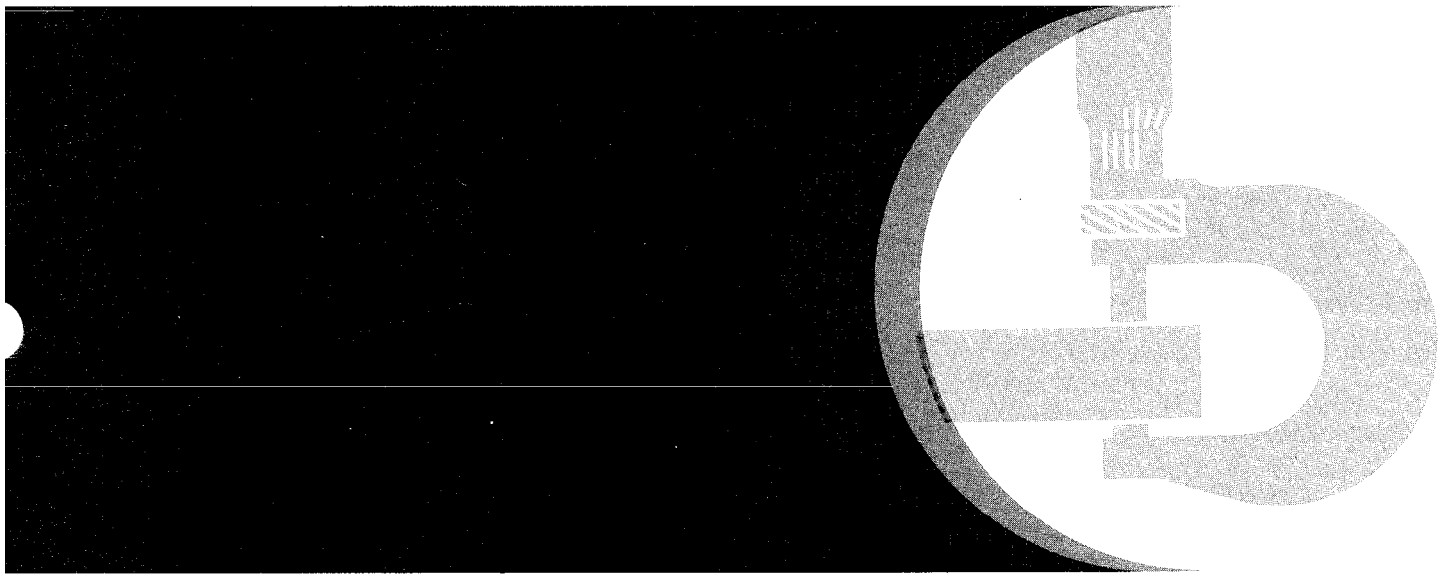
John Deere 444D, 544D and 644D Loader Repair



TECHNICAL MANUAL

TM-1341 (Oct-87)

LITHO IN U.S.A.

444D, 544D, AND 644D LOADERS TECHNICAL MANUAL TM-1341 (Oct-87)

SECTION AND GROUP CONTENTS

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.

T64;1341 J6 041187

SECTION AND GROUP CONTENTS—Continued

T64;1341 J8 021187

INTRODUCTION

This manual is part of a total service support program.

FOS Manuals—reference

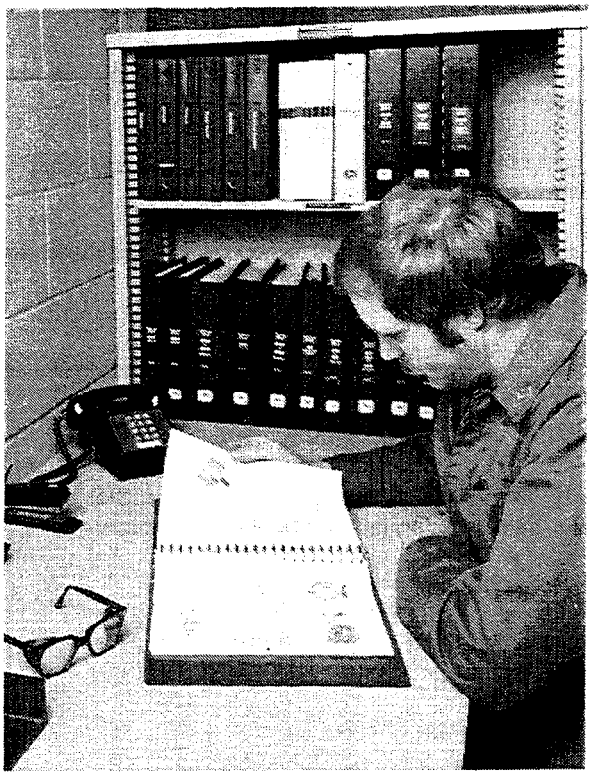
Technical Manuals—machine service

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 service guides for specific machines. Technical manuals are on-the-job guides containing only the vital information needed by an experienced service technician.

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



AB6;RW5559 053;INTR02 030785

FEATURES OF THIS TECHNICAL MANUAL

John Deere ILLUSTRUCTION format emphasizing illustrations and concise instructions in easy-to-use modules.

Emphasis on diagnosis, analysis, and testing so you can understand the problem and correct it.

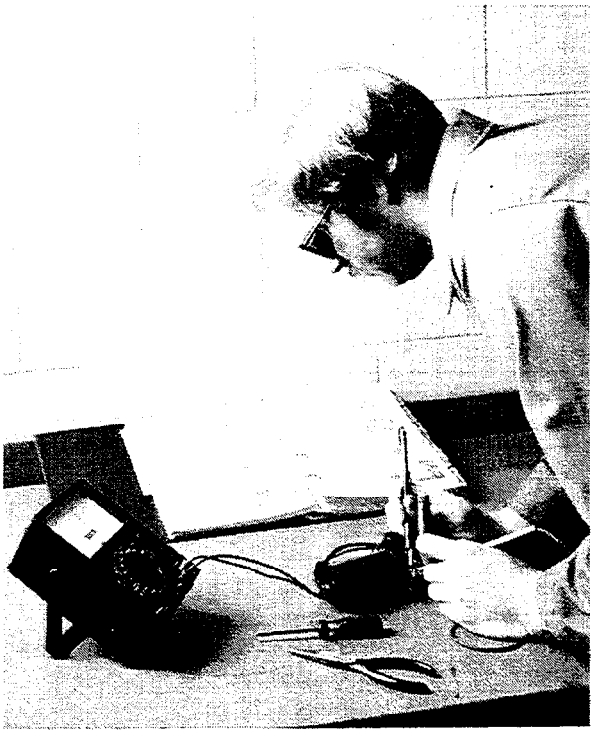
Diagnostic information presented with the most logical and easiest to isolate problems first to help you identify the majority of routine failures quickly.

Step-by-step instructions for teardown and assembly.

Summary listing at the beginning of each group of all applicable specifications, wear tolerances, torque values, essential tools, and materials needed to do the job.

An emphasis throughout on safety—so you do the job right without getting hurt.

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 when you need to know correct service procedures or specifications.



