

John Deere 670A and 672A Motor Grader Repair



TECHNICAL MANUAL

TM-1188 (Dee-87)

LITHO IN U.S.A.

JD670-A AND JD672-A MOTOR GRADERS

Technical Manual
TM-1188 (Dec-87)

SECTION AND GROUP CONTENTS

SECTION I - GENERAL INFORMATION

- Group I - Contents (not used)
- Group II - Introduction and Safety Information
- Group III - General Specifications
- Group IV - Predelivery, Delivery and After-Sales Services
- Group V - Lubrication

SECTION 1 - WHEELS

- Group 0110 - Powered Wheels and Fastenings
- Group 0120 - Non-Powered Wheels and Fastenings
- Group 0199 - Specifications and Special Tools

SECTION 2 - AXLES AND SUSPENSION SYSTEMS

- Group 0201 - Drive Axle Housing and Support
- Group 0210 - Differential or Bevel Drive
- Group 0250 - Axle Shafts, Bearing and Reduction Gears
- Group 0260 - Hydraulic System
- Group 0299 - Specifications and Special Tools

SECTION 3 - TRANSMISSION

- Group 0315 - Controls
- Group 0341 - Housings and Covers
- Group 0350 - Gears, Shafts, Bearings and Power Shift Clutch
- Group 0360 - Hydraulic System
- Group 0370 - Clutch Disconnect and Controls
- Group 0399 - Specifications and Special Tools

SECTION 4 - ENGINE

- Group 0400 - Removal and Installation
- Group 0422 - Starting Motor and Fastenings
- Group 0499 - Specifications and Special Tools

SECTION 5 - ENGINE AUXILIARY SYSTEMS

- Group 0505 - Cold Weather Starting Aids
- Group 0510 - Cooling Systems
- Group 0515 - Speed Controls
- Group 0520 - Intake System
- Group 0540 - Mounting Frame
- Group 0560 - External Fuel Supply Systems
- Group 0599 - Specifications and Special Tools

SECTION 8 - TRANSFER DRIVE

- Group 0841 - Housings and Covers
- Group 0851 - Gears, Shafts, Bearings
- Group 0899 - Specifications and Special Tools

SECTION 9 - STEERING SYSTEM

- Group 0920 - Power Steering
- Group 0960 - Hydraulic System
- Group 0999 - Specifications and Special Tools

SECTION 10 - SERVICE BRAKES

- Group 1011 - Active Elements
- Group 1015 - Controls Linkage
- Group 1060 - Hydraulic System
- Group 1099 - Specifications and Special Tools

SECTION 11 - PARKING-EMERGENCY BRAKES

- Group 1111 - Active Elements
- Group 1115 - Controls Linkage
- Group 1199 - Specifications and Special Tools

SECTION 15 - EQUIPMENT ATTACHING

- Group 1511 - Drawbar
- Group 1599 - Specifications and Special Tools

Continued on next page

SECTION 16 - ELECTRICAL SYSTEMS

- Group 1671 - Batteries, Support and Cables
- Group 1672 - Alternator, Regulator and Charging System Wiring
- Group 1673 - Lighting System
- Group 1674 - Wiring Harness and Switches
- Group 1675 - System Controls
- Group 1676 - Instruments and Indicators
- Group 1699 - Specifications and Special Tools

SECTION 17 - FRAME, CHASSIS OR SUPPORTING STRUCTURE

- Group 1740 - Frame Installation
- Group 1746 - Frame Bottom Guards
- Group 1747 - Bumpers, Vehicle
- Group 1799 - Specifications and Special Tools

SECTION 18 - OPERATOR'S STATION

- Group 1810 - Operator Enclosure
- Group 1821 - Seat and Seat Belt
- Group 1822 - Steps and Handholds
- Group 1830 - Heating and Air Conditioning
- Group 1899 - Specifications and Special Tools

SECTION 19 - SHEET METAL AND STYLING

- Group 1910 - Hood or Engine Enclosure
- Group 1913 - Miscellaneous Shields
- Group 1921 - Grille and Grille Housing

