. When in Manual mode, LED in Manual Lock switch and Differential lock indicator illuminates. Press Manual Lock switch a second time or depress one or both brake pedals to disengage Manual mode.



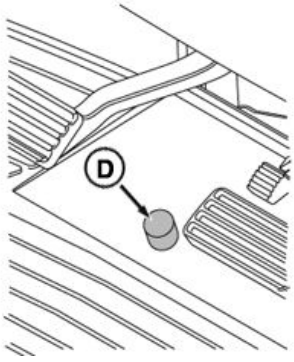
CommandARM™ Differential Lock Controls

RXA0141546 —UN—12MAY14



Corner Post Display

RXA0141542 —UN—12MAY14



Differential Lock Floor Switch

RXA0141548 —UN—12MAY14

A—Auto Lock Switch
B—Manual Lock Switch
C—Differential Lock Indicator
D—Differential Lock Floor Switch

CommandARM is a trademark of Deere & Company

TO84419,00000D2 -19-04JUN14-1/1

Change Differential Lock Disengagement Steering Angle

Higher disengage steering angles require operator to turn steering wheel further before differential lock disengages. Use in high slip field conditions that require large steering corrections to maintain desired path. Differential lock remains engaged while making steering corrections across field, but automatically disengages on headland turns.

Moderate disengage steering angles are useful in loader situations. Differential lock remains engaged when entering into a pile, but quickly disengages while turning.

Lower disengage steering angles allow differential lock to disengage sooner (less movement of the steering wheel), which is useful in high traction (e.g. concrete) conditions. Differential lock remains engaged during straight-line work, while minimizing tractor jerk when disengaged or reengaged during turns.

Use Transmission Advanced Settings to adjust steering angle to disengage differential lock.

1. Select **Transmission Shortcut button on Navigation Bar.**
2. Select **Advanced Settings icon.**
3. Select **Settings tab.**
4. Select desired steering angle to disengage differential lock using Steering Angle toggle bar (A).

A—Steering Angle Toggle Bar

RXA0133712 —UN—16JUL13

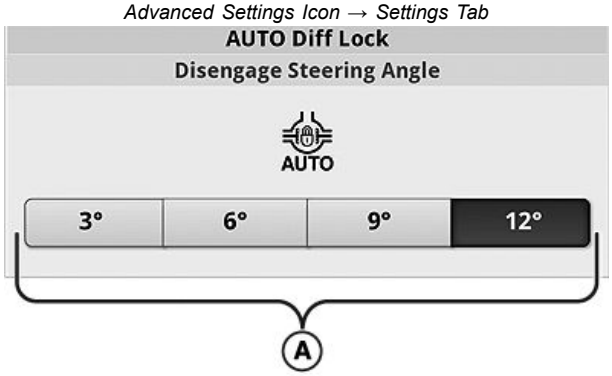


Transmission Shortcut Button on Navigation Bar

RXA0130326 —UN—11JAN13



Advanced Settings Icon → Settings Tab



RXA0137847 —UN—13DEC13

Differential Lock Steering Angle

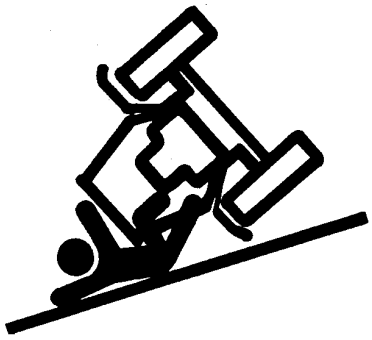
KT81203,00000F6 -19-11NOV14-1/1

Mechanical Front-Wheel Drive (MFWD)

CAUTION: Avoid personal injury or death. Reduce speed when driving on icy, wet, or graveled surfaces.

Ballast tractor correctly to avoid skidding and loss of steering control. Engage front-wheel drive by using MFWD switch mode, rather than AUTO mode for four wheel braking.

IMPORTANT: Use AUTO MFWD or Brake Assist when transporting tractor.



RW13093 —UN—07DEC88

MFWD allows the most power and traction for any road or field condition.

MFWD can be engaged and disengaged in all gears (forward and reverse) during operation and under full load. Select one of three operating modes:

AUTO MFWD — Enter Auto mode by pressing AUTO MFWD switch (A) on armrest. While in Auto mode, LED in AUTO switch illuminates. MFWD indicator (C) illuminates when MFWD is engaged. Following is how MFWD operates in AUTO position:

- MFWD automatically *disengages* when either brake pedal is pressed, at speeds above 23 km/h (14 mph) or steering angle is greater than selected value. For more information on how to change MFWD steering angle see Adjust Steering Angle to Disengage Mechanical Front-Wheel Drive (MFWD) in the section of this Operator's Manual.
- MFWD automatically *engages* when speed falls below 19 km/h (12 mph) and steering angle is below selected value, or when BOTH brake pedals are depressed.



RXA0138503 —UN—21JAN14

CommandARM™ MFWD Controls

Manual MFWD — Enter Manual mode by pressing Manual MFWD switch (B). While in Manual mode, LED in Manual MFWD switch and MFWD indicator illuminate until disengaged. To disengage Manual MFWD mode, press illuminated Manual MFWD switch. MFWD is engaged when transmission is in PARK.

Brake Assist — If both Manual and Auto mode are deselected, MFWD will be in Brake Assist mode. In Brake Assist mode, MFWD will be off unless both brake pedals are depressed at speeds above 5 km/h (3 mph).



RXA0135821 —UN—01OCT13

MFWD Indicator

A—AUTO MFWD Switch
B—Manual MFWD Switch
C—MFWD Indicator

TO84419,00000D3 -19-21JAN14-1/1

Change Mechanical Front-Wheel Drive (MFWD) Disengagement Steering Angle

MFWD disengages to enable tighter turning radius or to reduce ground disturbance in area of turn. To allow for different turning radius of various implements, steering angles to disengage MFWD are higher and have different settings than steering angles to disengage differential lock.

Disabling steering angle to disengage MFWD switches MFWD into “AUTO” mode allowing disengagement of MFWD based on wheel speed and depression of brake pedal, not on steering angle.

Use Transmission Advanced Settings to adjust steering angle to disengage MFWD.

1. Select **Transmission Shortcut button on Navigation Bar.**
2. Select **Advanced Settings icon.**
3. Select **Settings tab.**
4. Select desired steering angle to disengage MFWD using Steering Angle toggle bar (A). To disable steering angle to disengage MFWD, press Steering Angle OFF button (B).

A—Steering Angle Toggle Bar **B—Steering Angle OFF Button**

RXA0133712 —UN—16JUL13

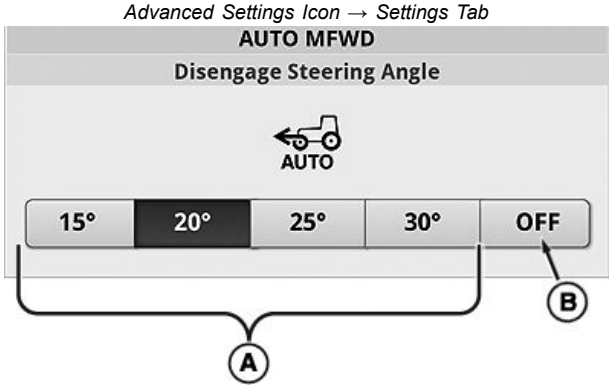


Transmission Shortcut Button on Navigation Bar

RXA0130326 —UN—11JAN13



Advanced Settings Icon → Settings Tab



RXA0137848 —UN—13DEC13

MFWD Steering Angle

KT81203,00000F7 -19-11NOV14-1/1

Use AutoClutch (If Equipped)

IMPORTANT: Damage to brakes could result if brake pedals are not locked together during transport when using AutoClutch.

IVT™/AutoPowr™ and e23™ transmissions are equipped with an AutoClutch feature. With AutoClutch, when the operator presses the brake pedals, clutch begins disengaging, pressing brake pedals further then applies the rear brakes (Front brakes as well - if equipped).

To access transmission main page, use Transmission Shortcut Button on Navigation Bar or follow alternative path:

1. Select **Menu.**
2. Select **Machine Settings tab.**
3. Select **Transmission icon.**
4. Select **Advanced Settings icon.**
5. Select **Settings tab.**
6. Select appropriate AutoClutch setting.
   - ON/OFF (A) disables or enables AutoClutch.
   - Low (B) is for heavy trailers (load).
   - Medium (C) is for medium trailers (load).
   - High (Factory Default) (D) is for light or no trailer (load).

NOTE: To keep AutoClutch from disengaging before trailer brakes are applied, AutoClutch Sensitivity options allow operator to adjust AutoClutch settings to load requirements. Larger trailers take lower AutoClutch Sensitivity settings. **AutoClutch Sensitivity factory default setting is set to High, which will support most operations.**

RXA0133712 —UN—16JUL13



Transmission Shortcut Button on Navigation Bar

RXA0147943 —UN—13APR15

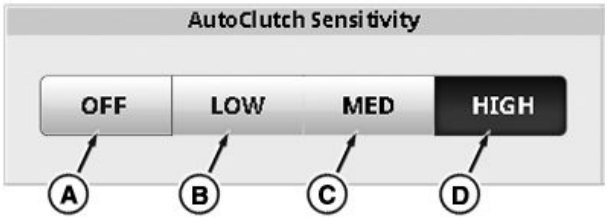


Menu → Machine Settings Tab → Transmission Icon

RXA0130326 —UN—11JAN13



Advanced Settings Icon → Settings Tab



RXA0137943 —UN—17DEC13

AutoClutch Sensitivity and Acceleration Aggressiveness Module

A—AutoClutch ON/OFF Toggle
B—Low AutoClutch Sensitivity Toggle
C—Medium AutoClutch Sensitivity Toggle
D—High AutoClutch Sensitivity Toggle

IVT is a trademark of Deere & Company
AutoPowr is a trademark of Deere & Company
e23 is a trademark of Deere & Company

RD47322,0000260 -19-15APR15-1/1

Foot Pedal Mode (If Equipped)

Foot pedal mode is a function that allows the operator to control wheel speed independently of engine speed by using foot pedal (A) while using hand throttle (B) to keep engine at a constant speed.

When the foot pedal is released, vehicle decelerates to a minimum travel speed of 0.5 – 2 km/h (0.3 - 1.2 mph). To come to a complete stop, brake pedal with AutoClutch function must be used.

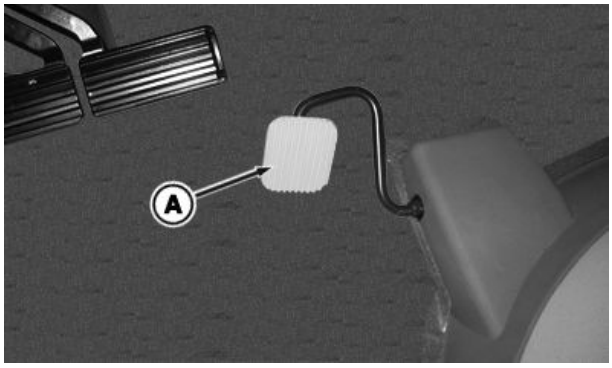
To cover transport applications with foot pedal only, leave hand throttle in lowest position; engine speed is increased or decreased from drive strategy based on fuel economy settings. When hand throttle is not at its lowest position, engine speed is controlled directly by hand throttle while foot pedal controls wheel speed only.

If engine speed is being held at low rpm via hand throttle, vehicle may not reach wheel speed commanded by set speed adjuster dial (C).

Foot pedal mode is intended for applications where it is important to keep engine speed at a constant rpm independent from wheel speed (mowing for example).

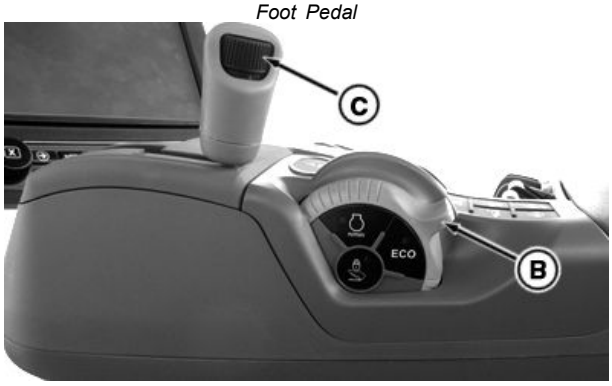
NOTE: If equipped, foot pedal mode indicator (D) is on when foot pedal mode enabled. Indicator goes out when foot pedal mode is disabled.

A—Foot Pedal
B—Hand Throttle Control
C—Set Speed Adjuster Dial
D—Foot Pedal Mode Indicator



RXA0136636 —UN—19SEP13

Foot Pedal



RXA0140646 —UN—25MAR14

Hand Throttle Control and Set Speed Adjuster Dial



RXA0140615 —UN—24MAR14

Foot Pedal Mode Indicator Light

Continued on next page

KT81203,00000B2 -19-14MAY14-1/2

Enable Foot Pedal Mode

Fuel economy settings and automatic mode functions become active when foot pedal mode is enabled.

1. Place transmission shift lever in PARK position.
2. Press Transmission shortcut button on Navigation Bar.
3. Press Foot Pedal Mode button (A)

Maximum forward and reverse speeds are adjusted using maximum forward (B) and reverse (C) speed module. For more information see IVT™/AutoPowr™ Modes and Setting Maximum Speeds in Operating IVT™/AutoPowr™ Transmission section of this Operator's Manual.

Lock or unlock foot pedal settings using foot pedal lock/unlock button (D).

NOTE: Foot pedal will not lock if foot pedal lock button is held more than 1 second.

Following are ways to unlock foot pedal:

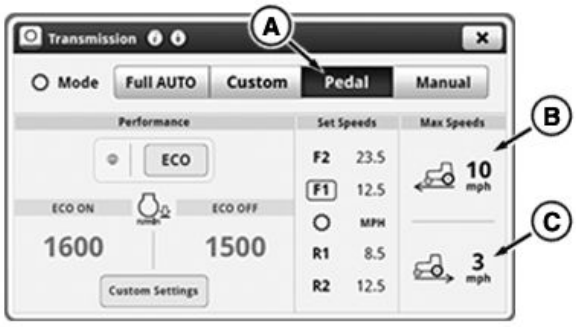
- Depressing foot pedal a second time.
- Depressing brake pedal.
- Pressing foot pedal set lock/unlock button.
- Moving speed control lever or left-hand reverser to PARK position.

A—Foot Pedal Mode Button
B—Max Forward Speed
C—Max Reverse Speed
D—Foot Pedal Lock/Unlock Button

RXA0133712 —UN—16JUL13

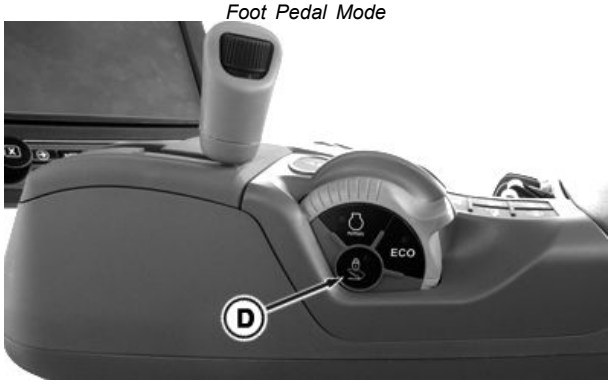


Transmission Shortcut Button on Navigation Bar



RXA0140647 —UN—25MAR14

Foot Pedal Mode



RXA0140645 —UN—25MAR14

Foot Pedal Lock/Unlock Button

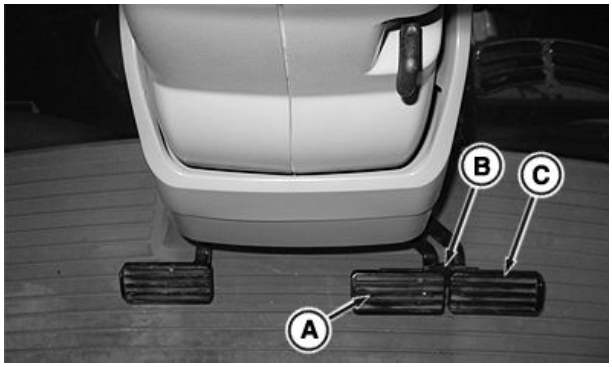
IVT is a trademark of Deere & Company
AutoPowr is a trademark of Deere & Company

KT81203,00000B2 -19-14MAY14-2/2

Brake Use

CAUTION: Avoid possible injury from losing control of tractor:

- **Lock brake pedals together with pedal lock tab (B) when operating on roads.**
- **Reduce speed if towed load weighs more than tractor or when transporting loads under adverse conditions. Avoid hard braking applications. (See Transporting Towed Equipment, in Transport Section of this Operator's Manual.)**
- **Tractor wheels may lock and skid on slippery downhill slopes. For IVT™/AutoPowr™ tractors, see Downhill Operation and Slippery Conditions, in the IVT™/AutoPowr™ Transmission section.**



RXA0129148 —UN—30OCT12

A—Left Brake Pedal
B—Pedal Lock Tab
C—Right Brake Pedal

IMPORTANT: MFWD engages if MFWD Brake Assist mode is selected and both brake pedals are depressed at speeds above 5 km/h (3 mph) (see Mechanical Front-Wheel Drive (MFWD) in this section for more information).

IMPORTANT: DO NOT rest feet on brake pedals during tractor operation to avoid unnecessary wear on brakes and increased fuel consumption.

Test brakes with engine stopped to be sure manual brake system is functioning (see 250 Hour Service section of this Operator's Manual).

Use individual brake pedals to assist in making sharp turns when working in field.

Depress both brake pedals (A and C) to stop tractor while disengaging clutch pedal. Use brake pedal lock tab (B) to lock brakes together.

Individual brake pedals can assist with slow speed off road turning, such as when hooking up implements.

Maintain at least 1800 engine rpm during aggressive braking events to ensure adequate cooling oil flow is directed to vehicle brakes. Do not over speed engine as it may cause damage to engine or transmission components.

For IVT™/AutoPowr™ Tractors Only

When operating at slow idle, individual brake pedals stop tractor without use of clutch pedal. To assist slow speed turning, depress either brake pedal while slowly increasing engine speed until desired turn is achieved. Returning engine speed to slow idle while continuing to depress one brake pedal will slow tractor to stop.

IVT is a trademark of Deere & Company
AutoPowr is a trademark of Deere & Company

Continued on next page

KT81203,00000B3 -19-11NOV14-1/2

Using Brakes with AutoClutch (If Equipped)

CAUTION: Avoid possible injury. Braking tractor while commanding high engine speed requires higher brake pedal force.

Avoid possible injury due to sudden or unexpected acceleration. When brake pedals are released, tractor automatically accelerates to speed currently commanded by throttle and speed control levers.

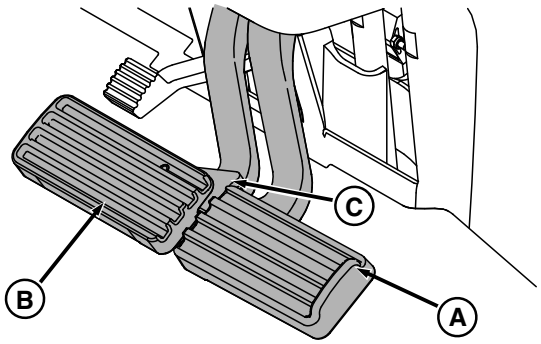
IMPORTANT: Damage to brakes could result if brake pedals are not locked together during transport when using AutoClutch

For IVT™/AutoPowr™ Tractors Only: Individual brake pedals (A) and (B) can assist with slow speed off-road turning, such as hooking up to implements. At low idle, AutoClutch feature stops tractor if operator depresses only one brake pedal. IT IS NOT NECESSARY TO DEPRESS CLUTCH PEDAL.

To assist in hooking up implement, depress either brake pedal while slowly increasing engine speed until desired turn is achieved. Returning engine speed to low idle while continuing to depress one brake pedal slows tractor to stop.

Parking Tractor with AutoClutch

1. Depress both brake pedals. Brakes activate AutoClutch (automatic clutch function within transmission) to stop tractor. **It is not necessary to depress clutch, reduce throttle, or move speed control lever.**



RXA0122335 —UN—17NOV11

A—Right Brake Pedal
B—Left Brake Pedal
C—Pedal Lock Tab

CAUTION: Avoid possible injury due to losing control of tractor. Use pedal lock tab (C) to couple brake pedals together when driving on roads.

2. Move speed control lever to slowest position and stop tractor.

CAUTION: Always place reverser lever in PARK position before dismounting tractor.

3. Shift reverser or shift lever to PARK position.

   Transmission PARK position holds tractor stationary.

4. Lower implements and shut off PTO.
5. Shut engine off and remove key.

KT81203,00000B3 -19-11NOV14-2/2

Use Secondary Brake Lever (If Equipped)

NOTE: Secondary brake lever will apply brakes only to rear axle.

NOTE: Lever is spring loaded to off position, so must be held back to engage brake.

Pull lever (A) back to engage secondary brake. Brake indicator will light when engaged. To release secondary brake, release lever.

A—Secondary Brake Lever



RXA0143011 —UN—25JUN14

Secondary Brake Lever

KT81203,000014C -19-25JUN14-1/1

Hydraulic Trailer Brakes (If Equipped)

CAUTION: Avoid possible injury from losing control of tractor equipped with IVT™ /AutoPowr™ transmission operating on downhill slopes. Tractor wheels may lock and skid on slippery downhill slopes (see Downhill Operation in Slippery Conditions in Operating IVT™/AutoPowr™ Transmission section of this Operator's Manual).

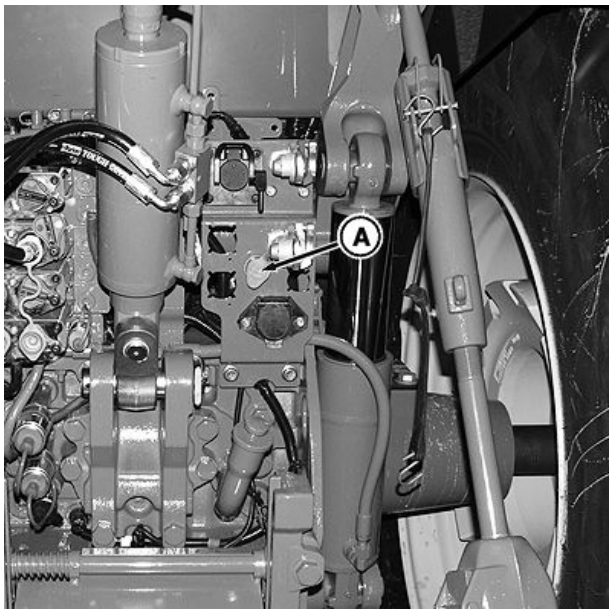
Remove dust cover from hydraulic trailer brake coupler (A). Connect pressure hose to brake coupler, making sure hose end and coupler are clean.

IMPORTANT: To reduce brake wear, make sure pressure hose is connected, select same gear for both downhill and uphill driving, and check hydraulic trailer brake regularly for correct functionality.

Depress brake pedals to operate hydraulic trailer brake. Braking effect depends on pressure applied to brake pedals.

Bring tractor-trailer to complete stop, shift transmission to PARK before dismounting tractor and disconnecting hydraulic lines from couplers. Seal connections with dust covers whenever hoses are disconnected.

IVT is a trademark of Deere & Company
AutoPowr is a trademark of Deere & Company



RXA0112902 —UN—14JAN11

A— Hydraulic Brake Coupler

TO84419,00000D6 -19-11SEP13-1/1

Trailer Air Brakes (If Equipped)

CAUTION: Avoid possible injury from losing control of tractor equipped with IVT™/AutoPowr™ transmission operating on downhill slopes. Tractor wheels may lock and skid on slippery downhill slopes (see Downhill Operation in Slippery Conditions in IVT™/AutoPowr™ Transmission section of this Operator's Manual).

Dual-line braking system employs yellow (A) and red (B) couplers.

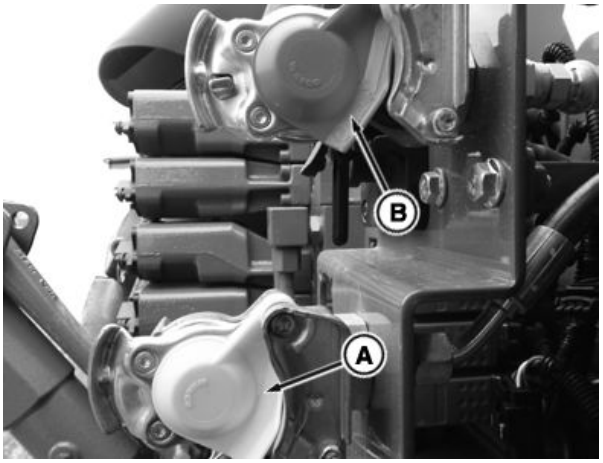
Clean connections before attaching air hoses. Connect trailer line that goes to yellow air brake coupler (control line) first. Lift dust cover from trailer air brake coupler and connect trailer hose coupling. Seal connections with dust covers whenever hoses are disconnected.

Start engine and allow air system to reach working pressure. While air pressure builds, Diagnostic Trouble Code and an accompanying message comes on CommandCenter™ display. When operating pressure is reached, indicator light and warning display shut off automatically.

IMPORTANT: To reduce brake wear, make sure pressure hoses are connected, select same gear for both downhill and uphill driving, and check air brake on trailer regularly for correct functioning.

IMPORTANT: With trailer lines connected, do not drive tractor until operating pressure is reached and service alert indicator and warning display are off.

IVT is a trademark of Deere & Company
AutoPowr is a trademark of Deere & Company
CommandCenter is a trademark of Deere & Company



RXA0143344 —UN—03JUL14

Brake Couplers

A—Yellow **B—Red**

Depress brake pedals to stop tractor-trailer while disengaging clutch pedal. Depressing clutch pedal to stop tractor equipped with IVT™/AutoPowr™ transmission is not necessary (see Stopping and Parking Tractor in Operating IVT™/AutoPowr™ Transmission section).

Trailer air brakes are equipped with an automatic bleed valve which can be checked manually (see Bleed Trailer Air Brakes in As Required Service section of this Operator's Manual).

TO84419,00000D7 -19-07JUL14-1/1

Backup Alarm (If Equipped)

CAUTION: Backup alarm emits an audible sound to alert anyone near by. Tractor will be traveling in a reverse direction.

NOTE: Backup alarm (B) is located on rear cross member.

Backup alarm will sound when key switch is **ON** and transmission shift lever (A) is in reverse gear.

Alarm can be set at three different volume levels:

- High
- Low
- Medium

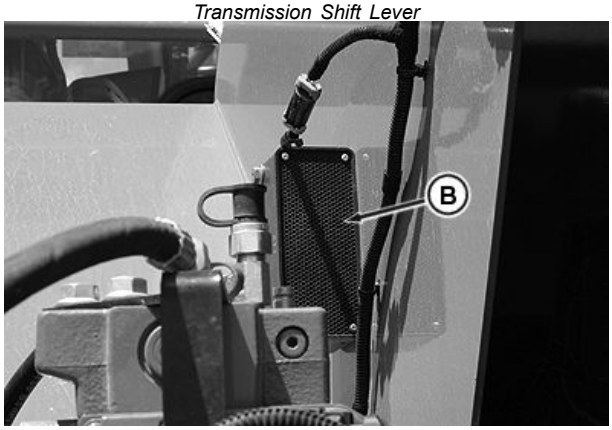
Turn volume control knob (C), on back of alarm, to desired setting.

A—Transmission Shift Lever
B—Backup Alarm
C—Volume Control Knob



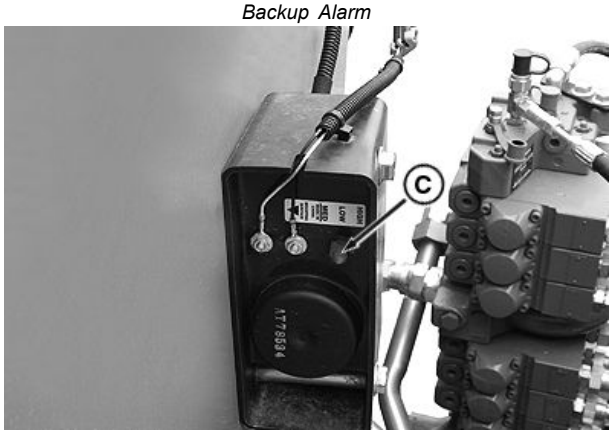
RXA0142551 —UN—13JUN14

Transmission Shift Lever



RXA0141854 —UN—02JUN14

Backup Alarm

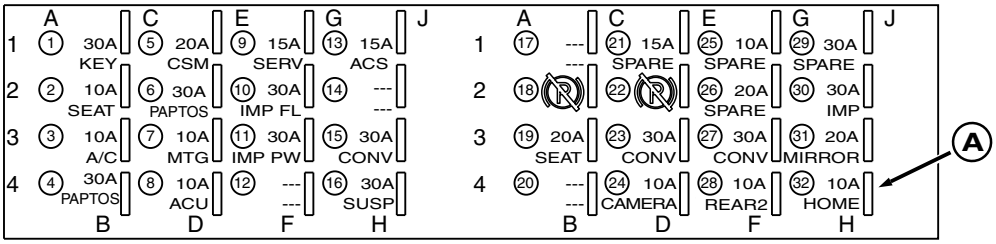


RXA0141855 —UN—02JUN14

Volume Control (Rear View)

KT81203,00001E6 -19-15DEC14-1/1

Come Home Mode



RXA0143345 —UN—08JUL14

Fuse Panel

⚠ CAUTION: When driving tractor in come home mode, do not exceed tractor limited capability.

If tractor is not equipped with back-up pump, steering and brakes will still function, but extra force will be required to operate these systems.

Come home mode may be used if tractor becomes inoperable due to failures and must be moved. In come-home mode, tractor can be moved short distances at reduced speeds and with limits on function:

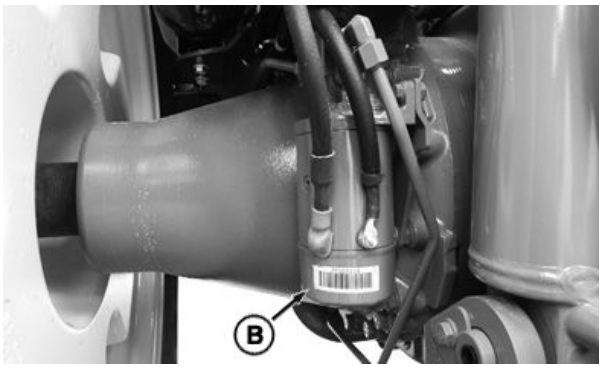
- e23™ transmission — engine speed is limited to 1500 rpm and Efficiency Manager™ is disabled.
- For IVT™ /AutoPowr™ transmission — maximum tractor speed is limited to 5 km/h (3.1 mph).

If tractor is back-up pump equipped (B), when fuse #32 (A) is removed and tractor is placed in gear, back-up pump will provide pressure oil for brake and steering functions.

1. Remove fuse #32 (A) and retain.
2. "Transmission come home mode active" displays on CommandCenter™.
3. Turn key switch to START position.
4. Step on brake pedal momentarily.

⚠ CAUTION: Before operating tractor, verify correct operation of steering and brakes. In some situations braking may require additional force due to lower hydraulic pressure.

5. Depress clutch pedal.
6. Select Forward or Reverse direction.
7. Release clutch pedal to put tractor in motion.
8. When destination is reached, put transmission shift lever in PARK position.
9. Turn key switch to OFF position.
10. Replace fuse #32.



RXA0143341 —UN—03JUL14

Back-up Pump

A—Fuse #32 **B—Back-up Pump**

e23 is a trademark of Deere & Company
Efficiency Manager is a trademark of Deere & Company
IVT is a trademark of Deere & Company
AutoPowr is a trademark of Deere & Company
CommandCenter is a trademark of Deere & Company

RW29387,00005E8 -19-31JUL14-1/1

Transmission Description and Controls

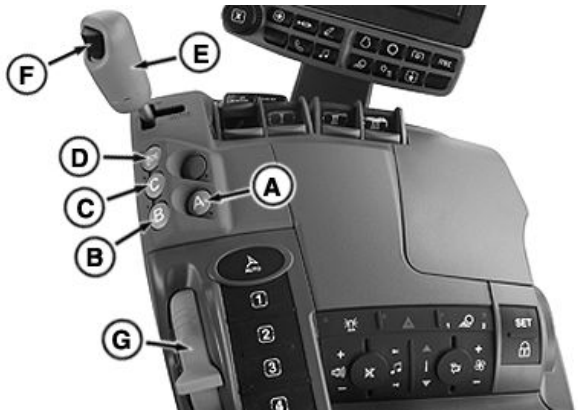
CommandQuad™ transmission has a hydraulically shifted range box which provides 20 forward and 20 reverse speeds (40 km/h (25 mph) ECO or 50 km/h (31 mph) ECO versions). Left-hand reverser (H) provides fully modulated shift capability between forward and reverse. When shifting directions with left-hand reverser (H) and changing ranges, direction must be established before ranges shift. Operator does not have to depress or release clutch pedal when shifting. When performing range shift, lights next to selected range button on CommandARM™ blink until shift is complete. In Auto Mode, engine speed, range, and gear are commanded automatically to achieve set speed and to manage heavy and light loads.

NOTE: During a range shift the clutch will be modulated.

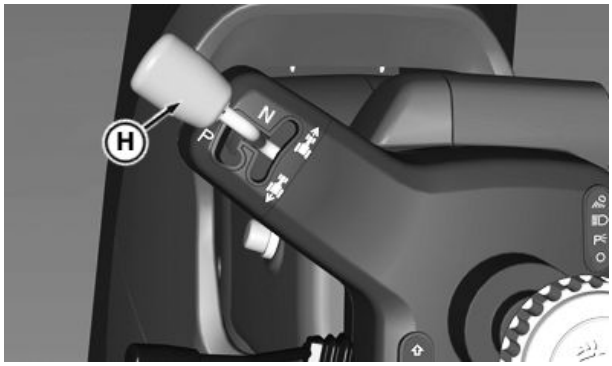
Range Lock Mode: Range buttons (A, B, C) provide three shiftable ranges. Use Range Lock buttons when operating in conditions where range change is not needed or when operating with significant draft load. Changing ranges with significant draft load would result in interruption of ground speed.

Multi-Range Mode: Multi-Range button (D) provides automatic range shifting when in Auto Mode. There are four power shiftable gears in any range. Selected ranges can be shifted manually using shift lever (E) or automatically when shift lever (E) is set in AUTO position.

A— A Range Button
B— B Range Button
C— C Range Button
D— Multi-Range Button
E— Shift Lever
F— Set Speed Adjuster Dial
G— Hand Throttle
H— Left Hand Reverser



RXA0127844 —UN—22AUG13



RXA0130485 —UN—15JAN13

Left Hand Reverser

RD47322,0000509 -19-28APR15-1/1

Operate Transmission

CAUTION: Avoid personal injury or damage to tractor. If engine starts with left-hand reverser lever in forward or reverse positions, there is a malfunction in starting circuit. Repairs should be made immediately by your John Deere™ dealer.

IMPORTANT: Prevent Transmission or Clutch Damage

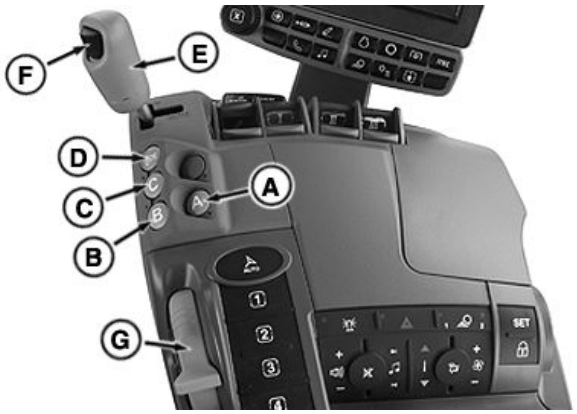
- **Never depress clutch pedal while tractor is rolling downhill or coasting, as serious transmission damage can result.**
- **Never attempt to start tractor by towing or pushing.**
- **Stop tractor completely before shifting to PARK position.**
- **Avoid excessive ballast.**
- **Clutch pedal must be fully depressed to disengage clutch. Never rest foot on clutch pedal while tractor is moving.**

NOTE: The seat assembly contains an operator presence switch to prevent initiation of movement of tractor without operator sitting in seat.

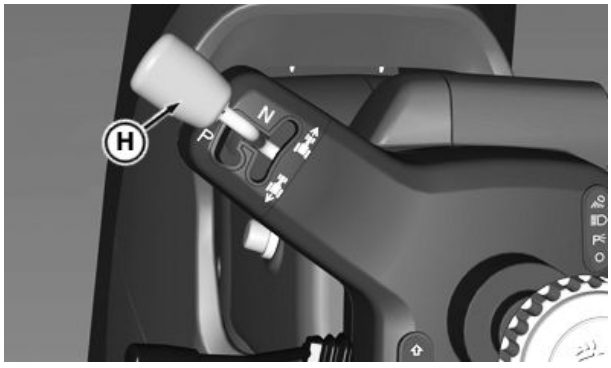
Shifting Transmission

Auto Mode—Place left-hand reverser (H) into desired directional slot. Slide transmission shift lever (E) into AUTO slot to right. When in Auto Mode, operator can select Range Lock Mode by pressing single range button (A, B, or C). While transmission is in Range Lock Mode, it is only able to shift through gears in selected range. To put transmission in Multi-Range Mode, select Multi-Range button (D); transmission shifts through gears and ranges that are selected in Transmission page. In Full AUTO mode, minimum engine speed is 1200 rpm Transmission shifts gears based on throttle position and set speed while in Auto Mode. When throttle is pulled back, transmission shifts to selected Start Gear (see Multi-Range Button Settings in this section of this Operator's Manual). Wheel speed can be set by scrolling set speed adjuster (F) up or down. iTEC™ function can control set speeds while in Auto Mode.

Manual Mode—Place left-hand reverser (H) into desired directional slot. Move transmission shift lever (E) into slot to left, operator selects desired range by pressing range button (A, B, or C). In each range there are four gears. Use shift lever (E) to shift up (+) or down (-) through gears. While using Range Lock Mode, operator must select different ranges by pressing one of range buttons (A, B, or C). While using Multi-Range Mode (D) operator does not have to select different ranges, transmission shifts through gears and ranges when shift lever (E) is bumped forward or backward. iTEC™ function can control gears while in Manual Mode.



RXA0127844 —UN—22AUG13



RXA0130485 —UN—15JAN13

Left-Hand Reverser

A—A Range Button
B—B Range Button
C—C Range Button
D—Multi-Range Button
E—Shift Lever
F—Set Speed Adjuster
G—Hand Throttle
H—Left-Hand Reverser

Additional Information

Operator should use shift lever (E) to shift between ranges when:

- When in highest gear in one range, single bumping shift lever (E) causes transmission to shift to appropriate gear in next range (D4 to E range).
- When in mid-gear in one range, double bumping shift lever (E) causes transmission to shift from one range directly to speed-matched gear in next range (D2 to E1).
- Pressing and holding shift lever (E) causes transmission to shift up continuously based on engine speed, load, gears, and ranges if in Multi-Range Mode, or load and gears if in Range Lock Mode.

Corner post display shows transmission's current state (P, N, F, or R), selected gear (1-4), and range (A-E) (refer to Ground Speeds in Specifications section of this Operator's Manual for range/gear settings).

NOTE: When engine shuts off, left-hand reverser remains in its selected position but transmission shifts into neutral. To start engine, put left-hand reverser into Park.

Continued on next page
RD47322,000050A -19-28APR15-1/2

Tractor cannot be put in gear unless operator is seated. Information indicator lights and corresponding message appears on CommandCenter™ display when Forward, Reverse, or Neutral positions are selected and operator is **not** in seat. To initiate motion, move lever from Park position to Forward or Reverse position with operator seated.

When clutch is disengaged, gear matching adjusts gear to allow for smooth clutch re-engagement. When engine speed of more than 1500 rpm is commanded, stall threshold is 700 rpm. When stall threshold is reached, clutch may disengage. To engage transmission, move left-hand reverser to PARK, reduce load, then shift back into desired operating direction.

Transmission system protects against engine overspeed. If engine is running at full speed in current gear, transmission automatically shifts up to protect the engine from overspeeding. Transmission can shift up gears but not ranges if engine speed reaches 2800 rpm.

John Deere is a trademark of Deere & Company

RD47322,000050A -19-28APR15-2/2

Adjust Set Speeds

CAUTION: Avoid unexpected rapid acceleration. Check and adjust set speeds before putting tractor in motion.

1. Turn key switch to RUN position.

   CAUTION: Do not start Tractor.

2. Move left-hand reverser out of Park position. Forward and reverse set speeds scroll on corner post display pausing at each speed for 2 seconds.
3. Adjust each speed when it displays by rotating set speed adjuster dial (B) on speed control lever forward to increase set speed value or rearward to decrease it.

   NOTE: Set speed adjustments can affect corresponding set speed of opposite direction See Adjusting Reverse/Forward Speed Ratio in this section of this Operator's Manual.

   On corner post display, set speed of selected speed band is displayed in orange and ground speed of tractor is displayed in white (A). Set speed can be adjusted while tractor is moving by rotating set speed adjuster dial. Increasing set speed value increases ground speed. Decreasing set speed value decreases ground speed. New set speed is indicated on display.
4. Select set speed that is approximately 3.2 km/h (2 mph) higher than desired working speed to obtain maximum productivity in applications where precise forward speed is **not** critical, such as plowing. Tractor reaches higher set speed value during no load or light load condition.



Corner Post Display

RXA0130015 —UN—11DEC12



Set Speed Adjuster Dial

RXA0127845 —UN—22AUG13

A— Set Speed **B— Set Speed Adjuster Dial**

CommandQuad™ Ranges

Ranges	Min. Set Speed km/h (mph)	Max. Set Speed km/h (mph)
A Range	2.4 (1.5)	5.4 (3.4)
B Range	5.0 (3.1)	11.4 (7.0)
C Range	8.0 (5.0)	18.8 (11.7)
BCDE Range (As Selected)	5.0 (3.1)	40.0 or 50.0 (24.8 or 31)[a]
CDE Range (As Selected)	8.0 (5.0)	40.0 or 50.0 (24.8 or 31)[a]
DE Range (As Selected)	15.0 (9.3)	40.0 or 50.0 (24.8 or 31)[a]

Set Speeds For Given Gears (Group 48 Tires)

[a] *Electronically limited based on transmission specifications.*

RD47322,000050B -19-28APR15-1/1

CommandCenter™ Transmission Main Page

CommandQuad™ transmission offers two modes to get most fuel efficiency and load control from your tractor:

- **Full Auto Mode (A)—**Automatically adjusts minimum engine speed, allowing tractor to use most fuel efficient engine speed under light load. In Full Auto, system responds to tractor work loads through active control of hitch or SCVs (load anticipation). During PTO use, top engine speed is automatically limited to provide appropriate PTO speed.
- **Custom Mode (B)—**Operator can choose Auto Shift Engine Speed, ECO Engine Speed, or Load Anticipation reaction.

Press **Transmission Shortcut Button on Navigation Bar or follow alternative path:**

1. Select **Menu.**
2. Select **Tractor Settings tab.**
3. Select **Transmission Icon.**

CommandCenter displays forward (E) or reverse (F) maximum speeds. To adjust, select appropriate maximum speed module. Max Speed Forward or Max Speed Reverse page appears. Use increase (+) or decrease (-) buttons to set maximum speed. If operator changes maximum forward or reverse speed below current set speed, set speed decreases to maximum speed and vehicle speed decreases.

RXA0133712 —UN—16JUL13

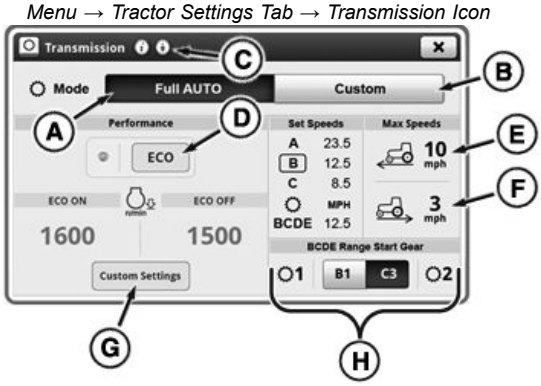


Transmission Shortcut Button on Navigation Bar

RXA0128094 —UN—14SEP12



Menu → Tractor Settings Tab → Transmission Icon



RXA0143052 —UN—26JUN14

Transmission Main Page

A— Full Auto Mode
B— Custom Mode
C— Information and Settings Icon
D— ECO ON/OFF Toggle
E— Maximum Forward Speed
F— Maximum Reverse Speed
G— Custom Settings
H— Startup Gear Toggle

RD47322,000050C -19-28APR15-1/1

CommandQuad™ Custom Mode Settings

NOTE: Settings discussed on this page are only applicable when CommandQuad™ transmission is in Custom Mode.

Press **Transmission Shortcut Button on Navigation Bar.**

1. Press **Custom Mode toggle.**

Under light loads, fuel can be saved by shifting up and throttling back. Auto mode does this automatically. While shifting in Custom Mode, however, system does not reduce engine speed below ECO Engine Speed (B) set by operator.

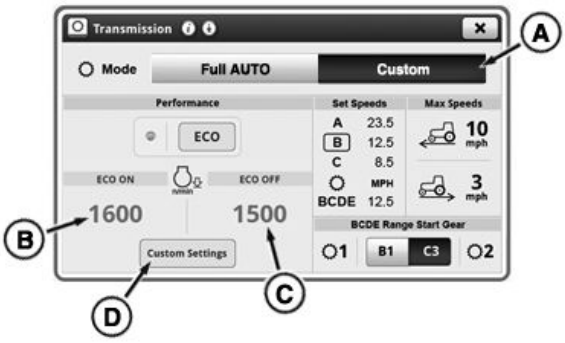
Auto Shift Engine Speed Droop (E, F) sets permissible drop in engine speed (under full load) before Custom Mode automatically downshifts. Lower percent means transmission downshifts earlier and higher percent means transmission downshifts later.

Load Anticipation (G, H, and I) allows CommandQuad™ transmission to predict loads when hitch, SCVs or PTO are in use. Load anticipation both shifts down transmission and increases engine speed to maintain wheel speed. This selection determines whether transmission increases engine rpm to get ECO Engine Speed above 1500 rpm when either hitch or SCVs are used. If hitch is lowered or raised, system increases engine rpm if engine speed is below 1500 rpm. If SCVs are set to extend or retract above 25% flow rate, engine increases rpm automatically. PTO load anticipation setting determines whether the engine speed should be raised to maximum engine speed determine by throttle and field cruise limit. If engine cannot keep minimum engine speed above 1500 rpm, transmission downshifts. SCV set to continuous flow also causes engine to increase rpm. Load Anticipation is enabled in "Full Auto" mode selected on Transmission page by default. In "Custom" mode, load anticipation for hitch is enabled when hitch toggle (G) is turned to ON. In "Custom" mode, load anticipation for SCVs is enabled when SCV toggle (F) is turned to ON. In "Custom" mode, load anticipation for PTO is enabled when PTO toggle (I) is turned to ON.

RXA0133712 —UN—16JUL13

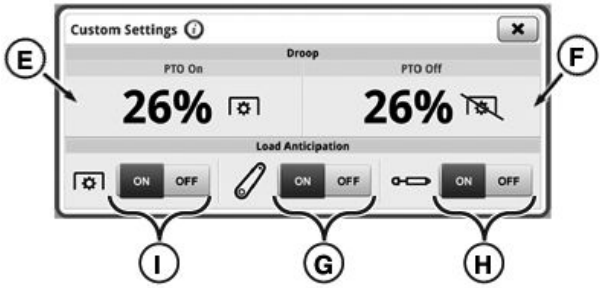


Transmission Shortcut Button on Navigation Bar



RXA0143053 —UN—07JUL14

Transmission Home Page



RXA0130977 —UN—14FEB13

Transmission Custom Settings Page

A— Custom Mode Toggle
B— ECO Engine Speed ON
C— ECO Engine Speed OFF
D— Custom Settings button
E— Auto Shift Engine Speed Droop PTO ON
F— Auto Shift Engine Speed Droop PTO OFF
G— Load Anticipation (Hitch)
H— Load Anticipation (SCV)
I— Load Anticipation (PTO)

Set Auto Shift Engine Speed Droop PTO ON

NOTE: Auto Shift Engine Speed Droop PTO ON can be set from 6% —26%

- From Transmission page, select Custom Settings button (D).
- Select Auto Shift Engine Speed Droop PTO ON module (E). Value adjustment page appears.
- Adjust percentage to desired value by using increase (+) and decrease (-) buttons.

Set Auto Shift Engine Speed Droop PTO OFF

NOTE: Auto Shift Engine Speed Droop PTO OFF can be set from 20% — 26%.

- From Transmission page, select Custom Settings button (D).
- Select Auto Shift Engine Speed Droop PTO OFF module (F). Value adjustment page appears.
- Adjust percentage value to desired value by using increase (+) and decrease (-) buttons.

Set ECO ON Engine Speed

- From Transmission page, select ECO ON Engine Speed module (B). Value adjustment page appears.
- Adjust percentage to desired value by using increase (+) and decrease (-) buttons.

Continued on next page

RD47322,000050D -19-28APR15-1/2

Set ECO OFF Engine Speed

NOTE: Continued from previous page, refer to previous pages for Setting ECO ON Engine Speed.

- From Transmissions page, select ECO OFF Engine Speed module (C). Value adjustment page appears.
- Adjust percentage to desired value by using increase (+) and decrease (-) buttons.

Turn Load Anticipation ON

- From Transmission page, select Custom Settings button (D).
- Use Hitch Load Anticipation toggle (G), SCV Load Anticipation toggle (H), or PTO Load Anticipation toggle (I) to turn hitch, SCV or PTO load anticipation ON or OFF.

RD47322,000050D -19-28APR15-2/2

Advanced Settings Page

Press **Transmission Shortcut Button on Navigation Bar.**

1. Press **Advanced Settings Icon.**
2. Press **Settings Tab.**

- **A— Softshift Toggle Bar:** Change Softshift to AUTO, ON, or OFF.
- **B— Multi-Range Toggle Bar:** Change Multi Range button range to DE, CDE, or BCDE.
- **D—Reverse/Forward Ratio button** Access list of reverse/forward ratio options.
- **E— Back Up Alarm ON/OFF Toggle:** If Equipped.

Multi-range Button Settings

Multi-range button can be set for applicable ranges and start gear .

Ranges available for this button are DE, CDE, or BCDE. When Multi-Range button is selected, transmission is able to shift through these ranges when in both Manual Mode and AUTO Mode.

Start gears available for Multi-Range button vary from B1 to D4. In AUTO Mode, start gear is also used as low idle gear. In any Range Lock Mode, start gear is Gear 3.

Adjust Reverse/Forward Speed Ratio

During shuttle shift, reverse gear can be selected to match forward gear.

Reverse/Forward ratio can be set to operate independent of each other, same as, between 1 to 3 gears slower, or 1 to 3 gears faster than selected forward gear.

In Manual Mode, transmission uses this setting to choose new gear in same range in opposite direction. In AUTO Mode, transmission uses this setting to adjust set speed in opposite direction.

NOTE: If +3 is selected and gear is currently C4 in forward, C4 is range/gear in reverse.

Independent setting allows tractor to remember last forward and reverse gear setting. Once gear is manually changed in reverse direction, gear automatically returns to last gear when changing directions. If gear is not manually changed when in reverse direction, then forward gear and reverse gear remains same when changing directions. In AUTO Mode, reverse and forward set speeds function independent of each other.

Enable/Disable SoftShift

Softshift provides smoother shifting between gears by providing short intermediate engine rpm adjustments between each gearshift.

RXA0133712 —UN—16JUL13

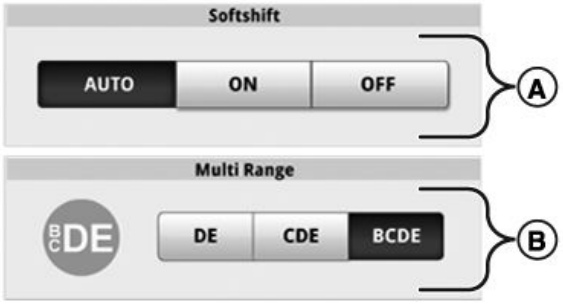


Transmission Shortcut Button on Navigation Bar

RXA0130326 —UN—11JAN13

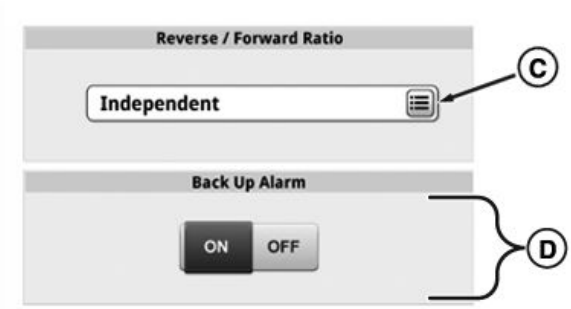


Advanced Settings Icon → Settings Tab



RXA0143167 —UN—01JUL14

Transmission Settings Page 1



RXA0143168 —UN—01JUL14

Transmission Settings Page 2

- During upshift, engine rpm momentarily decreases at beginning of shift and then returns to current throttle setting.
- During downshift, engine rpm momentarily increases at beginning of shift and then returns to current throttle setting.

Continued on next page

Select Multi-Range Start Gear 1

NOTE: Operators have the option of setting up to two multi-range forward startup gears and one single range startup gear with the CommandQuad™.

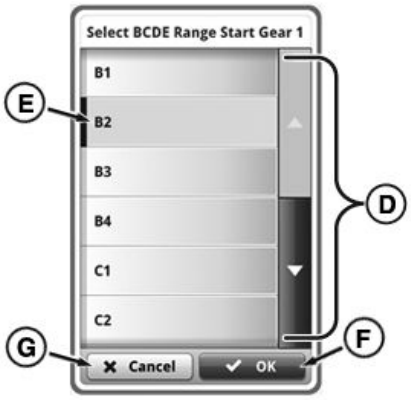
1. Press BCDE Forward Start Gear 1 Drop Down button (A). List of forward gears appears.
2. Scroll through list of gears (D).
3. Select desired gear (E) and press OK button (F) to finish selection or (G) to cancel.

A—BCDE Forward Start Gear 1 Drop Down Button
B—BCDE Forward Start Gear 2 Drop Down Button
C—Single Range Start Gear
D—BCDE Range Start Gear 1 Overlay
E—Desired Gear
F—OK button
G—Cancel button



RXA0143359 —UN—07JUL14

Start Gears



RXA0143054 —UN—30JUN14

BCDE Range Start Gear 1 Overlay

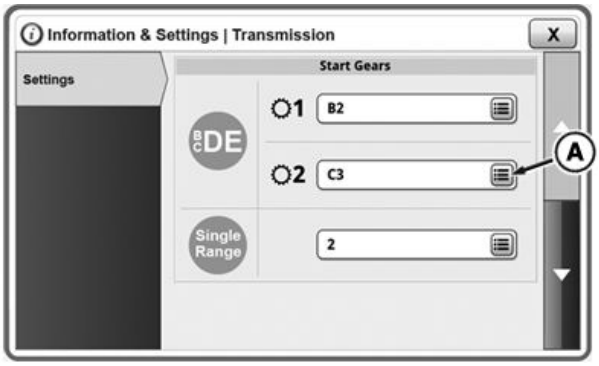
Continued on next page

RD47322,000050E -19-07AUG15-2/4

Select Multi-Range Start Gear 2

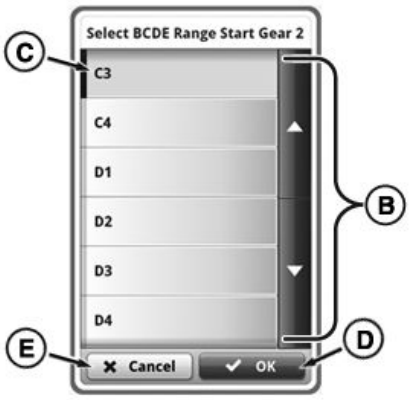
1. Press BCDE Forward Start Gear 2 Drop Down button (A). List of forward gears appears.
2. Scroll through list of gears (B).
3. Select desired gear (C) and press OK button (D) to finish selection or (E) to cancel.

A—BCDE Forward Start Gear 2 Drop Down Button
B—BCDE Range Start Gear 2 Overlay
C—Desired Gear
D—OK button
E—Cancel button



RXA0143162 —UN—30JUN14

Start Gears



RXA0143163 —UN—30JUN14

BCDE Range Start Gear 2 Overlay

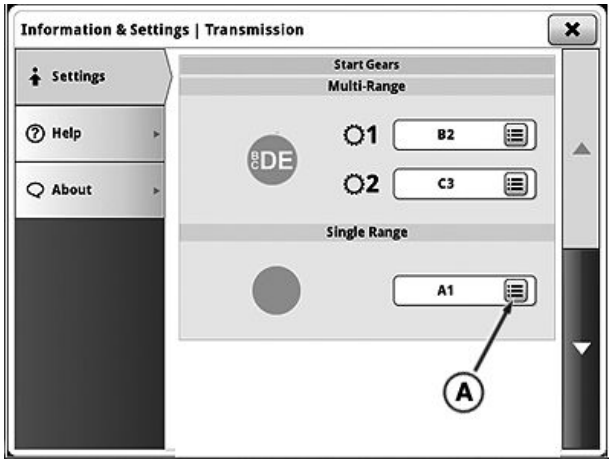
Continued on next page

RD47322,000050E -19-07AUG15-3/4

Select Single Range Gear

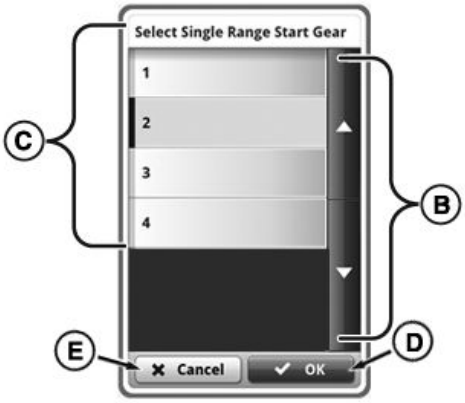
1. Press Single Range Start Gear Drop Down button (A). List of forward gears appears.
2. Scroll through list of gears with scroll bar (B).
3. Select desired gear from single range start gear list (C) and press OK button (D) to finish selection or (E) to cancel.

A—Single Range Start Gear Drop Down Button
B—Scroll Bar
C—Single Range Start Gear List
D—OK button
E—Cancel button



RXA0149591 —UN—07AUG15

Start Gears



RXA0149598 —UN—07AUG15

Single Range Start Gear Overlay

RD47322,000050E -19-07AUG15-4/4

Tractor Speed Displays on Corner Post Display and CommandCenter™

Set Speed

Set speed (A) is the maximum ground speed of selected range.

Ground Speed

Ground speed (B) value on tractors equipped with radar always shows a lower value than set speed selected if there is measurable wheel slip.

A— Set Speed

B— Ground Speed



RXA0130017 —UN—11DEC12

RD47322,000050F -19-28APR15-1/1

Downhill Operation in Slippery Conditions

CAUTION: Avoid possible injury from losing control of tractor while operating on a downhill slope. Tractor wheels can lock and skid on slippery downhill slopes. Observe the following precautions:

- **Slide shift lever (A) to the left to select Manual Mode.**
- **Select an appropriate gear and range to reduce skidding.**
- **Turn MFWD on.**

A— Shift Lever



RXA0125635 —UN—23AUG13

RD47322,0000510 -19-28APR15-1/1

Operate e23™ Transmission with Right-Hand Reverser

CAUTION: Avoid personal injury or damage to tractor. If engine starts with shift lever in gear, there is malfunction of starting circuit. Repair should be made immediately by your John Deere™ Dealer.

IMPORTANT: Prevent transmission or clutch damage:

- **Never depress clutch pedal while tractor is rolling downhill or coasting as transmission can over-speed and cause serious damage to the transmission.**
- **Never attempt to start tractor by towing or pushing.**
- **Operator can always move shift lever to PARK Position; however, park brake does not engage until ground speed is below 1.75 km/h (1.0 mph).**
- **Avoid excessive ballast.**
- **Avoid continuous operation under full throttle and full load conditions below 1800 rpm.**

Shift transmission using lever (A) on CommandARM™.

Transmission can be shifted, without use of clutch pedal, into forward or reverse.

If precise speed control is necessary, transmission control with clutch pedal for ease of connecting implements, operating in confined areas, or slow movement of tractor during precise maneuvers. Depress clutch pedal to preselect forward or reverse commanded gear from park.

When shift lever is moved from PARK to NEUTRAL position, park brake releases and corner post display (B) shows pre-selected forward or reverse gear and letter “N” for NEUTRAL. When lever is in forward or reverse, display shows “F” or an “R” along with commanded gear.

Engine only starts with shift lever (A) in PARK or NEUTRAL.

Shifts are made one at a time by “bumping” the shift lever. Multiple “bumps” or pushing and holding lever forward or pulling and holding lever rearward can result in skip shifts.

NOTE: The seat assembly contains an operator presence switch to prevent initiation of movement of tractor without operator sitting in the seat.

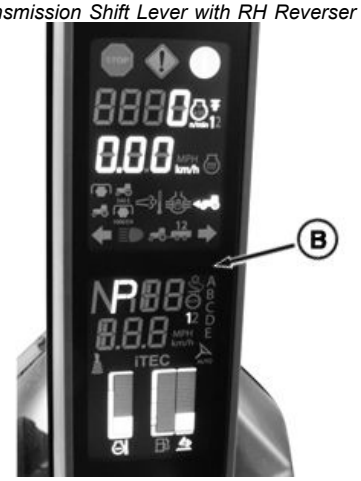
NOTE: When tractor is loaded to below low idle speed, transmission can default to NEUTRAL for powertrain protection. Park brake engages once the wheel speed drops below 1.75 km/h (1.0 mph).

John Deere is a trademark of Deere & Company



Transmission Shift Lever with RH Reverser

RXA01130275 —UN—19AUG13



Corner Post Display

RXA01135241 —UN—21AUG13

A— Transmission Shift Lever **B— Corner Post Display**

To re-engage transmission, move shift lever to PARK, reduce load, and shift into desired operating gear.

A diagnostic trouble code is stored and displayed when this condition occurs.

RD47322,00004F8 -19-28APR15-1/1

Shift e23™ Transmission with Right-Hand Reverser

Shift Lever Positions

PARK — (A) — Park brake is applied when lever is fully forward in rear slot.

NEUTRAL — (B) — Park brake is released when lever is moved to anywhere in right slot.

Reverse — (C) — Tractor begins moving rearward when the lever enters this slot. Push lever forward for downshifts and pull rearward for upshifts.

Forward — (D) — Tractor begins moving forward when lever enters this slot. Push lever forward for upshifts and pull rearward for downshifts.

NOTE: Transmission is in NEUTRAL position whenever shift lever is not in PARK, forward, or reverse positions.

IMPORTANT: Operator can always move shift lever to PARK Position; however, park brake will not engage until ground speed is below 1.75 km/h (1.0 mph). Repeated engagement of the park brake, while the tractor is moving, may damage the park brake.

Command Gears

NOTE: Optimum engine speed is 1800 — 2200 rpm in full load conditions. Using higher gear and lower engine speed for light load operation saves fuel and reduces wear. Under full load conditions, use full throttle engine speed.

Each time transmission enters forward or reverse slots, transmission starts in command gear, shown on corner post display.

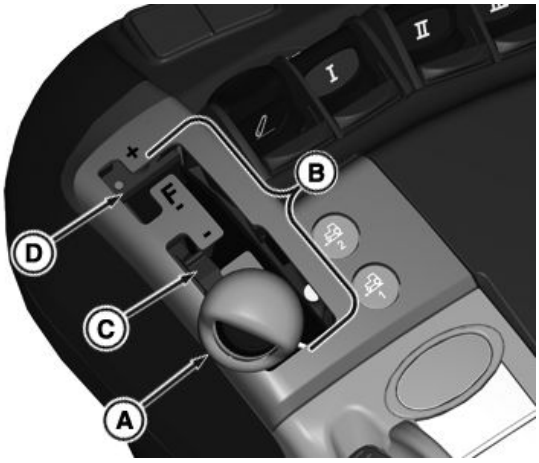
If no other command gears have been selected, transmission starts out in either 8F or 4R after engine is started. These are default command gears. Startup default command gears can be changed from F1 - F15 in forward and R1 - R6 in reverse (see Set Start Gear in this section of this Operator's Manual).

Command gear temporarily changes to the last gear used when shuttling between forward and reverse, or shift from gear to neutral.

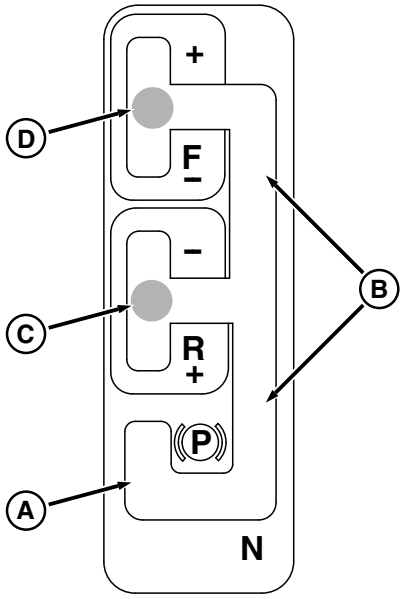
Transmission starts in the preselected forward or reverse gear when clutch pedal is released.

Forward Gear— Gears between F1 and F15 can be preselected by depressing clutch pedal, putting the shift lever in front (forward) slot, and bumping the shift lever up or down until the desired command gear is displayed.

Reverse Gear— Gears between R1 and R6 can be preselected by depressing clutch pedal, putting the shift lever in center (reverse) slot, and bumping the shift lever up or down until the desired command gear is displayed.



RXA0130278 —UN—07JAN13



RXA0107694 —UN—18MAY10

Lever Diagram

A— PARK
B— NEUTRAL
C— Reverse Gears
D— Forward Gears

Cold Weather Starting

When temperature is -10°C (14°F) or lower, it can take one minute to the release park brake with operator in the seat and shift transmission lever in gear. Several shifts between PARK and NEUTRAL can be required to release park in extremely cold conditions.

When temperature is -10°C (14°F) or above, it can take 3 seconds to release park brake with operator in seat.

Continued on next page

RD47322,00004F9 -19-28APR15-1/2

When shift lever is moved to NEUTRAL, corner post display shows “N” for three seconds. If park brake does not release, “N” changes back to “P”. Move shift lever back to PARK then back to NEUTRAL until “N” displays more than three seconds.

Delayed shift, slow hydraulic operation, hard steering, and limited engine rpm can also be noticeable until operating temperature is obtained.

Shift Without Using Clutch Pedal

Gear to Gear — Hold lever to shift up or down until desired gear is reached. Transmission shifts one gear at a time until lever is released.

Gear to Gear — Quickly ”bump” lever to shift up or down to desired gear. Transmission can skip gears if lever is moved faster than transmission can shift.

Shift Using Clutch Pedal

IMPORTANT: Clutch pedal must be fully depressed to completely disengage clutch for correct operation.

Gear to Gear — Depress clutch pedal and hold or “bump” lever to shift forward or backward in slot until desired gear is displayed. Transmission goes into commanded gear when clutch pedal is released.

Transport Shift

When tractor is in light load condition, the transmission can shift faster by rapidly “bumping” shift lever until the desired transport speed is reached. To reach transport speed quickly from a stop, depress the clutch and “bump” the shift lever to F15. Transmission shifts directly to F15 when the clutch pedal is released. If direct shift to 13F is not desired, “bump” shift lever to shift rapidly to reach desired gear and speed.

Press and Hold Shift

When operator holds the shift control lever in the up or down position, transmission shifts through the gears one gear at a time.

Double Shift

Transmission shifts up or down two gears at a time by double “bumping” shift lever to forward or backward. A double “bump” down shift is useful in field operations when hitting tough spots. Double “bumping” may also be useful in making headland turns.

Ground Speed Matching

CAUTION: Avoid possible accident and injury from loss of vehicle control. Never coast down hill.

Transmission can shift gears to match ground speed if clutch pedal is pressed.

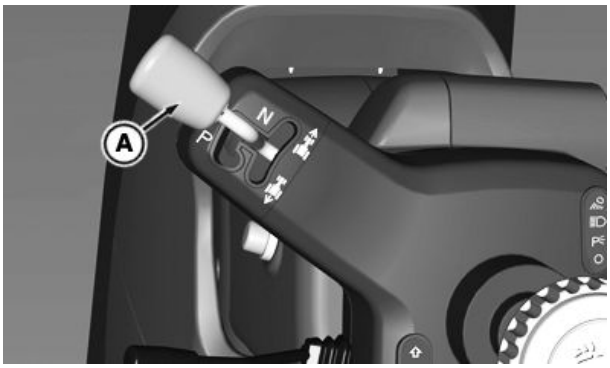
Transmission will shift up to prevent engine over speed if vehicle accelerates. The transmission can also shift down to F15 or the startup gear as the vehicle decelerates.

If Efficiency Manager™ is engaged, transmission returns to original set speed once the clutch pedal is released

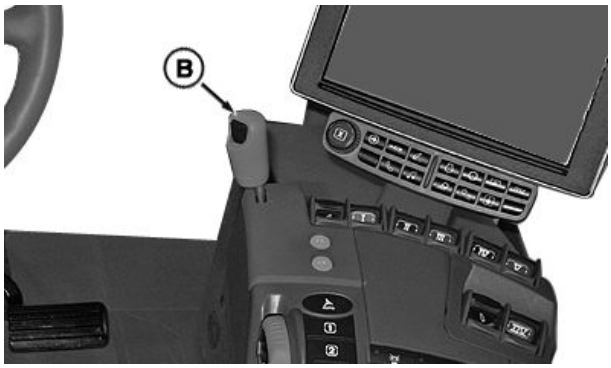
In manual mode, the transmission does not return to the gear it was in prior to pressing the clutch pedal when the clutch is released.

RD47322,00004F9 -19-28APR15-2/2

Operate e23™ Transmission with Left-Hand Reverser



RXA0130273 —UN—11JAN13



RXA0130274 —UN—03SEP14

CAUTION: Avoid personal injury or damage to tractor. If engine starts with shift lever in gear, there is malfunction of starting circuit. Repair should be made immediately by your John Deere™ Dealer.

IMPORTANT: Prevent transmission or clutch damage:

- **Never depress the clutch pedal while tractor is rolling downhill or coasting as transmission can overspeed and cause serious damage to the transmission.**
- **Never attempt to start tractor by towing or pushing.**
- **Operator can always move shift lever to PARK Position; however, park brake does not engage until ground speed is below 1.75 km/h (1.0 mph).**
- **Avoid excessive ballast.**
- **Avoid continuous operation under full throttle and full load conditions below 1800 rpm.**



RXA0133278 —UN—17JUN13

A— Left-Hand Reverser
B— Transmission Shift Lever
C— Corner Post Display

To select direction of travel, move left-hand reverser lever (A) to either forward or reverse position in directional slot.

Shift transmission using lever (B) on CommandARM™.

The transmission can be shifted, without use of clutch pedal, into forward or reverse.

The clutch pedal allows operator maximum manual control of modulation for ease in connecting implements, operating in confined areas, or slow movement of tractor during precise maneuvers.

Depress clutch pedal to preselect forward or reverse direction from park.

When left-hand lever (A) is moved from PARK to NEUTRAL position, park brake releases and corner post display (C) shows pre-selected forward or reverse gear and letter “N” for NEUTRAL. When lever is in forward or reverse, display shows “F” or an “R” along with commanded gear.

Engine only starts with left-hand reverser (A) is in PARK or NEUTRAL. Shifts are made one at a time by “bumping” lever (B). Multiple bumps or pushing and holding lever forward or pulling and holding lever rearward can result in skip shifts.

NOTE: The seat assembly contains an operator presence switch to prevent initiation of movement of tractor without operator sitting in seat.

NOTE: When the tractor is loaded to very low engine speed, the transmission can default to NEUTRAL for powertrain protection. The park brake engages once the wheel speed drops below 1.75 km/h (1.0 mph).

To re-engage transmission, move shift lever to PARK, reduce load, and shift into desired operating gear.

A diagnostic trouble code is stored and displayed when this condition occurs.

RD47322,00004FA -19-28APR15-1/1

Shifting e23™ Transmission with Left-Hand Reverser

Shift Lever Positions

PARK — (A) — Park brake is applied when lever is fully inward in slot.

NEUTRAL — (B) — Park brake is released when lever is moved to this slot.

Forward — (C) — Tractor begins moving forward when lever enters this slot.

Reverse — (D) — Tractor begins moving rearward when lever enters this slot.

Shift Lever — (E) — After direction is selected, push shift lever forward (+) for upshifts or pull rearward (-) for downshifts.

IMPORTANT: Operator can always move shift lever to PARK Position; however, park brake does not engage until ground speed is below 1.75 km/h (1.0 mph).

Command Gears

NOTE: Optimum engine speed is 1800 — 2200 rpm in full load conditions. Using higher gear and lower engine speed for light load operation saves fuel and reduces wear. Under full load conditions, use full throttle engine speed.

Each time transmission enters forward or reverse shift pattern, transmission starts in command gear, shown on corner post display.

Transmission starts out in F8 and R4 after engine is started. These are default command gears. Startup default command gears can be changed from F1 - F15 in forward and R1 - R6 in reverse (see Set Start Gear in this section).

Command gear temporarily changes to the last gear used when shuttling between forward and reverse, or Shift from gear to neutral.

Initial command gear can be changed before initiating motion to match operation.

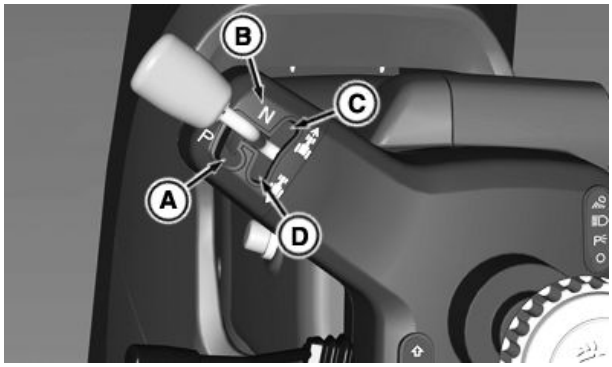
Forward Gear—Gears between F1 and F15 are preselected by depressing clutch pedal and pushing or pulling shift lever until desired command gear is displayed.

Reverse Gear—Gears between R1 and R6 are preselected by depressing clutch pedal and pushing or pulling shift lever until desired command gear is displayed.

The transmission starts in the preselected forward or reverse gear when clutch pedal is released.

Cold Weather Starting

When temperature is -10°C (14°F) or lower, it can take one minute to release park brake with operator in the seat and the transmission shifted into gear. Several shifts between PARK and NEUTRAL can be required to release park in extremely cold conditions.



RXA0130292 —UN—11JAN13



RXA0130293 —UN—30JUL14

A— PARK
B— NEUTRAL
C— Forward
D— Reverse
E— Shift Lever

When temperature is -10°C (14°F) or above, it can take 3 seconds to release park brake with operator in the seat.

When left-hand reverser lever is moved to NEUTRAL, corner post display shows “N” for three seconds. If park brake does not release, “N” changes back to “P”. Move left-hand reverser lever back to PARK then back to NEUTRAL until “N” displays more than three seconds.

Delayed Shift, slow hydraulic operation, hard steering, and limited engine rpm can also be noticeable until operating temperature is obtained.

Shift Without Using Clutch Pedal

Gear to Gear — Hold lever to shift forward or backward in slot until desired gear is reached. The transmission shifts one gear at a time until lever is released.

Gear to Gear — Quickly ”bump” lever to shift up or down to desired gear. The transmission can skip gears if lever is moved faster than transmission can shift.

Continued on next page

Shift Using Clutch Pedal

IMPORTANT: Clutch pedal must be fully depressed to completely disengage clutch for correct operation.

Gear to Gear — Depress clutch pedal and hold or “bump” lever to shift up or down until desired gear is displayed. Transmission goes into displayed gear when clutch pedal is released.

Transport Shift

When tractor is in a light load condition, transmission can shift faster by rapidly “bumping” the shift lever until the desired transport speed is reached. To reach transport speed quickly from a stop, depress clutch pedal and “bump” shift lever to F15. The transmission shifts directly to F15 when clutch pedal is released. If direct shift to F15 is not desired, “bump” shift lever to shift rapidly to reach desired gear and speed.

Press and Hold Shift

When operator holds the shift lever in up or down shift position, transmission shifts through the gears one gear at a time.

Double Shift

Transmission will shift up or down two gears at a time by double “bumping” shift lever to forward or backward. A double “bump” down shift is useful in field operations when hitting tough spots. Double “bumping” can also be useful in making headland turns.

Ground Speed Matching

CAUTION: Avoid possible accident and injury from loss of vehicle control. Never coast down hill.

The transmission can shift gears to match ground speed if clutch pedal is pressed.

The transmission will shift up to prevent engine over speed if vehicle accelerates. The transmission can also shift down to F15 or the startup gear as the vehicle decelerates.

If Efficiency Manager™ is engaged, transmission returns to original set speed once the clutch pedal is released

In manual mode, the transmission does not return to the gear it was in prior to pressing the clutch pedal when the clutch is released.

RD47322,00004FB -19-28APR15-2/2

Set Startup Gears

NOTE: Operators have the option of setting up to two forward startup gears and one reverse gear with e23™ the transmission.

Press **Transmission Shortcut Button on Navigation Bar.**

1. Press **Advanced Settings icon.**
2. Press **Settings tab.**
3. Press Forward Start Gear 1 button (A). List of forward gears appears.
4. Scroll through list of gears (D).
5. Select desired gear (E) and press OK button (F) to finish selection or (G) to cancel.

A— Forward Start Gear 1 button
B— Forward Start Gear 2 button
C— Reverse Start Gear button
D— Forward Start Gear 1 Drop Down Overlay
E— Desired Gear
F— OK button
G— Cancel button

RXA0133712 —UN—16JUL13

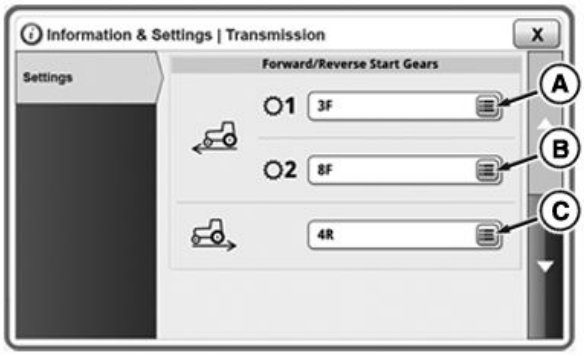


Transmission Shortcut Button on Navigation Bar

RXA0130326 —UN—11JAN13

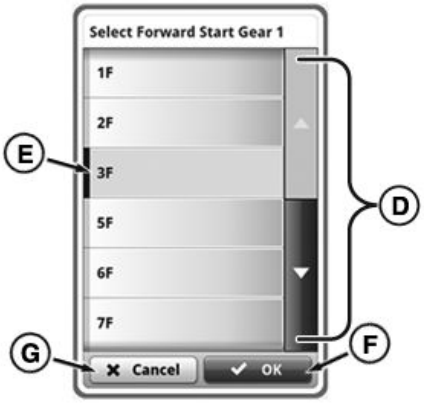


Advanced Settings Icon → Settings Tab



RXA0143042 —UN—01JUL14

Forward and Reverse Startup Gears



RXA0143039 —UN—01JUL14

Forward Start Gear 1 Drop Down Overlay

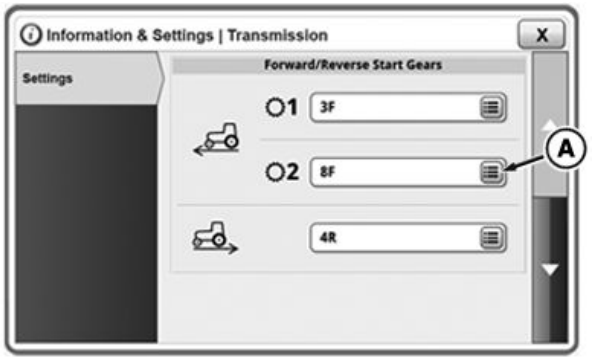
Continued on next page

RD47322,00004FC -19-28APR15-1/3

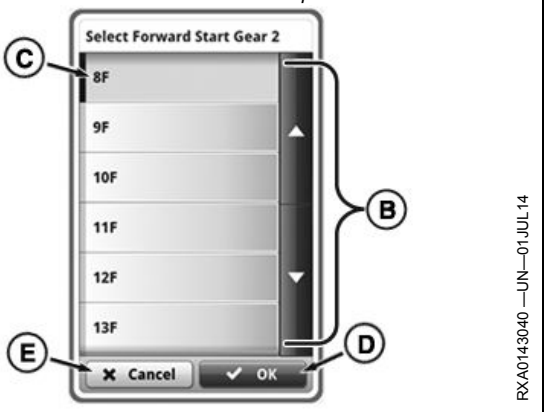
Select Forward Start Gear 2

1. Press Forward Start Gear 2 button (A). List of forward gears appears.
2. Scroll through list of gears (B).
3. Select desired gear (C) and press OK button (D) to finish selection or (E) to cancel.

A— Forward Startup Gear 2 button
B— Forward Start Gear 2 Drop Down Overlay
C— Desired Gear
D— OK button
E— Cancel button



Set Forward and Reverse Startup Gears



Forward Start Gear 2 Drop Down Overlay

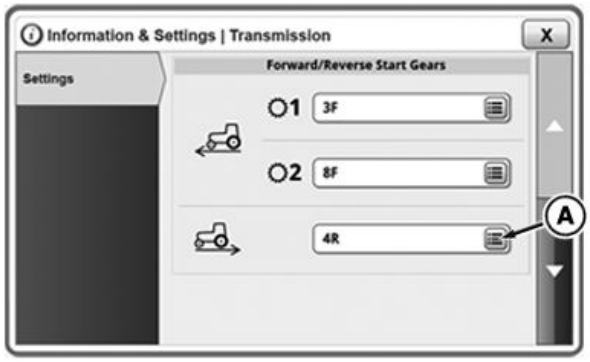
Continued on next page

RD47322,00004FC -19-28APR15-2/3

Select Reverse Start Gear

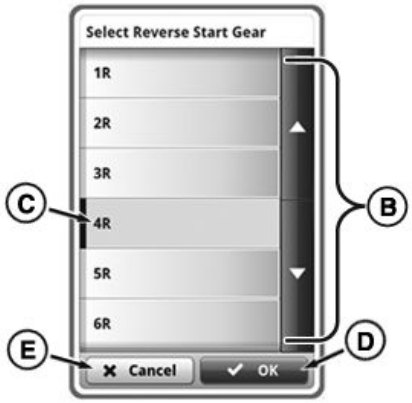
1. Press Reverse Start Gear 2 button (A). List of forward gears appears.
2. Scroll through list of gears (B).
3. Select desired gear (C) and press OK button (D) to finish selection or (E) to cancel.

A— Reverse Startup Gear button
B— Reverse Start Gear 2 Drop Down Overlay
C— Desired Gear
D— OK button
E— Cancel button



RXA0143044 —UN—01JUL14

Selecting Forward and Reverse Startup Gears



RXA0143041 —UN—01JUL14

Reverse Start Drop Down Overlay

RD47322,00004FC -19-28APR15-3/3

Stopping and Parking Tractor

1. Reduce throttle to low idle.

CAUTION: Avoid possible injury due to losing control of tractor. Couple brake pedals (A) together when driving on roads.

2. Depress both brake pedals. Brakes activate AutoClutch (automatic clutch function within transmission) to stop tractor. **It is not necessary to depress clutch**
3. Move speed control lever to slowest position.

CAUTION: Always place reverser lever in PARK position before dismounting tractor.

4. Shift reverser to PARK position.

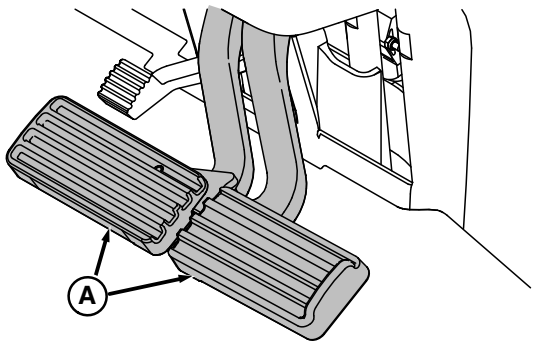
   Using PARK Position

   Transmission PARK position holds tractor stationary.

5. Lower implements and shut off PTO.
6. Shut off engine and remove key.

Stopping Tractor using AutoClutch

CAUTION: Avoid possible injury. Braking tractor while commanding a high engine speed requires higher brake pedal force.



RXA0068273 —UN—27AUG03

A— Brake Pedals

Avoid possible injury due to sudden or unexpected acceleration. When brake pedals are released, tractor automatically accelerates to speed currently commanded by throttle and speed control lever.

Depress both brake pedals. Brakes will activate AutoClutch. When brakes are released, tractor accelerates to currently commanded speed. **It is not necessary to depress clutch, reduce throttle, or move speed control lever.**

KT81203,0000265 -19-20JUL15-1/1

CommandCenter™ Transmission Main Page

e23™ transmission offers three modes of operation to optimize fuel efficiency and load control of the tractor. These modes are selected from the CommandCenter™ transmission main page.

- **Full AUTO (A) —** Automatically adjusts engine speed and gear selection to optimize fuel economy and performance. This mode automatically responds to loads created by the hitch or SCV's. During PTO use, engine speed is automatically controlled to provide appropriate PTO speed.
- **Custom (B) —** Similar to Full AUTO mode except the operator can modify some of the limits and parameters used in Full AUTO mode. See custom transmission settings in this section.
- **Manual (C) —** Operator selects engine throttle position and gear.

Maximum Ground Speed

The maximum tractor ground speed may be limited through the transmission main page. Forward maximum speed (D) and reverse maximum speed (E) displays maximum forward and reverse speed limits.

Changing Maximum Ground Speed

Press **Transmission Shortcut Button on Navigation Bar.**

1. Press appropriate speed limit on the Transmission Main page. The value adjustment page appears.
2. Adjust the ground speed to the desired value by using increase (+) and decrease (-) buttons. Also turning adjusting dial (M) can be used to increase or decrease ground speed settings.

NOTE: If operator changes maximum forward or reverse speed below current speed, the set speed (F) decreases to the maximum speed and the vehicle speed will decrease.

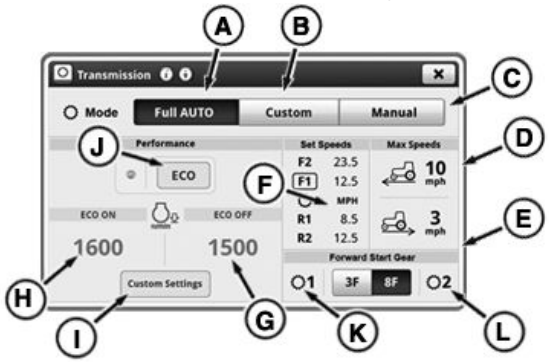
Efficiency Manager™ Set Speed

There are two programmable set speeds for each direction used in Efficiency Manager™. They are activated by pushing the set speed buttons on CommandArm™. Once activated, Efficiency Manager™ will shift gears and change engine speed so that the ground speed will match the set speed. The set speeds are changed through the set speed adjusting wheel. (See Efficiency Manager™ in this section in the Operator's Manual.)

RXA0133712 —UN—16JUL13



Transmission Shortcut Button on Navigation Bar



Transmission Main Page

RXA0143051 —UN—26JUN14



Adjusting Dial

RXA0143166 —UN—01JUL14

A— Full AUTO Mode
B— Custom Mode
C— Manual Mode
D— Maximum Forward Speed Setting
E— Maximum Reverse Speed Setting
F— Set Speeds Module
G— ECO Engine Speed Off Setting
H— ECO Engine Speed On Setting
I— Custom Settings button
J— ECO Level button
K— Forward Start Gear 1
L— Forward Start Gear 2
M— Adjusting Dial

RD47322,00004FD -19-28APR15-1/1

Efficiency Manager™ on the e23™ Transmission

Efficiency Manager™ controls transmission gear Shift and engine speed to maintain the desired ground speed (set speed). Shift decisions are based on load conditions, throttle command, and operator settings.

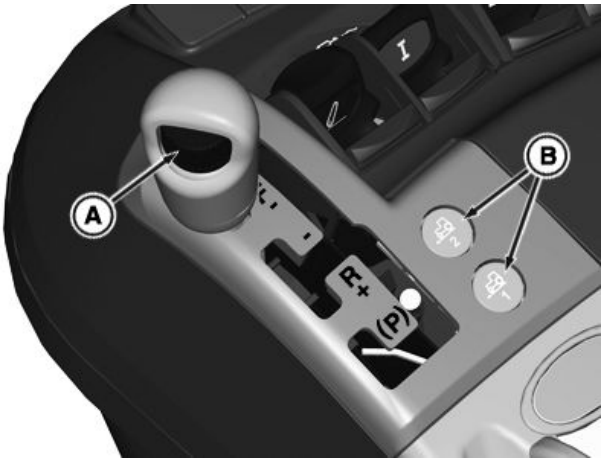
- Efficiency Manager™ is always running in **Full AUTO** and **Custom** modes.
- Efficiency Manager™ runs in Manual Mode when the set speed buttons are active.

Using Efficiency Manager™

- The Efficiency Manager™ indicator light (C) is on the corner post display.
- The tractor will only reach the set speed if the engine throttle is set to maximum engine rpm.
- In high load applications, the throttle should be set to maximum rpm.
- The transmission may shift gears if either the hand throttle or foot throttle is changed.
- The operator has a choice of setting two separate set speeds.
- The set speed is adjusted on the active set speed button by using the set speed adjusting wheel (A) on the shift lever. Press either set speed button 1 or 2, then rotate set speed adjusting wheel clockwise to increase speed and counterclockwise to decrease set speed. Repeat process for setting the second set speed. The transmission may shift gears with changes in set speed.
- Bumping the shift lever when in **Full AUTO** and in **Custom** modes, temporarily makes a large change in the set speed. The transmission may shift gears and the engine speed may change. The speeds stored in the set speed buttons (B) do not change.
- Efficiency Manager™ may not shift gears if the clutch pedal is partially depressed.
- If the clutch pedal is fully depressed and the tractor is stationary, Efficiency Manager™ selects the start-up gear and may reduce the engine speed.
- Efficiency Manager™ will select the start-up gear when Shift from neutral or park to gear.
- If the clutch pedal is fully depressed and the tractor is moving above the start-up gear speed, Efficiency Manager™ selects a gear and engine speed to match the ground speed.
- If the clutch pedal is fully depressed and the tractor is moving below the start-up gear speed, Efficiency Manager™ selects the start-up gear speed.

NOTE: Efficiency Manager™ set speeds can be programmed into iTEC™,

A— Set Speed Adjusting Wheel
B— Set Speed Buttons
C— Efficiency Manager™ Indicator Light



RXA0132341 —UN—02MAY13

Set Speed Buttons with Right-Hand Reverser



RXA0132342 —UN—02MAY13

Set Speed Buttons with Left-Hand Reverser



RXA0135363 —UN—03SEP13

Efficiency Manager™ Indicator Light

Efficiency Manager is a trademark of Deere & Company
iTEC is a trademark of Deere & Company

RD47322,00004FE -19-07AUG15-1/1

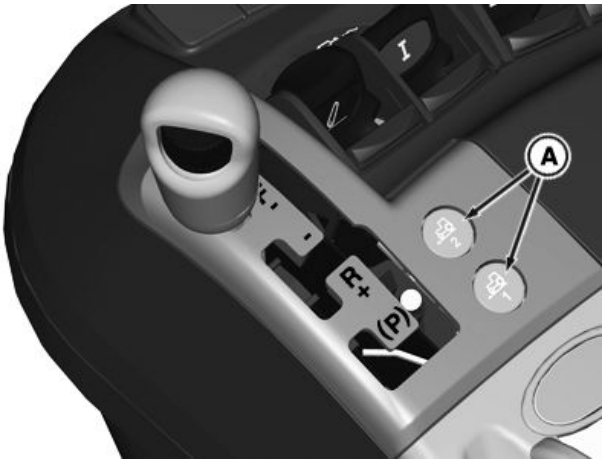
Efficiency Manager™ on e23™ Transmission in Manual Mode

Efficiency Manager™ is activated in **Manual Mode** by pressing either of the set speed buttons (A) on the CommandArm™.

- Pressing the same set speed button a second time in **Manual Mode** will disengage Efficiency Manager™.
- Bumping the shift lever in **Manual Mode** when efficiency manager is active, disengages Efficiency Manager™, shifts gears and changes engine speed to match the engine throttle position.
- All other features and functions of Efficiency Manager™ are the same between Full AUTO Mode and Custom Mode.

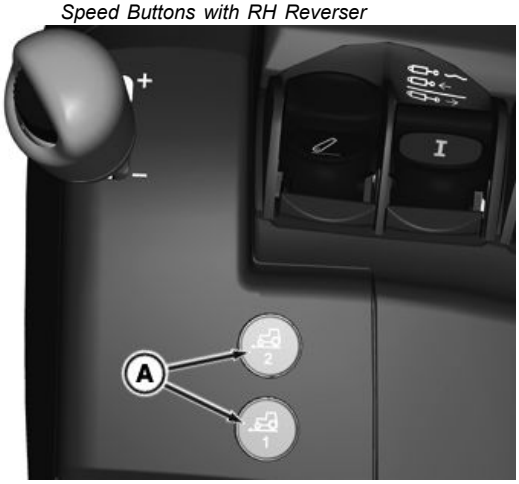
IMPORTANT: When disabling Efficiency Manager™, the engine rpm changes to match throttle position, possibly resulting in tractor acceleration.

A— Set Speed Buttons



RXA0131632 —UN—26MAR13

Speed Buttons with RH Reverser



RXA0131631 —UN—26MAR13

Speed Buttons with LH Reverser

RD47322,00004FF -19-25JUN14-1/1

Custom Transmission Settings

NOTE: Settings on this page can only be modified when Efficiency Manager is in Custom or Manual Mode.

Under Full Load Auto Shift Engine Speed Droop (D) and (E) limits the engine speed droop before Efficiency Manager™ automatically downshifts. A lower percentage means less droop is allowed before downshift.

NOTE: Auto Shift Engine Speed Droop can be set from 6% —26%. Different values can be entered for operation with or without the PTO.

Press **Transmission Shortcut Button on Navigation Bar.**

On Mode bar, select **Custom or Manual Mode.**

Set Auto Shift Engine Droop

NOTE: Auto Shift Engine Speed Droop PTO ON can be set from 6% —26%.

- Select Custom Settings button (A).
- Select Auto Shift Engine Speed Droop PTO ON setting (D). Value adjustment page appears.
- Adjust percentage value to desired value by using increase (+) and decrease (-) buttons.

Minimum Engine speed (B) and (C) limits how much Efficiency Manager™ shifts up and throttles back to save fuel under light loads.

Minimum Engine Speed

NOTE: Auto Shift Engine Speed Droop PTO OFF can be set from 14% — 26%.

- From Transmission page, select Custom Settings button (A).
- Select Auto Shift Engine Speed Droop PTO ON (D) or Auto Shift Engine Speed Droop PTO OFF (E). Value adjustment page appears.
- Adjust percentage to desired value by using increase (+) and decrease (-) buttons.

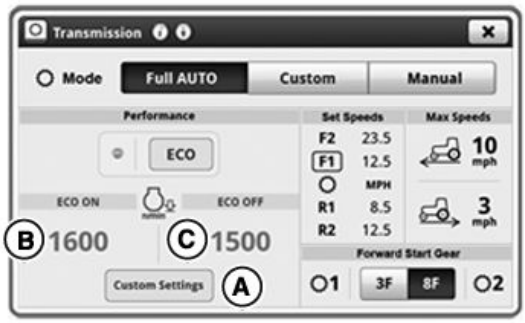
Turn Load Anticipation ON

- From Transmission home page, select Custom Settings button (A).
- Use Hitch Load Anticipation toggle (F), SCV Load Anticipation toggle (G), or PTO Load Anticipation toggle (H) to turn hitch, SCV or PTO load anticipation ON or OFF.

RXA0133712 —UN—16JUL13

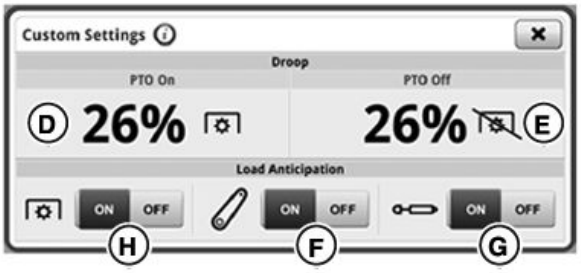


Transmission Shortcut Button on Navigation Bar



RXA0143050 —UN—07OCT14

Transmission Home Page



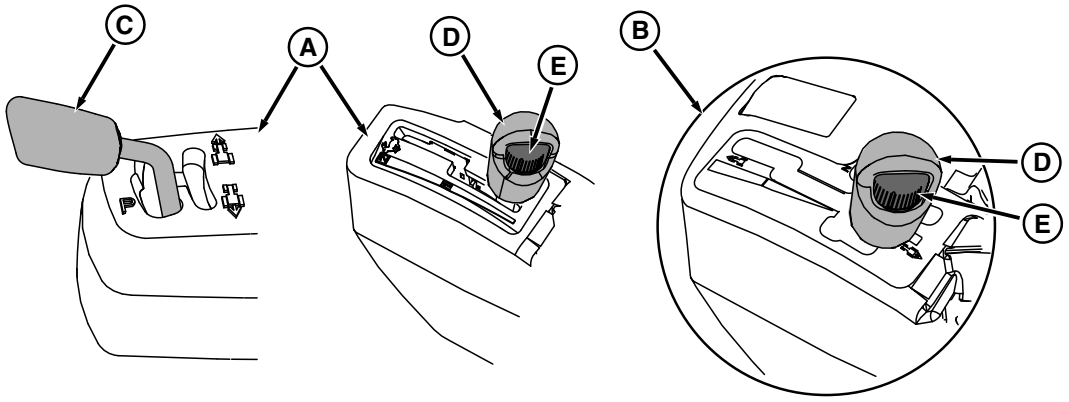
RXA0130327 —UN—07OCT14

Custom Settings Page

A— Custom Settings button
B— ECO Engine Speed ON Setting
C— ECO Engine Speed OFF Setting
D— Engine Droop PTO ON Setting
E— Engine Droop PTO OFF Setting
F— Hitch Load Anticipation Toggle
G— SCV Load Anticipation Toggle
H— PTO Load Anticipation Toggle

RD47322,0000500 -19-28APR15-1/1

Controls Identification



RXA0127892 —UN—29AUG12

AutoPowr™ Controls

A— Left-Hand Reverser Controls
B— Right-Hand Reverser
C— Left-Hand Reverser Lever
D— Speed Control Lever
E— Set Speed Adjusting Wheel

AutoPowr™ transmission provides infinite ground speeds in forward mode from 50 meters per hour (164 feet per hour) to 50 km/h (31 mph) depending on tractor specifications. Reverse mode provides infinite ground speeds from 50 meters per hour (164 feet per hour) to 20 km/h (12.4 mph). Maximum speeds can vary slightly due to tire size.

AutoPowr™ tractors are equipped with either left-hand reverser (A) or right-hand reverser (B). Transmission is controlled by two levers in the left-hand configuration. Left-hand reverser lever (C) controls tractor direction, park, and neutral. Second lever, speed control lever (D), is located on CommandARM™ and controls ground speed.

Right-hand reverser option consists of right-hand reverser lever (B) on CommandARM™ and controls tractor direction, park, neutral, and ground speed.

AutoPowr is a trademark of Deere & Company

There are two variable speed bands in forward direction on all tractors. Tractors equipped with left-hand reverser have two-speed bands in reverse. Tractors equipped with right-hand reverser have single reverse band.

Set speeds are maximum ground speeds in each speed band. Speed control lever must be pushed to end of slot to achieve set speeds. Set speed adjusting wheel (E) on speed control lever (D) rotates to adjust set speeds (See Adjust Set Speeds in this section of this Operator's Manual).

RD47322,0000322 -19-28APR15-1/1

Left-Hand and Right-Hand Reverser Shift Patterns

Park (A): Engages park brake to hold tractor stationary preventing tractor from rolling; "P" appears on corner post display.

Neutral (B): Disengages park brake, allowing tractor to roll, but does not transmit power to wheels; "N" appears on corner post display.

Reverse (C): Transmits power to wheels for rearward travel; "R" appears on corner post display.

PowerZero™ (D): Hand-held zero position temporarily holds tractor stationary on relatively flat surface.

Scroll Position (E): Scrolls through set speeds on corner post display continuously while tractor is not moving.

Forward Speed Band 1 (F): Transmits power to wheels for forward travel; "F1" appears on corner post display.

Forward Speed Band 2 (G): Transmits power to wheels for forward travel; "F2" appears on corner post display.

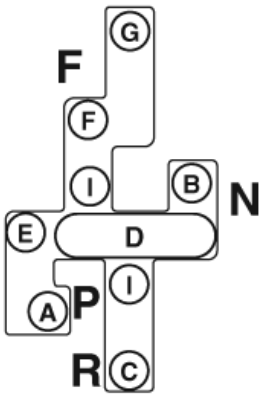
Forward (H): Transmits power to wheels for forward travel; "F" appears on corner post display.

Minimum Speed (I): Transmits power to wheels in direction selected.

Maximum Forward and Reverse Set Speed 1 (J): Transmits power to wheels in direction selected.

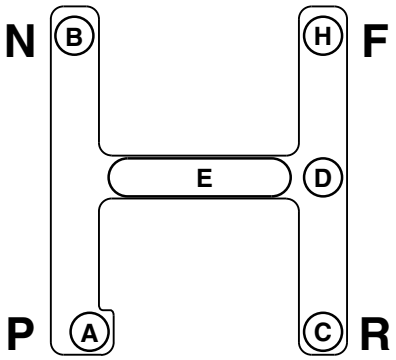
Maximum Forward and Reverse Set Speed 2 (K): Transmits power to wheels in direction selected.

A— Park
B— Neutral
C— Reverse
D—PowerZero™
E— Scroll Position
F— Forward Speed Band 1
G— Forward Speed Band 2
H— Forward
I— Minimum Speed
J— Maximum Forward or Reverse Set Speed 1
K— Maximum Forward or Reverse Set Speed 2



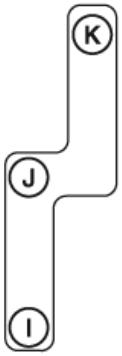
Right-Hand Reverser Speed Lever

RXA0133408 —UN—09DEC13



Left-Hand Reverser

RXA01003 19 —UN—26JAN09



Left-Hand Reverser Speed Lever

RXA0137698 —UN—09DEC13

PowerZero is a trademark of Deere & Company

RD47322,0000323 -19-28APR15-1/1

Operate the Transmission

CAUTION: Avoid personal injury or damage to tractor. If engine starts with lever not in PARK position, there is a malfunction in the starting circuit. Repairs should be made by John Deere™ dealers.

IMPORTANT: Prevent transmission or clutch damage:

- **Never depress clutch pedal while tractor is rolling downhill or coasting, as serious transmission damage can result.**
- **Never attempt to start tractor by towing or pushing.**
- **Operator can always move shift lever to PARK Position; however, park brake does not engage until ground speed is below 1.75 km/h (1.0 mph).**
- **Avoid excessive ballast.**
- **Clutch pedal must be fully depressed to completely disengage clutch. Never rest foot on clutch pedal while tractor is moving.**

NOTE: Operator presence switch is built into seat to prevent movement of tractor while in gear without operator sitting in seat.

Starting Engine

IMPORTANT: Tractor with left-hand reverser can start in neutral.

CAUTION: Tractors with right-hand reverser cannot start in neutral. If tractor does start in neutral, contact John Deere™ dealer for repair.

Ensure transmission is in PARK position; corner post monitor displays ”P” for park. Start engine.

Stopping Engine

CAUTION: Always place reverser lever in PARK position before dismounting tractor.

For tractors with left-hand reverser, reduce engine speed to low rpm, pull speed control lever back to slowest setting, and depress brake pedals until travel stops. Move left-hand reverser lever to PARK position. Slowly release brakes and stop engine.

For tractors with right-hand reverser, reduce engine speed to low rpm, pull speed control lever back to slowest setting, and depress brake pedals until travel stops. Move right-hand reverser lever to PARK position. Slowly release brakes and stop engine.

John Deere is a trademark of Deere & Company

RD47322,0000324 -19-28APR15-1/1

Adjust Set Speeds

⚠ CAUTION: Avoid unexpected rapid acceleration. Check and adjust set speeds before putting tractor in motion.

Turn key switch to RUN position (for tractors with right-hand reverser, engine must be running to change set speeds).

Move lever (A) to Scroll position. Forward and reverse set speeds scroll on corner post display pausing at each speed for 2 seconds.

Adjust each speed when displayed by rotating set speed adjuster on speed control lever clockwise to increase set speed value or counterclockwise to decrease it.

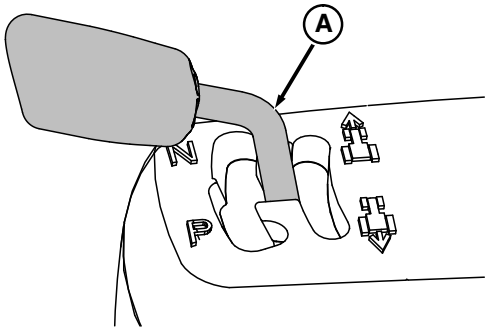
NOTE: Set speed adjustments can affect corresponding set speed of opposite direction (see Adjusting Reverse/Forward Set Speed Ratio in this section).

On corner post display, set speed of selected speed band displays in orange and ground speed of tractor displays in white letters (B). Set speed can be adjusted while tractor is moving by rotating set speed adjuster (C). Increasing set speed value increases ground speed. Decreasing set speed value decreases ground speed. New set speed shows on display.

Select set speed approximately 3.2 km/h (2 mph) higher than desired working speed to obtain maximum productivity where precise forward speed is **not** critical (such as plowing). Tractor reaches higher set speed value during no load or light load condition.

Maximum ground speed of selected speed band is attained at full throttle when speed control lever (D) is pushed fully forward to end of slot in respective speed band.

A— Left-Hand Reverser
B— Corner Post Display
C— Set Speed Adjuster
D— Speed Control Lever



RXA0068281 —UN—27AUG03

Left-Hand Reverser Shown



RXA0130020 —UN—22AUG13

Corner Post Display



RXA0127885 —UN—22AUG13

Speed Control Lever

RD47322,0000325 -19-28APR15-1/1

Set Speeds—Guidelines and Examples

Value of Set Speed 1 is always at least 10% less than value of Set Speed 2. This ensures smooth transition between speed bands and is illustrated in following examples.

NOTE: F1 refers to Forward mode for Set Speed in speed band 1. F2 refers to Forward mode for Set Speed in speed band 2.

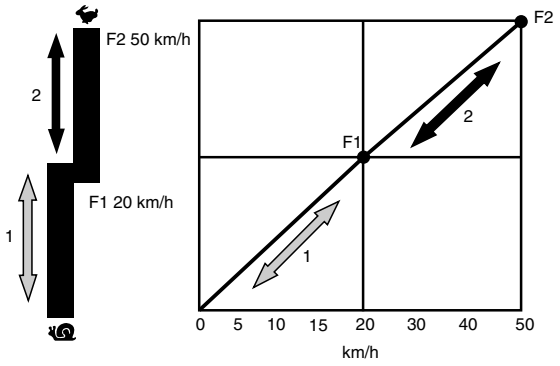
Example 1: Maximum Forward Set Speeds are selected for each speed band.

Example 2: Value of Set Speed 1 is reduced to 10 km/h (6 mph). Set Speed 2 value is not changed, but lower portion of speed band 2 has automatically decreased to meet top end of speed band 1.

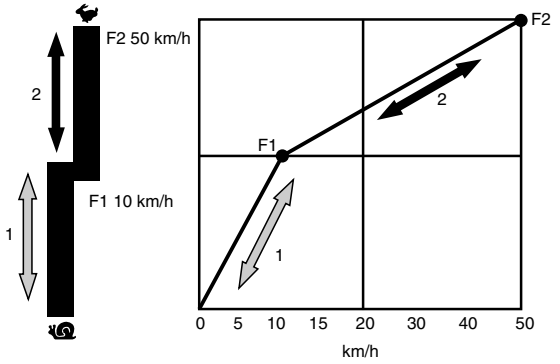
NOTE: Actual set speed increases or decreases at least 10% of adjusted speed band and ranges up to 12.5%. 10% is used in illustrations of Examples 3 and 4, and can differ by 2.5% of speeds shown.

Example 3: Set Speed 2 is reduced to 5 km/h (3 mph). Set Speed 1 automatically decreases to 4.5—4.3 km/h (2.8—2.7 mph), 10—12.5% below new value of Set Speed 2.

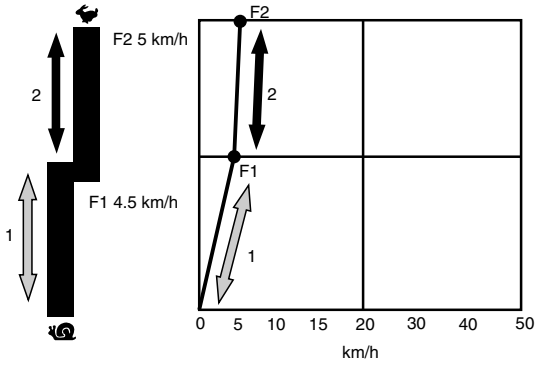
Example 4: Set Speed 1 is increased to 20 km/h (12.4 mph), which is higher than value of Set Speed 2. Set Speed 2 automatically increases to 22—22.5 km/h (13.7—14.0 mph), 10—12.5% above new value of Set Speed 1.



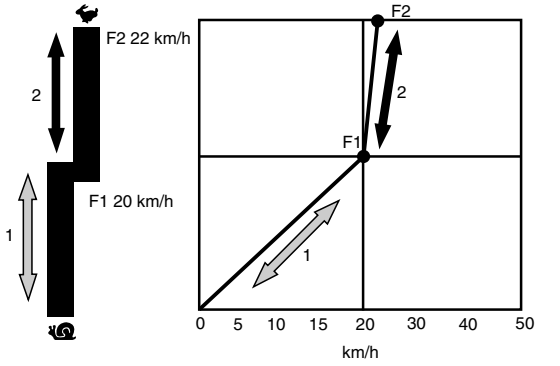
Example 1



Example 2



Example 3



Example 4

RD47322,0000326 -19-03JAN14-1/1

IVT™/AutoPowr™ Modes and Set Maximum Speed

Press **Transmission Shortcut Button on Navigation Bar or follow alternative path:**

1. Press **Menu button.**
2. Press **Tractor Settings button.**
3. Press **Transmission button.**

IVT™/AutoPowr™ offers three modes for fuel efficiency and load control from tractor:

- **Full Auto Mode (A)**
  Automatically adjusts Minimum Engine Speed allowing tractor to use most fuel efficient engine speed under light load.
  Automatically adjusts Auto Shift Engine Speed Droop allowing tractor to use peak power under full load.
- **Custom Mode (B)**
  Operator can customize settings for Performance, Minimum Engine Speed, Auto Shift Engine Speed Droop, and Load Anticipation reaction.
- **Foot Pedal Mode (C)**
  Operator can control wheel speed independently of engine speed by using the accelerator pedal. Operator can only choose Pedal Mode when the tractor is stopped and park brake is applied.
- **Manual Mode (D)**
  Tractor performs as if equipped with normal transmission and reacts to controls. No Fuel Economy or Load Control functions active.

RXA0133712 —UN—16JUL13

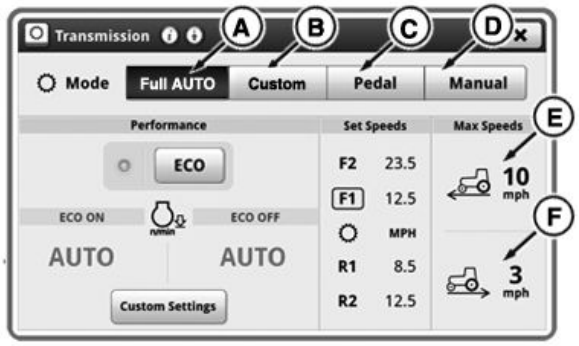


Transmission Shortcut button on Navigation Bar

RXA0128094 —UN—14SEP12



Menu button → Tractor Settings button→ Transmission button



RXA0130021 —UN—05JUN13

Transmission Home Page

A— Full Auto Mode
B— Custom Mode
C— Foot Pedal Mode
D— Manual Mode
E— Forward MAX Speed
F— Reverse MAX Speed

Full Auto Mode (A)	Custom Mode (B)	Pedal Mode (C)	Manual Mode (D)
• Auto Shift (or Load Control) ON. • Load Anticipation for Hitch ON. • Load Anticipation for SCVs ON. • Auto Shift Engine Speed Droop maintained at maximum tractor power. • Maximum engine speed limit adjusted according to PTO rated speed.	• Auto Shift (or Load Control) ON. • Auto Shift Engine Speed Droop with PTO On is Adjustable. • Auto Shift Engine Speed Droop with PTO Off is Adjustable. • Performance and Minimum Engine Speed with ECO ON is Adjustable. • Performance and Minimum Engine Speed with ECO OFF is Adjustable. • Load Anticipation for Hitch is Adjustable. • Load Anticipation for SCVs is Adjustable.	When hand throttle control is pulled all the way to the rearward position: • Auto Shift (or Load Control) ON. • Load Anticipation for Hitch ON. • Load Anticipation for SCVs ON. • Auto Shift Engine Speed Droop maintained at maximum tractor power. • Maximum engine speed limit adjusted according to PTO rated speed. When hand throttle control is at any other position: • Constant engine speed corresponding to the throttle position is commanded. • Auto Shift (or Load Control) ON. • Activating Engine Set Speed Button would engage constant engine speed functionality.	• Auto Shift (or Load Control) OFF. • Use when application is causing undesired automatic shifting. • Use when operating on steep and/or slippery downhill slopes.[a]

[a] *(See Downhill Operation in Slippery Conditions in this section.)*

Forward maximum speed (E) or reverse maximum speed (F) are displayed. To change maximum speed, select module, use increase (+) or decrease (-) buttons to change value. Increasing speed does not change dynamic behavior of tractor. If operator changes maximum forward or reverse speed below current set speed, set speed decreases to maximum speed and vehicle speed decreases.

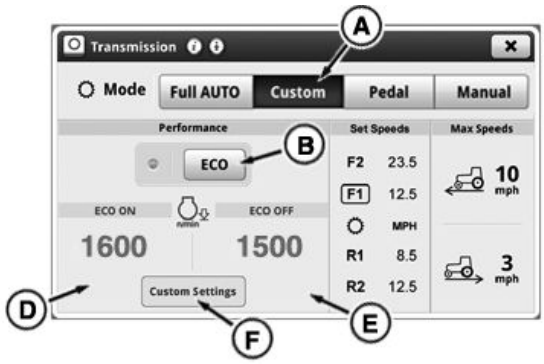
RD47322,0000327 -19-28APR15-1/1

IVT™/AutoPowr™ Custom Mode Settings

RXA0133712 —UN—16JUL13



Transmission Shortcut Button on Navigation Bar



RXA0130022 —UN—16DEC13

Transmission Home Page

NOTE: All settings pertaining to this page are only applicable when AutoPowr™ transmission is in Custom Mode.

This tractor is equipped with an ECO setting. With ECO ON, the tractor minimizes engine speeds, which reduce acceleration aggressiveness and fuel consumption in lighter steady loads. ECO OFF is tuned to maximize productivity. Operators can set a minimum engine speed for both ECO ON and ECO OFF. ECO is turned ON/OFF by pressing button (B) on the transmission home page or corresponding ECO button (C) on hand throttle control.

Load Anticipation allows IVT™/AutoPowr™ transmission to predict loads with hitch or SCVs in use. By default, Load Anticipation is enabled in "Full AUTO" mode selected on Transmission page. In "Custom" mode, load anticipation for hitch is enabled when hitch toggle (I) is turned to ON. In "Custom" mode, load anticipation for SCVs is enabled when SCV toggle (J) is turned to ON. In "Custom" mode, load anticipation for PTO is enabled when PTO toggle (K) is turned to ON.

Load anticipation feature can raise minimum engine speed to 1500 rpm when load anticipation is enabled and either hitch/SCV/PTO is placing heavy load on engine or SCV is in continuous flow. If load on engine is still excessive, load anticipation feature can raise minimum engine speed to 1800 rpm.

Press **Transmission Shortcut Button on Navigation Bar.**

Press **Custom Mode toggle (A).**

Set ECO Engine Speed RPM ON

- Press ECO ON Engine Speed module (D).
- Adjust percentage value using increase (+) or decrease (-) to set desired value.

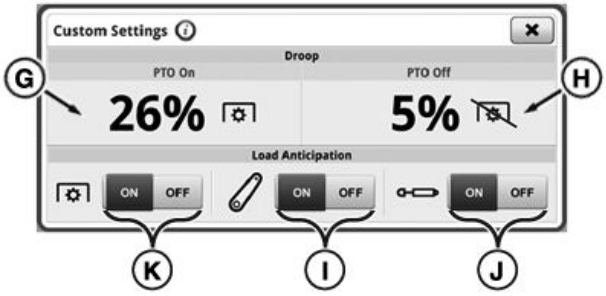
Set ECO Engine Speed RPM OFF

- Press ECO OFF Engine Speed module (E).



RXA0137863 —UN—21MAR14

Hand Throttle Control



RXA0130023 —UN—16DEC13

Transmission Custom Settings Page

A— Custom mode Toggle
B— ECO Button (ON/OFF-Activated when light is illuminated)
C— ECO Button (ON/OFF-Activated when light is illuminated)
D— ECO Engine Speed ON
E— ECO Engine Speed OFF
F— Custom Settings button
G— Auto Shift Engine Speed Droop PTO ON
H— Auto Shift Engine Speed Droop PTO OFF
I— Hitch Load Anticipation Toggle
J— SCV Load Anticipation Toggle
K— PTO Load Anticipation Toggle

- Adjust percentage value using increase (+) or decrease (-) to set desired value.

AutoPowr is a trademark of Deere & Company
IVT is a trademark of Deere & Company

Continued on next page

RD47322,0000328 -19-28APR15-1/2

Set Auto Shift Engine Speed Droop PTO ON

NOTE: Auto Shift Engine Speed Droop PTO ON can be set from 2% —26%.

- Press Auto Shift Engine Speed Droop module PTO ON (A).
- Adjust percentage value using increase (+) or decrease (-) to set desired value.

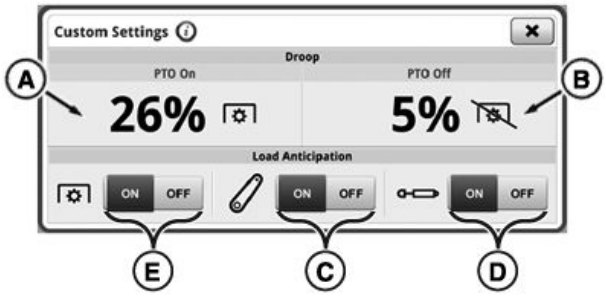
Set Auto Shift Engine Speed Droop PTO OFF

NOTE: Auto Shift Engine Speed Droop PTO OFF can be set from 2% — 26%.

- Press Auto Shift Engine Speed Droop module PTO OFF (B). PTO OFF box highlights.
- Adjust percentage value using increase (+) or decrease (-) to set desired value.

Turn On Load Anticipation

- Press Hitch toggle (C), SCV toggle (D), or PTO toggle (E) to on. When SCV toggle is on, engine speed is boosted as needed, with each use of SCV. When Hitch toggle is on, engine speed is boosted as needed, each time hitch is raised or lowered.



RXA0137865 —UN—16DEC13

Transmission Custom Settings Page

A— Auto Shift Engine Speed Droop PTO ON
B— Auto Shift Engine Speed Droop PTO OFF
C— Hitch Load Anticipation Toggle
D— SCV Load Anticipation Toggle
E— PTO Load Anticipation Toggle

RD47322,0000328 -19-28APR15-2/2

Adjust Reverse/Forward Set Speed Ratio

Reverse/Forward Ratio can be set to operate independently of each other or from 0.3 to 1.3 times as fast (in 0.1 increments). Forward and Reverse Set Speeds are same at 1.0 setting (1 to 1 ratio).

Maximum reverse speed is to 20 km/h (12 mph) regardless of ratio.

Press **Transmission Shortcut Button on Navigation Bar.**

1. Press **Advanced Settings icon.**
2. Press **Settings tab.**
3. Press **Reverse/Forward Ratio button (B)** to access list of reverse/forward ratio options.

Forward Set Speed is 4 km/h (2.5 mph) and Ratio is:	Reverse Set Speed km/h (mph) is:
0.3	1.2 (0.4)
0.4	1.6 (0.8)
0.5	2.0 (1.2)
0.6	2.4 (1.5)
0.7	2.8 (1.75)
0.8	3.2 (2.0)
0.9	3.6 (2.2)
1.0	4.0 (2.5)
1.1	4.4 (2.7)
1.2	4.8 (3.0)
1.3	5.2 (3.2)
Independent	No ratio because reverse and forward set speeds function independent of each other. Reverse Set Speed is limited to be no more than 5 km/h (3 mph) faster than Forward Set Speed.

RXA0133712 —UN—16JUL13



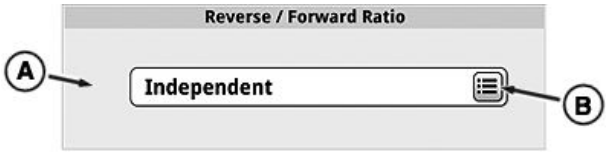
Transmission Shortcut Button on Navigation Bar

RXA0130326 —UN—11JAN13



Advanced Settings Icon → Settings Tab

RXA0127891 —UN—29AUG12



Reverse/Forward Ratio List

A—Reverse/Forward Module

B—Reverse/Forward Ratio button

RD47322,0000329 -19-28APR15-1/1

Put Tractor in Motion

CAUTION: Avoid possible injury due to sudden or unexpected acceleration. Be aware of set speeds and throttle position before putting tractor in motion.

*NOTE: Tractor cannot be put in gear unless operator is seated. Information indicator lights and corresponding message appears on CommandCenter™ display when Forward, Reverse, or NEUTRAL positions are selected and operator is **not** in seat.*

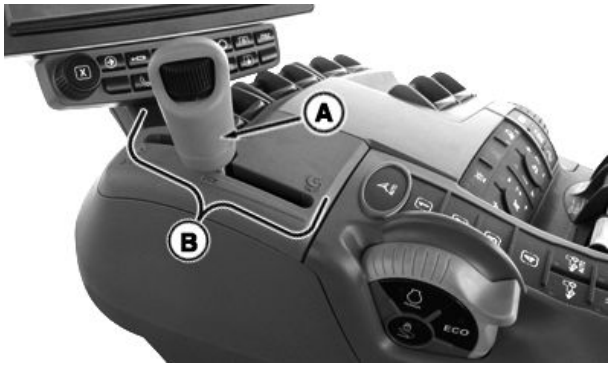
To initiate motion, move lever from PARK position to either Forward or Reverse position with operator seated.

NOTE: Cold conditions can affect IVT™/AutoPowr™ tractor performance:

- *Engine speed is limited to 1500 rpm if transmission oil temperature is less than -5 °C (23 °F).*
- *Wheel speed is limited to 5 km/h (3 mph) if transmission oil temperature is less than -15 °C (5 °F).*

Using clutch to put tractor in motion is not necessary.

IVT is a trademark of Deere & Company
AutoPowr is a trademark of Deere & Company



RXA0130849 —UN—22AUG13

Left-Hand Reverser

A— Speed Control Lever **B— Speed Bands**

NOTE: In event of seat switch failure, tractor can still be put into motion by cycling (depress/release) clutch or brake pedals.

Move reverser lever into Forward or Reverse position.

Use throttle and speed control levers to obtain desired speed.

RD47322,000032B -19-28APR15-1/1

Using Creeper Mode

Creeper mode is entered automatically when a set speed of less than 2 km/h (1 mph) is selected in speed band 1.

To eliminate rapid acceleration when lever is moved from speed band 1 to speed band 2, a ration of 2.5:1 is set between maximum speed of band 2 and band 1. For example, if speed band 1 is set at 100 m/h (328.1 ft/h), corresponding maximum speed in band 2 is 250 m/h (820.2 ft/h).

Default ratio can be temporarily overridden (such as when making headland turns) by increasing speed band 2 to a maximum of 10 km/h (6 mph). Moving lever back to band 1 restores previous working speeds.

In creeper mode, reverse set speed can be set to less than forward set speed. Reverse set speed limit can be temporarily overridden by moving Right-Hand Reverser Lever into Reverse Speed Band and increasing reverse set speed. Moving Right-Hand Reverse Lever from Reverse Speed Band to Forward Speed Band 1 and not changing Forward Set Speed 1 resets Reverse Set Speed to less than Forward Set Speed.

Creeper mode is exited when Set Speed 1 is adjusted above 2 km/h (1 mph) or Set Speed 2 is adjusted above 10 km/h (6 mph).

RD47322,000032C -19-28APR15-1/1

Stopping and Parking Tractor

1. Reduce throttle to low idle.

CAUTION: Avoid possible injury due to losing control of tractor. Couple brake pedals (A) together when driving on roads.

2. Depress both brake pedals. Brakes activate AutoClutch (automatic clutch function within transmission) to stop tractor. **It is not necessary to depress clutch**
3. Move speed control lever to slowest position.

CAUTION: Always place reverser lever in PARK position before dismounting tractor.

4. Shift reverser to PARK position.

   Using PARK Position

   Transmission PARK position holds tractor stationary.
5. Lower implements and shut off PTO.
6. Shut off engine and remove key.

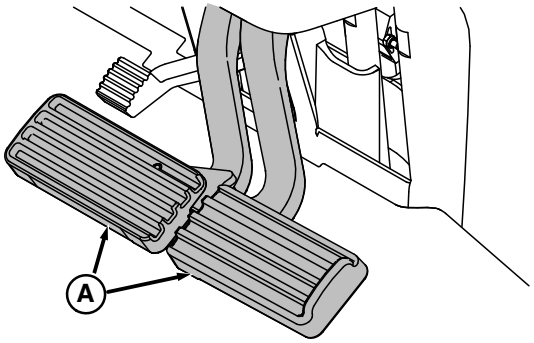
Stopping Tractor using AutoClutch

CAUTION: Avoid possible injury. Braking tractor while commanding a high engine speed requires higher brake pedal force.

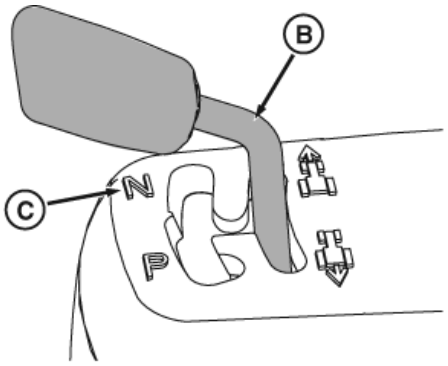
Avoid possible injury due to sudden or unexpected acceleration. When brake pedals are released, tractor automatically accelerates to speed currently commanded by throttle and speed control lever.

Depress both brake pedals. Brakes will activate AutoClutch. When brakes are released, tractor accelerates to currently commanded speed. **It is not necessary to depress clutch, reduce throttle, or move speed control lever.**

Using PowerZero™ Position



RXA0068273 —UN—27AUG03



RXA0130864 —UN—06FEB13

Left-Hand Reverser Shown In PowerZero™

A— Brake Pedals
B— PowerZero™ Position
C— NEUTRAL Position

CAUTION: Depending on speed and load, PowerZero™ cannot bring tractor to stop if already in motion.

Hold reverser lever in PowerZero™ position (B) to temporarily hold tractor stationary. Move lever to direction desired to resume motion.

Using NEUTRAL Position

Shiftlever to NEUTRAL to stop transmission from powering wheels. Tractor rolls freely with transmission in NEUTRAL whether engine is running or not.

RD47322,000032E -19-28APR15-1/1

Downhill Operation in Slippery Conditions

Press **Transmission Shortcut Button on Navigation Bar.**

When transmission page displays, select Manual toggle.

CAUTION: Avoid possible injury from losing control of tractor while operating on a downhill slope. Tractor wheels can lock and skid on slippery downhill slopes. Observe following precautions:

- **Adjust set speed value to a safe downhill operating speed.**
- **Do not make major speed reductions with speed control lever.**
- **Turn MFWD on.**

RXA0133712 —UN—16JUL13



Transmission Shortcut Button on Navigation Bar

RD47322,000032F -19-28APR15-1/1

CommandARM™ Control Functions

Intelligent Total Equipment Control, iTEC™, allows multiple reoccurring tasks to be performed with touch of one button, up to four sequences.

One sequence made up of series of functions, operations, and distances used at start of field. A second sequence used at water way in center of field. Sequences remain in memory until deleted or overwritten, even if electrical current is switched off.

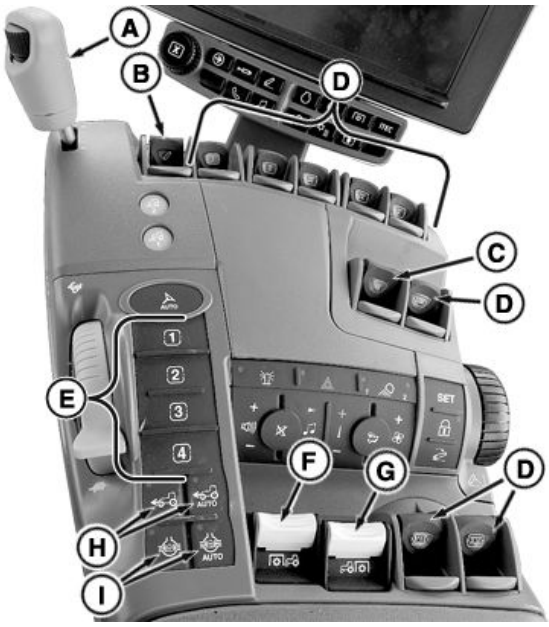
Each sequence can include up to 20 functions.

A sequence is a course of events from start of first function to completion of last function that the operator can start by pressing one of the sequence buttons.

iTEC™ pages are accessed through Generation 4 CommandCenter™.

Chart below describes item and function from CommandARM™ image.

iTEC™ Functionality		
	Component	**Function(s)**
A	IVT™ /AutoPowr™ Set Speed Forward (IVT™/AutoPowr™ Only)	Change Set Speed
	CommandQuad™ Transmission	Upshift or Downshift in Forward Gear and Change Ranges with Push Buttons A, B, C
	e23™ Transmission	Upshift or Downshift in forward gear
B	Rear Hitch (If Equipped)	Raise Detent and Lower Detent
C	Front Hitch (If equipped)	Raise and Lower
D	SCVs (CommandARM™)	Extend, Retract, Float, and Cancel
E	iTEC™ Buttons	1/2/3/4
F	Front PTO (If Equipped)	On/Off
G	Rear PTO	On/Off
H	MFWD	On/Off/Auto
I	Differential Lock	On/Off/Auto



RXA0149594 —UN—07AUG15

CommandARM™ Controls

CommandARM is a trademark of Deere & Company
iTEC is a trademark of Deere & Company
CommandCenter is a trademark of Deere & Company
IVT is a trademark of Deere & Company
AutoPowr is a trademark of Deere & Company
CommandQuad is a trademark of Deere & Company
e23 is a trademark of Deere & Company

TO84419,00000F5 -19-07AUG15-1/1

iTEC™ Station Description (2010-52-EU)

CAUTION: Do not operate front loaders in conjunction with Intelligent Total Equipment Control (iTEC™) to avoid sudden movements and possible accidents.

iTEC™ has two factory installed sequences in which learned functions are stored. A sequence is defined as the start of the first recorded function to completion of last recorded function. Example of two sequences would be, one sequence made up of a series of functions, operations and distances used at start of field and a second sequence used at a water way in the center of the field. Each program can include up to 20 functions. The programs remain in the memory until they are deleted or overwritten, even if the electrical current is switched off.

iTEC is a trademark of Deere & Company

RD47322,000020D -19-16JAN15-1/1

CommandCenter™ Pages Descriptions And Functions

iTEC™ Main Page

Use shortcut buttons or follow alternative path:

1. Select **Menu.**
2. Select **Machine Settings tab.**
3. Select **iTEC™ Icon.**

- **A — iTEC™ Master Toggle:** Toggle iTEC™ ON/OFF.
- **B — Active Assignment Set Button:** Select or create an assignment set.
- **C — Assignments List:** List of sequences assigned to iTEC™ buttons.
- **D — Manage Sequences Button:** Edit sequence and assign buttons.
- **E — Scroll Bar:** Scroll up or down.
- **F — Status List:** Shows status of each iTEC™ sequence step as sequence progresses.
- **G — Title Bar:** Press Title Bar to access application title, help button, and advanced settings (if applicable).

RXA0133714 —UN—16JUL13

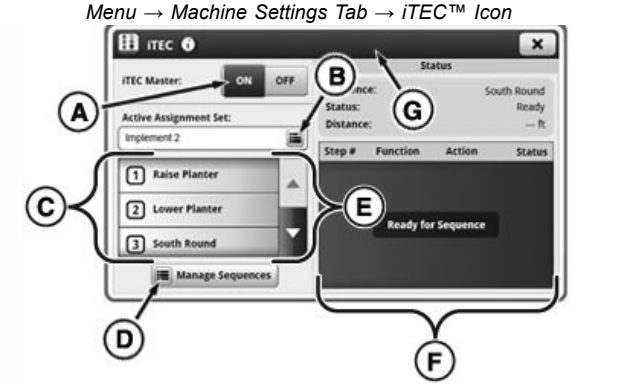


ITEC™ Shortcut Button on Navigation Bar

RXA0145566 —UN—01OCT14



Menu → Machine Settings Tab → iTEC™ Icon



RXA0131995 —UN—23APR13

iTEC™ Main Page

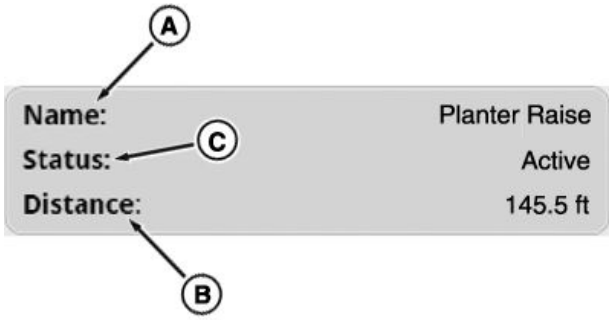
iTEC is a trademark of Deere & Company

SV81855,000002E -19-01OCT14-1/1

Status Area

Status Area

- **A—Name:** Name of sequence that is currently running.
- **B—Distance:** Displays accumulated distance while iTEC™ sequence is running.
- **C—Status:** Indicator of current iTEC™ status.
  - **Off** - No sequence execution possible.
  - **Ready** - Waiting for iTEC™ button to which a sequence is assigned to be pressed.
  - **Active** - iTEC™ sequence execution active.
  - **RPM Limit** - Engine speed is out of range [1]
  - **Park** - Transmission indicates that park lock is engaged [1]
  - **Operator Presence** - No operator presence, no iTEC™ execution allowed. Operator returns to seat [1]
  - **Wheel Speed Low** - Wheel speed < 0.5 km/h (0.3 MPH), execution is paused.
  - **Complete** - Sequence successfully completed.
  - **Aborted** - Sequence execution aborted by operator or active abort condition.



RXA0131243 —UN—08MAR13

Status Area on Main Page

- **Error** - One or more sequence steps did not execute.

iTEC is a trademark of Deere & Company

[1]Sequences pauses or cannot start if this condition exists. Correct condition to resume sequence.

SV81855,0000030 -19-23SEP13-1/2

Manage Sequence Page

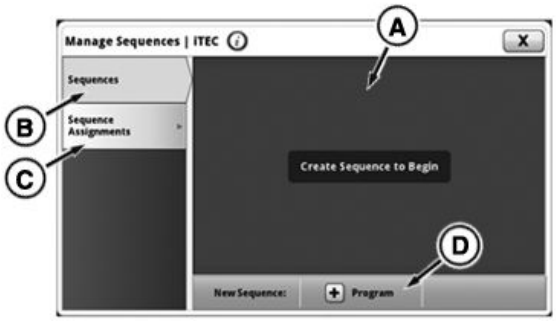
Select **Manage Sequences button** on iTEC™ main page.

- **A — iTEC™ Content Section:** Available sequences or sequence assignments are displayed.
- **B — Sequences Tab:** View available, delete saved, edit saved, or add new sequences.
- **C — Sequence Assignments Tab:** View assigned sequences or give sequence assignment.
- **D — Program Button:** Manually program new sequence.

RXA0129723 —UN—06MAR13



Manage Sequences Button



RXA0131143 —UN—26FEB13

iTEC™ Manage Sequences Page

iTEC is a trademark of Deere & Company

SV81855,0000030 -19-23SEP13-2/2

Set Up A Sequence

NOTE: For complete list of functions available, see Description and Display in this section of this Operators Manual.

From iTEC™ main page, follow guidelines listed below:

1. Select **Manage Sequences button.**
2. Select **Sequences tab.**
3. Select **Program Sequence button.**
4. Select **Add Step button.**

   NOTE: Operator may select Cancel button (E) to exit editing process without saving changes.

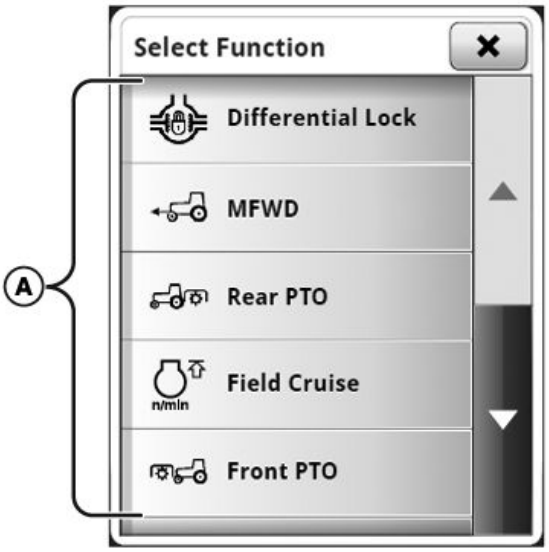
5. Select Function page appears allowing the operator to select from list of functions (A). Select a function.
6. Select Action page appears after function has been selected. Select an appropriate action.
7. Step Distance page appears after action has been selected. Use keypad to input distance from step to take place.
8. Select **OK button** to complete and access next page.
9. Repeat steps 4-8 until entire sequence is set up.
10. Press next button to access next page.
11. Name Sequence page appears.
12. Select **Edit Sequence Name button (B)**. Keyboard appears to type name of sequence. Select **Save button** when complete.
13. Select **Edit Assignment button (C)**. List of available assignments appears. Select assignment and press **Save button** on sequence assignment page.
14. Select **Save button (D)** to complete process.

A— Function List
B— Edit Sequence Name Button
C— Edit Sequence Assignment Button
D— Save Button
E— Cancel Button

RXA0130056 —UN—13DEC12

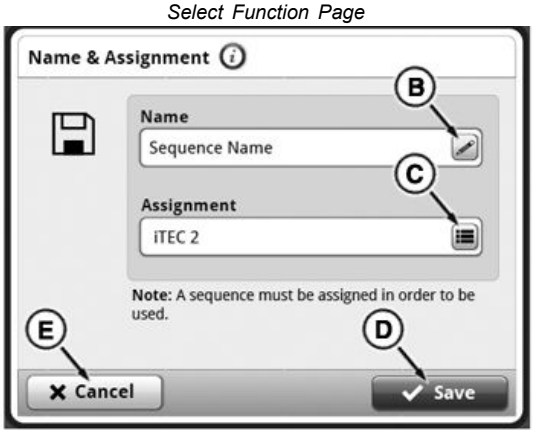


Manage Sequences → Sequences Tab → Program Sequence Button → Add Step Button



RXA0131164 —UN—27FEB13

Select Function Page



RXA0131165 —UN—28FEB13

Name & Assignments Page

iTEC is a trademark of Deere & Company

TO84419,00000F9 -19-19AUG14-1/1

Sequence Step Status

Whenever execution of a sequence step is not possible or is interrupted, iTEC™ system informs operator about new issue by displaying Information Alert (A) or Fault Alert (F) next to sequence or sequence step. Press **Alert Symbol** next to a sequence (in assignment area or sequence assignment tab) to access the sequence status page to read the steps with errors. Use scroll bars (D) to scroll up and down list. Select edit sequence button (G) if you want to edit this certain sequence. Press **Alert Symbol** next to a sequence step (while in EDIT) for information about the issue just for that step. Both views will show a short reason (C) for issue.

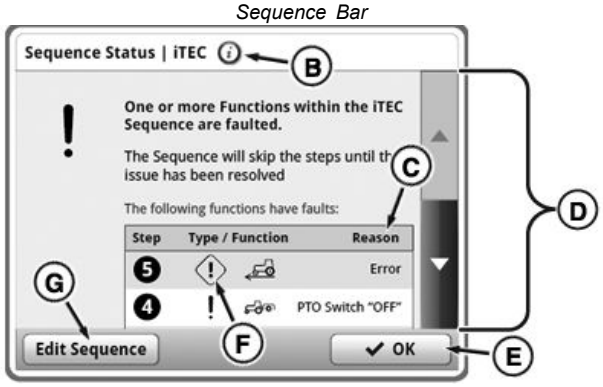
NOTE: Press Information Button (B) on any iTEC™ page to access a general status page. General status page will list all functions that are part of the sequences of current selected implement (assignment set).

A— Information Alert
B— Information Button
C— Text Description
D— Scroll Bar
E— OK Button
F— Fault Alert
G— Edit Sequence Button

RXA0131170 —UN—05MAR13



Sequence Bar



RXA0131609 —UN—25JUL13

Sequence Status Page

iTEC is a trademark of Deere & Company

Continued on next page

Edit Page:

From iTEC™ main page, follow guidelines listed below:

1. Select **Manage Sequences button.**
2. Select **Sequences tab.**
3. Select desired sequence.
4. Select **Edit button.**

- **A — Sequence Step List:** List of steps in selected sequence.
- **B— Add Step Button:** Add new step to sequence.

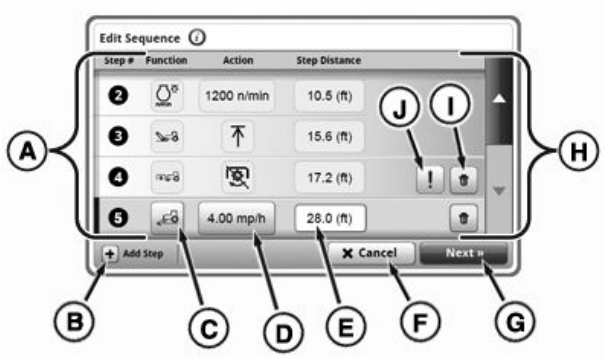
NOTE: Insert new step by selecting step in sequence. Press 'Add Step' button to insert new step. Distance field will be auto-filled with previous distance. If distance is changed, step will be sorted accordingly.

- **C— Step Function Input Box:** Change selected sequence step function.
- **D— Step Action Input Box:** Change selected sequence step action.
- **E— Step Distance Input Box:** Access number pad to adjust selected sequence step distance.
- **F— Cancel Button:** Exit without saving changes.
- **G— Next Button:** Access next page.
- **H — Scroll Bar:** Scroll up or down.
- **I— Delete Step Button:** Delete step.
- **J— Notification Button:** View issue for a particular step.
- **K — Sequence Name Input Box:** Access keypad to rename sequence.
- **L— Assignment Button:** Assign sequence to an iTEC™ button.
- **M— Save Button:** Save changes.
- **N — Sequence Assignment List:** Select button to which assign sequence.
- **O — OK Button:** Accept changes.

RXA0127531 —UN—15AUG12

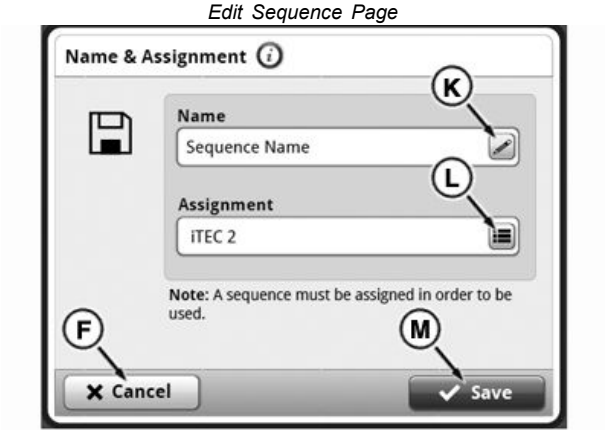


Manage Sequences Button → Sequence Tab → Edit Button



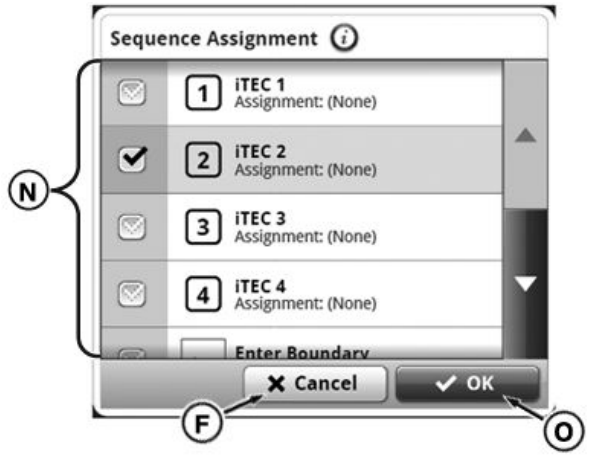
RXA0131144 —UN—25JUL13

Edit Sequence Page



RXA0131281 —UN—25JUL13

Name & Assignment Page



RXA0131280 —UN—25JUL13

Sequence Assignment Page

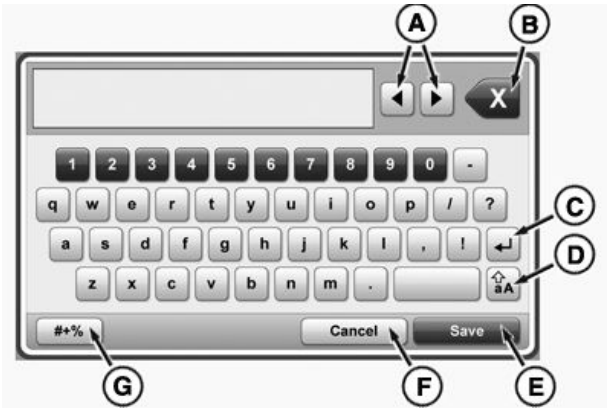
iTEC is a trademark of Deere & Company

Continued on next page

Keyboard

Select Sequence Name Input button on Name & Assignment page will display a keyboard for name input.

- **A — Left and Right Arrow Buttons:** Move curser right or left in input box.
- **B — Backspace Button:** Delete individual characters left of cursor in input box.
- **C — Return Button:** Move cursor to next line.
- **D — Caps Lock Button:** Toggle between capital and lower case letters.
- **E — Save Button:** Save changes.
- **F — Cancel Button:** Discard changes without saving.
- **G — Symbol Button:** Choose symbols.



Keyboard

Continued on next page

TO84419,00000F7 -19-01OCT14-3/5

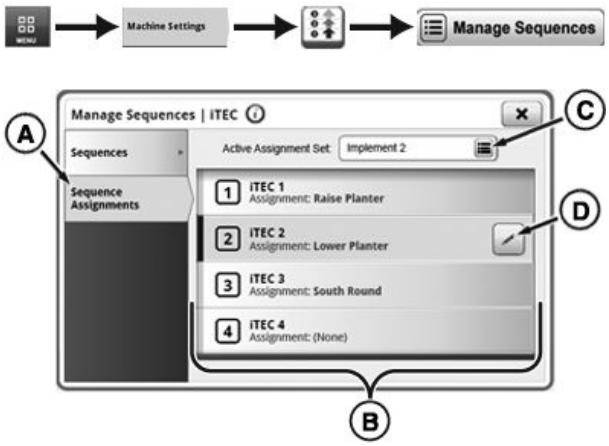
Sequence Assignments Page:

1. Select **Menu.**
2. Select **Machine Settings tab.**
3. Select **iTEC™ Icon.**
4. Select **Manage Sequences button.**
5. Select **Sequence Assignments tab (A).**

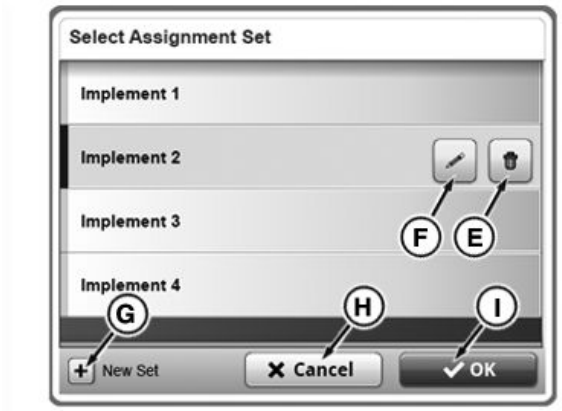
- **A — Sequence Assignment Tab:** View or change sequences assigned to buttons.
- **B — Sequence Assignment List:** List of assignments or openings for potential assignments to buttons.
- **C — Active Assignment Set Button:** Change selected assignment set from list.
- **D — Edit Button:** Change selected button assignment and assignment set.
- **E — Delete Assignment Set Button:** Delete assignment set.
- **F — Edit Assignment Button:** Change and set assignment name.
- **G — New Assignment Set Button:** Add a new assignment set.
- **H — Cancel Button:** Exit without saving changes.
- **I — OK Button:** Select a previously highlighted assignment set.
- **J — Available Sequence List:** Available sequences to assign.
- **K — Scroll Bar:** Scroll list up or down.

NOTE: Assignment Set: A set of button-assigned sequences for one implement. With assignment sets relating to different implements (e.g. planter and plow) it is easy to switch from one set (implement) to another.

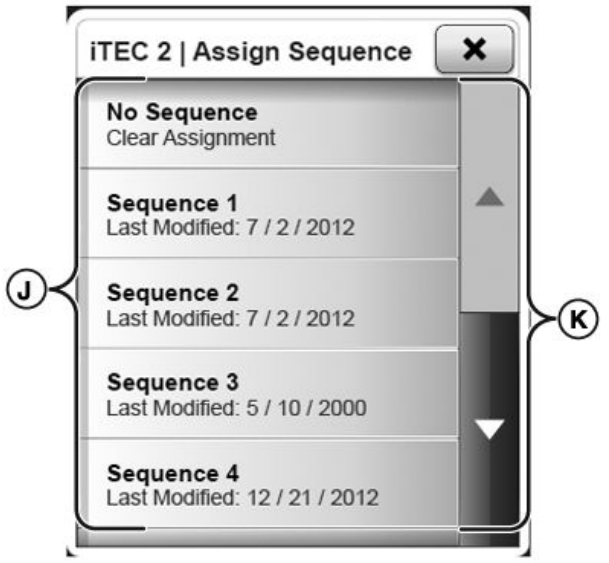
RXA0145567 —UN—01OCT14



RXA0131606 —UN—26MAR13



RXA0131607 —UN—27MAR13



RXA0131283 —UN—07MAR13

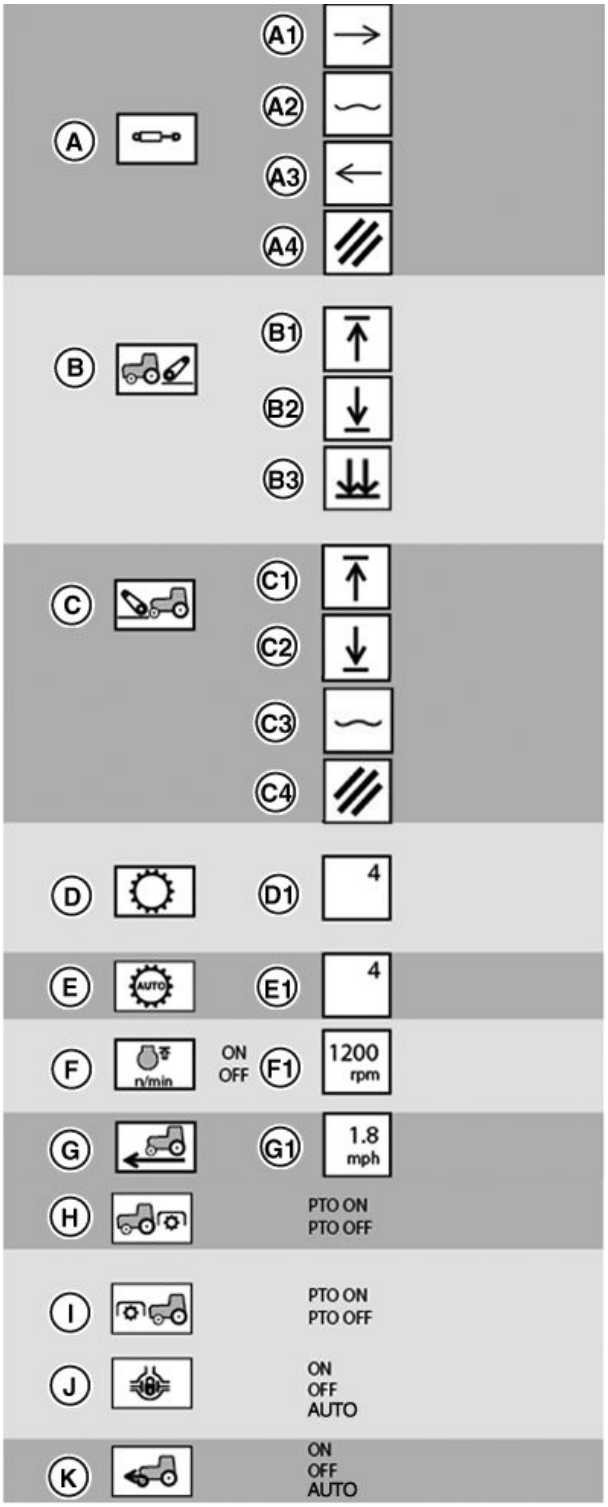
Continued on next page

TO84419,00000F7 -19-01OCT14-4/5

Available Options:

List and diagram name and illustrate icons for all available iTEC™ function, operation and distance options.

- A—SCV's (I through XV)
  - A-1 Extend
  - A-2 Float
  - A-3 Retract
  - A-4 Cancel
- B—Rear Hitch (If Equipped)
  - B-1 Raise to height limit
  - B-2 Lower to setpoint
  - B-3 Fast Lower
- C—Front Hitch (If Equipped)
  - C-1 Raise
  - C-2 Lower
  - C-3 Float
  - C-4 Cancel
- D—Transmission
  - D-1 Gear-Preselect gear
- E—AUTO Transmission[1]
  - E-1 Automatic gear-shift up to highest selected gear; with maximum gear or just resume based on transmission capabilities.
- F—FieldCruise™ On/Off
  - F-1 set engine to maximum rpm
- G—IVT™ /AutoPowr™ Set Speed
  - G-1 Speed-Set to maximum ground speed
- H—Rear PTO On/Off (If Equipped)
- I—Front PTO On/Off (If Equipped)
- J—Differential Lock On/Off/Auto
- K—MFWD On/Off/Auto



First Column: Function, Second Column: Action, Third Column: Distance

iTEC is a trademark of Deere & Company
FieldCruise is a trademark of Deere & Company
IVT is a trademark of Deere & Company
AutoPowr is a trademark of Deere & Company

[1]If CommandQuad™ Transmission is in AUTO mode, this function can change gears within a range but cannot change ranges.

TO84419,00000F7 -19-01OCT14-5/5

Execute Sequence

iTEC™ sequence execution requires certain tractor controls be operated in a particular way. Sequence will NOT execute with tractor in PARK position. Drive lever must be in forward position when executing set speeds, gears, or Automatic Gear Shift. Tractor ground speed must be at least 0.5 km/h (0.31 mph).

If a PTO function is included in sequence, PTO must be engaged manually, using PTO switch, for initial engagement. Before performing sequence using SCV functions, relevant SCV levers must be in neutral position.

Abort current sequence at any time by again pressing same **iTEC™ Sequence button (A-D)** used for starting sequence. Currently active commanded functions will be canceled (for example, hitch motion or SCV flow will stop if previously initiated as part of sequence).

During sequence execution, a function can be actuated manually at any time without execution of sequence being interrupted. Functions that are actuated manually are ignored by iTEC™ for the rest of sequence. Relevant alert icon for this function appears in **Status Area (H)**.

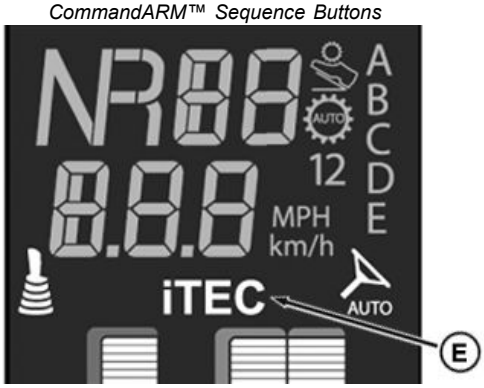
1. Turn **iTEC™ Master Toggle (F)** to ON position.
2. Select **iTEC™ Sequence button (A-D)** on CommandARM™ for desired sequence.
3. Sequence steps appear in **Status Area (H)** and shows progression of steps.

A— Sequence Button 1
B— Sequence Button 2
C— Sequence Button 3
D— Sequence Button 4
E— iTEC™
F— Master Toggle
G— Assignment List
H— Status Area



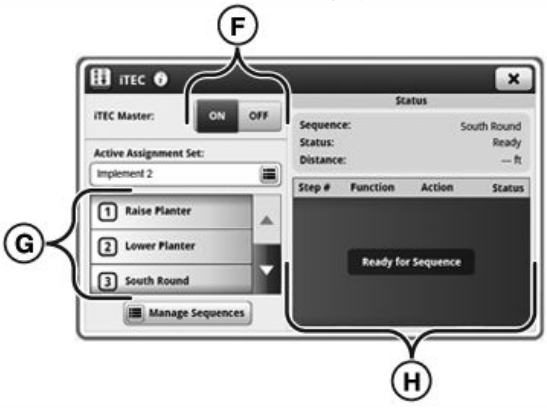
RXA0137808 —UN—22JAN14

CommandARM™ Sequence Buttons



RXA0131148 —UN—02OCT13

Corner Post Display



RXA0131608 —UN—26MAR13

iTEC™ Main Page

iTEC is a trademark of Deere & Company
CommandARM is a trademark of Deere & Company

TO84419,00000FC -19-22JAN14-1/1

Delete Sequence

If no longer necessary, sequences can be completely deleted. When a sequence is deleted, all button assignments clear and sequence is no longer available for use.

From iTEC™ main page, follow guidelines listed below:

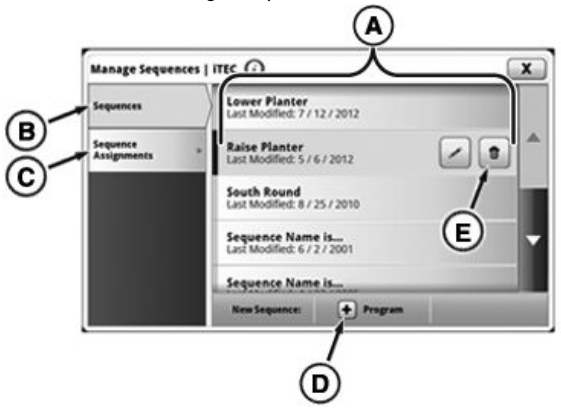
1. Select **Manage Sequences button.**
2. Select **Sequences tab (B)**.
3. Select sequence to be deleted.
4. Select **Delete button (E)**.
5. Delete Sequence page appears asking operators to confirm deleting sequence. Select delete to remove sequence.

A—iTEC™ Content Section
B—Sequences Tab
C—Sequence Assignments Tab
D—Program Button
E—Delete Button

RXA0129723 —UN—06MAR13



Manage Sequences Button



RXA0133539 —UN—15JUL13

Manage Sequences Page

iTEC is a trademark of Deere & Company

TO84419,00000FD -19-23SEP13-1/1

iTEC Functions—IVT™/AutoPowr™ Transmission

iTEC™ allows set speeds for IVT™/AutoPowr™ transmission to be preset. Minimum set speed can be saved is 0.8 km/h (0.5 mph).

Changing set speed or moving lever during execution of sequence will not cause iTEC™ to abort, but set speed changes will not be commanded for remainder of sequence.

If iTEC™ sequence commanded set speed exceeds maximum allowable speed in range selected, set speeds change, but are restricted to highest or lowest allowable set speed in current range. For example, tractor reaches maximum allowable set speed if transmission is in speed range F1 and operator executes 50 km/h (31 mph) command. When set speed is changed by iTEC™, control unit reacts as if operator changed set speed, pushing other set speeds up or down as result.

A— Speed Band 1
B— Speed Band 2

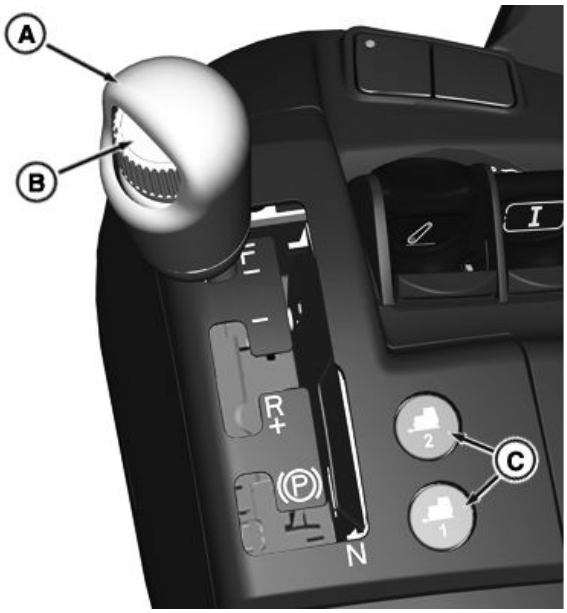


RXA0134400 —UN—25SEP13

iTEC is a trademark of Deere & Company

TO84419,00000FE -19-23SEP13-1/1

iTEC™ Functions—*Efficiency Manager*™ Powershift Transmission



RXA0139446 —UN—17MAR14

A—Shift Knob
B—Set Speed Adjusting Wheel
C—Efficiency Manager™ Buttons

Efficiency Manager™ Set Speed Buttons (C): The current forward set speed can be changed up or down with the set speed adjusting wheel (B). Transmission changes will be executed at the normal rate once the set speed has been changed.

The minimum set speed that can be saved is 0.8 km/h (0.5 mph). Changing the set speed or shifting during execution of a sequence will not cause iTEC™ to abort, but set speed changes will not be executed for the remainder of the sequence.

When a set speed is changed by an iTEC™ sequence, transmission will react as if the operator changed set speed, shifting up or down as a result.

Efficiency Manager is a trademark of Deere & Company
iTEC is a trademark of Deere & Company

SV81855,0000312 -19-12AUG15-1/1

Tractor Implement Automation™ (TIA™)

CAUTION: Although phrases ”transfer control” and ”withdraw control” are terms commonly used with TIA™ equipment, at NO time is implement in total control of an operation. Operator ALWAYS has ability to override TIA™ implement. It is operator's responsibility to make sure implement operation does not damage equipment, or pose danger of injury or death to operator or others close by.

TIA is a trademark of Deere & Company
Tractor Implement Automation a trademark of Deere & Company
John Deere is a trademark of Deere & Company

Tractor Implement Automation™ must not be put in operation when driving on public roads or when other persons are close by.

For ISO-compliant tractors, TIA™-compatible implements have ability to control certain individual tractor functions. See your implement operator’s manual or contact your John Deere™ dealer with any questions regarding TIA™ - compatible implements.

TO84419,00000FF -19-21MAR14-1/1

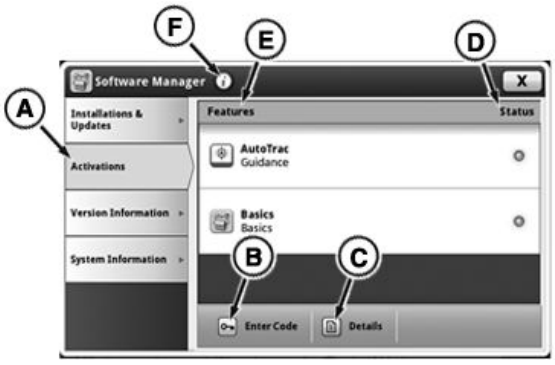
Activate Tractor Implement Automation™ Equipment

A—Activations Tab
B—Enter Code Button
C—Details Button
D—Status List
E—Feature List
F—Information Button

RXA0131994 —UN—22APR13



Menu → Systems Tab → Software Manager Icon → Activations Tab



RXA0143147 —UN—07JUL14

Activations Page

Response Codes, Text Descriptions, and Corrective Actions		
Common Response Codes	Text Displayed	Corrective Action
0	Code Accepted	None Required
4	Implement Not Available to Deactivate	Implement already deactivated
5	Implement Already Activated	None Required, implement should work as expected
6 and 11	Space Unavailable for Activation	Contact your dealer for assistance
17	Demonstration Activation Replaced With Permanent Activation	None Required

NOTE: To obtain tractor serial number, see Record Product Identification Number in Identification Numbers section of this Operator's Manual.

An activation code is required to allow TIA™ to function. Contact your John Deere™ dealer with tractor serial number and implement make, model, and serial number. Dealer obtains activation code through John Deere™ StellarSupport™.

1. Select **Menu**
2. Select **System Tab**
3. Select **Software Manager Icon**
4. Select **Activations Tab (A)**
5. When Activations page displays, press Enter Code button (B). Keyboard will appear.

NOTE: Some Tractor Automation Activation page keyboard characters are grayed out and are not used in activation codes. If provided activation code includes any characters that are grayed out on Tractor Automation Activation page keyboard, request dealer reconfirm activation code.

6. Using keyboard, enter activation code, then select Save/Enter button.
7. If activation code is entered correctly, confirmation code appears in the enter activation overlay and message is displayed. Code Accepted indicates that activation is complete.
8. If message other than Code Accepted appears, see Response Codes, Text Descriptions, and Corrective Actions table. If message not listed appears, check and reenter code. If problem persists, contact your John Deere™ dealer.

Up to twenty implement names can be viewed on Tractor Automation Activation page at any given time. When a new entry shows up in Feature List (E), that entry is labeled "Unknown Implement". The text "Unknown Implement" should change to a real name after first time connecting the implement.

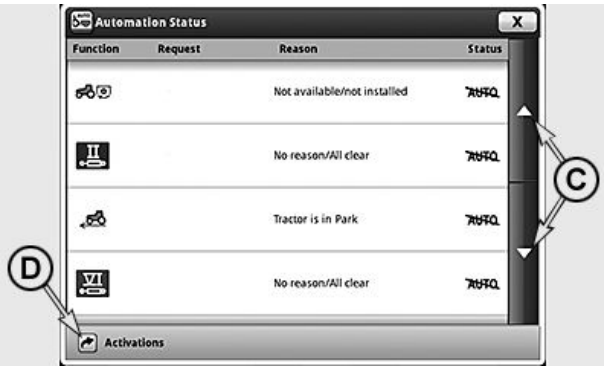
TIA is a trademark of Deere & Company
John Deere is a trademark of Deere & Company
StellarSupport is a trademark of Deere & Company

TO84419,0000100 -19-28APR15-1/1

TIA™ - Status Page



LX1057101 —UN—23JUL13



LX1057102 —UN—23JUL13

A—Applications Tab
B—Automation Status Icon
C—Scrollbar
D—Activating Tractor Implement Automation™ Button

Access CommandCenter™ Menu and select tab (A).

Press Automation Status icon (B) and access automation status page.

On the status page, the status of all the functions available for TIA™ are displayed.

If no TIA™-capable implement is connected, only a text message appears on the display.

If there are too many functions to display on one status page, scrollbar (C) can be used to change to the next or previous pages respectively.

To activate the implements, press activating TIA™ button (D) and access the page for activating the implements. See also TIA™ - Activating the Implements on the following pages.

The status page has four columns:

Function	Auto/Command	Cause	Status
All functions available for TIA™ displayed	•**Current command** from implement appears on display if function is in auto mode and implement is commanding function.	• **No Reason/All clear** - function is fault-free and cab be automated by implement. •**Brief text** - function is not ready to perform commands from implement.	• **AUTO** -function is currently commanded and has no threshold. • ~~*AUTO*~~ -function is currently not controlled by implement or cannot be controlled by it. Operator has control, or must enable function. • **!AUTO!** -function currently has a fault. Cause is displayed in a brief text in second column. • **AUTO**↑ -function has an upper threshold. Command from implement is too high. • **AUTO**↓ -function has a lower threshold. Command from implement is too low.

Tractor Implement Automation is a trademark of Deere & Company
CommandCenter is a trademark of Deere & Company
TIA is a trademark of Deere & Company

SV81855,000016F -19-28APR15-1/1

Operate Tractor Implement Automation™

IMPORTANT: Various requirements must be met by tractor and implements to allow TIA™ to function correctly. See information in this section of this Operator's Manual and implement Operator's Manual.

1. Connect TIA™ equipment to tractor using ISO connection, see Connecting Compatible Equipment in Operator Station section of this Operator's Manual.
2. Select AutoTrac™ Resume Button (A) on CommandARM™ .
3. Follow implement operator's manual instructions to operate implement.

A—AutoTrac™ Resume Button



RXA0135370 —UN—25SEP13

AutoTrac™ Switch

TIA is a trademark of Deere & Company
CommandARM is a trademark of Deere & Company
AutoTrac is a trademark of Deere & Company

TO84419,0000107 -19-29OCT14-1/1

PTO Requirements

Before transferring control to implement, prepare implement as indicated in implement Operator's Manual. Transfer control using AutoTrac™ resume switch as described in implement Operator's Manual.

Following guidelines must be met before transferring control to implement:

- Operator in seat.
- Functional PTO system.
- PTO remote control off.
- PTO engaged (PTO switch On).

AutoTrac is a trademark of Deere & Company

NOTE: Unless implement is authorized to engage PTO when tractor is stopped, tractor will prevent engagement of PTO when stopped. Implement is however, allowed to disengage PTO.

While operating and depending on PTO system capabilities, implement has ability to engage/disengage PTO, change PTO gear or adjust PTO speed.

To disengage control, turn PTO switch off.

TO84419,0000101 -19-23SEP13-1/1

SCV Requirements

Before transferring control to implement, prepare implement as indicated in implement Operator's Manual. Transfer control using AutoTrac™ resume switch as described in implement Operator's Manual.

Following guidelines must be met before transferring control to implement:

- Operator in seat.
- SCVs are functional.
- SCV control levers in neutral position.
- SCV levers are not locked.

NOTE: Set maximum SCV flow limit which cannot be exceeded by implement.

NOTE: Unless implement is authorized to adjust SCV flow when tractor is stopped, tractor will prevent SCV flow adjustments when at a stop. Implement is however allowed to stop oil flow.

While operating, implement has ability to:

- Control SCVs during operations.
- Change SCV flow rate up to set limit.

To disengage control:

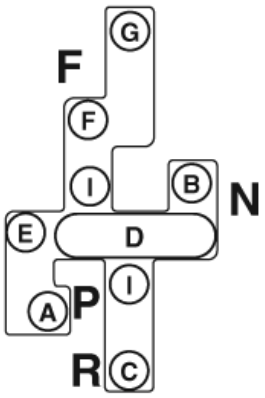
- Actuate specific SCV lever or...
- Lock SCV lever or...
- Actuate remote control switch on fender.

AutoTrac is a trademark of Deere & Company

TO84419,0000102 -19-31OCT13-1/1

IVT™/AutoPowr™ Requirements

Before transferring control to implement, prepare implement as indicated in implement Operator's Manual.



Right-Hand Reverser

NOTE: Limit is determined by maximum speed setting and position of speed control lever. This set limit cannot be exceeded by implement.

Following guidelines must be met before transferring control to implement:

- Operator in seat.
- No malfunctions present in IVT™/AutoPowr™ transmission.
- Reverser lever must be in Scroll (E), Power Zero™ (D), or forward position (F or G) for left hand, right hand reverser, forward position (H) for left hand reverser.

While operating, implement has ability to:

- Adjust speed up to operator set limit.
- Stop tractor.
- Drive tractor again after stopping; with operator's confirmation.

Operator's approval to start or restart motion:

- Cycle reverser lever. Move lever from forward to scroll to forward position again.
  Cycle reverser lever when a round baler stops tractor to eject full bale.
- Depress clutch pedal or brake pedal while tractor rolls to stop. Hold pedal down while tractor is stopped. Tractor starts moving when pedal is released, if implement requests speed.

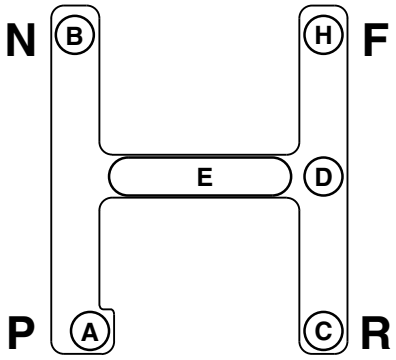
To withdraw control using reverser lever:

- When driving: Move lever out of forward position.
- When stopped: Move lever to Reverse, Neutral or Park.

To withdraw control using speed control lever or speed wheel:

AutoTrac is a trademark of Deere & Company
IVT is a trademark of Deere & Company
AutoPowr is a trademark of Deere & Company

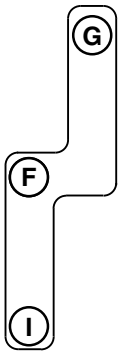
Transfer control using AutoTrac™ resume switch as presented in implement Operator's Manual.



RXA0133408 —UN—09DEC13

RXA0100319 —UN—26JAN09

Left-Hand Reverser



RXA0077571 —UN—10JUN05

Left-Hand Reverser Speed Lever

A—Park
B—Neutral
C—Reverse
D—Power Zero
E—Scroll Position
F— Forward Speed Band 1
G—Forward Speed Band 2
H—Forward
I— Minimum Speed

NOTE: Speed may always be reduced.

Set speed limit may be increased within 2 seconds after engaging travel speed Auto Mode. Current travel speed can be limited by other processes (e.g. iTEC™). This limit will be observed; however, the limit will not be considered as an intervention by operator.

- If implement commands stopping tractor and speed is increased, travel speed Auto Mode will be ended.
- Increasing speed will end Auto Mode. Implement has all information to inform operator that this interaction will end travel speed Auto Mode (see implement Operator's Manual).

Continued on next page

Power Zero is a trademark of Deere & Company
iTEC is a trademark of Deere & Company

TO84419,0000103 -19-23SEP13-2/2

Powershift Transmission Requirements

Before transferring control to the implement, perform all necessary steps to prepare the implement as indicated in implement operator's manual. Transfer control using AutoTrac™ resume switch or TIA™ resume button as presented in Operating Tractor Implement Automation section of this Operator's Manual.

- Implement can accelerate tractor up to set speed limit set by operator. Implement limit is determined by maximum speed setting and set speed adjusting wheel. This operator-set limit set cannot be exceeded by implement.

To transfer control to the implement, the following preconditions have to be met:

- Operator sitting on seat.
- No transmission malfunctions detected.
- Shift lever in Forward.

NOTE: When transferring control to the implement, Efficiency Manager™ mode will engage.

AutoTrac is a trademark of Deere & Company
TIA is a trademark of Deere & Company
Efficiency Manager is a trademark of Deere & Company
iTEC is a trademark of Deere & Company

To withdraw control using the shift lever:

- During driving: Shift up or down manually.
- Increasing the speed **will** end the Auto Mode. The implement has all information to inform the operator that this intervention will end the travel speed Auto Mode (see implement Operator's Manual).

NOTE: Reducing the speed is always allowed.

It is allowed to increase the limit set by the operator within 2 seconds after starting the travel speed Auto Mode.

The current travel speed can be limited by other processes (e.g. iTEC™). This limit will be observed, however, it will not be considered as an intervention by the operator.

SV81855,0000313 -19-16OCT14-1/1

AutoTrac™ Guidance Requirements

Before transferring control to implement, prepare implement as indicated in implement Operator's Manual. Transfer control using AutoTrac™ resume switch as presented in implement Operator's Manual.

Following guidelines must be met before transferring control to implement.

- Operator in seat.
- Steering system functional.

AutoTrac is a trademark of Deere & Company

- AutoTrac™ is **OFF.**
- Steering wheel stationary.
- Vehicle speed below maximum automated speed.
- Transmission not in Park.

While operating, implement has ability to automatically steer tractor.

To disengage control:

- Turn steering wheel.
- Place tractor in PARK.

TO84419,0000104 -19-23SEP13-1/1

Rear Hitch Requirements

Before transferring control to implement, prepare implement as indicated in implement Operator's Manual. Transfer control using AutoTrac™ resume switch as presented in implement Operator's Manual.

Implement can automatically control hitch depth.

Set raise limit using CommandCenter™.

IMPORTANT: Implement cannot exceed limit.

Following guidelines must be met before transferring control to implement:

- Operator in seat.
- Functional hitch system.
- Hitch control lever in neutral position.
- Hitch unlocked.

NOTE: Unless implement is authorized to adjust hitch depth when tractor is at a standstill, tractor will prevent hitch depth adjustments when at a standstill.

While operating, implement has ability to control hitch depth.

To disengage control:

- Move hitch control lever.
- Lock hitch.
- Activate fender mounted hitch switch (if equipped).

AutoTrac is a trademark of Deere & Company
CommandCenter is a trademark of Deere & Company

TO84419,0000105 -19-26JAN15-1/1

Operate Drive Strategy Requirements

While operating, implement has ability to change drive strategy mode. See IVT™/AutoPowr™ Custom Settings in Operating IVT™/AutoPowr™ Transmission section of this Operator's Manual.

Before transferring control to implement, prepare implement as indicated in implement Operator's Manual. Transfer control using AutoTrac™ resume switch as presented in implement Operator's Manual.

Following guidelines must be met before transferring control to implement:

- Operator in seat.
- Functional transmission.
- Transmission not in Park.

To disengage control:

- Manually select a drive strategy.
- Place transmission in Park.

IVT is a trademark of Deere & Company
AutoPowr is a trademark of Deere & Company
AutoTrac is a trademark of Deere & Company

TO84419,0000106 -19-31OCT13-1/1

Attaching Implement and Control System

IMPORTANT: Hydraulic Option Connector Reset Procedure:

1. **With the Ignition key in the STOP (off) position, disconnect hydraulic option connector harness from tractor.**
2. **Start tractor, wait until display comes up, stop tractor.**
3. **Connect hydraulic option connector harness to tractor.**
4. **Start tractor, optional hydraulic function should now be available.**

CAUTION: Escaping fluid under pressure can penetrate skin causing serious injury. Avoid hazard by relieving pressure before disconnecting hydraulic or other lines.

If an accident occurs, see a doctor immediately. Any fluid injected into skin must be surgically removed within a few hours or gangrene may result.

IMPORTANT: Hydraulic hoses can fail due to physical damage, kinks, age, and exposure. Check hoses regularly.

Any dirt, dust, or other foreign material can damage hydraulic system. Thoroughly clean hydraulic hoses and SCVs before connecting implement to tractor.

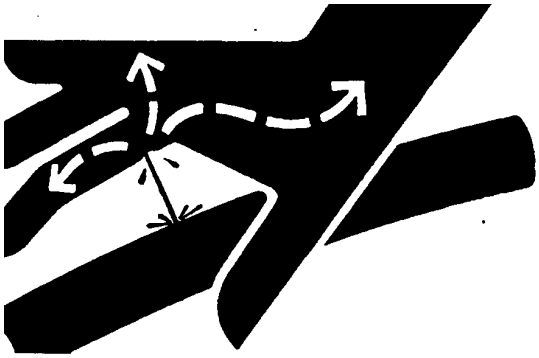
IMPORTANT: Steam cleaning or using a high pressure washer in the area around the SCV connections and electronics may damage equipment. Any pressure washer exceeding 6895 kPa (69 bar) (1000 psi) should be kept a minimum of 200 mm (8 in.) away from connections.

NOTE: Hose identification kits are available from your John Deere™ dealer.