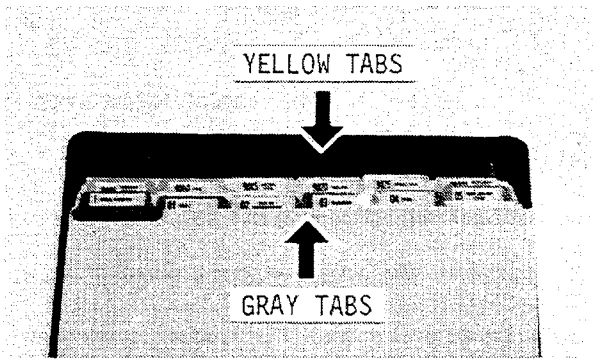
AB6;RW5560 053;INTR03 071085

USING TABS

To fully utilize this technical manual, you must understand how it is organized.

Only two tab colors are used—gray and yellow. Each color represents a different type of information.

Spend a minute reading this now and save many minutes of searching later.



018;T5933AB T82;FLPD I 260785

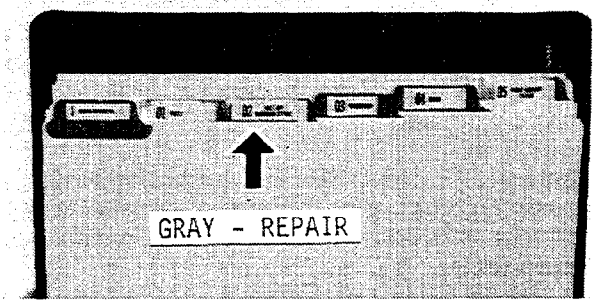
GRAY TAB SECTIONS

The gray tab sections are repair sections that tell how to repair the components of the various systems.

Repair of a component includes:

- Removal from machine (when necessary)
- Disassembly
- Inspection
- Replacement of parts
- Assembly
- Adjustment
- Installation on machine (when necessary)

The numbers used for the repair (gray tab) sections are part of an overall service publication numbering system. The numbers identify the same sections in the parts catalog, flat rate manual, service information bulletins, and service training courses.

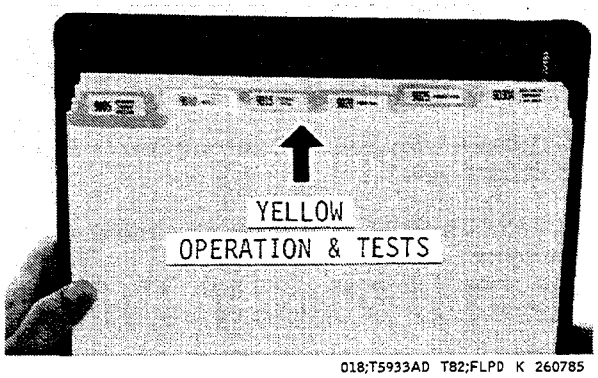


018;T5933AC T82;FLPD J 260785

YELLOW TAB SECTIONS

Each yellow tab section contains information on:

Groups	
05	Theory of Operation
10	System Operational Checks
15	System Diagnostic Information
20	Adjustments
25	Tests



018;T5933AD T82;FLPD K 260785

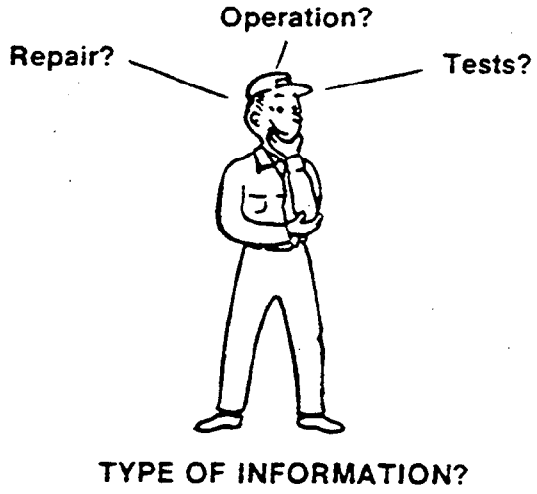
THREE-STEP PROCEDURE

Use the following three-step procedure to locate the desired information.

1. Determine the type of information you need. Is it repair, operation, or tests?

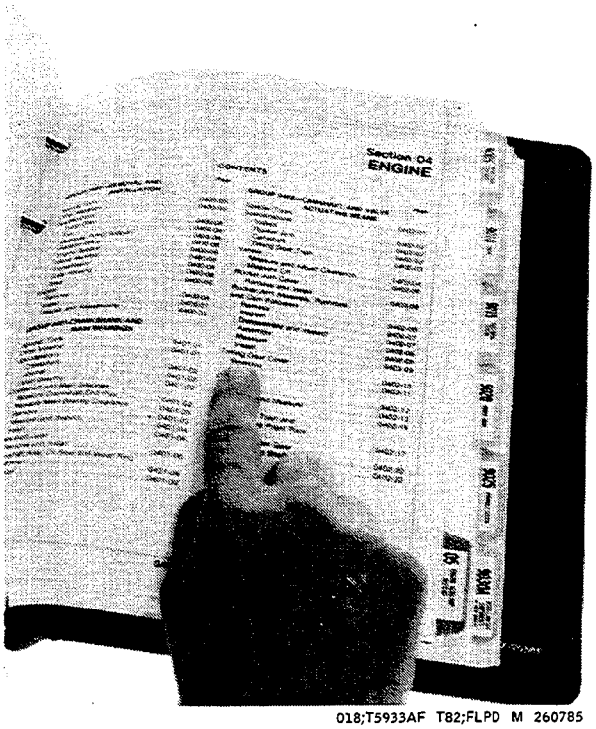
2. Go to the appropriate section tab:

   Gray for Repair
   Yellow for Operation or Tests



018;T5940AT T82;FLPD L 260785

3. Use the table of contents on the first page of the section to locate the information.



018;T5933AF T82;FLPD M 260785

CLEAN TRASH FROM MACHINE

Wait until engine has cooled before removing trash from areas such as engine, radiator, batteries, hydraulic lines, fuel tank, and operator's station.

Temperature in engine compartment may go up immediately after engine is stopped. BE ON GUARD FOR FIRES DURING THIS PERIOD.

Open side shields to cool the engine faster.

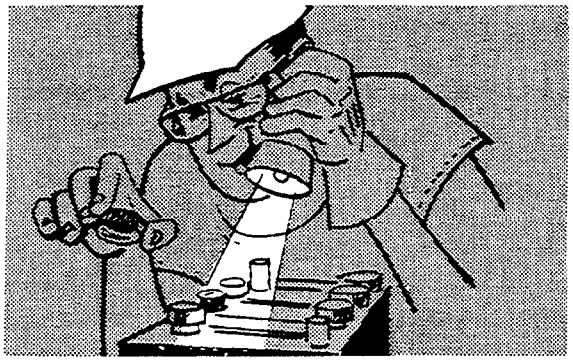
018;T86512 T82;FLSA D 010485

PREVENT BATTERY EXPLOSIONS

Battery gas can explode. Keep sparks and flames away from batteries. Use a flashlight to check battery electrolyte level.

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

Always remove grounded (-) battery clamp first and replace it last.



