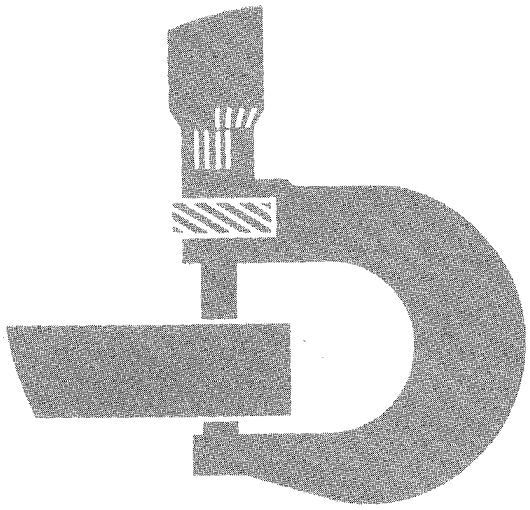
John Deere
JD740-A Skidder
Grapple Skidder



TECHNICAL MANUAL

TM1213
LITHO IN U.S.A. (REVISED)

JD740-A SKIDDER - GRAPPLE SKIDDER

Technical Manual
TM-1213 (Nov-79)

SECTION AND GROUP CONTENTS OF THIS MANUAL

Litho in U.S.A.

SECTION AND GROUP CONTENTS OF THIS MANUAL—Continued

The specifications and design information contained in this manual were correct at the time it was printed. It is John Deere's policy to continually improve and update our machines. Therefore, the specifications and design information are subject to change without notice. Wherever applicable, specifications and design information are in accordance with SAE and ICED standards.

Litho in U.S.A.

ALPHABETICAL INDEX

E

F

G

H

Litho in U.S.A.

S

T

V

W

Litho in U.S.A.

COMPLETE PAGE LISTING WITH LATEST DATE LINES

Litho in U.S.A.

COMPLETE PAGE LISTING—Continued

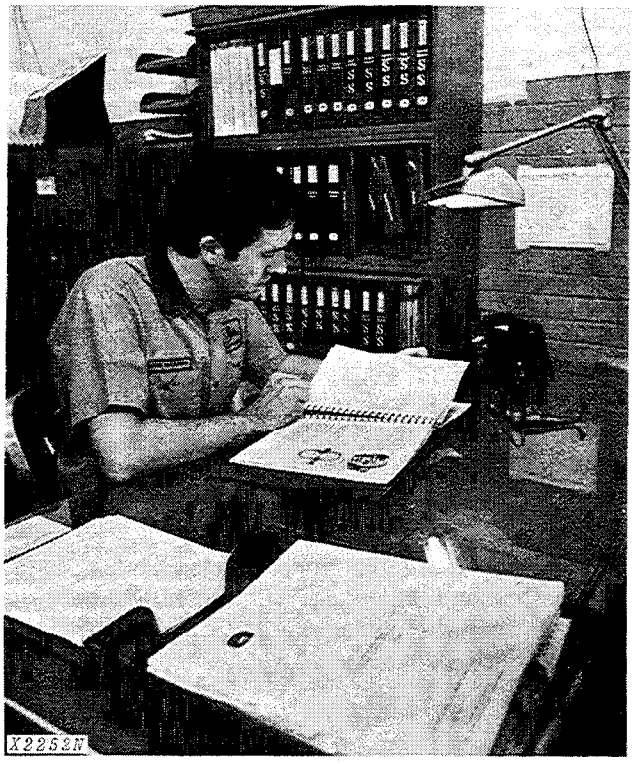
COMPLETE PAGE LISTING—Continued

Litho in U.S.A.

COMPLETE PAGE LISTING—Continued

Litho in U.S.A.

Group II
INTRODUCTION AND SAFETY INFORMATION
INTRODUCTION



Use FOS Manuals for Reference

This technical manual is part of a twin concept of service:

The two kinds of manuals work as a team to give you both the general background and technical details of shop service.

•FOS Manuals—for reference

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

When a service technician should refer to a FOS Manual for more information, a FOS symbol like the one at the left is used in the TM to identify the reference.

•Technical Manuals—for actual service

Technical Manuals are concise service guides for a *specific* machine. Technical manuals are on-the-job guides containing only the vital information needed by an experienced service technician.

Use Technical Manuals for Actual Service

This technical manual was planned and written for you—an experienced service technician. Keep it in a permanent binder in the shop where it is handy. Refer to it whenever in doubt about correct service procedures or specifications.

Some features of this manual:

- Inside front cover - "Table of Contents".
- Section I - Contents, safety information, general specifications and general services.
- Sections 1 through 40 - Removal, repair, testing (components removed), installation, and adjustment.
- Section 90 - Detailed explanation of system operation, diagnosis, visual inspection, testing, and adjustments.
- Specifications grouped and illustrated at the end of each section.

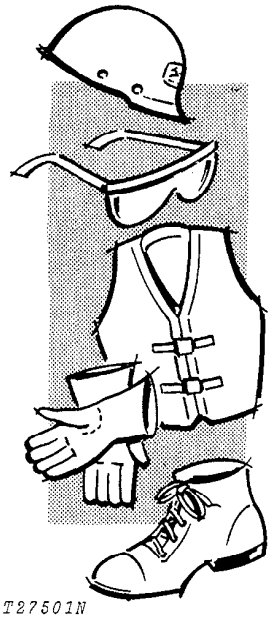
Litho in U.S.A.

MAINTENANCE WITHOUT ACCIDENT
WORK SAFELY

T27999N

This safety alert symbol is used for important safety messages. When you see this symbol, the possibility of personal injury exists if safety message is not followed.

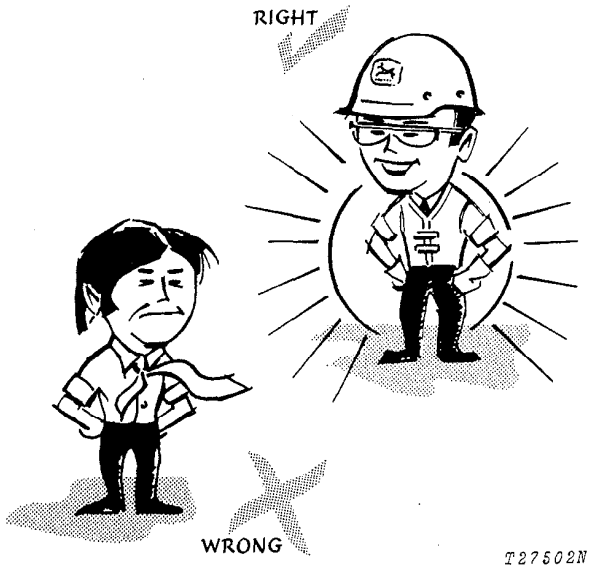
EVERY EMPLOYER HAS A SAFETY PROGRAM. KNOW WHAT IT IS!



T27501N

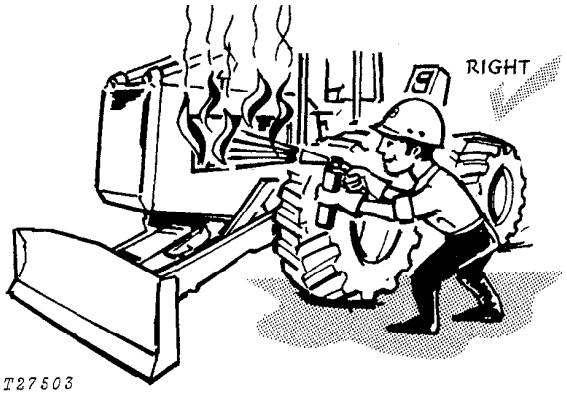
Consult your shop supervisor for specific instructions on a job, and the safety equipment required.

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



T27502N

ALWAYS AVOID loose clothing or any accessory—flopping cuffs, dangling neckties and scarves, or rings and wrist watches—that can catch in moving parts and put you out of work.



T27503

BE ALERT!

Plan ahead—work safely—avoid accidental damage and injury. If a careless moment does cause an accident or fire, react quickly with the tools and skills at hand—know how to use a first aid kit and a fire extinguisher—and where to get aid and assistance. In an emergency, split-second action is the key to safety.

Litho in U.S.A.

MAINTENANCE WITHOUT ACCIDENT

Specific safety procedures should always be observed, whether servicing or making repairs on the skidder. Remembering these—in time!—can prevent an injury...or save your life....

AVOID FIRE HAZARDS—

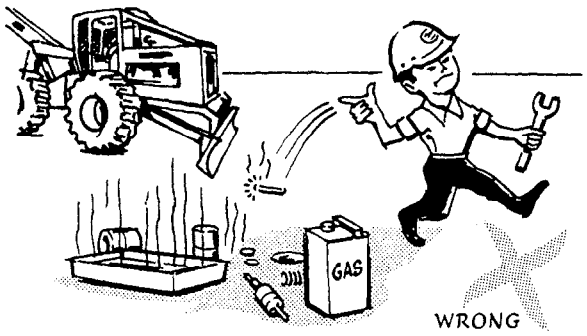
Fuel Is Dangerous!

