

**KEEP IN EPD
HAS COLOR & F.O.**

**Technical
Manual**

**John Deere
770A, 770AH,
772A, AND 772AH
Motor Graders**

TM-1361
Formerly TM-1187



Litho in U.S.A.

SECTION AND GROUP CONTENTS OF THIS MANUAL

SECTION I - GENERAL INFORMATION

- Group I - Contents and Index
- 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 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 - Engine Removal and Installation
- Group 0401 - Crankshaft and Main Bearings
- Group 0402 - Camshaft and Valve Actuating Means
- Group 0403 - Connecting Rods and Pistons
- Group 0404 - Cylinder Block
- Group 0407 - Oiling System
- Group 0408 - Ventilating System
- Group 0409 - Cylinder Head and Valves
- Group 0410 - Exhaust Manifold
- Group 0413 - Fuel Injection System
- Group 0414 - Intake Manifold
- Group 0416 - Turbocharger
- Group 0417 - Water Pump
- Group 0418 - Thermostats, Housings, and Water Piping
- Group 0419 - Oil Cooler
- Group 0420 - Fuel Filter
- Group 0421 - Fuel Transfer Pump
- Group 0422 - Starting Motor and Fastenings
- Group 0433 - Flywheel, Housing 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 AND GROUP CONTENTS OF THIS MANUAL—Continued

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

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 4240 - Frames
- Group 4260 - Hydraulic System
- Group 4299 - Specifications and Special Tools

SECTION 46 - AUTOMATIC CONTROL

- Group 4615 - Linkages
- Group 4640 - Frames and Housings
- Group 4660 - Hydraulic System
- Group 4670 - Electrical System
- Group 4699 - Specifications and Special Tools


SECTION 90 - SYSTEM TESTING

- Group 9005 - General Information
- Group 9010 - Engine
- Group 9015 - Electrical System
- Group 9016 - Hydraulic Front Wheel Drive
- Group 9020 - Power Train
- Group 9025 - Hydraulic System
- Group 9030 - Miscellaneous Components
- Group 9031 - Heating and Air Conditioning
- Group 9032 - Automatic Blade Control
- Group 9035 - Specifications and Special Tools

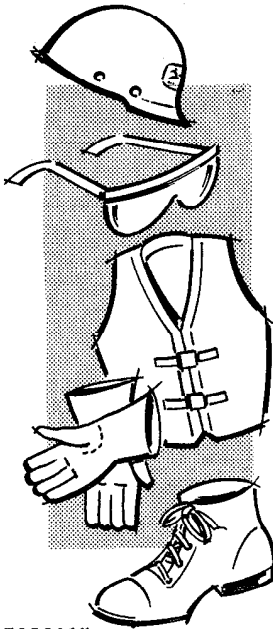
MAINTENANCE WITHOUT ACCIDENT WORK SAFELY



T27999N

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

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



T27501N

Consult your shop foreman 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 vests, ear protectors, respirators.



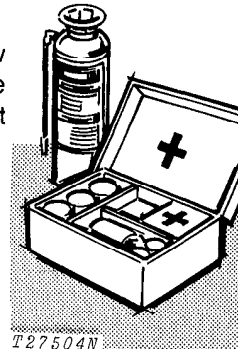
RIGHT

WRONG

T27502N

BE ALERT!

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



T27504N

Maintenance Area

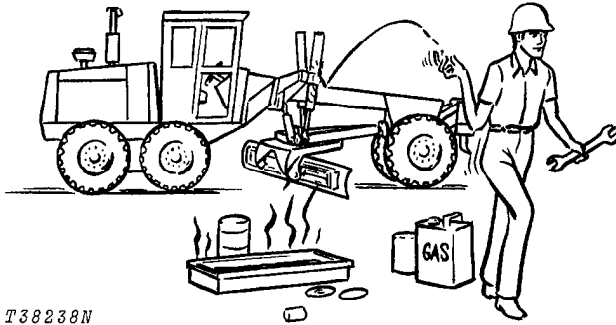
Make sure the maintenance area is adequately vented.

Keep 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.

Store starting aids in a cool and well-ventilated place, out of the 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!

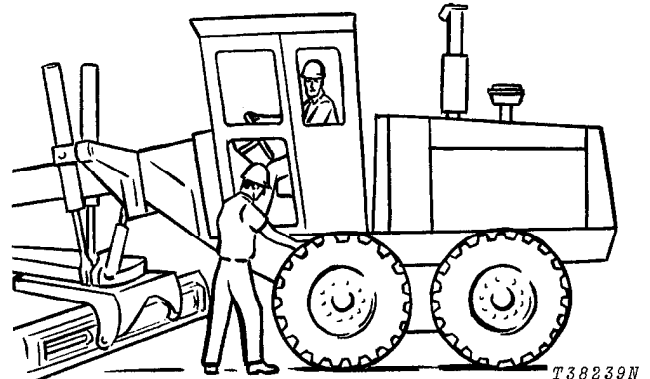
NEVER USE OPEN FLAME AROUND THE MACHINE.

