Section 10

GENERAL

CONTENTS OF THIS SECTION

GROUP 5 - SPECIFICATIONS Page
Machine Specifications 5-1

GROUP 10 - PREDELIVERY, DELIVERY, AND AFTER-SALES SERVICES
Predelivery Service 10-1
Delivery Service 10-3
After-Sales Service 10-4

GROUP 15 - TUNE-UP AND ADJUSTMENT
Preliminary Engine Testing 15-1
Engine Tune-Up 15-1
Engine Final Testing 15-3
Loader Adjustment 15-3

GROUP 20 - LUBRICATION Page
Lubrication Chart 20-1
Engine Lubricating Oil 20-2
Loader Hydraulic Oil 20-2
Transmission-Hydraulic Oil 20-2

GROUP 25 - LOADER SEPARATION
Separating Loader and Engine Frames 25-1
Removing Engine 25-2
Removing Transmission 25-4
Removing Axle Housing and Differential Assemblies 25-5
Removing Hydraulic Oil Reservoir, Battery Box, and Canopy 25-7

Group 5
SPECIFICATIONS

ENGINE	JD544	JD544-A
Flywheel horsepower at 2500 rpm	94	94
Number of cylinders	6	6
Bore and stroke	3.86x4.33 in.	4.02x4.33 in.
Displacement	303 cu. in.	329 cu. in.
Compression ratio	16.3 to 1	16.2 to 1
Firing order	1-5-3-6-2-4	1-5-3-6-2-4
Intake valve clearance	0.014 in.	0.014 in.
Exhaust valve clearance	0.018 in.	0.018 in.
Slow idle	700 rpm	700 rpm
Fast idle	2650 rpm	2650 rpm
Governed speed range	700 to 2650 rpm	700 to 2650 rpm

ELECTRICAL SYSTEM	
Battery voltage (nominal)	12 volts
Battery specific gravity at full charge (corrected to 80° F.)	1.260 ±0.010
Battery terminal grounded	Negative
Alternator regulation	Voltage Regulator

TRANSMISSION	
Make	Allison
Type	Torque converter and planetary gear
Converter oil pump	Input driven, gear type
Transmission clutches	Multi-disk, hydraulically actuated, spring released, oil cooled, self-adjusting type

Litho in U.S.A.

PREVIEW - YOUFIXTHIS.COM
Download full manual at youfixthis.com

Group 25
LOADER SEPARATION

SEPARATING LOADER AND ENGINE FRAMES

Disconnect battery ground strap. Operate controls to release hydraulic pressure from loader hydraulic system and steering and brake hydraulic system.

Remove plate on top of loader oil reservoir and disconnect bucket return-to-dig oil tube from loader control valve.

Support front and rear sections of loader and engine frames with heavy-duty stands to prevent frames from pivoting. Frames should be supported as evenly as possible to facilitate installation.

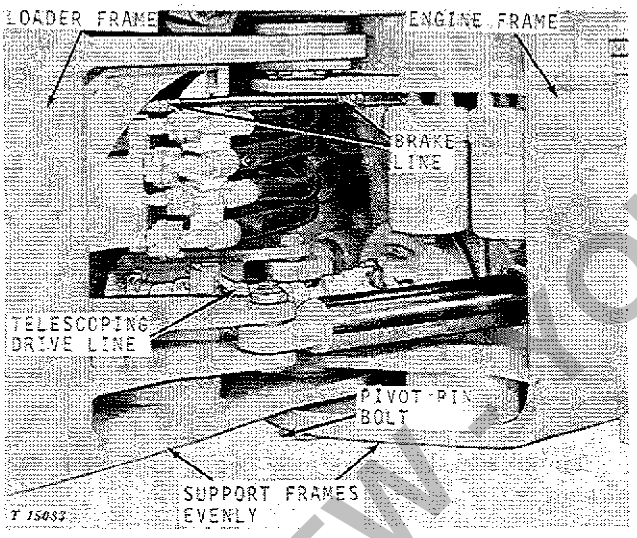


Fig. 1–Separating Frames–Lower Pivot Points

Refer to Figures 1 and 2 and perform the following steps:

1. Disconnect loader hoses, telescoping drive shaft, front lights, and front brake oil line.
2. Remove steering cylinder pivot pins. Keep washers and beveled spacers together for installation.

Do not damage threads on top of pivot pins while driving them out.

3. Remove cap screw and grease fitting from lower pivot pin and remove pin.
4. Remove the operator's platform.

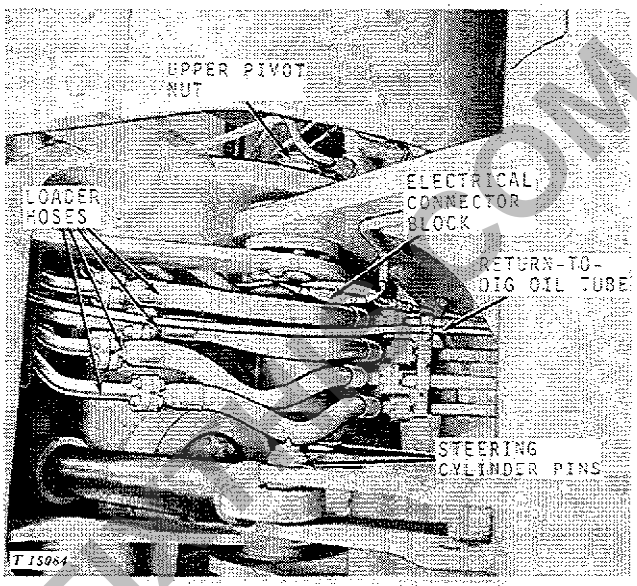


Fig. 2–Separating Frames–Upper Pivot Points

5. Remove upper pivot pin.
6. Attach a hoist to the loader frame and roll it away from the engine frame.

JOINING LOADER AND ENGINE FRAMES

CAUTION: Keep support stands under front and rear of loader and engine frames until installation is completed.

