# 8560 8760, and 8960 Tractors Repair

For complete service information also see:

8560, 8760, and 8960 Tractors
Operation and Tests
6076 Engine
Serial Number ( -499999) CTM6
Serial Number (500000- ) CTM42
6101 Engine CTM20
Radial Piston Pumps CTM7
Engine Accessories CTM11
1600 Series Axles CTM18

John Deere Waterloo Works TM1433 (19JUL01) **Excavator Service Repair Manual** 



John Deere 8560, 8760, 8960 Tractors Repair Technical Manual Download in the technological know-how of archaeology. The man or woman sorts of excavation are regarded simply as digs to people who participate in, with this being an over literal description of the technique used. An excavation issues itself with a particular archaeological web page or associated collection of web sites, and can be carried on over a amount of years, thinking about that the paintings can normally instances typically be of a seasonal nature. John Deere 8560, 8760, 8960 Tractors Repair Technical Manual Download

Inside of the enterprise of excavation, many lots greater strategies can be utilized, with each unmarried dig acquiring its very own precise traits which could necessitate variations of technique. Methods and different sensible problems do not permit archaeologists to carryout excavations each time and anyplace they choose, as many regarded web sites have additionally been intentionally left on my own and non excavated.

# FOREWORD

This manual is written for an experienced technician. Essential tools required in performing certain service work are identified in this manual and are recommended for use.

Live with safety: Read the safety messages in the introduction of this manual and the cautions presented throughout the text of the manual.



This is the safety-alert symbol. When you see this symbol on the machine or in this manual, be alert to the potential for personal injury.

Technical manuals are divided in two parts: repair and diagnostics. Repair sections tell how to repair the components. Diagnostic sections help you identify the majority of routine failures quickly.

Information is organized in groups for the various components requiring service instruction. At the beginning of each group are summary listings of all applicable essential tools, service equipment and tools, other materials needed to do the job, service parts kits, specifications, wear tolerances, and torque values.

Binders, binder labels, and tab sets can be ordered by John Deere dealers direct from the John Deere Distribution Service Center. This manual is part of a total product 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 type of failures and their causes. FOS Manuals are for training new personnel and for reference by experienced technicians.

Technical Manuals are concise guides for specific machines. Technical manuals are on-the-job guides containing only the vital information needed for diagnosis, analysis, testing, and repair.

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

NOTICE TO THE	DEALER
IMPORTANT: The changes listed below make your current TM obsolete. Discard TM1433 dated 23MAY91. Please make this information available to your service department.	
SECTION 20—	• SECTION 55—
Dynamometer Test moved to TM1434	Revised Transmission Repair Procedures
SECTION 30—	• SECTION 60—
Some information has been eliminated since it appears in the Operator's Manual	Added Steering Valve Warm-up Check Valve
SECTION 40—	• SECTION 70—
Added New Wiring Harnesses Added Hitch Draft Sensing	Added New Hydraulic Circuit Revised Section 70 Groups
• SECTION 50-	• SECTION 80—
24-Speed MST Hi-Lo Clutch Changes Revised Section 50 Groups	Revised Wheels—Group 05
	• SECTION 90—
	Revised Air Quality System Repair
Major revisions to this TM are listed above. Some Sections and Groups will have specification, procedure, or formatting changes not listed on this notification.	RX,TM1433,DLR -19-09MAR92

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All information, illustrations and specifications in this 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.

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05 05

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**S204** 

-19-04JUN90

# HANDLE FLUIDS SAFELY—AVOID FIRES

When you work around fuel, do not smoke or work near heaters or other fire hazards.

Store flammable fluids away from fire hazards. Do not incinerate or puncture pressurized containers.

Make sure machine is clean of trash, grease, and debris.

Do not store oily rags; they can ignite and burn spontaneously.



DX,FLAME -19-04JUN90

DX,SPARKS

# PREVENT BATTERY EXPLOSIONS

Keep sparks, lighted matches, and open flame away from the top of battery. Battery gas can explode.