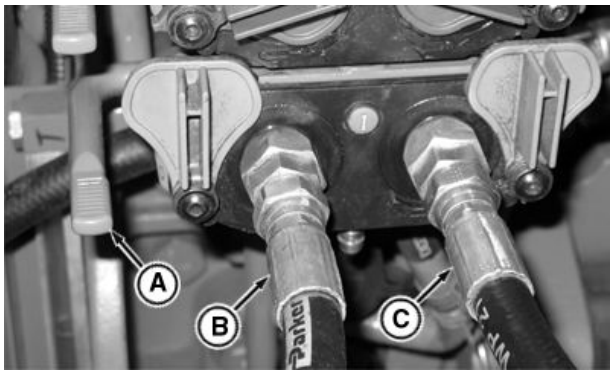
1. Identify extend (B) and retract hose (C).
2. Back tractor into position and attach implement to drawbar. Be sure that hitch pin is locked into position.

CAUTION: Prevent possible personal injury. Shut off engine, move SCV lever to neutral position and lock out SCV controls before attaching implements to prevent implement movement.

IMPORTANT: Always shut engine off before connecting/disconnecting implement position



X9811 —UN—23AUG88



RXA0110340 —UN—13SEP10

A— Coupler Lever
B— Extend Hose
C— Retract Hose

sensor. Connect/disconnect with engine running will cause system faults. Shut engine off restart to restore correct function.

3. Shut off engine.

IMPORTANT: Be sure to correctly connect remote hydraulic hoses to couplers. If hose connections are reversed, machine will not respond to system controls as expected.

Rear SCV
Extend=Left Port
Retract=Right Port

NOTE: Coupler Lever (A) is only pushed down when couplers are disconnected.

John Deere is a trademark of Deere & Company

Continued on next page

RD47322,0000514 -19-09JUL14-1/2

Connect implement hydraulic hoses. For reference see Remote Hydraulic Connections Selective Control Valves in Section 63 in this Operator's Manual.

Install implement position sensor to tractor wiring harness connector (A).

A— Wiring Harness Connector



RXA0143036 —UN—25JUN14

Wiring Harness Connector

RD47322,0000514 -19-09JUL14-2/2

Using TouchSet™ Depth Controls

CAUTION: Avoid personal injury or death. Do not attempt to install depth control sensors on implements not intended for this system. See implement operator's manual.

Moving implement control unit, sensor, connectors, or linkages, when engine is running, may cause unexpected movement. Stay clear of implement when starting engine.

Tractor selective control valve (SCV I) is used to electronically control raising, lowering, and setting of implement depth, without leaving cab.

1. Connect implement to tractor.
2. Press **SCV shortcut button on Navigation Bar or follow alternative path.**
3. Select **Menu.**
4. Select **SCV Icon.**

NOTE: When using TouchSet™, SCV must be set for feature mode. See Hydraulics and Selective Control Valves Section 60 of this Owner's Manual.

Height setting is upper setpoint implement range (B). Lower limit (depth setting) is bottom portion of implement range. Actual implement position is depicted by indicator (C).

Moving SCV 1 lever (A) into extend or retract detent position with TouchSet™ in AUTO (G) will command implements's position to established set point.

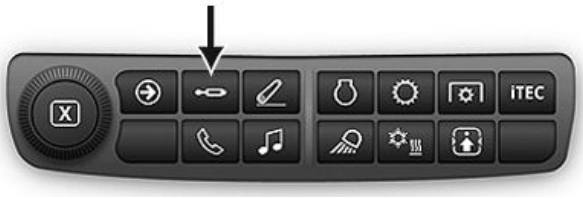
Rapidly moving SCV I lever into extend or retract region and returning to center position with TouchSet™ in AUTO will adjust implement's position up or down by a fixed amount. Repeated lever "flick" movements will be summed.

5. Using SCV I lever, lower implement to desired depth while watching implement and CommandCenter™ Implement Position (F).
6. When implement is at desired depth, press button (E).
7. Using SCV I lever, raise implement to desired height while watching implement and CommandCenter™ Implement Range (B).
8. When implement is at desired height, press button (D).



RXA0133709 —UN—16JUL13

RXA0130050 —UN—26AUG13

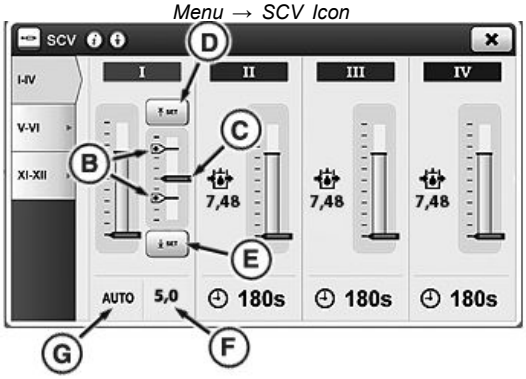


SCV Shortcut Button on Navigation Bar

RXA0127933 —UN—04SEP12



Menu → SCV Icon



SCV Main Page

RXA0136283 —UN—23OCT13

A— SCV I Control Lever
B— Implement Range
C— Implement Position Indicator
D— Upper Setpoint Button
E— Lower Setpoint Button
F— Implement Position
G— Automation Mode Status

Continued on next page

TouchSet™ Continued - Setting Flow

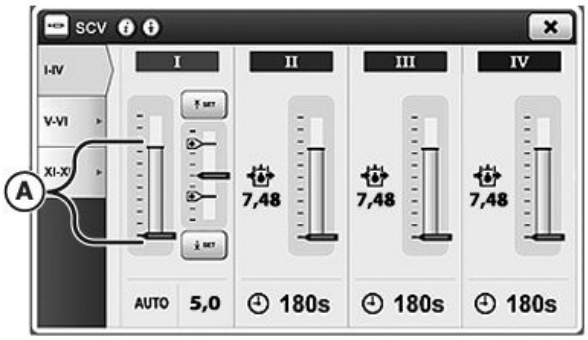
1. Touch bar graph (A) on main SCV Screen to bring up flow tab overlay. Increase flow by pushing button (B) or to decrease flow push buttons (C) to set desired flow.

NOTE: Bar graph (A) depicts detent flow and amount of detent flow will be shown in box (D). Detent time drop down box (E) cannot be adjusted when Automation Mode (F) is enabled. See Configuring Selective Control Valves - Standard Mode in Hydraulics and Selective Control Valves Section 60 of this Owner's Manual.

NOTE: Flow is displayed in increments of 0.04 beginning at 0.04 through 10 located in input box (D). Pushing (+) will increase flow by 0.04, pushing (++) increases flow by 1.00, and by pushing (-) and (- -) will decrease flow setting by same increments.

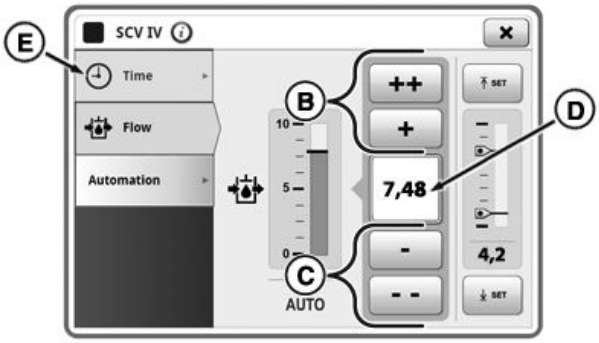
2. Press Automation tab (F) then ON or OFF toggle button (G), to activate the Automation feature.

A— Detent Flow Bar Graph
B— Increase Flow Buttons
C— Decrease Flow Buttons
D— Input Box
E— Detent Time Drop
F— Automation Tab
G— ON/OFF Toggle Button



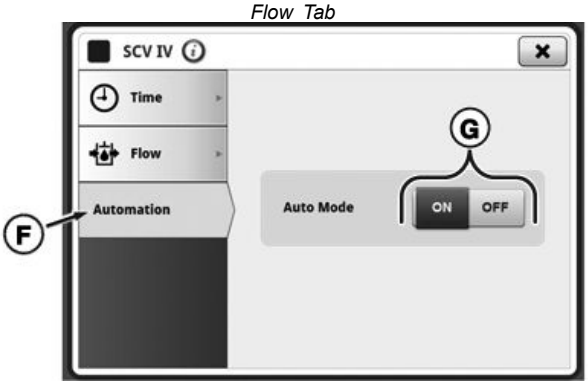
RXA0136281 —UN—23OCT13

SCV Main Page



RXA0136282 —UN—23OCT13

Flow Tab



RXA0131882 —UN—26AUG13

Automation

RD47322,0000515 -19-09JUL14-2/2

Configuring Selective Control Valves - Access to Settings

CAUTION: Do not operate front loaders in conjunction with Intelligent Total Equipment Control (iTEC™) to avoid sudden movements and possible accidents.

NOTE: The SCV Page at right has the Flow Indicators (F) appearing for reference only, the Flow Indicator will only appear if the SCV is activated and hydraulic oil is flowing. Flow Display (G) will only appear in yellow when the SCV is activated and hydraulic oil is flowing.

Feature Mode optional connector to be configured correctly.

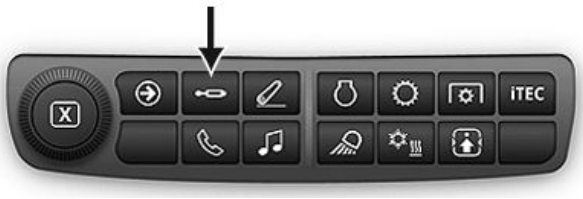
Press **SCV shortcut button on Navigation Bar or follow alternative path:**

1. Select **Menu.**
2. Select **Tractor Settings tab.**
3. Select **SCV icon.**

Each SCV can be configured to three different modes: standard mode displayed in SCV I (A), independent mode displayed in SCV II (B), or feature mode displayed in SCV III (C).

Additionally when SCV is set to float as in SCV IV (D), float symbol (E) appears.

RXA0133709 —UN—16JUL13

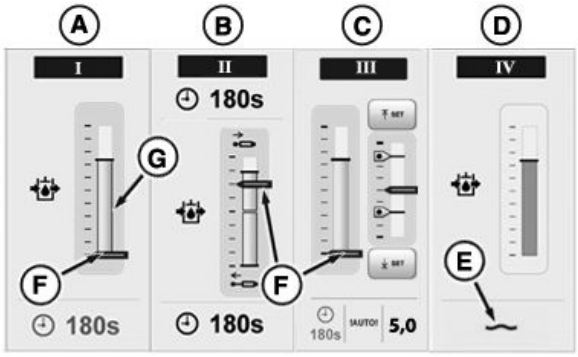


SCV Shortcut Button on Navigation Bar

RXA0128092 —UN—10SEP12



Menu → Tractor Settings Tab → SCV Icon



RXA0136280 —UN—23OCT13

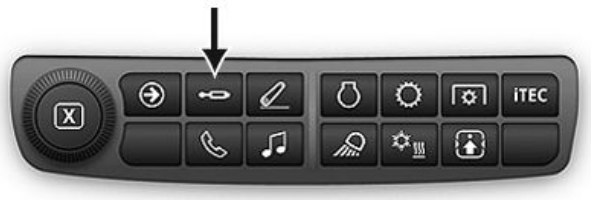
SCV Main Page

A— SCV Standard Mode
B— SCV Independent Mode
C— SCV Feature Mode
D— SCV Float Operation
E— Float Symbol
F— Flow Indicator
G— Flow Display

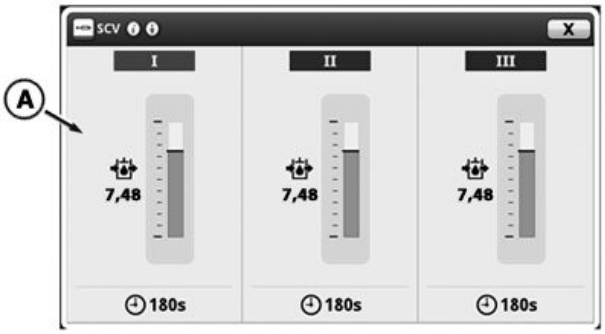
RD47322,0000332 -19-03JAN14-1/1

Configuring Selective Control Valves - Standard Mode

RXA0133709 —UN—16JUL13



SCV Shortcut Button on Navigation Bar



RXA0136278 —UN—23OCT13

SCV Main Page

SCVs in standard mode have one detent time and one detent flow settings which apply to both extend and retract.

Press **SCV shortcut button on Navigation Bar or follow alternative path.**

1. Select one of the individual SCVs (A) to access Standard Mode.
2. Select Time tab (B).

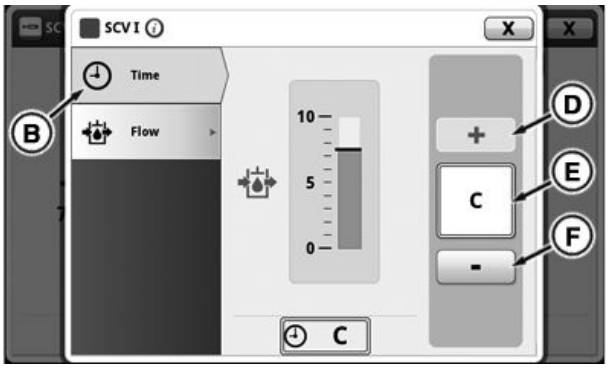
NOTE: Detent time displays amount of time in input box (E). Pressing (+) will increase time in 1 second increments up to 10, then in increments of 2 seconds up to 20, then increases every 5 seconds to 30, then by 30 seconds up to C for continuous. Pressing (-) will decrease time setting by the same increments.

3. To increase detent time press button (D) or to decrease detent press button (F). Also turning adjustment dial (G) can be used to increase or decrease detent time settings.
4. Select Flow tab (C).

NOTE: Flow is displayed in increments of 0,04 beginning at 0,04 through 10 located in input box (E). Pressing (+) will increase flow by 0,04, pressing (++) increases flow by 1,00, and by pressing (-) and (- -) will decrease flow setting by the same increments.

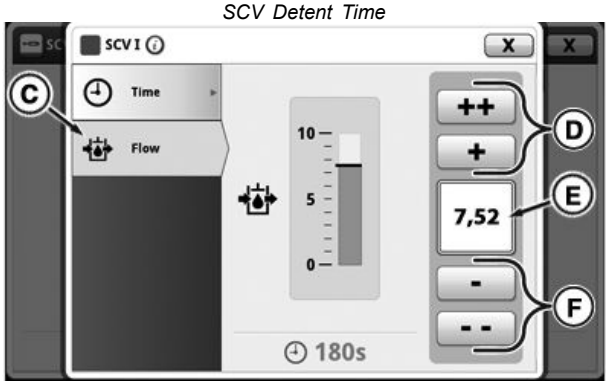
5. To increase flow press buttons (D) or to decrease press buttons (F). Also turning adjusting dial (G) can be used to increase or decrease flow settings.

A— SCV Main Page
B— Detent Time Tab
C— Detent Flow Tab
D— Increase Time/Flow buttons
E— Input Box
F— Decrease Time/Flow buttons
G— Adjusting Dial



RXA0131601 —UN—19AUG13

SCV Detent Time



RXA0136279 —UN—20NOV13

SCV Detent Flow

RXA0131231 —UN—09MAY13



Adjusting Dial on Navigation Bar

RD47322,0000333 -19-12MAY14-1/1

Activating Independent Mode

Press **SCV shortcut button on Navigation Bar.**

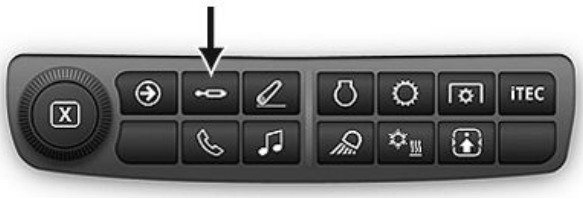
1. Press **Advanced Settings Icon.**
2. Press **Settings tab.**

Use toggles (A) to switch Independent Mode ON or OFF for each SCV.

NOTE: If Independent Mode is off, the SCV is in Standard Mode.

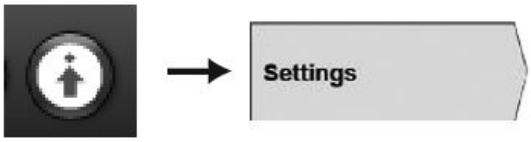
A— SCV ON/OFF Toggles **B— Scroll Bar**

RXA0133709 —UN—16JUL13

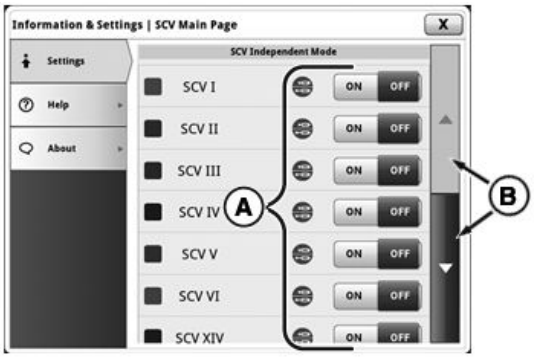


SCV Shortcut Button on Navigation Bar

RXA0130326 —UN—11JAN13



Advanced Settings Icon



RXA0128422 —UN—22AUG13

Information and Settings Page

RD47322,0000334 -19-03JAN14-1/1

Configuring Selective Control Valves - Independent Mode

SCVs in Independent Mode have two detent flow and two detent time settings, one for extend and one for retract.

Press **SCV shortcut button on Navigation Bar.**

1. Select an SCV that is in Independent Mode.
2. Select Detent Time Retract tab (A) or Detent Time Extend tab (B).

NOTE: Detent time displays amount of time in input box (F). Pressing (+) will increase time in 1 second increments up to 10, then increments of every 2 seconds up to 20, then increases every 5 seconds to 30, then by 30 seconds up to C for continuous and by pressing (-) will decrease time setting by the same increments.

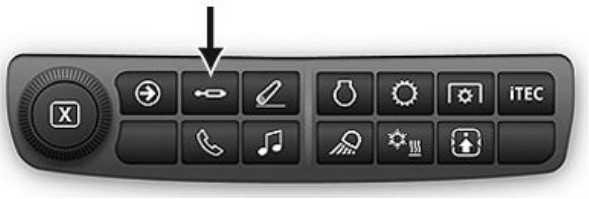
3. To increase detent time press buttons (E) or to decrease press buttons (G). Also adjusting dial (H) can be used to increase or decrease desired detent time setting.
4. Select Detent Flow Retract tab (C) or Detent Flow Extend tab (D).

NOTE: Flow is displayed in increments of 0,04 beginning at 0,04 through 10 located in input box (F). Pressing (+) will increase flow by 0,04, pressing (++) increases flow by 1,00, and by pressing (-) and (- -) will decrease flow setting by the same increments.

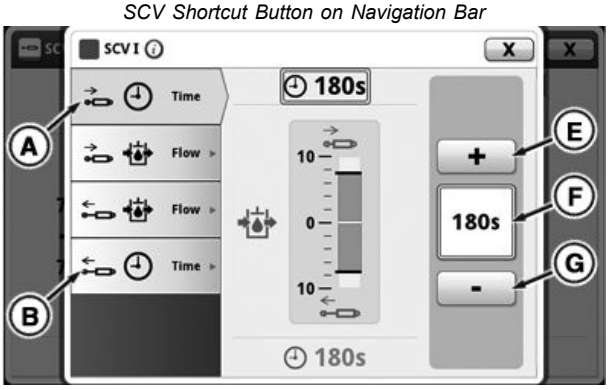
5. To increase flow press buttons (E) or to decrease press buttons (G). Also adjusting dial (H) can be used to increase or decrease flow setting.

A— Retract Detent Time Tab
B— Extend Detent Time Tab
C— Retract Detent Flow Tab
D— Extend Detent Flow Tab
E— Increase Time/Flow Buttons
F— Input Box
G— Decrease Time/Flow Buttons
H— Adjustment Dial

RXA0133709 —UN—16JUL13

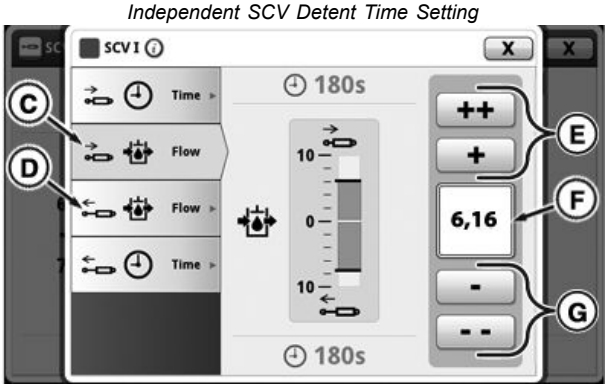


SCV Shortcut Button on Navigation Bar



RXA0131827 —UN—19AUG13

Independent SCV Detent Time Setting



RXA0136284 —UN—23OCT13

Independent SCV Detent Flow Setting

RXA0131232 —UN—09MAY13



Adjustment Dial on Navigation Bar

RD47322,0000335 -19-03JAN14-1/1

Configuring Selective Control Valves - Feature Mode

NOTE: Feature mode requires an optional connector. To use feature mode, connect implement to tractor before the key switch has been turned on. When connected through ISO Bus or implement connector, SCV(s) automatically enter feature mode. SCV page with feature option is displayed for selected SCV(s). Tractor also has Class 3 capabilities.

Following are available feature modes:

- *TouchSet™ depth control*
- *AccuDepth™ control*
- *ISOBUS control*
- *Laser Scraper*
- *Class 3 Capabilities*

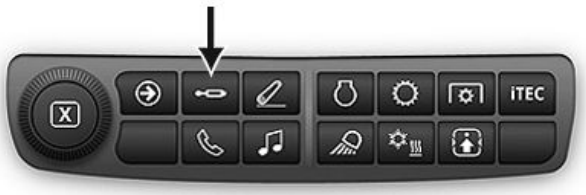
1. Connect tractor to implement.
2. Press **SCV Shortcut Button on Navigation Bar**
3. Select Feature SCV Module.
4. Select Detent Flow tab (A).
5. To increase flow press (+ or ++) button (D) or to decrease press (- or - -) button (F). Also turning adjusting dial (G) can be used to set desired flow setting.

NOTE: Flow is displayed in increments of 0,04 beginning at 0,04 through 10 located in input box (E). Pressing (+) will increase flow by 0,04, pressing (++) increases flow by 1,00, and by pressing (-) and (- -) will decrease flow setting by the same increments.

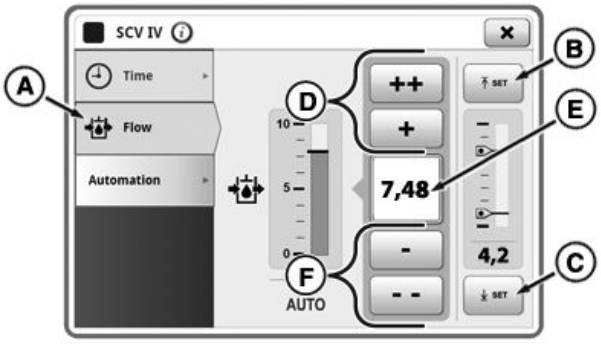
NOTE: Only TouchSet™ depth control uses upper and lower setpoint buttons (B) and (C).

6. Select Upper Setpoint button (B) to set upper setpoint to current position.
7. Select Lower Setpoint button (C) to set lower setpoint to current position.

RXA0133709 —UN—16JUL13



SCV Shortcut Button on Navigation Bar



RXA0136277 —UN—23OCT13

Feature SCV Settings Page



RXA0131233 —UN—09MAY13

Adjusting Dial on Navigation Bar

A—Detent Flow Tab
B—Upper Setpoint button
C—Lower Setpoint button
D—Increase Flow
E—Input Box
F—Decrease Flow
G—Adjustment Dial

RD47322,0000336 -19-03JAN14-1/1

Total Rear SCV Flow

1. Check flow setting for each function independently (see implement operator's manual Specifications section to determine correct motor flow settings).

   Following may cause pump to operate at high pressure:

   - Down pressure systems (drills, air seeders, disks) can be considered to be zero flow demand after completion of raise or lower cycle (see Implement Connection Example 1, Pressure Control Valve Applications (Grain Drills or Air Seeders with Constant Down-Pressure System) in Hydraulic Connections section).
   - Auxiliary flow control valves (vacuum flow control) - Open implement flow control valve and adjust tractor flow rate to desired setting (see Implement Connection Example 4, Planter with Vacuum Motor and Return Line to SCV Using Motor Return Tip in Hydraulic Connections section).
   - Cylinder functions where line or orifice restrictions control flow - Adjust tractor flow control to point where function speed begins to decrease.
   - Auxiliary control valves (implement stack valves, row guidance) adjust tractor flow control to lowest setting resulting in correct operation.

2. Determine total flow demand by adding flow requirements for each SCV using settings determined in Step 1. Include hitch and power beyond flow requirements, if applicable (refer to chart for correct settings).

3. Determine if flow demand exceeds available pump flow (refer to chart for available pump flow):

   - Flow demand is less than available pump flow but has performance concern (see your John Deere™ dealer).
   - Flow demand exceeds pump flow:
     - Increase engine RPM if possible.
     - Decrease flow setting on noncritical functions.
     - Convert implement open center valves to closed center operation, if equipped.

NOTE: Flow measurements made without steering or hitch being used.

SCV FLOW (Approximate)			
Engine rpm	**Pump Flow (48 cm^3 Pump) L/min (gpm)**	**Pump Flow (63 cm^3 Pump) L/min (gpm)**	**Pump Flow (85 cm^3 Pump) L/min (gpm)**
800	42.4 (11.2)	52 (13.7)	75 (19.8)
1500	85.8 (22.6)	109 (28.8)	152 (40.2)
1700	98.3 (26)	125 (33.0)	174 (46.0)
1900	110.7 (29.2)	142 (37.5)	196 (51.8)
2100	123.1 (32.5)	158 (41.7)	218 (57.6)
2200	129.3 (34.1)	166 (43.9)	229 (60.5)

SCV FLOW OUTPUT (Approximate)[a]	
SCV Flow Settings	**L/min (gpm)**
0.1[b]	—
1.0	1.9 (0.5)[c]
2.0	6.1 (1.6)
3.0	13.6 (3.6)
4.0	20.4 (5.4)
5.0	28.0 (7.4)
6.0	40.9 (10.8)
7.0	62.1 (16.4)
8.0	81.4 (21.5)
9.0	107.1 (28.3)
10.0	132 (35)

[a] At 2000 rpm and 454 kg (1000 lbs) of load at point of use.
[b] 0.1 = Minimum Flow Setting
[c] Observed under no load.

Front Hitch Flow		
Hitch Cylinder	**Flow**	
Diameter (mm)	L/min	gpm
90/90	61	16.1

Rear Hitch Flow		
Hitch Cylinder	**Flow**	
Diameter (mm)	L/min	gpm
90/90	71	18.7
100/100	88	23.2
100/115	102	26.9

RD47322,000023B -19-17FEB15-1/1

Using Six Position SCV Control Levers

CAUTION: To avoid personal injury, ensure that hoses are not reversed. If hoses are reversed, cylinder extends when it should retract.

Prevent possible personal injury. Shut off engine, move SCV control lever to neutral position and press SCV Control Lever Lock (J) before attaching implements to prevent unintentional implement movement.

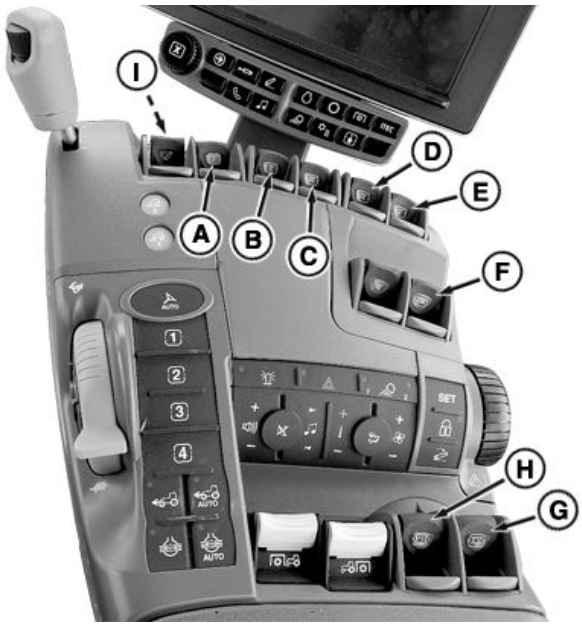
NOTE: While SCV control lever lock is engaged, External Switches for the SCV's (rear fender) and Front Hitch (front hitch casting) as well as the Rear Hitch Lever on the CommmandARM™ can still be used to command flow.

- **SCV Control Lever Lock (J):** Locks out control inputs lock functions on SCV levers (A-H) and front hitch lever (not shown - if equipped) only.

  NOTE: CommandARM™ configuration can vary depending on options.

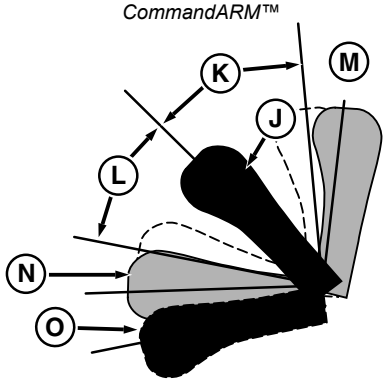
  Neutral and Float are positions SCV lever remains in without being held.

- **Neutral (K):** Lever returns to center position when released, except in float position.
- **Extend (L):** (Rearward between Neutral and Extend Detent position) Operator controlled variable flow to extend cylinder, proportional to lever movement and maximum flow settings. Flow stops when released.
- **Retract (M):** (Forward between Neutral and Retract Detent position) Variable flow to retract cylinder, proportional to lever movement and flow settings; flow stops when released.
- **Extend Detent Position (N):** (Rearward to "click" position) Timed flow to extend cylinder, based on time and flow detent settings. Lever returns to neutral when released, but flow continues for detent time set by operator. See Configure SCV, Standard Mode, and Independent Mode in this section of this Operator's Manual.
- **Retract Detent Position (O):** (Forward to "click" position) Timed flow to retract cylinder, based on detent time setting and rate set by flow rate control (see Adjusting Timed Detent and Adjusting SCV Flow Rate in this section). Returns to neutral when released.
- **Float (P):** (Forward and down into locked position) Valve opens to allow free flow of oil from head to rod end of implement hydraulic cylinder. Cylinder moves freely to follow ground contour. Float can be used to allow hydraulic motors to coast when shutting down implement. Pull up and out of locked position to disengage.



RXA0149597 —UN—07AUG15

CommandARM™



RXA0149600 —UN—10AUG15

Armrest Controls — Six Position SCV Levers

A— SCV I
B— SCV II
C— SCV III
D— SCV IV
E— SCV V
F— SCV VI
G— SCV XI
H— SCV XII
I— SCV Control Lever Lock
J— SCV Lever (Neutral Position)
K— Extend Range
L— Retract Range
M— Extend Detent Position
N— Retract Detent Position
O— Float

Push SCV lever cover (I) forward when SCV is not in use.

NOTE: To relieve hydraulic pressure in implement, move SCV control lever to float position (P), while engine is running.

RD47322,000023C -19-07AUG15-1/1

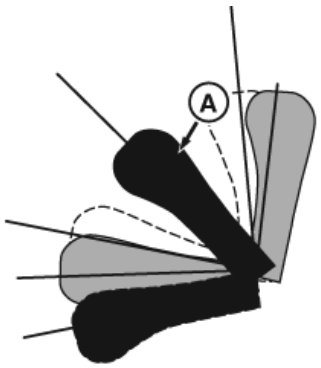
SCV Control Lever—Neutral Position

Neutral position (A) allows flow to continue until timed detent expires. If no timed detent is commanded, then flow is turned off when lever moves to Neutral.

Levers in extend or retract positions automatically return to neutral when released. Float position remains detented.

SCV control levers should be in neutral position at tractor startup. Any position other than neutral is ignored until lever is cycled to neutral after engine startup.

A— Neutral Position



RXA0135070 —UN—20AUG13

SCV Control Lever - (Neutral)

RD47322,000023D -19-29APR15-1/1

SCV Control Lever—Extend and Extend Detent Position

Extend Position

Pull lever (A) rearward of Neutral. This extends the cylinder at a rate that varies with how far rearward the lever is pulled.

Pull lever slightly rearward to Extend the remote cylinder slowly.

Pull lever rearward against the first detent notch to Extend the remote cylinder at maximum rate. (See Configure SCV - Standard Mode and - Independent Mode in this section of this Operator's Manual) Lever returns to Neutral and flow stops when released.

NOTE: Time Setting is ignored in the retract position.

Extend Detent Position

Pull lever (A) rearward to “click” detent position and release. Lever returns to Neutral position, but flow continues at maximum rate. See Configure SCV - Standard Mode and - Independent Mode in this section of this Operator's Manual.

Flow timing begins when the lever returns to center after being in the detent position for less than 0.8 seconds. SCV flow time should be adjusted so cylinder is fully Extended when time has elapsed.



RXA0129323 —UN—22JUL13

SCV Control Lever Extend and Extend Detent

A— Extend Position (Pull Rearward)

Detent can be canceled by moving SCV lever slightly forward or rearward from Neutral after lever has returned to Neutral or by holding lever in Extend position for more than 0.8 seconds after lever has entered detent position.

NOTE: Detent positions are ignored at start up until lever is cycled to NEUTRAL.

RD47322,000023E -19-29APR15-1/1

SCV Control Lever—Retract and Retract Detent Position

Retract Position

Push lever (A) forward of Neutral. This retracts cylinder at a rate that varies with how far forward the lever is pushed.

Push the lever slightly forward to Retract the remote cylinder slowly.

Push the lever forward against the first detent notch to Retract the remote cylinder at maximum rate. (See Configure SCV - Standard Mode and - Independent Mode in this section of this Operator's Manual.) Lever returns to Neutral and flow stops when released.

NOTE: Time setting is ignored in Retract position.

Retract Detent Position

Push lever (A) forward to "click" detent position and release. Lever returns to Neutral position, but flow continues at maximum rate if detent time setting is non-zero. (See Configure SCV - Standard Mode and - Independent Mode in this section of this Operator's Manual.)

Flow timing begins when the lever returns to center after being in the detent position for less than 0.8 seconds. SCV flow time should be adjusted so cylinder is fully retracted when time has elapsed.



RXA0129324 —UN—22JUL13

SCV Control Lever Retract and Retract Detent

A— Retract Position (Push Forward)

Detent can be canceled by moving SCV lever slightly forward or rearward from Neutral after lever has returned to Neutral or by holding lever in Retract position for more than 0.8 seconds after lever entered detent position.

NOTE: Detent positions are ignored at start up until lever is cycled to NEUTRAL.

RD47322,000023F -19-29APR15-1/1

SCV Control Lever—Float Position

Push SCV control lever (A) all the way forward to lock the lever in Float position. Lever and SCV remains in Float position until lever is manually returned to Neutral. Cylinder is free to Extend or Retract, letting implement follow ground contour.

NOTE: Time setting is ignored in Float position.

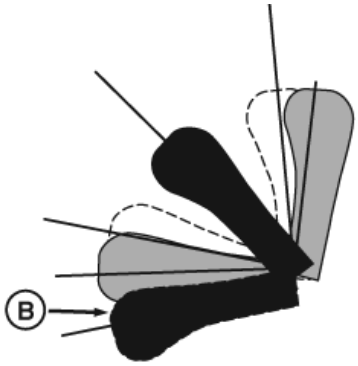
If lever is in Float position (B) at engine startup, Float function is disabled (C) until lever is cycled to Neutral.

Cycle cylinder fully in both directions after being used in the Float position to insure cylinder is filled with oil.

A— Float position (Push Down)
B— Float Position
C— Disabled Float Function and SCV Lockout

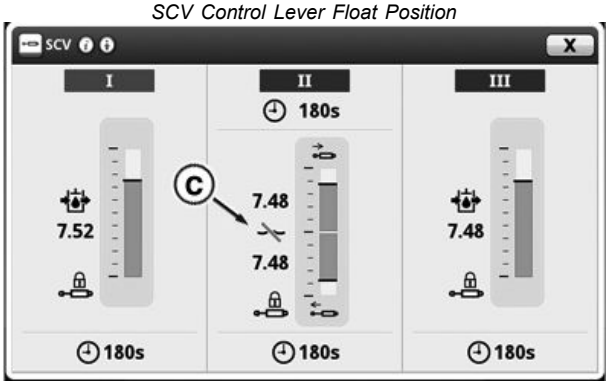


RXA0129325 —UN—22JUL13



RXA0135073 —UN—20AUG13

SCV Control Lever Float Position



RXA0131855 —UN—19AUG13

SCV Float and Lockout

RD47322,0000240 -19-29APR15-1/1

Operator Presence Sensor

⚠ CAUTION: SCV does not disengage when operator leaves seat.

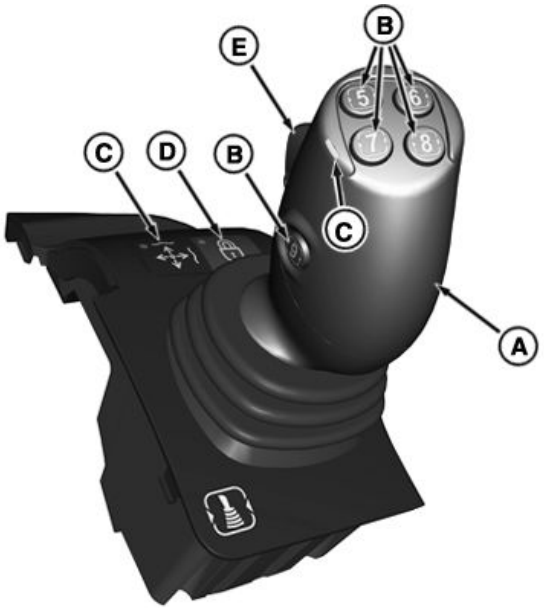
Audible warning sounds if operator leaves seat with transmission in PARK or Neutral and with SCV operating in Continuous or Timed Detent modes. After 5 seconds, the audible warning stops.

RD47322,0000241 -19-29APR15-1/1

CommandARM™ Joystick (If Equipped)

Operating SCVs With Joystick

- The Control Setup Icon appears around Controls that may be setup to control other functions. Review the Controls Setup page to verify the function of each control.
- The axes of the joystick (A) operates combinations of programmed front or rear SCVs functions.
- Tractors equipped with either the CommandQuad™ or the e23™ transmissions can select gear upshift (button 5) (B) and downshift (button 7) (B) for their joystick buttons on top of the lever.
- Joystick activation indicator light (C) is ON when joystick is active.
- Joystick lock (D) is used to lock out electro-hydraulic functions for SCV assigned to Joystick.
- Rocker switch (E) operates combinations of programmed SCV functions.
- The operator can assign an SCV to a joystick axis but still be able to switch between an SCV control lever and the joystick control lever.
- The joystick overrides the SCV control lever of the SCV assigned to its axes when the joystick is enabled.
- **Move joystick to the right twice in brief succession beyond the point of resistance and hold it there. This activates the bucket shake function.** (Only when joystick loader mode setting is “ON”.)
- Push the joystick all the way forward and engage in detent to activate the float position. The joystick lever remains in the detent until it is pulled back. (Detent does not function in loader mode.)
- In Loader mode, time detents for SCVs assigned to the joystick axes cannot be adjusted, **only flow detents can be adjusted for those SCVs.**



CommandARM™ Joystick

RXA0133735 —UN—17JUL13

RXA0133920 —UN—11NOV13



Controls Setup Icon

A— Joystick (If Equipped)
B— Joystick Buttons
C— Joystick Activation Indicator Light
D— Joystick Lock
E— Joystick Rocker Switch

Continued on next page

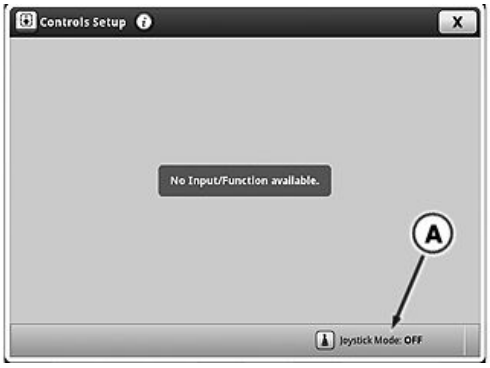
RD47322,0000337 -19-29APR15-1/5

Joystick Controls Custom Setup

RXA0133715 —UN—16JUL13



Controls Setup Shortcut Button on Navigation Bar



RXA0137972 —UN—04FEB14

Controls Setup Page

Press **Controls Setup Shortcut Button on Navigation Bar:**

1. Press **Joystick Mode (A).**
2. Select Tractor Mode (B), then confirm using OK button (C).
3. Select Front/Rear Mode (D) or Mid/Rear Mode (E), then confirm using the OK button (F).

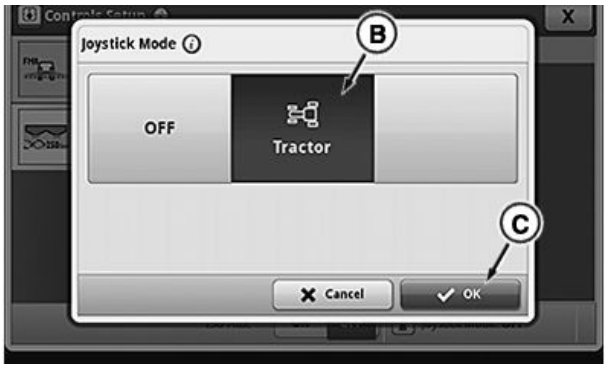
In Tractor Mode, only SCVs I to VI can be activated.

In Front/Rear Mode, only SCVs I to VI and front hitch, XIV and XV can be activated.

In Mid/Rear Mode, only SCVs I to VI and X to XIII can be activated.

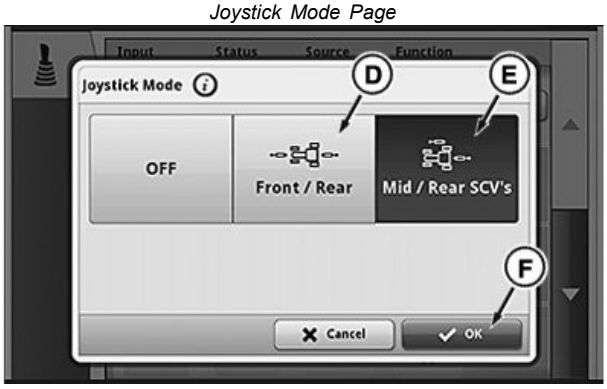
NOTE: Only one mode can be activated at a time.

A— Joystick Mode
B— Tractor Mode
C— OK Button
D— Front/Rear Mode
E— Mid/Rear Mode
F— OK Button



RXA0138010 —UN—18DEC13

Joystick Mode Page

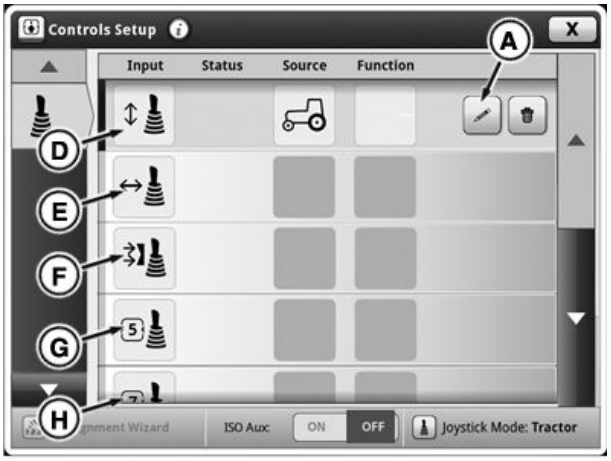


RXA0138011 —UN—18DEC13

Joystick Mode Page

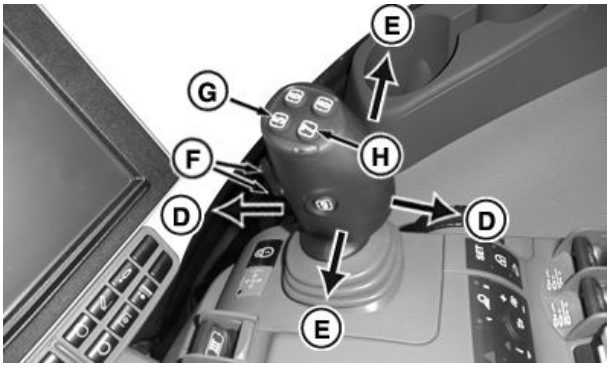
Continued on next page

RD47322,0000337 -19-29APR15-2/5



RXA0133929 —UN—20JAN14

Controls Setup Page



RXA0133467 —UN—20JAN14

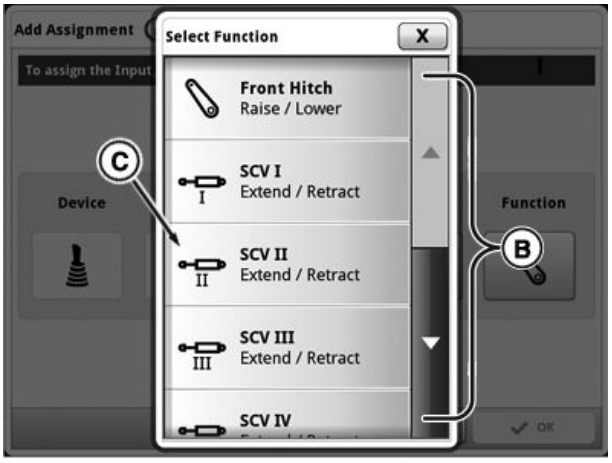
Joystick

NOTE: Joystick buttons 5 (G) and 7 (H) are preassigned from the factory for up and downshifting respectively with the CommandQuad™ and the e23™ transmission.

1. Select desired Custom Assignments buttons (D through F) to change programmed function on joystick.
2. Press edit function button (A).
3. Select from list of functions (B) tractor is equipped with and press desired function to assign.
4. Press close out button (C) to go back to controls setup page.

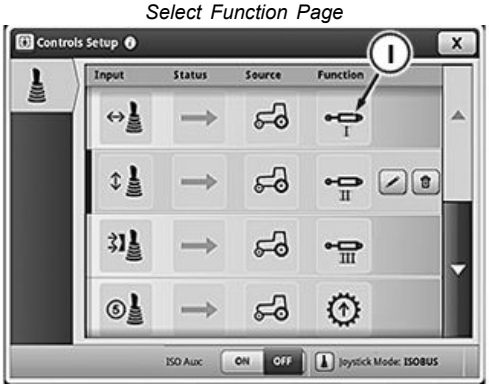
New programmed function (I) appears in function column across from custom assignment button.

A— Edit Function Button
B— Available Functions List
C— Close Out Button
D— Fore/Aft Axis
E— Left/Right Axis
F— Rocker Switch
G— Joystick Button 5
H— Joystick Button 7



RXA0133468 —UN—20JAN14

Select Function Page



RXA0138492 —UN—16JUN14

Controls Setup Page

Continued on next page

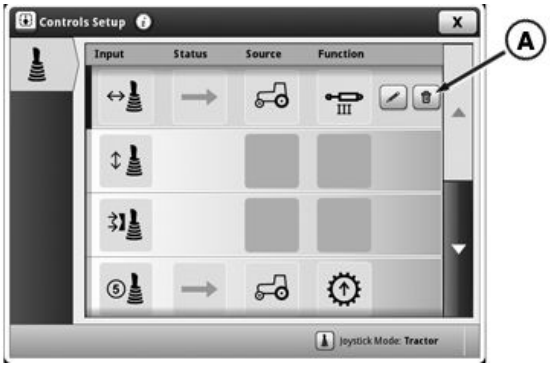
RD47322,0000337 -19-29APR15-3/5

Removing Custom Assignments

To change or remove the SCV that is assigned, press joystick assignment delete button (A) and then press confirm assignment removal OK button (B).

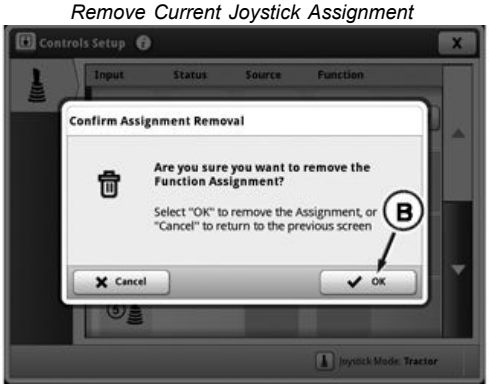
A— Joystick Assignment Delete Button

B— Confirm Assignment Removal OK Button



RXA0138964 —UN—27MAY14

Remove Current Joystick Assignment



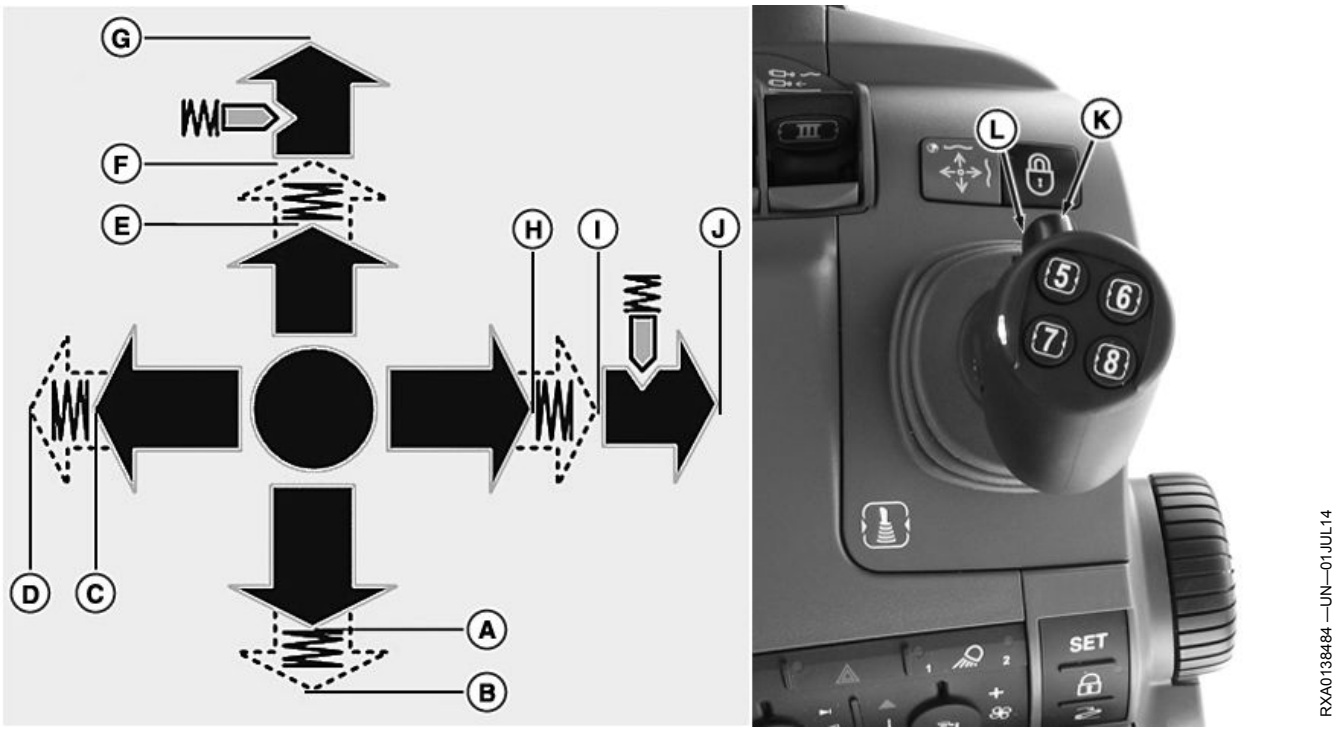
RXA0138963 —UN—27MAY14

Confirm Joystick Assignment Removal

Continued on next page

RD47322,0000337 -19-29APR15-4/5

Layout and Joystick Lever Functions



Joystick Movements

NOTE: The description of the joystick movements are made with the assumption that the hoses are connected so that extend is pulling the joystick back, retract is pushing the joystick forward. Moving the joystick to the left is extend and retract is to the right.

A	Pull joystick back to extend.
B	Pull joystick back **beyond** the point of detectable resistance to extend detent.
C	Move joystick to the left to extend.
D	Move joystick to the left **beyond** the point of detectable resistance to extend detent.
E	Push joystick forward to retract.
F	Push joystick forward **beyond** the point of detectable resistance to retract detent.
G	Push joystick all the way forward and engage in detent to activate the float position.
H	Move joystick to the right to retract.
I	Move joystick to the right **beyond** the point of detectable resistance to retract detent. Move the multi-function lever to the right twice in brief succession beyond the point of resistance and hold it there. This activates the bucket shake function.
J	Move joystick all the way to the right and engage in detent to activate the float position.
K	Move rocker switch up **beyond** the point of detectable resistance for extend detent.
L	Move rocker switch down **beyond** the point of detectable resistance for retract detent.

Operator can set any SCV on any axis or rocker switch of the joystick.

NOTE: Some functions shown may not be available depending upon what options the tractor is equipped with.

RD47322,0000337 -19-29APR15-5/5

SCV and Joystick Flow Response Setting

SCV and Joystick response can be set to three different response curves: Linear, Progressive and Combination.

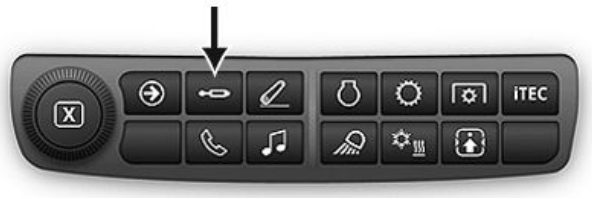
- **Linear** means that the flow rate of the SCV corresponds to the distance traveled by the SCV control lever / joystick lever.
- **Progressive** means that initially the flow rate of the SCV is less than that traveled by the SCV control lever / joystick lever (giving a more sensitive start to the movement).
- **Combination** is an intermediate stage between the two settings described above.

Using scroll bar (A), scroll down to flow adjustment sensitivity and press either SCV control lever (B) or joystick response (C) to adjust SCV response or joystick response.

Then choose either Linear (D), Combination (E) or Progressive (F), then confirm using the OK button (G).

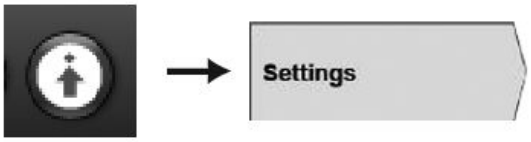
A— Scroll Bar
B— SCV Control Lever Response Setting button
C— Joystick Response Setting button
D— Linear Response button
E— Combination Response button
F— Progressive Response button
G— OK button

RXA0133709 —UN—16JUL13

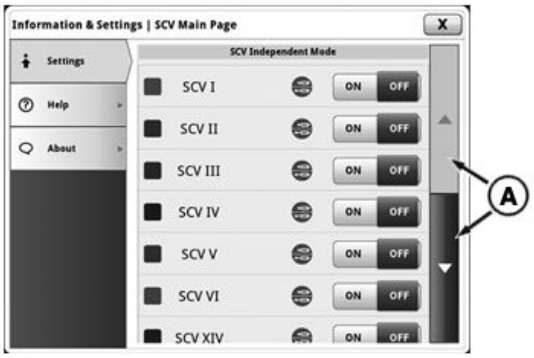


SCV Shortcut Button on Navigation Bar

RXA0130326 —UN—11JAN13

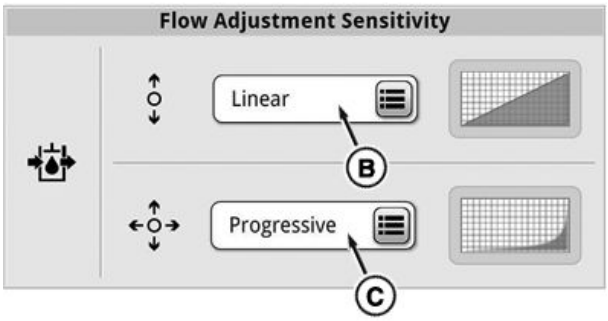


Advanced Settings Icon



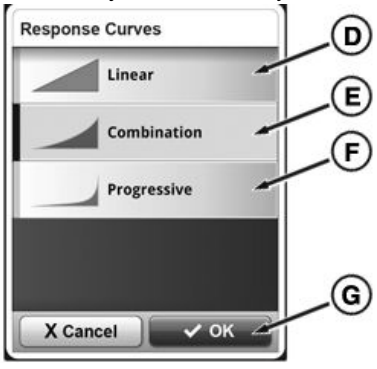
RXA0137874 —UN—18DEC13

Information and Settings Page



RXA0137875 —UN—18DEC13

Flow Adjustment Sensitivity



RXA0137876 —UN—18DEC13

Response Curves

RD47322,0000511 -19-29APR15-1/1

Laser Scraper—for Scrapers Equipped with Scraper Control Unit

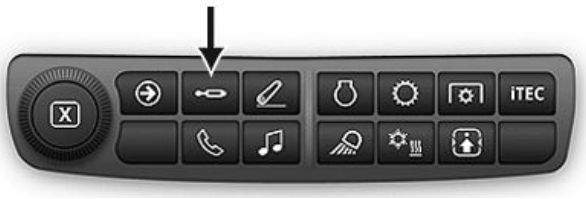
NOTE: Used primarily in areas requiring automated laser guidance system for scraper applications.

Press **SCV shortcut button on Navigation Bar or follow alternative path:**

1. Connect tractor to implement.
2. Select **Menu Button.**
3. Select **Tractor Settings tab.**
4. Select **SCV Button.**
5. Select Feature SCV Mode.
6. Select Detent Flow tab (A).
7. To increase flow press button (D) or to decrease press button (F). Also turning adjusting wheel (G) can be used to obtain desired flow setting.
8. Select Upper Setpoint button (B) to set upper setpoint to current position.
9. Select Lower Setpoint button (C) to set lower setpoint to current position.

A— Detent Flow Tab
B— Upper Setpoint Button
C— Lower Setpoint Button
D— Increase Flow
E— Input Box
F— Decrease Flow
G— Adjusting Dial

RXA0133709 —UN—16JUL13

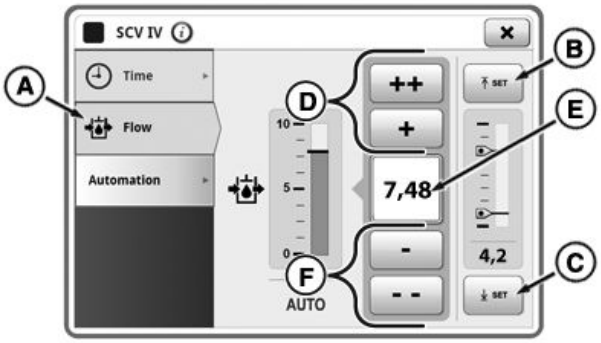


SCV Shortcut Button on Navigation Bar

RXA0128092 —UN—10SEP12



Menu Button → Tractor Settings Tab → SCV Button



RXA0136288 —UN—23OCT13

Feature SCV Settings Page



RXA0131233 —UN—09MAY13

Adjusting Dial on Navigation Bar

Continued on next page

RD47322,0000262 -19-03JAN14-1/2

CAUTION: Avoid personal injury or death. Moving scraper control unit, connectors, or linkages, when engine is running, may cause unexpected movement. Stay clear of implement when starting engine.

Tractor selective control valves (SCV I and/or SCV III) are used to electronically control raising, lowering, and setting of implement depth, without leaving the cab.

Control lever (A) is used to manually control SCV I and activate an automatic scraper control system.

Control lever (B) is used to manually control SCV III and activate a second automatic scraper control system.

A— SCV I Control Lever **B— SCV III Control Lever**



RXA0136915 —UN—13NOV13

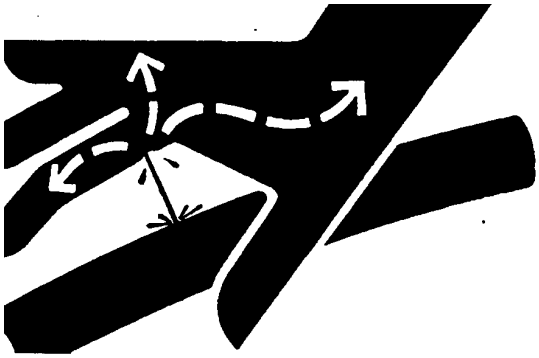
SCV Switches

RD47322,0000262 -19-03JAN14-2/2

Connect Rear Hydraulic Hoses

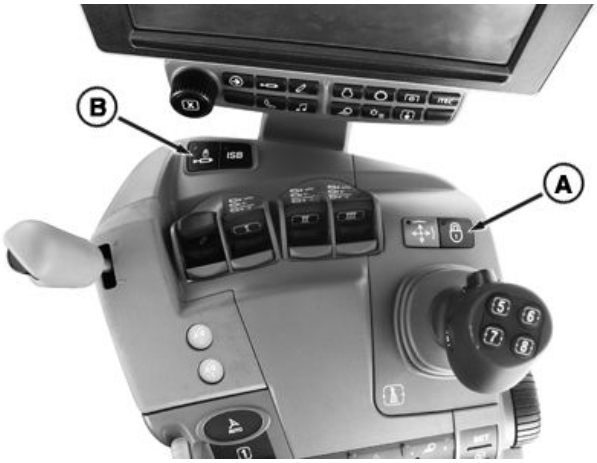
CAUTION: Escaping fluid under pressure can penetrate the skin causing serious injury. Avoid the hazard by relieving pressure before disconnecting hydraulic or other lines.

If an accident occurs, see a doctor immediately. Any fluid injected into the skin must be surgically removed within a few hours or gangrene can result.



X9811 —UN—23AUG88

CAUTION: Engage Joystick Lock (A) (If Equipped) and SCV Control Lever Lock (B) before attaching or detaching hydraulic hoses to prevent unintentional implement movement and possible personal injury.



RXA0126745 —UN—26AUG13

Joystick, SCV Control Lever Locks

IMPORTANT: Hydraulic hoses can fail due to physical damage, kinks, age, and exposure. Check hoses regularly.

Any dirt, dust, or other foreign material can damage hydraulic system. Thoroughly clean hydraulic hoses and SCVs before connecting implement to tractor.

IMPORTANT: Steam cleaning or using a high pressure washer in the area around the SCV connections and electronics can damage equipment. Any pressure washer exceeding 6895 kPa (69 bar) (1000 psi) should be kept a minimum of 200 mm (8 in.) away from connections.

NOTE: See Attaching Implement and Control System in TouchSet™ Depth Control Section of this Operator's Manual.

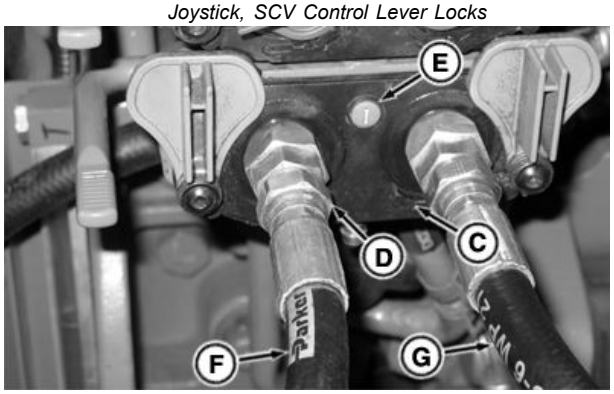
Connect Hydraulic Hoses

1. Lock out SCV controls. On CommandARM press:
   - Joystick—Press Joystick Lock (A).
   - CommandARM™—Press SCV Control lever Lock (B).
2. Clean dust covers. Rotate dust covers up to expose couplers.

IMPORTANT: Correctly connect remote hydraulic hoses to couplers. If hose connections are reversed, machine does not respond to system controls as expected. Mid-mount SCV ports are arranged opposite of front hitch and rear SCV stack ports.

Rear SCV or Front Hitch	Mid-Mount SCV
Extend=Left Port	Extend=Right Port
Retract=Right Port	Retract=Left Port

NOTE: Remote cylinder couplers are designated I through VI (E) with I being the bottom coupler.



RXA0122134 —UN—09NOV11

Couplers with High Pressure Relief Levers

A— Joystick Lock
B— SCV Control Lever Lock
C— Retract Icon
D— Extend Icon
E— SCV Identifier Number
F— Extend Hose
G— Retract Hose

3. Check if symbols on coupler identification plate (C) or (D), indicating cylinder movement, match cylinder travel direction.
4. When using SCV with single-acting cylinders, plug hose into extend side of coupler (F). When connecting double-acting cylinders, extend side is left side and retract is right side (G).
5. Push hoses firmly into couplers.

Continued on next page

RD47322,0000198 -19-29APR15-1/2

NOTE: SCVs are Color coded hoses for easier identification. Hose identification kits are available from your John Deere™ dealer.

SCV Numbers And Corresponding Colors	
SCV Number	**Color**
SCV I	Green
SCV II	Blue
SCV III	Brown
SCV IV	Black
SCV V	Violet
SCV VI	Gray

TouchSet is a trademark of Deere & Company
John Deere is a trademark of Deere & Company

RD47322,0000198 -19-29APR15-2/2

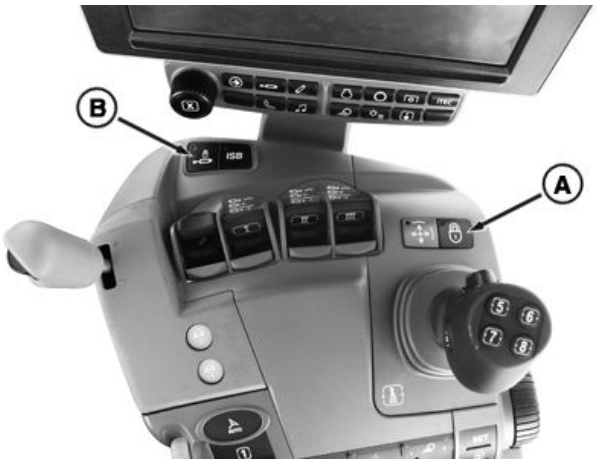
Disconnect Rear Hydraulic Hoses

CAUTION: Prevent possible personal injury. Lock out SCV controls before detaching implements to prevent implement movement.

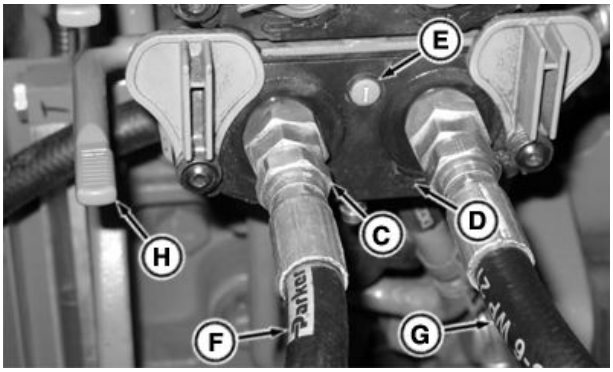
1. Lower implement to ground before disconnecting hydraulic hoses.
2. Relieve hydraulic pressure in hoses by moving SCV control lever or joystick (If Equipped) to float position for a few seconds while engine is running.
3. Lock out SCV controls:
   - Joystick — Press Joystick lock (A).
   - CommandARM™ SCV — Press SCV control lever lock (B).

IMPORTANT: Forcing or jerking SCV hoses when disconnecting can damage hose ends and SCV couplers. If hoses cannot be removed easily, relieve pressure in hydraulic system by moving SCV lever to float position for a few seconds with engine running and using handle (H) to extract hoses.

4. Push SCV hose release lever (H) down slightly to relieve any pressure buildup of trapped oil before removing hoses.
5. Pull hoses **straight** out from couplers.
6. Clean coupler area before closing dust cover.
7. Rotate dust covers down to cover couplers.



RXA0126745 —UN—26AUG13



RXA0131030 —UN—19FEB13

Couplers with High Pressure Relief Levers

A— Joystick - Joystick lock
B— CommandARM™ - SCV control lever Lock
C— Extend Icon
D— Retract Icon
E— SCV Identifier Number
F— Extend Hose
G— Retract Hose
H— SCV Hose Release Lever

RD47322,0000199 -19-29APR15-1/1

Connect or Disconnect Hydraulic Hoses - Mid-Mount or Front SCVs (If Equipped)

CAUTION: Escaping fluid under pressure can penetrate the skin causing serious injury. Avoid the hazard by relieving pressure before disconnecting hydraulic or other lines.

If an accident occurs, see a doctor immediately. Any fluid injected into the skin must be surgically removed within a few hours or gangrene can result.

Prevent possible personal injury. Shut off engine, move SCV lever to Neutral position and lock out SCV controls before attaching implements to prevent implement movement.

Engage SCV control lever lock and Joystick lock [(A) and (B)] before attaching or detaching hydraulic hoses to prevent equipment and possible personal injury.

IMPORTANT: Hydraulic hoses can fail due to physical damage, kinks, age, and exposure. Check hoses regularly.

Any dirt, dust, or other foreign material can damage hydraulic system. Thoroughly clean hydraulic hoses and SCVs before connecting implement to tractor.

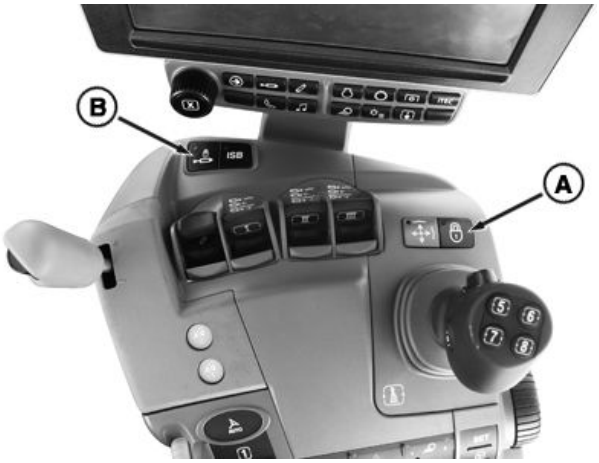
Steam cleaning or using a high pressure washer in the area around the SCV connections and electronics can damage equipment. Any pressure washer exceeding 6895 kPa (69 bar) (1000 psi) should be kept a minimum of 200 mm (8 in.) away from connections.

NOTE: See Attaching Implement and Control System in TouchSet™ Depth Control section of this Operator's Manual.

Front and mod-mount SCVs (if equipped) are operated by a joystick or SCV lever. Optional equipment available: Loader or front hitch with hydraulic outlets

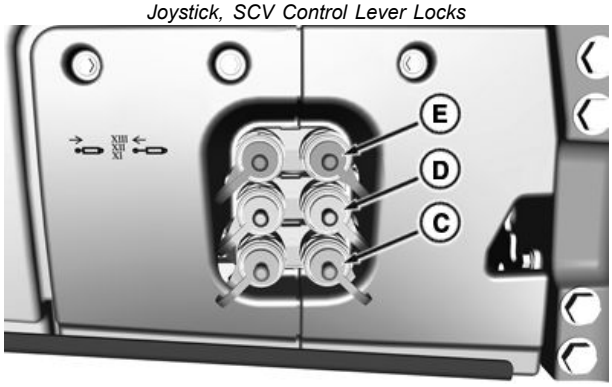
1. Lock out SCV controls.
   - Joystick— Press Joystick lock (A).
   - CommandARM™— Press SCV control lever lock (B).
2. Clean dust caps/plugs.

IMPORTANT: Be sure to correctly connect remote hydraulic hoses to couplers. If hose connections are reversed, machine does not respond to system controls as expected. Mid-mount SCV ports are arranged opposite of front hitch and rear SCV stack receptacles.

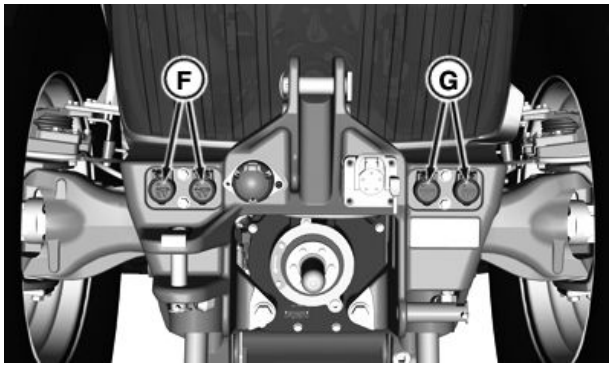


RXA0126745 —UN—26AUG13

Joystick, SCV Control Lever Locks



RXA0129741 —UN—12APR13



RXA0135061 —UN—20AUG13

Front Hitch Mounted SCV Couplers

A— Joystick Lock
B— SCV Control Lever Lock
C— Mid-Mount SCV XI
D— Mid-Mount SCV XII
E— Mid-Mount SCV XIII
F— Front SCV XV
G— Front SCV XIV

Rear SCV or Front Hitch	Mid-Mount SCV
Extend=Left Port	**Extend=Right Port**
Retract=Right Port	**Retract=Left Port**

3. Pull off caps/plugs to expose couplers.
4. Push hoses firmly into couplers.
   - If equipped with loader, see procedure in loader Operator's Manual to identify correct hose connections.

Continued on next page

RD47322,000019D -19-29APR15-1/2

SCV Number	Color	Front Function
SCV XI	Green	Mid-Mount SCV
SCV XII	Blue	Mid-Mount SCV
SCV XIII	Brown	Mid-Mount SCV
SCV XIV	Black	Front SCV
SCV XV	Violet	Front SCV

Midstack SCV FLOW OUTPUT (Approximate)[a]	
Midstack SCV Flow Settings	**L/min (gpm)**
0.1[b]	—
1.0	5.8 (1.5)
2.0	17.8 (4.7)
3.0	29.9 (7.9)
4.0	41.9 (11.1)
5.0	53.9 (14.2)
6.0	65.9 (17.4)
7.0	77.9 (20.6)
8.0	90.0 (23.7)
9.0	102.0 (26.9)
10.0	126.0 (33)

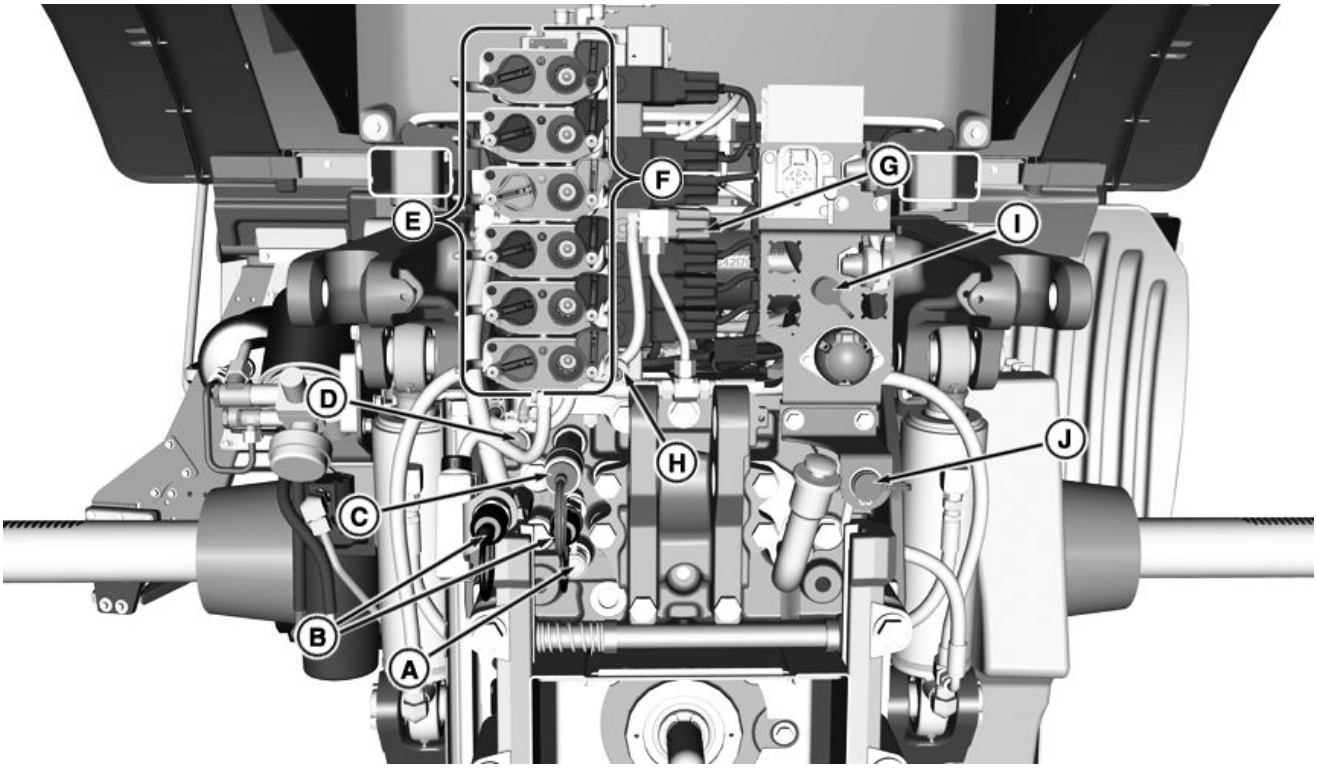
Flow Chart (Midstack SCV)

[a] *At 2100 rpm and no mass load at point of use.*

[b] *0.1 = Minimum Flow Setting*

RD47322,000019D -19-29APR15-2/2

Implement Hydraulic Connections



RXA0135367 —UN—04SEP13

A— Sump Coupler (Motor Case Drain)
B— Return Coupler (Motor Return)
C— Pressure Coupler
D— Pressure Port
E— SCV Extend Couplers (I—VI)
F— SCV Retract Couplers (I—VI)
G— Hitch Valve
H— Load Sense Coupler
I— Hydraulic Trailer Brake Coupler
J— Auxiliary Raise Coupler

Connect/Operating Hydraulic Motors

Select smallest displacement motor recommended for the function. This practice will reduce power loss and heating of hydraulic oil, especially if other functions force pump to operate at high pressure.

Operating Motors

- Ensure all in-line control valves are wide open.
- Ensure in-line orifices are removed.
- Close open-center bleed screw (If Equipped).

If tractor is not equipped with power beyond or auxiliary return couplers:

- Connect pressure line to SCV Retract Coupler (F).
- Connect return line to SCV Extend Coupler (E).
- Use ”special return hose tip” to prevent checking of return line and back flow if inadvertently reversed.

If tractor is equipped with auxiliary motor return:

- Connect pressure line to SCV Retract Coupler (F).
- Connect return line to Return Coupler (B).
- Special return hose tip is not required, but alright to use.

Activate motor by moving lever forward to retract detent. Adjust/set motor speed with SCV flow control. This will ensure pump only operates at pressure required.

Shut off motor by moving lever to float. This protects motor from potential seal damage due to over pressure if returning to SCV, or cavitation if using motor return couplers.

Operating motors with power beyond

Power beyond connection requires a separate flow control valve:

- Connect pressure line to Pressure Coupler (C or D).
- Connect return line to Return Coupler (B).
- Connect load sense line to coupler (H).

If sensed pressure is upstream of flow control valve, pump will operate at maximum pressure all the time.

If sensed pressure is between control valve and motor, pump will operate at load pressure.

Motor Case Drain

Some motors have a separate case drain line for internal leakage. Connect to sump coupler (A) to direct oil to sump.

RD47322,0000263 -19-01JUL14-1/1

Hydraulic Motor Return and Case Drain Kits

Port (E) is used as a motor case drain for low pressure, low flow applications. Motor case drain is used when return oil flow may be too high for motor return port and could cause back pressure that may damage seals in motor. Motor return and case drain kits are available from your John Deere™ dealer.

Motor Return Couplers (C and D) are located below Pressure couplers.

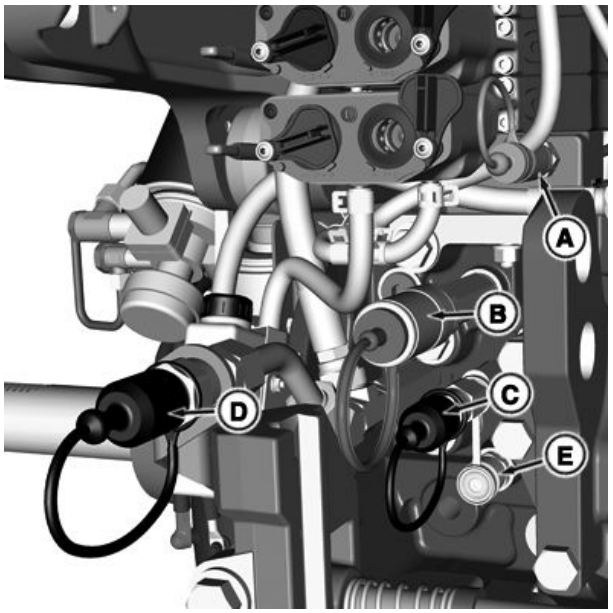
Using motor return coupler will prevent:

- Inadvertent reverse operation
- Pressurization of auxiliary function return line
- Potential flow checking of return-side SCV coupling

Examples of implements which cannot withstand high pressure applied to both couplers are:

- Hydraulic motors which have return and case drain couplers connected. Failure of motor housing or shaft seals may result if return line is pressurized.
- Auxiliary control valves located on implement may allow unexpected movement of cylinders or not function correctly if return line pressure is too high.

NOTE: Motors without over-running check valves should be connected to motor return coupler (C, D) to prevent return line pressurization when SCV is returned to neutral.



RXA0135365 —UN—04SEP13

A— Load Sense Coupler
B— Pressure Coupler
C— Return Coupler (Motor Return)
D— Return Coupler (Motor Return)
E— Sump Coupler (Motor Case Drain)

John Deere is a trademark of Deere & Company

RD47322,0000264 -19-04SEP13-1/1

Hitch Auxiliary Raise Kit

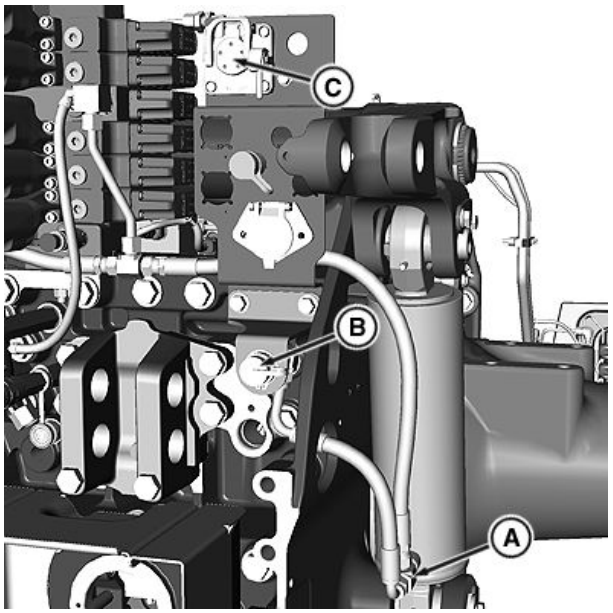
In some applications it is desirable to control a single SCV and hitch at same time. A Hitch Auxiliary Raise kit is available from yourJohn Deere™ dealer.

Implement joystick allows operation of an SCV and 3-point hitch using one lever. Kit connects to right side hitch lift cylinder (A).

Connect auxiliary raise hose to coupler (B).

NOTE: 9-pin connector and jumper harness (C) are required for hitch auxiliary raise kit. Jumper harness disables hitch valve and allows hitch valve to be operated with an SCV.

A— Hitch Lift Cylinder Connection
B— Auxiliary Raise Coupler
C— Jumper Harness



RXA0113560 —UN—09FEB11

John Deere is a trademark of Deere & Company

RD47322,00001A0 -19-29APR15-1/1

Using Load-Sensing Hydraulic System (Power Beyond)

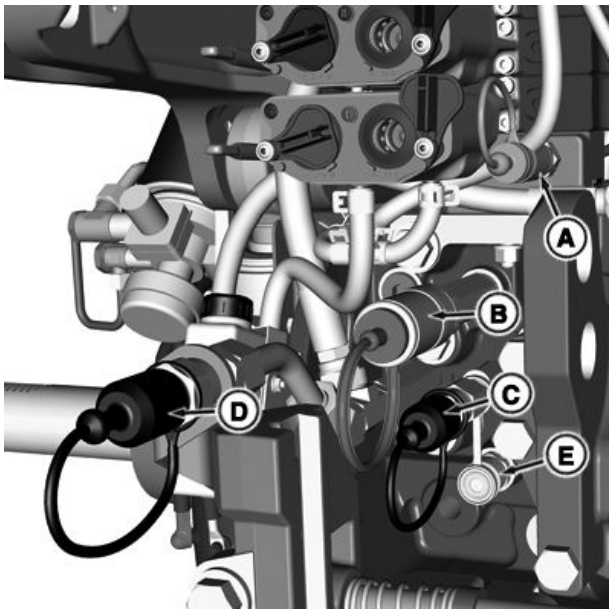
Power Beyond is used as a pressure/flow source for auxiliary functions equipped with independent flow control valves. Use Power Beyond when:

- Tractor SCV control is not needed
- When Implement control valve generates an external load sense signal to communicate flow demand to the pump.
- No other SCV outlet is available

Power Beyond functions require a ”load-sense” signal to regulate pump pressure, therefore, a load-sense hydraulic line is needed. Certain equipment can require modification. Special hydraulic couplers are available from your John Deere™ dealer.

Connect hoses to load sense coupler (A), pressure coupler (B), and return coupler (C or D).

A— Load Sense Coupler
B— Pressure Coupler
C— Return Coupler (Motor Return)
D— Return Coupler (Motor Return)
E— Sump Coupler (Motor Case Drain)

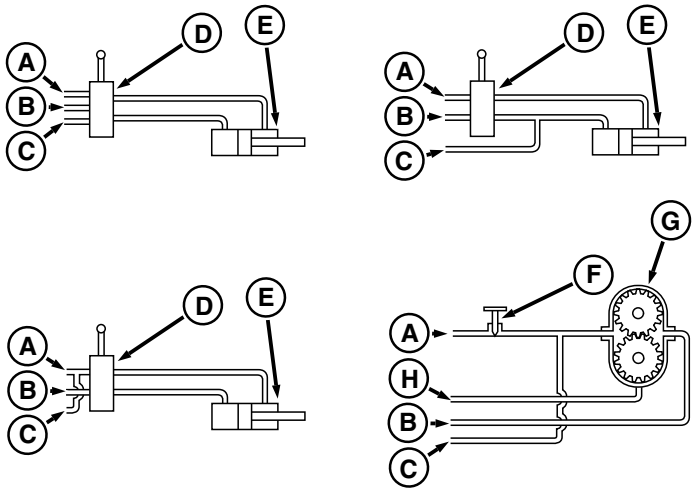


RXA0135365 —UN—04SEP13

John Deere is a trademark of Deere & Company

RD47322,00001A1 -19-30APR15-1/1

Load-Sense Hydraulic Connections - Examples



RXA0137432 —UN—17JAN14

Three Examples of Load-Sensing Hydraulic System — Power Beyond

A— Pressure Line
B— Return Line
C— Load-Sense Line
D— Control Valve
E— Cylinder
F— Pressure-Compensated Flow Valve
G— Hydraulic Motor
H— Motor Case Drain Line (Sump Line)

Hydraulic load sense works with hydraulic system to limit hydraulic pump pressure to maximum needed to perform a function. Limiting pump pressure results in more economical operation. Examples illustrate several methods of connecting implements to hydraulic system to assure load sense signal is available. Consult your implement Operator's Manual or dealer for additional information.

Upper Left — Control valves with a load-sense provide a load-sense signal to hydraulic system and can be operated manually or by solenoids.

NOTE: Upper left is the preferred method to use Power Beyond.

Upper Right — Control valve directs oil into extend or retract circuits. Connect load-sense line to circuit requiring pressure. An example is a wagon lift cylinder with load supported by mechanical stops in full down position. Load-sense signals pump when increased pressure is needed. Pressure remains low when load is supported by mechanical stops.

IMPORTANT: Circuit allows cylinder "leak-down" through load-sense line (C). If leakage is not acceptable for operation, see Example 3.

Lower Left — Control valve directs oil into extend or retract circuits, either requiring high pressure. Connect load-sense line to pressure line before control valve. An example is a folding implement, where pressure oil used to extend or retract cylinders.

IMPORTANT: System maintains a maximum pump pressure of 2000 kPa (200 bar) (2900 psi) as long as power-beyond hoses are connected.

Lower Right— Pressure-compensated flow control valve regulates pump pressure to stabilize motor speed. Valve minimizes pump pressure fluctuations caused by activation of other hydraulic function while motor is running. Connect load-sense line to pressure line after control valve.

Motor speed can fluctuate when other functions cause system pressure change. Minimize fluctuations by installing a pressure compensated flow control valve.

RD47322,00002FB -19-30APR15-1/1

Using Implements Requiring Large Volumes of Oil

IMPORTANT: Do not add oil to hydraulic system with engine running.

If more oil capacity is needed for large one-way cylinders, an optional field installed auxiliary reservoir is available. See you John Deere™ dealer.

Removing too much oil can result in malfunction when raising hitch or using “extend” function of SCVs.

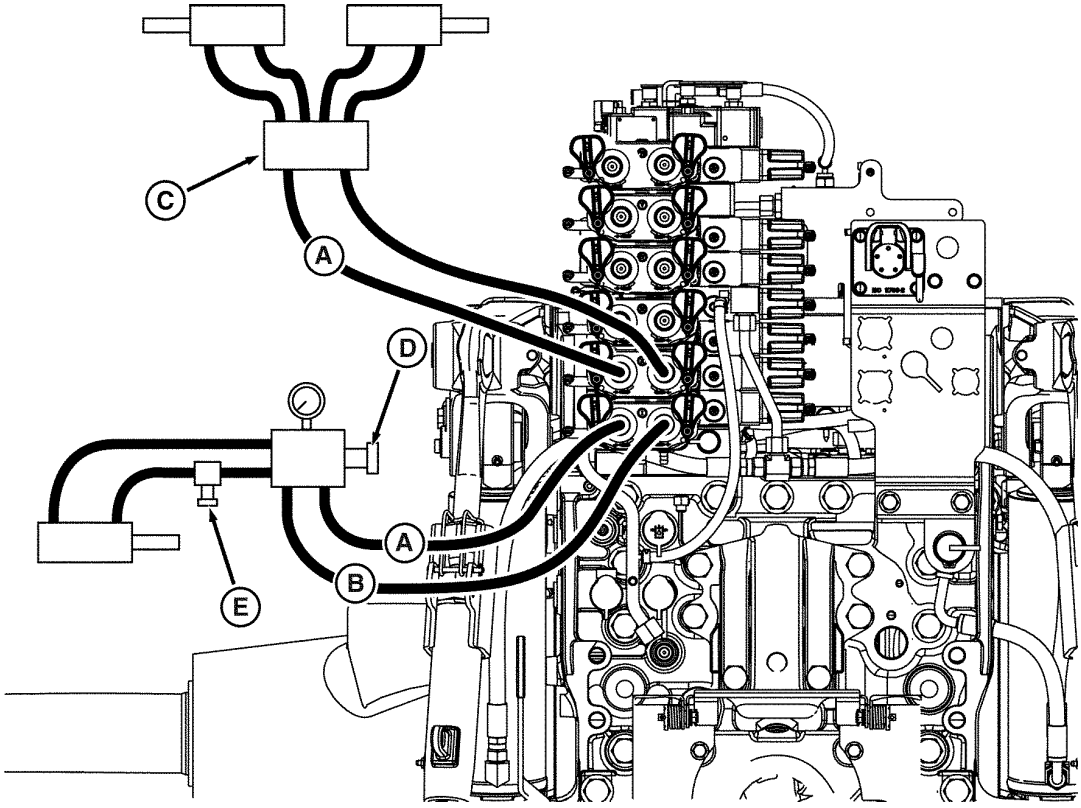
John Deere is a trademark of Deere & Company

To determine if sufficient oil is available for implement being used:

- Cycle all implement cylinders after starting tractor.
- Check transmission-hydraulic oil level. See Check Transmission-Hydraulic Oil Level in Daily or 10 Hour Service Section of this Operator’s Manual
- Add oil if necessary.
- Lower implement to return oil to reservoir.
- Recheck oil level when implement is removed.
- Drain excess oil if necessary.

RD47322,00001A3 -19-30APR15-1/1

Implement Connections - Active Down Pressure



RXA0114390 —UN—25MAY12

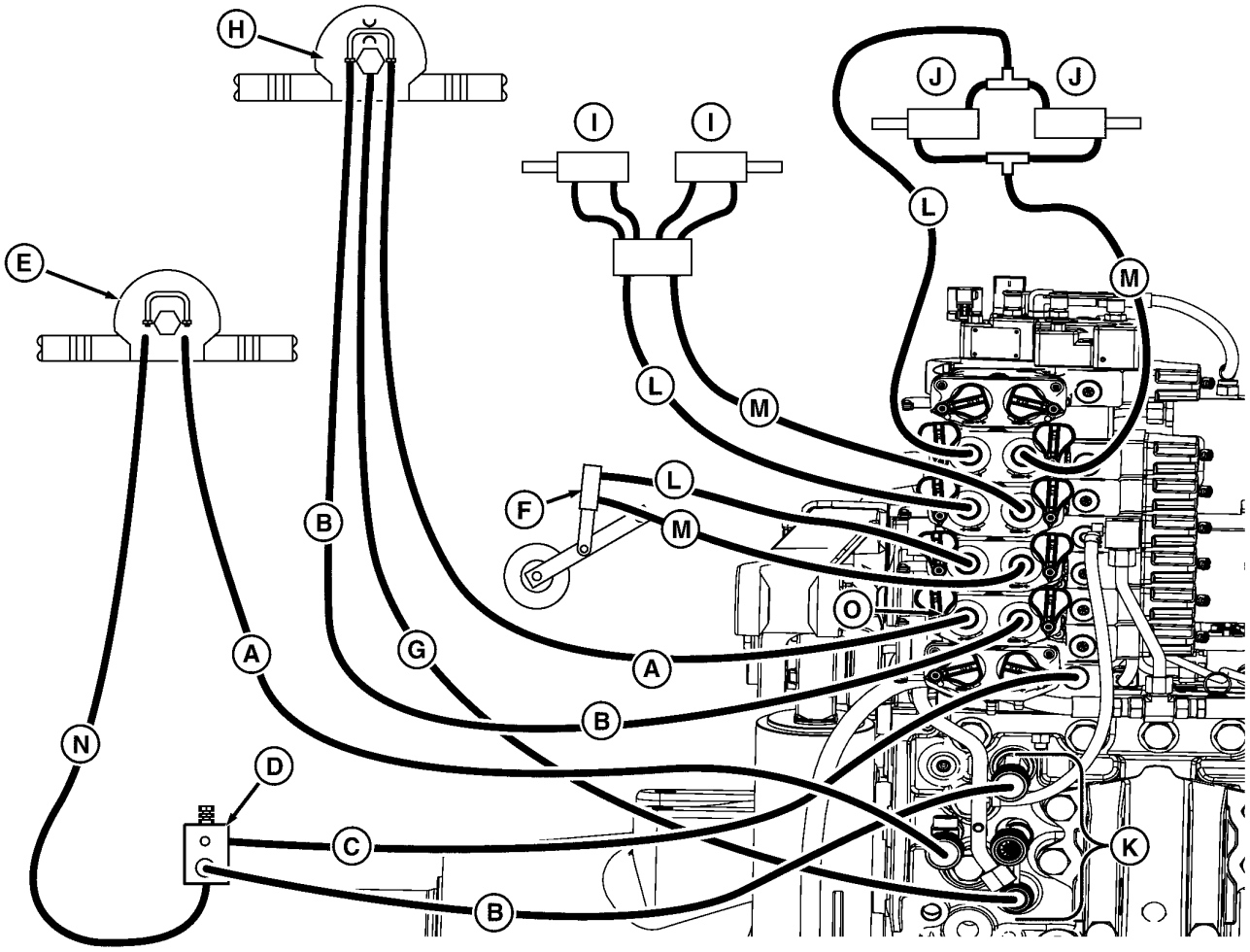
A— Extend Coupler Line
B— Retract Coupler Line
C— Selector Valve
D— Pressure Control Valve
E— Implement Transport Lock Valve

IMPORTANT: Using active down force while operating hydraulic motors can cause overheating. Keep number of motors in operation to a minimum when active down force is in use.

For implements using active down force (such as grain drills or air seeders), connect implement as shown in diagram. Set SCV flow control to continuous. Move SCV lever to retract detent position.

RD47322,00001A4 -19-30APR15-1/1

Implement Connection - Vacuum Motors with Power Beyond and Motor Case Drain



A— Return Line
B— Pressure Line
C— Load Sense Line
D— Control Valve
E— Vacuum Motor
F— Frame Lift Wheel Cylinder
G— Motor Case Drain Line
H— Vacuum Motor
I— Marker Cylinders
J— Folding Cylinders
K— Power Beyond Ports
L— Extend Coupler Line
M— Retract Coupler Line
N— Controlled Flow Line
O— Special Return Hose Tip

Diagram shows connections for possible planter application. Two hydraulic vacuum motors, marker arms (I), folding arms (J), and frame lift wheels are connected to system.

Vacuum motor (E) is powered from power beyond (K) through pressure compensated control valve (D). Load sense line (C) from valve, attached to load sense coupler (Y), signals hydraulic pump to control pump pressure.

Second vacuum motor (H) is equipped with motor case drain line (G) attached to sump coupler (X) to direct excess pressure oil from inside pump to move directly to sump.

Pressure oil (A) for second motor comes from SCV retract receptacle. These connections allow SCV lever to be moved to float without going through neutral position when shutting motor off. If lever is moved to neutral motor stops abruptly. Motor seals can be damaged.

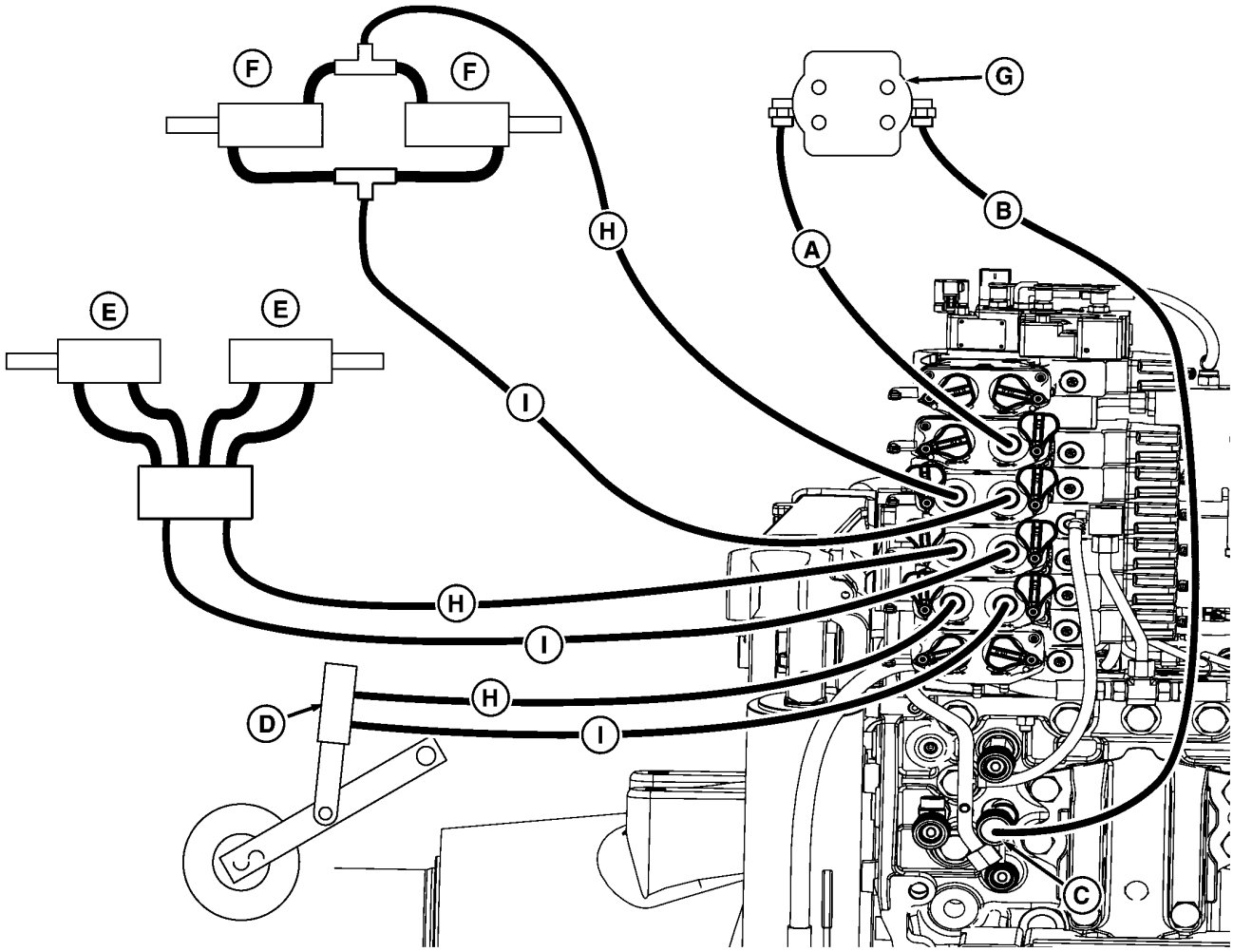
When motor return oil is routed to an SCV, a special return hose tip (O) prevents high pressure oil flowing back into motor and causing seal damage.

Folding (J), marker (I), and frame lift wheel (F) cylinders are connected to SCVs in normal manner.

See implement Operator's Manual or dealer for additional information.

RD47322,00001A5 -19-30APR15-1/1

Implementation Connections - Hydraulic Motor with Motor Return



A— Pressure Line
B— Return Line
C— Motor Return Coupler
D— Raise/Lower Cylinder
E— Marker Cylinders
F— Fold Cylinders
G— Hydraulic Motor
H— Extend Coupler Line
I— Retract Coupler Line

Diagram shows connections for possible planter applications. Single hydraulic motor, marker arms (E), folding arms (F), and frame lift wheels are connected to system.

Pressure oil from SCV retract receptacle provided pressure oil (A) to hydraulic motor. Return oil (B) is routed to sump coupler (C). These connections allow SCV lever to be moved to float without going through neutral position when shutting motor off. If lever is moved to neutral motor stops abruptly. Motor seals can be damaged.

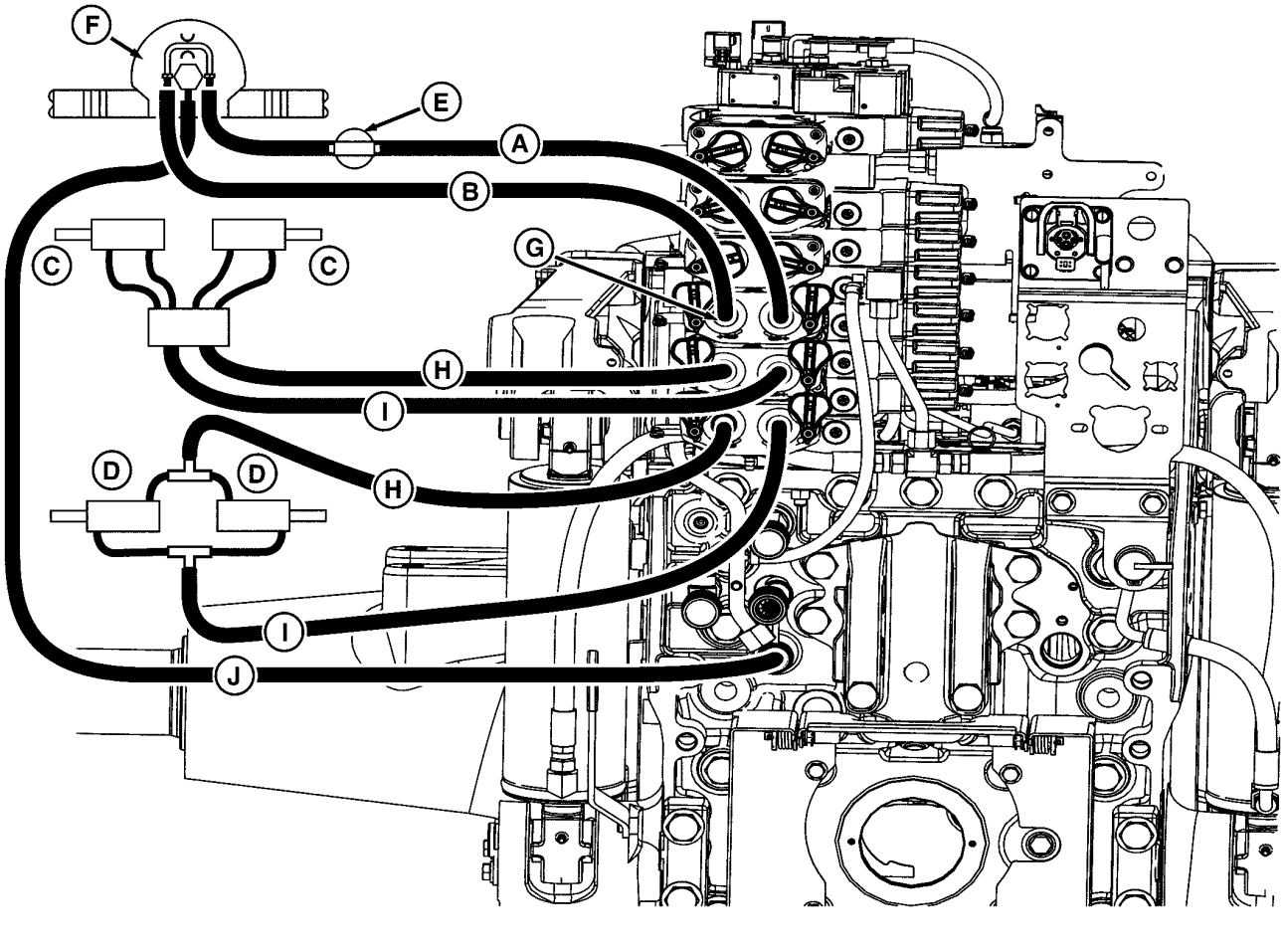
Load sensing is provided direct from SCV controlling motor.

Folding (F) maker (E) , and frame lift wheel (D) cylinders are connected to SCVs in normal manner.

See implement Operator's Manual or dealer for additional information.

RD47322,00001A6 -19-30APR15-1/1

Implement Connections - Vacuum Motor with Motor Return Tip



A— Pressure Line
B— Return Line
C— Marker Cylinders
D— Fold Cylinders
E— Flow Control Valve
F— Vacuum Motor
G— Special Return Hose Tip
H— Extend Coupler Line
I— Retract Coupler Line
J— Case Drain Line[1]

Diagram Shows connections for possible planter applications. Single hydraulic vacuum motor, marker arms (C), and folding arms (D) are connected to system.

Pressure oil (A) from vacuum motor (F) comes from SCV retract receptacle through pressure compensated control valve (E). Valve is opened fully and flow is controlled by SCV. Control valve does not provide load sense signal to hydraulic pump. If control valve is used to control flow, restriction increases pump pressure above that needed to operate pump. Increased pressure can cause overheating.

Return oil (B) is routed to extend receptacle. These SCV connections allow SCV lever to be moved to float without going through neutral position when shutting motor off.

If lever is moved to neutral motor stops abruptly. Motor seals can be changed.

When motor return oil is routed to an SCV, a special return hose tip (G) prevents high pressure oil flowing back into motor and causing seal damage.

On motor with a case drain, case drain line (J) is routed to sump coupler (X) to relieve excessive internal hydraulic pressure.

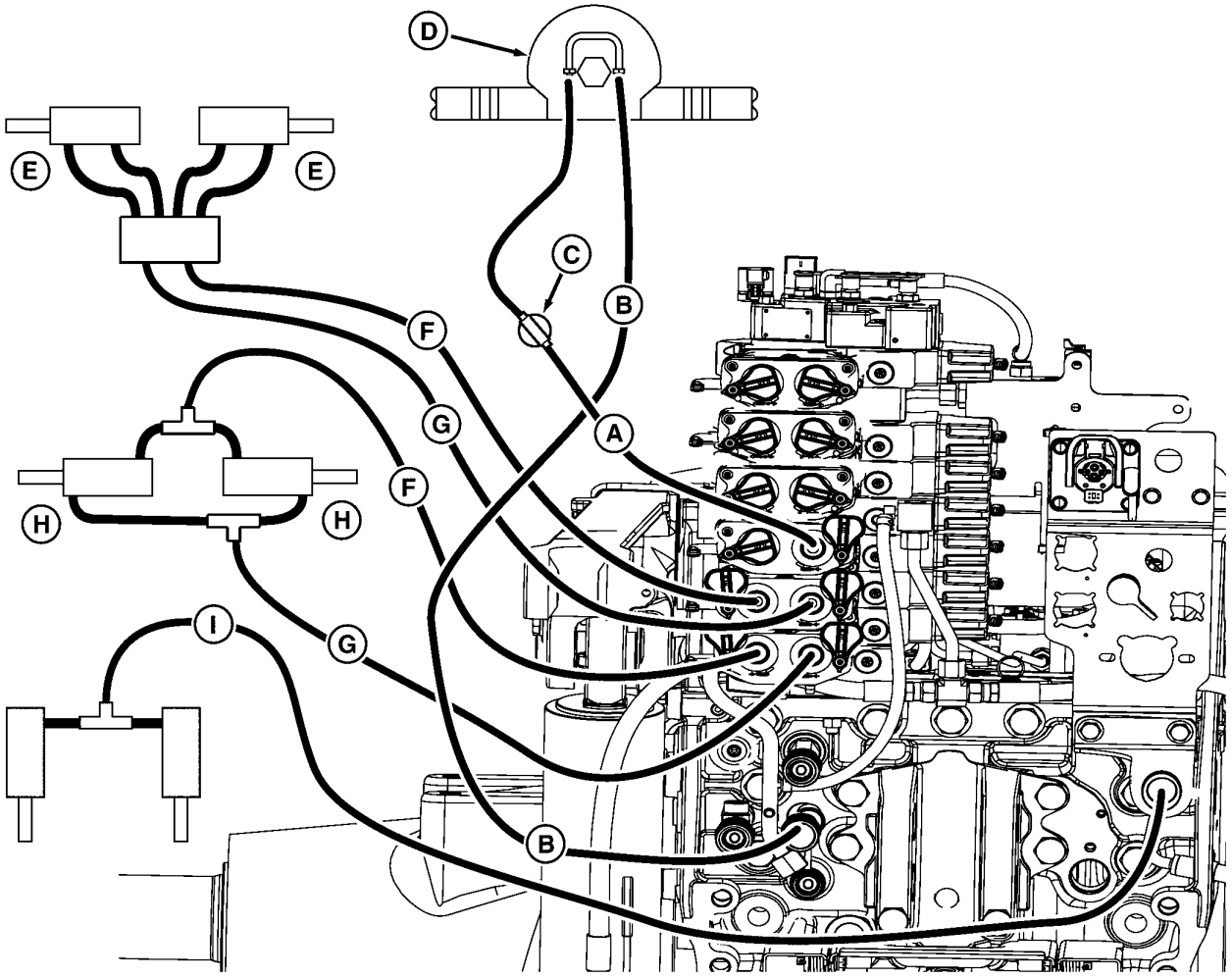
Folding (D) and marker (C) cylinders are connected to SCVs in normal manner.

See implement Operator's Manual or dealer for additional information.

[1]*For motor returns equipped with case drain only*

RD47322,00001A7 -19-30APR15-1/1

Implement Connections - Hitch Auxiliary Raise in Parallel with Hitch Valve



A— Pressure Line
B— Return Line
C— Flow Control Valve
D— Vacuum Motor
E— Fold Cylinders
F— Extend Coupler Line
G— Retract Coupler Line
H— Marker Cylinders
I— Hitch Auxiliary Raise

Diagram shows connections for possible planter application. Single hydraulic vacuum motor, marker arms (H), and folding arms (E) are connected to system. Optional hitch auxiliary raise kit has been installed in parallel with hitch valve.

Pressure oil (A) for vacuum motor (D) comes from SCV retract receptacle through pressure compensated control valve (C). Valve is opened fully and flow is controlled by SCV. Controlled valve does not provide load sense signal to hydraulic pump. If control valve is used to control flow, restriction increases pump pressure above that needed to operate pump. Increased pressure can cause overheating.

Return oil (B) is routed to power beyond coupler. These connections allow SCV lever to be moved to float without going through neutral position when shutting motor off.

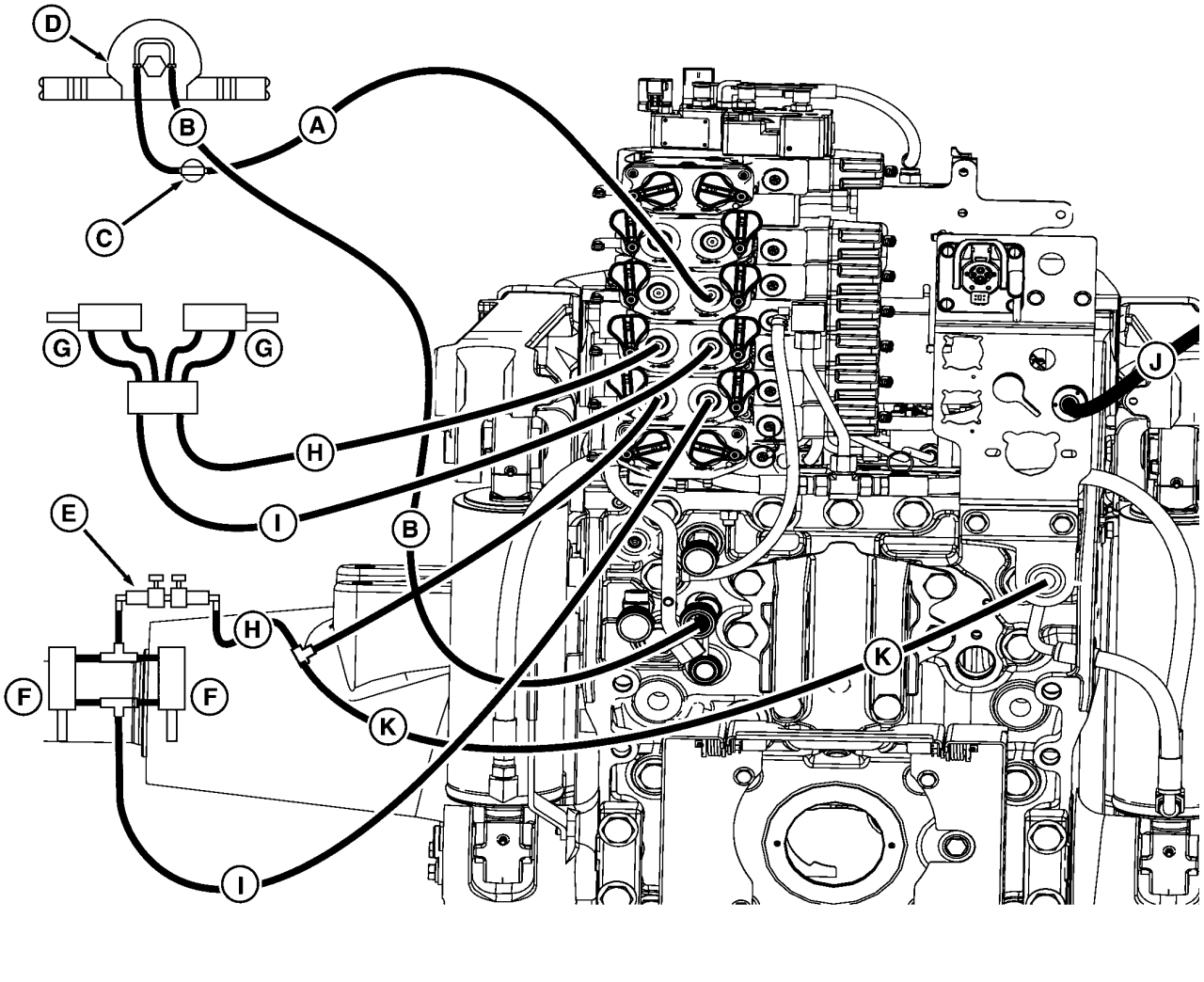
Hitch auxiliary raise is controlled by multi-function control lever on CommandARM.

Folding (D) and marker (C) cylinders are connected to SCVs in normal manner.

See implement Operator's Manual or dealer for additional information.

RD47322,00001A8 -19-30APR15-1/1

Implement Connections - Hitch Auxiliary Raise in Parallel with SCV



Implement Connection Example 6 (SCV Controlled)

A— Pressure Line
B— Return Line
C— Flow Control Valve
D— Vacuum Motor
E— Control Valve
F— Hitch Auxiliary Raise
G— Marker Cylinder
H— Extend Coupler Line
I— Retract Coupler Line
J— 9-Pin Connector with Harness
K— Hitch Auxiliary Raise

Diagram shows connection for possible planter application. Single hydraulic vacuum motor and marker arms (G) are connected to system. Optional hitch auxiliary raise kit has been installed in parallel with SCV I.

Pressure oil (A) for vacuum motor (D) comes from SCV retract receptacle through pressure compensated controlled by SCV. Control valve is used to control flow, restriction increases pump pressure above that needed to operate pump. Increased pressure can cause overheating.

Return oil (B) is routed to power beyond coupler. These connections allow SCV lever to be moved to float without going through neutral position when shutting off motor.

Marker cylinders (G) are connected to SCV in normal manner.

See implement Operator's Manual or dealer for additional information.

RD47322,00001A9 -19-30APR15-1/1

Hitch (2010-52-EU)

Rear Hitch												
Lift capacities according to OECD	Model 7210R		Model 7230R		Model 7250R		Model 7270R		Model 7290R		Model 7310R	
Sustained lift capacity, 610 mm behind the coupling points	5443 kg	Optional: 6894 kg	5443 kg	Optional: 6894 kg	6894 kg	Optional: 7847 kg	6894 kg	Optional: 7847 kg	6894 kg	Optional: 7847 kg	6894 kg	Optional: 7847 kg
Lift cylinder, diameter	2x90 mm	2x100 mm	2x90 mm	2x100 mm	2x90 mm	2x100 mm	2x100 mm	2x115 mm	1x100 mm	1x115 mm	1x100 mm	1x115 mm
Category	CAT 3N/3		CAT 3N/3		CAT 3N/3		CAT 3N/3		CAT 3N/3		CAT 3N/3	
IMPORTANT: In all applications, pay attention to axle load capacity and tire load capacity.												

Front Hitch						
Lift Capacities according to OECD	Model 7210R	Model 7230R	Model 7250R	Model 7270R	Model 7290R	Model 7310R
Maximum Lift Capacity at Coupling Points	5200 kg	5200 kg	5200 kg	5200 kg	5200 kg	5200 kg
Sustained Lift Capacity at Coupling Points	3800 kg	3800 kg	3800 kg	3800 kg	3800 kg	3800 kg
Category	CAT 3N					
IMPORTANT: In all applications, pay attention to axle load capacity and tire load capacity.						

GH15097,00007BC -19-28JAN15-1/1

Rear Hitch

Controls:

Operator can perform hitch functions by using following controls:

- Rear Hitch Control Lever (A)
- Depth Adjust Hitch Dial (C)

Settings:

Rear hitch settings can be adjusted by using CommandCenter™ or following controls:

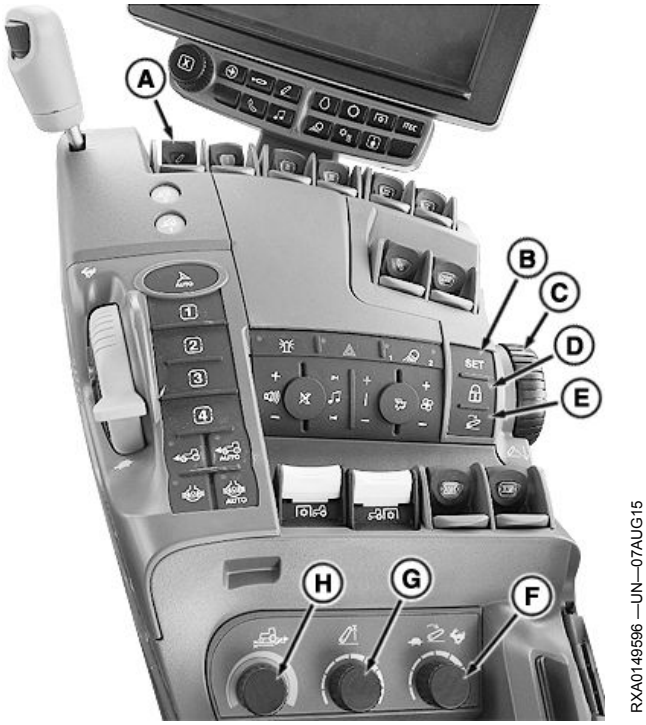
- Drop Rate Hitch Dial (F)
- Upper Limit Hitch Dial (G)
- Load Depth Hitch Dial (H)

Rear Hitch Settings Page can be accessed in two ways:

CommandCenter™:
1. Select **Menu.**
2. Select **Machine Settings tab.**
3. Select **Rear Hitch icon.**

Navigation Bar:

Press Rear Hitch Shortcut button on Navigation Bar.



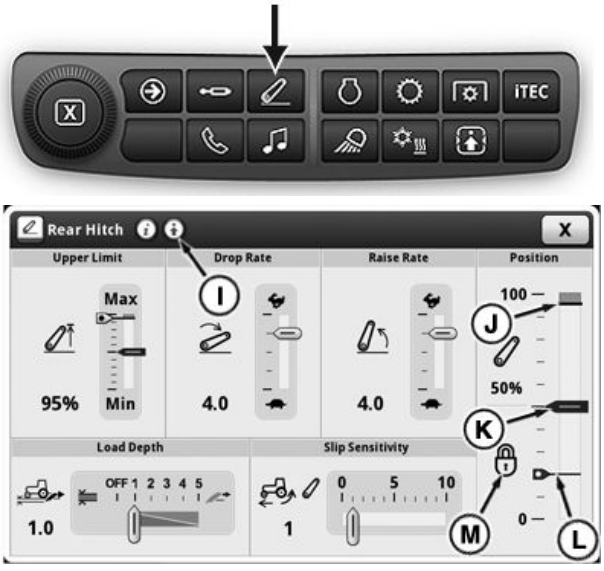
RXA0149596 —UN—07AUG15

RXA0148321 —UN—05JUN15

A—Rear Hitch Control Lever
B—Set Point Button
C—Depth Adjust Hitch Dial
D—Lock Button
E—Resume Button
F—Drop Rate Hitch Dial
G—Upper Limit Hitch Dial
H—Load Depth Hitch Dial
I— Advanced Settings Button
J— Upper Limit Indicator
K—Hitch Position Indicator
L—Set Point Indicator
M—Lock Icon



RXA0133710 —UN—16JUL13



RXA0143169 —UN—01JUL14

CommandCenter is a trademark of Deere & Company

GH15097,0000866 -19-07AUG15-1/1

Hitch Control Lever

Proportional

Moving hitch control lever within proportional regions (C and D), changes raise or lower rate depending on how far lever is moved from center position.

Hitch control lever does not raise above upper limit, but can lower below set point.

Detents

When the hitch control lever is pulled into detent position, raise (E) and released, hitch raises to upper limit. When pushed into detent position, lower (B) and released, hitch moves to set point.

Float

Float position (A) allows for freedom of motion for hitch and is useful when detaching implement. See Float Operation in this section of this Operator's Manual for proper setup if implement requires hitch to float during field operation.

Hitch Depth Adjust Dial

Hitch depth adjust dial can also be used to adjust hitch position. Like hitch control lever, it will not raise hitch above upper limit, but can lower hitch below set point.

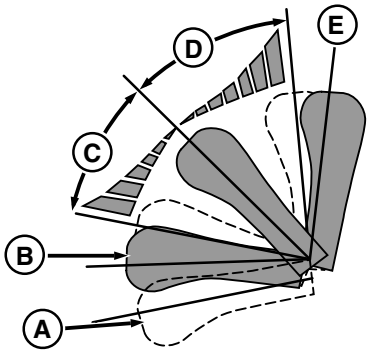
Setting Depth

Use hitch control lever or depth adjust dial to move hitch to desired position, press set point button (F) to store operating depth.

Return to Stored Operating Depth

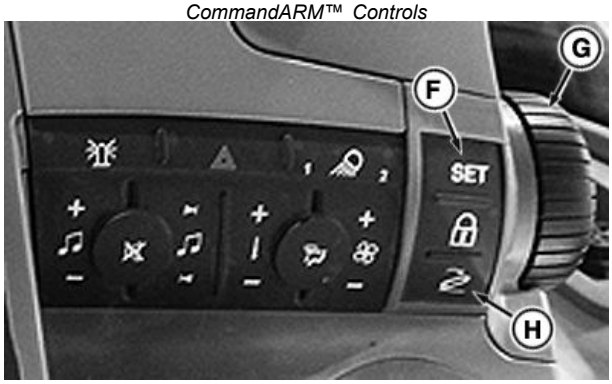
Press resume button (H) or push control lever into detent position, lower (B) and release to return to set point.

If hitch is lower than set point, returning to set point is only allowed when tractor is moving.



RXA0143179 —UN—07JUL14

CommandARM™ Controls



RXA0143180 —UN—27JAN15

Hitch Control Lever

A—Float Position
B—Detent Position, Lower
C—Hitch Proportional Lower
D—Hitch Proportional Raise
E—Detent Position, Raise
F—Set Point Button
G—Depth Adjust Hitch Dial
H—Resume Button

NOTE: Resume button (H) does not lower hitch if tractor is stationary with transmission in Park or Neutral.

GH15097,0000867 -19-07JUL14-1/1

Rear Hitch Lock/Damping

CAUTION: To prevent possible injury and equipment damage, lock hitch before transporting.

Hitch Lock

Before transport, or when hitch-mounted implement is not in use, engage rear hitch lock/damping

1. Raise hitch with control lever or hitch depth adjust dial.
2. Press lock button (A).

When hitch lock damping indicator (C) is visible, hitch will not respond to hitch depth adjust dial and hitch control lever cannot lower hitch.

Hitch control lever can raise hitch back up to locked position with lever held in detent position.

If hitch leaks down while tractor is stopped, hitch returns to locked height when tractor begins moving.

To unlock hitch, press lock button (A) again.

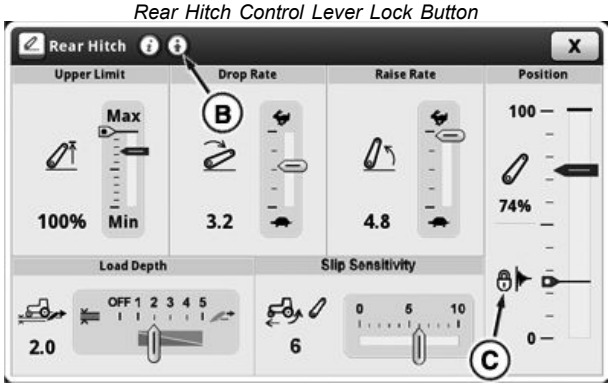
Hitch Damping

Lock button also turns transport damping ON/OFF when enabled. Hitch damping can be enabled or disabled in advanced hitch settings page (B).



RXA0143181 —UN—03JUL14

Rear Hitch Control Lever Lock Button



RXA0149592 —UN—07AUG15

A—Rear Hitch Control Lever Lock Button
B—Advanced Settings Icon
C—Lock Damping Indicator

GH15097,0000868 -19-07AUG15-1/1

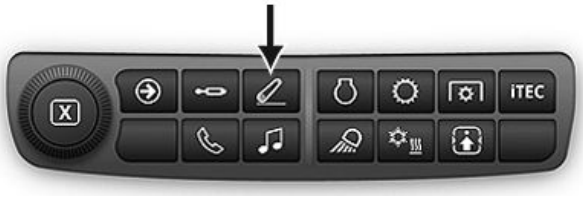
Adjust Load Depth Control (Draft Response)

Load depth control adjustment changes draft responsiveness.

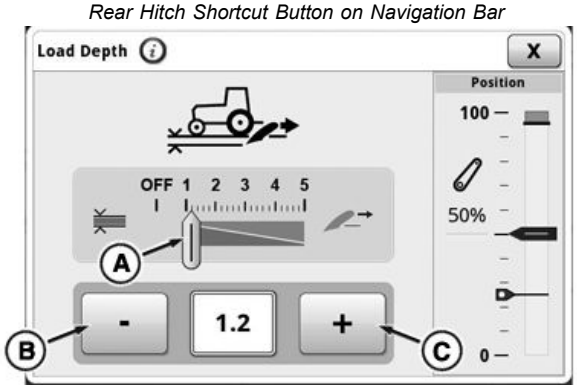
1. **Press Rear Hitch Shortcut button on Navigation Bar.**
2. Select load depth module.
3. Set load depth value (A) by using decrease value button (B), increase value button (C) or Load Depth Hitch Dial (D).
   - For position only control, turn load depth setting to OFF. See Using Position Control in this section of this Operator's Manual.
   - Higher settings are used for draft control. See Using Draft Control in this section of this Operator's Manual.

A—Load Depth Value
B—Decrease Value Button
C—Increase Value Button
D—Load Depth Hitch Dial

RXA0133710 —UN—16JUL13

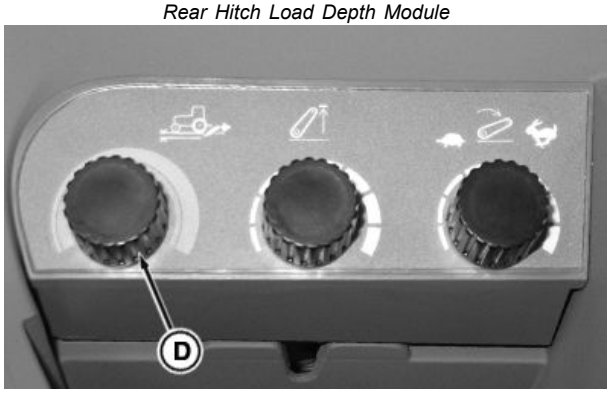


Rear Hitch Shortcut Button on Navigation Bar



RXA0143172 —UN—01JUL14

Rear Hitch Load Depth Module



RXA0140227 —UN—31MAR14

Rear Hitch Dials

GH15097,0000869 -19-07AUG15-1/1

Using Position Control

Use position control to operate non-ground engaging implements and implements that fully rest on gauge wheels for depth control.





RXA0128370 —UN—25SEP12

Hitch Held at Selected Position

GH15097,000086A -19-19MAY14-1/1

Using Draft Control

Use draft control to help maintain operating depth of non floating tillage equipment in rolling terrain, or if tractor altitude/pitch and rear wheel sinkage force implement deeper than desired. If soil density/resistance varies, higher response setting causes more depth variation. Best setting depends on implement type and field conditions.

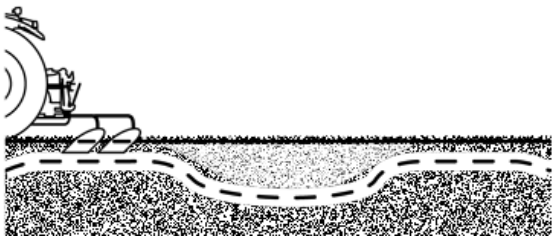
Higher values provide more/faster draft response. Lower values provide less/slower draft response.

Suggested settings by implement type:

Integral Field Cultivator	4—5
Integral Moldboard Plow	3—5
Semi-Integral Moldboard Plow	2—4
Integral Chisel Plow	2—4
Integral Ripper/Subsoiler	1—3

Use rear hitch control lever or load depth hitch dial to control/change operating depth. For more information, see Adjust Load Depth Control (Draft Response) in this section of this Operator's Manual.

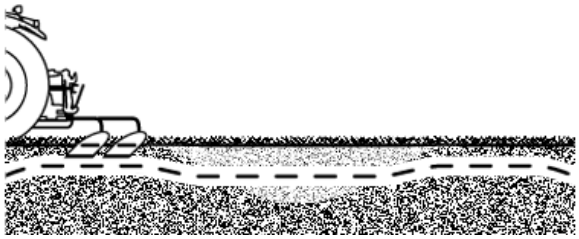




RXA0128369 —UN—25SEP12

High Response Causes More Depth Variation If Soil Varies

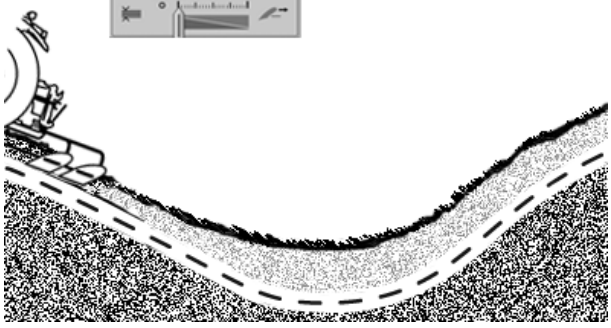




RXA0128366 —UN—30APR13

Middle Response Controls Depth Better If Soil Varies





RXA0143421 —UN—08JUL14

Low Response Causes More Depth Variation In Rolling Terrain





RXA0143422 —UN—08JUL14

Higher Response Causes Better Depth Control In Rolling Terrain

GH15097,000086B -19-10AUG15-1/1

Adjust Rear Hitch Upper Limit

1. Select rear hitch upper limit module.
2. To adjust rear hitch upper limit, use increase value button (B) or decrease value button (C).

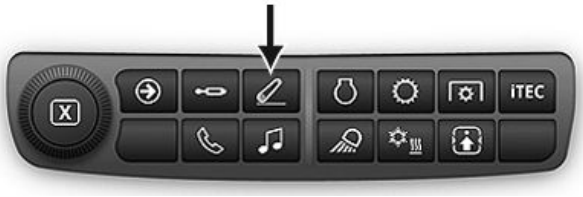
NOTE: Changes to upper limit are immediate.

Rear hitch upper limit can be adjusted using rear hitch upper limit dial (D).

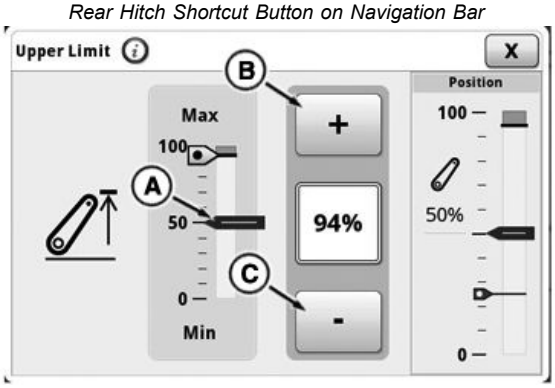
When the upper limit is the same as the hitch position, hitch follows upper limit.

A—Upper Limit Indicator
B—Increase Value Button
C—Decrease Value Button
D—Rear Hitch Upper Limit Dial

RXA0133710 —UN—16JUL13

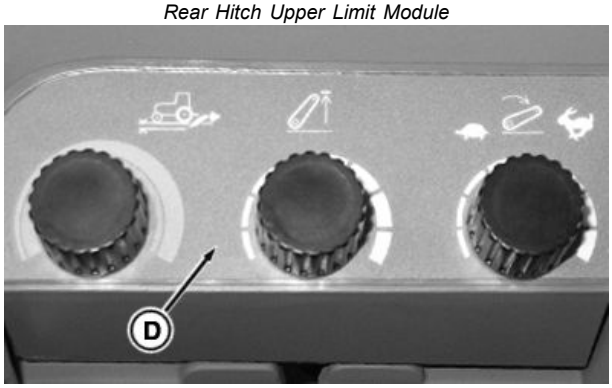


Rear Hitch Shortcut Button on Navigation Bar



RXA0143173 —UN—01JUL14

Rear Hitch Upper Limit Module



RXA0143175 —UN—01JUL14

Rear Hitch Upper Limit Dial

GH15097,000086C -19-05AUG14-1/1

Adjust Rear Hitch Drop Rate

CAUTION: Excessive drop speed may cause injury or machine damage. Fully lowering implement should take at least 2 seconds.

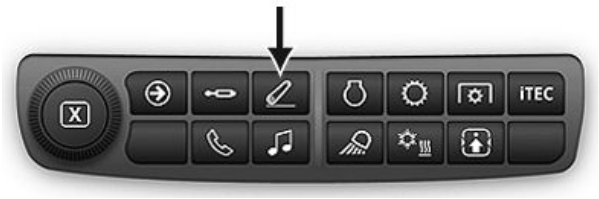
1. Select rear hitch drop rate module.
2. To adjust rear hitch drop rate, use increase value button (B) or decrease value button (C).

NOTE: Changes to drop rate are immediate.

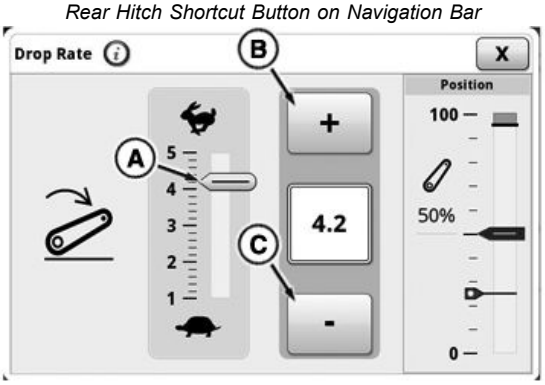
Rear hitch drop rate can also be adjusted with rear hitch drop rate dial (D).

A—Drop Rate Indicator
B—Increase Value Button
C—Decrease Value Button
D—Rear Hitch Drop Rate Dial

RXA0133710 —UN—16JUL13

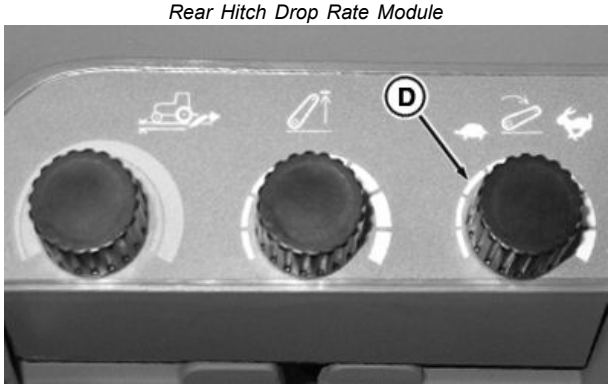


Rear Hitch Shortcut Button on Navigation Bar



RXA0143171 —UN—01JUL14

Rear Hitch Drop Rate Module



RXA0143174 —UN—01JUL14

Rear Hitch Drop Rate Dial

GH15097,000086D -19-05AUG14-1/1

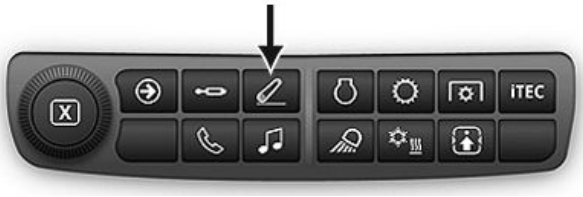
Adjust Rear Hitch Raise Rate

1. Select rear hitch raise rate module.
2. To adjust upper limit, use increase value button (B) or decrease value button (C).

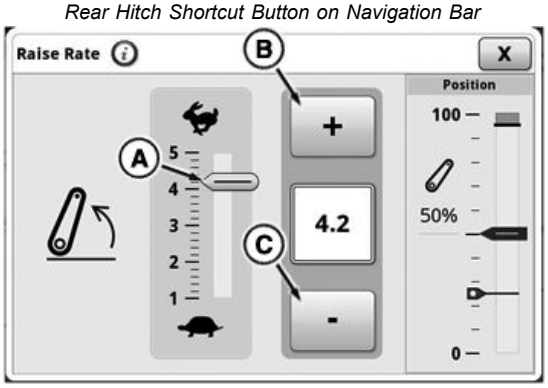
NOTE: Changes to raise rate are immediate.

A—Rear Hitch Raise Rate Indicator
B—Increase Value Button
C—Decrease Value Button

RXA0133710 —UN—16JUL13



Rear Hitch Shortcut Button on Navigation Bar



RXA0143170 —UN—01JUL14

Rear Hitch Raise Rate Module

GH15097,000086E -19-01JUL14-1/1

Rear Hitch Slip Sensitivity

*NOTE: Tractor must be equipped with **radar**, and load depth control must be in **draft control** mode for hitch slip to function (see Using Draft Control in this section of this Operator's Manual).*

Hitch can be operated with draft sensing only, or with draft sensing and hitch slip. Hitch slip adjustment is independent from draft response.

Response Setting Guidelines[a]	
Chisel Plow	2—4
Subsoiler	5—7
Moldboard Plow	7—9
V-Ripper	8—10

[a] *Appropriate setting depends on implement type, soil conditions, and tractor setup*

NOTE: Changing rear hitch slip response can affect operation when wheel slip is above 10%.

Rear hitch slip response automatically returns to zero during transport [speed above 20 km/h (12.4 mph)].

1. Select rear hitch slip sensitivity module.
2. To adjust slip sensitivity, use decrease value button (B) or increase value button (C).

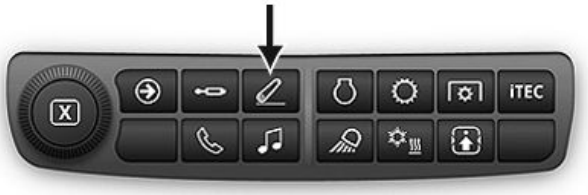
   Higher values provide more/quicker response to slip variation. Lower values provide less/slower response to slip variation.

   Changes to slip sensitivity are immediate.

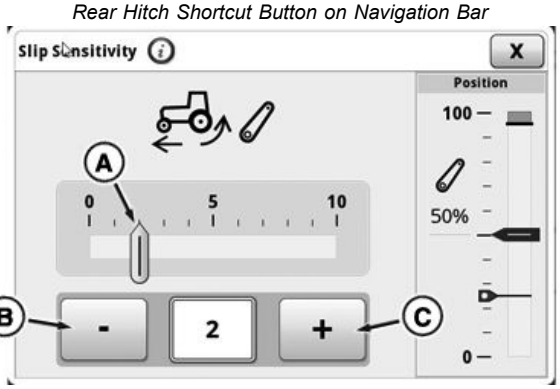
NOTE: Changing rear hitch slip response can affect operation when wheel slip is above 10%.

Rear hitch slip response automatically returns to zero during transport [speed above 20 km/h (12.4 mph)].

RXA0133710 —UN—16JUL13



Rear Hitch Shortcut Button on Navigation Bar



RXA0143178 —UN—03JUL14

Rear Hitch Slip Sensitivity Module

A—Slip Sensitivity Indicator
B—Decrease Value Button
C—Increase Value Button

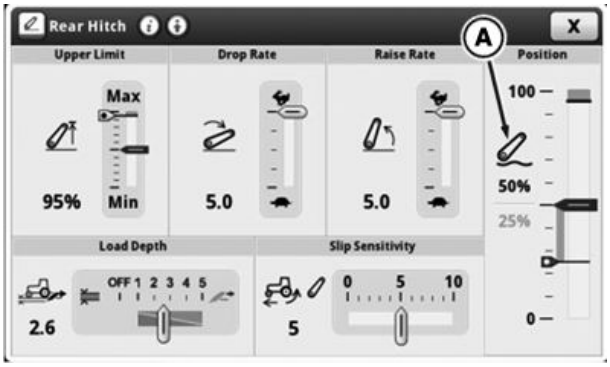
GH15097,000086F -19-13MAR15-1/1

Float Operation

Implements that fully rest on gauge wheels for depth control require hitch to float following ground contour.

Put hitch control lever in float position.Lift links can be adjusted for lateral float. See Adjust Lateral Float in this section of this Operator's Manual.

A—Float Icon



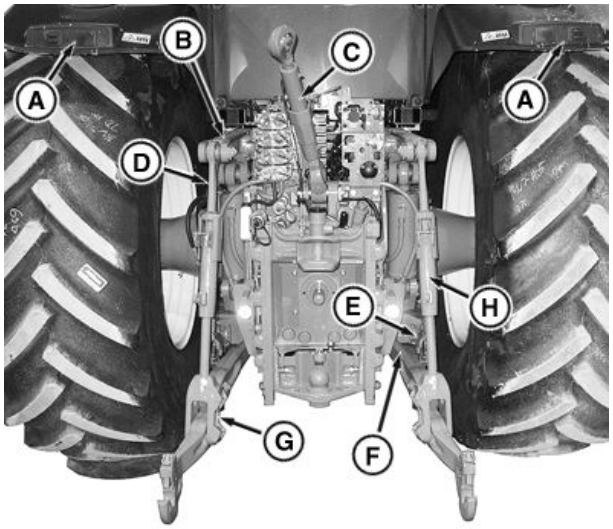
RXA0142717 —UN—01JUL14

Rear Hitch Module in Float Position

GH15097,0000870 -19-07AUG15-1/1

Hitch Components

A—Remote Raise/Lower Switches
B—Lift Arm
C—Center Link
D—Lift Cylinder
E—Stabilizer (If Equipped)
F—Sway Block (If Equipped)
G—Draft Link
H—Lift Link



RXA0130889 —UN—05AUG13

GH15097,00007BE -19-14AUG14-1/1

Remote Raise and Lower Switches (If Equipped)

CAUTION: To prevent injury or damage caused by tractor movement, be sure transmission is in PARK position before using remote raise and lower switches. Stay clear of interference points when using remote raise and lower switches.

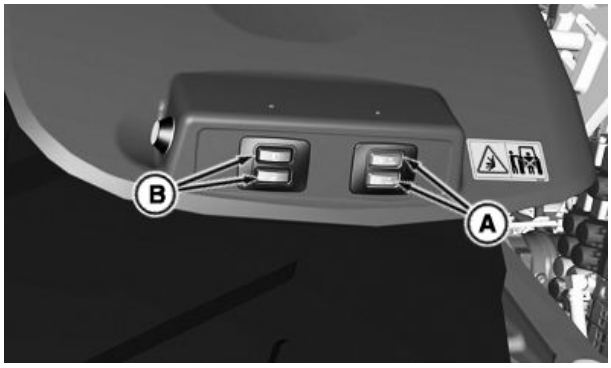
When remote hitch switches (A) are pressed, hitch moves slowly but increases speed longer hitch switch is held.

Press and hold remote hitch raise/lower switches (A) to operate hitch. SCV III extend/retract switches (B) are connected to hydraulic center link (if equipped).

NOTE: Front and Rear hitch control levers cannot be used simultaneously with remote raise/lower switch.

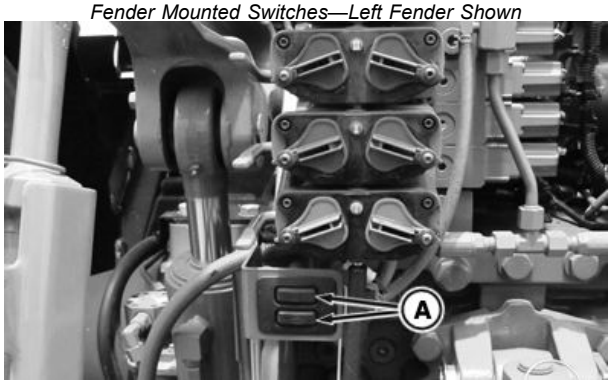
A—Remote Hitch Raise/Lower Switches

B—SCV III Extend/Retract Switches



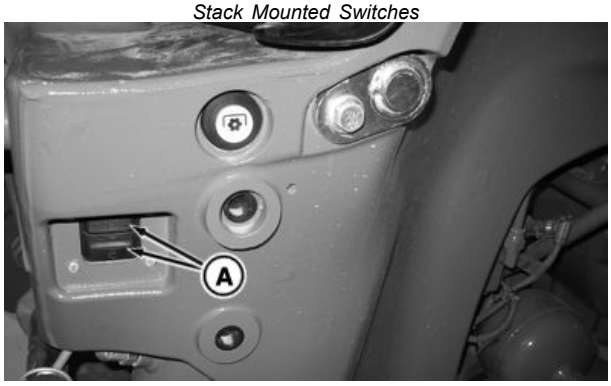
RXA0130893 —UN— 15FEB13

Fender Mounted Switches—Left Fender Shown



RXA0134416 —UN—01AUG13

Stack Mounted Switches



RXA0134417 —UN—01AUG13

Front Hitch Switches

TO84419,0000132 -19-11AUG15-1/1

Hitch Manual Lowering

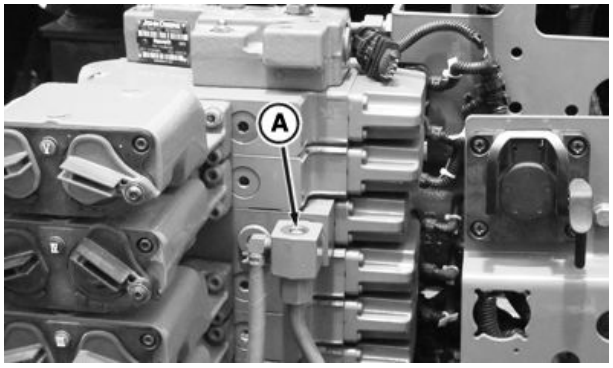
CAUTION: Avoid personal injury or death. Do not disconnect any hitch sensors, solenoids, or connectors from hitch control valve while engine is operating or key switch is ON. Unexpected hitch movement may occur. Stay clear of hitch area when starting engine or manually lowering hitch.

Hitch manual lowering is possible when hydraulic pressure and/or electrical power is not available.

Remove plug to access manual lowering socket head cap screw (A). Turn screw counterclockwise to lower hitch.

NOTE: Hitch cannot be raised manually. Both hydraulic and electrical power are required to raise hitch.

Turn socket head cap screw clockwise and install plug after hitch is lowered.



RXA0129473 —UN—20NOV12

Manual Lowering Socket Head Cap Screw

A—Manual Lowering Socket Head Cap Screw

TO84419,0000133 -19-12MAY14-1/1

Correct Center Link Position

IMPORTANT: Excessive power can damage an implement, and large implement can damage tractor.

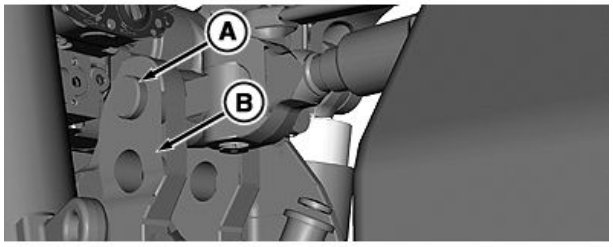
This tractor requires center link with recessed retaining mount (C) to prevent interference with SCV valve stack. Using center link without recessed retaining mounts may result in damage to SCV stack.

NOTE: Upper hole offers greater lift capacity. Lower hole offers greater ground clearance.

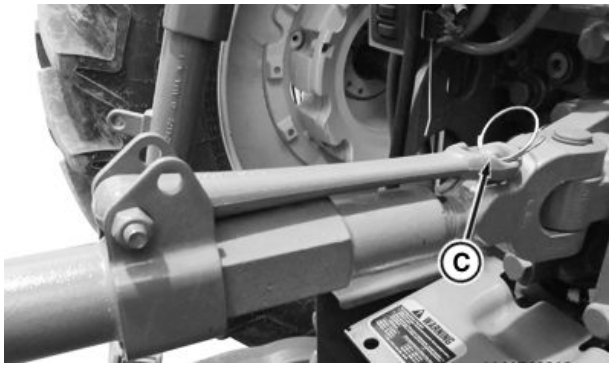
Attach center link to lower hole (B) for standard implements. Use upper hole (A) when implements require higher lift capacity (see implement Operator's Manual for recommendations).

Refer to lift capacities in Specifications section in this Operator's Manual.

A—Upper Hole
B—Lower Hole
C—Recessed Retaining Mount



RXA0147836 —UN—26MAR15



RXA0129475 —UN—20NOV12

TO84419,0000134 -19-26MAR15-1/1

Hydraulic Center Link (If Equipped)

CAUTION: To prevent injury, allow sufficient clearance in working zones.

CAUTION: To prevent machine damage, do not subject center link to excessive loads.

IMPORTANT: Make sure locking mechanism is engaged and cord is free to move. Tight cord releases hook locking mechanism.

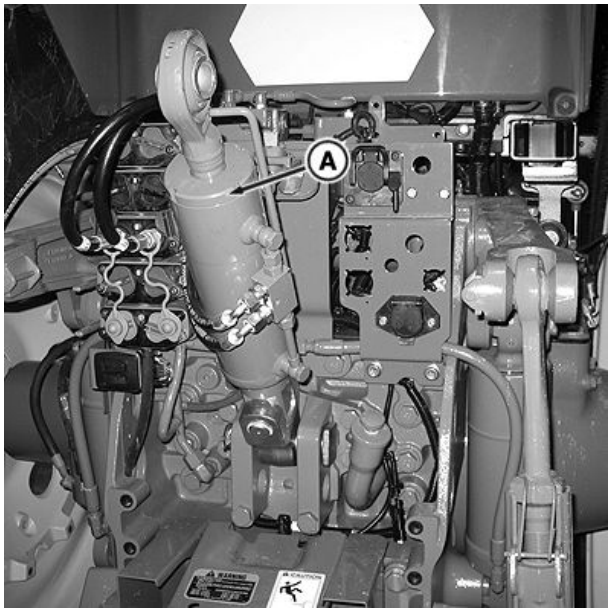
NOTE: Do not use continuous flow or timed detents with hydraulic center link. Make sure SCV detent time is set to 0.

Length of hydraulic center link (A) can be adjusted from operator's seat using a selected control valve.

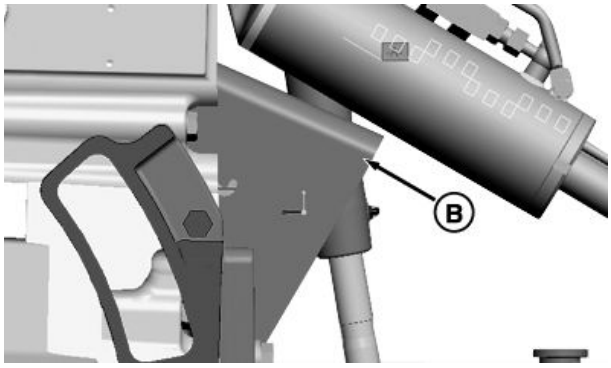
Place PTO shield (B) in down position when using hydraulic center link with lift links extended at maximum length.

Clean all mobile parts as required and apply commercial grease for smooth operation of parts. Interference of locking system is, in most cases, caused by dirt accumulation.

A—Hydraulic Center Link **B—PTO Shield**



RXA0113339 —UN—27JAN11



RXA0086282 —UN—26JAN06

TO84419,0000135 -19-11AUG15-1/1

Adjust Sway Blocks

Install sway blocks (A) in lower position to minimize side sway of hitch.

Adjust bumper (B) by loosening lock nut and sliding forward or rearward to limit amount of sway.

Mount sway blocks (A) in upper position to allow side sway when hitch is lowered. Side sway is prevented when hitch is raised.

If there is not enough adjustment in bumper block to remove hitch sway, install shims (C) as necessary between bumper block (B) and spacer (F).

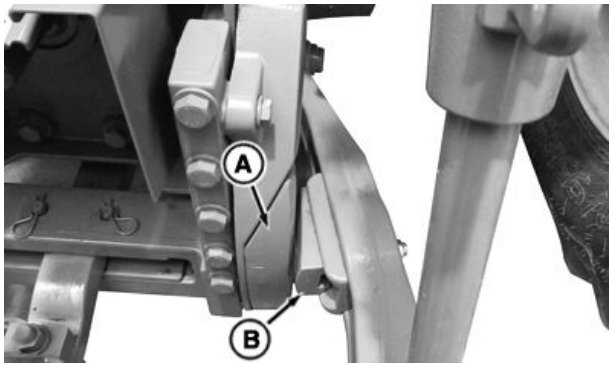
IMPORTANT: Tires must have at least 25 mm (1 in.) clearance distance (D) with fenders. To prevent draft link interference, distance (E) between tires is following:

- **Category 3N Hitch—1.09 m (43 in.)**
- **Category 3 Hitch—1.17 m (46 in.)**

Converting to Category 3 or 3N

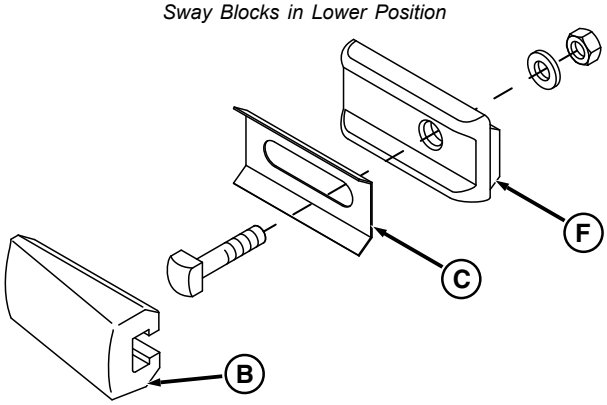
- Tractor is equipped with factory installed quick coupler for Category 3 applications.
- To convert to Category 3N, move spacer (F) outside of draft link.

A—Sway Blocks
B—Bumper Block
C—Shim
D—Distance Clearance Between Tires And Cab
E—Distance Between Tires
F—Spacer

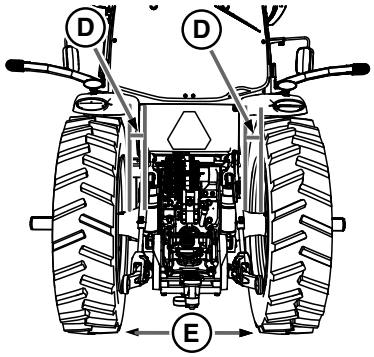


RXA0129476 —UN—20NOV12

Sway Blocks in Lower Position



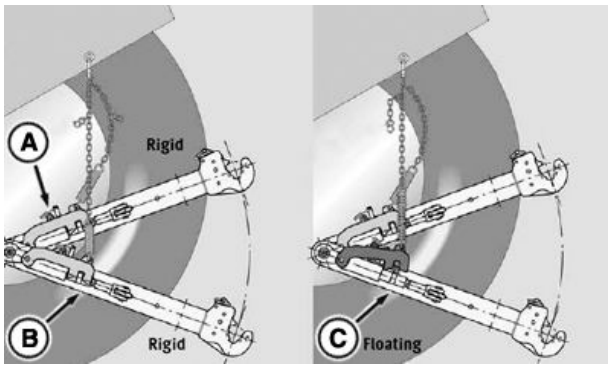
RXA0090041 —UN—04AUG06



RXA0117508 —UN—15JUN11

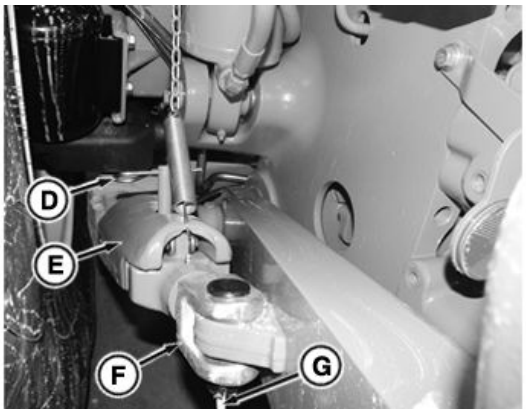
TO84419,0000136 -19-11MAR13-1/1

Adjust Deluxe Stabilizers



RXA0147640 —UN—20MAR15

Locked Rigid and Floating Hitch Positions



RXA0147003 —UN—20MAR15

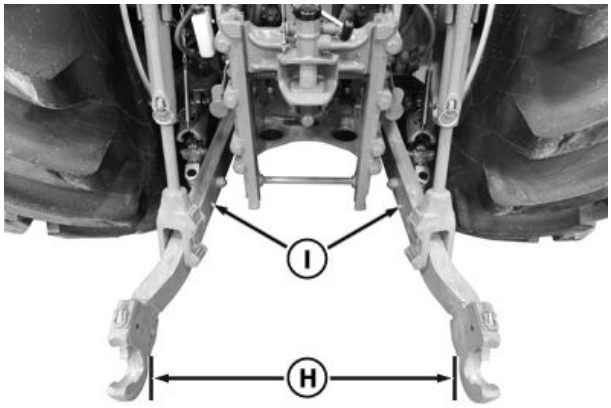
Stabilizer in Transport Position (Left-Hand Side Shown)

IMPORTANT: Check full range of hitch movement to ensure unnecessary sway latch (E) wear does not occur.

Deluxe sway stabilizers eliminate sway on stabilizer arms in transport rigid position (A). However, sway stabilizers can allow hitch to remain in rigid working position (B). Stabilizer chains (K) must be adjusted for each implement used. When hitch is lowered, stabilizer is unlocked in floating position (C). When hitch is raised, stabilizer locks automatically.

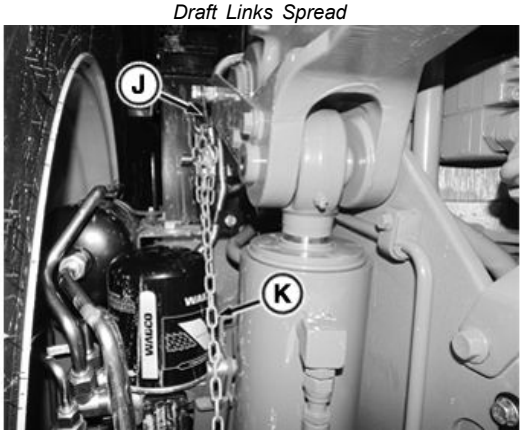
1. Park tractor on level ground and turn engine off.
2. Fully lower hitch.
3. Remove sway latch rings (D) from sway latches.
4. Raise sway latches fully. Place stabilizer chains on chain retaining hooks (J) to secure them.
5. Determine correct draft link spread (H). See implement operator's manual for desired distance.

A—Rigid Transport Position
B—Rigid Working Position
C—Floating Working Position
D—Sway Latch Ring
E—Sway Latch (locked)
F—Yoke
G—Yoke Pin
H—Draft Links Spread
I— Draft Links
J— Chain Retaining Hook
K—Stabilizer Chain



RXA0147641 —UN—20MAR15

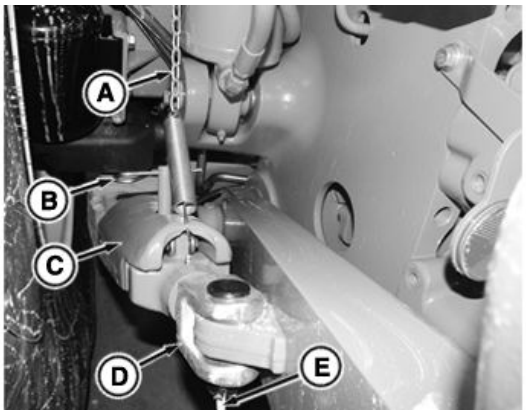
Draft Links Spread



RXA0147004 —UN—20MAR15

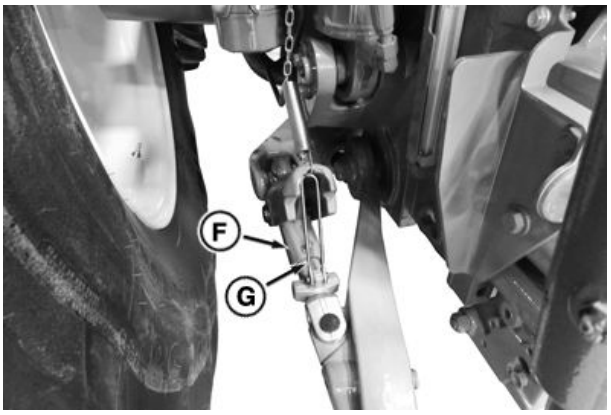
Stabilizer Chain Adjustment (Left-Hand Side Shown)

Continued on next page



RXA0147642 —UN—23MAR15

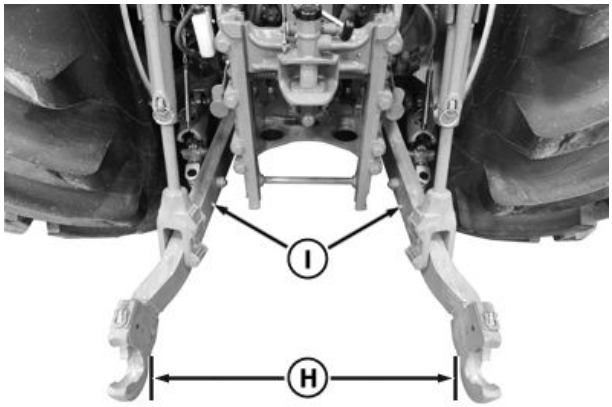
Stabilizer in Transport Position (Left-Hand Side Shown)



RXA0147643 —UN—23MAR15

Sway Latch Lever (Left-Hand Side Shown)

6. Adjust left-hand side sway latch lever (G) clockwise to decrease draft links spread (H) or counterclockwise to increase draft links spread to fit implement. If tractor tires are too large and prevent sway latch lever adjustment, remove yoke pin (E) and adjust yoke (D) clockwise to decrease draft links spread or counterclockwise to increase draft links spread.
7. Measure distance from centerline of drawbar to centerline of left-hand side implement ball.
8. Repeat steps 6 and 7 for right-hand side.
9. Recheck measurements to ensure accuracy.
10. When measurements are correct, remove stabilizer chain (A) from chain retaining hook (J) and lower sway latches (C) to stabilizer bar (F) and reinstall sway latch rings (B) and/or yoke pins.
11. Raise hitch to desired transport position.
12. Select stabilizer chain link that secures sway latches in position for transport and place link on chain retaining hook. If additional chain links are not secured, hang them on chain retaining hook to prevent possible interference.
13. Raise and lower hitch to ensure draft links (I) and sway latches can be in rigid and floating positions as desired.



RXA0147641 —UN—20MAR15

Draft Links Spread



RXA0147644 —UN—23MAR15

Stabilizer Chain Adjustment (Left-Hand Side Shown)

A—Stabilizer Chain
B—Sway Latch Ring
C—Sway Latch (locked)
D—Yoke
E—Yoke Pin
F—Stabilizer Bar
G—Sway Latch Lever
H—Draft Links Spread
I— Draft Links
J—Chain Retaining Hook

GH15097,0000911 -19-25MAR15-2/2

Attach Implement to Quick Coupler

CAUTION: To avoid bodily injury or machine damage:

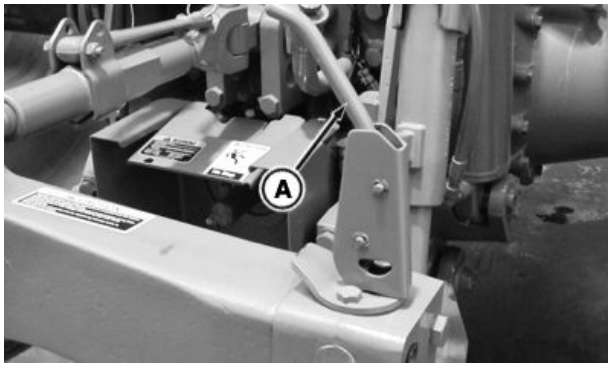
Put transmission in PARK position and check the full range of hitch for interference, binding, or PTO separation whenever an implement is attached.

Make sure implement is correctly attached. Incorrect attachment can allow implement to be pulled over the tractor wheel and onto the operator station.

Do not stand between tractor and implement.

1. Pull coupler latch handles (A) up.
2. Lower hitch until quick coupler hooks are lower than implement hitch pins.
3. Back up tractor to implement.
4. Raise hitch enough to engage implement pins in hooks.
5. Push coupler latch handles down to lock implement to quick coupler.
6. Connect hydraulic hoses and electrical connections.

IMPORTANT: Check for implement interference. Drawbar removal may be necessary.



RXA0129477 —UN—20NOV12

RXA0149595 —UN—07AUG15



Rear Hitch Control Lever

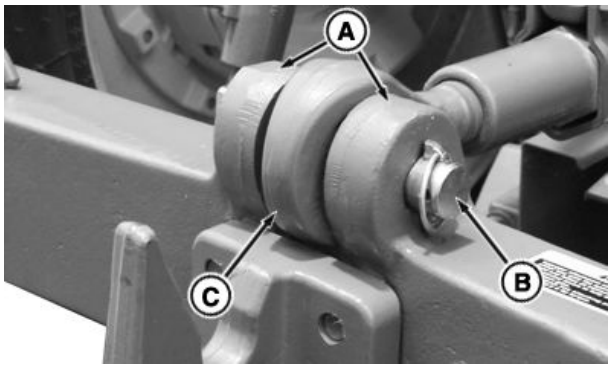
A—Coupler Latch Handle **B—Rear Hitch Control Lever**

7. Slowly pull rear hitch control lever (B) to raise implement. Lower implement to ground and adjust upper height limit control if necessary.

TO84419,0000137 -19-12AUG15-1/2

IMPORTANT: If center link is attached directly to implement, measure upper mast opening (A) and height above pin (B). If upper mast opening is greater than 70 mm (2.8 in.) or height above pin is less than 14 mm (0.6 in.), use shims to limit/restrict swiveling of yoke (C).

A—Upper Mast Opening Distance
B—Height Above Pin Distance
C—Yoke



RXA0129478 —UN—20NOV12

TO84419,0000137 -19-12AUG15-2/2

Level Implement

1. Adjust center link to level implement front-to-rear.
   - Remove locking ring (A).
   - Lift handle (B).
   - Rotate center portion of center link to desired length.
2. Secure handle (B) with locking ring (A).
3. Measure distance between centers of pins (C).

Center Link Length (C)—Specification

Adjustment—Category 3 Length With Quick Coupler	627—790 mm (24.7—31.1 in.)
Category 3 Length Without Quick Coupler	698—861 mm (27.5—33.9 in.)

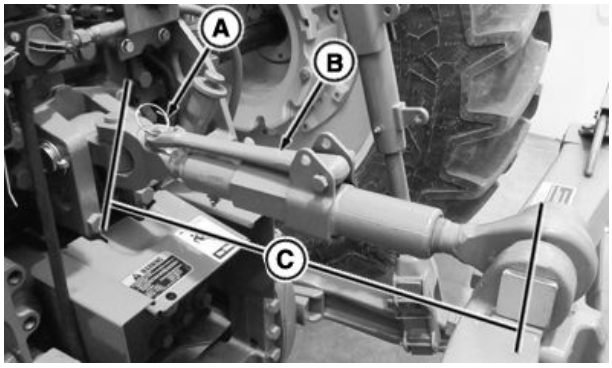
4. Adjust lift links to level implement side to side. Slide collar (D) upward. Rotate center portion (E) of lift link to desired length.
5. Measure between center of lift arm pin to draft link pin (F).

Lift Link Length (F)—Specification

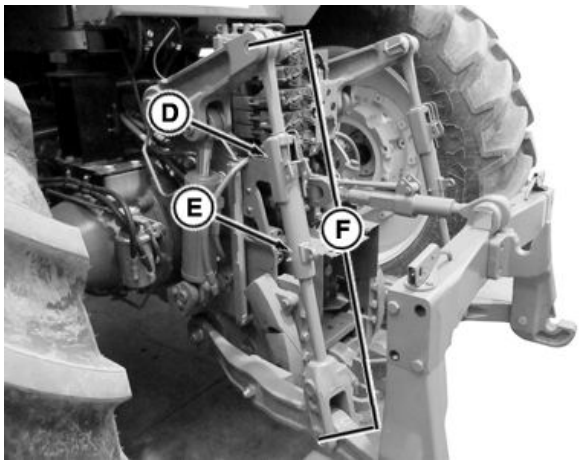
Adjustment—Group 47/48 Tires	1020—1178 mm (40—46.4 in.)
Group 49 Tires	1049—1207 mm (41—47.5 in.)

6. Lock out lateral float.
7. Secure collar (D) in position.

A—Locking Ring
B—Handle
C—Center Link Adjustment Length
D—Collar
E—Center Portion
F—Lift Link Adjustment Length



RXA0129479 —UN—20NOV12



RXA0129480 —UN—20NOV12

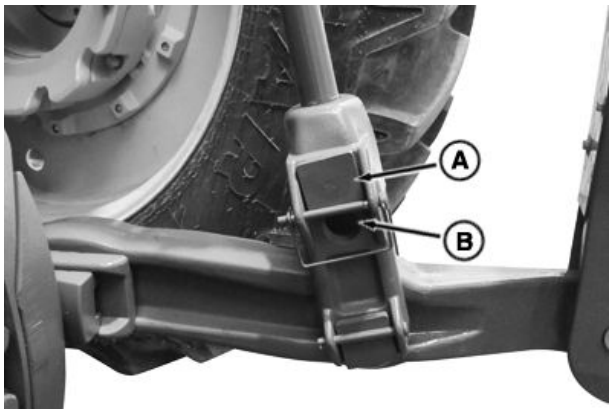
TO84419,0000138 -19-11MAR13-1/1

Adjust Lateral Float

Put lateral float pins in upper holes (A) to hold implement rigidly.

Put lateral float pins in lower holes (B) to allow draft link to raise as implement follows ground surface.

A—Upper Holes
B—Lower Holes



RXA0129481 —UN—20NOV12

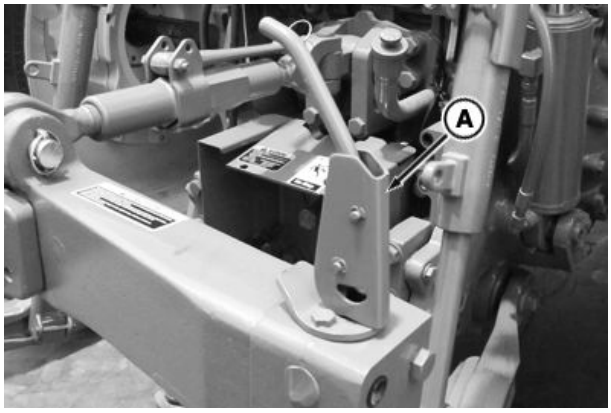
Lateral Float Pins

TO84419,0000139 -19-27NOV12-1/1

Detach Implement from Quick Coupler

1. Raise both latch levers (A) with implement raised.
2. Disconnect hydraulic hoses and electrical connections.
3. Lower implement to ground and continue lowering quick coupler until hooks clear implement hitch pins.
4. Carefully drive tractor away from implement.

A—Latch Lever



RXA0129731 —UN—20NOV12

Coupler Latch Lever

TO84419,000013A -19-27NOV12-1/1

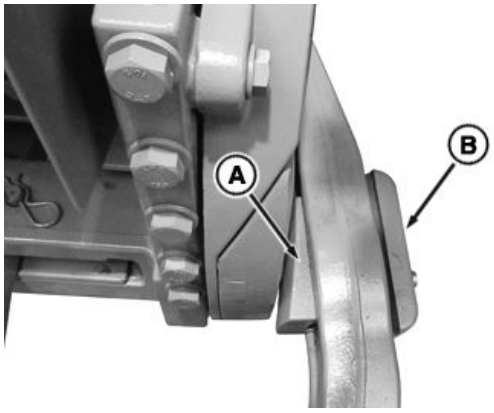
Hitch Conversion—Convertible Quick Coupler

1. Converting to category 3N is necessary for narrow row/tread spacing operations. Quick coupler is convertible to Category 3 or Category 3N. Use Category 3 whenever possible, especially for heavy loads. Install spacer (A) on outside of draft link for Category 3N.

IMPORTANT: If coupler is converted to category 3N, sway block spacer (A) must be mounted on outside of draft link to avoid damaging equipment.

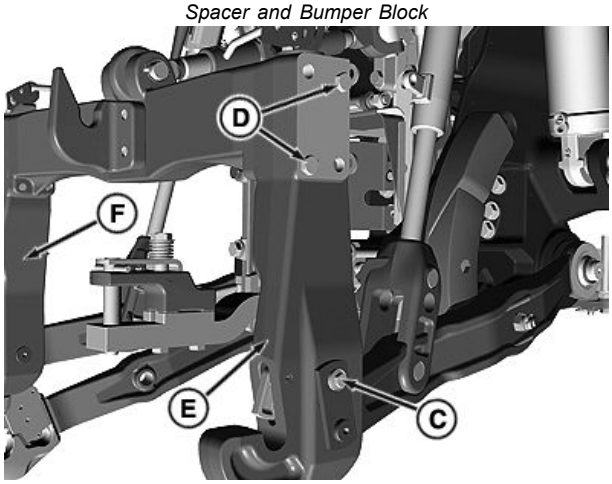
2. Adjust bumper block (B) to minimize clearance.
3. Tighten nut securely.
4. Support center of quick coupler. Remove pin retaining bolts (C) and pins from draft link. Remove side member cap screws (D).
5. Swap quick coupler side members, left- hand side member (F) to right end and right-hand side member (E) to left. Tighten cap screws to 320 N·m. (236 lb.-ft.)
6. Disconnect latch levers by removing C-clip and pin (G).
7. Remove cap screw (H) from wear plate and turn tab inward.
8. Install cap screws and tighten securely.
9. Reconnect levers.

A—Spacer
B—Bumper Block
C—Retaining Bolts
D—Cap Screws
E—Right-Hand Side Member
F—Left-Hand Side Member
G—C-Clip and Pin
H—Cap Screw



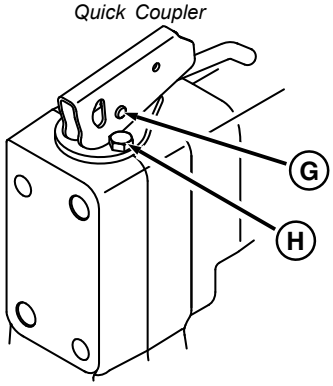
RXA0129732 —UN—20NOV12

Spacer and Bumper Block



RXA0128279 —UN—24SEP12

Quick Coupler



RXA0128278 —UN—24SEP12

Coupler Latch Lever

TO84419,000013B -19-01JUL14-1/1

Operating the Wagon Hitch

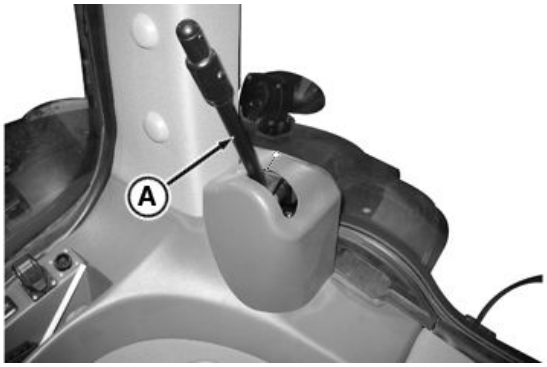
Wagon hitch can be released from the operator's seat using lever (A).

CAUTION: Avoid personal injury. Keep hands and fingers from hitch latching mechanism.

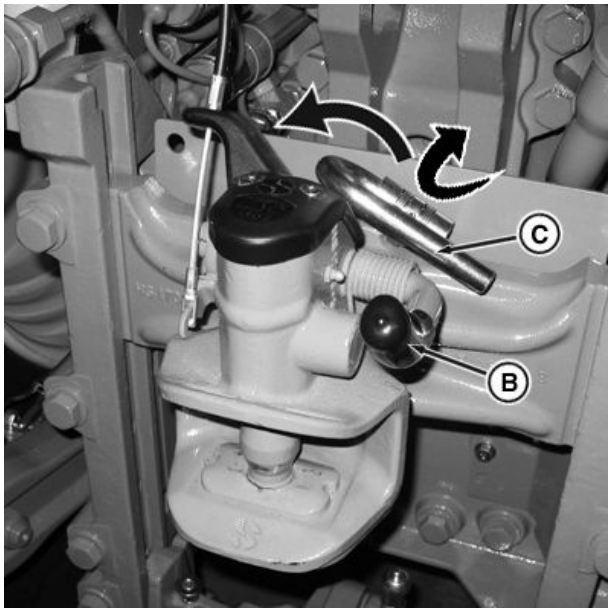
The wagon hitch closes automatically when trailer towing eye enters the hitch or can be manually closed using release lever (B).

Wagon hitch height can be adjusted using height adjustment lever (C). To adjust height, rotate height adjustment lever (C) back, then slide lever to the left.

A—Lever (In Cab)
B—Release Lever
C—Height Adjustment Lever



RXA0109284 —UN—10AUG10



RXA0112501 —UN—14DEC10

GH15097,00007C4 -19-13FEB13-1/1

Operating Pick-Up Hitch

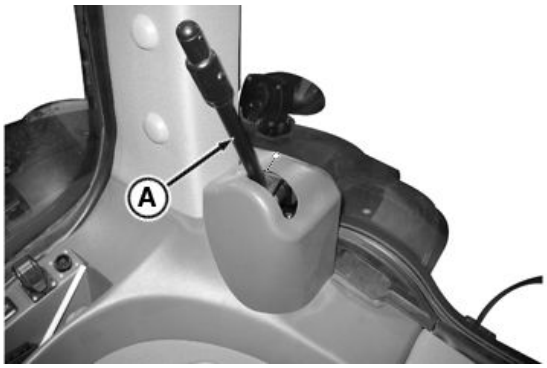
NOTE: Pick-up hitch is operated using any selective control valve, shown is SCV I (B), and by any hitch control which raises or lowers pick-up hitch.