With frame pivot points aligned, install pivot pins. Secure upper pivot pin with plate and large nut and tighten to specified torque. See Section 80, Group 5 for checking upper hinge ball-rolling torque.

Install cap screw through bottom of lower pivot pin and secure with self-locking nut. Install grease fitting.

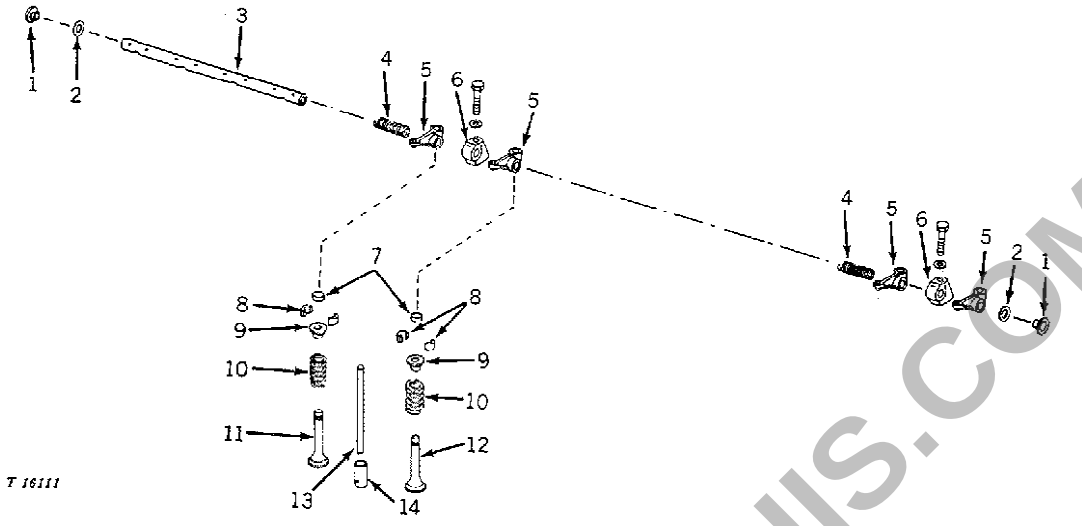
Secure steering cylinders to loader frame with pins and washers. Position spacers on top of self-aligning bushing with beveled side of spacer against bushing. Insert pivot pin (threaded end up) and secure with washer and nut. Tighten nut to specifications. Install operator's platform.

Connect telescoping drive shaft. Connect loader hoses and bucket return-to-dig oil tube.

Connect front lights and brake oil line.

Litho in U.S.A.

PREVIEW ONLY
Download full manual at youfixthis.com



1—Plug (2 used)
2—Washer (2 used)
3—Rocker Arm Shaft
4—Spring (5 used)
5—Rocker Arm with Adjusting Screw (12 used)
6—Bracket (6 used)
7—Valve Stem Caps (12 used)
8—Keepers (24 used)
9—Valve Spring Cap (12 used)
10—Spring (12 used)
11—Intake Valve (6 used)
12—Exhaust Valve (6 used)
13—Push Rod (12 used)
14—Cam Follower (12 used)

Fig. 1-Rocker Arm Assembly

Measure inside diameter of valve guides. Valves are available with standard size or oversize stems.

Valve guides must be precision reamed to match oversized valves. Make sure valves fit freely in guides.

Badly worn valve guides should be resized by knurling. Use knurling tool D20002WI exactly as recommended by the manufacturer.

Replace valve stem caps if worn or damaged.

Inspecting Valve Springs

Check compression strength of springs.

Inspecting Rocker Arm Assembly

Make sure that rocker arm oil holes are not plugged.

If ends of arms are worn, resurface them.

Thoroughly clean holes in rocker arm mounting brackets. This is especially important for the rear bracket, because oil is fed to the rocker arm shaft through this hole.

If a failed valve has been replaced, also replace the rocker arm and push rod for that valve.

Assembly

Rocker Arm Assembly

Assemble parts to rocker arm shaft in sequence that they were removed (Fig. 1).

Oil hole in rocker arm shaft to shaft support must face downward when assembly is installed on cylinder head.

Apply John Deere Valve Stem Lubricant (AR44402) to valve stems and install valves in valve guides. Work them back and forth to make sure they slip through the ports easily and seat properly.

Litho in U.S.A.

