

9950 Cotton Picker



TECHNICAL MANUAL

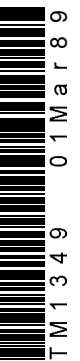
9950
Cotton Picker

TM1349 (01Mar89) English



TM1349 (01Mar89)

LITHO IN U.S.A.
ENGLISH



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 you see this symbol on the machine or in this manual, be alert to the potential for personal injury.

Technical manuals are divided in two parts: repair and diagnostics. Repair sections tell how to repair the components. Diagnostic sections help you 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.

Binders, binder labels, and tab sets can be ordered by John Deere dealers direct from the John Deere Distribution Service Center.

This manual is part of a total product support program.

FOS Manuals-reference

Technical Manuals-machine service

Component Manuals-component service

Fundamentals of Service (FOS) Manuals cover basic theory of operation, fundamentals of troubleshooting, general maintenance, and basic types of failures and their causes. FOS Manuals are for training new personnel and for reference by experienced technicians.

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

Component Technical Manuals are concise service guides for specific components. Component technicals manuals are written as stand-alone manuals covering multiple machine applications.

JOHN DEERE DEALERS

Please remove this page and route through your service department.

This is a complete revision for TM-1349, 9950 Cotton Picker.

Binder and tabs from old manual may be saved and used with this manual.

New pages are dated (Mar-89). Listed below is a brief explanation of "WHAT" was changed and "WHY" it was changed.

This manual was revised:

1. To show how to install the new lid parts required on 305 mm (12 in.) extensions.
2. To show replacement procedures and bleeding procedures for one filter fuel system.
3. To remove alternator repair information for both Motorola and Nippondenso. Refer to CTM-11 for repair and diagnostic information.
4. To show new repair information on hydrostatic drive and transmission because of addition of operator presence system.
5. To show new removal/installation and repair procedure for final drive axle.
6. To remove repair, operation and test information on 22.6 cm³ (1.38 cu. in.) hydraulic pump. Refer to CTM-7 for repair and diagnostic information.
7. To revise main control valve repair information because of addition of an orifice to port "F".
8. To revise basket lift cylinder repair information because of removal of an orifice plate from rear cylinder and revised orifice diameter in front cylinder.
9. To include repair information for new height sensing control valve.
10. To include repair information for new full length sleeved picker bars.
11. To revise the cotton fan repair information. The fan shaft has been revised. The inlet cap screw torque has been increased, and rotor-to-inlet running clearance changed. The water pump drive sheave mounting to fan shaft has been revised.
12. To revise the operational checks to include the operator presence and by-pass system diagnostic procedures.
13. To provide test procedure for operator presence interlock module, adjustment procedure for picking unit engaged switch and a wiring diagram for the operator presence system.
14. To provide a new complete hydraulic and J.I.C. diagrams for machines above Serial No. 4001.

N01;0000 -AD 060389

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manual**

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admin@servicemanualperfect.com**

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All information, illustrations and specifications contained in this technical 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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HANDLE FLUIDS SAFELY—AVOID FIRES

When you work around fuel, do not smoke or work near heaters or other fire hazards.

Store flammable fluids away from fire hazards. Do not incinerate or puncture pressurized containers.

Make sure machine is clean of trash, grease, and debris.

Do not store oily rags; they can ignite and burn spontaneously.



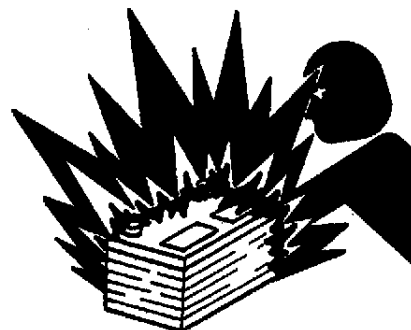
AB6;TS227 053;FLAME 050188

PREVENT BATTERY EXPLOSIONS

Keep sparks, lighted matches, and open flame away from the top of battery. Battery gas can explode.

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

Do not charge a frozen battery; it may explode. Warm battery to 16°C (60°F).