AB6;TS181 053;EXPLO 180485

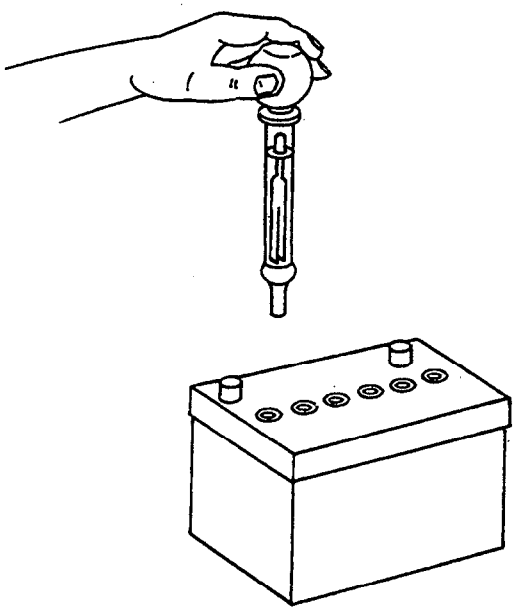
AVOID ACID BURNS

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.

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;TS182 053;ACID 180485

HANDLE STARTING FLUID SAFELY

Starting fluid is highly flammable. DO NOT incinerate or puncture a starting fluid container. Store starting fluid containers away from high temperature areas.

018;T6089AU T82;FLSA G 010485

WEAR PROTECTIVE CLOTHING

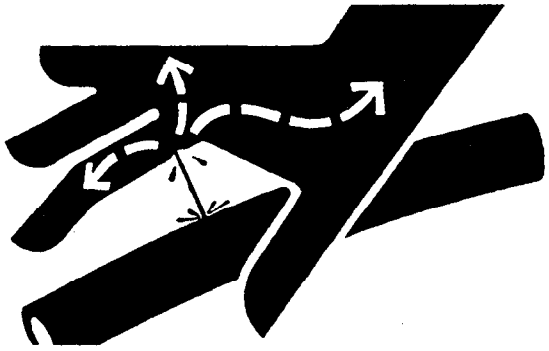
Wear fairly tight clothing . . . and safety equipment.

018;T85056 T82;FLSA AA 130685

AVOID HIGH-PRESSURE FLUIDS

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 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.

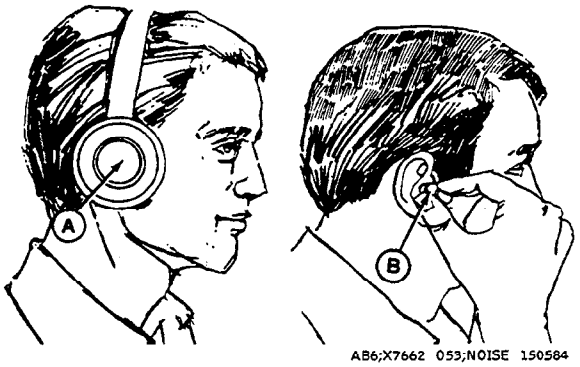


AB6;X9811 053;FLUID 010586

PROTECT AGAINST NOISE

Prolonged exposure to loud noise can cause impairment or loss of hearing.

Wear a suitable hearing protective device such as earmuffs (A) or earplugs (B) to protect against objectionable uncomfortable loud noises.



AB6;X7662 053;NOISE 150584

UNDERSTAND MACHINE OPERATION, SERVICE

Allow only qualified people to operate and service the machine.

Learn the location and purpose of all controls, instruments, indicators, and labels.

Be sure you understand a service procedure before you work on the machine.

Unauthorized modifications to the machine may impair the function and/or safety and affect machine life.

ALWAYS USE TWO PEOPLE when making checks with the engine running——the operator at the controls, able to see the person doing the checking.

Keep hands away from moving parts.

018;T6073AO T82;FLSA H 010485

PREVENT MACHINE RUNAWAY

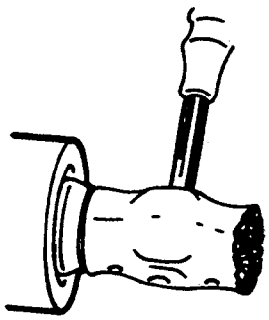
Avoid possible injury or death from machine runaway.

Do not start engine by shorting across starter terminals. Machine will start in gear and will move if normal circuitry is bypassed.

Never start engine while standing on ground. Start engine only from operator's seat, with gear shift lever in neutral, neutral lock latch in place, and park brake applied.

AB6;TS177 T82;FLSA I 010485

PROTECT AGAINST FLYING DEBRIS



When you drive connecting pins in or out, guard against injury from flying pieces of metal or debris; wear goggles or safety glasses.

018;T6073AP T82;FLSA AB 130685

SUPPORT RAISED EQUIPMENT

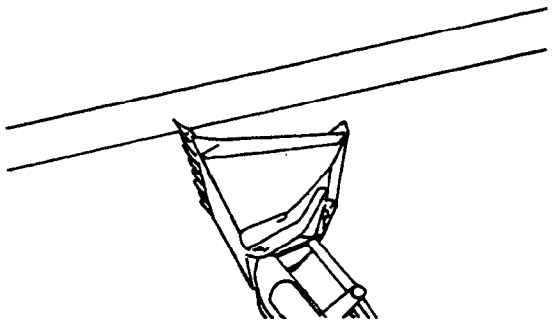
Raised equipment must be supported before working under it.

If a support is not available, lower equipment to the ground.

T82;FLSA O 010485

AVOID POWER LINES

Keep away from power lines. Serious injury or death may result. Never move any part of the machine or load closer to power line than 10 ft (3 m) plus twice the line insulator length.



018;T6133AK T82;FLSA Q 100685

OBSERVE SERVICE PRECAUTIONS

Keep ALL equipment free of dirt and oil.

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

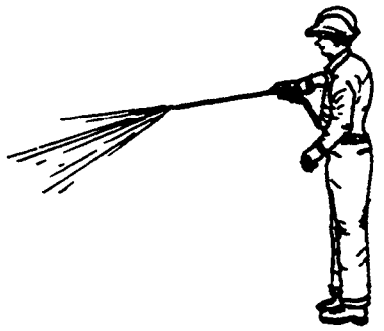
DO NOT remove the radiator cap unless the engine is cool. Then loosen the cap slowly to the stop. Release all pressure before you remove the cap.

Check the exhaust system regularly for leaks.

Release hydraulic pressure before you work on the hydraulic system.

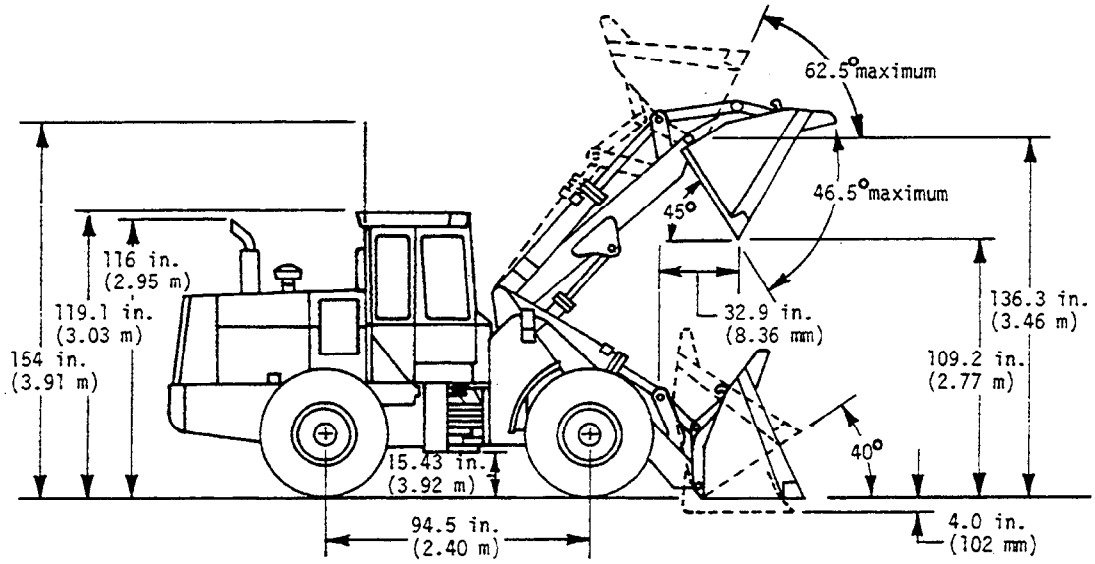
Disconnect negative (−) battery cable.