Don't smoke while refueling.

Don't smoke while handling highly flammable material.

Engine should be shut off when refueling.

Use care in refueling if the engine is hot.

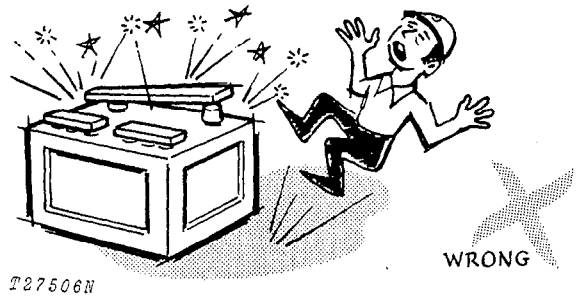


T33257N

Don't use open pans of gasoline or diesel fuel for cleaning parts. Good commercial, nonflammable solvents are preferred.

Battery Gas Is Highly Flammable!

Provide adequate ventilation when charging batteries.



T27506N

Don't check battery charge by placing metal objects across the posts.

Don't allow sparks or open flame near batteries.

Don't smoke near battery.

Flame Is Not a Flashlight!

Never check fuel, battery electrolyte or coolant levels with an open flame.

Never use an open flame to look for leaks anywhere on the equipment.

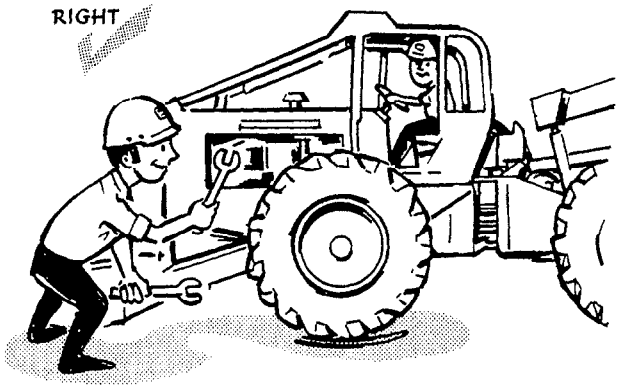
Never use an open flame as a light anywhere on or around the equipment.

KNOW WHERE FIRE EXTINGUISHERS ARE KEPT!

UNDER ALL MAINTENANCE CONDITIONS—

Do not perform any work on the skidder unless authorized to do so. Then be sure you understand the services required. Follow recommended procedures.

Never service the equipment while it is being operated.



T33258N

Avoid working on equipment with the engine running. If it is necessary to make checks with the engine running, **ALWAYS USE TWO SERVICE TECHNICIANS**—one, the operator, at the controls, the other checking in view of the operator. Also, put the transmission in neutral, set the brake, and apply any safety locks provided. **KEEP HANDS AWAY FROM MOVING PARTS.**

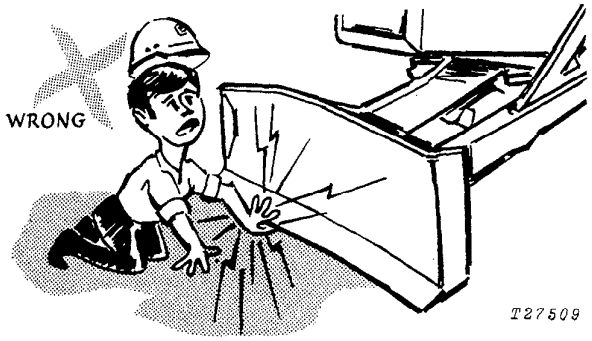
T27508N

Litho in U.S.A.

MAINTENANCE WITHOUT ACCIDENT

Before servicing, adjusting, or repairing skidders which have attachments such as blades, grapple tongs, etc.—**LOWER** equipment to the ground—or, if necessary to raise them for access to certain parts, **SECURELY SUPPORT** by external means. **DO NOT** rely on controls to support or position equipment for maintenance.

Never allow **ANYONE** to walk under equipment that is raised and not properly blocked.

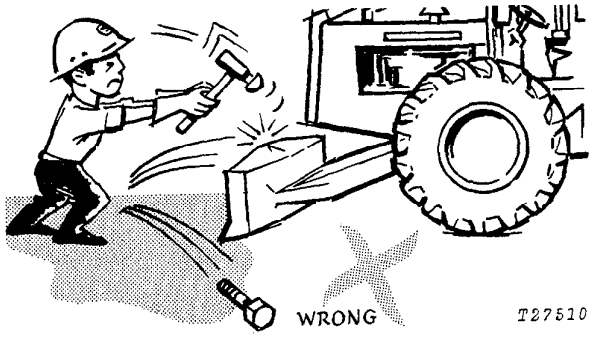


Avoid working directly under raised and blocked equipment unless absolutely necessary.

If the skidder is on an incline, block it securely.

Use hoisting equipment for lifting heavy parts. **TAKE CARE! WATCH OUT FOR OTHER PEOPLE IN THE VICINITY.**

Use extreme caution in removing radiator caps, drain plugs, grease fittings, or hydraulic pressure caps.



Wear safety glasses when drilling, grinding, or hammering metal.

Make sure the maintenance area is adequately vented.

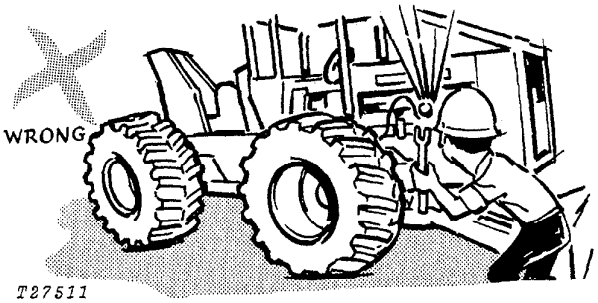
Keep maintenance area CLEAN AND DRY. Oily and wet floors are slippery; greasy rags are a fire hazard; wet spots are dangerous when working with electrical equipment.

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

SERVICING PRECAUTIONS

Stop the engine before cleaning or lubricating the skidder.

Lower blade and grapple to the ground *carefully.*



Engine coolant gets hot! Don't remove the radiator cap until coolant temperature is below the boiling point. Then turn cap slightly to relieve pressure before removing.

Exhaust gases are dangerous! Periodically check exhaust system for excessive leakage.

Don't forget a hydraulic system may be pressurized! To relieve system pressure, stop engine, lower blade and boom and operate blade, boom or grapple controls until system fails to respond.

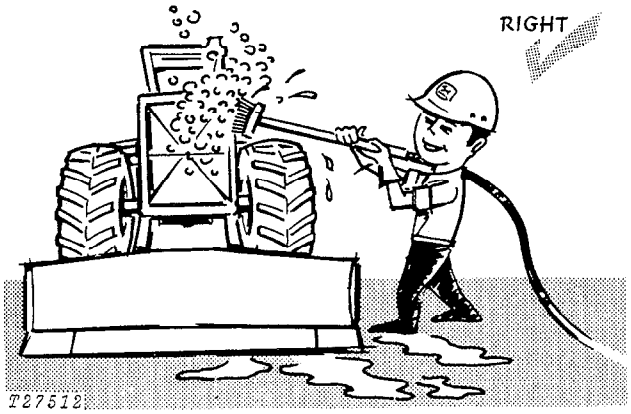
When checking hydraulic pressure, be sure to use the correct test gauge for the pressure in the particular system.

The skidder is equipped with a brake accumulator—recharge by using only dry nitrogen. To discharge brake accumulator apply the brake pedal about 30 times.

Litho in U.S.A.

MAINTENANCE WITHOUT ACCIDENT

When preparing engine for storage, remember that inhibitor is volatile and therefore dangerous. Seal and tape openings after adding inhibitor. Keep container tightly closed when not in use.

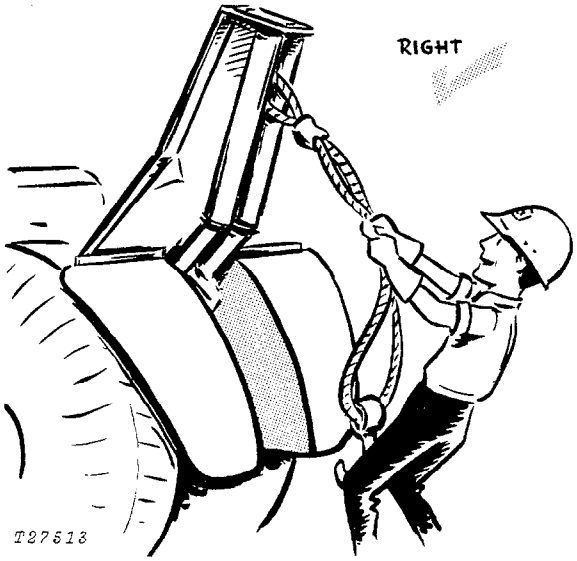


Keep ALL components free of dirt and oil. This attention will minimize fire hazards and facilitate spotting of loose or defective parts.