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

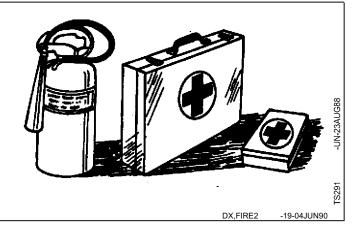
Do not charge a frozen battery; it may explode. Warm battery to  $16^{\circ}C$  ( $60^{\circ}F$ ).

# PREPARE FOR EMERGENCIES

Be prepared if a fire starts.

Keep a first aid kit and fire extinguisher handy.

Keep emergency numbers for doctors, ambulance service, hospital, and fire department near your telephone.



### PREVENT 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.
- 5. Use proper jump start procedure.

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.



DX,POISON -19-04JUN90

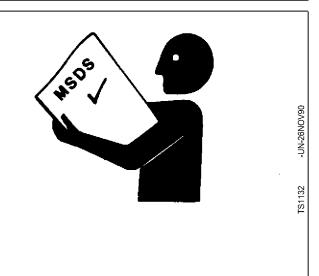
# HANDLE CHEMICAL PRODUCTS SAFELY

Direct exposure to hazardous chemicals can cause serious injury. Potentially hazardous chemicals used with John Deere equipment include such items as lubricants, coolants, paints, and adhesives.

A Material Safety Data Sheet (MSDS) provides specific details on chemical products: physical and health hazards, safety procedures, and emergency response techniques.

Check the MSDS before you start any job using a hazardous chemical. That way you will know exactly what the risks are and how to do the job safely. Then follow procedures and recommended equipment.

(See your John Deere dealer for MSDS's on chemical products used with John Deere equipment.)



DX,MSDS,NA -19-15MAR91

Safety

#### Safety

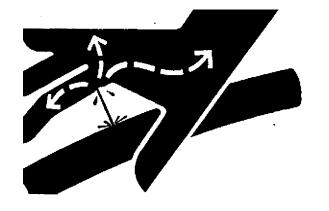
# AVOID HIGH-PRESSURE FLUIDS

Escaping fluid under pressure can penetrate the skin causing serious injury.

Avoid the hazard by relieving pressure before disconnecting hydraulic or other lines. Tighten all connections before applying pressure.

Search for leaks with a piece of cardboard. Protect hands and body from high pressure fluids.

If an accident occurs, see a doctor immediately. Any fluid injected into the skin must be surgically removed within a few hours or gangrene may result. Doctors unfamiliar with this type of injury should reference a knowledgeable medical source. Such information is available from Deere & Company Medical Department in Moline, Illinois, U.S.A.



DX,FLUID -19-09AUG91

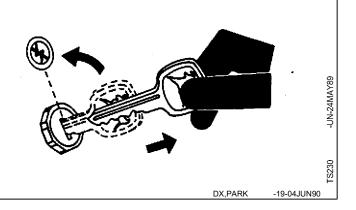
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# PARK MACHINE SAFELY

Before working on the machine:

- Lower all equipment to the ground.
- Stop the engine and remove the key.
- Disconnect the battery ground strap.
- Hang a "DO NOT OPERATE" tag in operator station.



# SUPPORT MACHINE PROPERLY

Always lower the attachment or implement to the ground before you work on the machine. If you must work on a lifted machine or attachment, securely support the machine or attachment.

Do not support the machine on cinder blocks, hollow tiles, or props that may crumble under continuous load. Do not work under a machine that is supported solely by a jack. Follow recommended procedures in this manual.

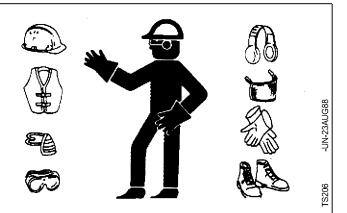
# WEAR PROTECTIVE CLOTHING

Wear close fitting clothing and safety equipment appropriate to the job.

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

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

Operating equipment safely requires the full attention of the operator. Do not wear radio or music headphones while operating machine.



DX,LOWER

DX,WEAR -19-10SEP90

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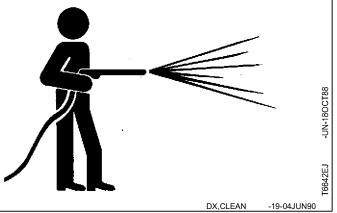
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# WORK IN CLEAN AREA

Before starting a job:

- Clean work area and machine.
- Make sure you have all necessary tools to do your job.
- Have the right parts on hand.
- Read all instructions thoroughly; do not attempt shortcuts.