1. Retract rear hitch control lever (D) to raise pick-up hitch.
2. Retract pick-up hitch control lever (A) back while lowering pick-up hitch using rear hitch control lever (D).
3. Extend SCV I (B) so hitch hook engages trailer towing eye.
4. Retract rear hitch control lever (D) to raise pick-up hitch.

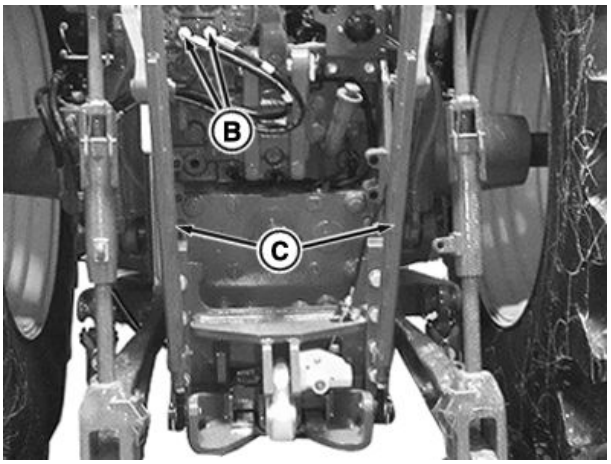
CAUTION: Avoid bodily injury whenever pick-up hitch is used. Make sure that pick-up hitch is fully raised and locked in position before driving away. Avoid damage to implement and/or pick-up hitch lift rods with use of caution when making sharp turns. Adjust sway blocks or stabilizers to prevent interference or binding.

5. Retract SCV I (B) to latch pick-up hitch.
6. Remove pin (G) and hook (F), then slide in drawbar (E), and install pin to change coupler.

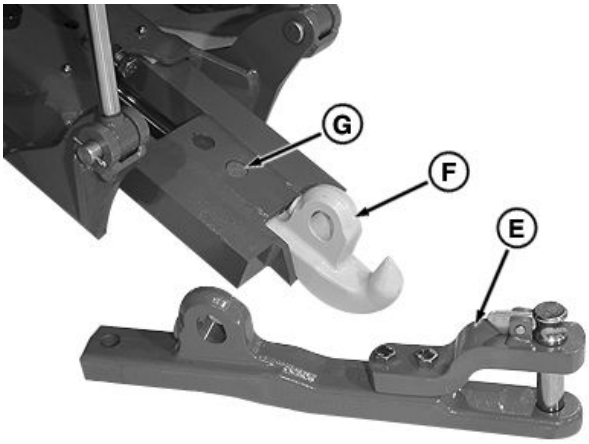
IMPORTANT: To install lift rods (C), adjust only at bottom.



RXA0109284 —UN—10AUG10



RXA0140573 —UN—02APR14



RXA0140574 —UN—02APR14



RXA0140572 —UN—02APR14

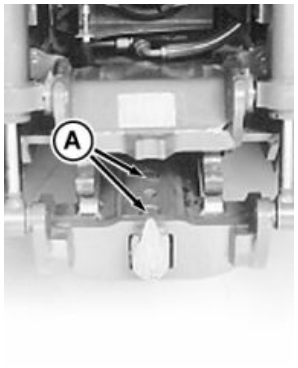
A—Pick-Up Hitch Control Lever
B—SCV I Coupler
C—Lift Rods
D—Rear Hitch Control Lever
E—Drawbar
F—Hook
G—Pin

GH15097,00007C1 -19-23APR14-1/1

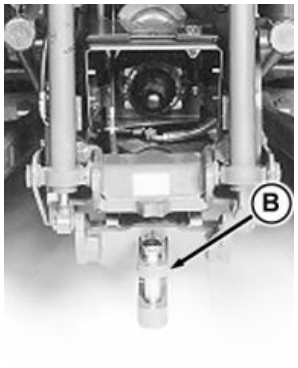
Changing Pick-Up Hitch Coupler

1. Lower pick-up hitch.
2. Remove pins (A) from hook.
3. Install swinging drawbar (B) and reinstall pins.
4. Store hook or drawbar element in holder on left side of tractor frame by batteries.

A—Pins **B—Swinging Drawbar**



RW55555A —UN—06NOV99



RW55556A —UN—06NOV99

GH15097,00007C2 -19-23APR14-1/1

3 in 1 Hitch System

CAUTION: Avoid personal injury. Keep hands and fingers from hitch latching mechanism.

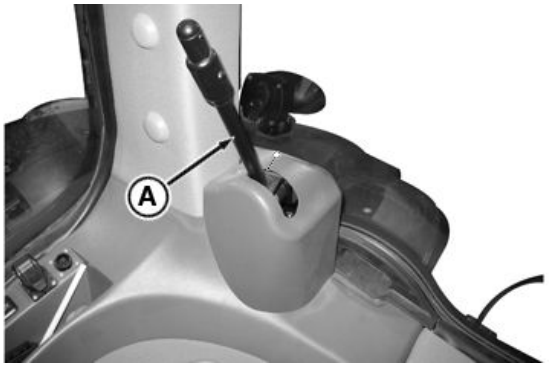
The wagon hitch pin closes automatically when trailer towing eye enters the hitch or can be manually closed using lever (A).

To operate piton coupling (B) or ball coupling (E), lift locking lever (C) and slide to the right to raise locking arm (D).

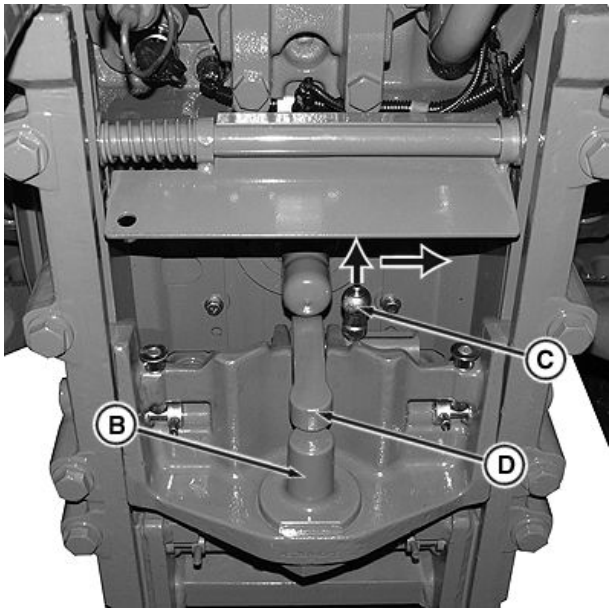
Install piton coupling (B) or ball coupling (E) by lifting locking pins (F) and sliding spring release pins (G). Slide either coupling into hitch rails and install locking pins.

IMPORTANT: If using 35 mm (1.375 in.) PTO or PTO adaptor with 3 in 1 hitch rails, it may be necessary to limit steering angles to prevent telescoping drive line from rubbing and/or damaging hitch rails.

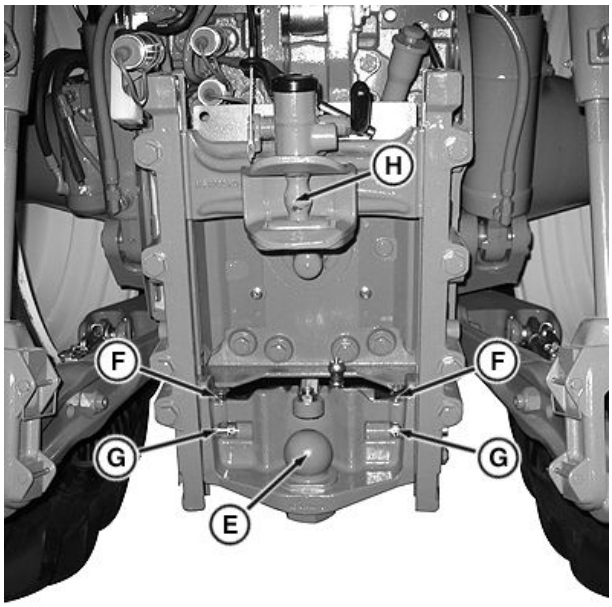
A—Lever (In Cab)
B—Piton Coupling
C—Locking Lever
D—Locking Arm
E—Ball Coupling
F—Locking Pins
G—Spring Release Pins
H—Wagon Hitch



RXA0109284 —UN—10AUG10



RXA0112499 —UN—14DEC10



RXA0112497 —UN—14DEC10

GH15097,00007C3 -19-11MAR13-1/1

Using Front Hitch (If Equipped)

IMPORTANT: Use deluxe hitch only for carrier operations unless optional push bar kit is installed.

NOTE: Front hitches can only be installed on tractors ordered from factory with front hitch ready option.

Two versions of front hitch are available, deluxe, and premium.

Premium front hitch is equipped with push bar and heavier lift arms that allows carrier operations with ground engaging implements.

Front hitches with a push bar (for extra strength) maintain front axle to ground clearance for row-crop applications and can be used with ground engaging implements, including primary tillage implements and standard blades.

Deluxe front hitch should be used for carrier operations, unless push bar is installed. Convert deluxe hitch to premium hitch configuration by installing kit from John Deere™ dealers.

Lift Arm Positions

Perform following to prepare front hitch for operation:

1. Support lift arm (A) and remove quick lock pin (B).
2. Lower lift arm to align holes with hitch frame for following operations:
   - Position (C) — Rigid; lift arms stable
   - Position (D) — Float; allows lift arms/hitch to follow ground contours
3. Install pin and quick lock pin.
4. Repeat on opposite side.

To store lift arms, remove pins and raise lift arm into upright position. Install pin and quick lock pin in location (C).

Attaching and Detaching Implement to/from Hitch

⚠ CAUTION: Avoid possible personal injury and tractor damage. DO NOT use front hitch to lift tractor. Use correct lifting equipment.

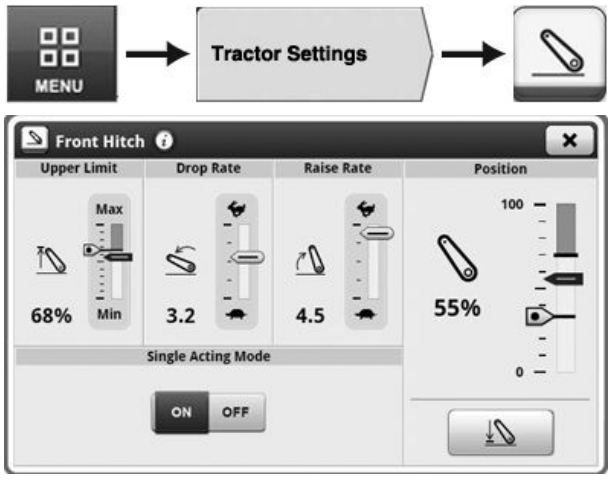
IMPORTANT: Avoid damage to equipment. Be sure load is balanced side-to-side and front-to-rear.

1. Adjust implement attaching points (see implement operator's manual).
2. Lower lift arms (A) using remote hitch switch (E).
3. Position coupler ends of lift arms below implement link pins and slowly raise hitch until coupler ends lock on implement link pins.

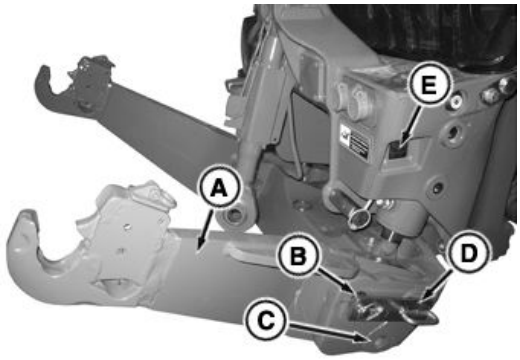
NOTE: Keep center link in stored position when not in use.

4. Loosen locking sleeve (G).

RXA0132258 —UN—22MAY13

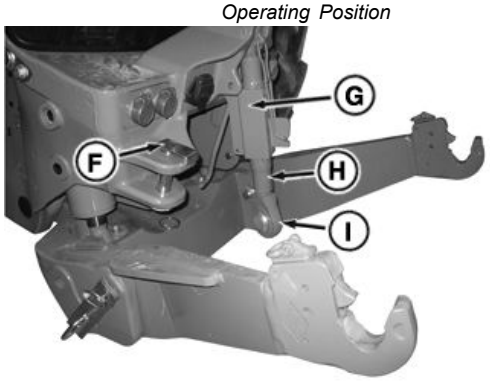


RXA0143184 —UN—03JUL14



RXA0133385 —UN—26JUL13

Operating Position



RXA0143177 —UN—03JUL14

A—Lift Arm
B—Quick Lock Pin
C—Rigid Position
D—Float Position
E—Remote Hitch Switch
F—Quick Lock Pin
G—Locking Sleeve
H—Center Link
I— Center Link End

5. Hold center link end (I) and turn center link (H) to adjust length. Tighten locking sleeve (G).
6. Remove quick lock pin (F) from storage location and attach center link (H) to implement.

Detach implement from hitch in reverse order of attaching.

Continued on next page

TO84419,000013C -19-07JUL14-2/3

NOTE: Front hitch can be operated by tractor mid-mount SCVs using electro-hydraulic joystick (A) (see Electro-Hydraulic joystick in Selective Control Valves Section in this Operator's Manual for more information).

A—Joystick



RXA0132251 —UN—13MAY13

Joystick

TO84419,000013C -19-07JUL14-3/3

Front Hitch Single Acting Mode And Position & Set Points

1. Select **Menu.**
2. Select **tractor settings tab.**
3. Select **front hitch icon.**
4. Select **single acting mode icon (A).**

When front hitch single acting mode is **ON**, hydraulics raise hitch without restriction but amount of downforce applied to lower hitch is reduced.

Single acting mode can only be enabled when front hitch is in float or in top 10% of travel range and front hitch control lever is in center position.

Position and set points module (B), displays current front hitch position (E), lower set point (I), and upper set point (D). Hitch position indicator (E) is shown as a percentage (F) of hitch position slider gauge (H). When front hitch is in full down position, position percentage (F) is 0%. When hitch is fully up, position percentage (F) is 100%.

In order to set lower set point (I), move position indicator (E) to the desired position using front hitch lever or joystick, then press lower set point set button (G).

Press upper set point set button (C) to reset upper position set point to current position.

Performing an extend detent operation with front hitch control lever or joystick causes front hitch to move to upper set point position (D) provided hitch starts from below this point.

Performing a retract detent operation with front hitch control lever or joystick causes front hitch to move to lower set point position (I) provided front hitch starts above this point.

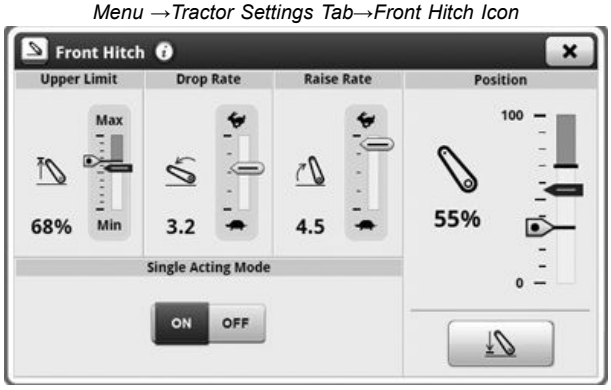
NOTE: Exception: If tractor is moving during a retract detent operation, front hitch moves to lower set point from any starting position.

Hitch can be moved above upper set points or below lower set point by using front hitch control lever or joystick in proportional control or remote switches.

RXA0132258 —UN—22MAY13

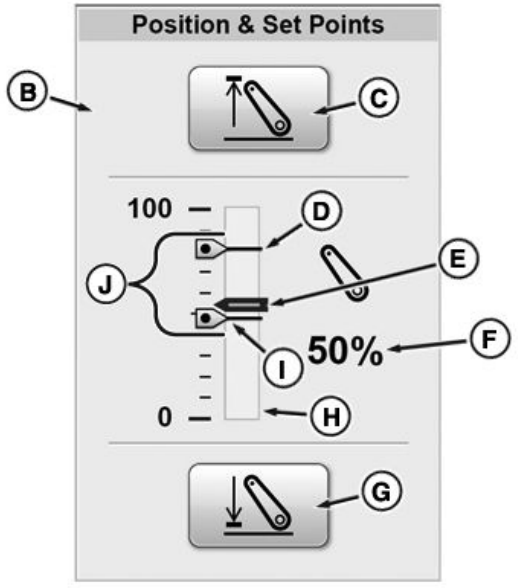


Menu →Tractor Settings Tab→Front Hitch Icon



RXA0142718 —UN—02JUL14

Front Hitch Single Acting Mode On



RXA0135525 —UN—18SEP13

Position and Set Points

A—Front Hitch Single Acting Mode On/Off Icon
B—Position And Set Points Module
C—Upper Set point Set Button
D—Upper Set point Indicator
E—Position Indicator
F—Position Percentage
G—Lower Set point Set Button
H—Front Hitch Position Slider Gauge
I— Lower Set point Indicator
J— Motion Range Using Detent Operations

GH15097,000082A -19-01JUL14-1/1

Adjusting Front Hitch Drop Rate

IMPORTANT: Excessive drop speed may cause injury or machine damage. Fully lowering implement should take at least 2 seconds.

1. Select **Menu.**
2. Select **Tractor settings tab.**
3. Select **Front Hitch icon.**
4. Select **Front Hitch Drop Rate module.**

NOTE: Changes to rate of drop are immediate.

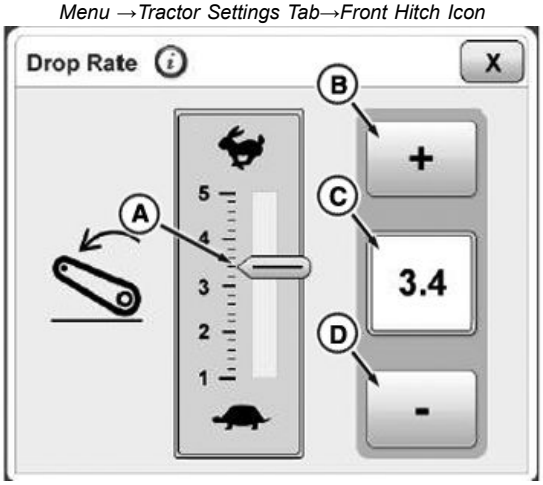
NOTE: Changes can be made to front hitch drop rate by increase value button (B) and decrease value button (D).

A—Drop Rate Indicator
B—Increase Value Button
C—Input Box
D—Decrease Value Button

RXA0132258 —UN—22MAY13



Menu →Tractor Settings Tab→Front Hitch Icon



RXA0132458 —UN—28JUN13

Front Hitch Drop Rate Module

GH15097,00007ED -19-10APR14-1/1

Adjusting Front Hitch Raise Rate

1. Select **Menu.**
2. Select **Tractor settings tab.**
3. Select **Front Hitch icon.**
4. Select **Hitch Raise Rate Module.**

NOTE: Changes to raise rate are immediate.

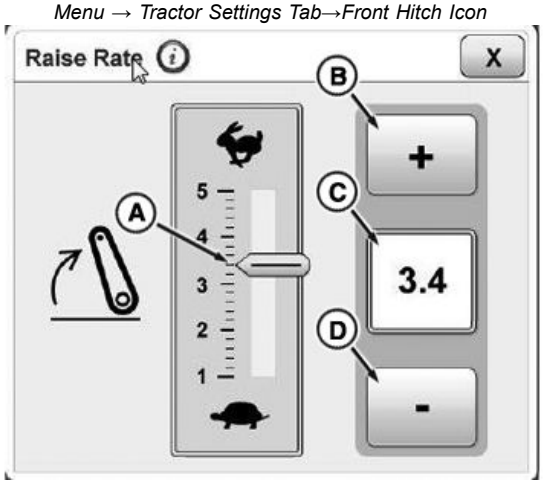
NOTE: Changes can be made to front hitch raise rate by increase value button (B) and decrease value button (D).

A—Raise Rate Indicator
B—Increase Value Button
C—Input Box
D—Decrease Value Button

RXA0132258 —UN—22MAY13



Menu → Tractor Settings Tab→Front Hitch Icon



RXA0132459 —UN—27JUN13

Front Hitch Raise Rate Module

GH15097,00007EE -19-17SEP13-1/1

Stay Clear of Rotating Drivelines

Entanglement in rotating driveline can cause serious injury or death.

Keep tractor master shield and driveline shields in place at all times. Make sure rotating shields turn freely.

Wear close fitting clothing. Stop the engine and be sure that PTO driveline is stopped before making adjustments, connections, or cleaning out PTO driven equipment.

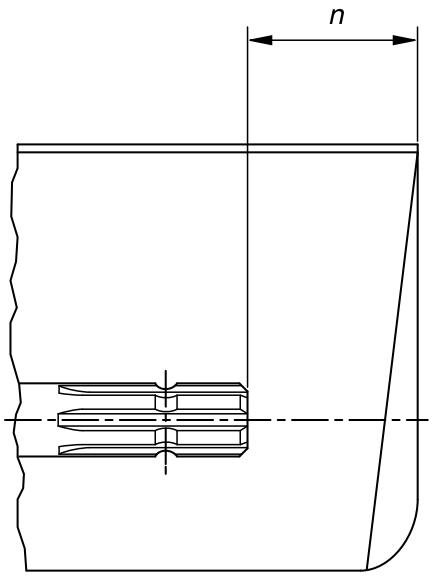
Do not install any adapter device between the tractor and the primary implement PTO drive shaft that will allow a 1000 rpm tractor shaft to power a 540 rpm implement at speeds higher than 540 rpm.

Do not install any adapter device that results in a portion of the rotating implement shaft, tractor shaft, or the adapter to be unguarded. The tractor master shield shall overlap the end of the splined shaft and the added adaptor device as outlined in the table.

PTO Type	Diameter	Splines	n ± 5 mm (0.20 in.)
1	35 mm (1.378 in.)	6	85 mm (3.35 in.)
2	35 mm (1.378 in.)	21	85 mm (3.35 in.)
3	45 mm (1.772 in.)	20	100 mm (4.00 in.)



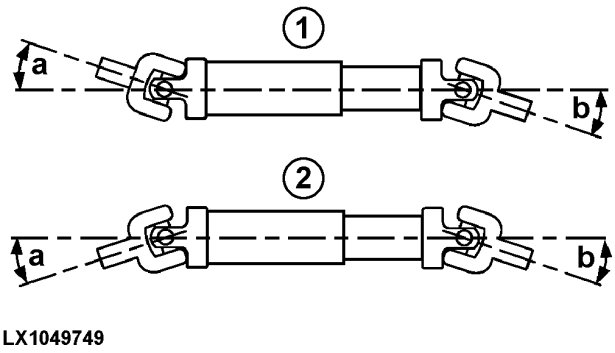
TS1644 —UN—22AUG95



H96219 —UN—29APR10

DX,PTO -19-30JUN10-1/1

Operating Instructions (2010-52-EU)

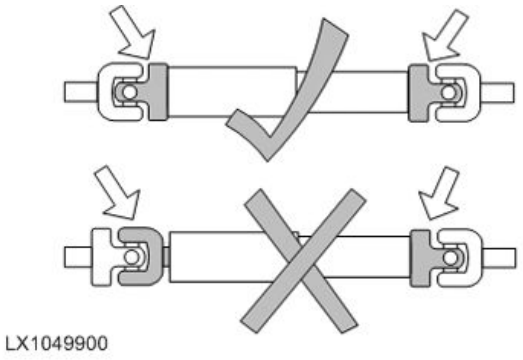


LX1049749

LX1049749 —UN—21MAY10

Articulation on drive shaft

1— Z-Shaped Layout **2— W-Shaped Layout**



LX1049900 —UN—22FEB11

Align Forks Correctly

As far as possible, angles (a) and (b) at the universal joints should be the same at both ends of the drive shaft.

In applications where this is not the case (e.g. sharp turns with PTO engaged), it is recommended to use a continuous-velocity drive shaft.

NOTE: The two schematic drawings do not show any guards on the drive shaft. A guard is mandatory when using drive shafts.

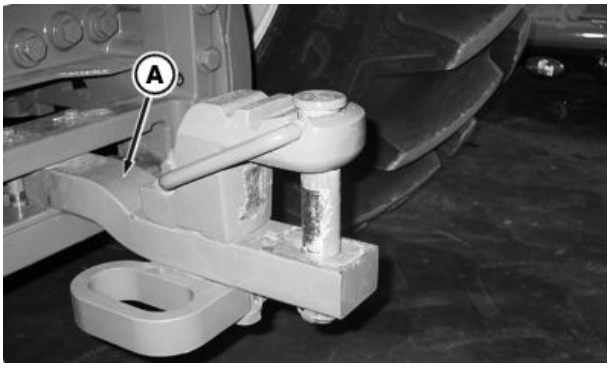
IMPORTANT: Only operating conditions described in the Operator's Manuals of the various implements are permitted. This applies particularly to maximum permissible angle of articulation, to the use of freewheel clutches and overload clutches, and to the prescribed amount of overlap when shaped pipes are pushed together.

IMPORTANT: Before using a PTO driven implement, take action to ensure that the drive shaft is lubricated regularly. Comply with instructions in the Operator's Manual provided by the manufacturer.

IMPORTANT: On multi component, telescopic drive shafts, the yokes at each end must be aligned as shown. The yokes at each end must NOT be at 90° to one another (see arrows in illustration on the right).

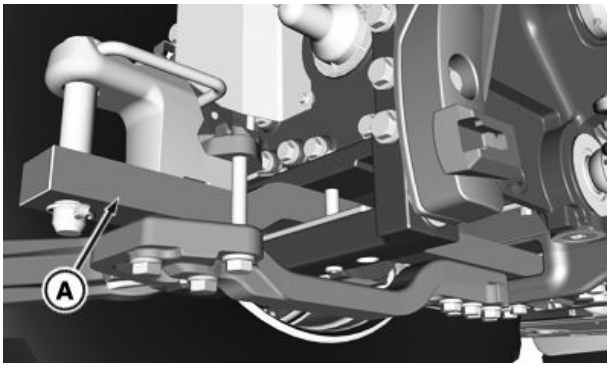
GH15097,00007BF -19-29APR13-1/1

Drawbar Load Limits Based on Drawbar Position and Length and PTO Type



RXA0127994 —UN—12SEP12

Category 3 Drawbar



RXA0128918 —UN—09NOV12

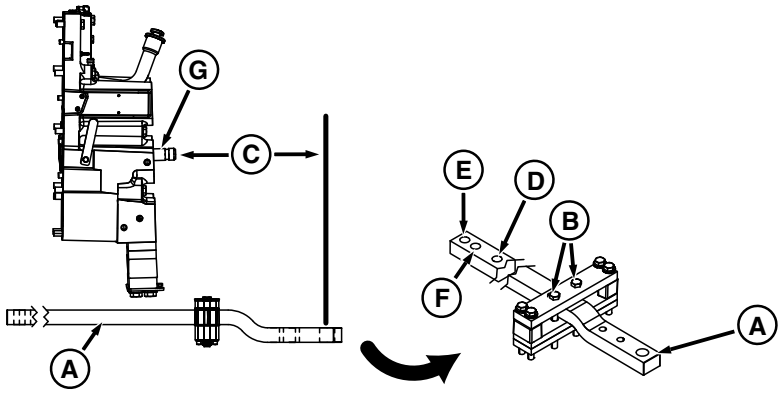
Category 3 Drawbar and High Vertical Load Drawbar Support

A—Drawbar

Drawbar Type	7210R	7230R	7250R	7270R	7290R	7310R
Category 3	Standard	Standard	Standard	Standard	Standard	Standard
Category 3 HD	Optional	Optional	Optional	Optional	Optional	Optional

Continued on next page

GH15097,0000833 -19-14AUG14-1/2



RXA0084666 —UN—02NOV05

A—Drawbar
B—Cap Screws
C—Dimension
D—Short Position
E—Long Position
F—Medium Position
G—PTO Shaft

IMPORTANT: Certain heavy implements may place excessive strain on drawbar (A). Strain is greatly increased by speed and rough terrain.

Do not exceed maximum static vertical load on drawbar for given drawbar length/position, as indicated in table below.

Drawbar Load Limits						
Drawbar Length/Position	**Dimension (C) at 1000 RPM 1 3/4 in 20 splines**	**Dimension (C) at 1000 RPM 1 3/8 in 21 splines**	**Dimension (C) at 540 RPM 1 3/8 in 6 splines**	**Maximum Vertical Load — Category 2 Drawbar**	**Maximum Vertical Load — Category 3 Drawbar**	**Maximum Vertical Load — Category 3 HD Drawbar**
1— Short/Rear Hole	348 mm (13.7 in.)[a]	360 mm (14.2 in.)[a]	360 mm (14.2 in.)	2268 kg (5000 lb.)	2766 kg (6100 lb.)	4536 kg (10000 lb.)
2—Medium/Middle Hole	397 mm (15.6 in.)[a]	409 mm (16.1 in.)	409 mm (16.1 in.)[a]	1678 kg (3700 lb.)	2131 kg (4700 lb.)	3493 kg (7700 lb.)
3—Long/Front Hole	500 mm (20 in.)	512 mm (20.2 in.)[a]	512 mm (20.2 in.)[a]	1430 kg (3150 lb.)	1837 kg (4050 lb.)	2994 kg (6600 lb.)

[a]*Not for PTO operation*

GH15097,0000833 -19-14AUG14-2/2

Adjusting Drawbar Length, Height and Side to Side

Adjusting Drawbar Length

IMPORTANT: For PTO driven implement, drawbar (A) must be positioned as instructed in Attaching PTO Driven Implement in this section.

1. Loosen drawbar locking bolts (D).
2. Remove cap screw (B), retaining pin (C) and retaining strap.
3. Slide drawbar to desired position.
4. Install drawbar retaining strap and pin.

Retaining Cap Screws—Specification

Cap Screw—Torque..... 70 N·m (50 lb-ft)

5. Tighten drawbar locking bolts to torque specification.

Drawbar Locking Bolts—Specification

Locking Bolts—Torque..... 430 N·m (318 lb-ft)

Adjusting Drawbar Height

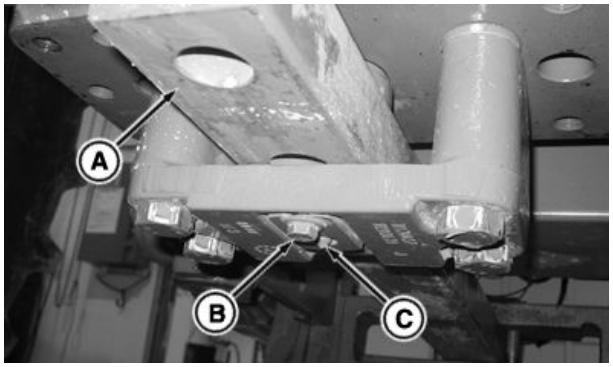
Drawbar height adjusted by turning offset (E) up or down. Adjust length. Slide drawbar fully out and turn drawbar over.

IMPORTANT: Clevis assembly must always be on top of drawbar if used.

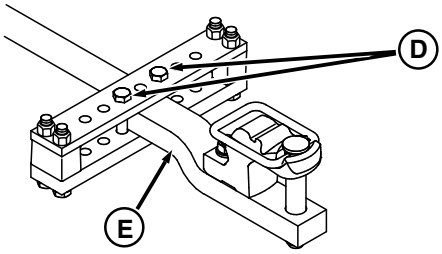
Heavy duty support cannot be used with drawbar offset positioned upward.

Adjusting Drawbar Side To Side

1. Remove drawbar locking bolts.



RXA0129472 —UN—09NOV12



RXA0085803 —UN—10JAN06

A—Drawbar
B—Cap Screw
C—Retaining Pin
D—Locking Bolts
E—Offset

2. Slide drawbar to desired position.
3. Install a locking bolt against each side of drawbar. Tighten bolts to torque specification.

TO84419,000013F -19-25JUL13-1/1

Installing and Using Clevis Assembly Cat 2 Drawbar

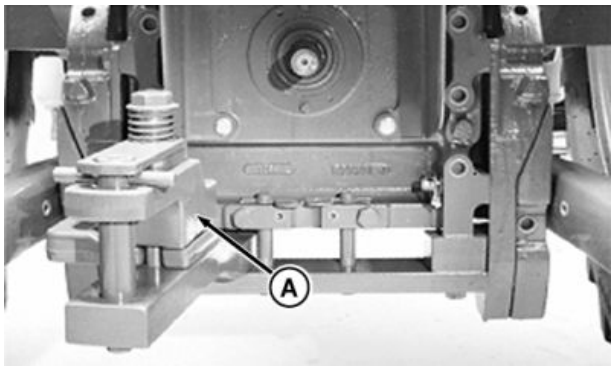
IMPORTANT: The clevis may need to be removed depending on PTO application.

There are two designs for the Cat 2 drawbar clevis. The picture shows the standard design and there is a low profile drop pin design like type 3.

Clevis (A) must be attached ONLY to top of drawbar. If the drawbar is turned over, remove the clevis assembly and attach to top of drawbar.

Clevis Assembly Retaining Cap Screws—Specification	
Category 2—Torque	750 N·m (550 lb-ft)

Connect implement to drawbar, using pin of clevis assembly.



RW21410A —UN—02AUG99

A—Clevis

GH15097,00007C0 -19-13FEB13-1/1

Installing and Using Clevis Assembly Cat 3 Drawbar

IMPORTANT: Clevis may need to be removed depending on application.

NOTE: Clevis assembly (A) must be attached ONLY to top of drawbar.

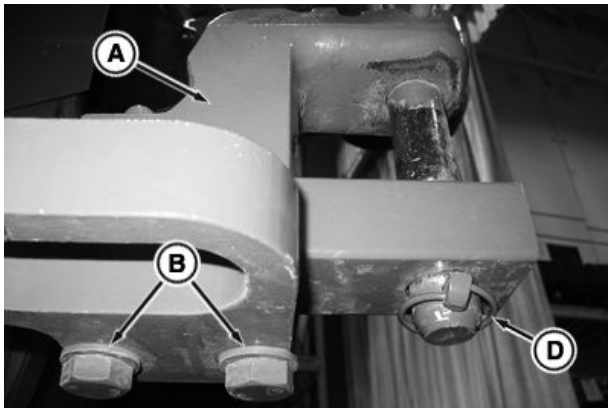
1. Install clevis assembly and tighten cap screws (B).

Clevis Assembly Retaining Cap Screws—Specification

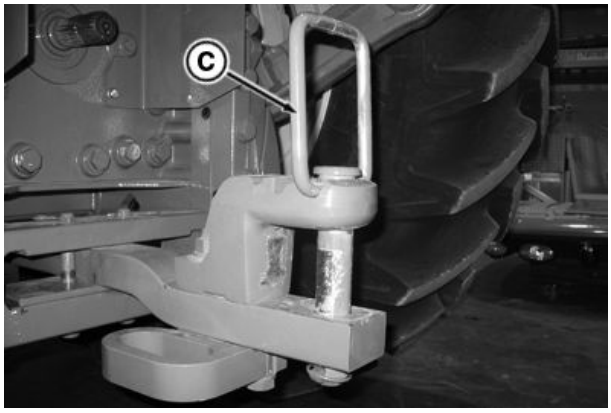
Category 3—Torque..... 750 N·m (550 lb-ft)

2. Remove lock pin (D). Lift pin with handle (C) and position in notch of clevis assembly.
3. Attach implement.
4. Insert pin only through drawbar, not through clevis assembly, if towed implement also has a clevis assembly. DO NOT insert pin through all four members. Remove drawbar clevis if implement is equipped with clevis.
5. Install locking pin (D).

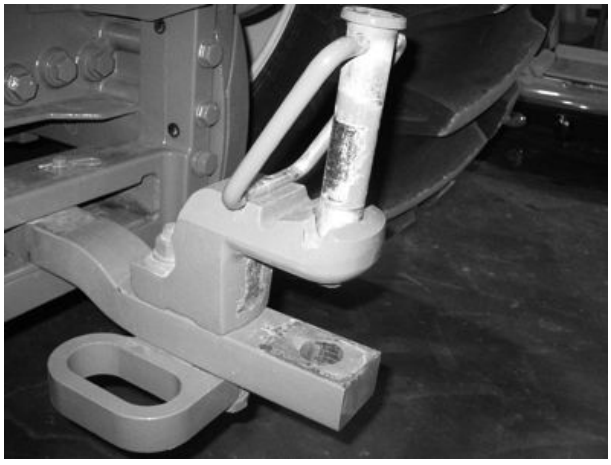
A—Clevis Assembly
B—Cap Screws
C—Pin with Handle
D—Lock Pin



RXA0128173 —UN—18OCT12



RXA0128175 —UN—12SEP12



RXA0128176 —UN—12SEP12

TO84419,0000140 -19-09SEP13-1/1

Installing and Using Clevis Assembly (High Vertical Load Drawbar Support)

IMPORTANT: The clevis may need to be removed depending on application.

Clevis assembly (B) must be attached ONLY to top of drawbar.

NOTE: Hold brace using a jack during installation.

1. Install brace (C) to drawbar (J) using three washers and cap screws (A).
2. Install brace (C) to drawbar and clevis assembly (B) using washer and cap screw (D).

Cap Screws (D)—Specification

Category 3—Torque..... 750 N·m (555 lb.-ft.)

3. Install retainer (E) using one washer and cap screw (F) and two washers and cap screws (G). Tighten brace cap screws to specification.

Cap Screws (F)—Specification

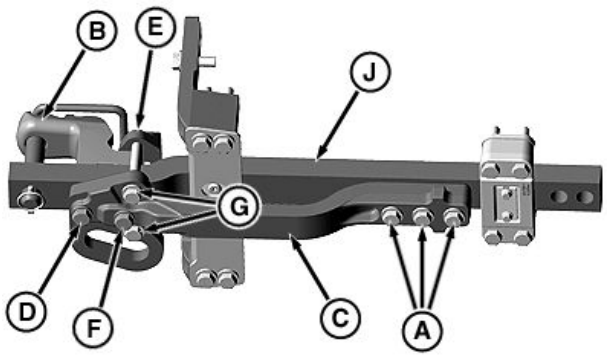
Category 3—Torque..... 750 N·m (555 lb-ft)

Cap Screws (A and G)—Specification

Category 3—Torque..... 430 N·m (320 lb-ft)

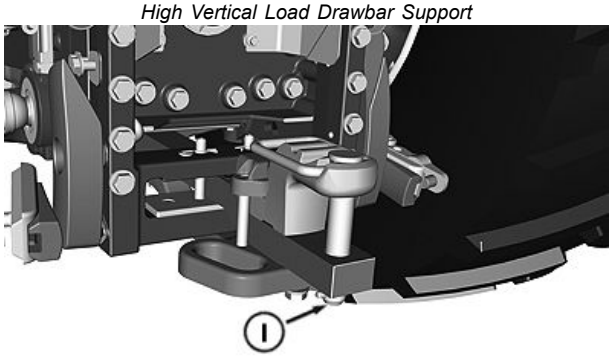
4. Remove locking pin (I). Lift pin with handle (H) and position in notch of clevis assembly.
5. Attach implement.
6. Insert pin only through drawbar, not through clevis assembly, if towed implement also has a clevis assembly. DO NOT insert pin through all four members.
7. Install locking pin (I).
8. Remove clevis in reverse order of installation.

A—Cap Screws
B—Clevis Assembly
C—Brace
D—Cap Screw
E—Retainer
F—Cap Screw
G—Cap Screws
H—Pin with Handle
I— Locking Pin
J— Drawbar

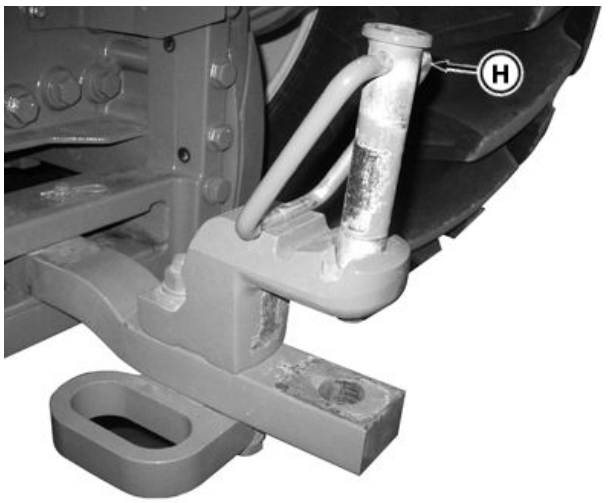


RXA0090741 —UN—21SEP06

High Vertical Load Drawbar Support



RXA0128626 —UN—12OCT12



RXA0128624 —UN—12OCT12

TO84419,0000141 -19-08APR13-1/1

Attaching Rear PTO Driven Implement

CAUTION: Entanglement in rotating drive line can cause serious injury or death. STOP THE ENGINE and be sure that telescoping drive line is stopped before making adjustments, connections, or before cleaning PTO driven equipment.

Keep PTO shield and drive line shields in place at all times. Make sure rotating shields turn freely. Wear close fitting clothing.



TS1644 —UN—22AUG95

Lock drawbar in center, no sway position shown and remove clevis assembly.

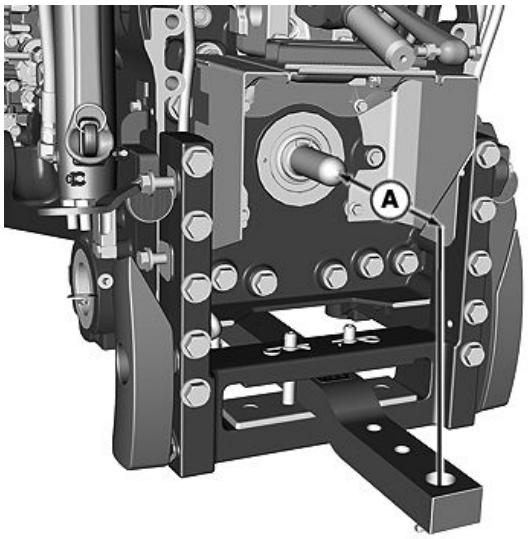
PTO Shaft	Distance from PTO Shaft End to Hitch Pin Hole (A)
1000 rpm - 6 Splines[a]	400 mm (16 in.)
1000 rpm - 21 Splines[a]	400 mm (16 in.)
1000 rpm - 20 Splines[b]	508 mm (20 in.)

[a]35 mm (1-3/8 in.) Shaft Diameter
[b]45 mm (1-3/4 in.) Shaft Diameter

Attach implement to drawbar before connecting telescoping drive line. If implement will be connected to quick coupler, be sure that drawbar will not interfere.

Connect drive line to PTO shaft. Turn shaft slightly by hand to line up splines. Be sure yoke is in correct position and firmly locked.

Move PTO shield into position. (See Rear PTO Shield in this section of this Operator's Manual.)



RXA0128912 —UN—16OCT12

A—PTO Shaft to Pin Hole Distance

GH15097,00008E6 -19-14AUG14-1/1

Attaching Front PTO Driven Implement (If Equipped)

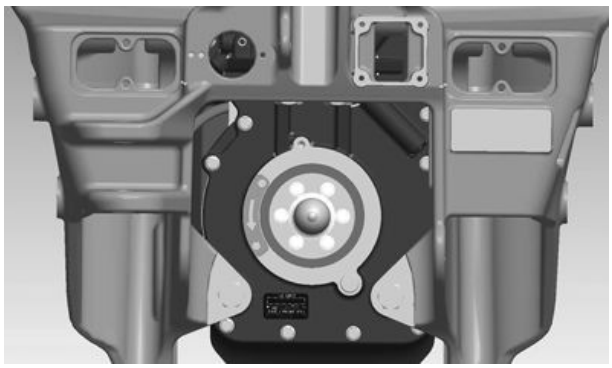


TS1644 —UN—22AUG95

CAUTION: Entanglement in rotating driveline can cause serious injury or death. STOP THE ENGINE and be sure that telescoping driveline is stopped before making adjustments, connections, or before cleaning PTO driven equipment.

Keep all driveline shields in place at all times. Make sure rotating shields turn freely. Wear close fitting clothing.

If optional front PTO is installed, it will come equipped with one of three PTO shafts. All shafts turn at 1000 rpm when engine is running at 1950 rpm.



RXA0135350 —UN—30AUG13

FPTO directional arrow

TO84419,0000143 -19-05SEP13-1/1

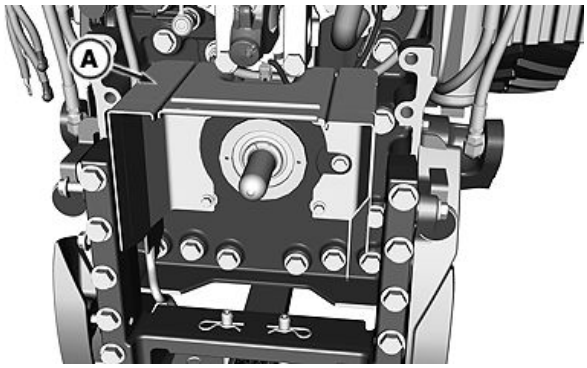
Rear PTO Shield—Type 3 PTO

CAUTION: Avoid personal injury. Put PTO shield in correct position at all times. Do not use shield as a step.

NOTE: Type 3 PTO uses 45 mm (1-3/4 in.) shaft with 20 splines.

Make sure to lower top plate (A) before engaging PTO.

When using hydraulic hitch center link, PTO shield should be lowered to provide proper clearance. See Hydraulic Center Link in Hitch section of this Operator's Manual for more information.



RXA0128913 —UN—12OCT12

Normal Position

A—Top Plate

TO84419,0000144 -19-27NOV12-1/1

Using Correct Engine Speed

Correct engine speed is important. Run engine at 1950 engine rpm for both 540 and 1000 rpm PTO speed operation.

If equipped with 3-speed PTO, run engine at:

- 1750 rpm—540E and 1000E rpm PTO
- 1950 rpm—540 and 1000 rpm PTO

A—Tachometer
B—PTO Indicator—Rear
C—PTO Indicator—Front (If Equipped)



RXA0128920 —UN—27NOV12

TO84419,0000145 -19-11MAR13-1/1

PTO Engagement Rate

Use shortcut buttons or follow alternative path:

1. Select **Menu.**
2. Select **Tractor Settings tab.**
3. Select **PTO icon.**
4. Select **Information and Settings icon.**
5. Select **Settings tab.**

Operator can select from three different engagement rates for both front and rear PTO: AUTO, Low, and High.

AUTO: Used for most implements, and is the factory setting in CommandCenter™. This setting provides software logic to determine engagement rate for PTO clutch, based on PTO speed sensor feedback. If PTO does not turn fast enough during initial PTO clutch engagement, engagement rate is automatically increased to avoid clutch slip and PTO shutdown.

Low: Can be used where gradual PTO startup is required, or if Auto engagement is too aggressive or inconsistent.

High: Can be used for applications where PTO clutch engagement needs to be aggressive.

IMPORTANT: If operator is experiencing problems with PTO clutch engagement in Auto setting, change PTO engagement setting in CommandCenter™ from Auto to High Rate to prevent power train damage.

A—Rear PTO Engagement Rate Button
B—Front PTO Engagement Rate Button (If Equipped)
C—PTO Engagement Rate Settings
D—Cancel Button
E—OK Button

RXA0133713 —UN—16JUL13

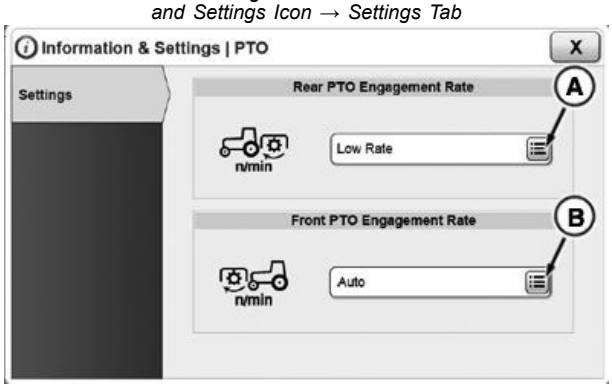


Generation 4 Shortcut Buttons

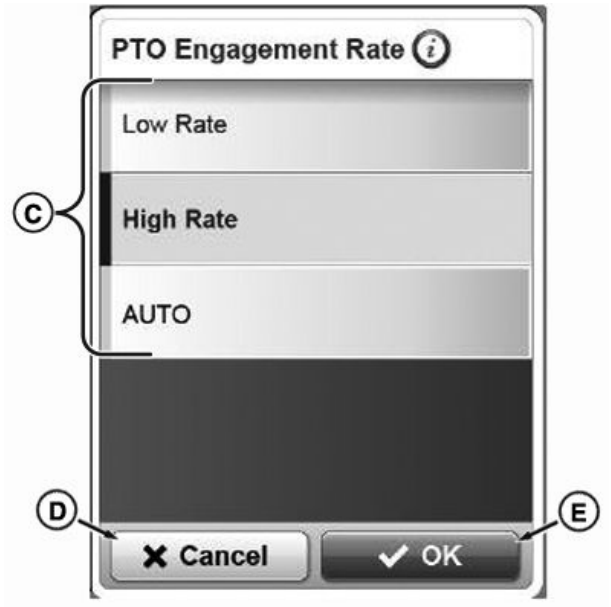
RXA0128917 —UN—15MAR13



Menu → Tractor Settings Tab → PTO Icon → Information and Settings Icon → Settings Tab



RXA0130890 —UN—15FEB13



RXA0130891 —UN—15FEB13

CommandCenter is a trademark of Deere & Company

TO84419,0000146 -19-01JUL14-1/1

Changing Optional Front PTO Shafts

Front PTO is factory equipped with one of three optional front PTO shafts:

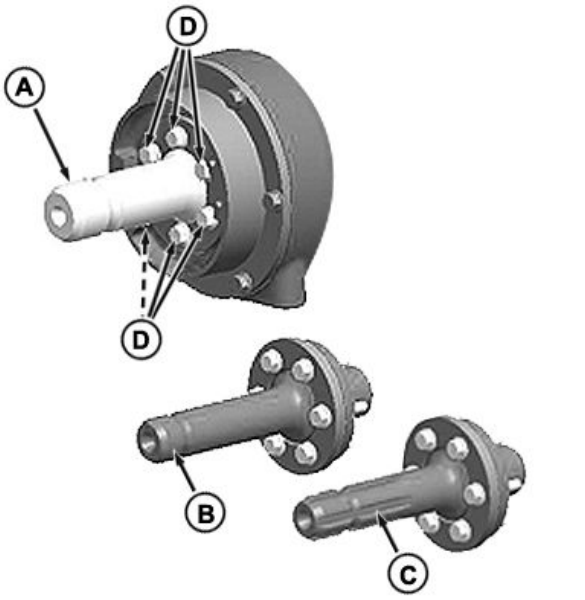
- 1-3/4 in. 20 Spline Shaft
- 1-3/8 in. 21 Spline Shaft
- 1-3/8 in. 6 Spline Shaft

Additional optional shafts are available through your John Deere dealer.

To change shaft, remove M8 six cap screws (D) remove factory installed shaft and install new shaft. Install six cap screws and torque to specification.

Specification	
Front PTO Cap Screws—Torque	40 N·m (30 lb.-ft.)

A—1-3/4 in. 20 Spline Shaft
B—1-3/8 in. 21 Spline Shaft
C—1-3/8 in. 6 Spline Shaft
D—M8 Cap Screws



Front PTO With Three Optional PTO Shafts

GH15097,0000824 -19-07JUL14-1/1

Operating Front PTO (If Equipped)

CAUTION: Avoid personal injury. Stop engine and allow PTO driveline to stop before adjusting, connecting, or cleaning PTO driven equipment.

Always disengage PTO when not in use.

PTO can be engaged or disengaged without operating clutch.

NOTE: Service alert indicator light will flash, a message appears on CommandCenter™ display, and an audible warning signal sounds if operator leaves seat with PTO engaged. PTO does not disengage when operator is off seat.

Extend PTO control lever (A) to engage PTO. Front PTO indicator on corner post monitor will light.

IMPORTANT: If PTO disengages during startup in cold weather operation, wait 5 minutes before reengaging PTO to avoid damage.

If PTO speed drops below 100 rpm for more than 1 second during normal operation, front PTO will be turned off. Information indicator will be activated.

If engine speed drops below 500 rpm while PTO is running or being engaged, front PTO will be shut off to keep engine from stalling.

Retract PTO control lever to disengage clutch and PTO brake will engage automatically.

NOTE: If engine is stopped and restarted while PTO is running, PTO will not operate. Disengage PTO control lever and engage PTO again.

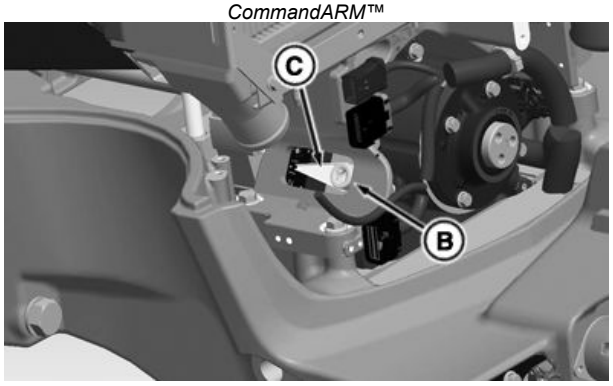
Front PTO Disconnect

Turn front PTO disconnect (B) counterclockwise when front PTO is not in use to increase fuel economy. Using 1/2 in. drive ratchet or breaker bar, turn front PTO disconnect clockwise to engage front PTO and counterclockwise to disengage front PTO. Front PTO disconnect flag indicates whether front PTO is retracted (up) or extended (down).



RXA0132253 —UN—13MAY13

CommandARM™



RXA0135349 —UN—30AUG13

Front PTO Disconnect - Right Side Of Radiator Support

A—Front PTO Control Lever
B—Front PTO Disconnect
C—Front PTO Disconnect Flag

Operating Front PTO in Cold Weather

CAUTION: Avoid personal injury. Keep PTO area clear of bystanders. PTO shaft or attached implement may rotate when engine is started in cold weather.

When air temperatures are expected to drop below -5 C (23 F), use John Deere™ Low Viscosity Hy-Gard™ oil in self contained front PTO reservoir.

Other oils can be used if they meet John Deere™ Standard JDM J20D.

CommandARM is a trademark of Deere & Company
CommandCenter is a trademark of Deere & Company
John Deere is a trademark of Deere & Company
Hy-Gard is a trademark of Deere & Company

TO84419,0000147 -19-01JUL14-1/1

Operating Rear PTO

CAUTION: Avoid personal injury. Stop engine and allow PTO driveline to stop before adjusting, connecting, or cleaning PTO driven equipment.

Always disengage PTO when not in use.

PTO can be engaged or disengaged without operating clutch.

NOTE: Service Alert indicator light will flash and a message appears on CommandCenter™ display. PTO does not disengage when operator is off seat.

Raise PTO switch (A) to engage PTO. PTO indicator on corner post display will light.

IMPORTANT: If PTO disengages during startup in cold weather operation, wait 5 minutes before reengaging PTO to avoid damage.

If PTO speed drops below 100 rpm for more than 1 second during normal operation, rear PTO will be turned off. Information indicator will be activated.

If engine speed drops below 500 rpm while PTO is running or being engaged, rear PTO will be shut off to keep engine from stalling.

Lower PTO switch to disengage clutch and PTO brake will engage automatically.

CommandARM is a trademark of Deere & Company
CommandCenter is a trademark of Deere & Company



RXA0132254 —UN—13MAY13

CommandARM™

A—Rear PTO Switch

NOTE: If engine is stopped and then restarted while PTO is running, PTO will not operate. Disengage PTO switch and engage PTO again.

NOTE: If Remote PTO Switch Enable is selected in CommandCenter™, but a rear PTO fender switch is not installed, console rear PTO switch will not function until Remote is deselected in CommandCenter™.

GH15097,00007E2 -19-08JUL13-1/1

Fine Adjustment To PTO Cruise Speeds

If desired, maximum PTO speed can be set. Select PTO icon on navigation bar and press PTO standard speed (A) to access PTO cruise module.

Select increase value (E) and decrease value (F) softkeys in PTO cruise module to input desired maximum PTO speed. Close module and press ON button to activate maximum PTO speed (B).

When maximum PTO speed is activated, engine speed is restricted so that set PTO speed is not exceeded, even at full throttle. When PTO is switched off, engine can be operated at its full speed range again.

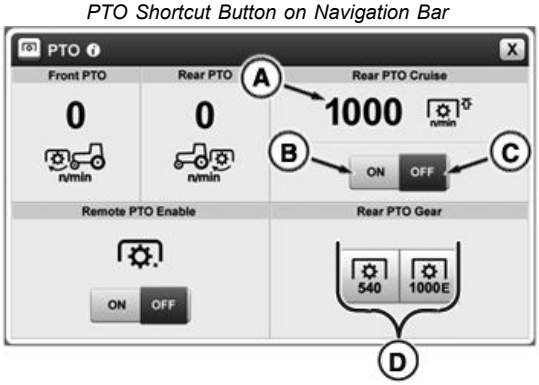
NOTE: If engine speed limit is set on engine settings page (see **Settings** *in relevant Operating the Tractor Section in this Operator's Manual), lower limit applies.*

A—PTO Standard Speed
B—Maximum PTO Speed Active
C—Maximum PTO Speed Deactivated
D—Standard Speed Options
E—Increase Value
F—Decrease Value

RXA0133713 —UN—16JUL13

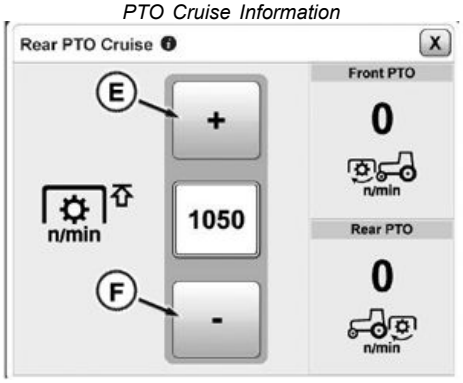


PTO Shortcut Button on Navigation Bar



RXA0144647 —UN—22AUG14

PTO Cruise Information



RXA0137730 —UN—16DEC13

PTO Cruise increase and decrease value

GH15097,0000850 -19-27AUG14-1/1

Select PTO Cruise Speed

CAUTION: Before engaging PTO, make sure that selected PTO speed is correct for attached implement. Incorrect PTO speed could result in severe damage to implement.

NOTE: PTO must be disengaged to select standard PTO speed.

Operating both Front PTO (if equipped) and PTO is described in Operating Front PTO (if equipped) and Operating PTO sections of this Operator's Manual.

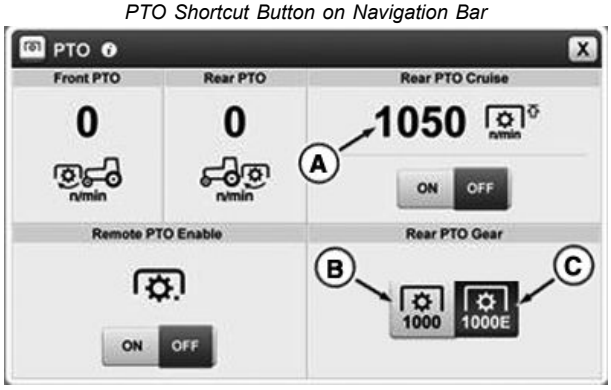
1. Select PTO icon on navigation bar to access PTO module.
2. Select desired PTO speed (B) or (C).
3. PTO standard speed (A) appears in display window. It can be activated or deactivated using ON/OFF buttons located below PTO standard speed (A).

CAUTION: Engine must be shut off when an implement is being connected.

RXA0133713 —UN—16JUL13



PTO Shortcut Button on Navigation Bar



RXA0144644 —UN—22AUG14

A—PTO Standard Speed
B—PTO Speed 1000E
C—PTO Speed 1000

GH15097,000084F -19-04SEP14-1/1

Remote Front PTO Switch (If Equipped)

Front PTO can be operated from outside of cab.

1. Select **Menu.**
2. Select **Tractor Settings tab.**
3. Select **PTO icon.**
4. Activate Remote PTO Enable button (A) on CommandCenter™ to enable Remote Front PTO button (C).
5. Raise front PTO switch (B). An audible warning will sound and hazard warning lights will flash (PTO has not started yet).
6. Press and hold Remote Front PTO button (C). Front PTO will start slowly.
   - Press and hold button for at least 4 seconds:
     - Hazard warning lights turn off
     - PTO continues to operate
   - Release button within 4 seconds:
     - PTO will slowly stop
     - Audible warning will continue to sound
     - Hazard warning lights will flash

Shut off front PTO by pressing Remote Front PTO button (C) (audible warning will sound and hazard warning lights will flash)**OR** pull back Front PTO switch (B) inside cab. Operator must select **OFF** on CommandCenter™ to allow Front PTO Switch (B) to return to normal operation.

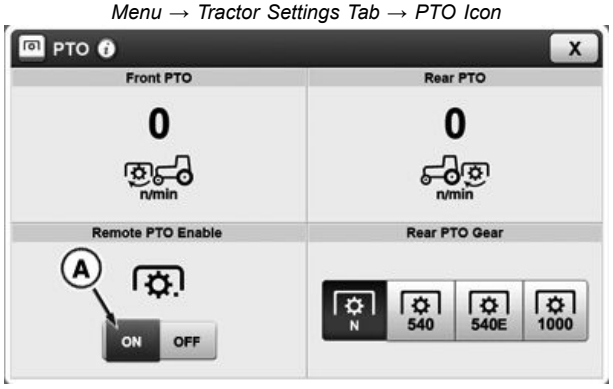
NOTE: If Front PTO is switched on in cab, Front PTO may be shut off at Remote Front PTO button. If Front PTO is switched off in cab, steps 1 through 3 must be repeated to enable Remote Front PTO button.

A—Remote PTO Switch Enable
B—Front PTO Switch
C—Front Remote PTO Button

RXA0128916 —UN—26OCT12



Menu → Tractor Settings Tab → PTO Icon



RXA0131638 —UN—27MAR13

CommandCenter™ PTO Home Page



RXA0133381 —UN—09JUL13

CommandARM



RXA0133386 —UN—26JUL13

Remote Front PTO Button

CommandCenter is a trademark of Deere & Company

TO84419,0000149 -19-30AUG13-1/1

Remote Rear PTO Switch (If Equipped)

Rear PTO can be operated from outside of cab.

1. Select **Menu.**
2. Select **Tractor Settings tab.**
3. Select **PTO icon.**
4. Activate Remote PTO Enable button (A) on CommandCenter™ to enable Rear Remote PTO button (C).
5. Push down and forward on Rear PTO switch (B). A audible warning will sound and Hazard Warning lights (D) will flash (PTO has not started yet).
6. Press and hold Rear Remote PTO button (C). Rear PTO will start slowly.
   - Press and hold switch for at least 4 seconds:
     - Hazard Warning lights (D) turn off
     - PTO continues to operate
   - Release switch within 4 seconds:
     - PTO will slowly stop
     - A continuous audible warning will sound
     - Hazard Warning lights (D) will flash

Shut off Rear PTO by pressing Rear Remote PTO button (C) [audible warning will sound and Hazard Warning lights (D) will flash] **OR** pull back Rear PTO switch (B) inside cab.

In order to restore normal function to Rear PTO Switch (B), deselect Remote PTO Enable (A).

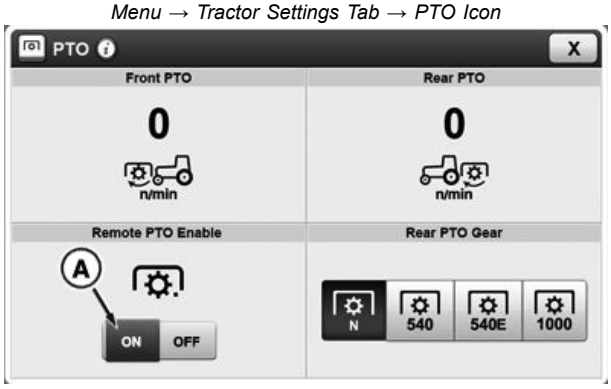
NOTE: If Rear PTO is switched on in cab, Rear PTO may be shut off at Remote PTO switch. If Rear PTO is switched off in cab, steps 1 through 3 must be repeated to enable Remote Rear PTO switch.

A—Remote PTO Enable
B—Rear PTO Switch
C—Rear Remote PTO Button
D—Hazard Warning Light

RXA0128916 —UN—26OCT12



Menu → Tractor Settings Tab → PTO Icon



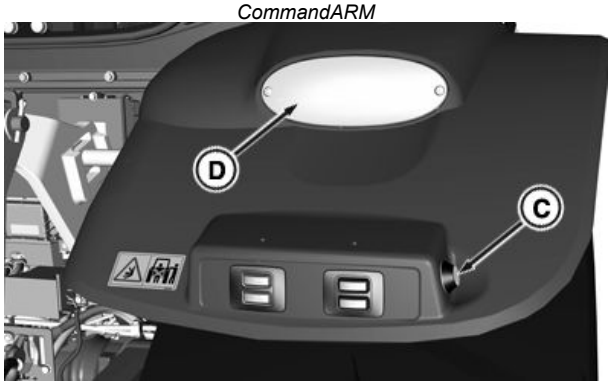
RXA0131638 —UN—27MAR13

CommandCenter™ PTO Home Page



RXA0133380 —UN—09JUL13

CommandARM



RXA0130894 —UN—15FEB13

Right-Hand Rear Fender

CommandCenter is a trademark of Deere & Company

GH15097,00007E0 -19-08JUL13-1/1

Operating Shiftable 3-Speed Rear PTO (If Equipped)

IMPORTANT: Make sure selected PTO speed is correct for attached implement. Incorrect speed can result in serious damage to implement. Excessive engine rpm can also cause excessive PTO speeds resulting in implement damage.

Implements can be operated at 540 rpm only if power input never exceeds 60 kW (80 hp.). Operating PTO at lower speeds under heavy load could damage PTO.

Do not attempt to shift PTO speeds when PTO shaft is turning or PTO clutch is engaged. Damage to PTO shift collars can result.

1. Select **Menu.**
2. Select **Tractor settings tab.**
3. Select **PTO Icon.**

NOTE: If PTO does not engage, verify that a gear has been selected.

Select desired PTO speed in CommandCenter™. PTO speed may need to change depending on equipment.

Extend rear PTO control lever to engage PTO clutch. PTO indicator shows PTO engagement on display.

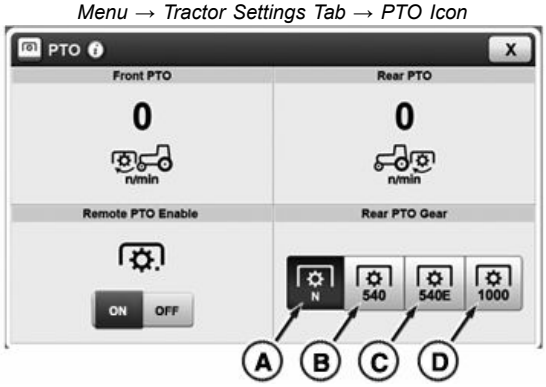
IMPORTANT: Make sure to select 540 rpm or 1000 rpm mode after changing PTO shaft. PTO does not disengage but speed must be limited if it does not match shaft size.

CommandCenter is a trademark of Deere & Company

RXA0128916 —UN—26OCT12



Menu → Tractor Settings Tab → PTO Icon



RXA0131639 —UN—27MAR13

A—Neutral Position
B—540 rpm Position
C—540E rpm Position
D—1000 rpm Position

PTO Shaft	PTO Speed
35 mm (1-3/8 in.) 6 Spline	540 rpm/540E rpm
35 mm (1-3/8 in.) 21 Spline	1000 rpm/1000E rpm
45 mm (1-3/4 in.) 20 Spline	1000 rpm/1000E rpm

NOTE: Use proper engine speed when shifting into 540E or 1000E.

TO84419,000014B -19-30APR14-1/1

Operating Shiftable 2-Speed Rear PTO (If Equipped)

IMPORTANT: Make sure selected PTO speed is correct for implement attached. Incorrect speed can result in serious damage to implement. Excessive engine rpm can also cause excessive PTO speeds resulting in implement damage.

IMPORTANT: Implements can be operated with 540 rpm 35 mm (1-3/8 in.) stub shaft only if power input never exceeds 60 kW (80 hp). Operating PTO at lower speeds under heavy load could damage PTO. 1000 rpm 35 mm (1-3/8 in.) stub shaft should be used for loads under 115 kW (154 hp). 1000 rpm 45 mm (1-3/4 in.) stub shaft should be used if heavier loads are expected.

IMPORTANT: Do not attempt to shift PTO speeds when PTO shaft is turning or PTO clutch is engaged. Damage to PTO shift collars may result.

Push down and forward on rear PTO switch to engage PTO clutch. PTO indicator will show PTO engagement on display.

Push PTO shift lever (A) down to shift to 540 rpm. Pull PTO shift lever up to shift to 1000 rpm.



RXA0112530 —UN—14DEC10

A—PTO Shift Lever

IMPORTANT: Make sure to select either 540 rpm or 1000 rpm mode after changing PTO shaft. PTO will disengage if speed does not match shaft size.

PTO Shaft	PTO Speed
35 mm (1-3/8 in.) 6 Spline	540 rpm/540E rpm
35 mm (1-3/8 in.) 21 Spline	1000 rpm/1000E rpm
45 mm (1-3/4 in.) 20 Spline	1000 rpm

TO84419,000014C -19-27NOV12-1/1

Changing PTO Stub Shaft (If Equipped)

CAUTION: Avoid personal injury. PTO shaft may be hot from operation. Allow shaft to cool before changing.

IMPORTANT: Implements can be operated with 540 rpm 35 mm (1-3/8 in.) stub shaft only if power input never exceeds 60 kW (80 hp). Operating PTO at lower speeds under heavy load could damage PTO. 1000 rpm 35 mm (1-3/8 in.) stub shaft should be used for loads under 115 kW (154 hp). 1000 rpm 45 mm (1-3/4 in.) stub shaft should be used if heavier loads are expected.

1. Rotate ends of snap ring to align with flat surface of PTO stub shaft.
2. Remove snap ring (A) and pull out shaft (B).
3. Clean stub shaft thoroughly. Coat splines with John Deere™ HD Non-Clay grease.

IMPORTANT: Avoid damage to PTO. Clean bore (C) thoroughly when installing PTO shaft for 1000 rpm use.

4. Install shaft into PTO housing.

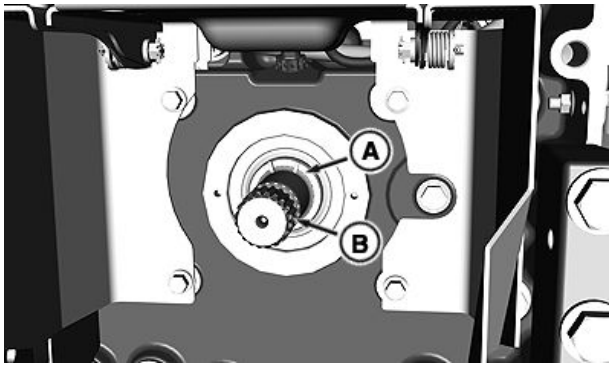
   540 rpm shaft—Rotate shaft back and forth while installing, to ensure shaft is properly seated in housing; continue to push shaft in while installing snap ring.

   1000 rpm shaft—Rotate shaft back and forth while installing until engagement is felt.

NOTE: Shaft is properly engaged when shaft turns with high effort.

5. Install snap ring in groove to retain PTO stub shaft. Align ends of snap ring with flat surface of shaft.

IMPORTANT: Make sure to select either 540 rpm or 1000 rpm mode after changing PTO shaft. PTO will disengage if speed does not match shaft size. See Operating shiftable 2-speed rear PTO (if equipped) in this section.



RXA0128914 —UN—12OCT12



RW21883A —UN—02AUG99

A—Snap Ring
B—Shaft
C—Bore

PTO Shaft	PTO Speed
35 mm (1-3/8 in.) 6 Spline	540 rpm/540E rpm
35 mm (1-3/8 in.) 21 Spline	1000 rpm/1000E rpm
45 mm (1-3/4 in.) 20 Spline	1000 rpm

TO84419,000014D -19-27NOV12-1/1

Performance Ballasting

Selecting Ballast (2010-52-EU)

CAUTION: When determining front and rear axle ballast, ensure that permissible axle loads and maximum permissible machine weight (including mounted implements) are not exceeded (see Specifications Section in this Operator's Manual).

Comply with local regulations regarding installation and maximum permissible number of weights. In order to maintain steerability, at least 20% of unladen mass must be on front axle. Unladen mass is mass of tractor without special equipment, attachments, trailer or ballast, but with hydraulic oil and lubricants, a full fuel tank and an operator weighing 75 kg.

CAUTION: Use suitable lifting tackle/hoists when handling weights.

Safety and performance of your tractor depend on correct ballasting of front axle (front weights) and rear axle (wheel weights, filling tires with liquid ballast, pick-up weight).

GH15097,00007C5 -19-14AUG14-1/1

How to Calculate Maximum Permissible Download on Trailer Hitch (2010-52-EU)

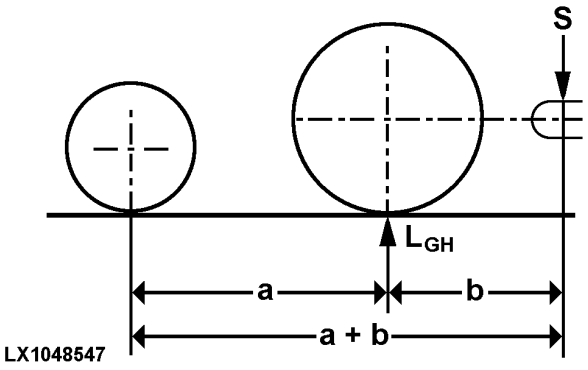
Calculation of maximum permissible download at trailer hitch **(S)** in relation to Load Index (LI)

- Load index can be read on sidewall of tire. If the index is provided, refer to tire's load capacity as quoted by tire manufacturer.
- Load index is quoted in conjunction with a Speed index (SI)
- As a rule, load capacity of tire in kg can be derived directly from the LI; see following table:

LI	kg	LI	kg	LI	kg	LI	kg
90	600	113	1150	136	2240	159	4375
91	615	114	1180	137	2300	160	4500
92	630	115	1215	138	2360	161	4625
93	650	116	1250	139	2430	162	4750
94	670	117	1285	140	2500	163	4875
95	690	118	1320	141	2575	164	5000
96	710	119	1360	142	2650	165	5150
97	730	120	1400	143	2725	166	5300
98	750	121	1450	144	2800	167	5450
99	775	122	1500	145	2900	168	5600
100	800	123	1550	146	3000	169	5800
101	825	124	1600	147	3075	170	6000
102	850	125	1650	148	3150	171	6150
103	875	126	1700	149	3250	172	6300
104	900	127	1750	150	3350	173	6500
105	925	128	1800	151	3450	174	6700
106	950	129	1850	152	3550	175	6900
107	975	130	1900	153	3650	176	7100
108	1000	131	1950	154	3750	177	7300
109	1030	132	2000	155	3875	178	7500
110	1060	133	2060	156	4000	179	7750
111	1090	134	2120	157	4125	180	8000
112	1120	135	2180	158	4250	181	8250

As a general rule, SI A8 implies a top speed of 40 km/h (25 mph), while SI B implies a top speed of 50 km/h (31 mph). If SI is different, manufacturer's instructions apply.

Calculate maximum trailer hitch download as follows:



LX1048547

LX1048547 —UN—20JUL09

$$S = \frac{(H_{max} - L_{GH}) * a}{a + b}$$, where

$H_{max.}$ = maximum capacity at rear axle limited by either tire capacity or axle capacity (lesser value of tire capacity or axle capacity)

L_{GH} = load on rear axle without a hitch load.

a = wheelbase (horizontal distance between front and rear axles).

b = rear overhang (the horizontal distance between center of rear axle and center of hitch point).

Example of how to calculate maximum trailer hitch download:

Given that: Axle Load without a hitch load L_{GH} = 6000 kg

Wheelbase a = 2925 mm

Overhang b = 913 mm

Tire marking = 164A8

Maximum permitted speed of tractor = 40 km/h (25 mph)

Permissible rear axle load = 11,000 kg

Maximum rear tire capacity = 5600 kg * 2 = 11,200 kg
Maximum rear axle load = 11,000 kg
$H_{max.}$ = 11,000 kg

$$S = \frac{(11{,}000 \text{ kg} - 6000 \text{ kg}) * 2925 \text{ mm}}{2925 \text{ mm} + 913 \text{ mm}} = 3810 \text{ kg}$$

CAUTION: At least 20% of vehicle's total unladen mass must be on front axle.

Trailer hitch download must not exceed value given by hitch manufacturer.

RD47322,00007C6 -19-31JUL14-1/1

Ballasting Information and Guidelines for Tractors with Single Tires

Basic Ballasting Definitions

Ballast is mass added to tractor chassis and/or wheels to:

• Increase **total weight** and/or

• Influence weight distribution between front axle and rear axle (static balance). Static means that front and rear axle loads are determined when tractor is parked.

Static weight distribution between front and rear axles is sometimes called **weight split.** It is expressed as percentages of total tractor static weight supported by front and rear axles. For example, if front axle supports 40% of total static tractor weight, tractor has a 40/60 weight split. Percentage of front axle weight is always stated first in this form.

A tractor **properly ballasted** for a given type of implement (towed, integral, or semi-integral) has both correct **total weight** and **static balance** for that type of implement.

Major Considerations

Amount of ballast required and especially the **locations** of ballast weights depend very much on type of implement being used and operating speed.

Ballasting is required to:

1. Assure front axle carries sufficient weight for steering security and stability with field draft loads as well as transport in field and on road.

2. Provide sufficient traction to efficiently pull high draft loads.

3. Provide proper fore-aft balance to minimize occurrence of power hop in MFWD tractors.

4. Assure rear axle carries sufficient weight for traction, braking, and stability when a loader or other front implement is attached to front of tractor.

When changing from one implement or attachment to another it may be necessary to reconfigure ballast on tractor.

TO84419,000014E -19-13AUG15-1/1

General Guidelines for Tractor Weight Based on PTO Horsepower Rating

IMPORTANT: Do not exceed maximum tractor ballast:

7210R, 7230R, 7250R, 7270R and 7290R - 88 kg/kw (PTO) (145 lb./hp) (PTO)

7310R - 82 kg/kw (PTO) (135 lb./hp) (PTO)

IMPORTANT: To extend power train life, tractor should never be operated with continuous full-power loads below 6.6 km/h (4.1 mph). With any transmission, ground speed may drop briefly below that level in hard pull situations, but must recover to higher levels during normal operations. This applies to tractors with all types of transmissions. For tractors equipped with IVT™/AutoPowr™ transmission operating in automatic mode, engine will not labor in high draft situations, but minimum ground speed guideline must still be followed.

NOTE: Use of radar to continually monitor wheel slip is recommended. Checking wheel slip manually is possible but will only show slip in area of field where check is performed.

Total tractor weight needed to efficiently deliver power through wheels to ground for field draft applications depends on travel speed. Table shows recommended weight per PTO power rating for three draft speed ranges.

Recommended Travel Speeds				
	Light draft	**Medium draft**	**Heavy draft**	
Ground Speed	8.7 km/h (5.4 mph) and faster	8.7—7.2 km/h (5.4—4.5 mph)	7.2 km/h (4.5 mph) and slower	
Model	All	All	7210R, 7230R, 7250R, 7270R and 7290R	7310R
Kg/kw (PTO)	46	50	88	82
Lb./hp (PTO)	100	110	145	135

Recommended Travel Speeds

Wheel slip should normally be in the range of 8-12 percent for optimum power delivery efficiency at these field speeds. Wheel slip may briefly rise above this range when tractor encounters a higher draft area in field, but should not remain there continuously. Add more weight to drive wheels if slip is excessive. If there is less than minimum slip percent, ballast should be removed, unless needed for stability.

AutoPowr is a trademark of Deere & Company

TO84419,000014F -19-29JUL14-1/1

General Weight Split Guidelines

Weight split requirements are based on type of implement or attachment being used. A primary consideration is to maintain sufficient weight on front and rear axles to provide stability and steering security under both field and transport conditions. Other factors as indicated in following tables must also be considered.

IMPORTANT: As front weight and tread width increase, steering capacity of tractor is reduced.

	MFWD/TLS™
Towed	40/60
Semi-Integral	40/60
Integral	40/60[a]

General Weight Split Guidelines

[a]Front weight requirements are determined by weight of hitch-mounted implements. Enough front weights need to be added to maintain steering control. See Implement Codes in this section for more information.

In all cases percentage on front axle **must be increased** if needed for steering security and stability.

MFWD: No more than 40% on front axle. This is required for power hop control. (See Controlling Power Hop in this section for details.)

CAUTION: Do not exceed front tire carrying capacities when using high percentages of front weight. See Tire Load Rating in Front Wheels, Tires, and Treads Section for more information.

TO84419,0000150 -19-09SEP13-1/1

Ballast Types

Cast iron wheel weights and front suitcase weights are preferred form of ballast. Liquid ballast in tires should be avoided if practical since it has a stiffening effect that causes rough ride and makes tractor more susceptible to power hop. If liquid is used in rear tires, all tires on axle must be filled to same level which should not exceed 40% (4 o'clock valve stem position). Specific information on use of liquid ballast is given later in this section of this Operator's Manual.

In some cases it may be necessary or desirable to remove either front or rear ballast. A front hitch facilitates this for front ballast. Installation and removal of rear weights on outside of wheels requires use of a hoist or forklift. Removal of inner rear wheel weights should not be required after initial installation at factory or dealership.

NOTE: Depending on mounting position used (hitch, hitch frame, or front support), effective weight added to front axle will be greater due to leveraging effect caused by weights distance in front of axle.

Front Weights are available in two forms — suitcase weights and a large block weight.

Front Weights

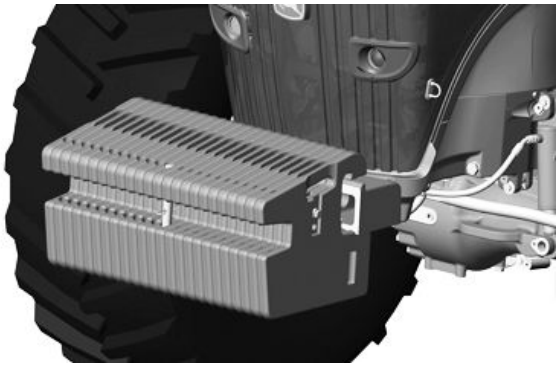
Each suitcase weight weighs 50 kg (110 lb.). Up to 24 can be installed on front weight support or a support on front hitch support.

Standard Weight Support

Front weight support effectively adds 134% of its weight to front axle and **subtracts** 34% from rear axle due to leveraging.

Front axle multiplier = 1.34 Rear axle multiplier = - 0.34

A 124 kg (273 lb.) weight support **adds** 1.34 x 124 = 166 kg (366 lb.) to front axle and **subtracts** 0.34 x 124 = 42 kg (93 lb.) from rear axle.



RXA0144436 —UN—08AUG14

Suitcase Weights on Front Support

Front Hitch Support

When suitcase weights are mounted on a front hitch with support as shown, multipliers are:

Front axle multiplier = 1.37 Rear axle multiplier = - 0.37

A 365 kg (805 lb.) hitch weight support **adds** 1.37 x 365 = 500 kg (1102 lb.) to front axle and **subtracts** 0.37 x 365 = 135 kg (298 lb.) from rear axle.

Front Suitcase Weights

Front suitcase weights mounted on a front weight support or front hitch support adds 144% of their weight to front axle and **subtract** 44% from rear axle due to leveraging.

Front axle multiplier = 1.44 Rear axle multiplier = - 0.44

A 50 kg (110 lb.) suitcase weight **adds** 1.44 x 50 = 72 kg (159 lb.) to front axle and **subtracts** 0.44 x 50 = 22 kg (49 lb.) from rear axle.

Continued on next page

Large Block Weights

Large 900 kg (1984 lb.) or 1150 kg (2535 lb.) Block

Both the 900 kg (1984 lb.) block and the 1150 kg (2535 lb.) block on either a standard front weight support or front hitch adds 144% of its weight to front axle and subtracts 44% from rear axle due to leveraging.

Front axle multiplier = 1.44 Rear axle multiplier = - 0.44

One 900 kg (1984 lb.) or 1150 kg (2535 lb.) block on standard front support **adds** 1.44 x 900 = 1296 kg (2857 lb.) or 1.44 x 1150 = 1656 kg (3651 lb.) to front axle and **subtracts** 0.44 x 900 = 396 kg (873 lb.) or 0.44 x 1150 = 506 kg (1116 lb.) from rear axle.

Large 1500 kg (3307 lb.) or 1800 kg (3968 lb.) Block

When directly mounted on a front hitch, multipliers are:

Front axle multiplier = 1.46 Rear axle multiplier = 0.46

The 1500 kg (3307 lb.) or 1800 kg (3968 lb.) block on front hitch **adds** 1.46 x 1500 = 2190 kg (4828 lb.) or 1.46 x 1800 = 2628 kg (5794 lb.) to front axle and **subtracts** 0.46 x 1500 = 690 kg (1521 lb.) or 0.46 x 1800 = 828 kg (1825 lb.) from rear axle.



RXA0118626 —UN—13JUL11

Large Block Weight (1800 kg shown)

GH15097,00008DE -19-11AUG14-2/4

Rear Wheel Weights

Rear wheel weights are available in 70 kg (154 lb.), 72 kg (159 lb.), 205 kg (452 lb.), 625 kg (1378 lb.), and 900 kg (1984 lb.) sizes.

NOTE: 7R tractors have two starter weights: 70 kg (154 lb.) weight is used with 900 kg (1984 lb.) and 72 kg (159 lb.) is used with 205 kg (452 lb.) weight.

Each weight applies total weight to rear axle and none to front axle.

NOTE: See Rear Wheels, Tires, and Treads Section in this Operator's Manual for restrictions due to vehicle configurations.



RXA0118628 —UN—13JUL11

Wheel Weight

Continued on next page

GH15097,00008DE -19-11AUG14-3/4

Front Hitch

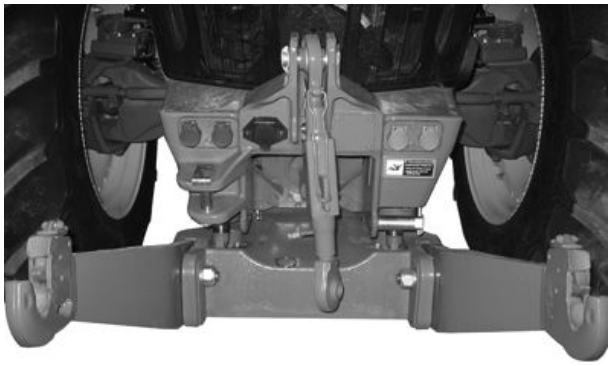
When tractor has a front hitch, additional front axle and rear axle loads due to its weight must be included in calculating total axle loads. Front and rear axle weights shown in Unballasted Tractor Weight Charts in this section of this Operator's Manual are based on tractors with front weight support. With a front hitch installed instead of a front weight support, **NET** amounts of weight changes are used in determining axle loads.

	Ground Engaging Hitch	Carrier Hitch
NET Weight **added** to front axle	492 kg (1085 lb.)	388 kg (855 lb.)
NET Weight **subtracted** from rear axle	80 kg (176 lb.)	90 kg (198 lb.)

NOTE: Front hitch **removes** *80 kg (176 lb.) or 90 kg (198 lb.) from rear axle due to leveraging.*

Front PTO

When a tractor has front PTO, additional front axle weight must be included in calculating total axle loads. Front and rear axle weights shown in Unballasted Tractor Weight Charts in this section of this Operator's Manual are based on tractors with front weight support. With front PTO installed **NET** amounts of weight changes are used in determining axle loads.



RXA0133387 —UN—26JUL13

Front Hitch

NET Weight **added** to front axle. ..... 225 kg (496 lb.)

NET Weight **subtracted** from rear axle. ..... 38 kg (84 lb.)

GH15097,00008DE -19-11AUG14-4/4

Ballasting Suggestions for Specific Types of Implements used with MFWD Tractors

Towed Draft Implements

These recommendations are offered as starting points when ballasting for operations with several common types of implements. Some deviations may be needed for specific circumstances.

Towed draft implements such as disks, chisel plows and field cultivators that place small vertical tongue loads on tractor drawbar.

Without Front Suspension



RXA0118620 —UN—13JUL11

	7210R	7230R	7250R	7270R	7290R	7310
Front Suitcase Weights	None	0[a]	0[a]	6	12	12
Rear Weights	None	1 pair 205 kg (452 lb.)	1 pair 205 kg (452 lb.)	1 pair 72 kg (159 lb.) 1 pair 625 kg (1378 lb.)	1 pair 72 kg (159 lb.) 1 pair 205 kg (452 lb.) 1 pair 625 kg (1378 lb.)	1 pair 72 kg (159 lb.) 1 pair 205 kg (452 lb.) 1 pair 625 kg (1378 lb.)

[a] *With Weight Support*

Continued on next page

TO84419,0000152 -19-08AUG14-1/4

Towed Trailers, Slurry Tanks and Fertilizer Tanks

Trailers that place a high vertical tongue load on tractor.

MFWD with or without front suspension

Front Ballast	20—24 Suitcase weights or 900 kg (1984 lb.) block
Rear Ballast	None required. If rear weights are already installed, it is not necessary to remove them.

NOTE: It may be practical to use less front weight with smaller trailers, but steering security and stability must be assured.

In all cases percentage on front axle **must be increased** *if needed for steering security and stability.*



RXA0118616 —UN—13JUL11

TO84419,0000152 -19-08AUG14-2/4

Semi-Integral Implements

MFWD with or without front suspension

Front Ballast	20 Suitcase weights or 900 kg (1984 lb. block
Rear Ballast	None



RXA0118622 —UN—13JUL11

TO84419,0000152 -19-08AUG14-3/4

Integral Implements

MFWD with or without front suspension

Front Ballast	20 Suitcase weights or 900 kg (1984 lb.) block
Rear Ballast	None



RXA0118618 —UN—13JUL11

TO84419,0000152 -19-08AUG14-4/4

Determining Ballasted Tractor Weight, Weight Split, Axle Loads, and Required Tire Inflation Pressures

Unballasted Tractor Weight Charts provide front axle, rear axle, and total weights for most power train and tire size options. From them and information previously provided on weights of various ballast elements (suitcase weights and wheel weights), front ballast multipliers and front hitch axle loads (if used), the ballasted tractor weight and axle loads can be calculated. They are needed to determine if total weight and weight split recommendations are met and to look up required tire inflation pressures.

Example 1

7230R EU Stage IIIB MFWD with CommandQuad™, Front Suspension, and Front Hitch — 230 Engine HP			
	Front Tires	420/85R34	
	Rear Tires	480/80R50	
	Front Ballast	900 kg (1984 lb.) Block on Front Hitch	
	Rear Ballast	None	
From Unballasted Tractor Weight Charts on following pages, front axle weight is 3937 kg (8679 lb.) and rear axle weight is 5430 kg (11972 lb.). These charts assume that a front weight support is mounted and does not include effect of a front hitch.			
NET changes from deducting front support and adding front hitch are to **add** 277 kg (611 lb.) to front axle and **subtract** 93 kg (205 lb.) from rear axle.			
900 kg (1984 lb.) block weight when attached to a Front Hitch **adds** 900 x 1.44 = 1296 kg (2857 lb.) to front axle and **subtracts** 900 x 0.44 = 396 kg (873 lb.) from rear axle due to leveraging.			
Combine all of these as shown:			
	Front Axle	**Rear Axle**	
Base Tractor	3937 kg (8679 lb.)	5430 kg (11972 lb.)	
Front Hitch	+277 kg (611 lb.)	-93 kg (205 lb.)	
900 kg (1984 lb.) Block on Front Hitch	+1296 kg (2857 lb.)	-396 kg (873 lb.)	**Total**
Totals	5510 kg (12147 lb.)	4917 kg (10901 lb.)	10427 kg (23048 lb.)

Tractor is ballasted to level of 10427 kg (23048 lb.) / 230 Eng-HP = 45.3 kg (100 lb.) per Eng-HP (Light)

Percentage of weight on front axle is 5510 kg / 10427 kg (12147 lb. / 23048 lb.) x 100% = 52.8%.

From Recommended Pressures charts in Wheels, Tires, and Treads section for calculated axle loads, required inflation pressures are:

Front Inflation Pressure = 1.6 bar (23 psi)

Rear Inflation Pressure = 0.9 bar (13 psi) **only if tractor is towing an implement that places very little down load on drawbar (disk or field cultivator)**.

For **semi-integral plows or towed implements that generate high weight transfer** add approximately 0.5 bar (7 psi) for a total of 1.1 bar (16 psi) for rear tires. With aid of an assistant, visually check tire deflection when tractor is pulling hard in field to confirm tires are not under-inflated with these pressures.

For **trailers, tankers, or any heavy integral implement** rear inflation pressures **must** be increased substantially to support extra weight at transport speeds. Exact amount depends on extra load. Usually it will be **more than double base amount** or 1.3—1.5 bar (19—22 psi) for this example. To determine rear axle load exactly, weigh rear axle of loaded tractor on a platform scale.

Example 2

7210R EU Stage IIIB MFWD with CommandQuad™, Standard Front Weight Support, No Front Hitch, and No Front Suspension — 210 Eng-HP			
	Front Tires	420/85R34	
	Rear Dual Tires	480/80R50	
	Front Ballast	10 Suitcase Weights on Front Support	
	Rear Ballast	1 pair - 625 kg (1378 lb.) Wheel Weights	
From Unballasted Tractor Weight Charts, front axle weight is 3641 kg (8027 lb.) and rear weight is 5406 kg (11918 lb.).			
Ten suitcase weights (50 kg [110 lb.] each) on standard front support **add** 10 x 50 x 1.44 = 720 kg (1587 lb.) to front axle and subtract 10 x 50 x 0.44 = 220 kg (485 lb.) from rear axle due to leveraging.			
Pair of rear 625 kg (1378 lb.) wheel weights adds nothing to front axle and 1250 kg (2756 lb.) to rear axle.			

Continued on next page

Combine all of these as shown:			
	Front Axle	**Rear Axle**	
Base Tractor	3641 kg (8027 lb.)	5406 kg (11918 lb.)	
10 Front Suitcase Weights	+720 kg (1587 lb.)	-220 kg (485 lb.)	
1 Pair 625 kg (1378 lb.) Wheel Weights	0	+1250 kg (2756 lb.)	**Total**
Totals	4361 kg (9614 lb.)	6436 kg (14189 lb.)	10797 kg (23803 lb.)

Tractor is ballasted to level of 10797 kg (23803 lb.) / 210 = 51.4 kg (113 lb.) per Eng-HP (Medium).

Percentage of weight on front axle is 4361 kg / 10797 kg (9614 lb. / 23803 lb.) x 100% = 40.4%

From Recommended Pressures tables for calculated axle loads, required inflation pressures are:

Front Inflation Pressure = 1.2 bar (17 psi)

Rear Inflation Pressure = 1.25 bar (18 psi) **Only if tractor is towing an implement that places little load on drawbar.**

This is ideal configuration for a 7210R EU Stage IIIB MFWD tractor **without** front suspension when it is used with towed tillage implements such as disks, chisels, and field cultivators. Front weight percentage should be approximately 40% or less to help prevent power hop. Although this tractor is slightly over 40%, it is close enough. Power hop can still occur, but it can be controlled using procedures given in this section. If percentage is much higher, control may not be possible.

When this tractor is used to tow large trailers, rear inflation pressure must be increased as outlined in Example 1.

If this tractor is used with heavy integral or semi-integral implements, additional front ballast and higher rear inflation pressures will be required.

CommandQuad is a trademark of Deere & Company

GH15097,0000825 -19-11AUG15-2/2

Tire Sidewall Information



RXA0149658 —UN—13AUG15

Displayed on tire sidewalls is information useful in selecting and working with tires.

A — Tire section width –Width in millimeters.
B — Aspect ratio – Ratio of height to tire section width.
C — Construction type –R = Radial, B = Bias.
D — Rim diameter –Diameter in inches (not total tire height or group size).
E — Load index –Numerical code indicates tire load-carrying capacity. Higher load index number designates higher load capacity. See Tire Load Index chart in this section of this Operator's Manual.
F — Speed rating –Maximum speed tire is designed to travel.

Additional information that may be displayed on sidewall.

Tread pattern — Indicates tread design and tire usage. Designs offered are all lug- or bar-type tires and are separated into one of three specifications: R1, R1W, or R2.
Direction of rotation — Icon (usually an arrow or group of arrows) indicating tire rotation direction.
Manufacturer name — Name of tire manufacturer.
Max load and pressure information — Maximum load a tire is permitted to carry under specified pressure and operating conditions. See Recommended Pressures charts in this section of this Operator's Manual.
Safety warnings — Important information provided by tire manufacturer.

TO84419,0000157 -19-24AUG15-1/1

Controlling Power Hop-MFWD tractors without front suspension

Power hop is a condition where tractor exhibits severe bounce and/or pitch motions at field working speeds when pulling a towed implement. It can occur when pulling medium to high draft loads in loose, dry soil on top of a firm base and/or when climbing hills. As a result, tractor cannot maintain pull due to either loss of traction, rough ride or both. Make adjustments only after assuring guidelines for optimum performance with towed implements have been followed. They are:

- No more than 40% of weight can be on front axle.
- If liquid ballast is used in rear tires, it should not exceed 40% fill (4 o'clock valve stem position).
- Front and rear inflation pressures are set correctly based on static axle loads.

Then if power hop occurs:

1. Increase front inflation pressures by 0.4 bar (6 psi) and operate tractor.
2. If power hop still occurs:
   Increase front inflation pressures by another 0.4 bar (6 psi) and operate tractor. Continue to increase front inflation pressure as needed up to a maximum of 0.4 bar (6 psi) **above** maximum pressure rating for tires (imprinted on tire sidewall). Usually 0.4—0.8 bar (6—12 psi) above rated pressure for front axle load will suffice to control power hop.
3. If power hop still occurs:
   Remove all front ballast weights. Leave same front maximum inflation pressure from previous step and operate tractor.
4. If power hop still occurs:
   Install 75% liquid in front tires. Re-inflate front tires to maximum pressure rating for tires and operate tractor.

NOTE: In most cases step 4 will not be required to control power hop.

TO84419,0000154 -19-13AUG15-1/1

Unballasted Tractor Weight Charts (7210R and 7230R)

NOTE: Unballasted weights are calculated by averaging and are figured based on tractor with a full tank of fuel. Each tractor is different. Have your tractor weighed for exact weight splits.

1150 MFWD front axle is only available on 7210R tractors.

Calculations assume no front hitch or PTO and front 420/90R30 (group 42) tires.

Tractor	7210R 1150 MFWD / 7230R 1300 MFWD [a]					
	CommandQuad™	e23™	IVT™/AutoPowr™	CommandQuad™	e23™	IVT™
	320/90R50 - Singles - Cast/Steel/Steel			320/90R50 - Duals - Cast/Steel/Steel		
Front Weight kg(lb.)	3428 (7557)	3609 (7956)	3601 (7939)	3428 (7557)	3609 (7956)	3601 (7939)
Rear Weight kg(lb.)	5669 (12498)	5946 (13109)	5928 (13069)	6449 (14219)	6726 (14828)	6708 (14789)
Total Weight kg(lb.)	9097 (20055)	9555 (21065)	9529 (21008)	9877 (21776)	10335 (22785)	10309 (22727)
7210R lb./hp 7230R lb./hp	96 88	100 92	100 92	104 96	108 100	108 100
Front Weight Split	38%	38%	37%	35%	35%	35%
Rear Weight Split	62%	62%	63%	65%	65%	65%

[a] *For 7230 1300 MFWD add 75 kg (166 lb.)*

Tractor	7210R / 7230R TLS™ [a]					
	CommandQuad™	e23™	IVT™	CommandQuad™	e23™	IVT™
	320/90R50 - Singles - Cast/Steel/Steel			320/90R50 - Duals - Cast/Steel/Steel		
Front Weight kg(lb.)	3592 (7919)	3773 (8318)	3764 (8298)	3592 (7919)	3773 (8318)	3764 (8298)
Rear Weight kg(lb.)	5731 (12635)	6008 (13245)	5991 (13208)	6511 (14365)	6788 (14965)	6771 (14927)
Total Weight kg(lb.)	9323 (20554)	9781 (21563)	9755 (21506)	10103 (22274)	10561 (23283)	10535 (23225)
7210R lb./hp 7230R lb./hp	98 89	103 94	102 94	106 97	111 103	111 103
Front Weight Split	39%	39%	39%	36%	36%	36%
Rear Weight Split	61%	61%	61%	64%	64%	64%

[a] *For TLS™ with front brakes add 94 kg (207 lb.)*

Tractor	7210R 1150 MFWD / 7230R 1300 MFWD [a]					
	CommandQuad™	e23™	IVT™	CommandQuad™	e23™	IVT™
	320/90R54 - Singles - Cast/Steel/Steel			320/90R54 - Duals - Cast/Steel/Steel		
Front Weight kg(lb.)	3428 (7557)	3609 (7956)	3601 (7939)	3428 (7557)	3609 (7956)	3601 (7939)
Rear Weight kg(lb.)	5799 (12785)	6076 (13395)	6058 (13356)	6729 (14835)	7006 (15446)	6988 (15406)
Total Weight kg(lb.)	9227 (20342)	9685 (21352)	9659 (21294)	10157 (22392)	10615 (23402)	10589 (23345)
7210R lb./hp 7230R lb./hp	97 89	102 94	101 93	107 99	111 103	111 103
Front Weight Split	37%	37%	37%	34%	34%	34%
Rear Weight Split	63%	63%	63%	66%	66%	66%

[a] *For 7230 1300 MFWD add 75 kg (166 lb.)*

Tractor	7210R / 7230R TLS™ [a]					
	CommandQuad™	e23™	IVT™	CommandQuad™	e23™	IVT™
	320/90R54 - Singles - Cast/Steel/Steel			320/90R54 - Duals - Cast/Steel/Steel		
Front Weight kg(lb.)	3592 (7919)	3773 (8318)	3764 (8298)	3592 (7919)	3773 (8318)	3764 (8298)
Rear Weight kg(lb.)	5861 (12921)	6138 (13532)	6121 (13494)	6791 (14972)	7068 (15582)	7051 (15545)
Total Weight kg(lb.)	9453 (20840)	9911 (21850)	9885 (21793)	10383 (22891)	10841 (23900)	10815 (23843)
7210R lb./hp 7230R lb./hp	99 91	104 96	104 96	109 101	114 106	114 106
Front Weight Split	38%	38%	38%	35%	35%	35%
Rear Weight Split	62%	62%	62%	65%	65%	65%

[a] *For TLS™ with front brakes add 94 kg (207 lb.)*

Continued on next page

Tractor	7210R 1150 MFWD / 7230R 1300 MFWD [a]					
	CommandQuad™	e23™	IVT™	CommandQuad™	e23™	IVT™
	380/80R46 - Singles - Cast/Steel/Steel			380/80R46 - Duals - Cast/Steel/Steel		
Front Weight kg(lb.)	3428 (7557)	3609 (7956)	3601 (7939)	3428 (7557)	3609 (7956)	3601 (7939)
Rear Weight kg(lb.)	5609 (12366)	5886 (12976)	5865 (12937)	6349 (13997)	6626 (14744)	6608 (14568)
Total Weight kg(lb.)	9037 (19923)	9495 (20933)	9469 (20876)	9777 (21555)	10235 (22564)	10209 (22507)
7210R lb./hp 7230R lb./hp	95 87	100 92	100 92	103 95	107 99	107 99
Front Weight Split	38%	39%	38%	35%	35%	35%
Rear Weight Split	62%	62%	62%	65%	65%	65%

[a]For 7230 1300 MFWD add 75 kg (166 lb.)

Tractor	7210R / 7230R TLS™ [a]					
	CommandQuad™	e23™	IVT™	CommandQuad™	e23™	IVT™
	380/80R46 - Singles - Cast/Steel/Steel			380/80R46 - Duals - Cast/Steel/Steel		
Front Weight kg(lb.)	3592 (7919)	3773 (8318)	3764 (8298)	3592 (7919)	3773 (8318)	3764 (8298)
Rear Weight kg(lb.)	5671 (12502)	5948 (13113)	5931 (13076)	6411 (14134)	6688 (14744)	6671 (14707)
Total Weight kg(lb.)	9263 (20421)	9721 (21431)	9695 (21374)	10003 (22053)	10461 (23063)	10435 (23005)
7210R lb./hp 7230R lb./hp	97 89	102 94	102 94	105 97	110 101	110 101
Front Weight Split	39%	39%	39%	36%	36%	36%
Rear Weight Split	61%	61%	61%	64%	64%	64%

[a]For TLS™ with front brakes add 94 kg (207 lb.)

Tractor	7210R 1150 MFWD / 7230R 1300 MFWD [a]					
	CommandQuad™	e23™	IVT™	CommandQuad™	e23™	IVT™
	380/90R50 - Singles - Cast/Steel/Steel			380/90R50 - Duals - Cast/Steel/Steel		
Front Weight kg(lb.)	3428 (7557)	3609 (7956)	3601 (7939)	3428 (7557)	3609 (7956)	3601 (7939)
Rear Weight kg(lb.)	5729 (12630)	6006 (13241)	5988 (13201)	6619 (14592)	6896 (15203)	6878 (15163)
Total Weight kg(lb.)	9157 (20188)	9615 (21197)	9589 (21140)	10047 (22150)	10505 (23160)	10479 (23102)
7210R lb./hp 7230R lb./hp	96 88	101 93	101 93	105 97	110 101	110 101
Front Weight Split	37%	38%	38%	34%	34%	34%
Rear Weight Split	63%	62%	62%	66%	66%	66%

[a]For 7230 1300 MFWD add 75 kg (166 lb.)

Tractor	7210R / 7230R TLS™ [a]					
	CommandQuad™	e23™	IVT™	CommandQuad™	e23™	IVT™
	380/90R50 - Singles - Cast/Steel/Steel			380/90R50 - Duals - Cast/Steel/Steel		
Front Weight kg(lb.)	3592 (7919)	3773 (7956)	3764 (8298)	3592 (7919)	3773 (8318)	3764 (8298)
Rear Weight kg(lb.)	5791 (12767)	6068 (13378)	6051 (13340)	6681 (14729)	6958 (15340)	6941 (15302)
Total Weight kg(lb.)	9383 (20686)	9841 (21695)	9815 (21638)	10273 (22648)	10731 (23658)	10705 (23601)
7210R lb./hp 7230R lb./hp	99 90	103 94	103 94	108 100	113 105	112 104
Front Weight Split	38%	38%	38%	35%	35%	35%
Rear Weight Split	62%	62%	62%	65%	65%	65%

[a]For TLS™ with front brakes add 94 kg (207 lb.)

Tractor	7210R 1150 MFWD / 7230R 1300 MFWD [a]					
	CommandQuad™	e23™	IVT™	CommandQuad™	e23™	IVT™
	420/80R46 - Singles - Cast/Steel/Steel			420/80R46 - Duals - Cast/Steel/Steel		
Front Weight kg(lb.)	3428 (7557)	3609 (7956)	3601 (7939)	3428 (7557)	3609 (7956)	3601 (7939)
Rear Weight kg(lb.)	5659 (12476)	5936 (13087)	5918 (13047)	6449 (14218)	6726 (14828)	6708 (14789)
Total Weight kg(lb.)	9087 (20033)	9545 (21043)	9519 (20986)	9877 (21775)	10335 (22785)	10309 (22727)
7210R lb./hp 7230R lb./hp	95 88	100 92	100 92	104 95	108 100	108 100

Continued on next page

TO84419,0000155 -19-20MAY15-2/5

Tractor	7210R 1150 MFWD / 7230R 1300 MFWD [a]					
	CommandQuad™	e23™	IVT™	CommandQuad™	e23™	IVT™
	420/80R46 - Singles - Cast/Steel/Steel			420/80R46 - Duals - Cast/Steel/Steel		
Front Weight Split	38%	38%	38%	35%	35%	35%
Rear Weight Split	62%	62%	62%	65%	65%	65%

[a]For 7230 1300 MFWD add 75 kg (166 lb.)

Tractor	7210R / 7230R TLS™ [a]					
	CommandQuad™	e23™	IVT™	CommandQuad™	e23™	IVT™
	420/80R46 - Singles - Cast/Steel/Steel			420/80R46 - Duals - Cast/Steel/Steel		
Front Weight kg(lb.)	3592 (7919)	3773 (8318)	3764 (8298)	3592 (7919)	3773 (8318)	3764 (8298)
Rear Weight kg(lb.)	5721 (12613)	5998 (13223)	5981 (13186)	6511 (14354)	6788 (14965)	6771 (14927)
Total Weight kg(lb.)	9313 (20532)	9771 (21541)	9745 (21484)	10103 (22273)	10561 (23283)	10535 (23226)
7210R lb./hp 7230R lb./hp	98 89	103 94	102 93	106 97	111 101	111 101
Front Weight Split	39%	39%	39%	36%	36%	36%
Rear Weight Split	61%	61%	61%	64%	64%	64%

[a]For TLS™ with front brakes add 94 kg (207 lb.)

Tractor	7210R 1150 MFWD / 7230R 1300 MFWD [a]					
	CommandQuad™	e23™	IVT™	CommandQuad™	e23™	IVT™
	480/80R46 - Singles - Cast/Steel/Steel			480/80R46 - Duals - Cast/Steel/Steel		
Front Weight kg(lb.)	3428 (7557)	3609 (7956)	3601 (7939)	3428 (7557)	3609 (7956)	3601 (7939)
Rear Weight kg(lb.)	5743 (12661)	6020 (13272)	6002 (13232)	6623 (14601)	6900 (15212)	6882 (15172)
Total Weight kg(lb.)	9171 (20219)	9629 (21228)	9603 (21171)	10051 (22159)	10509 (23168)	10483 (23111)
7210R lb./hp 7230R lb./hp	96 89	101 93	101 93	106 97	110 101	110 101
Front Weight Split	37%	37%	37%	34%	34%	34%
Rear Weight Split	63%	63%	63%	66%	66%	66%

[a]For 7230 1300 MFWD add 75 kg (166 lb.)

Tractor	7210R / 7230R TLS™ [a]					
	CommandQuad™	e23™	IVT™	CommandQuad™	e23™	IVT™
	480/80R46 - Singles - Cast/Steel/Steel			480/80R46 - Duals - Cast/Steel/Steel		
Front Weight kg(lb.)	3592 (7919)	3773 (8318)	3764 (8298)	3592 (7919)	3773 (8318)	3764 (8298)
Rear Weight kg(lb.)	5805 (12798)	6082 (13408)	6065 (13371)	6685 (14738)	6962 (15349)	6945 (15311)
Total Weight kg(lb.)	9397 (20717)	9855 (21727)	9829 (21669)	10277 (22657)	10735 (23667)	10709 (23609)
7210R lb./hp 7230R lb./hp	99 90	103 94	103 94	108 99	113 103	112 103
Front Weight Split	38%	38%	38%	35%	35%	35%
Rear Weight Split	62%	62%	62%	65%	65%	65%

[a]For TLS™ with front brakes add 94 kg (207 lb.)

Tractor	7210R 1150 MFWD / 7230R 1300 MFWD [a]					
	CommandQuad™	e23™	IVT™	CommandQuad™	e23™	IVT™
	520/85R42 - Singles - Cast/Steel/Steel			520/85R42 - Duals - Cast/Steel/Steel		
Front Weight kg(lb.)	3428 (7557)	3609 (7956)	3601 (7939)	3428 (7557)	3609 (7956)	3601 (7939)
Rear Weight kg(lb.)	5809 (12807)	6086 (13417)	6068 (13378)	6789 (14967)	7066 (15578)	7048 (15538)
Total Weight kg(lb.)	9237 (20364)	9695 (21374)	9669 (21317)	10217 (22525)	10675 (23534)	10649 (23477)
7210R lb./hp 7230R lb./hp	97 89	102 94	102 93	107 99	112 103	112 103
Front Weight Split	37%	37%	37%	34%	34%	34%
Rear Weight Split	63%	63%	63%	66%	66%	66%

[a]For 7230 1300 MFWD add 75 kg (166 lb.)

Continued on next page

Tractor	7210R / 7230R TLS™ [a]					
	CommandQuad™	e23™	IVT™	CommandQuad™	e23™	IVT™
	520/85R42 - Singles - Cast/Steel/Steel			520/85R42 - Duals - Cast/Steel/Steel		
Front Weight kg(lb.)	3592 (7919)	3773 (8318)	3764 (8298)	3592 (7919)	3773 (8318)	3764 (8298)
Rear Weight kg(lb.)	5871 (12943)	6148 (13554)	6131 (13517)	6851 (15104)	7128 (15715)	7111 (15677)
Total Weight kg(lb.)	9463 (20862)	9921 (21872)	9895 (21815)	10443 (23023)	10901 (24033)	10875 (23975)
7210R lb./hp 7230R lb./hp	99 91	104 95	104 95	110 100	114 104	114 104
Front Weight Split	38%	38%	38%	34%	35%	35%
Rear Weight Split	62%	62%	62%	66%	65%	65%

[a] *For TLS™ with front brakes add 94 kg (207 lb.)*

Tractor	7210R 1150 MFWD / 7230R 1300 MFWD [a]					
	CommandQuad™	e23™	IVT™	CommandQuad™	e23™	IVT™
	620/70R42 - Singles - Cast/Steel/Steel			620/70R42 - Duals - Cast/Steel/Steel		
Front Weight kg(lb.)	3428 (7557)	3609 (7956)	3601 (7939)	3428 (7557)	3609 (7956)	3601 (7939)
Rear Weight kg(lb.)	5997 (13221)	6274 (13832)	6256 (13792)	7143 (15748)	7420 (16358)	7402 (16319)
Total Weight kg(lb.)	9425 (20779)	9883 (21788)	9857 (21731)	10571 (23305)	11029 (24315)	11003 (24257)
7210R lb./hp 7230R lb./hp	99 91	104 95	103 95	111 102	116 106	116 106
Front Weight Split	36%	35%	35%	32%	33%	33%
Rear Weight Split	64%	65%	65%	68%	67%	67%

[a] *For 7230 1300 MFWD add 75 kg (166 lb.)*

Tractor	7210R / 7230R TLS™ [a]					
	CommandQuad™	e23™	IVT™	CommandQuad™	e23™	IVT™
	620/70R42 - Singles - Cast/Steel/Steel			620/70R42 - Duals - Cast/Steel/Steel		
Front Weight kg(lb.)	3592 (7919)	3773 (8318)	3764 (8298)	3592 (7919)	3773 (8318)	3764 (8298)
Rear Weight kg(lb.)	6059 (13358)	6336 (13968)	6319 (13931)	7205 (15884)	7482 (16495)	7465 (16457)
Total Weight kg(lb.)	9651 (21277)	10109 (22287)	10083 (22229)	10797 (23803)	11255 (24813)	11229 (24756)
7210R lb./hp 7230R lb./hp	101 93	106 97	106 97	113 103	118 108	118 108
Front Weight Split	37%	37%	37%	33%	34%	34%
Rear Weight Split	63%	63%	63%	67%	66%	66%

[a] *For TLS™ with front brakes add 94 kg (207 lb.)*

Tractor	7210R 1150 MFWD / 7230R 1300 MFWD [a]			7210R / 7230R TLS™ [b]		
	CommandQuad™	e23™	IVT™	CommandQuad™	e23™	IVT™
	650/65R42 - Singles - Cast/Steel/Steel			650/65R42 - Singles - Cast/Steel/Steel		
Front Weight kg(lb.)	3428 (7557)	3609 (7956)	3601 (7939)	3592 (7919)	3773 (8318)	3764 (8298)
Rear Weight kg(lb.)	5959 (13137)	6236 (13748)	6218 (13708)	6021 (13274)	6298 (13885)	6281 (13847)
Total Weight kg(lb.)	9387 (20695)	9845 (21705)	9819 (21647)	9613 (21193)	10071 (22203)	10045 (22145)
7210R lb./hp 7230R lb./hp	99 91	103 95	103 95	101 92	106 97	105 96
Front Weight Split	37%	37%	37%	37%	38%	38%
Rear Weight Split	63%	63%	63%	63%	62%	62%

[a] *For 7230 1300 MFWD add 75 kg (166 lb.)*
[b] *For TLS™ with front brakes add 94 kg (207 lb.)*

Tractor	7210R 1150 MFWD / 7230R 1300 MFWD [a]					
	CommandQuad™	e23™	IVT™	CommandQuad™	e23™	IVT™
	710/70R38 - Singles - Cast/Steel/Steel			710/70R38 - Duals - Cast/Steel/Steel		
Front Weight kg(lb.)	3428 (7557)	3609 (7956)	3601 (7939)	3428 (7557)	3609 (7956)	3601 (7939)
Rear Weight kg(lb.)	6037 (13309)	6314 (13920)	6296 (13880)	7209 (15893)	7486 (16504)	7468 (16464)
Total Weight kg(lb.)	9465 (20867)	9923 (21876)	9897 (21819)	10637 (23451)	11095 (24460)	11069 (24402)
7210R lb./hp 7230R lb./hp	99 91	104 96	104 96	112 103	116 107	116 107

Continued on next page

TO84419,0000155 -19-20MAY15-4/5

Tractor	7210R 1150 MFWD / 7230R 1300 MFWD [a]					
	CommandQuad™	e23™	IVT™	CommandQuad™	e23™	IVT™
	710/70R38 - Singles - Cast/Steel/Steel			710/70R38 - Duals - Cast/Steel/Steel		
Front Weight Split	36%	36%	36%	32%	33%	33%
Rear Weight Split	64%	64%	64%	68%	67%	67%

[a] *For 7230 1300 MFWD add 75 kg (166 lb.)*

Tractor	7210R / 7230R TLS™ [a]					
	CommandQuad™	e23™	IVT™	CommandQuad™	e23™	IVT™
	710/70R38 - Singles - Cast/Steel/Steel			710/70R38 - Duals - Cast/Steel/Steel		
Front Weight kg(lb.)	3592 (7919)	3773 (8318)	3764 (8298)	3592 (7919)	3773 (8318)	3764 (8298)
Rear Weight kg(lb.)	6099 (13446)	6376 (14057)	6359 (14019)	7271 (16030)	7548 (16640)	7531 (16603)
Total Weight kg(lb.)	9691 (21365)	10149 (22375)	9691 (21317)	10863 (23949)	11321 (24959)	11295 (24901)
7210R lb./hp 7230R lb./hp	102 93	107 97	106 97	114 104	119 109	119 108
Front Weight Split	37%	37%	37%	33%	33%	33%
Rear Weight Split	63%	63%	63%	67%	67%	67%

[a] *For TLS™ with front brakes add 94 kg (207 lb.)*

Tractor	7210R 1150 MFWD / 7230R 1300 MFWD [a]					
	CommandQuad™	e23™	IVT™	CommandQuad™	e23™	IVT™
	710/70R38HD - Singles - Cast/Steel/Steel			710/70R38HD - Duals - Cast/Steel/Steel		
Front Weight kg(lb.)	3428 (7557)	3609 (7956)	3601 (7939)	3428 (7557)	3609 (7956)	3601 (7939)
Rear Weight kg(lb.)	6121 (13494)	6398 (14105)	6380 (14065)	7377 (16263)	7654 (16874)	7636 (16834)
Total Weight kg(lb.)	9549 (21051)	10007 (22061)	6380 (22004)	10805 (23820)	11263 (24830)	11237 (24773)
7210R lb./hp 7230R lb./hp	100 92	105 97	105 96	113 104	118 109	118 108
Front Weight Split	36%	36%	36%	32%	32%	32%
Rear Weight Split	64%	64%	64%	68%	68%	68%

[a] *For 7230 1300 MFWD add 75 kg (166 lb.)*

Tractor	7210R / 7230R TLS™ [a]					
	CommandQuad™	e23™	IVT™	CommandQuad™	e23™	IVT™
	710/70R38HD - Singles - Cast/Steel/Steel			710/70R38HD - Duals - Cast/Steel/Steel		
Front Weight kg(lb.)	3592 (7919)	3773 (8318)	3764 (8298)	3592 (7919)	3773 (8318)	3764 (8298)
Rear Weight kg(lb.)	6138 (13631)	6460 (14242)	6443 (14204)	3592 (16400)	7716 (17011)	7699 (16973)
Total Weight kg(lb.)	9775 (21550)	10233 (22560)	10207 (22503)	7439 (24319)	11489 (25329)	11463 (25272)
7210R lb./hp 7230R lb./hp	103 94	107 98	107 98	116 106	121 110	120 110
Front Weight Split	37%	37%	37%	33%	33%	33%
Rear Weight Split	63%	63%	63%	67%	67%	67%

[a] *For TLS™ with front brakes add 94 kg (207 lb.)*

CommandQuad is a trademark of Deere & Company
e23 is a trademark of Deere & Company
IVT is a trademark of Deere & Company
AutoPowr is a trademark of Deere & Company
TLS is a trademark of Deere & Company

TO84419,0000155 -19-20MAY15-5/5

Unballasted Tractor Weight Charts (7210R and 7230R Continued)

NOTE: Unballasted weights are calculated by averaging and are figured based on tractor with a full tank of fuel. Each tractor is different. Have your tractor weighed for exact weight splits.

1150 MFWD front axle is only available on 7210R tractors.

Calculations assume no front hitch or PTO and front group 43 320/80R42 tires.

Tractor	7210R 1150 MFWD / 7230R 1300 MFWD [a]					
	CommandQuad™	e23™	IVT™/AutoPowr™	CommandQuad™	e23™	IVT™
	380/90R54 - Singles - Cast/Steel/Steel			380/90R54 - Duals - Cast/Steel/Steel		
Front Weight kg(lb.)	3584 (7901)	3765 (8300)	3757 (8283)	3584 (7901)	3765 (8300)	3757 (8283)
Rear Weight kg(lb.)	5789 (12696)	6036 (13307)	6018 (13267)	6679 (14725)	6956 (15335)	6938 (15296)
Total Weight kg(lb.)	9343 (20597)	9801 (21607)	9775 (21150)	10263 (22626)	10721 (23635)	10695 (23578)
7210R lb./hp 7230R lb./hp	98 90	103 95	103 94	108 99	113 103	112 103
Front Weight Split	38%	38%	38%	35%	35%	35%
Rear Weight Split	62%	62%	62%	65%	65%	65%

[a] *For 7230 1300 MFWD add 75 kg (166 lb.)*

Tractor	7210R / 7230R TLS™ [a]					
	CommandQuad™	e23™	IVT™	CommandQuad™	e23™	IVT™
	380/90R54 - Singles - Cast/Steel/Steel			380/90R54 - Duals - Cast/Steel/Steel		
Front Weight kg(lb.)	3748 (8263)	3929 (8662)	3920 (8642)	3748 (8263)	3929 (8662)	3920 (8642)
Rear Weight kg(lb.)	5821 (12833)	6098 (13444)	6081 (13406)	6741 (14861)	7018 (15472)	7001 (15435)
Total Weight kg(lb.)	9569 (21096)	10027 (22106)	10001 (22048)	10489 (23124)	10947 (24134)	10921 (24076)
7210R lb./hp 7230R lb./hp	100 92	105 96	105 96	110 101	115 105	115 105
Front Weight Split	39%	39%	39%	36%	36%	36%
Rear Weight Split	61%	61%	61%	64%	64%	64%

[a] *For TLS™ with front brakes add 94 kg (207 lb.)*

Tractor	7210R 1150 MFWD / 7230R 1300 MFWD [a]					
	CommandQuad™	e23™	IVT™	CommandQuad™	e23™	IVT™
	480/80R50 - Singles - Cast/Steel/Steel			480/80R50 - Duals - Cast/Steel/Steel		
Front Weight kg (lb.)	3584 (7901)	3765 (8300)	3757 (8283)	3584 (7901)	3765 (8300)	3757 (8283)
Rear Weight kg (lb.)	5839 (12873)	6116 (13483)	6098 (13444)	6749 (14879)	7026 (15490)	7008 (15450)
Total Weight kg (lb.)	9423 (20774)	9881 (21783)	9855 (21726)	10333 (22780)	10791 (23790)	10765 (23733)
7210R lb./hp 7230R lb./hp	99 91	104 95	103 95	108 100	113 104	113 104
Front Weight Split	38%	38%	38%	35%	35%	35%
Rear Weight Split	62%	62%	62%	65%	65%	65%

[a] *For 7230 1300 MFWD add 75 kg (166 lb.)*

Tractor	7210R / 7230R TLS™ [a]					
	CommandQuad™	e23™	IVT™	CommandQuad™	e23™	IVT™
	480/80R50 - Singles - Cast/Steel/Steel			480/80R50 - Duals - Cast/Steel/Steel		
Front Weight kg(lb.)	3748 (8263)	3929 (8662)	3920 (8642)	3784 (8263)	3929 (8662)	3920 (8642)
Rear Weight kg(lb.)	5901 (13009)	6178 (13620)	6161 (13583)	6811 (15016)	7088 (15626)	7071 (15589)
Total Weight kg(lb.)	9649 (21272)	10107 (22282)	10081 (22225)	10559 (23278)	11017 (24288)	10991 (24231)
7210R lb./hp 7230R lb./hp	101 91	106 97	106 97	111 101	116 106	115 105
Front Weight Split	39%	39%	39%	36%	36%	34%
Rear Weight Split	61%	61%	61%	64%	64%	66%

[a] *For TLS™ with front brakes add 94 kg (207 lb.)*

Continued on next page

Tractor	7210R 1150 MFWD / 7230R 1300 MFWD [a]					
	CommandQuad™	e23™	IVT™	CommandQuad™	e23™	IVT™
	520/85R46 - Singles - Cast/Steel/Steel			520/85R46 - Duals - Cast/Steel/Steel		
Front Weight kg(lb.)	3584 (7901)	3765 (8300)	3757 (8263)	3584 (7901)	3765 (8300)	3757 (8283)
Rear Weight kg(lb.)	5899 (13005)	6176 (13615)	6158 (13576)	6969 (15364)	7246 (15975)	7228 (15935)
Total Weight kg(lb.)	9483 (20906)	9941 (21916)	9915 (21859)	10553 (23265)	11011 (24275)	10985 (24217)
7210R lb./hp 7230R lb./hp	100 92	104 96	104 96	111 102	116 106	115 106
Front Weight Split	38%	38%	38%	34%	34%	34%
Rear Weight Split	62%	62%	62%	66%	66%	66%

[a] *For 7230 1300 MFWD add 75 kg (166 lb.)*

Tractor	7210R / 7230R TLS™ [a]					
	CommandQuad™	e23™	IVT™	CommandQuad™	e23™	IVT™
	520/85R46 - Singles - Cast/Steel/Steel			520/85R46 - Duals - Cast/Steel/Steel		
Front Weight kg(lb.)	3748 (8263)	3929 (8662)	3920 (8642)	3748 (8263)	3929 (8662)	3920 (8642)
Total Weight kg(lb.)	9709 (21405)	10167 (22414)	10141 (22357)	10779 (23764)	11237 (24773)	11211 (24716)
Rear Weight kg(lb.)	5961 (13142)	6238 (13752)	6221 (13715)	7031 (15501)	7308 (16111)	7291 (16074)
7210R lb./hp 7230R lb./hp	102 93	107 97	106 97	113 103	118 108	118 107
Front Weight Split	39%	39%	39%	35%	35%	35%
Rear Weight Split	61%	61%	61%	65%	65%	66%

[a] *For TLS™ with front brakes add 94 kg (207 lb.)*

Tractor	7210R 1150 MFWD / 7230R 1300 MFWD [a]					
	CommandQuad™	e23™	IVT™	CommandQuad™	e23™	IVT™
	620/70R46 - Singles - Cast/Steel/Steel			620/70R46 - Duals - Cast/Steel/Steel		
Front Weight kg(lb.)	3584 (7901)	3765 (8300)	3757 (8283)	3584 (7901)	3765 (8300)	3757 (8283)
Rear Weight kg(lb.)	5959 (13137)	6236 (13748)	6218 (13708)	7089 (15629)	7366 (16239)	7348 (16200)
Total Weight kg(lb.)	9543 (21038)	10001 (22048)	9975 (21991)	10673 (23530)	11131 (24539)	11105 (24483)
7210R lb./hp 7230R lb./hp	100 92	105 97	105 96	112 103	117 107	117 107
Front Weight Split	38%	38%	38%	34%	34%	34%
Rear Weight Split	62%	62%	62%	66%	66%	66%

[a] *For 7230 1300 MFWD add 75 kg (166 lb.)*

Tractor	7210R / 7230R TLS™ [a]					
	CommandQuad™	e23™	IVT™	CommandQuad™	e23™	IVT™
	620/70R46 - Singles - Cast/Steel/Steel			620/70R46 - Duals - Cast/Steel/Steel		
Front Weight kg(lb.)	3748 (8263)	3929 (8662)	3920 (8642)	3748 (8263)	3929 (8662)	3920 (8642)
Rear Weight kg(lb.)	6021 (13274)	6298 (13885)	6281 (13847)	7151 (15765)	7428 (16376)	7411 (16338)
Total Weight kg(lb.)	9769 (21537)	10227 (22547)	10201 (22489)	10899 (24028)	11357 (25038)	11331 (24980)
7210R lb./hp 7230R lb./hp	103 94	107 98	107 98	114 104	119 109	119 109
Front Weight Split	38%	38%	38%	34%	35%	35%
Rear Weight Split	62%	62%	62%	66%	65%	65%

[a] *For TLS™ with front brakes add 94 kg (207 lb.)*

Tractor	7210R 1150 MFWD / 7230R 1300 MFWD [a]					
	CommandQuad™	e23™	IVT™	CommandQuad™	e23™	IVT™
	650/85R38 - Singles - Cast/Steel/Steel			650/85R38 - Duals - Cast/Steel/Steel		
Total Weight kg(lb.)	9643 (21424)	10101 (22268)	10075 (22211)	10853 (23926)	11285 (24936)	11285 (24879)
Rear Weight kg(lb.)	6059 (13358)	6336 (13968)	6318 (13929)	7269 (16025)	7546 (16636)	7528 (16596)
Front Weight kg(lb.)	3584 (7901)	3765 (8300)	3757 (8283)	3584 (7901)	3765 (8300)	3757 (8283)
7210R lb./hp 7230R lb./hp	101 93	106 98	106 97	114 105	119 109	118 109

Continued on next page

GH15097,0000918 -19-20MAY15-2/5

Tractor	7210R 1150 MFWD / 7230R 1300 MFWD [a]					
	CommandQuad™	e23™	IVT™	CommandQuad™	e23™	IVT™
	650/85R38 - Singles - Cast/Steel/Steel			650/85R38 - Duals - Cast/Steel/Steel		
Front Weight Split	37%	37%	37%	33%	33%	33%
Rear Weight Split	63%	63%	63%	67%	67%	67%

[a]For 7230 1300 MFWD add 75 kg (166 lb.)

Tractor	7210R / 7230R TLS™ [a]					
	CommandQuad™	e23™	IVT™	CommandQuad™	e23™	IVT™
	650/85R38 - Singles - Cast/Steel/Steel			650/85R38 - Duals - Cast/Steel/Steel		
Front Weight kg(lb.)	3748 (8263)	3929 (8662)	3920 (8642)	3748 (8263)	3929 (8662)	3920 (8642)
Rear Weight kg(lb.)	6121 (13494)	6398 (14105)	6381 (14068)	7331 (16162)	7608 (16773)	7591 (16735)
Total Weight kg(lb.)	9869 (21757)	10327 (22767)	10301 (22710)	11079 (24425)	11537 (25435)	11511 (25377)
7210R lb./hp 7230R lb./hp	104 95	108 99	108 99	116 106	121 111	121 110
Front Weight Split	38%	38%	38%	34%	34%	34%
Rear Weight Split	62%	62%	62%	66%	66%	66%

[a]For TLS™ with front brakes add 94 kg (207 lb.)

Tractor	7210R 1150 MFWD / 7230R 1300 MFWD [a]			7210R / 7230R TLS™ [b]		
	CommandQuad™	e23™	IVT™	CommandQuad™	e23™	IVT™
	IF650/85R38 - Singles - Cast/Steel/Steel			IF650/85R38 - Singles - Cast/Steel/Steel		
Front Weight kg(lb.)	3584 (7901)	3765 (8300)	3757 (8283)	3748 (8263)	3929 (8662)	3920 (8642)
Rear Weight kg(lb.)	6118 (13488)	6395 (14099)	6377 (14059)	6180 (13625)	6457 (14235)	6440 (14198)
Total Weight kg(lb.)	9702 (21389)	10160 (22399)	10134 (22342)	9928 (21888)	10386 (22897)	10360 (22240)
7210R lb./hp 7230R lb./hp	102 94	107 98	106 98	104 95	109 100	109 99
Front Weight Split	37%	37%	37%	38%	38%	38%
Rear Weight Split	63%	63%	63%	62%	62%	62%

[a]For 7230 1300 MFWD add 75 kg (166 lb.)
[b]For TLS™ with front brakes add 94 kg (207 lb.)

Tractor	7210R 1150 MFWD / 7230R 1300 MFWD [a]					
	CommandQuad™	e23™	IVT™	CommandQuad™	e23™	IVT™
	710/70R42 - Singles - Cast/Steel/Steel			710/70R42 - Duals - Cast/Steel/Steel		
Front Weight kg(lb.)	3584 (7901)	3765 (8300)	3757 (8283)	3584 (7901)	3765 (8300)	3757 (8283)
Rear Weight kg(lb.)	6139 (13534)	6416 (14145)	6398 (14105)	7467 (16462)	7744 (17073)	7726 (17033)
Total Weight kg(lb.)	9723 (21435)	10181 (22445)	10155 (22388)	11051 (24363)	11509 (25373)	11483 (25316)
7210R lb./hp 7230R lb./hp	102 94	107 98	107 98	116 107	121 111	121 111
Front Weight Split	37%	37%	37%	32%	33%	33%
Rear Weight Split	63%	63%	63%	68%	67%	67%

[a]For 7230 1300 MFWD add 75 kg (166 lb.)

Tractor	7210R / 7230R TLS™ [a]					
	CommandQuad™	e23™	IVT™	CommandQuad™	e23™	IVT™
	710/70R42 - Singles - Cast/Steel/Steel			710/70R42 - Duals - Cast/Steel/Steel		
Front Weight kg(lb.)	3748 (8263)	3929 (8682)	3920 (8642)	3748 (8263)	3929 (8662)	3920 (8642)
Rear Weight kg(lb.)	6201 (13671)	6478 (14282)	6461 (14244)	7529 (16599)	7806 (17209)	7789 (17172)
Total Weight kg(lb.)	9949 (21934)	10407 (22944)	10381 (22886)	11277 (24862)	11735 (25871)	11709 (25814)
7210R lb./hp 7230R lb./hp	104 95	109 100	109 100	118 108	123 112	123 112
Front Weight Split	38%	38%	38%	33%	34%	34%
Rear Weight Split	62%	62%	62%	67%	66%	66%

[a]For TLS™ with front brakes add 94 kg (207 lb.)

Continued on next page

GH15097,0000918 -19-20MAY15-3/5

Tractor	7210R 1150 MFWD / 7230R 1300 MFWD [a]					
	CommandQuad™	e23™	IVT™	CommandQuad™	e23™	IVT™
	710/70R42HD - Singles - Cast/Steel/Steel			710/70R42HD - Duals - Cast/Steel/Steel		
Front Weight kg(lb.)	3584 (7901)	3765 (8300)	3757 (8283)	3584 (7901)	3765 (8300)	3757 (8283)
Rear Weight kg(lb.)	6145 (13547)	6422 (14158)	6404 (14118)	7979 (16488)	7756 (17099)	7739 (17059)
Total Weight kg(lb.)	9729 (21448)	10187 (22458)	10161 (22401)	11063 (24389)	11521 (25399)	11495 (25342)
7210R lb./hp 7230R lb./hp	102 94	107 98	107 98	116 107	121 111	121 111
Front Weight Split	37%	37%	37%	32%	33%	33%
Rear Weight Split	63%	63%	63%	68%	67%	67%

[a] *For 7230 1300 MFWD add 75 kg (166 lb.)*

Tractor	7210R / 7230R TLS™ [a]					
	CommandQuad™	e23™	IVT™	CommandQuad™	e23™	IVT™
	710/70R42HD - Singles - Cast/Steel/Steel			710/70R42HD - Duals - Cast/Steel/Steel		
Front Weight kg(lb.)	3748 (8263)	3929 (8662)	3920 (8642)	3748 (8263)	3929 (8662)	3920 (8642)
Rear Weight kg(lb.)	6207 (13684)	6484 (14295)	6467 (14257)	7541 (16625)	7818 (17236)	7801 (17198)
Total Weight kg(lb.)	9955 (21947)	10413 (22957)	10387 (22899)	11289 (24888)	11747 (25898)	11721 (25840)
7210R lb./hp 7230R lb./hp	105 95	109 100	109 100	119 108	123 113	123 112
Front Weight Split	38%	38%	38%	33%	33%	33%
Rear Weight Split	62%	62%	62%	67%	67%	67%

[a] *For TLS™ with front brakes add 94 kg (207 lb.)*

Tractor	7210R 1150 MFWD / 7230R 1300 MFWD [a]			7210R / 7230R TLS™ [b]		
	CommandQuad™	e23™	IVT™	CommandQuad™	e23™	IVT™
	IF710/70R42 - Singles - Cast/Steel/Steel			IF710/70R42 - Singles - Cast/Steel/Steel		
Rear Weight kg(lb.)	6181 (13627)	6458 (14237)	6439 (14196)	6243 (13763)	6520 (14374)	6502 (14334)
Total Weight kg(lb.)	9765 (21528)	10223 (22537)	10196 (22479)	9991 (22026)	10449 (23036)	10422 (22976)
Front Weight kg(lb.)	3584 (7901)	3765 (8300)	3757 (8283)	3748 (8263)	3929 (8662)	3920 (8642)
7210R lb./hp 7230R lb./hp	103 94	107 99	107 98	105 96	110 100	109 100
Front Weight Split	37%	37%	37%	38%	38%	38%
Rear Weight Split	63%	63%	63%	62%	62%	62%

[a] *For 7230 1300 MFWD add 75 kg (166 lb.)*
[b] *For TLS™ with front brakes add 94 kg (207 lb.)*

Tractor	7210R 1150 MFWD / 7230R 1300 MFWD [a]					
	CommandQuad™	e23™	IVT™	CommandQuad™	e23™	IVT™
	800/70R38 - Singles - Cast/Steel/Steel			800/70R38 - Duals - Cast/Steel/Steel		
Front Weight kg(lb.)	3584 (7901)	3765 (8300)	3757 (8283)	3584 (7901)	3765 (8300)	3757 (8283)
Rear Weight kg(lb.)	6310 (13911)	6587 (14522)	6569 (14482)	7769 (17128)	8046 (17738)	8028 (17699)
Total Weight kg(lb.)	9894 (21812)	10352 (22822)	10326 (22765)	11353 (25029)	11811 (26038)	11785 (25982)
7210R lb./hp 7230R lb./hp	104 96	109 100	108 100	119 110	124 114	124 114
Front Weight Split	36%	36%	36%	32%	32%	32%
Rear Weight Split	64%	64%	64%	68%	68%	68%

[a] *For 7230 1300 MFWD add 75 kg (166 lb.)*

Tractor	7210R / 7230R TLS™ [a]					
	CommandQuad™	e23™	IVT™	CommandQuad™	e23™	IVT™
	800/70R38 - Singles - Cast/Steel/Steel			800/70R38 - Duals - Cast/Steel/Steel		
Front Weight kg(lb.)	3584 (8263)	3929 (8662)	3920 (8642)	3748 (8263)	3929 (8662)	3920 (8642)
Rear Weight kg(lb.)	6372 (14048)	6649 (14659)	6623 (14621)	7831 (17264)	8108 (17875)	8091 (17838)
Total Weight kg(lb.)	10120 (22311)	10578 (23321)	10552 (23263)	11579 (25527)	12037 (26537)	12011 (26480)
7210R lb./hp 7230R lb./hp	106 97	111 101	111 101	122 111	126 115	126 115

Continued on next page

GH15097,0000918 -19-20MAY15-4/5

Tractor	7210R / 7230R TLS™ [a]					
	CommandQuad™	**e23™**	**IVT™**	**CommandQuad™**	**e23™**	**IVT™**
	800/70R38 - Singles - Cast/Steel/Steel			**800/70R38 - Duals - Cast/Steel/Steel**		
Front Weight Split	37%	37%	37%	32%	33%	33%
Rear Weight Split	63%	63%	63%	68%	67%	67%

[a] *For TLS™ with front brakes add 94 kg (207 lb.)*

CommandQuad is a trademark of Deere & Company
e23 is a trademark of Deere & Company
IVT is a trademark of Deere & Company
AutoPowr is a trademark of Deere & Company
TLS is a trademark of Deere & Company

GH15097,0000918 -19-20MAY15-5/5

Unballasted Tractor Weight Charts (7250R and 7270R)

NOTE: Unballasted weights are calculated by averaging and are figured based on tractor with a full tank of fuel. Each tractor is different. Have your tractor weighed for exact weight splits.

Calculations assume no front hitch or PTO and front 420/90R30 (group 42) tires.

Tractor	7250R / 7270R 1300 MFWD			
	e23™	IVT™/AutoPowr™	e23™	IVT™
	320/90R50 - Singles - Cast/Steel/Steel		320/90R50 - Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	3742 (8250)	3733 (8230)	3742 (8250)	3733 (8230)
Rear Weight kg (lb.)	6149 (13556)	6132 (13519)	6929 (15276)	6912 (15238)
Total Weight kg (lb.)	9891 (21806)	9865 (21749)	10671 (23526)	10645 (23468)
7250R, 7270R lb./hp	87, 81	87, 81	94, 87	94, 87
Front Weight Split	38%	38%	35%	35%
Rear Weight Split	62%	62%	65%	65%

Tractor	7250R / 7270R TLS™ [a]			
	e23™	IVT™	e23™	IVT™
	320/90R50 - Singles - Cast/Steel/Steel		320/90R50 - Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	3877 (8547)	3868 (8527)	3877 (8547)	3868 (8527)
Rear Weight kg (lb.)	6165 (13591)	6148 (13554)	6945 (15311)	10796 (15274)
Total Weight kg (lb.)	10042 (22138)	10016 (22081)	10822 (23858)	110796 (23801)
7250R, 7270R lb./hp	89, 82	88, 82	95, 88	95, 88
Front Weight Split	39%	39%	36%	36%
Rear Weight Split	61%	61%	64%	64%

[a] *For TLS™ with front brakes add 94 kg (207 lb.)*

Tractor	7250R / 7270R 1300 MFWD			
	e23™	IVT™	e23™	IVT™
	320/90R54 - Singles - Cast/Steel/Steel		320/90R54- Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	3742 (8250)	3733 (8230)	3742 (8250)	3733 (8230)
Rear Weight kg (lb.)	6279 (13843)	6262 (13805)	7209 (15893)	7192 (15856)
Total Weight kg (lb.)	10021 (22093)	9995 (22035)	10951 (24143)	10925 (24086)
7250R,7270R lb./hp	88, 82	88, 82	97, 89	96, 89
Front Weight Split	37%	37%	34%	34%
Rear Weight Split	63%	63%	66%	66%

Tractor	7250R / 7270R TLS™ [a]			
	e23™	IVT™	e23™	IVT™
	320/90R54 - Singles - Cast/Steel/Steel		320/90R54 - Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	3877 (8547)	3868 (8527)	3877 (8547)	3868 (8527)
Rear Weight kg (lb.)	6295 (13878)	6278 (13841)	7225 (15928)	7208 (15891)
Total Weight kg (lb.)	10172 (22425)	10146 (22368)	11102 (24475)	11076 (24418)
7250R, 7270R lb./hp	90, 83	89, 83	98, 91	98, 90
Front Weight Split	38%	38%	35%	35%
Rear Weight Split	62%	62%	65%	65%

[a] *For TLS™ with front brakes add 94 kg (207 lb.)*

Tractor	7250R / 7270R 1300 MFWD			
	e23™	IVT™	e23™	IVT™
	380/80R46 - Singles - Cast/Steel/Steel		380/80R46 - Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	3742 (8250)	3733 (8230)	3742 (8250)	3733 (8230)
Rear Weight kg (lb.)	6089 (13424)	6072 (13386)	6829 (15055)	6812 (15018)
Total Weight kg (lb.)	9831 (21674)	9805 (21616)	10571 (23305)	10545 (23248)
7250R, 7270R lb./hp	87, 80	86, 80	93, 86	93, 86

Continued on next page

Tractor	7250R / 7270R 1300 MFWD			
	e23™	IVT™	e23™	IVT™
	380/80R46 - Singles - Cast/Steel/Steel		380/80R46 - Duals - Cast/Steel/Steel	
Front Weight Split	38%	38%	35%	35%
Rear Weight Split	62%	62%	65%	65%

Tractor	7250R / 7270R TLS™ [a]			
	e23™	IVT™	e23™	IVT™
	380/80R46 - Singles - Cast/Steel/Steel		380/80R46 - Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	3877 (8547)	3868 (8527)	3877 (8547)	3868 (8527)
Rear Weight kg (lb.)	6105 (13459)	6088 (13422)	6845 (15091)	6828 (15053)
Total Weight kg (lb.)	9982 (22006)	9956 (21949)	10722 (23638)	10696 (23580)
7250R, 7270R lb./hp	88, 82	88, 81	95, 88	94, 87
Front Weight Split	39%	39%	36%	36%
Rear Weight Split	61%	61%	64%	64%

[a]For TLS™ with front brakes add 94 kg (207 lb.)

Tractor	7250R / 7270R 1300 MFWD			
	e23™	IVT™	e23™	IVT™
	380/90R50 - Singles - Cast/Steel/Steel		380/90R50 - Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	3742 (8250)	3733 (8230)	3742 (8250)	3733 (8230)
Rear Weight kg (lb.)	6209 (13688)	6192 (13651)	7099 (15651)	7082 (15613)
Total Weight kg (lb.)	9951 (21938)	9925 (21881)	10841 (23901)	10815 (23843)
7250R, 7270R lb./hp	88, 81	88, 81	96, 89	95, 88
Front Weight Split	38%	38%	35%	35%
Rear Weight Split	62%	62%	65%	65%

Tractor	7250R / 7270R TLS™ [a]			
	e23™	IVT™	e23™	IVT™
	380/90R50 - Singles - Cast/Steel/Steel		380/90R50 - Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	3877 (8547)	3868 (8527)	3877 (8547)	3868 (8527)
Rear Weight kg (lb.)	6225 (13724)	6208 (13686)	7115 (15686)	7098 (15648)
Total Weight kg (lb.)	10102 (22271)	10076 (22213)	10992 (24233)	10966 (24175)
7250R, 7270R lb./hp	89, 82	89, 82	97, 90	97, 90
Front Weight Split	38%	38%	35%	35%
Rear Weight Split	62%	62%	65%	65%

[a]For TLS™ with front brakes add 94 kg (207 lb.)

Tractor	7250R / 7270R 1300 MFWD			
	e23™	IVT™	e23™	IVT™
	420/80R46 - Singles - Cast/Steel/Steel		420/80R46 - Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	3742 (8250)	3733 (8230)	3742 (8250)	3733 (8230)
Rear Weight kg (lb.)	6139 (13534)	6122 (13497)	6929 (15276)	6912 (15238)
Total Weight kg (lb.)	9881 (21784)	9855 (21727)	10671 (23526)	10645 (23468)
7250R, 7270R lb./hp	87, 81	87, 80	94, 87	94, 87
Front Weight Split	38%	38%	35%	35%
Rear Weight Split	62%	62%	65%	65%

Tractor	7250R / 7270R TLS™ [a]			
	e23™	IVT™	e23™	IVT™
	420/80R46 - Singles - Cast/Steel/Steel		420/80R46 - Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	3877 (8547)	3868 (8527)	3877 (8547)	3868 (8527)
Rear Weight kg (lb.)	6155 (13569)	6138 (13532)	6945 (15311)	6928 (15274)
Total Weight kg (lb.)	10032 (22116)	10006 (22059)	10822 (23858)	10796 (23801)
7250R, 7270R lb./hp	88, 82	88, 82	95, 88	95, 88

Continued on next page

Tractor	7250R / 7270R TLS™ [a]			
	e23™	IVT™	e23™	IVT™
	420/80R46 - Singles - Cast/Steel/Steel		420/80R46 - Duals - Cast/Steel/Steel	
Front Weight Split	39%	39%	36%	36%
Rear Weight Split	61%	61%	64%	64%

[a] *For TLS™ with front brakes add 94 kg (207 lb.)*

Tractor	7250R / 7270R 1300 MFWD			
	e23™	IVT™	e23™	IVT™
	480/80R46 - Singles - Cast/Steel/Steel		480/80R46 - Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	3742 (8250)	3733 (8230)	3742 (8250)	3733 (8230)
Rear Weight kg (lb.)	6223 (13719)	6206 (13682)	7103 (15659)	7086 (15622)
Total Weight kg (lb.)	9965 (21969)	9939 (21912)	10845 (23909)	10819 (23851)
7250R, 7270R lb./hp	88, 81	88, 81	96, 89	95, 88
Front Weight Split	38%	38%	35%	35%
Rear Weight Split	62%	62%	65%	65%

Tractor	7250R / 7270R TLS™ [a]			
	e23™	IVT™	e23™	IVT™
	480/80R46 - Singles - Cast/Steel/Steel		480/80R46 - Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	3877 (8547)	3868 (8527)	3877 (8547)	3868 (8527)
Rear Weight kg (lb.)	6239 (13755)	6222 (13717)	7119 (15695)	7102 (15657)
Total Weight kg (lb.)	10116 (22302)	10090 (22244)	10996 (24242)	10970 (24184)
7250R, 7270R lb./hp	89, 83	89, 82	97, 90	97, 90
Front Weight Split	38%	38%	35%	35%
Rear Weight Split	62%	62%	65%	65%

[a] *For TLS™ with front brakes add 94 kg (207 lb.)*

Tractor	7250R / 7270R 1300 MFWD			
	e23™	IVT™	e23™	IVT™
	520/85R42 - Singles - Cast/Steel/Steel		520/85R42 - Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	3742 (8250)	3733 (8230)	3742 (8250)	3733 (8230)
Rear Weight kg (lb.)	6289 (13865)	6272 (13827)	7269 (16025)	7252 (15988)
Total Weight kg (lb.)	10031 (22115)	10005 (22057)	11011 (24275)	10985 (24218)
7250R, 7270R lb./hp	88, 82	88, 82	97, 90	97, 90
Front Weight Split	37%	37%	34%	34%
Rear Weight Split	63%	63%	66%	66%

Tractor	7250R / 7270R TLS™ [a]			
	e23™	IVT™	e23™	IVT™
	520/85R42 - Singles - Cast/Steel/Steel		520/85R42 - Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	3877 (8547)	3868 (8527)	3877 (8547)	3868 (8527)
Rear Weight kg (lb.)	6305 (13900)	6288 (13863)	7285 (16061)	7268 (16023)
Total Weight kg (lb.)	10182 (22447)	10156 (22390)	11162 (24608)	11136 (24550)
7250R, 7270R lb./hp	90, 83	90, 83	98, 91	98, 91
Front Weight Split	38%	38%	35%	35%
Rear Weight Split	62%	62%	65%	65%

[a] *For TLS™ with front brakes add 94 kg (207 lb.)*

Tractor	7250R / 7270R 1300 MFWD			
	e23™	IVT™	e23™	IVT™
	620/70R42 - Singles - Cast/Steel/Steel		620/70R42 - Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	3742 (8250)	3733 (8230)	3742 (8250)	3733 (8230)
Rear Weight kg (lb.)	6477 (14279)	6460 (14242)	7623 (16806)	7606 (16768)
Total Weight kg (lb.)	10219 (22529)	10193 (22471)	11365 (25056)	11339 (24998)
7250R, 7270R lb./hp	90, 83	90, 83	100, 93	100, 93

Continued on next page

GH15097,000091E -19-06JUL15-3/5

Tractor	7250R / 7270R 1300 MFWD			
	e23™	IVT™	e23™	IVT™
	620/70R42 - Singles - Cast/Steel/Steel		620/70R42 - Duals - Cast/Steel/Steel	
Front Weight Split	37%	37%	33%	33%
Rear Weight Split	63%	63%	67%	67%

Tractor	7250R / 7270R TLS™ [a]			
	e23™	IVT™	e23™	IVT™
	620/70R42 - Singles - Cast/Steel/Steel		620/70R42 - Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	3877 (8547)	3868 (8527)	3877 (8547)	3868 (8527)
Rear Weight kg (lb.)	6493 (14315)	6476 (14277)	7639 (16841)	7622 (16804)
Total Weight kg (lb.)	10370 (22862)	10344 (22804)	11516 (25388)	11490 (25331)
7250R, 7270R lb./hp	91, 85	91, 84	102, 94	101, 94
Front Weight Split	37%	37%	34%	34%
Rear Weight Split	63%	63%	66%	66%

[a]For TLS™ with front brakes add 94 kg (207 lb.)

Tractor	7250R / 7270R 1300 MFWD		7250R / 7270R TLS™ [a]	
	e23™	IVT™	e23™	IVT™
	650/65R42 - Singles - Cast/Steel/Steel		650/65R42 - Singles - Cast/Steel/Steel	
Front Weight kg (lb.)	3742 (8250)	3733 (8230)	3877 (8547)	3868 (8527)
Rear Weight kg (lb.)	6439 (14196)	6422 (14158)	6455(14231)	6438(14193)
Total Weight kg (lb.)	10181 (22446)	10155 (22388)	10332 (22778)	10306 (22720)
7250R, 7270R lb./hp	90, 83	90, 83	91, 84	91, 84
Front Weight Split	37%	37%	37%	37%
Rear Weight Split	63%	63%	63%	63%

[a]For TLS™ with front brakes add 94 kg (207 lb.)

Tractor	7250R / 7270R 1300 MFWD			
	e23™	IVT™	e23™	IVT™
	710/70R38 - Singles - Cast/Steel/Steel		710/70R38 - Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	3742 (8250)	3733 (8230)	3742 (8250)	3733 (8230)
Rear Weight kg (lb.)	6517 (14368)	6500 (14330)	7689 (16951)	7672 (16914)
Total Weight kg (lb.)	10259 (22618)	10233 (22560)	11431 (25201)	11405 (25144)
7250R, 7270R lb./hp	90, 84	90, 84	101, 93	101, 93
Front Weight Split	37%	37%	33%	33%
Rear Weight Split	63%	63%	67%	67%

Tractor	7250R / 7270R TLS™ [a]			
	e23™	IVT™	e23™	IVT™
	710/70R38 - Singles - Cast/Steel/Steel		710/70R38 - Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	3877 (8547)	3868 (8527)	3877 (8547)	3868 (8527)
Rear Weight kg (lb.)	6533 (14403)	6516 (14365)	7705 (16987)	7688 (16949)
Total Weight kg (lb.)	10410 (22950)	10384 (22892)	11582 (25534)	11556 (25476)
7250R, 7270R lb./hp	92, 85	92, 85	102, 95	102, 94
Front Weight Split	37%	37%	34%	34%
Rear Weight Split	63%	63%	66%	66%

[a]For TLS™ with front brakes add 94 kg (207 lb.)

Tractor	7250R / 7270R 1300 MFWD			
	e23™	IVT™	e23™	IVT™
	710/70R38HD-Singles- Cast/Steel/Steel		710/70R38HD-Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	3742 (8250)	3733 (8230)	3742 (8250)	3733 (8230)
Rear Weight kg (lb.)	6601 (14553)	6584 (14515)	7857 (17322)	7840 (17284)
Total Weight kg (lb.)	10343 (22803)	10317 (22745)	11599 (25572)	11573 (25514)
7250R, 7270R lb./hp	91, 84	91, 84	102, 95	102, 94

Continued on next page

Tractor	7250R / 7270R 1300 MFWD			
	e23™	IVT™	e23™	IVT™
	710/70R38HD-Singles- Cast/Steel/Steel		710/70R38HD-Duals - Cast/Steel/Steel	
Front Weight Split	36%	36%	32%	32%
Rear Weight Split	64%	64%	68%	68%

Tractor	7250R / 7270R TLS™ [a]			
	e23™	IVT™	e23™	IVT™
	710/70R38HD-Singles- Cast/Steel/Steel		710/70R38HD-Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	3877 (8547)	3868 (8527)	3877 (8547)	3868 (8527)
Rear Weight kg (lb.)	6617 (14588)	6600 (14550)	7873 (17357)	7856 (17319)
Total Weight kg (lb.)	10494 (23135)	10468 (23077)	11750 (25904)	11724 (25846)
7250R, 7270R lb./hp	93, 86	92, 85	104, 96	103, 96
Front Weight Split	37%	37%	33%	33%
Rear Weight Split	63%	63%	67%	67%

[a] *For TLS™ with front brakes add 94 kg (207 lb.)*

e23 is a trademark of Deere & Company
IVT is a trademark of Deere & Company
AutoPowr is a trademark of Deere & Company
TLS is a trademark of Deere & Company

GH15097,000091E -19-06JUL15-5/5

Unballasted Tractor Weight Charts (7250R and 7270R Continued)

NOTE: Unballasted weights are calculated by averaging and are figured based on tractor with a full tank of fuel. Each tractor is different. Have your tractor weighed for exact weight splits.

Calculations assume no front hitch or PTO and front 420/85R34 (group 43) tires.

Tractor	7250R / 7270R 1300 MFWD			
	e23™	IVT™/AutoPowr™	e23™	IVT™
	380/90R54 - Singles - Cast/Steel/Steel		380/90R54 - Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	3908 (8616)	3899 (8596)	3908 (8616)	3899 (8596)
Rear Weight kg (lb.)	6239 (13755)	6222 (13717)	7159 (15783)	7142 (15745)
Total Weight kg (lb.)	10147 (22371)	10121 (22313)	11067 (24399)	11041 (24341)
7250R, 7270R lb./hp	89, 83	89, 83	98, 90	97, 90
Front Weight Split	39%	39%	35%	35%
Rear Weight Split	61%	61%	65%	65%

Tractor	7250R / 7270R TLS™ [a]			
	e23™	IVT™	e23™	IVT™
	380/90R54 - Singles - Cast/Steel/Steel		380/90R54 - Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	4043 (8913)	4034 (8893)	4043 (8913)	4034 (8893)
Rear Weight kg (lb.)	6255 (13790)	6238 (13752)	7175 (15818)	7158 (15781)
Total Weight kg (lb.)	10298 (22703)	10272 (22645)	11218 (24731)	11192 (24674)
7250R,7270R lb./hp	91, 84	91, 84	99, 92	99, 91
Front Weight Split	39%	39%	36%	36%
Rear Weight Split	61%	61%	64%	64%

[a] For TLS™ with front brakes add 94 kg (207 lb.)

Tractor	7250R / 7270R 1300 MFWD			
	e23™	IVT™	e23™	IVT™
	480/80R50 - Singles - Cast/Steel/Steel		480/80R50 - Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	3908 (8616)	3899 (8596)	3908 (8616)	3899 (8596)
Rear Weight kg (lb.)	6319 (13931)	6302 (13894)	7229 (15937)	7212 (15900)
Total Weight kg (lb.)	10227 (22547)	10201 (22490)	11137 (24553)	11111 (24496)
7250R,7270R lb./hp	90, 84	90, 83	98, 91	98, 91
Front Weight Split	38%	38%	35%	35%
Rear Weight Split	62%	62%	65%	65%

Tractor	7250R / 7270R TLS™ [a]			
	e23™	IVT™	e23™	IVT™
	480/80R50 - Singles - Cast/Steel/Steel		480/80R50 - Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	4043 (8913)	4034 (8893)	4043 (8913)	4034 (8893)
Rear Weight kg (lb.)	6335 (13966)	6318 (13929)	7245 (15972)	7228 (15935)
Total Weight kg (lb.)	10378 (22879)	10352 (22822)	11288 (24885)	11262 (24828)
7250R,7270R lb./hp	92, 85	91, 85	100, 92	99, 92
Front Weight Split	39%	39%	36%	36%
Rear Weight Split	61%	61%	64%	64%

[a] For TLS™ with front brakes add 94 kg (207 lb.)

Tractor	7250R / 7270R 1300 MFWD			
	e23™	IVT™	e23™	IVT™
	520/85R46 - Singles - Cast/Steel/Steel		520/85R46 - Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	3908 (8616)	3899 (8596)	3908 (8616)	3899 (8596)
Rear Weight kg (lb.)	6379 (14063)	6362 (14026)	7449 (16422)	7432 (16385)
Total Weight kg (lb.)	10287 (22679)	10261 (22622)	11357 (25038)	11331 (24981)
7250R,7270R lb./hp	91, 84	90, 84	100, 93	100, 93

Continued on next page

Tractor	7250R / 7270R 1300 MFWD			
	e23™	IVT™	e23™	IVT™
	520/85R46 - Singles - Cast/Steel/Steel		520/85R46 - Duals - Cast/Steel/Steel	
Front Weight Split	38%	38%	34%	34%
Rear Weight Split	62%	62%	66%	66%

Tractor	7250R / 7270R TLS™ [a]			
	e23™	IVT™	e23™	IVT™
	520/85R46 - Singles - Cast/Steel/Steel		520/85R46 - Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	4043 (8913)	4034 (8893)	4043 (8913)	4034 (8893)
Rear Weight kg (lb.)	6395 (14099)	6378 (14061)	7465 (16457)	7448 (16420)
Total Weight kg (lb.)	10438 (23012)	10412 (22954)	11508 (25370)	11482 (25313)
7250R,7270R lb./hp	92, 85	92, 85	101, 94	101, 94
Front Weight Split	39%	39%	35%	35%
Rear Weight Split	61%	61%	65%	65%

[a] *For TLS™ with front brakes add 94 kg (207 lb.)*

Tractor	7250R / 7270R 1300 MFWD			
	e23™	IVT™	e23™	IVT™
	620/70R46 - Singles - Cast/Steel/Steel		620/70R46 - Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	3908 (8616)	3899 (8596)	3908 (8616)	3899 (8596)
Rear Weight kg (lb.)	6439 (14196)	6422 (14158)	7569 (16687)	7552 (16649)
Total Weight kg (lb.)	10347 (22812)	10321 (22754)	11477 (25303)	11451 (25245)
7250R,7270R lb./hp	91, 84	91, 84	101, 94	101, 94
Front Weight Split	38%	38%	34%	34%
Rear Weight Split	62%	62%	66%	66%

Tractor	7250R / 7270R TLS™ [a]			
	e23™	IVT™	e23™	IVT™
	620/70R46 - Singles - Cast/Steel/Steel		620/70R46 - Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	4043 (8913)	4034 (8893)	4043 (8913)	4034 (8893)
Rear Weight kg (lb.)	6455 (14231)	6438 (14193)	7585 (16722)	7568 (16685)
Total Weight kg (lb.)	10498 (23144)	10472 (23086)	11628 (25635)	11602 (25578)
7250R,7270R lb./hp	93, 86	92, 86	103, 95	102, 95
Front Weight Split	39%	39%	35%	35%
Rear Weight Split	61%	61%	65%	65%

[a] *For TLS™ with front brakes add 94 kg (207 lb.)*

Tractor	7250R / 7270R 1300 MFWD			
	e23™	IVT™	e23™	IVT™
	650/85R38 - Singles - Cast/Steel/Steel		650/85R38 - Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	3908 (8616)	3899 (8596)	3908 (8616)	3899 (8596)
Rear Weight kg (lb.)	6539 (14416)	6522 (14379)	7749 (17084)	7732 (17046)
Total Weight kg (lb.)	10447 (23032)	10421 (22975)	11657 (25700)	11631 (25642)
7250R,7270R lb./hp	92, 85	92, 85	103, 95	103, 95
Front Weight Split	37%	37%	34%	34%
Rear Weight Split	63%	63%	66%	66%

Tractor	7250R / 7270R TLS™ [a]			
	e23™	IVT™	e23™	IVT™
	650/85R38 - Singles - Cast/Steel/Steel		650/85R38 - Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	4043 (8913)	4034 (8893)	4043 (8913)	4034 (8893)
Rear Weight kg (lb.)	6555 (14451)	6538 (14414)	7765 (17119)	7748 (17081)
Total Weight kg (lb.)	10598 (23364)	10572 (23307)	11808 (26032)	11782 (25974)
7250R,7270R lb./hp	93, 87	93, 86	104, 96	104, 96

Continued on next page

Tractor	7250R / 7270R TLS™ [a]			
	e23™	IVT™	e23™	IVT™
	650/85R38 - Singles - Cast/Steel/Steel		650/85R38 - Duals - Cast/Steel/Steel	
Front Weight Split	38%	38%	34%	34%
Rear Weight Split	62%	62%	66%	66%

[a]For TLS™ with front brakes add 94 kg (207 lb.)

Tractor	7250R / 7270R 1300 MFWD		7250R / 7270R TLS™ [a]	
	e23™	IVT™	e23™	IVT™
	IF650/85R38-Singles - Cast/Steel/Steel		IF650/85R38-Singles - Cast/Steel/Steel	
Front Weight kg (lb.)	3908 (8616)	3899 (8596)	4043 (8913)	4034 (8893)
Rear Weight kg (lb.)	6598 (14546)	6581 (14509)	6614 (14581)	6597 (14544)
Total Weight kg (lb.)	10506 (23162)	10480 (23105)	10657 (23494)	10631 (23437)
7250R,7270R lb./hp	93, 86	92, 86	94, 87	94, 87
Front Weight Split	37%	37%	38%	38%
Rear Weight Split	63%	63%	62%	62%

[a]For TLS™ with front brakes add 94 kg (207 lb.)

Tractor	7250R / 7270R 1300 MFWD			
	e23™	IVT™	e23™	IVT™
	710/70R42 - Singles - Cast/Steel/Steel		710/70R42 - Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	3908 (8616)	3899 (8596)	3908 (8616)	3899 (8596)
Rear Weight kg (lb.)	6619 (14592)	6602 (14555)	7947 (17520)	7930 (17483)
Total Weight kg (lb.)	10527 (23208)	10501 (23151)	11855 (26136)	11829 (26079)
7250R,7270R lb./hp	93, 86	93, 86	105, 97	104, 97
Front Weight Split	37%	37%	33%	33%
Rear Weight Split	63%	63%	67%	67%

Tractor	7250R / 7270R TLS™ [a]			
	e23™	IVT™	e23™	IVT™
	710/70R42 - Singles - Cast/Steel/Steel		710/70R42 - Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	4043 (8913)	4034 (8893)	4043 (8913)	4034 (8893)
Rear Weight kg (lb.)	6635 (14628)	6618 (14590)	7963 (17555)	7946 (17518)
Total Weight kg (lb.)	10678 (23541)	10652 (23483)	12006 (26468)	11980 (26411)
7250R,7270R lb./hp	94, 87	94, 87	106, 98	106, 98
Front Weight Split	38%	38%	34%	34%
Rear Weight Split	62%	62%	66%	66%

[a]For TLS™ with front brakes add 94 kg (207 lb.)

Tractor	7250R / 7270R 1300 MFWD			
	e23™	IVT™	e23™	IVT™
	710/70R42HD-Singles- Cast/Steel/Steel		710/70R42HD - Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	3908 (8616)	3899 (8596)	3908 (8616)	3899 (8596)
Rear Weight kg (lb.)	6625 (14606)	6608 (14568)	7959 (17547)	7942 (17509)
Total Weight kg (lb.)	10533 (23222)	10507 (23164)	11867 (26163)	11841 (26105)
7250R,7270R lb./hp	93, 86	93, 86	105, 97	104, 97
Front Weight Split	37%	37%	33%	33%
Rear Weight Split	63%	63%	67%	67%

Tractor	7250R / 7270R TLS™ [a]			
	e23™	IVT™	e23™	IVT™
	710/70R42HD-Singles-Cast/Steel/Steel		710/70R42HD-Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	4043 (8913)	4034 (8893)	4043 (8913)	4034 (8893)
Rear Weight kg (lb.)	6641 (14641)	6624 (14603)	7975 (17582)	7958 (17544)
Total Weight kg (lb.)	10684 (23554)	10658 (23496)	12018 (26495)	11992 (26437)
7250R,7270R lb./hp	94, 87	94, 87	106, 98	106, 98

Continued on next page

GH15097,000091C -19-06JUL15-3/4

Tractor	7250R / 7270R TLS™ [a]			
	e23™	IVT™	e23™	IVT™
	710/70R42HD-Singles-Cast/Steel/Steel		710/70R42HD-Duals - Cast/Steel/Steel	
Front Weight Split	38%	38%	34%	34%
Rear Weight Split	62%	62%	66%	66%

[a] *For TLS™ with front brakes add 94 kg (207 lb.)*

Tractor	7250R / 7270R 1300 MFWD		7250R / 7270R TLS™ [a]	
	e23™	IVT™	e23™	IVT™
	IF710/70R42-Singles - Cast/Steel/Steel		IF710/70R42-Singles - Cast/Steel/Steel	
Front Weight kg (lb.)	3908 (8616)	3899 (8596)	4043 (8913)	4034 (8893)
Rear Weight kg (lb.)	6661 (14685)	6643 (14645)	6677 (14720)	6659 (14681)
Total Weight kg (lb.)	10569 (23301)	10542 (23241)	10720 (23633)	10693 (23574)
7250R,7270R lb./hp	93, 86	93, 86	95, 88	94, 87
Front Weight Split	37%	37%	38%	38%
Rear Weight Split	63%	63%	62%	62%

[a] *For TLS™ with front brakes add 94 kg (207 lb.)*

Tractor	7250R / 7270R 1300 MFWD			
	e23™	IVT™	e23™	IVT™
	800/70R38 - Singles - Cast/Steel/Steel		800/70R38 - Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	3908 (8616)	3899 (8596)	3908 (8616)	3899 (8596)
Rear Weight kg (lb.)	6790 (14969)	6773 (14932)	8249 (18186)	8232 (18148)
Total Weight kg (lb.)	10698 (23585)	10672 (23528)	12157 (26802)	12131 (26744)
7250R,7270R lb./hp	94, 87	94, 87	107, 99	107, 99
Front Weight Split	36%	36%	32%	32%
Rear Weight Split	64%	64%	68%	678%

Tractor	7250R / 7270R TLS™ [a]			
	e23™	IVT™	e23™	IVT™
	800/70R38 - Singles - Cast/Steel/Steel		800/70R38 - Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	4043 (8913)	4034 (8893)	4043 (8913)	4034 (8893)
Rear Weight kg (lb.)	6806 (15005)	6789 (14967)	8265 (18221)	8248 (18184)
Total Weight kg (lb.)	10849 (23918)	10823 (23860)	12308 (27134)	12282 (27077)
7250R,7270R lb./hp	96, 89	95, 88	109, 100	108, 100
Front Weight Split	37%	37%	33%	33%
Rear Weight Split	63%	63%	67%	67%

[a] *For TLS™ with front brakes add 94 kg (207 lb.)*

e23 is a trademark of Deere & Company
IVT is a trademark of Deere & Company
AutoPowr is a trademark of Deere & Company
TLS is a trademark of Deere & Company

GH15097,000091C -19-06JUL15-4/4

Unballasted Tractor Weight Charts (7250R and 7270R Continued)

NOTE: Unballasted weights are calculated by averaging and are figured based on tractor with a full tank of fuel. Each tractor is different. Have your tractor weighed for exact weight splits.

Calculations assume no front hitch or PTO and front 420/85R38 (group 44) tires.

Tractor	7250R / 7270R 1300 MFWD			
	e23™	IVT™/AutoPowr™	e23™	IVT™
	480/95R50 - Singles - Cast/Steel/Steel		480/95R50 - Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	3948 (8704)	3939 (8684)	3948 (8704)	3939 (8684)
Rear Weight kg (lb.)	6396 (14101)	6379 (14063)	7470 (16469)	7453 (16431)
Total Weight kg (lb.)	10344 (22805)	10318 (22747)	11418 (25173)	11392 (25115)
7250R, 7270R lb./hp	91, 84	91, 84	101, 93	100, 93
Front Weight Split	38%	38%	35%	35%
Rear Weight Split	62%	62%	65%	65%

Tractor	7250R / 7270R TLS™ [a]			
	e23™	IVT™	e23™	IVT™
	480/95R50 - Singles - Cast/Steel/Steel		480/95R50 - Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	4083 (9001)	4074 (8982)	4083 (9001)	4074 (8982)
Rear Weight kg (lb.)	6412 (14136)	6395 (14099)	7486 (16504)	7469 (16466)
Total Weight kg (lb.)	10495 (23137)	10469 (23081)	11569 (25505)	11543 (25448)
7250R, 7270R lb./hp	93, 86	92, 85	102, 94	102, 94
Front Weight Split	39%	39%	35%	35%
Rear Weight Split	61%	61%	65%	65%

[a] For TLS™ with front brakes add 94 kg (207 lb.)

Tractor	7250R / 7270R 1300 MFWD			
	e23™	IVT™	e23™	IVT™
	710/75R42 - Singles - Cast/Steel/Steel		710/75R42 - Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	3948 (8704)	3939 (8684)	3948 (8704)	3939 (8684)
Rear Weight kg (lb.)	6654 (14670)	6637 (14632)	8047 (17741)	8030 (17703)
Total Weight kg (lb.)	10602 (23374)	10576 (23316)	11995 (26445)	11969 (26387)
7250R, 7270R lb./hp	93, 87	93, 86	106, 98	106, 98
Front Weight Split	37%	37%	33%	33%
Rear Weight Split	63%	63%	67%	67%

Tractor	7250R / 7270R TLS™ [a]			
	e23™	IVT™	e23™	IVT™
	710/75R42 - Singles - Cast/Steel/Steel		710/75R42 - Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	4083 (9001)	4074 (8982)	4083 (9001)	4074 (8982)
Rear Weight kg (lb.)	6670 (14705)	6653 (14667)	8063 (17776)	8046 (17738)
Total Weight kg (lb.)	10753 (23706)	10727 (23649)	12146 (26777)	12120 (26720)
7250R, 7270R lb./hp	95, 88	95, 88	107, 99	107, 99
Front Weight Split	38%	38%	34%	34%
Rear Weight Split	62%	62%	66%	66%

[a] For TLS™ with front brakes add 94 kg (207 lb.)

Tractor	7250R / 7270R 1300 MFWD		7250R / 7270R TLS™ [a]	
	e23™	IVT™	e23™	IVT™
	IF710/75R42-Singles - Cast/Steel/Steel		IF710/75R42-Singles - Cast/Steel/Steel	
Front Weight kg (lb.)	3948 (8704)	3939 (8684)	4083 (9001)	4074 (8982)
Rear Weight kg (lb.)	6673 (14711)	6655 (14672)	6689 (14747)	6671 (14707)
Total Weight kg (lb.)	10621 (23415)	10594 (23355)	10772 (23748)	10745 (23689)
7250R, 7270R lb./hp	94, 87	93, 87	95, 88	95, 88

Continued on next page

Tractor	7250R / 7270R 1300 MFWD		7250R / 7270R TLS™ [a]	
	e23™	IVT™	e23™	IVT™
	IF710/75R42-Singles - Cast/Steel/Steel		IF710/75R42-Singles - Cast/Steel/Steel	
Front Weight Split	37%	37%	38%	38%
Rear Weight Split	63%	63%	62%	62%

[a] *For TLS™ with front brakes add 94 kg (207 lb.)*

e23 is a trademark of Deere & Company
IVT is a trademark of Deere & Company
AutoPowr is a trademark of Deere & Company

GH15097,000091F -19-20MAY15-2/2

Unballasted Tractor Weight Charts (7290R and 7310R)

NOTE: Unballasted weights are calculated by averaging and are figured based on tractor with a full tank of fuel. Each tractor is different. Have your tractor weighed for exact weight splits.

Calculations assume no front hitch or PTO and front 420/90R30 (group 42) tires.

Tractor	7290R / 7310R 1300 MFWD			
	e23™	IVT™/AutoPowr™	e23™	IVT™
	320/90R50 - Singles - Cast/Steel/Steel		320/90R50 - Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	3842 (8470)	3834 (8453)	3842 (8470)	3834 (8453)
Rear Weight kg (lb.)	6302 (13894)	6284 (13854)	7082 (15613)	7064 (15573)
Total Weight kg (lb.)	10144 (22364)	10118 (22307)	10924 (24083)	10898 (24026)
7290R, 7310R lb./hp	77, 72	77, 72	83, 78	83, 78
Front Weight Split	38%	38%	35%	35%
Rear Weight Split	62%	62%	65%	65%

Tractor	7290R / 7310R TLS TLS™ [a]			
	e23™	IVT™	e23™	IVT™
	320/90R50 - Singles - Cast/Steel/Steel		320/90R50 - Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	3977 (8768)	3969 (8750)	3977 (8768)	3969 (8750)
Rear Weight kg (lb.)	6318 (13929)	6300 (13889)	7098 (15648)	7080 (15609)
Total Weight kg (lb.)	10295 (22697)	10269 (22639)	11075 (24416)	11049 (24359)
7290R, 7310R lb./hp	78, 73	78, 73	84, 79	84, 79
Front Weight Split	39%	39%	36%	36%
Rear Weight Split	61%	61%	64%	64%

[a]For TLS™ with front brakes add 94 kg (207 lb.)

Tractor	7290R / 7310R 1300 MFWD			
	e23™	IVT™	e23™	IVT™
	320/90R54 - Singles - Cast/Steel/Steel		320/90R54- Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	3842 (8470)	3834 (8453)	3842 (8470)	3834 (8453)
Rear Weight kg (lb.)	6432 (14180)	6414 (14140)	7362 (16230)	7344 (16191)
Total Weight kg (lb.)	10274 (22650)	10248 (22593)	11204 (24700)	11178 (24644)
7290R, 7310R lb./hp	78, 73	78, 73	85, 80	85, 79
Front Weight Split	37%	37%	34%	34%
Rear Weight Split	63%	63%	66%	66%

Tractor	7290R / 7310R TLS™ [a]			
	e23™	IVT™	e23™	IVT™
	320/90R54 - Singles - Cast/Steel/Steel		320/90R54 - Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	3977 (8768)	3969 (8750)	3977 (8768)	3969 (8750)
Rear Weight kg (lb.)	6448 (14215)	6430 (14176)	7378 (16266)	7360 (16226)
Total Weight kg (lb.)	10425 (22983)	10399 (22926)	11355 (25034)	11329 (24976)
7290R, 7310R lb./hp	79, 74	79, 74	86, 81	86, 81
Front Weight Split	38%	38%	35%	35%
Rear Weight Split	62%	62%	65%	65%

[a]For TLS™ with front brakes add 94 kg (207 lb.)

