

JOHN DEERE 200, 208, 210, 212, 214 AND 216 LAWN AND GARDEN TRACTORS

**Service Manual
SM-2105 (June-81)**

TABLE OF CONTENTS

SECTION 10 - GENERAL

- Group 5 - Tractor Identification
- Group 10 - Specifications
- Group 15 - Fuel and Lubricants
- Group 20 - Tune-Up and Adjustments

SECTION 20 - ENGINE

- Group 5 - General Information
- Group 10 - Cylinder Head, Valves and Breather
- Group 15 - Minor Engine Recondition
- Group 20 - Major Engine Recondition
- Group 25 - Specifications

SECTION 30 - FUEL SYSTEM

- Group 5 - General Information
- Group 10 - Carburetor
- Group 15 - Air Cleaner
- Group 20 - Fuel Strainer and Fuel Tank
- Group 25 - Fuel Pump
- Group 30 - Specifications

SECTION 40 - ELECTRICAL SYSTEM

- Group 5 - General Information
- Group 10 - Cranking System
- Group 15 - Ignition System
- Group 20 - Charging System
- Group 25 - Lights
- Group 30 - Electric Lift
- Group 35 - Electric PTO Clutch

SECTION 50 - POWER TRAIN

- Group 5 - General Information
- Group 10 - Clutch and Variable Speed Drive
- Group 15 - Brakes
- Group 20 - 4-Speed Transaxle
- Group 25 - PTO Clutch

SECTION 60 - HYDRAULIC LIFT SYSTEM

- Group 5 - General Information
- Group 10 - Control Valve
- Group 15 - Pump
- Group 20 - Cylinder

SECTION 70 - MISCELLANEOUS

- Group 5 - Steering Linkage
- Group 10 - Front Wheels and Axles
- Group 15 - Lift Linkage

SECTION 80 - SPECIAL SERVICE TOOLS

- Group 5 - Engine Convenience Service Tools
- Group 10 - Tractor Essential Service Tools
- Group 15 - Tractor Convenience Service Tools

SECTION 90 - TRACTOR ATTACHMENTS

- Group 5 - 37A Snow Thrower
- Group 10 - 39 and 47 Rotary Mowers
- Group 15 - 541A PTO
- Group 20 - 31 Rotary Tiller

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(All information, illustrations, and specifications contained in this service 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.)

Litho in U.S.A.

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INTRODUCTION

This service manual contains service and maintenance information for the John Deere 200, 208, 210, 212, 214 and 216 Lawn and Garden Tractors and attachments through 1982 model (SN 195,001-).

The manual is divided into sections. Each section pertains to a certain component or operational system of the tractor or attachment. The information is divided into groups within each section.

Emphasis is placed on diagnosing malfunctions, analysis and testing. Diagnosing malfunctions includes possible troubles, their causes and how to correct them. Under specific components these troubles are analyzed to help you understand what is causing the problem. In this way, you can eliminate the cause rather than just replace the part.

Metric equivalents have been included, where applicable, throughout this service manual.

Specifications and special tools are found in the last group of each section.

Whenever new or revised pages are provided, insert them into your manual as soon as you receive them. Your service manual will always be up-to-date and be a valuable asset in your service department.



This safety alert symbol identifies important safety messages in this manual. When you see this symbol, be alert to the possibility of personal injury and carefully read the message that follows.

FOR YOUR CONVENIENCE

Vertical lines appear in the margins of many of the pages. These lines identify new material and revised information that affects specifications, procedures, and other important instructions.