PREVIEW - YOUFIXTHIS.COM
Download full manual at youfixthis.com

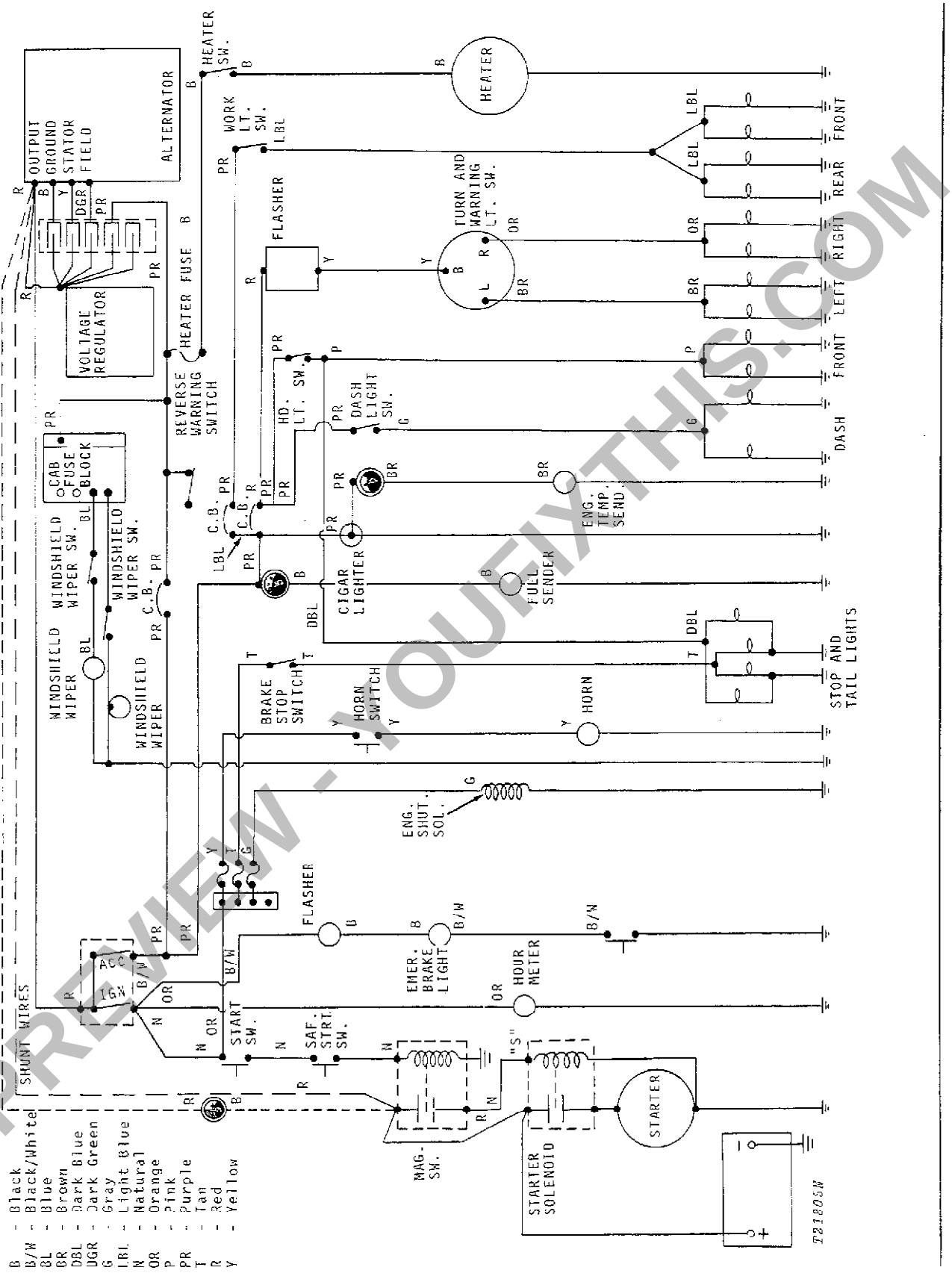


Fig. 1–Electrical Schematic (JD544)

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Moving the selector valve a second notch rightward will close off oil to the low-range line and allow it to exhaust. At the same time, oil will charge the high-range line and apply the clutch. This condition provides high-range operation.

Moving the selector valve one notch left of neutral will charge the reverse line and apply the reverse clutch.

TRIMMER (ACCUMULATOR) CIRCUIT

The trimmer regulates clutch-apply pressure during initial stages of clutch engagement, to obtain smooth operation. Normally, full main pressure holds the trimmer plug leftward against its spring and a shoulder in the valve body bore. This compresses the main-pressure regulator valve spring and gives maximum main pressure.

When any shift is made (or when any clutch is recharged after clutch cutoff operation) oil is required to charge the oncoming clutch. This oil must flow through the orifice directly below the main-pressure regulator valve, reducing oil pressure. This reduction in pressure allows the trimmer plug to move rightward. Force against the main-pressure regulator valve spring is reduced and main pressure is reduced.

When the clutch being charged is full, flow through the orifice stops and pressure below the orifice rises until it equals main pressure. This increased pressure acts against the right end of the trimmer plug, pushing the trimmer plug leftward. This compresses the main-pressure regulator valve spring and raises main pressure to maximum.

The check valve and orifice in parallel branches of the line connecting the selector valve bore to the trimmer plug bore insure rapid movement of the trimmer plug toward the right (check valve opens) and slower return of the trimmer plug leftward (check valve closes and orifice restricts flow). Therefore main pressure is rapidly reduced but slowly restored.