SECTION 20 - SAFETY, CONVENIENCE AND MISCELLANEOUS

- Group 2002 - Mirror
- Group 2003 - Fire Extinguisher
- Group 2004 - Horn
- Group 2006 - Cigar Lighter

SECTION 21 - MAIN HYDRAULIC SYSTEM

- Group 2160 - Hydraulic System
- Group 2199 - Specifications and Special Tools

SECTION 34 - GRADING DEVICE

- Group 3401 - Blade
- Group 3415 - Controls Linkage
- Group 3440 - Frames
- Group 3450 - Circle Gear Box
- Group 3460 - Hydraulic System
- Group 3499 - Specifications and Special Tools


SECTION 42 - GROUND CONDITIONING TOOL

- Group 4201 - Blades, Teeth, Shanks, Etc.
- Group 4215 - Controls Linkage
- Group 4240 - Frames
- Group 4260 - Hydraulic System
- Group 4299 - Specifications and Special Tools

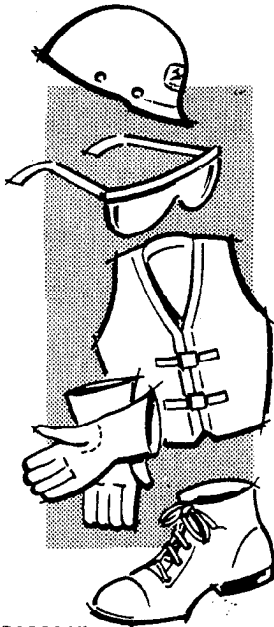
MAINTENANCE WITHOUT ACCIDENT WORK SAFELY



T27999N

 This safety symbol is used for important safety messages. When you see this symbol, follow the safety message to avoid personal injury.

**EVERY EMPLOYER HAS A
SAFETY PROGRAM. KNOW
WHAT IT IS!**



T27501N

See your shop supervisor for specific instructions on a job, and the safety equipment required.

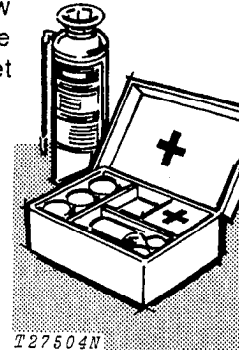
For instance, you may need: Hard hat, safety shoes, safety goggles, heavy gloves, reflector vest, ear protectors, respirator.



T27502N

BE ALERT!

Plan ahead—work safely—know how to use a first-aid kit and a fire extinguisher—and where to get assistance.



T27504N

Maintenance Area

Make sure the maintenance area has enough ventilation.

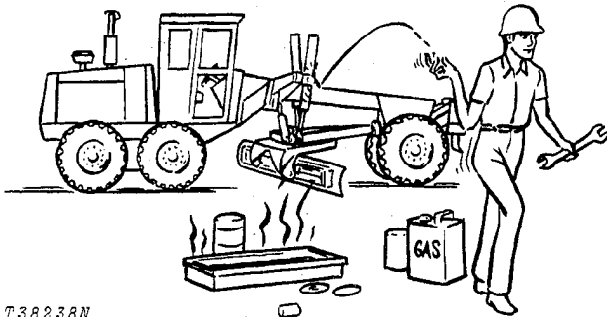
Keep the maintenance area **CLEAN AND DRY**. Oily and wet floors are slippery. Greasy rags are a fire hazard. Wet spots are dangerous when working with electrical equipment.

Keep starting aids in a cool, well-ventilated place, out of reach of unauthorized personnel.

MAINTENANCE WITHOUT ACCIDENT

AVOID FIRE HAZARDS—

Fuel Is Dangerous!



T38238N

Do not smoke while putting fuel in the fuel tank.

Do not smoke while working with material that will start on fire easily.

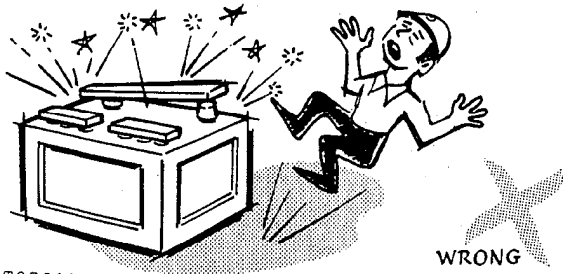
Stop the engine before filling the fuel tank.

