

310SK, 410K Backhoe Loaders With TMC Repair Manual

(PIN: 1T0310TK__E219607—)

(PIN: 1T0410TK__E219607—)

REPAIR TECHNICAL MANUAL

310SK, 410K Backhoe Loaders With TMC

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**Worldwide Construction
And Forestry Division**

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Introduction

Foreword

This manual is written for an experienced technician. Essential tools required in performing certain service work are identified in this manual and are recommended for use.

Live with safety: Read the safety messages in the introduction of this manual and the cautions presented throughout the text of the manual.

 This is the safety-alert symbol. When this symbol is seen on the machine or in this manual, be alert for the potential of personal injury.

Technical manuals are divided in two parts: repair and operation and tests. Repair sections tell how to repair the components. Operation and test sections help to quickly identify the majority of routine failures quickly.

Information is organized in groups for the various components requiring service instruction. At the beginning of each group are summary listings of all applicable essential tools, service equipment and tools, other materials needed to do the job, service parts kits, specifications, wear tolerances, and torque values.

Technical manuals are concise guides for specific machines. They are on-the-job guides containing only the vital information needed for diagnosis, analysis, testing, and repair.

Fundamental service information is available from other sources covering basic theory of operation, fundamentals of troubleshooting, general maintenance, and basic type of failures and their causes.

MM16284,00026ED -19-17SEP18-1/1

Manual Identification—READ THIS FIRST!

IMPORTANT: Use only supporting manuals designated for your specific machine. If incorrect manual is chosen, improper service may occur. Verify product identification number (PIN) when choosing the correct manual.

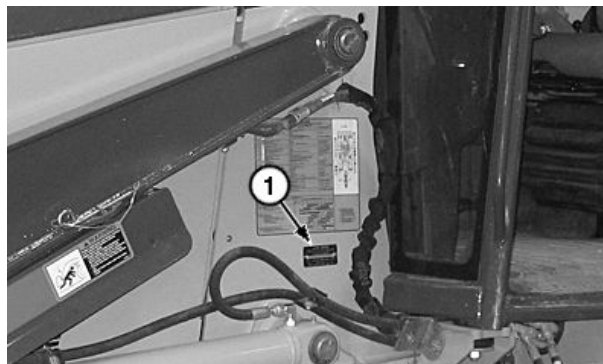
Choosing the Correct Supporting Manuals

John Deere backhoe loaders are available in different machine configurations based on the various markets into which they are sold. Different supporting manuals exist for different machine configurations.

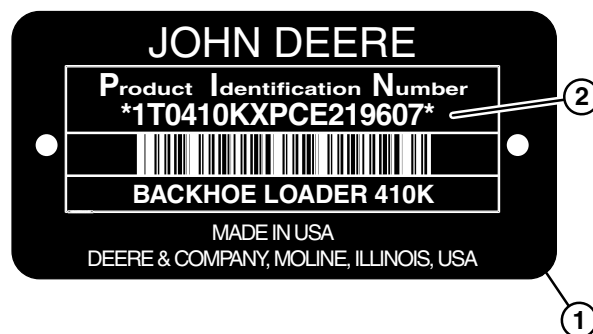
When necessary, product identification numbers are listed on the front covers of backhoe loader manuals. These numbers are used to identify the correct supporting manual for your machine.

Product Identification Number

The product identification number (PIN) plate (1) is located on the left-side of machine on the loader frame. Each machine has a 17-character PIN (2) shown on PIN plate.



PIN Plate Location



Example of PIN Plate

1—PIN Plate

2—17-Character PIN

TX1107874A —UN—08FEB12

TX1108673 —UN—20FEB12

Introduction

The PIN identifies the producing factory, machine model number, machine option, year of manufacture, engine emission level, and machine serial number.

17-Character PIN Examples													
(3)			(4)			(5)	(4)	(6)	(7)	(8)	(9)		
1	T	0	3	1	0	T	K			E	2	1	9
1	T	0	4	1	0	T	K			E	2	1	9

- **(3)—World Code**—Identifies location where machine is manufactured.
- **(4)—Machine Model Identifier**—Identifies model number.
- **(5)—Machine Option Code**—Identifies which major machine option is equipped. This character will change from one machine to another.
- **(6)—Check Letter**—This is a random character assigned by the factory. This is not used in machine identification.
- **(7)—Manufacturing Year Code**—Identifies year of machine manufacture.
- **(8)—Engine Emission Code**—Represents engine emission certification.
- **(9)—Machine Serial Number**—Identifies machine serial number. This character will change from one machine to another.

The following is an example for a 410K TMC machine that meets Interim Tier 4/Stage III B emission levels:

1T0410TK_ _E219607

1T0 **World Code** (manufacturing location)

1DW Davenport Works

1T8 Thibodaux Works

1T0 Dubuque Works

410_K **Machine Model Identifier**

T **Machine Option Code**

X Base Machine

S Super Duty

E Easy Power (EP)

T Total Machine Control (TMC) Configuration

— **Check Letter** (variable)

— **Manufacturing Year Code** (variable)

C 2012

D 2013

E 2014

F 2015

G 2016

E **Engine Emission Code**

C Tier 2 and Stage II

D Tier 3 and Stage III A

E Interim Tier 4 and Stage III B

F Tier 4

G Interim Tier 4 and Stage III A (19-56 kW)

219607 **Machine Serial Number**

JS93577,00000B3 -19-02JUL12-2/2

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- Group 9900—Dealer Fabricated Tools

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.

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Contents

Recognize Safety Information

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

Follow the precautions and safe operating practices highlighted by this symbol.

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

On your machine, DANGER signs are red in color, WARNING signs are orange, and CAUTION signs are yellow. DANGER and WARNING signs are located near specific hazards. General precautions are on CAUTION labels.