Tractor	7290R / 7310R 1300 MFWD			
	e23™	IVT™	e23™	IVT™
	380/80R46 - Singles - Cast/Steel/Steel		380/80R46 - Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	3842 (8470)	3834 (8453)	3842 (8470)	3834 (8453)
Rear Weight kg (lb.)	6242 (13761)	6224 (13722)	6982 (15393)	6964 (15353)
Total Weight kg (lb.)	10084 (22231)	10058 (22175)	10824 (23863)	10798 (23806)
7290R, 7310R lb./hp	77, 72	76, 72	82, 77	82, 77

Continued on next page

GH15097,0000920 -19-06JUL15-1/5

Tractor	7290R / 7310R 1300 MFWD			
	e23™	IVT™	e23™	IVT™
	380/80R46 - Singles - Cast/Steel/Steel		380/80R46 - Duals - Cast/Steel/Steel	
Front Weight Split	38%	38%	36%	36%
Rear Weight Split	62%	62%	64%	64%

Tractor	7290R / 7310R TLS™ [a]			
	e23™	IVT™	e23™	IVT™
	380/80R46 - Singles - Cast/Steel/Steel		380/80R46 - Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	3977 (8768)	3969 (8750)	3977 (8768)	3969 (8750)
Rear Weight kg (lb.)	6258 (13797)	6240 (13757)	6998 (15428)	6980 (15388)
Total Weight kg (lb.)	10235 (22565)	10209 (22507)	10975 (24196)	10949 (24138)
7290R, 7310R lb./hp	78, 73	78, 73	83, 78	83, 78
Front Weight Split	39%	39%	36%	36%
Rear Weight Split	61%	61%	64%	64%

[a] *For TLS™ with front brakes add 94 kg (207 lb.)*

Tractor	7290R / 7310R 1300 MFWD [a]			
	e23™	IVT™	e23™	IVT™
	380/90R50 - Singles - Cast/Steel/Steel		380/90R50 - Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	3842 (8470)	3834 (8453)	3842 (8470)	3834 (8453)
Rear Weight kg (lb.)	6362 (14026)	6344 (13986)	7252 (15988)	7234 (15948)
Total Weight kg (lb.)	10204 (22496)	10178 (22439)	11094 (24458)	11068 (24401)
7290R, 7310R lb./hp	78, 73	77, 72	84, 79	84, 79
Front Weight Split	38%	38%	35%	35%
Rear Weight Split	62%	62%	65%	65%

[a] *For TLS™ with front brakes add 94 kg (207 lb.)*

Tractor	7290R / 7310R TLS™ [a]			
	e23™	IVT™	e23™	IVT™
	380/90R50 - Singles - Cast/Steel/Steel		380/90R50 - Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	3977 (8768)	3969 (8750)	3977 (8768)	3969 (8750)
Rear Weight kg (lb.)	6378 (14061)	6360 (14021)	7268 (16023)	7250 (15983)
Total Weight kg (lb.)	10355 (22829)	10329 (22771)	11245 (24791)	11219 (24733)
7290R, 7310R lb./hp	79, 74	79, 73	85, 80	85, 80
Front Weight Split	38%	38%	35%	35%
Rear Weight Split	62%	62%	65%	65%

[a] *For TLS™ with front brakes add 94 kg (207 lb.)*

Tractor	7290R / 7310R 1300 MFWD			
	e23™	IVT™	e23™	IVT™
	420/80R46- Singles - Cast/Steel/Steel		420/80R46 - Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	3842 (8470)	3834 (8453)	3842 (8470)	3824 (8453)
Rear Weight kg (lb.)	6292 (13871)	6274 (13832)	7082 (15613)	7064 (15573)
Total Weight kg (lb.)	10134 (22341)	10108 (22285)	10924 (24083)	10898 (24026)
7290R, 7310R lb./hp	77, 72	77, 72	83, 78	83, 78
Front Weight Split	38%	38%	35%	35%
Rear Weight Split	62%	62%	65%	65%

Tractor	7290R / 7310R TLS™ [a]			
	e23™	IVT™	e23™	IVT™
	420/80R46 - Singles - Cast/Steel/Steel		420/80R46 - Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	3977 (8768)	3969 (8750)	3977 (8768)	3969 (8750)
Rear Weight kg (lb.)	6308 (13907)	6290 (13867)	7098 (15648)	7080 (15609)
Total Weight kg (lb.)	10285 (22675)	10259 (22617)	11075 (24416)	11049 (24359)
7290R, 7310R lb./hp	78, 73	78, 73	84, 79	84, 79

Continued on next page

GH15097,0000920 -19-06JUL15-2/5

Tractor	7290R / 7310R TLS™ [a]			
	e23™	IVT™	e23™	IVT™
	420/80R46 - Singles - Cast/Steel/Steel		420/80R46 - Duals - Cast/Steel/Steel	
Front Weight Split	39%	39%	36%	36%
Rear Weight Split	61%	61%	64%	64%

[a]For TLS™ with front brakes add 94 kg (207 lb.)

Tractor	7290R / 7310R 1300 MFWD			
	e23™	IVT™	e23™	IVT™
	480/80R46 - Singles - Cast/Steel/Steel		480/80R46 - Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	3842 (8470)	3834 (8453)	3842 (8470)	3834 (8453)
Rear Weight kg (lb.)	6376 (14057)	6358 (14017)	7256 (15997)	7238 (15957)
Total Weight kg (lb.)	10218 (22526)	10192 (22470)	11098 (24467)	11072 (24410)
7290R, 7310R lb./hp	78, 73	77, 72	84, 79	84, 79
Front Weight Split	38%	38%	35%	35%
Rear Weight Split	62%	62%	65%	65%

Tractor	7290R / 7310R TLS™ [a]			
	e23™	IVT™	e23™	IVT™
	480/80R46 - Singles - Cast/Steel/Steel		480/80R46 - Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	3977 (8768)	3969 (8750)	3977 (8768)	3969 (8750)
Rear Weight kg (lb.)	6392 (14092)	6374 (14052)	7272 (16032)	7254 (15992)
Total Weight kg (lb.)	10369 (22860)	10343 (22802)	11249 (24800)	11223 (24742)
7290R, 7310R lb./hp	79, 74	79, 74	86, 80	85, 80
Front Weight Split	38%	38%	35%	35%
Rear Weight Split	62%	62%	645%	65%

[a]For TLS™ with front brakes add 94 kg (207 lb.)

Tractor	7290R / 7310R 1300 MFWD			
	e23™	IVT™	e23™	IVT™
	520/85R42 - Singles - Cast/Steel/Steel		520/85R42 - Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	3842 (8470)	3834 (8453)	3842 (8470)	3834 (8453)
Rear Weight kg (lb.)	6442 (14202)	6424 (14162)	7422 (16363)	7404 (16323)
Total Weight kg (lb.)	10284 (22672)	10258 (22615)	11264 (24833)	11238 (24776)
7290R, 7310R lb./hp	78, 73	78, 73	86, 80	85, 80
Front Weight Split	37%	37%	34%	34%
Rear Weight Split	63%	63%	66%	66%

Tractor	7290R / 7310R TLS™ [a]			
	e23™	IVT™	e23™	IVT™
	520/85R42 - Singles - Cast/Steel/Steel		520/85R42 - Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	3977 (8768)	3969 (8750)	3977 (8768)	3969 (8750)
Rear Weight kg (lb.)	6458 (14237)	6440 (14198)	7438 (16398)	7420 (16358)
Total Weight kg (lb.)	10435 (23005)	10409 (22948)	11415 (25168)	11389 (25108)
7290R, 7310R lb./hp	79, 74	79, 74	87, 81	87, 81
Front Weight Split	38%	38%	35%	35%
Rear Weight Split	62%	62%	65%	65%

[a]For TLS™ with front brakes add 94 kg (207 lb.)

Tractor	7290R / 7310R 1300 MFWD			
	e23™	IVT™	e23™	IVT™
	620/70R42 - Singles - Cast/Steel/Steel		620/70R42 - Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	3842 (8470)	3834 (8453)	3842 (8470)	3834 (8453)
Rear Weight kg (lb.)	6630 (14617)	6612 (14577)	7776 (17143)	7758 (17103)
Total Weight kg (lb.)	10472 (23087)	10446 (23030)	11618 (25613)	11592 (25556)
7290R, 7310R lb./hp	80, 74	79, 74	88, 83	88, 82

Continued on next page

Tractor	7290R / 7310R 1300 MFWD			
	e23™	IVT™	e23™	IVT™
	620/70R42 - Singles - Cast/Steel/Steel		620/70R42 - Duals - Cast/Steel/Steel	
Front Weight Split	37%	37%	33%	33%
Rear Weight Split	63%	63%	67%	67%

Tractor	7290R / 7310R TLS™ [a]			
	e23™	IVT™	e23™	IVT™
	620/70R42 - Singles - Cast/Steel/Steel		620/70R42 - Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	3977 (8768)	3969 (8750)	3977 (8768)	3969 (8750)
Rear Weight kg (lb.)	6646 (14652)	6628 (14612)	7792 (17178)	7774 (17139)
Total Weight kg (lb.)	10623 (23420)	10597 (23362)	11769 (25946)	11743 (25889)
7290R, 7310R lb./hp	81, 76	81, 75	89, 84	89, 84
Front Weight Split	37%	38%	34%	34%
Rear Weight Split	63%	62%	66%	66%

[a] For TLS™ with front brakes add 94 kg (207 lb.)

Tractor	7290R / 7310R 1300 MFWD		7290R / 7310R TLS™ [a]	
	e23™	IVT™	e23™	IVT™
	650/65R42 - Singles - Cast/Steel/Steel		650/65R42 - Singles - Cast/Steel/Steel	
Front Weight kg (lb.)	3842 (8470)	3834 (8453)	3977 (8768)	3969 (8750)
Rear Weight kg (lb.)	6592 (14533)	6574 (14493)	6608 (14568)	6590 (14528)
Total Weight kg (lb.)	10434 (23003)	10408 (22946)	10585 (23336)	10559 (23278)
7290R, 7310R lb./hp	79, 74	79, 74	80, 75	80, 75
Front Weight Split	37%	37%	38%	38%
Rear Weight Split	63%	63%	62%	62%

[a] For TLS™ with front brakes add 94 kg (207 lb.)

Tractor	7290R / 7310R 1300 MFWD			
	e23™	IVT™	e23™	IVT™
	710/70R38 - Singles - Cast/Steel/Steel		710/70R38 - Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	3842 (8470)	3834 (8453)	3842 (8470)	3834 (8453)
Rear Weight kg (lb.)	6670 (14705)	6652 (14665)	7842 (17289)	7824 (17249)
Total Weight kg (lb.)	10512 (23175)	10486 (23118)	11684 (25759)	11658 (25702)
7290R, 7310R lb./hp	80, 75	80, 75	89, 83	89, 83
Front Weight Split	36%	37%	33%	33%
Rear Weight Split	64%	63%	67%	67%

Tractor	7290R / 7310R TLS™ [a]			
	e23™	IVT™	e23™	IVT™
	710/70R38 - Singles - Cast/Steel/Steel		710/70R38 - Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	3977 (8768)	3969 (8750)	3977 (8768)	3969 (8750)
Rear Weight kg (lb.)	6686 (14740)	6668 (14700)	7858 (17324)	7840 (17284)
Total Weight kg (lb.)	10663 (23508)	10637 (23450)	11835 (26092)	11724 (26034)
7290R, 7310R lb./hp	81, 76	81, 76	90, 84	90, 84
Front Weight Split	37%	37%	34%	34%
Rear Weight Split	63%	63%	66%	66%

[a] For TLS™ with front brakes add 94 kg (207 lb.)

Tractor	7290R / 7310R 1300 MFWD			
	e23™	IVT™	e23™	IVT™
	710/70R38HD-Singles-Cast/Steel/Steel		710/70R38HD - Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	3842 (8470)	3834 (8453)	3842 (8470)	3834 (8453)
Rear Weight kg (lb.)	6754 (14890)	6736 (14850)	8010 (17659)	7992 (17619)
Total Weight kg (lb.)	10596 (23360)	10570 (23303)	11852 (26129)	11826 (26072)
7290R, 7310R lb./hp	81, 75	80, 75	90, 84	90, 84

Continued on next page

GH15097,0000920 -19-06JUL15-4/5

Tractor	7290R / 7310R 1300 MFWD			
	e23™	IVT™	e23™	IVT™
	710/70R38HD-Singles-Cast/Steel/Steel		710/70R38HD - Duals - Cast/Steel/Steel	
Front Weight Split	36%	36%	32%	32%
Rear Weight Split	64%	64%	68%	68%

Tractor	7290R / 7310R TLS™ [a]			
	e23™	IVT™	e23™	IVT™
	710/70R38HD-Singles-Cast/Steel/Steel		710/70R38HD-Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	3977 (8768)	3969 (8750)	3977 (8768)	3969 (8750)
Rear Weight kg (lb.)	6770 (14925)	6752 (14886)	8026 (17694)	8008 (17655)
Total Weight kg (lb.)	10747 (23693)	10721 (23626)	12003 (26462)	11977 (26405)
7290R, 7310R lb./hp	82, 76	82, 76	91, 85	91, 85
Front Weight Split	37%	37%	33%	33%
Rear Weight Split	63%	63%	67%	67%

[a] *For TLS™ with front brakes add 94 kg (207 lb.)*

e23 is a trademark of Deere & Company
IVT is a trademark of Deere & Company
AutoPowr is a trademark of Deere & Company
TLS is a trademark of Deere & Company

GH15097,0000920 -19-06JUL15-5/5

Unballasted Tractor Weight Charts (7290R and 7310R Continued)

NOTE: Unballasted weights are calculated by averaging and are figured based on tractor with a full tank of fuel. Each tractor is different. Have your tractor weighed for exact weight splits.

Calculations assume no front hitch or PTO and front 420/85R34 (group 43) tires.

Tractor	7290R / 7310R 1300 MFWD			
	e23™	IVT™/AutoPowr™	e23™	IVT™
	380/90R54 - Singles - Cast/Steel/Steel		380/90R54 - Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	4008 (8836)	4000 (8818)	4008 (8836)	4000 (8818)
Rear Weight kg (lb.)	6392 (14092)	6374 (14052)	7312 (16120)	7294 (16080)
Total Weight kg (lb.)	10400 (22928)	10374 (22870)	11320 (24956)	11294 (24898)
7290R, 7310R lb./hp	79, 74	79, 74	86, 81	86, 80
Front Weight Split	38%	39%	35%	35%
Rear Weight Split	62%	61%	65%	65%

Tractor	7290R / 7310R TLS™ [a]			
	e23™	IVT™	e23™	IVT™
	380/90R54 - Singles - Cast/Steel/Steel		380/90R54 - Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	4143 (9134)	4135 (9116)	4143 (9134)	4135 (9116)
Rear Weight kg (lb.)	6408 (14127)	6390 (14088)	7328 (16155)	7310 (16116)
Total Weight kg (lb.)	10551 (23261)	10525 (23204)	11471 (25289)	11445 (25232)
7290R, 7310R lb./hp	80, 75	80, 75	87, 82	87, 81
Front Weight Split	39%	39%	36%	36%
Rear Weight Split	61%	61%	64%	64%

[a] For TLS™ with front brakes add 94 kg (207 lb.)

Tractor	7290R / 7310R 1300 MFWD			
	e23™	IVT™	e23™	IVT™
	480/80R50 - Singles - Cast/Steel/Steel		480/80R50 - Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	4008 (8836)	4000 (8818)	4008 (8836)	4000 (8818)
Rear Weight kg (lb.)	6472 (14268)	6454 (14229)	7382 (16275)	7364 (16235)
Total Weight kg (lb.)	10480 (23104)	10454 (23047)	11390 (25111)	11364 (25053)
7290R, 7310R lb./hp	80, 75	79, 74	87, 81	86, 81
Front Weight Split	38%	38%	35%	35%
Rear Weight Split	62%	62%	65%	65%

Tractor	7290R / 7310R TLS™ [a]			
	e23™	IVT™	e23™	IVT™
	480/80R50 - Singles - Cast/Steel/Steel		480/80R50 - Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	4143 (9134)	4135 (9116)	4143 (9134)	4135 (9116)
Rear Weight kg (lb.)	6488 (14304)	6470 (14264)	7398 (16310)	7380 (16270)
Total Weight kg (lb.)	10631 (23438)	10605 (23380)	11541 (25444)	11515 (25386)
7290R, 7310R lb./hp	81, 76	81, 75	88, 82	88, 82
Front Weight Split	39%	39%	36%	36%
Rear Weight Split	61%	61%	64%	64%

[a] For TLS™ with front brakes add 94 kg (207 lb.)

Tractor	7290R / 7310R 1300 MFWD			
	e23™	IVT™	e23™	IVT™
	520/85R46 - Singles - Cast/Steel/Steel		520/85R46 - Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	4008 (8836)	4000 (8818)	4008 (8836)	4000 (8818)
Rear Weight kg (lb.)	6532 (14401)	6514 (14361)	7602 (16760)	7584 (16720)
Total Weight kg (lb.)	10540 (23237)	10514 (23179)	11610 (25596)	11584 (25538)
7290R, 7310R lb./hp	80, 75	80, 75	88, 83	88, 82

Continued on next page

Tractor	7290R / 7310R 1300 MFWD			
	e23™	IVT™	e23™	IVT™
	520/85R46 - Singles - Cast/Steel/Steel		520/85R46 - Duals - Cast/Steel/Steel	
Front Weight Split	38%	38%	34%	34%
Rear Weight Split	62%	62%	66%	66%

Tractor	7290R / 7310R TLS™ [a]			
	e23™	IVT™	e23™	IVT™
	520/85R46 - Singles - Cast/Steel/Steel		520/85R46 - Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	4143 (9134)	4135 (9116)	4143 (9134)	4135 (9116)
Rear Weight kg (lb.)	6548 (14436)	6530 (14396)	7618 (16795)	7600 (16755)
Total Weight kg (lb.)	10691 (23570)	10665 (23512)	11761 (25929)	11735 (25871)
7290R, 7310R lb./hp	81, 76	81, 76	89, 84	89, 83
Front Weight Split	39%	39%	35%	35%
Rear Weight Split	61%	61%	65%	65%

[a]For TLS™ with front brakes add 94 kg (207 lb.)

Tractor	7290R / 7310R 1300 MFWD			
	e23™	IVT™	e23™	IVT™
	620/70R46 - Singles - Cast/Steel/Steel		620/70R46 - Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	4008 (8836)	4000 (8818)	4008 (8836)	4000 (8818)
Rear Weight kg (lb.)	6592 (14533)	6574 (14493)	7722 (17024)	7704 (16984)
Total Weight kg (lb.)	10600 (23369)	10574 (23311)	11730 (25860)	11704 (25802)
7290R, 7310R lb./hp	81, 75	80, 75	89, 83	89, 83
Front Weight Split	38%	38%	34%	34%
Rear Weight Split	62%	62%	66%	66%

Tractor	7290R / 7310R TLS™ [a]			
	e23™	IVT™	e23™	IVT™
	620/70R46 - Singles - Cast/Steel/Steel		620/70R46 - Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	4143 (9134)	4135 (9116)	4143 (9134)	4135 (9116)
Rear Weight kg (lb.)	6608 (14568)	6590 (14528)	7738 (17059)	7720 (17020)
Total Weight kg (lb.)	10751 (23702)	10725 (23644)	11881 (26193)	11855 (26136)
7290R, 7310R lb./hp	82, 76	82, 76	90, 84	90, 84
Front Weight Split	39%	39%	35%	35%
Rear Weight Split	61%	61%	65%	65%

[a]For TLS™ with front brakes add 94 kg (207 lb.)

Tractor	7290R / 7310R 1300 MFWD			
	e23™	IVT™	e23™	IVT™
	650/85R38 - Singles - Cast/Steel/Steel		650/85R38 - Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	4008 (8836)	4000 (8818)	4008 (8836)	4000 (8818)
Rear Weight kg (lb.)	6692 (14753)	6674 (14714)	7902 (17421)	7884 (17381)
Total Weight kg (lb.)	10700 (23589)	10674 (23532)	11910 (26257)	11884 (26199)
7290R, 7310R lb./hp	81, 76	81, 76	91, 85	90, 85
Front Weight Split	37%	37%	34%	34%
Rear Weight Split	63%	63%	66%	66%

Tractor	7290R / 7310R TLS™ [a]			
	e23™	IVT™	e23™	IVT™
	650/85R38 - Singles - Cast/Steel/Steel		650/85R38 - Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	4143 (9134)	4135 (9116)	4143 (9134)	4135 (9116)
Rear Weight kg (lb.)	6708 (14789)	6690 (14749)	7918 (17456)	7900 (17416)
Total Weight kg (lb.)	10851 (23923)	10825 (23865)	12061 (26590)	12035 (26532)
7290R, 7310R lb./hp	82, 77	82, 77	92, 986	91, 86

Continued on next page

GH15097,0000921 -19-20MAY15-2/4

Tractor	7290R / 7310R TLS™ [a]			
	e23™	IVT™	e23™	IVT™
	650/85R38 - Singles - Cast/Steel/Steel		650/85R38 - Duals - Cast/Steel/Steel	
Front Weight Split	38%	38%	34%	34%
Rear Weight Split	62%	62%	66%	66%

[a]For TLS™ with front brakes add 94 kg (207 lb.)

Tractor	7290R / 7310R 1300 MFWD		7290R / 7310R TLS™ [a]	
	e23™	IVT™	e23™	IVT™
	IF650/85R38-Singles - Cast/Steel/Steel		IF650/85R38-Singles - Cast/Steel/Steel	
Front Weight kg (lb.)	4008 (8836)	4000 (8818)	4143 (9134)	4135 (9116)
Rear Weight kg (lb.)	6751 (14883)	6733 (14844)	6767 (14919)	6749 (14879)
Total Weight kg (lb.)	10759 (23719)	10733 (23662)	10910 (24053)	10884 (23995)
7290R, 7310R lb./hp	82, 77	82, 76	83, 78	83, 77
Front Weight Split	37%	37%	38%	38%
Rear Weight Split	63%	63%	62%	62%

[a]For TLS™ with front brakes add 94 kg (207 lb.)

Tractor	7290R / 7310R 1300 MFWD			
	e23™	IVT™	e23™	IVT™
	710/70R42 - Singles - Cast/Steel/Steel		710/70R42 - Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	4008 (8836)	4000 (8818)	4008 (8836)	4000 (8818)
Rear Weight kg (lb.)	6772 (14930)	6754 (14890)	8100 (17857)	8082 (17818)
Total Weight kg (lb.)	10780 (23766)	10754 (23708)	12108 (26693)	12082 (26636)
7290R, 7310R lb./hp	82, 77	82, 76	92, 86	92, 86
Front Weight Split	37%	37%	33%	33%
Rear Weight Split	63%	63%	67%	67%

Tractor	7290R / 7310R TLS™ [a]			
	e23™	IVT™	e23™	IVT™
	710/70R42 - Singles - Cast/Steel/Steel		710/70R42 - Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	4143 (9134)	4135 (9116)	4143 (9134)	4135 (9116)
Rear Weight kg (lb.)	6788 (14965)	6770 (14925)	8116 (17893)	8098 (17853)
Total Weight kg (lb.)	10931 (24098)	10905 (24041)	12259 (27026)	12233 (26969)
7290R, 7310R lb./hp	83, 78	83, 78	93, 87	93, 87
Front Weight Split	38%	38%	34%	34%
Rear Weight Split	62%	62%	66%	66%

[a]For TLS™ with front brakes add 94 kg (207 lb.)

Tractor	7290R / 7310R 1300 MFWD			
	e23™	IVT™	e23™	IVT™
	710/70R42HD-Singles-Cast/Steel/Steel		710/70R42HD-Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	4008 (8836)	4000 (8818)	4008 (8836)	4000 (8818)
Rear Weight kg (lb.)	6778 (14943)	6760 (14903)	8112 (17884)	8094 (17844)
Total Weight kg (lb.)	10786 (23779)	10760 (23721)	12120 (26720)	12094 (26662)
7290R, 7310R lb./hp	82, 77	82, 77	92, 86	92, 86
Front Weight Split	37%	37%	33%	33%
Rear Weight Split	63%	63%	67%	67%

Tractor	7290R / 7310R TLS™ [a]			
	e23™	IVT™	e23™	IVT™
	710/70R42HD-Singles-Cast/Steel/Steel		710/70R42HD-Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	4143 (9134)	4135 (9116)	4143 (9134)	4135 (9116)
Rear Weight kg (lb.)	6794 (14978)	6776 (14939)	8128 (17919)	8110 (17879)
Total Weight kg (lb.)	10937 (24111)	10911 (24054)	12271 (27052)	12245 (26995)
7290R, 7310R lb./hp	83, 78	83, 78	93, 87	93, 87

Continued on next page

GH15097,0000921 -19-20MAY15-3/4

Tractor	7290R / 7310R TLS™ [a]			
	e23™	IVT™	e23™	IVT™
	710/70R42HD-Singles-Cast/Steel/Steel		710/70R42HD-Duals - Cast/Steel/Steel	
Front Weight Split	38%	38%	34%	34%
Rear Weight Split	62%	62%	66%	66%

[a]*For TLS™ with front brakes add 94 kg (207 lb.)*

Tractor	7290R / 7310R 1300 MFWD		7290R / 7310R TLS™ [a]	
	e23™	IVT™	e23™	IVT™
	IF710/70R42-Singles - Cast/Steel/Steel		IF710/70R42-Singles - Cast/Steel/Steel	
Front Weight kg (lb.)	4008 (8836)	4000 (8818)	4143 (9134)	4135 (9116)
Rear Weight kg (lb.)	6814 (15022)	6795 (14980)	6830 (15058)	6811 (15016)
Total Weight kg (lb.)	10822 (23858)	10795 (23798)	10973 (24191)	10946 (24131)
7290R, 7310R lb./hp	82, 77	82, 77	83, 78	83, 78
Front Weight Split	37%	37%	38%	38%
Rear Weight Split	63%	63%	62%	62%

[a]*For TLS™ with front brakes add 94 kg (207 lb.)*

Tractor	7290R / 7310R 1300 MFWD			
	e23™	IVT™	e23™	IVT™
	800/70R38- Singles - Cast/Steel/Steel		800/70R38 - Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	4008 (8836)	4000 (8818)	4008 (8836)	4000 (8818)
Rear Weight kg (lb.)	6943 (15307)	6925 (15267)	8402 (18523)	8384 (18484)
Total Weight kg (lb.)	10951 (24142)	10925 (24085)	12410 (27359)	12384 (27302)
7290R, 7310R lb./hp	83, 78	83, 78	94, 88	94, 88
Front Weight Split	37%	37%	32%	32%
Rear Weight Split	63%	63%	68%	678%

Tractor	7290R / 7310R TLS™ [a]			
	e23™	IVT™	e23™	IVT™
	800/70R38 - Singles - Cast/Steel/Steel		800/70R38 - Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	4143 (9134)	4135 (9116)	4143 (9134)	4135 (9116)
Rear Weight kg (lb.)	6959 (15342)	6941 (15302)	8418 (18558)	8400 (18519)
Total Weight kg (lb.)	11102 (24475)	11076 (24418)	12561 (27692)	12535 (27634)
7290R, 7310R lb./hp	84, 79	84, 79	95, 89	95, 89
Front Weight Split	37%	37%	33%	33%
Rear Weight Split	63%	63%	67%	67%

[a]*For TLS™ with front brakes add 94 kg (207 lb.)*

e23 is a trademark of Deere & Company
IVT is a trademark of Deere & Company
AutoPowr is a trademark of Deere & Company
TLS is a trademark of Deere & Company

GH15097,0000921 -19-20MAY15-4/4

Unballasted Tractor Weight Charts (7290R and 7310R Continued)

NOTE: Unballasted weights are calculated by averaging and are figured based on tractor with a full tank of fuel. Each tractor is different. Have your tractor weighed for exact weight splits.

Calculations assume no front hitch or PTO and front 420/85R38 (group 44) tires.

Tractor	7290R / 7310R 1300 MFWD)			
	e23™	IVT™/AutoPowr™	e23™	IVT™
	480/95R50 - Singles - Cast/Steel/Steel		480/95R50 - Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	4048 (8924)	4040 (8907)	4048 (8924)	4040 (8907)
Rear Weight kg (lb.)	6549 (14438)	6531 (14398)	7623 (16806)	7605 (16766)
Total Weight kg (lb.)	10597 (23362)	10571 (23305)	11671 (25730)	11645 (25673)
7290R, 7310R lb./hp	81, 75	80, 75	89, 83	89, 83
Front Weight Split	38%	38%	35%	35%
Rear Weight Split	62%	62%	65%	65%

Tractor	7290R / 7310R TLS™)			
	e23™	IVT™	e23™	IVT™
	480/95R50 - Singles - Cast/Steel/Steel		480/95R50 - Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	4183 (9222)	4175 (9204)	4183 (9222)	4175 (9204)
Rear Weight kg (lb.)	6565 (14473)	6547 (14434)	7639 (16841)	7621 (16801)
Total Weight kg (lb.)	10748 (23695)	10722 (23638)	11822 (26063)	11796 (26005)
7290R, 7310R lb./hp	82, 76	82, 76	90, 84	90, 84
Front Weight Split	39%	39%	35%	35%
Rear Weight Split	61%	61%	65%	65%

Tractor	7290R / 7310R 1300 MFWD)			
	e23™	IVT™	e23™	IVT™
	710/75R42 - Singles - Cast/Steel/Steel		710/75R42 - Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	4048 (8924)	4040 (8907)	4048(8924)	4040 (8907)
Rear Weight kg (lb.)	6807 (15007)	6789 (14967)	8200 (18078)	8182 (18038)
Total Weight kg (lb.)	10855 (23931)	10829 (23874)	12248 (27002)	12222 (26944)
7290R, 7310R lb./hp	83, 77	83, 77	93, 87	93, 87
Front Weight Split	37%	37%	33%	33%
Rear Weight Split	63%	63%	67%	67%

Tractor	7290R / 7310R TLS™)			
	e23™	IVT™	e23™	IVT™
	710/75R42 - Singles - Cast/Steel/Steel		710/75R42 - Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	4183 (9222)	4175 (9204)	4183 (9222)	4175 (9204)
Rear Weight kg (lb.)	6823 (15042)	6805 (15002)	8216 (18113)	8198 (18073)
Total Weight kg (lb.)	11006 (24264)	10980 (24206)	12399 (27335)	12373 (27277)
7290R, 7310R lb./hp	84, 78	83, 78	94, 88	94, 88
Front Weight Split	38%	38%	34%	34%
Rear Weight Split	62%	62%	66%	66%

Tractor	7290R / 7310R 1300 MFWD)		7290R / 7310R TLS™)	
	e23™	IVT™	e23™	IVT™
	IF710/75R42-Singles - Cast/Steel/Steel		IF710/75R42 - Duals - Cast/Steel/Steel	
Front Weight kg (lb.)	4048 (8924)	4040 (8907)	4183 (9222)	4175 (9204)
Rear Weight kg (lb.)	6826 (15049)	6807 (15007)	6842 (15084)	6823 (15042)
Total Weight kg (lb.)	10874 (23973)	10847 (23913)	11025 (24305)	10998 (24246)
7290R, 7310R lb./hp	83, 77	82, 77	84, 78	84, 78

Continued on next page

Tractor	7290R / 7310R 1300 MFWD)		7290R / 7310R TLS™)	
	e23™	IVT™	e23™	IVT™
	IF710/75R42-Singles - Cast/Steel/Steel		IF710/75R42 - Duals - Cast/Steel/Steel	
Front Weight Split	37%	37%	38%	38%
Rear Weight Split	63%	63%	62%	62%

e23 is a trademark of Deere & Company
IVT is a trademark of Deere & Company
AutoPowr is a trademark of Deere & Company

GH15097,0000922 -19-20MAY15-2/2

Installing Quik-Tatch™ Weights

Up to 24 Quik-Tatch™ weights can be installed on tractors.

When required, install Quik-Tatch™ weights, balanced on each side of center pin (A). The first two weights must be installed as a pair.

To hold six weights or fewer in position, insert retaining bolts (B) through holes and secure with a nut. Tighten to specifications.

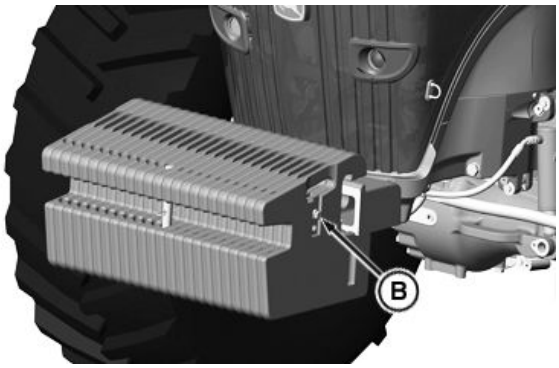
Specification

Retaining Bolts—Torque.....170 N·m (125 lb.-ft.)

A—Center Pin **B—Retaining Bolts**



RXA0144438 —UN—08AUG14



RXA0144461 —UN—11AUG14

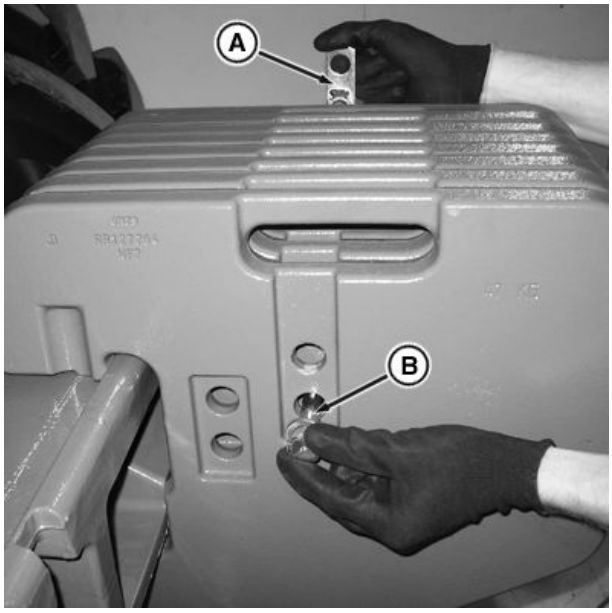
Continued on next page

GH15097,00008E3 -19-11AUG14-1/2

When eight or more weights are installed, insert retainers (A) between weights, one with threaded hole upward and the other with threaded hole downward. Tighten retaining bolts (B) to specifications.

Specification

Retaining Bolts—Torque.....170 N·m (125 lb-ft)



RXA0113871 —UN—09FEB11

A—Retainers **B—Retaining Bolt**

GH15097,00008E3 -19-11AUG14-2/2

Using Rear Wheel Weights

⚠ CAUTION: When installing weights, use appropriate equipment or have job performed by your John Deere™ dealer.

Weights (A) of 70 kg (154 lb.), 72 kg (159 lb.), 205 kg (452 lb.) or 900 kg (1984 lb.) can be installed on inside or outside of wheel. 72 kg (159 lb.) weights are starter weights for 205 kg (452 lb.) weights and 70 kg (154 lb.) are used with 900 kg (1984 lb.) weights.

NOTE: When using 762 mm (30 in.) tread setting, only one 205 kg (452 lb.) weight can be installed on inside of wheel.

Install weights on wheel.

Wheel Weight Attaching Bolts—Specification

M16 Bolt—Torque.....310 N·m (230 lb.-ft.)

M20 Bolt—Torque.....610 N·m (450 lb.-ft.)

For additional weights, install bolts in previous weight. Rotate alternate weight to align bolts with weight holes.

Tighten bolts and retighten after driving approximately 100 m (110 yd).

Retighten bolts after **3 HOURS** and again after **10 HOURS** of operation.



RW19886A —UN—02AUG99

A—Weights

Check tightness every 250 hours.

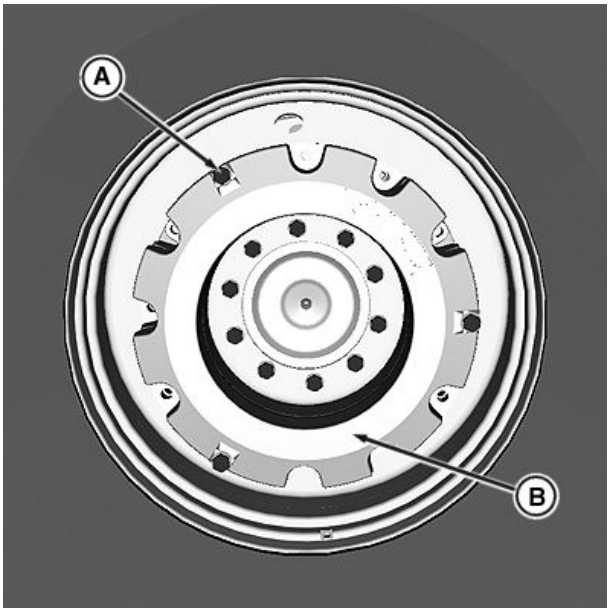
IMPORTANT: Inside wheel weights must have at least 25 mm (1 in.) clearance between weight and tractor components.

TO84419,0000159 -19-29JUL14-1/1

Using Rear Wheel Weights on Flanged Axles

A 72 kg (159 lb.) starter weight must be attached to wheel disk using three cap screws before 205 kg (452 lb.) weights (B) can be attached. One 205 kg (452 lb.) weight can be attached to inside of rim. Two 205 kg (452 lb.) weights can be attached to outside of rim.

IMPORTANT: 625 kg (1378 lb.) wheel weights cannot be used on flanged axles.



RXA0113869 —UN—09FEB11

A—Wheel Weight Cap Screw **B—205 kg (452 lb.) Wheel Weight**

Item	Measurement	Specification
Wheel Weight Cap Screws	Torque	610 N·m (450 lb.-ft.)

GH15097,00007C7 -19-21AUG14-1/1

Ballasting Suggestions for Hitch Mounted Implements

IMPORTANT: Use a scale to check static weight, especially with heavy implements. Static weight remaining on front wheels with implement lifted should always be at least 50% of front axle weight with implement resting on ground.

⚠ CAUTION: Do not attempt to transport an implement without adequate front ballast. Loss of steering control may result.

NOTE: Implements with a center of gravity greater than 610 mm (24 in.) will have a higher implement code and will require additional weight on rear axle. (See Implement Codes in this section for more details.)

Determine the following:

- MFWD or MFWD with TLS™
- Front tires with or without liquid ballast

Determine implement weight (fully loaded). Record weight.

Approximate Implement Weight kg (lb)	1786 (3938)	1819 (4011)	1914 (4220)	2009 (4429)	2104 (4638)	2199 (4847)	2293 (5056)	2388 (5265)	2483 (5475)	2578 (5684)	2672 (5893)
Front Ballast Required	None	None	Support Only	Support Only	2 Front Weights	4 Front Weights	6 Front Weights	8 Front Weights	10 Front Weights	12 Front Weights	12 Front Weights
Approximate Rear Axle Weight Added by Hitch Load kg (lb)	3015 (6646)	3070 (6769)	3230 (7122)	3348 (7382)	3509 (7735)	3631 (8005)	3752 (8271)	3836 (8457)	3997 (8811)	4081 (8997)	4240 (9347)

TO84419,000015A -19-27NOV12-1/1

Adding Rear Ballast For Front Loader

CAUTION: To help prevent personal injury or death from tractor/loader rollover, add recommended amount of ballast to tractor. Amount of ballast listed is minimum required for normal loader operation. For some operations, additional ballast may be required to maximize stability. Select one of following ballasting options.

NOTE: More ballast may be required depending on the application.



RXA0118624 —UN—13JUL11

Rear Ballast with H480 Loader[a]		
Rear Wheel Configuration	**Axle Ballast**	**Hitch Ballast[b]**
Single Steel Wheels	2500 kg (5510 lbs)	None
Single Steel Wheels	750 kg (1655 lbs)	1000 kg (2205 lbs)
Single Cast Wheels	2310 kg (5095 lbs)	None
Single Cast Wheels	560 kg (1235 lbs)	1000 kg (2205 lbs)
Steel Wheels with Duals	1590 kg (3505 lbs)	None
Steel Wheels with Duals	None	885 kg (1950 lbs)
Cast Wheels with Duals	1400 kg (3085 lbs)	None
Cast Wheels with Duals	None	750 kg (1655 lbs)

[a] *Minimum required with rear tread set at 1800 mm (71 in.) or greater. If equipped, include fluid in rear tires in ballast total.*
[b] *Ballast must be installed 1200 mm (47.25 in.) behind rear axle.*

TO84419,000015B -19-27NOV12-1/1

Using Liquid Ballast

CAUTION: Installing liquid ballast requires special equipment and training. See your John Deere dealer or a tire service store.

IMPORTANT: NEVER fill any tire to more than 90% full. More solution could damage tires.

Water or calcium chloride solution can be used to provide economical ballast. Used properly, it will not damage tires, tubes, or rims. However, liquid ballast is not recommended because it results in harsh ride, difficulty in handling, spills if flats occur, and when used in rear tires can result in greater susceptibility to power hop.

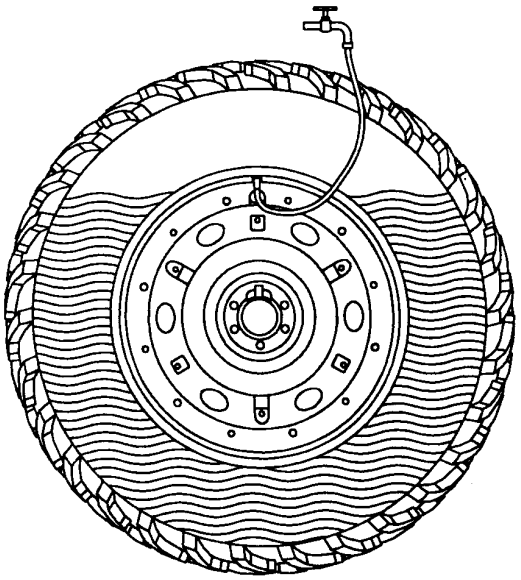
CAUTION: Avoid possible injury due to losing control of tractor. Limit transport speeds to 32 km/h (20 mph) when using liquid ballast.

A calcium chloride mixture of 420 gram per liter (3.5 lb per gal) of water will not freeze solid above -45 °C (-50 °F). A mixture of 600 gram per liter (5.0 lb per gal) will not freeze solid above -50 °C (-60 °F).

NOTE: Use of alcohol as liquid ballast is not recommended.

Liquid ballast should be avoided in rear tires since it has a stiffening effect that causes tractor to give a rough ride and generally reduces ability to control power hop. If liquid is used in rear tires, *all tires on axle must be filled to same level* which should not exceed 40% fill.

Up to 75% fill may be used in MFWD front tires for weight or to provide stiffness to assist in power hop control. *Do this as a last alternative.*



RW25003 —UN—07JUL93

Liquid Ballast 75% Full Shown

Fill **front** tires to 40% or 75% full for needed ballast. Fill **rear** tires to maximum of 40% full. More solution could result in harsh ride. The following charts show how much weight is added in liquid ballast when tire is filled to 40% capacity and 75% capacity.

TO84419,000015C -19-13AUG15-1/1

Liquid Ballast Charts

REAR TIRES		
LIQUID WEIGHT PER TIRE		
	40% FILL	
Tire Size	420 g/L (3.5 lb./gal.)	600 g/L (5.0 lb./gal.)
320/90R54	138 kg (305 lb.)	258 kg (569 lb.)
320/105R54	157 kg (345 lb.)	167 kg (367 lb.)
380/90R50	195 kg (430 lb.)	206 kg (455 lb.)
480/80R46	274 kg (604 lb.)	293 kg (646 lb.)
480/80R50 IF480/80R50	288 kg (634 lb.)	308 kg (678 lb.)
480/95R50	361 kg (796 lb.)	384 kg (847 lb.)
20.8R42	364 kg (802 lb.)	387 kg (853 lb.)
520/85R42	349 kg (770 lb.)	371 kg (818 lb.)
520/85R46	375 kg (827 lb.)	400 kg (882 lb.)
620/70R42	415 kg (915 lb.)	442 kg (974 lb.)
620/70R46	450 kg (991 lb.)	477 kg (1058 lb.)
650/75R38	460 kg (1015 lb.)	489 kg (1077 lb.)
650/85R38 IF650/85R38	561 kg (1237 lb.)	597 kg (1316 lb.)
650/65R42	401 kg (884 lb.)	429 kg (947 lb.)
710/70R38	495 kg (1092 lb.)	526 kg (1159 lb.)
710/70R42 IF710/70R42	558 kg (1231 lb.)	597 kg (1316 lb.)
710/75R42 IF710/75R42	580 kg (1279 lb.)	618 kg (1362 lb.)
800/70R38 IF800/70R38	650 kg (1433 lb.)	694 kg (1529 lb.)

FRONT TIRES				
LIQUID WEIGHT PER TIRE				
	40% FILL		75% FILL	
Tire Size	420 g/L (3.5 lb./gal.)	600 g/L (5.0 lb./gal.)	420 g/L (3.5 lb./gal.)	600 g/L (5.0 lb./gal.)
320/85R38	92 kg (203 lb.)	97 kg (214 lb.)	172 kg (379 lb.)	181 kg (399 lb.)
320/80R42 IF320/80R42	94 kg (207 lb.)	100 kg (220 lb.)	188 kg (414 lb.)	200 kg (440 lb.)
380/85R34	129 kg (284 lb.)	139 kg (307 lb.)	258 kg (568 lb.)	278 kg (614 lb.)
380/80R38 IF380/80R38	138 kg (304 lb.)	148 kg (326 lb.)	258 kg (569 lb.)	278 kg (613 lb.)
420/85R34 IF420/85R34	175 kg (386 lb.)	187 kg (413 lb.)	328 kg (723 lb.)	351 kg (774 lb.)
420/90R30	178 kg (391 lb.)	190 kg (420 lb.)	333 kg (734 lb.)	357 kg (787 lb.)
420/85R38	205 kg (453 lb.)	219 kg (483 lb.)	411 kg (906 lb.)	438 kg (966 lb.)
16.9R30	180 kg (398 lb.)	189 kg (420 lb.)	338 kg (746 lb.)	355 kg (787 lb.)
480/70R30	183 kg (404 lb.)	197 kg (434 lb.)	344 kg (758 lb.)	369 kg (814 lb.)
480/70R34	203 kg (448 lb.)	216 kg (477 lb.)	381 kg (840 lb.)	405 kg (894 lb.)
540/65R30	197 kg (436 lb.)	210 kg (462 lb.)	370 kg (817 lb.)	393 kg (867 lb.)
540/65R34	225 kg (496 lb.)	239 kg (527 lb.)	450 kg (992 lb.)	479 kg (1056 lb.)
540/75R34	264 kg (582 lb.)	281 kg (619 lb.)	529 kg (1166 lb.)	563 kg (1241 lb.)
600/65R28	243 kg (537 lb.)	258 kg (569 lb.)	456 kg (935 lb.)	484 kg (1067 lb.)
600/65R34	281 kg (620 lb.)	300 kg (661 lb.)	563 kg (1241 lb.)	600 kg (1322 lb.)
600/70R30 IF600/70R30	307 kg (676 lb.)	326 kg (718 lb.)	575 kg (1268 lb.)	611 kg (1347 lb.)
620/75R30 IF620/75R30	332 kg (732 lb.)	354 kg (780 lb.)	665 kg (1466 lb.)	708 kg (1560 lb.)

TO84419,000015D -19-13AUG14-1/1

Implement Codes

IMPORTANT: Use a scale to check static weight, especially with heavy implements. Static weight remaining on front wheels with implement lifted should always be at least 50 percent of weight with implement resting on ground.

Determine following:

- MFWD, or TLS™ Plus
- Front tires with or without liquid

Find implement code in John Deere™ implement operator's manual.

To find implement code for non-John Deere™ implements, use following procedure:

1. Estimate implement center of gravity (find or estimate fore-and-aft balance point)
2. Measure distance from implement hitch point to center of gravity. Record distance (inches). Add 37 to this figure.
3. Determine implement weight (fully loaded). Record weight.
4. Multiply Step 2 by Step 3. Divide by 1000.
5. Resulting number is implement code.

   Use prior information and refer to appropriate chart to determine how many Quik-Tatch™ weights are required.

CAUTION: Do not attempt to transport an implement without adequate front ballast. Loss of steering control may result.

NOTE: If no quick coupler is used, add 15 to implement code.

Implement Code	7210R—7230R MFWD	7250R—7310R TLS™
0—175	—	—
176—204	—	—
205—224	—	—
225—245	—	—
246—266	—	—
267—288	—	—
289—309	No front weight support	—
310—345	Weight Support Only	—
346—351	2	—
352—372	4	—
373—393	6	No front weight support
394—414	8	Weight Support Only
415—436	10	2
437—456	12	4
457—472	14	6
473—493	16	8
494—514	18	10
515—535	20	12
536—556	22	14
557—577	24	16
578—591	—	18
592—613	—	20
614—633	—	22
634—655	—	24
Add to implement code when:		
Fluid is added to front tires	60	60
Quick coupler is removed	15	15

Quik-Tatch™ Weights Required

TLS is a trademark of Deere & Company
John Deere is a trademark of Deere & Company

Continued on next page

Quik-Tatch is a trademark of Deere & Company

TO84419,000015E -19-31JUL14-2/2

Measuring Wheel Slip (Manually)

IMPORTANT: To properly measure wheel slip, make sure tire pressures are set for axle loads. (See Recommended Pressures tables in both Front Wheels, Tires, and Treads and Rear Wheels, Tires, and Treads sections.)

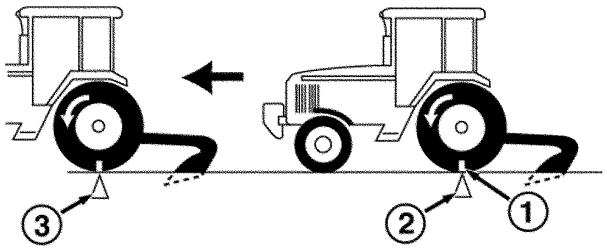
NOTE: Tractors equipped with optional radar unit can automatically determine percentage of wheel slip. Radar must be calibrated correctly. (See CommandCenter™ section.)

1. Mark a rear tire.
2. Mark a starting point on ground with tractor moving and implement lowered in ground.
3. Follow tractor and mark ground again where marked tire completes ten full revolutions.
4. Repeat procedure with implement raised at same working speed. Count revolutions between same two marks.
5. Use second count and chart to determine slippage.

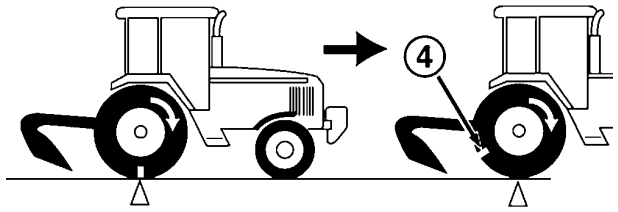
NOTE: Ideal slippage is 8—12% (tractors with MFWD).

6. Adjust ballast or load to give correct slippage.

NOTE: Available horsepower is greatly reduced when wheel slip drops below minimum percent.



RW26776 —UN—12JAN00



RW26777 —UN—13JAN00

Wheel Slippage Chart		
Wheel Revolutions (Step 4)	**% Slip**	**Result**
10	0	Remove Ballast
9-1/2	5	Remove Ballast
9	10	Correct Ballast
8-1/2	15	Add Ballast
8	20	Add Ballast
7-1/2	25	Add Ballast
7	30	Add Ballast

CommandCenter is a trademark of Deere & Company

TO84419,000015F -19-27NOV12-1/1

Service Tires Safely

Explosive separation of a tire and rim parts can cause serious injury or death.

Do not attempt to mount a tire unless you have the proper equipment and experience to perform the job.

Always maintain the correct tire pressure. Do not inflate the tires above the recommended pressure. Never weld or heat a wheel and tire assembly. The heat can cause an increase in air pressure resulting in a tire explosion. Welding can structurally weaken or deform the wheel.

When inflating tires, use a clip-on chuck and extension hose long enough to allow you to stand to one side and NOT in front of or over the tire assembly. Use a safety cage if available.

Check wheels for low pressure, cuts, bubbles, damaged rims, or missing lug bolts and nuts.



RXA0103438 —UN—11JUN09

DX,WW,RIMS -19-19AUG09-1/1

Select Tire Combinations

IMPORTANT: Avoid excessive power train wear. Do not mix worn and new tires, bias and radial, or tires of different diameters. Do not use R2 tires in combination with R1.

Tractors built with Group 47/48 tires may not be converted to Group 49 rear tires and tractors built with Group 49 tires may not be converted to Group 47/48 tires as these changes effect chassis and cab heights.

Mismatched front and rear tire combinations may cause poor performance and other problems. If unable to replace tires with same size as original equipment, consult your John Deere™ dealer or tire supplier for guidance.

Tires are placed into groups by their Rolling Circumference Index (RCI). Rolling circumference is distance tread travels in one revolution. Tires within a group, regardless of rim size, are same or nearly same diameter.

Since front tires are smaller than rear tires, front tires have to rotate faster to cover same distance as rear. Select correct size to optimize efficiency and ensure longer tire life.

Front tire must be from a group five group sizes smaller than rear tire group. For example, if rear tires are group 47, front tires must be group 42. Rim size is of no consequence. Different rim size tires such as 480/80R46 and 520/85R42 have same rolling circumference group, which is 47. Tire sizes are found in following tables.

FRONT TIRES								
Minimum Recommended Row Width mm (in.)								
Front Tires		508 mm (20 in.)	559 mm (22 in.)	762 mm (30 in.)	813 mm (32 in.)			
Front Tire Section Width mm (in.)								
RCI Group Size	Approximate Outside Diameter	320 mm (12.6 in.)	380 mm (15 in.)	420 mm (16.5 in.)	480 mm (18.9 in.)	540 mm (21.3 in.)	600 mm (23.6 in.)	620 mm (24.4 in.)
42	1499 mm (59 in.)	320/85R38	380/85R34	420/90R30	480/70R30		600/65R28	
43	1600 mm (63 in.)	320/80R42 IF320/80R42	380/80R38 IF380/80R38	420/85R34 IF420/85R34	IF480/70R34	540/65R34	600/70R30 IF600/70R30	
44	1676 mm (66 in.)		380/80R42	420/85R38		540/75R34	600/65R34	620/75R30 IF620/75R30

REAR TIRES									
Minimum Recommended Row Width mm (in.)									
Rear Tires		508 mm (20 in.)	559 mm (22 in.)	762 mm (30 in.)	813 mm (32 in.)				
Rear Tire Section Width mm (in.)									
RCI Group Size	Approximate Outside Diameter	320 mm (12.6 in.)	380 mm (15 in.)	480 mm (18.9 in.)	520 mm (20.5 in.)	620 mm (24.4 in.)	650 mm (25.6 in.)	710 mm (28 in.)	800 mm (31.5 in.)
47	1956 mm (77 in.)	320/90R54[a]	380/90R50	480/80R46	520/85R42	620/70R42	650/65R42	710/70R38	
48	2057 mm (81 in.)	320/105R54	380/90R54	480/80R50 IF480/80R50 VF480/80 R50	520/85R46	620/70R46	650/85R38 IF650/85R38	710/70R42 IF710/70R42	800/70R38 IF800/70R38
49	2172 mm (85.5 in.)			480/95R50				710/75R42 IF710/75R42	

[a] *Approved in dual configuration only*

NOTE: If tire group change is desired, see your John Deere™ dealer.

John Deere is a trademark of Deere & Company

TO84419,0000161 -19-19SEP14-1/1

Tire Sidewall Information



RXA0149658 —UN—13AUG15

Displayed on tire sidewalls is information useful in selecting and working with tires.

A — Tire section width –Width in millimeters.
B — Aspect ratio – Ratio of height to tire section width.
C — Construction type –R = Radial, B = Bias.
D — Rim diameter –Diameter in inches (not total tire height or group size).
E — Load index –Numerical code indicates tire load-carrying capacity. Higher load index number designates higher load capacity. See Tire Load Index chart in this section of this Operator's Manual.
F — Speed rating –Maximum speed tire is designed to travel.

Additional information that may be displayed on sidewall.

Tread pattern — Indicates tread design and tire usage. Designs offered are all lug- or bar-type tires and are separated into one of three specifications: R1, R1W, or R2.
Direction of rotation — Icon (usually an arrow or group of arrows) indicating tire rotation direction.
Manufacturer name — Name of tire manufacturer.
Max load and pressure information — Maximum load a tire is permitted to carry under specified pressure and operating conditions. See Recommended Pressures charts in this section of this Operator's Manual.
Safety warnings — Important information provided by tire manufacturer.

TO84419,0000157 -19-24AUG15-1/1

Tire Load Index

IMPORTANT: Tire load capacity can exceed allowable axle loading. Ballast tractor according to engine power and weight split guidelines. See Performance Ballasting Section in this Operator's Manual for more information.

Tire industry uses a term "load index" to define a load rating of a tire. Load index indicates maximum amount of weight that can be supported by each tire at manufacturer's maximum rated pressure is shown in this chart.

Load Index	Maximum Load per Tire[a]		Load Index	Maximum Load per Tire[a]	
	Single kg (lb)	Dual kg (lb)		Single kg (lb)	Dual kg (lb)
137	2300 (5071)	2024 (4462)	159	4375 (9645)	3850 (8488)
138	2360 (5203)	2077 (4579)	160	4500 (9921)	3960 (8730)
139	2430 (5357)	2138 (4714)	161	4625 (10196)	4070 (8973)
140	2500 (5512)	2200 (4850)	162	4750 (10472)	4180 (9215)
141	2575 (5677)	2266 (4996)	163	4875 (10748)	4290 (9458)
142	2650 (5842)	2332 (5141)	164	5000 (11023)	4400 (9700)
143	2725 (6008)	2398 (5287)	165	5150 (11354)	4532 (9991)
144	2800 (6173)	2464 (5432)	166	5300 (11684)	4664 (10282)
145	2900 (6393)	2552 (5626)	167	5450 (12015)	4796 (10573)
146	3000 (6614)	2640 (5820)	168	5600 (12346)	4928 (10864)
147	3075 (6779)	2706 (5966)	169	5800 (12787)	5104 (11252)
148	3150 (6945)	2772 (6111)	170	6000 (13228)	5280 (11640)
149	3250 (7165)	2860 (6305)	171	6150 (13558)	5412 (11931)
150	3350 (7385)	2948 (6499)	172	6300 (13889)	5544 (12222)
151	3450 (7606)	3036 (6693)	173	6500 (14330)	5720 (12610)
152	3550 (7826)	3124 (6887)	174	6700 (14771)	5896 (12998)
153	3650 (8047)	3212 (7081)	175	6900 (15212)	6072 (13386)
154	3750 (8267)	3300 (7275)	176	7100 (15653)	6248 (13774)
155	3875 (8543)	3410 (7518)	177	7300 (16094)	6424 (14162)
156	4000 (8818)	3520 (7760)	178	7500 (16535)	6600 (14550)
157	4125 (9094)	3630 (8003)	179	7750 (17086)	6820 (15036)
158	4250 (9370)	3740 (8245)	180	8000 (17637)	7040 (15521)

[a] *At maximium rated pressure.*

TO84419,0000169 -19-18SEP15-1/1

Tire Inflation Pressure Guidelines

Check tire inflation pressure while tires are cool, using an accurate dial or stick-type gauge having 10 kPa (0.1 bar) (1 psi) graduations.

NOTE: Use a special air-water gauge and measure with valve stem at bottom if tires contain liquid ballast.

Correctly inflated radial tires show deflection of sidewall. This is normal and does not harm tire.

Inflation pressures less than 80 kPa (0.8 bar) (12 psi) must be monitored frequently because of the increased risk of low-pressure air leaks.

NOTE: Bead slip can be experienced in high-traction conditions, with single tire usage. Increasing inflation pressure helps but reduces traction.

Maximum tire pressure is specified on tire sidewall.

Determine correct tire pressure

Integral implements transfer significant weight to axles, always include this weight when determining correct inflation pressures. Determine correct tire pressure by weighing tractor using following procedure:

Rear Mounted Implement - Front axle should be weighed with implement lowered. Rear axle should be weighed with implement raised.

Front Mounted Implement - Front axle should be weighed with implement raised. Rear axle should be weighed with implement lowered.

Front and Rear Mounted Implement - Weigh tractor with both front and rear implement raised.

Set tire inflation pressures according to weight measured. *Ballasting and tire inflation pressure may need to be adjusted when operating conditions change.* Use following tire inflation charts. For tires not found in charts refer to manufacturers recommended inflation pressures.

Managing Tire Inflation Pressures

Tractors operating with a loader should increase front tire pressures 30 kPa (0.3 bar) (4 psi) above values listed to compensate for weight transfer.

Tractors operating on steep side slopes or furrow plowing should increase rear tire pressures 30 kPa (0.3 bar) (4 psi) above values listed for base pressures 80 kPa (0.8 bar) (12 psi) and above to compensate for lateral weight transfer. For base pressures below 80 kPa (0.8 bar) (12 psi), pressure should be increased by 30%.

TO84419,0000162 -19-07APR14-1/1

Recommended Pressures—*Group 42*

Size	320/85R38	380/85R34			420/90R30			480/70R30	600/65R28	
Load Index	143	137	145	146	142	145	147	152	147	154
Speed Rating	A8	A8 / B	A8	B	A8	A8	A8	A8 / B	A8 / B	A8
	Single	Single	Single	Single	Single	Single	Single	Single	Single	Single
Axle Load kg(lb)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)
1814 (4000)	55 (0.55)(8)	62 (0.62)(9)	55 (0.55)(8)	83 (0.83)(12)	62 (0.62)(9)	50 (0.55)(8)	50 (0.55)(8)	55 (0.55)(8)	65 (0.65)(9)	105 (1.05)(15)
2041 (4500)	60 (0.6)(9)	62 (0.62)(9)	55 (0.55)(8)	83 (0.83)(12)	62 (0.62)(9)	50 (0.55)(8)	50 (0.55)(8)	55 (0.55)(8)	65 (0.65)(9)	105 (1.05)(15)
2268 (5000)	80 (0.80)(12)	62 (0.62)(9)	55 (0.55)(8)	83 (0.83)(12)	62 (0.62)(9)	50 (0.55)(8)	50 (0.55)(8)	55 (0.55)(8)	65 (0.65)(9)	105 (1.05)(15)
2495 (5500)	95 (0.95)(14)	62 (0.62)(9)	60 (0.6)(9)	83 (0.83)(12)	62 (0.62)(9)	60 (0.6)(9)	50 (0.55)(8)	70 (0.7)(10)	65 (0.65)(9)	105 (1.05)(15)
2722 (6000)	105 (1.05)(15)	70 (0.7)(10)	70 (0.7)(10)	83 (0.83)(12)	62 (0.62)(9)	70 (0.7)(10)	50 (0.55)(8)	75 (0.75)(11)	65 (0.65)(9)	105 (1.05)(15)
2948 (6500)	120 (1.2)(17)	90 (0.9)(13)	90 (0.90)(13)	83 (0.83)(12)	62 (0.62)(9)	85 (0.85)(12)	60 (0.6)(9)	85 (0.85)(12)	65 (0.65)(9)	105 (1.05)(15)
3175 (7000)	125 (1.25)(18)	95 (0.95)(14)	97 (0.97)(14)	83 (0.83)(12)	75 (0.75)(11)	95 (0.95)(14)	75 (0.75)(11)	90 (0.9)(13)	65 (0.65)(9)	105 (1.05)(15)
3402 (7500)	145 (1.45)(21)	110 (1.1)(16)	110 (1.1)(16)	83 (0.83)(12)	85 (0.85)(12)	105 (1.05)(15)	90 (0.9)(13)	105 (1.05)(15)	65 (0.65)(9)	105 (1.05)(15)
3629 (8000)	160 (1.6)(23)	110 (1.1)(16)	117 (1.17)(17)	95 (0.95)(14)	95 (0.95)(14)	120 (1.2)(17)	95 (0.95)(14)	110 (1.1)(16)	65 (0.65)(9)	105 (1.05)(15)
3856 (8500)	180 (1.80)(26)	125 (1.25)(18)	131 (1.31)(19)	110 (1.1)(16)	105 (1.05)(15)	130 (1.3)(19)	110 (1.1)(16)	120 (1.2)(17)	65 (0.65)(9)	105 (1.05)(15)
4082 (9000)	200 (2.0)(29)	130 (1.3)(19)	138 (1.38)(20)	124 (1.24)(18)	110 (1.1)(16)	145 (1.45)(21)	120 (1.2)(17)	125 (1.25)(18)	65 (0.65)(9)	105 (1.05)(15)
4309 (9500)	230 (2.3)(34)	145 (1.45)(21)	152 (1.52)(22)	140 (1.4)(20)	120 (1.2)(17)	160 (1.6)(23)	120 (1.2)(17)	140 (1.4)(20)	85 (0.85)(12)	105 (1.05)(15)
4536 (10000)	250 (2.5)(38)	150 (1.5)(22)	159 (1.59)(23)	160 (1.6)(23)	130 (1.3)(19)	165 (1.65)(24)	130 (1.3)(19)	150 (1.5)(22)	95 (0.95)(14)	105 (1.05)(15)
4763 (10500)	280 (2.8)(41)	160 (1.6)(23)	179 (1.79(26)	180 (1.8)(26)	145 (1.45)(21)	185 (1.85)(27)	140 (1.4)(20)	160 (1.6)(23)	105 (1.05)(15)	105 (1.05)(15)
4990 (11000)	303 (3.0)(44)	—	200 (2.0)(29)	193 (1.9)(28)	150 (1.5)(22)	200 (2.0)(29)	145 (1.45)(21)	165 (1.65)(24)	110 (1.1)(16)	105 (1.05)(15)
5216 (11500)	324 (3.2)(47)	—	234 (2.34)(34)	207 (2.1)(30)	160 (1.6)(23)	215 (2.15(31)	160 (1.6)(23)	180 (1.8)(26)	120 (1.2)(17)	110 (1.1)(16)
5443 (12000)	359 (3.6)(52)	—	255 (2.55)(37)	223 (2.2)(32)	—	235 (2.35)(35)	160 (1.6)(23)	190 (1.9)(28)	125 (1.25)(18)	120 (1.2)(17)
5670 (12500)	—	—	276(2.76(40)	230 (2.3)(33)	—	—	190 (1.9)(28)	210 (2.1)(30)	140 (1.4)(20)	130 (1.3)(19)
5900 (13000)	—	—	—	240 (2.4)(35)	—	—	215 (2.15)(31)	220 (2.2)(32)	145 (1.45)(21)	140 (1.4)(20)
6123 (13500)	—	—	—	—	—	—	240 (2.4)(35)	240 (2.4)(36)	160 (1.6)(23)	160 (1.6)(23)
6350 (14000)	—	—	—	—	—	—	—	275 (2.75)(40)	—	160 (1.6)(23)
6577 (14500)	—	—	—	—	—	—	—	290 (2.9)(42)	—	180 (1.8)(26)
6804 (15000)	—	—	—	—	—	—	—	300 (3.0)(43)	—	190 (1.9)(28)
7031 (15500)	—	—	—	—	—	—	—	320 (3.2)(46)	—	215 (2.15)(31)

Continued on next page

TO84419,0000163 -19-13AUG15-1/2

Size	320/85R38	380/85R34			420/90R30			480/70R30	600/65R28	
Load Index	143	137	145	146	142	145	147	152	147	154
Speed Rating	A8	A8 / B	A8	B	A8	A8	A8	A8 / B	A8 / B	A8
	Single	Single	Single	Single	Single	Single	Single	Single	Single	Single
Axle Load kg(lb)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)
7257 (16000)	—	—	—	—	—	—	—	—	—	230 (2.3)(33)
7484 (16500)	—	—	—	—	—	—	—	—	—	240 (2.4)(35)

TO84419,0000163 -19-13AUG15-2/2

Recommended Pressures—*Group 43*

Size	320/80R42	IF320/80R42	380/80R38	IF380/80R38	420/85R34	IF420/85R34
Load Index	141	149	142	149	147	152
Speed Rating	A8	A8	A8	A8	A8	A8
	Single	Single	Single	Single	Single	Single
Axle Load kg(lb)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)
1814 (4000)	55 (0.55)(8)	40 (0.4)(6)	65 (0.65)(9)	85 (0.85)(12)	65 (0.65)(9)	85 (0.85)(12)
2041 (4500)	65 (0.65)(9)	40 (0.4)(6)	65 (0.65)(9)	85 (0.85)(12)	65 (0.65)(9)	85 (0.85)(12)
2268 (5000)	75 (0.75)(11)	55 (0.55)(8)	65 (0.65)(9)	85 (0.85)(12)	65 (0.65)(9)	85 (0.85)(12)
2495 (5500)	90 (0.9)(13)	70 (0.7)(10)	65 (0.65)(9)	85 (0.85)(12)	65 (0.65)(9)	85 (0.85)(12)
2722 (6000)	105 (1.05)(15)	76 (0.76)(11)	70 (0.7)(10)	85 (0.85)(12)	65 (0.65)(9)	85 (0.85)(12)
2948 (6500)	120 (1.2)(17)	90 (0.90)(13)	85 (0.85)(12)	85 (0.85)(12)	65 (0.65)(9)	90 (0.90)(13)
3175 (7000)	125 (1.25)(18)	95 (0.95)(14)	90 (0.9)(13)	90 (0.90)(13)	75 (0.75)(11)	90 (0.90)(13)
3402 (7500)	140 (1.4)(20)	110 (1.1)(16)	95 (0.95)(14)	90 (0.90)(13)	85 (0.85)(12)	90 (0.90)(13)
3629 (8000)	150 (1.5)(22)	120 (1.2)(17)	95 (0.95)(14)	90 (0.90)(13)	95 (0.95)(14)	90 (0.90)(13)
3856 (8500)	175 (1.75)(25)	125 (1.25)(18)	105 (1.05)(15)	105 (1.05)(15)	105 (1.05)(15)	95 (0.95)(14)
4082 (9000)	200 (2.0)(29)	140 (1.4)(20)	120 (1.2)(17)	110 (1.1)(16)	110 (1.1)(16)	95 (0.95)(14)
4309 (9500)	235 (2.35)(34)	150 (1.5)(22)	140 (1.4)(20)	120 (1.2)(17)	120 (1.2)(17)	95 (0.95)(14)
4536 (10000)	260 (2.6)(38)	165 (1.65)2(4)	160 (1.6)(23)	125 (1.25)(18)	130 (1.3)(19)	105 (1.05)(15)
4763 (10500)	275 (2.75)(40)	185 (1.85)(27)	180 (1.8)(26)	130 (1.3)(19)	140 (1.4)(20)	110 (1.1)(16)
4990 (11000)	305 (3.05)(44)	200 (2.0)(29)	200 (2.0)(29)	140 (1.4)(20)	145 (1.45)(21)	120 (1.2)(17)
5216 (11500)	—	234 (2.34)(34)	220 (2.2)(32)	150 (1.5)(22)	160 (1.6)(23)	120 (1.2)(17)
5443 (12000)	—	255 (2.55)(37)	—	160 (1.6)(23)	160 (1.6)(23)	125 (1.25)(18)
5670 (12500)	—	276 (2.76)(40)	—	175 (1.75)(25)	175 (1.75)(25)	140 (1.4)(20)
5897 (13000)	—	290 (2.9)(42)	—	185 (1.85)(27)	175 (1.75)(25)	145 (1.45)(21)
6123 (13500)	—	310 (3.1)(45)	—	215 (2.15)(31)	175 (1.75)(25)	150 (1.5)(22)
6350 (14000)	—	324 (3.24)(47)	—	240 (2.4)(35)	—	160 (1.6)(23)
6577 (14500)	—	—	—	—	—	180 (1.8)(26)
6804 (15000)	—	—	—	—	—	185 (1.85)(27)
7031 (15500)	—	—	—	—	—	200 (2.0)(29)

TO84419,0000165 -19-13AUG15-1/1

Recommended Pressures—*Group 43* *(Continued)*

Size	480/70R34			540/65R34	600/70R30	IF600/70R30
Load Index	143	146	155	148	152	159
Speed Rating	A8 / B	A8	A8 / B	A8	A8 / B	A8 / B
	Single	Single	Single	Single	Single	Single
Axle Load kg(lb)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)
3175 (7000)	65 (0.65)(9)	65 (0.65)(9)	65 (0.65)(9)	65 (0.65)(9)	65 (0.65)(9)	85 (0.85)(12)
3402 (7500)	65 (0.65)(9)	70 (0.7)(10)	70 (0.7)(10)	65 (0.65)(9)	65 (0.65)(9)	85 (0.85)(12)
3629 (8000)	75 (0.75)(11)	75 (0.75)(11)	75 (0.75)(11)	65 (0.65)(9)	65 (0.65)(9)	85 (0.85)(12)
3856 (8500)	85 (0.85)(12)	85 (0.85)(12)	85 (0.85)(12)	70 (0.7)(10)	65 (0.65)(9)	85 (0.85)(12)
4082 (9000)	95 (0.95)(14)	95 (0.95)(14)	95 (0.95)(14)	75 (0.75)(11)	65 (0.65)(9)	85 (0.85)(12)
4309 (9500)	105 (1.05)(15)	105 (1.05)(15)	105 (1.05)(15)	85 (0.85)(12)	65 (0.65)(9)	85 (0.85)(12)
4536 (10000)	120 (1.2)(17)	110 (1.1)(16)	110 (1.1)(16)	95 (0.95)(14)	65 (0.65)(9)	85 (0.85)(12)
4763 (10500)	125 (1.25)(18)	120 (1.2)(17)	120 (1.2)(17)	105 (1.05)(15)	70 (0.7)(10)	85 (0.85)(12)
4990 (11000)	125 (1.25)(18)	125 (1.25)(18)	125 (1.25)(18)	105 (1.05)(15)	75 (0.75)(11)	85 (0.85)(12)
5216 (11500)	130 (1.3)(19)	130 (1.3)(19)	130 (1.3)(19)	110 (1.1)(16)	85 (0.85)(12)	85 (0.85)(12)
5443 (12000)	140 (1.4)(20)	140 (1.4)(20)	140 (1.4)(20)	120 (1.2)(17)	95 (0.95)(14)	85 (0.85)(12)
5670 (12500)	—	145 (1.45)(21)	145 (1.45)(21)	130 (1.3)(19)	105 (1.05)(15)	85 (0.85)(12)
5897 (13000)	—	160 (1.6)(23)	160 (1.6)(23)	140 (1.4)(20)	110 (1.1)(16)	90 (0.90)(13)
6123 (13500)	—	—	180 (1.8)(26)	150 (1.5)(22)	120 (1.2)(17)	95 (0.95)(14)
6350 (14000)	—	—	180(1.8)(26)	160(1.6)(23)	130 (1.3)(19)	105 (1.05)(15)
6577 (14500)	—	—	185(1.85)(27)	—	140 (1.4)(20)	110 (1.1)(16)
6804 (15000)	—	—	185(1.85)(27)	—	145 (1.45)(21)	110 (1.1)(16)
7031 (15500)	—	—	190(1.9)(28)	—	160 (1.6)(23)	120 (1.2)(17)
7257 (16000)	—	—	190(1.9)(28)	—	—	120 (1.2)(17)
7484 (16500)	—	—	190(1.9)(28)	—	—	125 (1.25)(18)
7711 (17000)	—	—	200(2.0)(29)	—	—	130 (1.3)(19)
7938 (17500)	—	—	—	—	—	140 (1.4)(20)
8165 (18000)	—	—	—	—	—	145 (1.45)(21)
8391 (18500)	—	—	—	—	—	150 (1.5)(22)

Continued on next page

TO84419,0000166 -19-12AUG15-1/2

Size	480/70R34			540/65R34	600/70R30	IF600/70R30
Load Index	**143**	**146**	**155**	**148**	**152**	**159**
Speed Rating	**A8 / B**	**A8**	**A8 / B**	**A8**	**A8 / B**	**A8 / B**
	Single	**Single**	**Single**	**Single**	**Single**	**Single**
Axle Load kg(lb)	**kPa (bar)(psi)**	**kPa (bar)(psi)**	**kPa (bar)(psi)**	**kPa (bar)(psi)**	**kPa (bar)(psi)**	**kPa (bar)(psi)**
8618 (19000)	—	—	—	—	—	160 (1.6)(23)
8845 (19500)	—	—	—	—	—	160 (1.6)(23)

TO84419,0000166 -19-12AUG15-2/2

Recommended Pressures—*Group 44*

Size	380/80R42	420/85R38	540/75R34	600/65R34	620/75R30	IF620/75R30
Load Index	150	149	157	157	163	164
Speed Rating	A8	A8 / B	A8	D	A8 / B / D	D
	Single	Single	Single	Single	Single	Single
Axle Load kg(lb)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)
2041 (4500)	40 (0.4)(6)	65 (0.65)(9)	55 (0.55)(8)	62 (0.6)(9)	105 (1.05)(15)	85 (0.85)(12)
2268 (5000)	50 (0.5)(7)	65 (0.65)(9)	55 (0.55)(8)	62 (0.6)(9)	105 (1.05)(15)	85 (0.85)(12)
2495 (5500)	65 (0.65)(9)	65 (0.65)(9)	55 (0.55)(8)	62 (0.6)(9)	105 (1.05)(15)	85 (0.85)(12)
2722 (6000)	70 (0.7)(10)	65 (0.65)(9)	55 (0.55)(8)	62 (0.6)(9)	105 (1.05)(15)	85 (0.85)(12)
2948 (6500)	85 (0.85)(12)	65 (0.65)(9)	55 (0.55)(8)	62 (0.6)(9)	105 (1.05)(15)	85 (0.85)(12)
3175 (7000)	90 (0.9)(13)	70 (0.7)(10)	55 (0.55)(8)	62 (0.6)(9)	105 (1.05)(15)	85 (0.85)(12)
3402 (7500)	105 (1.05)(15)	75 (0.75)(11)	55 (0.55)(8)	62 (0.6)(9)	105 (1.05)(15)	85 (0.85)(12)
3629 (8000)	110 (1.1)(16)	85 (0.85)(12)	70 (0.7)(10)	62 (0.6)(9)	105 (1.05)(15)	85 (0.85)(12)
3856 (8500)	120 (1.2)(17)	95 (0.95)(14)	75 (0.75)(11)	62 (0.6)(9)	105 (1.05)(15)	85 (0.85)(12)
4082 (9000)	130 (1.3)(19)	105 (1.05)(15)	83 (0.85)(12)	62 (0.6)(9)	105 (1.05)(15)	85 (0.85)(12)
4309 (9500)	140 (1.4)(20)	110 (1.1)(16)	90 (0.9)(13)	69 (0.7)(10)	105 (1.05)(15)	85 (0.85)(12)
4536 (10000)	150 (1.5)(22)	120 (1.2)(17)	97 (1.0)(14)	76 (0.8)(11)	105 (1.05)(15)	85 (0.85)(12)
4763 (10500)	160 (1.6)(23)	130 (1.3)(19)	103 (1.0)(15)	83 (0.8)(12)	105 (1.05)(15)	85 (0.85)(12)
4990 (11000)	175 (1.75)(25)	140 (1.4)(20)	110 (1.1)(16)	90 (0.9)(13)	105 (1.05)(15)	85 (0.85)(12)
5216 (11500)	190 (1.9)(28)	145 (1.45)(21)	110 (1.1)(16)	97 (1.0)(14)	105 (1.05)(15)	85 (0.85)(12)
5443 (12000)	22 0(2.2)(32)	150 (1.5)(22)	124 (1.2)(18)	103 (1.0)(15)	105 (1.05)(15)	85 (0.85)(12)
5670 (12500)	250 (2.5)(36)	160 (1.6)(23)	117 (1.2)(17)	110 (1.1)(16)	105 (1.05)(15)	85 (0.85)(12)
5897 (13000)	260 (2.6)(38)	165 (1.65)(24)	124 (1.2)(18)	117 (1.2)(17)	105 (1.05)(15)	85 (0.85)(12)
6123 (13500)	280 (2.8)(41)	175 (1.75)(25)	131 (1.3)(19)	124 (1.2)(18)	105 (1.05)(15)	85 (0.85)(12)
6350 (14000)	300 (3.0)(43)	175 (1.75)(25)	138 (1.4)(20)	131 (1.3)(19)	110 (1.1)(16)	85 (0.85)(12)
6577 (14500)	320 (3.2)(46)	180 (1.8)(26)	145 (1.5)(21)	138 (1.4)(20)	120 (1.2)(17)	90 (0.9)(13)
6804 (15000)	—	—	150 (1.5)(22)	145 (1.5)(21)	125 (1.25)(18)	95 (0.95)(14)
7031 (15500)	—	—	159 (1.6)(23)	159 (1.6)(23)	130 (1.3)(19)	95 (0.95)(14)
7257 (16000)	—	—	165 (1.7)(24)	165 (1.7)(24)	140 (1.4)(20)	105 (1.05)(15)
7484 (16500)	—	—	179 (1.8)(26)	179 (1.8)(26)	145 (1.45)(21)	110 (1.1)(16)

Continued on next page

TO84419,0000168 -19-13AUG15-1/2

Size	380/80R42	420/85R38	540/75R34	600/65R34	620/75R30	IF620/75R30
Load Index	150	149	157	157	163	164
Speed Rating	A8	A8 / B	A8	D	A8 / B / D	D
	Single	Single	Single	Single	Single	Single
Axle Load kg(lb)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)
7711 (17000)	—	—	193 (1.9)(28)	193 (1.9)(28)	160 (1.6)(23)	110 (1.1)(16)
7938 (17500)	—	—	215 (2.15)(31)	200 (2.0)(29)	175 (1.75)(25)	120 (1.2)(17)
8165 (18000)	—	—	228 (2.3)(33)	214 (2.1)(31)	185 (1.85)(27)	125 (1.25)(18)
8391 (18500)	—	—	—	228 (2.3)(33)	190 (1.9)(28)	125 (1.25)(18)
8618 (19000)	—	—	—	241 (2.4)(35)	200 (2.0)(29)	130 (1.3)(19)
8845 (19500)	—	—	—	—	215 (2.15)(31)	130 (1.3)(19)
9072 (20000)	—	—	—	—	230 (2.3)(33)	140 (1.4)(20)
9525 (21000)	—	—	—	—	240 (2.4)(35)	150 (1.5)(22)
9979 (22000)	—	—	—	—	—	160 (1.6)(23)

TO84419,0000168 -19-13AUG15-2/2

Tightening Front Wheel Bolts—MFWD

CAUTION: Avoid the possibility of personal injury. Never operate tractor with loose wheel bolts. Wheel bolts are critical and require retightening.

*NOTE: Both inner and outer bolt patterns of disk have one **tight fit** hole and one **slot fit** hole 180° from each other, for improved wheel centering.*

IMPORTANT: Front duals are not approved or recommended for use with standard MFWD and/or TLS™ Plus tractors.

Wheel Disk-to-Rim

1. Install bolt in **tight fit** hole (A) and hand tighten bolt.
2. Install bolt in **slot fit** hole (B) and hand tighten bolt.
3. Install and hand tighten remaining wheel disk-to-rim bolts.
4. Tighten all bolts to specifications.

Specification	
Wheel Disk-to-Rim Bolts 8 Position Wheel (M16 Hardware)—Torque	300 N·m (225 lb-ft)

NOTE: See Determining Rim Type in this section if unsure of hardware size.

IMPORTANT: Carefully follow procedure for tightening wheel bolts. Failure to do so could lead to wheel hub damage.

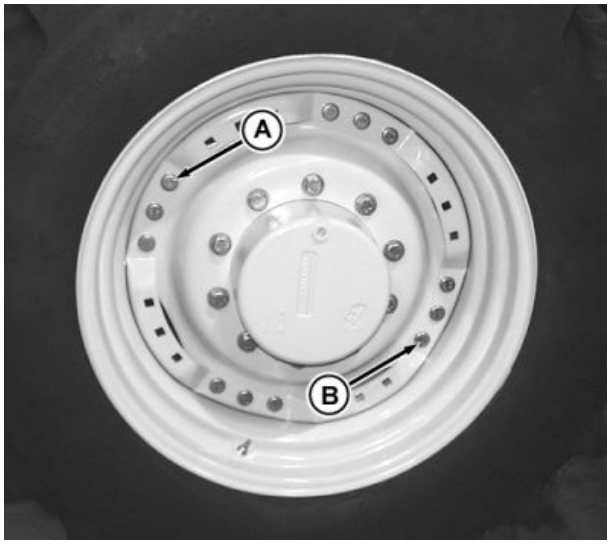
Wheel Disk-to-Hub (Eight-Position and Two-Position Wheels)

1. Install cap screw in **tight fit** hole (C) and hand tighten cap screw.
2. Install cap screw in **slot fit** hole (D) and hand tighten cap screw.
3. Install and hand tighten remaining wheel disk-to-hub cap screws.
4. Tighten all cap screws to specifications.

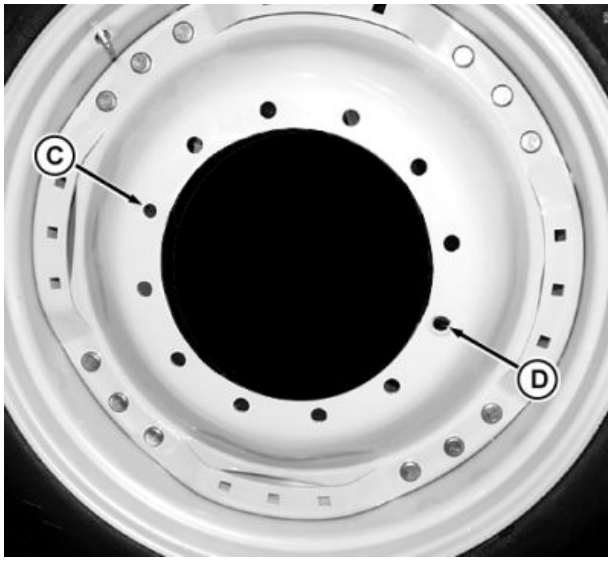
Specification	
Wheel Disk-to-Hub Bolts—Torque	600 N·m (445 lb-ft)

5. Drive tractor 100 m (100 yd) and retighten bolts.
6. Retighten bolts after working **3 HOURS**, **10 HOURS**, and **DAILY** for first week of operation and every 500 hours.

TLS is a trademark of Deere & Company



RW26463 —UN—14AUG99



RW26464 —UN—25AUG99

A—Wheel-to-Rim Tight Fit Hole
B—Wheel-to-Rim Slot Fit Hole
C—Disk-to-Hub Tight Fit Hole
D—Disk-to-Hub Slot Fit Hole

IMPORTANT: Carefully follow procedure for tightening wheel bolts. Failure to do so could lead to wheel hub damage.

TO84419,000016A -19-11MAR13-1/1

Checking Toe-In (MFWD and TLS™ Plus Axles)

1. Make sure tires are in straight forward position by driving tractor in a straight line for at least 15.24 m (50 ft).
2. Verify equal lengths of steering cylinder are showing on either side of tractor.
3. Measure distance between centerline of tires at hub level in front of axle, using an outside bar of each tire or an inside bar of each tire. Mark point that is measured.
4. Move tractor forward until front tires are rotated 180°.
5. Repeat Step 3 at rear of tire, at same point.
6. Determine difference between front and rear measurements. Difference may be in either direction (toe-in or toe-out), but should be adjusted to + or -3 mm (1/8 in.). Setting toe-in as close to 0 as possible will provide least amount of tire wear on hard surfaced roads.



RXA0110374 —UN—13SEP10

TO84419,000016B -19-06MAY13-1/1

Adjusting Toe-In (MFWD and TLS™ Plus Axles)

1. Check to make sure axle is centered.
2. Loosen clamp nut (B) on right or left side of tie rod.
3. Remove pin and nut (A).
4. Remove tie rod end (C) from wheel hub housing.

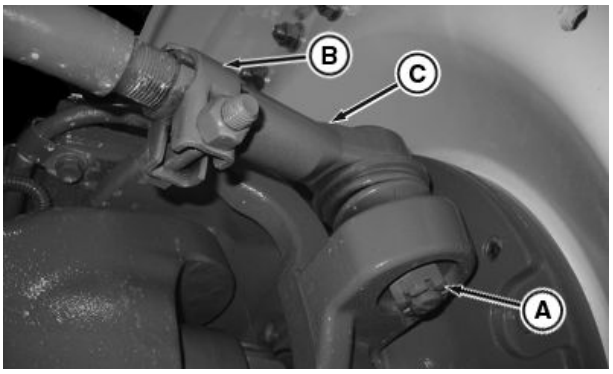
NOTE: Setting toe-in to + or -3 mm (1/8 in.) will provide least amount of tire wear on hard surfaced roads.

5. Rotate tie rod end (C) as necessary to obtain toe-in or toe-out less than specifications. Each turn equals approximately 3 mm (1/8 in.) change.

Specification	
Toe-in or Toe-out—Distance	+ or -3 mm (1/8 in.)

6. Tighten each nut to specifications.

Specification	
Tie-Rod Clamp Nut—Torque	162 N·m (120 lb-ft)



RXA0113529 —UN—11FEB11

A—Nut and Pin
B—Clamp Nut
C—Tie Rod End

NOTE: Clamp cap screw threads should point to front of tractor.

TO84419,000016C -19-04SEP13-1/1

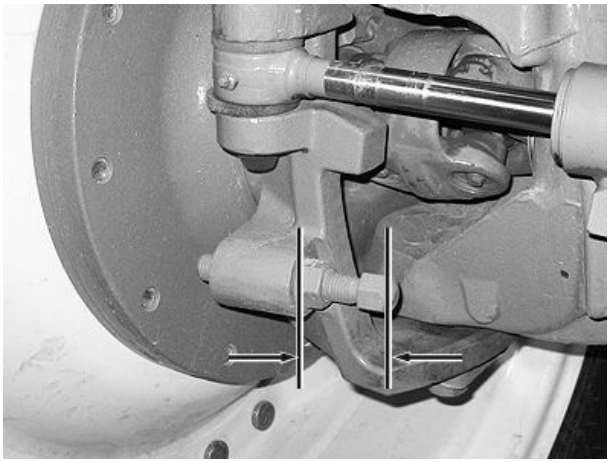
Setting Steering Stop Positions

IMPORTANT: These settings allow 20 mm (0.79 in.) minimum clearance at maximum turn and full axle oscillation. Check for interference with front weights, tie rods, and side frames. If equipped, fenders may deflect against side frame, and/or grille screen during full turn. A minimized turn radius may be obtained by utilizing a shorter stop position.

1. Adjust fenders (if equipped) and tread settings before setting steering stop positions.
2. Select correct steering stop position for tire size and tread setting. See following charts.
3. Set steering stops to correct position by measuring bolt length, as illustrated.
4. Tighten steering stop retaining nuts to specifications.

Specification	
Steering Stop Retaining Nuts—Torque	250 N·m (185 lb-ft)

5. Turn steering wheel fully to the right. Impact knuckle housing to steering stop five times. Repeat for left side.
6. Retighten steering stop retaining nuts to specifications.
7. Verify clearance by turning steering wheel fully to the left and then to the right.



RXA0109356 —UN—10AUG10

STEERING STOP POSITIONS		
Position	**Turn Angle**	**Bolt Length (MFWD and TLS™ Plus Axle) mm (in.)**
0	52°	47 (1.85)
1	47°	60 (2.36)
2	42°	73 (2.87)
3	38°	87 (3.43)
4	34°	98 (3.86)
5	30°	109 (4.29)
6	25°	123 (4.84)

NOTE: Settings listed are approximate, due to variations in tire size. Proper steering stop setting is obtained when the tire is 20 mm (0.79 in.) away from frame or side panels, when axle is fully oscillated.

TLS is a trademark of Deere & Company

TO84419,000016D -19-01JUL14-1/1

Eight Position MFWD Wheel Settings

NOTE: A through H are used for all tires 480 mm (18.9 in) or smaller.

Tread settings are measured at bottom center line of tire.

Use diagram to adjust rim and disk, to obtain a desired tread setting for all tires 480 mm (18.9 in) or smaller.

Using a star shaped pattern, torque disk to rim bolts as needed to maintain torque.

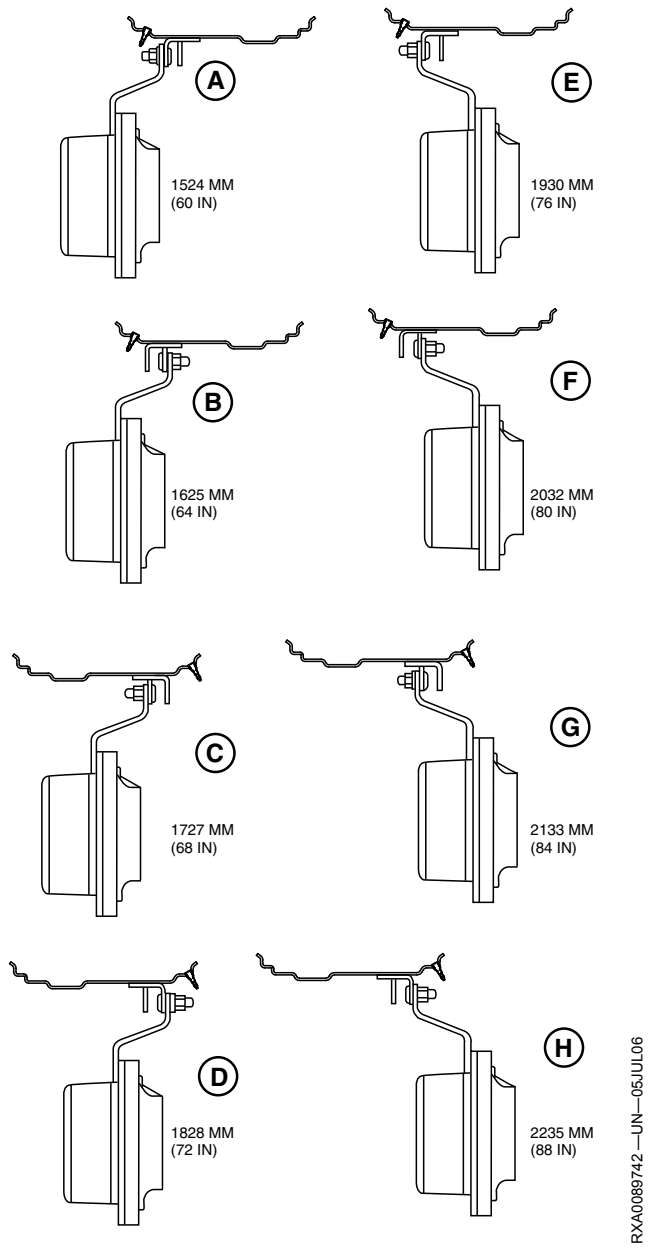
Specification	
Disk to Rim Bolts—Torque	310 N·m (230 lb-ft)

Specification	
Disk to Hub Nuts—Torque	600 N·m (450 lb-ft)

Retighten bolts after working **3 HOURS**, **10 HOURS**, and **DAILY** for first week of operation and then every 250 hours.

IMPORTANT: Carefully follow procedure for tightening wheel bolts. Failure to do so could lead to wheel hub damage.

Adjust fenders and steering stops as required using tables and diagrams on following pages.



Continued on next page

TO84419,000016E -19-07JUL15-1/2

NOTE: I through P are used for 540, 600, and 620 sized tires.

Tread settings are measured at bottom center line of tire.

Use diagram to adjust rim and disk, to a desired tread setting for 540, 600, and 620 sized tires.

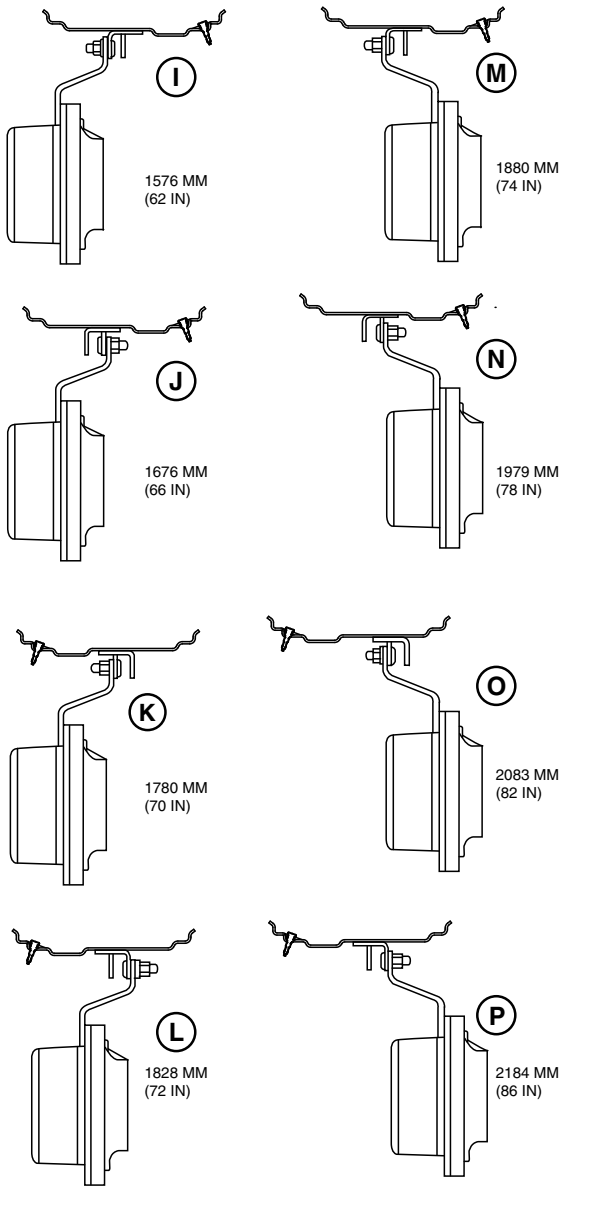
Using a star shaped pattern, torque disk to rim bolts as needed to maintain torque.

Specification	
Disk to Rim Bolts—Torque	310 N·m (230 lb-ft)

Specification	
Disk to Hub Nuts—Torque	600 N·m (450 lb-ft)

Retighten bolts after working **3 HOURS**, **10 HOURS**, and **DAILY** for first week of operation and then every 250 hours.

IMPORTANT: Carefully follow procedure for tightening wheel bolts. Failure to do so could lead to wheel hub damage.

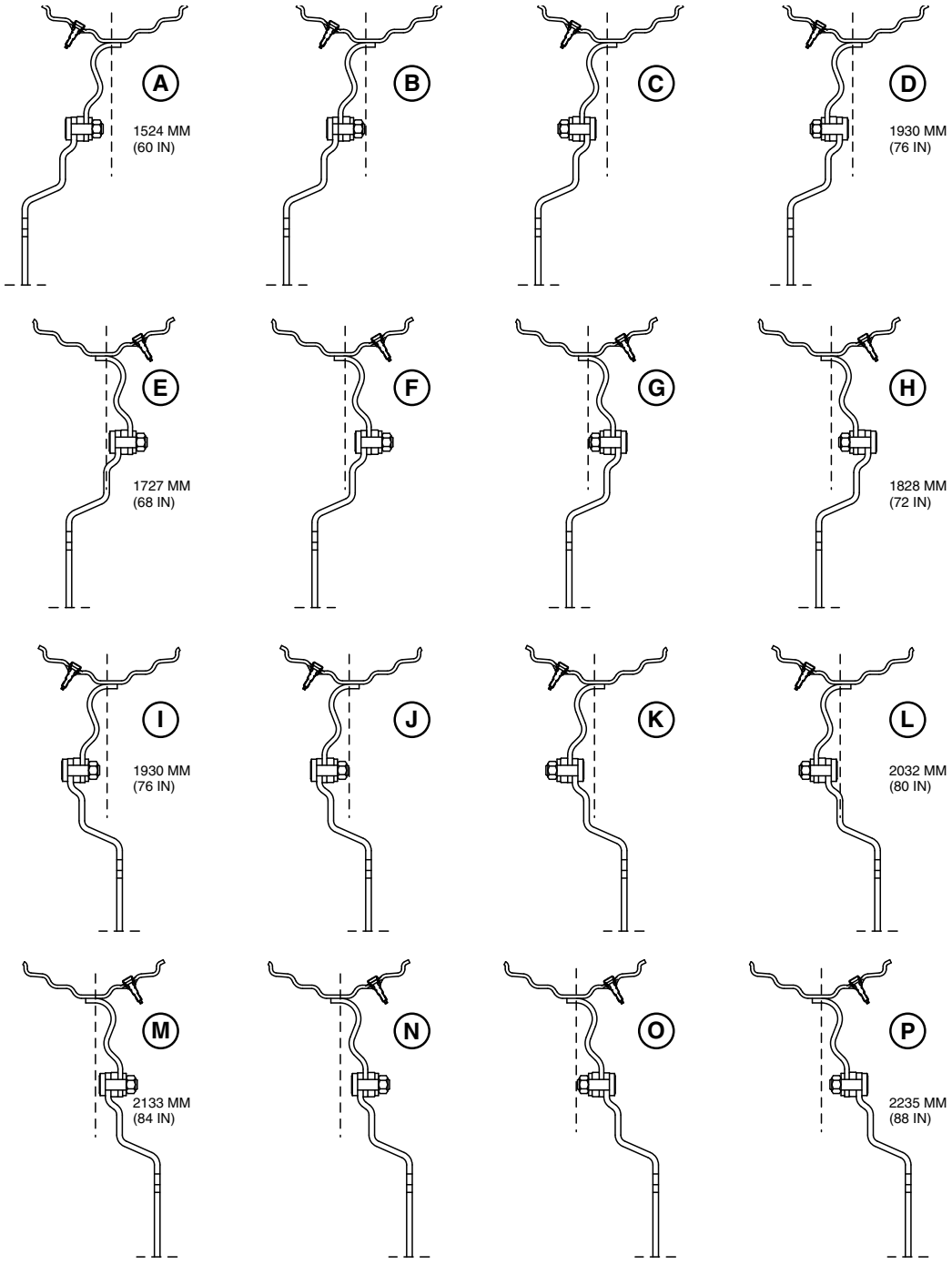


Wheel Positions For MFWD and TLS™ Plus Axles

TLS is a trademark of Deere & Company

TO84419,000016E -19-07JUL15-2/2

16 Position Front Wheel Settings



16 position steel wheel as viewed from behind left tire.

GH15097,0000913 -19-21APR15-1/1

710 mm (28 in.) Extra Wide Deluxe Pivoting Front Fenders - (Early Design)

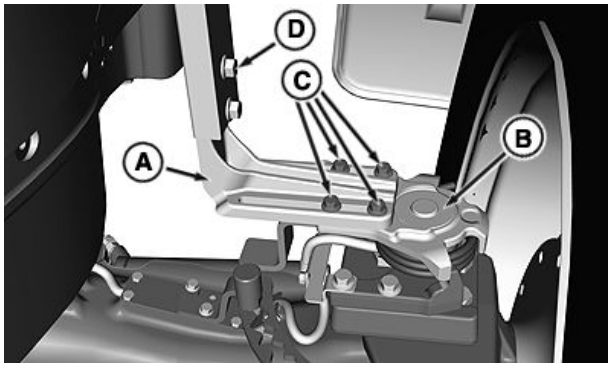
NOTE: Position fender assembly in middle position for initial setup.

1. Install fender assembly (A) to pivot assembly (B) using four M10 x 30 mm cap screws (C).
2. Tighten cap screws to pivot assembly (B) to specifications.

Specification	
Fender Assembly to Pivot Assembly—Torque	70 N·m (52 lb.-ft.)

3. Fender height can be adjusted by repositioning M12 x 35 mm cap screws (D). Tighten fender support bracket cap screws to specifications.

Specification	
Fender Support Bracket to Fender Assembly—Torque	125 N·m (92 lb.-ft.)



RXA0135734 —UN—26SEP13

A—Fender Assembly
B—Pivot Assembly
C—M10 x 30 mm Cap Screws
D—M12 x 35 mm Cap Screws

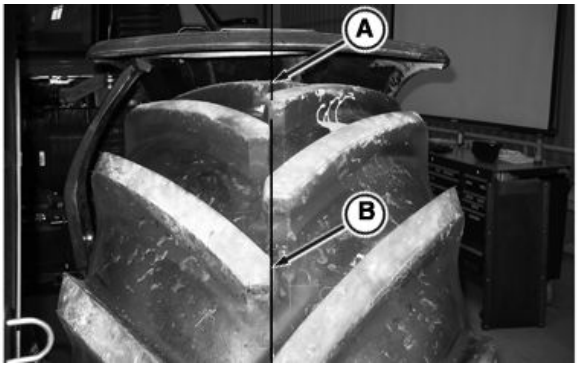
TO84419,000016F -19-20JUL15-1/1

Final Fender Positioning

NOTE: Height can be positioned per customer preference.

1. Position fender so that center of fender (A) is in line with tire center (B) as shown.
2. Torque all cap screws.
3. Verify fender clearance by turning steering wheel to left stop and right stop.

A— Fender Center Line
B— Tire Center Line



RXA0127363 —UN—31JUL12

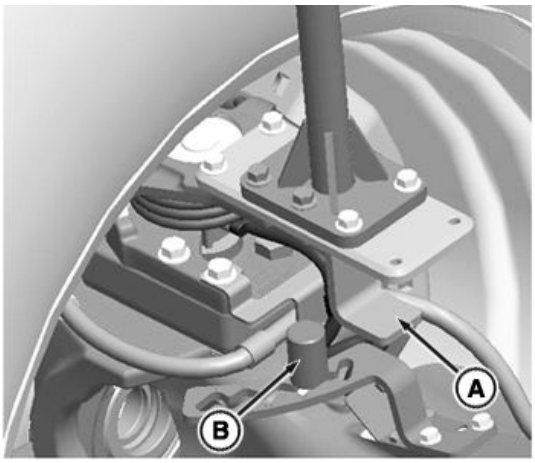
TO84419,0000170 -19-25JUL14-1/1

Fender Settings-MFWD—Deluxe Pivoting Fenders

Bracket Positions

The bracket (A) that contacts fender stop (B) can be replaced as it wears.

A—Bracket
B—Stop

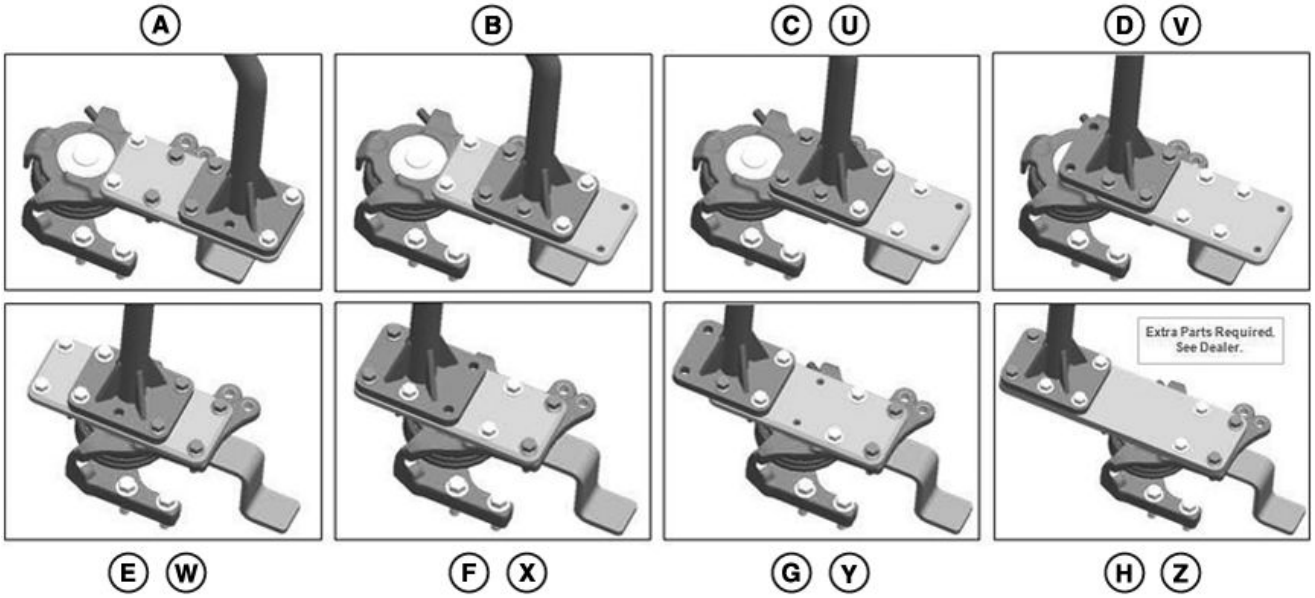


RXA0132028 —UN—12APR13

Continued on next page

TO84419,0000171 -19-13AUG15-1/4

To prevent damage to fender by contact with wheel or hood, place fender bracket and fender stopper in recommended positions.



NOTE: The following positions are only recommendations. Depending on tire size, fender size, and steering stop position, fenders may need additional adjustment from recommended positions listed above.

TO84419,0000171 -19-13AUG15-2/4

Stopper Positions

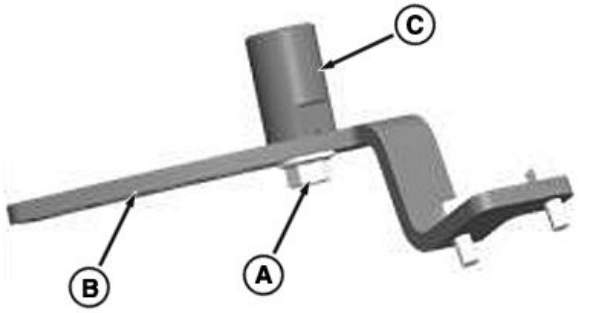
NOTE: The following positions are only recommendations. Depending on tire size, fender size, and steering stop position, fenders may need additional adjustment from recommended positions listed below.

Insert cap screw (A) into bracket (B). Screw on stopper (C) from above.

Stopper (C) can be replaced as it wears.

Some adjustment may be necessary if fender contacts hood on tight turns. Move stopper (C) towards axle, from G position to A position, to move fender further away from hood.

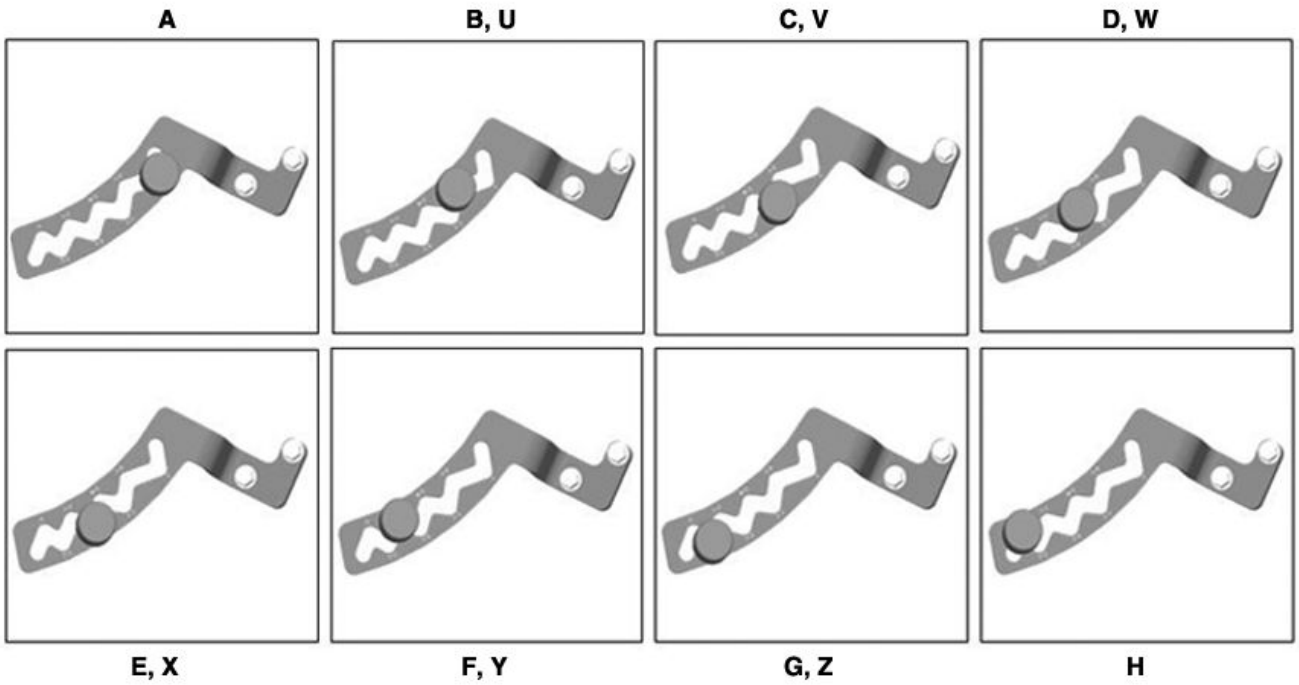
Some adjustment may be necessary if tire contacts fender on tight turns. Move stopper (C) away from axle, from A position to G position, to move fender further away from tire.



A—Cap Screw
B—Bracket
C—Stopper

Continued on next page

TO84419,0000171 -19-13AUG15-3/4



TO84419,0000171 -19-13AUG15-4/4

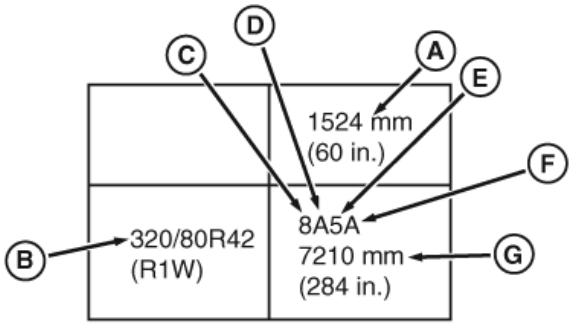
Front Tire, Fender, and Steering Stop Settings Table Explanation

NOTE: This explains tables on next several pages.

First row across top of page lists tread spacing (A) in millimeters and inches.

Column one lists tire size (B).

First number (C) in column two identifies that an eight-position rim is used. First letter (D) indicates which diagram to follow from Eight-Position MFWD Wheel Settings. Next number (E) indicates what steering stop position to use from Setting Steering Stop Positions located in this section. Next letter (F) is bracket position and stopper position setting, which are taken from MFWD Fender Settings—Deluxe Pivoting Fenders located in this section of this Operator's Manual. Last two entries indicate turning radius (G) in millimeters and inches.



A—Tread Spacing
B—Tire Size
C—Eight-Position Rim
D—Tread Setting
E—Steering Stop
F—Bracket and Stopper Settings
G—Turning Radius

TO84419,0000172 -19-12AUG14-1/1

Tire, Steering Stop, and Fender Settings-1150/1300 MFWD Axles

NOTE: Further adjustment is necessary if tire or fender contacts tractor on wide turns.

Model 7210 has an option of either 1150 or 1300 axle, all other models have 1300 axle.

NOTE: 7R Series Tractors have 9° oscillation on all rigid front axles when manufactured. 5° oscillation stops can be ordered through a dealer and installed on rigid front axles with 9° to offer better turning radius by limiting axle oscillation and reducing potential for tractor/tire contact. TLS™ Plus front axle has 9° oscillation and is not adjustable.

Tire, Steering Stop, and Fender Settings - 1150/1300 MFWD Axles, With 9° Oscillation Stops

Tire Size	1524 mm (60 in.)	1575 mm (62 in.)	1626 mm (64 in.)	1676 mm (66 in.)	1727 mm (68 in.)	1778 mm (70 in.)	1803 mm (71 in.)	1829 mm (72 in.)
320/80R42	8A5A 7210 mm 284 in.	Not Available	8B4B 6641 mm 261 in.	Not Available	8C3C[a] 6204 mm 244 in.	Not Available	Not Available	8D2D[b] 5860 mm 231 in.
IF320/80R42	8A5A 7210 mm 284 in.	Not Available	8B4B 6641 mm 261 in.	Not Available	8C3C[a] 6204 mm 244 in.	Not Available	Not Available	8D2D[b] 5860 mm 231 in.
320/85R38	8A4B 6550 mm 258 in.	Not Available	8B3B 6114 mm 241 in.	Not Available	8C2C 5772 mm 227 in.	Not Available	Not Available	8D1E 5414 mm 213 in.
380/80R38	Not Available	Not Available	Not Available	Not Available	16C5C[a] 7396 mm 291 in.	Not Available	Not Available	16D4D[a] 6824 mm 269 in.
380/85R34	8A5A 7210 mm 284 in.	Not Available	8B4B 6641 mm 261 in.	Not Available	8C3C[a] 6204 mm 244 in.	Not Available	Not Available	8D2D[b] 5860 mm 231 in.
420/85R34	Not Available	8I6A 8375 mm 330 in.	Not Available	8J4B 6687 mm 263 in.	Not Available	8K3C[a] 6249 mm 246 in.	Not Available	Not Available
420/90R30	Not Available	8I5A 7257 mm 286 in.	Not Available	8J4B 6687 mm 263 in.	Not Available	8K3C 6249 mm 246 in.	Not Available	Not Available
16.9R30	Not Available	8I5A 7257 mm 286 in.	Not Available	8J4B 6687 mm 263 in.	Not Available	8K3C 6249 mm 246 in.	Not Available	Not Available
480/70R30	Not Available	8I5A 7257 mm 286 in.	Not Available	8J4B 6687 mm 263 in.	Not Available	8K3B 6249 mm 246 in.	Not Available	Not Available
480/70R34	Not Available	8I6A 8375 mm 330 in.	Not Available	8J5A 7350 mm 289 in.	Not Available	8K4B 6778 mm 267 in.	Not Available	Not Available
540/65R30	Not Available	8I6A 8375 mm 330 in.	Not Available	8J4B 6687 mm 263 in.	Not Available	8K3B 6249 mm 246 in.	Not Available	Not Available
540/65R30[c]	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	2C3B 6271 mm 247 in.	Not Available
540/65R34	Not Available	Not Available	Not Available	8J5A 7350 mm 289 in.	Not Available	8K4B 6778 mm 267 in.	Not Available	Not Available
540/65R34[c]	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	2B4B 6801 mm 268 in.	Not Available
600/65R28	Not Available	Not Available	Not Available	Not Available	Not Available	8K4B 6778 mm 267 in.	Not Available	Not Available
600/65R28[c]	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	2B4B 6801 mm 268 in.	Not Available
600/70R30	Not Available	Not Available	Not Available	Not Available	Not Available	8K5A 7443 mm 293 in.	Not Available	Not Available

Continued on next page

Tire, Steering Stop, and Fender Settings - 1150/1300 MFWD Axles, With 9° Oscillation Stops								
Tire Size	**1524 mm (60 in.)**	**1575 mm (62 in.)**	**1626 mm (64 in.)**	**1676 mm (66 in.)**	**1727 mm (68 in.)**	**1778 mm (70 in.)**	**1803 mm (71 in.)**	**1829 mm (72 in.)**
600/70R30[c]	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	2B5B 7466 mm 294 in.	Not Available
IF600/70R30	Not Available	Not Available	Not Available	Not Available	Not Available	8K5A 7443 mm 293 in.	Not Available	Not Available
IF600/70R-30[c]	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	2B5B 7466 mm 294 in.	Not Available

[a]Wide fenders use position B.
[b]Wide fenders use position C.
[c]2 Position Wheel

1150/1300 MFWD Axles, With 9° Oscillation Stops, Tire, Fender, and Steering Stop Settings Continued									
Tire Size	**1880 mm (74 in.)**	**1930 mm (76 in.)**	**1955 mm (77 in.)**	**1981 mm (78 in.)**	**2032 mm (80 in.)**	**2083 mm (82 in.)**	**2133 mm (84 in.)**	**2184 mm (86 in.)**	**2235 mm (88 in.)**
320/80R42	Not Available	8E1E 5500 mm 217 in.	Not Available	Not Available	8F0F 5215 mm 205 in.	Not Available	8G0G[a] 5299 mm 209 in.	Not Available	8H0H 5384 mm 212 in.
IF320/80R42	Not Available	8E1E 5500 mm 217 in.	Not Available	Not Available	8F0F 5215 mm 205 in.	Not Available	8G0G[a] 5299 mm 209 in.	Not Available	8H0H 5384 mm 212 in.
320/85R38	Not Available	8E0F 5131 mm 202 in.	Not Available	Not Available	8F0F 5215 mm 205 in.	Not Available	8G0G[a] 5299 mm 209 in.	Not Available	8H0G 5384 mm 212 in.
380/80R38	Not Available	16E3E[b] 6384 mm 251 in.	Not Available	Not Available	16F2F[c] 6037 mm 238 in.	Not Available	16G1G 5673 mm 223 in.	Not Available	16H0H 5384 mm 212 in.
380/85R34	Not Available	8E1E 5500 mm 217 in.	Not Available	Not Available	8F0F 5215 mm 205 in.	Not Available	8G0G[a] 5299 mm 209 in.	Not Available	8H0G 5384 mm 212 in.
420/85R34	8M2D[b] 5904 mm 232 in.	Not Available	Not Available	8N1E 5543 mm 218 in.	Not Available	8O1F 5630 mm 222 in.	Not Available	8P0H 5342 mm 210 in.	Not Available
420/90R30	8M2D 5904 mm 232 in.	Not Available	Not Available	8N1E 5543 mm 218 in.	Not Available	8O0F 5257 mm 207 in.	Not Available	8P0G 5342 mm 210 in.	Not Available
16.9R30	8M2D 5904 mm 232 in.	Not Available	Not Available	8N1E 5543 mm 218 in.	Not Available	8O0F 5257 mm 207 in.	Not Available	8P0H[a] 5342 mm 210 in.	Not Available
480/70R30	8M2C 5904 mm 232 in.	Not Available	Not Available	8N1E 5543 mm 218 in.	Not Available	8O0F 5257 mm 207 in.	Not Available	8P0F 5342 mm 210 in.	Not Available
480/70R34	8M3C 6339 mm 250 in.	Not Available	Not Available	8N2D 5992 mm 236 in.	Not Available	8O1F 5630 mm 222 in.	Not Available	8P0G 5342 mm 210 in.	Not Available
540/65R30	8M2C 5904 mm 232 in.	Not Available	Not Available	8N1E 5543 mm 218 in.	Not Available	8O0F 5257 mm 207 in.	Not Available	8P0F 5342 mm 210 in.	Not Available
540/65R30[d]	Not Available	Not Available	2D1E 5522 mm 217 in.	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
540/65R34	8M3C 6339 mm 250 in.	Not Available	Not Available	8N2D 5992 mm 236 in.	Not Available	8O1F 5630 mm 222 in.	Not Available	8P0F 5342 mm 210 in.	Not Available
540/65R34[d]	Not Available	Not Available	2C3C 6406 mm 252 in.	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
600/65R28	8M3C 6339 mm 250 in.	Not Available	Not Available	8N2D 5992 mm 236 in.	Not Available	8O1E 5630 mm 222 in.	Not Available	8P0F 5342 mm 210 in.	Not Available

Continued on next page

1150/1300 MFWD Axles, With 9° Oscillation Stops, Tire, Fender, and Steering Stop Settings Continued									
Tire Size	**1880 mm (74 in.)**	**1930 mm (76 in.)**	**1955 mm (77 in.)**	**1981 mm (78 in.)**	**2032 mm (80 in.)**	**2083 mm (82 in.)**	**2133 mm (84 in.)**	**2184 mm (86 in.)**	**2235 mm (88 in.)**
600/65R28[d]	Not Available	Not Available	2C3C 6406 mm 252 in.	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
600/70R30	8M4B 6870 mm 270 in.	Not Available	Not Available	8N3C 6429 mm 253 in.	Not Available	8O2E 6081 mm 239 in.	Not Available	8P1F 5717 mm 225 in.	Not Available
600/70R30[d]	Not Available	Not Available	2C4C 6939 mm 273 in.	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
IF600/70R30	8M4B 6870 mm 270 in.	Not Available	Not Available	8N3C 6429 mm 253 in.	Not Available	8O2E 6081 mm 239 in.	Not Available	8P1F 5717 mm 225 in.	Not Available
IF600/70R-30[d]	Not Available	Not Available	2C4C 6939 mm 273 in.	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available

[a]Wide fenders use position F.
[b]Wide fenders use position C.
[c]Wide fenders use position E.
[d]2 Position Wheel

1150/1300 MFWD Axles, With 5° Oscillation Stops, Tire, Fender, and Steering Stop Settings								
Tire Size	**1524 mm (60 in.)**	**1575 mm (62 in.)**	**1626 mm (64 in.)**	**1676 mm (66 in.)**	**1727 mm (68 in.)**	**1778 mm (70 in.)**	**1803 mm (71 in.)**	**1829 mm (72 in.)**
320/80R42	8A5A 7210 mm 284 in.	Not Available	8B4B 6641 mm 261 in.	Not Available	8C2C 5772 mm 227 in.	Not Available	Not Available	8D2D[a] 5860 mm 231 in.
IF320/80R42	8A5A 7210 mm 284 in.	Not Available	8B4B 6641 mm 261 in.	Not Available	8C2C 5772 mm 227 in.	Not Available	Not Available	8D2D[a] 5860 mm 231 in.
320/85R38	8A4B 6550 mm 258 in.	Not Available	8B3B 6114 mm 241 in.	Not Available	8C2C 5772 mm 227 in.	Not Available	Not Available	8D1E 5414 mm 213 in.
380/80R38	16A6A 8327 mm 328 in.	Not Available	16B4B 6641 mm 261 in.	Not Available	16C3C[b] 6204 mm 244 in.	Not Available	Not Available	16D2D[a] 5860 mm 231 in.
380/85R34	8A5A 7210 mm 284 in.	Not Available	8B4B 6641 mm 261 in.	Not Available	8C2C 5772 mm 227 in.	Not Available	Not Available	8D1D 5414 mm 213 in.
420/85R34	Not Available	8I5A 7257 mm 286 in.	Not Available	8J4B 6687 mm 263 in.	Not Available	8K3C[b] 6249 mm 246 in.	Not Available	Not Available
420/90R30	Not Available	8I5A 7257 mm 286 in.	Not Available	8J4B 6687 mm 263 in.	Not Available	8K2C 5816 mm 229 in.	Not Available	Not Available
16.9R30	Not Available	8I5A 7257 mm 286 in.	Not Available	8J4B 6687 mm 263 in.	Not Available	8K3C 6249 mm 246 in.	Not Available	Not Available
480/70R30	Not Available	8I5A 7257 mm 286 in.	Not Available	8J4B 6687 mm 263 in.	Not Available	8K2C 5816 mm 229 in.	Not Available	Not Available
480/70R34	Not Available	8I6A 8375 mm 330 in.	Not Available	8J5A 7350 mm 289 in.	Not Available	8K4B 6778 mm 267 in.	Not Available	Not Available
540/65R30	Not Available	8I6A 8375 mm 330 in.	Not Available	8J4B 6687 mm 263 in.	Not Available	8K3B 6249 mm 246 in.	Not Available	Not Available
540/65R30[c]	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	2C3B 6271 mm 247 in.	Not Available
540/65R34	Not Available	Not Available	Not Available	8J5A 7350 mm 289 in.	Not Available	8K4B 6778 mm 267 in.	Not Available	Not Available

Continued on next page

GH15097,000093D -19-13AUG15-3/5

1150/1300 MFWD Axles, With 5° Oscillation Stops, Tire, Fender, and Steering Stop Settings								
Tire Size	**1524 mm (60 in.)**	**1575 mm (62 in.)**	**1626 mm (64 in.)**	**1676 mm (66 in.)**	**1727 mm (68 in.)**	**1778 mm (70 in.)**	**1803 mm (71 in.)**	**1829 mm (72 in.)**
540/65R34[c]	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	2B4B 6801 mm 268 in.	Not Available
600/65R28	Not Available	Not Available	Not Available	Not Available	Not Available	8K4B 6778 mm 267 in.	Not Available	Not Available
600/65R28[c]	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	2B4B 6801 mm 268 in.	Not Available
600/70R30	Not Available	Not Available	Not Available	Not Available	Not Available	8K5A 7443 mm 293 in.	Not Available	Not Available
600/70R30[c]	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	2B5B 7466 mm 294 in.	Not Available
IF600/70R30	Not Available	Not Available	Not Available	Not Available	Not Available	8K5A 7443 mm 293 in.	Not Available	Not Available
IF600/70R-30[c]	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	2B5B 7466 mm 294 in.	Not Available

[a]Wide fenders use position C.
[b]Wide fenders use position B.
[c]2 Position Wheel

1150/1300 MFWD Axles, With 5° Oscillation Stops, Tire, Fender, and Steering Stop Settings-Continued									
Tire Size	**1880 mm (74 in.)**	**1930 mm (76 in.)**	**1955 mm (77 in.)**	**1981 mm (78 in.)**	**2032 mm (80 in.)**	**2083 mm (82 in.)**	**2133 mm (84 in.)**	**2184 mm (86 in.)**	**2235 mm (88 in.)**
320/80R42	Not Available	8E1E 5500 mm 217 in.	Not Available	Not Available	8F0F 5215 mm 205 in.	Not Available	8G0G[a] 5299 mm 209 in.	Not Available	8H0H 5384 mm 212 in.
IF320/80R42	Not Available	8E1E 5500 mm 217 in.	Not Available	Not Available	8F0F 5215 mm 205 in.	Not Available	8G0G[a] 5299 mm 209 in.	Not Available	8H0H 5384 mm 212 in.
320/85R38	Not Available	8E0F 5131 mm 202 in.	Not Available	Not Available	8F0F 5215 mm 205 in.	Not Available	8G0G[a] 5299 mm 209 in.	Not Available	8H0H 5384 mm 212 in.
380/80R38	Not Available	16E1E 5500 mm 217 in.	Not Available	Not Available	16F1F 5587 mm 220 in.	Not Available	16G0G 5299 mm 209 in.	Not Available	16H0G 5384 mm 212 in.
380/85R34	Not Available	8E1E 5500 mm 217 in.	Not Available	Not Available	8F0F 5215 mm 205 in.	Not Available	8G0G[a] 5299 mm 209 in.	Not Available	8H0G 5384 mm 212 in.
420/85R34	8M2D[b] 5904 mm 232 in.	Not Available	Not Available	8N1E 5543 mm 218 in.	Not Available	8O0G 5257 mm 207 in.	Not Available	8P0H 5342 mm 210 in.	Not Available
420/90R30	8M1D 5457 mm 215 in.	Not Available	Not Available	8N1E 5543 mm 218 in.	Not Available	8O0F 5257 mm 207 in.	Not Available	8P0G 5342 mm 210 in.	Not Available
16.9R30	8M2D 5904 mm 232 in.	Not Available	Not Available	8N1E 5543 mm 218 in.	Not Available	8O0F 5257 mm 207 in.	Not Available	8P0H[a] 5342 mm 210 in.	Not Available
480/70R30	8M1D 5457 mm 215 in.	Not Available	Not Available	8N0E 5173 mm 204 in.	Not Available	8O0F 5257 mm 207 in.	Not Available	8P0F 5342 mm 210 in.	Not Available
480/70R34	8M3C 6339 mm 250 in.	Not Available	Not Available	8N2D 5992 mm 236 in.	Not Available	8O1F 5630 mm 222 in.	Not Available	8P0G 5342 mm 210 in.	Not Available
540/65R30	8M2C 5904 mm 232 in.	Not Available	Not Available	8N1E 5543 mm 218 in.	Not Available	8O0F 5257 mm 207 in.	Not Available	8P0F 5342 mm 210 in.	Not Available

Continued on next page

GH15097,000093D -19-13AUG15-4/5

1150/1300 MFWD Axles, With 5° Oscillation Stops, Tire, Fender, and Steering Stop Settings-Continued									
Tire Size	**1880 mm (74 in.)**	**1930 mm (76 in.)**	**1955 mm (77 in.)**	**1981 mm (78 in.)**	**2032 mm (80 in.)**	**2083 mm (82 in.)**	**2133 mm (84 in.)**	**2184 mm (86 in.)**	**2235 mm (88 in.)**
540/65R30[c]	Not Available	Not Available	2D1E 5522 mm 217 in.	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
540/65R34	8M3C 6339 mm 250 in.	Not Available	Not Available	8N2D 5992 mm 236 in.	Not Available	8O1F 5630 mm 222 in.	Not Available	8P0F 5342 mm 210 in.	Not Available
540/65R34[c]	Not Available	Not Available	2C3C 6406 mm 252 in.	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
600/65R28	8M3C 6339 mm 250 in.	Not Available	Not Available	8N2D 5992 mm 236 in.	Not Available	8O1E 5630 mm 222 in.	Not Available	8P0F 5342 mm 210 in.	Not Available
600/65R28[c]	Not Available	Not Available	2C3C 6406 mm 252 in.	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
600/70R30	8M4B 6870 mm 270 in.	Not Available	Not Available	8N2C 5992 mm 236 in.	Not Available	8O2E 6081 mm 239 in.	Not Available	8P1F 5717 mm 225 in.	Not Available
600/70R30[c]	Not Available	Not Available	2C3C 6406 mm 252 in.	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
IF600/70R30	8M4B 6870 mm 270 in.	Not Available	Not Available	8N2C 5992 mm 236 in.	Not Available	8O2E 6081 mm 239 in.	Not Available	8P1F 5717 mm 225 in.	Not Available
IF600/70R-30[c]	Not Available	Not Available	2C3C 6406 mm 252 in.	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available

[a] *Wide fenders use position F.*
[b] *Wide fenders use position C.*
[c] *2 Position Wheel*

GH15097,000093D -19-13AUG15-5/5

Tire, Steering Stop, and Fender Settings-TLS Plus Axle

NOTE: Further adjustment is necessary if tire or fender contacts tractor on wide turns.

Front Tire, Steering Stop, and Fender Settings-TLS™ Plus axle								
Tire Size	**1524 mm (60 in.)**	**1575 mm (62 in.)**	**1626 mm (64 in.)**	**1676 mm (66 in.)**	**1727 mm (68 in.)**	**1778 mm (70 in.)**	**1803 mm (71 in.)**	**1829 mm (72 in.)**
290/90R38	8A4B 6550 mm 258 in.	Not Available	8B3B 6114 mm 241 in.	Not Available	8C2C 5772 mm 227 in.	Not Available	Not Available	8D1E 5414 mm 213 in.
320/80R42	8A5A 7210 mm 284 in.	Not Available	8B4B 6641 mm 261 in.	Not Available	8C3C[a] 6204 mm 244 in.	Not Available	Not Available	8D2D[b] 5860 mm 231 in.
IF320/80R42	8A5A 7210 mm 284 in.	Not Available	8B4B 6641 mm 261 in.	Not Available	8C3C[a] 6204 mm 244 in.	Not Available	Not Available	8D2D[b] 5860 mm 231 in.
320/85R38	8A5A 7210 mm 284 in.	Not Available	8B3B 6114 mm 241 in.	Not Available	8C2C 5772 mm 227 in.	Not Available	Not Available	8D1E 5414 mm 213 in.
380/80R38	Not Available	Not Available	8B5B[c] 7303 mm 288 in.	Not Available	8C4C[a] 6732 mm 265 in.	Not Available	Not Available	8D3D[a] 6294 mm 248 in.
380/80R42	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
380/85R34	8A5A 7210 mm 284 in.	Not Available	8B4B 6641 mm 261 in.	Not Available	8C3C[a] 6204 mm 244 in.	Not Available	Not Available	8D2D[b] 5860 mm 231 in.
420/85R34	Not Available	8I6A 8375 mm 330 in.	Not Available	8J5B[c] 7350 mm 289 in.	Not Available	8K4C[a] 6778 mm 267 in.	Not Available	Not Available
420/85R38	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
420/90R30	Not Available	8I5A 7257 mm 286 in.	Not Available	8J4B 6687 mm 263 in.	Not Available	8K3C 6249 mm 246 in.	Not Available	Not Available
16.9R30	Not Available	8I6A 8375 mm 330 in.	Not Available	8J4B 6687 mm 263 in.	Not Available	8K3C 6249 mm 246 in.	Not Available	Not Available
480/70R30	Not Available	8I6A 8375 mm 330 in.	Not Available	8J5B[c] 7350 mm 289 in.	Not Available	8K3B 6249 mm 246 in.	Not Available	Not Available
480/70R34	Not Available	8I6A 8375 mm 330 in.	Not Available	8J5A 7350 mm 289 in.	Not Available	8K4B 6778 mm 267 in.	Not Available	Not Available
540/65R30	Not Available	Not Available	Not Available	8J5A 7350 mm 289 in.	Not Available	8K3B 6249 mm 246 in.	Not Available	Not Available
540/65R30[d]	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	2C3B 6271 mm 247 in.	Not Available
540/65R34	Not Available	Not Available	Not Available	8J6A 8470 mm 333 in.	Not Available	8K4B 6778 mm 267 in.	Not Available	Not Available
540/65R34[d]	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	2C4B 6801 mm 268 in.	Not Available
540/75R34	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
600/65R28	Not Available	Not Available	Not Available	Not Available	Not Available	8K4B 6778 mm 267 in.	Not Available	Not Available

Continued on next page

GH15097,000093E -19-13AUG15-1/3

Front Tire, Steering Stop, and Fender Settings-TLS™ Plus axle								
Tire Size	**1524 mm (60 in.)**	**1575 mm (62 in.)**	**1626 mm (64 in.)**	**1676 mm (66 in.)**	**1727 mm (68 in.)**	**1778 mm (70 in.)**	**1803 mm (71 in.)**	**1829 mm (72 in.)**
600/65R28[d]	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	2C4B 6801 mm 268 in.	Not Available
600/65R34	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
600/70R30	Not Available	Not Available	Not Available	Not Available	Not Available	8K5A 7443 mm 293 in.	Not Available	Not Available
600/70R30[d]	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	2B5B 7466 mm 294 in.	Not Available
IF600/70R30	Not Available	Not Available	Not Available	Not Available	Not Available	8K5A 7443 mm 293 in.	Not Available	Not Available
IF600/70R30[d]	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	2B5B 7466 mm 294 in.	Not Available
620/75R30	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
IF620/75R30	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available

[a]Wide fenders use position B.
[b]Wide fenders use position C.
[c]Wide fenders use position A.
[d]2 Position Wheel

TLS™ Plus Front Tire, Fender, and Steering Stop Settings Continued									
Tire Size	**1880 mm (74 in.)**	**1930 mm (76 in.)**	**1955 mm (77 in.)**	**1981 mm (78 in.)**	**2032 mm (80 in.)**	**2083 mm (82 in.)**	**2133 mm (84 in.)**	**2184 mm (86 in.)**	**2235 mm (88 in.)**
290/90R38	Not Available	8E0F 5131 mm 202 in.	Not Available	Not Available	8F0F 5215 mm 205 in.	Not Available	8G0G[a] 5299 mm 209 in.	Not Available	8H0G 5384 mm 212 in.
320/80R42	Not Available	8E1E 5500 mm 217 in.	Not Available	Not Available	8F1F[b] 5587 mm 220 in.	Not Available	8G0G[a] 5299 mm 209 in.	Not Available	8H0H 5384 mm 212 in.
320/85R38	Not Available	8E0F 5131 mm 202 in.	Not Available	Not Available	8F0F 5215 mm 205 in.	Not Available	8G0G[a] 5299 mm 209 in.	Not Available	8H0G 5384 mm 212 in.
380/80R42	Not Available	8E5W[c] 7583 mm 299 in.	Not Available	Not Available	8F4X[d] 7008 mm 276 in.	Not Available	8G3Y-[d] 6565 mm 258 in.	Not Available	8H1Z-[e] 5761 mm 227 in.
IF380/80R42	Not Available	8E5W[c] 7583 mm 299 in.	Not Available	Not Available	8F4X[d] 7008 mm 276 in.	Not Available	8G3Y-[d] 6565 mm 258 in.	Not Available	8H1Z-[e] 5761 mm 227 in.
380/80R38	Not Available	8E2E[f] 5948 mm 234 in.	Not Available	Not Available	8F1F 5587 mm 220 in.	Not Available	8G0G 5299 mm 209 in.	Not Available	8H0H 5384 mm 212 in.
380/85R34	Not Available	8E1E 5500 mm 217 in.	Not Available	Not Available	8F0F 5215 mm 205 in.	Not Available	8G0G[a] 5299 mm 209 in.	Not Available	8H0G 5384 mm 212 in.
420/85R34	8M3D[f] 6339 mm 250 in.	Not Available	Not Available	8N2E[g] 5992 mm 236 in.	Not Available	8O1F 5630 mm 222 in.	Not Available	8P0H 5342 mm 210 in.	Not Available
420/85R38	Not Available	8E6W 8709 mm 343 in.	Not Available	Not Available	8F4X[d] 7008 mm 276 in.	Not Available	8G3Y-[d] 6565 mm 258 in.	Not Available	8H2Z-[e] 6215 mm 245 in.
420/90R30	8M2D 5904 mm 232 in.	Not Available	Not Available	8N1E 5543 mm 218 in.	Not Available	8O0F 5257 mm 207 in.	Not Available	8P0G 5342 mm 210 in.	Not Available
16.9R30	8M2D 5904 mm 232 in.	Not Available	Not Available	8N1E 5543 mm 218 in.	Not Available	8O1F 5630 mm 222 in.	Not Available	8P0H[a] 5342 mm 210 in.	Not Available

Continued on next page

GH15097,000093E -19-13AUG15-2/3

TLS™ Plus Front Tire, Fender, and Steering Stop Settings Continued									
Tire Size	**1880 mm (74 in.)**	**1930 mm (76 in.)**	**1955 mm (77 in.)**	**1981 mm (78 in.)**	**2032 mm (80 in.)**	**2083 mm (82 in.)**	**2133 mm (84 in.)**	**2184 mm (86 in.)**	**2235 mm (88 in.)**
480/70R30	8M2C 5904 mm 232 in.	Not Available	Not Available	8N1E 5543 mm 218 in.	Not Available	8O0F 5257 mm 207 in.	Not Available	8P0F 5342 mm 210 in.	Not Available
480/70R34	8M3C 6339 mm 250 in.	Not Available	Not Available	8N2D 5992 mm 236 in.	Not Available	8O1F 5630 mm 222 in.	Not Available	8P0G 5342 mm 210 in.	Not Available
540/65R30	8M2C 5904 mm 232 in.	Not Available	Not Available	8N1E 5543 mm 218 in.	Not Available	8O0F 5257 mm 207 in.	Not Available	8P0F 5342 mm 210 in.	Not Available
540/65R30[h]	Not Available	Not Available	2D2D 5970 mm 235 in.	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
540/65R34	8M3C 6339 mm 250 in.	Not Available	Not Available	8N2D 5992 mm 236 in.	Not Available	8O1F 5630 mm 222 in.	Not Available	8P1F 5717 mm 225 in.	Not Available
540/65R34[h]	Not Available	Not Available	2C3C 6406 mm 252 in.	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
540/75R34	Not Available	Not Available	Not Available	8N6V 8757 mm 345 in.	Not Available	8O5W 7724 mm 304 in.	Not Available	8P3X 6611 mm 260 in.	Not Available
600/65R28	8M3C 6339 mm 250 in.	Not Available	Not Available	8N2D 5992 mm 236 in.	Not Available	8O1E 5630 mm 222 in.	Not Available	8P0F 5342 mm 210 in.	Not Available
600/65R28[h]	Not Available	Not Available	2C3C 6406 mm 252 in.	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
600/65R34	Not Available	Not Available	Not Available	Not Available	Not Available	8O6W 8853 mm 349 in.	Not Available	8P4X 7147 mm 281 in.	Not Available
600/70R30	8M4B 6870 mm 270 in.	Not Available	Not Available	8N3C 6429 mm 253 in.	Not Available	8O2E 6081 mm 239 in.	Not Available	8P1F 5717 mm 225 in.	Not Available
600/70R30[h]	Not Available	Not Available	2C3C 6406 mm 252 in.	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
IF600/70R30	8M4B 6870 mm 270 in.	Not Available	Not Available	8N3C 6429 mm 253 in.	Not Available	8O2E 6081 mm 239 in.	Not Available	8P1F 5717 mm 225 in.	Not Available
600/70R30[h]	Not Available	Not Available	2C3C 6406 mm 252 in.	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
620/75R30	Not Available	Not Available	Not Available	Not Available	Not Available	8O6W 8853 mm 349 in.	Not Available	8P4X 7147 mm 281 in.	Not Available
IF620/75R30	Not Available	Not Available	Not Available	Not Available	Not Available	8O6W 8853 mm 349 in.	Not Available	8P4X 7147 mm 281 in.	Not Available

[a]Wide fenders use position F.
[b]Wide fenders use position E.
[c]Wide fenders use position V.
[d]Wide fenders use position W.
[e]Not available with wide fenders
[f]Wide fenders use position C.
[g]Wide fenders use position D.
[h]2 Position Wheel

GH15097,000093E -19-13AUG15-3/3

Tire, Steering Stop, and Fender Settings-1150/1300 MFWD Axles-With Front Hitch

NOTE: Further adjustment is necessary if tire or fender contacts tractor on wide turns.

Model 7210 has an option of either 1150 or 1300 axle, all other models have only the 1300 axle.

NOTE: 7R Series Tractors have 9° oscillation on all rigid front axles when manufactured. 5° oscillation stops can be ordered through a dealer and installed on rigid front axles with 9° to offer better turning radius by limiting axle oscillation and reducing potential for tractor/tire contact. TLS front axle has 9° oscillation and is not adjustable.

Front Tire, Steering Stop, and Fender Settings-1150/1300 MFWD axles with 9° oscillation stops, with front hitch

Tire Size	1524 mm (60 in.)	1575 mm (62 in.)	1626 mm (64 in.)	1676 mm (66 in.)	1727 mm (68 in.)	1778 mm (70 in.)	1803 mm (71 in.)	1829 mm (72 in.)
320/80R42	8A6A 8327 mm 328 in.	Not Available	8B4B 6641 mm 261 in.	Not Available	8C3C[a] 6204 mm 244 in.	Not Available	Not Available	8D2D[b] 5860 mm 231 in.
IF320/80R42	8A6A 8327 mm 328 in.	Not Available	8B4B 6641 mm 261 in.	Not Available	8C3C[a] 6204 mm 244 in.	Not Available	Not Available	8D2D[b] 5860 mm 231 in.
380/80R38	Not Available	Not Available	Not Available	Not Available	16C5C[c] 7396 mm 291 in.	Not Available	Not Available	16D4D[a] 6824 mm 269 in.
420/85R34	Not Available	Not Available	Not Available	8J5B 7350 mm 289 in.	Not Available	8K3C[a] 6249 mm 246 in.	Not Available	Not Available
480/70R34	Not Available	Not Available	Not Available	8J5A 7350 mm 289 in.	Not Available	8K4B 6778 mm 267 in.	Not Available	Not Available
540/65R34	Not Available	Not Available	Not Available	Not Available	Not Available	8K4B 6778 mm 267 in.	Not Available	Not Available
540/65R34[d]	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	2B4B 6801 mm 268 in.	Not Available
600/70R30	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
600/70R30[d]	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	2B6B 8589 mm 338 in.	Not Available
IF600/70R30	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
IF600/70R-30[d]	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	2B6B 8589 mm 338 in.	Not Available

[a] *Wide fenders use position B.*
[b] *Wide fenders use position C.*
[c] *Wide fenders use position A.*
[d] *2 Position Wheel*

Front Tire, Steering Stop, and Fender Settings-1150/1300 MFWD axles with 5° oscillation stops, with front hitch

Tire Size	1880 mm (74 in.)	1930 mm (76 in.)	1955 mm (77 in.)	1981 mm (78 in.)	2032 mm (80 in.)	2083 mm (82 in.)	2133 mm (84 in.)	2184 mm (86 in.)	2235 mm (88 in.)
320/80R42	Not Available	8E1E 5500 mm 217 in.	Not Available	Not Available	8F0F 5215 mm 205 in.	Not Available	8G0G[a] 5299 mm 209 in.	Not Available	8H0H 5384 mm 212 in.
IF320/80 R42	Not Available	8E1E 5500 mm 217 in.	Not Available	Not Available	8F0F 5215 mm 205 in.	Not Available	8G0G[a] 5299 mm 209 in.	Not Available	8H0H 5384 mm 212 in.
380/80R38	Not Available	16E3E[b] 6384 mm 251 in.	Not Available	Not Available	16F2F[c] 6037 mm 238 in.	Not Available	16G1G 5673 mm 223 in.	Not Available	16H0H 5384 mm 212 in.
420/85R34	8M2D[b] 5904 mm 232 in.	Not Available	Not Available	8N1E 5543 mm 218 in.	Not Available	8O1F 5630 mm 222 in.	Not Available	8P0H 5342 mm 210 in.	Not Available

Continued on next page

Front Tire, Steering Stop, and Fender Settings-1150/1300 MFWD axles with 5° oscillation stops, with front hitch									
Tire Size	**1880 mm (74 in.)**	**1930 mm (76 in.)**	**1955 mm (77 in.)**	**1981 mm (78 in.)**	**2032 mm (80 in.)**	**2083 mm (82 in.)**	**2133 mm (84 in.)**	**2184 mm (86 in.)**	**2235 mm (88 in.)**
480/70R34	8M3C 6339 mm 250 in.	Not Available	Not Available	8N2D 5992 mm 236 in.	Not Available	8O1F 5630 mm 222 in.	Not Available	8P0G 5342 mm 210 in.	Not Available
540/65R34	8M3C 6339 mm 250 in.	Not Available	Not Available	8N2D 5992 mm 236 in.	Not Available	8O1F 5630 mm 222 in.	Not Available	8P0F 5342 mm 210 in.	Not Available
540/65R34[d]	Not Available	Not Available	2C3C 6406 mm 252 in.	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
600/70R30	8M4B 6870 mm 270 in.	Not Available	Not Available	8N3C 6429 mm 253 in.	Not Available	8O2E 6081 mm 239 in.	Not Available	8P1F 5717 mm 225 in.	Not Available
600/70R30[d]	Not Available	Not Available	2C4C 6939 mm 273 in.	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
IF600/70 R30	8M4B 6870 mm 270 in.	Not Available	Not Available	8N3C 6429 mm 253 in.	Not Available	8O2E 6081 mm 239 in.	Not Available	8P1F 5717 mm 225 in.	Not Available
IF600/70R-30[d]	Not Available	Not Available	2C4C 6939 mm 273 in.	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available

[a]Wide fenders use position F.
[b]Wide fenders use position C.
[c]Wide fenders use position E.
[d]2 Position Wheel

NOTE: Further adjustment may be necessary if tire or fender contacts tractor on wide turns.

If tire size is not listed in following charts, see 1150/1300 MFWD Axles, Tire, Fender, and Steering Stop Settings in this section.

Front Tire, Steering Stop, and Fender Settings-1150/1300 MFWD axles with 5° oscillation stops, with front hitch								
Tire Size	**1524 mm (60 in.)**	**1575 mm (62 in.)**	**1626 mm (64 in.)**	**1676 mm (66 in.)**	**1727 mm (68 in.)**	**1778 mm (70 in.)**	**1803 mm (71 in.)**	**1829 mm (72 in.)**
320/80R42	8A5A 7210 mm 284 in.	Not Available	8B4B 6641 mm 261 in.	Not Available	8C2C 5772 mm 227 in.	Not Available	Not Available	8D2D[a] 5860 mm 231 in.
380/80R38	Not Available	Not Available	16B6B[b] 8423 mm 332 in.	Not Available	16C3C[c] 6204 mm 244 in.	Not Available	Not Available	16D2D[a] 5860 mm 231 in.
420/85R34	Not Available	Not Available	Not Available	8J4B 6687 mm 263 in.	Not Available	8K3C[c] 6249 mm 246 in.	Not Available	Not Available
480/70R34	Not Available	Not Available	Not Available	8J5A 7350 mm 289 in.	Not Available	8K4B 6778 mm 267 in.	Not Available	Not Available
540/65R34	Not Available	Not Available	Not Available	8J5A 7350 mm 289 in.	Not Available	8K4B 6778 mm 267 in.	Not Available	Not Available
540/65R34[d]	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	2B4B 6801 mm 268 in.	Not Available
600/70R30	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
600/70R30[d]	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	2B5B 7466 mm 294 in.	Not Available
IF600/70R30	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
IF600/70R-30[d]	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	2B5B 7466 mm 294 in.	Not Available

[a]Wide fenders use position C.

Continued on next page

[b]*Wide fenders use position A.*
[c]*Wide fenders use position B.*
[d]*2 Position Wheel*

Front Tire, Steering Stop, and Fender Settings-1150/1300 MFWD axles with 5° oscillation stops, with front hitch									
Tire Size	**1880 mm (74 in.)**	**1930 mm (76 in.)**	**1955 mm (77 in.)**	**1981 mm (78 in.)**	**2032 mm (80 in.)**	**2083 mm (82 in.)**	**2133 mm (84 in.)**	**2184 mm (86 in.)**	**2235 mm (88 in.)**
320/80R42	Not Available	8E1E 5500 mm 217 in.	Not Available	Not Available	8F0F 5215 mm 205 in.	Not Available	8G0G[a] 5299 mm 209 in.	Not Available	8H0H 5384 mm 212 in.
380/80R38	Not Available	16E1E 5500 mm 217 in.	Not Available	Not Available	16F1F 5587 mm 220 in.	Not Available	16G0G 5299 mm 209 in.	Not Available	16H0H 5384 mm 212 in.
420/85R34	8M2D[b] 5904 mm 232 in.	Not Available	Not Available	8N1E 5543 mm 218 in.	Not Available	8O0F 5257 mm 207 in.	Not Available	8P0H 5342 mm 210 in.	Not Available
480/70R34	8M3C 6339 mm 250 in.	Not Available	Not Available	8N2D 5992 mm 236 in.	Not Available	8O1F 5630 mm 222 in.	Not Available	8P0G 5342 mm 210 in.	Not Available
540/65R34	8M3C 6339 mm 250 in.	Not Available	Not Available	8N2D 5992 mm 236 in.	Not Available	8O1F 5630 mm 222 in.	Not Available	8P0F 5342 mm 210 in.	Not Available
540/65R34[c]	Not Available	Not Available	2C3C 6406 mm 252 in.	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
600/70R30	8M4B 6870 mm 270 in.	Not Available	Not Available	8N2C 5992 mm 236 in.	Not Available	8O2E 6081 mm 239 in.	Not Available	8P1F 5717 mm 225 in.	Not Available
600/70R30[c]	Not Available	Not Available	2C3C 6406 mm 252 in.	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
IF600/70 R30	8M4B 6870 mm 270 in.	Not Available	Not Available	8N2C 5992 mm 236 in.	Not Available	8O2E 6081 mm 239 in.	Not Available	8P1F 5717 mm 225 in.	Not Available
IF600/70R-30[c]	Not Available	Not Available	2C3C 6406 mm 252 in.	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available

[a]*Wide fenders use position F.*
[b]*Wide fenders use position C.*
[c]*2 Position Wheel*

GH15097,000093F -19-13AUG15-3/3

Tire, Steering Stop, and Fender Settings-TLS Plus Axle with Front Hitch

Further adjustment may be necessary if tire or fender contacts tractor on wide turns.

NOTE: If tire size is not listed in the following chart, see TLS™ Plus Axle, Tire, Fender, and Steering Stop Settings in this section.

Tire, Steering Stop, and Fender Settings-TLS™ Plus axle with front hitch								
Tire Size	**1524 mm (60 in.)**	**1575 mm (62 in.)**	**1626 mm (64 in.)**	**1676 mm (66 in.)**	**1727 mm (68 in.)**	**1778 mm (70 in.)**	**1803 mm (71 in.)**	**1829 mm (72 in.)**
320/80R42	8A6A 8327 mm 328 in.	Not Available	8B5B[a] 7303 mm 288 in.	Not Available	8C3C[b] 6204 mm 244 in.	Not Available	Not Available	8D2D[c] 5860 mm 231 in.
IF320/80 R42	8A6A 8327 mm 328 in.	Not Available	8B5B[a] 7303 mm 288 in.	Not Available	8C3C[b] 6204 mm 244 in.	Not Available	Not Available	8D2D[c] 5860 mm 231 in.
380/80R38	Not Available	Not Available	8B6B[a] 8423 mm 332 in.	Not Available	8C5C[a] 7396 mm 291 in.	Not Available	Not Available	8D3D[b] 6294 mm 248 in.
380/80R42	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
420/85R34	Not Available	Not Available	Not Available	8J6B[a] 8470 mm 333 in.	Not Available	8K5C[a] 7443 mm 293 in.	Not Available	Not Available
420/85R38	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
480/70R34	Not Available	Not Available	Not Available	8J5A 7350 mm 289 in.	Not Available	8K4B 6778 mm 267 in.	Not Available	Not Available
540/65R34	Not Available	Not Available	Not Available	8J6A 8470 mm 333 in.	Not Available	8K4B 6778 mm 267 in.	Not Available	Not Available
540/65R34[d]	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	2C4B 6801 mm 268 in.	Not Available
540/75R34	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
600/65R34	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
600/70R30	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
600/70R30[d]	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	2B6B 8589 mm 338 in.	Not Available
IF600/70 R30	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
IF600/70R-30[d]	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	2B6B 8589 mm 338 in.	Not Available
620/75R30	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
IF620/75 R30	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available

[a] *Wide fenders use position A.*
[b] *Wide fenders use position B.*
[c] *Wide fenders use position C.*
[d] *2 Position Wheel*

Continued on next page

GH15097,0000940 -19-13AUG15-1/2

Tire, Steering Stop, and Fender Settings-TLS™ Plus axle with front hitch (Continued)									
Tire Size	**1880 mm (74 in.)**	**1930 mm (76 in.)**	**1955 mm (77 in.)**	**1981 mm (78 in.)**	**2032 mm (80 in.)**	**2083 mm (82 in.)**	**2133 mm (84 in.)**	**2184 mm (86 in.)**	**2235 mm (88 in.)**
320/80R42	Not Available	8E1E 5500 mm 217 in.	Not Available	Not Available	8F1F[a] 5587 mm 220 in.	Not Available	8G0G[b] 5299 mm 209 in.	Not Available	8H0H 5384 mm 212 in.
IF320/80 R42	Not Available	8E1E 5500 mm 217 in.	Not Available	Not Available	8F1F[a] 5587 mm 220 in.	Not Available	8G0G[b] 5299 mm 209 in.	Not Available	8H0H 5384 mm 212 in.
380/80R38	Not Available	8E2E 5948 mm 234 in.	Not Available	Not Available	8F1F 5587 mm 220 in.	Not Available	8G0G 5299 mm 209 in.	Not Available	8H0G 5384 mm 212 in.
380/80R42	Not Available	8E6E[c] 8709 mm 343 in.	Not Available	Not Available	8F5F 7677 mm 302 in.	Not Available	8G5G-[d] 7771 mm 306 in.	Not Available	8H4H-[d] 7193 mm 283 in.
420/85R34	8M3D[c] 6339 mm 250 in.	Not Available	Not Available	8N2E[e] 5992 mm 236 in.	Not Available	8O1F 5630 mm 222 in.	Not Available	8P0H 5342 mm 210 in.	Not Available
420/85R38	Not Available	8E6W 8709 mm 343 in.	Not Available	Not Available	8F5X[d] 7677 mm 302 in.	Not Available	8G4Y-[d] 7101 mm 280 in.	Not Available	8H3Z-[d] 6656 mm 262 in.
480/70R34	8M3C 6339 mm 250 in.	Not Available	Not Available	8N2D 5992 mm 236 in.	Not Available	8O1F 5630 mm 222 in.	Not Available	8P0G 5342 mm 210 in.	Not Available
540/65R34	8M3C 6339 mm 250 in.	Not Available	Not Available	8N2D 5992 mm 236 in.	Not Available	8O1F 5630 mm 222 in.	Not Available	8P1F 5717 mm 225 in.	Not Available
540/65R34[f]	Not Available	Not Available	2C3C 6406 mm 252 in.	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
540/75R34	Not Available	Not Available	Not Available	8N6V 8757 mm 345 in.	Not Available	8O5W 7724 mm 304 in.	Not Available	8P3X 6611 mm 260 in.	Not Available
600/70R30	8M5B 7537 mm 297 in.	Not Available	Not Available	8N3C 6429 mm 253 in.	Not Available	8O2E 6081 mm 239 in.	Not Available	8P1F 5717 mm 225 in.	Not Available
600/70R30[f]	Not Available	Not Available	2C3C 6406 mm 252 in.	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
IF600/70 R30	8M5B 7537 mm 297 in.	Not Available	Not Available	8N3C 6429 mm 253 in.	Not Available	8O2E 6081 mm 239 in.	Not Available	8P1F 5717 mm 225 in.	Not Available
IF600/70R-30[f]	Not Available	Not Available	2C3C 6406 mm 252 in.	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
600/65R34	Not Available	Not Available	Not Available	Not Available	Not Available	8O6W 8853 mm 349 in.	Not Available	8P4X 7147 mm 281 in.	Not Available
620/75R30	Not Available	Not Available	Not Available	Not Available	Not Available	8O6W 8853 mm 349 in.	Not Available	8P4X 7147 mm 281 in.	Not Available
IF620/75 R30	Not Available	Not Available	Not Available	Not Available	Not Available	8O6W 8853 mm 349 in.	Not Available	8P4X 7147 mm 281 in.	Not Available

[a]Wide fenders use position E.
[b]Wide fenders use position F.
[c]Wide fenders use position C.
[d]Wide fenders use position W.
[e]Wide fenders use position D.
[f]2 Position Wheel

GH15097,0000940 -19-13AUG15-2/2

Tire, Steering Stop, and Fender Settings-1150/1300 MFWD Axles with Front Loader

NOTE: Further adjustment may be necessary if tire contacts tractor on wide turns.

Group 44 tires are not available with front loader.

Pivoting fenders are not available with front loaders.

5° oscillation stops can be ordered through a dealer and installed on rigid front axles with 9° to offer better turning radius by limiting axle oscillation and reducing potential for tractor/tire contact.

Front Tire, Steering Stop, and Fender Settings-1150/1300 MFWD axles with 9° oscillation stops, with front loader								
Tire Size	**1524 mm (60 in.)**	**1575 mm (62 in.)**	**1626 mm (64 in.)**	**1676 mm (66 in.)**	**1727 mm (68 in.)**	**1778 mm (70 in.)**	**1803 mm (71 in.)**	**1829 mm (72 in.)**
320/80R42	8A5-7210 mm 284 in.	Not Available	8B4-6641 mm 261 in.	Not Available	8C3-6204 mm 244 in.	Not Available	Not Available	8D2-5860 mm 231 in.
IF320/80R42	8A5-7210 mm 284 in.	Not Available	8B4-6641 mm 261 in.	Not Available	8C3-6204 mm 244 in.	Not Available	Not Available	8D2-5860 mm 231 in.
320/85R38	8A4-6550 mm 258 in.	Not Available	8B3-6114 mm 241 in.	Not Available	8C2-5772 mm 227 in.	Not Available	Not Available	8D1-5414 mm 213 in.
380/80R38	Not Available	Not Available	Not Available	Not Available	16C5-7396 mm 291 in.	Not Available	Not Available	16D4-6824 mm 269 in.
380/85R34	8A5-7210 mm 284 in.	Not Available	8B4-6641 mm 261 in.	Not Available	8C3-6204 mm 244 in.	Not Available	Not Available	8D2-5860 mm 231 in.
420/85R34	Not Available	8I6-8375 mm 330 in.	Not Available	8J4-6687 mm 263 in.	Not Available	8K3-6249 mm 246 in.	Not Available	Not Available
420/90R30	Not Available	8I5-7257 mm 286 in.	Not Available	8J4-6687 mm 263 in.	Not Available	8K3-6249 mm 246 in.	Not Available	Not Available
16.9R30	Not Available	8I5-7257 mm 286 in.	Not Available	8J4-6687 mm 263 in.	Not Available	8K3-6249 mm 246 in.	Not Available	Not Available
480/70R30	Not Available	8I5-7257 mm 286 in.	Not Available	8J4-6687 mm 263 in.	Not Available	8K3-6249 mm 246 in.	Not Available	Not Available
480/70R34	Not Available	8I6-8375 mm 330 in.	Not Available	8J5-7350 mm 289 in.	Not Available	8K4-6778 mm 267 in.	Not Available	Not Available
540/65R30	Not Available	8I6-8375 mm 330 in.	Not Available	8J4-6687 mm 263 in.	Not Available	8K3-6249 mm 246 in.	Not Available	Not Available
540/65R30[a]	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	2C3-6271 mm 247 in.	Not Available
540/65R34	Not Available	Not Available	Not Available	8J5-7350 mm 289 in.	Not Available	8K4-6778 mm 267 in.	Not Available	Not Available
540/65R34[a]	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	2B4-6801 mm 268 in.	Not Available
600/65R28	Not Available	Not Available	Not Available	Not Available	Not Available	8K4-6778 mm 267 in.	Not Available	Not Available
600/65R28[a]	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	2B4-6801 mm 268 in.	Not Available
600/70R30	Not Available	Not Available	Not Available	Not Available	Not Available	8K5-7443 mm 293 in.	Not Available	Not Available

Continued on next page

Front Tire, Steering Stop, and Fender Settings-1150/1300 MFWD axles with 9° oscillation stops, with front loader								
Tire Size	**1524 mm (60 in.)**	**1575 mm (62 in.)**	**1626 mm (64 in.)**	**1676 mm (66 in.)**	**1727 mm (68 in.)**	**1778 mm (70 in.)**	**1803 mm (71 in.)**	**1829 mm (72 in.)**
600/70R30[a]	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	2B5-7466 mm 294 in.	Not Available
IF600/70R30	Not Available	Not Available	Not Available	Not Available	Not Available	8K5-7443 mm 293 in.	Not Available	Not Available
IF600/70R-30[a]	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	2B5-7466 mm 294 in.	Not Available

[a] *2 Position Wheel*

Front Tire, Steering Stop, and Fender Settings-1150/1300 MFWD axles with 9° oscillation stops, with front loader (Continued)									
Tire Size	**1880 mm (74 in.)**	**1930 mm (76 in.)**	**1955 mm (77 in.)**	**1981 mm (78 in.)**	**2032 mm (80 in.)**	**2083 mm (82 in.)**	**2133 mm (84 in.)**	**2184 mm (86 in.)**	**2235 mm (88 in.)**
320/80R42	Not Available	8E2-5948 mm 234 in.	Not Available	Not Available	8F2-6037 mm 238 in.	Not Available	8G2-6126 mm 241 in.	Not Available	8H2-6215 mm 245 in.
IF320/80R42	Not Available	8E2-5948 mm 234 in.	Not Available	Not Available	8F2-6037 mm 238 in.	Not Available	8G2-6126 mm 241 in.	Not Available	8H2-6215 mm 245 in.
320/85R38	Not Available	8E1-5500 mm 217 in.	Not Available	Not Available	8F1-5587 mm 220 in.	Not Available	8G1-5673 mm 223 in.	Not Available	8H1-5761 mm 227 in.
380/80R38	Not Available	16E3-6384 mm 251 in.	Not Available	Not Available	16F3-6474 mm 255 in.	Not Available	16G3-6565 mm 258 in.	Not Available	16H3-6656 mm 262 in.
380/85R34	Not Available	8E1-5500 mm 217 in.	Not Available	Not Available	8F1-5587 mm 220 in.	Not Available	8G1-5673 mm 223 in.	Not Available	8H1-5761 mm 227 in.
420/85R34	8M2-5904 mm 232 in.	Not Available	Not Available	8N3-6429 mm 253 in.	Not Available	8O3-6520 mm 257 in.	Not Available	8P3-6611 mm 260 in.	Not Available
420/90R30	8M2-5904 mm 232 in.	Not Available	Not Available	8N1-5543 mm 218 in.	Not Available	8O1-5630 mm 222 in.	Not Available	8P1-5717mm 225 in.	Not Available
16.9R30	8M2-5904 mm 232 in.	Not Available	Not Available	8N1-5543 mm 218 in.	Not Available	8O1-5630 mm 222 in.	Not Available	8P1-5717 mm 225 in.	Not Available
480/70R30	8M2-5904 mm 232 in.	Not Available	Not Available	8N1-5543 mm 218 in.	Not Available	8O0-5257 mm 207 in.	Not Available	8P0-5342 mm 210 in.	Not Available
480/70R34	8M3-6339 mm 250 in.	Not Available	Not Available	8N2-5992 mm 236 in.	Not Available	8O2-6081 mm 239 in.	Not Available	8P2-6170 mm 243 in.	Not Available
540/65R30	8M2-5904 mm 232 in.	Not Available	Not Available	8N1-5543 mm 218 in.	Not Available	8O1-5630 mm 222 in.	Not Available	8P1-5717 mm 225 in.	Not Available
540/65R30[a]	Not Available	Not Available	2D1-5522 mm 217 in.	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
540/65R34	8M3-6339 mm 250 in.	Not Available	Not Available	8N2-5992 mm 236 in.	Not Available	8O2-6081 mm 239 in.	Not Available	8P2-6170 mm 243 in.	Not Available
540/65R34[a]	Not Available	Not Available	2C3-6406 mm 252 in.	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
600/65R28	8M3-6339 mm 250 in.	Not Available	Not Available	8N2-5992 mm 236 in.	Not Available	8O1-5630 mm 222 in.	Not Available	8P1-5717 mm 225 in.	Not Available
600/65R28[a]	Not Available	Not Available	2C3-6406 mm 252 in.	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available

Continued on next page

GH15097,0000941 -19-13AUG15-2/5

Front Tire, Steering Stop, and Fender Settings-1150/1300 MFWD axles with 9° oscillation stops, with front loader (Continued)									
Tire Size	**1880 mm (74 in.)**	**1930 mm (76 in.)**	**1955 mm (77 in.)**	**1981 mm (78 in.)**	**2032 mm (80 in.)**	**2083 mm (82 in.)**	**2133 mm (84 in.)**	**2184 mm (86 in.)**	**2235 mm (88 in.)**
600/70R30	8M4-6870 mm 270 in.	Not Available	Not Available	8N4-6962 mm 274 in.	Not Available	8O4-7054 mm 278 in.	Not Available	8P4-7147 mm 281 in.	Not Available
600/70R30[a]	Not Available	Not Available	2C4-6939 mm 273 in.	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
IF600/70R30	8M4-6870 mm 270 in.	Not Available	Not Available	8N4-6962 mm 274 in.	Not Available	8O4-7054 mm 278 in.	Not Available	8P4-7147 mm 281 in.	Not Available
IF600/70R-30[a]	Not Available	Not Available	2C4-6939 mm 273 in.	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available

[a] 2 Position Wheel

NOTE: Further adjustment may be necessary if tire contacts tractor on wide turns.

Pivoting fenders are not available with front loaders.

Group 44 tires are not available with front loader.

Front Tire, Steering Stop, and Fender Settings-1150/1300 MFWD axles with 5° oscillation stops, with front loader								
Tire Size	**1524 mm (60 in.)**	**1575 mm (62 in.)**	**1626 mm (64 in.)**	**1676 mm (66 in.)**	**1727 mm (68 in.)**	**1778 mm (70 in.)**	**1803 mm (71 in.)**	**1829 mm (72 in.)**
320/80R42	8A5-7210 mm 284 in.	Not Available	8B4-6641 mm 261 in.	Not Available	8C2-5772 mm 227 in.	Not Available	Not Available	8D2-5860 mm 231 in.
320/85R38	8A4-6550 mm 258 in.	Not Available	8B3-6114 mm 241 in.	Not Available	8C2-5772 mm 227 in.	Not Available	Not Available	8D1-5414 mm 213 in.
380/80R38	16A6-8327 mm 328 in.	Not Available	16B4-6641 mm 261 in.	Not Available	16C3-6204 mm 244 in.	Not Available	Not Available	16D3-6294 mm 248 in.
380/85R34	8A5-7210 mm 284 in.	Not Available	8B4-6641 mm 261 in.	Not Available	8C2-5772 mm 227 in.	Not Available	Not Available	8D1-5414 mm 213 in.
420/85R34	Not Available	8I5-7257 mm 286 in.	Not Available	8J4-6687 mm 263 in.	Not Available	8K3-6249 mm 246 in.	Not Available	Not Available
420/90R30	Not Available	8I5-7257 mm 286 in.	Not Available	8J4-6687 mm 263 in.	Not Available	8K2-5816 mm 229 in.	Not Available	Not Available
16.9R30	Not Available	8I5-7257 mm 286 in.	Not Available	8J4-6687 mm 263 in.	Not Available	8K3-6249 mm 246 in.	Not Available	Not Available
480/70R30	Not Available	8I5-7257 mm 286 in.	Not Available	8J4-6687 mm 263 in.	Not Available	8K2-5816 mm 229 in.	Not Available	Not Available
480/70R34	Not Available	8I6-8375 mm 330 in.	Not Available	8J5-7350 mm 289 in.	Not Available	8K4-6778 mm 267 in.	Not Available	Not Available
540/65R30	Not Available	8I6-8375 mm 330 in.	Not Available	8J4-6687 mm 263 in.	Not Available	8K3-6249 mm 246 in.	Not Available	Not Available
540/65R30[a]	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	2C3-6271 mm 247 in.	Not Available
540/65R34	Not Available	Not Available	Not Available	8J5-7350 mm 289 in.	Not Available	8K4-6778 mm 267 in.	Not Available	Not Available
540/65R34[a]	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	2B4-6801 mm 268 in.	Not Available

Continued on next page

Front Tire, Steering Stop, and Fender Settings-1150/1300 MFWD axles with 5° oscillation stops, with front loader								
Tire Size	**1524 mm (60 in.)**	**1575 mm (62 in.)**	**1626 mm (64 in.)**	**1676 mm (66 in.)**	**1727 mm (68 in.)**	**1778 mm (70 in.)**	**1803 mm (71 in.)**	**1829 mm (72 in.)**
600/65R28	Not Available	Not Available	Not Available	Not Available	Not Available	8K4- 6778 mm 267 in.	Not Available	Not Available
600/65R28[a]	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	2B4- 6801 mm 268 in.	Not Available
600/70R30	Not Available	Not Available	Not Available	Not Available	Not Available	8K5- 7443 mm 293 in.	Not Available	Not Available
600/70R30[a]	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	2B5- 7466 mm 294 in.	Not Available
IF600/70R30	Not Available	Not Available	Not Available	Not Available	Not Available	8K5- 7443 mm 293 in.	Not Available	Not Available
IF600/70R-30[a]	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	2B5- 7466 mm 294 in.	Not Available

[a] *2 Position Wheel*

Front Tire, Steering Stop, and Fender Settings-1150/1300 MFWD axles with 5° oscillation stops, with front loader (Continued)									
Tire Size	**1880 mm (74 in.)**	**1930 mm (76 in.)**	**1955 mm (77 in.)**	**1981 mm (78 in.)**	**2032 mm (80 in.)**	**2083 mm (82 in.)**	**2133 mm (84 in.)**	**2184 mm (86 in.)**	**2235 mm (88 in.)**
320/80R42	Not Available	8E1- 5500 mm 217 in.	Not Available	Not Available	8F1- 5587 mm 220 in.	Not Available	8G1- 5673 mm 223 in.	Not Available	8H1- 5761 mm 227 in.
320/85R38	Not Available	8E0- 5131 mm 202 in.	Not Available	Not Available	8F0- 5215 mm 205 in.	Not Available	8G0- 5299 mm 209 in.	Not Available	8H0- 5384 mm 212 in.
380/80R38	Not Available	16E3- 6384 mm 251 in.	Not Available	Not Available	16F3- 6474 mm 255 in.	Not Available	16G3- 6565 mm 258 in.	Not Available	16H3- 6656 mm 262 in.
380/85R34	Not Available	8E1- 5500 mm 217 in.	Not Available	Not Available	8F0- 5215 mm 205 in.	Not Available	8G0- 5299 mm 209 in.	Not Available	8H0- 5384 mm 212 in.
420/85R34	8M2- 5904 mm 232 in.	Not Available	Not Available	8N2- 5992 mm 236 in.	Not Available	8O2- 6081 mm 239 in.	Not Available	8P2- 6170 mm 243 in.	Not Available
420/90R30	8M1- 5457 mm 215 in.	Not Available	Not Available	8N1- 5543 mm 218 in.	Not Available	8O0- 5257 mm 207 in.	Not Available	8P0- 5342 mm 210 in.	Not Available
16.9R30	8M2- 5904 mm 232 in.	Not Available	Not Available	8N1- 5543 mm 218 in.	Not Available	8O1- 5630 mm 222 in.	Not Available	8P1- 5717 mm 225 in.	Not Available
480/70R30	8M1- 5457 mm 215 in.	Not Available	Not Available	8N0- 5173 mm 204 in.	Not Available	8O0- 5257 mm 207 in.	Not Available	8P0- 5342 mm 210 in.	Not Available
480/70R34	8M3- 6339 mm 250 in.	Not Available	Not Available	8N2- 5992 mm 236 in.	Not Available	8O2- 6081 mm 239 in.	Not Available	8P2- 6170 mm 243 in.	Not Available
540/65R30	8M2- 5904 mm 232 in.	Not Available	Not Available	8N1- 5543 mm 218 in.	Not Available	8O0- 5257 mm 207 in.	Not Available	8P0- 5342 mm 210 in.	Not Available
540/65R30[a]	Not Available	Not Available	2D1- 5522 mm 217 in.	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
540/65R34	8M3- 6339 mm 250 in.	Not Available	Not Available	8N2- 5992 mm 236 in.	Not Available	8O1- 5630 mm 222 in.	Not Available	8P1- 5717 mm 225 in.	Not Available
540/65R34[a]	Not Available	Not Available	2C3- 6406 mm 252 in.	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available

Continued on next page

GH15097,0000941 -19-13AUG15-4/5

Front Tire, Steering Stop, and Fender Settings-1150/1300 MFWD axles with 5° oscillation stops, with front loader (Continued)									
Tire Size	**1880 mm (74 in.)**	**1930 mm (76 in.)**	**1955 mm (77 in.)**	**1981 mm (78 in.)**	**2032 mm (80 in.)**	**2083 mm (82 in.)**	**2133 mm (84 in.)**	**2184 mm (86 in.)**	**2235 mm (88 in.)**
600/65R28	8M3-6339 mm 250 in.	Not Available	Not Available	8N2-5992 mm 236 in.	Not Available	8O1-5630 mm 222 in.	Not Available	8P0-5342 mm 210 in.	Not Available
600/65R28[a]	Not Available	Not Available	2C3-6406 mm 252 in.	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
600/70R30	8M4-6870 mm 270 in.	Not Available	Not Available	8N3-6429 mm 253 in.	Not Available	8O2-6081 mm 239 in.	Not Available	8P2-6170 mm 243 in.	Not Available
600/70R30[a]	Not Available	Not Available	2C4-6939 mm 273 in.	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
IF600/70R30	8M4-6870 mm 270 in.	Not Available	Not Available	8N3-6429 mm 253 in.	Not applicable	8O2-6081 mm 239 in.	Not Available	8P2-6170 mm 243 in.	Not Available
IF600/70R30[a]	Not Available	Not Available	2C4-6939 mm 273 in.	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available

[a] *2 Position Wheel*

GH15097,0000941 -19-13AUG15-5/5

Tire, Steering Stop, and Fender Settings-TLS Plus Axle with Front Loader

NOTE: Further adjustment may be necessary if tire contacts tractor on wide turns.

Group 44 tires are not available with front loader.

Pivoting fenders are not available with front loaders.

Tire, Steering Stop, and Fender Settings-TLS™ Plus axle, with front loader								
Tire Size	**1524 mm (60 in.)**	**1575 mm (62 in.)**	**1626 mm (64 in.)**	**1676 mm (66 in.)**	**1727 mm (68 in.)**	**1778 mm (70 in.)**	**1803 mm (71 in.)**	**1829 mm (72 in.)**
320/80R42	8A5-7210 mm 284 in.	Not Available	8B4-6641 mm 261 in.	Not Available	8C3-6204 mm 244 in.	Not Available	Not Available	8D3-6294 mm 248 in.
IF320/80 R42	8A5-7210 mm 284 in.	Not Available	8B4-6641 mm 261 in.	Not Available	8C3-6204 mm 244 in.	Not Available	Not Available	8D3-6294 mm 248 in.
320/85R38	8A5-7210 mm 284 in.	Not Available	8B3-6114 mm 241 in.	Not Available	8C2-5772 mm 227 in.	Not Available	Not Available	8D1-5414 mm 213 in.
380/80R38	Not Available	Not Available	8B6-8423 mm 332 in.	Not Available	8C6-8518 mm 335 in.	Not Available	Not Available	8D5-7490 mm 295 in.
380/85R34	8A5-7210 mm 284 in.	Not Available	8B4-6641 mm 261 in.	Not Available	8C3-6204 mm 244 in.	Not Available	Not Available	8D2-5860 mm 231 in.
420/85R34	Not Available	8I6-8327 mm 328 in.	Not Available	8J5-7350 mm 289 in.	Not Available	8K4-6778 mm 267 in.	Not Available	Not Available
420/90R30	Not Available	8I5-7257 mm 286 in.	Not Available	8J4-6687 mm 263 in.	Not Available	8K3-6249 mm 246 in.	Not Available	Not Available
16.9R30	Not Available	8I6-8327 mm 328 in.	Not Available	8J4-6687 mm 263 in.	Not Available	8K3-6249 mm 246 in.	Not Available	Not Available
480/70R30	Not Available	8I6-8327 mm 328 in.	Not Available	8J5-7350 mm 289 in.	Not Available	8K3-6249 mm 246 in.	Not Available	Not Available
480/70R34	Not Available	8I6-8327 mm 328 in.	Not Available	8J5-7350 mm 289 in.	Not Available	8K4-6778 mm 267 in.	Not Available	Not Available
540/65R30	Not Available	Not Available	Not Available	8J5-7350 mm 289 in.	Not Available	8K3-6249 mm 246 in.	Not Available	Not Available
540/65R30[a]	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	2C3-6271 mm 247 in.	Not Available
540/65R34	Not Available	Not Available	Not Available	8J6-8470 mm 333 in.	Not Available	8K4-6778 mm 267 in.	Not Available	Not Available
540/65R34[a]	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	2B4-6801 mm 268 in.	Not Available
600/65R28	Not Available	Not Available	Not Available	Not Available	Not Available	8K4-6778 mm 267 in.	Not Available	Not Available
600/65R28[a]	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	2B4-6801 mm 268 in.	Not Available
600/70R30	Not Available	Not Available	Not Available	Not Available	Not Available	8K5-7443 mm 293 in.	Not Available	Not Available
600/70R30[a]	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	2B5-7466 mm 294 in.	Not Available

Continued on next page

GH15097,0000942 -19-13AUG15-1/3

Tire, Steering Stop, and Fender Settings-TLS™ Plus axle, with front loader								
Tire Size	**1524 mm (60 in.)**	**1575 mm (62 in.)**	**1626 mm (64 in.)**	**1676 mm (66 in.)**	**1727 mm (68 in.)**	**1778 mm (70 in.)**	**1803 mm (71 in.)**	**1829 mm (72 in.)**
IF600/70 R30	Not Available	Not Available	Not Available	Not Available	Not Available	8K5-7443 mm 293 in.	Not Available	Not Available
IF600/70R-30[a]	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	2B5-7466 mm 294 in.	Not Available

[a] *2 Position Wheel*

NOTE: Group 44 tires are not available with front loader.