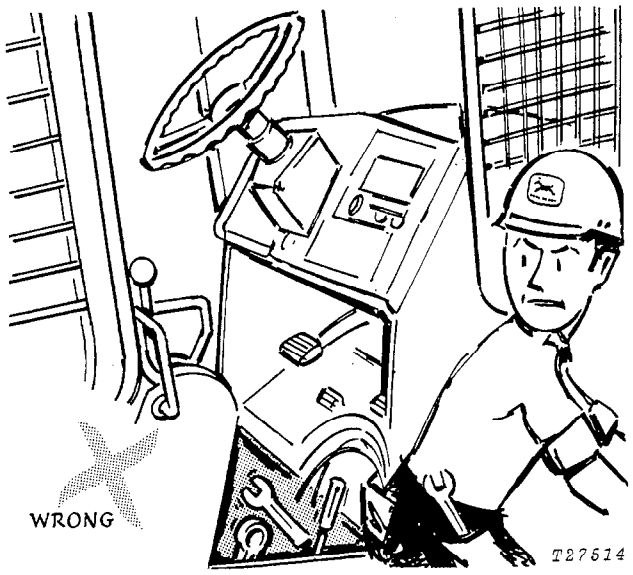
ADJUSTING PRECAUTIONS

....for Operating Adjustments

Keep clutch and brake control units properly adjusted at all times. Before making adjustments, stop engine.



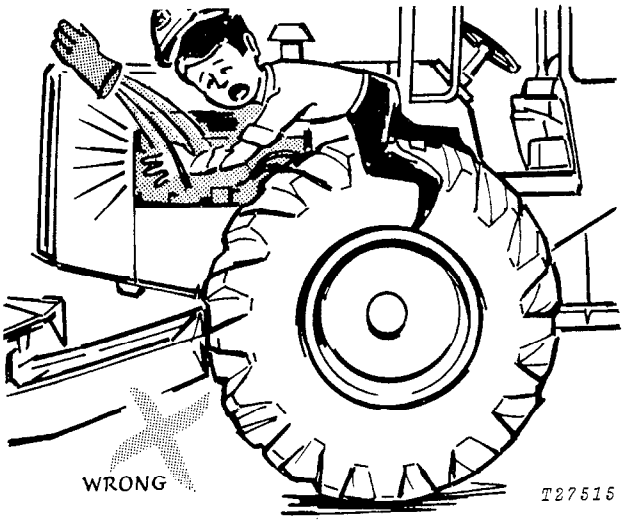
Always wear gloves when handling cable.



Before removing any housing covers, stop engine. Take all objects from your pockets which could fall into the opened housings. Don't let adjusting wrenches fall into opened housings.

....for Maintenance Adjustments

Don't attempt to check belt tension while the engine is running.



Don't adjust the fuel system while the machine is in motion.

MAINTENANCE WITHOUT ACCIDENT

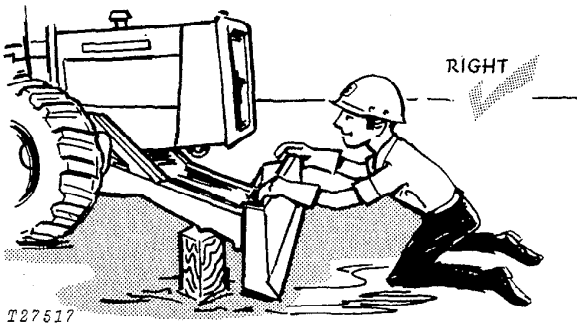
PRECAUTIONS DURING REPAIR

Before working on the engine fuel system—close fuel shutoff valve.

Before working on hydraulic system—make sure engine is not running and the system pressure is relieved by working the control levers in all directions with the engine shut off.

Before repairing the electrical system, or performing a major overhaul, make sure the batteries are disconnected.

Keep all equipment free of dirt and oil. This attention will minimize fire hazards and facilitate spotting of loose or defective parts.



When changing cutting edges on the blade, stop the engine and securely block the blade.

Never let your bare hands come in contact with the sharp edges. WEAR GLOVES.

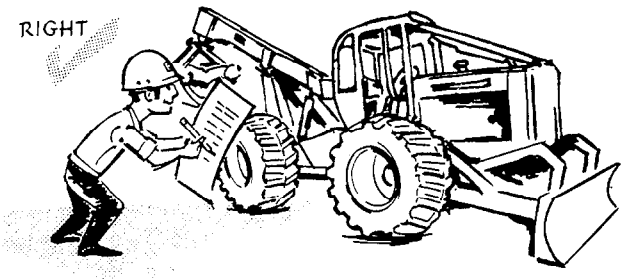
MAINTENANCE WITHOUT ACCIDENT

KNOW EQUIPMENT IS READY!

Check guards, canopies, safety bars—all protective devices installed on the skidder. Every one should be in place and secure.

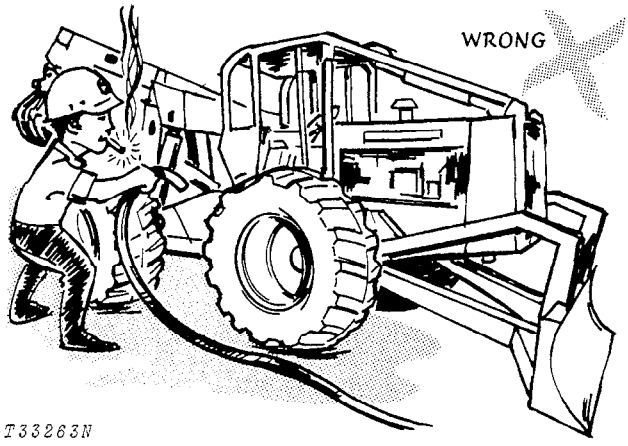
CHECK IT OUT!

- ☐ GUARDS
- ☐ CANOPIES
- ☐ SHIELDS
- ☐ PROTECTIVE DEVICES
- ☐ ROLL-OVER PROTECTIVE STRUCTURES
- ☐ SEAT BELTS
- ☐ FIRE EXTINGUISHER, ETC.
- ☐ FIRE SUPPRESSION SYSTEM



T33262N.

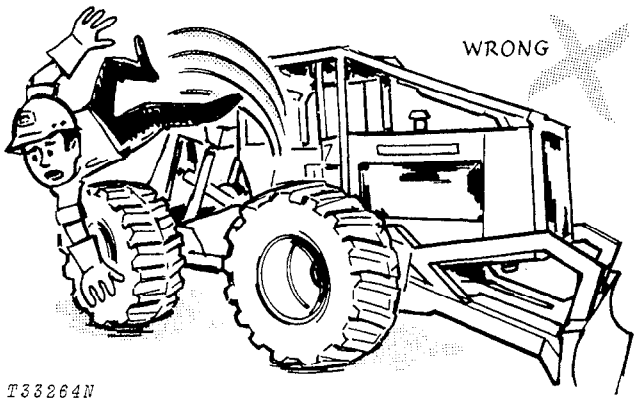
Carefully inspect equipment for visual defects—leaks in fuel, lubrication, and hydraulic systems. Do not search for pressurized fluid leaks with your hands. Use cardboard or wood to search for leaks.



T33263N

Check levels of fuel, coolant, hydraulic fluid, and lubricating oil. If fuel must be added—**FIRST, PUT OUT THAT CIGARET.**

Check and secure all caps and filler plugs for fuel, oils, radiator, etc.



T33264N

Be sure to clean any oil, grease or mud accumulation from floor of operator's compartment, stepping points, and grab rails to minimize the danger of slipping.

In freezing weather beware of snow or ice deposits on stepping points, grab rails, and floor.

Remove loose bolts, tools, or other objects from floor of operator's compartment.

Although it is impractical to try to cover every possible maintenance situation, the safety precautions recommended here should serve to develop and promote safe maintenance procedures.

The information contained in this manual is not intended to replace safety codes, insurance requirements, federal, state, and local laws, rules and regulations. In particular, your service area or jobsite activities may be subject to state safety rules and/or federal regulation under the Occupational Safety and Health Act (OSHA). Familiarize yourself with all regulations applicable to your situation in order to avoid possible safety violations.

Illustrations and copy reproduced in part by permission of Construction Industry Manufacturers' Association (CIMA).

Litho in U.S.A.

Group III
GENERAL SPECIFICATIONS

SKIDDER

(Specifications and design are 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 30.5-32, 12-ply-rating logging tires and standard equipment.)