Section 10

GENERAL

Group 5

TRACTOR IDENTIFICATION

CONTENTS

| | Page | | Page |
|--|------|---|------|
| GROUP 5 - TRACTOR IDENTIFICATION | | GROUP 20 - TUNE-UP AND ADJUSTMENTS | |
| Serial Numbers | 5-2 | Purpose of Tune-Up and Adjustments | 20-1 |
| Tractor | 5-2 | Visual Inspection | 20-1 |
| Engine | 5-2 | Engine Tune-Up | 20-1 |
| Transaxle | 5-2 | Tractor Adjustments | 20-1 |
| Identification Codes | 5-2 | Tune-Up Guide | 20-1 |
| Tire Codes | 5-2 | Tune-Up and Adjustments | 20-2 |
| | | Clean Engine Shrouds and | |
| GROUP 10 - SPECIFICATIONS | | Cooling Fins | 20-2 |
| Engine Specifications | 10-1 | Clean or Replace Air Filter | |
| Battery Specifications | 10-2 | Element | 20-2 |
| Tractor Specifications | 10-2 | Clean Fuel Strainer | 20-2 |
| Tire Specifications | 10-3 | Check and Clean Engine Crankcase | |
| Rear Wheel Weight Bolt Size Chart | 10-3 | Breather | 20-2 |
| Bolt Torque Chart | 10-4 | Check Spark Plug Gap | 20-3 |
| Set Screw Seating Torque Chart | 10-4 | Check Ignition Breaker Points and | |
| | | Engine Timing | 20-3 |
| GROUP 15 - FUEL AND LUBRICANTS | | Adjust Carburetor | 20-5 |
| Fuel | 15-1 | Check Engine Speed | 20-5 |
| Lubricants | 15-1 | Change Engine Crankcase Oil | 20-6 |
| Engine Crankcase | 15-1 | Check or Change Transaxle Lubricant | 20-6 |
| Transaxle | 15-1 | Lubricate Grease Fittings | 20-6 |
| Tractor Grease Fittings | 15-1 | Repack PTO Clutch Bearing | 20-6 |
| Hydraulic System (Optional Equip.) | 15-1 | Service Battery | 20-6 |
| Capacities | 15-1 | Check Tire Pressure | 20-6 |
| Service Intervals | 15-2 | Check Operation and Condition of: | |
| Lubricating Grease Fittings | 15-2 | Lights | 20-6 |
| Changing Engine Crankcase Oil | 15-3 | Lift System | 20-6 |
| Changing Transaxle Lubricant | 15-3 | Steering | 20-6 |
| Repacking PTO Clutch Bearing | 15-4 | Brakes | 20-6 |
| Lubricating Integral Hitch Grease | | Belts and Equipment | 20-6 |
| Fitting | 15-4 | | |
| Checking Hydraulic Lift System Fluid | | | |
| Level | 15-4 | | |

SERIAL NUMBERS

Tractor

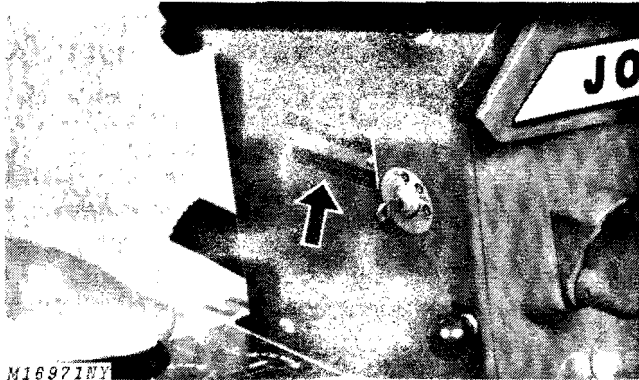
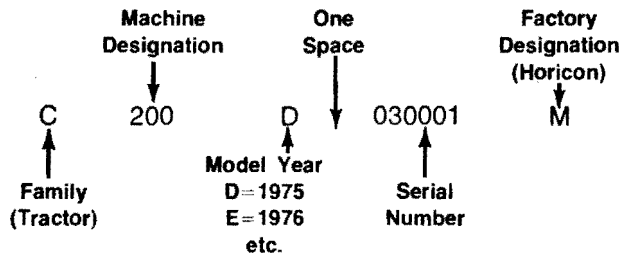


Fig. 1-Tractor Serial Number

The tractor serial number, Fig. 1, is located on the pedestal below the steering wheel.

The first letter indicates the "family of machine"; the next three numbers or letters, the "model or machine designation"; the letter in the fifth position indicates the "model year". This is followed by a space (for computer purposes), and a six-digit serial number and the letter "M" denoting Horicon as the factory of manufacture.