KNOW WHERE FIRE EXTINGUISHERS ARE KEPT!

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.

TAKE CARE! WATCH OUT FOR OTHER PEOPLE IN THE AREA.

KEEP HANDS AWAY FROM MOVING PARTS.

Put a support under all raised equipment.

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

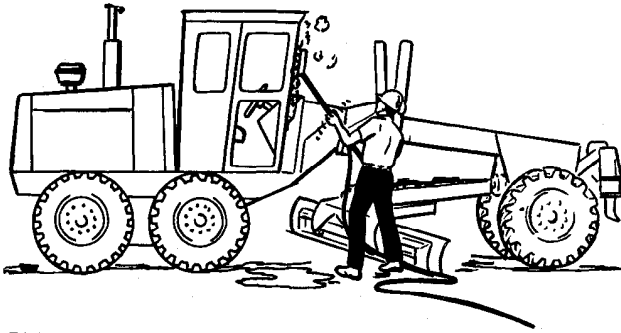
Lower all equipment to the ground.

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.

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

BE CAREFUL DURING SERVICE AND REPAIR



T38242N

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 shut-off valve.

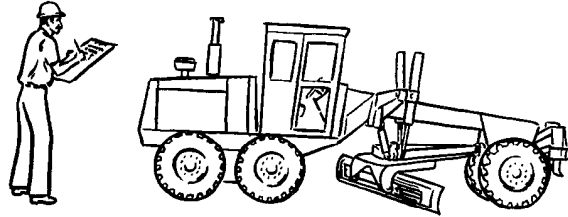
Before working on the electrical system, or making a major overhaul, disconnect the batteries.

KNOW EQUIPMENT IS READY!

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

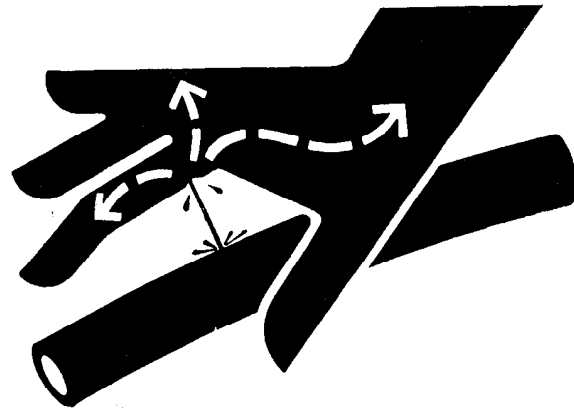
CHECK IT OUT!

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



T38243N

T38243N



X9811

Escaping fluid under pressure can penetrate the skin causing serious injury. Relieve pressure before disconnecting 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 or paper to search for leaks. Do not use your hand.

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.

Rear Drive . . . Inboard planetary final drives with heat-treated, splined steel torque shafts. Oscillating welded construction tandems; nodular cast sprockets driving 2 in. (51 mm) pitch roller chain in oil bath.

Front Axle: Fabricated steel box-frame with steel spindles
 Total oscillation 30 deg.
 Wheel lean range (either direction) 20 deg.

Steering:

Front . . . Full hydraulic power system. Steering capabilities without engine power
 Rear . . . Hydraulically articulated frame steering (25 deg. left or right)
 Minimum turning radius (JD770-A) 22 ft. (6.7 m)
 Minimum turning radius 22 ft. 6 in. (6.86 m) (JD772-A)

Brakes:

Service . . . Foot-operated, hydraulically-actuated, wet-disk, effective on 4 tandem wheels
 Parking . . . Foot-operated, mechanical, dry-disk, effective on 4 tandem wheels

Hydraulic System: Closed-center

Pressure controlled variable- displacement pump, 4.0 cu-in. (65 cm³) 36 gpm (2.27 L/s), @ 2200 engine rpm

Blade:

Length 12 ft. (3.66 m)
 Height 24 in. (610 mm)
 Thickness 0.88 in. (22 mm)

Blade Range:

Lift above ground 1 ft. 5 in. (432 mm)
 Blade side shift:
 Right or left 2 ft. 2.9 in. (683 mm)
 Shoulder reach outside wheels:
 Right 7 ft. 8.5 in. (2.35 m)
 Left 7 ft. 8 in. (2.34 m)
 Pitch at ground line 44 deg. forward
 10 deg. back

Blade Lifting Mechanism:

Control Dual-lever, hydraulic

Lift Arms: Nodular cast

Positions 7
 Control Hydraulic, foot operated

Circle Fabricated steel angle construction

Circle diameter 5 ft. (1.5 m)
 Rotation 360 deg.
 Drive . . . Hydraulic motor and worm gear w/positive position lock
 Sideshift, right 32.0 in. (813 mm)
 left 33.5 in. (851 mm)

Drawbar . . . Welded box section, 3.5x7x0.5 in.