Power (@ 2200 engine rpm): **SAE** **DIN**
Gross ..... 167 hp (125.0 kW)
Net ..... 152 hp (113.3 kW) 154 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 diesel, vertical 6-cylinder, valve-in-head, 4-stroke cycle—turbocharged and intercooled.
Bore and stroke ..... 4.56x4.75 in. (116x121 mm)
Piston displacement ..... 466 cu. in. (7.638 L)
Compression ratio ..... 15.5 to 1
Maximum torque @ 1200 rpm .. 507 lb-ft (687 N·m) (70.1 kg-m)
NACC or AMA (U.S. Tax) horsepower 49.9
Lubrication ..... Pressure system w/full-flow filter
Cooling ..... Pressurized w/thermostat and fixed bypass
Fan ..... Blower
Air cleaner w/restriction indicator ..... Dry
Electrical system ..... 12-volt w/alternator
Batteries (2) .. Reserve capacity: 180 minutes each

Differentials:
Front and rear .. Full differentials with hydraulic lock

Engine Clutch Disconnect:
Hand-operated, spring-loaded, dry-disk. Single plate, 12 in. (305 mm).

Transmission:
Power Shift with planetary gears, hydraulically actuated wet-disk clutches and brakes; provides 8 speeds forward—4 reverse. Controlled by single lever. Pressurized lubrication.

Travel Speeds (2200 engine rpm, no tire slip):
Forward ..... 1.63 mph (2.62 km/h) to 18.40 mph (29.61 km/h)
Reverse ..... 2.00 mph (3.22 km/h) to 5.79 mph (9.32 km/h)

Drive Axles:
Four-wheel drive with inboard planetary gears on all axles. Front axle oscillates 15 degrees above and below horizontal. 24.9 in. (632 mm) total travel at tire center line at narrowest tread.

Brakes:
Service . Hydraulic power-actuated, pedal-controlled, wet-disk on 4 wheels.
Winching ..... Manually locked service brakes.
Parking ..... Foot-operated mechanical.

Power Steering:
Articulated frame hydraulically actuated by dual cylinders.
Turning radius ..... 17 ft. 5 in. (5.31 m)
Turning clearance circle (w/o braking) ..... 37 ft. 1 in. (11.30 m)
Wheel rotation, max. left to max. right ..... 3 turns

Hydraulic System:
Closed-center constant pressure. Variable-displacement pump driven from crankshaft ..... 36 gpm (2.27 L/s), 2000 psi (13 790 kPa) (140.6 kg/cm²) @ 2200 engine rpm.
Externally mounted transmission driven gear pump ... 20 gpm (1.26 L/s) @ 2200 engine rpm provides charge oil to main hydraulic pump.

Litho in U.S.A.

Winch:
Cable capacities*:
1/2 in. (12.7 mm) ..... 577 ft. (175.87 m)
5/8 in. (15.8 mm) ..... 379 ft. (115.52 m)
3/4 in. (19.1 mm) ..... 267 ft. (81.38 m)
7/8 in. (22.2 mm) ..... 192 ft. (58.52 m)
1 in. (25.4 mm) ..... 149 ft. (45.42 m)

*Calculated: No allowance made for loose or uneven spooling.

Linepull**:
Bare drum .... 51,880 lb. (232.53 kN) (23 533 kg)
Full drum ..... 29,648 lb. (132.88 kN) (13 448 kg)

**Based on maximum engine torque.

Line speed (2200 rpm):
Bare drum ..... 116 fpm (35.5 m/min)
Full drum ..... 204 fpm (62.0 m/min)

Arch:
Horizontal rollers ..... 8 in. (203 mm) dia.
Vertical rollers
(through-hardened steel) ... 4.5 in. (114 mm) dia.
Working height (top of horizontal roller to ground): Adjustable to 4 positions.

Tires:
24.5-32, 16-ply-rating, Kevlar, LS-2
30.5-32, 12-ply-rating, logging, double bead, LS-2
30.5-32, 16-ply-rating, steel ply, double bead, LS-2
30.5-32, 16-ply-rating, Kevlar, LS-2

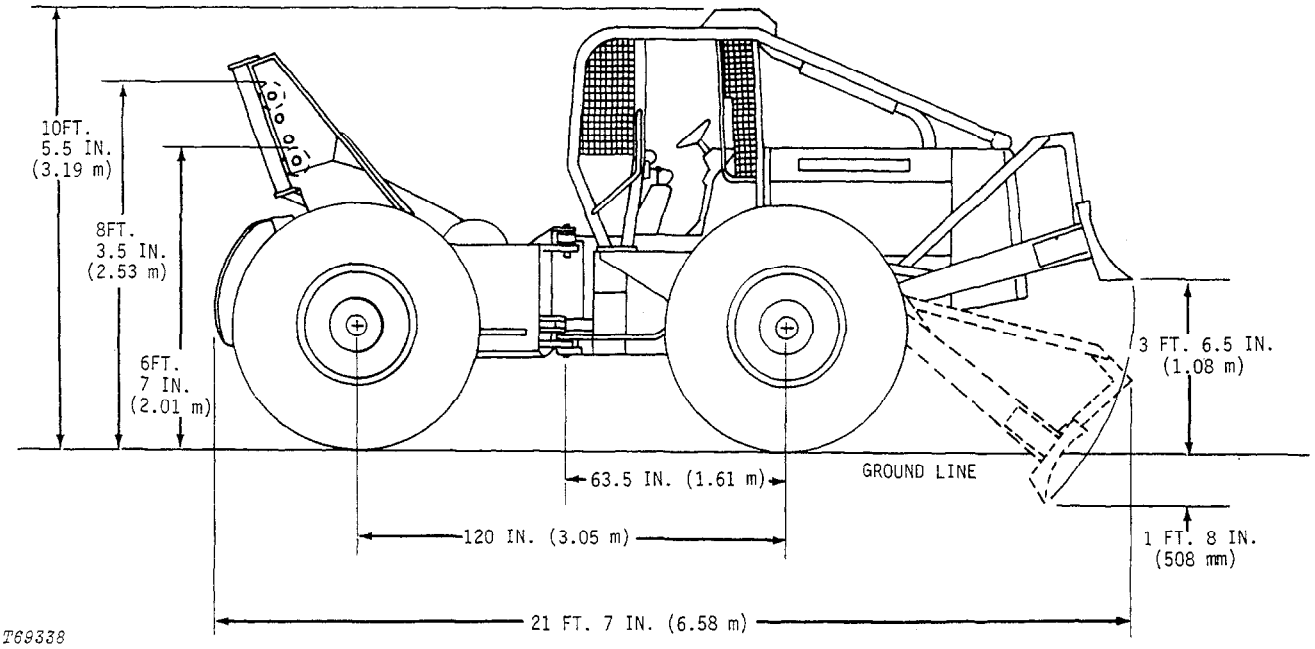
SAE Operating Weight ..... 30,280 lb. (13 735 kg)

Capacities:	U.S.	Imp.	Liters
Fuel tank	54 gal.	45.0 gal.	204.4
Cooling system	12 gal.	10.0 gal.	45.4
Engine lubrication, including filter	20 qt.	16.7 qt.	18.9
Transmission and winch	24.2 gal.	20.2 gal.	91.6
Front differential	6.5 gal.	5.4 gal.	24.6
Rear differential	6.5 gal.	5.4 gal.	24.6
Hydraulic system	18 gal.	15.0 gal.	68.0

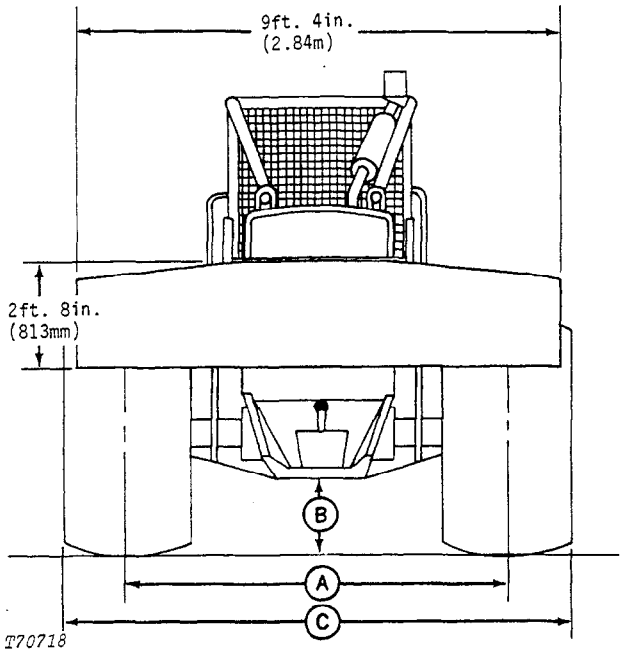
Additional Standard Equipment:
Bottom guards
Canopy with ROPS, brush screens and limb risers
Cigar lighter
Cushion seat with suspension, position adjustment and seat belt
Engine side shields
Cold weather starting aid
Exhaust with rain deflector
Fire extinguisher
Fuel level dipstick
Gauges:
Electric hour meter
Engine coolant temperature
Engine oil pressure
Transmission oil temperature
Voltmeter
Hand and foot throttle
Heavy-duty starter
Hinge locking bar
Horn
Key switch with push-button safety start
Lights
Muffler
Parking brake
Trail-building blade
Transmission oil pressure warning light
Transistorized voltage regulator
Vandal protection

Special Equipment:
Automatic fire suppression system
Cab with ROPS, air conditioner and heater
Canopy with ROPS, screened doors, right window, windshield and wiper
Depth gauge shoes
Engine coolant heater

Litho in U.S.A.