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



018;TS813AM T82;FLPD P 130886

444D LOADER



Engine:
- John Deere 6-cylinder turbocharger diesel ..... 90 SAE hp (67 kw)
- Bore and stroke
  - Pin (—511476) ..... 4.02 x 4.33 in. (102 x 110 mm)
  - Pin (511477—) ..... 4.19 x 4.33 in. (106 x 110 mm)
- Piston displacement
  - Pin (—511476) ..... 3.29 cu. in. (5.392 L)
  - Pin (511477—) ..... 3.59 cu. in. (5.833 L)
- Lubrication ..... Pressure system with full-flow filter
- Cooling ..... Pressurized with thermostat and controlled bypass
- Fan ..... Blower
- Dual-stage air cleaner with restriction indicator ..... Dry
- Electrical system ..... 12-volt with alternator
- Batteries (one 12-volt)
  - Cold cranking capacity at 0°F (−18°C) ..... 625 amps
  - Reserve capacity ..... 170 min. ea.
- Alternator: standard ..... 42 amps
  - optional with cab ..... 90 amps

Differentials:
- Front and rear ..... Standard
- Front hydraulic differential lock with capture circuit ..... Optional
- Front No Spin ..... Optional

Drive Axles:
- Inboard-mounted planetary gears to each wheel.
- Front axle fixed.
- Rear axle oscillates 22° total (15.6 in (396 mm) vertical travel at center of tire).

018;T6140AC 05T;115 C72 140886

Torque Converter ..... Twin-turbine

Transmission ..... Power shift planetary

Forward Speeds	mph	km/h
1	0—2.9	0—4.7
2	2.9—6.5	4.7—10.5
3	0—11.0	0—17.7
4	11.0—24.6	17.7—39.6
Reverse Speeds		
1	0—3.9	0—6.3
2	3.9—8.8	6.3—14.2

NOTE: Shift from 1st to 2nd and 3rd to 4th is automatic.

Brakes:

Service:

Power-actuated, 4-wheel, inboard-mounted, wet-disk.
Foot-operated by either pedal.
Left pedal also disconnects transmission.
External inspection.
Low brake pressure warning light and buzzer.

Park:

Expanding shoe on transmission output shaft, foot-operated.
Transmission disconnects with park brake applied.
Warning light on instrument panel.

Steering:

Turning radius ..... 13 ft 10 in. (4.22 m) measure to center line of outside tire
Secondary steering—if equipped: Meets the requirements of SAE J53.

Main Hydraulic and Steering System @ fast idle:

Hydraulic System Relief	2250—2450 psi (15 514—15 895 kPa) (155—159 bar)
Boom Raise Circuit Relief	2500—2625 psi (17 238—18 005 kPa) (173—180 bar)
Bucket Rollback Circuit Relief	2500—2625 psi (17 238—18 005 kPa) (173—180 bar)
Bucket Dump Circuit Relief	850—1050 psi (5 861—7 240 kPa) (59—72 bar)
Clam Open Circuit Relief	2500—2625 psi (17 238—18 005 kPa) (173—180 bar)
Clam Close Circuit Relief	2500—2625 psi (17 238—18 005 kPa) (173—180 bar)
Maximum Steering System Pressure	2400—2500 psi (16 550—17 240 kPa) (165—172 bar)
Steering Crossover Relief Valve Pressure	3000—3200 psi (20 685—22 060 kPa) (207—220 bar)

Brake and Differential Lock Hydraulic System:

Unloading Valve Pressure Setting (Closing)	1800 psi (12 411 kPa) (124 bar)
(Opening)	2300 psi (15 859 kPa) (159 bar)
Differential Lock Circuit Pressure	600 psi (4 137 kPa) (41 bar)
Transmission System Pressure	125—170 psi (862—1 172 kPa) (8.6—11.7 bar)

Maximum lift capacity with standard equipment

Maximum height	7,310 lb (3320 kg)
Ground level	18,790 lb (8525 kg)

05T;115 C73 140886

Tires:	Cold Tire Inflation Pressure
13.0—24, 8 PR, G2	50 psi (345 kPa) (3.5 bar)
15.5—25, 8 PR, L2	45 psi (310 kPa) (3.1 bar)
15.5—25, 12 PR, L2	55 psi (380 kPa) (3.8 bar)
15.5—25, 1 STAR, XRAT	front 50 psi (340 kPa) (3.4 bar)
	rear 30 psi (210 kPa) (2.1 bar)
17.5—25, 12 PR, L2	50 psi (340 kPa) (3.4 bar)
*18.4—26, 10 PR, LS2	30 psi (210 kPa) (2.1 bar)
*23.1—26, 10 PR, LS2	25 psi (170 kPa) (1.7 bar)

**Use with log loader*

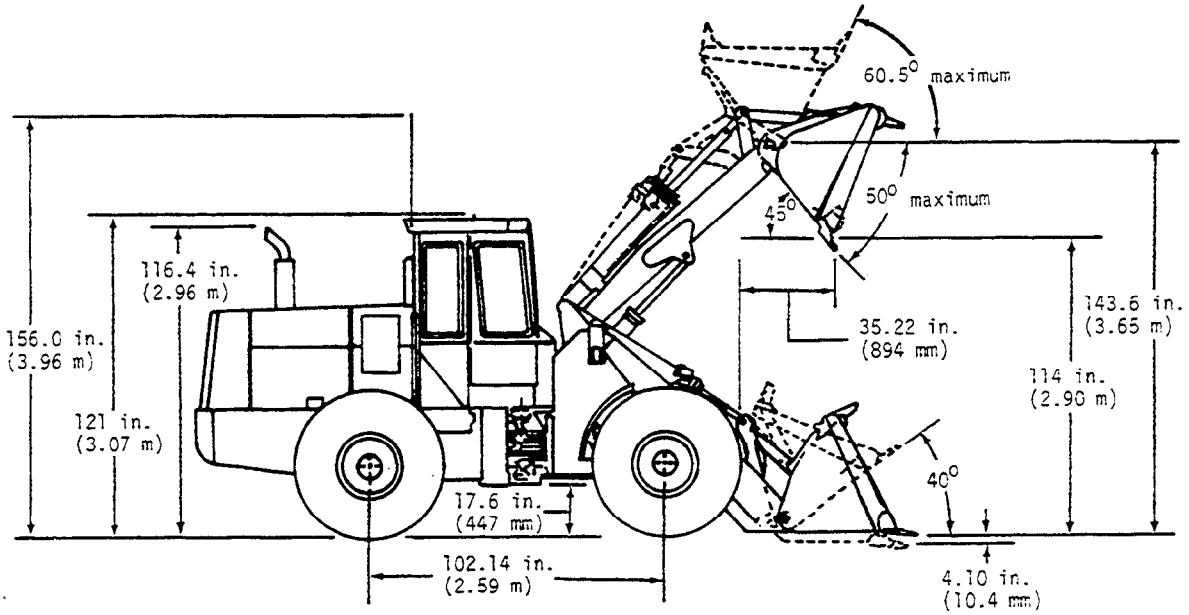
Wheel Treads:
Front and rear ..... 70.0 in. (1.78 m)