Pivoting fenders are not available with front loaders.

Tire, Steering Stop, and Fender Settings-TLS™ Plus axle, with front loader (Continued)									
Tire Size	**1880 mm (74 in.)**	**1930 mm (76 in.)**	**1955 mm (77 in.)**	**1981 mm (78 in.)**	**2032 mm (80 in.)**	**2083 mm (82 in.)**	**2133 mm (84 in.)**	**2184 mm (86 in.)**	**2235 mm (88 in.)**
290/90R38	Not Available	8E1-5500 mm 217 in.	Not Available	Not Available	8F1-5587 mm 220 in.	Not Available	8G1-5673 mm 223 in.	Not Available	8H1-5761 mm 227 in.
320/80R42	Not Available	8E3-6384 mm 251 in.	Not Available	Not Available	8F3-6474 mm 255 in.	Not Available	8G3-6565 mm 258 in.	Not Available	8H3-6656 mm 262 in.
IF320/80 R42	Not Available	8E3-6384 mm 251 in.	Not Available	Not Available	8F3-6474 mm 255 in.	Not Available	8G3-6565 mm 258 in.	Not Available	8H3-6656 mm 262 in.
320/85R38	Not Available	8E1-5500 mm 217 in.	Not Available	Not Available	8F1-5587 mm 220 in.	Not Available	8G1-5673 mm 223 in.	Not Available	8H1-5761 mm 227 in.
380/80R38	Not Available	8E4-6916 mm 272 in.	Not Available	Not Available	8F4-7008 mm 276 in.	Not Available	8G4-7101 mm 280 in.	Not Available	8H4-7193 mm 283 in.
380/85R34	Not Available	8E1-5500 mm 217 in.	Not Available	Not Available	8F1-5587 mm 220 in.	Not Available	8G1-5673 mm 223 in.	Not Available	8H1-5761 mm 227 in.
420/85R34	8M4-6870 mm 270 in.	Not Available	Not Available	8N4-6962 mm 274 in.	Not Available	8O3-6520 mm 257 in.	Not Available	8P3-6611 mm 260 in.	Not Available
420/90R30	8M2-5904 mm 232 in.	Not Available	Not Available	8N2-5992 mm 236 in.	Not Available	8O2-6081 mm 239 in.	Not Available	8P2-6170 mm 243 in.	Not Available
16.9R30	8M2-5904 mm 232 in.	Not Available	Not Available	8N2-5992 mm 236 in.	Not Available	8O2-6081 mm 239 in.	Not Available	8P2-6170 mm 243 in.	Not Available
480/70R30	8M2-5904 mm 232 in.	Not Available	Not Available	8N1-5543 mm 218 in.	Not Available	8O1-5630 mm 222 in.	Not Available	8P1-5717 mm 225 in.	Not Available
480/70R34	8M3-6339 mm 250 in.	Not Available	Not Available	8N3-6429 mm 253 in.	Not Available	8O3-6520 mm 257 in.	Not Available	8P3-6611 mm 260 in.	Not Available
540/65R30	8M2-5904 mm 232 in.	Not Available	Not Available	8N1-5543 mm 218 in.	Not Available	8O1-5630 mm 222 in.	Not Available	8P1-5717 mm 225 in.	Not Available
540/65R-30[a]	Not Available	Not Available	2D2-5970 mm 235 in.	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
540/65R34	8M3-6339 mm 250 in.	Not Available	Not Available	8N3-6429 mm 253 in.	Not Available	8O3-6520 mm 257 in.	Not Available	8P3-6611 mm 260 in.	Not Available
540/65R-34[a]	Not Available	Not Available	2C3-6406 mm 252 in.	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
600/65R28	8M3-6339 mm 250 in.	Not Available	Not Available	8N2-5992 mm 236 in.	Not Available	8O1-5630 mm 222 in.	Not Available	8P1-5717 mm 225 in.	Not Available

Continued on next page

Tire, Steering Stop, and Fender Settings-TLS™ Plus axle, with front loader (Continued)									
Tire Size	**1880 mm (74 in.)**	**1930 mm (76 in.)**	**1955 mm (77 in.)**	**1981 mm (78 in.)**	**2032 mm (80 in.)**	**2083 mm (82 in.)**	**2133 mm (84 in.)**	**2184 mm (86 in.)**	**2235 mm (88 in.)**
600/65R-28[a]	Not Available	Not Available	2C3-6406 mm 252 in.	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
600/70R30	8M5-7537 mm 297 in.	Not Available	Not Available	8N5-7630 mm 300 in.	Not Available	8O4-7054 mm 278 in.	Not Available	8P4-7147 mm 281 in.	Not Available
600/70R-30[a]	Not Available	Not Available	2C5-7607 mm 299 in.	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
IF600/70 R30	8M5-7537 mm 297 in.	Not Available	Not Available	8N5-7630 mm 300 in.	Not Available	8O4-7054 mm 278 in.	Not Available	8P4-7147 mm 281 in.	Not Available
IF600/70R-30[a]	Not Available	Not Available	2C5-7607 mm 299 in.	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available

[a] *2 Position Wheel*

GH15097,0000942 -19-13AUG15-3/3

Tire, Steering Stop, and Extra-Wide Fender (710 mm (28 in)) Settings-(Late Design)

NOTE: **Refer to table and diagrams for correct setting for 710 mm (28 in.) extra wide fenders (late design).**

Tire Size	Tread Spacing	Steering Stop	Casting Block Position	Left-Hand Bracket	Right-Hand Bracket	Arm Angle	Arm Height	Stop Positions	Tube Position
600/65R34	2083 mm (82 in)	6	1	RE577187	RE577115[a]	2	3	D	2
600/65R34	2184 mm (86 in)	4	1	RE577187	RE577115[b]	2	3	E	2
620/75R30	2083 mm (82 in)	6	1	RE577187	RE577115[a]	2	3	D	2
620/75R30	2184 mm (86 in)	4	1	RE577187	RE577115[b]	2	3	E	2
IF620/75R30	2083 mm (82 in)	6	1	RE577187	RE577115[a]	2	3	D	2
IF620/75R30	2184 mm (86 in)	4	1	RE577187	RE577115[b]	2	3	E	2
600/60R30	1778 mm (70 in)	5	4	RE577115	RE577187	2	1	B	1
600/60R30	1880 mm (74 in)	4	3	RE577115	RE577187	2	1	C	1
600/60R30	1981 mm (78 in)	3	1	RE577115	RE577187	2	1	D	1
600/60R30	2083 mm (82 in)	2	1	RE577187	RE577115[a]	2	2	E	1
600/60R30	2184 mm (86 in)	1	1	RE577187	RE577115[b]	2	3	F	2
IF600/60R30	1778 mm (70 in)	5	4	RE577115	RE577187	2	1	B	1
IF600/60R30	1880 mm (74 in)	4	3	RE577115	RE577187	2	1	C	1
IF600/60R30	1981 mm (78 in)	3	1	RE577115	RE577187	2	1	D	1
IF600/60R30	2083 mm (82 in)	2	1	RE577187	RE577115	2	2	E	1
IF600/60R30	2184 mm (86 in)	1	1	RE577187	RE577115[b]	2	3	F	2
540/65R34	1880 mm (74 in)	3	3	RE577115	RE577187	2	1	C	1
540/65R34	1981 mm (78 in)	2	1	RE577115	RE577187	2	1	D	1
540/65R34	2083 mm (82 in)	1	1	RE577187	RE577115[a]	2	2	E	1
540/65R34	2083 mm (82 in)	1	1	RE577187	RE577115[a]	2	2	E	1
540/65R34	2184 mm (86 in)	1	1	RE577187	RE577115[b]	2	3	F	2

Tire, Steering Stop, and Extra-Wide Fender (710 mm (28 in)) Settings-(Late Design)

[a] *Swap RE577115 (C) and RE577187 (B). See diagram next page.*

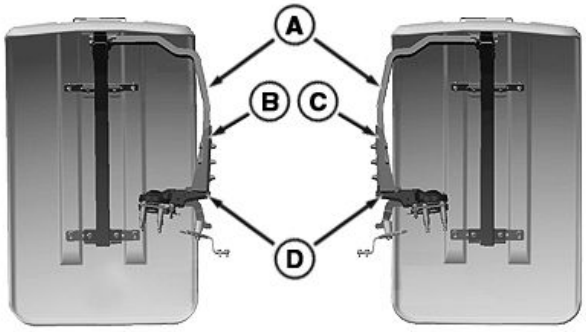
[b] *Swap RE577115 (C) and RE577187 (B). Install fender arm (A) outside fender brackets (B) and (C). See diagram next page.*

Continued on next page

GH15097,0000943 -19-13AUG15-1/9

1. Refer to assembly diagram for fender supports (A), left-hand fender bracket (B), right-hand fender bracket (C), and casting block (D).

A—RE577114 Fender Supports
B—RE577187 Left-Hand Fender Bracket
C—RE5777115 Right-Hand Fender Bracket
D—Casting Block



RXA0149402 —UN—27JUL15

710 mm (28 in.) Extra Wide Fender Diagram

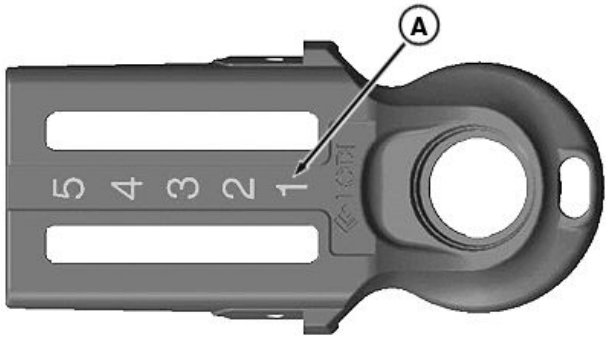
GH15097,0000943 -19-13AUG15-2/9

2. Adjust casting block (A) to desired fender using table for reference. Tighten cap screws to specification.

Specification

Casting Block Cap Screws—Torque.....140 N·m (104 lb-ft)

A—Casting Block



RXA0148599 —UN—20JUL15

Casting Block Position

Continued on next page

GH15097,0000943 -19-13AUG15-3/9

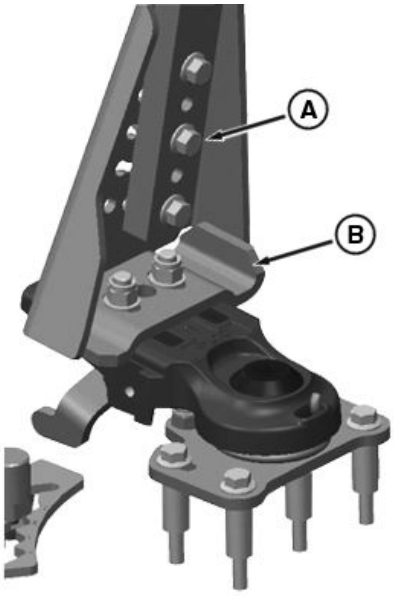
NOTE: For 2184 mm (86 in.) tread settings, fender arm is mounted to outside of support bracket.

3. Check position of RE577114 adjustable fender arm (A) to RE577187 or RE577115 support bracket (B) for correct fender setting.
4. Adjust arm angle (C) and height position brackets (D) to proper settings using the chart. Tighten cap screws to specification.

Specification

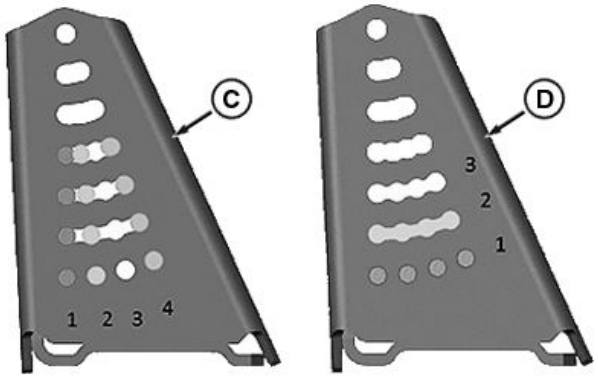
Arm Angle and Height Bracket Cap Screws—Torque.....128 N·m (95 lb-ft)

A—RE577114 Adjustable Fender Arm
B—RE577187 or RE577115 Support Bracket
C—Arm Angle Position
D—Arm Height Position



RXA0149398 —UN—20JUL15

Fender Arm and Support Bracket

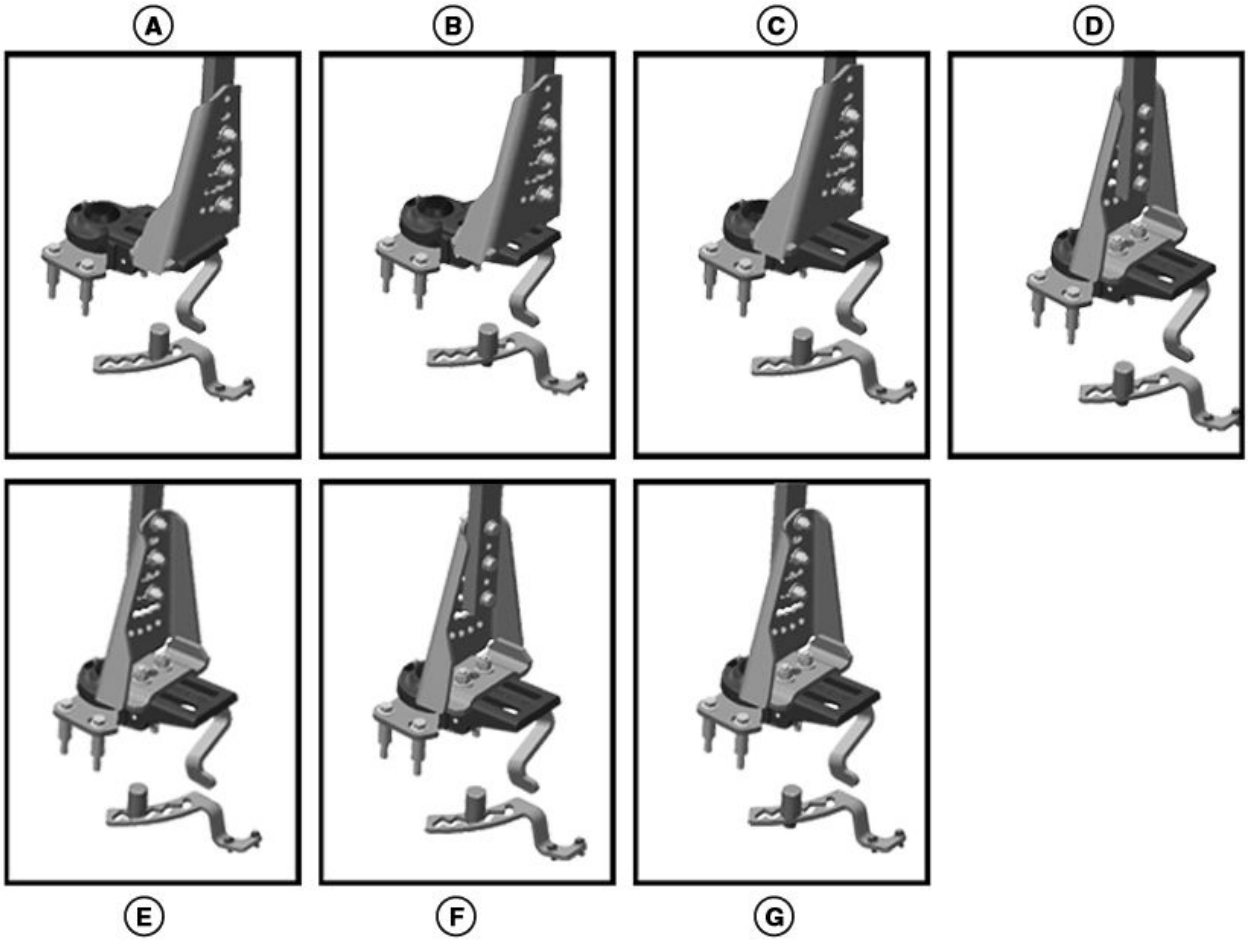


RXA0149399 —UN—20JUL15

Arm Angle and Air Height Position

Continued on next page

GH15097,0000943 -19-13AUG15-4/9



RXA0149400 —UN—16JUL15

Steering Stop Position for Tread Setting and Tire Groups

A—70 in. Tread, Group 42/43 Tire
B—74 in. Tread, Group 42/43 Tire
C—78 in. Tread, Group 42/43 Tire
D—82 in. Tread, Group 42/43 Tire
E—86 in. Tread, Group 42/43 Tire[1]
F—82 in. Tread, Group 44 Tire
G—86 in. Tread, Group 44 Tire[1]

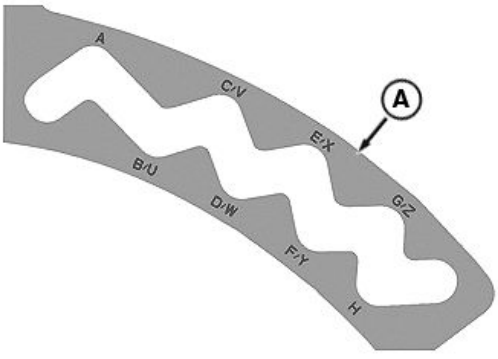
5. Refer to the diagram for correct steering stop position for desired tread setting and tire group.

[1]*Note: Fender arm mounted outside of support bracket*

GH15097,0000943 -19-13AUG15-5/9

6. Identify correct steering stop position on bracket (A) shown on the table for tire size and tread setting.

A—Steering Stop Bracket



RXA0148598 —UN—17JUL15

Steering Stop Bracket

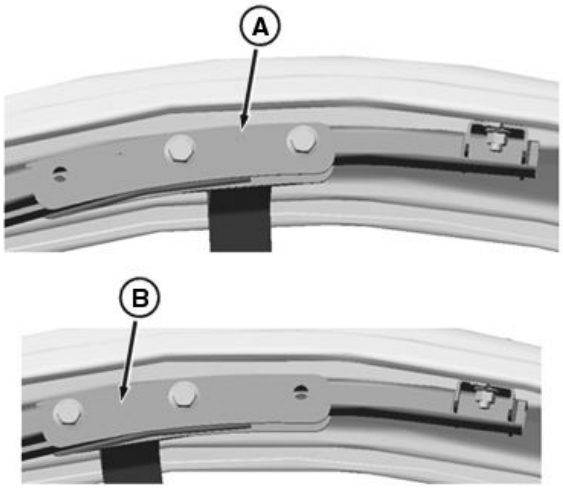
Continued on next page

GH15097,0000943 -19-13AUG15-6/9

7. Identify proper top tube position from the table. Reference diagram (A) indicates **Setting 1** and (B) is for **Setting 2**.

Specification	
Top Tube Cap Screws—Torque	128 N·m (95 lb-ft)

A—Setting 1 **B—Setting 2**



RXA0149401 —UN—20JUL15

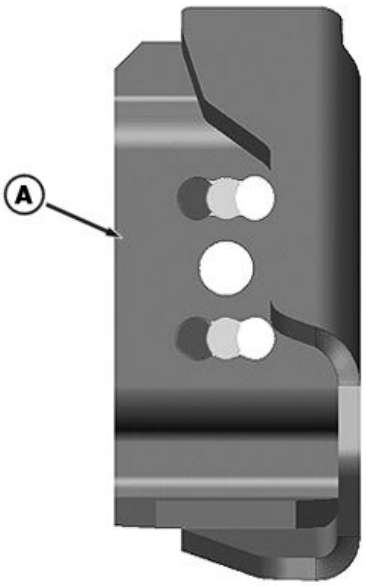
Top Tube Position

GH15097,0000943 -19-13AUG15-7/9

8. Perform final adjustment and correct assembly settings from the table. Tighten bracket cap screws (A) to specification.

Specification	
Casting Block Cap Screws—Torque	140 N·m (104 lb-ft)

A—Cap Screws



RXA0149403 —UN—20JUL15

Bracket Bolt Position

Continued on next page

GH15097,0000943 -19-13AUG15-8/9

9. Confirm fender brackets (A) are centered under fender as a final adjustment. Tighten cap screws to specification.

Specification

Fender Bracket Cap Screws—Torque.....73 N·m (54 lb-ft)

10. Check all wide fender assembly cap screws are tight to specification.

A—Fender Brackets



RXA0149404 —UN—20JUL15

Fender Bracket Adjustment

GH15097,0000943 -19-13AUG15-9/9

Service Tires Safely

Explosive separation of a tire and rim parts can cause serious injury or death.

Do not attempt to mount a tire unless you have the proper equipment and experience to perform the job.

Always maintain the correct tire pressure. Do not inflate the tires above the recommended pressure. Never weld or heat a wheel and tire assembly. The heat can cause an increase in air pressure resulting in a tire explosion. Welding can structurally weaken or deform the wheel.

When inflating tires, use a clip-on chuck and extension hose long enough to allow you to stand to one side and NOT in front of or over the tire assembly. Use a safety cage if available.

Check wheels for low pressure, cuts, bubbles, damaged rims, or missing lug bolts and nuts.



RXA0103438 —UN—11JUN09

DX,WW,RIMS -19-19AUG09-1/1

Select Tire Combinations

IMPORTANT: Avoid excessive power train wear. Do not mix worn and new tires, bias and radial, or tires of different diameters. Do not use R2 tires in combination with R1.

Tractors built with Group 47/48 tires may not be converted to Group 49 rear tires and tractors built with Group 49 tires may not be converted to Group 47/48 tires as these changes effect chassis and cab heights.

Mismatched front and rear tire combinations may cause poor performance and other problems. If unable to replace tires with same size as original equipment, consult your John Deere™ dealer or tire supplier for guidance.

Tires are placed into groups by their Rolling Circumference Index (RCI). Rolling circumference is distance tread travels in one revolution. Tires within a group, regardless of rim size, are same or nearly same diameter.

Since front tires are smaller than rear tires, front tires have to rotate faster to cover same distance as rear. Select correct size to optimize efficiency and ensure longer tire life.

Front tire must be from a group five group sizes smaller than rear tire group. For example, if rear tires are group 47, front tires must be group 42. Rim size is of no consequence. Different rim size tires such as 480/80R46 and 520/85R42 have same rolling circumference group, which is 47. Tire sizes are found in following tables.

FRONT TIRES								
Minimum Recommended Row Width mm (in.)								
Front Tires		508 mm (20 in.)	559 mm (22 in.)	762 mm (30 in.)	813 mm (32 in.)			
Front Tire Section Width mm (in.)								
RCI Group Size	Approximate Outside Diameter	320 mm (12.6 in.)	380 mm (15 in.)	420 mm (16.5 in.)	480 mm (18.9 in.)	540 mm (21.3 in.)	600 mm (23.6 in.)	620 mm (24.4 in.)
42	1499 mm (59 in.)	320/85R38	380/85R34	420/90R30	480/70R30		600/65R28	
43	1600 mm (63 in.)	320/80R42 IF320/80R42	380/80R38 IF380/80R38	420/85R34 IF420/85R34	IF480/70R34	540/65R34	600/70R30 IF600/70R30	
44	1676 mm (66 in.)		380/80R42	420/85R38		540/75R34	600/65R34	620/75R30 IF620/75R30

REAR TIRES									
Minimum Recommended Row Width mm (in.)									
Rear Tires		508 mm (20 in.)	559 mm (22 in.)	762 mm (30 in.)	813 mm (32 in.)				
Rear Tire Section Width mm (in.)									
RCI Group Size	Approximate Outside Diameter	320 mm (12.6 in.)	380 mm (15 in.)	480 mm (18.9 in.)	520 mm (20.5 in.)	620 mm (24.4 in.)	650 mm (25.6 in.)	710 mm (28 in.)	800 mm (31.5 in.)
47	1956 mm (77 in.)	320/90R54[a]	380/90R50	480/80R46	520/85R42	620/70R42	650/65R42	710/70R38	
48	2057 mm (81 in.)	320/105R54	380/90R54	480/80R50 IF480/80R50 VF480/80 R50	520/85R46	620/70R46	650/85R38 IF650/85R38	710/70R42 IF710/70R42	800/70R38 IF800/70R38
49	2172 mm (85.5 in.)			480/95R50				710/75R42 IF710/75R42	

[a] *Approved in dual configuration only*

NOTE: If tire group change is desired, see your John Deere™ dealer.

John Deere is a trademark of Deere & Company

TO84419,0000161 -19-19SEP14-1/1

Tire Sidewall Information



RXA0149658 —UN—13AUG15

Displayed on tire sidewalls is information useful in selecting and working with tires.

A — Tire section width –Width in millimeters.
B — Aspect ratio – Ratio of height to tire section width.
C — Construction type –R = Radial, B = Bias.
D — Rim diameter –Diameter in inches (not total tire height or group size).
E — Load index –Numerical code indicates tire load-carrying capacity. Higher load index number designates higher load capacity. See Tire Load Index chart in this section of this Operator's Manual.
F — Speed rating –Maximum speed tire is designed to travel.

Additional information that may be displayed on sidewall.

Tread pattern — Indicates tread design and tire usage. Designs offered are all lug- or bar-type tires and are separated into one of three specifications: R1, R1W, or R2.
Direction of rotation — Icon (usually an arrow or group of arrows) indicating tire rotation direction.
Manufacturer name — Name of tire manufacturer.
Max load and pressure information — Maximum load a tire is permitted to carry under specified pressure and operating conditions. See Recommended Pressures charts in this section of this Operator's Manual.
Safety warnings — Important information provided by tire manufacturer.

TO84419,0000157 -19-24AUG15-1/1

Tire Load Index

IMPORTANT: Tire load capacity may exceed allowable axle loading. Tractor should be ballasted according to engine power and weight split guidelines. See Performance Ballasting Section for more information.

Chart lists maximum amount of weight that can be supported by each tire at manufacturer's maximum rated pressure.

For tractors equipped with duals, load carrying capacity per tire is reduced.

Load Index	Maximum Load per Tire[a]		Load Index	Maximum Load per Tire[a]	
	Single kg (lb)	Dual kg (lb)		Single kg (lb)	Dual kg (lb)
137	2300 (5071)	2024 (4462)	158	4250 (9370)	3740 (8246)
141	2575 (5677)	2266 (4996)	159	4375 (9645)	3850 (8488)
142	2650 (5842)	2332 (5141)	160	4500 (9921)	3960 (8730)
143	2725 (6008)	2398 (5287)	163	4875 (10747)	4290 (9457)
144	2800 (6173)	2464 (5432)	164	5000 (11023)	4400 (9700)
145	2900 (6393)	2552 (3927)	166	5300 (11684)	4664 (10282)
146	3000 (6614)	2640 (5820)	167	5450 (12015)	4796 (10573)
147	3075 (6779)	2706 (5966)	168	5600 (12346)	4928 (10864)
148	3150 (6944)	2772 (6111)	170	6000 (13228)	5280 (11641)
149	3250 (7165)	2860 (6305)	171	6150 (13558)	5412 (11931)
150	3350 (7385)	2948 (6499)	173	6500 (14330)	5720 (12610)
151	3450 (7606)	3036 (6693)	175	6900 (15212)	6072 (13386)
152	3550 (7826)	2948 (6887)	176	7100 (15653)	6248 (13775)
154	3750 (8267)	3300 (7275)	178	7500 (16535)	6600 (14551)
155	3875 (8543)	3410 (7518)	179	7750 (17086)	6820 (15036)
157	4125 (9094)	3630 (8003)			

[a] *At maximium rated pressure.*

TO84419,0000187 -19-13AUG15-1/1

Tire Inflation Pressure Guidelines

Check tire inflation pressure while tires are cool, using an accurate dial or stick-type gauge having 10 kPa (0.1 bar) (1 psi) graduations.

NOTE: Use a special air-water gauge and measure with valve stem at bottom if tires contain liquid ballast.

Correctly inflated radial tires will show a deflection of sidewall. This is normal and will not harm tire.

Inflation pressures less than 83 kPa (0.8 bar) (12 psi) should be monitored frequently because of increased risk of low-pressure air leaks.

NOTE: Bead slip can be experienced in high-traction conditions, with single tire usage. Increasing inflation pressure will help but will reduce traction.

Maximum tire pressure is specified on tire sidewall.

Determine the correct tire pressure

Integral implements transfer significant weight to axles, always include this weight when determining correct inflation pressures. Determine correct tire pressure by weighing tractor using following procedure:

Rear Mounted Implement - Front axle should be weighed with implement lowered. Rear axle should be weighed with implement raised.

Front Mounted Implement - Front axle should be weighed with implement raised. Rear axle should be weighed with implement lowered.

Front and Rear Mounted Implements - Weigh tractor with both front and rear implements raised.

Set tire inflation pressures according to weight measured. *Ballasting and tire inflation pressure may need to be adjusted when operating conditions change.* Use following tire inflation charts. For tires not found in charts refer to manufacturers recommended inflation pressures.

Managing Tire Inflation Pressures

Tractors operating with a loader should increase front tire pressures 30 kPa (0.3 bar) (4 psi) above values listed to compensate for weight transfer.

Tractors operating on steep side slopes or furrow plowing should increase rear tire pressures 30 kPa (0.3 bar) (4 psi) above values listed for base pressures 80 kPa (0.8 bar) (12 psi) and above to compensate for lateral weight transfer. For base pressures below 80 kPa (0.8 bar) (12 psi), pressure should be increased by 30%.

Reduce pressures to correct pressure for towed implement operation.

Tractors with heavy hitch-mounted implements require additional front cast weights to maintain steering stability and increased front and rear tire inflation pressure to carry increased weight.

TO84419,000017B -19-27NOV12-1/1

Recommended Pressures—*Group 47*

Size	320/90R54	380/90R50		480/80R46		520/85R42			
Load Index	149	151		158		157		162	
Speed Rating	A8	A8		A8 / B		A8		A8 / B	
	Dual	Single	Dual	Single	Dual	Single	Dual	Single	Dual
Axle Load kg (lb)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)
3629 (8000)	70 (0.7)(10)	83 (0.8)(12)	40 (0.4)(6)	65 (0.65)(9)	40 (0.4)(6)	65 (0.65)(9)	40 (0.4)(6)	85 (0.85)(12)	40 (0.4)(6)
3856 (8500)	70 (0.7)(10)	124 (1.2)(18)	40 (0.4)(6)	65 (0.65)(9)	40 (0.4)(6)	65 (0.65)(9)	40 (0.4)(6)	85 (0.85)(12)	40 (0.4)(6)
4082 (9000)	70 (0.7)(10)	124 (1.2)(18)	40 (0.4)(6)	75 (0.75)(11)	40 (0.4)(6)	65 (0.65)(9)	40 (0.4)(6)	85 (0.85)(12)	40 (0.4)(6)
4309 (9500)	70 (0.7)(10)	131 (1.3)(19)	40 (0.4)(6)	85 (0.85)(12)	40 (0.4)(6)	65 (0.65)(9)	40 (0.4)(6)	85 (0.85)(12)	40 (0.4)(6)
4536 (10000)	70 (0.7)(10)	131 (1.3)(19)	41 (0.4)(6)	90 (0.9)(13)	40 (0.4)(6)	65 (0.65)(9)	40 (0.4)(6)	85 (0.85)(12)	40 (0.4)(6)
4763 (10500)	70 (0.7)(10)	131 (1.3)(19)	48 (0.5)(7)	95 (0.95)(14)	40 (0.4)(6)	70 (0.7)(10)	40 (0.4)(6)	85 (0.85)(12)	40 (0.4)(6)
4990 (11000)	75 (0.75)(11)	138 (1.4)(20)	55 (0.6)(8)	105 (1.05)(15)	40 (0.4)(6)	75 (0.75)(11)	40 (0.4)(6)	85 (0.85)(12)	40 (0.4)(6)
5216 (11500)	80 (0.8)(12)	138 (1.4)(20)	55 (0.6)(8)	110 (1.1)(16)	40 (0.4)(6)	85 (0.85)(12)	40 (0.4)(6)	85 (0.85)(12)	40 (0.4)(6)
5443 (12000)	90 (0.9)(13)	145 (1.4)(21)	62 (0.6)(9)	120 (1.2)(17)	40 (0.4)(6)	90 (0.9)(13)	40 (0.4)(6)	85 (0.85)(12)	40 (0.4)(6)
5670 (12500)	95 (0.95)(14)	159 (1.6)(23)	69 (0.7)(10)	130 (1.3)(19)	40 (0.4)(6)	95 (0.95)(14)	40 (0.4)(6)	85 (0.85)(12)	40 (0.4)(6)
5897 (13000)	105 (1.05)(15)	165 (1.7)(24)	69 (0.7)(10)	145 (1.45)(21)	50 (0.5)(7)	105 (1.05)(15)	40 (0.4)(6)	85 (0.85)(12)	40 (0.4)(6)
6123 (13500)	110 (1.1)(16)	179 (1.8)(26)	76 (0.8)(11)	150 (1.5)(22)	50 (0.5)(7)	105 (1.05)(15)	40 (0.4)(6)	90 (0.9)(13)	40 (0.4)(6)
6350 (14000)	110 (1.1)(16)	207 (2.1)(30)	83 (0.8)(12)	160 (1.6)(23)	55 (0.55)(8)	110 (1.1)(16)	40 (0.4)(6)	95 (0.95)(14)	40 (0.4)(6)
6577 (14500)	120 (1.2)(17)	221 (2.2)(32)	90 (0.9)(13)	165 (1.65)(24)	55 (0.55)(8)	110 (1.1)(16)	40 (0.4)(6)	105 (1.05)(15)	40 (0.4)(6)
6804 (15000)	120 (1.2)(17)	241 (2.4)(35)	124 (1.2)(18)	175 (1.75)(25)	65 (0.65)(9)	120 (1.2)(17)	50 (0.5)(7)	110 (1.1)(16)	40 (0.4)(6)
7031 (15500)	125 (1.25)(18)	—	124 (1.2)(18)	180 (1.8)(26)	70 (0.7)(10)	125 (1.25)(18)	50 (0.5)(7)	120 (1.2)(17)	40 (0.4)(6)
7257 (16000)	130 (1.3)(19)	—	124 (1.2)(18)	190 (1.9)(28)	75 (0.75)(11)	130 (1.3)(19)	55 (0.55)(8)	125 (1.25)(18)	40 (0.4)(6)
7484 (16500)	145 (1.45)(21)	—	124 (1.2)(18)	200 (2.0)(29)	75 (0.75)(11)	140 (1.4)(20)	55 (0.55)(8)	140 (1.4)(20)	40 (0.4)(6)
7711 (17000)	145 (1.45)(21)	—	131 (1.3)(19)	215 (2.15)(31)	80 (0.8)(12)	145 (1.45)(21)	55 (0.55)(8)	150 (1.5)(22)	40 (0.4)(6)
7938 (17500)	150 (1.5)(22)	—	131 (1.3)(19)	220 (2.2)(32)	90 (0.9)(13)	150 (1.5)(22)	65 (0.65)(9)	160 (1.6)(23)	50 (0.5)(7)
8165 (18000)	160 (1.6)(23)	—	131 (1.3)(19)	235 (2.35)(34)	95 (0.95)(14)	160 (1.6)(23)	70 (0.7)(10)	175 (1.75)(25)	55 (0.55)(8)
8391 (18500)	165 (1.65)(24)	—	131 (1.3)(19)	240 (2.4)(35)	105 (1.05)(15)	—	70 (0.7)(10)	180 (1.8)(26)	55 (0.55)(8)
8618 (19000)	170 (1.7)(25)	—	138 (1.4)(20)	—	105 (1.05)(15)	—	75 (0.75)(11)	190 (1.9)(28)	65 (0.65)(9)
8845 (19500)	185 (1.85)(27)	—	138 (1.4)(20)	—	110 (1.1)(16)	—	75 (0.75)(11)	207 (2.07)(30)	65 (0.65)(9)
9072 (20000)	210 (2.1)(30)	—	138 (1.4)(20)	—	110 (1.1)(16)	—	80 (0.8)(12)	220 (2.2)(32)	70 (0.7)(10)

Continued on next page

GH15097,0000829 -19-20AUG15-1/2

Size	320/90R54	380/90R50		480/80R46		520/85R42			
Load Index	149	151		158		157		162	
Speed Rating	A8	A8		A8 / B		A8		A8 / B	
	Dual	Single	Dual	Single	Dual	Single	Dual	Single	Dual
Axle Load kg (lb)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)
9525 (21000)	240 (2.4)(35)	—	145 (1.4)(21)	—	120 (1.2)(17)	—	90 (0.9)(13)	240 (2.4)(35)	70 (0.7)(10)
9979 (22000)	255 (2.55)(37)	—	159 (1.6)(23)	—	130 (1.3)(19)	—	95 (0.95)(14)	—	75 (0.75)(11)
10433 (23000)	280 (2.8)(41)	—	172 (1.7)(25)	—	145 (1.45)(21)	—	105 (1.05)(15)	—	80 (0.8)(12)
10886 (24000)	300 (3.0)(43)	—	186 (1.9)(27)	—	150 (1.5)(22)	—	110 (1.1)(16)	—	90 (0.9)(13)
11340 (25000)	320 (3.2)(46)	—	214 (2.1)(31)	—	160 (1.6)(23)	—	110 (1.1)(16)	—	95 (0.95)(14)
11793 (26000)	—	—	234 (2.3)(34)	—	175 (1.75)(25)	—	120 (1.2)(17)	—	105 (1.05)(15)
12247 (27000)	—	—	—	—	185 (1.85)(27)	—	125 (1.25)(18)	—	110 (1.1)(16)
12701 (28000)	—	—	—	—	190 (1.9)(28)	—	130 (1.3)(19)	—	120 (1.2)(17)
13154 (29000)	—	—	—	—	200 (2.0)(29)	—	140 (1.4)(20)	—	125 (1.25)(18)
13608 (30000)	—	—	—	—	215 (2.15)(31)	—	145 (1.45)(21)	—	140 (1.4)(20)
14061 (31000)	—	—	—	—	220 (2.2)(32)	—	150 (1.5)(22)	—	150 (1.5)(22)
14515 (32000)	—	—	—	—	235 (2.35)(34)	—	160 (1.6)(23)	—	160 (1.6)(23)
14969 (33000)	—	—	—	—	240 (2.4)(35)	—	—	—	175 (1.75)(25)
15422 (34000)	—	—	—	—	—	—	—	—	185 (1.85)(27)
15876 (35000)	—	—	—	—	—	—	—	—	200 (2.0)(29)
16329 (36000)	—	—	—	—	—	—	—	—	240 (2.4)(35)

GH15097,0000829 -19-20AUG15-2/2

Recommended Pressures—*Group 47* *(Continued)*

Size	620/70R42				650/65R42		710/70R38	
Load Index	160		166		158	170	166	
Speed Rating	A8		A8		D	A8	A8 / B	A8
	Single	Dual	Single	Dual	Single	Single	Single	Dual
Axle Load kg (lb)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)
4536 (10000)	62 (0.6)(9)	62 (0.6)(9)	55 (0.55)(8)	40 (0.4)(6)	60 (0.6)(9)	60 (0.6)(9)	65 (0.65)(9)	40 (0.4)(6)
4763 (10500)	62 (0.6)(9)	62 (0.6)(9)	60 (0.6)(9)	40 (0.4)(6)	60 (0.6)(9)	60 (0.6)(9)	65 (0.65)(9)	40 (0.4)(6)
4990 (11000)	69 (0.7)(10)	62 (0.6)(9)	70 (0.7)(10)	40 (0.4)(6)	70 (0.7)(10)	70 (0.7)(10)	65 (0.65)(9)	40 (0.4)(6)
5216 (11500)	76 (0.8)(11)	62 (0.6)(9)	70 (0.7)(10)	40 (0.4)(6)	75 (0.75)(11)	75 (0.75)(11)	65 (0.65)(9)	40 (0.4)(6)
5443 (12000)	76 (0.8)(11)	62 (0.6)(9)	75 (0.75)(11)	40 (0.4)(6)	85 (0.85)(12)	85 (0.85)(12)	65 (0.65)(9)	40 (0.4)(6)
5670 (12500)	83 (0.8)(12)	62 (0.6)(9)	85 (0.85)(12)	40 (0.4)(6)	90 (0.9)(13)	90 (0.9)(13)	65 (0.65)(9)	40 (0.4)(6)
5897 (13000)	90 (0.9)(13)	62 (0.6)(9)	90 (0.9)(13)	40 (0.4)(6)	95 (0.95)(14)	95 (0.95)(14)	65 (0.65)(9)	40 (0.4)(6)
6123 (13500)	97 (1.0)(14)	62 (0.6)(9)	95 (0.95)(14)	40 (0.4)(6)	95 (0.95)(14)	95 (0.95)(14)	65 (0.65)(9)	40 (0.4)(6)
6350 (14000)	103 (1.0)(15)	62 (0.6)(9)	105 (1.05)(15)	40 (0.4)(6)	105 (1.05)(15)	105 (1.05)(15)	65 (0.65)(9)	40 (0.4)(6)
6577 (14500)	110 (1.1)(16)	62 (0.6)(9)	110 (1.1)(16)	40 (0.4)(6)	110 (1.1)(16)	110 (1.1)(16)	65 (0.65)(9)	40 (0.4)(6)
6804 (15000)	110 (1.1)(16)	62 (0.6)(9)	110 (1.1)(16)	40 (0.4)(6)	110 (1.1)(16)	110 (1.1)(16)	65 (0.65)(9)	40 (0.4)(6)
7031 (15500)	117 (1.2)(17)	62 (0.6)(9)	120 (1.2)(17)	40 (0.4)(6)	120 (1.2)(17)	120 (1.2)(17)	70 (0.7)(10)	40 (0.4)(6)
7257 (16000)	117 (1.2)(17)	62 (0.6)(9)	120 (1.2)(17)	40 (0.4)(6)	125 (1.25)(18)	125 (1.25)(18)	75 (0.75)(11)	40 (0.4)(6)
7484 (16500)	124 (1.2)(18)	62 (0.6)(9)	125 (1.25)(18)	50 (0.5)(7)	130 (1.3)(19)	130 (1.3)(19)	75 (0.75)(11)	40 (0.4)(6)
7711 (17000)	131 (1.3)(19)	62 (0.6)(9)	130 (1.3)(19)	55 (0.55)(8)	140 (1.4)(20)	140 (1.4)(20)	85 (0.85)(12)	40 (0.4)(6)
7938 (17500)	131 (1.3)(19)	62 (0.6)(9)	130 (1.3)(19)	55 (0.55)(8)	145 (1.45)(21)	145 (1.45)(21)	90 (0.9)(13)	40 (0.4)(6)
8165 (18000)	138 (1.4)(20)	62 (0.6)(9)	140 (1.4)(20)	65 (0.65)(9)	150 (1.5)(22)	150 (1.5)(22)	95 (0.95)(14)	40 (0.4)(6)
8391 (18500)	145 (1.4)(21)	62 (0.6)(9)	145 (1.45)(21)	65 (0.65)(9)	160 (1.6)(23)	160 (1.6)(23)	105 (1.05)(15)	40 (0.4)(6)
8618 (19000)	152 (1.5)(22)	69 (0.7)(10)	150 (1.5)(22)	70 (0.7)(10)	160 (1.6)(23)	160 (1.6)(23)	110 (1.1)(16)	50 (0.5)(7)
8845 (19500)	159 (1.6)(23)	69 (0.7)(10)	160 (1.6)(23)	70 (0.7)(10)	—	160 (1.6)(23)	110 (1.1)(16)	50 (0.5)(7)
9072 (20000)	152 (1.5)(22)	69 (0.7)(10)	167 (1.67)(24)	70 (0.7)(10)	—	160 (1.6)(23)	120 (1.2)(17)	50 (0.5)(7)
9525 (21000)	159 (1.6)(23)	76 (0.8)(11)	180 (1.8)(26)	75 (0.75)(11)	—	175 (1.75)(25)	130 (1.3)(19)	50 (0.5)(7)
9979 (22000)	—	83 (0.8)(12)	200 (2.0)(29)	85 (0.85)(12)	—	180 (1.8)(26)	140 (1.4)(20)	50 (0.5)(7)
10433 (23000)	—	90 (0.9)(13)	—	90 (0.9)(13)	—	185 (1.85)(27)	160 (1.6)(23)	55 (0.55)(8)
10886 (24000)	—	97 (1.0)(14)	—	95 (0.95)(14)	—	190 (1.9)(28)	—	55 (0.55)(8)

Continued on next page

TO84419,000017D -19-13AUG15-1/2

Size	620/70R42				650/65R42		710/70R38	
Load Index	160		166		158	170	166	
Speed Rating	A8		A8		D	A8	A8 / B	A8
	Single	Dual	Single	Dual	Single	Single	Single	Dual
Axle Load kg (lb)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)
11340 (25000)	—	10 3(1.0)(15)	—	105 (1.05)(15)	—	190 (1.9)(28)	—	55 (0.55)(8)
11793 (26000)	—	110 (1.1)(16)	—	110 (1.1)(16)	—	200 (2.0)(29)	—	55 (0.55)(8)
12247 (27000)	—	117 (1.2)(17)	—	120 (1.2)(17)	—	—	—	65 (0.65)(9)
12701 (28000)	—	117 (1.2)(17)	—	120 (1.2)(17)	—	—	—	70 (0.7)(10)
13154 (29000)	—	124 (1.2)(18)	—	125 (1.25)(18)	—	—	—	75 (0.75)(11)
13608 (30000)	—	131 (1.3)(19)	—	130 (1.3)(19)	—	—	—	85 (0.85)(12)
14061 (31000)	—	138 (1.4)(20)	—	140 (1.4)(20)	—	—	—	95 (0.95)(14)
14515 (32000)	—	138 (1.4)(20)	—	140 (1.4)(20)	—	—	—	105 (1.05)(15)
14969 (33000)	—	152 (1.5)(22)	—	145 (1.45)(21)	—	—	—	110 (1.1)(16)
15422 (34000)	—	159 (1.6)(23)	—	150 (1.5)(22)	—	—	—	110 (1.1)(16)
15876 (35000)	—	152 (1.5)(22)	—	150 (1.5)(22)	—	—	—	120 (1.2)(17)
16329 (36000)	—	159 (1.6)(23)	—	175 (1.75)(25)	—	—	—	125 (1.25)(18)
16783 (37000)	—	—	—	185 (1.85)(27)	—	—	—	130 (1.3)(19)
17237 (38000)	—	—	—	190 (1.9)(28)	—	—	—	140 (1.4)(20)
17690 (39000)	—	—	—	210 (2.1)(30)	—	—	—	145 (1.45)(21)
18144 (40000)	—	—	—	220 (2.2)(32)	—	—	—	150 (1.5)(22)
18597 (41000)	—	—	—	240 (2.4)(35)	—	—	—	160 (1.6)(23)

TO84419,000017D -19-13AUG15-2/2

Recommended Pressures—*Group 48*

Size	320/105R54		380/90R54		480/80R50		IF480/80R50		520/85R46	
Load Index	163		152		159		166		158	
Speed Rating	A8		A8		A8	A8 / B	A8		A8	A8 / B
	Single	Dual	Single	Dual	Single	Dual	Single	Dual	Single	Dual
Axle Load kg (lb)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)
4536 (10000)	131 (1.3)(19)	48 (0.5)(7)	105 (1.1)(15)	55 (0.55)(8)	85 (0.85)(12)	40 (0.4)(6)	40 (0.4)(6)	41 (0.4)(6)	65 (0.65)(9)	40 (0.4)(6)
4763 (10500)	138 (1.4)(20)	55 (0.55)(8)	110 (1.1)(16)	55 (0.55)(8)	85 (0.85)(12)	40 (0.4)(6)	40 (0.4)(6)	41 (0.4)(6)	70 (0.7)(10)	40 (0.4)(6)
4990 (11000)	145 (1.4)(21)	62 (0.6)(8)	120 (1.2)(17)	55 (0.55)(8)	90 (0.9)(13)	40 (0.4)(6)	40 (0.4)(6)	41 (0.4)(6)	75 (0.75)(11)	40 (0.4)(6)
5216 (11500)	159 (1.6)(23)	69 (0.7)(10)	130 (1.3)(19)	55 (0.55)(8)	95 (1.0)(14)	40 (0.4)(6)	40 (0.4)(6)	41 (0.4)(6)	75 (0.75)(11)	40 (0.4)(6)
5443 (12000)	172 (1.7)(25)	76 (0.8)(11)	140 (1.4)(20)	55 (0.55)(8)	105 (1.1)(15)	40 (0.4)(6)	40 (0.4)(6)	41 (0.4)(6)	85 (0.85)(12)	40 (0.4)(6)
5670 (12500)	193 (1.9)(28)	76 (0.8)(11)	150 (1.5)(22)	65 (0.65)(9)	110 (1.1)(16)	40 (0.4)(6)	40 (0.4)(6)	41 (0.4)(6)	90 (0.9)(13)	40 (0.4)(6)
5897 (13000)	214 (2.1)(31)	83 (0.8)(12)	160 (1.6)(23)	65 (0.65)(9)	110 (1.1)(16)	40 (0.4)(6)	40 (0.4)(6)	41 (0.4)(6)	95 (0.95)(14)	40 (0.4)(6)
6123 (13500)	228 (2.3)(33)	90 (0.9)(13)	170 (1.70)(25)	65 (0.65)(9)	120 (1.2)(17)	50 (0.5)(7)	40 (0.4)(6)	48 (0.5)(7)	105 (1.05)(15)	40 (0.4)(6)
6350 (14000)	248 (2.5)(36)	97 (1.0)(14)	180 (1.8)(26)	70 (0.7)(10)	125 (1.25)(18)	50 (0.5)(7)	40 (0.4)(6)	48 (0.5)(7)	110 (1.1)(16)	40 (0.4)(6)
6577 (14500)	262 (2.6)(38)	103 (1.0)(15)	190 (1.9)(28)	70 (0.7)(10)	130 (1.3)(19)	55 (0.55)(8)	40 (0.4)(6)	48 (0.5)(7)	110 (1.1)(16)	40 (0.4)(6)
6804 (15000)	283 (2.8)(41)	103 (1.0)(15)	200 (2.0)(29)	75 (0.75)(11)	140 (1.4)(20)	55 (0.55)(8)	40 (0.4)(6)	48 (0.5)(7)	110 (1.1)(16)	40 (0.4)(6)
7031 (15500)	296 (3.0)(43)	110 (1.1)(16)	250 (2.5)(36)	75 (0.75)(11)	145 (1.45)(21)	55 (0.55)(8)	40 (0.4)(6)	55 (0.6)(8)	120 (1.2)(17)	50 (0.5)(7)
7257 (16000)	317 (3.2)(46)	110 (1.1)(16)	—	80 (0.8)(12)	150 (1.5)(22)	65 (0.65)(9)	50 (0.5)(7)	50 (0.5)(7)	125 (1.25)(18)	50 (0.5)(7)
7484 (16500)	338 (3.4)(49)	117 (1.2)(17)	—	90 (0.9)(13)	160 (1.6)(23)	70 (0.7)(10)	50 (0.5)(7)	55 (0.55)(8)	130 (1.3)(19)	55 (0.55)(8)
7711 (17000)	359 (3.6)(52)	124 (1.2)(18)	—	95 (0.95)(14)	180 (1.8)(26)	70 (0.7)(10)	55 (0.55)(8)	62 (0.6)(9)	140 (1.4)(20)	55 (0.55)(8)
7938 (17500)	379 (3.8)(55)	124 (1.2)(18)	—	95 (0.95)(14)	190 (1.9)(28)	75 (0.75)(11)	65 (0.65)(9)	62 (0.6)(9)	145 (1.45)(21)	55 (0.55)(8)
8165 (18000)	393 (3.9)(57)	131 (1.3)(19)	—	105 (1.05)(15)	200 (2.0)(29)	85 (0.85)(12)	65 (0.65)(9)	62 (0.6)(9)	150 (1.5)(22)	65 (0.65)(9)
8391 (18500)	414 (4.1)(60)	138 (1.4)(20)	—	105 (1.1)(15)	220 (2.2)(32)	90 (0.9)(13)	65 (0.65)(9)	62 (0.6)(9)	160 (1.6)(23)	70 (0.7)(10)
8618 (19000)	421 (4.2)(61)	145 (1.4)(21)	—	110 (1.1)(16)	235 (2.35)(34)	90 (0.9)(13)	70 (0.7)(10)	69 (0.7)(10)	—	75 (0.75)(11)
8845 (19500)	434 (4.3)(63)	152 (1.5)(22)	—	120 (1.2)(17)	240 (2.4)(35)	90 (0.9)(13)	70 (0.7)(10)	69 (0.7)(10)	—	75 (0.75)(11)
9072 (20000)	448 (4.5)(65)	159 (1.6)(23)	—	130 (1.3)(19)	—	95 (0.95)(14)	70 (0.7)(10)	69 (0.7)(10)	—	75 (0.75)(11)
9525 (21000)	483 (4.8)(70)	172 (1.7)(25)	—	140 (1.4)(20)	—	105 (1.05)(15)	75 (0.75)(11)	76 (0.8)(11)	—	85 (0.85)(12)
9979 (22000)	—	193 (1.9)(28)	—	150 (1.5)(22)	—	110 (1.1)(16)	85 (0.85)(12)	83 (0.8)(12)	—	90 (0.9)(13)
10433 (23000)	—	214 (2.1)(31)	—	160 (1.6)(23)	—	110 (1.1)(16)	90 (0.9)(13)	90 (0.9)(13)	—	95 (0.95)(14)
10886 (24000)	—	234 (2.3)(34)	—	170 (1.70)(25)	—	120 (1.2)(17)	95 (0.95)(14)	97 (1.0)(14)	—	105 (1.05)(15)

Continued on next page

TO84419,0000180 -19-13AUG15-1/2

Size	320/105R54		380/90R54		480/80R50		IF480/80R50		520/85R46	
Load Index	163		152		159		166		158	
Speed Rating	A8		A8		A8	A8 / B	A8		A8	A8 / B
	Single	Dual	Single	Dual	Single	Dual	Single	Dual	Single	Dual
Axle Load kg (lb)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)
11340 (25000)	—	255 (2.6)(37)	—	180 (1.8)(26)	—	130 (1.3)(19)	—	10 3(1.0)(15)	—	110 (1.1)(16)
11793 (26000)	—	276 (2.8)(40)	—	190 (1.9)(28)	—	140 (1.4)(20)	—	110 (1.1)(16)	—	110 (1.1)(16)
12247 (27000)	—	290 (2.9)(42)	—	200 (2.0)(29)	—	145 (1.45)(21)	—	117 (1.2)(17)	—	120 (1.2)(17)
12701 (28000)	—	310 (3.1)(45)	—	250 (2.5)(36)	—	150 (1.5)(22)	—	117 (1.2)(17)	—	125 (1.25)(18)
13154 (29000)	—	338 (3.4)(49)	—	—	—	160 (1.6)(23)	—	124 (1.2)(18)	—	130 (1.3)(19)
13608 (30000)	—	359 (3.6)(52)	—	—	—	170 (1.70)(25)	—	131 (1.3)(19)	—	140 (1.4)(20)
14061 (31000)	—	379 (3.8)(55)	—	—	—	190 (1.9)(28)	—	138 (1.4)(20)	—	145 (1.45)(21)
14515 (32000)	—	400 (4.0)(58)	—	—	—	200 (2.0)(29)	—	138 (1.4)(20)	—	150 (1.5)(22)
14969 (33000)	—	421 (4.2)(61)	—	—	—	220 (2.2)(32)	—	152 (1.5)(22)	—	160 (1.6)(23)
15422 (34000)	—	434 (4.3)(63)	—	—	—	240 (2.4)(35)	—	159 (1.6)(23)	—	—
15876 (35000)	—	448 (4.5)(65)	—	—	—	—	—	165 (1.7)(24)	—	—
16329 (36000)	—	462 (4.6)(67)	—	—	—	—	—	172 (1.7)(25)	—	—
16783 (37000)	—	476 (4.8)(69)	—	—	—	—	—	186 (1.9)(27)	—	—
17237 (38000)	—	—	—	—	—	—	—	207 (2.1)(30)	—	—
17690 (39000)	—	—	—	—	—	—	—	221 (2.2)(32)	—	—
18144 (40000)	—	—	—	—	—	—	—	228 (2.3)(33)	—	—
18597 (41000)	—	—	—	—	—	—	—	241 (2.4)(35)	—	—

TO84419,0000180 -19-13AUG15-2/2

Recommended Pressures—*Group 48* *(Continued)*

Size	620/70R46		650/85R38		IF650/85R38	
Load Index	167		173		179	
Speed Rating	A8		A8 / B		A8 / B	
	Single	Dual	Single	Dual	Single	Dual
Axle Load kg (lb)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)
5443 (12000)	65 (0.65)(9)	40 (0.4)(6)	40 (0.4)(6)	40 (0.4)(6)	85 (0.85)(12)	40 (0.4)(6)
5670 (12500)	65 (0.65)(9)	40 (0.4)(6)	50 (0.5)(7)	40 (0.4)(6)	85 (0.85)(12)	40 (0.4)(6)
5897 (13000)	65 (0.65)(9)	40 (0.4)(6)	50 (0.5)(7)	40 (0.4)(6)	85 (0.85)(12)	40 (0.4)(6)
6123 (13500)	65 (0.65)(9)	40 (0.4)(6)	55 (0.55)(8)	40 (0.4)(6)	85 (0.85)(12)	40 (0.4)(6)
6350 (14000)	70 (0.7)(10)	40 (0.4)(6)	55 (0.55)(8)	40 (0.4)(6)	85 (0.85)(12)	40 (0.4)(6)
6577 (14500)	75 (0.75)(11)	40 (0.4)(6)	55 (0.55)(8)	40 (0.4)(6)	85 (0.85)(12)	40 (0.4)(6)
6804 (15000)	85 (0.85)(12)	40 (0.4)(6)	65 (0.65)(9)	40 (0.4)(6)	85 (0.85)(12)	40 (0.4)(6)
7031 (15500)	90 (0.9)(13)	40 (0.4)(6)	65 (0.65)(9)	40 (0.4)(6)	85 (0.85)(12)	40 (0.4)(6)
7257 (16000)	95 (0.95)(14)	40 (0.4)(6)	70 (0.7)(10)	40 (0.4)(6)	85 (0.85)(12)	40 (0.4)(6)
7484 (16500)	105 (1.05)(15)	40 (0.4)(6)	70 (0.7)(10)	40 (0.4)(6)	85 (0.85)(12)	40 (0.4)(6)
7711 (17000)	110 (1.1)(16)	40 (0.4)(6)	75 (0.75)(11)	40 (0.4)(6)	85 (0.85)(12)	40 (0.4)(6)
7938 (17500)	110 (1.1)(16)	50 (0.5)(7)	75 (0.75)(11)	40 (0.4)(6)	85 (0.85)(12)	40 (0.4)(6)
8165 (18000)	120 (1.2)(17)	50 (0.5)(7)	75 (0.75)(11)	40 (0.4)(6)	85 (0.85)(12)	40 (0.4)(6)
8391 (18500)	125 (1.25)(18)	50 (0.5)(7)	85 (0.85)(12)	40 (0.4)(6)	85 (0.85)(12)	40 (0.4)(6)
8618 (19000)	130 (1.3)(19)	50 (0.5)(7)	90 (0.9)(13)	40 (0.4)(6)	85 (0.85)(12)	40 (0.4)(6)
8845 (19500)	140 (1.4)(20)	55 (0.55)(8)	95 (0.95)(14)	40 (0.4)(6)	90 (0.9)(13)	40 (0.4)(6)
9072 (20000)	150 (1.5)(22)	55 (0.55)(8)	105 (1.05)(15)	50 (0.5)(7)	95 (0.95)(14)	40 (0.4)(6)
9525 (21000)	160 (1.6)(23)	55 (0.55)(8)	110 (1.1)(16)	50 (0.5)(7)	105 (1.05)(15)	40 (0.4)(6)
9979 (22000)	165 (1.65)(24)	55 (0.55)(8)	120 (1.2)(17)	55 (0.55)(8)	110 (1.1)(16)	40 (0.4)(6)
10433 (23000)	170 (1.70)(25)	65 (0.65)(9)	145 (1.45)(21)	55 (0.55)(8)	110 (1.1)(16)	40 (0.4)(6)
10886 (24000)	180 (1.8)(26)	65 (0.65)(9)	160 (1.6)(23)	65 (0.65)(9)	120 (1.2)(17)	40 (0.4)(6)
11340 (25000)	—	70 (0.7)(10)	180 (1.8)(26)	65 (0.65)(9)	125 (1.25)(18)	40 (0.4)(6)
11793 (26000)	—	75 (0.75)(11)	200 (2.0)(29)	70 (0.7)(10)	130 (1.3)(19)	40 (0.4)(6)
12247 (27000)	—	85 (0.85)(12)	220 (2.2)(32)	70 (0.7)(10)	140 (1.4)(20)	40 (0.4)(6)
12701 (28000)	—	95 (0.95)(14)	240 (2.4)(35)	75 (0.75)(11)	145 (1.45)(21)	50 (0.5)(7)

Continued on next page

TO84419,0000181 -19-13AUG15-1/3

Size	620/70R46		650/85R38		IF650/85R38	
Load Index	167		173		179	
Speed Rating	A8		A8 / B		A8 / B	
	Single	Dual	Single	Dual	Single	Dual
Axle Load kg (lb)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)
13154 (29000)	—	105 (1.05)(15)	—	75 (0.75)(11)	150 (1.5)(22)	50 (0.5)(7)
13608 (30000)	—	110 (1.1)(16)	—	85 (0.85)(12)	160 (1.6)(23)	55 (0.55)(8)
14061 (31000)	—	110 (1.1)(16)	—	85 (0.85)(12)	180 (1.8)(26)	55 (0.55)(8)
14515 (32000)	—	120 (1.2)(17)	—	90 (0.9)(13)	200 (2.0)(29)	65 (0.65)(9)
14969 (33000)	—	130 (1.3)(19)	—	90 (0.9)(13)	220 (2.2)(32)	65 (0.65)(9)
15422 (34000)	—	140 (1.4)(20)	—	95 (0.95)(14)	240 (2.4)(35)	70 (0.7)(10)
15876 (35000)	—	145 (1.45)(21)	—	95 (0.95)(14)	—	70 (0.7)(10)
16329 (36000)	—	150 (1.5)(22)	—	105 (1.05)(15)	—	75 (0.75)(11)
16783 (37000)	—	160 (1.6)(23)	—	110 (1.1)(16)	—	75 (0.75)(11)
17237 (38000)	—	160 (1.6)(23)	—	120 (1.2)(17)	—	85 (0.85)(12)
17690 (39000)	—	165 (1.65)(24)	—	125 (1.25)(18)	—	90 (0.9)(13)
18144 (40000)	—	165 (1.65)(24)	—	140 (1.4)(20)	—	90 (0.9)(13)
18597 (41000)	—	165 (1.65)(24)	—	150 (1.5)(22)	—	95 (0.95)(14)
19051 (42000)	—	170 (1.70)(25)	—	160 (1.6)(23)	—	95 (0.95)(14)
19504 (43000)	—	—	—	165 (1.65)(24)	—	105 (1.05)(15)
19958 (44000)	—	—	—	180 (1.8)(26)	—	105 (1.05)(15)
20412 (45000)	—	—	—	190 (1.9)(28)	—	105 (1.05)(15)
20865 (46000)	—	—	—	200 (2.0)(29)	—	110 (1.1)(16)
21319 (47000)	—	—	—	215 (2.15)(31)	—	110 (1.1)(16)
21772 (48000)	—	—	—	220 (2.2)(32)	—	110 (1.1)(16)
22226 (49000)	—	—	—	235 (2.35)(34)	—	120 (1.2)(17)
22680 (50000)	—	—	—	240 (2.4)(35)	—	120 (1.2)(17)
23133 (51000)	—	—	—	—	—	125 (1.25)(18)
23587 (52000)	—	—	—	—	—	130 (1.3)(19)
24040 (53000)	—	—	—	—	—	130 (1.3)(19)
24494 (54000)	—	—	—	—	—	140 (1.4)(20)

Continued on next page

TO84419,0000181 -19-13AUG15-2/3

Size	620/70R46		650/85R38		IF650/85R38	
Load Index	167		173		179	
Speed Rating	A8		A8 / B		A8 / B	
	Single	Dual	Single	Dual	Single	Dual
Axle Load kg (lb)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)
24948 (55000)	—	—	—	—	—	145 (1.45)(21)
25401 (56000)	—	—	—	—	—	145 (1.45)(21)
25855 (57000)	—	—	—	—	—	150 (1.5)(22)
26308 (58000)	—	—	—	—	—	150 (1.5)(22)
26762 (59000)	—	—	—	—	—	150 (1.5)(22)
27216 (60000)	—	—	—	—	—	160 (1.6)(23)

TO84419,0000181 -19-13AUG15-3/3

Recommended Pressures—*Group 48* *(Continued)*

Size	710/70R42				IF710/70R42		800/70R38		IF800/70R38	
Load Index	168		173		179		173		179	
Speed Rating	A8	A8 / B	A8 / B		A8 / B		A8 / B		A8	
	Single	Dual	Single	Dual	Single	Dual	Single	Dual	Single	Dual
Axle Load kg (lb)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)
5443 (12000)	40 (0.4)(6)	40 (0.4)(6)	65 (0.65)(9)	40 (0.4)(6)	85 (0.85)(12)	40 (0.4)(6)	65 (0.65)(9)	40 (0.4)(6)	83 (0.8)(12)	83 (0.8)(12)
5670 (12500)	55 (0.55)(8)	40 (0.4)(6)	65 (0.65)(9)	40 (0.4)(6)	85 (0.85)(12)	40 (0.4)(6)	65 (0.65)(9)	40 (0.4)(6)	83 (0.8)(12)	83 (0.8)(12)
5897 (13000)	65 (0.65)(9)	40 (0.4)(6)	65 (0.65)(9)	40 (0.4)(6)	85 (0.85)(12)	40 (0.4)(6)	65 (0.65)(9)	40 (0.4)(6)	83 (0.8)(12)	83 (0.8)(12)
6123 (13500)	65 (0.65)(9)	40 (0.4)(6)	65 (0.65)(9)	40 (0.4)(6)	85 (0.85)(12)	40 (0.4)(6)	65 (0.65)(9)	40 (0.4)(6)	83 (0.8)(12)	83 (0.8)(12)
6350 (14000)	70 (0.7)(10)	40 (0.4)(6)	70 (0.7)(10)	40 (0.4)(6)	85 (0.85)(12)	40 (0.4)(6)	65 (0.65)(9)	40 (0.4)(6)	83 (0.8)(12)	83 (0.8)(12)
6577 (14500)	70 (0.7)(10)	40 (0.4)(6)	70 (0.7)(10)	40 (0.4)(6)	85 (0.85)(12)	40 (0.4)(6)	65 (0.65)(9)	40 (0.4)(6)	83 (0.8)(12)	83 (0.8)(12)
6804 (15000)	75 (0.75)(11)	40 (0.4)(6)	75 (0.75)(11)	40 (0.4)(6)	85 (0.85)(12)	40 (0.4)(6)	65 (0.65)(9)	40 (0.4)(6)	83 (0.8)(12)	83 (0.8)(12)
7031 (15500)	75 (0.75)(11)	40 (0.4)(6)	75 (0.75)(11)	40 (0.4)(6)	85 (0.85)(12)	40 (0.4)(6)	65 (0.65)(9)	40 (0.4)(6)	83 (0.8)(12)	83 (0.8)(12)
7257 (16000)	85 (0.85)(12)	40 (0.4)(6)	85 (0.85)(12)	40 (0.4)(6)	85 (0.85)(12)	40 (0.4)(6)	70 (0.7)(10)	40 (0.4)(6)	83 (0.8)(12)	83 (0.8)(12)
7484 (16500)	90 (0.9)(13)	40 (0.4)(6)	90 (0.9)(13)	40 (0.4)(6)	85 (0.85)(12)	40 (0.4)(6)	70 (0.7)(10)	40 (0.4)(6)	83 (0.8)(12)	83 (0.8)(12)
7711 (17000)	95 (0.95)(14)	40 (0.4)(6)	95 (0.95)(14)	40 (0.4)(6)	85 (0.85)(12)	40 (0.4)(6)	75 (0.75)(11)	40 (0.4)(6)	83 (0.8)(12)	83 (0.8)(12)
7938 (17500)	105 (1.05)(15)	40 (0.4)(6)	95 (0.95)(14)	40 (0.4)(6)	85 (0.85)(12)	40 (0.4)(6)	75 (0.75)(11)	40 (0.4)(6)	83 (0.8)(12)	83 (0.8)(12)
8165 (18000)	110 (1.1)(16)	40 (0.4)(6)	105 (1.05)(15)	40 (0.4)(6)	85 (0.85)(12)	40 (0.4)(6)	85 (0.85)(12)	40 (0.4)(6)	83 (0.8)(12)	83 (0.8)(12)
8391 (18500)	110 (1.1)(16)	40 (0.4)(6)	105 (1.05)(15)	40 (0.4)(6)	85 (0.85)(12)	40 (0.4)(6)	90 (0.9)(13)	40 (0.4)(6)	83 (0.8)(12)	83 (0.8)(12)
8618 (19000)	120 (1.2)(17)	40 (0.4)(6)	110 (1.1)(16)	40 (0.4)(6)	85 (0.85)(12)	40 (0.4)(6)	90 (0.9)(13)	40 (0.4)(6)	83 (0.8)(12)	83 (0.8)(12)
8845 (19500)	120 (1.2)(17)	40 (0.4)(6)	110 (1.1)(16)	40 (0.4)(6)	90 (0.9)(13)	40 (0.4)(6)	95 (0.95)(14)	40 (0.4)(6)	83 (0.8)(12)	83 (0.8)(12)
9072 (20000)	120 (1.2)(17)	50 (0.5)(7)	120 (1.2)(17)	50 (0.5)(7)	95 (0.95)(14)	40 (0.4)(6)	105 (1.05)(15)	40 (0.4)(6)	83 (0.8)(12)	83 (0.8)(12)
9525 (21000)	130 (1.3)(19)	50 (0.5)(7)	130 (1.3)(19)	50 (0.5)(7)	105 (1.05)(15)	40 (0.4)(6)	110 (1.1)(16)	40 (0.4)(6)	83 (0.8)(12)	83 (0.8)(12)
9979 (22000)	140 (1.4)(20)	55 (0.55)(8)	140 (1.4)(20)	55 (0.55)(8)	110 (1.1)(16)	40 (0.4)(6)	120 (1.2)(17)	40 (0.4)(6)	90 (0.9)(13)	83 (0.8)(12)
10433 (23000)	150 (1.5)(22)	55 (0.55)(8)	150 (1.5)(22)	55 (0.55)(8)	110 (1.1)(16)	40 (0.4)(6)	120 (1.2)(17)	50 (0.5)(7)	97 (1.0)(14)	83 (0.8)(12)
10886 (24000)	150 (1.5)(22)	65 (0.65)(9)	150 (1.5)(22)	65 (0.65)(9)	120 (1.2)(17)	50 (0.5)(7)	125 (1.25)(18)	50 (0.5)(7)	103 (1.0)(15)	83 (0.8)(12)
11340 (25000)	160 (1.6)(23)	70 (0.7)(10)	160 (1.6)(23)	70 (0.7)(10)	125 (1.25)(18)	50 (0.5)(7)	130 (1.3)(19)	50 (0.5)(7)	103 (1.0)(15)	83 (0.8)(12)
11793 (26000)	—	70 (0.7)(10)	185 (1.85)(27)	70 (0.7)(10)	130 (1.3)(19)	55 (0.55)(8)	140 (1.4)(20)	55 (0.55)(8)	110 (1.1)(16)	83 (0.8)(12)
12247 (27000)	—	75 (0.75)(11)	200 (2.0)(29)	75 (0.75)(11)	140 (1.4)(20)	55 (0.55)(8)	145 (1.45)(21)	55 (0.55)(8)	110 (1.1)(16)	83 (0.8)(12)
12701 (28000)	—	85 (0.85)(12)	225 (2.25)(33)	85 (0.85)(12)	145 (1.45)(21)	65 (0.65)(9)	150 (1.5)(22)	55 (0.55)(8)	117 (1.2)(17)	83 (0.8)(12)

Continued on next page

TO84419,0000182 -19-13AUG15-1/3

Size	710/70R42				IF710/70R42		800/70R38		IF800/70R38	
Load Index	168		173		179		173		179	
Speed Rating	A8	A8 / B	A8 / B		A8 / B		A8 / B		A8	
	Single	Dual	Single	Dual	Single	Dual	Single	Dual	Single	Dual
Axle Load kg (lb)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)
13154 (29000)	—	90 (0.9)(13)	240 (2.4)(35)	90 (0.9)(13)	150 (1.5)(22)	70 (0.7)(10)	160 (1.6)(23)	65 (0.65)(9)	124 (1.2)(18)	83 (0.8)(12)
13608 (30000)	—	90 (0.9)(13)	—	90 (0.9)(13)	160 (1.6)(23)	70 (0.7)(10)	—	70 (0.7)(10)	131 (1.3)(19)	83 (0.8)(12)
14061 (31000)	—	95 (0.95)(14)	—	95 (0.95)(14)	180 (1.8)(26)	75 (0.75)(11)	—	75 (0.75)(11)	138 (1.4)(20)	83 (0.8)(12)
14515 (32000)	—	95 (0.95)(14)	—	95 (0.95)(14)	200 (2.0)(29)	85 (0.85)(12)	—	85 (0.85)(12)	145 (1.4)(21)	83 (0.8)(12)
14969 (33000)	—	105 (1.05)(15)	—	105 (1.05)(15)	220 (2.2)(32)	85 (0.85)(12)	—	90 (0.9)(13)	152 (1.5)(22)	83 (0.8)(12)
15422 (34000)	—	105 (1.05)(15)	—	105 (1.05)(15)	240 (2.4)(35)	90 (0.9)(13)	—	95 (0.95)(14)	159 (1.6)(23)	83 (0.8)(12)
15876 (35000)	—	110 (1.1)(16)	—	110 (1.1)(16)	—	90 (0.9)(13)	—	95 (0.95)(14)	159 (1.6)(23)	83 (0.8)(12)
16329 (36000)	—	120 (1.2)(17)	—	120 (1.2)(17)	—	95 (0.95)(14)	—	105 (1.05)(15)	—	83 (0.8)(12)
16783 (37000)	—	120 (1.2)(17)	—	120 (1.2)(17)	—	95 (0.95)(14)	—	105 (1.05)(15)	—	83 (0.8)(12)
17237 (38000)	—	125 (1.25)(18)	—	125(1.25)(18)	—	105 (1.05)(15)	—	110 (1.1)(16)	—	83 (0.8)(12)
17690 (39000)	—	130 (1.3)(19)	—	130 (1.3)(19)	—	105 (1.05)(15)	—	110 (1.1)(16)	—	90 (0.9)(13)
18144 (40000)	—	140 (1.4)(20)	—	140 (1.4)(20)	—	110 (1.1)(16)	—	120 (1.2)(17)	—	90 (0.9)(13)
18597 (41000)	—	145 (1.45)(21)	—	145 (1.45)(21)	—	110 (1.1)(16)	—	120 (1.2)(17)	—	97 (1.0)(14)
19051 (42000)	—	150 (1.5)(22)	—	150 (1.5)(22)	—	120 (1.2)(17)	—	125 (1.25)(18)	—	97 (1.0)(14)
19504 (43000)	—	160 (1.6)(23)	—	160 (1.6)(23)	—	125 (1.25)(18)	—	125 (1.25)(18)	—	103 (1.0)(15)
19958 (44000)	—	—	—	175 (1.75)(25)	—	125 (1.25)(18)	—	130 (1.3)(19)	—	103 (1.0)(15)
20412 (45000)	—	—	—	180 (1.8)(26)	—	130 (1.3)(19)	—	130 (1.3)(19)	—	110 (1.1)(16)
20865 (46000)	—	—	—	190 (1.9)(28)	—	130 (1.3)(19)	—	140 (1.4)(20)	—	110 (1.1)(16)
21319 (47000)	—	—	—	200 (2.0)(29)	—	140 (1.4)(20)	—	140 (1.4)(20)	—	110 (1.1)(16)
21772 (48000)	—	—	—	215 (2.15)(31)	—	145 (1.45)(21)	—	145 (1.45)(21)	—	117 (1.2)(17)
22226 (49000)	—	—	—	220 (2.2)(32)	—	145 (1.45)(21)	—	152 (1.5)(22)	—	117 (1.2)(17)
22680 (50000)	—	—	—	240 (2.4)(35)	—	150 (1.5)(22)	—	160 (1.6)(23)	—	124 (1.2)(18)
23133 (51000)	—	—	—	—	—	150 (1.5)(22)	—	—	—	124 (1.2)(18)
23587 (52000)	—	—	—	—	—	160 (1.6)(23)	—	—	—	131 (1.3)(19)
24040 (53000)	—	—	—	—	—	175 (1.75)(25)	—	—	—	138 (1.4)(20)
24494 (54000)	—	—	—	—	—	180 (1.8)(26)	—	—	—	138 (1.4)(20)

Continued on next page

TO84419,0000182 -19-13AUG15-2/3

Size	710/70R42				IF710/70R42		800/70R38		IF800/70R38	
Load Index	168		173		179		173		179	
Speed Rating	A8	A8 / B	A8 / B		A8 / B		A8 / B		A8	
	Single	Dual	Single	Dual	Single	Dual	Single	Dual	Single	Dual
Axle Load kg (lb)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)
24948 (55000)	—	—	—	—	—	185 (1.85)(27)	—	—	—	145 (1.4)(21)
25401 (56000)	—	—	—	—	—	190 (1.9)(28)	—	—	—	145 (1.4)(21)
25855 (57000)	—	—	—	—	—	200 (2.0)(29)	—	—	—	152 (1.5)(22)
26308 (58000)	—	—	—	—	—	220 (2.2)(32)	—	—	—	152 (1.5)(22)
26762 (59000)	—	—	—	—	—	230 (2.3)(33)	—	—	—	159 (1.6)(23)
27216 (60000)	—	—	—	—	—	240 (2.4)(35)	—	—	—	159 (1.6)(23)

TO84419,0000182 -19-13AUG15-3/3

Recommended Pressures—*Group 49*

Size	480/95R50	710/75R42	IF710/75R42
Load Index	164	175	176
Speed Rating	A8 / B	A8 / B / D	A8 / B / D
	Dual	Single	Single
Axle Load kg (lb)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)
6804 (15000)	40 (0.4)(6)	105 (1.05)(15)	85 (0.85)(12)
7031 (15500)	50 (0.5)(7)	105 (1.05)(15)	85 (0.85)(12)
7257 (16000)	50 (0.5)(7)	110 (1.1)(16)	85 (0.85)(12)
7484 (16500)	55 (0.55)(8)	110 (1.1)(16)	85 (0.85)(12)
7711 (17000)	55 (0.55)(8)	110 (1.1)(16)	85 (0.85)(12)
7938 (17500)	65 (0.65)(9)	110 (1.1)(16)	85 (0.85)(12)
8165 (18000)	65 (0.65)(9)	110 (1.1)(16)	85 (0.85)(12)
8391 (18500)	70 (0.7)(10)	110 (1.1)(16)	85 (0.85)(12)
8618 (19000)	70 (0.7)(10)	110 (1.1)(16)	85 (0.85)(12)
8845 (19500)	75 (0.75)(11)	110 (1.1)(16)	85 (0.85)(12)
9072 (20000)	75 (0.75)(11)	110 (1.1)(16)	90 (0.9)(13)
9525 (21000)	85 (0.85)(12)	110 (1.1)(16)	95 (0.95)(14)
9979 (22000)	90 (0.9)(13)	110 (1.1)(16)	105 (1.05)(15)
10433 (23000)	95 (0.95)(14)	120 (1.2)(17)	110 (1.1)(16)
10886 (24000)	105 (1.05)(15)	125 (1.25)(18)	110 (1.1)(16)
11340 (25000)	110 (1.1)(16)	140 (1.4)(20)	120 (1.2)(17)
11793 (26000)	110 (1.1)(16)	145 (1.45)(21)	125 (1.25)(18)
12247 (27000)	120 (1.2)(17)	150 (1.5)(22)	130 (1.3)(19)
12701 (28000)	125 (1.25)(18)	165 (1.65)(24)	140 (1.4)(20)
13154 (29000)	130 (1.3)(19)	185 (1.85)(27)	150 (1.5)(22)
13608 (30000)	140 (1.4)(20)	210 (2.1)(30)	160 (1.6)(23)
14061 (31000)	145 (1.45)(21)	—	165 (1.65)(24)
14515 (32000)	150 (1.5)(22)	—	—
14969 (33000)	160 (1.6)(23)	—	—
15422 (34000)	165 (1.65)(24)	—	—

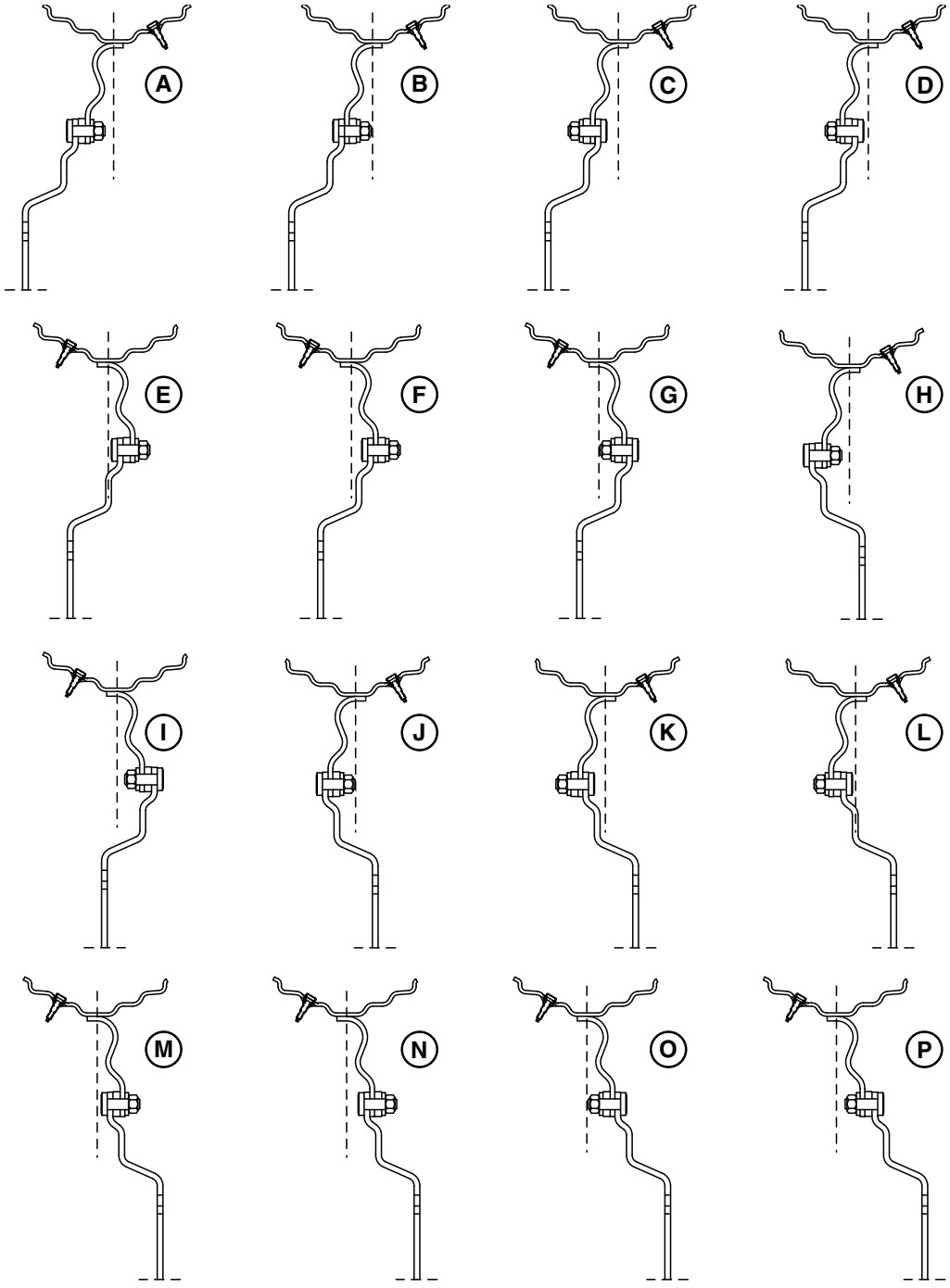
Continued on next page

TO84419,0000186 -19-13AUG15-1/2

Size	480/95R50	710/75R42	IF710/75R42
15876 (35000)	185 (1.85)(27)	—	—
16329 (36000)	195 (1.95)(28)	—	—
16783 (37000)	210 (2.1)(30)	—	—
17237 (38000)	230 (2.3)(33)	—	—

TO84419,0000186 -19-13AUG15-2/2

16-Position Rear Wheel Settings



16-Position steel wheel as viewed from behind left tire.

TO84419,0000188 -19-31JUL14-1/1

Installing Rear Drive Wheel to Cast Hub

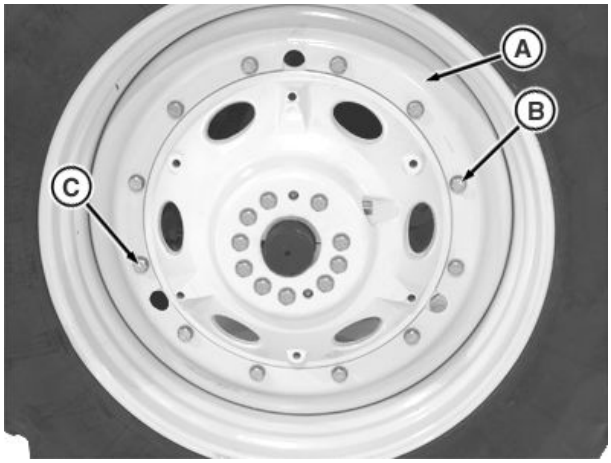
CAUTION: Avoid the possibility of personal injury. Failure to follow torquing sequence and procedure will result in damage to equipment and may result in personal injury. Wheel bolts are critical and require repeated torquing.

*NOTE: Wheel rim (A) has one **tight fit** hole smaller than other holes. One **slot fit** hole is 180° from tight fit hole, for improved wheel centering.*

1. Install and hand tighten bolt in the **tight fit** hole (B).
2. Install and hand tighten bolt in **slot fit** hole (C).
3. Install and hand tighten remaining bolts.
4. Tighten all bolts until bolts maintain torque according to specifications.

Specification	
Wheel Bolts—Torque	600 N·m (445 lb-ft)

5. Drive tractor 100 meters (100 yd) and retighten bolts.
6. Tighten again at **3 HOURS**, **10 HOURS**, and **DAILY** for first week of operation and every 250 hours.



RXA0056891 —UN—11SEP01

Heavy Duty Cast 10-Bolt Hub Shown

A—Wheel Rim
B—Tight Fit Hole
C—Slot Fit Hole

IMPORTANT: Carefully follow procedure for retightening wheel bolts. Failure to do so could lead to wheel hub damage.

TO84419,0000189 -19-27NOV12-1/1

Installing Rear Steel Wheel to Hub

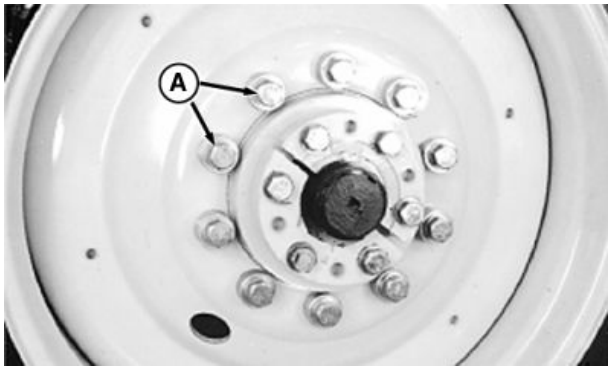
CAUTION: Avoid the possibility of personal injury. Failure to follow torquing sequence and procedure will result in damage to equipment and may result in personal injury. Wheel bolts are critical and require repeated torquing.

*NOTE: Check hole sizes on duals, wheel rim may have one **tight fit** hole smaller than other holes. One **slot fit** hole is 180° from tight fit hole, for improved wheel centering.*

1. Install and hand tighten bolts (A).
2. Tighten all bolts until bolts maintain torque according to specifications.

Specification	
Wheel-to-Hub Bolts—Torque	600 N·m (445 lb-ft)

3. Drive tractor 100 meters (100 yd) and retighten bolts.
4. Tighten again at **3 HOURS**, **10 HOURS**, and **DAILY** for first week of operation and every 250 hours.



RXA0084448 —UN—05OCT05

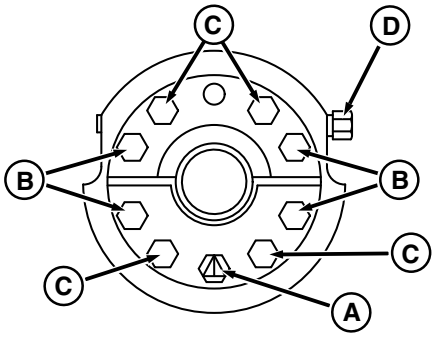
Mini Cast Drive Hub With Pinion

A—Wheel to Hub Bolts

IMPORTANT: Carefully follow procedure for tightening wheel bolts. Failure to do so could result in equipment damage.

TO84419,000018A -19-12SEP13-1/1

Adjusting and Tightening Rear Steel Wheels—Cast Hubs



RXA0059686 —UN—11MAR02

A—Lower Hub Center Cap Screw B—Outer Hub Sleeve Cap Screws C—Inner Jack Cap Screws D—Adjusting Cap Screw

CAUTION: Avoid personal injury. NEVER run the engine with transmission in gear and rear wheels off the ground. MFWD wheels could pull rear wheels off support. MFWD must be disengaged and transmission in NEUTRAL to rotate axle.

1. Raise tractor on level ground and turn wheels so rack on axle is on top.
2. Loosen lower hub center cap screw (A) against retaining nut and loosen outer hub sleeve cap screws (B).

NOTE: Strike end of axle with a heavy hammer and use penetrating oil if sleeves are difficult to break loose.

3. Tighten inner jack cap screws (C) on upper and lower hub sleeves as necessary to loosen sleeves.

NOTE: Observe tread width limitations when adjusting rear wheels.

4. Turn adjusting cap screw (D) to slide wheel to desired position.
5. Loosen the jack cap screws (C) all the way against stop.

CAUTION: Avoid the possibility of personal injury. Failure to follow torquing sequence and procedure will result in damage to equipment and may result in personal injury. Wheel cap screws are critical and require repeated torquing.

6. Tighten hub sleeve cap screws (B) to initial torque specifications beginning with center cap screw in lower sleeve, then tighten remaining cap screws in diagonal method.
7. Tighten cap screws to secondary torque specifications using same sequence.
8. Drive tractor a minimum of 100 meters (100 yd) and tighten cap screws to final torque specifications.

Wheel Hub Sleeve Cap Screws—Specification

Initial—Torque	204 N·m (150 lb-ft)
Secondary—Torque	410 N·m (300 lb-ft)
Final—Torque	600 N·m (445 lb-ft)

IMPORTANT: Some sleeve cap screws may loosen as sleeve is tightened. Repeat star shaped torquing pattern until ALL sleeve cap screws maintain proper torque. Failure to follow procedure could result in damage to equipment and may result in personal injury.

9. Retighten cap screws after working **3 HOURS**, **10 HOURS**, and **DAILY** during first week of operation and every 250 hours.

TO84419,000018B -19-07MAR13-1/1

Adjusting and Tightening Rear Wheels—Heavy-Duty Cast 10-Cap Screw Hubs

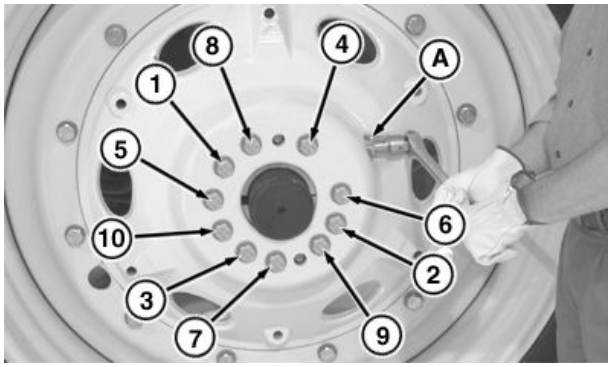
CAUTION: Avoid personal injury. Never run the engine with transmission in gear and rear wheels off the ground. MFWD wheels could pull rear wheels off support. Disengage MFWD and put transmission in NEUTRAL to rotate axle. Never operate tractor with a loose rim, wheel, or hub.

CAUTION: Avoid the possibility of personal injury. Failure to follow torquing sequence and procedure will result in damage to equipment and may result in personal injury. Wheel cap screws are critical and require repeated torquing.

1. Raise tractor on level ground with rack upward on the axle.
2. Loosen (without removing) sleeve cap screws (1—10) enough to move wheel.

IMPORTANT: Do not loosen or remove the two socket head cap screws. Doing so could result in wheel jamming or damage.

3. Turn pinion gear (A) to move wheel to desired position.
4. Tighten sleeve cap screws (1—10) in numerical order to initial torque specifications. Make sure wheel is perpendicular to axle.
5. Tighten sleeve cap screws (1—10) in numerical order to final torque specifications.



RXA0056944 —UN—10OCT01

Heavy Duty Cast Drive Hub Shown

6. Drive tractor a minimum of 100 meters (100 yd) and retighten cap screws in numerical order to final torque specifications.

Wheel Hub Sleeve Cap Screws—Specification

Initial—Torque	400 N·m (300 lb-ft)
Final—Torque	610 N·m (450 lb-ft)

7. Retighten cap screws after working **3 HOURS**, **10 HOURS**, and **DAILY** during first week of operation and every 250 hours.

IMPORTANT: Some sleeve cap screws may loosen as sleeve is tightened. Repeat numerical torquing pattern until ALL sleeve cap screws maintain proper torque. Failure to follow procedure could result in damage to equipment and may result in personal injury.

TO84419,000018C -19-11MAR13-1/1

Adjusting and Tightening Rear Wheels—Heavy-Duty 12-Cap Screw Hubs

CAUTION: Avoid personal injury. Never run the engine with transmission in gear when adjusting wheels. Wheels on the ground could pull supported wheels off jackstands.

Never operate tractor with a loose rim, wheel, or hub.

IMPORTANT: Tractors are equipped with 12 cap screw heavy-duty drive wheels and hubs. Numbers indicating proper torquing sequences are cast into wheel hub.

Carefully follow procedure. Failure to do so could lead to sleeve or cast wheel damage.

IMPORTANT: Clean any paint, grease, film, rust or debris from axle shafts, cap screws, and threads before positioning and installing wheel sleeves and cast wheel. DO NOT apply any lubricant to cap screws, threads, wheel, or axle.

1. Raise tractor on level ground and support tractor with jackstands.
2. Loosen (without removing) sleeve cap screws (1—12) enough to move wheel.

IMPORTANT: Do not loosen or remove two socket head cap screws. Doing so could result in wheel jamming or damage.

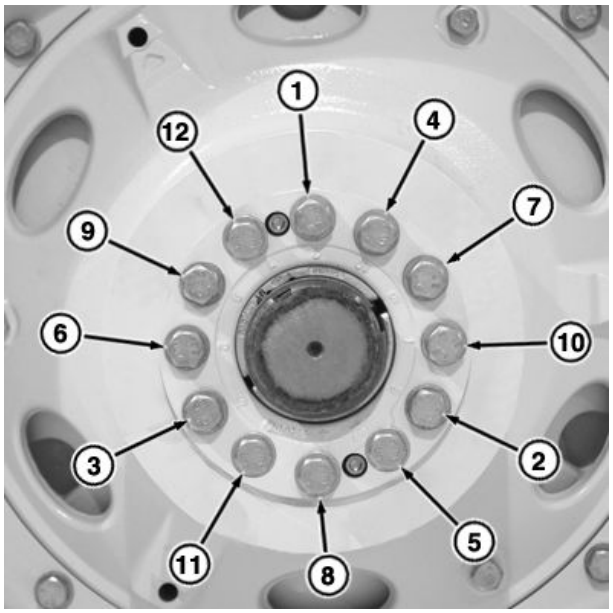
CAUTION: Use a hoist, wheel dolly, or proper lifting equipment to safely slide and adjust wheels on axles and avoid possibility of personal injury.

Failure to follow torquing sequence and procedure will result in damage to wheel sleeves and may result in personal injury. Wheel bolt torques are critical and require repeated tightening.

3. Move wheel to desired position.
4. Tighten cap screws (1—12) in numerical torque sequence until bolts maintain initial torque. Make sure wheel is perpendicular to axle.

Specification	
Wheel Cap Screws—Initial Torque	405 N·m (300 lb-ft)

5. Tighten cap screws (1—12) in numerical order until bolts maintain final torque.



RXA0090157 —UN—08AUG06

12 Cap Screw Heavy-Duty Drive Wheel

Specification	
Wheel Cap Screws—Final Torque	610 N·m (450 lb-ft)

IMPORTANT: Some sleeve cap screws may loosen as sleeve is tightened. Repeat star shaped numbered sequence torquing pattern until ALL sleeve cap screws maintain proper torque. Failure to follow procedure could result in damage to equipment and may result in personal injury.

6. Drive tractor unloaded in a large **figure-8** pattern a minimum of four times and tighten cap screws in numerical order until cap screws maintain final torque of 610 N·m (450 lb-ft).

IMPORTANT: Keep wheel sleeve cap screws tightened to specification. If tractor is operated with loose wheel sleeves or under-torqued cap screws it may be necessary to replace sleeves and cast wheels.

7. Torque cap screws after working **3 HOURS, 10 HOURS,** and **DAILY** during first week of operation or until cap screws **do not** move when retorquing.

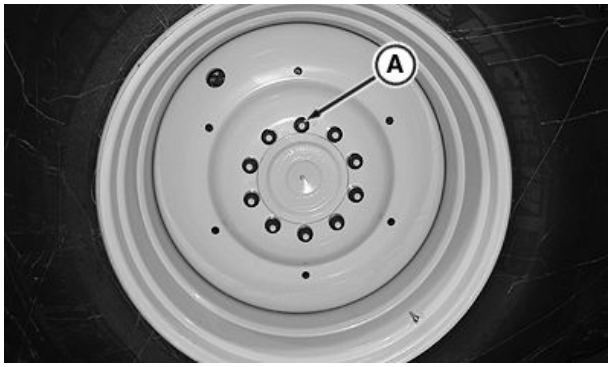
TO84419,000018D -19-27NOV12-1/1

Adjusting and Tightening Rear Wheels—Flanged Axle

CAUTION: Avoid the possibility of personal injury. Never operate tractor with loose wheel bolts. Wheel bolts are critical and require retightening.

IMPORTANT: The distance between the side wall of the tire and the fender must not be less than 50 mm (1.97 in.).

The distance between the running surface (edge) of the tire and the fender must not be less than 60 mm (2.36 in.).



RXA0113849 —UN—09FEB11

Flanged Axle

A—Disk-to-Axle Flange Bolt

Item	Measurement	Specification
Disk-to-Axle Flange Bolts (A)	Torque	610 N·m (450 lb-ft)

The complete wheel can be installed on the other side of the tractor, in doing so, maintain the direction of tire rotation.

After adjustment has been completed tighten wheel retaining bolts to specified torque (A).

IMPORTANT: Retighten all wheel attaching bolts after 100 m (328 ft), 3 hours, and 10 hours of operation.

GH15097,00007DF -19-27MAR13-1/1

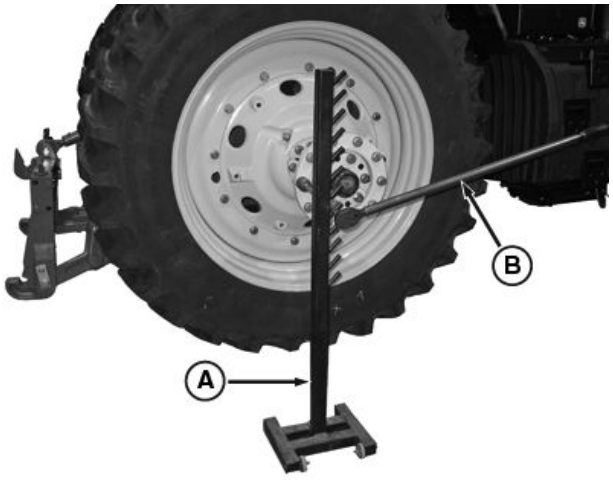
Wheel Tightening Stand

Wheel tightening stand (A) may be used to aid in tightening wheel hardware.

It will support the torque wrench (B) when tightening cap screws at different heights.

See your John Deere™ dealer to order.

A—Wheel Tightening Stand **B—Torque Wrench**



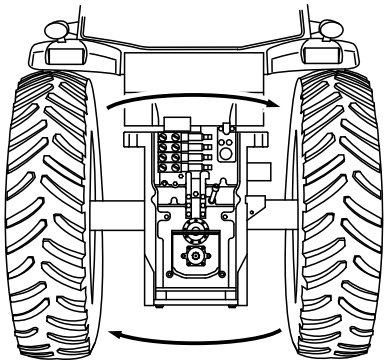
RXA0113539 —UN—11FEB11

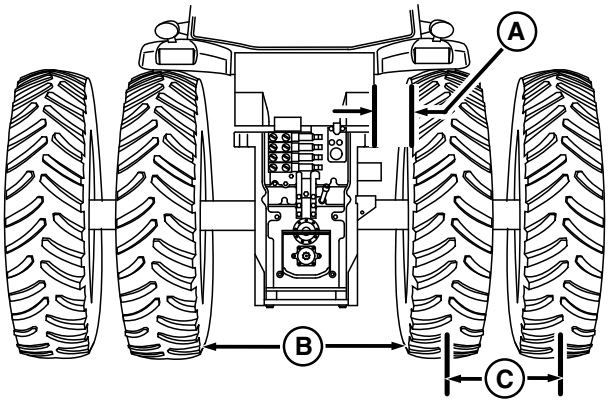
Wheel Tightening Stand

John Deere is a trademark of Deere & Company

TO84419,000018E -19-27NOV12-1/1

Rear Wheel, Tire, and Tread Guidelines





RXA0056701 —UN—29AUG01

A—Clearance between inner wheel and fender

B—Distance between inside walls of drive wheels

C—Minimum spacing between duals

To provide a wider range of settings, complete wheel can be installed on other side of tractor. In doing so, maintain correct direction of tire rotation.

CAUTION: Avoid personal injury and tractor instability. Never operate with single tires having tread width less than 1520 mm (60 in.).

Turning while operating at transport speeds with narrow tread widths can cause tractor instability. Increase tread width to improve stability.

IMPORTANT: The distance between the side wall of the tire and the fender must not be less than 50 mm (1.97 in.).

The distance between the running surface (edge) of the tire and the fender must not be less than 60 mm (2.36 in.).

With sway blocks in upper position (sway allowed), minimum distance between tires must be 1090 mm (43 in.) to prevent interference.

Do not exceed 2800 mm (110 in.) between single tires for pulling heavy loads.

Check for adequate clearance between implement and rear tires.

DO NOT mix radial and bias-ply tires on same axle.

Drive and dual tires mounted on same axle should all be inflated to same pressure.

Cast wheels are used inside and steel wheels on outside on tractors with duals.

Over inflating a radial tire reduces machine performance. Using correct inflation pressures will result in optimum tractive performance.

Operators will experience a decrease in turning radius with Group 49 tires due to the larger diameter Group 44 front tires.

Minimum Spacing for Dual Tires (C)

Tread setting is measured between center of tires

Tire Section	Minimum Spacing
480 mm (18.4 in.)	549 mm (21.6 in.)
520 mm (20.8 in.)	591 mm (23.3 in.)
620 mm (24.5 in.)	695 mm (27.4 in.)
650 mm (25.5 in.)	726 mm (28.6 in.)
710 mm (28.0 in.)	788 mm (31 in.)

GH15097,0000826 -19-13SEP13-1/1

Rear Single Drive Wheel Tread Settings—Flanged Wheels

NOTE: In certain countries, overall vehicle width for driving on public roads must not exceed 2.55 m (100 in.).

Tread settings are measured at the bottom tire centerline.

Tire Size	Valve Stem Out	Valve Stem In
650/85R38	1793 mm (70.6 in.)	2023 mm (79.6 in.)
IF650/85R38	1793 mm (70.6 in.)	2023 mm (79.6 in.)
710/70R38	1793 mm (70.6 in.)	2023 mm (79.6 in.)
710/70R42	1793 mm (70.6 in.)	2023 mm (79.6 in.)
IF710/70R42	1793 mm (70.6 in.)	2023 mm (79.6 in.)
710/75R42	1793 mm (70.6 in.)	2023 mm (79.6 in.)
IF710/75R42	1793 mm (70.6 in.)	2023 mm (79.6 in.)
800/70R38	1908 mm (75.1 in.)	1908 mm (75.1 in.)
IF800/70R38	1908 mm (75.1 in.)	1908 mm (75.1 in.)

Tread Settings

ZE59858,00006A9 -19-24MAR11-1/1

Minimum Tread Setting With Air Trailer Brakes And Inner Wheel Weights

NOTE: These restrictions only apply to tractors equipped with optional air trailer brakes.

IMPORTANT: Follow suggested guidelines to wheel weight specifications based on wheel type to avoid tractor component damage.

Minimum Tread Settings With Air Trailer Brakes And Inner Wheel Weights Options	
Option 1	205 kg (452 lbs)
Option 2	72 kg + 205 kg (159 lbs + 452 lbs)
Option 3	205 kg + 205 kg (452 lbs + 452 lbs)
Option 4	72 kg + 205 kg + 205 kg (159 lbs + 452 lbs + 452 lbs)
Option 5	625 kg (1378 lbs)

Inner Wheel Weights Options

Minimum Tread Setting With Air Trailer Brakes And Inner Wheel Weights					
Wheel Type	**Option 1**	**Option 2**	**Option 3**	**Option 4**	**Option 5**
Cast — Dish In (tire section width less than 800 mm)	1829 mm (72 in.)	1829 mm (72 in.)	2032 mm (80 in.)	N/A	1880 mm (74 in.)
Cast — Dish In (tire section width equal to 800 mm)	1880 mm (74 in.)	1981 mm (78 in.)	2134 mm (84 in.)	N/A	2134 mm (84 in.)
Cast — Dish Out (tire section width less than 800 mm)	2134 mm (84 in.)	2134 mm (84 in.)	N/A	N/A	2184 mm (86 in.)
Cast — Dish Out (tire section width equal to 800 mm)	2184 mm (86 in.)	N/A	N/A	N/A	N/A
Steel — Dish In	NA	2083 mm (82 in.)	NA	NA	NA
Steel — Dish Out	NA	NA	NA	NA	NA
Flanged Axle	NA	NA	NA	NA	NA

Minimum Tread Setting With Air Trailer Brakes And Inner Wheel Weights Compared To Wheel Type

GH15097,0000827 -19-24JAN14-1/1

Rear Single Drive Wheel Tread Settings—Steel Wheels

IMPORTANT: Tractors equipped with tires narrower than 520 and have a starter 72 kg (159 lb.) and two 205 kg (452 lb.) inner wheel weights must not set rear treads narrower than 1676 mm (66 in.). Doing so will result in damage to tractor.

IMPORTANT: Refer to "Minimum Tread Setting With Air Trailer Brakes And Inner Wheel Weights" section for further restrictions on tractors equipped with optional air trailer brakes.

NOTE: Refer to charts for rear tires shown earlier in this section to determine rim position for 16-position wheels.

320 and 380 Tires				
Single Tire				
Position	Minimum	2550 mm (100.4 in.) Axle Maximum	2808 mm (110.5 in.) Axle Maximum	3012 mm (118.5 in.) Axle Maximum
D	1524 mm (60 in.)	1981 mm (78 in.)	2220 mm (87.4 in.)	2424 mm (95.4 in.)
O	2182 mm (85.9 in.)	2643 mm (104 in.)	2882 mm (113.5 in.)	3086 mm (121.5 in.)
P	2232 mm (87.9 in.)	2563 mm (106 in.)	2932 mm (115.4 in.)	3136 mm (123.5 in.)

480 Tire				
Single Tire				
Position	Minimum	2550 mm (100.4 in.) Axle Maximum	2808 mm (110.5 in.) Axle Maximum	3012 mm (118.5 in.) Axle Maximum
IN	1524 mm (60 in.)	1969 mm (77.5 in.)	2208 mm (86.9 in.)	2412 mm (95 in.)
OUT	2078 mm (81.8 in.)	2409 mm (100 in.)	2778 mm (109.4 in.)	2982 mm (117.4 in.)

520 Tire				
Single Tire				
Position	Minimum	2550 mm (100.4 in.) Axle Maximum	2808 mm (110.5 in.) Axle Maximum	3012 mm (118.5 in.) Axle Maximum
IN	1544 mm (60.8 in.)	1967 mm (77.4 in.)	2206 mm (86.9 in.)	2410 mm (94.9 in.)
OUT	2074 mm (81.7 in.)	2405 mm (99.8 in.)	2774 mm (109.2 in.)	2978 mm (117.2 in.)

620 Tire				
Single Tire				
Position	Minimum	2550 mm (100.4 in.) Axle Maximum	2808 mm (110.5 in.) Axle Maximum	3012 mm (118.5 in.) Axle Maximum
IN	1638 mm (64.5 in.)	1969 mm (77.5 in.)	2208 mm (86.9 in.)	2412 mm (95 in.)
OUT	2078 mm (81.8 in.)	2539 mm (100 in.)	2778 mm (109.4 in.)	2982 mm (117.4 in.)

650 Tire				
Single Tire				
Position	Minimum	2550 mm (100.4 in.) Axle Maximum	2808 mm (110.5 in.) Axle Maximum	3012 mm (118.5 in.) Axle Maximum
IN	1669 mm (65.7 in.)	1969 mm (77.5 in.)	2208 mm (86.9 in.)	2412 mm (95 in.)
OUT	2078 mm (81.8 in.)	2539 mm (100 in.)	2778 mm (109.4 in.)	2982 mm (117.4 in.)

710 Tire				
Single Tire				
Position	Minimum	2550 mm (100.4 in.) Axle Maximum	2808 mm (110.5 in.) Axle Maximum	3012 mm (118.5 in.) Axle Maximum
IN	1732 mm (68.2 in.)	1969 mm (77.5 in.)	2208 mm (86.9 in.)	2412 mm (95 in.)
OUT	2078 mm (81.8 in.)	2539 mm (100 in.)	2778 mm (109.4 in.)	2982 mm (117.4 in.)

800 Tire				
Single Tire				
Position	Minimum	2550 mm (100.4 in.) Axle Maximum	2808 mm (110.5 in.) Axle Maximum	3012 mm (118.5 in.) Axle Maximum

Continued on next page

TO84419,0000190 -19-24JUN14-1/2

800 Tire				
IN	1826 mm (71.9 in.)	2101 mm (82.7 in.)	2340 mm (92.1 in.)	2544 mm (100.2 in.)
OUT	1946 mm (76.6 in.)	2407 mm (94.8 in.)	2646 mm (104.2 in.)	2850 mm (112.2 in.)

TO84419,0000190 -19-24JUN14-2/2

Rear Single Drive Wheel Tread Settings—Cast Wheels

IMPORTANT: Tractors equipped with tires narrower than 520 and have two 205 kg (452 lbs) inner wheel weights must not set rear treads narrower than 1676 mm (66 in.). Doing so will result in damage to tractor.

IMPORTANT: Refer to "Minimum Tread Setting With Air Trailer Brakes And Inner Wheel Weights" section for further restrictions on tractors equipped with optional air trailer brakes.

320 Tire				
Single Tire				
Position	Minimum	2550 mm (100.4 in.) Axle Maximum	2808 mm (110.5 in.) Axle Maximum	3012 mm (118.5 in.) Axle Maximum
IN	1524 mm (60 in.)	1963 mm (77.3 in.)	2202 mm (86.7 in.)	2406 mm (94.7 in.)
OUT	1806 mm (71.1 in.)	2536 mm (99.8 in.)	2506 mm (98.6 in.)	2710 mm (106.7 in.)

380 Tire				
Single Tire				
Position	Minimum	2550 mm (100.4 in.) Axle Maximum	2808 mm (110.5 in.) Axle Maximum	3012 mm (118.5 in.) Axle Maximum
IN	1524 mm (60 in.)	1963 mm (77.3 in.)	2202 mm (86.7 in.)	2406 mm (94.7 in.)
OUT	1806 mm (71.1 in.)	2536 mm (99.8 in.)	2506 mm (98.6 in.)	2710 mm (106.7 in.)

480 Tire				
Single Tire				
Position	Minimum	2550 mm (100.4 in.) Axle Maximum	2808 mm (110.5 in.) Axle Maximum	3012 mm (118.5 in.) Axle Maximum
IN	1524 mm (60 in.)	1963 mm (77.3 in.)	2202 mm (86.7 in.)	2406 mm (94.7 in.)
OUT	1806 mm (71.1 in.)	2536 mm (99.8 in.)	2506 mm (98.6 in.)	2710 mm (106.7 in.)

520 Tires				
Single Tire				
Position	Minimum	2550 mm (100.4 in.) Axle Maximum	2808 mm (110.5 in.) Axle Maximum	3012 mm (118.5 in.) Axle Maximum
IN	1555 mm (61.2 in.)	2005 mm (78.9 in.)	2202 mm (86.7 in.)	2449 mm (96.4 in.)
OUT	1821 mm (71.7 in.)	2310 mm (90.9 in.)	2506 mm (98.6 in.)	2754 mm (108.4 in.)

620 Tire				
Single Tire				
Position	Minimum	2550 mm (100.4 in.) Axle Maximum	2808 mm (110.5 in.) Axle Maximum	3012 mm (118.5 in.) Axle Maximum
IN	1659 mm (65.3 in.)	2005 mm (78.9 in.)	2202 mm (86.7 in.)	2449 mm (96.4 in.)
OUT	1821 mm (71.7 in.)	2310 mm (90.9 in.)	2506 mm (98.6 in.)	2754 mm (108.4 in.)

650 Tire				
Single Tire				
Position	Minimum	2550 mm (100.4 in.) Axle Maximum	2808 mm (110.5 in.) Axle Maximum	3012 mm (118.5 in.) Axle Maximum
IN	1690 mm (66.5 in.)	2005 mm (78.9 in.)	2202 mm (86.7 in.)	2449 mm (96.4 in.)
OUT	1821 mm (71.7 in.)	2310 mm (90.9 in.)	2506 mm (98.6 in.)	2754 mm (108.4 in.)

710 Tire				
Single Tire				
Position	Minimum	2550 mm (100.4 in.) Axle Maximum	2808 mm (110.5 in.) Axle Maximum	3012 mm (118.5 in.) Axle Maximum
IN	1752 mm (69 in.)	2005 mm (78.9 in.)	2202 mm (86.7 in.)	2449 mm (96.4 in.)
OUT	1821 mm (71.7 in.)	2310 mm (90.9 in.)	2506 mm (98.6 in.)	2754 mm (108.4 in.)

Continued on next page

800 Tire				
Single Tire				
Position	Minimum	2550 mm (100.4 in.) Axle Maximum	2808 mm (110.5 in.) Axle Maximum	3012 mm (118.5 in.) Axle Maximum
IN	1846 mm (72.7 in.)	2158 mm (85.0 in.)	2354 mm (92.7 in.)	2602 mm (102.4 in.)
OUT	Not Available	Not Available	Not Available	Not Available

TO84419,0000191 -19-16SEP13-2/2

Rear Dual Wheel Tread Settings—Steel Drive Wheels

IMPORTANT: Tractors equipped with tires narrower than 520 and have two 205 kg (452 lbs) inner wheel weights must not set rear treads narrower than 1676 mm (66 in.). Doing so will result in damage to tractor.

IMPORTANT: Refer to charts in minimum tread setting with air trailer brakes with inner wheel weights for further restrictions.

NOTE: Refer to charts for rear tires shown earlier in this section to determine rim position for 16-position wheels.

320 Tire									
Inner Tire						Dual Tire			
		2808 mm (110.5 in.) Axle		3012 mm (118.5 in.) Axle				2808 mm (110.5 in.) Axle	3012 mm (118.5 in.) Axle
Position	Minimum	Maximum	Maximum[a]	Maximum	Maximum[a]	Position	Minimum	Maximum	Maximum
D	1524 mm (60 in.)	1692 mm (66.6 in.)	1788 mm (70.4 in.)	1896 mm (74.6 in.)	1992 mm (78.4 in.)	D	2290 mm (90.2 in.)	2458 mm (96.8 in.)	2662 mm (104.8 in.)
D	1524 mm (60 in.)	1788 mm (70.4 in.)	1788 mm (70.4 in.)	1992 mm (78.4 in.)	1992 mm (78.4 in.)	H	2448 mm (96.4 in.)	2712 mm (106.8 in.)	2916 mm (114.8 in.)
D	1524 mm (60 in.)	1788 mm (70.4 in.)	1788 mm (70.4 in.)	1992 mm (78.4 in.)	1992 mm (78.4 in.)	L	2600 mm (102.4 in.)	2864 mm (112.8 in.)	3068 mm (120.8 in.)
D	1524 mm (60 in.)	1788 mm (70.4 in.)	1788 mm (70.4 in.)	1992 mm (78.4 in.)	1992 mm (78.4 in.)	O	2854 mm (112.4 in.)	3118 mm (122.8 in.)	3322 mm (130.8 in.)
D	1524 mm (60 in.)	1788 mm (70.4 in.)	1788 mm (70.4 in.)	1992 mm (78.4 in.)	1992 mm (78.4 in.)	P	2904 mm (114.3 in.)	3168 mm (124.7 in.)	3372 mm (132.8 in.)
G	1774 mm (69.8 in.)	1998 mm (78.7 in.)	2042 mm (80.4 in.)	2202 mm (86.7 in.)	2202 mm (86.7 in.)	J	2540 mm (100 in.)	2764 mm (108.8 in.)	2968 mm (116.9 in.)
G	1774 mm (69.8 in.)	2042 mm (80.4 in.)	2042 mm (80.4 in.)	2246 mm (88.4 in.)	2246 mm (88.4 in.)	M	2750 mm (108.3 in.)	3018 mm (118.8 in.)	3222 mm (126.9 in.)
G	1774 mm (69.8 in.)	2042 mm (80.4 in.)	2042 mm (80.4 in.)	2246 mm (88.4 in.)	2246 mm (88.4 in.)	P	2900 mm (114.2 in.)	3168 mm (124.7 in.)	3372 mm (132.8 in.)
L	1928 mm (75.9 in.)	2098 mm (82.6 in.)	2196 mm (86.5 in.)	2302 mm (90.6 in.)	2400 mm (94.5 in.)	L	2692 mm (106 in.)	2864 mm (112.8 in.)	3068 mm (120.8 in.)
L	1928 mm (75.9 in.)	2196 mm (86.5 in.)	2196 mm (86.5 in.)	2400 mm (94.5 in.)	2400 mm (94.5 in.)	O	2850 mm (112.2 in.)	3118 mm (122.8 in.)	3322 mm (130.8 in.)
L	1928 mm (75.9 in.)	2196 mm (86.5 in.)	2196 mm (86.5 in.)	2400 mm (94.5 in.)	2400 mm (94.5 in.)	P	2900 mm (114.2 in.)	3168 mm (124.7 in.)	3372 mm (132.8 in.)
O	2182 mm (85.9 in.)	2404 mm (94.6 in.)	2450 mm (96.5 in.)	2608 mm (102.7 in.)	2654 mm (104.5 in.)	P	2946 mm (116 in.)	3168 mm (124.7 in.)	3372 mm (132.8 in.)
P	2232 mm (87.9 in.)	2404 mm (94.6 in.)	2500 mm (98.4 in.)	2608 mm (102.7 in.)	2704 mm (106.5 in.)	P	2998 mm (118 in.)	3168 mm (124.7 in.)	3372 mm (132.8 in.)

[a] *With 15 in. extension on dual*

380 Tire									
Inner Tire						Dual Tire			
		2808 mm (110.5 in.) Axle		3012 mm (118.5 in.) Axle				2808 mm (110.5 in.) Axle	3012 mm (118.5 in.) Axle
Position	Minimum	Maximum	Maximum[a]	Maximum	Maximum[a]	Position	Minimum	Maximum	Maximum
D	1524 mm (60 in.)	1776 mm (69.9 in.)	1790 mm (70.5 in.)	1980 mm (78 in.)	1994 mm (78.5 in.)	F	2412 mm (95 in.)	2662 mm (104.8 in.)	2866 mm (112.8 in.)
D	1524 mm (60 in.)	1790 mm (70.5 in.)	1790 mm (70.5 in.)	1994 mm (78.5 in.)	1994 mm (78.5 in.)	L	2598 mm (102.3 in.)	2864 mm (112.8 in.)	3068 mm (120.8 in.)
D	1524 mm (60 in.)	1790 mm (70.5 in.)	1790 mm (70.5 in.)	1994 mm (78.5 in.)	1994 mm (78.5 in.)	O	2852 mm (112.3 in.)	3118 mm (122.8 in.)	3322 mm (130.8 in.)
D	1524 mm (60 in.)	1790 mm (70.5 in.)	1790 mm (70.5 in.)	1994 mm (78.5 in.)	1994 mm (78.5 in.)	P	2904 mm (114.3 in.)	3168 mm (124.7 in.)	3372 mm (132.8 in.)
G	1776 mm (69.9 in.)	1976 mm (77.8 in.)	2044 mm (80.5 in.)	2180 mm (85.8 in.)	2248 mm (88.5 in.)	L	2662 mm (104.8 in.)	2864 mm (112.8 in.)	3068 mm (120.8 in.)

Continued on next page

380 Tire									
G	1776 mm (69.9 in.)	2044 mm (80.5 in.)	2044 mm (80.5 in.)	2248 mm (88.5 in.)	2248 mm (88.5 in.)	O	2850 mm (112.2 in.)	3118 mm (122.8 in.)	3322 mm (130.8 in.)
G	1776 mm (69.9 in.)	2044 mm (80.5 in.)	2044 mm (80.5 in.)	2248 mm (88.5 in.)	2248 mm (88.5 in.)	P	2900 mm (114.2 in.)	3168 mm (124.7 in.)	3372 mm (132.8 in.)
L	1928 mm (75.9 in.)	2182 mm (85.9 in.)	2196 mm (86.5 in.)	2386 mm (93.9 in.)	2400 mm (94.5 in.)	N	2816 mm (110.9 in.)	3068 mm (120.8 in.)	3272 mm (128.8 in.)
L	1928 mm (75.9 in.)	2196 mm (86.5 in.)	2196 mm (86.5 in.)	2400 mm (94.5 in.)	2400 mm (94.5 in.)	P	2900 mm (114.2 in.)	3168 mm (124.7 in.)	3372 mm (132.8 in.)
O	2182 mm (85.9 in.)	2282 mm (89.8 in.)	2450 mm (96.5 in.)	2486 mm (97.9 in.)	2654 mm (104.5 in.)	P	3070 mm (120.9 in.)	3168 mm (124.7 in.)	3372 mm (132.8 in.)
P	2232 mm (87.9 in.)	2282 mm (89.8 in.)	2500 mm (98.4 in.)	2486 mm (97.9 in.)	2704 mm (106.5 in.)	P	3120 mm (122.8 in.)	3168 mm (124.7 in.)	3372 mm (132.8 in.)

[a]*With 15 in. extension on dual*

18.4 Tire									
Inner Tire						Dual Tire			
		2808 mm (110.5 in.) Axle		3012 mm (118.5 in.) Axle				2808 mm (110.5 in.) Axle	3012 mm (118.5 in.) Axle
Position	Minimum	Maximum	Maximum[a]	Maximum	Maximum[a]	Position	Minimum	Maximum	Maximum
IN	1524 mm (60 in.)	Not Available	1776 mm (69.9 in.)	1534 mm (60.4 in.)	1980 mm (78 in.)	IN	2912/2596 mm (114.6/102.2 in.)[a]	3164 mm (124.6 in.)[a]	2606 mm (102.6 in.)
OUT	2078 mm (81.8 in.)	Not Available	1092 mm (43 in.)	Not Available	2296 mm (90.4 in.)	IN	3150 mm (124 in.)[a]	3164 mm (124.6 in.)[a]	3368 mm (132.6 in.) [a]
IN	1524 mm (60 in.)	1776 mm (69.9 in.)	1776 mm (69.9 in.)	1980 mm (78 in.)	1980 mm (78 in.)	OUT	2816 mm (110.9 in.)	3068 mm (120.8 in.)	3272 mm (128.9 in.)
OUT	2078 mm (81.8 in.)	Not Available	2346 mm (92.4 in.)	2200 mm (86.6 in.)	2550 mm (100.4 in.)	OUT	3562[a]/3150 mm (140.2/124 in.)	3830 mm (150.8 in.)[a]	3272 mm (128.9 in.)

[a]*With 15 in. extension on dual*

480 Tire									
Inner Tire						Dual Tire			
		2808 mm (110.5 in.) Axle		3012 mm (118.5 in.) Axle				2808 mm (110.5 in.) Axle	3012 mm (118.5 in.) Axle
Position	Minimum	Maximum	Maximum[a]	Maximum	Maximum[a]	Position	Minimum	Maximum	Maximum
IN	1524 mm (60 in.)	Not Available	1776 mm (69.9 in.)	Not Available	1980 mm (78 in.)	IN	2912 mm (114.6 in.)[a]	3164 mm (124.6 in.)[a]	3368 mm (132.6 in.)[a]
OUT	2078 mm (81.8 in.)	Not Available	Not Available	Not Available	2270 mm (89.4 in.)	IN	3176 mm (125 in.)[a]	Not Available	3368 mm (132.6 in.) [a]
IN	1524 mm (60 in.)	1776 mm (69.9 in.)	1776 mm (69.9 in.)	1980 mm (78 in.)	1980 mm (78 in.)	OUT	2816 mm (110.9 in.)	3068 mm (120.8 in.)	3272 mm (128.9 in.)
OUT	2078 mm (81.8 in.)	Not Available	2346 mm (92.4 in.)	2174 mm (85.6 in.)	2550 mm (100.4 in.)	OUT	3562[a]/3176 mm (140.2/125 in.)	3830 mm (150.8 in.)[a]	3272 mm (128.9 in.)

[a]*With 15 in. extension on dual*

520 Tire									
Inner Tire						Dual Tire			
		2808 mm (110.5 in.) Axle		3012 mm (118.5 in.) Axle				2808 mm (110.5 in.) Axle	3012 mm (118.5 in.) Axle
Position	Minimum	Maximum	Maximum[a]	Maximum	Maximum[a]	Position	Minimum	Maximum	Maximum
IN	1534 mm (60.4 in.)	Not Available	1774 mm (69.8 in.)	Not Available	1978 mm (77.9 in.)	IN	2824 mm (111.2 in.)[a]	3062 mm (120.6 in.)	3266 mm (128.6 in.)[a]
OUT	2074 mm (81.7 in.)	Not Available	Not Available	Not Available	2084 mm (82 in.)	IN	3256 mm (128.2 in.)[a]	Not Available	3266 mm (128.6 in.) [a]
IN	1534 mm (60.4 in.)	1774 mm (69.8 in.)	1774 mm (69.8 in.)	1978 mm (77.9 in.)	1978 mm (77.9 in.)	OUT	2930 mm (115.4 in.)	3170 mm (124.8 in.)	3374 mm (132.8 in.)
OUT	2074 mm (81.7 in.)	Not Available	2342 mm (92.2 in.)	2192 mm (86.3 in.)	2546 mm (100.2 in.)	OUT	3664/3256 mm (144.3/128.2 in.)[a]	3932 mm (154.8 in.)[a]	3374 mm (132.8 in.)

[a]*With 15 in. extension on dual*

Continued on next page

620 Tire									
Inner Tire						Dual Tire			
		2808 mm (110.5 in.) Axle		3012 mm (118.5 in.) Axle				2808 mm (110.5 in.) Axle	3012 mm (118.5 in.) Axle
Position	Minimum	Maximum	Maximum[a]	Maximum	Maximum[a]	Position	Minimum	Maximum	Maximum
IN	1638 mm (64.5 in.)	Not Available	Not Available	Not Available	1718 mm (67.6 in.)	IN	3028 mm (119.2 in.)[a]	Not Available	3108 mm (122.4 in.)[a]
OUT	1806 mm (71.18 in.)	Not Available	Not Available	Not Available	Not Available	IN	Not Available	Not Available	Not Available
IN	1638 mm (64.5 in.)	1776 mm (69.9 in.)	1776 mm (69.9 in.)	1980 mm (78 in.)	1980 mm (78 in.)	OUT	3204 mm (126.1 in.)	3342 mm (131.6 in.)	3546 mm (139.6 in.)
OUT	2078 mm (81.8 in.)	1952 mm (76.9 in.)	2346 mm (92.4 in.)	2550 mm (100.4 in.)	2550 mm (100.4 in.)	OUT	3466 mm (136.5 in.)	3342 mm (131.6 in.)	3546 mm (139.6 in.)

[a] *With 15 in. extension on dual*

650 Tire									
Inner Tire						Dual Tire			
		2808 mm (110.5 in.) Axle		3012 mm (118.5 in.) Axle				2808 mm (110.5 in.) Axle	3012 mm (118.5 in.) Axle
Position	Minimum	Maximum	Maximum[a]	Maximum	Maximum[a]	Position	Minimum	Maximum	Maximum
IN	1669 mm (65.7 in.)	1774 mm (69.8 in.)	1776 mm (69.9 in.)	1978 mm (77.9 in.)	1980 mm (78 in.)	OUT	3310 mm (130.3 in.)	3352 mm (132 in.)	3556 mm (140 in.)
OUT	2078 mm (81.8 in.)	Not Available	2346 mm (92.4 in.)	Not Available	2550 mm (100.4 in.)	OUT	3654 mm (143.9 in.)[a]	4114 mm (162 in.)[a]	4318 mm (170 in.)[a]

[a] *With 15 in. extension on dual*

710 Tire									
Inner Tire						Dual Tire			
		2808 mm (110.5 in.) Axle		3012 mm (118.5 in.) Axle				2808 mm (110.5 in.) Axle	3012 mm (118.5 in.) Axle
Position	Minimum	Maximum	Maximum[a]	Maximum	Maximum[a]	Position	Minimum	Maximum	Maximum
IN	1732 mm (68.1 in.)	1774 mm (69.8 in.)	1776 mm (69.9 in.)	1978 mm (77.9 in.)	1980 mm (78 in.)	OUT	3310 mm (130.3 in.)	3352 mm (132 in.)	3556 mm (140 in.)
OUT	2078 mm (81.8 in.)	Not Available	2346 mm (92.4 in.)	Not Available	2550 mm (100.4 in.)	OUT	3654 mm (143.9 in.)[a]	4114 mm (162 in.)[a]	4318 mm (170 in.)[a]

[a] *With 15 in. extension on dual*

800 Tire					
Inner Tire			Dual Tire		
		3012 mm (118.5 in.) Axle			3012 mm (118.5 in.) Axle
Position	Minimum	Maximum[a]	Position	Minimum[b]	Maximum[b]
IN	1826 mm (71.9 in.)	1941 mm (76.4 in.)	OUT	3843 mm (151.3 in.)	4006 mm (157.7 in.)
OUT	Not Available	Not Available	OUT	Not Available	Not Available

[a] *With 15 in. extension on dual*
[b] *With 10 in. extension on dual*

TO84419,0000192 -19-13SEP13-3/3

Rear Dual Wheel Tread Settings—Cast Drive Wheels

IMPORTANT: Tractors equipped with tires narrower than 520 and have two 205 kg (452 lbs) inner wheel weights must not set rear treads narrower than 1676 mm (66 in.). Doing so will result in damage to tractor.

IMPORTANT: Refer to "Minimum Tread Setting With Air Trailer Brakes And Inner Wheel Weights" section for further restrictions on tractors equipped with optional air trailer brakes.

320 Tire									
Single Tire						Dual Tire			
		2808 mm (110.5 in.) Axle		3012 mm (118.5 in.) Axle				2808 mm (110.5 in.) Axle	3012 mm (118.5 in.) Axle
Position	Minimum	Maximum	Maximum[a]	Maximum	Maximum[a]	Position	Minimum	Maximum	Maximum
IN	1524 mm (60 in.)	1692 mm (66.6 in.)	1774 mm (69.8 in.)	1896 mm (74.6 in.)	1978 mm (77.9 in.)	D	2290 mm (90.2 in.)	2458 mm (96.8 in.)	2662 mm (104.8 in.)
OUT	1810 mm (71.3 in.)	Not Available	2078 mm (81.8 in.)	1896 mm (74.6 in.)	2282 mm (89.8 in.)	D	2952 mm (116.2 in.)[a]	3220 mm (126.7 in.)[a]	2662 mm (104.8 in.)
OUT	1810 mm (71.3 in.)	Not Available	2078 mm (81.8 in.)	1896 mm (74.6 in.)	2282 mm (89.8 in.)	D	2576 mm (101.4 in.)	3220 mm (126.7 in.)[a]	2662 mm (104.8 in.)
IN	1524 mm (60 in.)	1774 mm (69.8 in.)	1774 mm (69.8 in.)	1978 mm (77.9 in.)	1978 mm (77.9 in.)	G	2462 mm (96.9 in.)	2711 mm (106.7 in.)	2915 mm (114.8 in.)
OUT	1810 mm (71.3 in.)	1946 mm (76.6 in.)	2078 mm (81.8 in.)	2150 mm (84.6 in.)	2282 mm (89.8 in.)	G	2576 mm (101.4 in.)	2711 mm (106.7 in.)	2915 mm (114.8 in.)
IN	1524 mm (60 in.)	1774 mm (69.8 in.)	1774 mm (69.8 in.)	1978 mm (77.9 in.)	1978 mm (77.9 in.)	L	2614 mm (102.9 in.)	2864 mm (112.7 in.)	3068 mm (120.8 in.)
OUT	1810 mm (71.3 in.)	2078 mm (81.8 in.)	2078 mm (81.8 in.)	2282 mm (89.8 in.)	2282 mm (89.8 in.)	L	2596 mm (102.2 in.)	2864 mm (112.7 in.)	3068 mm (120.8 in.)
IN	1524 mm (60 in.)	1774 mm (69.8 in.)	1774 mm (69.8 in.)	1978 mm (77.9 in.)	1978 mm (77.9 in.)	O	2868 mm (112.9 in.)	3118 mm (122.7 in.)	3322 mm (130.8 in.)
OUT	1810 mm (71.3 in.)	2078 mm (81.8 in.)	2078 mm (81.8 in.)	2282 mm (89.8 in.)	2282 mm (89.8 in.)	O	2850 mm (112.2 in.)	3118 mm (122.7 in.)	3322 mm (130.8 in.)
IN	1524 mm (60 in.)	1774 mm (69.8 in.)	1774 mm (69.8 in.)	1978 mm (77.9 in.)	1978 mm (77.9 in.)	P	2920 mm (115 in.)	3168 mm (124.7 in.)	3372 mm (132.8 in.)
OUT	1810 mm (71.3 in.)	2078 mm (81.8 in.)	2078 mm (81.8 in.)	2282 mm (89.8 in.)	2282 mm (89.8 in.)	P	2900 mm (114.2 in.)	3168 mm (124.7 in.)	3372 mm (132.8 in.)

[a]With 15 in. extension on dual.

380 Tire									
Single Tire						Dual Tire			
		2808 mm (110.5 in.) Axle		3012 mm (118.5 in.) Axle				2808 mm (110.5 in.) Axle	3012 mm (118.5 in.) Axle
Position	Minimum	Maximum	Maximum[a]	Maximum	Maximum[a]	Position	Minimum	Maximum	Maximum
IN	1524 mm (60 in.)	1770 mm (69.7 in.)	1770 mm (69.7 in.)	1974 mm (77.7 in.)	1974 mm (77.7 in.)	G	2414 mm (95 in.)	2711 mm (106.7 in.)	2915 mm (114.8 in.)
OUT	1806 mm (71.1 in.)	1822 mm (71.7 in.)	2074 mm (81.7 in.)	2026 mm (79.8 in.)	2278 mm (89.7 in.)	G	2698 mm (106.2 in.)	2711 mm (106.7 in.)	2915 mm (114.8 in.)
IN	1524 mm (60 in.)	1770 mm (69.7 in.)	1770 mm (69.7 in.)	1974 mm (77.7 in.)	1974 mm (77.7 in.)	L	2618 mm (103.1 in.)	2864 mm (112.7 in.)	3068 mm (120.8 in.)
OUT	1806 mm (71.1 in.)	1974 mm (77.7 in.)	2074 mm (81.7 in.)	2178 mm (85.7 in.)	2278 mm (89.7 in.)	L	2698 mm (106.2 in.)	2864 mm (112.7 in.)	3068 mm (120.8 in.)
IN	1524 mm (60 in.)	1770 mm (69.7 in.)	1770 mm (69.7 in.)	1974 mm (77.7 in.)	1974 mm (77.7 in.)	O	2872 mm (113.1 in.)	3118 mm (122.7 in.)	3322 mm (130.8 in.)
OUT	1806 mm (71.1 in.)	2074 mm (81.7 in.)	2074 mm (81.7 in.)	2278 mm (89.7 in.)	2278 mm (89.7 in.)	O	2850 mm (112.2 in.)	3118 mm (122.7 in.)	3322 mm (130.8 in.)
IN	1524 mm (60 in.)	1770 mm (69.7 in.)	1770 mm (69.7 in.)	1974 mm (77.7 in.)	1974 mm (77.7 in.)	P	2922 mm (115 in.)	3168 mm (124.7 in.)	3372 mm (132.8 in.)
OUT	1806 mm (71.1 in.)	2074 mm (81.7 in.)	2074 mm (81.7 in.)	2278 mm (89.7 in.)	2278 mm (89.7 in.)	P	2900 mm (114.2 in.)	3168 mm (124.7 in.)	3372 mm (132.8 in.)

[a]With 15 in. extension on dual.

Continued on next page

18.4 and 480 Tires									
Inner Tire						Dual Tire			
		2808 mm (110.5 in.) Axle		3012 mm (118.5 in.) Axle				2808 mm (110.5 in.) Axle	3012 mm (118.5 in.) Axle
Position	Minimum	Maximum	Maximum[a]	Maximum	Maximum[a]	Position	Minimum	Maximum	Maximum
IN	1524 mm (60 in.)	Not Available	1770 mm (69.7 in.)	1508 mm (59.4 in.)	1974 mm (77.7 in.)	IN	2918 mm (114.9 in.)[a]	3164 mm (124.6 in.)[a]	2606 mm (102.6 in.)
IN	1524 mm (60 in.)	Not Available	1770 mm (69.7 in.)	1508 mm (59.4 in.)	1974 mm (77.7 in.)	IN	2622 mm (103.2 in.)	3164 mm (124.6 in.)[a]	2606 mm (102.6 in.)
OUT	1806 mm (71.1 in.)	Not Available	2066 mm (81.3 in.)	Not Available	2270 mm (89.4 in.)	IN	2906 mm (114.4 in.)	3164 mm (124.6 in.)[a]	3368 mm (132.6 in.) [a]
IN	1524 mm (60 in.)	1770 mm (69.7 in.)	1770 mm (69.7 in.)	1974 mm (77.7 in.)	1974 mm (77.7 in.)	OUT	2822 mm (111.1 in.)	3068 mm (120.8 in.)	3272 mm (128.9 in.)
OUT	1806 mm (71.1 in.)	1970 mm (77.5 in.)	2074 mm (81.7 in.)	2174 mm (85.6 in.)	2278 mm (89.7 in.)	OUT	2906 mm (114.4 in.)	3068 mm (120.8 in.)	3272 mm (128.9 in.)

[a]With 15 in. extension on dual.

520 Tire									
Inner Tire						Dual Tire			
		2808 mm (110.5 in.) Axle		3012 mm (118.5 in.) Axle				2808 mm (110.5 in.) Axle	3012 mm (118.5 in.) Axle
Position	Minimum	Maximum	Maximum[a]	Maximum	Maximum[a]	Position	Minimum	Maximum	Maximum
IN	1535 mm (60.4 in.)	Not Available	1770 mm (69.7 in.)	Not Available	1974 mm (77.7 in.)	IN	2826 mm (111.3 in.)[a]	3062 mm (120.6 in.)[a]	3266 mm (128.6 in.)[a]
OUT	1806 mm (71.1 in.)	Not Available	1880 mm (74 in.)	Not Available	2084 mm (82 in.)	IN	2988 mm (117.6 in.)[a]	3062 mm (120.6 in.)[a]	3266 mm (128.6 in.) [a]
IN	1534 mm (60.4 in.)	1770 mm (69.7 in.)	1770 mm (69.7 in.)	1974 mm (77.7 in.)	1974 mm (77.7 in.)	OUT	2935 mm (115.6 in.)	3170 mm (124.8 in.)	3374 mm (132.8 in.)
OUT	1806 mm (71.1 in.)	1952 mm (76.9 in.)	2074 mm (81.7 in.)	2192 mm (86.3 in.)	2278 mm (89.7 in.)	OUT	2988 mm (117.6 in.)	3170 mm (124.8 in.)	3374 mm (132.8 in.)

[a]With 15 in. extension on dual.

620 Tire									
Inner Tire						Dual Tire			
		2808 mm (110.5 in.) Axle		3012 mm (118.5 in.) Axle				2808 mm (110.5 in.) Axle	3012 mm (118.5 in.) Axle
Position	Minimum	Maximum	Maximum[a]	Maximum	Maximum[a]	Position	Minimum	Maximum	Maximum
IN	1638 mm (64.5 in.)	Not Available	Not Available	Not Available	1718 mm (67.6 in.)	IN	3028 mm (119.2 in.)	Not Available	3108 mm (122.3 in.)[a]
IN	1638 mm (64.5 in.)	1770 mm (69.7 in.)	1770 mm (69.7 in.)	1974 mm (77.7 in.)	1974 mm (77.7 in.)	OUT	3210 mm (126.4 in.)	3342 mm (131.6 in.)	3545 mm (139.6 in.)
OUT	1806 mm (71.1 in.)	1952 mm (76.9 in.)	2074 mm (81.7 in.)	2156 mm (84.9 in.)	2278 mm (89.7 in.)	OUT	3196 mm (125.8 in.)	3342 mm (131.6 in.)	3545 mm (139.6 in.)

[a]With 15 in. extension on dual.

650 Tire									
Single Tire						Dual Tire			
		2808 mm (110.5 in.) Axle		3012 mm (118.5 in.) Axle				2808 mm (110.5 in.) Axle	3012 mm (118.5 in.) Axle
Position	Minimum	Maximum	Maximum[a]	Maximum	Maximum[a]	Position	Minimum	Maximum	Maximum
IN	1670 mm (65.8 in.)	1770 mm (69.7 in.)	1770 mm (69.7 in.)	1974 mm (77.7 in.)	1974 mm (77.7 in.)	OUT	3242 mm (127.6 in.)	3342 mm (131.6 in.)	3545 mm (139.6 in.)
OUT	1806 mm (71.1 in.)	1890 mm (74.4 in.)	2074 mm (81.7 in.)	2094 mm (82.4 in.)	2278 mm (89.7 in.)	OUT	3258 mm (128.3 in.)	3342 mm (131.6 in.)	3545 mm (139.6 in.)

[a]With 15 in. extension on dual.

710 Tire				
Inner Tire			Dual Tire	
	2808 mm (110.5 in.) Axle	3012 mm (118.5 in.) Axle		2808 mm (110.5 in.) Axle	3012 mm (118.5 in.) Axle

Continued on next page

710 Tire									
Position	Minimum	Maximum	Maximum[a]	Maximum	Maximum[a]	Position	Minimum	Maximum	Maximum
IN	1732 mm (68.1 in.)	1764 mm (69.4 in.)	1770 mm (69.7 in.)	1968 mm (77.5 in.)	1974 mm (77.7 in.)	OUT	3310 mm (130.3 in.)	3342 mm (131.6 in.)	3621 mm (139.6 in.)
OUT	1806 mm (71.1 in.)	Not Available	2074 mm (81.7 in.)	1968 mm (77.5 in.)	2278 mm (89.7 in.)	OUT	3384 mm (133.2 in.)	3342 mm (131.6 in.)	3621 mm (139.6 in.)

[a] *With 15 in. extension on dual.*

800 Tire									
Inner Tire						Dual Tire			
		2808 mm (110.5 in.) Axle		3012 mm (118.5 in.) Axle				2808 mm (110.5 in.) Axle	3012 mm (118.5 in.) Axle
Position	Minimum	Maximum	Maximum[a]	Maximum	Maximum[a]	Position	Minimum	Maximum	Maximum
IN	1732 mm (68.1 in.)	1774 mm (69.8 in.)	1776 mm (69.9 in.)	1978 mm (77.9 in.)	1980 mm (78 in.)	OUT	3310 mm (130.3 in.)	3352 mm (132 in.)	3556 mm (140 in.)
OUT	2078 mm (81.8 in.)	Not Available	2346 mm (92.4 in.)	Not Available	2550 mm (100.4 in.)	OUT	3654 mm (143.9 in.)	4114 mm (162 in.)	4318 mm (170 in.)

[a] *With 15 in. extension on dual.*

TO84419,0000193 -19-16SEP13-3/3

Rear Dual Wheel Row Crop Settings and Dual Hub Extensions—Cast Drive Wheels

IMPORTANT: Tractors equipped with tires narrower than 520 and have two 205 kg (452 lbs) inner wheel weights must not set rear treads narrower than 1676 mm (66 in.). Doing so will result in damage to tractor.

18.4 or 480 Section Dual Rear Tire and Hub Extension								
Row Spacing - inch	20	22	30	32	34	36	38	40
Drive Wheel - inch	Not Available	Not Available	60	64	68	72	76	80
Dual Wheel - inch	Not Available	Not Available	120	128	136	144	152	160
Dual Extension (110.5 in. Axle) - inch	Not Available	Not Available	NR	5	10	10	15	Not Available
Dual Extension (118.5 in. Axle) - inch	Not Available	Not Available	NR	NR	5	10	10	15
520 or 20.8 Section Dual Rear Tire and Hub Extension								
Row Spacing - inch	20	22	30	32	34	36	38	40
Drive Wheel - inch	Not Available	Not Available	Not Available	64	68	72	76	80
Dual Wheel - inch	Not Available	Not Available	Not Available	128	136	144	152	160
Dual Extension (110.5 in. Axle) - inch	Not Available	Not Available	Not Available	5	10	10	15	N/A
Dual Extension (118.5 in. Axle) - inch	Not Available	Not Available	Not Available	Not Available	5	10	10	15
620 or 710 Section Dual Rear Tire and Hub Extension								
Row Spacing - inch	20	22	30	32	34	36	38	40
Drive Wheel - inch	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	80
Dual Wheel - inch	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	160
Dual Extension (110.5 in. Axle) - inch	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	15
Dual Extension (118.5 in. Axle) - inch	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	13
NR = Dual hub extension, not required for tread setting								

TO84419,0000194 -19-13SEP13-1/1

Clamp-on Dual Usage

IMPORTANT: Clamp-on duals should not be used for heavy traction work. They are allowed only for use when the following conditions are met including recommended tire sizes and manufacturers.

NOTE: Clamp-on duals are not recommended for turning with brake.

Use the right combination of weight and tread widths for the relevant application.

Steel Rear Wheels:

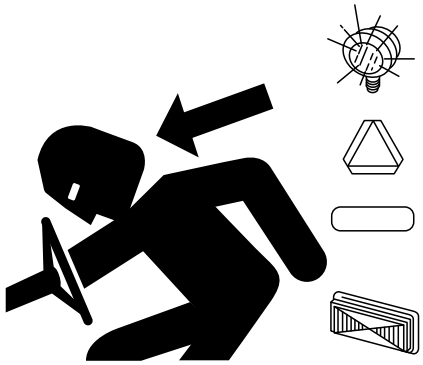
- Maximum rear axle weight is limited to 6300 kg (13860 lbs).
- Maximum outer tread width is limited to 3404 mm (134 in.).

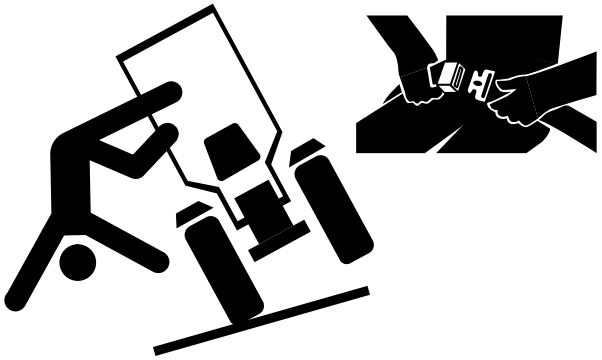
Cast Rear Wheels:

- Maximum total vehicle weight is limited to 16 000 kg (35 274 lbs).
- Maximum inner tread width is limited to 1930 mm (76 in.).
- Maximum outer tread width is limited to 3860 mm (152 in.).

TO84419,0000195 -19-27NOV12-1/1

Driving Tractor on Roads





RXA0086597 —UN—09FEB06

CAUTION: Avoid personal injury or death from losing control of tractor. When driving tractor on roads:

- **Wear seat belts.**
- **Latch brake pedals together.**
- **If equipped, use foot throttle instead of speed control lever.**
- **Reduce speed when driving on icy, wet, or graveled surfaces.**
- **Ballast tractor correctly (see Performance Ballasting section in this Operator's Manual).**
- **Prevent wheels from locking and skidding on tractors equipped with IVT™ /AutoPowr™ transmission. (See Downhill Operation In Slippery Conditions, in Operating IVT™/AutoPowr™ Transmission section in this Operator's Manual).**
- **Avoid holes, ditches, sharp turns, hill sides, and obstructions which may cause tractor to roll over.**
- **Frequently check for traffic from the rear, especially in turns, and use turn signal lights.**
- **Always operate flashing lights when traveling on a highway or public roads, except where prohibited by law.**

Lights—Use headlights and turn signals day and night. Follow local regulations for equipment lighting and marking. Keep lighting and marking visible and in good working order. Replace or repair lighting and marking that has been damaged or lost. An implement safety lighting kit is available from your John Deere™ dealer.

IMPORTANT: Damage to brakes could result if brake pedals are not locked together during transport when using AutoClutch.

Brakes—Tap brake pedal to ensure differential lock is NOT engaged. **Latch brake pedals together before driving on a road**. Avoid hard application of brakes.

MFWD—Disengage MFWD when transporting tractor. When driving on roads, engage AUTO or BRAKE ASSIST position of MFWD switch to provide four wheel braking.

Remote Cylinders—Position control levers appropriately to eliminate possibility of lowering an implement during transport by inadvertently bumping control lever(s). (See procedure in Hydraulics and Selective Control Valves section in this Operator's Manual.)

Front or Rear Hitch—Position hitch control lever appropriately to eliminate possibility of lowering an implement during transport by inadvertently bumping raise/lower lever. (See procedure in Hitch section in this Operator's Manual.)

IVT is a trademark of Deere & Company
AutoPowr is a trademark of Deere & Company
John Deere is a trademark of Deere & Company

TO84419,0000196 -19-10AUG15-1/1

Transporting with Ballast

CAUTION: Avoid possible injury or equipment damage when transporting heavy rear-mounted implements.

- **Drive slowly over rough ground, regardless of how much ballast is used.**
- **Add weight to front end if needed to maintain stability and steering control. Heavy pulling and heavy rear-mounted implements tend to lift front wheels.**

Use implement code in implement operator's manual to determine the minimum number of front weights required.

TO84419,0000197 -19-07AUG14-1/1

Towed Mass (2010-52-EU)

Depending on how trailer/implement is braked, following masses and speeds are permitted:

Trailer/implement brake system	Max. Permissible Towed Mass	Max. speed
	kg (lb)	km/h (mph)
- Unbraked Towable Mass	3000 (6614)	40 (24.8)
- Independently - Braked Towable Mass	5000 (11023)	40 (24.8)
- Inertia/Overrun Braked Towable Mass	8000 (17637)	40 (24.8)
- Hydraulic Braked Towable Mass	38000 (83776)	40 (24.8)
- Single-Line Air Brake	38000 (83776)	40 (24.8)
- Dual-Line Air Brake	38000 (83776)	Max. design speed

There may be legal limits in force that restrict maximum towed mass and/or travel speeds to figures lower than those quoted here. Refer to Identification Number Section in this Operator's Manual for additional information on this topic.

GH15097,00007C8 -19-29SEP15-1/1

Towing Loads

CAUTION: Avoid possible injury from losing control while towing a load. Stopping distance increases with speed and weight of towed loads, and on slopes.

Tractor wheels may lock and skid on slippery downhill slopes on tractors equipped with IVT/AutoPowr transmission. (See Downhill Operation In Slippery Conditions, in Operating IVT/AutoPowr Transmission section of this Operator's Manual.)

Never transport at speeds exceeding implement's maximum transport speed. Before transporting a towed implement, refer to implement operator's manual and implement decals to determine maximum transport speed. This tractor is capable of operating at transport speeds exceeding maximum allowable transport speed for most towed implements. Use implement code in implement operator's manual to determine minimum number of front weights required. Failure to adhere to implement's maximum transport speed or to have correct ballast can result in:

- **Loss of control of tractor/implement combination**
- **Reduced or no ability to stop during braking**
- **Implement tire failure**
- **Damage to implement structure or components**

Guidelines for Towing Equipment without Brakes:

- **Do not transport at speeds greater than 32 km/h (20 mph).**
- **Must weigh less than 1.5 times the ballasted tractor weight.**

Guidelines for Towing Equipment with Brakes:

- **If manufacturer does not specify a maximum transport speed, do not transport at speeds above 40 km/h (24.8 mph).**
- **When transporting at speeds up to 40 km/h (24.8 mph) the fully loaded implement must weigh less than 4.5 times tractor weight.**
- **When transporting at speeds between 40 km/h (24.8 mph) to 50 km/h (31 mph), fully loaded implement must weigh less than 3 times the tractor weight.**

Tractor must be heavy and powerful enough with adequate braking power for towed load. Add ballast to tractor or lighten implement load.

Drive slowly enough to maintain safe control. Be alert for skids. Shift to a lower gear for hillsides, rough ground, and sharp turns, especially when transporting heavy equipment.

Never operate with transmission in neutral position or with clutch disengaged.

GH15097,0000872 -19-14AUG14-1/1

Towing Tractor

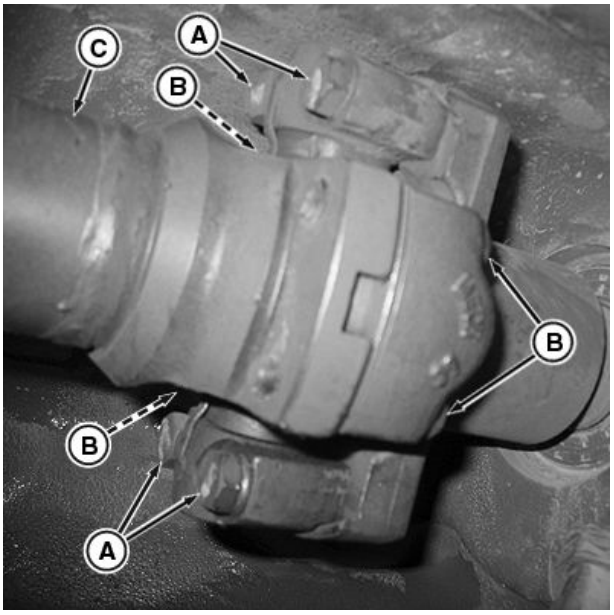
CAUTION: Avoid personal injury or death. Disconnect MFWD drive shaft if towing tractor with front wheels on a carrier. Loss of electrical power or transmission-hydraulic system pressure engages MFWD and will pull tractor off carrier, regardless of MFWD switch position.

If tractor is ACS™ equipped and hydraulic oil temperature is less than -10° C (14° F), backup pump will not turn on. Tractor will not have brakes or steering. If tractor still must be moved, contact your John Deere™ dealer.

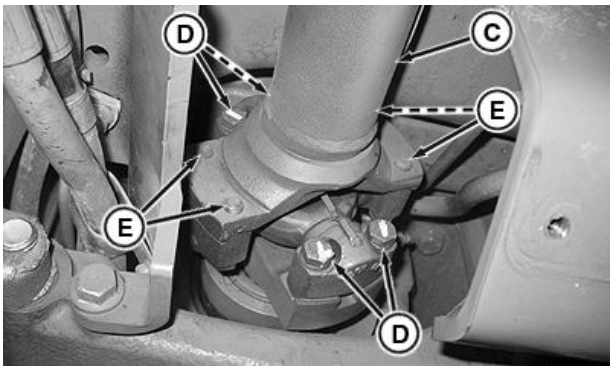
IMPORTANT: Avoid transmission and power train component damage:

- **NEVER attempt to start tractor by towing. Engine will not start.**
- **If possible, operate engine above 1250 rpm to provide lubrication, power steering, and power brakes. Have an operator steer and brake tractor.**
- **Do not tow tractor faster than 8 km/h (5 mph). Do not exceed 3 km/h (2 mph) for first 10 minutes in below freezing temperatures.**
- **Check transmission/hydraulic oil level. Add 4 L (1 gal.) for each 152 mm (6 in.) front wheels are raised off the ground. Do not raise wheels more than 305 mm (12 in.). Drain excess oil after transporting.**

1. If equipped with MFWD, disconnect drive shaft if towing tractor with front wheels on a carrier:
   a. Remove shields.
   b. Remove both sets of cap screws (A, B) on rear MFWD drive shaft U-joint.
   c. Remove both sets of cap screws (D, E) on front MFWD drive shaft U-joint.
   d. Slide MFWD drive shaft (C) forward and out from tractor.
2. Tap brake pedals to make sure differential lock is not engaged.
3. Move reverser to:
   - CommandQuad™ and e23™ Transmissions: Make sure reverser is in NEUTRAL position.
   - IVT™/AutoPowr™ Transmission:
     - Engine running: Move reverser to NEUTRAL position.
     - Engine off: Keep reverser in PARK position.



RXA0111188 —UN—14FEB11



RXA0111186 —UN—14FEB11

A—Front-Facing Rear U-Joint Cap Screws
B—Rear-Facing Rear U-Joint Cap Screws
C—MFWD Drive Shaft
D—Rear-Facing Front U-Joint Cap Screws
E—Front-Facing Front U-Joint Cap Screws

4. Release park brake:
   - CommandQuad™ and e23™ 40 km/h transmission equipped tractors with ACS™ and all CommandQuad™, e23™, and all IVT™/AutoPowr™ 50 km/h transmission equipped tractors: See procedure 1 in Releasing Park Brake Electrically in this section of this Operator's Manual.
   - CommandQuad™ and e23™ 40 km/h transmission equipped tractors without ACS™: See procedure 2 in Releasing Park Brake Electrically in this section of this Operator's Manual.

John Deere is a trademark of Deere & Company

TO84419,000019A -19-10AUG15-1/1

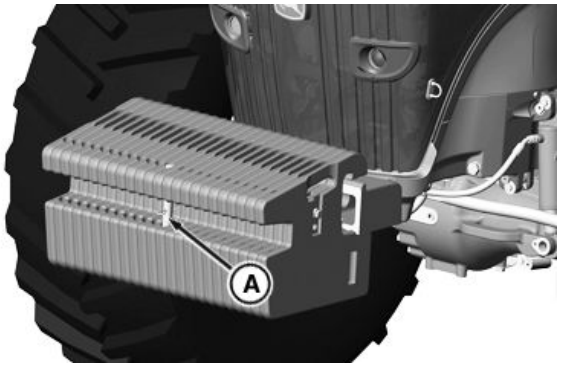
Tow Points

CAUTION: The methods of hitching shown here may be used for maneuvering and towing on hard-surfaced roads only. Before the tractor is towed by tow points, remove any trailers or mounted implements.

Never use a tow-rope; always use an approved towbar.

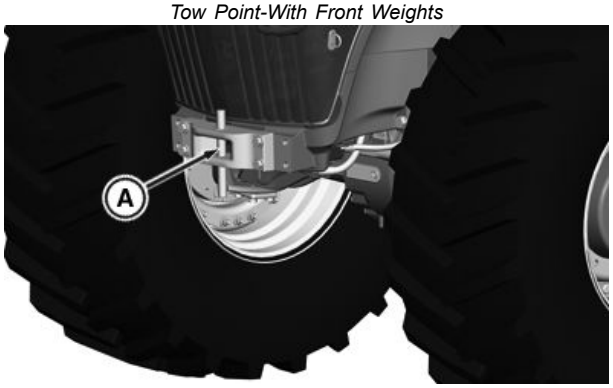
Tow points are integrated into front end of tractor to allow tractor to be maneuvered and towed on hard-surfaced roads.

A—Pin



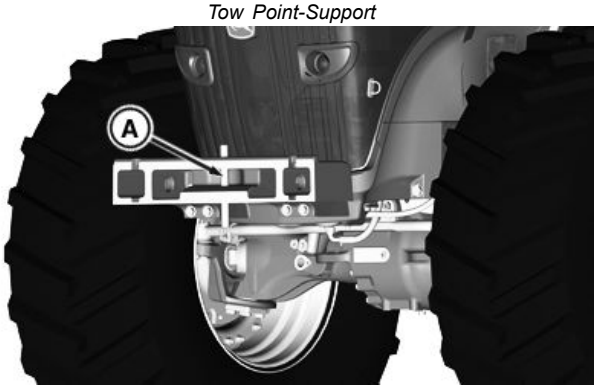
RXA0144437 —UN—08AUG14

Tow Point-With Front Weights



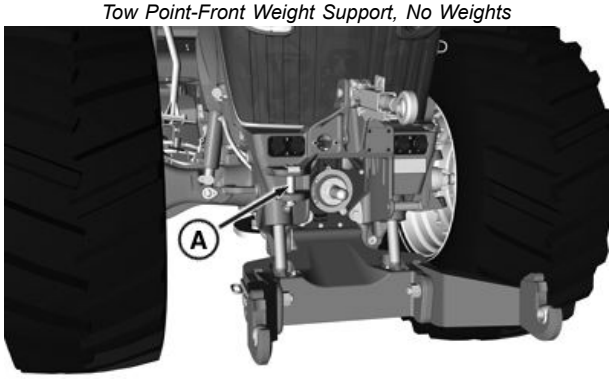
RXA0144439 —UN—11AUG14

Tow Point-Support



RXA0144438 —UN—08AUG14

Tow Point-Front Weight Support, No Weights



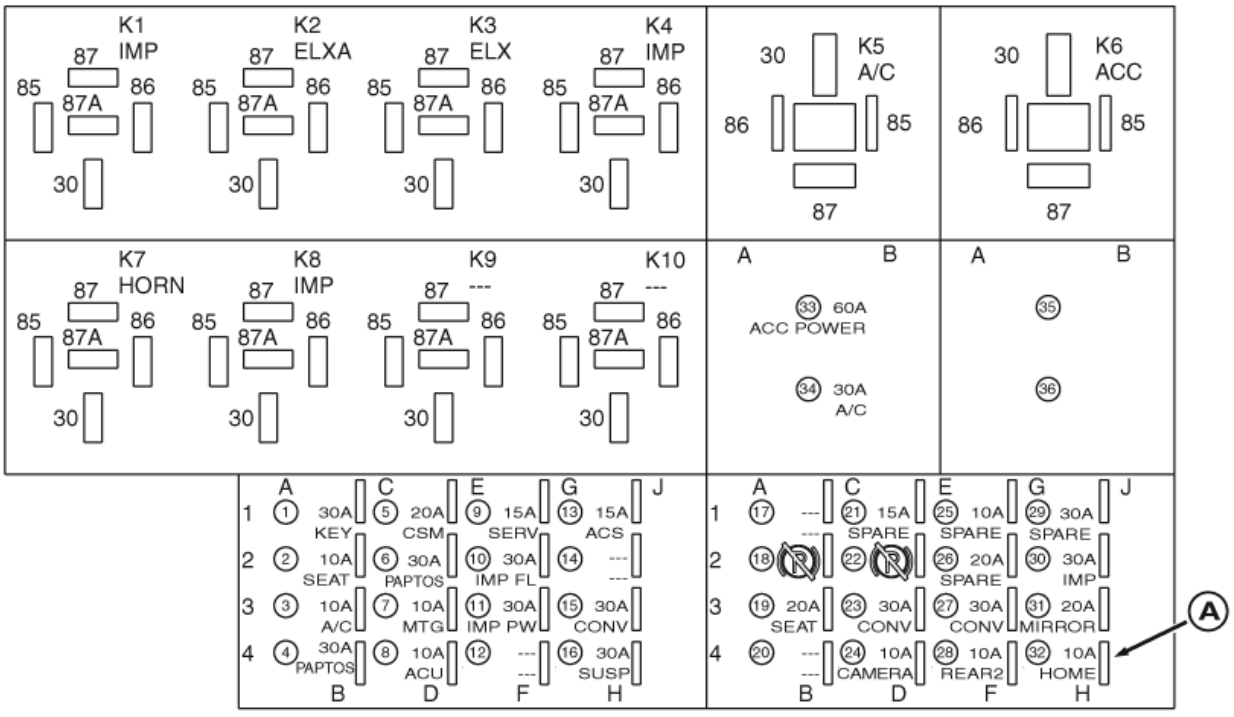
RXA0144440 —UN—08AUG14

Tow Point-Front Hitch

GH15097,00008E2 -19-14AUG14-1/1

Releasing Park Brake Electrically

Tractors Equipped With Backup Pump



Remove # 32 Fuse And Retain

A—# 32 Fuse

NOTE: If tractor must be moved **immediately***, pulling tractor a short distance while tractor is in PARK will not damage brake system.*

Before tractor can be towed, park brake must be released, if possible.

Activating backup mode allows tractor to be operated at a maximum of 8 km/h (5 mph) in forward position and 3 km/h (1.8 mph) in reverse.

If tractor loses electrical power, park brake can re-engage. If tractor has no electrical power, a 100 Amp electrical source must be connected. See Using a Battery Booster Or Charger in Operating the Engine Section of this Operator's Manual.

NOTE: Removing # 32 fuse (A) diverts hydraulic oil through backup pump which supplies hydraulic oil to brakes and steering. Tractor can safely be moved short distances at lower speeds.

Fold seat backrest down to allow easier access and allow cab lighting to shine on load center when fuses are being inspected, replaced, or removed.

1. Remove fuse # 32 (A) and retain.
2. Turn key switch to RUN position.

NOTE: When tractor is placed in neutral, operator will hear backup pump start. As long as tractor is in Neutral any movement of brake pedals or steering wheel will engage backup pump to supply hydraulic oil as needed.

3. Place tractor in Neutral.

NOTE: When tractor is in park, P is displayed on corner post display. When placed in Neutral, corner post display will show “N”, tractor is ready to tow.

4. Verify transmission is in Neutral by looking at corner post display.

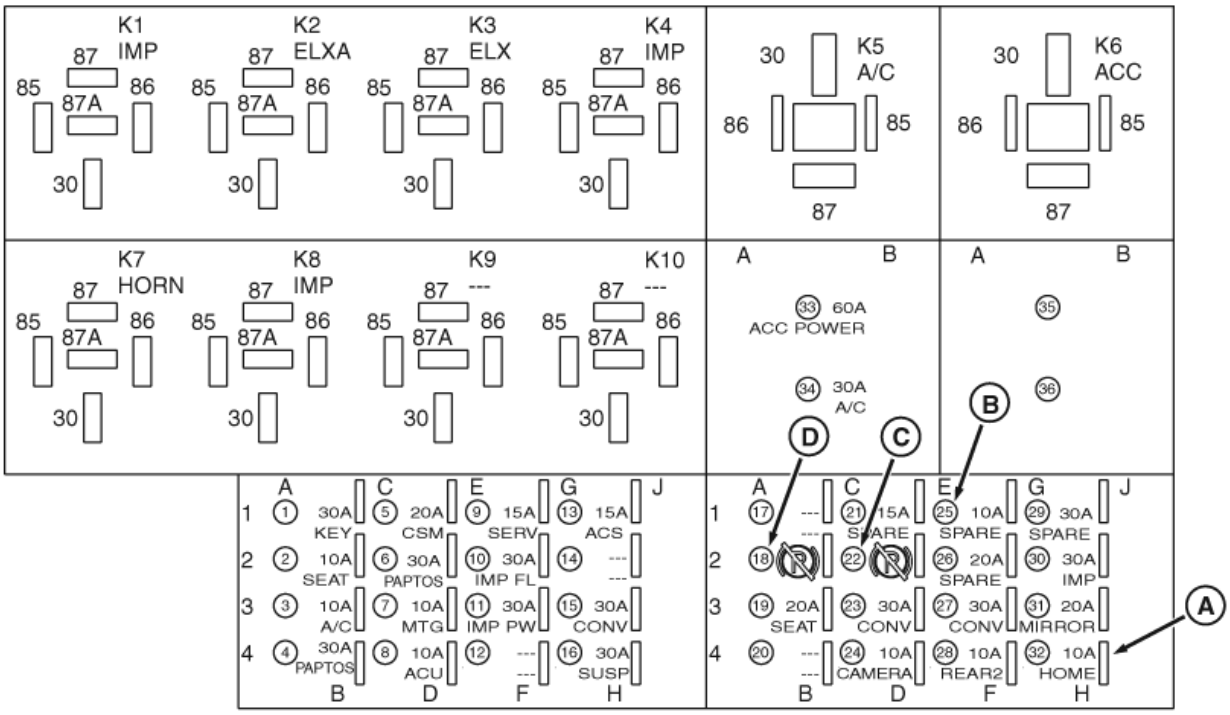
NOTE: If after placing tractor in Neutral, corner post display still displays “P”, contact your John Deere™ dealer for assistance.

5. Steering and braking are supplied by backup pump.
6. When destination is reached, put transmission shift lever in PARK position.
7. Turn key switch to OFF position.
8. Replace removed fuse # 32 to original location.

Continued on next page

RW29387,00005E5 -19-08AUG14-1/3

Tractors Equipped Without Backup Pump



RXA0130661 —UN—25JAN13

Fuse Panel

NOTE: If tractor must be moved **immediately***, pulling tractor a short distance while tractor is in PARK will not damage brake system.*

If following procedure fails, park brake can be manually pumped off with an external power source. See your John Deere™ dealer for required Park Brake Release Hand Pump Kit components.

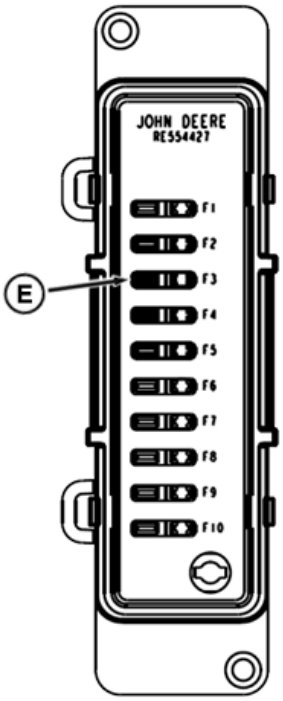
Before tractor can be towed, park brake must be released, if possible.

If tractor looses electrical power, park brake may re-engage. If tractor has no electrical power, a 100 Amp electrical source must be connected. See Using a Battery Booster Or Charger in Operating the Engine section of this Operator's Manual.

Tractors not equipped with a backup pump must complete following procedure to release park brake.

1. Remove Fuse #32 (A) and place it in Fuse #22 (C).
2. Remove Fuse #25 (B) and place it in Fuse #18 (D).
3. Remove Fuse F3 (E) on the front load center. Raise hood to access load center in front of the radiator.

   This allows engine to be cranked over without starting. Cranking engine over allows hydraulic oil pressure to rise, releasing the park brake.



RXA0130662 —UN—18FEB13

Front Load Center

A—Fuse # 32
B—Fuse # 25
C—Fuse # 22
D—Fuse # 18
E—Front Load Center Fuse F3

Continued on next page

RW29387,00005E5 -19-08AUG14-2/3

NOTE: If after placing tractor in Neutral, corner post display still displays "P", contact your John Deere™ dealer for assistance.

4. Verify that transmission is in Neutral by looking at corner post display. When placed in Neutral, corner post display shows "N".
5. Manual operation of brakes and steering still functions, but extra force is required to operate these systems.
6. When destination is reached, put transmission shift lever in PARK position.
7. Turn key switch to OFF position.
8. Replace removed panel fuses and load center fuse to original respective locations.

John Deere is a trademark of Deere & Company

RW29387,00005E5 -19-08AUG14-3/3

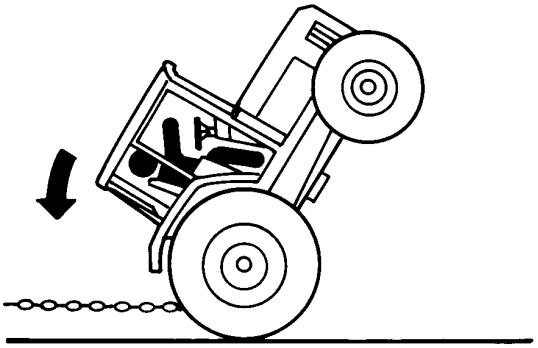
Freeing a Mired Machine

Attempting to free a mired machine can involve safety hazards such as the mired tractor tipping rearward, the towing tractor overturning, and the tow chain or tow bar (a cable is not recommended) failing and recoiling from its stretched condition.

Back your tractor out if it gets mired down in mud. Unhitch any towed implements. Dig mud from behind the rear wheels. Place boards behind the wheels to provide a solid base and try to back out slowly. If necessary, dig mud from the front of all wheels and drive slowly ahead.

If necessary to tow with another unit, use a tow bar or a long chain (a cable is not recommended). Inspect the chain for flaws. Make sure all parts of towing devices are of adequate size and strong enough to handle the load.

Always hitch to the drawbar of the towing unit. Do not hitch to the front pushbar attachment point. Before moving, clear the area of people. Apply power smoothly to take up the slack: a sudden pull could snap any towing device causing it to whip or recoil dangerously.



TS1645 —UN—15SEP95



TS263 —UN—23AUG88

DX,MIRED -19-07JUL99-1/1

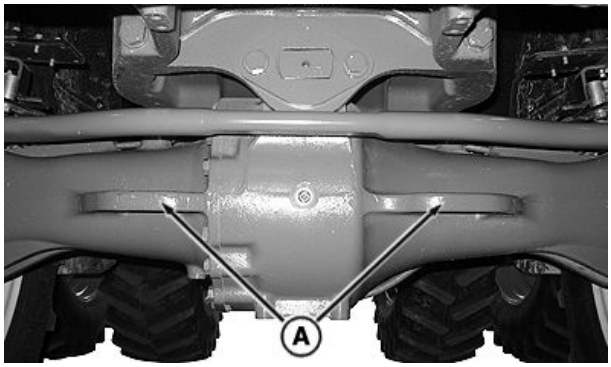
Transporting on Carrier

⚠ CAUTION: To avoid accident or injury, securely chain the tractor to carrier. Do not wrap chain around mechanical front-wheel drive shaft or axle housing. Drive carefully.

IMPORTANT: A disabled tractor should be hauled on a flat-bed carrier.

Attach chain to loop (A) on front axle when securing tractor to carrier.

A—Loop



RXA0116174 —UN—05MAY11

TO84419,000019D -19-27NOV12-1/1

Diesel Fuel

Consult your local fuel distributor for properties of the diesel fuel available in your area.

In general, diesel fuels are blended to satisfy the low temperature requirements of the geographical area in which they are marketed.

Diesel fuels specified to EN 590 or ASTM D975 are recommended. Renewable diesel fuel produced by hydrotreating animal fats and vegetable oils is basically identical to petroleum diesel fuel. Renewable diesel that meets EN 590 or ASTM D975 is acceptable for use at all percentage mixture levels.

Required Fuel Properties

In all cases, the fuel shall meet the following properties:

Cetane number of 40 minimum. Cetane number greater than 47 is preferred, especially for temperatures below –20 °C (–4 °F) or elevations above 1675 m (5500 ft.).

Cold Filter Plugging Point (CFPP) should be at least 5 °C (9 °F) below the expected lowest temperature or **Cloud Point** below the expected lowest ambient temperature.

Fuel lubricity should pass a maximum scar diameter of 0.52 mm as measured by ASTM D6079 or ISO 12156-1. A maximum scar diameter of 0.45 mm is preferred.

Diesel fuel quality and sulfur content must comply with all existing emissions regulations for the area in which the engine operates. DO NOT use diesel fuel with sulfur content greater than 10 000 mg/kg (10 000 ppm).

Sulfur content for Interim Tier 4, Final Tier 4, Stage III B, and Stage IV Engines

- Use ONLY ultra low sulfur diesel (ULSD) fuel with a maximum of 15 mg/kg (15 ppm) sulfur content.

Sulfur Content for Tier 3 and Stage III A Engines

- Use of diesel fuel with sulfur content less than 1000 mg/kg (1000 ppm) is RECOMMENDED.
- Use of diesel fuel with sulfur content 1000—2000 mg/kg (1000—2000 ppm) REDUCES the oil and filter change interval.
- BEFORE using diesel fuel with sulfur content greater than 2000 mg/kg (2000 ppm), contact your John Deere dealer.

Sulfur Content for Tier 2 and Stage II Engines

- Use of diesel fuel with sulfur content less than 2000 mg/kg (2000 ppm) is RECOMMENDED.
- Use of diesel fuel with sulfur content 2000—5000 mg/kg (2000—5000 ppm) REDUCES the oil and filter change interval.
- BEFORE using diesel fuel with sulfur content greater than 5000 mg/kg (5000 ppm), contact your John Deere dealer.

Sulfur Content for Other Engines

- Use of diesel fuel with sulfur content less than 5000 mg/kg (5000 ppm) is RECOMMENDED.
- Use of diesel fuel with sulfur content greater than 5000 mg/kg (5000 ppm) REDUCES the oil and filter change interval.

IMPORTANT: Do not mix used diesel engine oil or any other type of lubricating oil with diesel fuel.

Improper fuel additive usage may cause damage on fuel injection equipment of diesel engines.

DX,FUEL1 -19-24OCT14-1/1

Supplemental Diesel Fuel Additives

Diesel fuel can be the source of performance or other operational problems for many reasons. Some causes include poor lubricity, contaminants, low cetane number, and a variety of properties that cause fuel system deposits. These and others are referenced in other sections of this Operator's Manual.

To optimize engine performance and reliability, closely follow recommendations on fuel quality, storage, and handling, which are found elsewhere in this Operator's Manual.

To further aid in maintaining performance and reliability of the engine's fuel system, John Deere has developed a family of fuel additive products for most global markets. The primary products include Fuel-Protect Diesel Fuel Conditioner (full feature conditioner in winter and summer formulas) and Fuel-Protect Keep Clean (fuel injector deposit removal and prevention). Availability of these and other products varies by market. See your local John Deere dealer for availability and additional information about fuel additives that might be right for your needs.

DX,FUEL13 -19-07FEB14-1/1

Lubricity of Diesel Fuel

Most diesel fuels manufactured in the United States, Canada, and the European Union have adequate lubricity to ensure proper operation and durability of fuel injection system components. However, diesel fuels manufactured in some areas of the world may lack the necessary lubricity.

IMPORTANT: Make sure the diesel fuel used in your machine demonstrates good lubricity characteristics.

Fuel lubricity should pass a maximum scar diameter of 0.52 mm as measured by ASTM D6079 or ISO 12156-1. A maximum scar diameter of 0.45 mm is preferred.

If fuel of low or unknown lubricity is used, add John Deere Fuel-Protect Diesel Fuel Conditioner (or equivalent) at the specified concentration.

Lubricity of BioDiesel Fuel

Fuel lubricity can improve significantly with BioDiesel blends up to B20 (20% BioDiesel). Further increase in lubricity is limited for BioDiesel blends greater than B20.

DX,FUEL5 -19-07FEB14-1/1

Handling and Storing Diesel Fuel

CAUTION: Reduce the risk of fire. Handle fuel carefully. DO NOT fill the fuel tank when engine is running. DO NOT smoke while you fill the fuel tank or service the fuel system.

Fill the fuel tank at the end of each day's operation to prevent water condensation and freezing during cold weather.

Keep all storage tanks as full as practicable to minimize condensation.

Ensure that all fuel tank caps and covers are installed properly to prevent moisture from entering. Monitor water content of the fuel regularly.

When using BioDiesel fuel, the fuel filter may require more frequent replacement due to premature plugging.

Check engine oil level daily prior to starting engine. A rising oil level may indicate fuel dilution of the engine oil.

IMPORTANT: The fuel tank is vented through the filler cap. If a new filler cap is required, always replace it with an original vented cap.

When fuel is stored for an extended period or if there is a slow turnover of fuel, add a fuel conditioner to stabilize the fuel and prevent water condensation. Contact your fuel supplier or John Deere dealer for recommendations.