Sideview dimensions are for Skidder equipped with 30.5-32 tires



TIRE SIZE	A WHEEL TREAD	B GROUND CLEARANCE	C OVERALL WIDTH
24.5-32	93 in. (2.36 m)	21.6 in. (549 mm)	9 ft. 9.5 in. (2.98 m)
30.5-32	97 in. (2.46 m)	20 in. (508 mm)	10 ft. 7.5 in. (3.24 m)

GRAPPLE SKIDDER

(Specifications and design are 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 30.5-32, 16-ply-rating logging tires and standard equipment.)

Power (@ 2200 engine rpm): **SAE** **DIN**
Gross ..... 167 hp (125.0 kW)
Net ..... 152 hp (113.3 kW) 154 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 diesel, vertical 6-cylinder, valve-in-head, 4-stroke cycle—turbocharged and intercooled.
Bore and stroke ..... 4.56x4.75 in. (116x121 mm)
Piston displacement ..... 466 cu. in. (7.638 L)
Compression ratio ..... 15.5 to 1
Maximum torque @ 1200 rpm .. 507 lb-ft (687 N·m) (70.1 kg-m)
NACC or AMA (U.S. Tax) horsepower 49.9
Lubrication ..... Pressure system w/full-flow filter
Cooling ..... Pressurized w/thermostat and fixed bypass
Fan ..... Blower
Air cleaner w/restriction indicator ..... Dry
Electrical system ..... 12-volt w/alternator
Batteries (2) .. Reserve capacity: 180 minutes each

Differentials:
Front and rear .. Full differentials with hydraulic lock

Engine Clutch Disconnect:
Hand-operated, spring-loaded, dry-disk. Single plate, 12 in. (305 mm).

Transmission:
Power Shift with planetary gears, hydraulically actuated wet-disk clutches and brakes; provides 8 speeds forward—4 reverse. Controlled by single lever. Pressurized lubrication.

Travel Speeds (2200 engine rpm, no tire slip):
Forward ..... 1.63 mph (2.62 km/h) to 18.40 mph (29.61 km/h)
Reverse ..... 2.00 mph (3.22 km/h) to 5.79 mph (9.32 km/h)

Drive Axles:
Four-wheel drive with inboard planetary gears on all axles. Front axle oscillates 15 degrees above and below horizontal. 24.9 in. (632 mm) total travel at tire center line at narrowest tread.

Brakes:
Service . Hydraulic power-actuated, pedal-controlled, wet-disk on 4 wheels.
Winching ..... Manually locked service brakes.
Parking ..... Foot-operated mechanical disk.

Power Steering:
Articulated frame hydraulically actuated by dual cylinders.
Turning radius ..... 18 ft. 10.7 in. (5.75 m)
Curb clearance circle
(w/o braking) ..... 40 ft. 5.5 in. (12.33 m)
Wheel rotation, max. left to max. right ..... 3 turns

Hydraulic System:
Closed-center constant pressure. Variable-displacement pump driven from crankshaft ..... 54 gpm (3.41 L/s), 2000 psi (13 790 kPa) (140.6 kg/cm²) @ 2200 engine rpm.
Externally mounted transmission driven gear pump ... 20 gpm (1.26 L/s) @ 2200 engine rpm provides charge oil to main hydraulic pump.

Litho in U.S.A.

Hydraulic Cylinders:

	Bore	Stroke
Boom and arch (2 ea.)	4.25 in. (108 mm)	29.81 in. (757 mm)
Grapple (1)	6.25 in. (159 mm)	19.75 in. (502 mm)
Cylinder rods	Ground, heat-treated, chrome-plated	polished
Boom and arch cylinder rods	2 in. (51 mm) dia.	
Grapple cylinder rod	2.75 in. (70 mm) dia.	

Winch:
Live mechanical drive; hydraulically actuated clutch and brake. Single-lever control.
Cable capacities*:

1/2 in. (12.7 mm)	577 ft. (175.87 m)
5/8 in. (15.8 mm)	379 ft. (115.52 m)
3/4 in. (19.1 mm)	267 ft. (81.38 m)
7/8 in. (22.2 mm)	192 ft. (58.52 m)
1 in. (25.4 mm)	149 ft. (45.42 m)

*Calculated: No allowance made for loose or uneven spooling.

Linepull**:

Bare drum	51,880 lb. (232.53 kN) (23 533 kg)
Full drum	29,648 lb. (132.88 kN) (13 448 kg)

**Based on maximum engine torque.

Line speed (2200 rpm):

Bare drum	116 fpm (35.5 m/min)
Full drum	204 fpm (62.0 m/min)

Arch (integral in grapple frame):

Horizontal roller	6 in. (152 mm) dia.
Vertical rollers (through-hardened steel)	4.5 in. (114 mm) dia.

Tires:
30.5-32, 16-ply-rating, logging, double bead, LS-2

SAE Operating Weight ..... 36,320 lb. (16 475 kg)

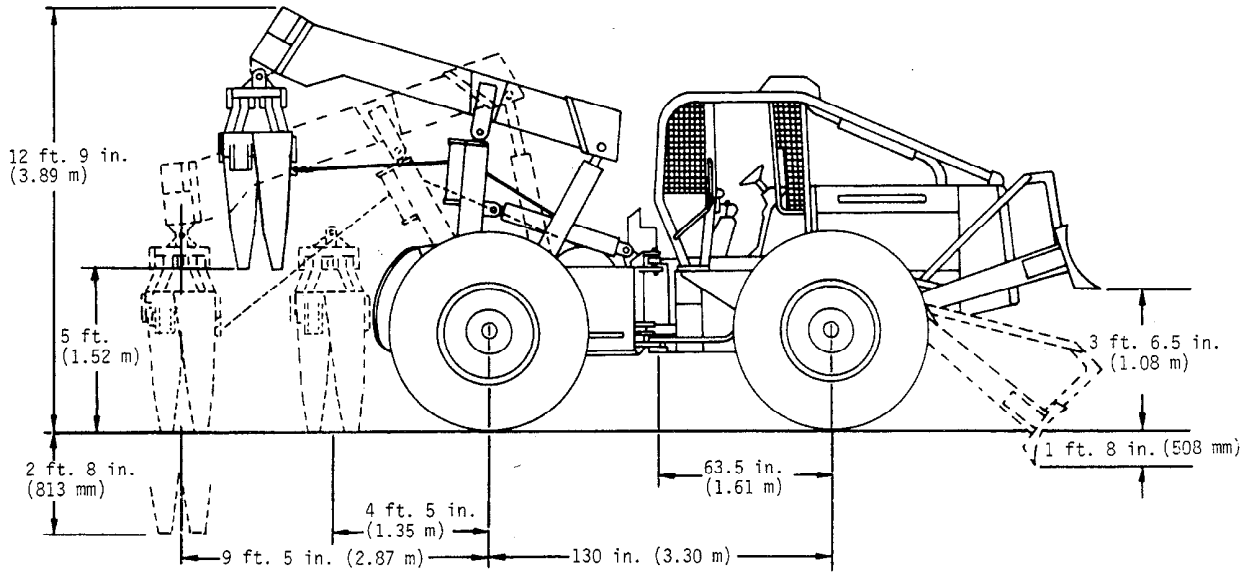
Capacities:	U.S.	Imp.	Liters
Fuel tank	54 gal.	45.0 gal.	204.4
Cooling system	12 gal.	10.0 gal.	45.4
Engine lubrication, including filter	20 qt.	16.7 qt.	18.9
Transmission and winch	24.2 gal.	20.2 gal.	91.6
Front differential	6.5 gal.	5.4 gal.	24.6
Rear differential	6.5 gal.	5.4 gal.	24.6
Hydraulic system	18 gal.	15.0 gal.	68.0

Additional Standard Equipment:
Bottom guards
Canopy with ROPS, brush screens and limb risers
Cigar lighter
Cushion seat with suspension, position adjustment and seat belt
Engine side shields
Cold weather starting aid
Exhaust with rain deflector
Fire extinguisher
Fuel level dipstick
Gauges:
- Electric hour meter
- Engine coolant temperature
- Engine oil pressure
- Transmission oil temperature
- Voltmeter

Hand and foot throttle
Heavy-duty starter
Hinge locking bar
Horn
Key switch with push-button safety start
Lights
Muffler
Parking brake
Trail-building blade
Transmission oil pressure warning light
Transistorized voltage regulator
Vandal protection

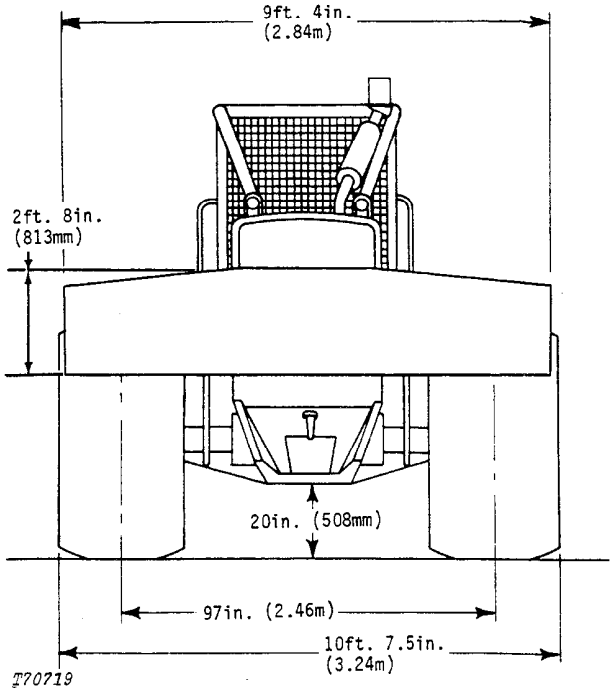
Special Equipment:
Automatic fire suppression system
Cab with ROPS, air conditioner and heater
Canopy with ROPS, screened doors, right window, windshield and wiper
Depth gauge shoes
Engine coolant heater

Litho in U.S.A.