85-87-8960 Tractors Repair 190701 PN=9

# SERVICE MACHINES SAFELY

Tie long hair behind your head. Do not wear a necktie, scarf, loose clothing, or necklace when you work near machine tools or moving parts. If these items were to get caught, severe injury could result.

Remove rings and other jewelry to prevent electrical shorts and entanglement in moving parts.

# WORK IN VENTILATED AREA

Engine exhaust fumes can cause sickness or death. If it is necessary to run an engine in an enclosed area, remove the exhaust fumes from the area with an exhaust pipe extension.

If you do not have an exhaust pipe extension, open the doors and get outside air into the area.

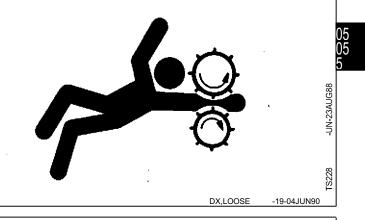
# ILLUMINATE WORK AREA SAFELY

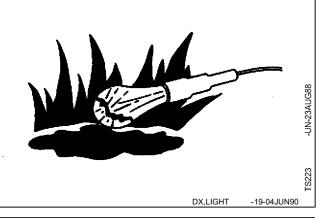
Illuminate your work area adequately but safely. Use a portable safety light for working inside or under the machine. Make sure the bulb is enclosed by a wire cage. The hot filament of an accidentally broken bulb can ignite spilled fuel or oil.

# REPLACE SAFETY SIGNS

Replace missing or damaged safety signs. See the machine operator's manual for correct safety sign placement.

DX SIGNS1





DX,AIR

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**FS220** 

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<sup>-</sup>S201

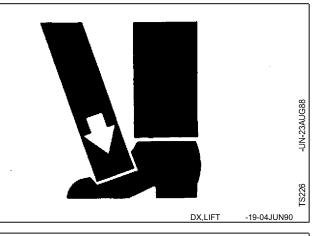
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# USE PROPER LIFTING EQUIPMENT

Lifting heavy components incorrectly can cause severe injury or machine damage.

Follow recommended procedure for removal and installation of components in the manual.



# SERVICE TIRES SAFELY

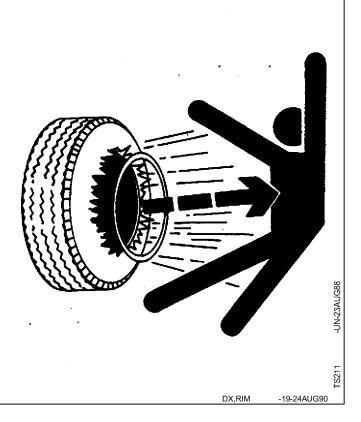
Explosive separation of a tire and rim parts can cause serious injury or death.

Do not attempt to mount a tire unless you have the proper equipment and experience to perform the job.

Always maintain the correct tire pressure. Do not inflate the tires above the recommended pressure. Never weld or heat a wheel and tire assembly. The heat can cause an increase in air pressure resulting in a tire explosion. Welding can structurally weaken or deform the wheel.

When inflating tires, use a clip-on chuck and extension hose long enough to allow you to stand to one side and NOT in front of or over the tire assembly. Use a safety cage if available.

Check wheels for low pressure, cuts, bubbles, damaged rims or missing lug bolts and nuts.



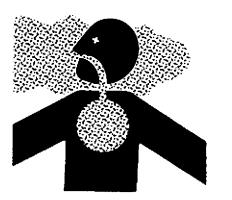
# AVOID HARMFUL ASBESTOS DUST

Avoid breathing dust that may be generated when handling components containing asbestos fibers. Inhaled asbestos fibers may cause lung cancer.

Components in products that may contain asbestos fibers are brake pads, brake band and lining assemblies, clutch plates, and some gaskets. The asbestos used in these components is usually found in a resin or sealed in some way. Normal handling is not hazardous as long as airborne dust containing asbestos is not generated.