DX,FUEL4 -19-15FEB13-1/1

Avoid Static Electricity Risk When Refueling

The removal of sulfur and other compounds in Ultra-Low Sulfur Diesel (ULSD) fuel decreases its conductivity and increases its ability to store a static charge.

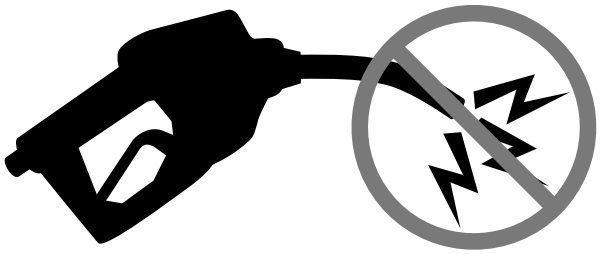
Refineries may have treated the fuel with a static dissipating additive. However, there are many factors that can reduce the effectiveness of the additive over time.

Static charges can build up in ULSD fuel while it is flowing through fuel delivery systems. Static electricity discharge when combustible vapors are present could result in a fire or explosion.

Therefore, it is important to ensure that the entire system used to refuel your machine (fuel supply tank, transfer pump, transfer hose, nozzle, and others) is properly grounded and bonded. Consult with your fuel or fuel system supplier to ensure that the delivery system is in compliance with fueling standards for proper grounding and bonding practices.



RG22142 —UN—17MAR14



RG21992 —UN—21AUG13

DX,FUEL,STATIC,ELEC -19-12JUL13-1/1

Fill Fuel Tank

CAUTION: Handle fuel with care: It is highly flammable. Do not refuel the machine while smoking or when near open flame or sparks.

Always stop engine before refueling machine. Fill fuel tank outdoors.

Prevent fires by keeping machine clean of accumulated trash, grease, and debris. Always clean up spilled fuel.



TS202 —UN—23AUG88

Watch fuel level. Low fuel indicator on corner post fuel display will flash when approximately 39 L (10 gal.) of fuel remains. Regardless of fuel level, fill fuel tank at end of each day to prevent condensation in tank. Condensation can be produced when trapped moist air cools. Use fuel as specified for machine's engine.

Use only ultra low sulfur fuel as specified on decal (B) in this section of this Operator's Manual. For other machines, see Diesel Fuel in this section of this Operator's Manual.

To open fuel tank cap (A), lift latch lever and turn 90° counterclockwise, then lift fuel cap from filler neck. Replace and securely latch cap after fueling is complete.



RXA0135482 —UN—12SEP13

A—Fuel Tank Cap

B—Ultra Low Sulfur Fuel Only Decal

RX32825,0000030 -19-29OCT14-1/1

BioDiesel Fuel

BioDiesel fuel is comprised of mono-alkyl esters of long chain fatty acids derived from vegetable oils or animal fats. BioDiesel blends are BioDiesel mixed with petroleum diesel fuel on a volume basis.

Before using fuel containing BioDiesel, review the BioDiesel Use Requirements and Recommendations in this Operator's Manual.

Environmental laws and regulations can encourage or prohibit the use of biofuels. Operators should consult with appropriate governmental authorities prior to using biofuels.

All John Deere Engines with Exhaust Filter (Released 2011 and After)

While 5% blends (B5) are preferred, BioDiesel concentrations up to a 20% blend (B20) in petroleum diesel fuel can be used. BioDiesel blends up to B20 can be used ONLY if the BioDiesel (100% BioDiesel or B100) meets ASTM D6751, EN 14214, or equivalent specification. Expect a 2% reduction in power and a 3% reduction in fuel economy when using B20.

BioDiesel concentrations above B20 can harm the engine's emission control systems and should not be used. Risks include, but are not limited to, more frequent stationary regeneration, soot accumulation, and increased intervals for ash removal.

John Deere approved fuel conditioners, which contain detergent and dispersant additives, are required when using BioDiesel blends from B10—B20, and are recommended when using lower BioDiesel blends.

All John Deere Engines Excluding Exhaust Filter (Primarily Released Prior to 2012)

While 5% blends (B5) are preferred, BioDiesel concentrations up to a 20% blend (B20) in petroleum diesel fuel can be used. BioDiesel blends up to B20 can be used ONLY if the BioDiesel (100% BioDiesel or B100) meets ASTM D6751, EN 14214, or equivalent specification. Expect a 2% reduction in power and a 3% reduction in fuel economy when using B20.

These John Deere engines can operate on BioDiesel blends above B20 (up to 100% BioDiesel). Operate at levels above B20 ONLY if the BioDiesel is permitted by law and meets the EN 14214 specification (primarily available in Europe). Engines operating on BioDiesel blends above B20 might not fully comply with or be permitted by all applicable emissions regulations. Expect up to a 12% reduction in power and an 18% reduction in fuel economy when using 100% BioDiesel.

John Deere approved fuel conditioners, which contain detergent and dispersant additives, are required when using BioDiesel blends from B10—B20, and are recommended when using lower BioDiesel blends.

BioDiesel Use Requirements and Recommendations

The petroleum diesel portion of all BioDiesel blends must meet the requirements of ASTM D975 (US) or EN 590 (EU) commercial standard.

BioDiesel users in the U.S. are strongly encouraged to purchase BioDiesel blends from a BQ-9000 Certified Marketer and sourced from a BQ-9000 Accredited Producer (as certified by the National BioDiesel Board). Certified Marketers and Accredited Producers can be found at the following website: http://www.bq9000.org.

BioDiesel contains residual ash. Ash levels exceeding the maximums allowed in either ASTM D6751 or EN14214 can result in more rapid ash loading and require more frequent cleaning of the Exhaust Filter (if present).

The fuel filter can require more frequent replacement, when using BioDiesel fuel, particularly if switching from diesel. Check engine oil level daily prior to starting engine. A rising oil level can indicate fuel dilution of the engine oil. BioDiesel blends up to B20 must be used within 90 days of the date of BioDiesel manufacture. BioDiesel blends above B20 must be used within 45 days from the date of BioDiesel manufacture.

When using BioDiesel blends up to B20, the following must be considered:

- Cold-weather flow degradation
- Stability and storage issues (moisture absorption, microbial growth)
- Possible filter restriction and plugging (usually a problem when first switching to BioDiesel on used engines)
- Possible fuel leakage through seals and hoses (primarily an issue with older engines)
- Possible reduction of service life of engine components

Request a certificate of analysis from your fuel distributor to ensure that the fuel is compliant with the specifications provided in this Operator's Manual.

Consult your John Deere dealer for approved fuel conditioners to improve storage and performance with BioDiesel fuels.

The following must also be considered if using BioDiesel blends above B20:

- Possible coking or blocked injector nozzles, resulting in power loss and engine misfire if John Deere approved fuel conditioners are not used
- Possible crankcase oil dilution (requiring more frequent oil changes)
- Possible lacquering or seizure of internal components
- Possible formation of sludge and sediments
- Possible thermal oxidation of fuel at elevated temperatures
- Possible compatibility issues with other materials (including copper, lead, zinc, tin, brass, and bronze) used in fuel handling equipment

Continued on next page

DX,FUEL7 -19-15MAY13-1/2

- Possible reduction in water separator efficiency
- Possible damage to paint if exposed to BioDiesel
- Possible corrosion of fuel injection equipment
- Possible elastomeric seal and gasket material degradation (primarily an issue with older engines)
- Possible high acid levels within fuel system
- Because BioDiesel blends above B20 contain more ash, using blends above B20 can result in more rapid ash loading and require more frequent cleaning of the Exhaust Filter (if present)

IMPORTANT: Raw pressed vegetable oils are NOT acceptable for use as fuel in any concentration in John Deere engines. Their use could cause engine failure.

DX,FUEL7 -19-15MAY13-2/2

Testing Diesel Fuel

A fuel analysis program can help to monitor the quality of diesel fuel. The fuel analysis can provide critical data such as cetane number, fuel type, sulfur content, water content, appearance, suitability for cold weather operations, bacteria, cloud point, acid number, particulate contamination, and whether the fuel meets specification.

Contact your John Deere dealer for more information on diesel fuel analysis.

DX,FUEL6 -19-14APR11-1/1

Fuel Filters

The importance of fuel filtration cannot be overemphasized with modern fuel systems. The combination of increasingly restrictive emission regulations and more efficient engines requires fuel system to operate at much higher pressures. Higher pressures can only be achieved using fuel injection components with very close tolerances. These close manufacturing tolerances have significantly reduced capacities for debris and water.

John Deere brand fuel filters have been designed and produced specifically for John Deere engines.

To protect the engine from debris and water, always change engine fuel filters as specified in this manual.

DX,FILT2 -19-14APR11-1/1

Minimizing the Effect of Cold Weather on Diesel Engines

John Deere diesel engines are designed to operate effectively in cold weather.

However, for effective starting and cold-weather operation, a little extra care is necessary. The following information outlines steps that can minimize the effect that cold weather may have on starting and operation of your engine. See your John Deere dealer for additional information and local availability of cold-weather aids.

Use Winter Grade Fuel

When temperatures fall below 0 °C (32 °F), winter grade fuel (No. 1-D in North America) is best suited for cold-weather operation. Winter grade fuel has a lower cloud point and a lower pour point.

Cloud point is the temperature at which wax begins to form in the fuel. This wax causes fuel filters to plug. **Pour point** is the lowest temperature at which movement of the fuel is observed.

NOTE: On average, winter grade diesel fuel has a lower Btu (heat content) rating. Using winter grade fuel may reduce power and fuel efficiency, but should not cause any other engine performance effects. Check the grade of fuel being used before troubleshooting for low-power complaints in cold-weather operation.

Air Intake Heater

An air intake heater is an available option for some engines to aid cold weather starting.

Ether

An ether port on the intake is available to aid cold weather starting.

CAUTION: Ether is highly flammable. Do not use ether when starting an engine equipped with glow plugs or an air intake heater.

Coolant Heater

An engine block heater (coolant heater) is an available option to aid cold weather starting.

Seasonal Viscosity Oil and Proper Coolant Concentration

Use seasonal grade viscosity engine oil based on the expected air temperature range between oil changes and a proper concentration of low silicate antifreeze as recommended. (See DIESEL ENGINE OIL and ENGINE COOLANT requirements in this section.)

Diesel Fuel Flow Additive

Use John Deere Fuel-Protect Diesel Fuel Conditioner (winter formula), which contains anti-gel chemistry, or equivalent fuel conditioner to treat non-winter grade fuel (No. 2-D in North America) during the cold-weather season. This generally extends operability to about 10 °C (18 °F) below the fuel cloud point. For operability at even lower temperatures, use winter grade fuel.

IMPORTANT: Treat fuel when outside temperature drops below 0 °C (32 °F). For best results, use with untreated fuel. Follow all recommended instructions on label.

BioDiesel

When operating with BioDiesel blends, wax formation can occur at warmer temperatures. Begin using John Deere Fuel-Protect Diesel Fuel Conditioner (winter formula) at 5 °C (41 °F) to treat BioDiesel fuels during the cold-weather season. Use B5 or lower blends at temperatures below 0 °C (32 °F). Use only winter grade petroleum diesel fuel at temperatures below -10 °C (14 °F).

Winterfronts

Use of fabric, cardboard, or solid winterfronts is not recommended with any John Deere engine. Their use can result in excessive engine coolant, oil, and charge air temperatures. This can lead to reduced engine life, loss of power and poor fuel economy. Winterfronts may also put abnormal stress on fan and fan drive components potentially causing premature failures.

If winterfronts are used, they should never totally close off the grill frontal area. Approximately 25% area in the center of the grill should remain open at all times. At no time should the air blockage device be applied directly to the radiator core.

Radiator Shutters

If equipped with a thermostatically controlled radiator shutter system, this system should be regulated in such a way that the shutters are completely open by the time the coolant reaches 93 °C (200 °F) to prevent excessive intake manifold temperatures. Manually controlled systems are not recommended.

If air-to-air aftercooling is used, the shutters must be completely open by the time the intake manifold air temperature reaches the maximum allowable temperature out of the charge air cooler.

For more information, see your John Deere dealer.

DX,FUEL10 -19-15MAY13-1/1

Fill Diesel Exhaust Fluid (DEF) Tank - FT4/Stage IV Engines

CAUTION: DEF contains urea. Do not get the substance in eyes. In case of contact, immediately flush eyes with large amounts of water for a minimum of 15 minutes. Do not take internally. In event DEF is ingested, contact a physician immediately. Reference Materials Safety Data Sheet (MSDS) for additional information.

IMPORTANT: To determine tractor engine type, see Record Engine Serial Number in Identification Numbers Section of this Operator's Manual.

IMPORTANT: Never put DEF in diesel fuel tank, or diesel fuel in DEF tank.

To avoid drastic changes in tractor performance, always keep DEF level above topmost red mark on cornerpost display (A). Monitor DEF level on cornerpost display and refill as necessary. Refill DEF tank every time tractor is refueled. See SCR System in Operating the Engine section of this Operator's Manual.

IMPORTANT: If DEF is spilled or contacts any surface other than the storage tank, immediately clean the surface with clear water. DEF is corrosive to painted and unpainted metallic surfaces and may distort some plastic and rubber components.

To fill DEF tank:

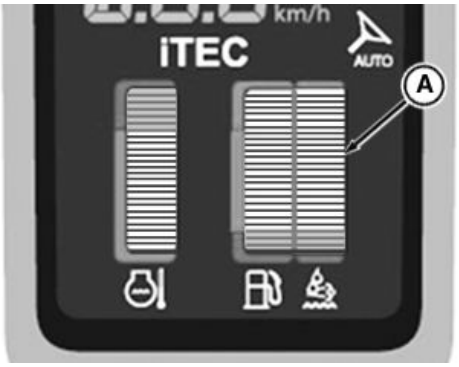
1. Before using containers, funnels, etc. to dispense DEF, wash and rinse items thoroughly with distilled water to remove contaminants.
2. Wipe DEF tank filler cap (B), area around cap and filler neck to reduce chance of contaminating DEF.
3. Lift DEF tank cap latch lever and turn 90° counterclockwise.
4. Lift cap from filler neck.

   IMPORTANT: Avoid overfilling DEF tank.

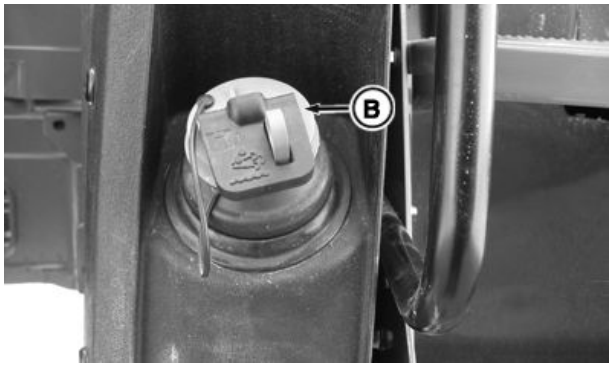
   Completely filling DEF tank at lower temperatures can cause a blockage in filler neck. If expected temperatures are expected to reach below -11°C (12°F), do not fill DEF tank more than half way according to DEF level display on corner post (A). Observe temperature guidelines to assure ability to refill tank.

5. Using funnel, carefully fill DEF tank. **DO NOT** over fill DEF tank. While filling, watch DEF sight gauge (C). When DEF is at bottom of gauge, it will take one second to reach top of sight gauge with a high flow (30 L/min.) rate. Best final fill level is determined by ambient air temperature guide:
   - **Ambient air temperature at or above -11°C (12°F):** Completely fill tank.
   - **Ambient air temperature below -11°C (12°F):** Keep fill tank level below the filler neck. Although main portion of DEF tank is heated to keep DEF from freezing, filler neck is not heated. Fluid in neck may freeze, preventing refill DEF tank until fluid melts.
6. Replace and securely latch DEF tank cap. The DEF tank cap can be locked with a padlock.
7. Carefully clean any spills, using clean (preferably distilled) water.

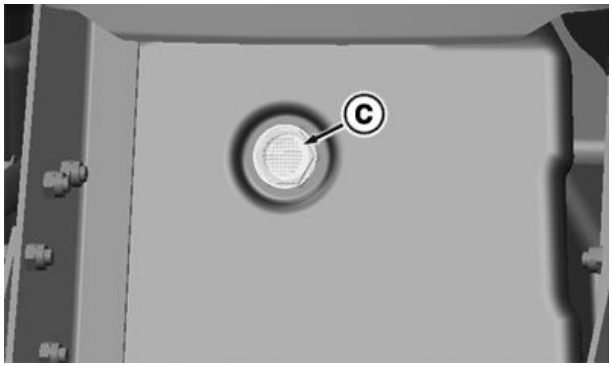
If an unapproved fluid, such as diesel fuel, or engine coolant is added to vehicle DEF tank, see Cleaning Diesel Exhaust Fluid (DEF) Tank in As Required Service section of this Operator's Manual.



RXA0131292 —UN—19MAR13



RXA0133405 —UN—28JUN13



RXA0143405 —UN—10JUL14

A—DEF Level on Corner Post Display
B—DEF Tank Cap
C—Sight Gauge

RX32825,0000760 -19-16DEC14-1/1

Diesel Exhaust Fluid (DEF) — Use in Selective Catalytic Reduction (SCR) Equipped Engines

Diesel exhaust fluid (DEF) is a high purity liquid that is injected into the exhaust system of engines equipped with selective catalytic reduction (SCR) systems. Maintaining the purity of DEF is important to avoid malfunctions in the SCR system. Engines requiring DEF shall use a product that meets the requirements for aqueous urea solution 32 (AUS 32) according to ISO 22241-1.

The use of John Deere Diesel Exhaust Fluid is recommended. John Deere Diesel Exhaust Fluid is available at your John Deere dealer in a variety of package sizes to suit your operational needs.

If John Deere Diesel Exhaust Fluid is not available, use DEF that is certified by the American Petroleum Institute (API) Diesel Exhaust Fluid Certification Program or by the AdBlue™ Diesel Exhaust Fluid Certification Program. Look for the API certification symbol or the AdBlue™ name on the container.

In some cases, DEF is referred to by one or more of these names:

- Urea
- Aqueous Urea Solution 32
- AUS 32
- AdBlue™
- NOx Reduction Agent
- Catalyst Solution

AdBlue is a trademark of VDA, the German Association of the Automotive Industry.

DX,DEF -19-13JUN13-1/1

Storing Diesel Exhaust Fluid (DEF)

CAUTION: Avoid contact with eyes. In case of contact, immediately flush eyes with large amounts of water for a minimum of 15 minutes. Reference the Materials Safety Data Sheet (MSDS) for additional information.

Do not ingest DEF. In the event DEF is ingested, contact a physician immediately. Reference the Materials Safety Data Sheet (MSDS) for additional information.

IMPORTANT: It is unlawful to tamper with or remove any component of the aftertreatment system. Do not use DEF that does not meet the required specifications or operate the engine with no DEF.

Never attempt to create DEF by mixing agricultural grade urea with water. Agricultural grade urea does not meet the necessary specifications and can damage the aftertreatment system.

Do not add any chemicals or additives to DEF in an effort to prevent freezing. Any chemicals or additives added to DEF can damage the aftertreatment system.

Never add water or any other fluid in place of, or in addition to DEF. Operating with a modified DEF or using an unapproved DEF can damage the aftertreatment system.

The following storage information is provided for reference and is to be used as a guideline only.

It is preferred to store DEF out of extreme ambient temperatures. DEF freezes at –11 °C (12 °F). Exposure to temperatures greater than 30 °C (86 °F) can degrade DEF over time.

Dedicated DEF storage containers must be sealed between uses to prevent evaporation and contamination. Containers made of polyethylene, polypropylene, or stainless steel are recommended to transport and store DEF.

Ideal conditions for storage of DEF are:

- Store at temperatures between –5 °C and 30 °C (23 °F and 86 °F)
- Store in dedicated containers sealed to avoid contamination and evaporation

Under these conditions, DEF is expected to remain useable for a minimum of 18 months. Storing DEF at higher temperatures can reduce its useful life by approximately 6 months for every 5 °C (9 °F) temperature above 30 °C (86 °F).

If unsure how long or under what conditions DEF has been stored, test DEF. See Testing Diesel Exhaust Fluid (DEF).

Long-term storage in the DEF tank (over 12 months) is not recommended. If long-term storage is necessary, test DEF prior to operating engine. See Testing Diesel Exhaust Fluid (DEF).

It is recommended to purchase DEF in quantities that will be consumed within 12 months.

DX,DEF,STORE -19-13JUN13-1/1

Refilling Diesel Exhaust Fluid (DEF) Tank

CAUTION: Avoid contact with eyes. In case of contact, immediately flush eyes with large amounts of water for a minimum of 15 minutes. Reference the Materials Safety Data Sheet (MSDS) for additional information.

Do not ingest DEF. In the event DEF is ingested, contact a physician immediately. Reference the Materials Safety Data Sheet (MSDS) for additional information.



TS1731 —UN—23AUG13

IMPORTANT: Use only distilled water to rinse components that are used to deliver DEF. Tap water can contaminate DEF. If distilled water is not available, rinse with clean tap water, then thoroughly rinse with ample amounts of DEF.

If DEF is spilled or contacts any surface other than the storage tank, immediately clean the surface with clear water. DEF is corrosive to painted and unpainted metallic surfaces and can distort some plastic and rubber components.

If DEF is filled into engine fuel tank or other fluid compartment, do not operate engine until system is properly purged of DEF. Contact your John Deere dealer immediately to determine how to clean and purge the system.

Reasonable care should be taken when refilling the DEF tank. Ensure that the DEF tank cap area is free of debris before removing the cap. Seal containers of DEF between use to prevent contamination and evaporation.

Avoid splashing DEF and do not allow DEF to come into contact with skin, eyes, or mouth.

DEF is not harmful to handle, but DEF can be corrosive to materials such as steel, iron, zinc, nickel, copper, aluminum, and magnesium. Use suitable containers to transport and store DEF. Containers made of polyethylene, polypropylene, or stainless steel are recommended.

Avoid prolonged contact with skin. In case of accidental contact, wash skin immediately with soap and water.

Keep anything used to store or dispense DEF clean of dirt and dust. Wash and rinse containers or funnels thoroughly with distilled water to remove contaminants.

If an unapproved fluid, such as diesel fuel or coolant is added to the DEF tank, contact your John Deere dealer immediately to determine how to clean and purge the system.

If water has been added to the DEF tank, a tank cleaning is necessary. See Cleaning DEF Tank in this manual. After refilling the tank, check the DEF concentration. See Testing Diesel Exhaust Fluid (DEF).

The operator must maintain appropriate DEF levels at all times. Check the DEF level daily and refill the tank as needed. The filling port is identified by a blue colored cap embossed with the DEF symbol, shown.

DX,DEF,REFILL -19-13AUG13-1/1

Testing Diesel Exhaust Fluid (DEF)

IMPORTANT: Using DEF with the correct concentration is critical to engine and aftertreatment system performance. Extended storage and other conditions can adversely alter the DEF concentration.

If DEF quality is questionable, draw a sample out of the DEF tank or storage tank into a clear container. DEF must be crystal clear with a light ammonia smell. If DEF appears cloudy, has a colored tint, or has a profound ammonia smell, it is likely not within specification. DEF in this condition should not be used. Drain tank, flush with distilled water and refill with new or good DEF. After refilling the tank, check the DEF concentration.

If the DEF passes the visual and smell test, check the DEF concentration with a handheld refractometer calibrated to measure DEF.

DEF concentration should be checked when the engine has been stored for extended periods, or if there is suspicion the engine or packaged DEF fluid has been contaminated with water.

Two approved tools are available through your John Deere dealer:

- JDG11594 Digital DEF Refractometer—A digital tool providing an easy to read concentration measurement
- JDG11684 DEF Refractometer—Low-cost alternative tool providing an analog reading

Follow instructions included with either tool to obtain the measurement.

The correct DEF concentration is 31.8—33.2% urea. If the DEF concentration is not within specification, drain the DEF tank, flush with distilled water and fill with new or good DEF. If packaged DEF is not within specification, dispose of DEF packages and replace with new or good DEF.

DX,DEF,TEST -19-13JUN13-1/1

Disposal of Diesel Exhaust Fluid (DEF)

Although there is little issue with minor spillage of DEF on the ground, large amounts of DEF should be contained. If large spills occur, contact local environmental authorities for assistance with clean-up.

If a substantial quantity of DEF is not within specification, contact the DEF supplier for assistance with disposal. Do not dump substantial quantities of DEF onto the ground or send DEF to wastewater treatment facilities.

DX,DEF,DISPOSE -19-13JUN13-1/1

John Deere Break-In Plus™ Engine Oil — Interim Tier 4, Final Tier 4, Stage IIIB, and Stage IV

New engines are filled at the factory with John Deere Break-In Plus™ Engine Oil. During the break-in period, add John Deere Break-In Plus™ Engine Oil, as needed to maintain the specified oil level.

Operate the engine under various conditions, particularly heavy loads with minimal idling, to help seat engine components properly.

During the initial operation of a new or rebuilt engine, change the oil and filter between a minimum of 100 hours and maximum equal to the interval specified for John Deere Plus-50™ II oil.

After engine overhaul, fill the engine with John Deere Break-In Plus™ Engine Oil.

If John Deere Break-In Plus™ Engine Oil is not available, use an SAE 10W-30 viscosity grade diesel engine oil meeting one of the following:

- API Service Category CJ-4
- ACEA Oil Sequence E9
- ACEA Oil Sequence E6

If one of these oils is used during the initial operation of a new or rebuilt engine, change the oil and filter between a minimum of 100 hours and a maximum of 250 hours.

IMPORTANT: Do not use any other engine oils during the initial break-in of a new or rebuilt engine.

John Deere Break-In Plus™ Engine Oil can be used for all John Deere diesel engines at all emission certification levels.

After the break-in period, use John Deere Plus-50™ II or other diesel engine oil as recommended in this manual.

Break-In Plus is a trademark of Deere & Company
Plus-50 is a trademark of Deere & Company.

DX,ENOIL16 -19-15JUN10-1/1

Determine Tractor Engine Type

IMPORTANT: To determine tractor engine type, see Record Engine Serial Number in Identification Numbers Section of this Operator's Manual.

Correct engine oil specification and oil change interval is determined by a number of factors. One important consideration is type of engine aftertreatment installed. To determine engine type, see Record Engine Serial Number in Identification Numbers section of this Operator's Manual.

RX32825,0000003 -19-29OCT14-1/1

Diesel Engine Oil — Interim Tier 4, Final Tier 4, Stage IIIB, and Stage IV

Use oil viscosity based on the expected air temperature range during the period between oil changes.

John Deere Plus-50™ II is the recommended engine oil.

Extended service intervals may apply when John Deere Plus-50™ II engine oil is used. Refer to the engine oil drain interval table and consult your John Deere dealer for more information.

If John Deere Plus-50™ II engine oil is not available, engine oil meeting one or more of the following may be used:

- API Service Category CJ-4
- ACEA Oil Sequence E9
- ACEA Oil Sequence E6

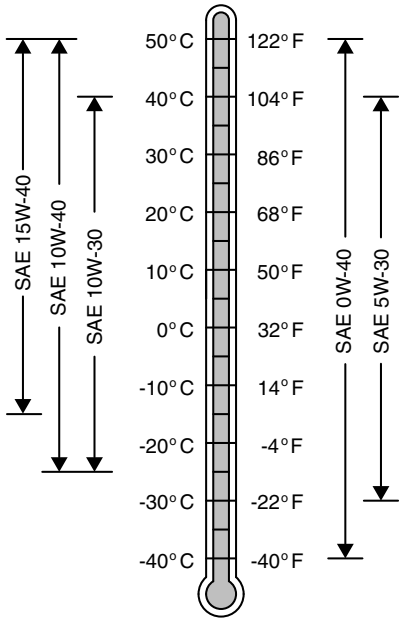
DO NOT use engine oil containing more than 1.0% sulfated ash, 0.12% phosphorus, or 0.4% sulfur.

Multi-viscosity diesel engine oils are preferred.

Diesel fuel quality and fuel sulfur content must comply with all existing emissions regulations for the area in which the engine operates.

IMPORTANT: Use only ultra low sulfur diesel (ULSD) fuel with a maximum sulfur content of 15 mg/kg (15 ppm).

Plus-50 is a trademark of Deere & Company



Oil Viscosities for Air Temperature Ranges

DX,ENOIL14 -19-15JUN10-1/1

Engine Oil and Filter Service Intervals — Interim Tier 4, Final Tier 4, Stage IIIB, and Stage IV Engines

Recommended oil and filter service intervals are based on a combination of oil pan capacity, type of engine oil and filter used, and sulfur content of the diesel fuel. Actual service intervals also depend on operation and maintenance practices.

Use oil analysis to evaluate the condition of the oil and to aid in selection of the proper oil and filter service interval. Contact your John Deere dealer for more information on engine oil analysis.

Change the oil and oil filter at least once every 12 months even if the hours of operation are fewer than the otherwise recommended service interval.

Diesel fuel sulfur content affects engine oil and filter service intervals. Higher fuel sulfur levels reduce oil and filter service intervals.

Use of diesel fuel with sulfur content less than 15 mg/kg (15 ppm) is REQUIRED.

IMPORTANT: To avoid engine damage:

- **Reduce oil and filter service intervals by 50% when using BioDiesel blends greater than B20. Oil analysis may allow longer service intervals.**
- **Use only approved oil types.**

Approved Oil Types:

- John Deere Plus-50™ II
- "Other Oils" include API CJ-4, ACEA E9, and ACEA E6

NOTE: The 500 hour extended oil and filter change interval is only allowed if all of the following conditions are met:

- *Use of diesel fuel with sulfur content less than 15 mg/kg (15 ppm)*
- *Use of John Deere Plus-50™ II oil*
- *Use of an approved John Deere oil filter*

Engine Oil and Filter Service Intervals	
John Deere Plus-50™ II	500 hours
Other Oils	250 hours
Oil analysis may extend the service interval of "Other Oils" to a maximum not to exceed the interval of Plus-50™ II oils.	

Plus-50 is a trademark of Deere & Company

DX,ENOIL15,IT4,120toMAX -19-07FEB14-1/1

Diesel Engine Oil Service Interval for Operation at High Altitude

To avoid excessive oil degradation and potential engine damage, reduce oil and filter service intervals to 50% of the original recommended values when operating engines at altitudes above **1675 m (5500 ft)**.

Oil analysis may allow longer service intervals.

Use only approved oil types.

Example of Original Hours	Corresponding High Altitude Hours
125	60
150	75
175	85
200	100
250	125
275	135
300	150
350	175
375	185
400	200
500	250

DX,ENOIL,SERV,HIALT -19-11NOV14-1/1

Oil Filters

Filtration of oils is critically important for proper operation and lubrication. John Deere brand oil filters have been designed and produced specifically for John Deere applications.

John Deere filters adhere to engineering specifications for quality of the filter media, filter efficiency rating, strength of the bond between the filter media and the element end cap, fatigue life of the canister (if applicable), and pressure capability of the filter seal. Non-John Deere branded oil filters might not meet these key John Deere specifications.

Always change oil filters regularly as specified in this manual.

DX,FILT1 -19-11APR11-1/1

Diesel Engine Coolant (engine with wet sleeve cylinder liners)

Preferred Coolants

The following pre-mix engine coolants are preferred:

- **John Deere COOL-GARD™II**
- **John Deere COOL-GARD II PG**

COOL-GARD II pre-mix coolant is available in several concentrations with different freeze protection limits as shown in the following table.

COOL-GARD II pre-mix	Freeze Protection Limit
COOL-GARD II 20/80	-9 °C (16 °F)
COOL-GARD II 30/70	-16 °C (3 °F)
COOL-GARD II 50/50	-37 °C (-34 °F)
COOL-GARD II 55/45	-45 °C (-49 °F)
COOL-GARD II PG 60/40	-49 °C (-56 °F)
COOL-GARD II 60/40	-52 °C (-62 °F)

Not all COOL-GARD II pre-mix products are available in all countries.

Use COOL-GARD II PG when a non-toxic coolant formulation is required.

Additional Recommended Coolants

The following engine coolant is also recommended:

- John Deere COOL-GARD II Concentrate in a 40—60% mixture of concentrate with quality water.

IMPORTANT: When mixing coolant concentrate with water, do not use less than 40% or greater than 60% concentration of coolant. Less than 40% gives inadequate additives for corrosion protection. Greater than 60% can result in coolant gelation and cooling system problems.

Other Coolants

Other ethylene glycol or propylene glycol base coolants may be used if they meet the following specification:

- Pre-mix coolant meeting ASTM D6210 requirements
- Coolant concentrate meeting ASTM D6210 requirements in a 40—60% mixture of concentrate with quality water

If coolant meeting one of these specifications is unavailable, use a coolant concentrate or pre-mix coolant that has a minimum of the following chemical and physical properties:

- Provides cylinder liner cavitation protection according to either the John Deere Cavitation Test Method or a fleet study run at or above 60% load capacity
- Is formulated with a nitrite-free additive package
- Protects the cooling system metals (cast iron, aluminum alloys, and copper alloys such as brass) from corrosion

Water Quality

Water quality is important to the performance of the cooling system. Distilled, deionized, or demineralized water is recommended for mixing with ethylene glycol and propylene glycol base engine coolant concentrate.

Coolant Drain Intervals

Drain and flush the cooling system and refill with fresh coolant at the indicated interval, which varies with the coolant used.

When COOL-GARD II or COOL-GARD II PG is used, the drain interval is 6 years or 6000 hours of operation.

If a coolant other than COOL-GARD II or COOL-GARD II PG is used, reduce the drain interval to 2 years or 2000 hours of operation.

IMPORTANT: Do not use cooling system sealing additives or antifreeze that contains sealing additives.

Do not mix ethylene glycol and propylene glycol base coolants.

Do not use coolants that contain nitrites.

COOL-GARD is a trademark of Deere & Company

DX,COOL3 -19-15MAY13-1/1

Operating in Warm Temperature Climates

John Deere engines are designed to operate using recommended engine coolants.

Always use a recommended engine coolant, even when operating in geographical areas where freeze protection is not required.

IMPORTANT: Water may be used as coolant *in emergency situations only.*

Foaming, hot surface aluminum and iron corrosion, scaling, and cavitation occur when water is used as the coolant, even when coolant conditioners are added.

Drain cooling system and refill with recommended engine coolant as soon as possible.

DX,COOL6 -19-15MAY13-1/1

Water Quality for Mixing with Coolant Concentrate

Engine coolants are a combination of three chemical components: ethylene glycol (EG) or propylene glycol (PG) antifreeze, inhibiting coolant additives, and quality water.

Water quality is important to the performance of the cooling system. Distilled, deionized, or demineralized water is recommended for mixing with ethylene glycol and propylene glycol base engine coolant concentrate.

All water used in the cooling system should meet the following minimum specifications for quality:

Chlorides	<40 mg/L
Sulfates	<100 mg/L
Total solids	<340 mg/L
Total dissolved I hardness	<170 mg/L
pH	5.5—9.0

IMPORTANT: Do not use bottled drinking water because it often contains higher concentrations of total dissolved solids.

Freeze Protection

The relative concentrations of glycol and water in the engine coolant determine its freeze protection limit.

Ethylene Glycol	Freeze Protection Limit
40%	-24 °C (-12 °F)
50%	-37 °C (-34 °F)
60%	-52 °C (-62 °F)
Propylene Glycol	**Freeze Protection Limit**
40%	-21 °C (-6 °F)
50%	-33 °C (-27 °F)
60%	-49 °C (-56 °F)

DO NOT use a coolant-water mixture greater than 60% ethylene glycol or 60% propylene glycol.

DX,COOL19 -19-15MAY13-1/1

Testing Coolant Freeze Point

The use of a handheld coolant refractometer is the quickest, easiest, and most accurate method to determine coolant freeze point. This method is more accurate than a test strip or a float-type hydrometer which can produce poor results.

A coolant refractometer is available through your John Deere dealer under the SERVICEGARD™ tool program. Part number 75240 provides an economical solution to accurate freeze point determination in the field.

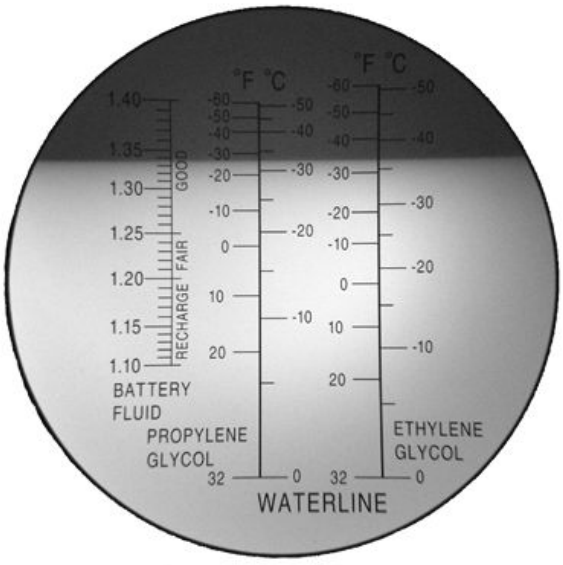
To use this tool:

1. Allow cooling system to cool to ambient temperatures.
2. Open radiator cap to expose coolant.
3. With the included dropper, collect a small coolant sample.
4. Open the lid of the refractometer, place one drop of coolant on the window and close the lid.
5. Look through the eyepiece and focus as necessary.
6. Record the listed freeze point for the type of coolant (ethylene glycol coolant or propylene glycol) being tested.



TS1732 —UN—04SEP13

SERVICEGARD™ Part Number 75240



TS1733 —UN—04SEP13

Image with a Drop of 50/50 Coolant Placed on the Refractometer Window

SERVICEGARD is a trademark of Deere & Company

DX,COOL,TEST -19-13JUN13-1/1

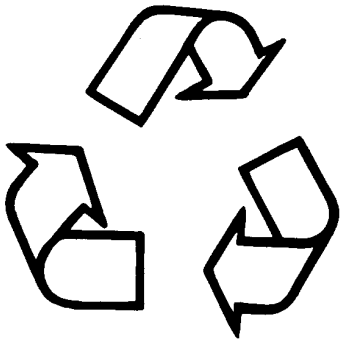
Disposing of Coolant

Improperly disposing of engine coolant can threaten the environment and ecology.

Use leakproof containers when draining fluids. Do not use food or beverage containers that may mislead someone into drinking from them.

Do not pour waste onto the ground, down a drain, or into any water source.

Inquire on the proper way to recycle or dispose of waste from your local environmental or recycling center, or from your John Deere engine distributor or servicing dealer.



TS1133 —UN—15APR13

Recycle Waste

RG,RG34710,7543 -19-09JAN07-1/1

Transmission and Hydraulic Oil

Use oil viscosity based on the expected air temperature range during the period between oil changes.

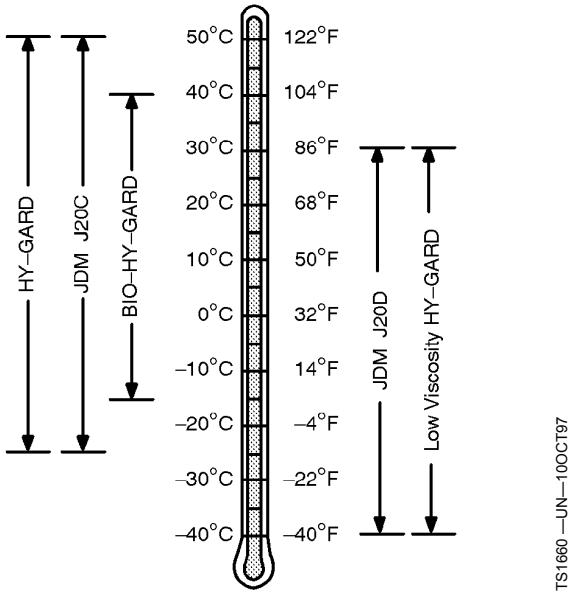
The following oils are preferred:

- John Deere HY-GARD™
- John Deere Low Viscosity HY-GARD™

Other oils may be used if they meet one of the following:

- John Deere Standard JDM J20C
- John Deere Standard JDM J20D

Use John Deere BIO-HY-GARD™ oil when a biodegradable fluid is required.[1]



HY-GARD is a trademark of Deere & Company
BIO-HY-GARD is a trademark of Deere & Company

[1] BIO-HY-GARD meets or exceeds the minimum biodegradability of 80% within 21 days according to CEC-L-33-T-82 test method. BIO-HY-GARD should not be mixed with mineral oils, because this reduces the biodegradability and makes proper oil recycling impossible.

DX,ANTI -19-07NOV03-1/1

Use Correct Viscosity Front PTO Oil in Cold Weather

CAUTION: Avoid personal injury. Keep PTO area clear of bystanders. PTO shaft or attached implement may rotate prior to engine start in cold weather.

When air temperatures are expected to drop below -5° C (23° F), use John Deere™ Low Viscosity HY-GARD™ oil in the self contained front PTO reservoir.

Other oils can be used if they meet John Deere™ Standard JDM J20D.

John Deere is a trademark of Deere & Company
Hy-Gard is a trademark of Deere & Company

TO84419,00001B8 -19-27NOV12-1/1

Transmission Recalibration

Your tractor's transmission is factory filled with John Deere™ Hy-Gard™ oil.

When changing transmission/hydraulic oil from one viscosity to another, transmission electronic control unit may need to be recalibrated in order to maintain smooth shifting characteristics. See your John Deere™ dealer.

John Deere is a trademark of Deere & Company
Hy-Gard is a trademark of Deere & Company

TO84419,00001B9 -19-02JUL14-1/1

Gear Oil

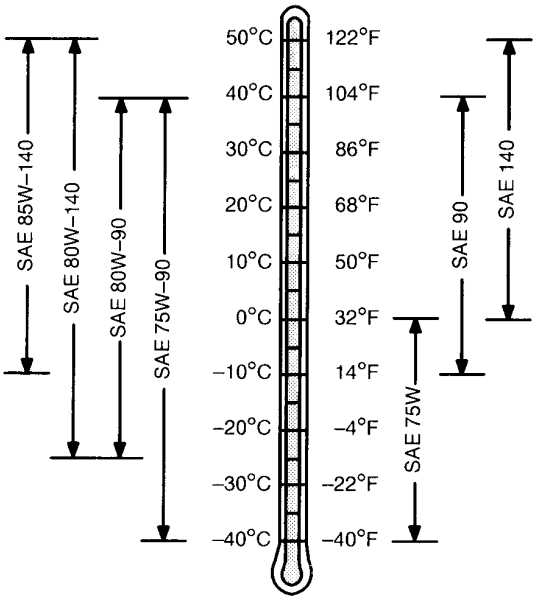
Use oil viscosity based on the expected air temperature range during the period between oil changes.

The following oils are preferred:

- John Deere GL-5 Gear Lubricant
- John Deere EXTREME-GARD™

Other oils may be used if they meet the following:

- API Service Category GL-5



TS1653 —UN—14MAR96

Oil Viscosities for Air Temperature Ranges

EXTREME-GARD is a trademark of Deere & Company

DX,GEOIL -19-14APR11-1/1

Grease

Use grease based on NLGI consistency numbers and the expected air temperature range during the service interval.

John Deere SD Polyurea Grease is preferred.

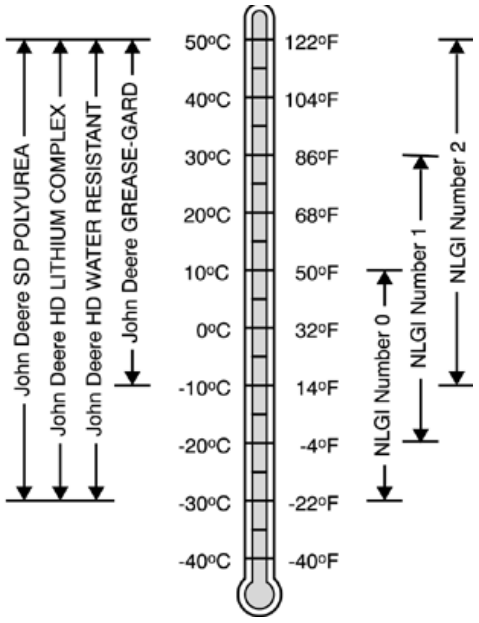
The following greases are also recommended:

- John Deere HD Lithium Complex Grease
- John Deere HD Water Resistant Grease
- John DeereGREASE-GARD™

Other greases may be used if they meet the following:

- NLGI Performance Classification GC-LB

IMPORTANT: Some types of grease thickeners are not compatible with others. Consult your grease supplier before mixing different types of grease.



TS1673 —UN—31OCT03

Greases for Air Temperature Ranges

GREASE-GARD is a trademark of Deere & Company

DX,GREA1 -19-14APR11-1/1

Mixing of Lubricants

In general, avoid mixing different brands or types of oil. Oil manufacturers blend additives in their oils to meet certain specifications and performance requirements.

Mixing different oils can interfere with the proper functioning of these additives and degrade lubricant performance.

Consult your John Deere dealer to obtain specific information and recommendations.

DX,LUBMIX -19-18MAR96-1/1

Alternative and Synthetic Lubricants

Conditions in certain geographical areas may require lubricant recommendations different from those printed in this manual.

Some John Deere brand coolants and lubricants may not be available in your location.

Consult your John Deere dealer to obtain information and recommendations.

Synthetic lubricants may be used if they meet the performance requirements as shown in this manual.

The temperature limits and service intervals shown in this manual apply to both conventional and synthetic lubricants.

Re-refined base stock products may be used if the finished lubricant meets the performance requirements.

DX,ALTER -19-11APR11-1/1

Lubricant Storage

Your equipment can operate at top efficiency only when clean lubricants are used.

Use clean containers to handle all lubricants.

Store lubricants and containers in an area protected from dust, moisture, and other contamination. Store containers on their side to avoid water and dirt accumulation.

Make certain that all containers are properly marked to identify their contents.

Properly dispose of all old containers and any residual lubricant they may contain.

DX,LUBST -19-11APR11-1/1

Break-In Service (100 Hours or Less)

Perform Break-In Checks

IMPORTANT: Initial break-in service interval of a new or rebuilt wet sleeve engine with John Deere™ Break-In Plus™ oil must last at least 100 hours to assure surface mating of rings and liners has had an opportunity to occur. 100 hour minimum interval applies to all new or rebuilt engines. Maximum service interval is the same as service interval recommended for your engine in Engine Oil and Filter Service Intervals of Fuel, Lubricants and Coolant section of this Operator Manual. To confirm which engine your tractor is equipped with, see Record Engine Serial Number in Identification Numbers section of this Operator's Manual.

For subsequent oil changes, see Engine Oil and Filter Service Intervals for your engine located in Fuels, Lubricants, and Coolant Section of this Operator's Manual.

Engine is ready for normal operation. During first 100 hours of operation:

- Operate engine at heavy loads without reaching sustained maximum load
- Avoid idling engine longer than 5 minutes. If engine will idle longer than 5 minutes, stop engine
- Closely observe coolant temperature during operation
- Check engine air intake system hoses and clamps. See 500 Hour Service section of this Operator's Manual.
- Check for fluid leaks
- Tighten wheel, wheel weight and axle bolts after **3 HOURS**, after **10 HOURS**, and **DAILY** for first week of operation. See 500 Hour Service section of this Operator's Manual.

Daily or Every 10 Hours

IMPORTANT: If engine oil must be added prior to first normal oil change, use John Deere™ Break-In Plus™ engine oil.

Perform normal daily or 10 hour services. See Daily or 10 Hour Service section of this Operator's Manual.

For first 100 hours of tractor operation, perform these additional services daily or every 10 hours:

- Drain water separator. See As Indicated Service section of this Operator's Manual.
- Check coolant level. See As Indicated Service section of this Operator's Manual.
- Lubricate rear and front (if equipped) hitch components. See 250 Hour Service section of this Operator's Manual.
- Inspect tires for cuts or punctures. See 50 Hour Service section of this Operator's Manual.

After service is performed, reset appropriate service interval hours display to zero. See Add or Edit Service Interval in CommandCenter™ section of this Operator's Manual.

John Deere is a trademark of Deere & Company
Break-In Plus is a trademark of Deere & Company
CommandCenter is a trademark of Deere & Company

RX32825,0000747 -19-22APR15-1/1

Observe Service Intervals

IMPORTANT: Recommended service intervals are for average conditions. Service MORE OFTEN may be required if tractor is operated under adverse conditions.

When looking for details on any service listed in this section, go to either Table of Contents or Index of this Operator's Manual. Look for same title listed in left-hand column of hourly and annual service tables on following pages.

Perform all services at hourly intervals indicated. Record service performed in Lubrication and Maintenance Records section.

When scheduled services at any hourly level are performed, also perform all subordinate hourly level services as shown below. Other charts in this section list specific main and subordinate services.

Main Service	**Subordinate Services**:						
	10 Hours	50 Hours	250 Hours	500 Hours	1000 Hours	1500 Hours	3000 Hours
50 Hours	X	—					
250 Hours	X	X	—				
500 Hours	X	X	X	—			
1000 Hours	X	X	X	X	—		
Annual	No Subordinate Services Required						
1500 Hours	X	X	X	X		—	
3000 Hours	X	X	X	X	X	X	—
4500 Hours	X	X	X	X		X	
5000 Hours	X	X	X	X	X		
6000 Hours	X	X	X	X	X	X	X

RX32825,0000033 -19-07MAY13-1/1

Service Interval Chart—*Daily or 10 Hours, 50 Hours, 250 Hours, 500 Hours and 1000 Hours*

Item	Daily or 10 Hours	50 Hours	250 Hours	500 Hours	1000 Hours
Check Engine Oil Level	•				
Check Transmission-Hydraulic Oil Level	•				
Lubricate MFWD or TLS™ Plu King Pins, Tie Rod Ends, Steering Cylinder, Axle Pivot and Panhard Rod[a]	•			•	
Lubricate MFWD or TLS™ Plus External Fittings and U-Joints (If Equipped)[a]	•			•	
Inspect Tires		•			
Lubricate Rear Hitch[b]		•	•		
Lubricate Deluxe Stabilizers (If Equipped)			•		
Lubricate Front Hitch (If Equipped)[b]		•	•		
Check Manual Brakes[c]			•		
Check Secondary Brake			•		
Check Neutral Start System			•		
Check Transmission PARK System			•		
Check Front PTO Housing Oil Level (If Equipped)			•		
Check and Lubricate Wagon Hitch (If Equipped)			•		
Check and Lubricate Pick-Up Hitch (If Equipped)			•		
Change Engine Oil and Filter[d]				•	
Back Flush Optional Fuel Water Separator (If Equipped)				•	
Service Optional Fuel Water Separator Filter Element (If Equipped)				•	
Lubricate Cab Suspension (If Equipped)				•	
Tighten Wheel and Wheel Weight Bolts				•	
Inspect Air Intake System				•	
Clean Dual Beam Radar Sensor (If Equipped)				•	
Replace Fuel Filters				•	
Replace Cab Fresh Air and Recirculation Filters[e]					•
Test Coolant Freeze Point[e]					•
Check TLS™ Plus Accumulator Charge Pressure (If Equipped)[e,f]					•
Check Cab Suspension Accumulator Charge Pressure (If Equipped)[e,f]					•
Clean MFWD or TLS™ Plus (If Equipped) Axle Breather[g]					•

[a] *Normal lubrication at 500 hours. If used in extremely wet conditions, lubricate daily or every 10 hours.*
[b] *Normal lubrication at 250 hours. If used daily, lubricate every 50 hours.*
[c] *If tractor not equipped with electronic back-up pump.*
[d] *Perform oil change in accordance with Engine Oil and Filter Change Intervals in Fuel, Lubricants and Coolant section of this Operator's Manual.*
[e] *Perform service every 1000 hours or annually - whichever comes first.*
[f] *See your John Deere™ dealer.*
[g] *Interval may vary according to operating conditions.*

TLS is a trademark of Deere & Company

TO84419,0000099 -19-15JUL15-1/1

Service Interval Chart—*Annual, 1500 Hours, 3000 Hours, 4500 Hours, 5000 Hours and 6000 Hours*

Item	Annual	1500 Hours	3000 Hours	4500 Hours	5000 Hours	6000 Hours
Change Engine Oil and Filter[a]	•					
Test Coolant Freeze Point[b]	•					
Service Batteries[c] and Connections	•					
Inspect Seat Belts	•					
Replace Cab Fresh Air and Recirculation Filters[b]	•					
Check TLS™ Plus Accumulator Charge Pressure (If Equipped)[d]	•					
Check Cab Suspension Accumulator Charge Pressure (If Equipped)[e]	•					
Inspect Primary and Secondary Engine Air Filters[f]	•					
Inspect Fan Belt and Fan Belt Tensioner		•				
Change MFWD or TLS™ Plus Axle Housing Oil		•				
Change MFWD or TLS™ Plus Wheel Hub Oil		•				
Lubricate Draft Link Support Shaft Bushing		•				
Change Front PTO Housing Oil and Filter (If Equipped)[g]		•				
Change Transmission, Hydraulic and Axle Oil and Filters		•				
Clean Hydraulic System Sump Screen		•				
Replace Open Crankcase Ventilation Filter (6.8 L Engines Only)[h]		•				
Replace Trailer Air Brake Drier Filter (If Equipped)[i]		•				
Replace Fuel Tank Vent Filter[j]		•				
Adjust Engine Valve Clearance (IT4/Stage IIIB and FT4/Stage IV Engines)[h],[d]			•			
Replace Diesel Exhaust Fluid (DEF) Dosing Unit Filter (FT4/Stage IV Engines)[h],[k]				•		
Replace Diesel Exhaust Fluid (DEF) Tank Filter (FT4/Stage IV Engines)[h],[l]		•		•		
Replace Transmission Drive Shaft Damper[d]				•		
Replace Engine Crankshaft Damper[d]					•	
Drain, Flush, and Refill Engine Cooling System and Replace Cooling System Thermostats and De-aeration Tank Cap[m]						•

[a]Perform service at least once per year. Perform oil change in accordance with Engine Oil and Filter Service Intervals in Fuel, Lubricants and Coolant section of this Operator's Manual.
[b]Perform service every 1000 hours or annually - whichever comes first.
[c]For replacement batteries, follow manufacturer's recommendations.
[d]See your John Deere™ dealer.
[e]Perform service every 1000 hours or annually - whichever comes first. See your John Deere™ dealer.
[f]Interval may vary, according to operating conditions.
[g]Normal service interval is 1500 hours. However, change oil and filter after first 100 hours of tractor operation.
[h]To confirm which engine your tractor is equipped with, see Record Engine Serial Number in Identification Numbers section of this Operator's Manual.
[i]Replace every TWO years or 1500 hours, whichever comes first.
[j]Interval may vary according to operating conditions.
[k]Replace every THREE years or 4500 hours, whichever comes first.
[l]Replace after first year then every 4500 hours.
[m]INITIAL change interval is 6 years or 6000 hours, provided cooling system is topped off using only John Deere™ Cool-GARD™ II and premix and coolant is tested at recommended intervals. SCHEDULED interval (2 years or 2000 hours) can be extended up to 6 years or 6000 hours depending on coolant used and if coolant is tested at recommended intervals. See Drain Intervals for Diesel Engine Coolant in Fuel, Lubricants and Coolant section of this Operator's Manual.

TLS is a trademark of Deere & Company

RX32825,0000041 -19-15DEC14-1/1

Perform As Indicated Service

As Indicated services should be performed when an appropriate indicator light is illuminated or Diagnostic Trouble Code (DTC) is displayed (see Diagnostic Trouble Code section of this Operator's Manual). Other services without a specified hourly service interval may be found in As Required Service section of this Operator's Manual.

RX32825,000006A -19-25JUL13-1/1

Replace Primary and Secondary Engine Air Filters

IMPORTANT: Inspect filters annually or when a related diagnostic trouble code appears. Replacement interval may vary due to operating conditions. Replace secondary engine air filter at every second primary filter change.

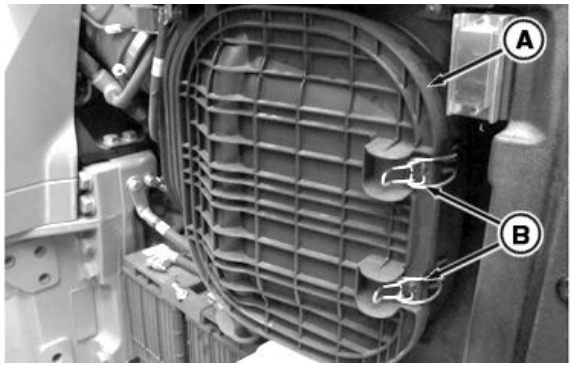
If diagnostic trouble code indicates plugged engine air filter, replace primary filter and inspect or replace secondary filter.

1. Remove battery compartment cover.
2. Unfasten two clamps (B) and open filter cover (A).
3. Pull handle (D) towards front of tractor to release primary air filter from raised retainer (E).
4. Pull on handle to remove primary filter (C).
5. Clean dirt from inside of canister and cover.

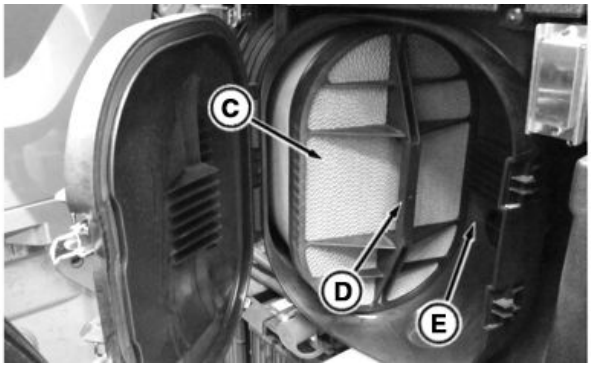
IMPORTANT: If a filter is dirty, replace it. Do not attempt to clean filters.

6. Remove primary air filter.

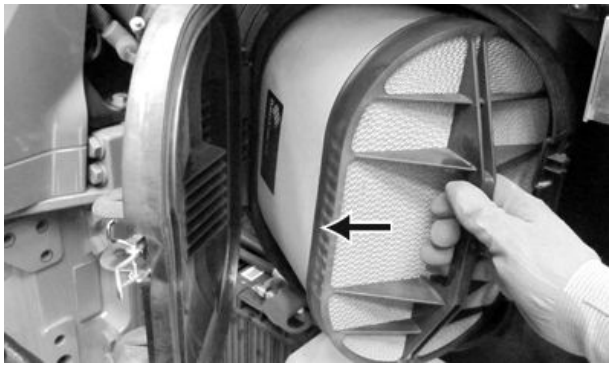
A—Cover
B—Clamps
C—Primary Air Filter
D—Handle
E—Retainer



RXA0134187 —UN—25JUL13



RXA0134188 —UN—25JUL13



RXA0134189 —UN—25JUL13

Pull Handle to Remove Primary Air Filter

Continued on next page

TO84419,00001C6 -19-25JUL13-1/2

7. To protect air intake system, only remove secondary filter far enough from canister to allow inspection. Pull on handle (B) to slide top part of secondary filter (A) out first. Inspect secondary filter.

IMPORTANT: Failure to properly install primary and secondary filters will cause damage to engine. When installing primary air filter, make sure filter is properly seated behind raised retainer.

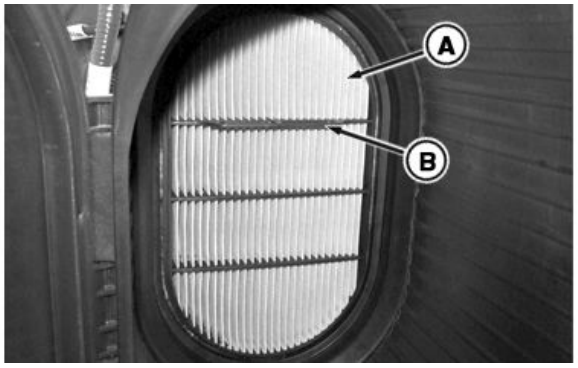
Replace secondary filter every second primary air filter change or if secondary filter is found to be damaged or excessively dirty.

8. If secondary filter is found to be in good condition and has been replaced at last primary filter change, reinsert it into filter canister. Then install new primary filter. Replace filter and battery covers.

IMPORTANT: Install new secondary filter immediately to prevent dust from entering air intake system.

9. If secondary filter is damaged or excessively dirty, or if the primary filter has been replaced once before without replacing secondary filter, remove and discard secondary filter.
10. To install secondary filter (A), place tab (C) in slot (D).
11. Firmly press around edge of secondary filter to properly seat filter against filter housing.
12. Install new primary filter.
13. Close filter cover and fasten cover clamps.
14. Reinstall battery compartment cover.

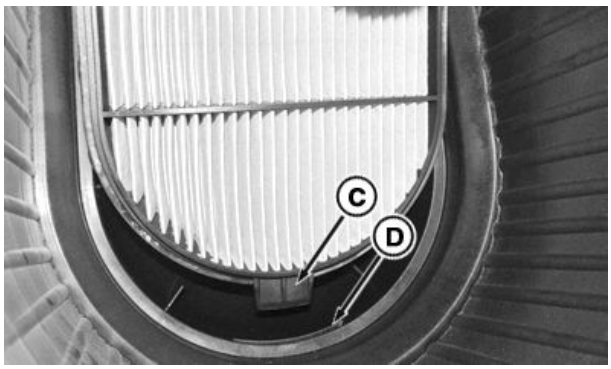
A—Secondary Filter
B—Handle
C—Tab
D—Slot



RXA0134190 —UN—25JUL13



RXA0134191 —UN—25JUL13



RXA0134192 —UN—25JUL13

TO84419,00001C6 -19-25JUL13-2/2

Check Coolant Level

Coolant level is monitored electrically. When coolant is low a diagnostic trouble code will appear on CommandCenter™. Check coolant level manually and refill system as necessary.

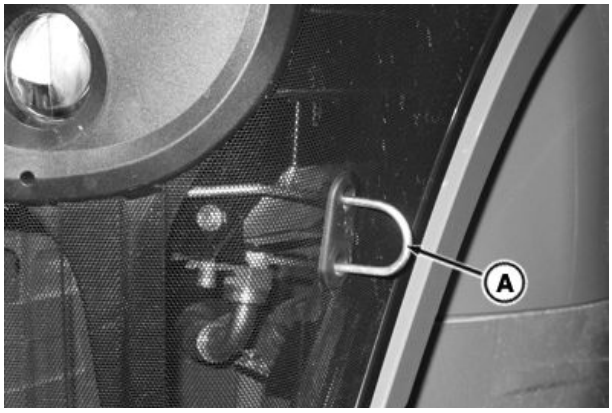
1. Pull hood release (A) and raise hood.
2. Check coolant level on side of de-aeration tank. Level should be at or above Min Cold (B). If level is low, before adding coolant, check for any signs of leakage. Repair if necessary.

IMPORTANT: Do not open de-aeration tank cap (D) when engine is warm. Doing so will add air to coolant system.

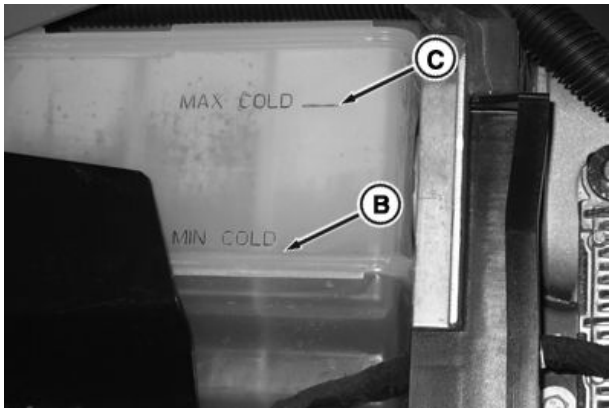
NOTE: If coolant level is low, but there is no sign of an external leak, there may be an internal coolant leak. Contact your John Deere™ dealer.

3. Wait until engine is cool. Remove de-aeration tank cap and add coolant as specified in Heavy Duty Diesel Engine Coolant in Fuel, Lubricants and Coolant section of this Operator's Manual. Do not fill above Max Cold line (C). Reinstall de-aeration tank cap.
4. Close and secure hood.

A—Hood Release
B—De-aeration Tank Cap
C—Min Cold
D—Max Cold Line

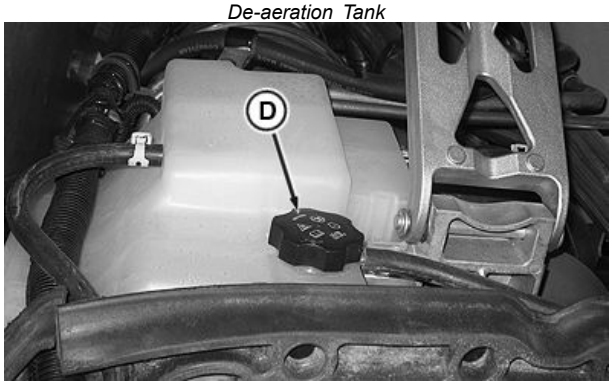


RXA0133488 —UN—02JUL13



RXA0133489 —UN—02JUL13

De-aeration Tank



RXA0133490 —UN—02JUL13

CommandCenter is a trademark of Deere & Company
John Deere is a trademark of Deere & Company

RX32825,000072D -19-01JUL14-1/1

Clean Diesel Particulate Filter (DPF)

When exhaust filter and warning light indicators are illuminated:

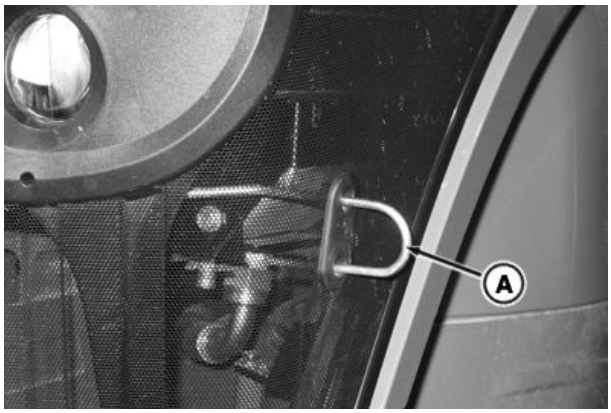
- Ensure exhaust filter cleaning is set to Auto. See Exhaust Filter System Overview and Auto Exhaust Filter Cleaning Mode in Operating the Engine section of this Operator's Manual
- Perform parked exhaust filter cleaning (if system allows). See Parked Exhaust Filter Cleaning in Operating the Engine section of this Operator's Manual

If Exhaust Filter Cleaning is set to Auto, Parked Exhaust Filter Cleaning has been performed and exhaust filter and warning light indicators are still illuminated, contact your John Deere™ dealer.

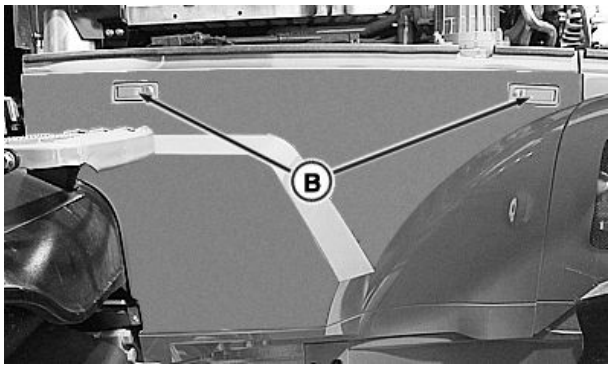
John Deere is a trademark of Deere & Company

TO84419,0000077 -19-25FEB14-1/1

Drain Water Separator

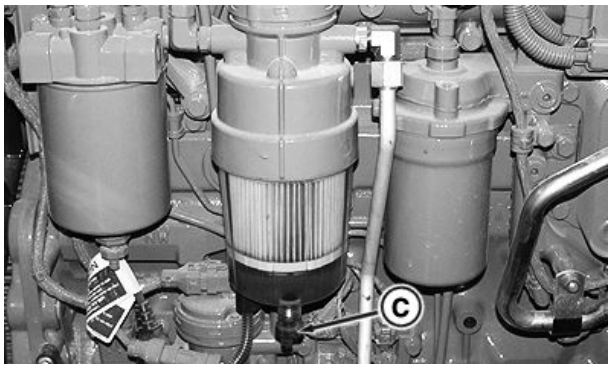


RXA0133488 —UN—02JUL13



RXA0134208 —UN—29JUL13

Right Rear Side Shield



RXA0134240 —UN—31JUL13

Water Separator Drain Valve—6.8 L Shown



RXA0109392 —UN—10SEP10

Water Separator Drain Valve—9.0 L Shown

A—Hood Release **B—Latch Buttons** **C—Drain Valve**

NOTE: Water Separator removes water that has been accumulated in your fuel. If excessive water is found, draining of the fuel tanks may be required.

1. Pull hood release (A) and raise hood.
2. Depress latch buttons (B) to remove right rear side shield.
3. Open drain valve (C) and drain accumulated water. Close drain valve.
4. Reinstall side shield and securely close hood.

RX32825,00006F9 -19-30AUG13-1/1

As Required Service

Perform As Required Service

As Required services should be performed when tractor performance indicates that service is needed. Conditions that indicate an As Required service is needed are described under appropriate headings below. Other services without a specified hourly service interval may be found in As Indicated Service section of this Operator's Manual.

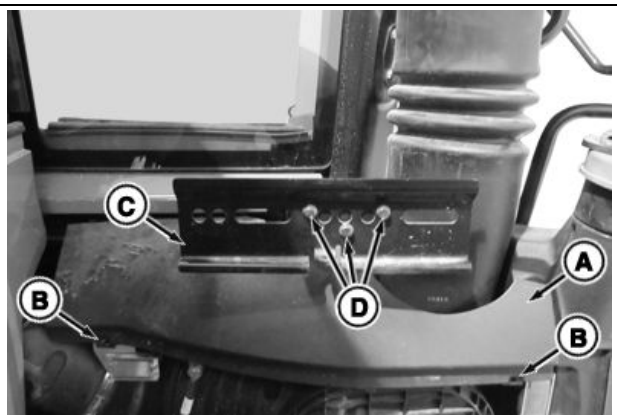
RX32825,000005E -19-25JUL13-1/1

Service Engine Air Filter Precleaner System

IMPORTANT: Do not remove engine air filters while servicing precleaner system.

NOTE: Service interval may vary due to operating conditions. If engine air filters clog prematurely, intake precleaner components may be dirty. Inspect and clean or replace precleaner components.

1. Disconnect battery ground (-) cable.
2. Remove battery compartment cover.
3. Remove two screws (B) holding aspirator hose cover (A). Remove aspirator hose cover.
4. Remove three screws (D) holding tool box support bracket (C). Remove tool box support bracket.



RXA0134280 —UN—20AUG13

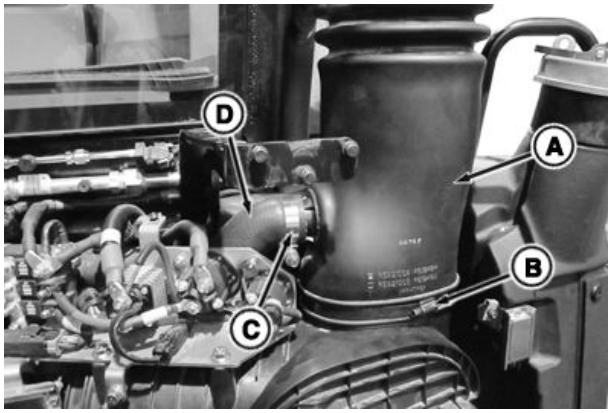
A—Aspirator Hose Cover
B—Aspirator Hose Cover Screws
C—Tool Box Support Bracket
D—Tool Box Support Bracket Cap Screws

Continued on next page

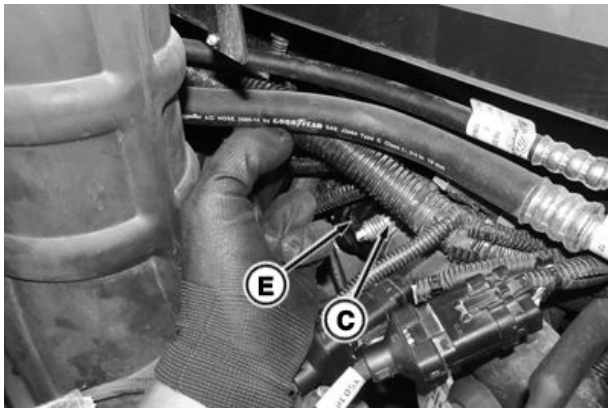
TO84419,0000079 -19-03SEP13-1/4

5. Loosen clamp (B) holding precleaner assembly (A) to air cleaner canister.
6. Loosen clamps (C) securing aspirator hose (D) to aspirator check valve (E) and aspirator hose to precleaner assembly (A).
7. Remove aspirator hose (D).

A—Precleaner Assembly
B—Precleaner Clamp
C—Aspirator Hose Clamps
D—Aspirator Hose
E—Aspirator Check Valve



RXA0134281 —UN—20AUG13



RXA0134282 —UN—20AUG13

TO84419,0000079 -19-03SEP13-2/4

8. Remove six cap screws (A) holding precleaner to support bracket and lift precleaner assembly from air cleaner canister.

A—Precleaner Mounting Cap Screws

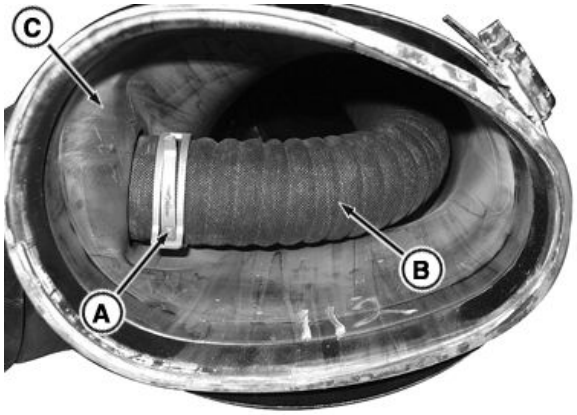


RXA0134283 —UN—21AUG13

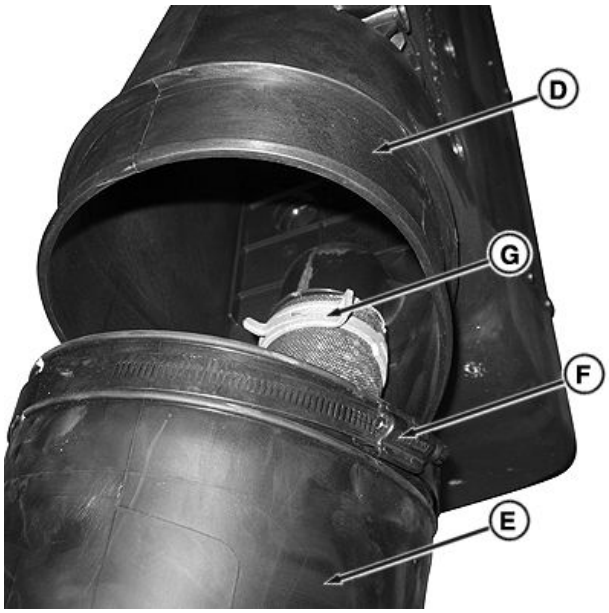
Continued on next page

TO84419,0000079 -19-03SEP13-3/4

9. Remove lower aspirator hose clamp (A) to remove aspirator hose (B) from precleaner extension tube (C).
10. Loosen clamp (F) holding precleaner (D) to extension tube (E).
11. Remove upper aspirator hose clamp (G) to separate aspirator hose from precleaner. Remove precleaner from extension tube.
12. Inspect components for damage. Replace as necessary.
13. Clean dust from aspirator tubes using compressed air, not to exceed 500 kPa (5 bar) (75 psi).
14. Thoroughly wash precleaner and precleaner extension tube in warm [maximum 65.5 °C (150 °F)] water mixed with a small amount of commercially available non-detergent car wash product. Rinse in clean water. Thoroughly dry before reinstallation.
15. Check aspirator check valve internal flap for freedom of movement. If flap does not move easily, remove check valve assembly and clean or replace as necessary.
16. Inspect aspirator hoses for damage or cracking. Replace as necessary.
17. Reassemble all components in reverse order of disassembly. Tighten according to specifications:



RXA0134284 —UN—21AUG13



RXA0134285 —UN—21AUG13

A—Lower Aspirator Hose Clamp
B—Aspirator Hose
C—Precleaner Extension Tube
D—Precleaner
E—Precleaner Extension Tube
F—Precleaner to Extension Tube Hose Clamp
G—Upper Aspirator Hose Clamp

Item	Measurement	Specification
Precleaner Mounting Cap Screws (H)	Torque	25 N·m (18.5 lb.-ft.)
Aspirator Hose Clamps (C)	Torque	10 N·m (7.4 lb.-ft.)
Precleaner Clamp (D)	Torque	6.5 N·m (4.8 lb.-ft.)
Precleaner to Extension Tube Hose Clamp (N)	Torque	6.5 N·m (4.8 lb.-ft.)

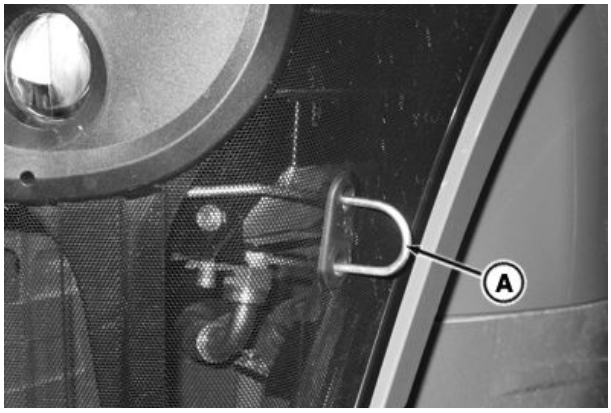
TO84419,0000079 -19-03SEP13-4/4

Clean Radiator, Coolers, and Air Conditioning Condenser

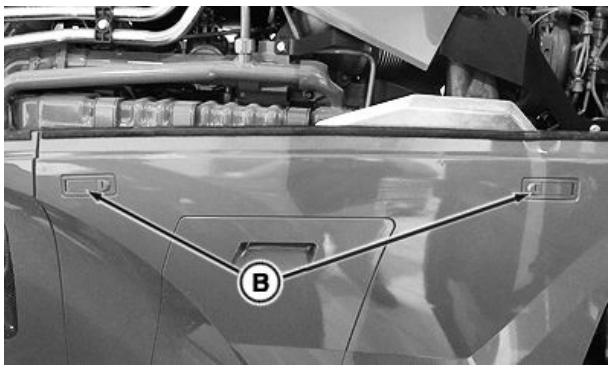
If tractor coolant temperature is excessive, or if debris is seen to be accumulating on cooling system components, clean components to help reduce excess temperatures.

1. Stop engine and remove key.
2. Clean grille and side screens using a brush.
3. Pull hood release (A) and raise hood.
4. Depress latch buttons (B) to remove left rear side shield.
5. Depress latch button (C) to remove left front side shield.

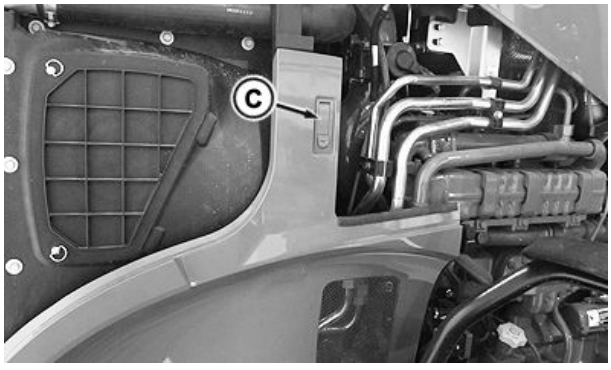
A—Hood Release
B—Left Rear Latch Buttons
C—Left Front Latch Button



RXA0133488 —UN—02JUL13



RXA0134193 —UN—25JUL13



RXA0134230 —UN—29JUL13

Continued on next page

TO84419,000007A -19-12SEP13-1/2

6. Release air conditioning condenser latch (D) on right side of air conditioning condenser (E) and pivot condenser and cooler forward and left.

IMPORTANT: Directing pressurized water at electronic/electrical components or connectors, bearings and hydraulic seals, fuel injection pumps or other sensitive parts and components may cause product malfunctions. Reduce pressure, and spray at a 45 to 90 degree angle.

Directing pressurized air at electronic/electrical components or connectors, may cause buildup of static electricity and product malfunctions.

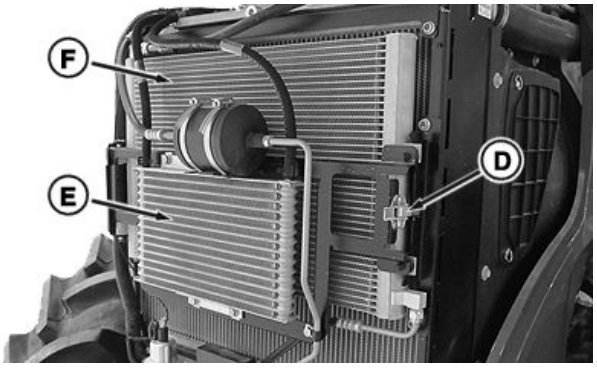
7. Use compressed air or water to clean air conditioning condenser. Straighten any bent fins.
8. Release fan shroud service door latches (G) on either side of tractor.

IMPORTANT: Directing pressurized water at electronic/electrical components or connectors, bearings and hydraulic seals, fuel injection pumps or other sensitive parts and components may cause product malfunctions. Reduce pressure, and spray at a 45 to 90 degree angle.

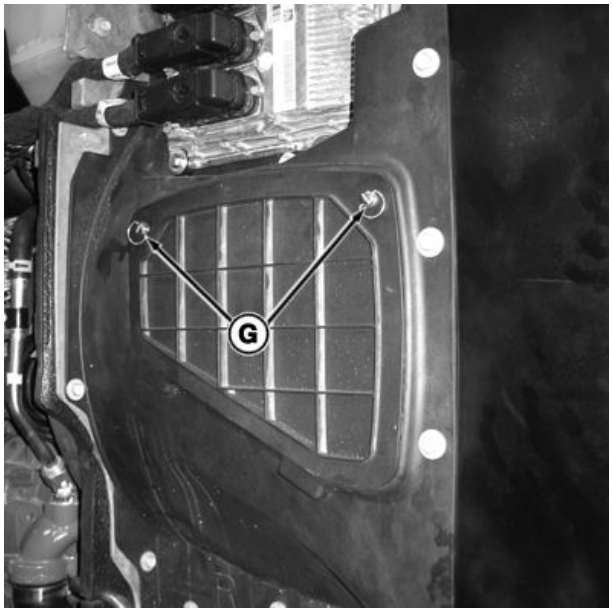
Directing pressurized air at electronic/electrical components or connectors, may cause buildup of static electricity and product malfunctions.

9. Use compressed air or water to clean hydraulic oil cooler (H) and engine coolant radiator (F). Straighten any bent fins.
10. Reposition and secure components, shields, and hood.

D—Air Conditioning Condenser Latch
E—Air Conditioning Condenser
F—Engine Coolant Radiator
G—Fan Shroud Service Door Latches
H—Hydraulic Oil Cooler



RXA0134241 —UN—12SEP13



RXA0135406 —UN—12SEP13



RXA0135407 —UN—12SEP13

TO84419,000007A -19-12SEP13-2/2

Check Engine and Exhaust Compartments for Debris

IMPORTANT: Accumulated crop residue inside engine compartment can reduce engine and cooling system performance. If tractor has been operated in field conditions which might have caused debris accumulation, inspect and clean engine compartment as necessary.

Directing pressurized water at electronic/electrical components, connectors, bearings and hydraulic seals, fuel injection pump or other sensitive parts and components may cause product malfunctions. Reduce pressure, and spray at a 45 to 90 degree angle.

Directing pressurized air at electronic/electrical components or connectors, may cause buildup of static electricity and product malfunctions.

Never steam clean or pour cold water on an injection pump that is operating or hot. Pump could seize.

1. Shut engine off and allow time for engine to cool.
2. Open and raise engine hood.
3. Remove any crop or debris within engine and exhaust compartments, especially around turbocharger, exhaust manifold, and exhaust aftertreatment system.
4. Reinstall all shields. Close and securely latch hood.

RX32825,0000453 -19-02APR14-1/1

Check Air Conditioning System

CAUTION: Avoid possible injury. Improper servicing may cause refrigerant to penetrate eyes and skin or cause burns.

IMPORTANT: R-134a refrigerant must be used in air conditioning system. Service requires special equipment and procedures. See your John Deere™ dealer.

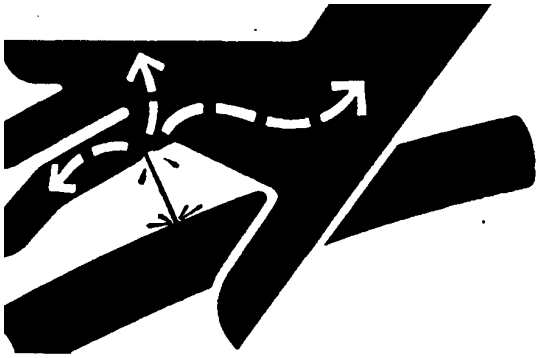
NOTE: Some oil seepage from compressor shaft seal is normal.

Perform following checks if air conditioning system will not cool, or cooling is intermittent:

- Confirm system does not function correctly. Access HVAC page on CommandCenter™ (see Generation 4 CommandCenter™ HVAC Settings in Operator Station section of this Operator's Manual). Set fan increment bar (A) to highest speed. Access Set Temperature page (B) and set temperature to coldest setting (C). Operate engine at 2000 rpm. Check air vents to confirm cold air is not present.
- Inspect and clean cab air filters. Replace filters if necessary. See Clean or Replace Cab Air Filters in this section of this Operator's Manual.
- Clean grille and radiator. See Clean Radiator, Coolers and Air Conditioning Condenser in this section of this Operator's Manual.
- Check air vents for cold air flow.

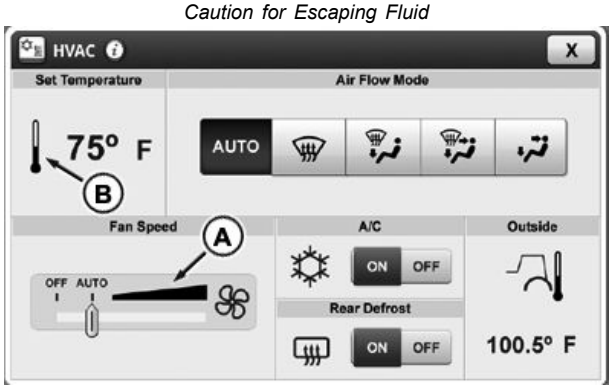
If problems persist, see yourJohn Deere™ dealer.

A—Fan Increment Bar
B—Set Temperature Module
C—Decrease Temperature Softkey



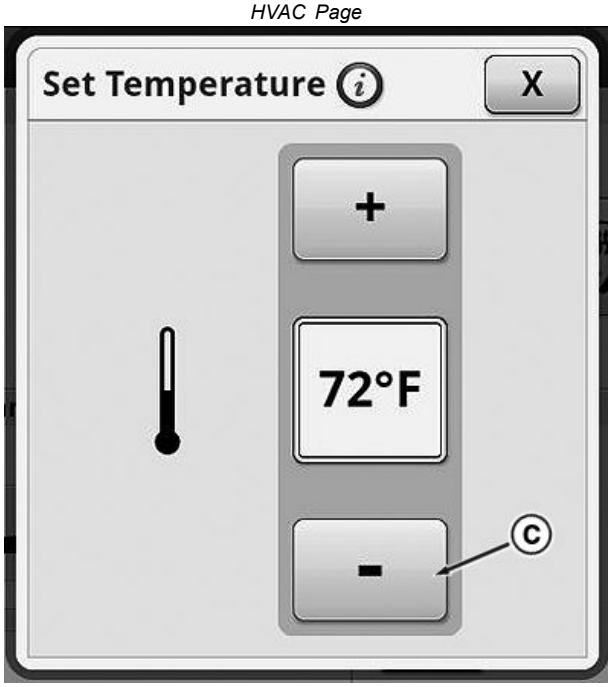
X9811 —UN—23AUG88

Caution for Escaping Fluid



RXA0134229 —UN—29JUL13

HVAC Page



RXA0131825 —UN—02APR13

Set Temperature Page

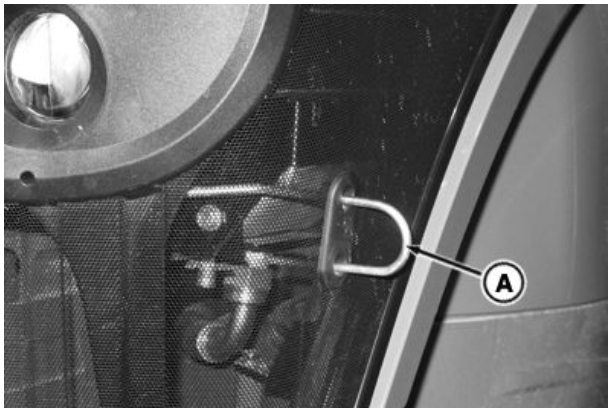
John Deere is a trademark of Deere & Company
CommandCenter is a trademark of Deere & Company

TO84419,000021A -19-02APR14-1/1

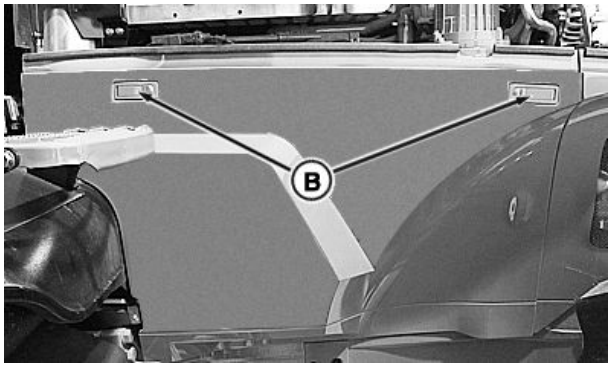
Replace Fan Belt

1. Pull hood release loop (A) and raise hood.
2. Depress side shield latches (B) and remove both front and rear side shields.
3. Remove cap screw (C) and disconnect fan drive connector (D).

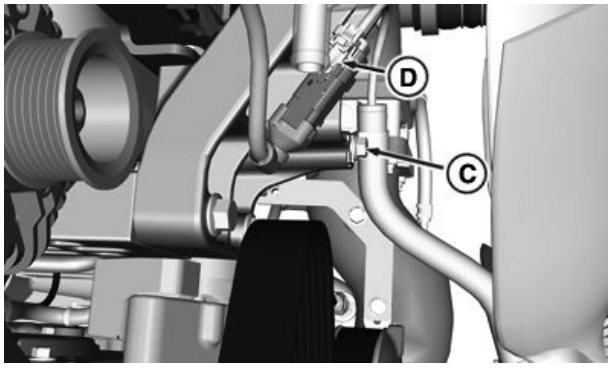
A—Hood Release Loop
B—Side Shield Latches
C—Cap Screw
D—Fan Drive Connector



RXA0133488 —UN—02JUL13



RXA0134208 —UN—29JUL13



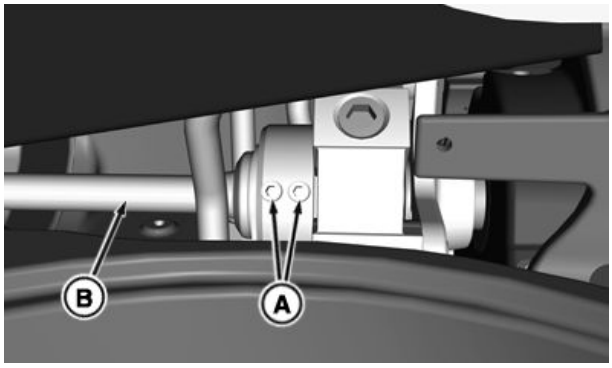
RXA0143146 —UN—03JUL14

Continued on next page

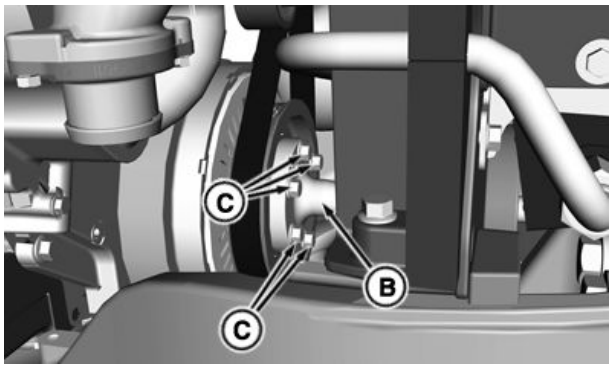
SV81855,00002C4 -19-08APR15-1/8

4. **For tractors equipped with front PTO:**
   1. Rotate PTO drive shaft (B) using JDG820 Flywheel Rotation Tool, see your John Deere™ dealer for tool, and remove front PTO hub set screws (A).
   2. Remove PTO drive shaft cap screws (C).
   3. Slide PTO drive shaft (B) forward.

A—Front PTO Hub Set Screws (2 used)
B—PTO Drive Shaft
C—PTO Drive Shaft Cap Screws (6 used)



RXA0136745 —UN—13NOV13



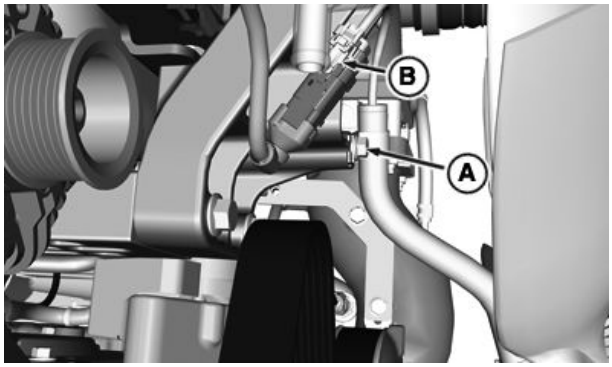
RXA0136744 —UN—13NOV13

John Deere is a trademark of Deere & Company

SV81855,00002C4 -19-08APR15-2/8

5. Remove cap screw (A) and disconnect fan drive connector (B).

A—Cap Screw
B—Fan Drive Connector



RXA0137540 —UN—05DEC13

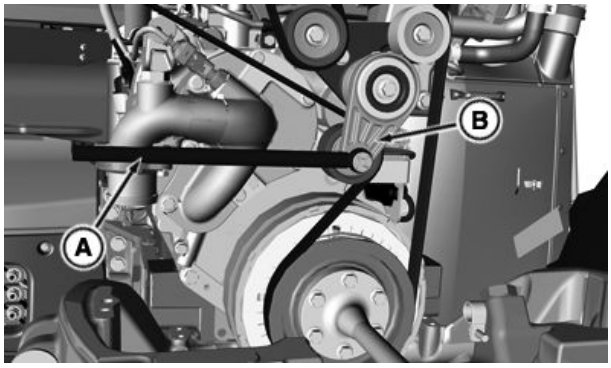
Continued on next page

SV81855,00002C4 -19-08APR15-3/8

NOTE: Fan drive belt is equipped with an automatic tensioner which does not require adjustment.

6. Release tension on belt using 1/2 in. drive breaker bar (A) on tensioner pulley (B).
7. Remove belt.
8. Inspect parts and replace as necessary.

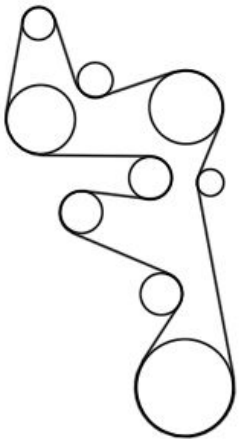
A—1/2 in. Drive Breaker Bar **B—Tensioner Pully**



RXA0136743 —UN—13NOV13

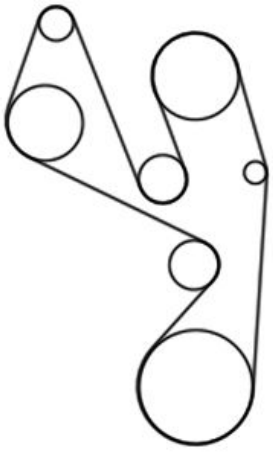
SV81855,00002C4 -19-08APR15-4/8

9. Install belt.



6.8L Fan Belt Layout

RXA0134221 —UN—29JUL13



9.0L Fan Belt Layout

RXA0134220 —UN—29JUL13

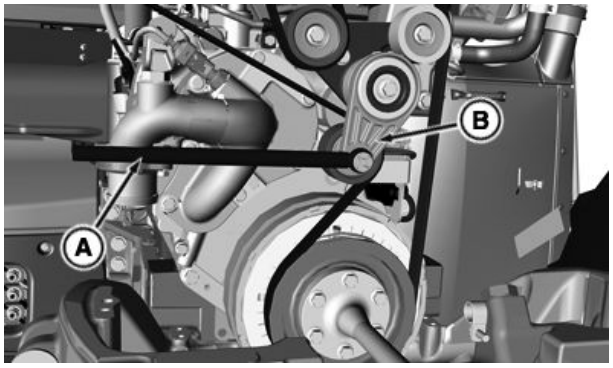
Continued on next page

SV81855,00002C4 -19-08APR15-5/8

NOTE: Fan drive belt is equipped with an automatic tensioner which does not require adjustment.

10. Release tension using 1/2 in. drive breaker bar (A) on tensioner pulley (B) and install belt around tensioner.

A—1/2 in. Drive Breaker Bar **B—Tensioner Pully**



RXA01136743 —UN—13NOV13

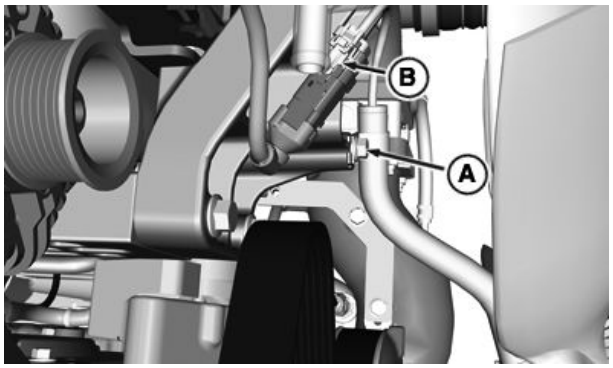
SV81855,00002C4 -19-08APR15-6/8

11. Connect fan drive connector (B) and install clamp cap screw (A). Tighten to specification.

Specification

Clamp Camp Screw—Torque.....27.5 N·m (243 lb.-in.)

A—Clamp Cap Screw **B—Fan Drive Connector**



RXA0137540 —UN—05DEC13

Continued on next page

SV81855,00002C4 -19-08APR15-7/8

12. **For tractors equipped with front PTO, perform the following:**
    - Slide PTO drive shaft (B) reward.
    - Rotate PTO drive shaft (B) using JDG820 Flywheel Rotation Tool and install PTO drive shaft cap screws (C). Tighten to specification.

Specification

PTO Drive Shaft Cap Screws—Torque.....73 N·m (54 lb.-ft.)

    - Install front PTO hub set screws (A). Tighten to specification.

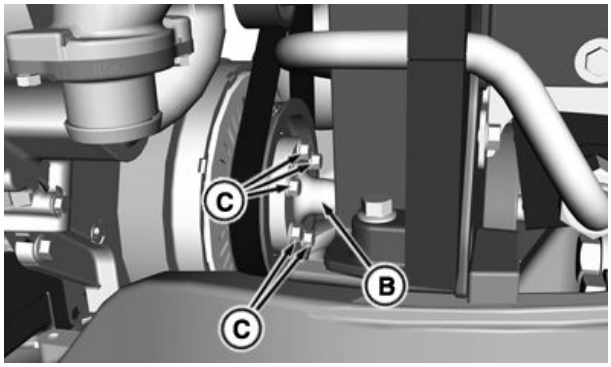
Specification

PTO Hub Set Screws—Torque.....55 N·m (41 lb.-ft.)

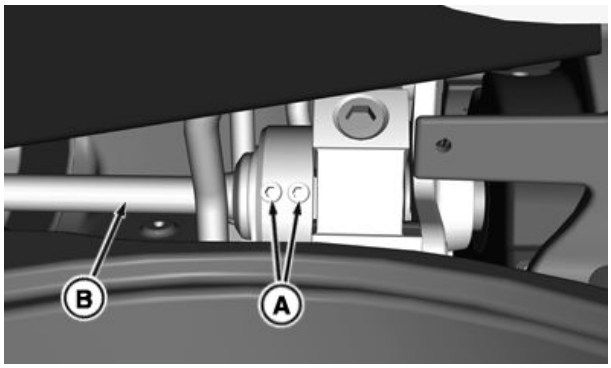
13. Install front and rear side shields.

14. Lower hood.

A—Front PTO Hub Set Screws (2 used)
B—PTO Drive Shaft
C—PTO Drive Shaft Cap Screws (6 used)



RXA0136744 —UN—13NOV13



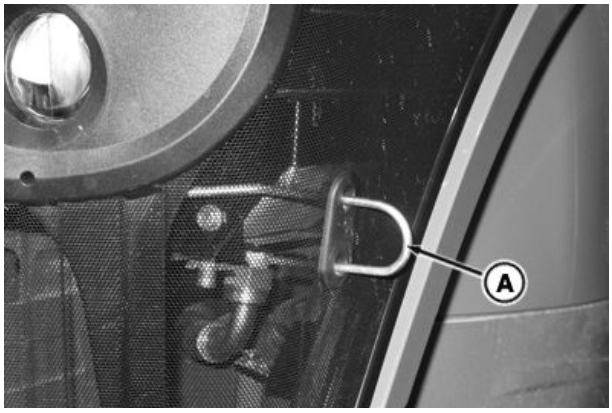
RXA0136745 —UN—13NOV13

SV81855,00002C4 -19-08APR15-8/8

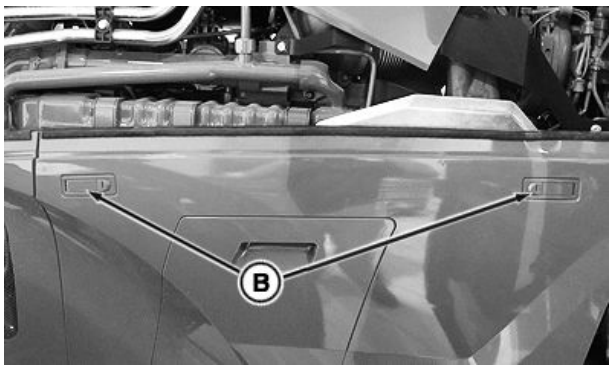
Check Engine Weep Hole

1. Pull hood release (A) and raise hood.
2. Depress latch buttons (B) to remove left rear side shield.
3. Depress latch button (C) to remove left front side shield.

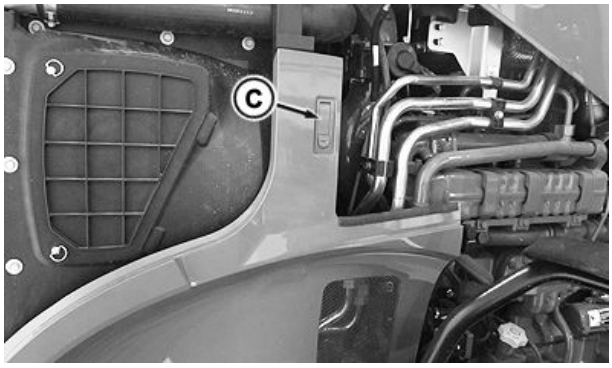
A—Hood Release
B—Left Rear Latch Buttons
C—Left Front Latch Button



RXA0133488 —UN—02JUL13



RXA0134193 —UN—25JUL13



RXA0134230 —UN—29JUL13

Continued on next page

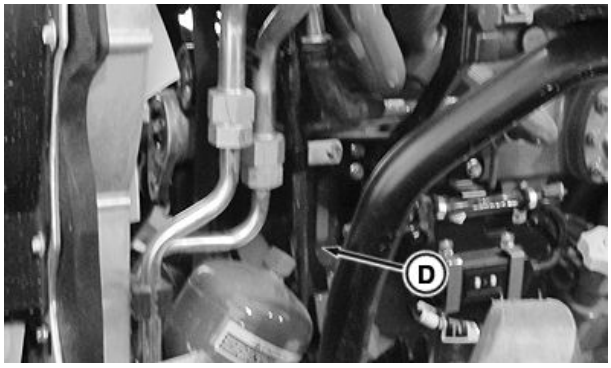
TO84419,000003F -19-16AUG13-1/2

4. Inspect weep hole (D) for oil or coolant leakage.
5. Close and secure hood and reinstall side shields.

If leakage is detected, see your John Deere™ dealer to replace complete coolant pump assembly (repair parts are not available).

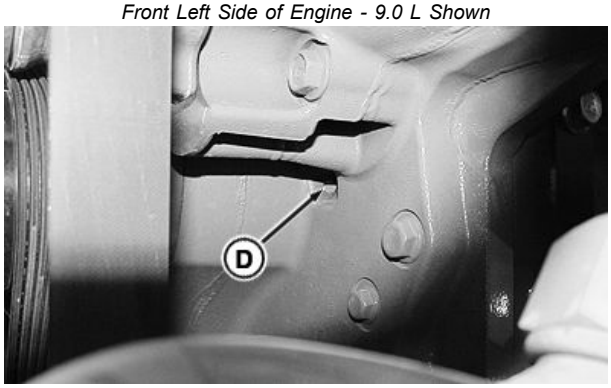
- Oil leakage indicates a damaged rear seal.
- Coolant leakage indicates a damaged front seal.

D—Weep Hole



RXA0134196 —UN—25JUL13

Front Left Side of Engine - 9.0 L Shown



RXA0134197 —UN—25JUL13

Engine Weep Hole - 9.0 L Shown

John Deere is a trademark of Deere & Company

TO84419,000003F -19-16AUG13-2/2

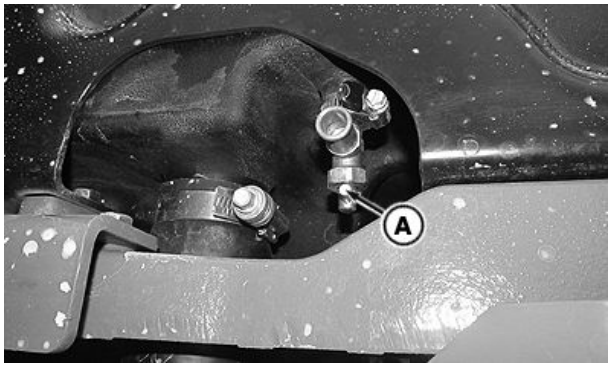
Drain Fuel Tank Sump

Drain fitting is recessed into inboard edge of right fuel tank.

Open drain tee (A).

Drain fuel from tanks until clean fuel appears from tank.

A—Drain Tee



RXA0134215 —UN—25JUL13

TO84419,0000095 -19-30AUG13-1/1

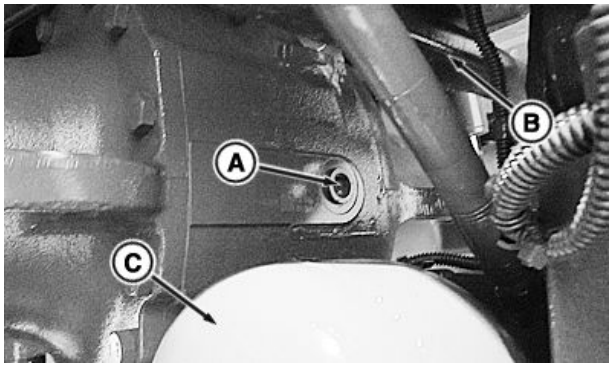
Check MFWD or TLS™ Plus (If Equipped) Axle Housing Oil Level

IMPORTANT: If there are any indications of oil leaks, do not operate tractor until the source has been determined and repairs made.

1. Park tractor on level ground.
2. Remove fill/check plug (A). Oil level should be just below plug hole.
3. If oil level is low, add oil until level is correct. Use John Deere™ Hy-Gard™ oil as specified in Transmission and Hydraulic Oil in Fuel, Lubricants and Coolant section of this Operator's Manual.
4. Apply pipe sealant with TEFLON®, or equivalent, to threads of fill/check plug (A).
5. Install fill/check plug. Tighten to specifications.

Specification	
Plugs-to-Axle Housing—Torque	70 N·m (52 lb.-ft.)

TEFLON is a trademark of Du Pont Co.



RXA0134206 —UN—29JUL13

Left-Hand Side

A— Fill/Check Plug
B— Tie Rod
C— TLS™ Plus Accumulator

TO84419,0000065 -19-21AUG13-1/1

Check MFWD or TLS™ Plus (If Equipped) Wheel Hub Oil Level

IMPORTANT: If there are any indications of oil leaks, do not operate tractor until the source has been determined and repairs made.

1. Park tractor on level ground.
2. Maneuver tractor forward or backward until words OIL LEVEL - HY-GARD (A) or OIL LEVEL (C) cast into wheel hub are horizontal.
3. Remove drain/fill plug (B). Oil level should be just below plug hole.

IMPORTANT: Use correct lubricant. Wheel hubs with brakes must be filled with John Deere™ Hy-Gard™ oil as specified in Transmission and Hydraulic Oil in Fuel, Lubricants and Coolant section of this Operator's Manual.

Wheel hubs without brakes are filled with John Deere™ GL-5 Gear Lubricant as specified in Gear Oil in Fuel, Lubricants and Coolant section of this Operator's Manual. .

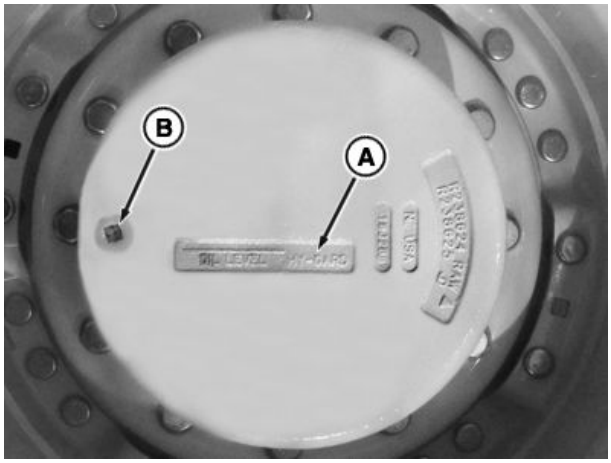
4. If oil level is low, add oil through drain/fill hole. Add correct oil depending upon whether tractor is equipped with front brakes. If tractor is equipped with front brakes, words cast into front hubs will read OIL LEVEL - HY-GARD. Fill front brake hub with John Deere™ Hy-Gard™ oil.

   If only words OIL LEVEL are cast into front hubs, tractor is not equipped with front brakes. Use John Deere™ GL-5 Gear Lubricant.

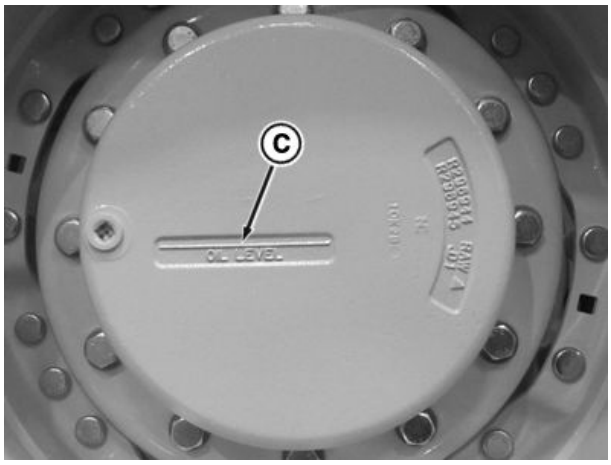
NOTE: See Gear Oil or Transmission and Hydraulic Oil in Fuel, Lubricants and Coolant section of this Operator's Manual.

5. Apply pipe sealant with TEFLON®, or equivalent, to threads of drain/fill plug.
6. Install drain/fill plug and O-ring. Tighten to specifications.

Hy-Gard is a trademark of Deere & Company
TEFLON is a trademark of Du Pont Co.



RXA0134236 —UN—29JUL13



RXA0129807 —UN—26NOV12

A—Oil Level - HY-GARD
B—Drain/Fill Plug
C—Oil Level

Specification	
Plug-to-Hub—Torque	70 N·m (52 lb.-ft.)

7. Repeat procedure with other wheel hub.

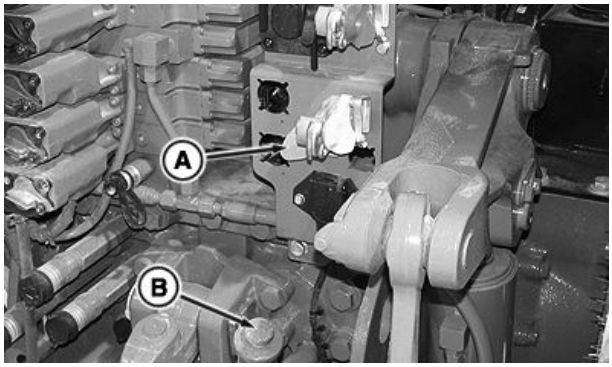
TO84419,0000066 -19-25SEP13-1/1

Bleed Trailer Hydraulic Brakes (If Equipped)

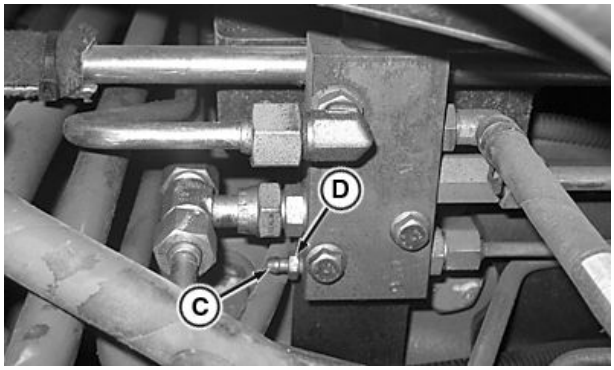
NOTE: An assistant is needed to perform this procedure.

1. Remove cap and connect a hose to hydraulic trailer brake coupler (A). Place other end of hose into hydraulic oil filler tube (B).
2. Loosen bleed valve nut (D).
3. Connect a hose over bleed valve connection (C). Place other end of hose into hydraulic oil filler tube (B).
4. Start engine.
5. At slow idle, depress brake pedals for approximately 2 minutes.
6. Tighten bleed valve nut (D) with brake pedals depressed.
7. Shut off engine and remove key.
8. Remove hoses and install hydraulic oil filler tube cap.

A—Hydraulic Trailer Brake Coupler
B—Hydraulic Oil Filler Tube
C—Bleed Valve Connection
D—Bleed Valve Nut



RXA0134228 —UN—26JUL13



RXA0111305 —UN—14OCT10

TO84419,000021C -19-01JUL14-1/1

Bleed Trailer Air Brakes (If Equipped)

NOTE: An assistant is needed to perform this procedure.

Trailer air brakes are equipped with **automatic** bleed valves. Automatic bleed valves will vent an air/oil/water mixture multiple times during normal operation of tractor.

First person will stand by rear hitch and manually push in red trailer air brake coupler (A). Second person will feel if bleed valves (B) cycle. Bleed valves (B) are located on bottom of trailer brake air tanks. The air tanks are located in front of right rear axle.

CAUTION: To avoid injury, be sure all people are clear of tractor.

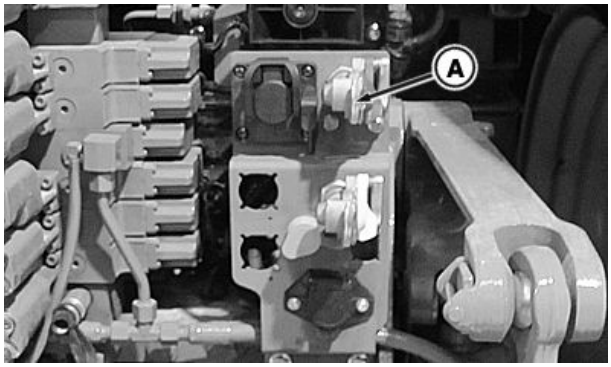
1. Start tractor.
2. Wait 1 minute for air tanks to build up pressure.

   NOTE: Continuous release of air will not allow trailer air brakes to bleed. Coupler must be cycled in an on/off process.

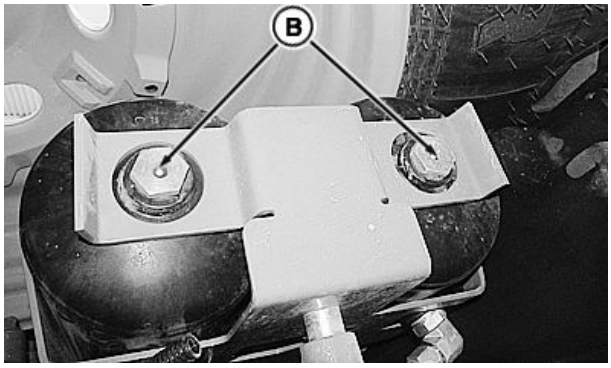
3. Person 1 repeatedly cycles red trailer air brake coupler (A) on and off.
4. Person 2 places hand below bleed valves, (B) and feel for a release of air, water or oil.

Bleed valves cycle randomly. If they do not operate first time, wait 10 minutes and try this process again. If no venting is observed, contact your John Deere™ dealer.

John Deere is a trademark of Deere & Company



RXA0134198 —UN—25JUL13



RXA0134199 —UN—25JUL13

A—Red Trailer Air Brake Coupler

B—Bleed Valves

TO84419,000007D -19-29AUG13-1/1

Clean Diesel Exhaust Fluid (DEF) Tank (7310R only)

CAUTION: Avoid contact with eyes. In case of contact, immediately flush eyes with large amounts of water for a minimum of 15 minutes. Reference the Materials Safety Data Sheet (MSDS) for additional information.

IMPORTANT: If DEF is spilled or contacts any surface other than the storage tank, immediately clean the surface with clear water. DEF is corrosive to painted and unpainted metallic surfaces and can distort some plastic and rubber components.

Spilled DEF, if left to dry or if only wiped away with a cloth, leaves a white residue. Improperly cleaned DEF spill can interfere with diagnosis of Selective Catalytic Reduction (SCR) system leakage problems.

If foreign material or fluid has been added to the DEF tank, drain the DEF tank, flush, and fill with new DEF.

If DEF quality is in question, pull a sample out of the DEF tank and place into a clear container. DEF should be crystal clear with a light ammonia smell. If DEF appears cloudy, has a colored tint or has a profound ammonia smell, it is likely not within specification. DEF in this condition should not be used.

1. Remove drain plug (if equipped), and drain or siphon bad DEF from DEF tank.

NOTE: Cleaning can take place with DEF tank installed or removed.

2. Clean DEF tank with new DEF.

   DEF must pass visual, smell, and concentration checks before the engine can be ran. See Diesel Exhaust Fluid (DEF) – For Use In Selective Catalytic Reduction (SCR) Equipped Engines in the Fuels, Lubricants, and Coolants Section for more information.

3. Drain or siphon DEF tank.

NOTE: Repeat steps 2—3 until DEF tank has been cleaned.

4. Change DEF dosing unit filter.
5. Install drain plug in DEF tank, if removed. Install DEF tank, if removed.
6. Fill DEF tank with new DEF.
7. Check DEF concentration with DEF refractometer, such as JDG11594 or JDG11684. The correct DEF concentration is 31.8% — 33.2%. See your authorized dealer for more information.
8. If DEF is not within specification, does not appear clear, or does not have a slight ammonia smell, contact your authorized dealer.

GH15097,00008E4 -19-29OCT14-1/1

Diesel Exhaust Fluid (DEF) Tank Drain Plug (7310R only)

Remove drain plug (A) to drain DEF from tank.

Check O-ring for defects. Replace if needed.

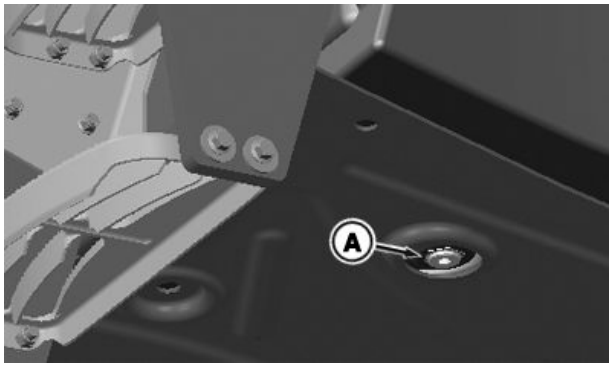
Clean DEF Tank. See Cleaning Diesel Exhaust Fluid (DEF) Tank section above.

Clean out any DEF crystallization in threads.

IMPORTANT: Do not over torque drain plug. Over torquing can cause plug to spin in tank and lead to leaks.

Install drain plug, tighten to specifications.

Specification	
DEF Tank Drain Plug—Torque	25 N·m (18 lb.-ft.)



RXA0143406 —UN—10JUL14

A—DEF Tank Drain Plug

GH15097,00008E5 -19-14AUG14-1/1

Clean CommandCenter™ Display

Clean CommandCenter™ Display. See Clean CommandCenter™ Display in CommandCenter™ section of this Operator's Manual.

CommandCenter is a trademark of Deere & Company

SV81855,00002F5 -19-19AUG14-1/1

Check Engine Oil Level

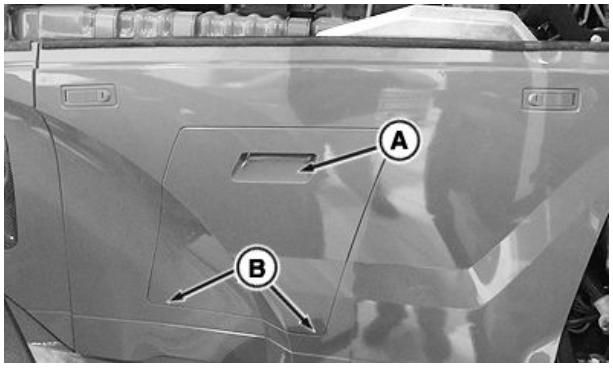
1. Park tractor on level ground. Stop engine and remove key.
2. Remove engine access panel. Pull outward, using hand grip recess (A). Magnets secure top of panel. Lift panel from alignment tabs at bottom (B).

IMPORTANT: Do not operate engine with oil level below ”ADD” mark on dipstick.

NOTE: Fully tighten filler cap to check oil. Oil level at top of crosshatch area on dipstick is considered FULL.

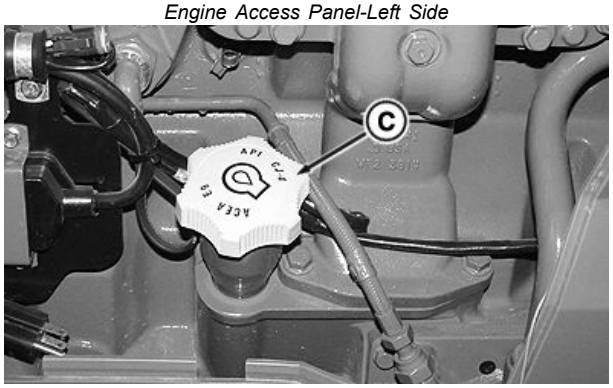
3. Dipstick is attached to filler cap (C). Remove cap and clean dipstick. Retighten cap, then remove and check oil level on dipstick (D). Oil level should be between ”ADD” mark and top (E) of crosshatch area on dipstick.
4. If needed, remove cap and add oil recommended in Fuel, Lubricants and Coolant section of this Operator’s Manual.
5. Reinstall engine access panel.

A—Hand Grip Recess
B—Alignment Tabs
C—Filler Cap
D—Dipstick
E—Top of Crosshatch



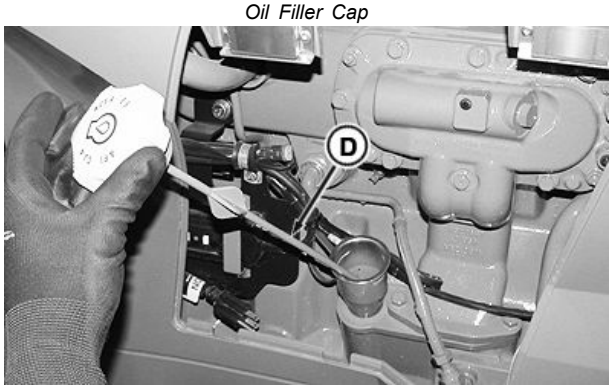
RXA0134202 —UN—13AUG13

Engine Access Panel-Left Side

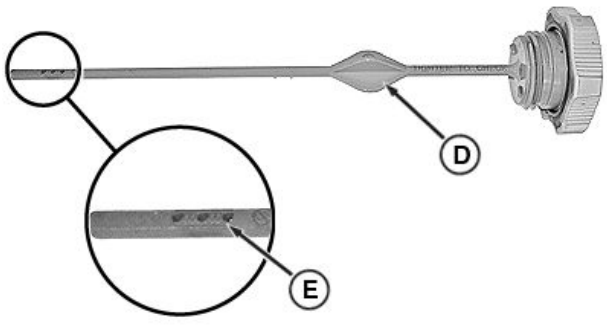


RXA0134278 —UN—13AUG13

Oil Filler Cap



RXA0134279 —UN—13AUG13



RXA0109390 —UN—16AUG10

Oil Dipstick

TO84419,0000041 -19-16AUG13-1/1

Check Transmission-Hydraulic Oil Level

IMPORTANT: During operation, with engine running, oil level will vary and may be much above maximum operating level or below normal operating range. Check transmission-hydraulic oil level only after tractor has not been running for at least 1/2 hour or until level stabilizes in sight tube.

1. Park tractor on level ground, if equipped with rear hitch make sure it is fully lowered and if tractor has been running, shut off engine.
2. Wait at least 1/2 hour or until oil level stabilizes in sight tube before checking oil level.
3. Check oil level in sight glass (A) at rear of tractor.

IMPORTANT: Overfilling transmission-hydraulic oil can result in decreased operating efficiency. Except when operating in side-hill or high volume applications, keep oil level at or slightly below top of normal operating range. Never fill system above maximum operating level.

NOTE: Oil level may need to be adjusted based on expected operating conditions. See special operating condition instructions below.

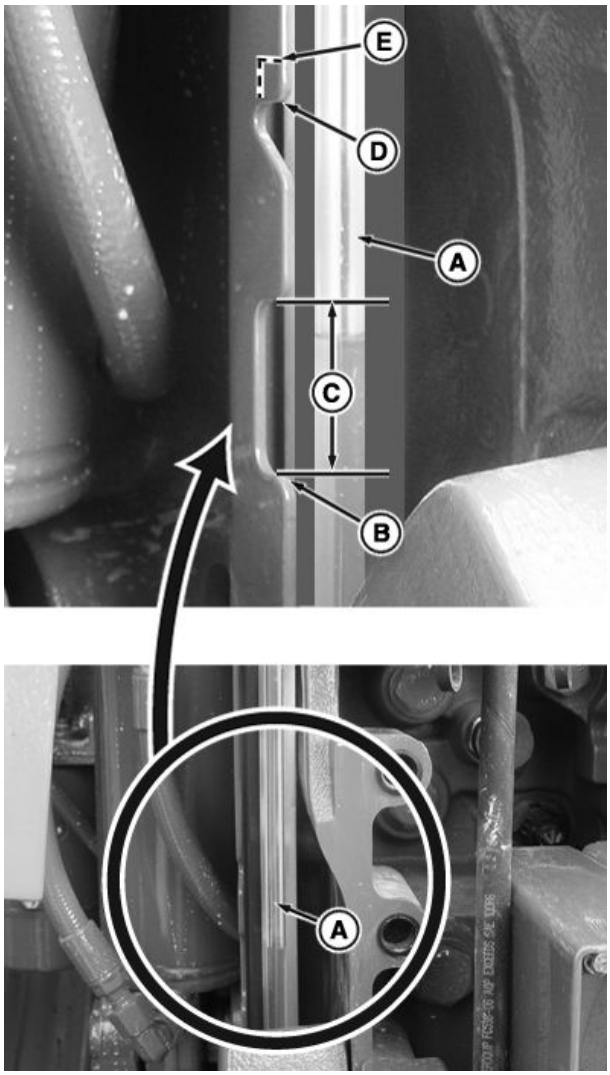
Hydraulic oil sensor detects a low oil level or hydraulic oil loss. DTC appears on display. Check hydraulic oil level and fill to normal operating range.

4. If transmission-hydraulic oil level is at or below add oil indication (B), slowly add oil to reach top of normal operating range indicator (C). Use oil as specified in Transmission-Hydraulic Oil in Fuel, Lubricants and Coolant section of this Operator's Manual. From add oil level, adding approximately these amounts of oil will bring oil level to top of normal operating range.

Transmission	Without Optional Auxiliary Oil Reservoir	With Optional Auxiliary Oil Reservoir
CommandQuad™	20 L (21 qt.)	22 L (23 qt.)
IVT™/AutoPowr™	16 L (17 qt.)	18 L (19 qt.)
e23™	16 L (17 qt.)	18 L (19 qt.)

IMPORTANT: Examine oil level indicator. If tractor is not equipped with optional auxiliary oil reservoir, maximum operating level indication will be as shown (D). If tractor has optional oil reservoir installed, maximum operating level indicator will be higher (E).

For Side-Hill Applications or High Oil Volume Requirements: To prevent low oil levels, additional oil may be required when operating on side hills or when using implements which require large volumes of oil to function. Oil level should be at or slightly below maximum operating level (D or E).



RXA0133301 —UN—21APR14

A—Transmission-Hydraulic Oil Sight Glass
B—Add Oil
C—Normal Operating Range
D—Maximum Operating Level (Without Optional Auxiliary Oil Reservoir)
E—Maximum Operating Level (With Optional Auxiliary Oil Reservoir)

TO84419,00001CE -19-24JUN14-1/1

Lubricate MFWD or TLS™ Plus Kingpins, Tie Rod Ends, Steering Cylinder, Axle Pivot and Panhard Rod

IMPORTANT: Normal service is every 500 hours. If used in extremely wet conditions service daily or every 10 hours. See Lubricate MFWD or TLS™ Plus Kingpins, Tie Rod Ends, Steering Cylinder, Axle Pivot and Panhard Rod in 500 Hour Service section of this Operator's Manual.

TO84419,0000042 -19-16AUG13-1/1

Lubricate MFWD or TLS™ Plus U-Joints

IMPORTANT: Normal service is every 500 hours. If used in extremely wet conditions service daily or every 10 hours. See Lubricate MFWD or TLS™ Plus U-Joints in 500 Hour Service section of this Operator's Manual.

TO84419,0000043 -19-16AUG13-1/1

50 Hour Service

Perform This and Other Scheduled Services

When scheduled service at any hourly level is performed, also perform all subordinate hourly level services. See

Observe Service Intervals in Maintenance and Service Intervals Section of this Operator's Manual for table listing main and subordinate service intervals.

TO84419,0000211 -19-25JUL13-1/1

Inspect Tires

IMPORTANT: Keep tires at recommended pressure to insure maximum performance. See inflation pressure tables in Front Wheels, Tires, and Treads and in Rear Wheels, Tires, and Treads section of this Operator's Manual.

Inspect tires for cuts or breaks and repair. Adjust and maintain tire pressure according to recommended pressure charts for optimum field performance. Check pressure of each tire at least once a week. If tires contain liquid ballast, use a special air-water gauge, and measure with valve stem positioned at bottom.

RX32825,00006FC -19-27MAR13-1/1

Lubricate Rear Hitch

IMPORTANT: Normal service is every 250 hours. If used daily, service every 50 hours. See

Lubricate Rear Hitch in 250 Hour Service section of this Operator's Manual.

RX32825,00006FD -19-23APR13-1/1

Lubricate Front Hitch (If Equipped)

IMPORTANT: Normal service is every 250 hours. If used daily, service every 50 hours. See

Lubricate Front Hitch (If Equipped) in 250 Hour Service section of this Operator's Manual.

RX32825,00006FE -19-18DEC12-1/1

Perform This and Other Scheduled Services

When scheduled service at any hourly level is performed, also perform all subordinate hourly level services. See Observe Service Intervals in Maintenance and Service Intervals Section of this Operator's Manual for table listing main and subordinate service intervals.

TO84419,0000211 -19-25JUL13-1/1

Lubricate Rear Hitch

IMPORTANT: Normal service is every 250 hours. If used daily, service every 50 hours.

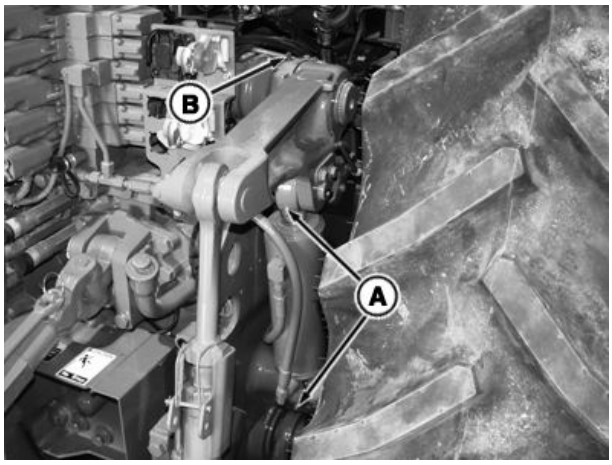
Lower hitch before lubricating hitch components.

Lubricate lift cylinders (A), rockshaft (B), and lift arms (C) located on both sides of tractor.

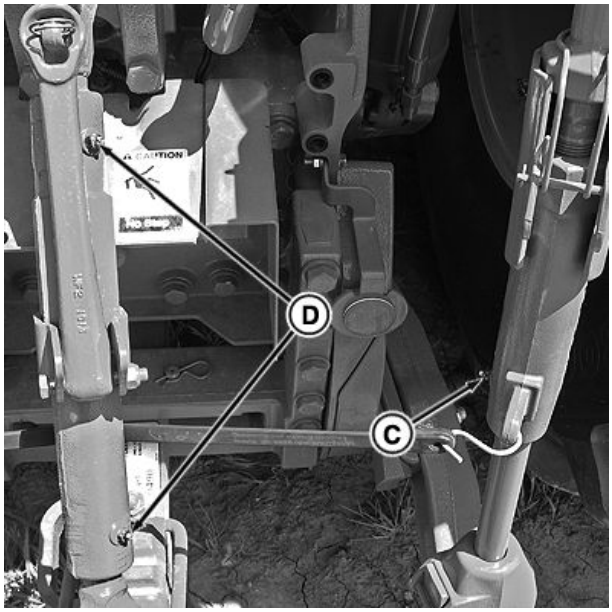
Lubricate mechanical center link (D).

Use John Deere™ SD Polyurea grease or other grease as specified in Fuel, Lubricants, and Coolant section.

A—Lift Cylinders
B—Rockshaft
C—Lift Arms
D—Center Link



RXA0134286 —UN—20AUG13



RXA0118612 —UN—13JUL11

John Deere is a trademark of Deere & Company

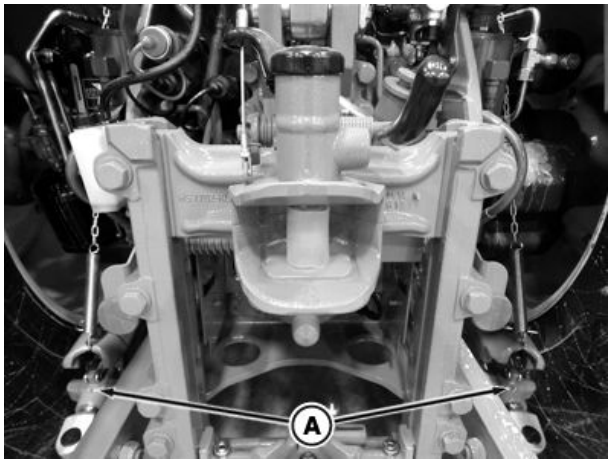
RX32825,0000701 -19-19AUG13-1/1

Lubricate Deluxe Stabilizers (If Equipped)

Lubricate deluxe stabilizers (A) located on both sides of tractor.

Use John Deere™ SD Polyurea grease or other grease as specified in Fuel, Lubricants, and Coolant section.

A—Deluxe Stabilizers



RXA0147023 —UN—22JAN15

John Deere is a trademark of Deere & Company

SV81855,000035F -19-22JAN15-1/1

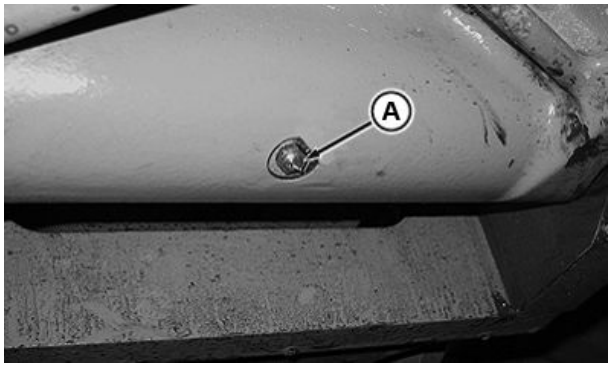
Lubricate Front Hitch (If Equipped)

IMPORTANT: Normal service is every 250 hours. If used daily, service every 50 hours.

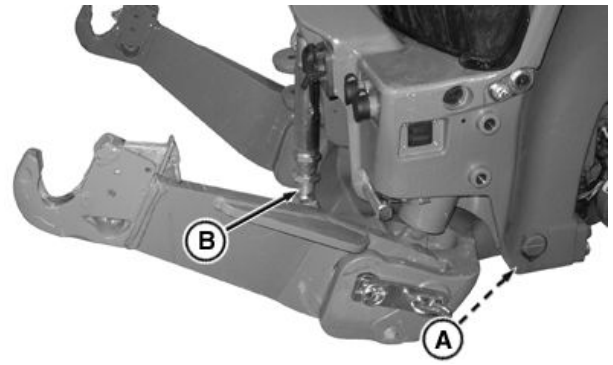
Grease main pivot point through grease fitting (A) underneath front hitch, and threads on center link (B).

Use John Deere™ SD Polyurea grease or other grease as specified in Fuel, Lubricants, and Coolant section.

A—Pivot Point Grease Fitting **B—Center Link Threads**



RXA0110637 —UN—03SEP10



RXA0110655 —UN—03SEP10

John Deere is a trademark of Deere & Company

RX32825,0000702 -19-18DEC12-1/1

Check Manual Brakes

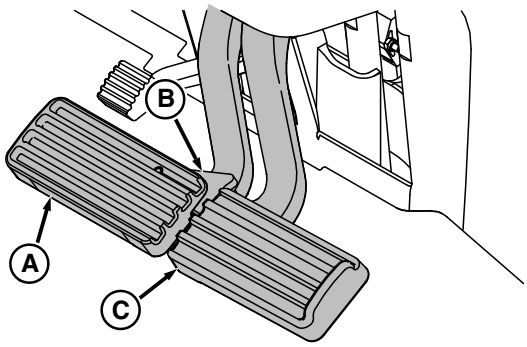
IMPORTANT: Any noticeable pedal drift downward from point of resistance (solid pedal) indicates brake leakage. See your John Deere™ dealer.

NOTE: Solid pedal feel occurs when brake pedal feels like it has stopped moving, even when it is pushed harder; usually after pedal has traveled 102—127 mm (4—5 in.) without any type of trailer brake, and 127—152 mm (5—6 in.) with trailer brakes. Brake valve will emit a squeak just before solid pedal point is reached.

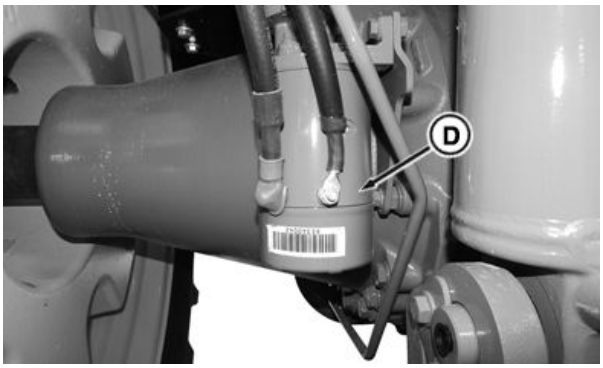
With engine stopped, check manual brakes for correct function:

NOTE: If tractor is equipped with back-up pump (D), these steps do not apply.

1. Be sure latch bar (B) is positioned to allow brake pedals to operate separately.
2. Pump left brake pedal (A) and right brake pedal (C) individually. Pedals should have a solid feel. If pedals do not feel solid, have your John Deere™ dealer bleed brakes.
3. Check to make sure pedals do not settle to end of stroke within 10 seconds after being applied. If leakage exceeds this rate or if one pedal settles faster than the other, see your John Deere™ dealer.
4. Press both pedals simultaneously. Solid pedal should be obtained at approximately same pedal height on both pedals. If height varies more than 51 mm (2 in.), have your John Deere™ dealer bleed brakes.



RXA0068386 —UN—27AUG03



RXA0143145 —UN—02JUL14

A—Left Brake Pedal
B—Latch Bar
C—Right Brake Pedal
D—Back-up Pump

John Deere is a trademark of Deere & Company

RX32825,0000704 -19-30JAN15-1/1

Check Secondary Brake



RXA0143604 —UN—24JUL14

IVT™ & e23™ Left-Hand Reverser



RXA0143605 —UN—24JUL14

CommandQuad™ Transmission Lever



RXA0143606 —UN—24JUL14

e23™ Right-Hand Reverser



RXA0143607 —UN—24JUL14

Secondary Brake

A—IVT™ and e23™ Left-Hand Reverser

B—CommandQuad™ Transmission Lever

C—e23™ Transmission Lever

D—Secondary Brake

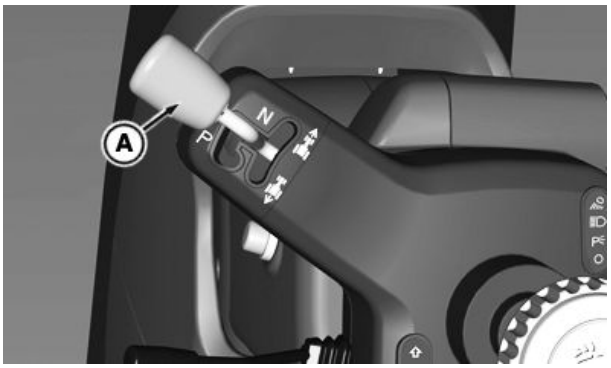
1. Park tractor on incline. Incline should be steep enough to allow tractor to roll easily when tractors is place in Neutral.
2. For IVT™ or left-hand reverser, move transmission shift lever (A) to Neutral position.
3. For CommandQuad™, move transmission lever (B) to Neutral position.
4. For e23™, move transmission lever (C) to Neutral position.
5. Engage secondary brake (D).

   If tractor does not hold with secondary brake engaged, see your John Deere™ dealer.

e23 is a trademark of Deere & Company
CommandQuad is a trademark of Deere & Company
IVT is a trademark of Deere & Company
John Deere is a trademark of Deere & Company

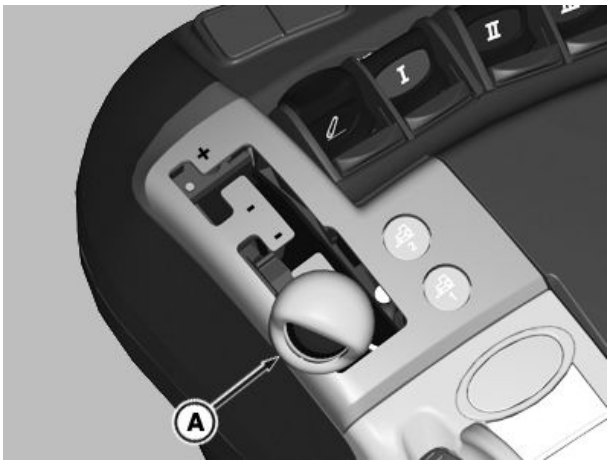
SV81855,00002D8 -19-24JUL14-1/1

Check Neutral Start System



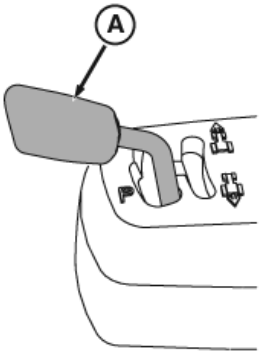
CommandQuad™ or e23™ Transmission Left-Hand Reverser

RXA0130962 —UN—14FEB13



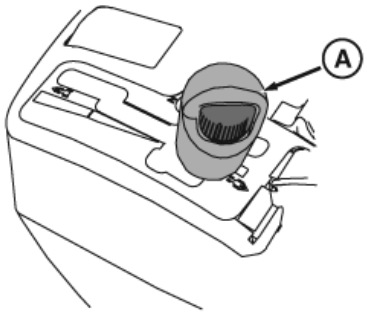
e23™ Transmission Right-Hand Reverser

RXA0130963 —UN—14FEB13



IVT™ /AutoPowr™ Left-Hand Reverser

RXA0130964 —UN—14FEB13



IVT™/AutoPowr™ Right-Hand Reverser

RXA0130965 —UN—14FEB13

⚠ CAUTION: Avoid personal injury. Make sure that everyone is clear of tractor.

1. Park tractor on level ground.
2. Fully depress clutch and brake pedals.
3. Shut off tractor.
4. Move reverser lever (A) to any position **except** NEUTRAL or PARK position.

NOTE: Engine should start in NEUTRAL or PARK position only (depending upon transmission type).

5. Attempt to start engine. If engine starts in any position other than NEUTRAL or PARK (depending upon transmission type), neutral start system should be repaired. See your John Deere™ dealer **immediately**.

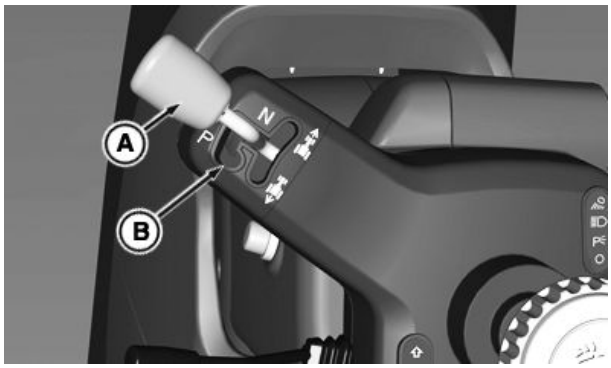
Transmission and Reverser Lever Options	Tractor Starts In
CommandQuad™ Left-Hand Reverser	Park ONLY
e23™ Transmission Left-Hand Reverser	Park or Neutral
e23™ Transmission Right-Hand Reverser	Park or Neutral
IVT™/AutoPowr™ Left-Hand Reverser	Park or Neutral
IVT™/AutoPowr™ Right-Hand Reverser	Park ONLY

Transmission Reverser Lever Position to Allow Tractor to Start

CommandQuad is a trademark of Deere & Company
IVT is a trademark of Deere & Company
AutoPowr is a trademark of Deere & Company
John Deere is a trademark of Deere & Company

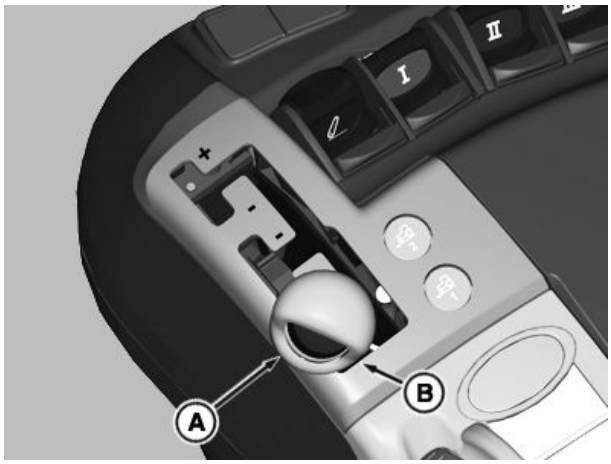
RX32825,0000725 -19-03APR14-1/1

Check Transmission PARK System



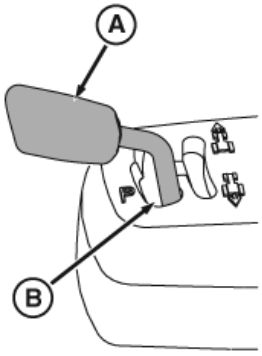
CommandQuad™ or e23™ Transmission Left-Hand Reverser

RXA0130966 —UN—14FEB13



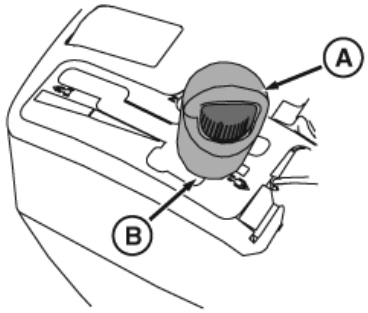
RXA0130967 —UN—14FEB13

e23™ Transmission Right-Hand Reverser



RXA0130968 —UN—14FEB13

IVT™ /AutoPowr™ Left-Hand Reverser



RXA0130969 —UN—14FEB13

IVT™/AutoPowr™ Right-Hand Reverser

⚠ CAUTION: Avoid personal injury. Make sure that everyone is clear of tractor.

1. Position tractor on a 30% incline [1 m (3.3 ft) vertically for every 3 m (9.8 ft) horizontally] with front of tractor facing downward.
2. Move reverser lever (A) to PARK position (B).
3. If tractor does not hold stationary on incline with reverser lever in PARK position, transmission should be repaired **immediately** by your John Deere™ dealer.

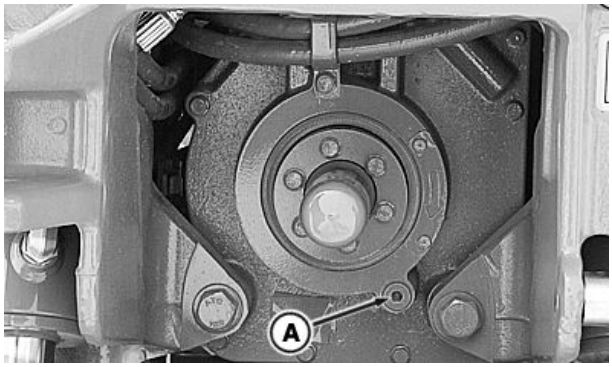
CommandQuad is a trademark of Deere & Company
IVT is a trademark of Deere & Company
AutoPowr is a trademark of Deere & Company
John Deere is a trademark of Deere & Company

TO84419,00001DC -19-13FEB13-1/1

Check Front PTO Housing Oil Level (If Equipped)

1. Park tractor on level surface.
2. Remove plug (A). Oil level should be just below plug hole.
3. If low, add oil until level is correct. Fill with transmission/hydraulic oil specified in Fuel, Lubricants, and Coolant section.
4. Install plug.

A—Check/Fill Plug



RXA0134207 —UN—25JUL13

TO84419,00001DF -19-26JUL13-1/1

Lubricate Wagon Hitch and Check for Wear

CAUTION: Parts that have reached or exceeded their wear limit must be replaced with new parts.

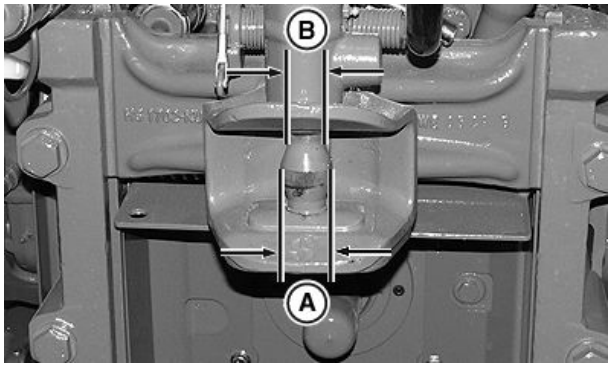
Wagon Hitch

Specifications	
Large Diameter (A)	36 mm (1.42 in.) Minimum
Small Diameter (B)	27 mm (1.06 in.) Minimum
Receiver Hole Diameter (C)	34 mm (1.33 in.) Maximum
Wear Plate Thickness (D)[a]	6 mm (0.24 in.) Minimum

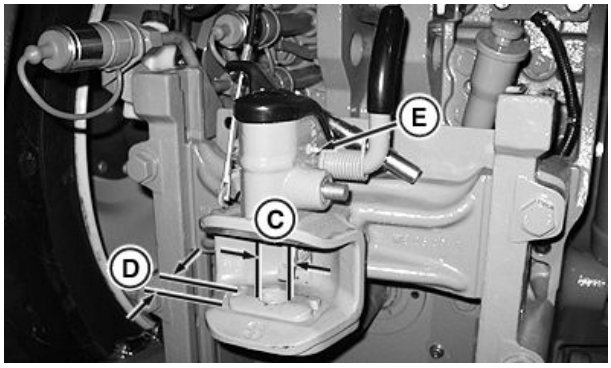
[a] *Minimum Permitted Thickness*

Lubricate grease fittings (E). Use John Deere™ multi-purpose grease as specified in Grease in Fuel, Lubricants, and Coolant section of this Operator's Manual.

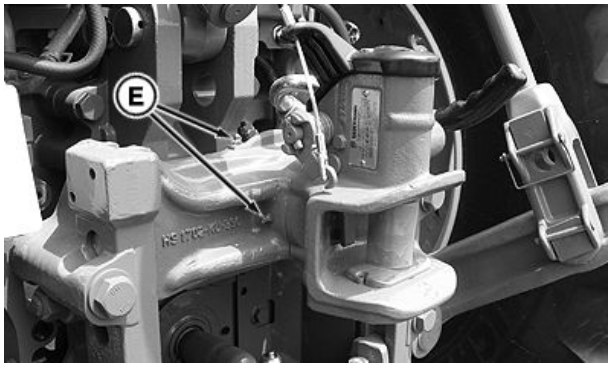
A—Large Diameter
B—Small Diameter
C—Receiver Hole Diameter
D—Wear Plate Thickness
E—Grease Fitting



RXA0113614 —UN—07FEB11



RXA0113616 —UN—07FEB11

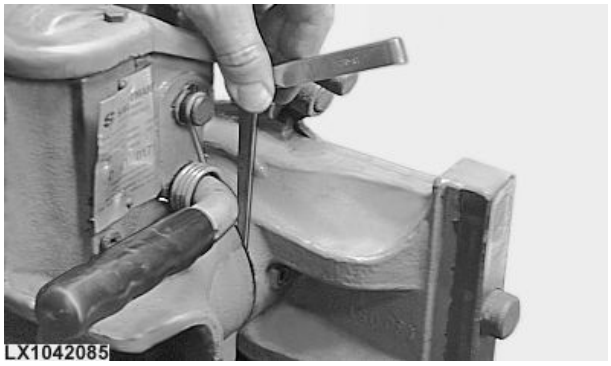


RXA0118760 —UN—21JUL11

Continued on next page
RX32825,000075A -19-19JUN13-1/3

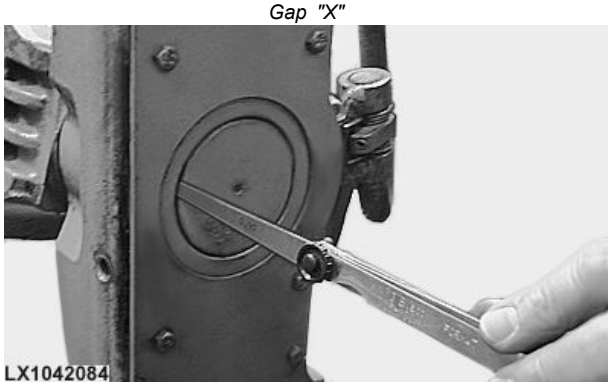
Replace internal retaining wire if gap (X) is greater than 3 mm (0.118 in.).

IMPORTANT: If bearing play (Y) is greater than 1.5 mm (0.059 in.) entire wagon hitch must be replaced with new hitch assembly.



LX1042085 —UN—26FEB07

Gap "X"



LX1042084 —UN—26FEB07

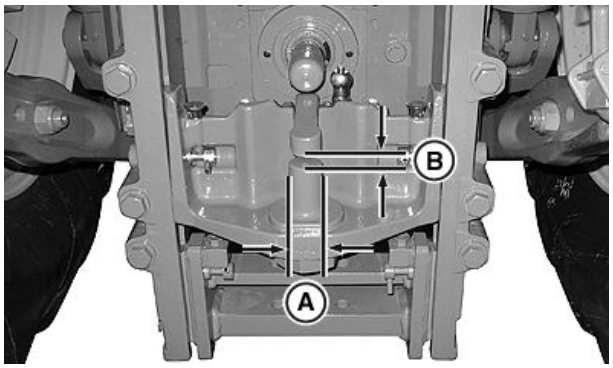
Bearing Play "Y"

RX32825,000075A -19-19JUN13-2/3

Couplings

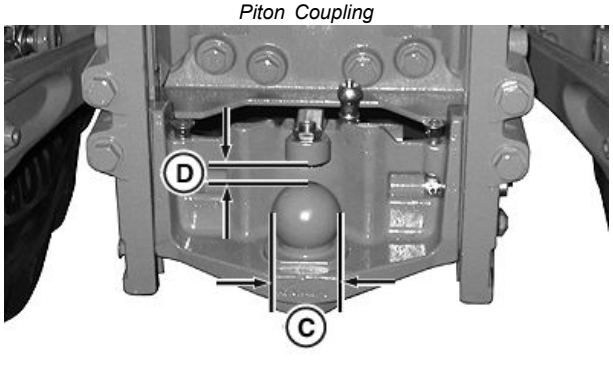
Specifications	
Pin Diameter (A)	10 mm (0.39 in.) Minimum
Gap (B)	41.5 mm (1.63 in.) Maximum
Ball Diameter (C)	4 mm (0.16 in.) Minimum
Gap (D)	78 mm (0.39 in.) Maximum

A—Pin Diameter
B—Gap
C—Ball Diameter
D—Gap



RXA0113618 —UN—07FEB11

Piton Coupling



RXA0113620 —UN—07FEB11

Ball Coupling

RX32825,000075A -19-19JUN13-3/3

Lubricate Pick-Up Hitch and Check for Wear

CAUTION: Parts that have reached or exceeded their wear limit must be replaced with new parts.

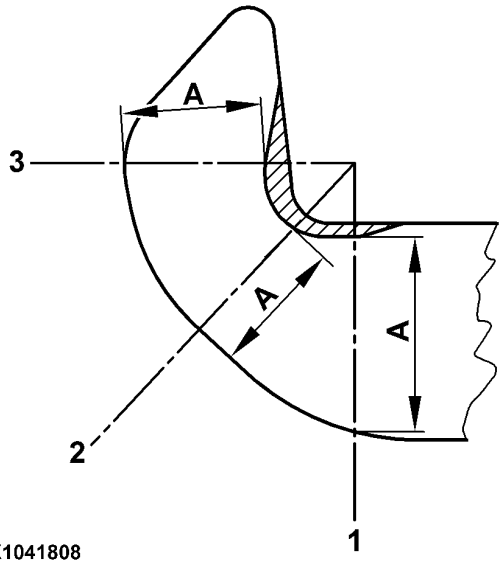
Read ”D”-value (unit of measurement = kN) from pick-up hitch type plate.

If ”D”-value indicated on type plate is 65 or less, observe following wear tolerances (A).

Specification	
Tow hook, diameter (D = 65 or less)—Minimum value (A), diameter 1	43.5 mm 1.71 in.
Tow hook, diameter (D = 65 or less)—Minimum value (A), diameter 2	42.0 mm 1.65 in.
Tow hook, diameter (D = 65 or less)—Minimum value (A), diameter 3	40.5 mm 1.59 in.

If ”D”-value indicated on type plate is greater than 65, observe following wear tolerances (A).

Specification	
Tow hook, diameter (D = more than 65)—Minimum value (A), diameter 1	45.0 mm 1.77 in.
Tow hook, diameter (D = more than 65)—Minimum value (A), diameter 2	43.5 mm 1.71 in.
Tow hook, diameter (D = more than 65)—Minimum value (A), diameter 3	42.0 mm 1.65 in.



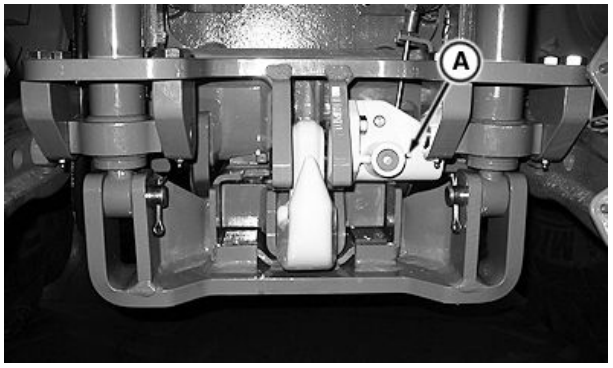
LX1041808

LX1041808 —UN—27NOV06

RX32825,000075B -19-19JUN13-1/4

Lubricate grease fittings (A). Use John Deere™ multi-purpose grease as specified in Grease in Fuel, Lubricants, and Coolant section of this Operator’s Manual.

A— Grease Fitting



RXA0126860 —UN—13JUN12

Continued on next page

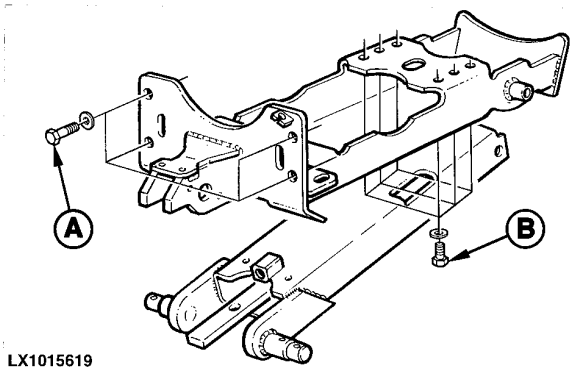
RX32825,000075B -19-19JUN13-2/4

Check Pick-Up Hitch Attaching Screws Torque

Check attaching screw torques:

Tighten cap screws (A) to 450 N·m (330 lb.-ft.).

Tighten cap screws (B) to 265 N·m (190 lb.-ft.).



LX1015619

LX1015619 —UN—08JAN97

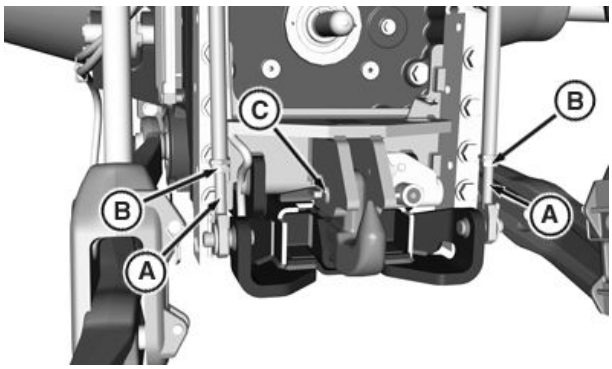
RX32825,000075B -19-19JUN13-3/4

Check Lifting Rods for Proper Adjustment

IMPORTANT: If threaded lifting rods (A) are not adjusted equally, the cross locking pin (C) will not lock in place and become loose.

Make sure that lift rods are adjusted equally. To adjust lift rods, loosen lock nuts (B) and detach rods from drawbar support. Measure and rotate threaded rods (A) in or out for proper cross locking pin (C) alignment. Tighten lock nuts (B) to specification.

Specification	
Lock Nut (B)—Torque	310 N·m 228 lb.-ft.



RXA0126855 —UN—13JUN12

A—Threaded Rod
B—Lock Nut
C—Cross Locking Pin

RX32825,000075B -19-19JUN13-4/4

Perform This and Other Scheduled Services

When scheduled service at any hourly level is performed, also perform all subordinate hourly level services. See Observe Service Intervals in Maintenance and Service Intervals Section of this Operator's Manual for table listing main and subordinate service intervals.

TO84419,0000211 -19-25JUL13-1/1

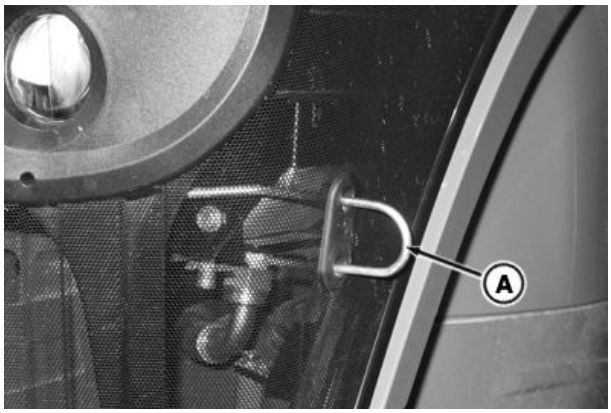
Change Engine Oil and Filter—6.8 L Engine

IMPORTANT: Sulfur content should not exceed 0.10%. Sulfur content less than 0.10% is preferred. See Engine Oil and Filter Service Intervals in Fuel, Lubricants and Coolant section of this Operator's Manual for your engine.

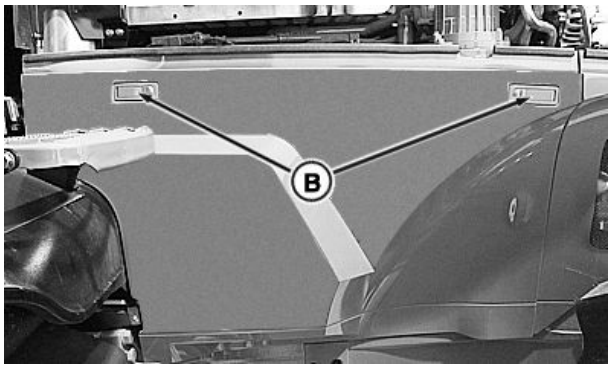
NOTE: Initial break-in service interval of a new or rebuilt wet sleeve engine with Break-In Plus must go at least 100 hours to assure surface mating of rings and liners has had opportunity to occur. 100 hour minimum applies to all new or rebuilt engines. Maximum service interval are the same as service interval recommendations listed in Engine Oil and Filter Service Intervals in Fuel, Lubricants and Coolant section of this Operator's Manual for your engine. To determine which engine your tractor is equipped with, see Record Engine Serial Number in Identification Numbers section of this Operator's Manual.

For subsequent oil changes, see Engine Oil and Filter Service Intervals for your engine located in Fuel, Lubricants, and Coolant Section of this Operator's Manual.

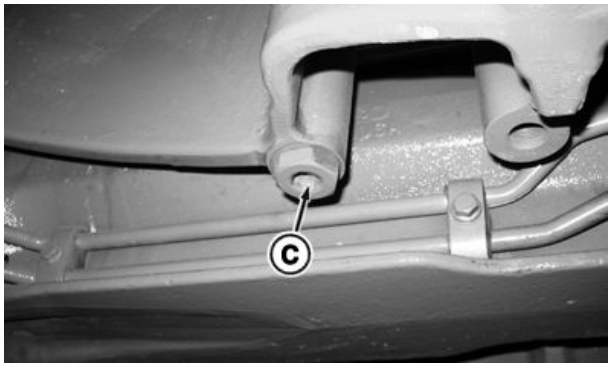
1. Operate engine for approximately 5 minutes to warm oil.
2. Stop engine and remove key.
3. Pull hood release (A) and raise hood.
4. Depress latch buttons (B) to remove right rear side shield.
5. Remove engine access panel.
6. Remove engine fill cap (at dipstick).
7. Put a large catch pan below engine drain plug (C).
8. Remove plug to drain oil while engine is warm.



RXA0133488 —UN—02JUL13



RXA0134208 —UN—29JUL13



RXA0116170 —UN—06MAY11

A—Hood Release
B—Latch Buttons
C—Engine Oil Drain Plug

Continued on next page

TO84419,0000082 -19-22JUN15-1/2

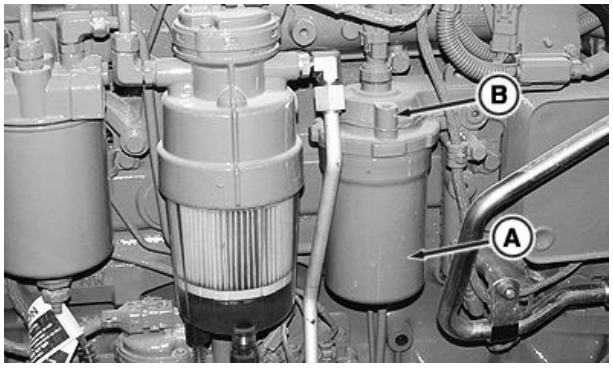
9. Using an oil filter wrench, remove oil filter (A) from oil filter housing (B).
10. Dispose of used oil and oil filter in accordance with local laws and ordinances.
11. Lubricate new filter seal with clean oil.
12. Insert oil filter (A) until gasket contacts oil filter housing (B) surface. Hand tighten additional 1/2 turn.
13. Install drain plug after oil has been drained from crankcase. Tighten to specification.

Specification	
6.8 L Engine Oil Drain Plug—Torque	102 N·m (75 lb.-ft.)

IMPORTANT: Do not overfill engine. Excess oil can cause loss of efficiency.

14. Refill crankcase at engine fill cap with seasonal viscosity grade oil. See Engine Oil in Fuel, Lubricants and Coolant section of this Operator's Manual.

Specification	
6.8 L Crankcase—Capacity	26 L (27.5 qt.)



RXA0134234 —UN—29JUL13

A—Oil Filter **B—Oil Filter Housing**

15. Check for correct oil level using dipstick.
16. Close and secure hood and reinstall right rear side shield.
17. Start engine and check for leaks.
18. Stop engine. Recheck oil level. Add oil if necessary.

TO84419,0000082 -19-22JUN15-2/2

Change Engine Oil and Filter—9.0 L Engine

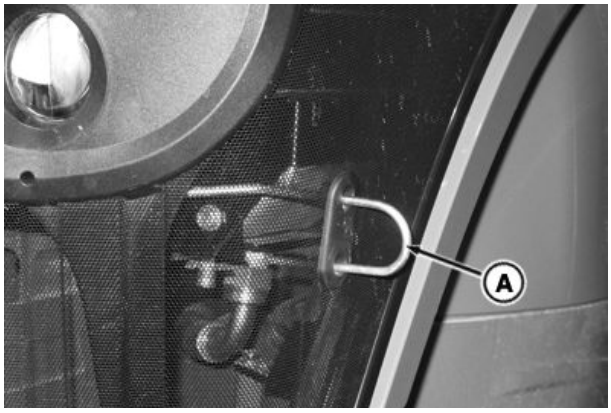
IMPORTANT: Sulfur content should not exceed 0.10%. Sulfur content less than 0.10% is preferred. See Engine Oil and Filter Service Intervals in Fuel, Lubricants and Coolant section of this Operator's Manual for your engine.

NOTE: The initial break-in service interval of a new or rebuilt wet sleeve engine with Break-In Plus must go at least 100 hours to assure the surface mating of the rings and liners has had an opportunity to occur. The 100 hour minimum applies to all new or rebuilt engines. The maximum service interval are the same as the service interval recommendations listed in Engine Oil and Filter Service Intervals in this section of this Operator's Manual for your engine. To determine which engine your tractor is equipped with, see Record Engine Serial Number in Identification Numbers section of this Operator's Manual.

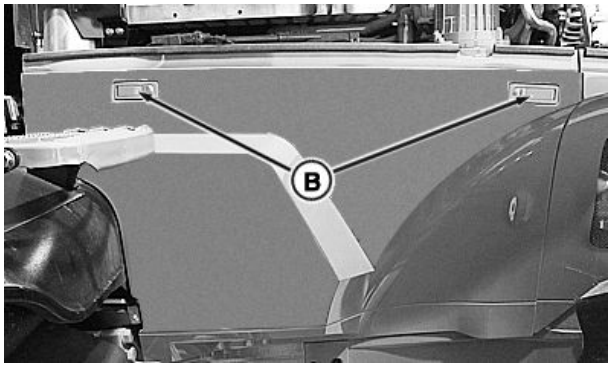
For subsequent oil changes, see Engine Oil and Filter Service Intervals for your engine located in the Fuels, Lubricants, and Coolant Section of this Operator's Manual.

1. Operate engine for approximately 5 minutes to warm oil.
2. Stop engine and remove key.
3. Pull hood release (A) and raise hood.
4. Depress latch buttons (B) to remove right rear side shield.
5. Remove engine access panel.
6. Remove engine fill cap (at dipstick).
7. Put a large catch pan below engine oil drain plug (C).
8. Remove plug to drain oil while engine is warm.

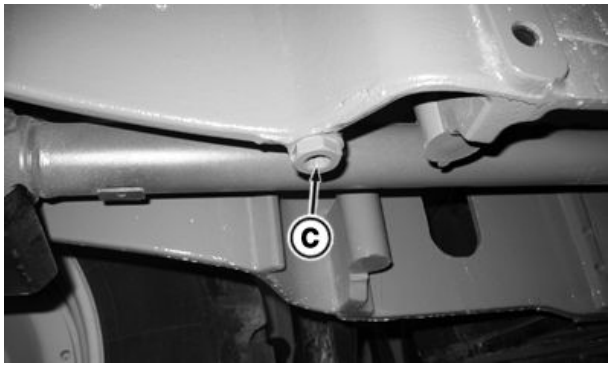
NOTE: Do not remove plug on oil filter housing base. Oil will automatically drain back into crankcase when filter is removed.



RXA0133488 —UN—02JUL13



RXA0134208 —UN—29JUL13



RXA0116168 —UN—06MAY11

A—Hood Release
B—Latch Buttons
C—Engine Oil Drain Plug

Continued on next page

TO84419,0000083 -19-22JUN15-1/2

9. Using a 32 mm wrench, unscrew oil filter cover (A) and lift as shown. Allow filter (B) to drain into crankcase.
10. Remove filter cover with oil filter (B) attached.
11. While holding cover (A), strike filter (B) against solid surface to remove filter. Discard used filter in accordance with local laws and ordinances.
12. Remove old O-ring, and replace with new O-ring provided with new filter element.
13. Press new filter (B) into cover (A) until it snaps into place.
14. Insert filter (B) and cover (A) into oil filter housing (C). Tighten cover to specification.

Specification

Oil Filter Cover—Torque..... 40 N·m (30 lb.-ft.)

15. Install drain plug after oil has been drained from crankcase. Tighten to specification.

Specification

9.0 L Engine Oil Drain Plug—Torque..... 102 N·m (75 lb.-ft.)

16. Dispose of used oil and oil filter in accordance with local laws and ordinances.

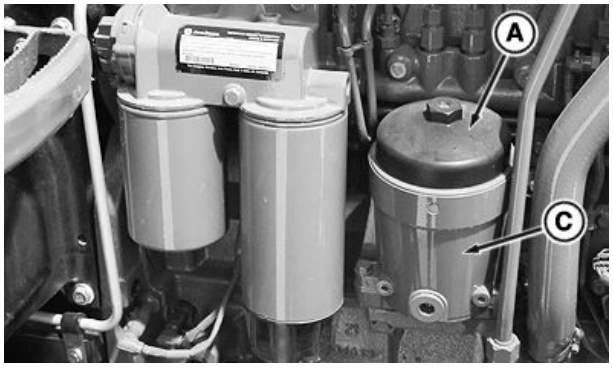
IMPORTANT: Do not overfill engine. Excess oil can cause loss of efficiency.

17. Refill crankcase with seasonal viscosity grade oil. See Engine Oil in Fuel, Lubricants and Coolant section of this Operator's Manual.

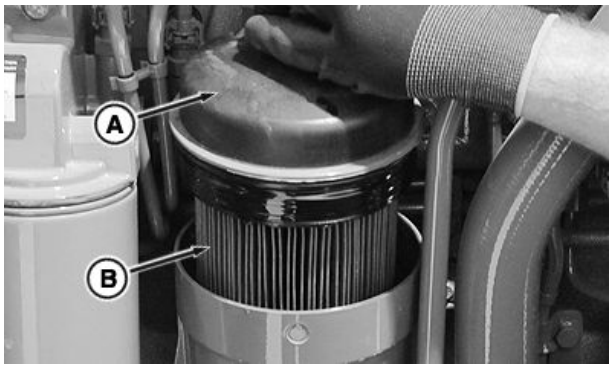
Specification

9.0 L Crankcase—Capacity.....23 L (24.3 qt)

18. Check for correct oil level using dipstick.
19. Close and secure hood and reinstall right rear side shield.
20. Start engine and check for leaks.
21. Stop engine. Recheck oil level. Add oil if necessary.



RXA0134210 —UN—25JUL13



RXA0134209 —UN—25JUL13

Removing Engine Oil Filter From Housing



RXA0136207 —UN—24OCT13

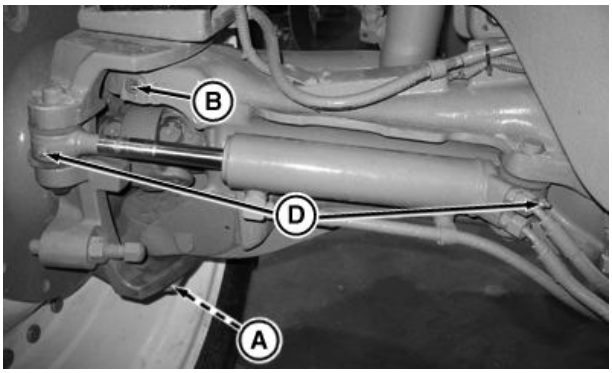
Removing Engine Oil Filter From Cover

A—Oil Filter Cover
B—Oil Filter
C—Oil Filter Housing

TO84419,0000083 -19-22JUN15-2/2

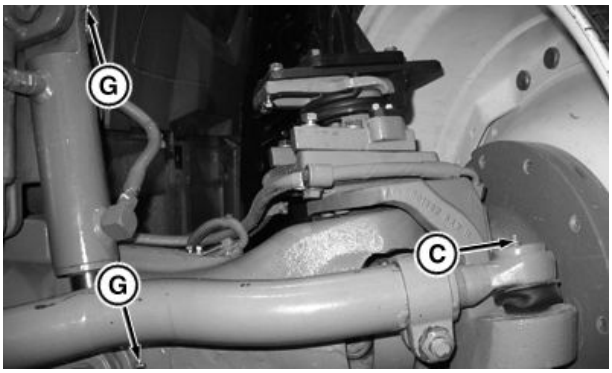
Lubricate MFWD or TLS™ (If Equipped) Plus Kingpins, Tie Rod Ends, Steering Cylinder, Axle Pivot and Panhard Rod

IMPORTANT: Normal service is every 250 hours. In wet conditions service daily or every 10 hours.



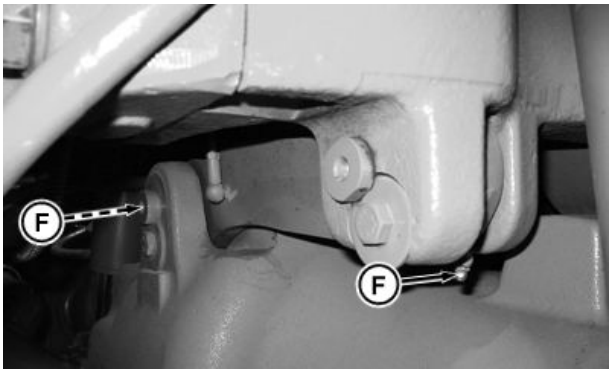
RXA0109431 —UN—16AUG10

Kingpins and Steering Cylinder (Rear of MFWD)



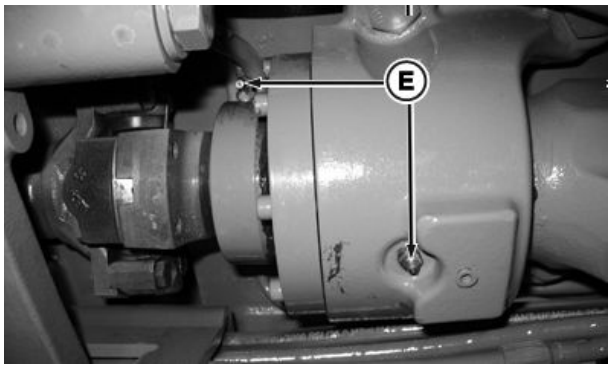
RXA0109440 —UN—16AUG10

Tie Rods and Axle Cylinder (Front of MFWD)



RXA0109442 —UN—16AUG10

Panhard Rod (TLS Plus Only)



RXA0116166 —UN—06MAY11

Axle Pivot (TLS Plus Only)

A—Kingpin Fittings, Bottom
B—Kingpin Fittings, Top
C—Tie Rod End Fittings
D—Steering Cylinder Fittings
E—Axle Pivot Fittings (TLS Plus Only)
F—Panhard Rod Fittings (TLS Plus Only)
G—MFWD Axle Cylinder Fittings (TLS Plus Only)

Use John Deere SD Polyurea grease or other grease as specified in Fuel, Lubricants, and Coolant section of this Operator's Manual.