T133555 —UN—15APR13

T133588 —19—28AUG00

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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. Use this operator's manual for correct safety sign placement. Be sure that 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 could impair the function or safety and affect machine life.



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

TS201 —UN—15APR13

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Operate Only If Qualified

Do not operate this machine unless the operator's manual has been read carefully, and you have been qualified by supervised training and instruction.

Operator should be familiar with the job site and surroundings before operating. Try all controls and

machine functions with the machine in an open area before starting to work.

Know and observe all safety rules that may apply to every work situation and work site.

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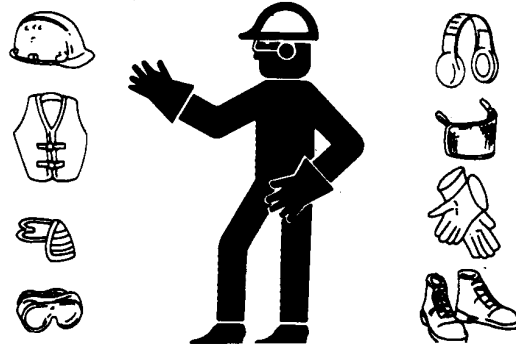
Wear Protective Equipment

Guard against injury from flying pieces or metal or debris; wear goggles or safety glasses.

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.

Prolonged exposure to loud noise can cause impairment or loss of hearing. Wear suitable hearing protection such as earmuffs or earplugs to protect against objectionable or uncomfortable loud noises. Radio or music headphones are not suitable to use for hearing protection.



TS206 —UN—15APR13

SL78608,0000784 -19-04APR12-1/1

Avoid Unauthorized Machine Modifications

John Deere recommends using only genuine John Deere replacement parts to ensure machine performance. Never substitute genuine John Deere parts with alternate parts not intended for the application as these can create hazardous situations or hazardous performance. Non-John Deere parts, or any damage or failures resulting from their use are not covered by any John Deere warranty.

Modifications of this machine, or addition of unapproved products or attachments, may affect machine stability or

reliability, and may create a hazard for the operator or others near the machine. The installer of any modification which may affect the electronic controls of this machine is responsible for establishing that the modification does not adversely affect the machine or its performance.

Always contact an authorized dealer before making machine modifications that change the intended use, weight or balance of the machine, or that alter machine controls, performance or reliability.

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Inspect Machine

Inspect machine carefully each day by walking around it before starting.

Keep all guards and shields in good condition and properly installed. Fix damage and replace worn or broken parts immediately. Pay special attention to hydraulic hoses and electrical wiring.



T6607AQ —UN—15APR13

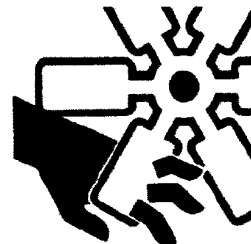
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Stay Clear of Moving Parts

Entanglements in moving parts can cause serious injury.

Stop engine before examining, adjusting, or maintaining any part of machine with moving parts.

Keep guards and shields in place. Replace any guard or shield that has been removed for access as soon as service or repair is complete.



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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.

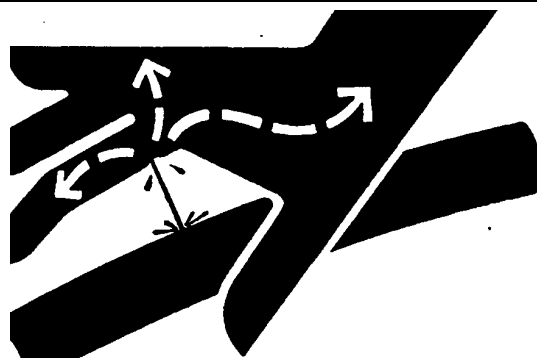
Replace worn or damaged hose assemblies immediately with John Deere approved replacement parts.

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.

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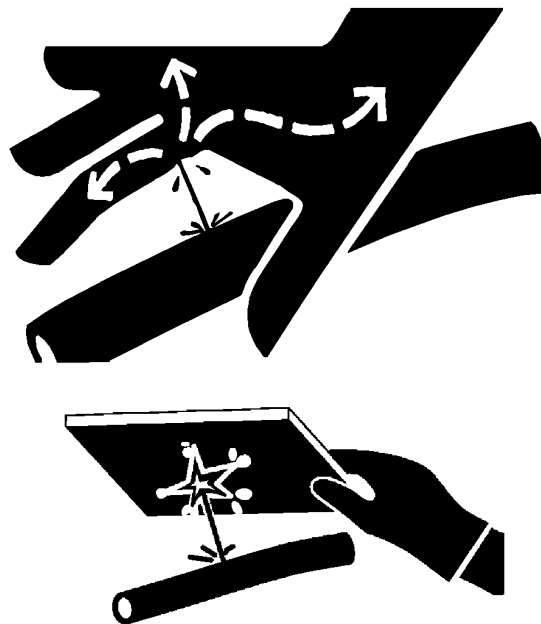
X9811 —UN—23AUG88

Avoid High-Pressure Oils

This machine uses a high-pressure hydraulic system. Escaping oil under pressure can penetrate the skin causing serious injury.

Never search for leaks with your hands. Protect hands. Use a piece of cardboard to find location of escaping oil. Stop engine and relieve pressure before disconnecting lines or working on hydraulic system.

If hydraulic oil penetrates your skin, see a doctor immediately. Injected oil must be removed surgically within hours or gangrene could result. Contact a knowledgeable medical source or the Deere & Company Medical Department in Moline, Illinois, U.S.A.



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T133509 —UN—15APR13

T133840 —UN—20SEP00