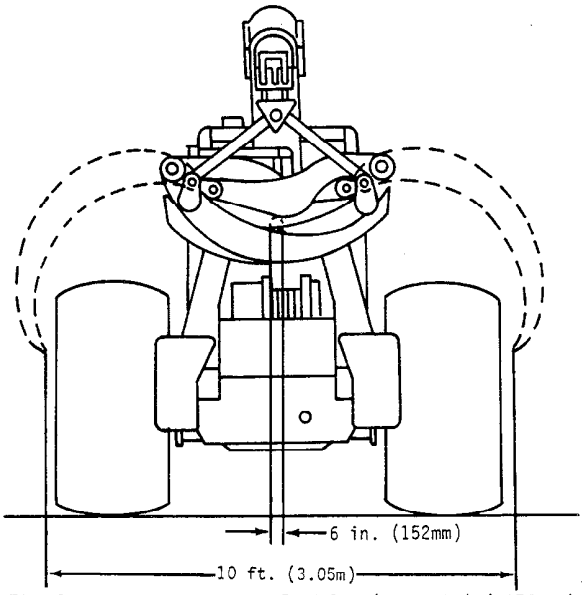


T69339

Sideview dimensions are for Grapple Skidder equipped with 30.5-32 tires



T70719



Tip closure force.....7000 lb. (31.38 kN) (3175 kg)
Enclosure area, tips meeting.....15 sq. ft. ($1.39m^2$)

T70720

Group IV
PREDELIVERY, DELIVERY, AND AFTER-SALE SERVICES

TEMPORARY STORAGE

After receiving your skidder from the factory and before putting the skidder into temporary storage, perform the following checks.

1. Check battery electrolyte level and charge the battery, if necessary.

2. Check coolant level in the radiator. The coolant should be maintained at a level midway between the radiator core and filler neck.

3. Check crankcase oil level. Oil should be at top mark of dipstick after machine has been shut down for 10 minutes.

4. Relieve hydraulic pressure by stopping engine, lowering boom and operating control levers until system fails to respond.

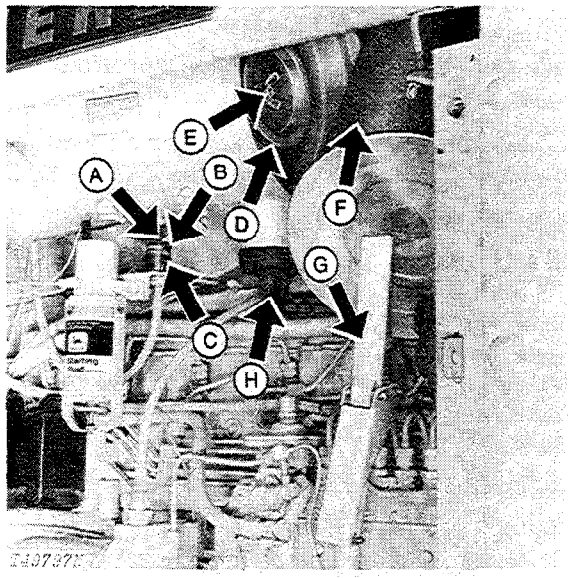
PREDELIVERY SERVICE

Because of the shipping factors involved, plus extra finishing touches that are necessary to promote customer satisfaction, proper predelivery service is of prime importance to the dealer and the customer.

If adjustments are required, procedures are found in the after-sale section.

Use the following list when preparing a skidder for delivery to the customer.

1. Air Cleaner



A—Reset Button
B—Restriction Indicator
C—Red Signal
D—Safety Element
E—Wing Nut
F—Primary Element
G—Lever
H—Dust Unloader

Fig. 1-Air Cleaner Components

Check air cleaner restriction indicator. If the restriction indicator locks in full view, look for restriction or blockage in air intake system.

Air cleaner elements checked	*Yes*	*No*
Restriction in system	*Yes*	*No*

Litho in U.S.A.

2. Radiator

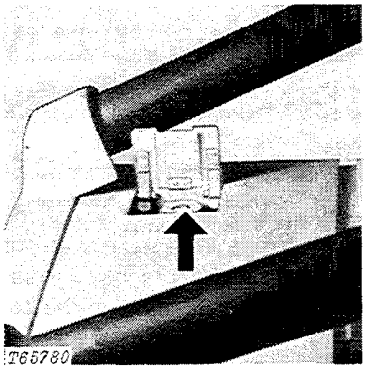


Fig. 2-Radiator Filler Cap

CAUTION: Do not remove radiator filler cap until coolant temperature is below its boiling point. Then loosen cap slowly to the stop to relieve any excess pressure before removing cap completely.

Check coolant level in radiator. Coolant should be maintained at a level midway between the radiator core and filler neck.

The antifreeze-water ratio is approximately 50 percent each. This protects to at least −34°F (−37°C).

Radiator coolant level checked *Yes* *No*

3. Batteries

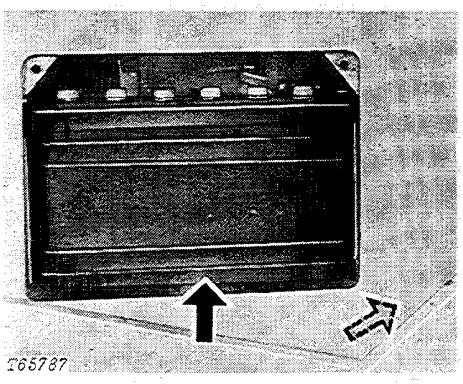


Fig. 3-Batteries

Remove foreign material from top of batteries. Check battery electrolyte level. If distilled water is not available, use clean soft water. Coat terminals with petroleum jelly.

IMPORTANT: Never add water to batteries in freezing weather unless engine is to be run 2 or 3 hours to assure mixing of water and electrolyte.

Punch date code on battery.

Water added *Yes* *No*
Battery connections checked *Yes* *No*

4. Tire Pressure

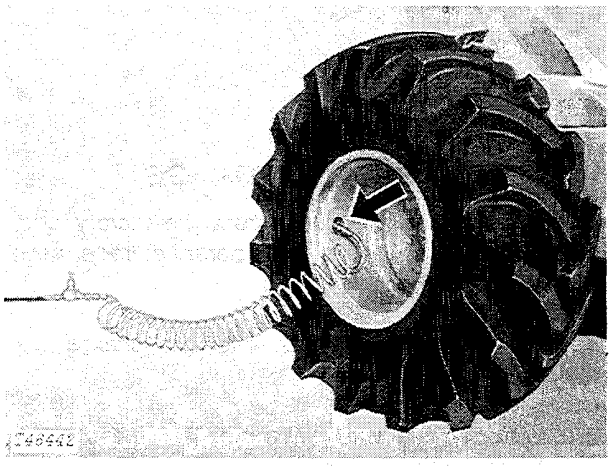


Fig. 4-Correct Tire Filling Procedure

Check air pressure in the tires with an accurate gauge having 1 psi (7 kPa) graduations.

Tire Size	Type	Ply Rating	Pressure
24.5-32**	LS-2	16	25 psi (172 kPa)
30.5-32	LS-2	12	20 psi (138 kPa)
30.5-32*	LS-2	16	25 psi (172 kPa)
30.5-32**	LS-2	16	25 psi (172 kPa)

**Includes grapple skidder.*
***Canada only (kevlar-ply)*

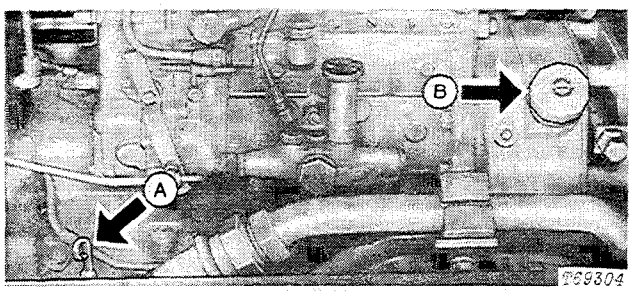
CAUTION: Failure to follow proper procedures when mounting a tire on a wheel or rim can produce an explosion which may result in serious bodily injury. DO NOT attempt to mount a tire unless you have the proper equipment and experience to perform the job safely.