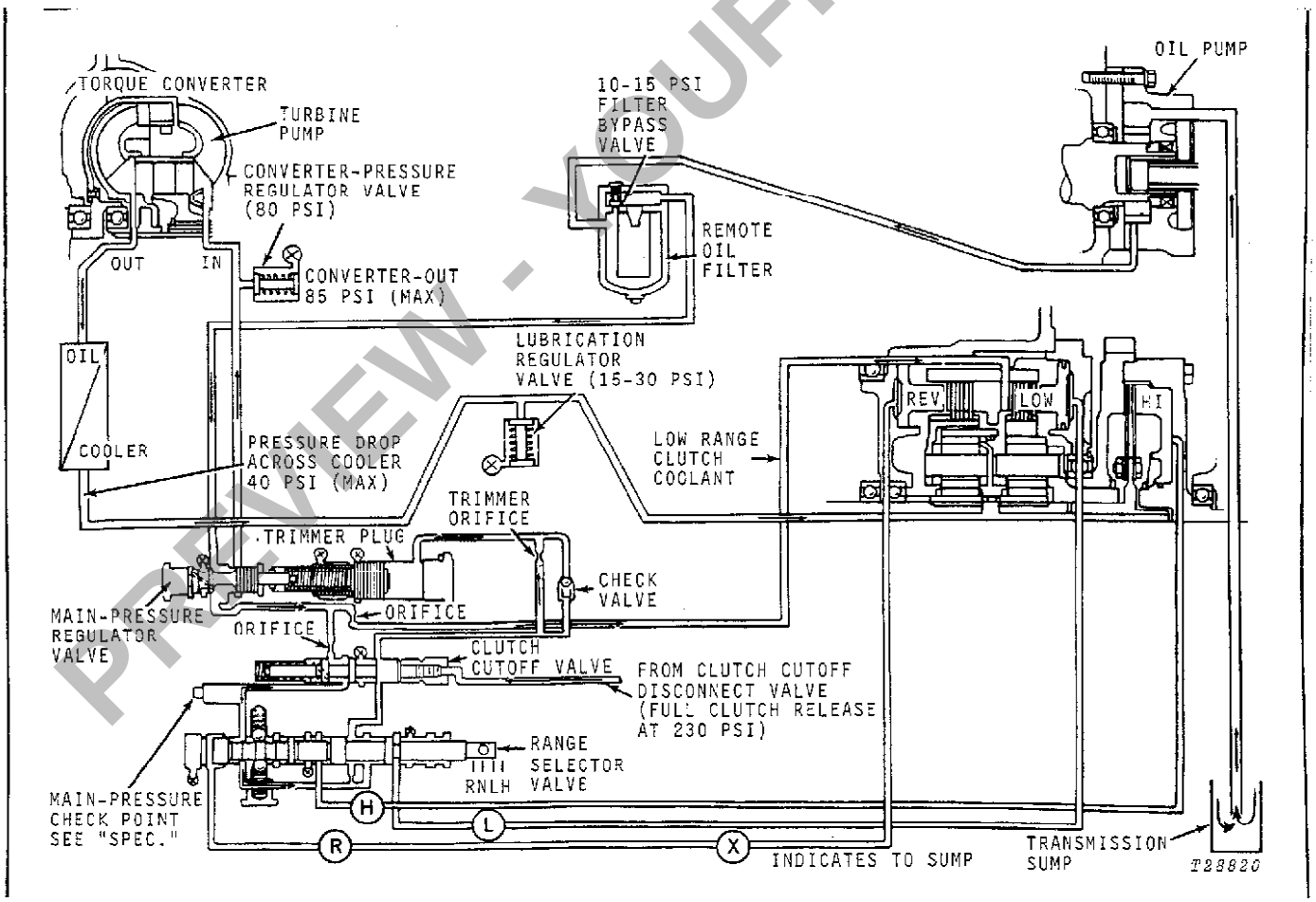


Fig. 7 – Transmission Hydraulic System

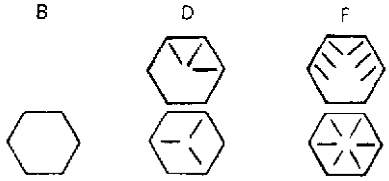
PREVIEW - YOUFIXTHIS.COM
Download full manual at youfixthis.com

SPECIFICATIONS

Rear Differential Oscillating End Play ..... 0.001 to 0.036 in.

STANDARD TORQUE CHART

RECOMMENDED TORQUE IN FT-LBS
COARSE AND FINE THREADS



Bolt Diameter	Plain Head	Three Dashes	Six Dashes
1/4	Not used	10	14
5/16	Not used	20	30
3/8	Not used	35	50
7/16	35	55	80
1/2	55	85	120
9/16	75	130	175
5/8	105	170	240
3/4	185	300	425
7/8	160	445	685
1	250	670	1030
1-1/8	330	910	1460
1-1/4	480	1250	2060

TX25227

The types of bolts and cap screws are identified by head markings as follows:

Plain head: regular machine bolts and cap screws.

3-dash head: tempered steel high-strength bolts and cap screws.

6-dash head: tempered steel extra high-strength bolts and cap screws.

The standard torque requirements chart is based on manufacturer's recommendations and should be observed in all cases where specific requirements are not mentioned.

TORQUE VALUES

Item	Torque (ft-lbs)
Upper Pivot Pin Nut *	1000
Steering Cylinder Pin Nut	300
Engine Brackets to Engine Frame	170
Engine Brackets to Flywheel Housing	85
Rear Pump Support to Engine Block	170
Transmission Brackets to Engine Frame	170
Oscillating Supports to Engine Frame	260
Wheel Attaching Hex. Nuts	380
Loader Frame to Axle Housing	445
Cross Bar to Battery Compartment	85
Cross Bar to Loader Reservoir	85
Canopy to Loader Frame Front Screws	445
Canopy to Loader Frame Rear Screws	300
Axle Housings to Differential Housing	180
Pump and Brake Drain Lines and Starting Fluid Adapter Line	5
Rear weight bumper hanger-to-engine frame	185
Side weight hanger-to-engine frame	200
First side weight-to-hanger nuts	200
Second side weight-to-first side weight	200

**Advise the operator to retighten pivot pin nut to 1000 ft-lbs annually or every 1000 hours of operation.*

Litho in U.S.A.

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

JD544 AND JD544-A LOADERS

TECHNICAL MANUAL

TM-1002 (Apr-74)

CONTENTS

Section 10—GENERAL
- Group 5 Specifications
- Group 10 Predelivery, Delivery, and After-Sales Services
- Group 15 Tune-up and Adjustment
- Group 20 Lubrication
- Group 25 Loader Separation

Section 20—ENGINE
- Group 5 Diagnosis
- Group 10 Basic Engine
- Group 15 Engine Lubrication
- Group 20 Speed Control Linkage
- Group 25 Engine Cooling
- Group 30 Specifications and Special Tools

Section 30—FUEL SYSTEM
- Group 5 Diagnosis
- Group 10 Tank, Filters, and Transfer Pump
- Group 15 Air Intake System
- Group 20 Fuel Injection Pump
  Fuel Injection Nozzles (see SM-2045)

Section 40—ELECTRICAL SYSTEM
- Group 5 Wiring Diagrams
- Group 10 Charging System
- Group 15 Starting Circuit
- Group 20 Gauges and Switches

Section 50—POWER TRAIN
- Group 5 Damper and Drive Shafts
- Group 10 Transmission Assembly
- Group 11 Disconnect Output Shaft
- Group 15 Axle Assemblies
- Group 20 Differentials

Section 60—POWER STEERING AND BRAKE SYSTEMS
- Group 5 General Information, Testing, and Diagnosis
- Group 10 Hydraulic Pump (3.01 cu. in.)
- Group 15 Filters, Cooler, and Accumulators
- Group 20 Steering System
- Group 25 Brake System

Section 70—HYDRAULIC SYSTEM
- Group 5 General Information, Testing, and Diagnosis
- Group 10 Reservoir and Filters
- Group 15 Hydraulic Pump
- Group 20 Control Valve
- Group 25 Return-to-Dig Valve
- Group 30 Backhoe Control Valve
- Group 35 Cylinders
- Group 40 Backhoe Swing Cylinder

Section 80—MISCELLANEOUS COMPONENTS
- Group 5 Frames
- Group 10 Buckets
- Group 15 Drott 4-in-1 Buckets
- Group 20 9305 Backhoe
- Group 25 Specifications and Special Tools

INDEX

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 IEMC standards.