Refill Capacities:	U.S.	Metric
Cooling System	24 qt.	23 L
Fuel tank	50 gal.	189 L
Engine crankcase and filter	12 qt.	11.4 L
Transmission case and filter	8.5 gal	32.2 L
Front and rear differential	17 qt.	16 L
Hydraulic reservoir	64 qt.	61 L
Weight:	19, 223 lb	8727 kg

NOTE: Specifications and design subject to change without notice. Wherever applicable, specifications are in accordance with ICED and SAE standards. Except where otherwise noted, specifications are based on a machine equipped with all standard equipment, 15.5—25, 8 PR loader-tread tires with 940 lb (426 kg) $CaC1_2$ solution in rear tires, ROPS cab, full fuel tank, and 175 lb (79 kg) operator.

T82;FLSP H 140685

544D LOADER



Engine:

John Deere 6-cylinder turbocharger diesel	115 SAE hp (86 kw)
Bore and stroke	4.19 x 5 in. (106.5 x 127 mm)
Piston displacement	414 cu. in. (6.785 L)
Lubrication	Pressure system with full-flow filter
Cooling	Pressurized with thermostat and controlled bypass
Fan	Blower
Aspirated dual-stage air cleaner with restriction indicator	Dry
Electrical system	12-volt with alternator
Batteries (one 12-volt)	
Cold cranking capacity at 0°F (−18°C)	625 amps
Reserve capacity	170 min. ea.
Alternator: standard	42 amps
optional with cab	90 amps

Torque Converter	Twin-turbine
Transmission	Power shift planetary

Forward Speeds	mph	km/h
1	0—3.1	0—5.0
2	3.1—7.3	5.0—11.7
3	0—11.7	0—18.8
4	11.7—27.9	18.8—45.0
Reverse Speeds		
1	0—4.2	0—6.8
2	4.2—9.9	6.8—16.0

NOTE: Shift from 1st to 2nd and 3rd to 4th is automatic.

25A;T6140AD T82;FLPD S 310785

Differentials:
- Front and rear ..... Standard
- Front hydraulic differential lock with capture circuit ..... Optional
- Front No Spin ..... Optional

Drive Axles:
- Inboard-mounted planetary gears to each wheel.
- Front axle fixed.
- Rear axle oscillates 22° total (13.5 in (343 mm) vertical travel at center of tire).

Brakes:
- Service:
  - Power-actuated, 4-wheel, inboard-mounted, wet-disk.
  - Foot-operated by either pedal.
  - Left pedal also disconnects transmission.
  - External inspection.
  - Low brake pressure warning light and buzzer.
- Park:
  - Expanding shoe on transmission output shaft, foot-operated.
  - Transmission disconnects with park brake applied.
  - Warning light on instrument panel.

Steering:
- Turning radius ..... 14 ft 7 in. (4.44 m) measured to center line of outside tire
- Secondary steering—if equipped: Meets the requirements of SAE J53.

Main Hydraulic and Steering System:

Hydraulic System Relief	2625—1750 psi (18 099—18 960 kPa) (179—189 bar)
Boom Raise Circuit Relief	2875—3000 psi (19 823—20 680 kPa) (198—207 bar)
Bucket Rollback Circuit Relief	2875—3000 psi (19 823—20 680 kPa) (198—207 bar)
Bucket Dump Circuit Relief	1750—1950 psi (12 066—13 445 kPa) (119—134 bar)
Clam Open Circuit Relief	2875—3000 psi (19 823—20 680 kPa) (198—207 bar)
Clam Close Circuit Relief	2875—3000 psi (19 823—20 680 kPa) (198—207 bar)
Maximum Steering System Pressure	2400—2500 psi (16 550—17 240 kPa) (166—172 bar)
Steering Crossover Relief Valve Pressure	3000—3200 psi (20 685—22 060 kPa) (207—220 bar)

Brake and Differential Lock Hydraulic System:

Unloading Valve Pressure Setting (Closing)	1800 psi (12 411 kPa) (124 bar)
(Opening)	2300 psi (15 859 kPa) (159 bar)
Differential Lock Circuit Pressure	600 psi (4 137 kPa) (41 bar)
Transmission System Pressure	125—170 psi (862—1 172 kPa) (18.6—11.7 bar)

Maximum lift capacity with standard equipment
- Maximum height ..... 10,239 lb (4 654 kg)
- Ground level ..... 25,009 lb (11 368 kg)

T82;FLSP E 081185

Tires:	Cold Tire Inflation Pressure
14.0—24, 10 PR, G2	55 psi (380 kPa) (3.8 bar)
14.0—24, 12 PR, G2	65 psi (410 kPa) (4.1 bar)
17.5—25, 12 PR, L2	50 psi (345 kPa) (3.5 bar)
17.5—25, 12 PR, L3	50 psi (345 kPa) (3.5 bar)
17.5—25, 1 START, XRAT	front 50 psi (345 kPa) (3.5 bar)
	rear 30 psi (210 kPa) (2.1 bar)
20.5—25, 12 PR, L3	50 psi (345 kPa) (3.5 bar)
20.5—25, 12 PR, L3	50 psi (345 kPa) (3.5 bar)
*23.1—26, 10 PR, LS2	25 psi (170 kPa) (1.7 bar)
*28.1—26, 14 PR, LS2	30 psi (210 kPa) (2.1 bar)

**Use with feller buncher and log loader*

Wheel Treads:

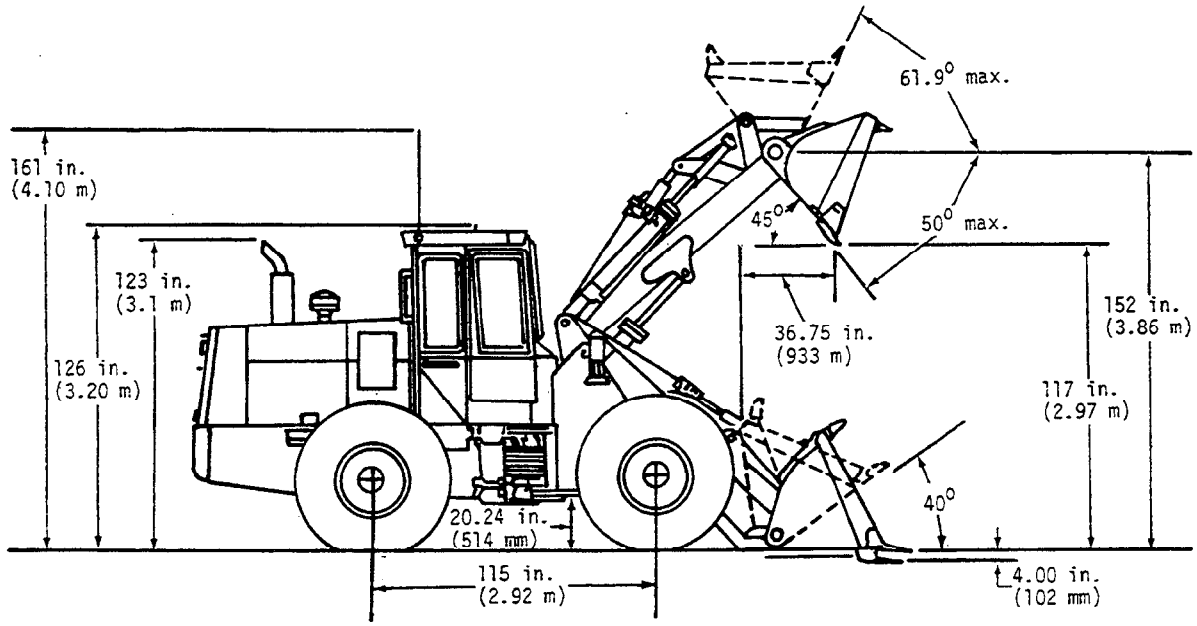
Front and rear	70.0 in. (1.78 m)
Front and rear w/20, 5—25 tires	80.0 in. (2.03 m)