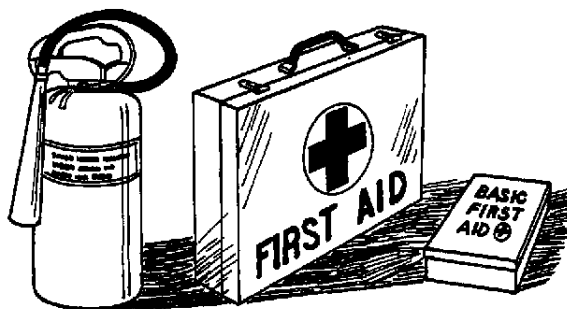
AB6;TS204 053;SPARKS 280688

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.



AB6;TS166 053;FIRE2 080785

PREVENT ACID BURNS

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

Avoid the hazard by:

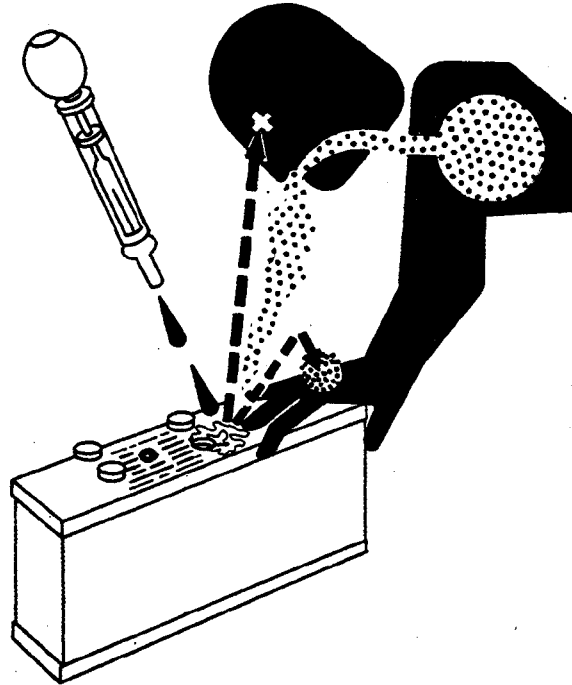
1. Filling batteries in a well-ventilated area.
2. Wearing eye protection and rubber gloves.
3. Avoiding breathing fumes when electrolyte is added.
4. Avoiding spilling or dripping electrolyte.
5. Use proper jump start procedure.

If you spill acid on yourself:

1. Flush your skin with water.
2. Apply baking soda or lime to help neutralize the acid.
3. Flush your eyes with water for 10-15 minutes. Get medical attention immediately.

If acid is swallowed:

1. Drink large amounts of water or milk.
2. Then drink milk of magnesia, beaten eggs, or vegetable oil.
3. Get medical attention immediately.

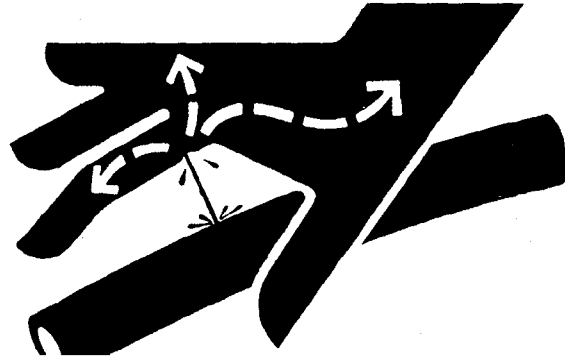


AB6;TS203 053;POISON 211287

AVOID HIGH-PRESSURE FLUIDS

Escaping fluid under pressure can penetrate the skin causing serious injury. Relieve pressure before unhooking hydraulic or other lines. Tighten all connections before applying pressure. Keep hands and body away from pinholes and nozzles which eject fluids under high pressure. Use a piece of cardboard to search for leaks.

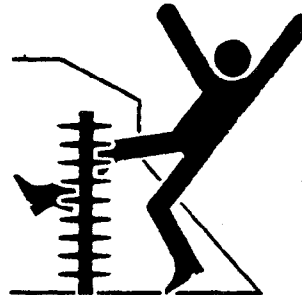
If ANY fluid is injected into the skin, it must be surgically removed within a few hours by a doctor familiar with this type injury or gangrene may result.