Avoid creating dust. Never use compressed air for cleaning. Avoid brushing or grinding material containing asbestos. When servicing, wear an approved respirator. A special vacuum cleaner is recommended to clean asbestos. If not available, apply a mist of oil or water on the material containing asbestos.

Keep bystanders away from the area.



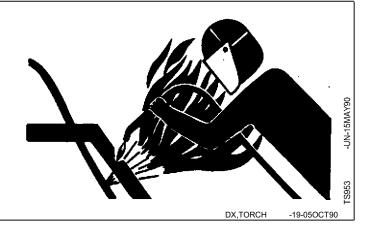


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**S220** 

# AVOID HEATING NEAR PRESSURIZED FLUID LINES

Flammable spray can be generated by heating near pressurized fluid lines, resulting in severe burns to yourself and bystanders. Do not heat by welding, soldering, or using a torch near pressurized fluid lines or other flammable materials. Pressurized lines can be accidentally cut when heat goes beyond the immediate flame area.



# REMOVE PAINT BEFORE WELDING OR HEATING

Avoid potentially toxic fumes and dust.

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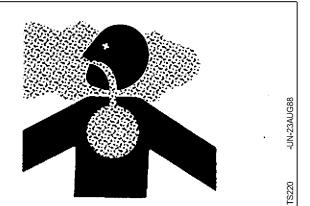
Hazardous fumes can be generated when paint is heated by welding, soldering, or using a torch.

Do all work outside or in a well ventilated area. Dispose of paint and solvent properly.

Remove paint before welding or heating:

• If you sand or grind paint, avoid breathing the dust. Wear an approved respirator.

• If you use solvent or paint stripper, remove stripper with soap and water before welding. Remove solvent or paint stripper containers and other flammable material from area. Allow fumes to disperse at least 15 minutes before welding or heating.



DX,PAINT -19-04JUN90

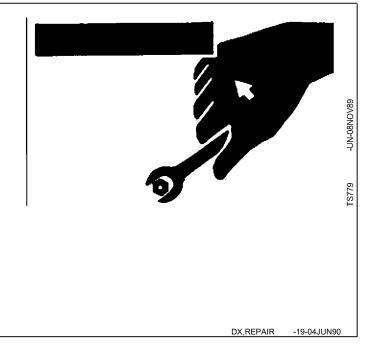
### USE PROPER TOOLS

Use tools appropriate to the work. Makeshift tools and procedures can create safety hazards.

Use power tools only to loosen threaded parts and fasteners.

For loosening and tightening hardware, use the correct size tools. DO NOT use U.S. measurement tools on metric fasteners. Avoid bodily injury caused by slipping wrenches.

Use only service parts meeting John Deere specifications.



# DISPOSE OF WASTE PROPERLY

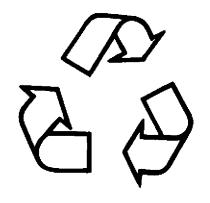
Improperly disposing of waste can threaten the environment and ecology. Potentially harmful waste used with John Deere equipment include such items as oil, fuel, coolant, brake fluid, filters, and batteries.

Use leakproof containers when draining fluids. Do not use food or beverage containers that may mislead someone into drinking from them.

Do not pour waste onto the ground, down a drain, or into any water source.

Air conditioning refrigerants escaping into the air can damage the Earth's atmosphere. Government regulations may require a certified air conditioning service center to recover and recycle used air conditioning refrigerants.

Inquire on the proper way to recycle or dispose of waste from your local environmental or recycling center, or from your John Deere dealer.



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DX,DRAIN -19-09AUG91

# LIVE WITH SAFETY

Before returning machine to customer, make sure machine is functioning properly, especially the safety systems. Install all guards and shields.