Detailed tire mounting instructions, including necessary safety precautions, are contained in John Deere Fundamentals of Service (FOS) Manual 55, **Tires and Tracks.**

Tire pressure checked *Yes* *No*

Litho in U.S.A.

5. Engine Crankcase Oil Level



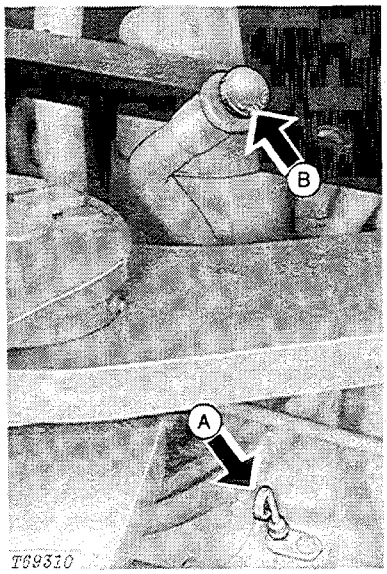
A—Dipstick **B—Oil Filler Cap**

Fig. 5-Crankcase Oil Level

Check engine crankcase oil level with skidder on level ground. (Allow a minimum of 10 minutes for the oil to drain down before checking.) If oil level is at or below bottom mark on dipstick, add sufficient oil of the proper viscosity and type specified on page I-IV-3 to bring oil level to between marks on dipstick. Do not operate engine with oil level below the bottom mark.

Crankcase oil level checked *Yes No*
Oil added, if any _____*qts (L)*

6. Transmission Oil Level



A—Dipstick **B—Oil Filler Cap**

Fig. 6-Dipstick and Oil Filler Cap

Check transmission oil level with skidder on level ground. Oil level should be between marks on dipstick. If oil level is below bottom mark, add oil specified on page I-V-3.

Transmission oil level checked *Yes No*
Oil added, if any _____*qts (L)*

7. Hydraulic System Oil Level

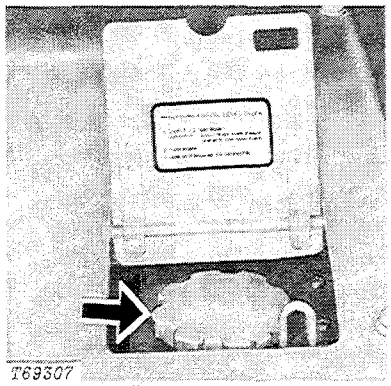


Fig. 7-Reservoir Cap

Check oil level as follows:

1 - Park skidder on level surface.
2 - Start engine.
3 - Lower blade, open grapple tongs, raise arch, and lower boom.
4 - Stop engine.

Oil level should be to top mark on bayonet gauge or to top of sight glass. If oil level is low, add oil specified on page I-V-3.

Hydraulic system oil level checked *Yes No*
Oil added, if any _____*qts (L)*

8. Grease Fittings

The skidder was checked and lubricated before it left the factory. However, to insure customer satisfaction, check each lubrication point shown in the following pages. Lubricate with several strokes of John Deere Multi-Purpose Grease or equivalent, if necessary.

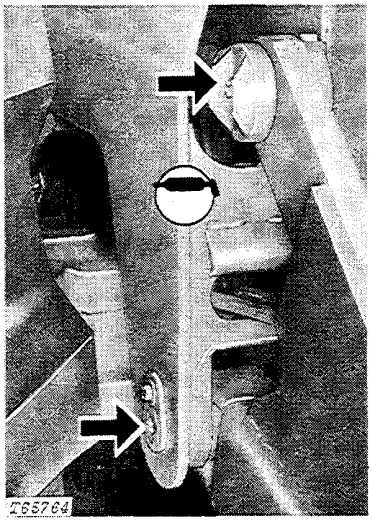


Fig. 8-Blade and Cylinder Pivots (4 Points)

Lubricant required *Yes* *No*

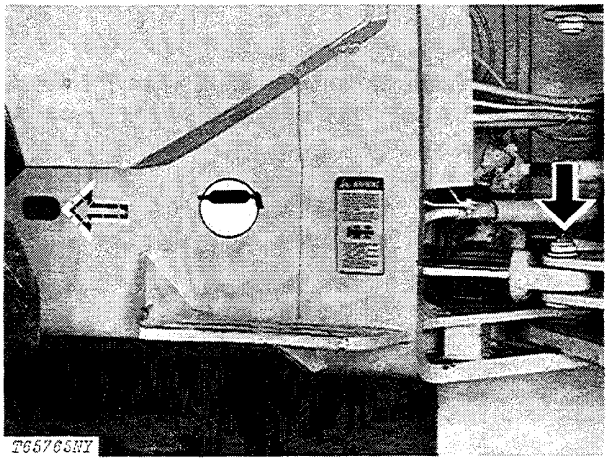


Fig. 9-Steering Cylinder Pivot Pins (4 Points)

Lubricant required *Yes* *No*

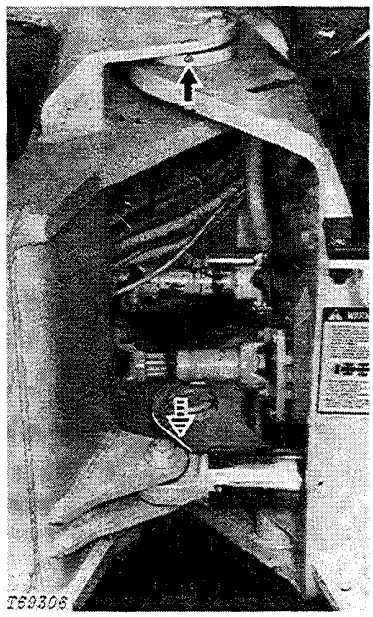


Fig. 10-Frame Hinge Pivots (2 Points)

Lubricant required *Yes* *No*

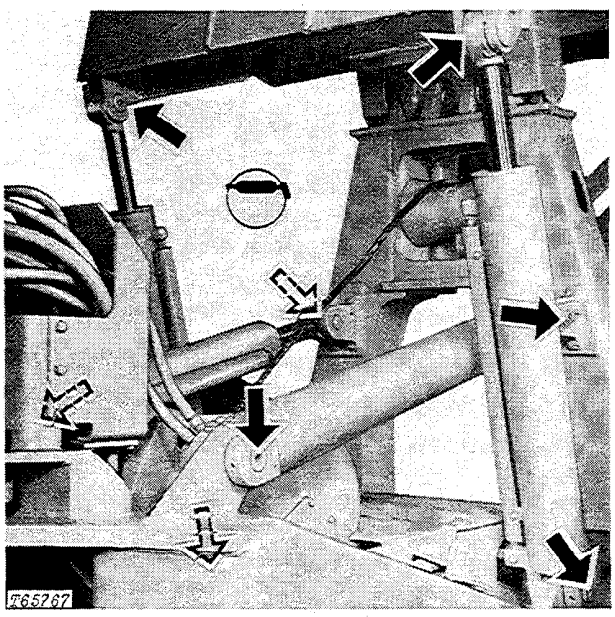


Fig. 11-Boom Cylinder Pins (8 Points)

Lubricant required *Yes* *No*

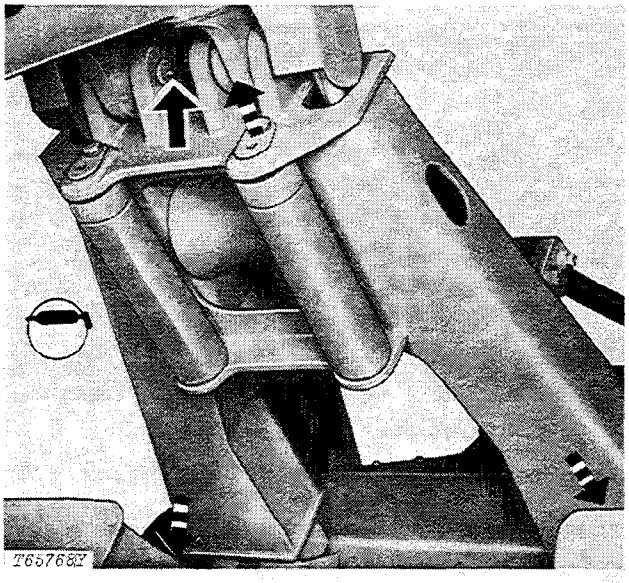


Fig. 12-Arch Pins (4 Points)