AB6;X9811 053;FLUID 180987

AVOID CONTACT WITH ENGAGED PICKING UNIT

If service is required with engaged picking units, avoid contact with moving parts. Moving parts can puncture or dismember body parts, or cause death.

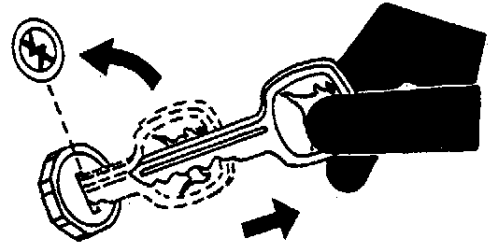


068;N39613 N01;;1000K -080289

PARK MACHINE SAFELY

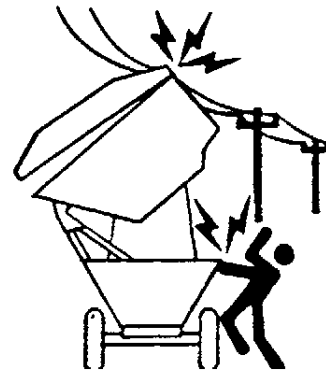
Before working on the machine:

- 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.



AB6;TS230 053;PARK 050188

- Look overhead for electric lines or low ceiling.

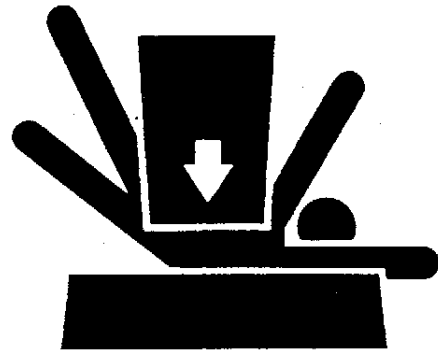


068;N39671 N01;1000L -080289

SUPPORT MACHINE PROPERLY

Always lower the attachment or implement to the ground before you work on the machine. If you must work on a lifted machine or attachment, securely support the machine or attachment.

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.



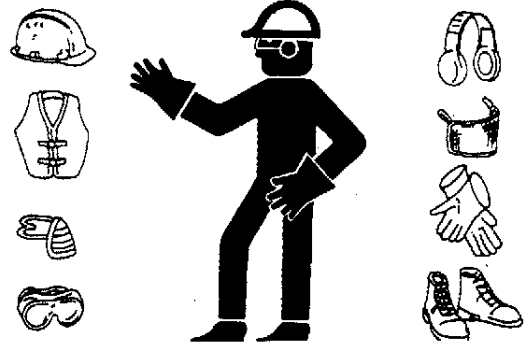
AB6;TS229 053;LOWER 211287

WEAR PROTECTIVE CLOTHING

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

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.



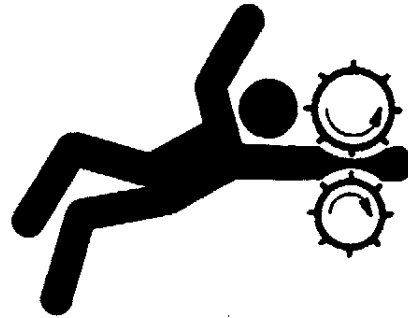
AB6;TS206 053;WEAR 230487

Safety

SERVICE MACHINE SAFELY

Tie long hair behind your head. Do not wear a necktie, scarf, loose clothing, or necklace when you work near machine tools or moving parts. If these items were to get caught, severe injury could result.

Remove rings and other jewelry to prevent electrical shorts and entanglement in moving parts.

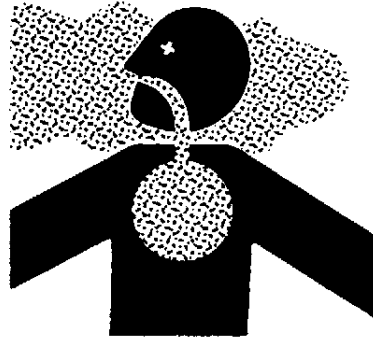


AB6;TS228 053;LOOSE 211287

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.