Refill Capacities:	U.S.	Metric
Cooling System	24 qt.	23 L
Fuel tank	50 gal.	189 L
Engine crankcase and filter	20 qt.	19 L
Transmission case and filter	8.5 gal	32 L
Front differential	24 qt.	23 L
Rear differential	24 qt.	23 L
Hydraulic reservoir	64 qt.	61 L
Weight:	22, 665 lb	10 290 kg

NOTE: Specifications and design subject to change without notice. Wherever applicable, specifications are in accordance with ICED and SAE standards. Except where otherwise noted, specifications are based on a machine equipped with all standard equipment, 17.5—25, 12 PR, L2 tires with 1180 lb (535 kg) $CaC1_2$ solution in rear tires, ROPS cab, full fuel tank, and 175 lb (79 kg) operator.

T82;FLSP I 111185

644D LOADER



Engine:

John Deere 6-cylinder turbocharger diesel	155 SAE hp (116 kw)
Bore and stroke	4.56 x 4.75 in. (116 x 121 mm)
Piston displacement	466 cu. in. (7.636 L)
Lubrication	Pressure system with full-flow filter
Cooling	Pressurized with thermostat and controlled bypass
Fan	Blower
Dual-stage air cleaner with restriction indicator	Dry
Electrical system	12-volt with alternator
Batteries (two 12-volt)	
Cold cranking capacity at 0°F (−18°C)	625 amps
Reserve capacity	170 min. ea.
Alternator: standard	42 amps
optional with cab	90 amps
Torque Converter	Twin-turbine
Transmission	Power shift planetary

Forward Speeds	mph	km/h
1	0—3.3	0—5.3
2	3.3—7.1	5.3—11.4
3	0—12.8	0—20.6
4	12.8—27.3	20.6—43.9
Reverse Speeds		
1	0—3.8	0—6.1
2	3.8—8.2	6.1—13.2

NOTE: Shift from 1st to 2nd and 3rd to 4th is automatic.

018;T6140AE T82;FLPD T 310785

Differentials:
- Front and rear ..... Standard
- Front hydraulic differential lock with capture circuit ..... Optional
- Front No Spin ..... Optional

Drive Axles:
- Inboard-mounted planetary gears to each wheel.
- Front axle fixed.
- Rear axle oscillates 22° total (15.6 in (396 mm) vertical travel at center of tire).

Brakes:
- Service:
  - Power-actuated, 4-wheel, inboard-mounted, wet-disk.
  - Foot-operated by either pedal.
  - Left pedal also disconnects transmission.
  - External inspection.
  - Low brake pressure warning light and buzzer.
- Park:
  - Expanding shoe on transmission output shaft, foot-operated.
  - Transmission disconnects with park brake applied.
  - Warning light on instrument panel.

Steering:
- Turning radius ..... 16 ft 6 in. (5.03 m) measure to center line of outside tire
- Secondary steering—if equipped: Meets the requirements of SAE J53.

Main Hydraulic and Steering System:

Hydraulic System Relief	2625—2750 psi (18 099—18 960 kPa) (181—190 bar)
Boom Raise Circuit Relief	2875—3000 psi (19 823—20 680 kPa) (198—207 bar)
Bucket Rollback Circuit Relief	2875—3000 psi (19 823—20 680 kPa) (198—207 bar)
Bucket Dump Circuit Relief	1750—1950 psi (12 066—13 445 kPa) (121—134 bar)
Clam Open Circuit Relief	2875—3000 psi (19 823—20 680 kPa) (198—207 bar)
Clam Close Circuit Relief	2875—3000 psi (19 823—20 680 kPa) (198—207 bar)
Maximum Steering System Pressure	2400—2500 psi (16 550—17 240 kPa) (166—172 bar)
Steering Crossover Relief Valve Pressure	3000—3200 psi (20 685—22 060 kPa) (207—220 bar)

Brake and Differential Lock Hydraulic System:

Unloading Valve Pressure Setting (Closing)	1800 psi (12 411 kPa)(124 bar)
(Opening)	2300 psi (15 859 kPa) (159 bar)
Differential Lock Circuit Pressure	600 psi (4 137 kPa) (41 bar)
Transmission System Pressure	125—170 psi (862—1 172 kPa) (8.6—11.7 bar)

Maximum lift capacity with standard equipment
- Maximum height ..... 14,682 lb (6 674 kg)
- Ground level ..... 31,325 lb (14 239 kg)

T82;FLSP G 081185

Tires:	Cold Tire Inflation Pressure
16.0—24, 12 PR, G2	50 psi (345 kPa) (3.5 bar)
17.5—25, 12 PR, L2	60 psi (410 kPa) (4.1 bar)
29.5—25, 12 PR, L2	50 psi (345 kPa) (3.5 bar)
20.5—25, 12 PR, L-3	50 psi (345 kPa) (3.5 bar)
20.5—25, 16 PR, L3	60 psi (410 kPa) (4.1 bar)
20.5—25, 1 STAR, XRAT	front 50 psi (345 kPa) (3.5 bar)
	rear 30 psi (210 kPa) (2.1 bar)
23.5—20, 12 PR, L3	45 psi (310 kPa) (3.1 bar)
*28.1—26, 14 PR, LS2	30 psi (210 kPa) (2.1 bar)

**Use with log loader*

Wheel Treads:

Front and rear	80.0 in. (2.03 m)
Front and rear w/23.5—25 tires	84.8 in. (2.15 m)

Refill Capacities:	U.S.	Metric
Cooling System	29 qt.	28 L
Fuel tank	67 gal.	254 L
Engine crankcase and filter	20 qt.	19 L
Transmission case and filter	8.5 gal	32 L
Front differential	24 qt.	23 L
Rear differential	24 qt.	23 L
Hydraulic reservoir	100 qt.	95 L
Weight:	29, 320 lb	13 311 kg

NOTE: Specifications and design subject to change without notice. Wherever applicable, specifications are in accordance with ICED and SAE standards. Except where otherwise noted, specifications are based on a machine equipped with all standard equipment, 20.5—25, 12 PR, L2 loader-tread tires w 1820 lb (826 kg) $CaC1_2$ solution in rear tires, ROPS cab, full fuel tank, and 175 lb (79 kg) operator.

T82;FLSP J 111185

SERVICE EQUIPMENT AND TOOLS

NOTE: Order tools from your SERVICE-GARD™ Catalog. Some tools may be available from a local supplier.

Name	Use
Heavy Duty Wheel Lift	Remove and install wheels.
Shop Stand	Support the unit while removing wheels.