# Section 10 GENERAL INFORMATION

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10 05 1

# **GENERAL SPECIFICATIONS**

	8560	8760	8960
Power:			
Engine (Factory observed PTO (Factory observed) Rated speed Governed speed range Operating speed range	) 235 hp (175 kW) 198 hp (148 kW) 2100 rpm 800—2300 rpm 1500—2100 rpm	300 hp (224 kW) 256 hp (191 kW) 2100 rpm 800—2300 rpm 1500—2100 rpm	370 hp (276 kW) 322 hp (240 kW) 1900 rpm 800—2100 rpm 1500—1900 rpm
Engine:			
Туре	in-line 6-cylinder, valve-in-h and air-to-air aftercooled di		in-line 6-cylinder, valve- in-head, turbocharged and water-to-air aftercooled
Displacement Bore Stroke Compression ratio Lubrication	466 cu in. (7.6 L) 4.56 in. (116 mm) 4.75 in. (121 mm) 16.0:1 full-flow filtration w/bypass	619 cu in. (10.1L) 5.12 in. (130 mm) 5.00 in. (127 mm) 15.2:1 full-flow filtration w/bypass	855 cu in. (14.0L) 5.50 in. (140 mm) 6.0 in. (152 mm) 14.0:1 full-flow filtration w/bypass
Fuel System:			
Injection pump type Fuel filter Number fuel filters Air cleaner	in-line dual-stage, metal-enclosed single dry-type with secondary element	in-line throwaway type element single dry-type with secondary element	Cummins Pressure-Time spin-on throwaway single dry-type with secondary element
Cooling System:			
Fan Number of thermostats	viscous drive 2	viscous drive 3	viscous drive 1
Electrical System:			
Type Alternator Batteries Cold cranking amps	12 volt negative ground 120 amp two 12 volt 1850	12 volt negative ground 120 amp two 12 volt 1850	12 volt negative ground 120 amp three 12 volt 2775
Capacities:			
Fuel tank Cooling system Crankcase Transmission (all types) Hydraulic system:	220 gal (835L) 58 qt (55L) 23 qt (22L) 10 gal (37.8L)	220 gal (835L) 58 qt (55L) 36.5 qt (34.5L) 10 gal (37.8L)	220 gal (835L) 72 qt (68.1L) 39 qt (37L) 10 gal (37.8L)
Total Hydraulic reservoir	38 gal (144L) 14 gal (53L)	38 gal (144L) 14 gal (53L)	40 gal (151L) 14 gal (53L)
			DV44024040.4 40.07MAV04

RX14331010,1 -19-07MAY91

### Hydraulic System:

Type       Closed-Center, Pressure Compensating         Main Hydraulic Pump       8-Piston, Variable Displacement         Displacement       4 cu in. (65 cm <sup>3</sup> )         Standby Pressure       2530 psi (17 500 kPa) (175 bar)         Steering System       Hydrostatic Power         Hitch Lift Capacity       13490 lb (6323 kg)
Brakes:
Type
Fransmissions:
12-Speed Syncro: Type
24-Speed POWRSYNC: Type

# 12-Speed Powershift:

Туре	Electronically Activated Wet Clutch
Gear Selections	12 Forward, 2 Reverse

#### Power Take-Off:

Type
Speed
Size 1-3/4 in. (45 m
Clutch Multiple Wet-Disk Hydraulically Activat
EV14231010.2 10.07MAV

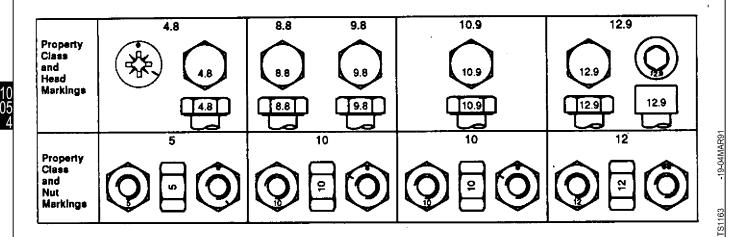
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Machine Specifications/Specifications