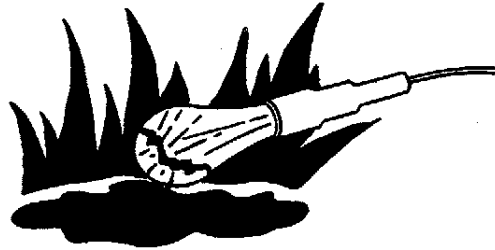


AB6;TS220 053;AIR 050188

UNDERSTAND CORRECT SERVICE

Illuminate your work area adequately but safely. Use a portable safety light for working inside or under the machine. Make sure the bulb is enclosed by a wire cage. The hot filament of an accidentally broken bulb can ignite spilled fuel or oil.

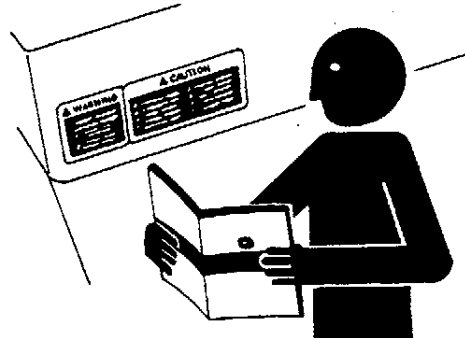
Catch draining fuel, oil, or other fluids in suitable containers. Do not use food or beverage containers that may mislead someone into drinking from them. Wipe up spills at once.



AB6;TS223 053;LIGHT 230288

REPLACE SAFETY SIGNS

Replace missing or damaged safety signs. See the machine operator's manual for correct safety sign placement.

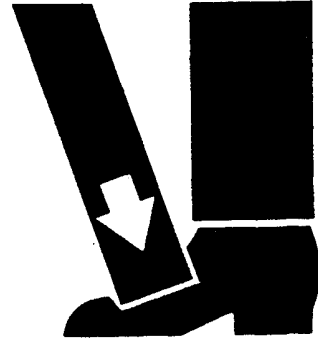


AB6;TS201 053;SIGNS1 221287

USE PROPER LIFTING EQUIPMENT

Lifting heavy components incorrectly can cause severe injury or machine damage.

Follow recommended procedure for removal and installation of components in the manual.



AB6;TS226 053;LIFT 050188

SERVICE TIRES SAFELY

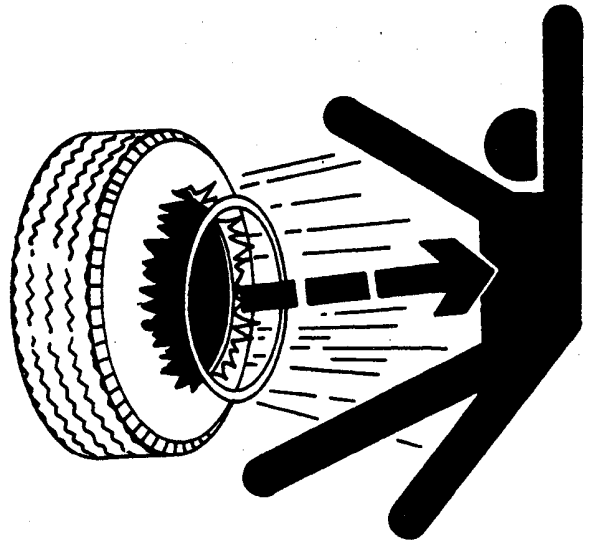
Explosive separation of a tire and rim parts can cause serious injury or death.

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.

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.



AB6;TS211 053;RIM 211287

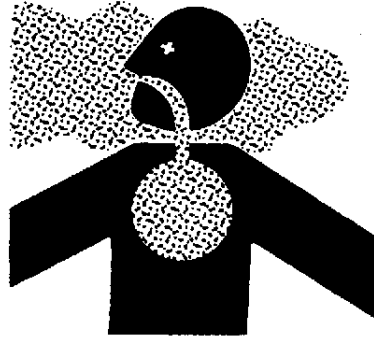
AVOID HARMFUL ASBESTOS DUST

Avoid breathing dust that may be generated when handling components containing asbestos fibers. Inhaled asbestos fibers may cause lung cancer.