Lubricant required Yes No

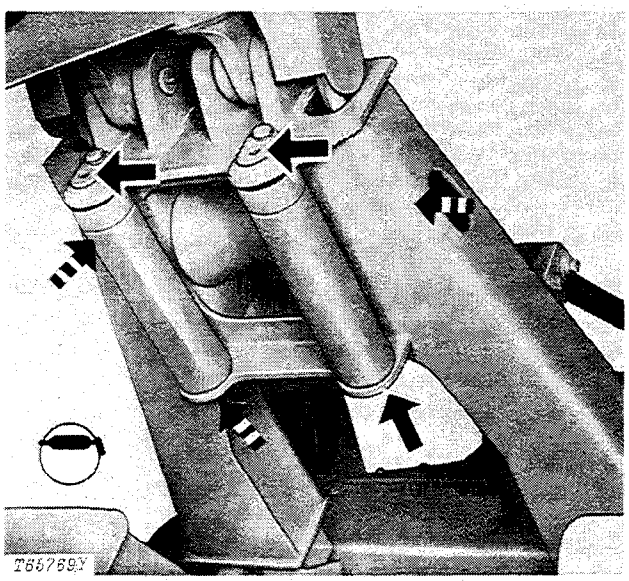


Fig. 13-Fairlead Pins (6 Points)

Lubricant required Yes No

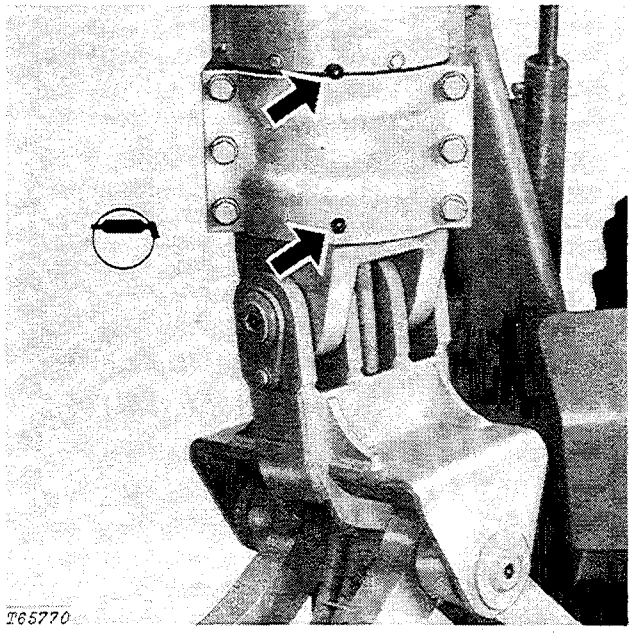


Fig. 14-Rotate Shaft Bearing (2 Points)

Lubricant required Yes No

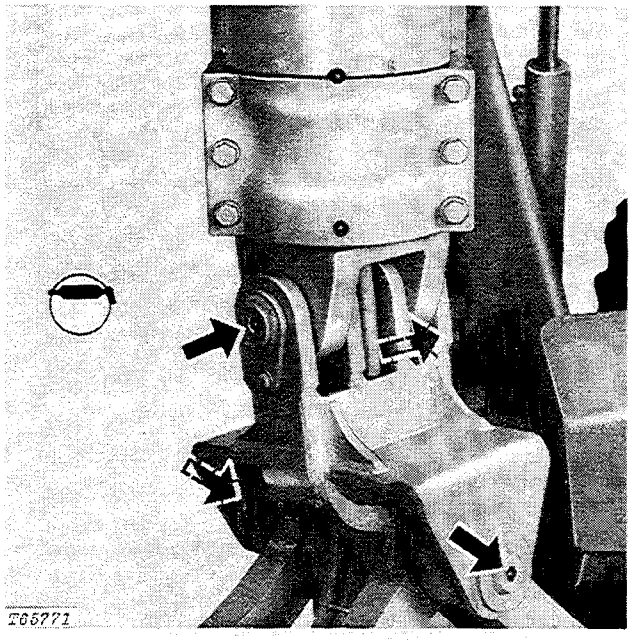


Fig. 15-Yoke Pins (4 Points)

Lubricant required Yes No

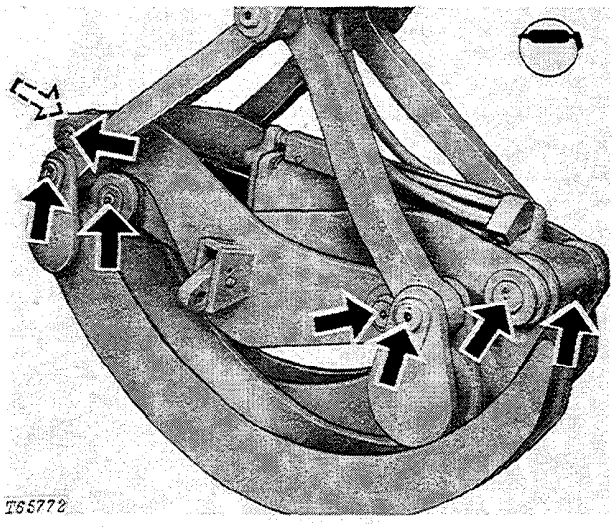


Fig. 16-Grapple Pins (8 Points)

Lubricant required *Yes* *No*

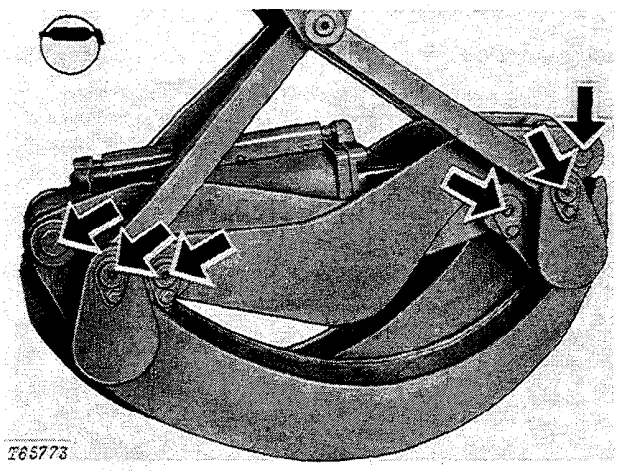


Fig. 17-Grapple Pins (6 Points)

Lubricant required *Yes* *No*

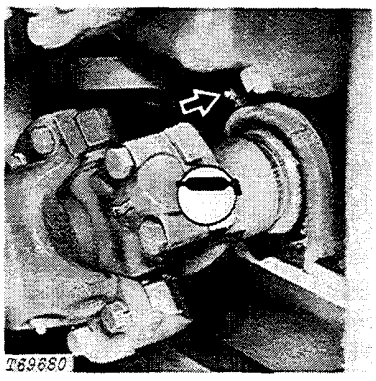


Fig. 18-Lower Drive Shaft Support Bearing (1 Point)

Lubricant required *Yes* *No*

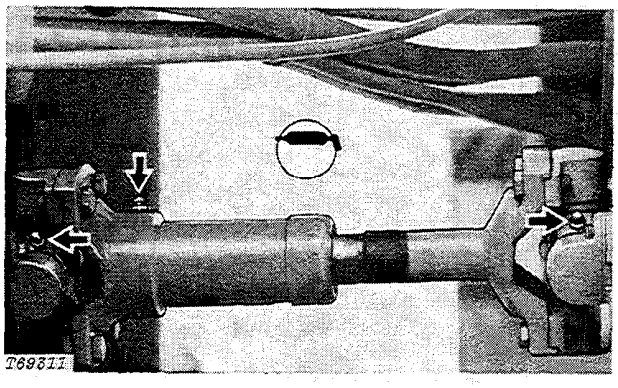


Fig. 19-Winch Drive Line (3 Points)

Lubricant required *Yes* *No*

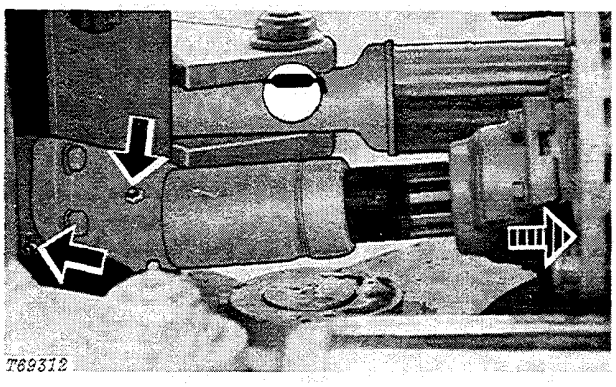


Fig. 20-Lower Telescoping Universal Joints (3 Points)

Lubricant required *Yes* *No*

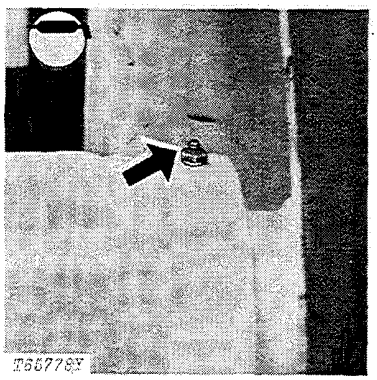


Fig. 21-Axle Bearings (4 Points)

Lubricant required *Yes* *No*