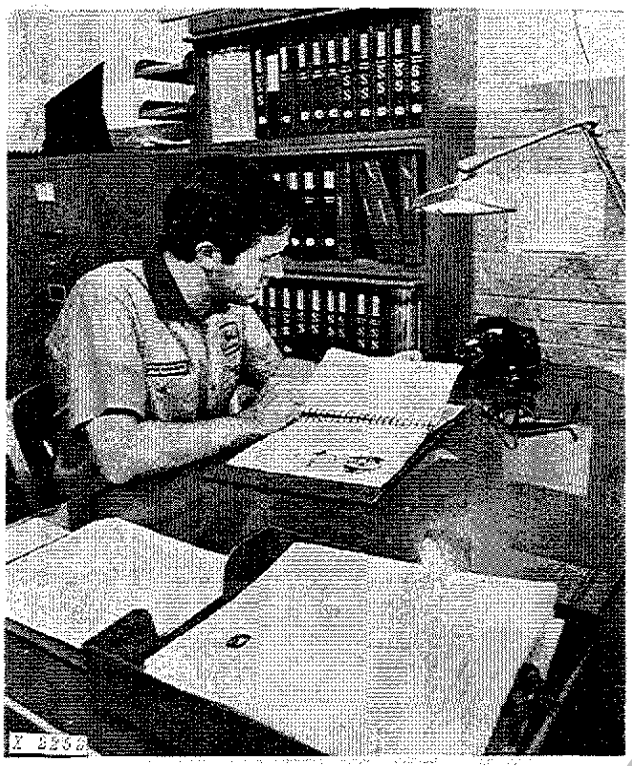
Litho in U.S.A.

Copyright 1967
DEERE & COMPANY
Moline, Illinois
All rights reserved

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

INTRODUCTION



Use FOS Manuals for Reference



Use Technical Manuals for Actual Service

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

- **FOS Manuals—for reference**
- **Technical Manuals—for actual service**

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

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 men and for reference by experienced men.

Technical Manuals are concise service guides for a *specific* machine. Technical Manuals are on-the-job guides containing only the vital information needed by a journeyman mechanic.

When a serviceman 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.

Some features of this technical manual:

- *Table of contents at front of manual*
- *Exploded views showing parts relationship*
- *Photos showing service techniques*
- *Specifications grouped for easy reference*

This technical manual was planned and written for you—a journeyman mechanic. 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.

Using the technical manual as a guide will reduce error and costly delay. It will also assure you the best in finished service work.

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

Litho in U.S.A.

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

BASIC ENGINE

SPECIFICATIONS—Continued

Item	New Part	Wear Tolerance
Main Bearings		
Bearings I.D.	3.1256-3.1276	0.0020
Bearing-to-Journal Clearance	0.0016-0.0046	0.0060 Max.
Crankshaft		
Main Journal O.D.	3.1230-3.1240	Round within 0.0030
Rod Journal O.D.	2.7480-2.7490	Round within 0.0030
End Play	0.0020-0.0080	0.0150 Max.
Journal Taper (per inch of journal length)	--------	0.0010
Journal Out-of-Roundness	--------	0.0030
Piston		
Clearance Between Liner and Piston at Bottom of Skirt (maximum) JD544	--------	0.006
JD544-A	--------	0.008
Ring Side Clearance		
Second Ring (maximum)	--------	0.006
Oil Ring (maximum)	--------	0.006
Connecting Rods and Bearings		
Bearing Insert Oil Clearance	0.0012-0.0040	0.0060
Pin Bushing (early units)	1.1886-1.1896	0.0020
(later units)	1.3760-1.3770	0.0020
Piston Pin O.D. (early units)	1.1875 to 1.1879	
(later units)	1.3750 ± 0.0002	
Bearing I.D.	2.7502-2.7520	None allowed
Pin Bushing Oil Clearance	0.0008-0.0022	0.0020
Bearing Bore I.D.	2.9000-2.9010	
Camshaft		
Journal O.D.	2.1997-2.2007	0.0010
Journal Clearance	0.0035-0.0055	0.0090 Max.
End Play	0.0025-0.0085	0.0150 Max.
Thrust Plate Thickness	0.1560-0.1580	0.0050

Litho in U.S.A.

PREVIEW - YOUFIXTHIS.COM
Download full manual at youfixthis.com

PREVIEW - YOUFIXTHIS.COM

Litho in U.S.A.