When ordering parts, use only the six-digit serial number. When writing about or filling out warranty claims, use all thirteen numbers, letters and spaces shown on the machine serial number plate.

Engine

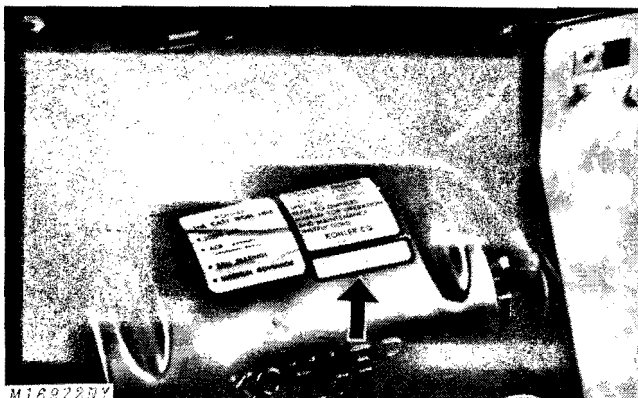


Fig. 2-Engine Serial Number

The engine serial number, Fig. 2, is located on the engine shroud.

Transaxle

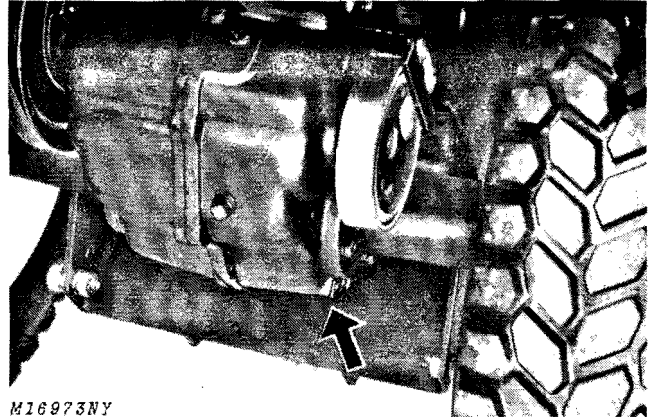


Fig. 3-Transaxle Serial Number

The transaxle serial number, Fig. 3, is located on the transaxle case next to the L.H. axle housing.

IDENTIFICATION CODES

Tire Codes

John Deere 200, 210, 212, 214 and 216 Tractors can be equipped with four different combinations of tires as follows:

| Tire Code | Size Front | Size Rear | Tread |
|----------------------|--------------------------------------|----------------------|-------------------------|
| GT-3 | 16x6.50-8 | 23x8.50-12 | High-Flotation |
| GT-4 | 4.80/4.00-8 ----- | ----- 23x8.50-12 | Studded Traction |
| GT-5 | 16x6.50-8 | 23x10.50-12 | High-Flotation |
| GT-8 Bar Tread | 16x6.50-8 or 4.80/4.00-8 ----- | ----- 23x10.50-12 | High-Flotation Traction |

NOTE: The 200 Tractor is equipped with GT-3 tires as standard equipment. The 208 Tractor is equipped with 4.80 x 4.00-8 (2-ply) front tires and 23 x 8.50-12 rear tires as standard equipment. The 208 Tractor can be equipped with GT-3, GT-4, GT-5, or GT-8 tires listed above if desired. The 210, 212, 214 and 216 Tractors are equipped with GT-5 tires as standard equipment.