Components in John Deere products that may contain asbestos fibers are brake pads, brake band and lining assemblies, clutch plates, and some gaskets. The asbestos used in these components is usually found in a resin or sealed in some way. Normal handling is not hazardous as long as airborne dust containing asbestos is not generated.

Avoid creating dust. Never use compressed air for cleaning. Avoid brushing or grinding of asbestos containing materials. When servicing, wear an approved respirator. A special vacuum cleaner is recommended to clean asbestos. If not available, wet the asbestos containing materials with a mist of oil or water.

Keep bystanders away from the area.

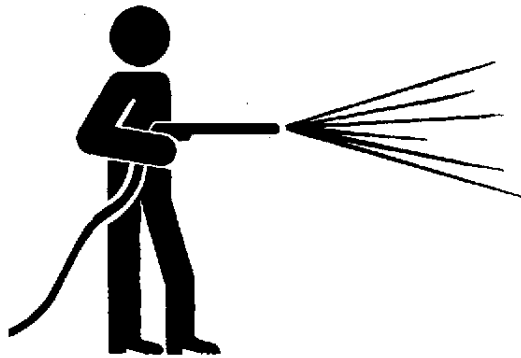


AB6;TS220 053;DUST 140488

WORK IN CLEAN AREA

Before starting a job:

- Clean work area and machine.
- Make sure you have all necessary tools to do your job.
- Have the right parts on hand.
- Read all instructions thoroughly; do not attempt shortcuts.



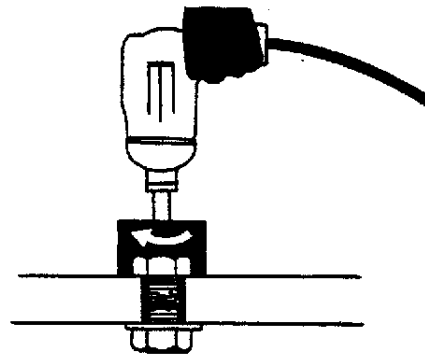
AB6;T6642E J 053;CLEAN 190188

USE TOOLS PROPERLY

Use tools appropriate to the work. Makeshift tools, parts, and procedures will not make good repairs.

Use pneumatic and electric tools only to loosen threaded parts and fasteners. Never use such tools to tighten fasteners, especially on light alloy parts.

Use only replacement parts meeting John Deere specifications.

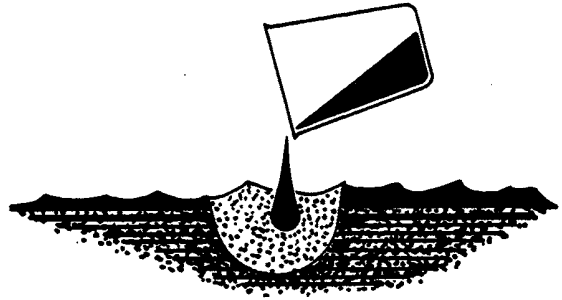


AB6;TS221 053;REPAIR 211287

DISPOSE FLUIDS PROPERLY

Be mindful of the environment and ecology. Before you drain fluids, find out the proper way to dispose of the oil.

Do not pour oil onto the ground, down a drain, or into a stream, pond, or lake. Consult local ordinances that govern the disposal of wastes.



AB6;TS222 053;DRAIN 211287

LIVE WITH SAFETY

Before returning machine to customer, make sure machine is functioning properly, especially the safety systems. Install all guards and shields.



AB6;TS231 053;LIVE 050188

Safety

SPECIFICATIONS

PICKING UNITS

Number of units	4
Number of picking drums.	8
Number of picker bars (per unit):	
Front drum.	12
Rear drum	12
Number of spindles (per machine)	1920
Row widths.	0.96 to 1.02 m (38 to 40-in.)