Download full manual at youfixthis.com

ALTERNATOR AND REGULATOR TEST SPECIFICATIONS

MR Series

Test	Reading
Circuit Tests	
Test No. 1 - Key off	0 to 0.1 volts
Test No. 2 - Key on	1.5 to 2.0 volts
Test No. 3 - Key on, engine running at 1500 rpm	0.8 to 1.2 volts plus temperature correction
Test No. 4 - Key off	2.0 to 3.0 amperes
Test No. 5 - Key on, engine running at 1500 rpm	13 to 15 volts
Rotor Test	4.0 to 5.2 ohms
	1.65 to 2.25 amperes

Temperature Correction Chart

Temperature*	Voltage
40°F	14.3 - 15.1 volts
60°F	14.1 - 14.9 volts
80°F	14.0 - 14.8 volts
100°F	13.8 - 14.6 volts
120°F	13.7 - 14.5 volts
140°F	13.6 - 14.3 volts

**Measured 1-inch from regulator case.*

Wiring Test Chart (Fig. 17)

Test Points	Maximum Voltmeter Reading
B - E	0.3 volt
A - D	0.3 volt
D - F	0.1 volt
B - C	1.3 volt

TORQUE VALUES

Item	Torque
Slip ring cap screw	45 in-lbs
Pulley nut	35 to 50 ft-lbs
Through bolts	50 to 60 in-lbs
Brush mounting screws	16 to 20 in-lbs
Rear housing cover screws	20 to 30 in-lbs
Terminal hex. nuts (MA Series)	20 to 30 in-lbs
Diode mounting nuts (MR Series)	20 to 30 in-lbs
Regulator mounting screws (MR Series)	40 to 45 in-lbs
Regulator lead lock nuts (MR Series)	20 to 30 in-lbs

SPECIAL TOOLS

Essential Tools

No.	Name	Use
A-200JD**	Alternator Service Tool Set	Disassembly and Assembly of Alternator
A-201***	Press Assembly	
A-203***	Drive End Bearing Installation Tool	
A-205***	Shaft Protector	
A-207***	Drive End Housing Support Tool	
A-208***	Rotor Holder	
A-209***	Bearing Removal and Pulley Installation Tool	
A-216***	Alternator Housing and Bearing Pulley	

***Order from: Service Tools*
****Tools are part of A200JD Alternator Service Tool Set*

Litho in U.S.A.

PREVIEW - YOUFIXTHIS.COM
Download full manual at youfixthis.com

TORQUE VALUES

Damper Assembly

Item	Torque (ft-lbs) (-90296)	Torque (ft-lbs) (90297-)
Flywheel housing cover-to-flywheel housing	32 to 38	32 to 38
Damper drive plate-to-flywheel	32 to 38	32 to 38
Damper rubber mounting stop nuts	32 to 38	85

Drive Shaft

Item	Torque (ft-lbs)
Spider-to-coupling plate cap screws (2, Fig. 6)	45 ± 5
Yoke-to-spider cap screws (7, Fig. 6)	45 ± 5
Spider-to-yoke hex. nuts (5, Fig. 7)	55 ± 5
Yoke attaching cap screws (1, Fig. 7)	45 ± 5
Yoke-to-drive shaft cap screws (13, Fig. 8)	170 ± 15
Spider hex. nuts (22, Fig. 8)	55 ± 5
Yoke attaching cap screws (4, Fig. 8)	45 ± 5

PREVIEW - YOUFIXTHIS.COM

Litho in U.S.A.

Download full manual at youfixthis.com

Low-Range Clutch and Planetary

Position the clutch plates on the lower side of the low-range ring gear positioning ring as shown (Fig. 37, page 50-10-27 and Fig. 38, page 50-10-28). Install low-range ring gear with clutch plates on the lower side of the positioning ring as a single unit. Be sure to engage the slots in the external tanged plates with the six anchor pins.

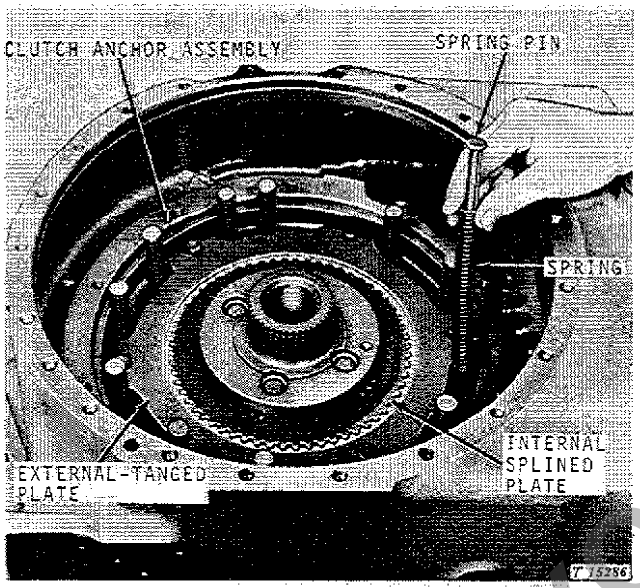


Fig. 41–Installing Piston Return Springs and Pins

NOTE: TT2200 Series has relieved side of low range ring gear toward low range piston.

Place the remaining clutch plates on the upper side of the ring gear positioning ring as shown (Fig. 37, page 50-10-27 and Fig. 38, page 50-10-28). Again be sure the clutch anchor pins are engaged in the slots in the external tanged plate(s). Install piston return springs and spring pins into the hole in the clutch anchor assembly.

Install the low-range piston with seal rings and expanders into the piston housing, flat side down.

Install the low range clutch piston and housing assembly and attach it with 10 bolts to the transmission housing. Use two jack-bolts (see page 50-10-43) to draw the piston housing down sufficiently to engage the self locking bolts. Remove the jack bolts to install the last two self-locking bolts. Tighten as specified.

TRANSFER DRIVE GEAR, HIGH-RANGE CLUTCH AND FRONT COVER

Transfer Drive Gear

Install the transfer drive gear (and bearing with snap ring), meshing the gear splines with those on the hub of the low-range planetary carrier.