If the engine is hot, use care when putting fuel in the fuel tank.

Do not use gasoline or diesel fuel for cleaning parts. Use solvents that will not start on fire.

Battery Gas Is Highly Flammable!

When charging batteries, be sure there is enough ventilation.



T27506N

Do not check the battery charge by putting metal objects across the posts.

Do not let sparks or open flame near batteries.

Do not smoke near battery.

Flame Is Not a Flashlight!

NEVER USE OPEN FLAME AROUND THE MACHINE.

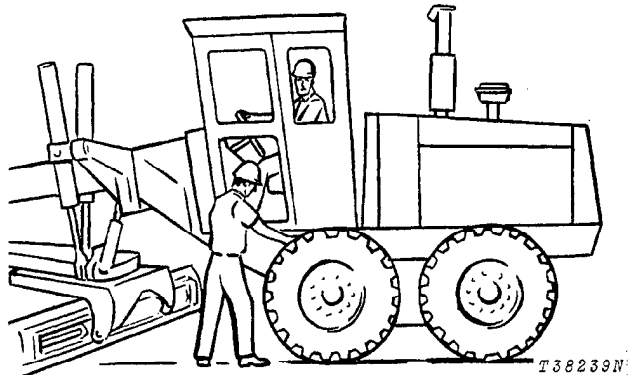
KNOW WHERE FIRE EXTINGUISHERS ARE KEPT!

Litho in U.S.A.

UNDER ALL MAINTENANCE CONDITIONS—

Do not work on the equipment unless you are approved to do so. Then be sure you know the safe and correct procedure.

Never work on equipment while it is being operated.



T38239N

When the engine is running, avoid working on equipment.

If you must work on the machine with the engine running, **ALWAYS USE TWO** service technicians. One must be at the controls. The other must be within sight of the operator.

KEEP HANDS AWAY FROM MOVING PARTS

Put a support under all raised equipment.

Never work under a raised blade, ripper, or scarifier.

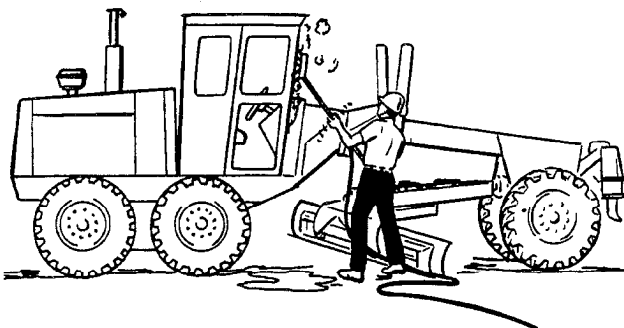
Lower all equipment to the ground.

If the machine is on a slope, use blocks to hold it in place.

Do not lift heavy parts by yourself. Use hoisting equipment for this.

TAKE CARE! WATCH OUT FOR OTHER PEOPLE IN THE AREA

When drilling, grinding, or hammering metal, wear safety glasses.

**BE CAREFUL DURING SERVICE
AND REPAIR**

T38242N

Keep ALL equipment free of dirt and oil.

Clean oil, grease, mud, ice or snow from the operator's station, steps and hand rails.

When getting the engine ready for storage, remember that inhibitor changes easily into gas and is dangerous. After adding the inhibitor, seal and tape openings. When you are not using the inhibitor, keep the can tightly closed.

Do not remove the radiator cap unless you can hold your hand on the radiator tank. First, loosen the cap slowly to the stop. Then release all pressure in the cooling system before removing the cap.

Check the exhaust system regularly for leaks.

Release hydraulic pressure before working on the hydraulic system. Stop the engine. Lower all equipment to the ground. Move the control levers until the equipment does not move.

When checking hydraulic pressure, be sure to use the correct test gauge.

Before working on the fuel system, close the fuel shutoff valve.