Kingpins—Lubricate fittings (A and B) until grease appears at orifice on bottom end of each kingpin bearing.

Tie Rods—Lubricate fittings (C).

Steering Cylinder—Lubricate fittings (D).

Axle Pivot—Lubricate front and rear fittings (E) (TLS Plus Only).

Panhard Rod —Lubricate left and right fittings (F) (TLS Plus Only).

Axle Cylinder—Lubricate top and bottom fittings (G) (TLS Plus Only).

NOTE: All fittings, except for axle pivot (E) and Panhard rod (F), are the same for the left and right sides.

RX32825,0000705 -19-02APR13-1/1

Lubricate MFWD or TLS™ Plus (If Equipped) U-Joints

IMPORTANT: Normal service is every 250 hours. If used in extremely wet conditions service daily or every 10 hours.

Use John Deere™ SD Polyurea grease or other grease as specified in Fuel, Lubricants, and Coolant section of this Operator's Manual.

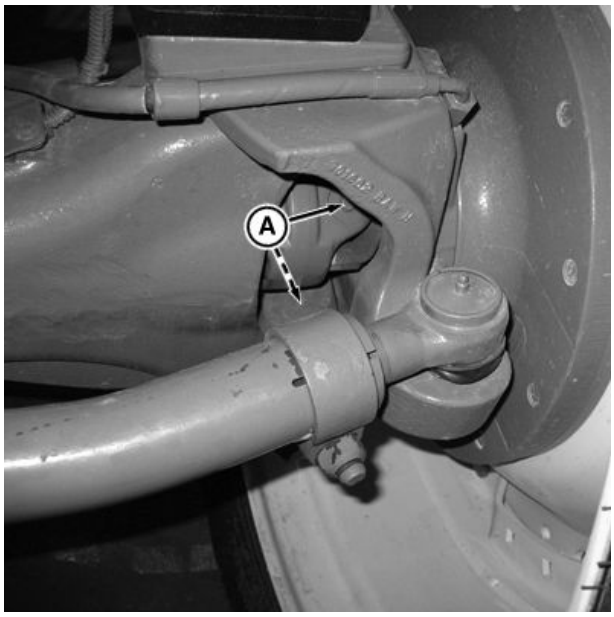
Drilled passages in the U-joint allow grease to reach all four bearings from a single grease fitting.

For normal operations, U-joints are sealed and not permanently equipped with grease fittings. To lubricate proceed as follows:

1. Replace plugs with M10 thread 90° grease fittings. See your John Deere ™ dealer for correct part.
2. Apply grease to both U-joints at lubrication points (A).

Specification	
Plug—Torque	0.904 N·m (8 lb.-in.)

A—Lubrication Points



RXA0109446 —UN—16AUG10

Hub U-joint Lubrication Points

John Deere is a trademark of Deere & Company

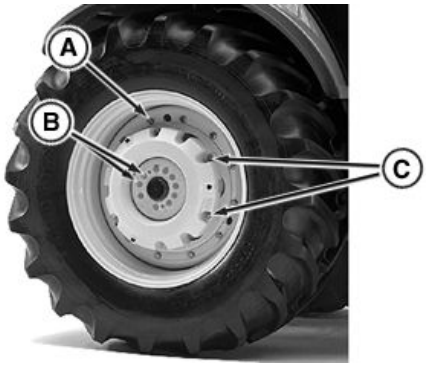
TO84419,0000094 -19-27JUN14-1/1

Tighten Wheel and Wheel Weight Bolts

CAUTION: Avoid the possibility of personal injury. Never operate tractor with loose wheel or wheel weight bolts. Failure to follow torquing procedure may result in personal injury. Wheel and wheel weight bolts are critical and require repeated torquing to assure secure tightness.

IMPORTANT: Failure to follow correct tightening procedure could result in equipment damage.

Tighten front and rear wheel bolts (A), hub bolts (B) and wheel weight bolts (C) using appropriate torquing procedures described below.



RXA0098559 —UN—16JUN08

A—Rim to Wheel Bolts
B—Hub Bolts
C—Weight Bolts

RX32825,0000735 -19-09JAN13-1/1

Use Wheel Tightening Stand

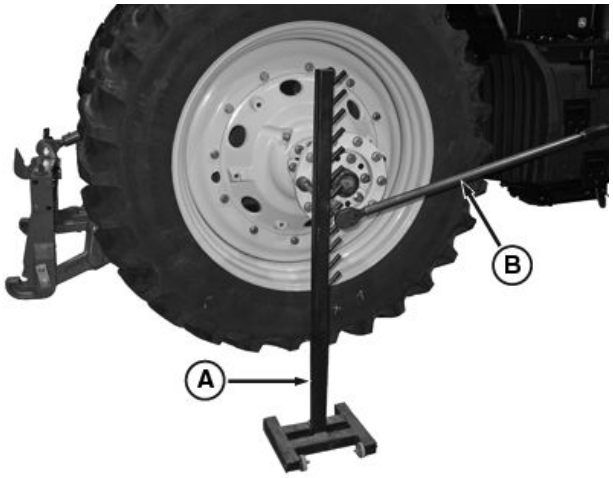
Wheel tightening stand (A) may be used to aid in tightening wheel and wheel weight hardware.

Stand will support torque wrench (B) and extension when tightening bolts at different heights.

See your John Deere™ dealer for information on purchasing or fabricating stand.

A—Wheel Tightening Stand (DFR219 or JDG10741)

B—Torque Wrench



RXA0113539 —UN—11FEB11

John Deere is a trademark of Deere & Company

RX32825,0000736 -19-25JUN13-1/1

Use Wheel Torque Wrench Adapter

Install JDG679 Torque Wrench Adapter (A) [32 mm (3/4 in.) drive] to allow easy access to sleeve bolts on inner cast wheels with outside duals in place. See your John Deere™ dealer.

Install adapter at **90° angle** from torque wrench shaft to assure correct torque specification.

Specification

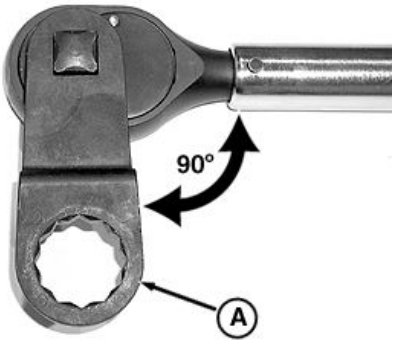
Cast Wheel Cap Screws—Torque ..... 610 N·m (450 lb-ft)

When unable to use adapter at 90° angle from torque wrench shaft, use formula to calculate correct torque wrench setting (Tw) to obtain desired final torque on bolts.

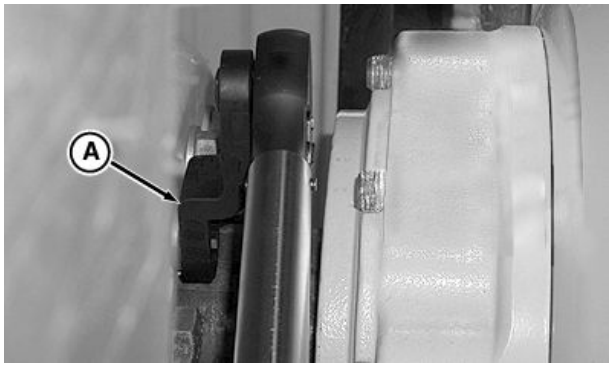
Tw	=	Torque setting on torque wrench
Ta	=	Torque actually being applied to bolt
L	=	Length from point of force (center of the wrench handle) to center of head of torque wrench
A	=	Application distance from center of torque wrench head to center of adapter [95 mm (3.75 in.)]

Example: Torque wrench length = 0.91 m (36 in.), wrench adapter = 0.1 m (4 in.), Value Tw for torque wrench setting is 549 N·m (405 lb-ft).

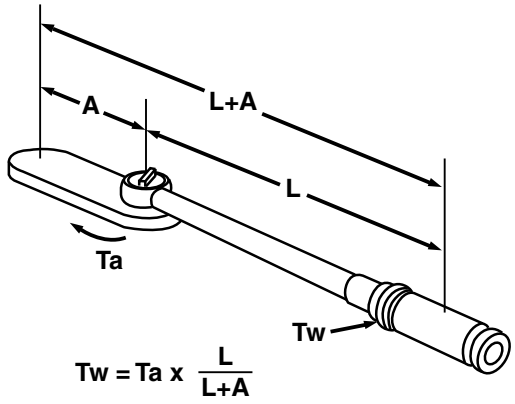
A—JDG679 Torque Wrench Adapter



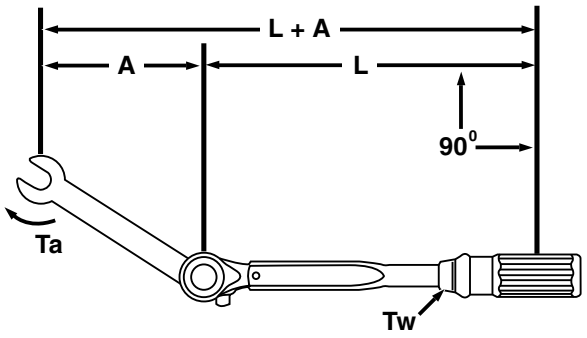
RXA0086802 —UN—15FEB06



RXA0086804 —UN—15FEB06



RXA0061214 —UN—19JUN02



RXA0062101 —UN—15AUG02

John Deere is a trademark of Deere & Company

GH15097,000049F -19-24APR13-1/1

Tighten Rear Wheel Weight Bolts

CAUTION: Avoid the possibility of personal injury. Never operate tractor with loose wheel weight bolts. Failure to follow torquing procedure may result in personal injury. Wheel weight bolts are critical and require repeated torquing to assure secure tightness.

IMPORTANT: Failure to follow tightening procedure could result in equipment damage.

Tighten all wheel weight bolts (A) until bolts maintain torque according to specifications.

Wheel Weight Attaching Bolts—Specification

M16 Bolt—Torque	310 N·m (230 lb.-ft.)
M20 Bolt—Torque	610 N·m (450 lb.-ft.)

Drive tractor approximately 100 m (100 yd.). Then check bolt torque and retighten until bolts maintain torque specification.

IMPORTANT: Keep wheel weight bolts tightened to specification. If tractor is operated with loose bolts, damage to equipment may occur.



RXA0130316 —UN—15JAN13

Retighten bolts after working **3 HOURS**, again after **10 HOURS** and **DAILY** for first week of operation or until bolts **do not** move when retorqued.

TO84419,000004D -19-16AUG13-1/1

Tighten Front Wheel Bolts

CAUTION: Avoid the possibility of personal injury. Never operate tractor with loose wheel bolts. Failure to follow torquing procedure may result in personal injury. Wheel bolts are critical to operation and require repeated torquing to assure secure tightness.

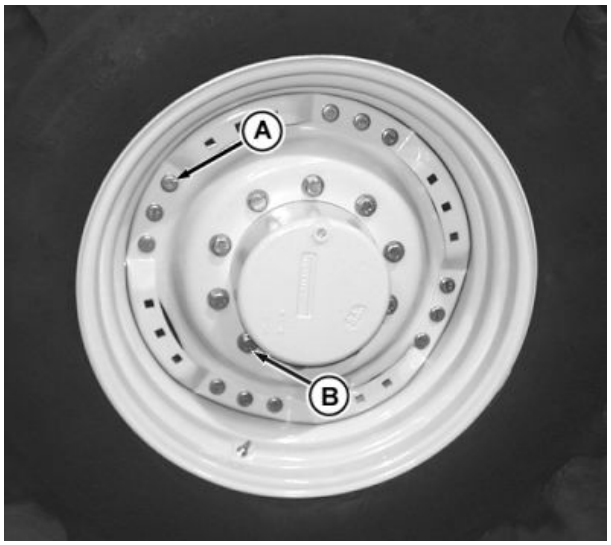
IMPORTANT: Failure to follow tightening procedure could result in equipment damage.

Tighten all wheel disk to rim (A) and wheel disk to hub (B) (eight-position and two-position wheels) bolts until bolts maintain torque according to specifications.

Front Wheel Bolts—Specification

Wheel Disk to Rim Bolts - 8-Position Wheel (M16 Hardware)—Torque	300 N·m (225 lb.-ft.)
Wheel Disk to Hub Bolts—Torque	600 N·m (445 lb.-ft.)

Drive tractor approximately 100 m (100 yd.). Then check bolt torque and retighten until bolts maintain torque specification.



RXA0130317 —UN—15JAN13

IMPORTANT: Keep wheel bolts tightened to specification. If tractor is operated with loose bolts, damage to equipment may occur.

Retighten bolts after working **3 HOURS**, again after **10 HOURS** and **DAILY** for first week of operation or until bolts **do not** move when retorqued.

TO84419,000004E -19-16AUG13-1/1

Tighten Rear Drive Wheel to Cast Hub Bolts

CAUTION: Avoid the possibility of personal injury. Never operate tractor with loose wheel bolts. Failure to follow torquing procedure may result in personal injury. Wheel bolts are critical to operation and require repeated torquing to assure secure tightness.

IMPORTANT: Failure to follow tightening procedure could result in equipment damage.

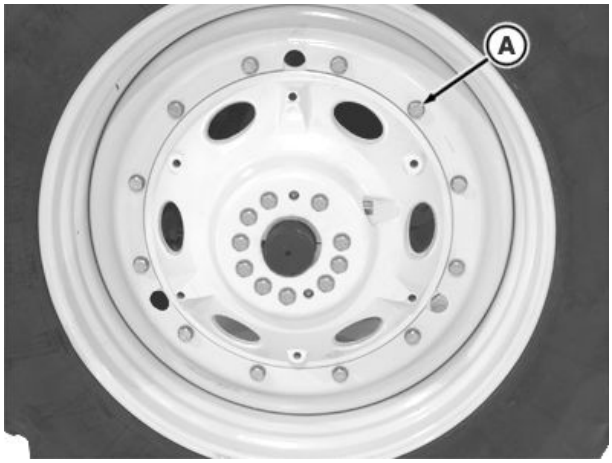
Tighten all wheel to hub bolts (A) until bolts maintain torque according to specifications.

Wheel to Hub Bolts—Specification

Wheel to Hub Bolts—Torque.....600 N·m (445 lb.-ft.)

Drive tractor approximately 100 m (100 yd.). Then check bolt torque and retighten until bolts maintain torque specification.

IMPORTANT: Keep wheel bolts tightened to specification. If tractor is operated with loose bolts, damage to equipment may occur.



RXA0130486 —UN—15JAN13

Heavy Duty Cast 10-Bolt Hub Shown

Retighten bolts after working **3 HOURS**, again after **10 HOURS** and **DAILY** for first week of operation or until bolts **do not** move when retorqued.

TO84419,000004F -19-16AUG13-1/1

Tighten Rear Steel Wheel to Hub Bolts

CAUTION: Avoid the possibility of personal injury. Never operate tractor with loose wheel bolts. Failure to follow torquing procedure may result in personal injury. Wheel bolts are critical to operation and require repeated torquing to assure secure tightness.

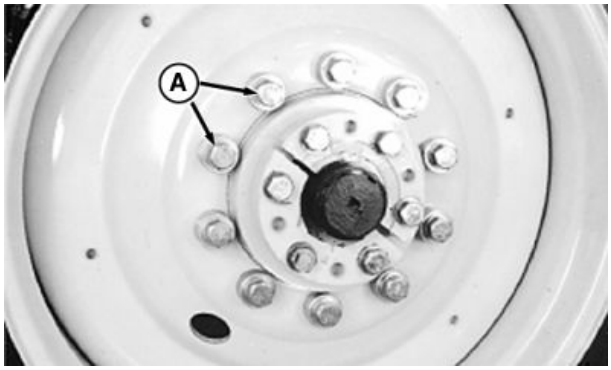
IMPORTANT: Failure to follow tightening procedure could result in equipment damage.

Tighten all wheel to hub bolts (A) until bolts maintain torque according to specifications.

Wheel to Hub Bolts—Specification

Wheel to Hub Bolts—Torque.....600 N·m (445 lb.-ft.)

Drive tractor approximately 100 m (100 yd.). Then check bolt torque and retighten until bolts maintain final torque specification.



RXA0084448 —UN—05OCT05

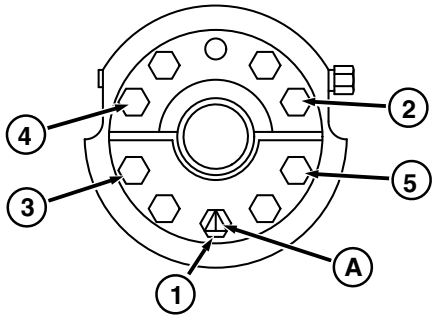
Standard Hub Shown

IMPORTANT: Keep wheel bolts tightened to specification. If tractor is operated with loose bolts, damage to equipment may occur.

Retighten bolts after working **3 HOURS**, again after **10 HOURS** and **DAILY** for first week of operation or until bolts **do not** move when retorqued.

TO84419,0000050 -19-16AUG13-1/1

Tighten Rear Steel Wheels—Cast Hub Bolts



RXA0130319 —UN—15JAN13

CAUTION: Avoid the possibility of personal injury. Never operate tractor with loose wheel bolts. Failure to follow procedure may result in personal injury. Wheel bolts are critical to operation and require repeated torquing to assure secure tightness.

IMPORTANT: Some bolts may loosen as sleeve is tightened. Repeat torquing sequence until ALL sleeve bolts maintain proper torque. Failure to follow procedure could result in damage to equipment.

Tighten five hub sleeve bolts (1-5) to initial torque specifications in sequence shown beginning with center cap screw (A) in lower sleeve.

Tighten bolts to secondary torque specifications using same tightening sequence.

Drive tractor approximately 100 m (100 yd.). Then tighten bolts to final torque specification until bolts maintain torque specified.

Wheel Hub Sleeve Bolts—Specification

Initial—Torque	204 N·m (150 lb.-ft.)
Secondary—Torque	410 N·m (300 lb.-ft.)
Final—Torque	600 N·m (445 lb.-ft.)

IMPORTANT: Keep wheel bolts tightened to specification. If tractor is operated with loose bolts, damage to equipment may occur.

Retighten bolts after working **3 HOURS**, again after **10 HOURS** and **DAILY** for first week of operation or until bolts **do not** move when retorqued.

TO84419,0000051 -19-16AUG13-1/1

Tighten Rear Wheel Bolts—Heavy-Duty Cast 10-Bolt Hubs

CAUTION: Avoid the possibility of personal injury. Never operate tractor with loose wheel bolts. Failure to follow procedure may result in personal injury. Wheel bolts are critical to operation and require repeated torquing to assure secure tightness.

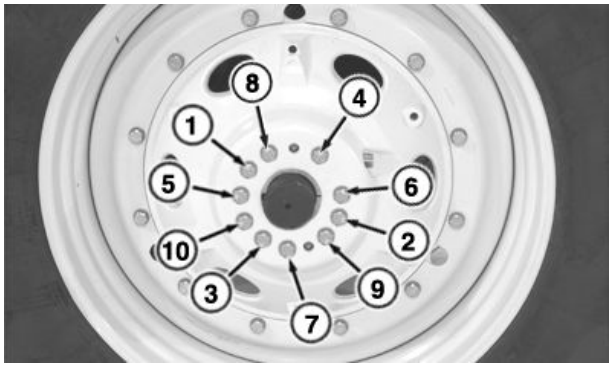
IMPORTANT: Some bolts may loosen as sleeve is tightened. Repeat torquing sequence until ALL bolts maintain proper torque. Failure to follow procedure could result in damage to equipment.

Tighten wheel to hub bolts (1-10) to initial torque specifications - in numerical sequence shown - until torque is maintained.

Tighten bolts to final torque specifications - in numerical sequence - until torque is maintained.

Wheel to Hub Bolts—Specification

Initial—Torque	400 N·m (300 lb.-ft.)
Final—Torque	610 N·m (450 lb.-ft.)



RXA0130320 —UN—15JAN13

Heavy Duty Cast Drive Hub Shown

Drive tractor approximately 100 m (100 yd.). Using numerical sequence, check bolt torque and retighten until final torque specification is maintained.

IMPORTANT: Keep wheel bolts tightened to specification. If tractor is operated with loose bolts, damage to equipment may occur.

Retighten bolts after working **3 HOURS**, again after **10 HOURS** and **DAILY** for first week of operation or until bolts **do not** move when retorqued.

TO84419,0000052 -19-16AUG13-1/1

Tighten Rear Wheel Bolts—Heavy-Duty 12-Bolt Hubs

CAUTION: Avoid the possibility of personal injury. Never operate tractor with loose wheel bolts. Failure to follow procedure may result in personal injury. Wheel bolts are critical to operation and require repeated torquing to assure secure tightness.

IMPORTANT: Some bolts may loosen as sleeve is tightened. Repeat torquing sequence until ALL bolts maintain proper torque. Numbers indicating proper torquing sequences are cast into wheel hub. Failure to follow procedure could result in damage to equipment.

Tighten wheel to hub bolts (1-12) to initial torque specifications in numerical sequence shown until torque is maintained.

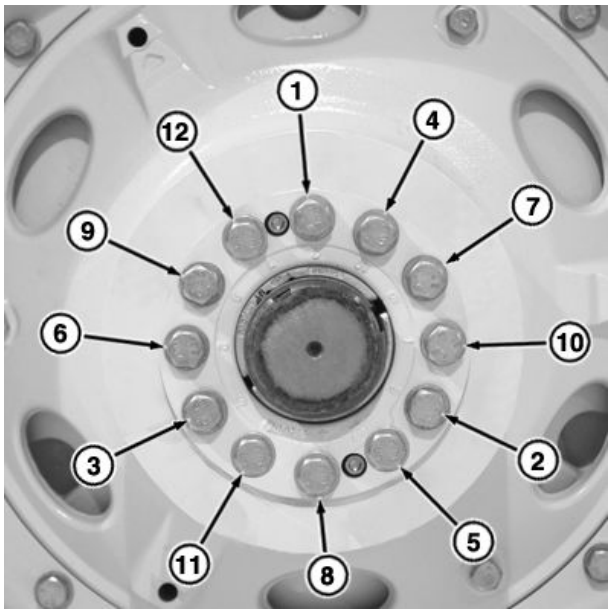
Tighten bolts to final torque specifications - in numerical sequence - until torque is maintained.

Wheel to Hub Bolts—Specification

Initial Torque—Torque	405 N·m (300 lb.-ft.)
Final Torque—Torque	(450 lb.-ft.)

Drive tractor unloaded in a large **figure-8** pattern a minimum of four times and retighten bolts - in numerical order - until bolts maintain final torque specification.

IMPORTANT: Keep wheel bolts tightened to specification. If tractor is operated with loose bolts, damage to equipment may occur.



RXA0090157 —UN—08AUG06

12-Bolt Heavy-Duty Drive Wheel

Retighten bolts after working **3 HOURS**, again after **10 HOURS** and **DAILY** for first week of operation or until bolts **do not** move when retorqued.

TO84419,0000053 -19-16AUG13-1/1

Clean Dual Beam Radar Sensor (If Equipped)

IMPORTANT: Inspect radar sensor horns for dirt or debris build up, which may affect accuracy performance. Service may be required more often in some operating conditions.

Avoid use of high pressure washer nozzle pointed directly at radar.

Avoid damage to radar and wiring harness when using sharp tools to remove dirt or packed mud around radar unit.

Dual beam radar sensor is located on bottom of transmission.

Check radar sensor (A) for damage.

Clean radar sensor with warm water and mild soap. Dry with clean soft cloth.



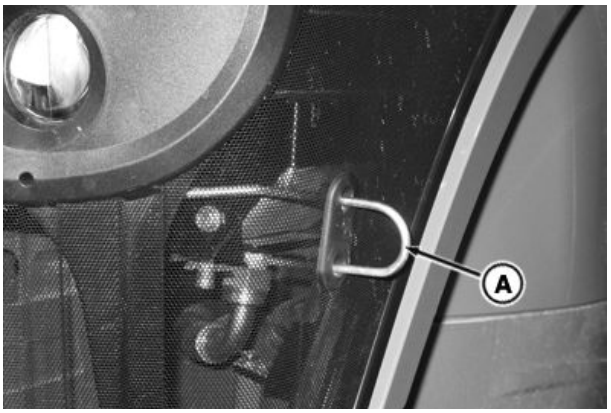
RXA0133518 —UN—09JUL13

Dual Beam Radar, CommandQuad™ Transmission Shown

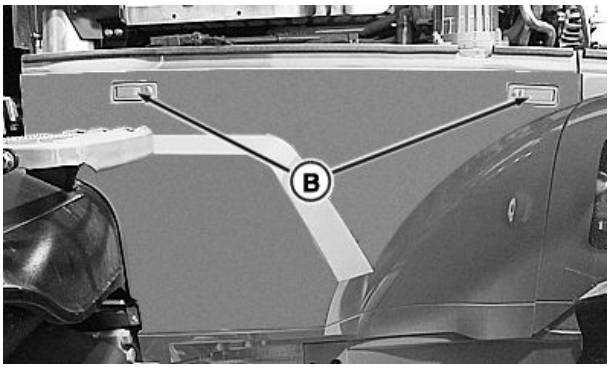
A—Radar Sensor

RX32825,0000715 -19-30AUG13-1/1

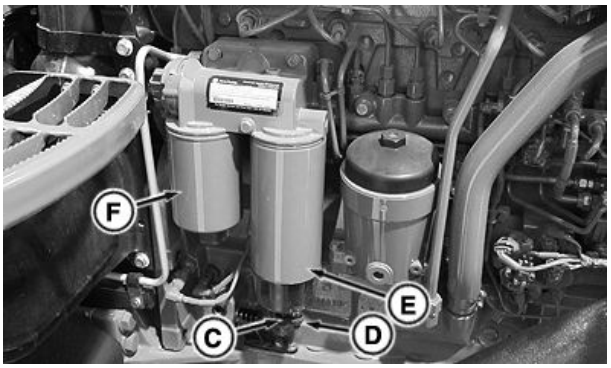
Replace Fuel Filters



RXA0133488 —UN—02JUL13

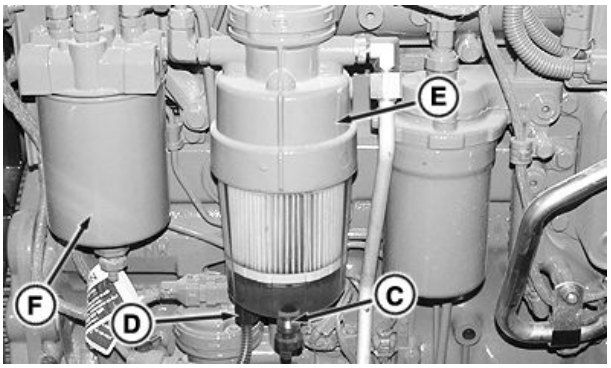


RXA0134208 —UN—29JUL13



RXA0134211 —UN—25JUL13

Remove Fuel Filter—9.0 L Engine



RXA0134233 —UN—29JUL13

Remove Fuel Filter—6.8 L Engine

A—Hood Release
B—Latch Buttons
C—Drain Valve
D—Water In Fuel Sensor Connector
E—Primary Filter
F—Secondary Filter

⚠ CAUTION: Always shut off engine and remove key before performing maintenance work on fuel filter.

IMPORTANT: To determine which engine your tractor is equipped with, see Record Engine Serial Number in Identification Numbers section of this Operator's Manual.

NOTE: Service may be required more often under some conditions.

1. Pull hood release (A) and raise hood.
2. Depress latch buttons (B) to remove right rear side shield.
3. Pull top of shield outward and lift shield from brackets on frame.
4. Clean exterior of filter and mounting area.
5. Remove Water In Fuel sensor connector (D).

NOTE: Use a catch pan when draining fuel and removing filter from tractor.

6. Open drain valve (C) and drain fuel.
7. Remove primary (E) and secondary (F) filters and discard.
8. Dispose of drained fuel used filters in accordance with local laws and ordinances.

IMPORTANT: Do NOT prefill either fuel filter with fuel.

9. Lubricate gasket for primary fuel filter with fuel, and install canister onto base. Tighten 3/4 turn after packing contacts base.
10. Lubricate primary fuel filter water separator gasket with fuel and install onto filter canister. Tighten 3/4 of a full turn after gasket contacts the base.
11. Lubricate gasket for secondary fuel filter with fuel, and install filter onto base. Tighten 3/4 of a turn after packing contacts base.
12. Connect Water In Fuel sensor connector.
13. Close and secure hood and reinstall side shield.

Continued on next page

TO84419,00001EA -19-29JUL13-1/2

IMPORTANT: Key must be turned to ON position for 3 minutes before starting engine to provide time to prefill fuel filters. Fuel system is self-bleeding.

Do not try to start engine until 3 minute time elapses or an air lock in the fuel system may occur.

14. Turn key to ON position for 3 minutes to allow transfer pump to prefill fuel filters
15. Start and run engine at fast idle for at least 2 minutes.

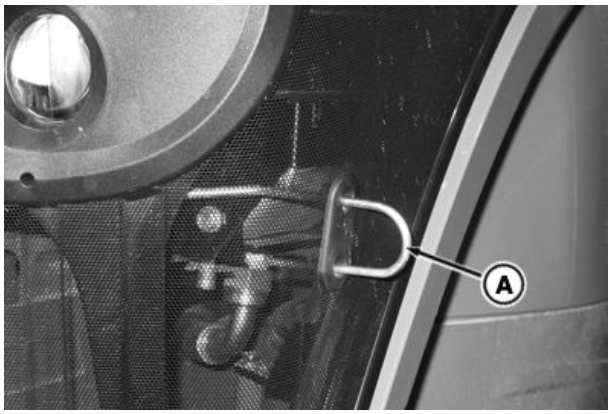
TO84419,00001EA -19-29JUL13-2/2

Inspect Engine Air Intake System—6.8 L Engine

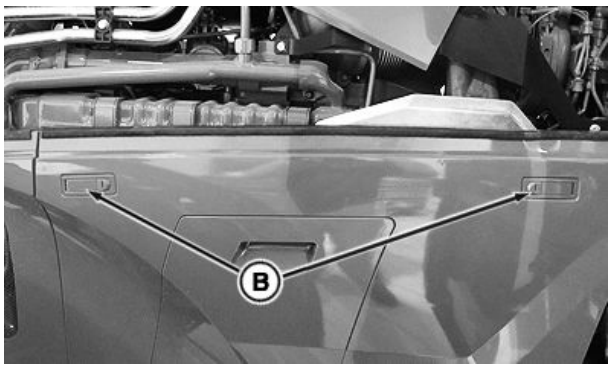
IMPORTANT: To determine which engine your tractor is equipped with, see Record Engine Serial Number in Identification Numbers section of this Operator's Manual.

1. Pull hood release (A) and raise hood.
2. Depress latch buttons (B) to remove left rear side shield.
3. Remove battery compartment cover.
4. Tighten hose clamp (C) after air filter.

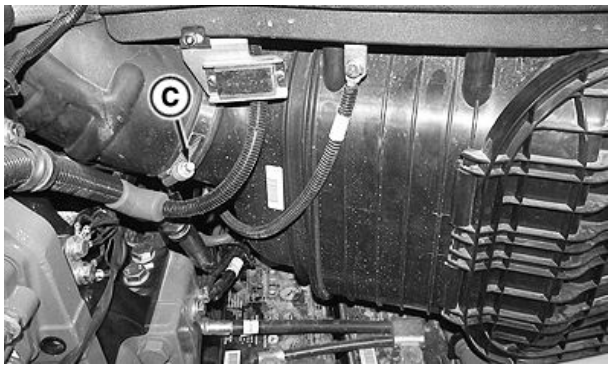
A—Hood Release
B—Latch Buttons
C—Clamp After Air Filter



RXA0133488 —UN—02JUL13



RXA0134193 —UN—25JUL13



RXA0134212 —UN—25JUL13

Hose Clamp After Air Filter (Left Side of Engine)

Continued on next page

TO84419,00001EB -19-15JAN15-1/2

5. Tighten hose clamps before (D) and after (E) first turbocharger.
6. Tighten hose clamps before (F) and after (G) second turbocharger.
7. Tighten hose clamps (H) before and after (I) intercooler.

Specification

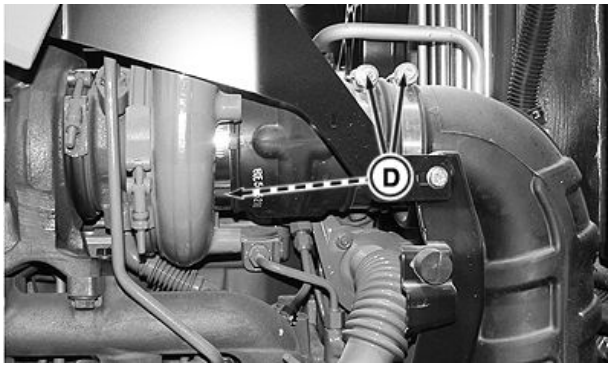
Clamp After Second Turbocharger (G)—Torque ..... 20 N·m (178 lb.-in.)

Specification

All Other Clamps (C, D, E, F, H, I)—Torque ..... 10 N·m (88 lb.-in.)

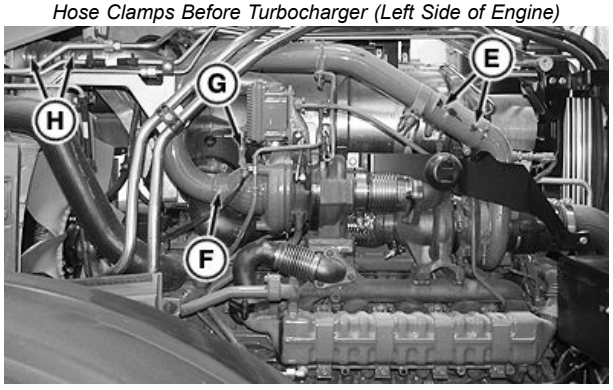
8. Close and secure hood and reinstall side shields.

D—Clamps Before First Turbocharger
E—Clamps After First Turbocharger
F—Clamp Before Second Turbocharger
G—Clamp After Second Turbocharger
H—Clamps Before Intercooler
I— Clamps After Intercooler



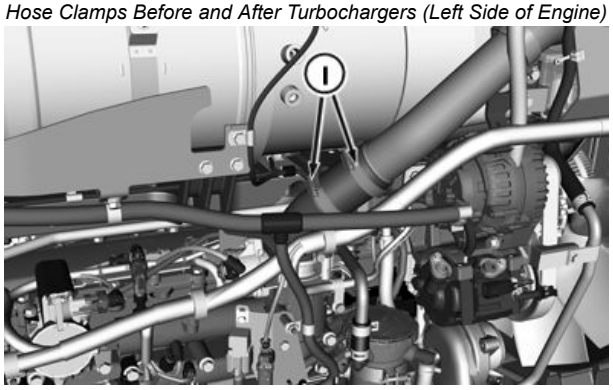
RXA0134237 —UN—30JUL13

Hose Clamps Before Turbocharger (Left Side of Engine)



RXA0134252 —UN—31JUL13

Hose Clamps Before and After Turbochargers (Left Side of Engine)



RXA0135223 —UN—23AUG13

Hose Clamps After Intercooler (Right Side of Engine)

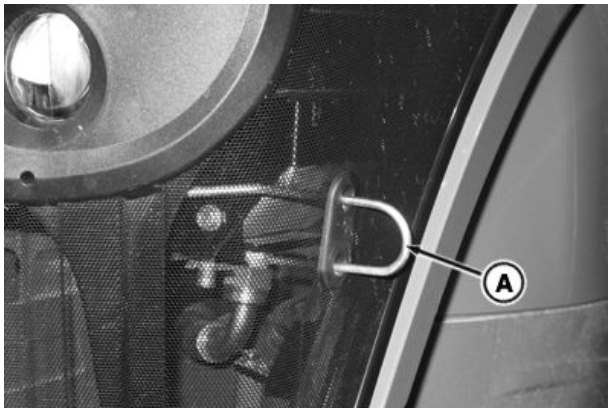
TO84419,00001EB -19-15JAN15-2/2

Inspect Engine Air Intake System - 9.0 L Engine

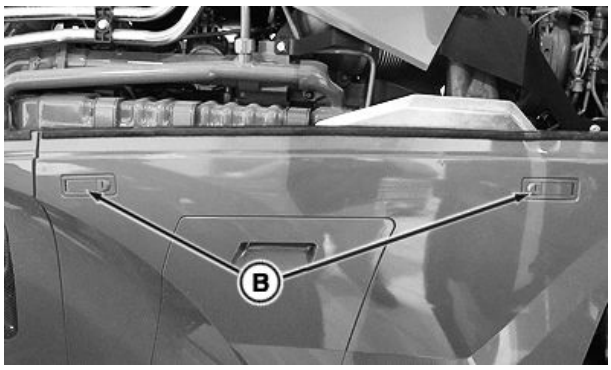
IMPORTANT: To determine which engine your tractor is equipped with, see Record Engine Serial Number in Identification Numbers section of this Operator's Manual.

1. Pull hood release (A) and raise hood.
2. Depress latch buttons (B) to remove left rear side shield.
3. Remove battery compartment cover.
4. Tighten hose clamp (C) after air filter.

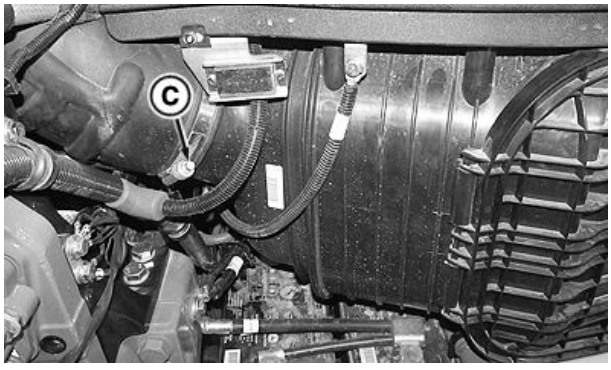
A—Hood Release
B—Latch Buttons
C—Clamp After Air Filter



RXA0133488 —UN—02JUL13



RXA0134193 —UN—25JUL13



RXA0134212 —UN—25JUL13

Hose Clamp After Air Filter (Left Side of Engine)

Continued on next page

TO84419,00001EC -19-26JUL13-1/2

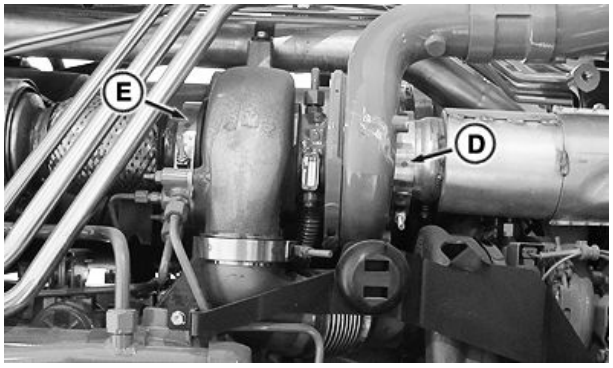
5. Tighten hose clamps before (D) and after (E) turbocharger.
6. Tighten hose clamps before (F) and after (G) intercooler (H).

Specification	
Clamp Before Turbocharger (D)—Torque	20 N·m (178 lb-in.)

Specification	
All Other Clamps (C, E, F, G)—Torque	10 N·m (88 lb-in.)

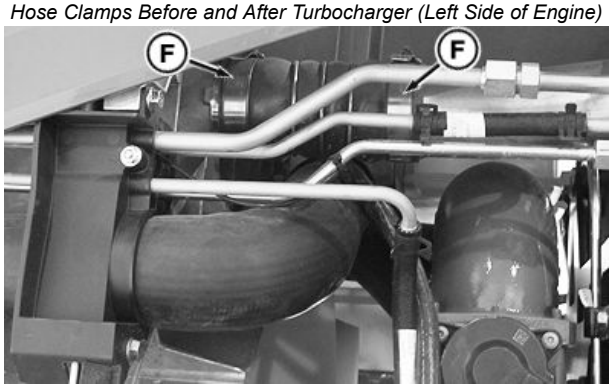
7. Close and secure hood and reinstall side shields.

D—Clamp Before Turbocharger
E—Clamps After Turbocharger
F—Clamps Before Intercooler
G—Clamps After Intercooler
H—Intercooler



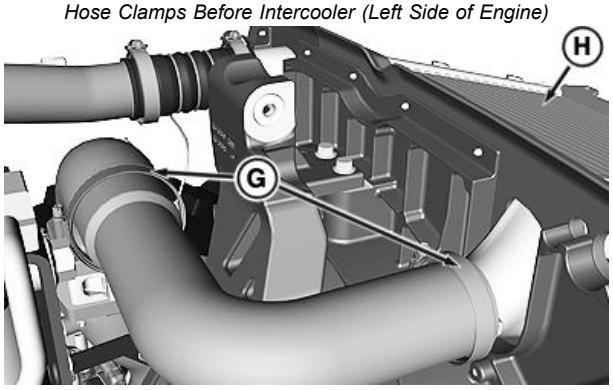
RXA0134214 —UN—25JUL13

Hose Clamps Before and After Turbocharger (Left Side of Engine)



RXA0134213 —UN—25JUL13

Hose Clamps Before Intercooler (Left Side of Engine)



RXA0134227 —UN—29JUL13

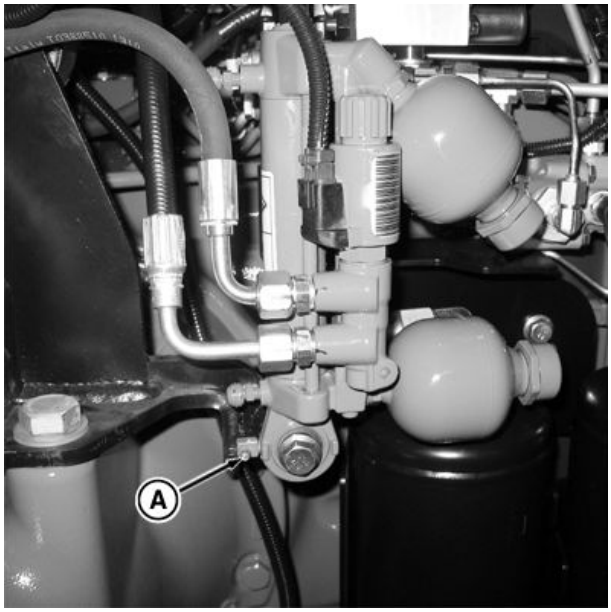
Hose Clamps After Intercooler (Right Side of Engine)

TO84419,00001EC -19-26JUL13-2/2

Lubricate Cab Suspension System (If Equipped)

Lubricate grease fittings (A) with several strokes of grease gun. Use John Deere multi-purpose grease as specified in Fuel, Lubricants, and Coolant section.

A—Grease Fitting



RXA0112398 —UN—04JAN11

TO84419,00001EE -19-25JUL13-1/1

Back Flush Optional Fuel Water Separator (If Equipped)

IMPORTANT: Back flush optional fuel water separator whenever bowl is half full of water or when diagnostic trouble code appears. If, after flushing, trouble code is still displayed, wash filter element. See Service Optional Fuel Water Separator Filter Element in this section of this Operator's Manual. If code persists, change both fuel filters.

1. Shut off engine.
2. Close fuel shut-off valve (A).
3. Open bleed screw (B) on top of water separator cover. Allow water and dirt to be released from filter element and settle in bottom of bowl.

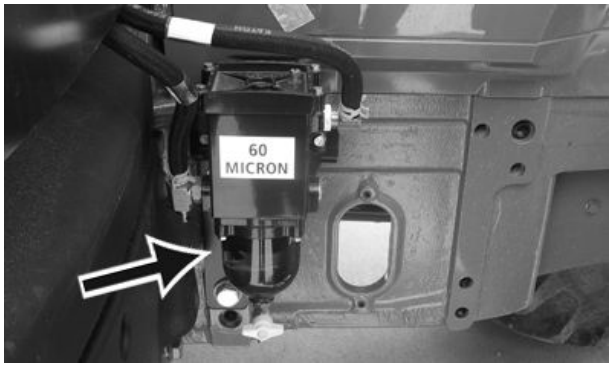
NOTE: Drain fuel into appropriate container and dispose of properly.

As fuel, water, and dirt is drained from bowl in step 4, more water and dirt may be flushed from filter element and collect in bottom of bowl.

4. Push IN on drain valve (C) and turn COUNTERCLOCKWISE to drain water and dirt from bowl.
5. Close drain valve (C) and allow water and dirt to settle again.
6. When all dirt and water have been drained, proceed to step 7.
7. Close bleed screw (B) and open fuel shut-off valve (A).
8. Start and run engine at high idle for at least 2 minutes. If engine will not start or dies, see Replace Fuel Filters in this section of this Operator's Manual.

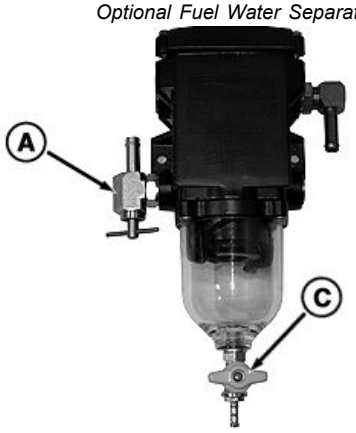
NOTE: Filter element in water separator can be back flushed up to five times before being cleaned.

A—Fuel Shut-Off Valve
B—Bleed Screw
C—Drain Valve



RXA0133505 —UN—03JUL13

Optional Fuel Water Separator



RXA0084314 —UN—26SEP05



RXA0084316 —UN—26SEP05

RX32825,0000713 -19-24APR15-1/1

Service Optional Fuel Water Separator Filter Element (If Equipped)

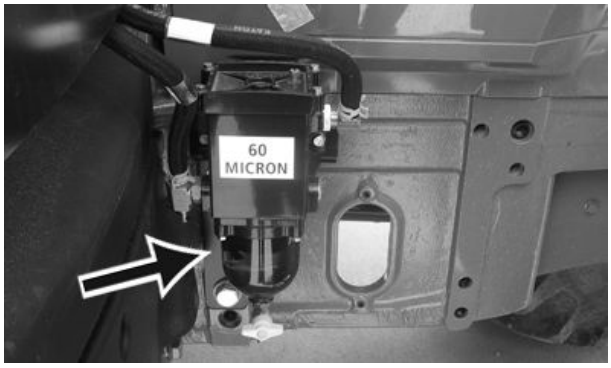
IMPORTANT: Clean filter element after each fifth back flushing of water separator assembly. Filter element can be cleaned as often as necessary for an indefinite number of times. Replace element if damaged or if cleaning becomes impossible.

1. Shut off engine.
2. Close fuel shut-off valve (A).

NOTE: Drain fuel into appropriate container and dispose of properly.

3. Open drain valve and drain fuel from bowl.
4. Loosen lid cap screws evenly in sequence shown.

A—Fuel Shut-Off Valve



RXA0133505 —UN—03JUL13

Optional Fuel Water Separator



RXA0084318 —UN—26SEP05



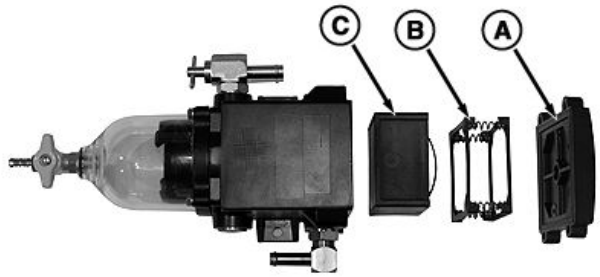
RXA0084320 —UN—26SEP05

Continued on next page

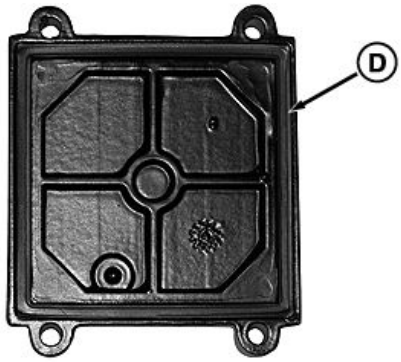
RX32825,0000712 -19-23APR15-1/2

5. Remove lid (A), spring cassette (B). Lift filter element (C) from housing using attached handle.
6. Wash filter element in clean diesel fuel or mineral spirits.
7. Carefully inspect filter element for damage. If damaged, or if filter cannot be cleaned, replace filter element.
8. Install cleaned or new filter element and spring cassette.
9. Inspect lid gasket (D) condition and replace if necessary.
10. Install lid (A) and tighten cap screws in sequence shown.
11. Open fuel shut-off valve.
12. Start and run engine at high idle for at least 2 minutes. If engine will not start or dies, see Replace Fuel Filters in this section of this Operator's Manual.
13. Shut off engine and check for fuel leaks.

A—Lid
B—Spring Cassette
C—Filter Element
D—Lid Gasket



RXA0084322 —UN—26SEP05



RXA0084324 —UN—26SEP05



RXA0084320 —UN—26SEP05

Lid Cap Screw Tightening Sequence

RX32825,0000712 -19-23APR15-2/2

Perform This and Other Scheduled Services

When scheduled service at any hourly level is performed, also perform all subordinate hourly level services. See Observe Service Intervals in Maintenance and Service Intervals Section of this Operator's Manual for table listing main and subordinate service intervals.

TO84419,0000211 -19-25JUL13-1/1

Cab Classification According to EN 15695-1 (for Application of Crop Protection Chemicals and Liquid Fertilizer) (2010-52-EU)

Cab classification according to EN 15695-1 provides information on the effectiveness of protection against harmful substances offered by the cab.

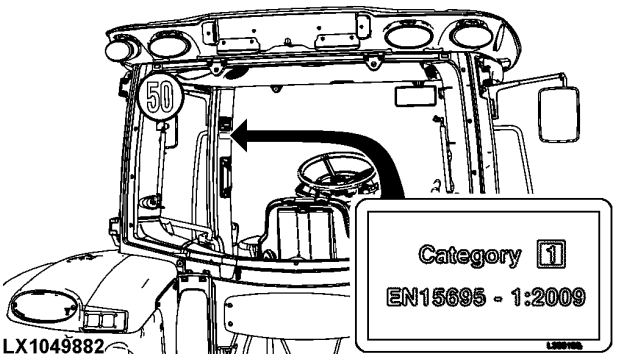
Categories 1 to 4 are used for classification and specified on a label inside the cab.

Replace label if missing or damaged. See your John Deere dealer.

A — Category 1 - The cab does not offer any protection against substances which are harmful to health.
B — Category 2 - The cab offers protection against solid airborne particles such as dust, but not against aerosols and vapors.
C — Category 3 - The cab offers protection against dust and aerosols (liquid airborne substances such as spray), but not against vapors.
D — Category 4 - The cab offers protection against dust, aerosols and vapors.

CAUTION: Before working in an environment containing hazardous substances, i.e. when using pesticides, check whether the cab offers sufficient protection. Refer to the product data sheets of the spraying liquid manufacturer specifying the category required for the cab.

CAUTION: In case of category 3 and 4 cabs, find out whether the installed filters have been checked according to EN 15695-2:2009 and whether they are suitable for the chemical being used (refer to the manufacturer's information) before working in an environment containing hazardous substances.



LX1049882 —UN—12APR11

Label Shown for Illustration Purposes Only (May Not Indicate the Category of the Cab Installed)

CAUTION: The cab air filters must be serviced as specified. See Section "Lubrication and Periodic Service" or "Service - As Required" and "Service - Once a Year" in this Operator's Manual.

CAUTION: Refer to product data sheets and product identification of the crop protection chemicals. These contain important information on how to avoid hazards.

The following requirements must be met to offer best protection:

1. All seals (on door, windows and roof) in good condition
2. Doors, windows and roof closed
3. Grommets for cables in the cab sealed properly
4. Fan ON
5. Cab air filters in good condition

RD47322,000020F -19-26APR13-1/1

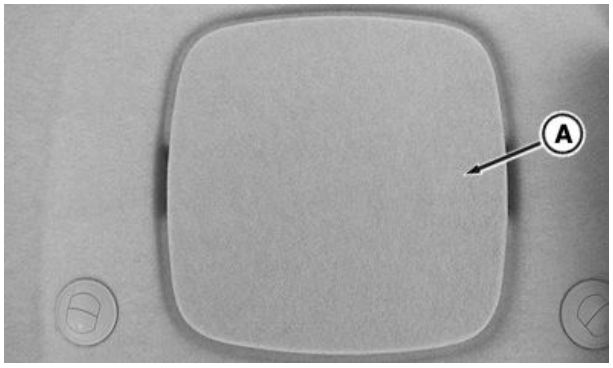
Replace Cab Recirculation Air Filter

CAUTION: Cab air filters are not designed to filter out harmful chemicals. Follow instructions in implement Operator's Manual and those given by chemical manufacturer when using agricultural chemicals.

IMPORTANT: Replacement interval can vary according to operating conditions. Normal service is 1000 hours or annually, whichever occurs first.

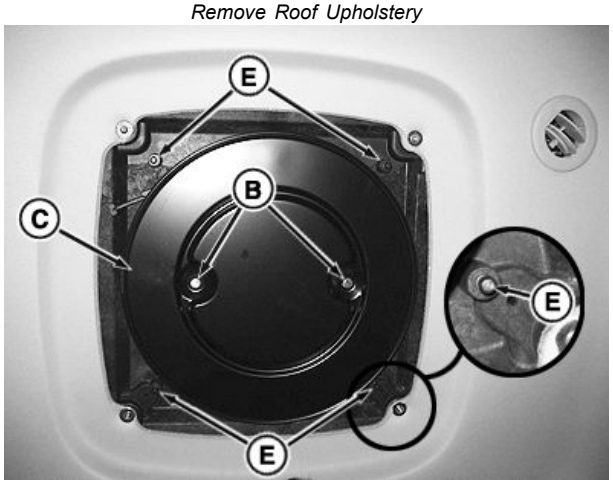
1. Close entry door to prevent debris getting into cab.
2. Remove upholstery cover (A) in headliner by grasping outer edges and pulling down.
3. While holding cover (C) in place with one hand, remove fasteners (B) allowing cover to be lowered.
4. Using a clean cloth, wipe down inside and outside of filter cover.
5. Remove and discard old recirculation filter (D).
6. Install new filter.
7. Install cover (C) and tighten fasteners (B).
8. Install upholstery cover by lining up ball studs (E) with clip nuts (F) and firmly push up.

A—Upholstery Cover
B—Fasteners
C—Cover
D—Filter
E—Ball Studs
F—Clip Nuts



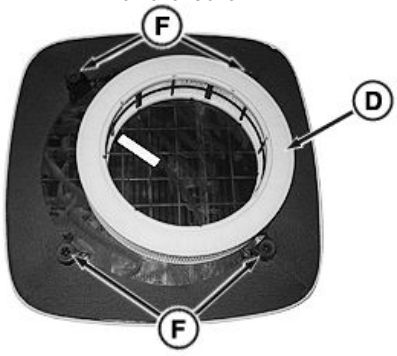
RXA0134243 —UN—31JUL13

Remove Roof Upholstery



RXA0100957 —UN—17MAR09

Remove Cover



RXA0100959 —UN—17MAR09

Remove Filter

TO84419,0000087 -19-27JAN15-1/1

Replace Cab Fresh Air Filter

CAUTION: Cab air filters are not designed to filter out harmful chemicals. Follow instructions in implement Operator's Manual and those given by chemical manufacturer when using agricultural chemicals.

IMPORTANT: Replacement interval can vary according to operating conditions. Normal service is 1000 hours or annually, whichever occurs first.

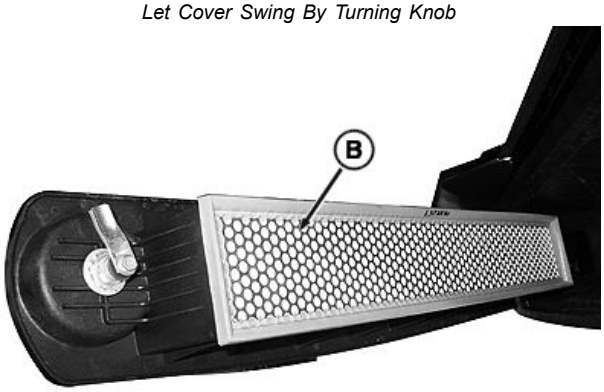
1. Support cover, then turn knob allowing cover (A) to swing down.
2. Remove and discard old fresh air filter (B).
3. Using a clean cloth, wipe down inside and outside of filter cover.

A—Cover **B—Air Filter**



RXA0099137 —UN—19SEP08

Let Cover Swing By Turning Knob



RXA0099139 —UN—19SEP08

Remove Filter



RXA0099699 —UN—04NOV08

Continued on next page

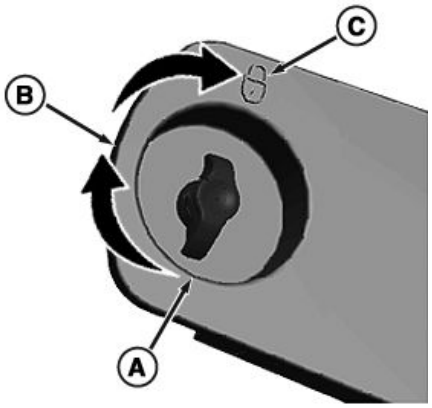
TO84419,0000088 -19-15JUL15-1/2

4. Install new filter.

NOTE: Filter cover latch has three positions; open (A), latched (B) and locked (C).

5. Close cover and turn knob 180° to securely lock latch.

A—Open Position
B—Latched Position
C—Locked Position



RXA0099848 —UN—26NOV08

Air Filter Cover

TO84419,0000088 -19-15JUL15-2/2

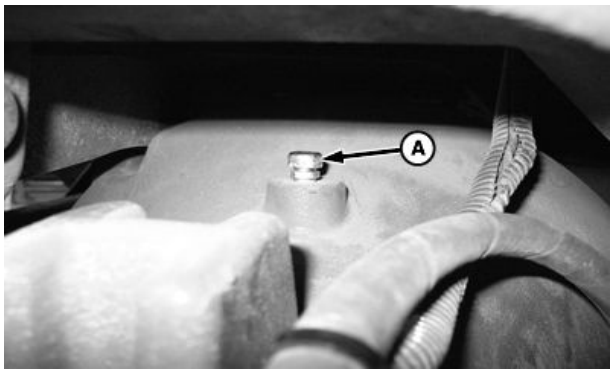
Clean MFWD or TLS™ Plus (If Equipped) Axle Vent Filter

IMPORTANT: Allowing excess dirt and foreign material to build up in vent filter may cause damage to axle seals.

NOTE: If vent filter is packed with dirt, soak in solvent before blowing air through breather vent.

Remove axle vent filter (A). Clean by blowing air through vent filter (bottom to top).

A—MFWD or TLS™ Plus (If Equipped) Axle Vent Filter



RXA0109503 —UN—19AUG10

TLS is a trademark of Deere & Company

TO84419,00001F5 -19-02APR13-1/1

Test Coolant Freeze Point

IMPORTANT: Perform coolant service every 1000 hours or annually, whichever comes first. See Test Coolant Freeze Point in Annual Service section of this Operator's Manual.

RX32825,0000708 -19-06AUG14-1/1

Check TLS™ Plus Accumulator Charge Pressure (If Equipped)

IMPORTANT: Perform service every 1000 hours or annually, whichever comes first.

Contact your John Deere™ dealer for all TLS™ Plus accumulator charge pressure service.

John Deere is a trademark of Deere & Company
TLS is a trademark of Deere & Company

RX32825,000071A -19-15JUL15-1/1

Check Cab Suspension Accumulator Charge Pressure (If Equipped)

IMPORTANT: Check cab suspension accumulator charge pressure every 1000 hours or annually, whichever comes first.

Have your John Deere™ dealer check cab suspension accumulator charge pressure.

John Deere is a trademark of Deere & Company

RX32825,0000709 -19-18DEC12-1/1

Handling Batteries Safely

Battery gas can explode. Keep sparks and flames away from batteries. Use a flashlight to check battery electrolyte level.

Never check battery charge by placing a metal object across the posts. Use a voltmeter or hydrometer.

Always remove grounded (-) battery clamp first and replace grounded clamp last.

Sulfuric acid in battery electrolyte is poisonous and strong enough to burn skin, eat holes in clothing, and cause blindness if splashed into eyes.

Avoid hazards by:

- Filling batteries in a well-ventilated area
- Wearing eye protection and rubber gloves
- Avoiding use of air pressure to clean batteries
- Avoiding breathing fumes when electrolyte is added
- Avoiding spilling or dripping electrolyte
- Using correct battery booster or charger procedure.

If acid is spilled on skin or in eyes:

1. Flush skin with water.
2. Apply baking soda or lime to help neutralize the acid.
3. Flush eyes with water for 15—30 minutes. Get medical attention immediately.

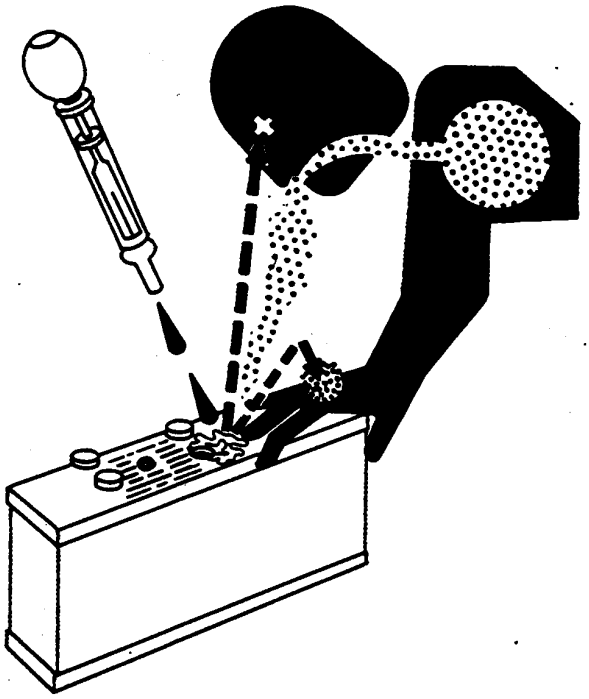
If acid is swallowed:

1. Do not induce vomiting.
2. Drink large amounts of water or milk, but do not exceed 2 L (2 qt.).
3. Get medical attention immediately.

WARNING: Battery posts, terminals, and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm. **Wash hands after handling.**



TS204 —UN—15APR13

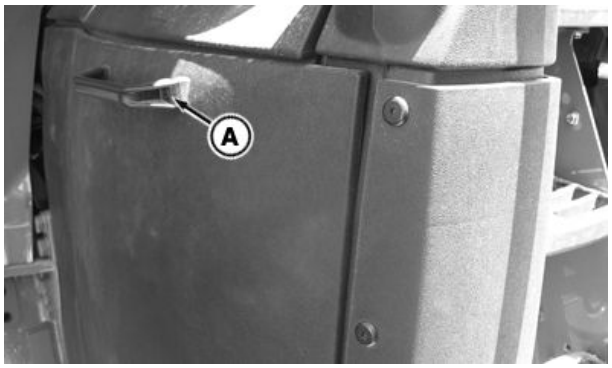


TS203 —UN—23AUG88

DX,WW,BATTERIES -19-02DEC10-1/1

Service Batteries and Connections





RXA0086786 —UN—14FEB06

RXA0133316 —UN—25JUN13

A—Battery Compartment Cover Handle

NOTE: Although this battery is a maintenance free battery, conditions such as long periods of operation at high ambient temperatures and excessive engine cranking may require adding water. See label on battery.

CAUTION: Never use compressed air to clean batteries. It can cause a buildup of static charge leading to potential injury.

Battery gas can explode. Keep sparks and flames away from batteries. Use a flashlight to check battery electrolyte level.

Never check battery charge by placing a metal object across posts. Use a voltmeter or hydrometer.

Always remove battery ground cables before positive battery cables and connect them last. Do not let disconnected ground terminal touch metal surface.

WARNING: Battery posts, terminals, and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm. **Wash hands after handling.**

CAUTION: Avoid contact with poisonous sulfuric acid in battery electrolyte. Battery acid can burn skin, damage clothing, and cause blindness if splashed into eyes.

NOTE: For optimum battery performance, keep battery terminals clean and tight.

For replacement batteries, follow manufacturer's recommendations.

1. Grasp handle (A) and pull forward and upward to remove battery compartment cover. Strong magnets hold cover in place.

IMPORTANT: (Final Tier 4 and Stage IV Engines only. To determine which engine your tractor is equipped with, see Record Engine Serial Number in Identification Numbers section of this Operator's Manual.) Do not disconnect battery until Selective Catalyst Reduction (SCR) system has had enough time to automatically purge system of Diesel Exhaust Fluid (DEF) . If adequate time is not allowed for system to be purged, any DEF remaining can crystallize and plug system. At temperatures below -15°C (5°F), unpurged DEF will freeze and damage system components. If equipped with a battery disconnect system, a light on the DEF tank flashes while auto-purge is in progress. It shuts off when complete and safe to disconnect the battery.

If tractor is not equipped with battery disconnect switch, wait at least 4 minutes after tractor stops before disconnecting battery.

2. **Disconnect negative battery cables, then positive battery cables.**
3. Remove any corrosion with a terminal brush, then clean terminals and battery posts using a baking soda and water solution.
4. Rinse with clean water and air dry.
5. If batteries have been removed for service, slide batteries back into compartment. Install battery retaining clamp.
6. Connect positive battery terminals, then connect negative battery terminal.
7. Apply thin coat of grease to cable ends.
8. Replace battery compartment cover. Line up cover supports at bottom of cover and pivot cover into place. Magnets secure cover.

TO84419,00001F9 -19-29JUL14-1/1

Change Engine Oil and Filter

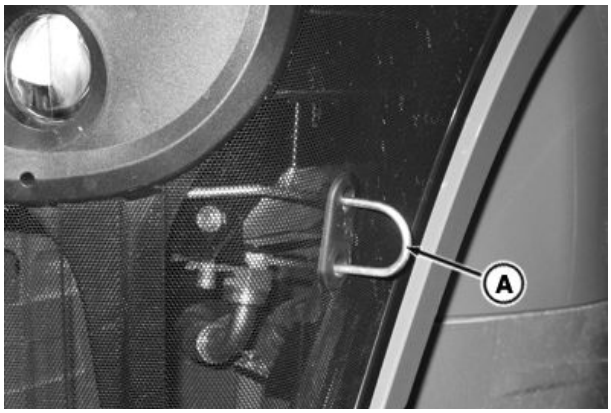
IMPORTANT: Change engine oil and filter at least once every twelve months.

Change oil and oil filter at least once every 12 months even if hours of operation are fewer than otherwise recommended service interval. See Engine Oil and Filter Service Intervals in Fuel, Lubricants and Coolant section of this Operator's Manual.

RX32825,00000EA -19-15OCT13-1/1

Test Coolant Freeze Point





TS281 —UN—15APR13

RXA0133488 —UN—02JUL13

IMPORTANT: Perform coolant service every 1000 hours or annually, whichever comes first.

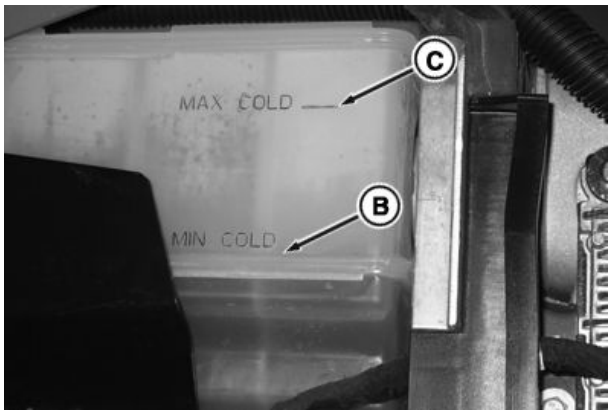
CAUTION: Explosive release of fluids from pressurized cooling system can cause serious burns.

Shut off engine. Only remove cap when cool enough to touch with bare hands. Slowly loosen cap to release pressure before fully removing.

1. Pull hood release (A) and raise hood.

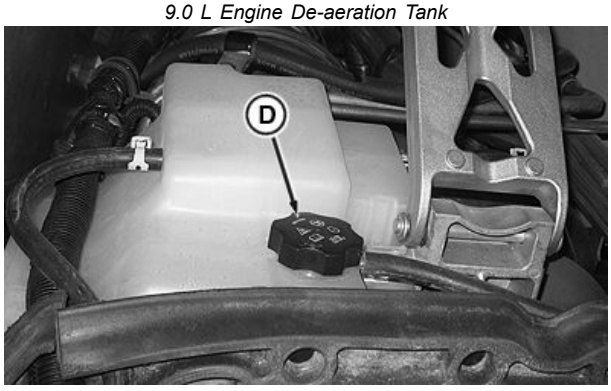
IMPORTANT: Do not open de-aeration tank cap when engine is warm. Doing so will add air to coolant system.

2. Slowly turn de-aeration tank cap (D) to relieve pressure. Remove cap.
3. Test coolant. A more precise test device is available from your John Deere™ dealer, see Testing Coolant Freeze Point in Fuel, Lubricants and Coolant section of this Operator's Manual.
4. Visually check cap O-ring for sealing effectiveness. A correctly sealing O-ring will have imprint of tank neck mating surface with no apparent scratches or leak paths. If O-ring is not sealing correctly, replace cap.
5. Install de-aeration tank cap.
6. Close and secure hood.



RXA0133489 —UN—02JUL13

9.0 L Engine De-aeration Tank



RXA0133490 —UN—02JUL13

9.0 L Engine De-aeration Tank

A—Hood Release
B—Min Cold Line
C—Max Cold Line
D—De-aeration Tank Cap

John Deere is a trademark of Deere & Company

TO84419,000008A -19-28JAN15-1/1

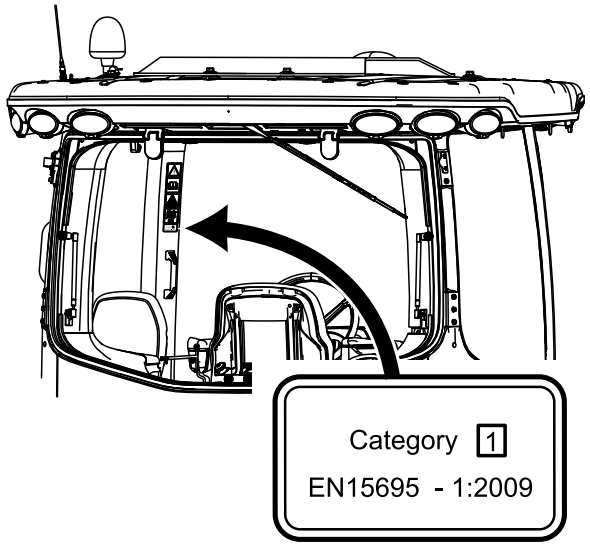
Cab Classification According to EN 15695-1 (for Application of Crop Protection Chemicals and Liquid Fertilizer) (2010-52-EU)

Cab classification according to EN 15695-1 provides information on the effectiveness of protection against harmful substances offered by the cab.

Categories 1 to 4 are used for classification and specified on a label inside the cab.

Replace label if missing or damaged. See your John Deere dealer.

A — Category 1 - The cab does not offer any protection against substances which are harmful to health.
B — Category 2 - The cab offers protection against solid airborne particles such as dust, but not against aerosols and vapors.
C — Category 3 - The cab offers protection against dust and aerosols (liquid airborne substances such as spray), but not against vapors.
D — Category 4 - The cab offers protection against dust, aerosols and vapors.



RXA0125666 —UN—04APR12

Label Shown for Illustration Purposes Only (May Not Indicate the Category of the Cab Installed)

CAUTION: Before working in an environment containing hazardous substances, i.e. when using pesticides, check whether the cab offers sufficient protection. Refer to the product data sheets of the spraying liquid manufacturer specifying the category required for the cab.

CAUTION: In case of category 3 and 4 cabs, find out whether the installed filters have been checked according to EN 15695-2:2009 and whether they are suitable for the chemical being used (refer to the manufacturer's information) before working in an environment containing hazardous substances.

CAUTION: The cab fresh air and recirculation air filters must be serviced as specified.

See "As Indicated or As Required Service", "1000 Hour Service" and "Annual Service" in this Operator's Manual.

CAUTION: Refer to product data sheets and product identification of the crop protection chemicals. These contain important information on how to avoid hazards.

The following requirements must be met to offer best protection:

1. All seals (on door, windows and roof) in good condition
2. Doors, windows and roof closed
3. Grommets for cables in the cab sealed properly
4. Fan ON
5. Cab air filters in good condition

RD47322,000020E -19-26APR13-1/1

Replace Cab Recirculation and Fresh Air Filters

CAUTION: Cab air filters are not designed to filter out harmful chemicals. Follow instructions in implement Operator's Manual and by chemical manufacturer when using agricultural chemicals.

IMPORTANT: Replacement interval can vary according to operating conditions. Normal service is 1000 hours or annually, whichever occurs first. See Replace Cab Recirculation Air Filter and Replace Cab Fresh Air Filter in 1000 Hour Service section of this Operator's Manual.

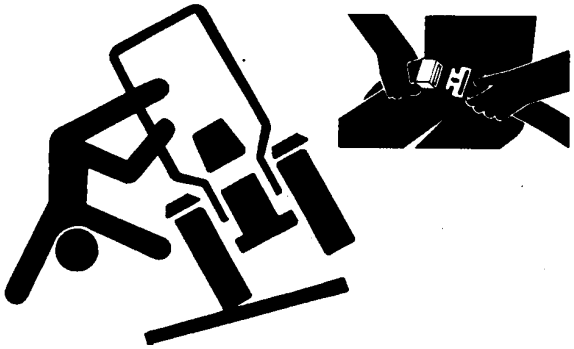
TO84419,0000089 -19-30MAY14-1/1

Inspect Seat Belts

CAUTION: If seat belt system, including mounting hardware, buckle, belt, or retractor shows any sign of damage such as cuts, fraying, extreme or unusual wear, discoloration or abrasion, the entire seat belt system should be replaced immediately. Replace belt system only with replacement parts approved for your machine.

Inspect seat belts (A) and mounting hardware. If seat belts need to be replaced, see your John Deere™ dealer.

A—Seat Belts



TS205 —UN—23AUG88



RXA0136864 —UN—14NOV13

John Deere is a trademark of Deere & Company

TO84419,00001FB -19-10DEC13-1/1

Inspect Primary and Secondary Engine Air Filters

IMPORTANT: Inspect filters annually or when a related diagnostic trouble code appears. Replacement interval may vary due to operating conditions. If primary filter appears good upon inspection, but diagnostic trouble code remains ON, replace primary engine air filter. Replace secondary engine air filter at every second primary filter change.

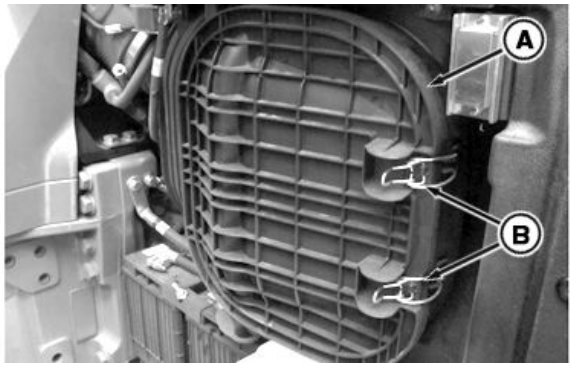
Carefully remove and examine primary and secondary filters for breaks or tears or excessive dirt accumulation. To inspect filters:

1. Remove battery compartment cover.
2. Unfasten two clamps (B) and open filter cover (A).
3. Pull handle (D) towards front of tractor to release primary air filter from raised retainer (E).
4. Pull on handle to remove primary filter (C).
5. Clean dirt from inside of canister and cover.

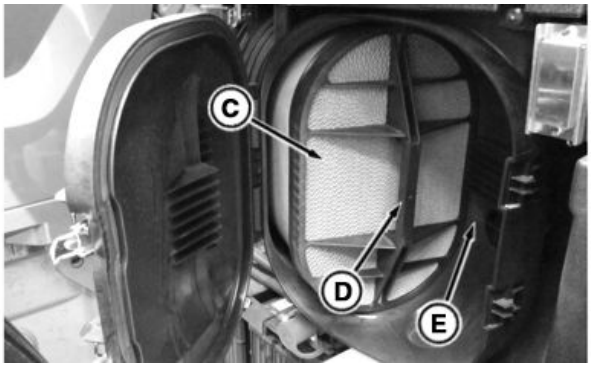
IMPORTANT: If a filter is dirty, replace it. Do not attempt to clean filters.

6. Carefully inspect primary filter, looking for excessive dirt and debris accumulation or rips in filter element. Replace if excessively dirty or if damaged.

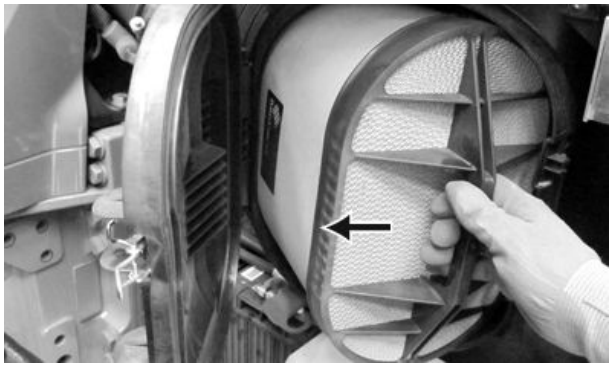
A—Cover
B—Clamps
C—Primary Air Filter
D—Handle
E—Retainer



RXA0134187 —UN—25JUL13



RXA0134188 —UN—25JUL13



RXA0134189 —UN—25JUL13

Pull Handle to Remove Primary Air Filter

Continued on next page

RX32825,000070D -19-26JUL13-1/2

7. To protect air intake system, only remove secondary filter far enough from canister to allow inspection. Pull on handle (B) to slide top part of secondary filter (A) out first. Inspect secondary filter.

IMPORTANT: Failure to properly install primary and secondary filters will cause damage to engine. When installing primary air filter, make sure filter is properly seated behind raised retainer.

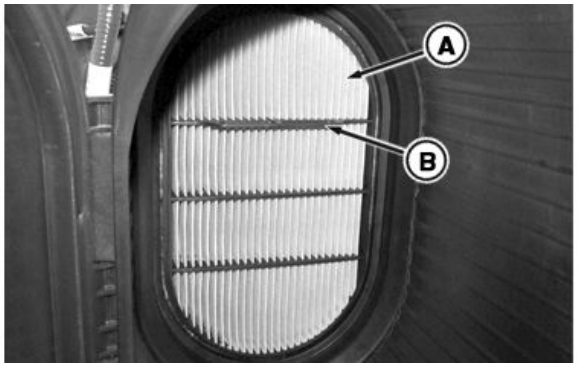
Replace secondary filter every second primary air filter change or if secondary filter is found to be damaged or excessively dirty.

8. If secondary filter is found to be in good condition and has been replaced at last primary filter change, reinsert it into filter canister. Then reinstall original - or install new - primary filter. Replace filter and battery covers.

IMPORTANT: Install new secondary filter immediately to prevent dust from entering air intake system.

9. If secondary filter is damaged or excessively dirty, or if the primary filter has been replaced once before without replacing secondary filter, remove and discard secondary filter.
10. To install secondary filter (A), place tab (C) in slot (D).
11. Firmly press around edge of secondary filter to properly seat filter against filter housing.
12. Install new or reinstall original primary filter.
13. Close cover and fasten cover clamps.
14. Reinstall battery compartment cover.

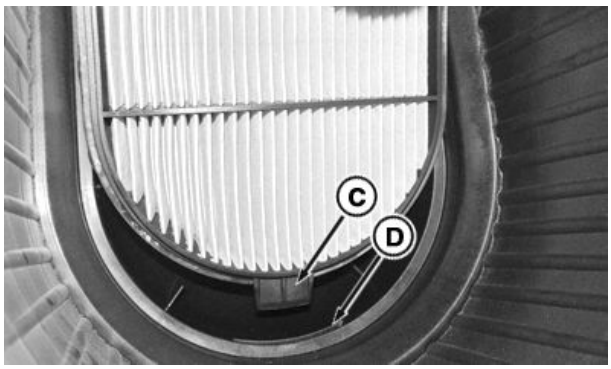
A—Secondary Filter
B—Handle
C—Tab
D—Slot



RXA0134190 —UN—25JUL13



RXA0134191 —UN—25JUL13



RXA0134192 —UN—25JUL13

RX32825,000070D -19-26JUL13-2/2

Check TLS™ Plus Accumulator Charge Pressure (If Equipped)

IMPORTANT: Perform service every 1000 hours or annually, whichever comes first.

Contact your John Deere™ dealer for all TLS™ Plus accumulator charge pressure service.

John Deere is a trademark of Deere & Company
TLS is a trademark of Deere & Company

RX32825,000071A -19-15JUL15-1/1

Check Cab Suspension Accumulator Charge Pressure (If Equipped)

IMPORTANT: Perform service every 1000 hours or annually, whichever comes first.

Have your John Deere™ dealer check cab suspension accumulator charge pressure.

John Deere is a trademark of Deere & Company

RX32825,000071B -19-15JUL15-1/1

1500 Hour Service

Perform This and Other Scheduled Services

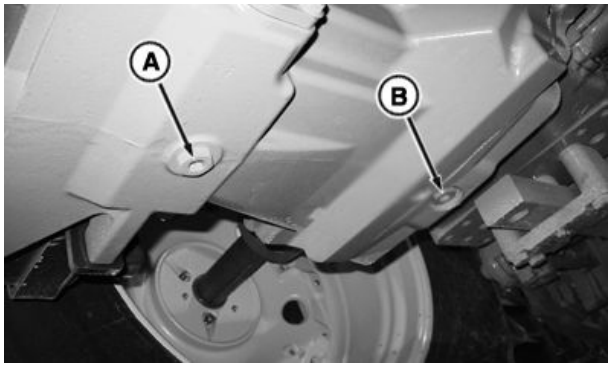
When scheduled service at any hourly level is performed, also perform all subordinate hourly level services. See Observe Service Intervals in Maintenance and Service Intervals Section of this Operator's Manual for table listing main and subordinate service intervals.

TO84419,0000211 -19-25JUL13-1/1

Change Transmission/Hydraulic Oil and Filter and Clean Sump Screen

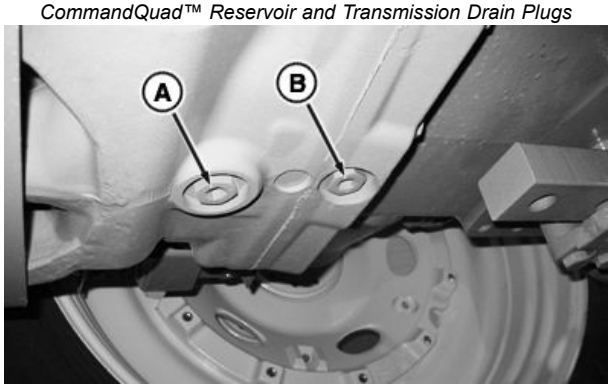
1. Drive tractor to warm transmission/hydraulic oil to 38°C (100°F).
2. Park tractor on level surface.
3. Lower hitch.
4. Let engine run at idle for 1—2 minutes, then stop engine.
5. Move drawbar to side so oil can drain unobstructed.
6. Remove transmission drain plug (A), reservoir drain plug (B), PTO drain plug (C), and each axle final drive drain plug (D) (one per side).

A—Transmission Drain Plug
B—Reservoir Drain Plug
C—PTO Drain Plug
D—Axle Final Drive Drain Plug (One Per Side)



RXA0133514 —UN—09JUL13

CommandQuad™ Reservoir and Transmission Drain Plugs

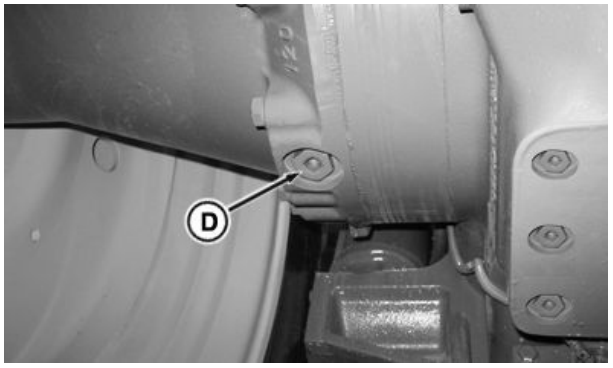


RXA0133515 —UN—09JUL13

e23™ or IVT™/AutoPowr™ Reservoir and Transmission Drain Plugs



RXA0133516 —UN—09JUL13



RXA0133517 —UN—09JUL13

Continued on next page

TO84419,000008C -19-08JUL14-1/4

7. Remove suction screen cover (A). Remove cap screw (B) to remove suction screen cover.
8. Remove suction screen and wash carefully in cleaning solvent. Blow dry with compressed air.

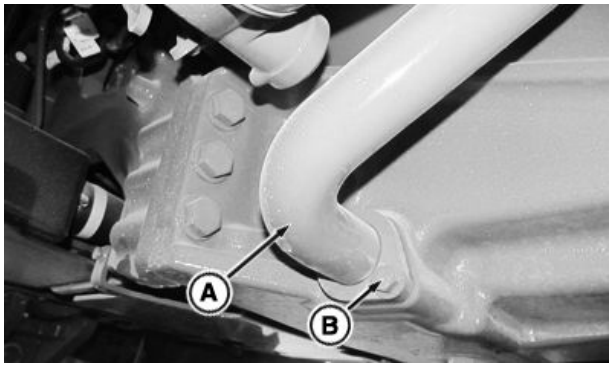
IMPORTANT: When installing scavenge and lube lines on suction screen cover, do not forget to install O-rings. Failure to do so will cause leakage.

9. Install screen and oil lines (if removed) making sure gaskets and O-rings are correctly positioned.
10. Remove transmission/hydraulic oil filter (C).
11. Lubricate new filter seal with clean hydraulic oil.
12. Install filter until gasket contacts surface. Hand tighten additional 1/2 turn.
13. Install drain plugs after oil has drained. Tighten to specification.

Specification

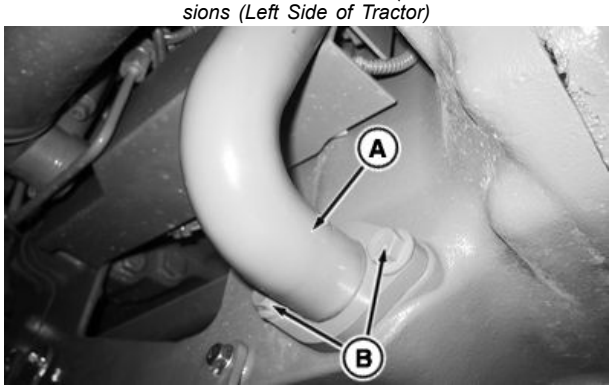
Drain Plug—Torque.....102 N·m (75 lb.-ft.)

A—Suction Screen Cover
B—Suction Screen Cover Cap Screws
C—Transmission/Hydraulic Oil Filter



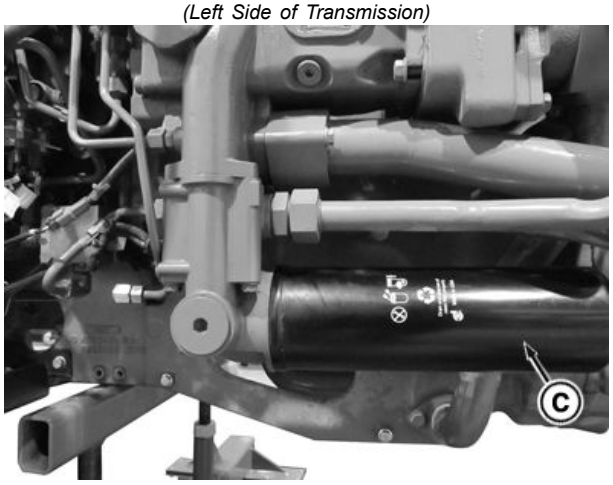
RXA0134253 —UN—31JUL13

Suction Screen Location CommandQuad™ Transmissions (Left Side of Tractor)



RXA0135224 —UN—23AUG13

Suction Screen Location e23™ or IVT ™/AutoPowr™ Transmission (Left Side of Transmission)



RXA0134216 —UN—31JUL13

Transmission/Hydraulic Filter (Left Side of Tractor)

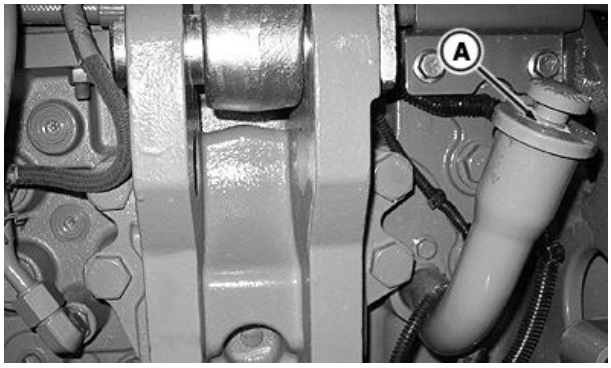
Continued on next page

TO84419,000008C -19-08JUL14-2/4

14. Remove fill tube cap (A) and add 160 L (42.3 gal.) of hydraulic oil. See Fuel, Lubricants, and Coolant section of this Operator's Manual for fill volume.

IMPORTANT: Fully insert and firmly tighten fill cap to assure proper hydraulic system operation.

15. Install and firmly tighten fill cap.
16. Start and leave engine at slow idle for 5 minutes. Oil level should rise in sight glass as tractor operates.
17. Shut off engine and wait at least 1/2 hour to allow oil to stabilize before checking oil level.



RXA0130643 —UN—23JAN13

Rear of Tractor

A—Fill Tube

Continued on next page

TO84419,000008C -19-08JUL14-3/4

18. Check oil level in sight glass (A) at rear of tractor.

IMPORTANT: Wait at least 1/2 hour after engine was shut off to check transmission-hydraulic oil level.

Overfilling transmission-hydraulic oil can result in decreased operating efficiency. Except when operating in side-hill or high volume applications, keep oil level at or slightly below top of normal operating range. Never fill system above maximum operating level.

NOTE: Oil level may need to be adjusted based on expected operating conditions. See special operating condition instructions below.

19. If transmission-hydraulic oil level is at or below add oil indication (B), slowly add oil to reach top of normal operating range indicator (C). Use oil as specified in Transmission-Hydraulic Oil in Fuel, Lubricants and Coolant section of this Operator's Manual. From add oil level, adding approximately these amounts of oil will bring oil level to top of normal operating range.

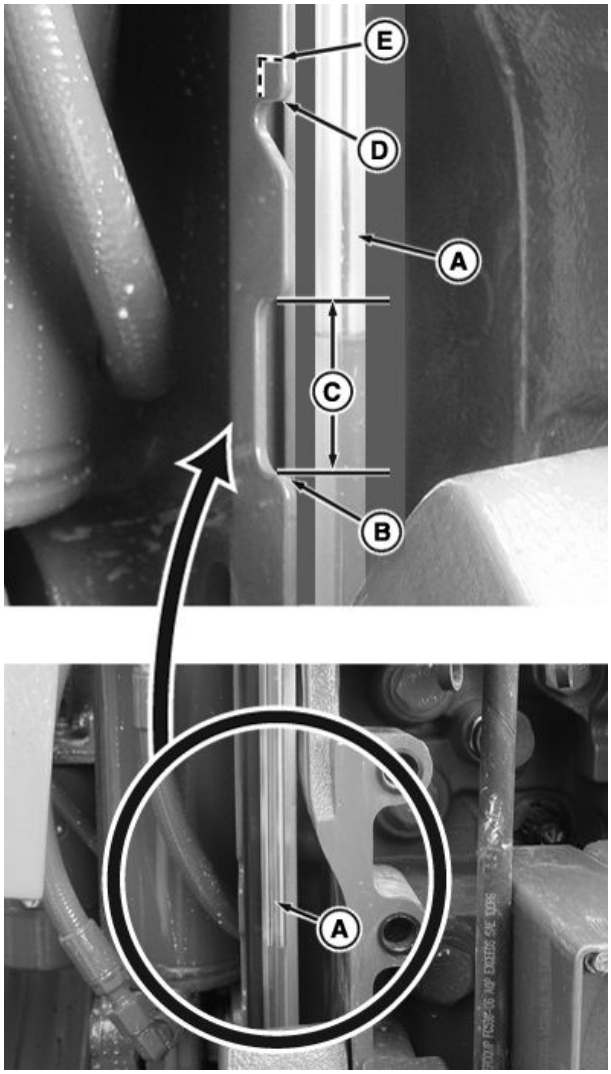
Transmission	Without Optional Auxiliary Oil Reservoir-CommandQuad™ [a]	Add With Optional Auxiliary Oil Reservoir
CommandQuad™	20 L (21 qt.)	22 L (23 qt.)
IVT™/AutoPowr™	16 L (17 qt.)	18 L (19 qt.)
e23™	16 L (17 qt.)	18 L (19 qt.)

[a] *Actual volume may vary depending on additional SCV's and tractor options.*

Road Transportation: In applications where tractor is mainly used for road transport and light hydraulic work, adjust oil level to lower end of normal operating range. A lower oil level allows tractor to operate more efficiently at transport speeds with less power loss and heat generation.

IMPORTANT: Examine oil level indicator. If tractor is not equipped with optional auxiliary oil reservoir, maximum operating level indication will be as shown (D). If tractor has optional oil reservoir installed, maximum operating level indicator will be higher (E).

For Side-Hill Applications or High Oil Volume Requirements: To prevent low oil levels, additional oil may be required when operating on side hills or when using implements which require large volumes of oil to function. Oil level should be at or slightly below maximum operating level (D or E).



RXA0133301 —UN—21APR14

A—Transmission-Hydraulic Oil Sight Glass
B—Add Oil
C—Normal Operating Range
D—Maximum Operating Level (Without Optional Auxiliary Oil Reservoir)
E—Maximum Operating Level (With Optional Auxiliary Oil Reservoir)

TO84419,000008C -19-08JUL14-4/4

Change MFWD or TLS™ Plus Wheel Hub Oil

1. Park tractor on level ground.
2. Maneuver tractor forward or backward until drain/fill plug (A) is at bottom of hub.
3. Open drain/fill plug and drain oil.
4. When oil has completely drained, maneuver tractor so that words OIL LEVEL - HY-GARD (B) or OIL LEVEL (C) cast into wheel hub are horizontal.

IMPORTANT: Use correct lubricant. Wheel hubs with brakes must be filled with John Deere™ Hy-Gard™ oil.

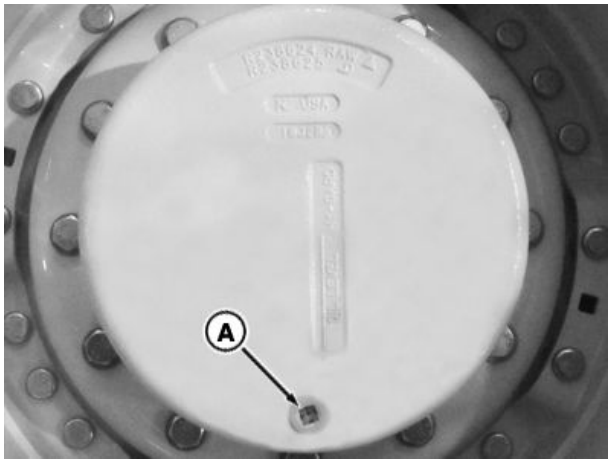
Wheel hubs without brakes are filled with John Deere™ GL-5 Gear Lubricant.

5. Refill wheel hubs with oil. Add correct oil depending upon whether tractor is equipped with front brakes. If tractor is equipped with front brakes, words cast into front hubs will read OIL LEVEL - HY-GARD. Fill front brake hub with John Deere™ Hy-Gard™ oil.
   - If only words OIL LEVEL are cast into front hubs, tractor is not equipped with front brakes. Use John Deere™ GL-5 Gear Lubricant. See Gear Oil or Transmission and Hydraulic Oil in Fuel, Lubricants and Coolant section of this Operator's Manual.
6. Apply pipe sealant with TEFLON®, or equivalent, to threads of drain/fill plug.
7. Install drain/fill plug and O-ring. Tighten to specifications.

Specification	
Hub Without Brakes—Capacity	3.8 L (4.0 qt.)
Hub With Brakes—Capacity	3.9 L (4.1 qt.)
Plug-to-Hub—Torque	70 N·m (52 lb.-ft.)

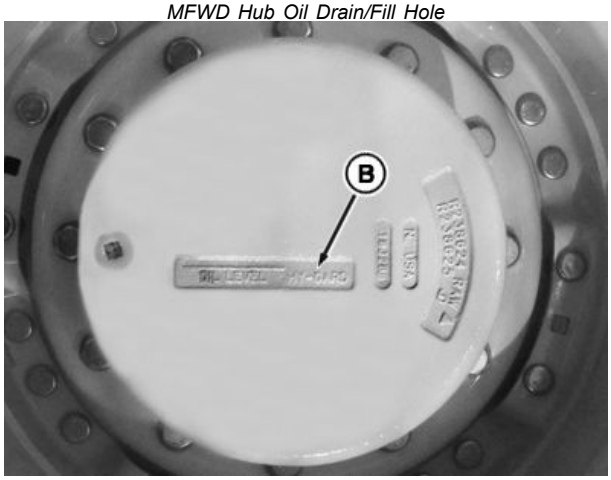
8. Repeat procedure with other wheel hub.

A—MFWD Hub Oil Drain/Fill Hole
B—Oil Level - HY-GARD™
C—Oil Level



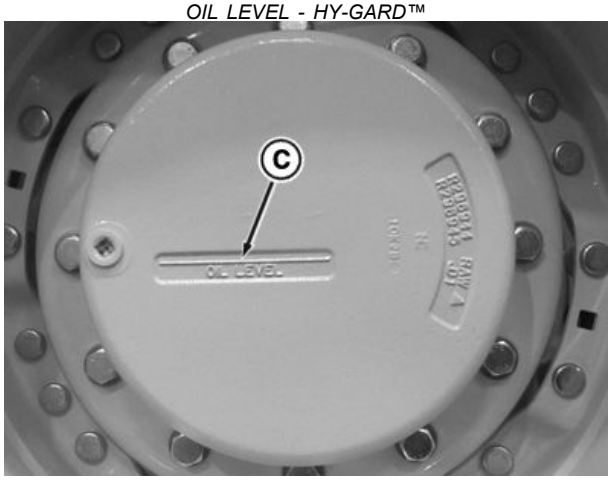
RXA0129809 —UN—26NOV12

MFWD Hub Oil Drain/Fill Hole



RXA0129808 —UN—26NOV12

OIL LEVEL - HY-GARD™



RXA0129807 —UN—26NOV12

John Deere is a trademark of Deere & Company
Hy-Gard is a trademark of Deere & Company
TEFLON is a registered trademark of DuPont Co.

TO84419,000005D -19-31OCT13-1/1

Change MFWD or TLS™ Plus Axle Housing Oil

1. Remove drain plugs (D) from axle housing and differential housing.
2. Install drain plugs after oil has drained. Tighten to specifications.

Specification

Plugs-to-Axle Housing—Torque.....70 N·m (52 lb.-ft.)

3. Remove fill/check plug (A).
4. Fill axle housing with John Deere™ Hy-Gard™ oil as specified in Transmission and Hydraulic Oil in Fuel, Lubricants and Coolant section of this Operator's Manual. Add oil until level is even with bottom of fill/check hole.

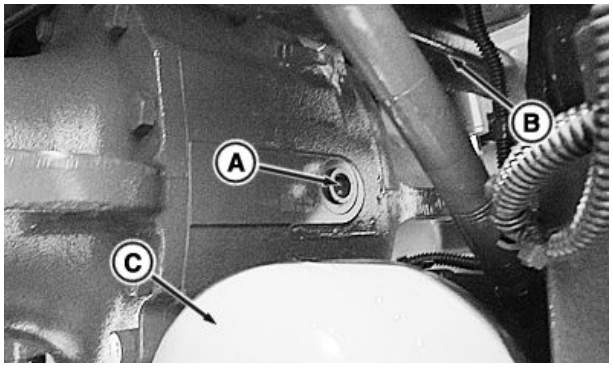
Specification

Axle Housing—Capacity..... 14.4 L (15.2 qt.)

5. When oil level is correct, apply pipe sealant with TEFLON®, or equivalent, to threads of fill/check plug (A).
6. Install fill/check plug. Tighten to specifications.

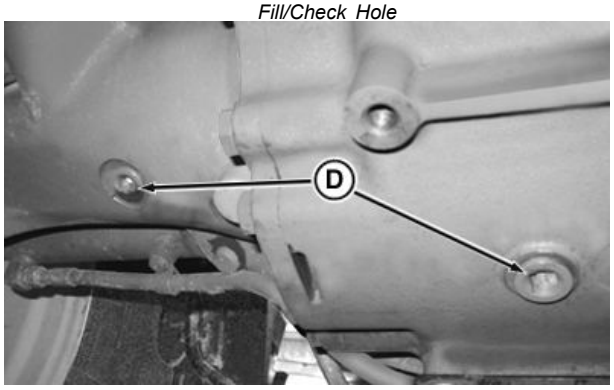
Specification

Plugs-to-Axle Housing—Torque.....70 N·m (52 lb.-ft.)



RXA0134206 —UN—29JUL13

Fill/Check Hole



RXA0109739 —UN—22SEP10

Drain Plugs

A—Fill/Check Plug
B—Tie Rod
C—TLS™ Plus Accumulator (If Equipped)
D—Axle and Differential Housing Drain Plugs

John Deere is a trademark of Deere & Company
Hy-Gard is a trademark of Deere & Company
TEFLON is a registered trademark of DuPont Co.

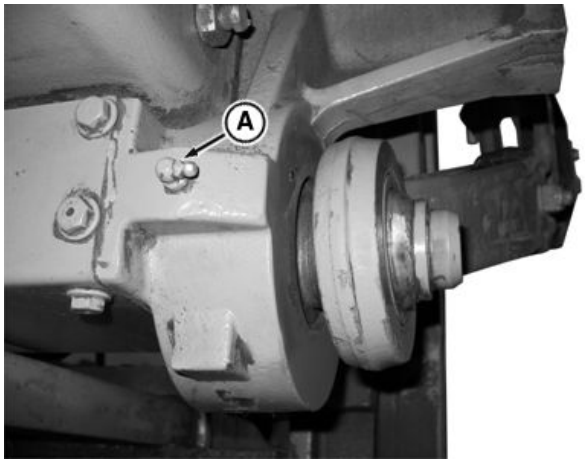
TO84419,000008D -19-09JUL14-1/1

Lubricate Draft Link Support Shaft Bushing

Use John Deere™ SD Polyurea grease or other grease as specified in Fuel, Lubricants and Coolant section.

Apply one or two shots of grease to support shaft grease fitting (A).

A—Support Shaft Grease Fitting



RXA0110394 —UN—13SEP10

Left Side Under Rear of Tractor

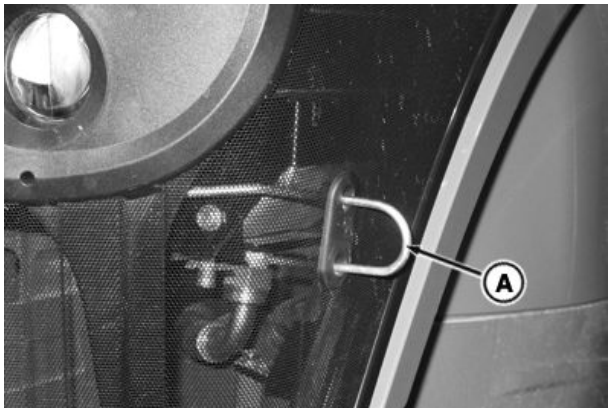
John Deere is a trademark of Deere & Company

TO84419,0000205 -19-27NOV12-1/1

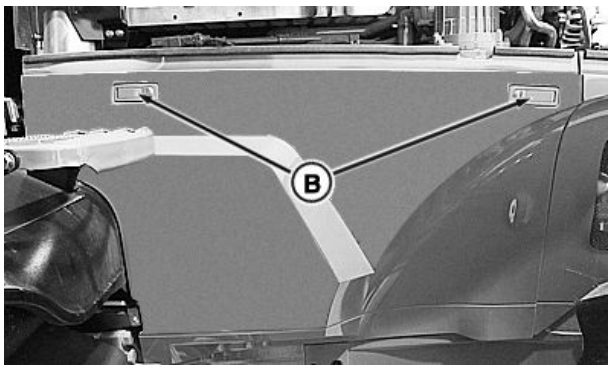
Inspect Fan Belt and Fan Belt Tensioner

1. Pull hood release loop (A) and raise hood.
2. Depress side shield latches (B) and remove both front and rear side shields.
3. Remove cap screw (C) and disconnect fan drive connector (D).

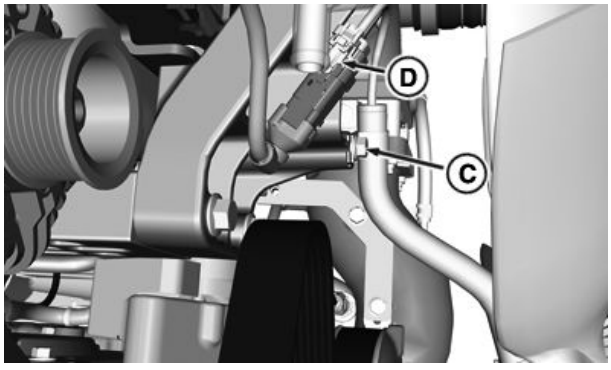
A—Hood Release Loop
B—Side Shield Latches
C—Cap Screw
D—Fan Drive Connector



RXA0133488 —UN—02JUL13



RXA0134208 —UN—29JUL13

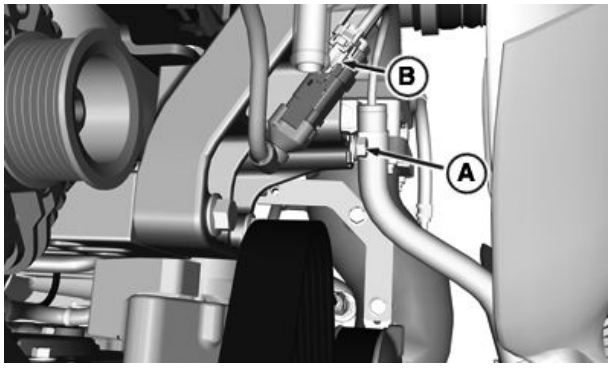


RXA0143146 —UN—03JUL14

TO84419,000005F -19-08JUL14-1/7

4. Remove cap screw (A) and disconnect fan drive connector (B).

A—Cap Screw
B—Fan Drive Connector



RXA0137540 —UN—05DEC13

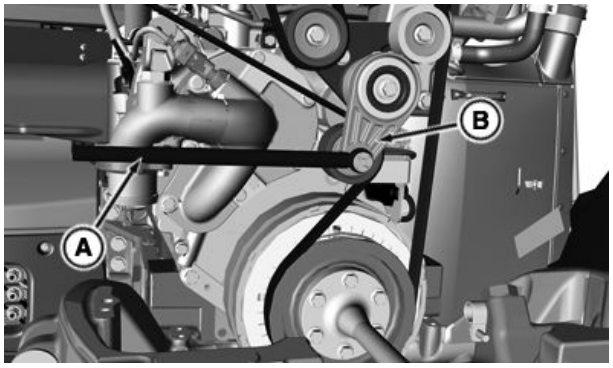
Continued on next page

TO84419,000005F -19-08JUL14-2/7

NOTE: Fan drive belt is equipped with an automatic tensioner which does not require adjustment.

5. Release tension on belt using 1/2 in. drive breaker bar (A) on tensioner pulley (B).
6. Remove belt.
7. Inspect parts and replace as necessary.

A—1/2 in. Drive Breaker Bar **B—Tensioner Pully**



RXA01136743 —UN—13NOV13

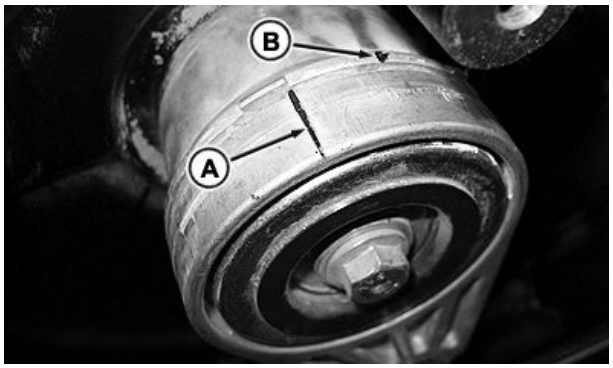
TO84419,000005F -19-08JUL14-3/7

8. Measure 21 mm (13/16 in.) from mark on tensioner arm (A) and put mark (B) on mounting bracket.
9. Rotate tension arm with torque wrench until marks (A and B) align together. If torque wrench measurement is not within specification, replace tensioner mechanism.

Specification

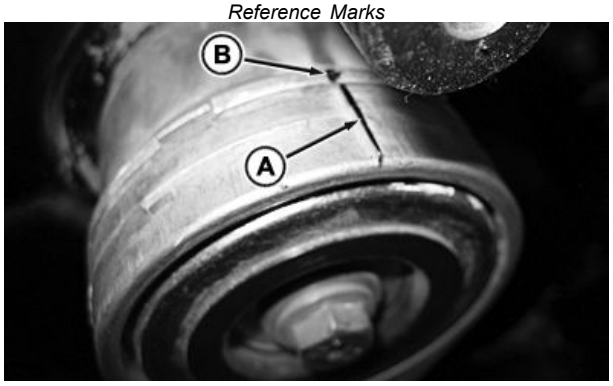
Tension Arm—Torque..... 18-23 N·m (159-204 lb.-in.)

A—Mark on Tensioner Arm **B—Mark on Mounting Bracket**



RXA0134875 —UN—05AUG13

Reference Marks



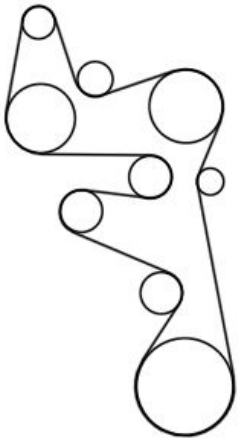
RXA0134876 —UN—05AUG13

Check Tension Specification

Continued on next page

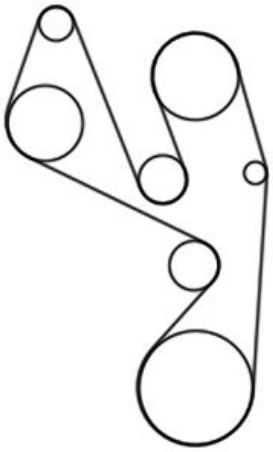
TO84419,000005F -19-08JUL14-4/7

10. Inspect fan velt for cracks, damage, or excessive wear. Replace if necessary. See Replace Fan Belt in As Required section of this Operator's Manual.
11. Install belt according to fan belt layout diagram.



RXA0134221 —UN—29JUL13

6.8L Fan Belt Layout



RXA0134220 —UN—29JUL13

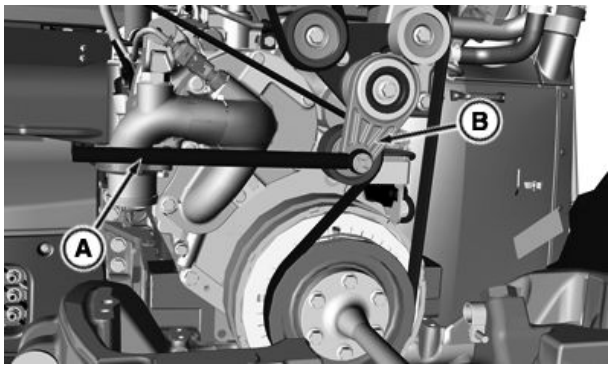
9.0L Fan Belt Layout

TO84419,000005F -19-08JUL14-5/7

NOTE: Fan drive belt is equipped with an automatic tensioner which does not require adjustment.

12. Release tension using 1/2 in. drive breaker bar (A) on tensioner pulley (B) and install belt around tensioner.

A—1/2 in. Drive Breaker Bar **B—Tensioner Pully**



RXA0136743 —UN—13NOV13

Continued on next page

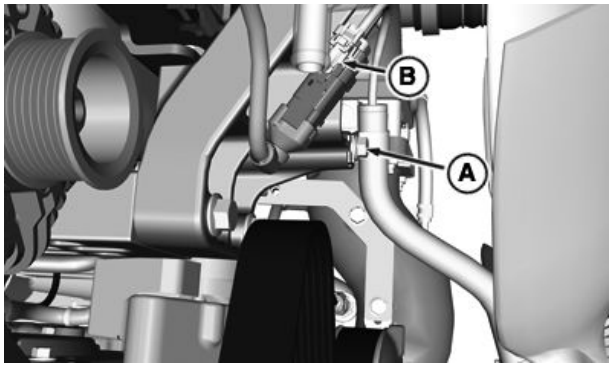
TO84419,000005F -19-08JUL14-6/7

13. Connect fan drive connector (B) and install clamp cap screw (A). Tighten to specification.

Specification	
Clamp Camp Screw—Torque	27.5 N·m (243 lb.-in.)

14. Install front and rear side shields.
15. Lower hood.

A—Clamp Cap Screw **B—Fan Drive Connector**



RXA0137540 —UN—05DEC13

TO84419,000005F -19-08JUL14-7/7

Change Front PTO Housing Oil and Filter (If Equipped)

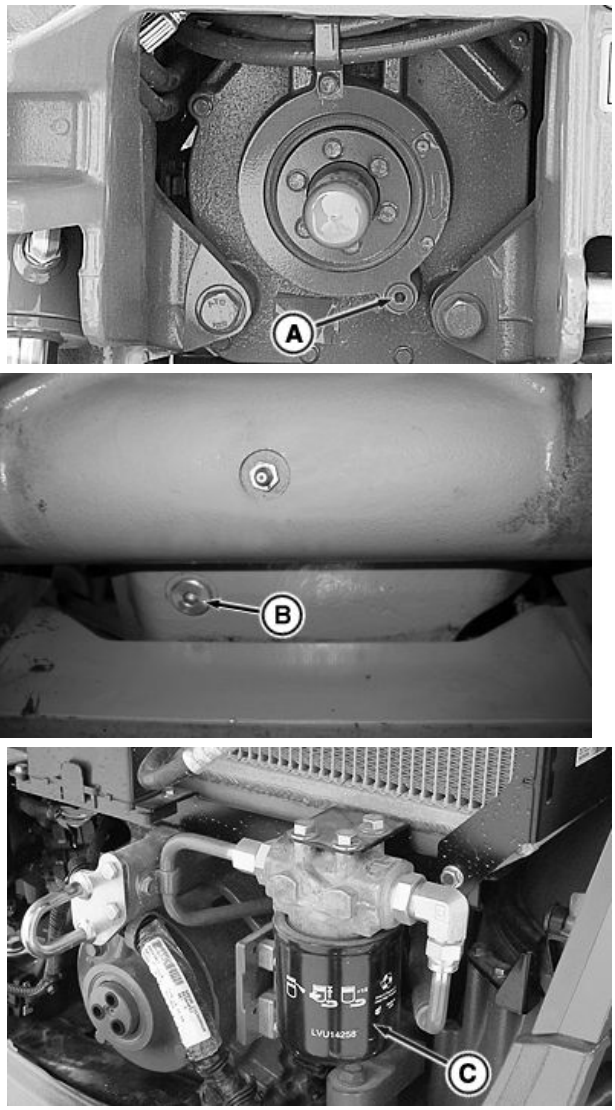
IMPORTANT: Normal front PTO service interval is every 1500 hours. However, change oil and replace filter after first 250 hours of tractor use.

1. Remove fill (A) and drain (B) plugs.
2. Install drain plug after oil has drained.
3. Remove filter (C).
4. Lubricate new filter seal with hydraulic oil.
5. Install filter until seal contacts surface. Hand tighten additional 1/2 turn.

NOTE: When temperatures can be expected to drop below -5° C (23° F), use John Deere™ Low Viscosity Hy-Gard™ oil as specified in Use Correct Viscosity Front PTO Oil In Cold Weather in Fuel, Lubricants and Coolant section of this Operator's Manual.

6. Fill with appropriate John Deere™ Hy-Gard™ as specified in Transmission and Hydraulic Oil or Use Correct Viscosity Front PTO Oil In Cold Weather in Fuel, Lubricants and Coolant section of this Operator's Manual. Fill through fill hole (A) until oil is even with bottom of hole.
7. Install fill plug.
8. Start tractor and operate front PTO. Ensure PTO disconnect is engaged so that oil pump can run and circulate oil. After a few minutes of operation, stop tractor and recheck oil level at fill plug. Add more oil if necessary.

A—Check/Fill Plug **C—Filter**
B—Drain Plug



RXA0134207 —UN—25JUL13

RXA0110843 —UN—29SEP10

RXA0134225 —UN—26JUL13

John Deere is a trademark of Deere & Company
Hy-Gard is a trademark of Deere & Company

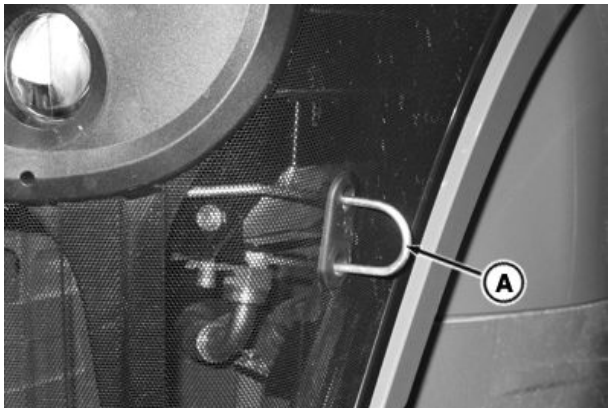
RX32825,0000727 -19-08JUL14-1/1

Replace Open Crankcase Ventilation Filter—6.8 L Engine

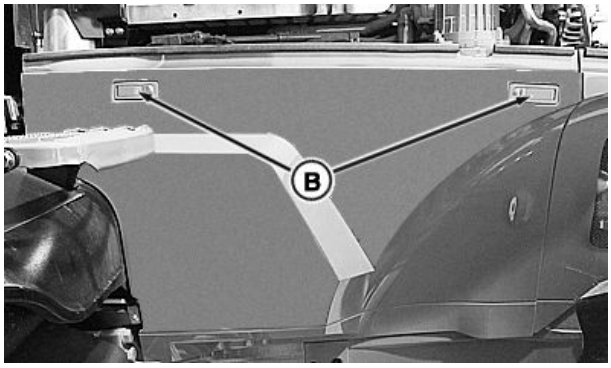
NOTE: To determine which engine your tractor is equipped with, see Record Engine Serial Number in Identification Numbers section of this Operator's Manual.

1. Pull hood release (A) and raise hood.
2. Depress latch buttons (B) and remove right rear side shield.
3. Depress latch button (C) and remove right front side shield.
4. Remove filter lid (D).
5. Remove open crankcase ventilation filter from inside of filter housing (E).
6. To install new filter, align tabs on new filter with tabs on inside of filter housing (E).
7. Replace lid and hand tighten.
8. Close and secure hood and reinstall side shields.

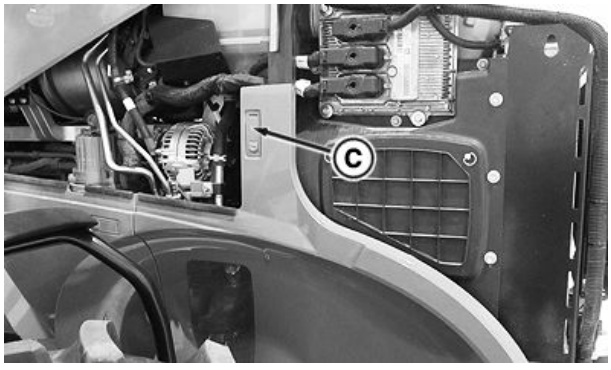
A—Hood Release
B—Right Rear Latch Buttons
C—Right Front Latch Button
D—Filter Lid
E—Filter Housing



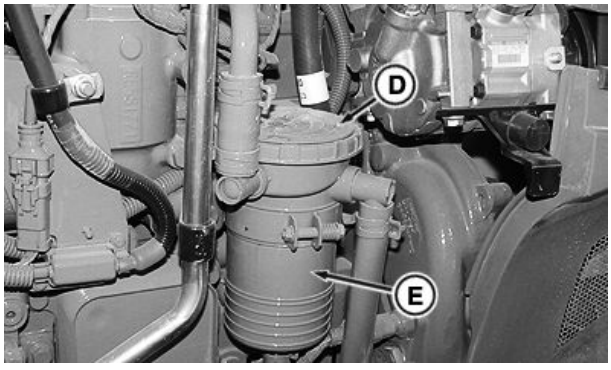
RXA0133488 —UN—02JUL13



RXA0134208 —UN—29JUL13



RXA0134226 —UN—26JUL13



RXA0134239 —UN—31JUL13

Open Crankcase Ventilation Filter

RX32825,000070E -19-15JAN15-1/1

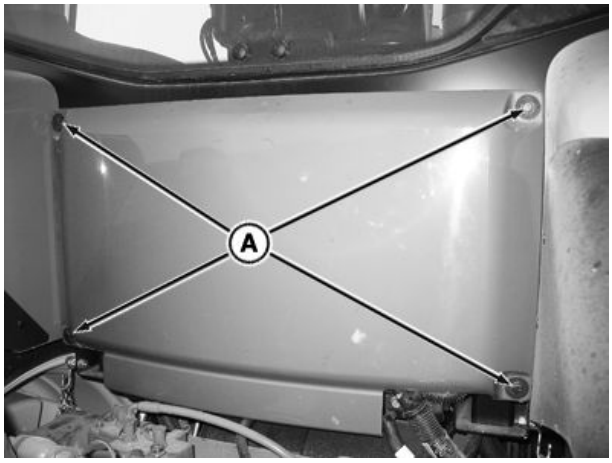
Replace Fuel Tank Vent Filter

Remove four cap screws (A) and lift off cab back panel.

Fuel tank vent filter (B) is located under back panel on tractor left-side side.

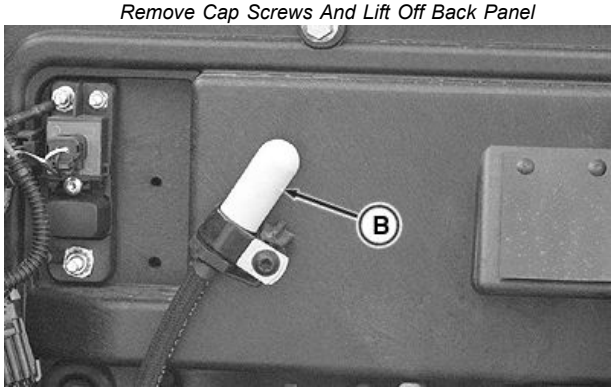
Remove fuel tank vent filter and install new filter.

A—Cap Screws **B—Fuel Tank Vent Filter**



RXA01110047 —UN—26AUG10

Remove Cap Screws And Lift Off Back Panel



RXA01109380 —UN—16AUG10

Remove Fuel Tank Vent Filter

RD47322,000033A -19-06JAN14-1/1

Replace Diesel Exhaust Fluid (DEF) Tank Vent- Final Tier 4 and Stage IV Engines

CAUTION: DEF contains urea. Do not get the substance in eyes. In case of contact, immediately flush eyes with large amounts of water for a minimum of 15 minutes. Do not take internally. In event DEF is ingested, contact a physician immediately. Reference Material Safety Data Sheet (MSDS) for additional information.

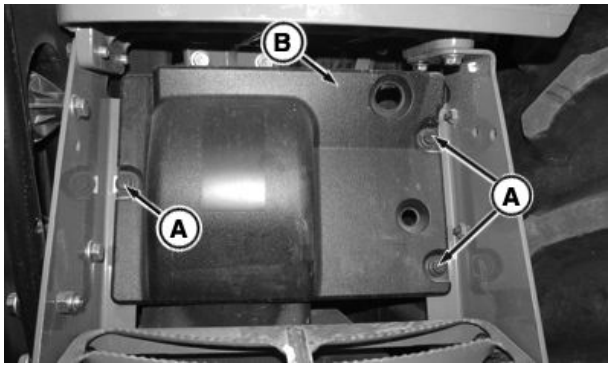
IMPORTANT: To determine tractor engine type, see Record Engine Serial Number in Identification Numbers Section of this Operator's Manual.

Replace filter after first year of operation and every THREE years thereafter.

Using incorrect or unapproved aftertreatment components can cause damage to vehicle's aftertreatment system and reduce ability of aftertreatment system to function correctly. Never interchange aftertreatment components between Interim Tier 4/Stage III B and Final Tier 4/Stage IV equipped vehicles.

If DEF is spilled or contacts any surface other than the storage tank, immediately clean the surface with clear water. DEF is corrosive to painted and unpainted metallic surfaces and may distort some plastic and rubber components.

1. Remove cap screws (A) and shield (B).
2. Remove DEF tank vent (C) located above DEF dosing unit.
3. Install NEW DEF tank vent.
4. Reinstall DEF tank shield (B) and DEF tank shield cap screws (A). Tighten to specification.



RXA0135357 —UN—30AUG13



RXA0135335 —UN—29AUG13

A—Cap Screws
B—Tank Shield
C—DEF Tank Vent

Specification	
DEF Tank Shield Cap Screws—Torque	37 N·m (27 lb.-ft.)

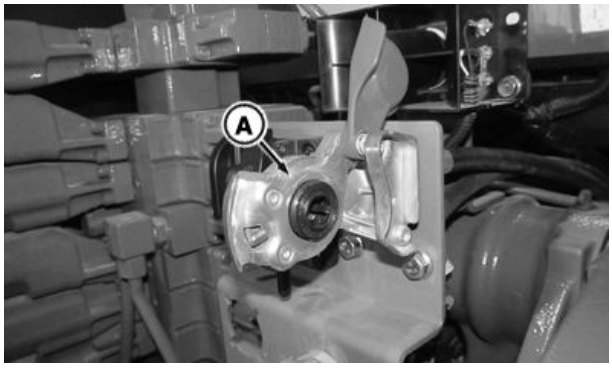
TO84419,0000097 -19-25SEP13-1/1

Replace Trailer Air Brake Dryer Filter (If Equipped)

1. With engine in OFF position, manually depress release valve inside red trailer air brake coupler (A).
2. After all air pressure is released, remove trailer air brake dryer filter (B) with O-ring and discard.
3. Lubricate new filter O-ring with clean oil.
4. Install new trailer air brake dryer filter (B) until O-ring contacts air dryer surface. Hand tighten additional 1/2 turn.

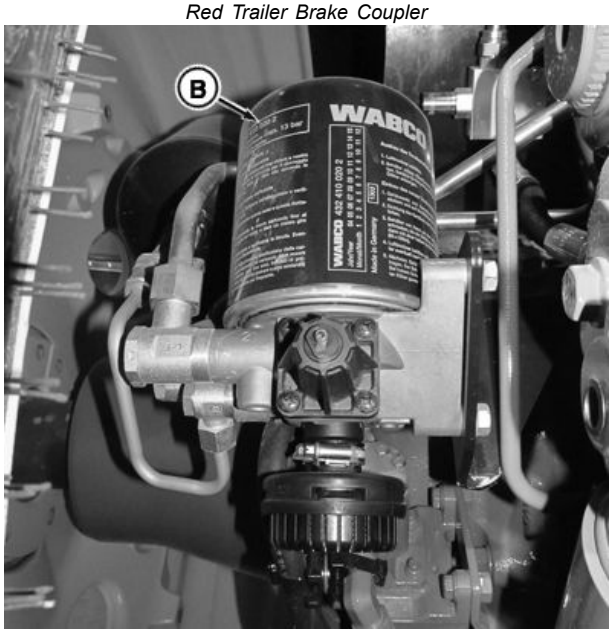
A—Red Trailer Air Brake Coupler

B—Trailer Air Brake Dryer Filter



RXA0135319 —UN—29AUG13

Red Trailer Brake Coupler



RXA0135320 —UN—29AUG13

Trailer Brake Dryer Filter

TO84419,0000200 -19-14AUG14-1/1

3000 Hour Service

Perform This and Other Scheduled Services

When scheduled service at any hourly level is performed, also perform all subordinate hourly level services. See Observe Service Intervals in Maintenance and Service Intervals Section of this Operator's Manual for table listing main and subordinate service intervals.

TO84419,0000211 -19-25JUL13-1/1

Adjust Engine Valve Clearance—Interim Tier 4 and Stage IIIB Engines

See your John Deere™ dealer for correct engine valve clearance.

John Deere is a trademark of Deere & Company

RX32825,0000034 -19-15JAN15-1/1

Adjust Engine Valve Clearance—Final Tier 4 and Stage IV Engines

NOTE: To confirm which engine your tractor is equipped with, see Record Engine Serial Number in Identification Numbers section of this Operator's Manual.

See your John Deere™ dealer for correct engine valve clearance.

John Deere is a trademark of Deere & Company

RX32825,0000729 -19-06NOV13-1/1

4500 Hour Service

Perform This and Other Scheduled Services

When scheduled service at any hourly level is performed, also perform all subordinate hourly level services. See Observe Service Intervals in Maintenance and Service Intervals Section of this Operator's Manual for table listing main and subordinate service intervals.

TO84419,0000211 -19-25JUL13-1/1

Replace Transmission Drive Shaft Damper

See your John Deere™ dealer to replace transmission drive shaft damper.

John Deere is a trademark of Deere & Company

RX32825,0000728 -19-02JAN13-1/1

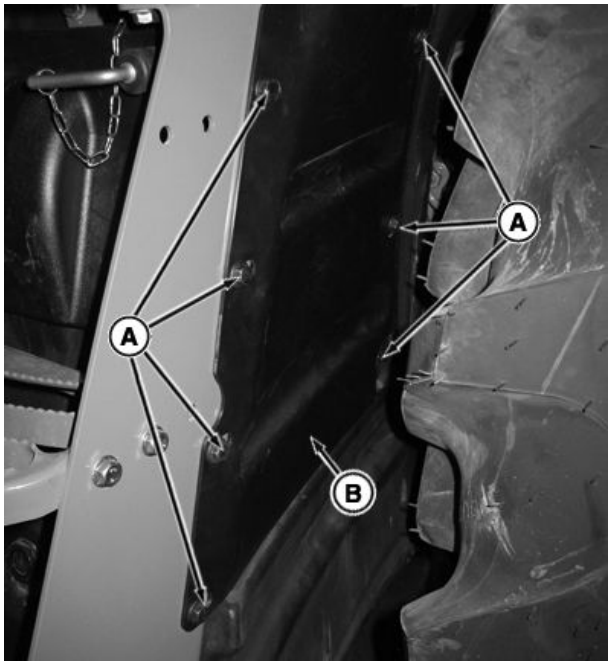
Access Diesel Exhaust Fluid (DEF) Dosing Unit and Tank Vent Filters—Final Tier 4 and Stage IV Engines

1. Remove cap screws (A) and shield (B).
2. Diesel exhaust fluid (DEF) dosing unit filter (C) is located on bottom of dosing unit
3. DEF tank vent filter (D) is located just above dosing unit.
4. Install in reverse order. Tighten to specification.

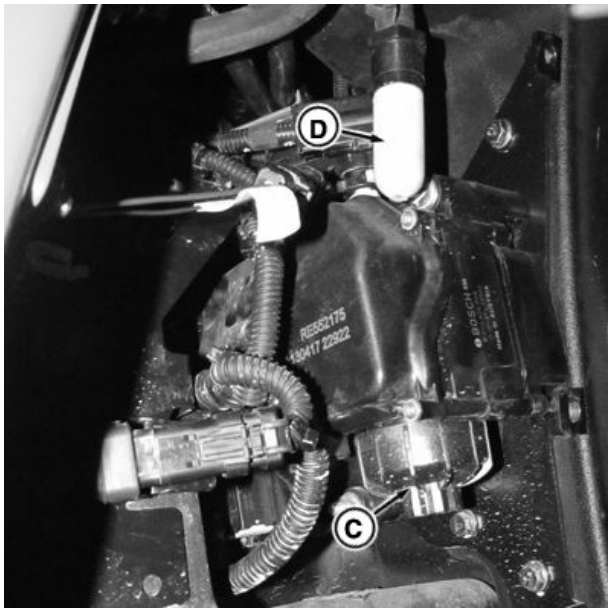
Specification

Shield Cap Screws—Torque.....37 N·m (27 lb.-ft.)

A—Shield Cap Screws (7 used)
B—Shield
C—DEF Dosing Unit Filter
D—DEF Tank Vent Filter



RXA0135317 —UN—28AUG13



RXA0135318 —UN—29AUG13

TO84419,000006F -19-15JAN15-1/1

Changing Diesel Exhaust Fluid (DEF) Dosing Unit Filter

CAUTION: Avoid contact with eyes. In case of contact, immediately flush eyes with large amounts of water for a minimum of 15 minutes. Reference the Materials Safety Data Sheet (MSDS) for additional information.

IMPORTANT: If DEF is spilled or contacts any surface other than the storage tank, immediately clean the surface with clear water. DEF is corrosive to painted and unpainted metallic surfaces and can distort some plastic and rubber components.

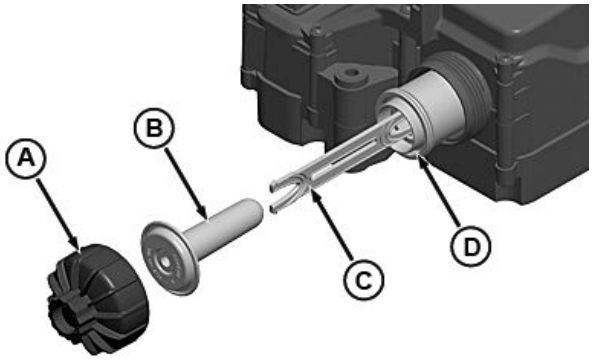
Spilled DEF, if left to dry or if only wiped away with a cloth, leaves a white residue. Improperly cleaned DEF spill can interfere with diagnosis of Selective Catalytic Reduction (SCR) system leakage problems.

NOTE: Servicing DEF dosing unit filter may require removing additional covers or components. See Access DEF Dosing Unit for location information.

1. Remove DEF dosing unit filter cover (A).
2. Remove and discard DEF dosing unit filter equalizing element (B).
3. Insert “Black” end of DEF dosing unit filter tool (C) into DEF dosing unit filter (D) until CLICK is felt or heard indicating DEF dosing unit filter tool is fully engaged.

NOTE: A tool such as a screwdriver can be inserted into DEF dosing unit filter tool slot to assist removal.

4. Pull DEF dosing unit filter tool and DEF dosing unit filter from DEF dosing unit. Discard DEF dosing unit filter and DEF dosing unit filter tool.



RG22534 —UN—21MAR13

DEF Dosing Unit Filter

A—DEF Dosing Unit Filter Cover
B—DEF Dosing Unit Filter Equalizing Element
C—DEF Dosing Unit Filter Tool
D—DEF Dosing Unit Filter

5. Clean DEF dosing unit threads and mating surfaces with distilled water.
6. Lubricate new DEF filter O-rings with clean engine oil. Carefully insert DEF dosing unit filter into DEF dosing unit.
7. Install new DEF dosing unit filter equalizing element into DEF dosing unit filter.
8. Install DEF dosing unit filter cover and tighten to specifications.

Specification	
DEF Dosing Unit Filter Cover—Torque	23 N·m (204 lb.-in.)

DX,DEF,CHANGE,FILT -19-12JUL13-1/1

5000 Hour Service

Perform Service And All Subordinate Services

When scheduled service at any hourly level is performed, also perform all subordinate hourly level services. See Observe Service Intervals in Maintenance and Service Intervals Section of this Operator's Manual for table listing main and subordinate service tasks.

RW29387,0000051 -19-05SEP13-1/1

Replace Engine Crankshaft Damper

See your John Deere™ dealer to replace engine torsional crankshaft damper.

John Deere is a trademark of Deere & Company

RW29387,0000052 -19-05SEP13-1/1

6000 Hour Service

Perform This and Other Scheduled Services

When scheduled service at any hourly level is performed, also perform all subordinate hourly level services. See Observe Service Intervals in Maintenance and Service Intervals Section of this Operator's Manual for table listing main and subordinate service intervals.

TO84419,0000211 -19-25JUL13-1/1

Drain, Flush, and Refill Cooling System (6.8 and 9.0 L Engines)

See your John Deere™ dealer to drain, flush and refill cooling system.

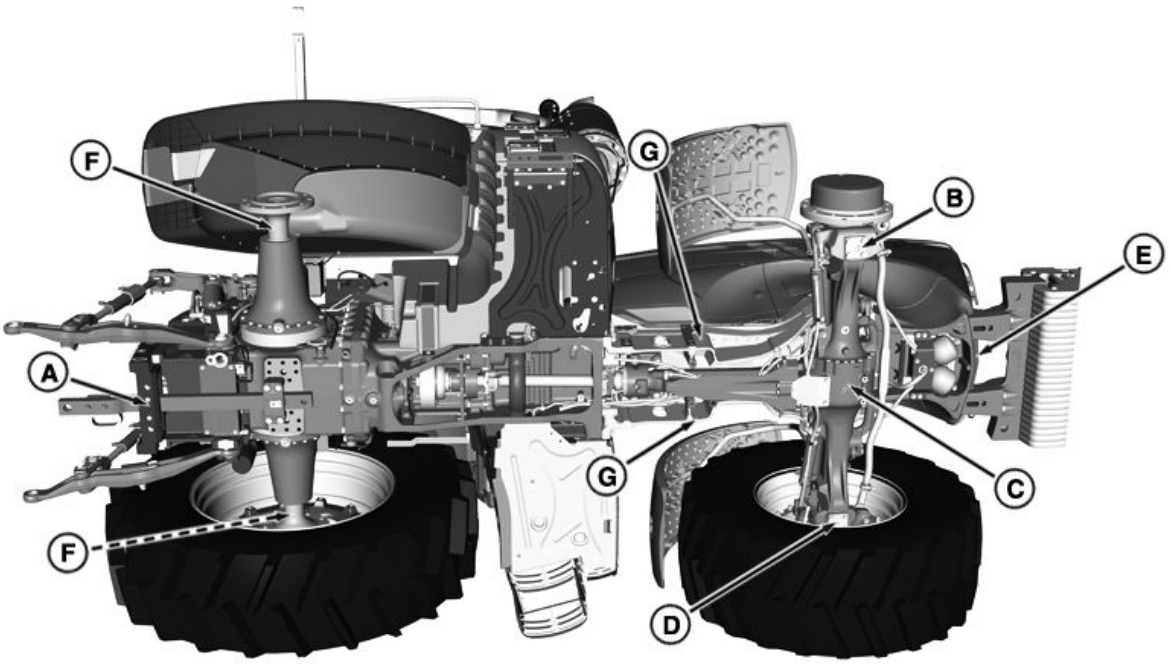
Thermostat, thermostat gasket, de-aeration tank cap and radiator cap should be replaced whenever system is flushed.

John Deere is a trademark of Deere & Company

TO84419,0000062 -19-03FEB14-1/1

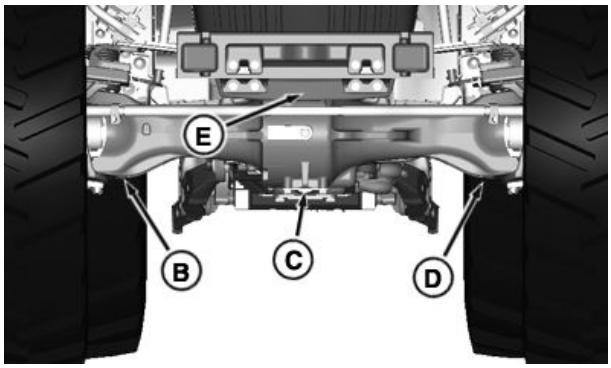
Jack Up the Tractor - Lifting Points and Support Stand Placement (2010-52-EU)

The illustrations show the recommended lifting points and support stand placement for jacking up the tractor. Use appropriate and suitable lifting device.



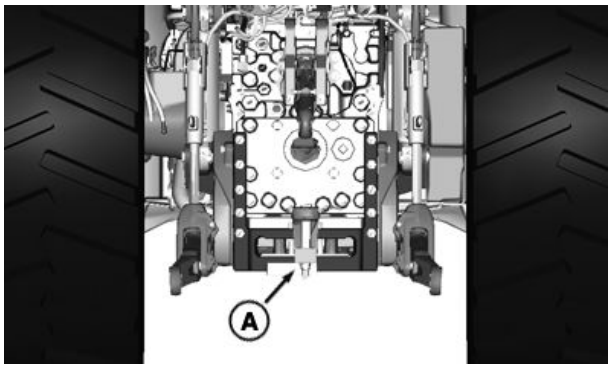
RXA0143148 —UN—08JUL14

Underside View, Lift Points/Support Stand Placement



RXA0126239 —UN—04MAY12

Front Lift Points



RXA0126241 —UN—04MAY12

Rear Lift Point

A- Raise Rear of Tractor, e.g. to Remove Rear Wheel

B- Raise Right End of Front Axle and Support Stand Placement, e.g. to Remove Right Front Wheel

C- Raise Center of Axle (Use Wooden Wedges to Prevent Axle from Tilting)

D- Raise Left End of Front Axle, e.g. to Remove Left Front Wheel

E- Raise Front End of Tractor under the Basic Weight

F- Support Stand Placement

Continued on next page

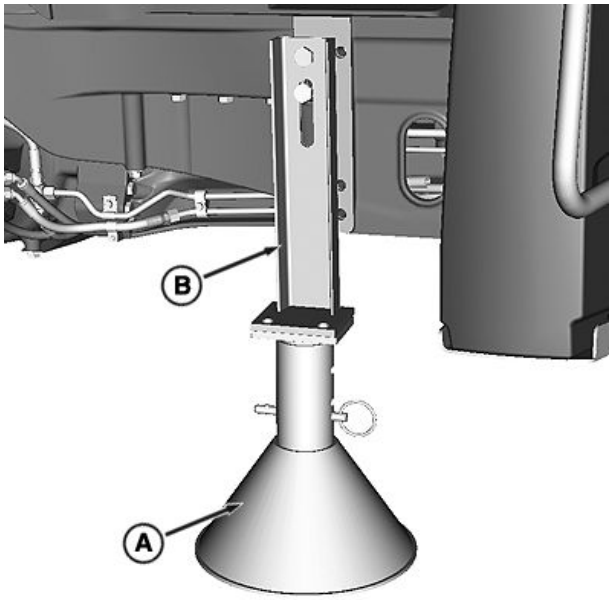
RD47322,00001D9 -19-07JUL14-1/3

CAUTION: Use approved lifting equipment only. Jack up tractor on firm, level ground only. Before doing any further work on tractor, first secure it using suitable support stands. The special John Deere tools shown can be used for this purpose. These support stands are available from your John Deere Dealer.

1. Disconnect battery ground cable.
2. Remove front weights or front hitch, if equipped.
3. Raise front of tractor and install JT07211 Rear Differential Support Stand (A) with KJD10539 Support Stand Adapter (B) using M20 x 40 mm (10.9 grade) cap screws to both sides of tractor.

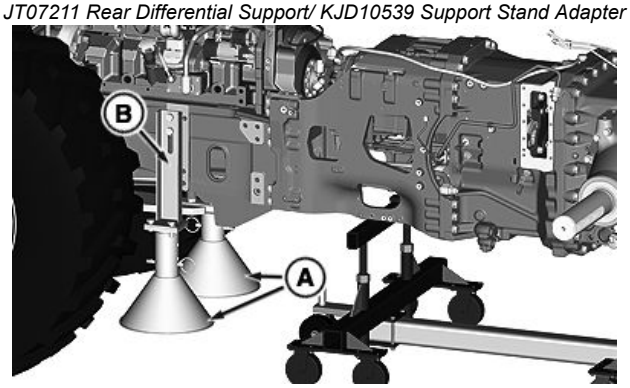
A— JT07211 Rear Differential Support Stand (2 used)

B— KJD10539 Support Stand Adapter (2 used)



RXA0113923 —UN—22FEB11

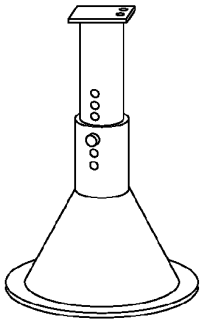
JT07211 Rear Differential Support/ KJD10539 Support Stand Adapter



RXA0122362 —UN—22NOV11

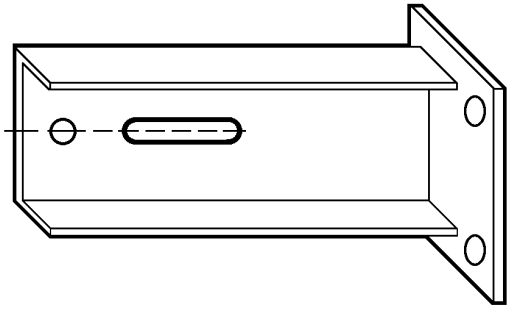
JT07211 Rear Differential Support/ KJD10539 Support Stand Adapter

RD47322,00001D9 -19-07JUL14-2/3



JT07211 Support Stand

RXA0084749 —UN—25OCT05



KJD10539 —UN—14DEC06

KJD10539

KJD10539 Support Stand Adapter

RD47322,00001D9 -19-07JUL14-3/3

Service and Connect Snap-to-Connect (STC®) Fittings

CAUTION: Do not disconnect STC™ fitting when under pressure. Failure to relieve pressure before disconnecting fitting may result in personal injury, damage to equipment or both.

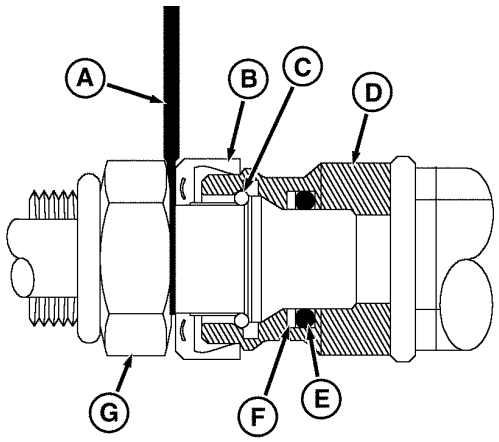
Snap-to-Connect (STC)® fittings are used on steel lines, hose connections and come in a variety of sizes. JDG1885 STC™ tool (A) is designed as a spacer to move release ring (B) inward which releases retaining ring (C). JDG1885 STC™ tool can be purchased through your John Deere™ dealer.

IMPORTANT: Do not use tool to pry fittings apart. Prying with tool may damage fitting and tool.

NOTE: If retaining ring (C), backup ring (F) or O-ring (E) are damaged, see your John Deere™ dealer for replacement kit and replace all three parts.

1. Insert correct STC™ tool between release ring and fitting.
2. Remove hose or line from connector.
3. Before connecting Snap-to-Connect fitting, check mating surfaces for nicks, scratches or flat spots.
4. Check O-ring, backup ring and retaining ring for wear or damage.
5. Make sure female end (D) and male end (G) are clean and free of contaminates.

Snap-to-Connect (STC) is a trademark of Eaton Corporation



RXA00080095 —UN—31MAR05

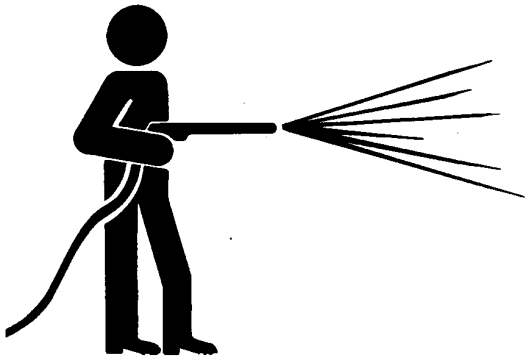
A—JDG1885 STC™ Tool
B—Release Ring
C—Retaining Ring
D—Female End (STC™ Fitting)
E—O-ring
F—Backup Ring
G—Male End (STC™ Fitting)

6. Make sure release ring (B) is on male end fitting.
7. Push fitting halves together until a definite snap and solid stop is felt.
8. Pull back on hose to make sure that fitting halves are locked together.

TO84419,0000214 -19-06MAY15-1/1

Use High-Pressure Washers

IMPORTANT: Directing pressurized water at electronic/electrical components or connectors, bearings and hydraulic seals, fuel injection pumps, exhaust outlet or other sensitive parts and components may cause product malfunctions. Reduce pressure, and spray at a 45 to 90 degree angle. When washing do not direct any water towards the exhaust or any fill tank openings.



T6642EJ —UN—18OCT88

TO84419,0000215 -19-29OCT14-1/1

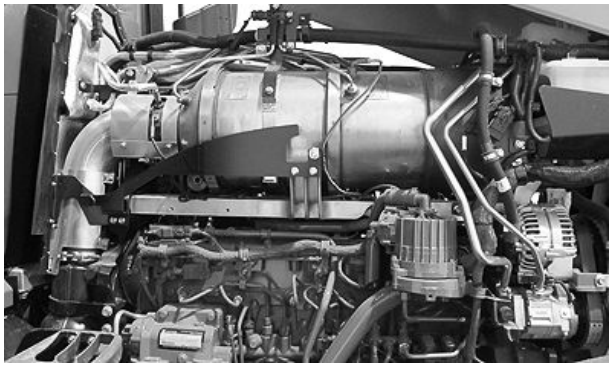
Diesel Particulate Filter Service

IMPORTANT: Using incorrect or unapproved aftertreatment components can cause damage to vehicle's aftertreatment system and reduce ability of aftertreatment system to function correctly. Never interchange aftertreatment components between Interim Tier 4/Stage III B and Final Tier 4/Stage IV equipped vehicles.

Exhaust Filter includes Diesel Oxidation Catalyst (DOC) and Diesel Particulate Filter (DPF). DPF is designed to retain residual ash, which is a noncombustible result of additives used in crankcase lubrication oils and fuel. DPF provides many hours of maintenance free operation. At some point DPF will require professional service to remove accumulated ash. The exact number of hours of operation before service is required will vary depending upon engine's power category, duty cycle and operating conditions, engine oil ash content, and fuel quality. Adhering to John Deere's™ recommended oil and fuel specifications will maximize hours of operation before professional DPF service is required.

As engine owner, you are responsible for performing required maintenance described in your Operator's Manual. During normal equipment operation DPF maintenance requirements will depend on rate at which ash accumulates in it. As ash levels rise in DPF capacity for soot storage is reduced and back pressure of exhaust system will rise more frequently. Exhaust Filter dash lamp indicator or diagnostic gauge will indicate when DPF needs servicing.

Removal of DPF ash must be done by removing DPF from machine and placing it into specialized equipment. Do not remove ash by using water or other chemicals. Removing



RXA0134218 —UN—25JUL13

DPF Filter On Top of Engine

ash by these methods may damage material securing DPF in its canister, resulting in the loosening of DPF element in canister and subjecting it to damage from vibration.

Failure to follow approved ash removal methods may violate U.S. federal, state and local hazardous waste laws, along with damage to DPF resulting in potential denial of Diesel Exhaust Filter emissions warranty. It is strongly recommended you take DPF to an authorized John Deere™ service location or other qualified service provider for servicing.

When AUTO PARKED exhaust filter cleaning is enabled, exhaust temperature may be high under no load or light load conditions at certain times during exhaust filter cleaning cycle.

Disable exhaust filter cleaning in conditions where it may be unsafe for elevated exhaust temperatures.

Disable automatic exhaust filter cleaning only when necessary.

John Deere is a trademark of Deere & Company

TO84419,0000217 -19-25FEB14-1/1

Exhaust Filter/Diesel Particulate Filter (DPF) Ash Handling and Disposal

CAUTION: Under federal, state, and/or local laws or regulations, Diesel Particulate Filter ash may be classified as a hazardous waste. Hazardous wastes must be disposed of in accordance with all applicable federal, state and local laws or regulations governing hazardous waste disposal.

Only a qualified service provider should remove ash from the DPF. Personal protective equipment and clothing, maintained in a sanitary and reliable condition, should be used when handling and cleaning a DPF. See your John Deere™ dealer or qualified service provider for assistance.

John Deere is a trademark of Deere & Company

TO84419,0000218 -19-13NOV13-1/1

Exhaust Filter Disposal

CAUTION: Proper management of an Exhaust Filter that has reached the end of its useful life is required, since the ash or catalyst material in the device may be classified as hazardous waste under federal, state, and/or local laws or regulations. Used Exhaust Filters, which include the Diesel Particulate Filter, may be exchanged at any John Deere™ dealer or qualified service provider.

John Deere is a trademark of Deere & Company

TO84419,0000219 -19-13NOV13-1/1

Do Not Modify Fuel System

IMPORTANT: Increasing horsepower, or altering any aspect of fuel and air delivery on emissions certified engines beyond factory rating, will cause emission levels beyond what is approved. This may result in substantial fines to persons or companies committing such violations.

Tractor warranty is void if power level is changed from factory specifications.

Do not attempt to service injection pump or fuel injectors yourself. Special training and special tools are required. See your John Deere™ dealer.



RXA0109527 —UN—18AUG10

Never steam clean or spray water on a warm injection pump. This could damage pump parts.

John Deere is a trademark of Deere & Company

TO84419,000021E -19-01MAY13-1/1

Do Not Open High-Pressure Fuel System

High-pressure fluid remaining in fuel lines can cause serious injury. Do not disconnect or attempt repair of fuel lines, sensors, or any other components between the high-pressure fuel pump and nozzles on engines with High Pressure Common Rail (HPCR) fuel system.

Only technicians familiar with this type of system can perform repairs. (See your John Deere™ dealer.)



TS1343 —UN—18MAR92

John Deere is a trademark of Deere & Company

TO84419,000021F -19-27NOV12-1/1

Bleed Fuel System

If Diagnostic Trouble Code (DTC) indicates fuel system problem, and fuel system and filters are found to be correct - or if (even without a DTC present) tractor does not run correctly or fails to start, fuel injection system may need to be bled of air. Turn key switch to run position. Electric fuel pump will start and bleed air from fuel system. Allow pump to run for 30 seconds to 1 minute before attempting an engine restart. If problem persists, see your John Deere™ dealer.

John Deere is a trademark of Deere & Company

TO84419,0000220 -19-03JUL13-1/1

Identify Zinc-Flake Coated Fasteners

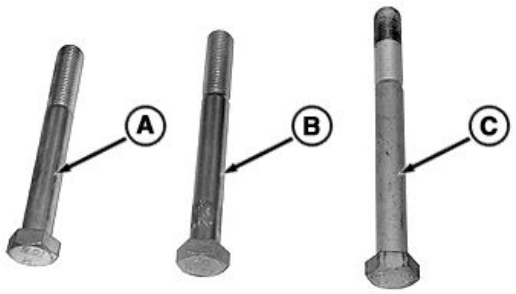
Standard cap screws (A) are of a reflective silver color.

Zinc plated cap screws (B) are of a reflective gold color.

Zinc-flake coated cap screws (C) are of a dull silver color.

NOTE: Zinc-flake coated fasteners are tightened to lubricated specifications, unless otherwise noted. (See Torque Value Charts in this group.)

A—Standard Cap Screws
B—Zinc-Plated Cap Screw
C—Zinc-Flake Cap Screw (20 mm and larger)

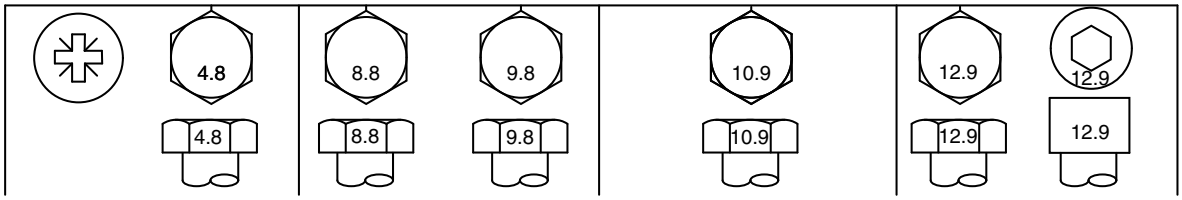


RXA0073812 —UN—03MAR04

TO84419,0000276 -19-27NOV12-1/1

Metric Bolt and Screw Torque Values

TS1670 —UN—01MAY03



Bolt or Screw Size	Class 4.8				Class 8.8 or 9.8				Class 10.9				Class 12.9			
	Lubricated[a]		Dry[b]		Lubricated[a]		Dry[b]		Lubricated[a]		Dry[b]		Lubricated[a]		Dry[b]	
	N·m	lb.-in.	N·m	lb.-in.	N·m	lb.-in.	N·m	lb.-in.	N·m	lb.-in.	N·m	lb.-in.	N·m	lb.-in.	N·m	lb.-in.
M6	4.7	42	6	53	8.9	79	11.3	100	13	115	16.5	146	15.5	137	19.5	172
									N·m	lb.-ft.	N·m	lb.-ft.	N·m	lb.-ft.	N·m	lb.-ft.
M8	11.5	102	14.5	128	22	194	27.5	243	32	23.5	40	29.5	37	27.5	47	35
			N·m	lb.-ft.	N·m	lb.-ft.	N·m	lb.-ft.								
M10	23	204	29	21	43	32	55	40	63	46	80	59	75	55	95	70
	N·m	lb.-ft.														
M12	40	29.5	50	37	75	55	95	70	110	80	140	105	130	95	165	120
M14	63	46	80	59	120	88	150	110	175	130	220	165	205	150	260	190
M16	100	74	125	92	190	140	240	175	275	200	350	255	320	235	400	300
M18	135	100	170	125	265	195	330	245	375	275	475	350	440	325	560	410
M20	190	140	245	180	375	275	475	350	530	390	675	500	625	460	790	580
M22	265	195	330	245	510	375	650	480	725	535	920	680	850	625	1080	800
M24	330	245	425	315	650	480	820	600	920	680	1150	850	1080	800	1350	1000
M27	490	360	625	460	950	700	1200	885	1350	1000	1700	1250	1580	1160	2000	1475
M30	660	490	850	625	1290	950	1630	1200	1850	1350	2300	1700	2140	1580	2700	2000
M33	900	665	1150	850	1750	1300	2200	1625	2500	1850	3150	2325	2900	2150	3700	2730
M36	1150	850	1450	1075	2250	1650	2850	2100	3200	2350	4050	3000	3750	2770	4750	3500

Torque values listed are for general use only, based on the strength of the bolt or screw. DO NOT use these values if a different torque value or tightening procedure is given for a specific application. For stainless steel fasteners or for nuts on U-bolts, see the tightening instructions for the specific application. Tighten plastic insert or crimped steel type lock nuts by turning the nut to the dry torque shown in the chart, unless different instructions are given for the specific application.

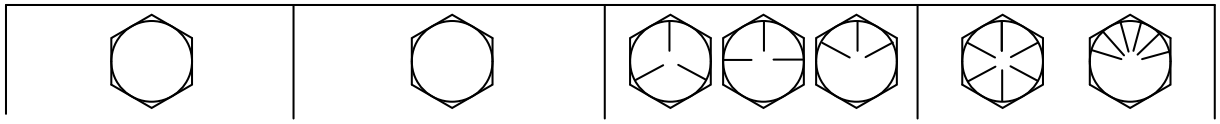
Shear bolts are designed to fail under predetermined loads. Always replace shear bolts with identical property class. Replace fasteners with the same or higher property class. If higher property class fasteners are used, tighten these to the strength of the original. Make sure fastener threads are clean and that you properly start thread engagement. When possible, lubricate plain or zinc plated fasteners other than lock nuts, wheel bolts or wheel nuts, unless different instructions are given for the specific application.

[a] *"Lubricated" means coated with a lubricant such as engine oil, fasteners with phosphate and oil coatings, or M20 and larger fasteners with JDM F13C, F13F or F13J zinc flake coating.*
[b] *"Dry" means plain or zinc plated without any lubrication, or M6 to M18 fasteners with JDM F13B, F13E or F13H zinc flake coating.*

DX,TORQ2 -19-12JAN11-1/1

Unified Inch Bolt and Screw Torque Values

TS1671 —UN—01MAY03



Bolt or Screw Size	SAE Grade 1				SAE Grade 2[a]				SAE Grade 5, 5.1 or 5.2				SAE Grade 8 or 8.2			
	Lubricated[b]		Dry[c]		Lubricated[b]		Dry[c]		Lubricated[b]		Dry[c]		Lubricated[b]		Dry[c]	
	N·m	lb.-in.	N·m	lb.-in.	N·m	lb.-in.	N·m	lb.-in.	N·m	lb.-in.	N·m	lb.-in.	N·m	lb.-in.	N·m	lb.-in.
1/4	3.7	33	4.7	42	6	53	7.5	66	9.5	84	12	106	13.5	120	17	150
													N·m	lb.-ft.	N·m	lb.-ft.
5/16	7.7	68	9.8	86	12	106	15.5	137	19.5	172	25	221	28	20.5	35	26
									N·m	lb.-ft.	N·m	lb.-ft.				
3/8	13.5	120	17.5	155	22	194	27	240	35	26	44	32.5	49	36	63	46
			N·m	lb.-ft.	N·m	lb.-ft.	N·m	lb.-ft.								
7/16	22	194	28	20.5	35	26	44	32.5	56	41	70	52	80	59	100	74
	N·m	lb.-ft.														
1/2	34	25	42	31	53	39	67	49	85	63	110	80	120	88	155	115
9/16	48	35.5	60	45	76	56	95	70	125	92	155	115	175	130	220	165
5/8	67	49	85	63	105	77	135	100	170	125	215	160	240	175	305	225
3/4	120	88	150	110	190	140	240	175	300	220	380	280	425	315	540	400
7/8	190	140	240	175	190	140	240	175	490	360	615	455	690	510	870	640
1	285	210	360	265	285	210	360	265	730	540	920	680	1030	760	1300	960
1-1/8	400	300	510	375	400	300	510	375	910	670	1150	850	1450	1075	1850	1350
1-1/4	570	420	725	535	570	420	725	535	1280	945	1630	1200	2050	1500	2600	1920
1-3/8	750	550	950	700	750	550	950	700	1700	1250	2140	1580	2700	2000	3400	2500
1-1/2	990	730	1250	930	990	730	1250	930	2250	1650	2850	2100	3600	2650	4550	3350

Torque values listed are for general use only, based on the strength of the bolt or screw. DO NOT use these values if a different torque value or tightening procedure is given for a specific application. For plastic insert or crimped steel type lock nuts, for stainless steel fasteners, or for nuts on U-bolts, see the tightening instructions for the specific application. Shear bolts are designed to fail under predetermined loads. Always replace shear bolts with identical grade.

Replace fasteners with the same or higher grade. If higher grade fasteners are used, tighten these to the strength of the original. Make sure fastener threads are clean and that you properly start thread engagement. When possible, lubricate plain or zinc plated fasteners other than lock nuts, wheel bolts or wheel nuts, unless different instructions are given for the specific application.

[a] Grade 2 applies for hex cap screws (not hex bolts) up to 6 in. (152 mm) long. Grade 1 applies for hex cap screws over 6 in. (152 mm) long, and for all other types of bolts and screws of any length.

[b] "Lubricated" means coated with a lubricant such as engine oil, fasteners with phosphate and oil coatings, or 7/8 in. and larger fasteners with JDM F13C, F13F or F13J zinc flake coating.

[c] "Dry" means plain or zinc plated without any lubrication, or 1/4 to 3/4 in. fasteners with JDM F13B, F13E or F13H zinc flake coating.

DX,TORQ1 -19-12JAN11-1/1

Electrical System Service

Introduction to Electrical Service Section

In addition to fuses and relays mounted in fuse panels (behind operator's seat), tractors are also equipped with solid state load centers located in two electronic control units.

These solid-state load centers replace fused relay circuits previously used. Their primary function is to control the majority of high current loads such as rear fender lights and horn. Load center circuitry monitors loads and voltages providing fast reaction time and ability to alert operator if a circuit overloads or if voltage is out of specification, i.e. open circuit (undercurrent) or short circuit (over-current).

If circuit is faulty and a diagnostic trouble code is generated, circuit will stay OFF and diagnostic trouble code will remain active until circuit is recycled by operator. If circuit or one of its components is turned back ON and problem is no longer present, system will function normally.

As an example, if a light circuit is determined to have an over-current condition, load center system will shut the circuit off. If operator turns light switch off and back on, and system senses zero amps when light controlled by the switch is off, system will turn system back on and normal operation will turn back on.

If total current load of load center exceeds a preset level, software will automatically shut down system, turning off one circuit at a time. Logic circuit will wait a few seconds between circuit shutdowns to determine if total controller current has fallen below preset level, or if additional circuits should be turned off.

Solid state circuits are rated for a fixed value. If additional electrical devices need to be added to tractor, it is recommend to use a power strip or convenience outlets in conjunction with an off/on switch. Splicing into a wire in the wrong location could cause circuit to overload and shut circuit down.

If extra implement lights and controls, such as switches are needed, contact your John Deere™ dealer. A dealer can provide information on correct method to tie in a light switch with one of accessory wires located in 7 pin terminal on back of tractor.

John Deere is a trademark of Deere & Company

TO84419,0000222 -19-13AUG13-1/1

Disconnect Battery - Final Tier 4 and Stage IV Engines

IMPORTANT: To determine tractor engine type, see Record Engine Serial Number in Identification Numbers Section of this Operator's Manual.

IMPORTANT: Do not disconnect battery until Selective Catalyst Reduction (SCR) system has had enough time to automatically purge system of Diesel Exhaust Fluid (DEF) . If adequate time is not allowed for system to be purged, any DEF remaining can crystallize and plug system. At temperatures below -15°C (5°F), unpurged DEF will freeze and damage system components. If equipped with a battery disconnect system, a light next to disconnect system is illuminated while auto-purge is in progress. It shuts off when complete and safe to disconnect the battery.

If tractor is not equipped with battery disconnect switch, wait at least 4 minutes after tractor stops before disconnecting battery.

RX32825,0000754 -19-29JUL14-1/1

Load Center Fuses

NOTE: Fold seat backrest down to allow easier access, and allow cab lighting to shine on load center when fuses are being inspected or replaced.

Two load centers (cab and front) and a master fuse module hold system replaceable fuses.

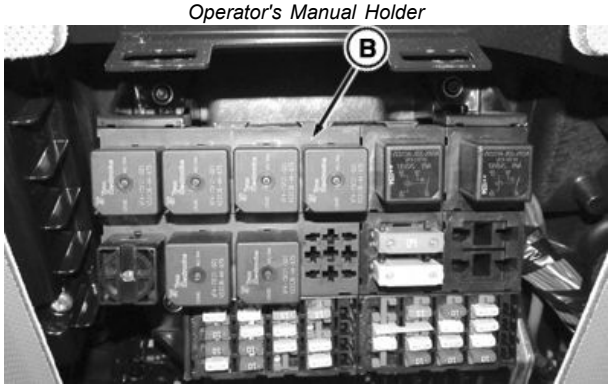
Cab Load Center (CLC) fuse panel (B) is directly behind operator's seat and just below cab rear window. To access load center, lift up on Operator's Manual holder (A).

A—Operator's Manual Holder **B—Load Center Fuse Panel**



RXA0135034 —UN—14AUG13

Operator's Manual Holder



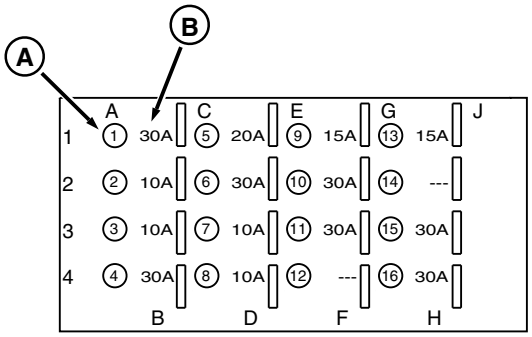
RXA0135035 —UN—14AUG13

Load Center Fuse Panel

RW29387,00005D1 -19-29JUL14-1/5

Diagram identifies load center fuse location, size and description.

A—Fuse Location Number **B—Fuse Size**

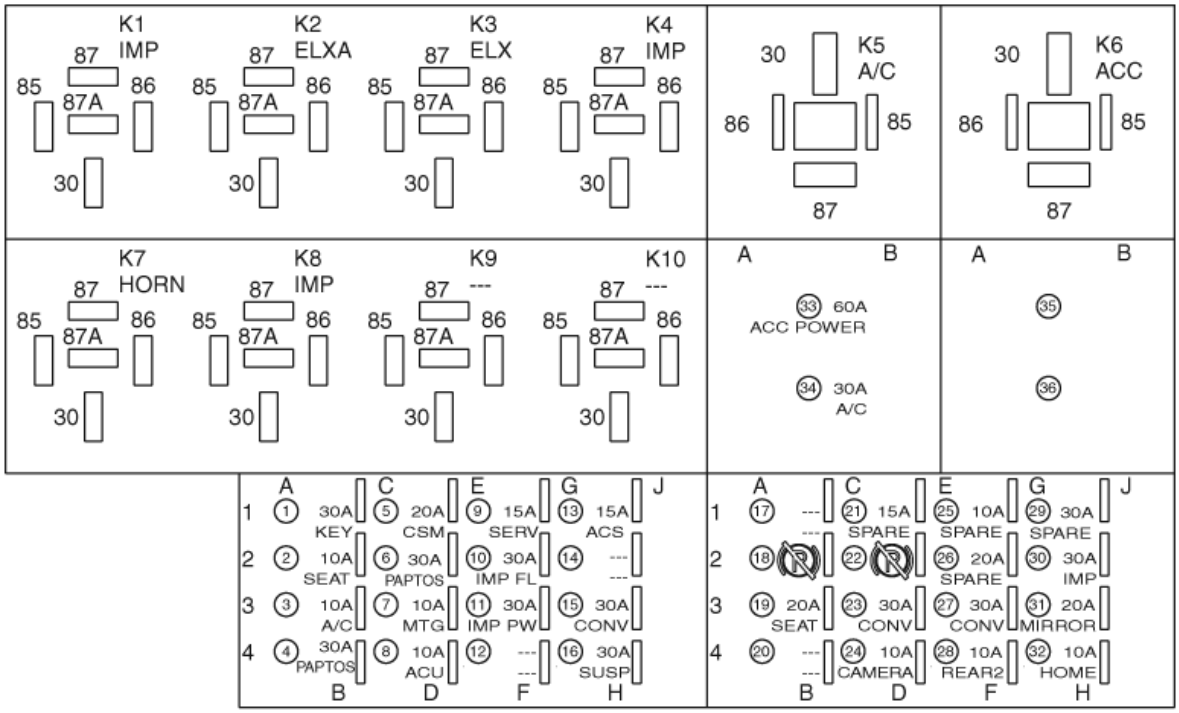


RXA0130346 —UN—28JAN13

Load Center — Legend

Continued on next page

RW29387,00005D1 -19-29JUL14-2/5



RXA0127389 —UN—25JAN13

K1—ISO Implement Connector Power Relay
K2—Electronics Relay
K3—Electronics Relay
K4—Implement Accessory Relay
K5—Blower Relay
K6—Accessories Relay
K7—Warning Horn Relay
K8—Implement Flood Relay
K9—Not Used
K10— Not Used
1— Key Switch (30 Amp)
2— Operator Presence Switch (10 Amp)
3— Air Conditioner (10 Amp)
4— PAPTOS (If Equipped)(30 Amp)
5— Radio, Primary Display and Interior Lights (20 Amp)
6— PAPTOS (If Equipped)(30 Amp)
7— Modular Telematics Gateway (10 Amp)
8— Armrest Control Unit (10 Amp)
9— Server (15 Amp)
10— Implement Flood Lights (30 Amp)
11— Implement Accessory (30 Amp)[1]
12— Not Used
13— ActiveCommand Steering (ACS)™ (If Equipped) (15 Amp)
14— Not Used
15— Convenience Outlet Battery (30 Amp)
16— Not Used
17— Not Used
18— Park Brake Release
19— Seat Controls (20 Amp)
20— Not Used
21— Spare (15 Amp)
22— Park Brake Release
23— Convenience Outlet Switched (30 Amp)
24— Video Camera Power and Armrest Outlet (10 Amp)
25— Spare (10 Amp)
26— Spare (20 Amp)
27— Convenience Outlet Switched (30 Amp)
28— Rear Chassis Control Unit (10 Amp)
29— Spare (30 Amp)
30— ISO Implement Connector (30 Amp)
31— Remote Mirror (20 Amp)
32— Come Home Mode (IVT™ /AutoPowr™ Only) (10 Amp)
33— Accessories Power (60 Amp)
34— Blower Motor (30 Amp)
35— Not Used
36— Not Used

IMPORTANT: (Final Tier 4 and Stage IV Engines only. To determine which engine your tractor is equipped with, see Record Engine Serial Number in Identification Numbers section of this Operator's Manual.) Do not disconnect battery until Selective Catalyst Reduction (SCR) system has had enough time to automatically purge system of Diesel Exhaust Fluid (DEF) . If adequate time is not allowed for system to be purged, any DEF remaining can crystallize and plug system. At temperatures below -15°C (5°F), unpurged DEF will freeze and damage system components. If equipped with a battery disconnect system, a light next to the disconnect system is illuminated while auto-purge is in progress. It shuts off when complete and safe to disconnect the battery.

If tractor is not equipped with battery disconnect switch, wait at least 4 minutes after tractor stops before disconnecting battery.

IMPORTANT: Replacement Fuses must be the same rating as the original. Ensure key is in OFF position.

ActiveCommand Steering is a trademark of Deere & Company
IVT is a trademark of Deere & Company

Continued on next page

RW29387,00005D1 -19-29JUL14-3/5

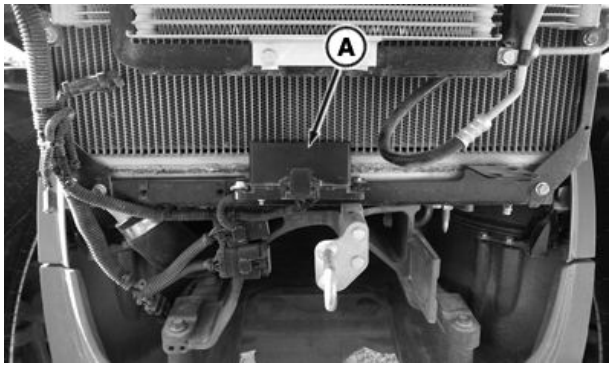
AutoPowr is a trademark of Deere & Company

[1]Accessory fuse F11 is removed for European tractors. Some trailers use this connection for fog lights. This can be enabled by inserting a 30 A fuse into F11.

Continued on next page

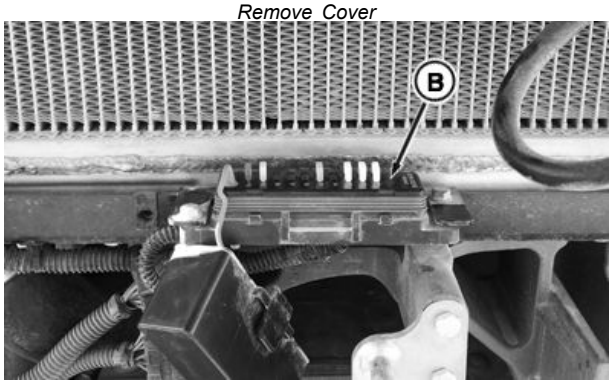
Front load center (B) is at front bottom of cover (A). Close and secure hood when service is complete. Open hood. Front load center (B) is at front bottom of radiator. Remove cover (A).

A—Cover
B—Front Load Center Panel
C—F1 - ECU (20 Amp)(Not Used-Stage II Engine)
D—F2 - ECU (20 Amp)
E—F3 - ECU (20 Amp)
F—F4 - Dosing Pump (15 Amp)(Not Used-Stage II Engine)
G—F5 - Fuel Transfer Pump (15 Amp)(Not Used-Stage II Engine)
H—F6 - Not Used
I— F7 - Key Switch (10 Amp)
J— F8 - Steering Control Unit (15 Amp)
K—F9 - Front Chassis Control Unit 2 (If Equipped with Front Hitch, Front PTO or Mid-Stack SCV-25 Amp)
L—F10 - Front Chassis Control Unit 1 (If Equipped with Suspended Front Axle-10 Amp)



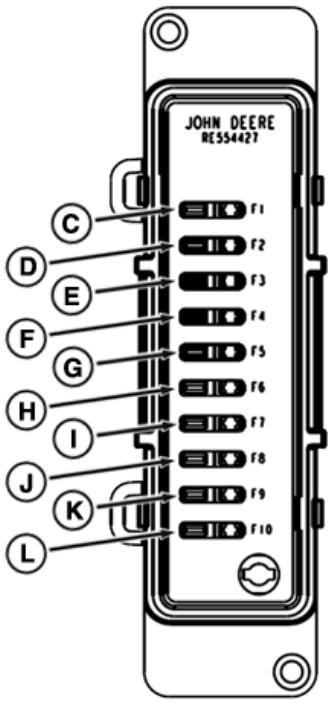
RXA01143403 —UN—09JUL14

Remove Cover



RXA01143404 —UN—09JUL14

Fuses



RXA0130342 —UN—11JAN13

RW29387,00005D1 -19-29JUL14-5/5

Master Fuses

IMPORTANT: (Final Tier 4 and Stage 4 Engines only. To determine which engine your tractor is equipped with, see Record Engine Serial Number in Identification Numbers section of this Operator's Manual.) Do not disconnect battery until Selective Catalyst Reduction (SCR) system has had enough time to automatically purge system of Diesel Exhaust Fluid (DEF) . If adequate time is not allowed for system to be purged, any DEF remaining can crystallize and plug system. At temperatures below -15°C (5°F), unpurged DEF will freeze and damage system components. If equipped with a battery disconnect system, a light next to disconnect system is illuminated while auto-purge is in progress. It shuts off when complete and safe to disconnect the battery.

If tractor is not equipped with battery disconnect switch, wait at least 4 minutes after tractor stops before disconnecting battery.

IMPORTANT: Ensure both negative (-) and positive (+) battery connections are disconnected from both batteries before fuse inspection or replacement.

Do not attempt to disassemble master fuses unless instructed by your John Deere™ dealer.

Replacement fuses must be the same rating as original.

Tractors have two or three master fuses. Fuse module is located inside battery compartment.

Grasp battery compartment cover handle (A) and pull forward and up to remove cover. Strong magnets secure cover.

Remove top cover retaining screws (B) and remove cover (C) to access master fuse module.

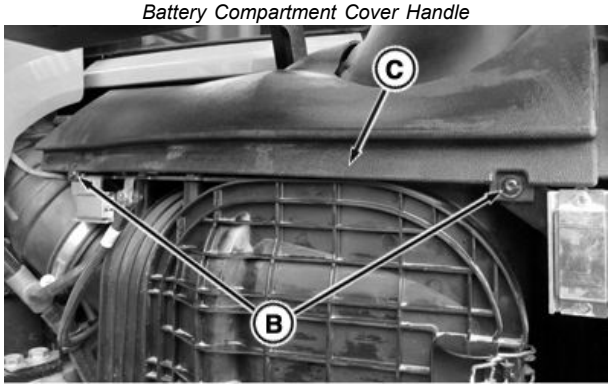
- Master Fuse (E) — 300 Amps
- Backup Hydraulic Pump (If Equipped) (F) — 250 Amps
- Alternator Battery Relay (G) — 300 Amps

A—Battery Compartment Cover Handle
B—Screws
C—Master Fuse Module Cover
D—Backup Hydraulic Pump (If Equipped)
E—Master Fuse
F—Backup Pump Fuse
G—Alternator Battery Relay Fuse
H—Nuts (2 used)
I— Cover



RXA0135033 —UN—15AUG13

Battery Compartment Cover Handle



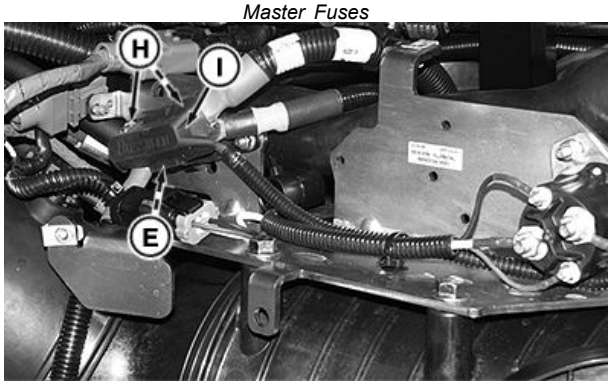
RXA0135049 —UN—14AUG13

Master Fuse Cover



RXA0135032 —UN—15AUG13

Master Fuses



RXA0139445 —UN—10MAR14

Single Master Fuse Option

TO84419,0000225 -19-10AUG15-1/1

Welding Near Electronic Control Units

IMPORTANT: Do not jump-start engines with arc welding equipment. Currents and voltages are too high and may cause permanent damage.