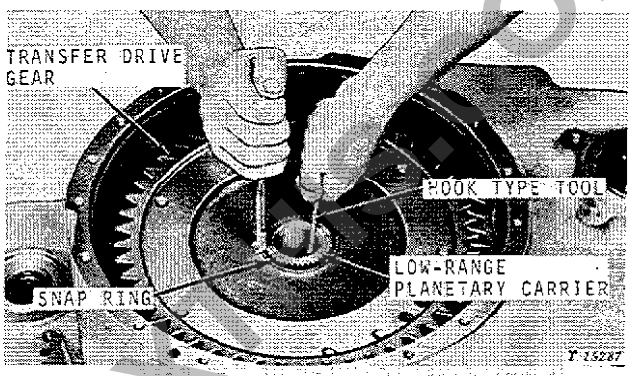


Fig. 42–Installing Transfer Drive Gear Snap Ring

Using a suitable hook-type tool, raise the low-range planetary carrier sufficiently to expose the snap ring groove, and install the snap ring (Fig. 42).

High-Range Clutch and Front Cover

Install the high-range clutch hub assembly. Install the high-range clutch piston housing assembly.

Align the bolt holes and install lock tabs and six bolts. Tighten as specified. Bend one corner of each lock tab against the bolt head and the other over the outer perimeter of the piston housing.

Be sure that the snap ring is in place on the hub assembly shaft spline before installing the clutch hub assembly.

Install the seal ring into the groove in the front cover.

Install pipe plug. Install the gasket on the pilot, using grease to hold it in location on the front cover. Install the front cover assembly, seal ring, and gasket.

Install bolts with lock washers. Tighten bolts as specified.

Litho in U.S.A.

PREVIEW - YOUFIXTHIS.COM
Download full manual at youfixthis.com

Example for finding shim pack on JD544 Loader:

	1.7515	in.	— Width of bearing (8, Fig. 15)
+	0.0015	in.	— Increase in width of bearing when cup is installed in quill
+	7.125	in.	— Dimension (10) etched on spiral bevel pinion
=	8.878	in.	— Sum of Steps C and D
	8.625	in.	— Dimension (2) stamped on differential case
+	0.289	in.	— Dimension (4) stamped on input quill
=	8.914	in.	— Sum of Steps A and B
−	8.878	in.	— Sum of Steps C and D
=	0.036	in.	— Cone Point Shim Pack

Pinion Shaft Rolling Drag Torque

Before installing the pinion shaft oil seal, install yoke on the shaft so cotter pin installation will not be hampered by lugs on yoke. Tighten differential drive and bevel pinion shaft slotted nut to 445 lb-ft. Use enough shims to provide 0.000 to 0.001 in preload. After tightening to 445 lb-ft, the nut should be loosened to below 200 lb-ft.

Tighten the slotted nut to within a range of 225 to 300 lb-ft and to a position where the cotter pin can be installed. It may be necessary to install a washer of different thickness between the nut and yoke to obtain a position where the cotter pin can be installed and not exceed the 225 to 300 lb-ft range.

Apply oil to the bearing on the yoke end of the pinion shaft for prelubrication before installing the oil seal.

With the slotted nut tightened to the 225 to 300 lb-ft range, check the pinion shaft rolling drag torque. Reading should be within 2 to 10 lb-in without spiral bevel pinion shaft and differential housing ring gear engaged and without the oil seal in place. If necessary, adjust bearing shims adjacent to outer bearing cone to obtain this rolling drag torque. After rolling drag torque has been determined, check to insure no end play in pinion shaft bearings.

Mark the slotted nut, the end of the pinion shaft, and the yoke. Remove the nut and yoke.

Coat sealing lips of the oil seal with a multi-purpose lubricant. With spring side of seal facing away from the driver, press to 0.44 in. below end of quill.

The differential drive and bevel pinion shaft O-ring is to be installed in the counterbore of the yoke. No part of the O-ring is to protrude outside of the counterbore before the washer is installed.

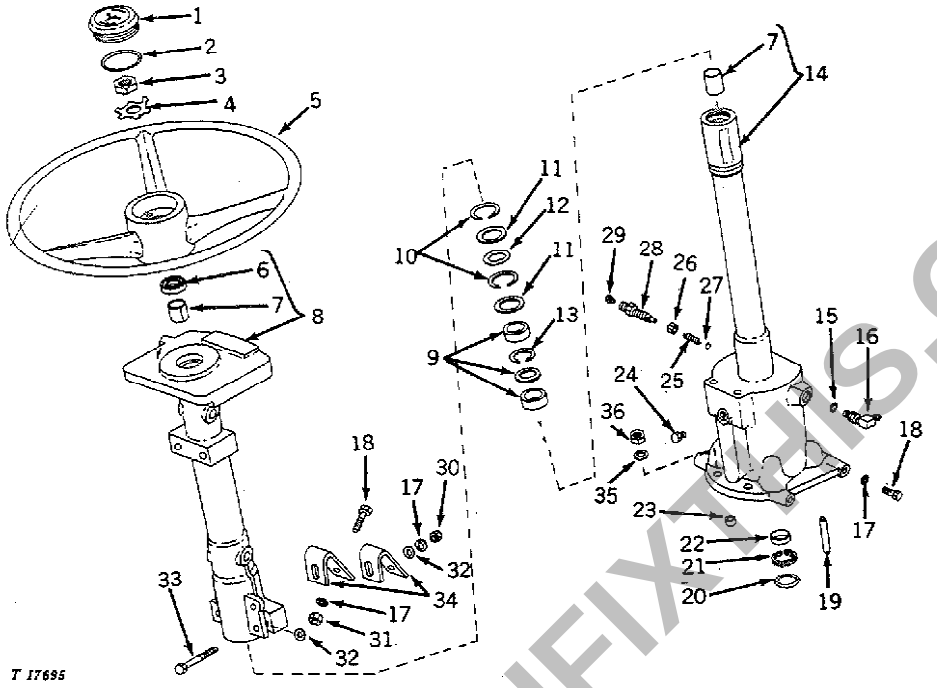
Install the yoke to agree with markings previously made.