PICKING UNIT SPEEDS

Picking unit drive shaft	1260 rpm*
Picking drum	0-151 rpm*
Doffer shaft	0-1728 rpm*
Spindle	0-3885 rpm*

GROUND SPEEDS (FULL THROTTLE)

Picking speeds:	
1st gear	0-5.63 km/h (0-3.5 mph)
2nd gear	0-6.76 km/h (0-4.2 mph)
Transport speed:	
3rd gear	0-21.56 km/h (0-13.4 mph)
Reverse.	0-11.94 km/h (0-7 mph)

CAPACITIES

Cotton basket (standard)	24.2 m ³ (856 cu ft)
Cotton basket (with 305 mm [12-in.] extension)	28.4 m ³ (1004 cu ft)
Cotton basket (with 605 mm [24-in.] extension)	32.6 m ³ (1152 cu ft)
Fuel Tank.	356 L (94 gal)
Water/solution tank.	870.5 L (230 gal)
Lubrication reservoir	227 L (60 gal)
Cooling system	42 L (44 qt)
Engine crankcase, including filter	23 L (24.3 qt)
Hydraulic system, including filter	26.5 L (28 qt)
Hydraulic reservoir	17.4 L (18.4 qt)
Transmission and final drive	31.2 L (33 qt)
Hydrostatic drive.	26.5 L (28 qt)
Hydrostatic reservoir	17 L (18.4 qt)

TIRES

Front drive wheels	18.4 x 38, 12 PR (R1, R2)
Rear guide wheels	9.00 x 24, 8 PR (I1)

WEIGHT

Standard (less basket extension)	10 783 kg (23,750 lb)
with 305 mm (12-in.) extension	10 964 kg (24,150 lb)
with 610 mm (24-in.) extension	11 055 kg (24,350 lb)
Conveyor	
with 305 mm (12-in.) extension	11 554 kg (25,450 lb)
with 610 mm (24-in.) extension	11 600 kg (25,550 lb)

* Picking unit speeds listed are theoretical maximums. Actual speeds will be approximately 5 percent lower due to slippage in hydrostatic transmission and drive belts.

N01;1005 -BG 230987

General Specifications/Specifications

ENGINE

Model 6466AN-02
Type Diesel, intercooled
Aspiration Turbocharged
Cylinders 6, In-line
Slow idle speed 800-900 rpm
Rated (under field load) 2200 rpm
Fast idle speed (no load) 2375-2425 rpm
Bore and stroke 116 x 121 mm (4.57 x 4.75-in.)
Compression ratio 14.9 to 1
Displacement 7.6 L (466 cu in.)
Horsepower 154 kW (207 hp)

FUEL SYSTEM

Type Direct injection
Injection pump type In-line
Injection pump timing TDC
Air cleaner Dry type with safety element

COOLING SYSTEM

Type Single pressure with gear driven pump
Temperature control Dual heavy-duty thermostats

ELECTRICAL SYSTEM

Type 12-volt, negative ground
Batteries:
Group 31
Amps 625
Capacity (reserve minutes) 160
Alternator 90 amp

HYDROSTATIC DRIVE

Motor and pump make (S.N. -2000) Eaton
Motor and pump make (S.N. 2001-) Sundstrand
Type of oil filter Full flow suction
Type of cooler Air-cooled

FINAL DRIVE

Type Planetary

BRAKES

Type Hydraulically-operated wet disk

HYDRAULIC SYSTEM

Type Closed-center, constant pressure
Standby pressure (S.N. -2000) 15 690—16 300 kPa (2276—2364 psi)
Standby pressure (S.N. 2001-) 17 170—17 860 kPa (2490—2590 psi)
Steering system Hydrostatic power

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General Specifications/Specifications

OPERATOR'S STATION

Type SOUND-GARD® styled cab (with no ROPS) with heater,
windshield wiper, rear view mirror, deluxe seat
suspension, and PERSONAL-POSTURE™ seat

Optional Attachment Air conditioner

Heater capacity 5274 W/hr (18,000 BTU)

Air Conditioner:

Compressor make Nippondenso

Capacity 6446 W/hr (22,000 BTU)

Refrigerant charge Approx. 2.5 kg (5-1/2 lb)

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