T47;0110 K529 170985

SPECIFICATIONS

Item	Measurement	Specification
Cap Screw	Torque	410 ± 40 N·m (300 ± 30 lb-ft)

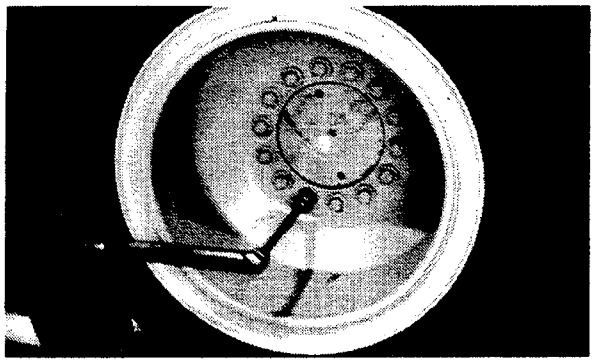
T47;0110 K530 170985

REMOVE WHEEL

NOTE: Procedures are the same for all units.

CAUTION: Loader wheels are heavy. Use suitable equipment when handling wheels to avoid injury.

1. Loosen cap screws before lifting unit off ground.



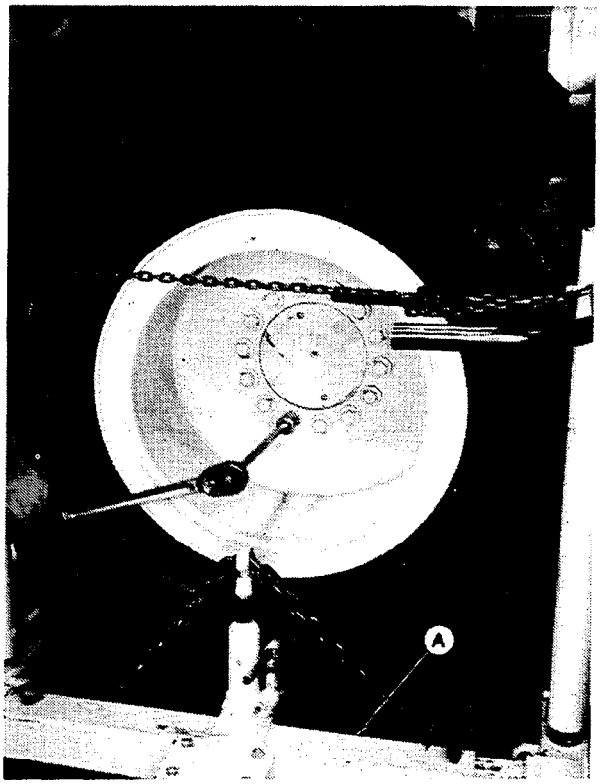
1AG;T6144AY T47;0110 K531 011085

2. Use a service jack or a hoist of at least 9000 kg (10-ton) capacity to lift unit until the wheel is off the ground.

3. Put a shop stand of at least 9000 kg (10-ton) capacity under the axle housing.

4. Put a wheel lift (A) under the raised wheel. Fasten the safety chain, from wheel lift, around the upper portion of tire.

5. Remove cap screws. Pull wheel assembly away from flanged axle.



1AG;T6144AU T47;0110 K532 011085

REMOVE TIRE

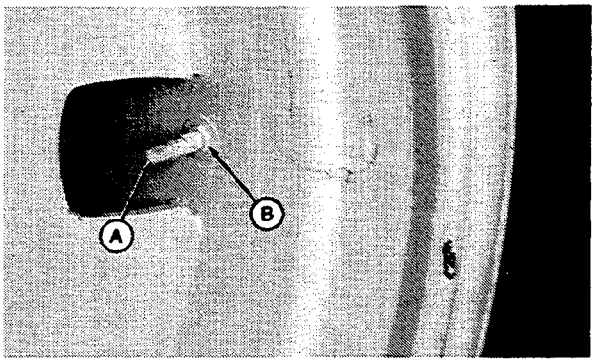
1. The tire can be removed without removing the wheel from the loader. See the John Deere Off-The-Road Tire Maintenance Manual to remove the tire from the wheel.

CAUTION: Failure to follow proper procedures when demounting a tire from a wheel or rim can produce an explosion which may result in serious bodily injury. DO NOT attempt to demount a tire unless you have the proper equipment and experience to perform the job safely. Have it done by a qualified tire repair service.

T47;0110 K533 170985

2. Before attempting any demounting operation, always completely deflate tire by removing valve core (A) from valve. Check the valve stem by running a probe through it, making sure the valve stem is not plugged. Remove valve nut (B).

3. Inspect all parts for damage; replace parts as necessary.



1AG;T6145AD T47;0110 K534 170985

INSTALL TIRE

CAUTION: Failure to follow proper procedures when demounting a tire from a wheel or rim can produce an explosion which may result in serious bodily injury. DO NOT attempt to demount a tire unless you have the proper equipment and experience to perform the job safely. Have it done by a qualified tire repair service.

NOTE: See the John Deere Off-The-Road Tire Maintenance Manual to mount the tire on the wheel.

1. Make sure all parts are clean and free from rust or grease before assembly.

T47;0110 K535 170985

2. To prevent slipping of the wheel under load, the inside and outside of wheel (B) must be free of paint, rust, oil, grease, dirt or other foreign material before installation.

3. Install valve stem (D) in rim base and tighten valve core housing finger tight.

4. Put John Deere Non-Soap Lubricating Grease, or an equivalent, on threads of pipe cap (if equipped). Install pipe cap on valve stem shield.

CAUTION: Serious bodily injury can occur from explosion when mounting and inflating tires if safe procedures are not followed.

5. Before mounting tire on rim, add soap lubricant to beads of the tire and O-ring (C).

6. Before adding air to tire, make sure the back ring (A) fits tight against the base all around the circumference.

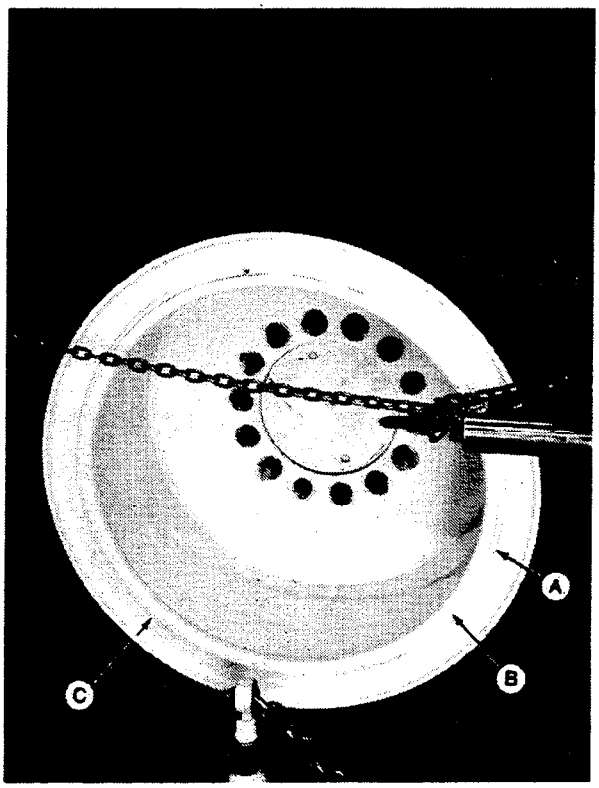
7. Clear the area of all persons.