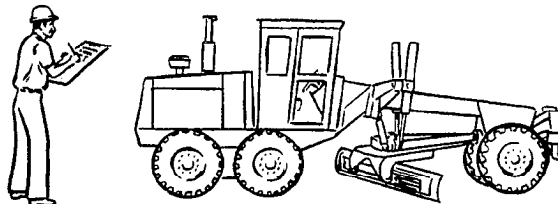
Before working on the electrical system, or making a major overhaul, disconnect the batteries.

KNOW EQUIPMENT IS READY!

Check all guards, shields, and safety bars. Every one must be in place and tight.

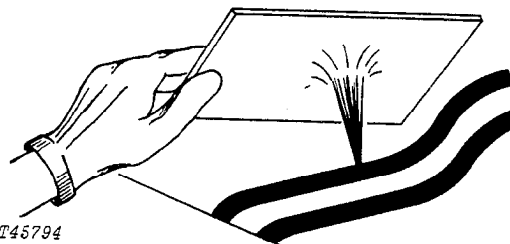
CHECK IT OUT!

- GUARDS
- SHIELDS
- SAFETY BARS
- ROLL-OVER PROTECTIVE STRUCTURES
- SEAT BELTS, ETC.



T38243N

Carefully inspect all systems for leaks.



T45794

Use a piece of cardboard or wood, rather than hands, to search for suspected leaks.

Escaping fluid under pressure can penetrate the skin.

If injured by escaping fluid, see a doctor at once.

Group III

GENERAL SPECIFICATIONS

(Specifications and design subject to change without notice. Wherever applicable, specifications are in accordance with ICED and SAE Standards. Except where otherwise noted, these specifications are based on a unit equipped with 13.00-24, 12 ply rating, tubeless tires, 12 ft. (3.66 m) moldboard, and standard equipment. Weights include lubricants, coolants, full fuel tank and 175 lb. (79 kg) operator.)

Power

(at 2300 engine rpm):	SAE	DIN
Gross	135 hp (100.7 kW)	
Net	125 hp (93.2 kW)	126.7 PS

Net engine flywheel power is for an engine equipped with fan, air cleaner, water pump, lubricating oil pump, fuel pump, alternator, and muffler. The gross engine power is without fan. Flywheel power ratings are under SAE standard conditions of 500 ft. altitude and 85°F temperature, and DIN 70 020 conditions (non-corrected). No derating is required up to 10,000 ft. (3000 m) altitude.

Engine: John Deere turbocharged diesel, vertical 6-cylinder, valve-in-head, 4-stroke cycle.

Bore and stroke 4.19x5 in. (106.5x127 mm)

Piston displacement 414 cu. in. (6784 cm³)

Compression ratio 16.2 to 1

Maximum torque @ 1300 rpm ..372 lb.-ft. (504 Nm)
 (51.4 kg/m)

NACC or AMA (U.S. Tax) horsepower 42.1

Main bearings 7

Lubrication Pressure system w/full-flow filter

Cooling . Pressurized, w/thermostat and fixed bypass

Fan Suction

Air cleaner w/restriction indicator Dry

Electrical system 24 volt w/alternator

Batteries (2) 12 volt. Reserve capacity: 180 minutes

Transmission Direct drive full Power Shift with planetary gear reductions. Foot inching pedal.

Travel Speeds (2300 engine rpm, no tire slip):

Shift Lever Position	Forward		Reverse	
	mph	km/h	mph	km/h
1	2.3	3.6	2.8	4.5
2	3.2	5.1	3.9	6.3
3	4.8	7.8	5.9	9.5
4	6.3	10.1	7.6	12.3
5	8.2	13.2		
6	10.5	17.0		
7	14.1	22.8		
8	23.9	38.4		

Differential Lock Foot-operated, hydraulically actuated

Front Drive: (JD672-A only)

Hydrostatic motor in each wheel controlled through a flow divider to provide optimum traction. Free-wheeling in gears 5 through 8. Switch controlled for two modes of operation.

Pump 5.43 cu. in. (89 cm³) variable displacement pump driving a 2.03 cu. in. (33 cm³) reversible motor in each wheel.

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