Install and tighten slotted nut to markings previously made. At this position, the slotted nut should be tightened to at least 225 lb-ft, but no more than 300 lb-ft. *NOTE: If necessary to obtain this torque, use different size special washer.* Install cotter pin so the ends of the pin do not bend over the end of the shaft. Check rolling drag torque to assure 4 to 14 lb-in rolling drag torque on the differential drive and bevel pinion shaft bearings with seal in place.

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

REMOVAL



1 – Emblem
2 – O-Ring
3 – Nut
4 – Special Washer
5 – Steering Wheel
6 – Oil Seals with Washer
7 – Bushing (2 used)
8 – Steering Column Top
9 – Oil Seals
10 – Snap Ring (2 used)
11 – Washer (2 used)
12 – Washer
13 – Snap Ring
14 – Steering Valve Cylinder
15 – O-Ring Packing
16 – Elbow
17 – Lock Washer (8 used)
18 – Cap Screw (6 used)
19 – Dowel Pin (2 used)
20 – O-Ring Packing
21 – Back-Up Ring
22 – Thrust Bearing
23 – O-Ring Packing
24 – Plug
25 – O-Ring
26 – Spring
27 – Special Nut
28 – Steel Ball
29 – Special Screw
30 – Machine Screw
31 – Nut (4 used)
32 – Washer (4 used)
33 – Cap Screw (2 used)
34 – Bracket (2 used)
35 – Washer (2 used) (94353–)
36 – Hex. Nut (2 used) (94353–)

Fig. 3 – Exploded View of Power Steering Wheel and Column Assembly

1. Remove front and rear platforms and steering column shroud.

2. Disconnect transmission shifter cable and diesel starting aid tube (if equipped).

3. Disconnect power steering lines from steering valve and flow control valve housing. Remove all clamps securing hydraulic lines to steering column.

4. Remove the long cap screws from clamp halves securing steering column to brackets under cowl. Insert short cap screws in clamp halves to secure steering column top to steering valve cylinder.

5. Remove cap screws securing steering valve housing to support brackets. Remove steering valve with steering column top, steering wheel and flow control valve housing as an assembly.

REPAIR

1. Remove steering wheel from upper steering wheel shaft.

2. Separate steering column top from steering valve cylinder. Separate steering shafts. See Fig. 3 above.

PREVIEW - YOUFIXTHIS.COM
Download full manual at youfixthis.com

SPECIAL TOOLS

Convenience Tools

Part Number OTC*	Name
Y3013	Tee (3/4 NPTf x 3/4 NPTf x 3/4 NPTm)
Y3016	Adapter (3/4 NPTf x 3/4 NPTm)
Y3017	Connector (3/4 NPTf x 3/4 NPTf)
Y3018	Adapter (3/4 NPTf x 3/4 NPTm)
Y3019	Cap (3/4 NPTf)
Y3020	Plug (3/4 NPTm)
Y3023	Adapter (7/8-14 37° JICm x 3/4 30° NPTm)
Y3024	Connector (1-15/16-12 37° JICf x 3/4 NPTf)
Y3025	Connector (1-15/16-12 37° JICm x 3/4 NPTm)
Y21-10	Hose (3/4 NPTm x 3/4 NPTm)
Y-81 or Y-90	Flow Meter

NUDAY*	
D-88	Adapter (3/4 NPTm x 1-1/16-12 JICm)
D-92	Tee (1-1/16-12 JICm x 1-1/16-12JICf x 1-1/16-12 JICm)
D-93	Cap (1-1/16-12 JICf)
D-94	Plug (1-1/16-12 JICm)
D-96	Union (1-1/16-12 JICf x 1-1/16-12 JICf)
D-100	Adapter (3/4 NPTf x 1-1/16-12 JICm)
D-103	Elbow (7/8-14 UNF JICm x 1-1/16-12 JICm)
D-104	Elbow (1-5/16-12 UNF JICf x 1-1/16-12 JICm)
D-105	Union (1-5/16-12 UNF JICm x 1-1/16-12 JICm)
D-91	Hose (1-1/16-12 JICf x 1-1/16-12 JICm)
ND-1575	Flow Meter

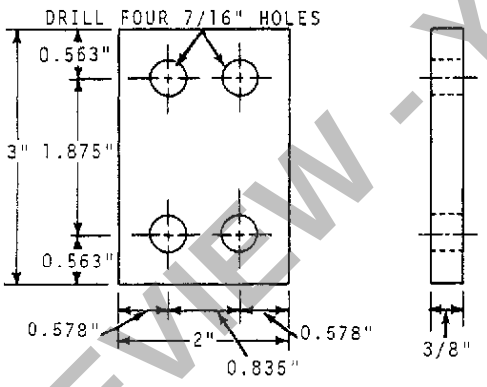


Fig. 6-Cylinder Oil Lines Block÷

**If fittings are not available use the D-15037NU Hydraulic Fitting Kit. For the Flow Meter use the D-15017NU Flow Meter.*

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

SPECIFICATIONS

Item	Specification
Control Valve Springs	
Anti-cavitation check valve spring	0.75 pounds tension at 5/8 in.
Spool lift check springs	1/2 pounds tension at 13/16 in.
Spool springs	27 pounds tension at 1-3/16 in.
Relief Valve Springs	
For 2375 psi and 3000 psi	122 pounds tension at 1-1/2 in.
For 1625 psi	92 pounds tension at 1-7/16 in.

TORQUE VALUES

Item	Torque (Ft-Lbs)
Tie bolts	20 to 25
Spool screws (coat threads with loctite)	5 to 8

Litho in U.S.A.

PREVIEW - YOUFIXTHIS.COM
Download full manual at youfixthis.com

PREVIEW ONLY

You're viewing 17 of 360 pages

The full manual includes:

- All 360 pages, complete
- Searchable PDF (find any keyword)
- No watermarks
- Instant download
- Print-ready quality

GET FULL MANUAL NOW

John Deere JD544, JD544-A Technical Manual



Scan or click anywhere
youfixthis.com

Click anywhere on this page to get the full manual