(89x178x13 mm) wall w/ball and socket draft connection

Frame:

Rear mainframe . . . Welded flanged box section from articulation joint to mainframe arch
 Width, minimum 12.03 in. (306 mm)
 Height, minimum 11.95 in. (304 mm)
 Thickness, sides 0.47 in. (12 mm)
 top and bottom (min.) 0.87 in. (22 mm)
 Weight per ft. (m), minimum 120 lb. (179 kg/m)
 Minimum vertical section modulus . 143 inches cubed (2 343 cm cubed)
 Front mainframe . . . Welded box section from mainframe arch to front hood
 Width 10 in. (254 mm)
 Height, minimum 13 in. (330 mm)
 Thickness, minimum 0.625 in. (16 mm)
 Weight per ft. (m), minimum 110 lb. (164 kg/m)
 Minimum vertical section modulus . 118 inches cubed (1 935 cm cubed)

Capacities

	U.S.	Liters
Fuel tank	70 gal.	265.0
Cooling system	10 gal.	38
Engine lubrication, (incl. filter)		
PIN 500604-508635	20 qt.	18.9
PIN 508636-	26 qt.	24.6
Transmission and hydraulic system	31 gal.	117.3
(770-A, AH)		
Transmission and hydraulic system	41 gal.	155.2
(772-A, AH)		
Tandem housings (each)	5 gal.	18.9
Circle drive gearbox	3 qt.	2.8

JD770-A

SAE Operating Weight	On Front Wheels	On Rear Wheels	Total
Standard equipment	8548 lb. (3877 kg)	21,726 lb. (9855 kg)	30,274 lb. (13 732 kg)
Standard equipment and scarifier	9905 lb. (4493 kg)	21,523 lb. (9763 kg)	31,428 lb. (14 256 kg)
Standard equipment, scarifier and ripper	9137 lb. (4145 kg)	24,765 lb. (11 233 kg)	33,902 lb. (15 378 kg)

JD772-A

SAE Operating Weight	On Front Wheels	On Rear Wheels	Total
Standard equipment	9237 lb. (4190 kg)	21,680 lb. (9834 kg)	30,917 lb. (14 024 kg)
Standard equipment and scarifier	10,594 lb. (4805 kg)	21,477 lb. (9742 kg)	32,071 lb. (14 547 kg)
Standard equipment, scarifier and ripper	9826 lb. (4457 kg)	24,719 lb. (11 213 kg)	34,545 lb. (15 670 kg)

Tires:

- 13.00-24, 12 ply rating; 8 in. rim
- 14.00-24, 12 ply rating; 10 in. rim
- 17.5-25, 12 ply rating; 14 in. rim

Dimensions:

Tire Size	Wheel Tread		Width		Ground Clearance (Front Axle)
	Front	Rear	Front	Rear	
13.00-24	76.60 in. (1.94 m)	79.61 in. (2.02 m)	7 ft. 10 in. (2.34 m)	7 ft. 10 in. (2.34 m)	1 ft. 10 in. (559 mm)
14.00-24	76.60 in. (1.94 m)	79.61 in. (2.02 m)	8 ft. (2.44 m)	8 ft. (2.44 m)	1 ft. 10.5 in. (571 mm)
17.5-25	79.36 in. (2.01 m)	82.37 in. (2.09 m)	8 ft. 6 in. (2.59 m)	8 ft. 6 in. (2.59 m)	1 ft. 11.2 in. (589 mm)

Height to top of steering wheel . . . 7 ft. 6 in. (2.29 m)

Scarifier (Special Equipment):

- V-type for 4 ft. (1.22 m) cut with 3 manual pitch positions and hydraulic float
- Number of teeth (9 possible) 5
- Lift above ground 24.0 in. (610 mm)
- Penetration 13.7 in. (348 mm)
- Shank size 1x3 in. (25x76 mm)

Ripper (Special Equipment): 8 ft. (2.44 m) cut width, parallelogram linkage, 2 manual shank vertical positions

- Number of shank pockets 5
- Number of shanks 3
- Lift above ground 1 ft. 2.5 in. (368 mm)
- Penetration 1 ft. 2 in. (356 mm)
- Shank size 2x5 in. (51x127 mm)
- Lift above ground (shank in upper position) 1 ft. 11.5 in. (597 mm)

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