1. Disconnect the negative (-) battery cable(s).
2. Disconnect the positive (+) battery cable(s).
3. Connect the positive and negative cables together. Do not attach to vehicle frame.
4. Clear or move any wiring harness sections away from welding area.
5. Connect welder ground close to welding point and away from control units.



TS953 —UN—15MAY90

6. After welding, reverse Steps 1—5.

DX,WW,ECU02 -19-14AUG09-1/1

Keep Electronic Control Unit Connectors Clean

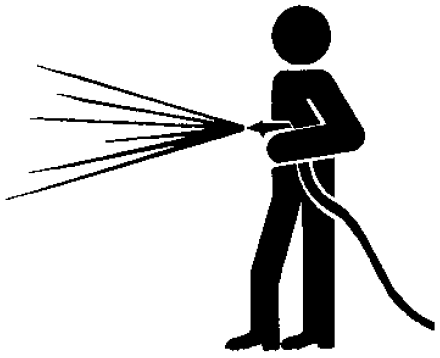
IMPORTANT: Do not open control unit and do not clean with a high-pressure spray. Moisture, dirt, and other contaminants may cause permanent damage.

1. Keep terminals clean and free of foreign debris. Moisture, dirt, and other contaminants may cause the terminals to erode over time and not make a good electrical connection.
2. If a connector is not in use, put on the proper dust cap or an appropriate seal to protect it from foreign debris and moisture.
3. Control units are not repairable.
4. Since control units are the components LEAST likely to fail, isolate failure before replacing by completing a diagnostic procedure. (See your John Deere dealer.)
5. The wiring harness terminals and connectors for electronic control units are repairable.

DX,WW,ECU04 -19-11JUN09-1/1

Use Compressed Air

IMPORTANT: Directing pressurized air at electronic/electrical components or connectors, may cause buildup of static electricity and product malfunctions.

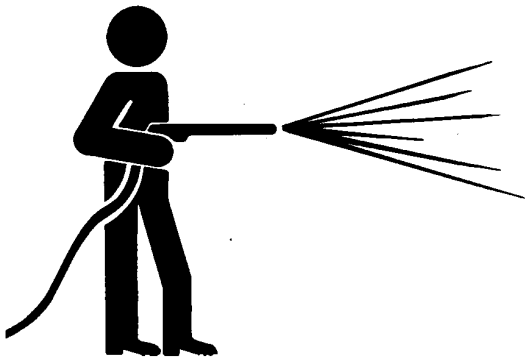


RW56455 —UN—30JUN97

TO84419,0000228 -19-29OCT14-1/1

Use High-Pressure Washers

IMPORTANT: Directing pressurized water at electronic/electrical components or connectors, bearings and hydraulic seals, fuel injection pumps, exhaust outlet or other sensitive parts and components may cause product malfunctions. Reduce pressure, and spray at a 45 to 90 degree angle. When washing do not direct any water towards the exhaust or any fill tank openings.



T6642EJ —UN—18OCT88

TO84419,0000215 -19-29OCT14-1/1

Service Implement Power Relay Module

Remove four cap screws (A) and cab rear cover. Implement Power Relay Module is located in upper left corner of rear cab panel. Module routes power to Implement Bus Breakaway Connector.

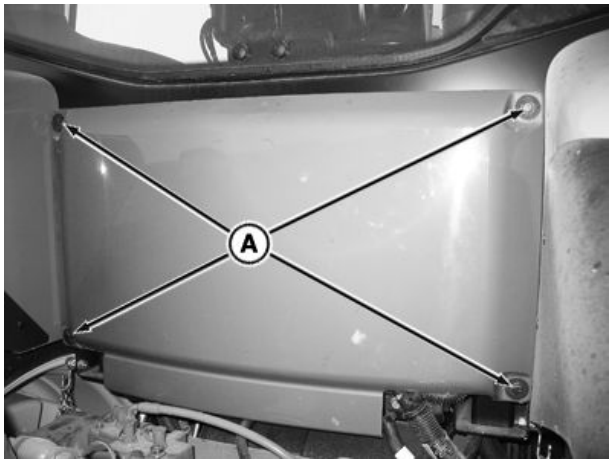
Power comes into module from battery at battery power input stud (H).

Switched power lug (B) is protected by a 60 Amp fuse (F). Unswitched power lug (C) is protected by a 30 Amp fuse (G).

To Change Fuses

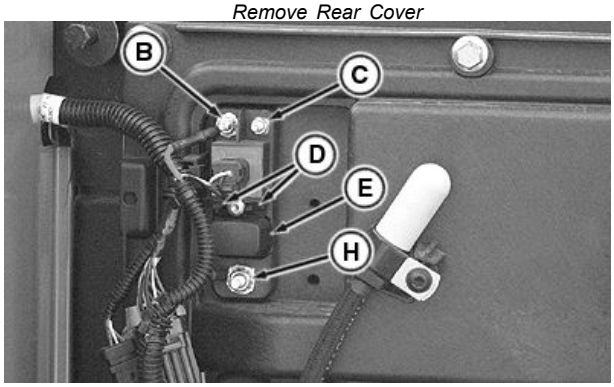
1. Press down on fuse cover tabs (D) and remove fuse cover (E).
2. To remove, pull fuse straight rearward.
3. Replace with new fuse.
4. Reinstall cover and slide tabs over cover edge to secure.

A—Cap Screws
B—Switched Power Lug
C—Unswitched Power Lug
D—Fuse Cover Tabs
E—Fuse Cover
F—60 Amp Fuse
G—30 Amp Fuse
H—Battery Power Input Stud



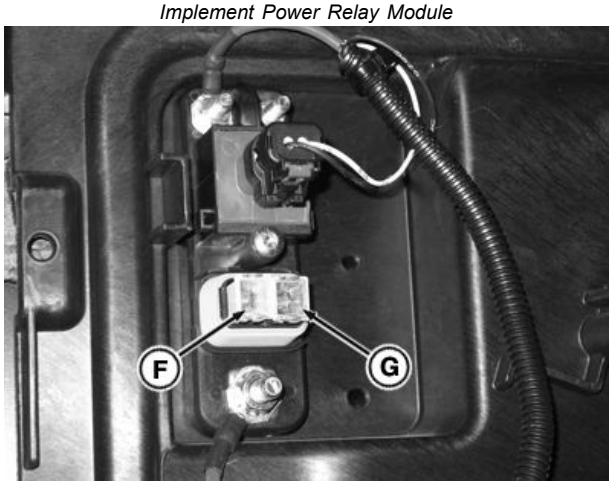
RXA0110047 —UN—26AUG10

Remove Rear Cover



RXA0109345 —UN—16AUG10

Implement Power Relay Module



RXA0100356 —UN—03FEB09

Implement Power Relay Module Fuses

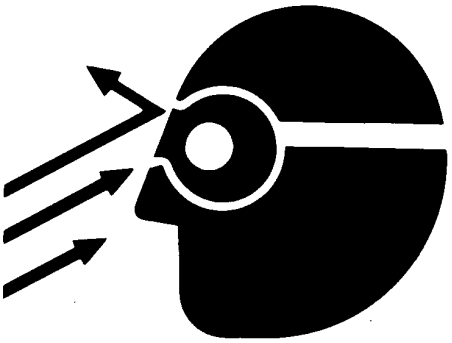
TO84419,0000229 -19-25JUL13-1/1

Handle Halogen Light Bulbs Safely

CAUTION: Halogen bulbs (A) contain gas under pressure. Handling a bulb improperly could cause it to shatter into flying fragments. To avoid possible injury:

- **Turn light switch off and allow bulbs to cool before changing. Leave switch off until bulb change is done.**
- **Wear eye protection.**
- **Handle bulb by its base. Keep bulb oil free; wear gloves to avoid touching glass.**
- **Do not drop or scratch bulb. Keep moisture away.**
- **Place used bulb in the new bulb carton and dispose of properly. Keep out of reach of children.**

A—Halogen Bulb



TS266 —UN—23AUG88



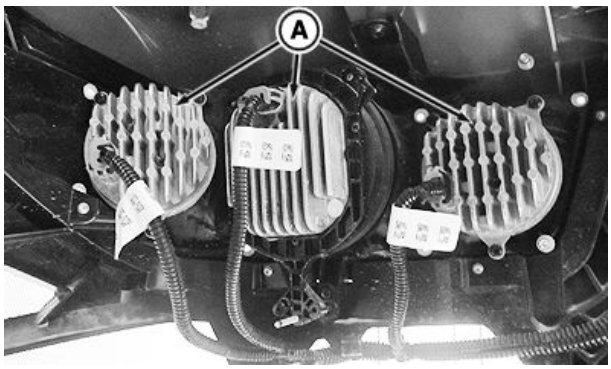
H39474 —UN—30JUN00

TO84419,000022A -19-09APR13-1/1

Replace Front HID/LED Light Assembly

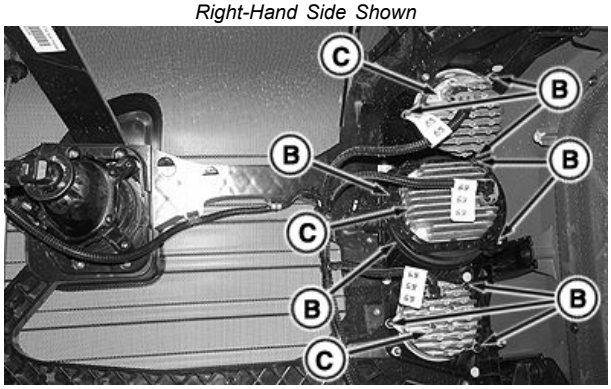
1. Raise hood.
2. Disconnect harness connector (A).
3. Remove screws (B) and light assembly (C).
4. Replace light assembly.
5. Install new light assembly in reverse order of removal.
6. Close and secure hood.

A—Harness Connector
B—Screws
C—Light Assembly



RXA0134245 —UN—31JUL13

Right-Hand Side Shown



RXA0134248 —UN—31JUL13

Right-Hand Side Shown

TO84419,000022C -19-06SEP13-1/1

Adjust Front Grille Lights

Adjust front grill lights, as needed. Perform adjustments on each side of tractor.

For High Beam Headlights:

To lower high beam, turn high beam adjustment screw (A) counterclockwise.

To raise and tilt in high beam, turn high beam adjustment screw (C) counterclockwise.

To raise and tilt out high beam, turn high beam adjustment screw (D) counterclockwise.

For Inner Hood Work Light:

To lower low beam headlight, turn low beam adjustment screw (B) counterclockwise.

To raise and tilt in low beam headlight, turn low beam adjustment screw (E) counterclockwise.

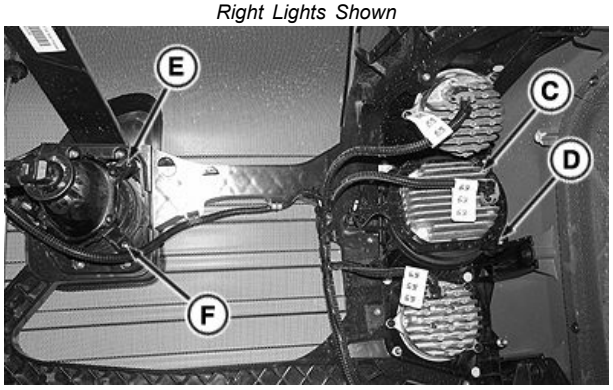
To raise and tilt out low beam headlight, turn low beam adjustment screw (F) counterclockwise.

A—High Beam Adjustment Screw
B—Low Beam Adjustment Screw
C—High Beam Tilt Up And In Adjustment Screw
D—High Beam Tilt Up And Out Adjustment Screw
E—Low Beam Tilt Up And In Adjustment Screw
F—Low Beam Tilt Up And Out Adjustment Screw



RXA0134244 —UN—31JUL13

Right Lights Shown

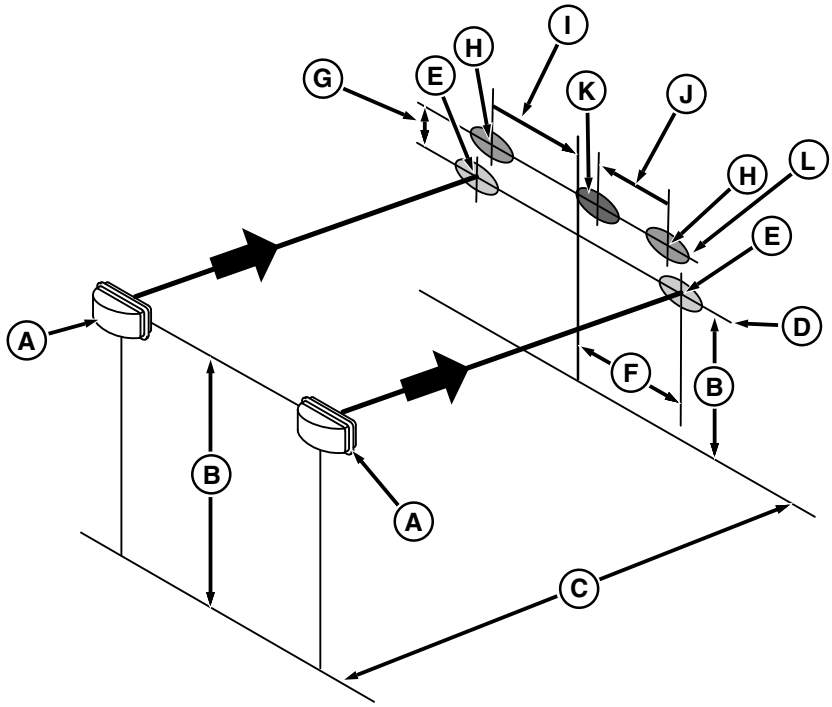


RXA0134249 —UN—31JUL13

Right Lights Shown

TO84419,000022E -19-31JUL13-1/1

Aim Headlights



RXA0147456 —UN—20FEB15

A—Low Beam Road Lights
B—Distance, Road Light Low Beam Center To Ground
C—Distance, 7.5 meters (25 ft.)
D—Horizontal Line on Wall
E—Road Light Low Beam Center
F—Distance, 914 mm (36 in.)
G—Distance, 355 mm (14 in.) (Road Light Low Beam Center To High Beam Center)
H—Road Light High Beam Center
I—Distance, 787 mm (31 in.) (Road Light High Beam Center To Tractor Center Line)
J—Distance, 635 mm (25 in.) (Road Light High Beam Center To Inner Hood Light Beam Center)
K—Inner Hood Light Beam Center
L—Edge of High Beam Bright Area

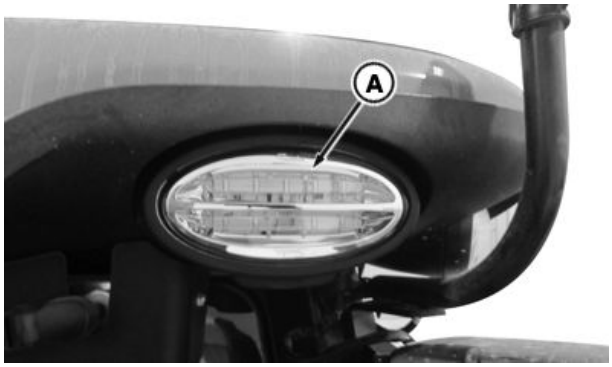
1. Park tractor on level surface with low beam road lights (A) 7.5 meters (25 ft.) (C) from a straight wall. Tractor must be perpendicular to wall. Turn on low beam road lights.
2. Measure distance (B) from center of road light low beam lamps to ground.
3. Mark a horizontal line (D) on wall at same height as center of road light low beams.
4. On wall, mark each road light low beam center (E).
5. Determine total distance between centers of road light low beams.
6. Calculate one-half distance determined in step 5.
7. Mark vertical line at distance calculated in step 6 from center of right-hand low beam center.
8. Distance (F) between center of road light low beam and center line should be 914 mm (36 in.). Adjust as necessary. See Adjust Front Grille Lights in this section of this Operator's Manual.
9. Turn on road light high beams.
10. Adjust road light high beams so edge of bright area (L) is **at least** one tenth of distance (B) **above** road light low beam centers (E).
11. On wall, mark each road light high beam center (H), then mark a horizontal center line between center of road light high beams.
12. Distance (I) between center of road light high beams and center line should be 787 mm (31 in.). Adjust as necessary. See Adjust Front Grille Lights in this section of this Operator's Manual.
13. Configure inner hood lights ON.
14. Turn on field lights. Inner hood light beam center (K) should be on horizontal line between centers of road light high beams. Adjust as necessary.
15. Distance (J) between inner hood light beam center (K) and light center line should be 635 mm (25 in.). Adjust as necessary.

TO84419,000022F -19-20FEB15-1/1

Replace Front, Side And Rear Cab Roof Light Assembly

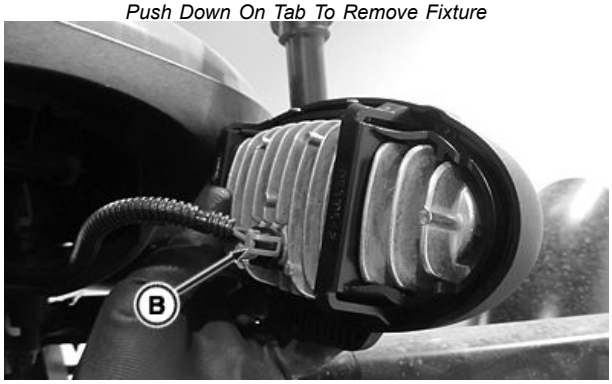
1. Push down light fixture latch tab (A). Remove fixture.
2. Disconnect harness connector (B) and replace light assembly.
3. Connect harness connector.
4. Insert fixture into cab roof until it seats and tab snaps into place.

A—Light Fixture Tab **B—Harness Connector**



RXA0134250 —UN—31JUL13

Push Down On Tab To Remove Fixture



RXA0134251 —UN—31JUL13

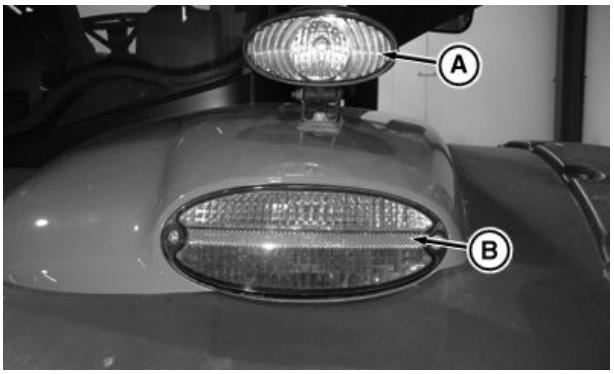
Remove Bulb

TO84419,0000230 -19-31JUL13-1/1

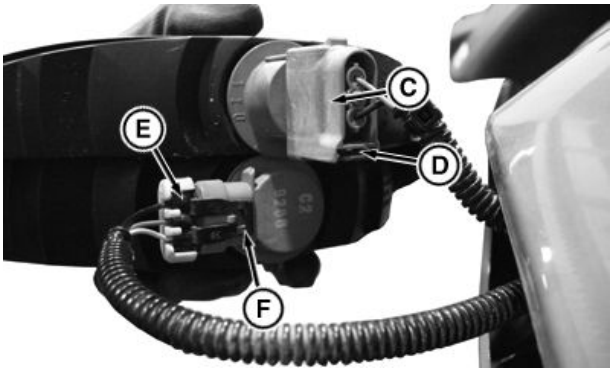
Replace Brake or Turn Signal Light Bulb

1. Remove screws and tail light lens (B).
2. Press turn signal tab (D) and remove turn signal wiring harness (C).
3. Lift brake light tab (F) and remove brake light wiring harness (E).
4. Rotate turn signal (H) or brake light bulb fixture (G) 1/4 turn counterclockwise and remove from housing.
5. Turn brake light bulb fixture (H) 1/4 turn counterclockwise and remove.
6. Pull bulb (I) out of fixture (J).
7. Install new bulb (I) in fixture (J) and turn fixture (J) 1/4 turn clockwise to install.
8. Reinstall wiring harnesses (C and E).
9. Reinstall lens and screws.

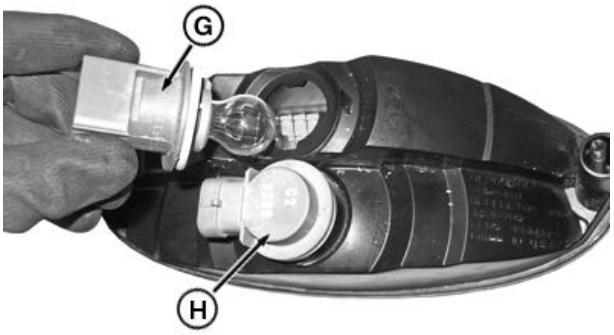
A—HID Light
B—Tail Light Lens
C—Turn Signal Wiring Harness
D—Turn Signal Tab
E—Brake Light Wiring Harness
F—Brake Light Tab
G—Turn Signal Bulb Fixture
H—Brake Light Bulb Fixture
I— Bulb
J— Fixture



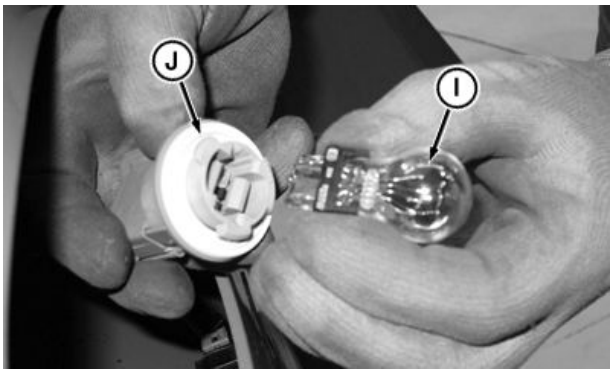
RXA0109540 —UN—18AUG10



RXA0109542 —UN—18AUG10



RXA0109544 —UN—08OCT10



RXA0109551 —UN—18AUG10

TO84419,0000231 -19-03APR14-1/1

Replace Dome Light Bulb

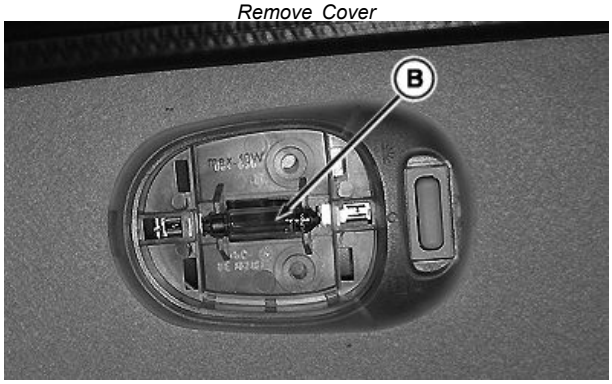
1. Remove lens cover (A).
2. To remove light bulb (B), grasp firmly and pull straight down.
3. Gently push new bulb into fixture until it seats.
4. Reinstall cover.

A—Cover **B—Light Bulb**



RXA0099130 —UN—19SEP08

Remove Cover



RXA0099128 —UN—19SEP08

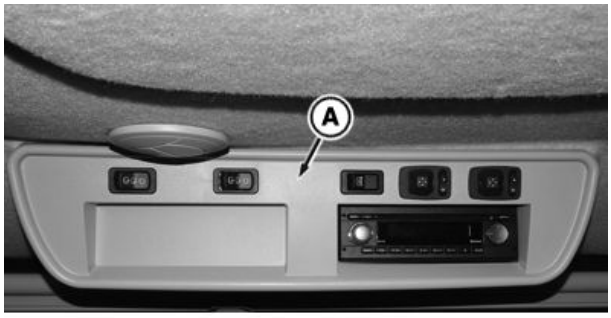
Remove And Replace Bulb

TO84419,0000232 -19-02APR13-1/1

Replace Courtesy Light Bulb

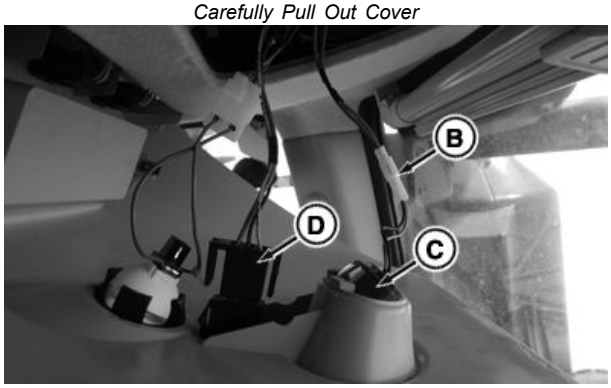
1. Carefully pull out cover (A) to access bulbs.
2. Disconnect plug (D) and courtesy light connector (B). Cover with bulb assembly is now free from cab roof.
3. Remove courtesy light bulb (C) from cover.
4. Install new bulb in cover.
5. Slide rear clips into roof.
6. Reconnect connector (B) and plug (D), then reinstall cover.

A—Cover
B—Courtesy Light Connector
C—Courtesy Bulb
D—Plug



RXA0143154 —UN—08JUL14

Carefully Pull Out Cover



RXA0143150 —UN—08JUL14



RXA0143152 —UN—08JUL14

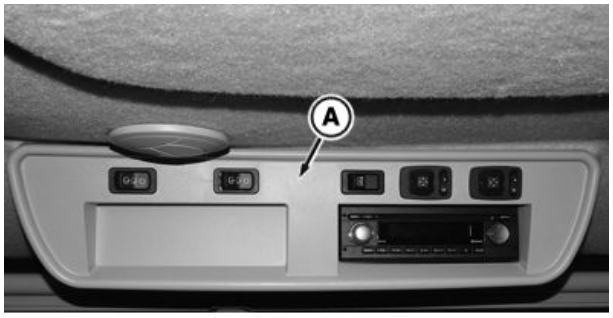
Remove Bulb From Retaining Ring

GH15097,0000545 -19-08JUL14-1/1

Replace Map Light Bulb

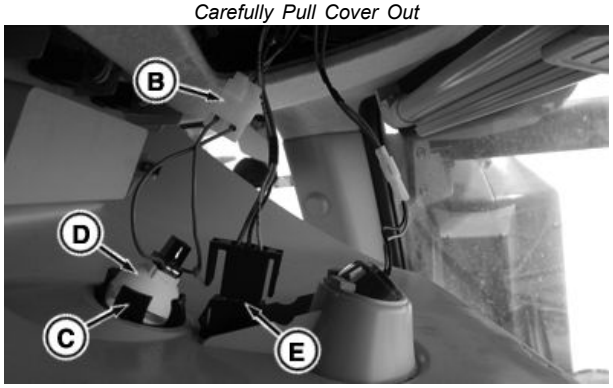
1. Carefully pull out cover (A) to access bulbs.
2. Disconnect plug (E) and map light connector (B). Cover with bulb assembly is now free from cab roof.
3. Remove bulb (D) from retaining ring (C).
4. Install new bulb in retaining ring.
5. Snap retaining ring with bulb into cover.
6. Reconnect connector(B) and plug (E), then reinstall cover.

A—Cover
B—Map Light Connector
C—Retaining Ring
D—Map Light Bulb
E—Plug



RXA0143154 —UN—08JUL14

Carefully Pull Cover Out



RXA0143151 —UN—08JUL14



RXA0143153 —UN—08JUL14

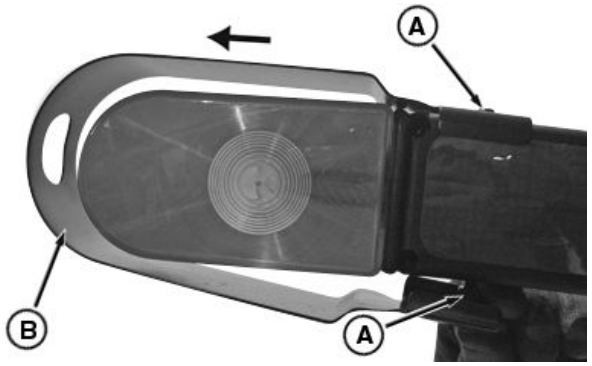
Remove Bulb From Retaining Ring

GH15097,0000546 -19-08JUL14-1/1

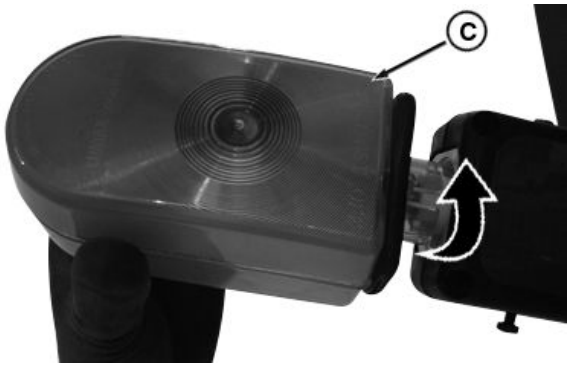
Replace Extremity Warning Light Bulb (If Equipped)

1. Loosen screws (A).
2. Slide shield (B) away from lens cover to remove.
3. Turn lens cover (C) counterclockwise to access light bulb.
4. Install new bulb (D) in reverse order of removal.

A—Screws
B—Shield
C—Lens Cover
D—Light Bulb



RXA0108609 —UN—29JUL10



RXA0108611 —UN—29JUL10



RXA0108613 —UN—29JUL10

TO84419,0000233 -19-01MAY13-1/1

Engine Troubleshooting

Symptom	Problem	Solution
Engine hard to start or will not start	Fuel pump not operating properly	Turn key on and listen for pumping noise to make sure fuel pump is working
	Incorrect starting procedure	Review starting procedure
	Blown fuse	Check fuse
	No fuel	Check fuel tank
	Air in fuel line	Bleed fuel line (Turn key to **RUN** for 60 seconds with engine off)
	Cold weather	Use cold weather starting aids
	Slow starter speed	See Starter Cranks Slowly
	Crankcase oil too heavy	Use correct oil viscosity
	Incorrect type of fuel	Consult fuel supplier. Use correct fuel type for operating conditions
	Water, dirt, or air in fuel system	Drain, flush, fill, and bleed system
	Clogged fuel filter	Replace filter elements
	Dirty or faulty injectors	Have your John Deere™ dealer check injectors
	Injection pump shutoff not reset	Turn key switch to OFF, then to ON
Engine knocks	Insufficient oil	Add oil
	During warm-up, pilot injection system will activate and deactivate depending on engine operating temperature	This is normal operation
	Low coolant temperature	Replace thermostats
	Engine overheating	See Engine Overheats
Engine runs irregularly or stalls frequently	Low coolant temperature	Replace thermostats
	Clogged fuel filters	Replace filter elements
	Water, dirt, or air in fuel system	Drain, flush, fill, and bleed system
	Vent on fuel tank obstructed	Clean vent under rear cab panel
	Dirty or faulty injectors	Have your John Deere™ dealer check injectors

Continued on next page

TO84419,0000234 -19-27NOV12-1/4

Symptom	Problem	Solution
Below normal engine temperature	Defective thermostat	Replace thermostats
	Defective temperature gauge or sender	See your John Deere™ dealer
Throttle does not allow full engine rpm	IVT™/AutoPowr™ Auto Shift (or Load Control) may not be set properly	See Operating IVT™/AutoPowr™ Transmission
	FieldCruise™ may be on and limiting max engine rpm	Check the settings for FieldCruise™ in the CommandCenter™. Make sure full rpm has been selected on display
	Cold oil can limit engine speed to 1500 rpm	Warm up transmission/hydraulic oil See your John Deere™ dealer if problem persists
Lack of power	Engine overloaded	Reduce load or shift to lower gear
	Low fast idle speed	Make sure FieldCruise™ is set to MAX rpm Make sure IVT™/AutoPowr™ is set correctly If problem persists, see your John Deere™ dealer
	Intake air restriction	Service air cleaner
	Clogged fuel filters	Replace fuel filter elements
	Incorrect type of fuel	Use correct fuel
	Overheated engine	See Engine Overheats
	Below normal engine temperature	Remove and check thermostat
	Incorrect valve clearance	See your John Deere™ dealer
	Dirty or faulty injectors	Have your John Deere™ dealer check injectors
	Turbocharger not functioning	See your John Deere™ dealer
	Leaking exhaust manifold gasket	See your John Deere™ dealer
	Implement incorrectly adjusted	See implement operator's manual
	Restricted fuel inlet	Clean or replace fuel line
	Incorrect ballast	Adjust ballast to load. See Performance Ballasting

Continued on next page

Symptom	Problem	Solution
Low oil pressure	Low oil level	Add oil
	Incorrect type of oil	Drain, fill crankcase with correct quality and viscosity of oil
High oil consumption	Crankcase oil too light	Use correct viscosity oil
	Oil leaks	Check for leaks in lines, around gaskets and drain plug
	Defective turbocharger	See your John Deere™ dealer
	Restricted engine breather tube	Unclog engine breather tube
Engine emits smoke	Incorrect type of fuel	Use correct fuel
	Clogged or dirty air cleaner	Service air cleaner
	Engine overloaded	Reduce load or shift to a low gear
	Injection nozzles dirty	See your John Deere™ dealer
	Turbocharger not functioning	See your John Deere™ dealer
Engine overheats	Dirty radiator core, oil cooler, or grille screens	Remove all trash and clean coolers
	Engine overloaded	Shift to lower gear or reduce load
	Low engine oil level	Check oil level. Add oil as required
	Low coolant level	Fill de-aeration tank to correct level, check radiator, and hoses for loose connections or leaks
	Faulty radiator cap	Replace radiator cap
	Loose or defective fan belt	Check and replace belt as needed
	Cooling system needs flushing	Flush cooling system
	Defective thermostat	Replace thermostat
	Defective temperature gauge or sender	See your John Deere™ dealer
High fuel consumption	Clogged or dirty air cleaner	Service air cleaner
	Engine overloaded	Reduce load or shift to lower gear
	Injection nozzles dirty	See your John Deere™ dealer

Continued on next page

Symptom	Problem	Solution
	Implement incorrectly adjusted	See implement operator's manual
	Excessive ballast	Adjust ballast to load. See Performance Ballasting

John Deere is a trademark of Deere & Company
AutoPowr is a trademark of Deere & Company
FieldCruise is a trademark of Deere & Company
CommandCenter is a trademark of Deere & Company

TO84419,0000234 -19-27NOV12-4/4

Transmission Troubleshooting

Symptom	Problem	Solution
Transmission oil overheats	Low oil supply	Fill system with correct oil
	Excessive oil supply	Remove oil as needed
	Oil cooler air passages clogged	Clean oil coolers
	Clogged transmission/hydraulic oil filter	Replace filter
IVT™ /AutoPowr™ transmission external vent leaks oil	Clogged scavenge pump screen	Clean screen
Transmission warning displays	Diagnostic trouble code has been stored	Access PTI or PTQ codes in the CommandCenter™ display. See Diagnostic Trouble Codes section
Low transmission oil pressure	Low oil supply	Fill system with correct oil
	Clogged transmission/hydraulic oil filter	Replace filter
Transmission shifts slowly and tractor steers hard	Cold oil	See Transmission/Hydraulic System Warm-Up in Operating the Tractor section
IVT™/AutoPowr™, e23™ or CommandQuad™ transmission starts out too fast/slow	No problem	Startup gear can be changed through the CommandCenter™ settings. See Adjusting Set Speeds.
		If problem persists, see your John Deere™ dealer

IVT is a trademark of Deere & Company
AutoPowr is a trademark of Deere & Company
CommandCenter is a trademark of Deere & Company
e23 is a trademark of Deere & Company
CommandQuad is a trademark of Deere & Company
John Deere is a trademark of Deere & Company

TO84419,0000235 -19-03APR14-1/1

Hydraulic System Troubleshooting

Symptom	Problem	Solution
Entire hydraulic system fails to function	Low oil supply	Check sight glass and fill system with correct oil
	Clogged transmission/hydraulic filter	Replace hydraulic filter
	Clogged hydraulic return screen	Clean screen
	Oil cooler air passages clogged	Clean oil cooler
	High-pressure internal leak	See your John Deere™ dealer
Hydraulic oil overheats	Low or high oil supply	Check sight glass and fill system with correct oil
	Oil cooler air passages clogged	Clean oil cooler
	Internal hydraulic leak	See your John Deere™ dealer
	Implement hydraulic load not matched to tractor or not properly routed back into tractor hydraulic system	See Remote Hydraulic Connections
	Mid-mount valve (If Equipped) flow and detent settings incorrect	Adjust settings. (See Hydraulics and Selective Control Valves section.)
	Clogged transmission/hydraulic oil filter	Replace filter

John Deere is a trademark of Deere & Company

TO84419,0000236 -19-27NOV12-1/1

Hitch Troubleshooting

Symptom	Problem	Solution
Insufficient transport clearance	Center link too short	Adjust center link
	Center link in wrong position	Put center link of tractor in correct hole. See Hitch section.
	Lift links too short	Adjust lift links
	Implement not level	Level implement
	Implement not correctly adjusted	See implement operator's manual
	Upper height limit not correctly set	Adjust upper height limit in CommandCenter™
Hitch fails to follow lever	Malfunction in lever position sensor circuit or hitch position sensor	See your John Deere™ dealer
Poor position control	Load/depth mix control on wrong position	Adjust upper height limit in CommandCenter™
	System is reset	Enable system
	Malfunction in lever position sensor circuit or hitch position sensor	See your John Deere™ dealer
Hitch drops slowly	Hitch rate-of-drop not correctly set	Adjust rate-of-drop in CommandCenter™
Hitch fails to lift or lifts slowly	Excessive load on hitch	Reduce load
	Center link in wrong position	Put center link of tractor in correct hole. See Hitch section.
	Hitch valve leak	See your John Deere™ dealer
	Raise limit switch setting may be limiting lift	Check settings in CommandCenter™
Implement will not operate at desired depth	Lift links too short	Adjust lift links
	Lack of penetration	See implement operator's manual
	Draft sensor failed	See your John Deere™ dealer
Insufficient or no hitch response to draft load	Load/depth mix control in wrong position	Adjust load/depth mix in CommandCenter™
	System is reset	Enable system
	Rate-of-drop too slow	Adjust rate-of-drop in CommandCenter™

Continued on next page

TO84419,0000237 -19-08AUG13-1/2

Symptom	Problem	Solution
Hitch too responsive	Load/depth mix control not correctly set	Adjust load/depth mix in CommandCenter™
Hitch settles too fast after tractor is parked and engine shut off	Internal circuit leakage	See your John Deere™ dealer
Hitch will not move (controls not working, including rear raise/lower switches)	Fuse(s) blown	Replace fuses
External raise/lower switches will not move hitch	Failure of raise/lower switches, connector, or wiring harness	See your John Deere™ dealer
	Lever in transport lock	Move lever out of transport. Unlock hitch at CommandCenter™

CommandCenter is a trademark of Deere & Company
John Deere is a trademark of Deere & Company

TO84419,0000237 -19-08AUG13-2/2

Selective Control Valve (SCV) Troubleshooting

Symptom	Problem	Solution
Remote cylinder will not lift load	Flow check	Cycle SCV levers
	Excessive load	Reduce load
	Hoses not completely installed	Attach hoses correctly
	Incorrect remote cylinder size	Use correct size cylinder
	SCV control lever lock engaged	Release SCV control lever lock
	Incorrect or damaged hose tips	Replace hose tips
Remote cylinder rate of travel too fast or too slow	Incorrect flow rate	Adjust flow rate on CommandCenter™
Direction of remote cylinder travel is reversed	Incorrect hose connections	Reverse hose connections
Hoses will not couple	Incorrect hose male connectors	Replace connectors with ISO standard connectors
Detent does not hold or releases too soon	Detent time set incorrectly	Set time correctly
	Pressure restriction with some implements	Reduce oil flow by changing metering valve setting
	Flow control or detent release setting incorrect	Adjust detent relief setting
SCV lever does not release	Float is being ”commanded”	Do not push lever down in forward position
	Lever mechanism failed	See your John Deere™ dealer
	Built in pressure leakage with some implements	Increase oil flow by changing metering valve setting
	Flow control or detent release setting incorrect	Adjust detent relief setting
Implement does not operate or does not operate correctly	Incorrect hose connections	Reverse hose connections
		See your John Deere™ dealer

CommandCenter is a trademark of Deere & Company

TO84419,0000238 -19-08AUG13-1/1

TouchSet Depth Control Troubleshooting

Symptom	Problem	Solution
Depth control does not function correctly	Implement transport lock-up valve closed	Open valve
	Cylinders not ”rephased” (synchronized)	”Rephase” (synchronize) cylinders
		IMPORTANT: Be sure all air is bled from depth control system
	Machine operating at different depths	Work on softer ground and/or in normal operating conditions
		See implement operator's manual
	Cylinder leakage	Check for leakage
		Repair or replace cylinders; see your John Deere™ dealer
	Insufficient tractor hydraulic pressure	Check tractor hydraulic pressure; use correct size cylinders for tractor pressure
	Hydraulic hoses not connected correctly	Reconnect correctly

John Deere is a trademark of Deere & Company

TO84419,0000239 -19-26MAR13-1/1

Electrical System Troubleshooting

Symptom	Problem	Solution
Voltage indicator displayed when there is low battery voltage (key ON and engine OFF)	Defective battery	Check electrolyte level and specific gravity
	Low charging voltage	Have your John Deere™ dealer check charging circuit
	High resistance in charging circuit	Have your John Deere™ dealer check charging circuit
	Indicator malfunction	Have your John Deere™ dealer check indicator
Voltage symbol displayed and service alert indicator flashing indicating low charging voltage (engine running)	Low engine speed	Increase speed
	Alternator belt slipping, alternator not charging	Check belt tension
	Defective battery	Check electrolyte level and specific gravity
	Defective alternator	Have your John Deere™ dealer check alternator
	Excessive electrical load	Decrease load
Voltage symbol displayed and service alert indicators flashing indicating excessive charging voltage	Faulty connection to alternator	Check wiring connections
	Defective regulator	Have your John Deere™ dealer check alternator
Chirping noise from side console	Noise is normal	7R series tractors use solid-state electronic drivers instead of relays to control turn signal lights. The tractor warning system provides a turn signal indicator beep replacing the relay clicking noise.
Batteries will not charge	Loose or corroded connections	Clean and tighten connections
	Sulfated or worn-out batteries	Check electrolyte level and specific gravity
	Loose or defective alternator belt	Adjust belt tension or replace belt
Starter inoperative	Transmission in gear	Place transmission in PARK
	Faulty neutral start switch or starter solenoid malfunction	See your John Deere™ dealer
	Loose or corroded connections	Clean and tighten loose connections

Continued on next page

TO84419,000023A -19-02JUL14-1/2

Symptom	Problem	Solution
	Low battery output	See your John Deere™ dealer
	Blown fuse	Replace fuse
Starter turns over slowly	Low battery output	Check electrolyte level and specific gravity
	Crankcase oil too heavy	Use correct viscosity oil
	Loose or corroded connections	Clean and tighten loose connections
Light system does not function; rest of electrical system functions	Blown fuse	Replace fuse
Entire electrical system does not function	Faulty battery connection	Clean and tighten connections
	Sulfated or worn out batteries	Check electrolyte level and specific gravity
	Blown master fuse	Replace master fuse
Blower malfunctioning	Blower does not work	Check for stored codes, total cab electrical load may be exceeding solid-state load center capacity
	Blown fuse	Replace fuse

John Deere is a trademark of Deere & Company

TO84419,000023A -19-02JUL14-2/2

Operator Enclosure Troubleshooting

Symptom	Problem	Solution
Blower not keeping dust out of operator enclosure	Defective seal around filter element	Check seal condition
		Check filter for correct installation
	Defective filter	Replace filter
	Excessive air leak	Seal air leaks
	Blower air flow too low	See Blower Air Flow Too Low
Blower air flow too low	Clogged filter or air intake screen	Clean
	Heater core or evaporator core clogged	Clean
Heater will not shut off	Heater hoses connected incorrectly	See your John Deere™ dealer
Air conditioner not cooling	Low voltage	See your John Deere™ dealer
	Low refrigerant	See your John Deere™ dealer
	Belt slipping	Check belt tension
	Heater on	Turn heater to off position.
	Compressor stuck	Rock compressor pulley back and forth
Intermittent cooling	Air restriction	Clean side screens, radiator and oil cooler/condenser.
Water leaking from roof	Plugged air conditioning condensate drain hoses	Clean drain hoses
	Heater hoses leaking	Replace heater hoses
Seat suspension sticking	Foreign objects under seat	Keep area under seat completely clear
Seat suspension not working	Blown fuse	Replace fuse
Radio does not function	Blown fuse	Replace fuse

John Deere is a trademark of Deere & Company

TO84419,000023B -19-02JUL14-1/1

Tractor Operation Troubleshooting

Symptom	Problem	Solution
Tractor bounces or jumps	Power hop/wheel hop	See Controlling Wheel Hop in the Performance Ballasting section
		Check weight split
		Check ballast
		Check inflation pressures
		See your John Deere™ dealer

John Deere is a trademark of Deere & Company

TO84419,000023C -19-27NOV12-1/1

Steering System Troubleshooting

Symptom	Problem	Solution
No steering	Transmission shift lever in PARK position	Shift lever into NEUTRAL position
	Plugged hydraulic steering filter	Replace steering filter
	Loss of electrical power to steering controller	Check fuse F13
		See your John Deere Dealer
	Other electrical or hydraulic malfunctions	Check vehicle monitor for warning codes. Refer to Service Codes Section for possible solution
		See your John Deere Dealer
Will not turn as short as desired/expected or difficult to turn under load	Implement causes side loading greater than steering system can overcome when attempting to turn; outside track spins	Raise implement
		Slow down during turn or execute turn by doing a series of brief short turns
		Let drawbar swing
		Add ballast (See Ballast Section.)
		See Tractor Operation in the Operating the Tractor Section
	Electrical or hydraulic malfunction	Check vehicle monitor for warning codes. See Service Codes Section for possible solutions
		See your John Deere Dealer
	Plugged transmission hydraulic filter	Replace transmission hydraulic filter
Tractor drifts or pulls to one side	Implement causing side load on tractor	Adjust implement to eliminate side draft
		Let drawbar swing
		Add ballast. (See Ballast Section.)
		See Tractor Operation in the Operating the Tractor Section
	Steering wheel does not self center	See your John Deere Dealer
Will not turn as short as desired/expected with no load	Electrical or hydraulic malfunction	Check vehicle monitor for warning codes. (See Service Codes Section for possible solution.)
		See your John Deere Dealer

Continued on next page

Symptom	Problem	Solution
	Attempting to turn while stopped (loose soil, heavy ballast); steering load exceeds system capacity	Maintain forward/reverse motion while turning Increase engine speed and/or hold steering wheel against stop for a couple of seconds to allow greater steering force
Will not turn as short as desired/expected (high gear, low engine speed)	Minimum turn radius is naturally greater in high gears and maximum steering pump flow is less at low engine speed	Downshift before turn See Tractor Operation in the Operating the Tractor Section

GH15097,0000847 -19-11FEB14-2/2

Premium Radio Troubleshooting

Symptom	Problem	Solution
”NO CD” displayed	CD will not play	No CD has been loaded in the player
“CD ERROR” displayed	No playable files on media	Change media
”DEV ERR” displayed	No playable files on media	Change media
Bad sound quality, skipping, difficulty in finding tracks, and/or difficulty in loading or ejecting	CD-R may be affected by a CD-R’s quality, the method of recording, the quality of the music that has been recorded or the way the CD-R has been handled.	Play CD you know is good to see if error corrects itself. If an error occurs repeatedly or if an error cannot be corrected, contact your dealer. If radio displays an error message, write it down and provide it to dealer when reporting problem.
“BLOCKED” displayed	No audio in any source	Verify radio is installed in correct vehicle. Run engine for at least 5 minutes. Restart radio to resolve.
Radio display blank with radio on.	Display in DIM-OFF mode.	Change to DIM-ON mode in radio SETUP mode.

TO84419,000023D -19-01AUG14-1/1

STOP, Service Alert, and Information Indicators

NOTE: All STOP and Service Alert Indicators are accompanied by an informative message, diagnostic trouble code, and/or fault description shown on CommandCenter™.

STOP Indicator (A): Light flashes and alarm sounds continuously. A serious malfunction has occurred, requiring immediate attention or the tractor will be damaged. Control unit (B), diagnostic trouble code (C) , system (D) and solution (E) are identified on CommandCenter™. When control unit detects a malfunction or condition ”out of range”, a diagnostic trouble code containing the control unit followed by an industry standard number are displayed. Numbers to the left of the decimal indicate the malfunction and numbers to the right of decimal indicate the condition.

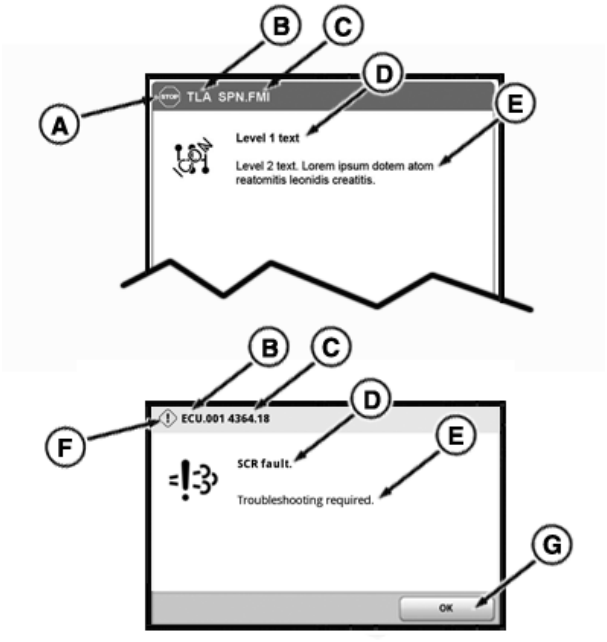
IMPORTANT: Engine will shut down automatically if STOP signal is received when operator is out of the seat for longer than 3 seconds and the transmission control is in PARK. CommandCenter™ display can be reset by cycling key switch.

If situation allows to stop operations immediately, reduce engine speed to idle, then shut down engine and turn key ON to observe CommandCenter™ display for problem identification and solution. It may be necessary to access the stored codes, see Using Diagnostics, Stored Codes and CAN Statistics. Correct problem before restarting.

Service Alert Indicator (F): Light flashes and alarm sounds five times indicating a performance or operational problem has been detected, which must be resolved as soon as possible. Some Service Alert Indicators can be ”acknowledged” and cleared by pressing OK button (G)CommandCenter™ display. If condition still exists, diagnostic trouble code may reappear later. Continued operations can cause a Service Alert to escalate into a STOP indicator. If appropriate corrective action is not taken soon (serviced, repaired, operated in a different manner), a significant reduction in performance and/or damage to machine will occur.

When Service Alert Indicator is displayed, place tractor in park and shut off engine.

Follow solution on CommandCenter™ or if situation cannot be corrected contact your John Deere™ dealer.



RXA0137743 —UN—11DEC13

Diagnostic Trouble Codes

A—STOP Indicator
B—Control Unit
C—Diagnostic Trouble Code
D—System
E—Solution
F—Service Alert Indicator
G—OK Button

CommandCenter is a trademark of Deere & Company
John Deere is a trademark of Deere & Company

Continued on next page

SV81855,000012D -19-03JAN14-1/2

Information (INFO) Indicator (A)

NOTE: All Information Indicators are accompanied by an informative message, diagnostic trouble code, and/or fault description shown on CommandCenter™.

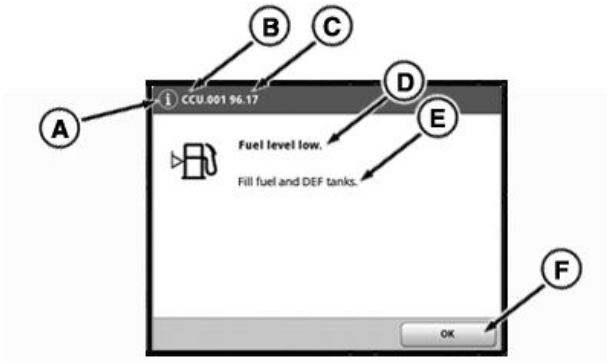
Light comes on continuously and alarm sounds for 2 seconds, indicating a fault condition. Tractor operations can continue without damage; but, performance of some functions may be degraded.

Operating in a different manner may correct and clear out of range condition. Some Information Indicators can be ”acknowledged” and cleared by pressing OK button (F) CommandCenter™ display. If condition still exists, diagnostic trouble code may reappear later.

When Information Indicator is displayed, place tractor in park and shut off engine.

Follow solution on CommandCenter™ or if situation cannot be corrected contact your John Deere™ dealer.

CommandCenter is a trademark of Deere & Company
John Deere is a trademark of Deere & Company



RXA0137695 —UN—02JAN14

Diagnostic Trouble Code

A—Information Indicator
B—Control Unit
C—Diagnostic Trouble Code
D—System
E—Solution
F—OK Button

SV81855,000012D -19-03JAN14-2/2

Access Diagnostic Trouble Codes

NOTE: If problem is not resolved after cycling power to tractor, or following solution on CommandCenter™ page, see your John Deere™ dealer.

NOTE: Not all active DTC's are displayed. Follow steps to retrieve stored DTC's.

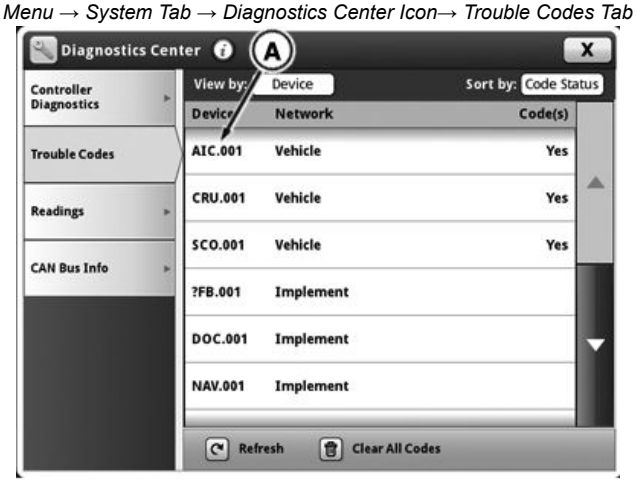
1. Select **Menu.**
2. Select **System tab.**
3. **Diagnostics Center icon**
4. Select **Trouble Codes tab.**
5. Select control unit (A) desired.
6. Select diagnostic code (B) for code display.

A—Control Unit **B—Diagnostic Code**

RXA0133360 —UN—26JUL13

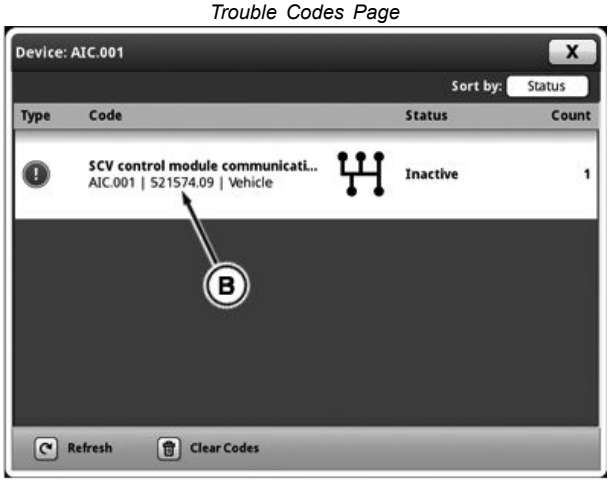


Menu → System Tab → Diagnostics Center Icon→ Trouble Codes Tab



RXA0133359 —UN—26JUL13

Trouble Codes Page



RXA0133361 —UN—26JUL13

Diagnostic Trouble Code

CommandCenter is a trademark of Deere & Company
John Deere is a trademark of Deere & Company

SV81855,000012E -19-29OCT14-1/1

Place Tractor in Storage

IMPORTANT: If tractor will not be used for more than three months, the following recommendations for storage and removal from storage will minimize corrosion and deterioration.

NOTE: Whenever possible store tractor in a building or under a roof to avoid damage resulting from prolonged exposure to the elements.

1. Lower hitch.
2. Change engine oil and replace filter (if required).

NOTE: Do not add BioDiesel fuel if placing tractor in storage.

3. Drain fuel tank and add back approximately 19 L (5 gal) of fuel.

IMPORTANT: (Final Tier 4 and Stage IV Engines only. To determine which engine your tractor is equipped with, see Record Engine Serial Number in Identification Numbers section of this Operator's Manual.) Long-term storage of Diesel Exhaust Fluid (DEF) in vehicle (over 6 months) is not recommended. If long-term storage is necessary, periodic testing of DEF is recommended to ensure that urea concentration does not fall out of specification.

4. Final Tier 4 and Stage IV tractors: Diesel Exhaust Fluid (DEF) has a limited shelf life, but may be stored in vehicle for as long as 6 months, depending upon storage conditions. See Handling and Storing DEF in Fuel, Lubricants and Coolant section of this Operator's Manual. If draining DEF tank is necessary, see Draining DEF Tank in Fuel, Lubricants and Coolant section of this Operator's Manual for proper procedure.
5. Using plastic bags and either tape or tie-bands, seal air inlets and exhaust, crankcase vent tube, radiator overflow hose, and transmission-hydraulic system fill cap.

IMPORTANT: (Final Tier 4 and Stage IV Engines only. To determine which engine your tractor is equipped with, see Record Engine Serial Number in Identification Numbers section of this Operator's Manual.) Do not disconnect battery until Selective Catalyst Reduction (SCR) system has had enough time to automatically purge system of Diesel Exhaust Fluid (DEF) . If adequate time is not allowed for system to be purged, any DEF remaining can crystallize and plug system. At temperatures below -15°C (5°F), unpurged DEF will freeze and damage system components. If equipped with a battery disconnect system, a light next to disconnect system is illuminated while auto-purge is in progress. It shuts off when complete and safe to disconnect the battery.

If tractor is not equipped with battery disconnect switch, wait at least 4 minutes after tractor stops before disconnecting battery.

6. Remove and store batteries in a cool, dry location. Keep batteries charged.[1]
7. Coat all exposed (machined) metal surfaces such as lift cylinders and steering cylinder rods with light coat of grease.
8. Lubricate all grease fittings.
9. Release tension on auxiliary drive belt and remove belt from air conditioner pulley.

If tractor must be stored outside, follow these additional precautions.

1. Cover instrument panel, control levers and seat with sheets of material or cardboard to protect against sun rays.
2. Thoroughly clean tractor touching up any scratched or chipped painted surfaces.
3. Wax or cover entire tractor with waterproof material.
4. Raise tires off the ground and/or cover them to protect from heat and sunlight.

[1] *Disconnect battery ground cable for short-term storage periods (20 to 90 days)*

RX32825,0000752 -19-29JUL14-1/1

Remove Tractor from Storage

1. Remove all coverings placed in or on tractor while preparing for storage.

IMPORTANT: To avoid engine damage, make sure crankcase vent tube is unsealed after storage.

2. Unseal all openings sealed during storage.
3. Remove any accumulated trash or debris, especially around engine and inside engine compartment.

IMPORTANT: If air conditioning compressor is locked up, engine operation with compressor clutch engaged may damage drive belt or compressor.

4. Rotate air conditioner compressor pulley several turns. If pulley does not turn freely, compressor components may be seized. See your John Deere™ dealer.
5. Check auxiliary drive belt for cracking and if serviceable, install auxiliary drive belt on air conditioner pulley.
6. Check under and around tractor for any evidence of fluid leaks.

IMPORTANT: If transmission-hydraulic oil level was correct at time of storage, and there is no evidence of hydraulic oil leaks, there should be no concern starting tractor even if transmission-hydraulic oil sight glass level is low. Over a period of storage, hydraulic oil may drain into transmission, causing sight glass to read low even when adequate amount of oil is available. If there are indications of oil leaks, do not start tractor until the source has been determined and repairs made. If there are no leakage indications, but there is any doubt about oil level at time of storage, check hydraulic oil level as soon as possible after starting tractor.

7. Check transmission-hydraulic oil level. Add oil as required.
8. Check all other fluid levels. Fill as required.
9. Fill fuel tank.
10. Inspect tires and check tire inflation pressures. (See Wheels, Tires and Treads sections of this Operator's Manual.)
11. Perform all Daily or 10 Hour service procedures and any other scheduled services as required. (See Maintenance and Service Intervals and Daily or 10 Hour Service sections of this Operator's Manual.)
12. Install batteries and connect cables.
13. Turn key to **RUN** position for one minute to allow fuel system to prime.

NOTE: While operating engine at slow idle, visually check all instruments and indicators to ensure they function properly.

14. Start and operate engine at slow idle for several minutes.
15. Check tractor functions and systems, including air conditioning.
16. Warm up tractor before putting tractor under load.

John Deere is a trademark of Deere & Company

RX32825,0000036 -19-07MAY13-1/1

Paint Finish Care

IMPORTANT: DO NOT use strong soaps, chemical detergents, or cleaning agents containing acids, caustics, or abrasives. It is best to use commercially available car wash (non-detergent) products which will not remove protective wax, which may be applied to the paint finish.

- Wash tractor regularly, particularly if it has been exposed to herbicides, pesticides, road salt, or other chemical agents.
- DO NOT wash tractor in direct sunlight.
- All cleaning agents should be rinsed promptly and not be allowed to dry on the paint surface.
- Waxing tractor occasionally is recommended to remove residue from and further protect the paint finish. DO NOT use waxes containing abrasive compounds.
- Inspect paint surface during washing or waxing for chips and scratches. Repaint any areas where paint has been damaged.

Your John Deere™ dealer has a full line of cleaners, waxes, and touch-up paints to help enhance the paint finishes and which are compatible with your equipment.

John Deere is a trademark of Deere & Company

RX32825,000072E -19-02JAN13-1/1

Engine

	7210R	7230R	7250R	7270R	7290R	7310R
POWER:						
Rated Engine power PS (hp ISO) at 2100 engine rpm (97/68/EC)[a]	155 kW (210 hp)	169 kW (230 hp)	184 kW (250 hp)	199 kW (270 hp)	213 kW (290 hp)	228 kW (310 hp)
Rated Engine power PS[b] (hp ISO) at 2100 engine rpm (ECE-R24)	148 kW (202 hp)	162 kW (221 hp)	177 kW (240 hp)	191 kW (259 hp)	205 kW (278 hp)	219 kW (298 hp)
Rated PTO power (hp SAE) at rated engine speed (2100 erpm)[c,d]	127 kW (170 hp)	141 kW (189 hp)	153 kW (205 hp)	167 kW (224 hp)	181 kW (242 hp)	194 kW (260 hp)
Rated Speed	2100 rpm					
ENGINE:						
US EPA Interim Tier 4/EU Stage IIIB						
Manufacturer (US EPA Interim Tier 4/EU Stage IIIB)[e]	John Deere™ PowerTech™ PSX (B20 Diesel Compatible) 6.8 L		John Deere™ PowerTech™ PVX (B20 Diesel Compatible) 9.0 L			Not Available.
Aspiration	Dual turbochargers, variable geometry turbo with fixed geometry turbo in series		Single turbocharger, variable geometry turbo			Not Available
Rated Speed	2100 rpm					
Type	Diesel, in-line, 6-cylinder, wet-sleeve cylinder liners with 4 valves-in-head					
Filter, Engine Air)	Dual stage					
Displacement	6.8 L (415 cu. in.)		9.0 L (549 cu. in.)			
Bore and Stroke	106 mm (4.19 in.) x 127 mm (5.0 in.)		118.4 mm (4.66 in.) x 136 mm (5.35 in.)			
Compression Ratio	17.2:1	16.0:1				Not Available
Lubrication	Full pressure, full flow filtration with bypass					
Filter, Oil	Replaceable cartridge style oil filter					
US EPA Final Tier 4/EU Stage IV						
Manufacturer (US EPA Final Tier 4/EU Stage IV)[e]	Not Available		Not Available			John Deere™ PowerTech™ PSS (B20 Diesel Compatible) 9.0 L
Aspiration	Not Available		Not Available			Dual turbochargers, variable geometry turbo with fixed geometry turbo in series
Rated Speed	2100 rpm					
Type	Diesel, in-line, 6-cylinder, wet-sleeve cylinder liners with 4 valves-in-head					
Filter, Engine Air	Dual stage					
Displacement	Not Available		Not Available			9.0 L (549 cu. in.)
Bore and Stroke	Not Available		Not Available			118.4 mm (4.66 in.) x 136 mm (5.35 in.)
Compression Ratio	16.0:1					
Lubrication	Full pressure, full flow filtration with bypass					
Filter, Oil	Replaceable cartridge style oil filter					
FUEL:	Electronically controlled, high-pressure common rail with electric fuel transfer pump (self priming)					
Filter System	Two Stage with water separator and service indicator light					
Filter, Primary	10 micron replaceable cartridge with water indication sensor and drain					
Filter, Secondary	2 micron spin-on element					

[a] 97/68/EC power refers to average (50% MOE) net brake power measured and corrected for ambient conditions according to the EC emissions directive. It is equivelent to internal Deere Standard RES10080, and SAE Standards J1349, J1995.
[b] German term for horse power in which one PS is equivalent to .9863 horse power

Continued on next page

[c]*PTO Power for IVT models. PST models will be slightly higher. Does not include optional equipment losses.*
[d]*80% Factory Observed MOE value.*
[e]*To determine which engine your tractor is equipped with, see Record Engine Serial Number in Identification Numbers Section of this Operator's Manual.*

John Deere is a trademark of Deere & Company
PowerTech is a trademark of Deere & Company

TO84419,0000266 -19-15DEC14-2/2

Capacities

	7210R	7230R	7250R	7270R	7290R	7310R
CAPACITIES:						
US EPA Interim Tier 4/EU Stage IIIB						
Fuel Tank, CommandQuad™, G47/G48 Tires	572 L (151 gal.)		Not Available			
Fuel Tank, e23™, G47/G48 Tires	533 L (141 gal.)					
Fuel Tank, e23™, G49 Tires	Not Available		552 L (146 gal.)			
Fuel Tank, IVT™/AutoPowr™, G47/G48 Tires	589 L (156 gal.)					
Fuel Tank, IVT™/AutoPowr™, G49 Tires	Not Available		607 L (160 gal.)			
US Final Tier 4/EU Stage IV						
Fuel Tank, CommandQuad™, G47/G48 Tires	503 L (133 gal.)		Not Available			
Fuel Tank, e23™, G47/G48 Tires	465 L (123 gal.)					
Fuel Tank, e23™, G49 Tires	Not Available		488 L (129 gal.)			
Fuel Tank, IVT™/AutoPowr™, G47/G48 Tires	520 L (137 gal.)					
Fuel Tank, IVT™/AutoPowr™, G49 Tires	Not Available		543 L (143 gal.)			
DEF[a] Tank	23 L (6 gal.)[b]					
Cooling System	39.5 L (41.75 qt.)				44.5 L (47 qt.)	
Crankcase, including Filter [c]	26 L (27.4 qt.)		23 L (24.3 qt.)			
Transmission-Hydraulic System, CommandQuad™ [d]	160 L (42.3 gal.)		Not Available			
Transmission-Hydraulic system, e23™ [d]	160 L (42.3 gal.)					
Transmission-Hydraulic system, IVT™/AutoPowr™ [d]	160 L (42.3 gal.)					
Front PTO Oil	4.0 L (4.25 qt.)					
TLS™ Plus with Differential Lock	10.8 L (2.8 gal.)					
TLS™ Plus with Limited Slip	14.4 L (3.8 gal.)					
1300 MFWD Axle	Not Available	14.4 L (3.8 gal.)	Not Available			
1150 MFWD Axle	14.4 L (3.8 gal.)	Not Available				
Wheel Hub without Brakes	3.8 L (4.0 qt.) Per Wheel Hub					
Wheel Hub with Brakes	3.9 L (4.1 qt.) Per Wheel Hub					

[a] *Diesel Exhaust Fluid*
[b] *Normal usage.*
[c] *Advertised fill capacities*
[d] *Actual volume may vary depending on additional SCV's and tractor options.*

SV81855,000008C -19-30SEP15-1/1

Hydraulic

	7210R	7230R	7250R	7270R	7290R	7310R
HYDRAULIC:	Closed-center, pressure/flow compensated					
Selective Control Valves	3, 4, 5, 6 SCV's with CommandQuad, PST, and IVT™ Transmissions					
Main Pump Displacement	63 cc — Standard 85 cc — Optional					
Maximum Pressure	2,958 psi (20,400 +or- 300 kPa)					
Rated Flow 63 cc Pump	162 L/min (43 gpm)					
Rated Flow 85 cc Pump	223 L/min (59 gpm) — Optional					
Available Flow at One SCV	132 L/min (35 gpm)					
Available Flow at Single Front SCV	126 L/min (33 gpm)					
Take Out Oil Capacity	CQ 85 Liters; e23™ and IVT™ is 65 or 85 Liters with Auxiliary Reservoir		e23™ and IVT™ is 65 or 85 Liters with Auxiliary Reservoir			

IVT is a trademark of Deere & Company

RW29387,0000041 -19-01JUL14-1/1

Electrical System

	7210R	7230R	7250R	7270R	7290R	7310R
ELECTRICAL SYSTEM (two batteries in parallel):						
Alternator/Battery	200 amps / 12 volt (Standard)—240 amps/ 12 volt (Optional)					
Total cold cranking amps	1850 (2-925CCA grp 31 batteries)					

RW29387,0000042 -19-06SEP13-1/1

Transmission and Drive Train

	7210R	7230R	7250R	7270R	7290R	7310R
TRANSMISSION:						
20 Speed CommandQuad™ Transmission 40K	Optional (40 km/h ECO, 20 forward / 20 reverse speeds)		Not Available			
20 Speed CommandQuad™ Transmission 50K	Optional (50 km/h ECO, 20 forward / 20 reverse speeds)		Not Available			
e23™ Transmission 40K	Standard (23 speed forward/ 11 reverse)		Standard			
e23™ Transmission 50K	Optional (23 speed forward/ 11 reverse)		Optional			
John Deere IVT™ 0.050 - 42 km/h (0.030 - 26 mph)	Optional					
John Deere IVT™ 0.050 - 50 km/h (0.030 - 31 mph)	Optional					
REAR AXLES:						
100 mm diameter x 2550 mm length (3.94 x 100.4 in.)	Optional		Not Available			
100 mm diameter x 2808 mm length (3.94 x 110.5 in.)	Optional		Not Available			
100 mm diameter x 3012 mm length (3.94 x 118.5 in.)	Optional		Not Available			
110 mm diameter x 2550 mm length (4.33 x 100.4 in.)	Not Available		Optional			
110 mm diameter x 3012 mm length (4.33 x 118.5 in.)	Not Available		Optional			
120 mm diameter x 2550 mm length (4.72 x 100.4 in.)	Not Available		Optional			
120 mm diameter x 3012 mm length (4.72 x 118.5 in.)	Not Available		Optional			
335 mm length Flanged Axle	Standard					
REAR WHEEL EQUIPMENT:						
Type	Group 47/48 tires available as singles/duals		Group 47/48/49 tires available as singles/duals			Group 48/49 tires available as singles/duals
FRONT AXLES:						
1150 Series MFWD - tread range 60 to 88 in. (1524 to 2235 mm)	Standard	Not Available				
1300 Series MFWD - tread range 60 to 88 in. (1524 to 2235 mm)	Not Available	Standard	Not Available			
TLS™ Plus- tread range 60 to 88 in. (1524 to 2235 mm)	Optional					

Continued on next page

RW29387,0000043 -19-05AUG14-1/2

	7210R	7230R	7250R	7270R	7290R	7310R
TLS™ Plus with front brakes, available with 40Kph, standard with 50 Kph	Optional					
DIFFERENTIAL LOCK - REAR AXLE:						
Full - Locking Electrohydraulic	Standard					
DIFFERENTIAL LOCK - FRONT AXLE:						
1150 MFWD	Limited Slip	Not Available				
1300 Series MFWD	Not Available	Limited Slip	Not Available			
TLS™ Plus	Limited Slip					
TLS™ Plus with Front Brakes	Full - locking electrohydraulic (actuated at same time as rear differential - lock)					
STEERING:	Tilt-telescope with memory					
Hydrostatic Power with electric pump back-up	Load sensing, hydrostatic, flow metering with a 406 mm diameter steering wheel — Standard					
Active Command Steering with electric pump back-up	Variable ratio 15:1 to 23:1 (3.1—5.0 turns lock to lock) with Stability Augmentation and passive tactile feedback (345 mm diameter steering wheel) — Optional					
BRAKES:	Hydraulically operated wet disk					

CommandQuad is a trademark of Deere & Company
e23 is a trademark of Deere & Company
IVT is a trademark of Deere & Company

RW29387,0000043 -19-05AUG14-2/2

Hitch, Drawbar and PTO

	7210R	7230R	7250R	7270R	7290R	7310R
3-POINT HITCH (rear):						
Category 3/3N with Quik-Coupler	5443 kg (12,000 lb.) 100 mm dia. axle (7300 kg max lift) — Standard		N/A[a]			
Category 3/3N with Quik-Coupler	6894 kg (15,200 lb.) 100 mm dia. axle (9208 kg max lift) — Optional		6894 kg (15,200 lb.) 110 mm dia. axle (9208 kg max lift)— Standard			
Category 3N/3 with Quik-Coupler	N/A[a]		7847 kg (17,300 lb.) 120 mm dia. axle (10,206 kg max lift) — Standard			
Category 3/3N with Hook Ends [b]	5443 kg (12,000 lb.) 100mm dia. axle (7300 kg max lift) - Standard		N/A[a]			
Category 3/3N with Hook Ends [b]	6895 kg (15,200 lb.) 100mm dia. Axle (9208 kg max lift) - Optional		6895 kg (15,200 lb.) 110mm dia. Axle (9208 kg max lift) - Standard			
Category 3/3N with Hook Ends [b]	N/A[a]		7847 kg (17,300 lb.) 120mm dia. axle (10206 kg max lift) - Optional			
3-POINT HITCH (front):						
Cat. 3N Hitch	5,200 kg (11,464 lb.) Lift Capacity — Optional					
Cat. 3N Hitch	5,200 kg (11,464 lb.) Lift Capacity Ground Engaging — Optional					
DRAWBAR:						
Cat 2 2800 kg (6160 lb.) Maximum Vertical Load	Optional					
Cat 3 3000 kg (6613 lb.) Maximum Vertical Load	Standard					
Cat 3 HD 3000 kg (6613 lb.) Maximum Vertical Load	Optional					
3 in 1 Hitch	Optional					
...w/ Cat 2 drawbar	Optional					
...w/ Cat 3 drawbar	Optional					
Wagon Hitch	Optional					
Ball Hitch	Optional					
Piton Hitch	Optional					
Pick-up Hitch	Optional					
...w/ Cat 2 drawbar	Optional					
...w/ Cat 3 drawbar	Optional					
Rear PTO (power take off):	Independent					
1-3/4 in., 20 spline, 1,000 rpm	Standard					
1-3/4 in., 20 spline, 1,000 rpm with 1-3/8 in. 540/1000 rpm gearcase	Optional					
1-3/4 in., 20 spline, 1,000 rpm with 1-3/8 in. 540/1000/1000E rpm gearcase	Optional					
1-3/4 in., 20 spline, 1,000 rpm with 1-3/8 in. 540/540E/1000 rpm gearcase	Optional					
PTO Speed @ Engine rpm	(540/1000 PTO rpm @ 1950 engine rpm) (540E/1000E PTO rpm @ 1750 engine rpm)					

Continued on next page

RW29387,0000044 -19-14AUG15-1/2

	7210R	7230R	7250R	7270R	7290R	7310R
Front PTO (power take off):						
1-3/8 in., 6-spline, 1,000-rpm, CCW rotation (when facing Front PTO)	Available					
1-3/8 in., 21-spline, 1,000-rpm, CCW rotation (when facing Front PTO)	Available					
1-3/4 in., 20-spline, 1,000-rpm, CCW rotation (when facing Front PTO)	Available					
1-3/8 in., 21-spline, 1,000-rpm, CW rotation (when facing Front PTO)	Available					
1-3/4 in., 20-spline, 1,000-rpm, CW rotation (when facing Front PTO)	Available					
PTO Speed @ Engine RPM (1:2 ratio)	1000 PTO RPM @ 1940 engine rpm					
PTO Power (SAE hp)	175 hp (130 kW) maximum output					

[a]N/A is the abbreviation for not available
[b]Tier 2/EU Stage II, European Option

RW29387,0000044 -19-14AUG15-2/2

Other Equipment

OTHER EQUIPMENT:	
AutoTrac™ Ready	Standard
Modular Telematics Gateway (MTG)	Available JDLink™ Ultimate and Ethernet Harness (Availability dependent upon destination)
Service ADVISOR™ Remote	Capable with JDLink™ Select and Ultimate
CommandCenter™ Video with 4100 Processor	Single video input (Tyco Connector PN 776536-1) for camera using PAL or NTSC signal. Integrated behind rear cab cover. Camera and extension harness available through parts.
CommandCenter™ Video with 4600 Processor	Four video inputs (Tyco Connector PN 776536-1) for camera using PAL or NTSC signal. Integrated behind rear cab cover. Camera and extension harness available through parts.

AutoTrac is a trademark of Deere & Company
JDLink is a trademark of Deere & Company
Service ADVISOR is a trademark of Deere & Company
CommandCenter is a trademark of Deere & Company

RW29387,00001EF -19-05SEP14-1/1

Sound Level (2010-52-EU)

Maximum sound level at operator's ear	86 dB(A)	Measurement method in accordance with Directive 2009/76/EC (1), Supplement II
Maximum pass-by noise	89 dB(A)	Measurement method in accordance with Directive 2009/63/EC (2)

RD47322,000015F -19-08JAN14-1/1

Tractor Load/Weights—Drawbar Static Vertical Load

	7210R	7230R	7250R	7270R	7290R	7310R
MAXIMUM STATIC VERTICAL LOAD (Not on Public Roads) :						
Drawbar Cat 3 — Extended Position	1837 kg (4050 lb.)					
Drawbar Cat 3 Heavy Duty — Extended Position	2994 kg (6600 lb.)					
Drawbar Cat 3 — Medium Position	2131 kg (4700 lb.)					
Drawbar Cat 3 Heavy Duty — Medium Position	3493 kg (7700 lb.)					
Drawbar Cat 3 — Fully Retracted	2766 kg (6100 lb.)					
Drawbar Cat 3 Heavy Duty — Fully Retracted	4536 kg (10,000 lb.)					
Front MFWD Axle	5500 kg (12,125 lb.)	6500 kg (14,330 lb.)				
MAXIMUM STATIC VERTICAL LOAD (On Public Roads) :						
Drawbar Cat 3 — Fully Retracted	3000 kg (14330 lb.)					
Drawbar Cat 3 Heavy Duty — Fully Retracted	3000 kg (14330 lb.)					

RD47322,0000045 -19-18NOV14-1/1

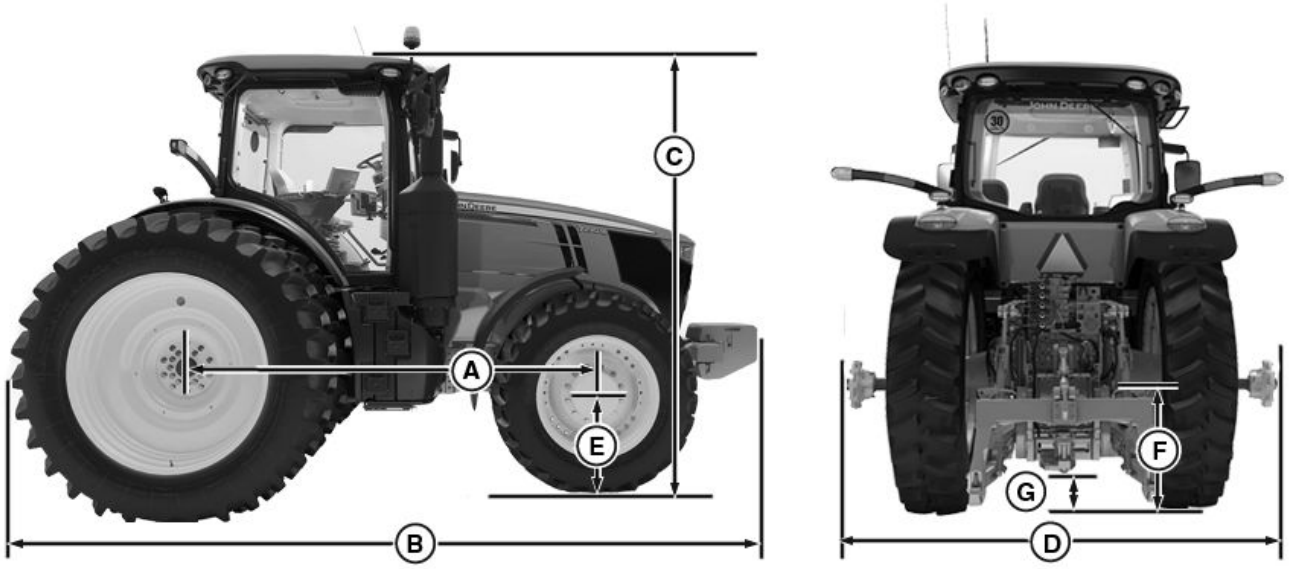
Tractor Load/Weights—Average Standard Weight

	7210R	7230R	7250R	7270R	7290R	7310R
AVERAGE STANDARD WEIGHT: [a]						
CommandQuad™, MFWD, Cat3 hitch, Quick Coupler, Cat3 drawbar, 480/80R46 rear duals, 420/90R30 front, one pair 452 lb. inner weights, front weight support, shipping fuel	10,129 kg (22,331 lb.)		Not Available			
e23™, TLS™, MFWD, Cat3 hitch, Quick Coupler, Cat 3 Heavy Duty drawbar, 480/80R50 rear duals, 380/80R38 front, one pair 452 lb. inner weights, front weight support, shipping fuel	11,25 kg (24,871 lb.)		11,651 kg (25,686 lb.)			12,005 kg (26,469 lb.)
IVT™, TLS™, MFWD, Flanged Axle, Hooks with sway blocks, 3 in 1 rails with wagon hitch, 650/85R38 singles, 540/65R34 front, one pair 452 lb. outer weights, front weight support, shipping fuel	10,425 kg (22,984 lb.)		10,816 kg (23,487 lb.)			11,326 kg (24,971 lb.)

[a] *Total Tractor Weight, Less Front Weights*

RW29387,0000054 -19-09DEC14-1/1

Overall Dimensions



	7210R	7230R	7250R	7270R	7290R	7310R
A - Wheelbase						
MFWD/TLS Axles	2925 mm (115.2 in.)					
B - Overall Length						
Including front weight support, rear hitch, and excluding front suitcase weights	5520 mm (217 in.)			5540 mm (218 in.)		
C - Overall Height (Top of Cab)						
Group 47 Rear Tires	3245 mm (128 in.)					
Group 48 Rear Tires	3357 mm (132 in.)					
Group 49 Rear Tires	N/A[a]		3446 mm (136 in.)			
D - Width (Axle Length)						
Short Axle [100 mm (3.94 in.), 110 mm (4.33 in.), 120 mm (4.72 in.) Diameter]	2550 mm (100 in.)					
Long Axle [100 mm (3.94 in.) Diameter]	2807 mm (110 in.)					
Extra Long [100 mm (3.94 in.), 110 mm (4.33 in.), 120 mm (4.72 in.) Diameter]	3012 mm (119 in.)					
E - Crop Clearance						
MFWD With Group 42 Front Tires	612 mm (24 in.)					
MFWD With Group 43 Front Tires	634 mm (25 in.)					
MFWD With Group 44 Front Tires	N/A[a]		668 mm (26 in.)			
F - Crop Clearance (Rear Axle Housing)						
Group 47 Rear Tires	575 mm (23 in.)[b]					
Group 48 Rear Tires	627 mm (25 in.)[b]					
Group 49 Rear Tires	N/A[a]		673 mm (27 in.)			
G - Drawbar Clearance						
Group 47 Rear Tires	352 mm (14 in.)					
Group 48 Rear Tires	420 mm (17 in.)					
Group 49 Rear Tires	N/A[a]		463 mm (18 in.)			
H- Overall Length (Including Hitch, Drawbar and Front Weight Support with no Front Weights)	5520 mm (217 in.)			5540 mm (218 in.)		
I- Overall Length (Including Hitch, Drawbar, Front Weight Support and Front Weights)	5885 mm (232 in.)			5905 mm (232.5 in.)		
Rear Axle Diameter	100 mm (3.9 in.)			110 mm (4.3 in) or 120 mm (4.7 in)		

Continued on next page

RW29387,0000046 -19-06SEP13-1/2

	7210R	7230R	7250R	7270R	7290R	7310R
Ground Clearance (Front Axle, Off-Center, assuming 30 in. Rows)						
MFWD/TLS Front Axle (Group 42 tires)	612 mm (24.1 in.)					
MFWD/TLS 1300 Front Axle (Group 43 tires, 420/85R34)	495 mm (19.5 in.)					
MFWD/TLS Front Axle (Group 44 tires, 420/85R38)	668 mm (26.3 in.)					
Turning Radius (Centerline of Outside Front Tire, at 60" Treads)						
MFWD Front Axle Without Oscillation Stops 420/90R30	7.0 m (22.9 ft.) @31° turn angle					
MFWD Front Axle Without Oscillation Stops 380/85R34	6.5 m (21.3 ft.) @34° turn angle					
MFWD Front Axle Without Oscillation Stops 420/90R30	5.2 m (17 ft.) @47° turn angle					
Cab Glass Area	6.52 sq. m (70.18 sq. ft.)					
Cab Volume	3.597 cu. M (127 cu. ft.)					
Max Ballast Level	Maximum recommended ballast is 145 lbs./SAE PTO HP-See OM for specific ballast instructions					
Max Payload Capacity	See OM for details on tractor loading					

[a] *N/A is the abbreviation for not available*
[b] *MFWD Front Axle*

RW29387,0000046 -19-06SEP13-2/2

Loads and Weights - (For Tractors 7210R and 7230R) (2010-52-EU)

Tractor weights:

Total weight ..... 11,256 kg (24,817 lb.)

Details apply to a tractor equipped as follows:

- 420/90R30 front tires
- 480/80R46 rear tires
- e23™ transmission
- Suspended front axle (TLS™)
- Number of selective control valves, 4
- Passenger seat
- 2 x 205 kg (452 lb.) inner weight
- 1000/540E/540 rear PTO
- Swinging drawbar
- Shipping fuel in tank 87 liter (23 gal.)
- Without air brake system
- CAT 3 rear hitch w/quick coupler
- Carry weight of 5443 kg (12,000 lb.) [3785 L (1000 gal.) fluid + tare weight] permissible with adequate tire carrying capacity and not to exceed 6500 kg (14330 lb.).

Note: Different equipment, transmission versions, and tire sizes affect weight details.

Maximum permissible static vertical load[a]	**7210R**	**7230R**
- CAT 2 Drawbar	1430 kg (3152 lb.)	1430 kg (3152 lb.)
- CAT 3[b] Drawbar	3000 kg (6613 lb.)	3000 kg (6613 lb.)
- CAT 3 HD Drawbar	3000 kg (6613 lb.)	3000 kg (6613 lb.)
- Trailer hitch	2000 kg (4409 lb.)	2000 kg (4409 lb.)
- Tow hook of pickup hitch	3000 kg (4409 lb.)	3000 kg (4409 lb.)
- Piton fixed tow hitch	3000 kg (4409 lb.)	3000 kg (4409 lb.)
- Ball type tow hitch	3000 kg (6614 lb.)	3000 kg (6614 lb.)
.....Lowest three (3) positions	4000 kg (8818 lb.)	4000 kg (8818 lb.)
Maximum permissible front axle load	6500 kg (14,300 lb.)	6500 kg (14,300 lb.)
Maximum permissible rear axle load	10,500 kg (23,100 lb.)	10,500 kg (23,100 lb.)
Maximum permissible total weight	14,500 kg (31,900 lb.)	14,500 kg (31,900 lb.)

[a] *Maximum permitted travel speed is 40 km/h (24.8 mph). At higher travel speeds, maximum permissible static vertical load is limited to 2000 kg (4400 lb.).*
[b] *2700 kg (6000 lb.) Maximum Vertical Load dependent on drawbar position.*

NOTE: Traffic regulations in certain countries may restrict permissible axle loads and total weight to figures lower than those quoted above.

RD47322,000026C -19-29JAN15-1/1

Loads and Weights - (For Tractors 7250R, 7270R, 7290R, 7310R) (2010-52-EU)

Tractor weights:

Total weight ..... 12,005 kg (26,469 lb.)

Details apply to a tractor equipped as follows:

- 420/90R30 front tires
- 480/80R46 rear tires
- e23™ Transmission
- Suspended front axle (TLS™)
- Number of selective control valves, 4
- Passenger seat
- Cab, not suspended
- 1000/540E/540 rear PTO
- CAT 3 Rear Hitch w/ Quick Coupler
- 2 x 205 kg (452 lb.) inner weight
- Shipping fuel in tank 87 liter (23 gal.)
- Without air brake system

Carry Weight of 5,443 kg (12,000 lb.) [3785 L (1000 gal.) fluid + tare weight] permissible with adequate tire carrying capacity and not to exceed 6500 kg (14330 lb.).

Note: Different equipment, transmission versions, and tire sizes affect weight details.

Maximum permissible static vertical load[a]	**7250R**	**7270R**	**7290R**	**7310R**
- CAT 2 Drawbar	1430 kg (3152 lb.)	1430 kg (3152 lb.)	1430 kg (3152 lb.)	1430 kg (3152 lb.)
- CAT 3 Drawbar[b]	3000 kg (6613 lb.)	3000 kg (6613 lb.)	3000 kg (6613 lb.)	3000 kg (6613 lb.)
- CAT 3 HD Drawbar	3000 kg (6613 lb.)	3000 kg (6613 lb.)	3000 kg (6613 lb.)	3000 kg (6613 lb.)
- Trailer hitch	2000 kg (4409 lb.)	2000 kg (4409 lb.)	2000 kg (4409 lb.)	2000 kg (4409 lb.)
- Tow hook of pick-up hitch	3000 kg (6614 lb.)	3000 kg (6614 lb.)	3000 kg (6614 lb.)	3000 kg (6614 lb.)
- Piton fixed tow hitch	3000 kg (6614 lb.)	3000 kg (6614 lb.)	3000 kg (6614 lb.)	3000 kg (6614 lb.)
- Ball type tow hitch	3000 kg (6614 lb.)	3000 kg (6614 lb.)	3000 kg (6614 lb.)	3000 kg (6614 lb.)
.....Lowest three (3) positions	4000 kg (8818 lb.)	4000 kg (8818 lb.)	4000 kg (8818 lb.)	4000 kg (8818 lb.)
Maximum permissible front axle load	6500 kg (14,330 lb.)	6500 kg (14,330 lb.)	6500 kg (14,330 lb.)	6500 kg (14,330 lb.)
Maximum permissible rear axle load	11,000 kg (24,250 lb.)	11,000 kg (24,250 lb.)	11,000 kg (24,250 lb.)	11,000 kg (24,250 lb.)
Maximum permissible total weight	16,000 kg (35,274 lb.)	16,000 kg (35,274 lb.)	16,000 kg (35,274 lb.)	16,000 kg (35,274 lb.)

[a] *Maximum permitted travel speed is 40 km/h (24.8 mph). At higher travel speeds, maximum permissible static vertical load is limited to 2000 kg (4400 lb.).*
[b] *2700 kg (6000 lb.) Maximum Vertical Load dependent on drawbar position.*

NOTE: Traffic regulations in certain countries may restrict permissible axle loads and total weight to figures lower than those quoted above.

RD47322,000026D -19-29JAN15-1/1

How to Calculate Permissible Mass (2010-52-EU)

Calculating permissible tractor mass and permissible trailer mass on the basis of the D value

EC-approved, dynamically tested trailer hitches are always provided with a D value. This is calculated as follows:

$$D = \frac{G * A * B}{A + B}$$, where

D = D value of hitch
G = Gravitational constant 9.81 m/s^2
A = Tractor mass
B = Trailer mass

To calculate trailer mass for a given D value and a given tractor mass, and to calculate tractor mass for a given D value and a given trailer mass, use the following formulas:

Tractor mass $A = \frac{D * B}{G * B - D}$

Trailer mass $B = \frac{D * A}{G * A - D}$

*NOTE: If when calculating A the product of G*B is less than the D value, or if when calculating B the product of G*A is less than the D value, then the result of this calculation is negative. Even so, the D value is sufficient for every combination of tractor mass and trailer mass.*

Example of how to calculate permissible trailer mass:

Given that: D value, D = 55 kN = 55000 N
Tractor mass A = 7000 kg

$$B = \frac{55000\ N * 7000\ kg}{9.81\ m/s^2 * 7000\ kg - 55000\ N} = 28163\ kg$$

Pay close attention to permissible towed mass and tractor mass!

RD47322,0000162 -19-08JAN14-1/1

Ground Speeds With CommandQuad™ ECO Transmission — 40 km/h (24.8 mph) (7210R, 7230R)

Travel speeds are at rated engine speed of 2100 rpm using maximum rolling circumference (RC).

	Group 47 Tires RC = 5850 mm (230 in.)[a] 710/70R38, 520/85R42, 650/65R42, 620/70R42, 480/80R46, 380/90R50, 320/90R54 Tires		Group 48 Tires RC = 6164 mm (243 in.)[a] 650/85R38, 800/70R38, 710/70R42, 520/85R46, 620/70R46, 480/80R50, 320/105R54, 380/90R54 Tires	
Gear	**Forward km/h (mph)**	**Reverse km/h (mph)**	**Forward km/h (mph)**	**Reverse km/h (mph)**
A1	2.8 (1.7)	2.9 (1.8)	2.9 (1.8)	3.1 (1.9)
A2	3.4 (2.1)	3.5 (2.2)	3.5 (2.2)	3.7 (2.3)
A3	4.0 (2.5)	4.2 (2.6)	4.2 (2.6)	4.4 (2.8)
A4	4.9 (3.1)	5.2 (3.2)	5.2 (3.2)	5.4 (3.4)
B1	5.9 (3.7)	6.2 (3.8)	6.2 (3.9)	6.5 (4.0)
B2	7.1 (4.4)	7.4 (4.6)	7.5 (4.7)	7.8 (4.9)
B3	8.5 (5.3)	8.9 (5.5)	9.0 (5.6)	9.4 (5.8)
B4	10.5 (6.5)	10.9 (6.8)	11.0 (6.9)	11.5 (7.1)
C1	9.4 (5.9)	9.8 (6.1)	9.9 (6.2)	10.4 (6.4)
C2	11.4 (7.1)	11.8 (7.4)	12.0 (7.4)	12.5 (7.8)
C3	13.6 (8.5)	14.2 (8.8)	14.3 (8.9)	14.9 (9.3)
C4	16.7 (10.4)	17.4 (10.8)	17.6 (10.9)	18.3 (11.4)
D1	17.5 (10.9)	18.2 (11.3)	18.4 (11.4)	19.2 (11.9)
D2	21.0 (13.1)	21.9 (13.6)	22.2 (13.8)	23.1 (14.4)
D3	25.2 (15.6)	26.3 (16.3)	26.5 (16.5)	27.7 (17.2)
D4	30.8 (19.2)	30.0 (18.6)[b]	32.5 (20.2)	30.0 (18.6)[b]
E1	31.9 (19.8)	30.0 (18.6)[b]	33.6 (20.9)	30.0 (18.6)[b]
E2	38.4 (23.8)	30.0 (18.6)[b]	40.4 (25.1)	30.0 (18.6)[b]
E3	42.0 (26.1)[b]	30.0 (18.6)[b]	42.0 (26.1)[b]	30.0 (18.6)[b]
E4	42.0 (26.1)[b]	30.0 (18.6)[b]	42.0 (26.1)[b]	30.0 (18.6)[b]

[a] *Speed based on RC shown.*
[b] *Speed reached at reduced engine speed, below 2100 rpm.*

RD47322,0000270 -19-12AUG14-1/1

Ground Speeds With CommandQuad™ ECO Transmission — 50 km/h (31 mph) (7210R, 7230R)

Travel speeds are at rated engine speed of 2100 rpm using maximum rolling circumference (RC).

	Group 47 Tires RC = 5850 mm (230 in.)[a] 710/70R38, 520/85R42, 650/65R42, 620/70R42, 480/80R46, 380/90R50, 320/90R54 Tires		Group 48 Tires RC = 6164 mm (243 in.)[a] 650/85R38, 800/70R38, 710/70R42, 520/85R46, 620/70R46, 480/80R50, 320/105R54, 380/90R54 Tires	
Gear	**Forward km/h (mph)**	**Reverse km/h (mph)**	**Forward km/h (mph)**	**Reverse km/h (mph)**
A1	2.8 (1.7)	2.9 (1.8)	2.9 (1.8)	3.1 (1.9)
A2	3.4 (2.1)	3.5 (2.2)	3.5 (2.2)	3.7 (2.3)
A3	4.0 (2.5)	4.2 (2.6)	4.2 (2.6)	4.4 (2.8)
A4	4.9 (3.1)	5.2 (3.2)	5.2 (3.2)	5.4 (3.4)
B1	5.9 (3.7)	6.2 (3.8)	6.2 (3.9)	6.5 (4.0)
B2	7.1 (4.4)	7.4 (4.6)	7.5 (4.7)	7.8 (4.9)
B3	8.5 (5.3)	8.9 (5.5)	9.0 (5.6)	9.4 (5.8)
B4	10.5 (6.5)	10.9 (6.8)	11.0 (6.9)	11.5 (7.1)
C1	9.4 (5.9)	9.8 (6.1)	9.9 (6.2)	10.4 (6.4)
C2	11.4 (7.1)	11.8 (7.4)	12.0 (7.4)	12.5 (7.8)
C3	13.6 (8.5)	14.2 (8.8)	14.3 (8.9)	14.9 (9.3)
C4	16.7 (10.4)	17.4 (10.8)	17.6 (10.9)	18.3 (11.4)
D1	17.5 (10.9)	18.2 (11.3)	18.4 (11.4)	19.2 (11.9)
D2	21.0 (13.1)	21.9 (13.6)	22.2 (13.8)	23.1 (14.4)
D3	25.2 (15.6)	26.3 (16.3)	26.5 (16.5)	27.7 (17.2)
D4	30.8 (19.2)	30.0 (18.6)[b]	32.5 (20.2)	30.0 (18.6)[b]
E1	31.9 (19.8)	30.0 (18.6)[b]	33.6 (20.9)	30.0 (18.6)[b]
E2	38.4 (23.8)	30.0 (18.6)[b]	40.4 (25.1)	30.0 (18.6)[b]
E3	46.0 (28.6)	30.0 (18.6)[b]	48.4 (30.1)	30.0 (18.6)[b]
E4	50.0 (31.1)[b]	30.0 (18.6)[b]	50.0 (31.1)[b]	30.0 (18.6)[b]

[a] *Speed based on RC shown.*
[b] *Speed reached at reduced engine speed, below 2100 rpm.*

RD47322,0000271 -19-12AUG14-1/1

Ground Speeds With e23™ Transmission 40 km/h (24.8 mph) (7210R, 7230R)

Travel speeds are at rated engine speed of 2100 rpm using maximum rolling circumference (RC).

		Group 47		Group 48	
		RC = 5850 mm (230 in.)[a] 710/70R38, 520/85R42, 650/65R42, 620/70R42, 480/80R46, 380/90R50, 320/90R54 Tires		RC = 6164 mm (243 in.)[a] 650/85R38, 800/70R38, 710/70R42, 520/85R46, 620/70R46, 480/80R50, 320/105R54, 380/90R54 Tires	
Engine rpm	Gear	km/h	mph	km/h	mph
2100	1	2.4	1.5	2.5	1.5
2100	2	2.7	1.7	2.9	1.8
2100	3	3.1	2.0	3.3	2.1
2100	4	3.6	2.3	3.8	2.4
2100	5	4.2	2.6	4.4	2.7
2100	6	4.8	3.0	5.1	3.2
2100	7	5.5	3.4	5.8	3.6
2100	8	6.3	3.9	6.6	4.1
2100	9	7.3	4.5	7.7	4.8
2100	10	8.4	5.2	8.9	5.5
2100	11	9.7	6.0	10.2	6.4
2100	12	11.2	6.9	11.8	7.3
2100	13	12.9	8.0	13.6	8.5
2100	14	14.8	9.2	15.6	9.7
2100	15	17.1	10.6	18.0	11.2
2100	16	19.8	12.3	20.9	13.0
2100	17	22.9	14.2	24.1	15.0
2100	18	26.4	16.4	27.9	17.3
2100	19	30.5	19.0	32.2	20.0
2100	20	35.1	21.8	37.0	23.0
	21	40.0 @ 2070 rpm	24.9	40.0 @ 1965 rpm	24.9
	22	40.0 @ 1810 rpm	24.9	40.0 @ 1715 rpm	24.9
	23	40.0 @ 1565 rpm	24.9	40.0 @ 1485 rpm	24.9
2100	R1	2.2	1.4	2.3	1.4
2100	R2	2.9	1.8	3.1	1.9
2100	R3	3.9	2.4	4.1	2.6
2100	R4	5.2	3.2	5.4	3.4
2100	R5	5.9	3.7	6.2	3.9
2100	R6	7.9	4.9	8.3	5.2
2100	R7	10.5	6.5	11.0	6.8
2100	R8	13.8	8.6	14.6	9.0
2100	R9	18.5	11.5	19.5	12.1
2100	R10	24.7	15.4	26.1	16.2
	R11	30.0 @ 1915 rpm	18.6	30.0 @ 1820 rpm	18.6

[a] *Speed based on RC shown.*

RD47322,000059E -19-12AUG14-1/1

Ground Speeds With e23™ Transmission 40 km/h (24.8 mph) (7250R, 7270R, 7290R and 7310R)

Travel speeds are at rated engine speed of 2100 rpm using maximum rolling circumference (RC).

		Group 47		Group 48		Group 49	
		RC = 5850 mm (230 in.)[a] 710/70R38, 520/85R42, 650/65R42, 620/70R42, 480/80R46, 380/90R50, 320/90R54 Tires		RC = 6164 mm (243 in.)[a] 650/85R38, 800/70R38, 710/70R42, 520/85R46, 620/70R46, 480/80R50, 320/105R54, 380/90R54 Tires		RC = 6495 mm (256 in.)[a] 710/75R42, 480/95R50 Tires	
Engine rpm	Gear	km/h	mph	km/h	mph	km/h	mph
2100	1	2.3	1.4	2.4	1.5	2.6	1.6
2100	2	2.7	1.7	2.8	1.7	2.9	1.8
2100	3	3.1	1.9	3.2	2.0	3.4	2.1
2100	4	3.5	2.2	3.7	2.3	3.9	2.4
2100	5	4.1	2.5	4.3	2.7	4.5	2.8
2100	6	4.7	2.9	5.0	3.1	5.2	3.2
2100	7	5.4	3.3	5.7	3.5	6.0	3.7
2100	8	6.2	3.8	6.5	4.0	6.8	4.3
2100	9	7.1	4.4	7.5	4.7	7.9	4.9
2100	10	8.2	5.1	8.7	5.4	9.1	5.7
2100	11	9.5	5.9	10.0	6.2	10.5	6.6
2100	12	10.9	6.8	11.5	7.2	12.1	7.5
2100	13	12.6	7.8	13.3	8.3	14.0	8.7
2100	14	14.4	9.0	15.2	9.5	16.0	10.0
2100	15	16.7	10.4	17.6	10.9	18.5	11.5
2100	16	19.4	12.0	20.4	12.7	21.5	13.4
2100	17	22.4	13.9	23.6	14.6	24.8	15.4
2100	18	25.8	16.1	27.2	16.9	28.7	17.8
2100	19	29.8	18.5	31.4	19.5	33.1	20.6
2100	20	34.3	21.3	36.2	22.5	38.1	23.7
2100	21	39.7	24.6	40.0 @ 2010 rpm	24.9	40.0 @ 1905 rpm	24.9
	22	40.0 @ 1850 rpm	24.9	40.0 @ 1755 rpm	24.9	40.0 @ 1665 rpm	24.9
	23	40.0 @ 1605 rpm	24.9	40.0 @ 1520 rpm	24.9	40.0 @ 1445 rpm	24.9
2100	R1	2.2	1.3	2.3	1.4	2.4	1.5
2100	R2	2.9	1.8	3.0	1.9	3.2	2.0
2100	R3	3.8	2.4	4.0	2.5	4.2	2.6
2100	R4	5.0	3.1	5.3	3.3	5.6	3.5
2100	R5	5.8	3.6	6.1	3.8	6.4	4.0
2100	R6	7.7	4.8	8.1	5.0	8.5	5.3
2100	R7	10.2	6.3	10.8	6.7	11.3	7.0
2100	R8	13.5	8.4	14.2	8.8	15.0	9.3
2100	R9	18.1	11.3	19.1	11.9	20.1	12.5

Continued on next page

RD47322,000059A -19-12AUG14-1/2

		Group 47		Group 48		Group 49	
		RC = 5850 mm (230 in.)[a] 710/70R38, 520/85R42, 650/65R42, 620/70R42, 480/80R46, 380/90R50, 320/90R54 Tires		RC = 6164 mm (243 in.)[a] 650/85R38, 800/70R38, 710/70R42, 520/85R46, 620/70R46, 480/80R50, 320/105R54, 380/90R54 Tires		RC = 6495 mm (256 in.)[a] 710/75R42, 480/95R50 Tires	
Engine rpm	**Gear**	**km/h**	**mph**	**km/h**	**mph**	**km/h**	**mph**
2100	R10	24.2	15.0	25.5	15.8	26.8	16.7
	R11	30.0 @ 1965 rpm	18.6	30.0 @ 1865 rpm	18.6	30.0 @ 1765 rpm	18.6

[a] *Speed based on RC shown.*

RD47322,000059A -19-12AUG14-2/2

Ground Speeds With e23™ Transmission 50 km/h (31 mph) (7210R, 7230R)

Travel speeds are at rated engine speed of 2100 rpm using maximum rolling circumference (RC).

		Group 47		Group 48	
		RC = 5850 mm (230 in.)[a] 710/70R38, 520/85R42, 650/65R42, 620/70R42, 480/80R46, 380/90R50, 320/90R54 Tires		RC = 6164 mm (243 in.)[a] 650/85R38, 800/70R38, 710/70R42, 520/85R46, 620/70R46, 480/80R50, 320/105R54, 380/90R54 Tires	
Engine rpm	**Gear**	**km/h**	**mph**	**km/h**	**mph**
2100	1	2.4	1.5	2.5	1.5
2100	2	2.7	1.7	2.9	1.8
2100	3	3.1	2.0	3.3	2.1
2100	4	3.6	2.3	3.8	2.4
2100	5	4.2	2.6	4.4	2.7
2100	6	4.8	3.0	5.1	3.2
2100	7	5.5	3.4	5.8	3.6
2100	8	6.3	3.9	6.6	4.1
2100	9	7.3	4.5	7.7	4.8
2100	10	8.4	5.2	8.9	5.5
2100	11	9.7	6.0	10.2	6.4
2100	12	11.2	6.9	11.8	7.3
2100	13	12.9	8.0	13.6	8.5
2100	14	14.8	9.2	15.6	9.7
2100	15	17.1	10.6	18.0	11.2
2100	16	19.8	12.3	20.9	13.0
2100	17	22.9	14.2	24.1	15.0
2100	18	26.4	16.4	27.9	17.3
2100	19	30.5	19.0	32.2	20..0
2100	20	35.1	21.8	37.0	23.0
2100	21	40.6	25.2	42.8	26.6
2100	22	46.5	28.9	49.0	30.4
2100	23	50.0 @ 1955 rpm	31.1	50.0 @ 1855 rpm	31.1
2100	R1	2.2	1.4	2.3	1.4
2100	R2	2.9	1.8	3.1	1.9
2100	R3	3.9	2.4	4.1	2.6
2100	R4	5.2	3.2	5.4	3.4
2100	R5	5.9	3.7	6.2	3.9
2100	R6	7.9	4.9	8.3	5.2
2100	R7	10.5	6.5	11.0	6.8
2100	R8	13.8	8.6	14.6	9.0
2100	R9	18.5	11.5	19.5	12.1
2100	R10	24.7	15.4	26.1	16.2
	R11	30.0 @ 1915 rpm	18.6	30.0 @ 1820 rpm	18.6

[a] *Speed based on RC shown.*

RD47322,000059F -19-12AUG14-1/1

Ground Speeds With e23™ Transmission 50 km/h (31 mph) (7250R, 7270R, 7290R and 7310R)

Travel speeds are at rated engine speed of 2100 rpm using maximum rolling circumference (RC).

		Group 47		Group 48		Group 49	
		RC = 5850 mm (230 in.)[a] 710/70R38, 520/85R42, 650/65R42, 620/70R42, 480/80R46, 380/90R50, 320/90R54 Tires		RC = 6164 mm (243 in.)[a] 650/85R38, 800/70R38, 710/70R42, 520/85R46, 620/70R46, 480/80R50, 320/105R54, 380/90R54 Tires		RC = 6495 mm (256 in.)[a] 710/75R42, 480/95R50 Tires	
Engine rpm	Gear	km/h	mph	km/h	mph	km/h	mph
2100	1	2.3	1.4	2.4	1.5	2.6	1.6
2100	2	2.7	1.7	2.8	1.7	2.9	1.8
2100	3	3.1	1.9	3.2	2.0	3.4	2.1
2100	4	3.5	2.2	3.7	2.3	3.9	2.4
2100	5	4.1	2.5	4.3	2.7	4.5	2.8
2100	6	4.7	2.9	5.0	3.1	5.2	3.2
2100	7	5.4	3.3	5.7	3.5	6.0	3.7
2100	8	6.2	3.8	6.5	4.0	6.8	4.3
2100	9	7.1	4.4	7.5	4.7	7.9	4.9
2100	10	8.2	5.1	8.7	5.4	9.1	5.7
2100	11	9.5	5.9	10.0	6.2	10.5	6.6
2100	12	10.9	6.8	11.5	7.2	12.1	7.5
2100	13	12.6	7.8	13.3	8.3	14.0	8.7
2100	14	14.4	9.0	15.2	9.5	16.0	10.0
2100	15	16.7	10.4	17.6	10.9	18.5	11.5
2100	16	19.4	12.0	20.4	12.7	21.5	13.4
2100	17	22.4	13.9	23.6	14.6	24.8	15.4
2100	18	25.8	16.1	27.2	16.9	28.7	17.8
2100	19	29.8	18.5	31.4	19.5	33.1	20.6
2100	20	34.3	21.3	36.2	22.5	38.1	23.7
2100	21	39.7	24.6	41.8	26.0	44.0	27.4
2100	22	45.4	28.2	47.8	29.7	50.0 @ 2085 rpm	31.1
	23	50.0 @ 2005 rpm	31.1	50.0 @ 1900 rpm	31.1	50.0 @ 1805 rpm	33.1
2100	R1	2.2	1.3	2.3	1.4	2.4	1.5
2100	R2	2.9	1.8	3.0	1.9	3.2	2.0
2100	R3	3.8	2.4	4.0	2.5	4.2	2.6
2100	R4	5.0	3.1	5.3	3.3	5.6	3.5
2100	R5	5.8	3.6	6.1	3.8	6.4	4.0
2100	R6	7.7	4.8	8.1	5.0	8.5	5.3
2100	R7	10.2	6.3	10.8	6.7	11.3	7.0
2100	R8	13.5	8.4	14.2	8.8	15.0	9.3
2100	R9	18.1	11.3	19.1	11.9	20.1	12.5
2100	R10	24.2	15.0	25.5	15.8	26.8	16.7
	R11	30.0 @ 1965 rpm	18.6	30.0 @ 1865 rpm	18.6	30.0 @ 1765 rpm	18.6

[a] *Speed based on RC shown.*

RD47322,000059B -19-12AUG14-1/1

Ground Speeds With — IVT™/AutoPowr™ Transmission

Travel speed is infinitely variable from 20 km/h (12 mph) in reverse to 40 or 50 km/h (24.8 or 31 mph) in forward.

The chart lists minimum engine speed needed to maintain 40 or 50 km/h (24.8 or 31 mph) travel speed using rolling circumference shown. Transmission ratios up to give top speed until engine speed drops below rpm listed.

For example, in Auto mode at full throttle with group 48 tires at 50 km/h (31 mph) travel speeds, if load pulls engine rpm down to 1703 rpm, ground speed will be 50 km/h (31 mph). If the load pulls engine rpm below 1703 rpm, ground speed will decrease.

In manual mode at full throttle, ground speed would also be 50 km/h (31 mph). The transmission will ratio back to give a top speed of 50 km/h (31 mph).

	Group 47 Tires RC = 5850 mm (230 in.)[a] 710/70R38, 520/85R42, 650/65R42, 620/70R42, 480/80R46, 380/90R50, 320/90R54 Tires	**Group 48 Tires RC = 6164 mm (243 in.)[a] 650/85R38, 800/70R38, 710/70R42, 520/85R46, 620/70R46, 480/80R50, 320/105R54, 380/90R54 Tires**
Minimum Engine Speed - 40 km/h (24.8 mph) Travel Speeds	1402 rpm	1331 rpm
Minimum Engine Speed - 50 km/h (31 mph) Travel Speeds	1753 rpm	1664 rpm

IVT™/AutoPowr™ Speed Chart For 7210R, and 7230R

[a]Speed based on RC shown.

	Group 47 Tires RC = 5850 mm (230 in.)[a] 710/70R38, 520/85R42, 650/65R42, 620/70R42, 480/80R46, 380/90R50, 320/90R54 Tires	**Group 48 Tires RC = 6164 mm (243 in.)[a] 650/85R38, 800/70R38, 710/70R42, 520/85R46, 620/70R46, 480/80R50, 320/105R54, 380/90R54 Tires**	**Group 49 Tires[a] RC = 6497 mm (256 in.) 710/75R42, 480/95R50 Tires**
Minimum Engine Speed - 40 km/h (24.8 mph) Travel Speeds	1436 rpm	1363 rpm	1293 rpm
Minimum Engine Speed - 50 km/h (31 mph) Travel Speeds	1795 rpm	1703 rpm	1616 rpm

IVT™/AutoPowr™ Speed Chart For 7250R, 7270R, 7290R and 7310R

[a]Speed based on RC shown.

NOTE: Actual rpm may vary from those listed.

Tire sizes used are group nominal. Actual tires sizes can vary up to 2%.

RD47322,0000273 -19-12AUG14-1/1

Required Emission-Related Information

Service Provider

A qualified repair shop or person of the owner's choosing may maintain, replace, or repair emission control devices and systems with original or equivalent replacement parts. However, warranty, recall, and all other services paid for by John Deere must be performed at an authorized John Deere service center.

DX,EMISSIONS,REQINFO -19-12JUN15-1/1

Front Loader Installation - Front Loader Mounting Frames (2010-52-EU)

Comply with Front Loader's Operator's Manual and Installation Instructions.

CAUTION: Do not operate front loaders in conjunction with Intelligent Total Equipment Control (iTEC™) to avoid sudden movements and possible accidents.

IMPORTANT: A front loader checked and approved by John Deere™ is available for purchase.

When installing John Deere™ front loader mounting frames, use appropriate hardware only, as shown.

Front loader mounting frames must be installed as shown. During initial installation, mounting frame cap screws must be tightened - using correct two step procedure - to a final torque of 620 N•m (457 lb-ft). Carefully follow directions in Front Loader Installation Instructions. Be sure torque is maintained at 620 N•m (457 lb-ft). Check torque regularly (see Lubrication and Maintenance section of Front Loader Operator's Manual).

Hardware used on John Deere™ Front Loader Mounting Frames						
Item	**Designation**	**Width Across Flats**	**Standard**	**Thread**	**Length / Size**	**Identification / Grade**
A (10 per side)	Washer	-	JDS130	-	21.4 x 42 x 5 mm	-
B (3 per side)	Cap Screw	30 mm	ISO4014	M20 x 2.5	100 mm	10.9
C (7 per side)	Cap Screw	30 mm	ISO4014	M20 x 2.5	120 mm	10.9

NOTE: Right side of tractor shown.

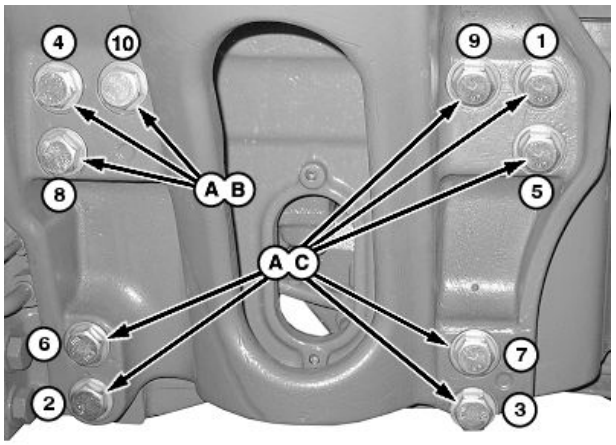
Mounting hardware consists of ten washers (A), three 120 mm cap screws (B) and seven 100 mm cap screws (C) on each side of tractor. 120 mm cap screws and washers are installed in locations 4, 8, and 10.

IMPORTANT: Loose mounting frames can cause damage. Tighten hardware to specified torque.

Check hardware torque after first 3 and 10 hours of operation and as specified in Lubrication and Maintenance section of Loader Operator's Manual.

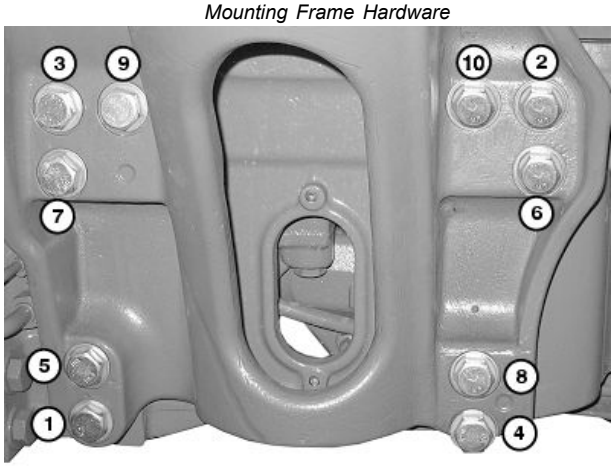
Tighten flange nuts to 620 N•m (457 lb-ft.) using sequence shown. Repeat steps on left side of tractor.

A—Washer (10 per side)
B—Cap Screw (3 per side)
C—Cap Screw (7 per side)



W21561 —UN—09MAY11

Mounting Frame Hardware



W21572 —UN—09MAY11

Mounting Frame Torquing Sequence

RD47322,0000168 -19-08JAN14-1/1

Identification Numbers

Identification Plates

Each tractor has identification plates shown on these pages. Letters and numbers stamped on plates identify a component or assembly. ALL characters are needed when ordering parts or identifying a tractor or component for any John Deere™ dealer or product support program.

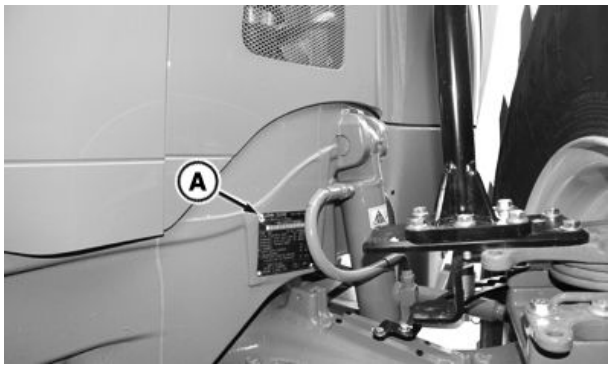
John Deere is a trademark of Deere & Company

Also, identification numbers are needed for law enforcement to trace your tractor if it is ever stolen. ACCURATELY record these characters in the spaces provided in each following photographs. Additionally, in a separate and secure location, maintain an up-to-date inventory of all product and component serial numbers.

TO84419,000027A -19-27NOV12-1/1

Record Product Identification Number

Identification plate (A) is located on right-hand tractor frame.



RXA0142518 —UN—03JUL14

Product Identification Number

_____

Product Identification Number (PIN): consists of 17 positions without spaces, dashes, or other interruptions:

Positions 1-3: World Manufacturer Code (WMC) (e.g. 1RW).

Positions 4-7: Numeric portion of the tractor model number.

Position 8: Model identifier suffix (Additional machine information).

Position 9: Check letter calculated based on the values and positions of the other sixteen characters.

Position 10: Calendar year of manufacture is a letter identifying calendar year (not model year) of manufacture. Value of this character is specified in the table.

Characters Used To Designate Year Of Manufacture	
YEAR	Code
2015	F
2016	G
2017	H
2018	J

CommandQuad is a trademark of Deere & Company
e23 is a trademark of Deere & Company
IVT is a trademark of Deere & Company
AutoPowr is a trademark of Deere & Company

Position 11: Transmission or Configuration Option Code:

Configuration and Transmission Option Codes	
C	CommandQuad™
S	e23™
D	IVT™/AutoPowr™

Position 12: Additional Product Information provide additional information about the product and when it was built. Character in position 12 is a number from 0 to 7.

Positions 13-17: Sequential Serial Number will be a serialized number uniquely identifying a specific tractor within the same model designation.

Additionally: Asterisks (*) precede first character and follow last character of PIN to discourage tampering or altering. These asterisks are not part of the 17 - character PIN number.

RW29387,0000626 -19-10AUG15-1/1

Record Engine Serial Number

Engine serial number plate is located on right side under fuel filter for 6.8 L engine (A) and on left side above starter for 9.0 L engine (B).

Fifth and sixth characters on engine serial number plate designates engine displacement (C). Seventh character designates engine emission level (D).

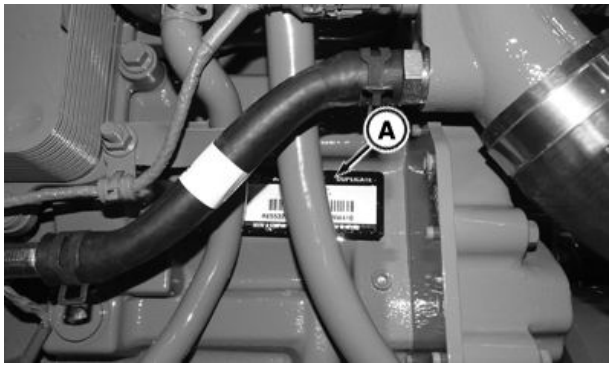
Seventh Character of Engine Serial Number	
U.S. EPA Interim-Tier 4 and EU Stage IIIB	R
U.S. EPA Final Tier 4 and EU Stage IV	U

Fifth and Sixth Characters of Engine Serial Number	
6.8 L Engine	68
9.0 L Engine	90

Serial Number

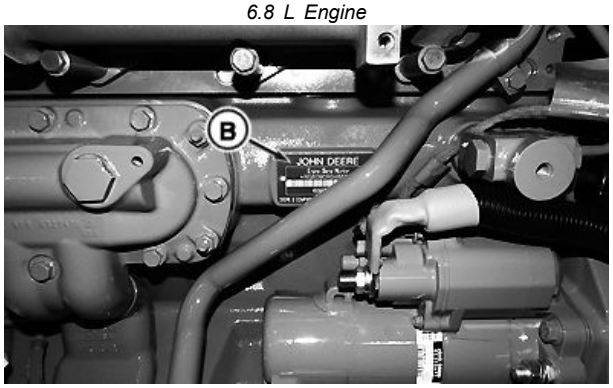
_____

A—6.8 L Engine Serial Number Location
B—9.0 L Engine Serial Number Location
C—Engine Displacement
D—Engine Emission Tier Level



RXA0142519 —UN—02JUL14

6.8 L Engine



RXA0142520 —UN—02JUL14

9.0 L Engine



RXA0117779 —UN—09JUN11

9.0 L Interim Tier 4 and EU Stage IIIB Engine

RW29387,0000666 -19-15DEC14-1/1

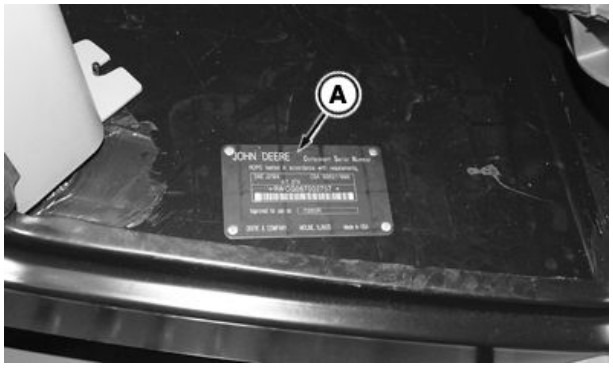
Record Cab Serial Number

Identification plate is located underneath floor mat, inside cab entry door.

Serial Number

_____

A—Cab Serial Number



RXA0142622 —UN—02JUL14

TO84419,000027D -19-02JUL14-1/1

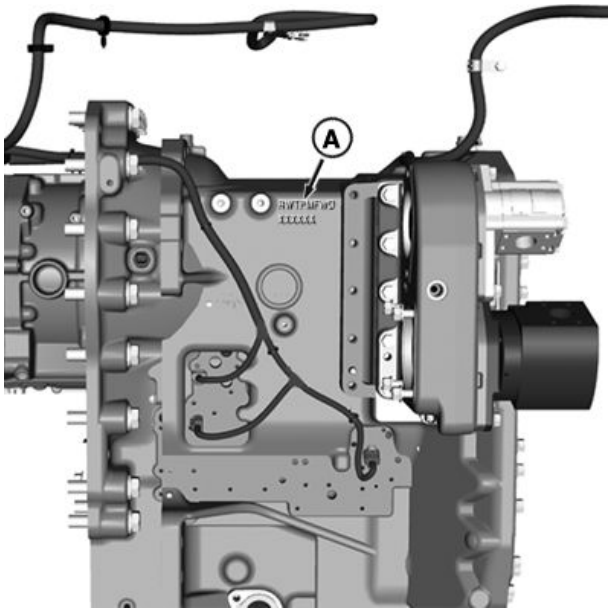
Record CommandQuad™ Transmission Serial Number

Identification number (A) is located on the transmission left side on top side of housing.

Serial Number

_____

A—Identification Number



RXA0144020 —UN—05AUG14

Record CommandQuad™ Transmission Serial Number

CommandQuad is a trademark of Deere & Company

SV81855,00002E8 -19-05AUG14-1/1

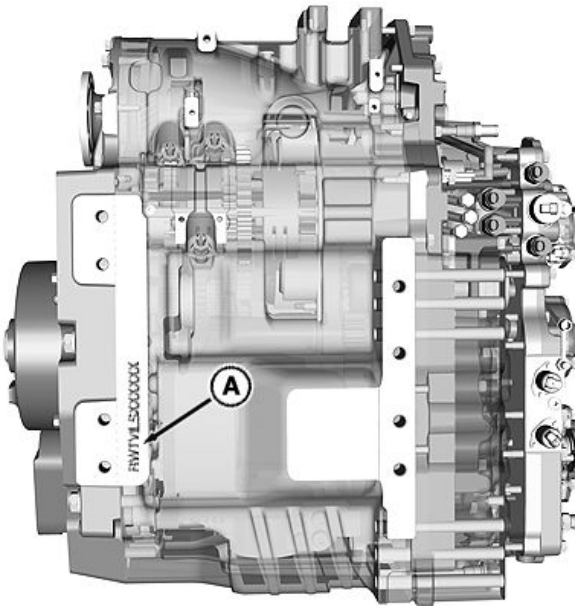
Record IVT™/AutoPowr™ Transmission Serial Number

Identification number (A) is located on the transmission left side approximately 15 cm (6 in.) below air cleaner mounting bracket.

Serial Number

_____

A—Identification Number



RXA0144023 —UN—05AUG14

Record IVT™ /AutoPowr™ Transmission Serial Number (Left Side View)

IVT is a trademark of Deere & Company
AutoPowr is a trademark of Deere & Company

SV81855,00002E6 -19-05AUG14-1/1

Record e23™ Transmission Serial Number

NOTE: Green paint covers the number.

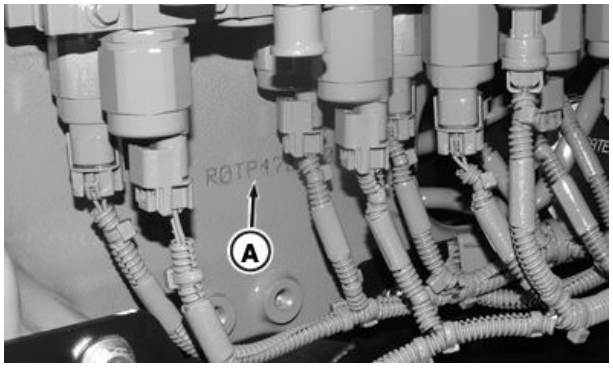
Identification number location (A) is stamped vertically on left lower rear side of transmission housing.

Serial Number

_____

A—Identification Number (Stamped in Transmission Housing)

e23 is a trademark of Deere & Company



RXA0144021 —UN—05AUG14

Record e23™ Transmission Serial Number (Left Side View)

SV81855,00002E7 -19-05AUG14-1/1

Record MFWD/TLS™ Plus Axle Serial Number

Identification number (A) is stamped on front-side of the MFWD/TLS™ Plus axle housing.

Serial Number

_____

A—MFWD/TLS™ Plus Identification Number



RXA0135521 —UN—13SEP13

Record MFWD/TLS™ Plus Serial Number

TO84419,000027E -19-13SEP13-1/1

Keep Proof of Ownership

1. Maintain in a secure location an up-to-date inventory of all product and component serial numbers.
2. Regularly verify that identification plates have not been removed. Report any evidence of tampering to law enforcement agencies and order duplicate plates.
3. Other steps you can take:
   - Mark your machine with your own numbering system
   - Take color photographs from several angles of each machine

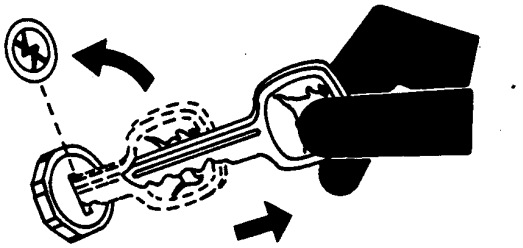


TS1680 —UN—09DEC03

DX,SECURE1 -19-18NOV03-1/1

Keep Machines Secure

1. Install vandal-proof devices.
2. When machine is in storage:
   - Lower equipment to the ground
   - Set wheels to widest position to make loading more difficult
   - Remove any keys and batteries
3. When parking indoors, put large equipment in front of exits and lock your storage buildings.
4. When parking outdoors, store in a well-lighted and fenced area.
5. Make note of suspicious activity and report any thefts immediately to law enforcement agencies.
6. Notify your John Deere dealer of any losses.



TS230 —UN—24MAY89

DX,SECURE2 -19-18NOV03-1/1

Lubrication and Maintenance Records

50 Hour Service Record

Complete all items on Daily/10 hour service interval list plus:

- Inspect tires
- Lubricate rear and front (if equipped) hitch components (if used daily)

Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				

TO84419,0000281 -19-13FEB13-1/1

250 Hour Service Record

Complete all items on Daily/10 hour and 50 hour service interval lists plus:

- Check manual brakes
- Check secondary brake
- Check neutral start system
- Check transmission PARK position
- Lubricate deluxe stabilizers (if equipped)
- Lubricate front hitch (if equipped) and rear hitch components
- Check front PTO housing oil level (if equipped)
- Check and lubricate wagon hitch (if equipped)
- Check and lubricate pick-up hitch (if equipped)

Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				

TO84419,0000282 -19-22JAN15-1/1

500 Hour Service Record

Complete all items on Daily/10 hour, 50 hour, and 250 hour service interval lists plus:

- Change engine oil and filter [1]
- Tighten wheel and wheel weight bolts
- Clean dual beam radar sensor
- Replace fuel filters
- Inspect engine air intake system
- Lubricate MFWD or TLS™ Plus (if equipped) axle kingpins, tie rod ends, steering cylinder, axle pivot, and panhard rod
- Lubricate MFWD or TLS™ Plus U-Joints (if equipped)
- Lubricate cab suspension system (if equipped)
- Back flush optional fuel water separator (if equipped)
- Service optional fuel water separator filter element (if equipped)

Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				

TLS is a trademark of Deere & Company

[1]Engine oil and filter change interval can vary depending upon various factors. See Fuel, Lubricants, and Coolant section of this Operator's Manual for further information.

TO84419,0000283 -19-24APR15-1/1

1000 Hour Service Record

Complete all items on Daily/10 hour, 50 hour, 250 hour, and 500 hour service interval lists plus:

- Test coolant freeze point
- Check TLS™ Plus accumulator charge pressure (if equipped)
- Replace cab air and recirculation filters
- Clean MFWD or TLS™ Plus axle breather
- Check cab suspension accumulator charge pressure (if equipped)

Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				

TLS is a trademark of Deere & Company

TO84419,0000284 -19-06SEP13-1/1

Annual Service Record

- Change engine oil and filter
- Service batteries and connections
- Test coolant freeze point
- Inspect seat belts
- Replace cab fresh air and recirculation filters
- Inspect primary and secondary engine air filters
- Check TLS™ Plus accumulator charge pressure (if equipped)
- Check cab suspension accumulator charge pressure (if equipped)

Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				

TLS is a trademark of Deere & Company

TO84419,0000285 -19-10JUL14-1/1

1500 Hour Service Record

Complete all items on Daily/10 hour, 50 hour, 250 hour, and 500 hour service interval lists plus:

- Change transmission/hydraulic oil and filters
- Change MFWD or TLS™ Plus (if equipped) wheel hub and axle housing oil
- Clean hydraulic system sump screen
- Lubricate draft link support shaft bushing
- Replace trailer air brake drier filter (if equipped)
- Replace fuel tank vent filter
- Inspect fan belt and fan belt tensioner
- Change front PTO housing oil and filter (if equipped)
- Replace open crankcase ventilation filter (6.8 L Engine Only)

Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				

TLS is a trademark of Deere & Company

TO84419,0000286 -19-13FEB13-1/1

3000 Hour Service Record

Complete all items on Daily/10 hour, 50 hour, 250 hour, 500 hour and 1000 hour service interval lists plus:

- Adjust engine valve clearance - Interim Tier4/EU Stage IIIB and Final Tier4/EU Stage IV engines[1]

Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				

[1] *See your John Deere™ dealer*

RD47322,0000270 -19-16SEP13-1/1

4500 Hour Service Record

Complete all items on Daily/10 hour, 50 hour, 250 hour, 500 hour, and 1500 hour service interval lists plus:

- Replace transmission drive shaft damper
- Replace Diesel Exhaust Fluid (DEF) Dosing Unit Filter (FT4/Stage IV Engines Only)
- Replace Diesel Exhaust Fluid (DEF) Tank Filter (FT4/Stage IV Engines Only)

Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				

TO84419,0000289 -19-27NOV12-1/1

5000 Hour Service Record

Complete all items on Daily/10 hour, 50 hour, 250 hour, 500 hour, 1000 hour, and 2500 hour service interval lists plus:

- Replace engine crankshaft damper

Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				

TO84419,000028A -19-07AUG14-1/1

6000 Hour Service Record

Complete all items on Daily/10 hour, 50 hour, 250 hour, 500 hour, 1000 hour, 1500 hour, 2000 hour and 3000 hour service interval lists plus:

- Drain, flush, and refill engine cooling system and replace thermostats and de-aeration tank cap

Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				

TO84419,000028B -19-03FEB14-1/1

Glossary of Terms

Accessory	ACC	Secondary electrical system
ActiveCommand Steering (ACS™)	ACS	Abbreviation
ActiveSeat™ Control Unit	ASU	Abbreviation
Air Conditioning	A/C	System used for conditioning the air in the cab
Air Quality System	AQS	System used to control conditioned air in the cab
Alternating Current	AC	Electrical current that reverses its direction at regularly recurring intervals
Armrest Interface Control Unit	AIC	Abbreviation
Automatic Temperature Control Unit	ATC	Abbreviation
Brake Control Unit	BRC	Abbreviation
Cab Load Center Control Unit	CLC	Abbreviation
Cab Suspension Control Unit	CSC	Abbreviation
Cab Switch Module	CSM	Abbreviation
Chassis Control Unit	CCU	Abbreviation
Circulator Motor Speed	O	Medium Speed
Circulator Motor Speed	++	Fastest Speed
Cold Cranking Amperes	CCA	Refers to a battery's capability to perform during cold-weather operation
CommandCenter™	GS3	Computerized system for tractor monitoring
CommandQuad™ Transmission Control Unit	PTQ	Abbreviation
CommandQuad™ Transmission Shift Control Unit	TIQ	Abbreviation
Component Technical Manual	CTM	Technical manual developed for the servicing of major components
Corner Post Display	PDU	Abbreviation
Diagnostic Technical Manual	DTM	Technical manual developed for diagnosing problems
Diagnostic Trouble Codes	DTC	Codes that inform the operator of stop, service, or information alerts
Diesel Particulate Filter	DPF	Filter that prevents ash and soot from entering the atmosphere
Direct Current	DC	Electrical current flowing in one direction only
e23™ Transmission Control Unit	PTP	Abbreviation
e23™ Transmission Shift Control Unit	TIP	Abbreviation
Electro-Hydraulic	EH	Refers to a hydraulic valve function that is controlled electrically
Electro-Hydraulic Depth Control	EHDC	Abbreviation
Electro-Hydraulic Selective Control Valve	EH SCV	Selective control valve operated with electrical solenoids
Electronics	ELX	Abbreviation
Engine Control Unit	ECU	Abbreviation
Engine Interface Control Unit	EIC	Abbreviation
Forward Set Speed	FSS	Speed control for Infinitely Variable Transmission
Front Chassis Control Unit	FCC	Abbreviation
Front PTO Control Unit	PTF	Abbreviation
Gallons per Minute	gpm	Fluid flow measured over a period of 1 minute
Global Positioning System	gps	Abbreviation
Heating Ventilating Air Conditioning	HVAC	Abbreviation
Heavy Duty	HD	Abbreviation
Hitch Control unit	HCC	Abbreviation
High Intensity Discharge	HID	Type of Xenon working light used for front lighting
Hitch Slip Command	HSC	Computerized system used to supplement hitch draft control
Hitch Valve Control Unit	HV1	Abbreviation
Ignition	IGN	Control for starting and stopping the tractor
Infinitely Variable Transmission	IVT	Abbreviation
Intelligent Total Equipment Control	iTEC	Abbreviation
International Standards Organization	ISO	Abbreviation

Continued on next page

IVT™/AutoPowr™ Transmission Control Unit	PTI	Abbreviation
IVT™/AutoPowr™ Transmission Shift Control Unit	TII	Abbreviation
JDLink™ Control Unit	JDL	Abbreviation
Light Emitting Diode	LED	Abbreviation
Liters per Minute	L/min	Fluid flow measured over a period of 1 minute
Mechanical Front Wheel Drive	MFWD	Powered front axle which is driven mechanically from the transmission
Operator Interface Control Unit	OIC	Abbreviation
Operators Manual	OM	Technical manual developed for operating a machine
Power Assisted PTO Shifting	PAPTOS	Electronic Rear PTO Shifting
Power Take-Off	PTO	Abbreviation
Pressure Control Valve	PCV	Valve used to control pressure within a system
Product Identification Number	PIN	Serial number relating to tractor identification
Radio Frequency Identification	RFID	Abbreviation
Rear PTO Control Unit	RPT	Abbreviation
Revolutions per Minute	rpm	Abbreviation
Roll-Over Protective Structure	ROPS	Abbreviation
Roof Lighting Control Unit	RLC	Abbreviation
SCV Control Unit	SCC	Abbreviation
Secondary Hydraulic Control Unit	SCO	Abbreviation
Selective Control Valve	SCV	Device used to control remote hydraulic functions
Selective Control Valve Units	SV	Abbreviation
Sequence Control Unit	SMV	Abbreviation
Slow Moving Vehicle	SMV	Warning sign on the rear of the tractor
StarFire Control Unit	ITC	Abbreviation
Steering System Control Unit	XMA, XMB, XSA, XSB	Abbreviation
Steering System Control Unit	XMC, XSC	Abbreviation
Suspended Front Axle Control Unit	SFA	Abbreviation
Tractor Equipment Control Unit	TEC	Abbreviation
Tractor Equipment Interface Control Unit	TEI	Abbreviation
Tractor Implement Automation	TIA	Automated processes for tractors and implements.
Triple Link Suspension	TLS	Suspended front axle
Vehicle Load Center Control Unit	VLC	Abbreviation
Virtual Terminal Implement Control Unit	VTI	Abbreviation
Water-In-Fuel	WIF	Abbreviation

TO84419,000028C -19-03JUL14-2/2

Index

Page

A

Acceleration Aggressiveness 41-8
Activation 16-27
  Demonstration 16-12
Aftertreatment indicators overview 15-2
Aftertreatment system
  Restored operation option 30-5
Aiming Headlights 160-12
Air Conditioning
  Checking 103-7
  Condenser
    Clean 103-4
Air Trailer Brakes
  Bleeding 103-18
AMS Applications 16-11
Annual
  Checking seat belts 130-6
Applications
  AutoTrac™ Guidance 16-49
  Control Setup 16-61
  Date & Time 16-20
  Diagnostics Center 16-36
  Display & Sound 16-15
  Equipment Manager 16-51
  Fields 16-47
  File Manager 16-32
  Implement Profile 16-53
  ISOBUS VT 16-63
  Language & Units 16-22
  Layout Manager 16-43
  Machine Monitor 16-54
  Machine Profile 16-51, 16-52
  Maintenance & Calibrations 16-56
  Service ADVISOR™ Remote 16-27
  Software Manager 16-24
  StarFire™ Receiver 16-64
  Users & Access 16-41
  Video 16-67
  Work Monitor 16-55
Automation Status
  CommandCenter™ 16-12
AutoTrac™ 16-49
  Fields 16-46
  Machine sync 25-15
AutoTrac™ Assisted Steering System 25-18
Auxiliary Controls 16-60
Auxiliary heaters 30-17
Auxiliary power strip and electrical outlets 25-11
Avoid static electricity risk when fueling 05-4, 90-3
Axle
  MFWD
    Lubricating 105-3, 120-5, 120-6

Page

B

Backup alarm
  Volume control 40-22
Ballast
  Controlling Power Hop 75-11
  Determining ballasted
    Required tire inflation pressures 75-9
    Tractor axle loads 75-9
    Tractor weight 75-9
    Tractor weight split 75-9
  Flanged Axles
    Rear Wheel Weights 75-45
  Guidelines
    General Weight Split 75-4
    Tractors with Single Tires 75-3
    Weight based on PTO horsepower 75-3
  Hitch Mounted Implements 75-45
  Implement Codes 75-49
  Integral implements 75-7
  Liquid ballast
    Using 75-47
  Liquid Ballast
    Charts 75-48
  Loader
    Rear Ballast For Front Loader 75-46
  Quik-Tatch Weights 75-43
  Rear Wheel Weights 75-44, 120-9
  Semi-integral implements 75-7
  Towed draft implements 75-7
  Towed trailers, slurry tanks, and fertilizer tanks 75-7
  Tractor weight charts 75-12, 75-17, 75-22, 75-27, 75-31, 75-33, 75-38, 75-42
  Types 75-5
  Wheel Slip 75-50
Battery
  Charging 30-18
  Connections
    Servicing 130-2
  Servicing 130-2
Battery disconnect switch 30-8
Battery Handling, Safety
  Safety, Battery Handling 05-13, 130-1
Belt
  Fan 135-8
Belt tensioner
  Inspecting 135-8
BioDiesel fuel 90-4
Bluetooth®
  Manage paired devices 17-11
  Pair device 17-10
Bolt and screw torque values
  Metric 155-6
  Unified inch 155-7

Continued on next page

Page

Brakes
Manual
Checking 115-3
Secondary brake 115-4
Secondary Brake
Using 40-20
Trailer
Air 40-21
Bleeding 103-18
Hydraulic 40-20
Bleeding 103-17
Using 40-18
Break-in checks 92-1
Break-in engine oil
Interim tier 4, final tier 4, stage IIIB, and stage IV 90-10
Brightness 16-16
Business band and antenna
Installing 25-10

C

Cab
Classification 25-1, 125-1, 130-5
Cab Air Filters
Inspecting or replacing 125-3
Cab Classification
(2010-52-EU) 25-1, 125-1, 130-5
Cab Roof Light Bulbs (Front, Side And Rear)
Replacing 160-13
Cab Suspension
Accumulator Charge Pressure 125-5, 130-8
Calibrations
Radar 16-56
Wheel Slip 16-56
Changing to a different size tire
Tire 40-3
Check
Wheel and wheel weight bolt torque 120-6
Checking
Seat Belts 130-6
Clean CommandCenter™ Display
CommandCenter™ 103-20
Cleaning Fuel Tank Vent Filter 135-13
Cold weather starting 30-9
Auxiliary heaters 30-17
Starting Engine
With starting aid 30-14
ComfortCommand™ Seat
HCS Plus (Hydro-pneumatic cab suspension plus)
Cab suspension 25-5
CommandARM
Secondary Brake
Using 40-20
CommandARM™ 15-6
Front and Rear Hitch Controls 15-7
House controls 15-8

Page

ISOBUS button 15-10
Joystick 15-6
Left side controls 15-9
Position, adjusting 25-7
PTO controls 15-9
SCV controls 15-8
CommandARM with generation 4 display
Controls 15-5
CommandCenter
Auxiliary Controls 16-60
Cab Lighting 16-15
Camera 16-64, 16-65
Remote Viewer 16-66
CommandQuad
Downhill Operation in Slippery Conditions 41-12
Tractor Speed Display 41-12
Transmission Main Page 41-5
Engine
Parked exhaust filter cleaning 30-6
FieldCruise 40-7
Hitch
Controls and switches 65-2
Drop Rate 65-8, 65-29
Float Operation 65-10
Raise Rate 65-9, 65-29
Slip Response 65-10
Upper Set Limit 65-7
Intelligent power management 40-8
iTEC
Control functions 47-1
Language 16-22
Units 16-22
Video display capability 16-65
Video Display Capability 16-64
Video Display Settings 16-66
CommandCenter™ 16-25, 16-32, 40-8
Access Manager 16-41
Access Manager - Setting Owner/Operator 16-41
Access Manager password 16-41
Adjust steering angle 40-12
AutoClutch 40-15
Basic diagnostics readings 16-35
Cab Suspension 40-10
Calibration
Wheel Slip 16-58
Calibrations 16-56
Radar 16-57
Configurable lights 20-2
Controls Setup
ISOBUS controller 16-63
Display Models 16-2
Engine
Exhaust filter overview 30-3
Exit lighting 20-4
Fields 16-46
Hitch
Load/Depth Control 65-4, 65-5
HVAC 25-8

Continued on next page

Page

- Input Fields ... 16-23
- iTEC™
  - Abort conditions ... 47-5
  - Cancel conditions ... 47-5
  - CommandCenter™ functions ... 47-2, 47-3
  - Executing programmed sequence ... 47-10
  - Inhibit conditions ... 47-5
  - Interrupt conditions ... 47-5
- IVT™/AutoPowr™
  - Custom Settings ... 45-7
  - Modes ... 45-6
  - Reverse-Forward Set Speed Ratio ... 45-9
  - Set maximum speed ... 45-6
- Layout manager ... 16-43
- Machine monitor ... 16-54
- Machine settings menu ... 16-4
- Maintenance ... 16-56
- MFWD advanced settings ... 40-14
- Pair Bluetooth® device ... 17-10
- Phone ... 17-12
  - Contact list
    - Favorites ... 17-14
  - Recent calls ... 17-15
- Power on/off ... 16-14
- Processor Models ... 16-3
- Radio Source ... 17-6
- SCV Controls
  - Access Settings ... 60-1
  - Configuring ... 60-1, 60-2, 60-4, 60-5
  - Feature Mode ... 60-5
  - Independent Mode ... 60-4
  - Standard Mode ... 60-2
- Shortcut Buttons ... 16-15
- Software manager ... 16-24
- Time, setting ... 16-20
- TLS™ front axle suspension ... 40-10
- Work monitor ... 16-55

CommandQuad™
- Advanced Settings ... 41-8
- Forward/Reverse Soeed Ratio ... 41-8
- Forward/Reverse Startup Gear ... 41-8
- Select Start Gear ... 41-8
- Softshift ... 41-8
- Start Gears
  - Multi-Range ... 41-8
  - Single-Range ... 41-8

Compressed air ... 160-7

Configure
- ISOBUS Joystick ... 16-61
- Tractor Joystick ... 16-61

Configuring tractor
- GPS ... 25-14
- Radar ... 25-14

Control Setup ... 16-61

Controls
- Brake pedals ... 15-1
- Clutch pedal ... 15-1
- Console, front ... 15-1
- Foot operated speed control ... 15-10
- Key switch ... 15-1
- Left-hand reverser ... 15-1
- Lighting selection ... 15-1
- Steering column tilt ... 15-1
- Steering wheel telescope release ... 15-1
- Steering wheel tilt release ... 15-1
- Turn signals ... 15-1
- Windshield wiper selection ... 15-1

Controls Setup
- ISOBUS controller ... 16-63

Coolant
- Diesel engine
  - Engine with wet sleeve cylinder liners ... 90-13
- Disposing ... 90-15
- Mixing with concentrate, water quality ... 90-14
- Test freeze point ... 125-4, 130-3, 130-4
- Testing freeze point ... 90-15
- Warm temperature climates ... 90-13

Coolers
- Clean ... 103-4

Cooling system
- Check level ... 100-3
- Draining, flushing, and refilling
  - 9.0 L engine
    - 6.8 L engine ... 150-1
- Weep hole ... 103-13

Corner Post Display ... 15-3
- Information indicator ... 15-1
- Service alert indicator ... 15-1
- Stop indicator ... 15-1

Courtesy Light
- Replacing bulb ... 160-16

Custom transmission settings ... 44-14

D

- Date ... 16-21
- Deactivation ... 16-27

DEF
- Disposal ... 90-10
- Dosing unit filter, changing ... 145-3
- Storing ... 90-8
- Tank, cleaning ... 103-19
- Tank, refilling ... 90-9
- Testing ... 90-10
- Use in SCR equipped engines ... 90-8

DEF dosing unit filter
- Changing ... 145-3

DEF Filter Replacement ... 135-14

DEF tank
- Cleaning ... 103-19

Deluxe
- Stabilizers
  - Lubricate ... 115-2

Demo Activation ... 16-12

Diagnostic Trouble Codes
- Accessing ... 170-3

Continued on next page

Page

Diagnostics Center 16-35
CAN Bus Information 16-39
Controller Diagnostics 16-36
Controller Information 16-37
Diagnostic Addresses 16-37
Diagnostic Trouble Codes 16-37
Diagnostic Trouble Codes 16-37
Diagnostics Mode 16-37
Hide Diagnostics Center 16-37
Network 16-40
Readings 16-38
Diesel engine oil
Interim tier 4, final tier 4, stage IIIB, and stage IV 90-11
Service interval for operation at high altitude 90-12
Diesel engines, cold weather effect 90-6
Diesel exhaust fluid (DEF) dosing unit
Tank vent filter 145-2
Diesel fuel 90-1
Supplemental additives 90-1
Diesel fuel, testing
Testing Diesel Fuel 90-5
Differential lock 40-11
Adjust steering angle 40-12
Dimensions 180-11
Implement 16-53
Machine 16-51, 16-52
Disconnect battery
Battery 40-3
Disconnecting Battery
Purging DEF Lines
DEF, Purging Lines 160-1
Display & Sound
Brightness 16-16
Sound 16-16
Volume 16-16
Display Calibration 16-19
Disposal, Exhaust Filter 155-5
Dome light bulb
Replacing 160-15
Drawbar
3 in 1 Hitch
Check for Wear 115-8
Lubricate 115-8
Adjusting length, height, side to side 70-4
Clevis Assembly
Cat 2 Drawbar 70-4
Cat 3 Drawbar 70-5
High Vertical Load Drawbar Support 70-6
Load limitations 70-2
Dual Beam Radar
Checking 120-13

E

e23™
Stopping tractor 44-10

Page

e23™ Transmission
Efficiency Manager™ 44-12
Set forward and reverse startup gears 44-7, 44-11
e23™ transmission serial number
Identicication numbers 185-4
Effect of cold weather on diesel engines 90-6
Efficiency Manager™
e23™ Transmission 44-12
Efficiency Manager™ on e23™ Transmission in Manual Mode 44-13
Electric mirror
Operator station 25-20
Electrical system
Introduction 160-1
Electrical System
Troubleshooting 165-10
Electronic equipment
Connect 25-13
Emergency exit 40-2
Emissions
Required language
EPA 180-22
Engine 40-7, 40-8
Air Filter Precleaner 103-1
Air Intake
Inspect
6.8 L engine 120-15
Inspecting
9.0 L engine 120-17
Auxiliary heaters 30-17
Change starting fluid canister 30-15
Check engine and exhaust compartments
Check for debris 103-6
Cold weather starting
6.8 L engines 30-12
9.0 L engines 30-13
9L engine
With starting aid 30-14
Change starting fluid canister 30-15
Emissions certification 30-8
Exhaust filter cleaning mode
Auto 30-5
Exhaust filter overview 30-3
Low fuel indicator
Low diesel exhaust fluid indicator 30-15
Oil
Changing
6.8 L 120-1
9.0 L 120-3
Check 105-1
Operating 30-8
Parked exhaust filter cleaning 30-6
Replace Diesel Particulate Filter (DPF) 100-3
Restarting when Out of Fuel 30-15
Troubleshooting 165-1
Engine coolant
Disposing of 90-15

Continued on next page

Page

Engine oil....90-11
Break-In
Interim tier 4, final tier 4, stage IIIB, and stage IV 90-10
Diesel
Interim tier 4, final tier 4, stage IIIB, and stage IV 90-11
Service interval for operation at high altitude 90-12
Engine oil and filter service intervals
Interim tier 4, final tier 4, stage IIIB, and stage IV
0.12 L/kW or greater oil pan 90-12
Operation at high altitude.... 90-12
Engine Valve Clearance
3000 hour service 142-1
Equipment Manager 16-51
Exhaust filter
Maintenance and service 155-4
Exhaust Filter
Ash Handling and Disposal.... 155-4
Exhaust Filter Ash Handling and Disposal
Diesel Particulate Filter Ash Handling and Disposal 155-4
Exhaust filter cleaning mode
Auto.... 30-5
Exhaust Filter Disposal.... 155-5
Exhaust Filter, Safety
Safety, Exhaust Filter 05-16
External audio sources
USB input.... 17-5
External Audio Sources
Auxiliary input.... 17-5

F

Fender
Front
Deluxe Pivoting Fenders 80-19
FieldCruise 40-7
FieldCruise™.... 40-8
Fields
Create 16-48
Edit.... 16-48
Filter.... 16-48
Manage.... 16-48
File Manager.... 16-32
Export.... 16-32
Screenshots 16-35
Import.... 16-32
Filling DEF Tank
Draining DEF Tank
DEF Tank
Tank, DEF 90-7
Filters
Cab air
Inspecting or replacing 125-3
Cab recirculation
Replacing 125-2, 130-5

Page

Engine
6.8 L 120-1
9.0 L 120-3
Air
Checking.... 130-7
Replace.... 100-1
Exhaust filter
Maintenance and service.... 155-4
Front PTO 135-11
Fuel
Replacing 120-14
Open Crankcase Ventilation 135-12
Replace Diesel Particulate Filter (DPF) 100-3
Filters, Oil
Oil Filters.... 90-12
Foot Throttle 15-10
Front grille lights
Adjusting 160-11
Front hitch single acting mode
Double acting mode
Set points 65-28
Front loader installation 180-23
Front loader mounting frames 180-23
Fuel
BioDiesel.... 90-4
Diesel.... 90-1
Filters
Replacing 120-14
Handling and storing.... 90-2
Lubricity.... 90-2
Optional water separator
Back flushing.... 120-20
System.... 30-8
Tank 90-3
Tank sump
Draining.... 103-14, 103-19
Fuel Filters
Filters, Fuel 90-5
Fuel system
Bleeding.... 155-5
Do not modify.... 155-5
Do not open 155-5
Fuses
Location 160-2

G

Gauges.... 15-5
Gear Oil
Oil, Gear.... 90-17
Generation 4 Display
Operating System 16-7
Glossary 195-1
GPS
Configuring tractor 25-14
GPS Receiver.... 16-64
Grease.... 90-17

Continued on next page

Page

GreenStar™
Machine sync ... 25-15
GreenStar™ connector ... 25-13
Greenstar™ system components
Installing ... 25-16
Ground Speed ... 15-4
Ground speeds
IVT/AutoPowr ... 180-22
Ground Speeds CommandQuad™ ECO Transmission — 50 km/h (31 mph) ... 180-16
Ground Speeds With CommandQuad™ ECO Transmission
40 km/h (24.8 mph) ... 180-15
Ground Speeds With e23™ Transmission
40 km/h (24.8 mph) ... 180-17
Ground Speeds With e23™ Transmission
40 km/h (24.8 mph) ... 180-18
Guidance ... 16-49

H

Halogen light bulbs
Handling ... 160-10
Handling
Halogen light bulbs ... 160-10
Hardware torque values
Metric ... 155-6
Unified inch ... 155-7
Headlights
Aiming ... 160-12
High/low beam, operating ... 20-5
High-pressure washers ... 155-3, 160-8
Hitch
3 in 1 System ... 65-25
Center link
Hydraulic ... 65-14
Center Link ... 65-19
Using Correct Position ... 65-13
Command lever ... 65-3
Components ... 65-11
Controls and switches ... 65-2
Draft control ... 65-6
Draft link support shaft bushing
Lubricating ... 135-7
Drop Rate ... 65-8, 65-29
External raise and lower switches ... 65-12
External Raise/Lower Switches ... 15-11
Float Operation ... 65-10
Front
Lubricating ... 110-1
Using ... 65-26
Lateral Float ... 65-19
Lift Capacity
2010-52-EU ... 65-1
Lift Links ... 65-19
Load/Depth Control ... 65-4, 65-5
Manual Lowering ... 65-13

Page

Pick-Up Hitch
Changing Coupler ... 65-24
Operating ... 65-23
Quick Coupler
Detaching Implement ... 65-20
Raise Rate ... 65-9, 65-29
Rear
Lubricating ... 110-1, 115-1
Slip Response ... 65-10
Specifications
2010-52-EU ... 65-1
Troubleshooting ... 165-6
Upper Set Limit ... 65-7
Wagon ... 65-22
Hitch conversion ... 65-21
Horn, operating ... 25-7
HVAC
Heating
Ventilation
Air conditioning ... 25-8
Hydraulic
Connections
Hitch auxiliary raise kit ... 63-6
Implement ... 63-5
Load-Sensing Hydraulic System ... 63-7
Motor Case Drain ... 63-6
Motor Return ... 63-6
Examples
Auxiliary Motor Return ... 63-11
Hitch Cylinders Controlled by SCV in Parallel with Hitch Auxiliary Raise ... 63-14
Integral Planter with Hitch Auxiliary Raise Operated in Parallel with Hitch Valve ... 63-13
Intergral Planter with Hitch Auxiliary Raise ... 63-14
Motor Application Using Power Beyond ... 63-10
Motor Application Using SCV Retract ... 63-11
Motor Case Drain ... 63-10
Planter with Vacuum Motor ... 63-12
Pressure Control Valve Applications ... 63-9
Return Line to SCV Using Motor Return Tip ... 63-12
Hoses
Connect, Mid-Mount ... 63-3
Connect, Rear ... 63-1
Disconnect, Mid-Mount ... 63-3
Disconnect, Rear ... 63-2
Implements Requiring Large Volumes of Oil ... 63-9
Oil
Changing ... 135-2
Level, Checking ... 105-2
SCV Control Levers ... 60-7
SCV controls
Troubleshooting ... 165-8
SCV Controls
Access Settings ... 60-1
Activating Independent Mode ... 60-3
Configuring ... 60-1, 60-2, 60-4, 60-5
Feature Mode ... 60-5
Independent Mode ... 60-4

Continued on next page

Page

Joystick....60-11
Operator Presence Sensor.... 60-10
SCV Lever Positions
Neutral 60-8
Standard Mode.... 60-2
Total Flow Demand.... 60-6
Troubleshooting 165-5
Warm-up 40-4
Hydraulic system
TouchSet controls
SCV Lever positions
Extend.... 60-8
Extend detent.... 60-8
Float.... 60-10
Retract 60-9
Retract detent 60-9

I

Implement Codes 75-49
Implement connector.... 25-13
Implement Profile.... 16-53
Indicators
Digital.... 15-4
Information.... 170-1
Service alert.... 170-1
STOP 170-1
Indicators overview.... 15-2
Information indicators 15-1
Inspecting
Or replacing cab air filters.... 125-3
Or replacing recirculation filter 125-2, 130-5
Intelligent power management 40-8
Intelligent Total Equipment Control (iTEC™)
Inhibit conditions 47-5
Set up a sequence.... 47-4
CommandARM™ control functions.... 47-1
iTEC™ functions for IVT™/AutoPowr™ 47-11
Clearing sequence....47-11
Executing a programmed sequence 47-10
Interrupt conditions 47-5
Cancel conditions.... 47-5
CommandCenter™ description.... 47-3
Abort conditions 47-5
CommandCenter™ description.... 47-2
Introduction to
Electrical system.... 160-1
ISO connectors.... 25-13
ISOBUS Controller 16-63
ISOBUS Joystick
Controls.... 16-61
ISOBUS VT 16-63
iTEC™
Functions
Efficiency manager transmission.... 47-12
iTEC™ station description.... 47-2
IVT™/AutoPowr™
Creeper mode, using 45-10

Page

Operate.... 45-3
Put tractor in motion.... 45-10
Set speeds, guidelines and examples 45-5
Stopping tractor....45-11

J

Jacking up the tractor
(2010-52-EU) 155-1
Joystick....60-11
Joystick controls custom setup.... 60-12
Joystick layout 60-15

K

Keep window and door closed.... 40-2

L

Language 16-22
Layout Manager
Active Set.... 16-43
All Run Pages 16-45
Run Pages 16-45
Lift Capacity.... 65-1
Lifting points for jacking up.... 155-1
Lights
7-Pin Outlet.... 20-9
Adjusting front grille lights....160-11
Aiming headlights.... 160-12
Brake light bulb
Replacing 160-14
Cab Lighting.... 16-15
Configurable lights 20-2
Exit lighting.... 20-4
Extremity warning lights.... 20-7
Replacing 160-18
Front grille flood light bulbs
Replacing 160-10
Hazard lights.... 20-7
Light identification 20-1
Replacing cab roof front, side and rear
light bulbs.... 160-13
Replacing dome light bulb.... 160-15
Right region buttons.... 20-3, 20-6
Rotary beacon light.... 20-8
Safety lights and devices 20-6
Load center fuses.... 160-2
Low DEF indicator 30-15
Low fuel indicator.... 30-15
Lubricant
Mixing.... 90-18
Lubricant Storage
Storage, Lubricant.... 90-18
Lubricants, Safety
Safety, Lubricants 90-18

Continued on next page

Page

Lubricate
Deluxe stabilizers....115-2
Lubricating
Axle Pivot....105-3, 120-5
Draft link support shaft bushing....135-7
Front Hitch....110-1, 115-2
MFWD Kingpins....105-3, 120-5
Panhard Rod....105-3, 120-5
Rear hitch....110-1, 115-1
Steering Cylinder....105-3, 120-5
Tie Rod Ends....105-3, 120-5
U-Joints....120-6
Lubrication and maintenance
4500 hours/36 months
Changing DEF dosing unit filter....145-3
As required
Cleaning DEF tank....103-19
Lubricity of diesel fuel....90-2

M

Machine communication radio
Machine sync....25-15
Machine communications radio antenna (MCR)
Install....25-17
Machine Monitor....16-54
Machine Profile....16-50, 16-52
Machine Status....16-59
Machine stop warning, required....30-1
Machine sync....25-15
Maintenance
Optional Fuel Water Separator (if equipped)....120-21
Maintenance & Calibrations....16-56
Maintenance intervals....95-2
Maintenance Intervals....16-59
Manual Rear View Mirror
Rear view mirror....25-19
Map Light
Replacing bulb....160-17
Master fuses....160-6
Mechanical fornt-wheel drive
MFWD....40-13
Mechanical front-wheel drive
Steering angle disengagment....40-14
Menu....16-4
Metric bolt and screw torque values....155-6
MFWD
Axle housing
Changing oil....135-7
Axle Housing
Oil Level....103-15
Wheel hub
Changing oil....135-6
Wheel Hub
Oil Level....103-16

Page

Mirror
Side
Rear-view....25-20
Side (rear view)....25-19
Telescoping Heated Electirc....25-20
Mixing lubricants....90-18
Monitor bracket mounts....25-19
Multiple Displays....16-17

N

Navigate
Run Pages....16-14
Navigating Generation 4 CommandCenter™....16-13

O

Offsets
Implement....16-53
Machine....16-51, 16-52
Oil
Engine....90-11
Changing
6.8 L....120-1
9.0 L....120-3
Interim tier 4, final tier 4, stage IIIB, and stage IV....90-11
Front PTO
Changing oil....135-11
Checking Level....115-7
Hydraulic
Changing oil....135-2
Checking Level....105-2
MFWD
Axle housing
Changing oil....135-7
Axle Housing
Checking Level....103-15
Wheel hub
Changing oil....135-6
Wheel Hub
Checking Level....103-16
Transmission
Changing oil....135-2
Checking Level....105-2
Weep hole....103-13
Onscreen Help....16-1
Operating System
Applications....16-7
Operator Presence Sensor....60-10
Optional fuel water separator
Back flushing....120-20
Optional Fuel Water Separator
Maintenance....120-21

Continued on next page

Page

P

Paint care 175-2
Park brake
  Releasing 85-5
Passenger seat 25-6
Phone 17-12
  Battery charge 17-13
  Clear call history 17-15
  Clear favorites 17-15
  Contact list
    Favorites 17-14
  Manage paired devices 17-11
  Pair Bluetooth® device 17-10
  Recent calls 17-15
  Signal strength 17-13
Pick-up Hitch
  Checking for Wear 115-10
  Lubricating 115-10
Premium radio
  External audio sources 17-5
Product identification 185-1
PTO
  Changing Stub Shaft 70-20
  Cruise 70-14, 70-15
  Engagement rate 70-10
  Engine Speed 70-9
  External front switch 70-16
  External rear switch 70-17
  External Switch 15-11
  Front
    Changing oil 135-11
    Checking Oil Level 115-7
  Operating front 70-12
  Operating rear 70-13
  PTO-Driven Implement 70-7, 70-8
  Shield
    Type 3 PTO 70-8
  Shiftable PTO 70-18, 70-19
PTO, operating instructions
  (2010/52/EU) 70-2

Q

Quick coupler
  Attach Implement 65-18
Quik-Tatch Weights 75-43

R

Radar
  Configuring tractor 25-14
Radar Calibration 16-56, 16-57
Radiator
  Clean 103-4

Page

Radio
  Adjust maximum volume at power-on 17-3
  Faceplate 17-1
  Premium radio
    CommandCenter
      AM/FM home page 17-7
      Auxiliary home page 17-9
      Bluetooth® home page 17-8
      CD home page 17-7
      USB home page 17-8
  Program Type 17-3
  Source Select 17-6
  Treble Reduction During Interference (HCUT) 17-3
Radio, Premium
  Troubleshooting 165-15
Recirculation Air Filter
  Inspecting or replacing 125-2, 130-5
Record
  CommandQuad™transmission serial number 185-3
  IVT™/AutoPowr™; transmission serial number 185-3
Reduce fuel consumption 30-16
Refrigerator
  Storage space 25-21
Refueling, avoid static electricity risk 05-4, 90-3
Removing custom assingments 60-14
Replace engine crankshaft damper 148-1
Replace fan belt
  Fan
    Fan belt 103-8
Replace Transmission Drive Shaft Damper 145-1
Replacing
  Courtesy light bulb 160-16
  Dome light bulb 160-15
  Map light bulb 160-17
Required machine stop warning 30-1
Restarting when Out of Fuel 30-15
Restored operation option 30-5
Run Page 16-4
  Change 16-14
Running engine 30-11

S

Safety
  Handling Halogen light bulbs 160-10
Safety, Avoid High-Pressure Fluids
  Avoid High-Pressure Fluids 05-20
Safety, Fire Prevention
  Fire Prevention 05-3
Safety, Forestry Operations
  Limited Use in Forestry Operation 05-8
Safety, Handle Fuel Safely, Avoid Fires
  Avoid Fires, Handle Fuel Safely 05-3
Safety, Steps and Handholds
  Use Steps and Handholds Correctly 05-6
Safety, Tightening Wheel Retaining
  Bolts/Nuts
  Tightening Wheel Retaining Bolts/Nuts 05-20

Continued on next page

Page

Safety, Use Caution on Slopes and Uneven Terrain
Use Caution on Slopes and Uneven Terrain 05-10
SCR
Restored operation option 30-5
System overview 30-4
SCR system 30-7
Screenshots 16-35
SCV and jostick flow response setting 60-16
Seat
ActiveSeat™ 25-4
ComfortCommand™ seat 25-3
Heated Leather
Adjust 25-3
Seat Belts
Checking 130-6
Seat belts, use 40-2
Second Display 16-17
Secondary brake 15-6
Selecting ballast
(2010/52/EU) 75-1
Selective Catalytic Reduction 30-7
Serial numbers 185-1
Service 100-1, 103-1, 110-1, 115-1, 120-1, 125-1, 135-1, 142-1, 145-1, 150-1
1000 hours
Cleaning fuel tank vent filter 135-13
Inspecting cab air filters 125-3
Inspecting recirculation filter 125-2, 130-5
3000 hours
Check engine valve clearance 142-1
4500 hours
Replacing transmission drive shaft damper 145-1
4500 hours/36 months
Changing DEF dosing unit filter 145-3
500 hours
Check wheel and weight bolt torque 120-6
5000 hours
Replacing engine crankshaft damper 148-1
Annual
Checking seat belts 130-6
As required
Cleaning DEF tank 103-19
Implement power relay module 160-9
Service ADVISOR Remote
Download Updates 16-28
Install Updates 16-29
Reprogramming 16-31
Troubleshooting 16-31
Service ADVISOR™ Remote 16-27
Reprogramming 16-28
Theory of Operation 16-27
Vehicle Compatibility 16-27
Service alert indicator 15-1
Service Checks 16-59
Service intervals 95-2
Service Intervals 16-59, 95-1

Page

Service records
1000 Hours 190-2
1500 Hours 190-3
250 Hours 190-1
3000 Hours 190-4
4500 Hours 190-4
50 Hours 190-1
500 Hours 190-2
5000 Hours 190-4
6000 Hours 190-5
Annual 190-3
ServiceADVISOR™ 16-25
Servicing and Connecting Snap to Connect Fittings .. 155-3
Set Key Function (KEY PRG) 17-3
Set Speed 15-4
Snap to Connect Fitting (STC)
STC 155-3
Software
Activation 16-27
Deactivation 16-27
Download 16-25
Install 16-25
Rollback 16-25
Update 16-25
Versions 16-25
Software Packages
AMS Applications 16-11
Operating System 16-7
Sound Level 180-8
Specifications
Sound Level 180-8
Specifications, quick reference ..... -5
StarFire™
Machine sync 25-15
StarFire Receiver 16-64
StarFire™ Recievers
Installation 25-15
Starting engine 30-9
Status Center 16-23
Steering wheel and column
Adjust 25-2
Steps
Left-Hand 25-22
Right-Hand 25-23
Stop indicator 15-1
Stopping engine 30-11
Storing fuel 90-2
Sunshade 25-21
Suspension
Lubricate cab suspension system 120-19
Sway blocks 65-15

T

Tachometer 15-4
Tank, Fuel 90-3
Theft Deterrent Systems
CESAR Datatag 30-10

Continued on next page

Page

Immobilizer Keys 30-10
Three-camera video connectors
Ethernet cable 16-66
TIA
Status Page 50-3
Time 16-21
Tire
Sidewall information 75-11, 80-3, 81-3
Tire Pressure
Front
Group 42 Tires 80-6
Group 43 Tires 80-8, 80-9
Group 44 Tires 80-11
Rear
Group 47 Tires 81-6, 81-8
Group 48 Tires 81-10, 81-12, 81-15
Group 49 Tires 81-18
TLS Plus
Accumulator Charge Pressure
Checking 125-4, 130-8
TLS™ Plus Front Axle Suspension 40-9
Top speed, note 40-3
Torque charts
Metric 155-6
Unified inch 155-7
Touchscreen Calibration 16-19
TouchSet™ Depth Control
Attaching Control System 55-1
Attaching Implement 55-1
TouchSet™ depth controls 55-3
Tow
Points 85-4
Tow points 85-4
Towable loads 180-12, 180-13
(2010/52/EU) 85-2
Towed mass 85-2
Towing
Loads 85-2
Towing tractor
Releasing park brake 85-5
Towing Tractor 85-3
Tractor
AutoClutch 40-15
Cab Suspension 40-10
TLS™ Plus front axle suspension 40-10
Tractor Implement Automation™
Activating Tractor Implement Automation™ equipment 50-2
Introduction 50-1
Tractor Joystick
Controls 16-61
Tractor load/weights
Average standard weight 180-10
Drawbar static vertical load 180-9
Tractor storage 175-1
Tractor-Implement Automation™
Operating TIA™ 50-4
Requirements for AutoTrac™ 50-7

Page

Requirements for drive stategy 50-8
Requirements for E-SCVs 50-5
Requirements for IVT™/AutoPowr™ 50-6
Requirements for PTO 50-4
Requirements for rear hitch 50-8
Traffic Information 17-4
Trailer air brake filter
Air brake dryer filter 135-15
Trailer Air Brakes 40-21
Trailer hitch
Specifications 180-12, 180-13
Transmission
AutoPowr
Park position 115-6
AutoPowr™
Controls 45-1
CommandQuad
Custom Transmission Settings 41-6
Description and Controls 41-1
Downhill Operation in Slippery Conditions 41-12
Neutral start system 115-5
Operate 41-2
Park position 115-6
Tractor Speed Display 41-12
Transmission CommandCenter Main Page 41-5
CommandQuad™
Advanced Settings 41-8
e23™
AutoClutch 40-15
Stopping tractor 44-10
e23™ Transmissions,
Come home mode 40-23
Efficiency Manager™
Set Speeds
Adjust 41-4
IVT/AutoPowr
Come home mode 40-23
IVT™/AutoPowr™
AutoClutch 40-15
Creeper mode, using 45-10
Custom Settings 45-7
Downhill operation in slippery conditions 45-12
Foot Pedal Set Lock/Unlock Button 40-16
Left-Hand Reverser Shift Pattern 45-2
Modes 45-6
Operate 45-3
Put tractor in motion 45-10
Reverse/Forward Set Speed Ratio 45-9
Right-Hand Reverser Shift Pattern 45-2
Set maximum speed 45-6
Set Speeds
Adjust 45-4
Set speeds, guidelines and examples 45-5
Stopping tractor 45-11
MFWD advanced settings 40-14
Oil
Changing 135-2
Level, Checking 105-2

Continued on next page

Page

Operate
Operate e23™ Transmission with Right-hand reverser ... 44-1
Operating
Operating e23™ Transmission with Left-hand reverser ... 44-4
Troubleshooting ... 165-4
Warm-up ... 40-4
Transporting
Driving on Roads ... 85-1
On carrier ... 85-7
Towing Tractor ... 85-3
With ballast ... 85-1, 85-2
Troubleshooting
Depth control ... 165-9
Electrical System ... 165-10
Engine ... 165-1
Hitch ... 165-6
Hydraulics ... 165-5
Operator enclosure ... 165-12
Premium radio ... 165-15
Selective control valve ... 165-8
Steering ... 165-14
Tractor Operation ... 165-13
Transmission ... 165-4
Turn confirmation beep on/off ... 17-2
Turn signal, operating ... 20-5

U

Unified inch bolt and screw torque values ... 155-7
Units of Measure ... 16-22
Update
Download ... 16-25
Install ... 16-25
Rollback ... 16-25
Software ... 16-25
USB Drive
Best Practices ... 16-35
Requirements ... 16-35
Users & Access
Access Groups ... 16-42
User Profiles ... 16-41
Using position control
Hitch ... 65-5

V

Video ... 16-67
Triggers ... 16-67
Volume ... 16-16

W

Warnings
Auxiliary Controls ... 16-60

Page

Water separator
Draining ... 100-4
Wave Band ... 17-2
Weights
(2010-52-EU) ... 180-12, 180-13
Wheel
Wrench adapter ... 120-8
Wheel Slip Calibration ... 16-56, 16-58
Wheels
Checking ... 110-1
Clamp-on Dual ... 81-38
Front
710 mm Wide fender settings ... 80-43
Inflation Pressure
Group 44 Tires ... 80-11
Inflation Pressures
Group 42 Tires ... 80-6
Group 43 Tires ... 80-8, 80-9
MFWD
Eight-Position Wheel Settings ... 80-16
Tightening Wheel Bolts ... 80-13, 120-9
Tire Load Index ... 80-4, 81-4
Toe-in ... 80-14
Steering Stop Positions ... 80-15
Tire Combinations ... 80-2, 81-2
Tire Inflation Pressures ... 80-5
Tire, Fender, and Steering Stop Settings
1150/1300 Axles ... 80-22
1150/1300 Axles with Front Hitch ... 80-30
1150/1300 Axles with Front Loader ... 80-35
Table Explanation ... 80-21
TLS Plus Axle ... 80-27
Tire, Fender, Steering Stop Settings
TLS Plus Axle with Front Loader ... 80-40
TLS Plus Axle, With Front Hitch ... 80-33
TLS Plus
Toe-in ... 80-14
Minimum tread setting
With air brakes ... 81-27
Rear
Adjusting and Tightening
12-Bolt Hubs ... 81-24, 120-13
Cast 10-Bolt Hubs ... 81-23, 120-12
Cast Hubs ... 81-22, 120-11
Flanged Axle ... 81-25
Dual Hub Extensions ... 81-37
Dual Row Crop Settings ... 81-37
Guidelines
Wheel, Tire, and Tread ... 81-26
Inflation Pressure ... 81-5
Inflation Pressures
Group 47 Tires ... 81-6, 81-8
Group 48 Tires ... 81-10, 81-12, 81-15
Group 49 Tires ... 81-18
Installing Drive Wheel to Hub ... 81-21, 120-10
Installing Steel Wheel to Hub ... 81-21, 120-10
Tread settings
Dual wheel - cast ... 81-35

Continued on next page

Page

Dual wheel - steel 81-32
Single wheel - cast..... 81-30
Single wheel - Steel 81-28
Tread Settings
Flanged Wheels..... 81-27
Weights 75-44, 120-9
Rear, Flanged Axles
Weights 75-45
Settings
Sixteen position 80-18
Slip 75-50
Tightening stand 81-25, 120-7
Wiper and Washer
Front..... 25-9
Wiper and washer, operating
Rear window 25-9
Work Monitor 16-55
Recording..... 16-55

Z

Zinc-Flake
Coated Fasteners 155-6

John Deere Service Keeps You On The Job

John Deere Parts

We help minimize downtime by putting genuine John Deere parts in your hands in a hurry.

That's why we maintain a large and varied inventory—to stay a jump ahead of your needs.



TS100 —UN—23AUG88

DX,IBC,A -19-04JUN90-1/1

The Right Tools

Precision tools and testing equipment enable our Service Department to locate and correct troubles quickly . . . to save you time and money.



TS101 —UN—23AUG88

DX,IBC,B -19-04JUN90-1/1

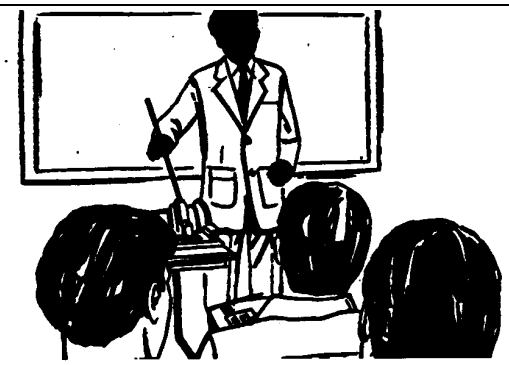
Well-Trained Technicians

School is never out for John Deere service technicians.

Training schools are held regularly to be sure our personnel know your equipment and how to maintain it.

Result?

Experience you can count on!



TS102 —UN—23AUG88

DX,IBC,C -19-04JUN90-1/1

Prompt Service

Our goal is to provide prompt, efficient care when you want it and where you want it.

We can make repairs at your place or at ours, depending on the circumstances: see us, depend on us.

JOHN DEERE SERVICE SUPERIORITY: We'll be around when you need us.



TS103 —UN—23AUG88

DX,IBC,D -19-04JUN90-1/1