Group 10

SPECIFICATIONS

ENGINE SPECIFICATIONS

| Item | 200 | 208 | 210 |
|--------------------------|---|----------------------|--|
| Engine Model No. | K181QS | K181S | K241AQS |
| Manufacturer | Kohler | Kohler | Kohler |
| Cylinders | One | One | One |
| Stroke/Cycle | Four | Four | Four |
| Bore | 2.94 in. (74.6 mm) | 2.94 in. (74.6 mm) | 3.25 in. (82.5 mm) |
| Stroke | 2.75 in. (69.8 mm) | 2.75 in. (69.8 mm) | 2.88 in. (73.1 mm) |
| Displacement | 18.6 cu. in. | 18.6 cu. in. | 23.9 cu. in. |
| Speeds (Fast) No Load .. | 3400 to 3500 rpm | 3400 to 3500 rpm | 3400 to 3500 rpm |
| Speeds (Idle) | 1700 to 1900 rpm | 1700 to 1900 rpm | 1700 to 1900 rpm |
| Horsepower* | 8 | 8 | 10 |
| Normal Compression | 110 to 120 psi | 110 to 120 psi | 110 to 120 psi |
| Valve Clearance | | | |
| Intake (Cold) | 0.007 in. (0.178 mm) | 0.007 in. (0.178 mm) | 0.010 in. (0.254 mm) |
| Exhaust (Cold) | 0.016 in. (0.406 mm) | 0.016 in. (0.406 mm) | 0.020 in. (0.508 mm) |
| Ignition | Battery | Battery | Battery |
| Spark Plug** | Champion-J-8 or XJ8 AC-45-M or R-46 Prestolite-14-7 or 14-R8 | Champion-RJ8 | Champion-H-10 AC-45L Prestolite-14-L7B |
| Spark Plug Gap | 0.025 in. (0.635 mm) | 0.025 in. (0.635 mm) | 0.035 in. (0.889 mm) |
| Breaker Point Gap | 0.020 in. (0.508 mm) | 0.020 in. (0.508 mm) | 0.020 in. (0.508 mm) |
| Charging System | Alternator | Alternator | Alternator |
| Starter | 12-Volt | 12-Volt | 12-Volt |
| Air Filter | Dry-type | Dry-type | Dry-type |

| Item | 212 | 214 | 216 |
|--------------------------|--|--|--|
| Engine Model No. | K301AQS | K321AQS | K341AQS |
| Manufacturer | Kohler | Kohler | Kohler |
| Cylinders | One | One | One |
| Stroke/Cycle | Four | Four | Four |
| Bore | 3.38 in. (85.8 mm) | 3.50 in. (88.9 mm) | 3.75 in. (95.2 mm) |
| Stroke | 3.25 in. (82.5 mm) | 3.25 in. (82.5 mm) | 3.25 in. (82.5 mm) |
| Displacement | 29.1 cu. in. | 31.3 cu. in. | 35.9 cu. in. |
| Speeds (Fast) No Load .. | 3400 to 3500 rpm | 3400 to 3500 rpm | 3400 to 3500 rpm |
| Speeds (Idle) | 1700 to 1900 rpm | 1700 to 1900 rpm | 1700 to 1900 rpm |
| Horsepower* | 12 | 14 | 16 |
| Normal Compression | 110 to 120 psi | 110 to 120 psi | 110 to 120 psi |
| Valve Clearance | | | |
| Intake (Cold) | 0.010 in. (0.254 mm) | 0.010 in. (0.254 mm) | 0.010 in. (0.254 mm) |
| Exhaust (Cold) | 0.020 in. (0.508 mm) | 0.020 in. (0.508 mm) | 0.020 in. (0.508 mm) |
| Ignition | Battery | Battery | Battery |
| Spark Plug** | Champion-H-10 AC-45L Prestolite-14-L7B | Champion-H-10 AC-45L Prestolite-14-L7B | Champion-H-10 AC-45L Prestolite-14-L7B |
| Spark Plug Gap | 0.035 in. (0.889 mm) | 0.035 in. (0.889 mm) | 0.035 in. (0.889 mm) |
| Breaker Point Gap | 0.020 in. (0.508 mm) | 0.020 in. (0.508 mm) | 0.020 in. (0.508 mm) |
| Charging System | Alternator | Alternator | Alternator |
| Starter | 12-Volt | 12-Volt | 12-Volt |
| Air Filter | Dry-type | Dry-type | Dry-type |

*The horsepower rating shown is established by the engine manufacturer in accordance with Standard Internal Combustion Engine Institute procedure. It is corrected at 60°F. and 29.22 in. Hg. Barometer and is developed from laboratory test engines equipped with standard air cleaner and muffler.

**In Canada, compliance with radio interference regulations certified. Replace spark plug with resistor-type spark plug only. Use Champion RJ8 for 200 and 208 Tractors. Use Champion RH10 for 210, 212, 214 and 216 Tractors.