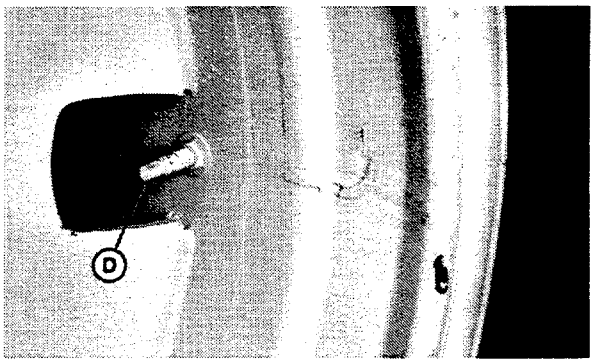
8. Use a pressure-regulating valve with clip-on chuck and extension hose long enough to allow you to stand well to one side and NOT in front of the assembly while inflating.

9. Use only recommended air pressure. Pressure over this limit can cause explosion.

10. Add air until side flange of tire slides out against the back ring.

11. Before completely inflating tire, again make certain the back ring is in its proper groove completely around the rim.





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444D

Tire Size	Type	Ply Rating	Cold Tire Inflation Pressure Min psi (kPa)(bar)	Normal psi (kPa)
13.0 x 24.0	G2	8	40 (280) (2.8)	50 (340) (3.5)
15.5 x 25.0	L2	8	40 (280) (2.8)	45 (310) (3.1)
15.5 x 25.0	L2	12	45 (310) (3.1)	55 (380) (3.8)
15.5 x 25.0	XRAT	(1) STAR	front 50 (340) (3.5)	50 (340) (3.5)
			rear 30 (210) (2.1)	30 (210) (2.1)
17.5 x 25.0	L2	12	40 (280) (2.8)	50 (340) (3.5)
*18.4 x 26.0	LS2	10	30 (210) (2.1)	30 (210) (2.1)
*23.1 x 26.0	LS2	10	25 (170) (1.7)	25 (170) (1.7)

**Use with log loader*

T47;0110 K537 170985

544D

Tire Size	Type	Ply Rating	Cold Tire Inflation Pressure Min psi (kPa)(bar)	Normal psi (kPa)
14.0 x 24.0	G2	10	50 (340) (3.5)	55 (380) (3.8)
14.0 x 24.0	G2	12	50 (340) (3.5)	60 (410) (4.1)
17.5 x 25.0	L2	12	40 (280) (2.8)	50 (340) (3.5)
17.5 x 25.0	L3	12	40 (280) (2.8)	50 (340) (3.5)
17.5 x 25.0	XRAT	(1) STAR	front 50 (340) (3.5)	50 (340) (3.5)
			rear 30 (210) (2.1)	30 (210) (2.1)
20.5 x 25.0	L2	12	40 (280) (2.8)	50 (340) (3.5)
20.5 x 25.0	L3	12	40 (280) (2.8)	50 (340) (3.5)
*23.1 x 26	LS2	10	25 (170) (1.7)	25 (170) (1.7)
*28.1 x 26	LS2	14	30 (210) (2.1)	30 (210) (2.1)

**Use with feller buncher and log loader.*

T47;0110 K540 180985

644D

Tire Size	Type	Ply Rating	Cold Tire Inflation Pressure Min psi (kPa)(bar)	Normal psi (kPa) (bar)
16.0 x 24	G2	12	45 (310) (3.1)	50 (340) (3.5)
17.5 x 25	L2	12	50 (340) (3.5)	60 (410) (4.1)
20.5 x 25	L2	12	40 (280) (2.8)	50 (340) (3.5)
20.5 x 25	L3	12	40 (280) (2.8)	50 (340) (3.5)
20.5 x 25	L3	16	50 (340) (3.5)	60 (410) (4.1)
20.5 x 25	XRAT	(1) STAR	front 50 (340) (3.5)	50 (340) (3.5)
			rear 30 (210) (2.1)	30 (210) (2.1)
23.5 x 25	L3	20	40 (280) (2.8)	45 (310) (3.1)
*28.1 x 26	LS2	14	30 (210) (2.1)	30 (210) (2.1)

**Use with log loader.*

T47;0110 K541 180985

12. Check air pressure in all tires with an accurate gauge having 7 kPa (0.1 bar) (1 psi) graduations. Be sure that tire pressures are equal for all four tires where applicable.

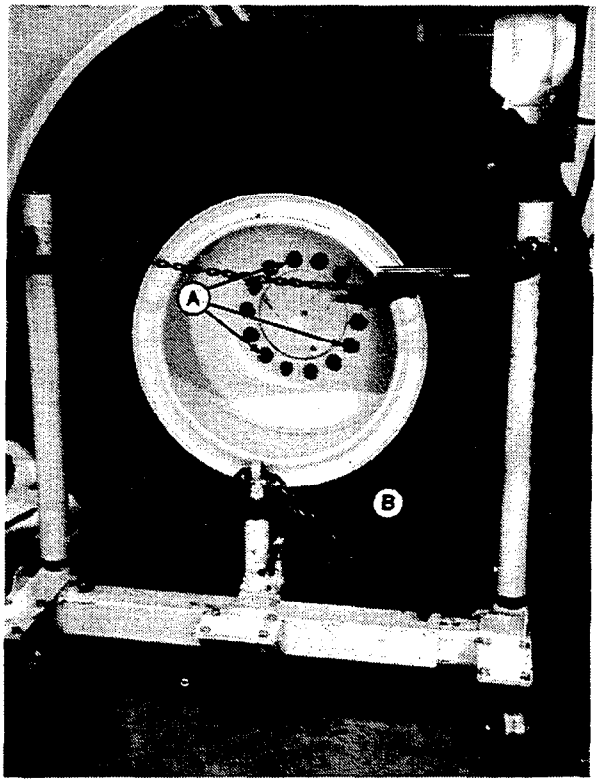
T47;0110 K542 180985

INSTALL LOADER WHEEL ASSEMBLY

1. Thoroughly clean the cap screws, washers and the tapped holes in the flanged axle. Use compressed air to dry all parts and tapped holes.

2. Install special studs (A) in the flanged axle. The special studs are used as guides for installing loader wheels.

3. Use a wheel lift (B) to install the wheel.



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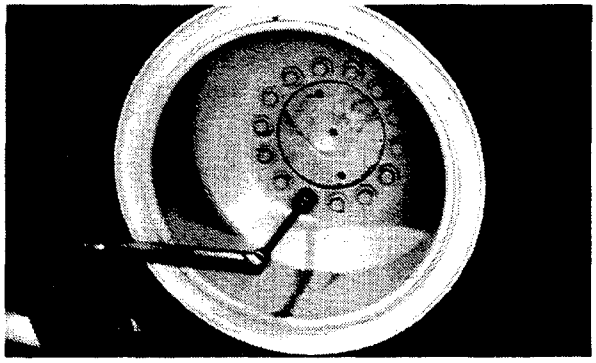
4. Install and tighten cap screws to 203 ± 20 N·m (150 ± 15 lb-ft).

5. Lower the loader to the ground.

IMPORTANT: If a power wrench is used, be sure that the cap screws are engaged to prevent stripping. Run the wrench slowly to prevent thread damage.

6. Cross tighten the cap screws to 410 ± 40 N·m (300 ± 30 lb-ft).



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Section 02
AXLES AND SUSPENSION SYSTEMS

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