	8560 (18.4-38 duals)	8760 (20.8-38 duals)	8960 (20.8-42 duals)
Overall Dimensions:			
Wheelbase	134.0 in. (3400 mm)	134.0 in. (3400 mm)	134.0 in. (3400 mm)
Overall Length	268.9 in. (6830 mm)	268.9 in. (6830 mm)	268.9 in. (6830 mm)
Width			
(center of outer duals)	119.8 in. (3042 mm)	119.8 in. (3042 mm)	119.8 in. (3042 mm)
Height			
Top of SOUND-GARD	134.3 in. (3410 mm)	135.8 in. (3440 mm)	137.4 in. (3491 mm)
Top of Hood	95.9 in. (2436 mm)	97.1 in. (2466 mm)	99.1 in. (2517 mm)
Top of Muffler	151.7 in. (3852 mm)	152.8 in. (3882 mm)	154.8 in. (3933 mm)
Turning Radius	14.6 ft (4.45 m)	14.6 ft (4.45 m)	14.6 ft (4.45 m)
Crop Clearance (axle)	18.8 in. (477 mm)	20.0 in. (507 mm)	22.0 in. (558 mm)
Estimated Shipping Weight			
(No PTO - No Hitch)	28260 lb (12 819 kg)	29720 lb (13 481 kg)	31320 lb (14 188 kg)
Tires (standard)	18.4R-38 in.	20.8R-38 in.	20.8R-42 in.

RX14331010,3 -19-22MAY91

# METRIC BOLT AND CAP SCREW TORQUE VALUES



Class 12.9
<sup>ra</sup> Lubricated <sup>a</sup> Dry <sup>a</sup>
lb-ft N·m lb-ft N·m lb-ft
12 15 11.5 19 14.5
30 37 28 47 35
60 75 55 95 70
105 130 95 165 120
165 205 150 260 190
225 320 240 400 300
350 440 325 560 410
500 625 460 800 580
675 850 625 1075 800
850 1075 800 1350 1000
1250 1600 1150 2000 1500
1700 2150 1600 2700 2000
2350 2900 2150 3700 2750
3000 3750 2750 4750 3500
1112

DO NOT use these values if a different torque value or tightening procedure is given for a specific application. Torque values listed are for general use only. Check tightness of fasteners periodically.

Shear bolts are designed to fail under predetermined loads. Always replace shear bolts with identical property class.

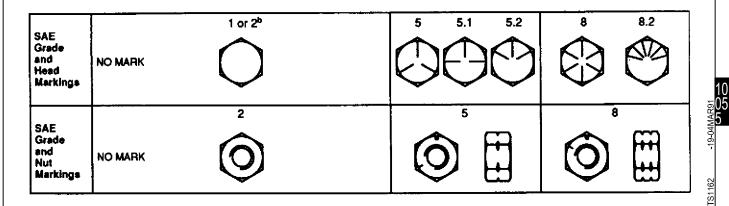
Fasteners should be replaced with the same or higher property class. If higher property class fasteners are used, these should only be tightened to the strength of the original.

<sup>a</sup> "Lubricated means coated with a lubricant such as engine oil, or fasteners with phosphate and oil coatings. "Dry means plain or zinc plated without any lubrication. Make sure fasteners threads are clean and that you properly start thread engagement. This will prevent them from failing when tightening.

Tighten plastic insert or crimped steel-type lock nuts to approximately 50 percent of the dry torque shown in the chart, applied to the nut, not to the bolt head. Tighten toothed or serrated-type lock nuts to the full torque value.

TM1433 (19JUL01)

# UNIFIED INCH BOLT AND CAP SCREW TORQUE VALUES



	Grade 1 Grade 2 <sup>b</sup>				de 2 <sup>b</sup>	Grade 5, 5.1, or 5.2				Grade 8 or 8.2						
Size	Lubri	cated <sup>a</sup>	Dr	ya	Lubri	cated <sup>a</sup>	Dr	ya	Lubri	cateda	Dr	' <b>y</b> a	Lubri	cateda	Di	'y <sup>a</sup>
	N∙m	lb-ft	N∙m	lb-ft	N∙m	lb-ft	N∙m	lb-ft	N∙m	lb-ft	N∙m	lb-ft	N∙m	lb-ft	N∙m	lb-ft
1/4	3.7	2.8	4.7	3.5	6	4.5	7.5	5.5	9.5	7	12	9	13.5	10	17	12.5
5/16	7.7	5.5	10	7	12	9	15	11	20	15	25	18	28	21	35	26
3/8	14	10	17	13	22	16	27	20	35	26	44	33	50	36	63	46
7/16	22	16	28	20	35	26	44	32	55	41	70	52	80	58	100	75
1/2	33	25	42	31	53	39	67	50	85	63	110	80	120	90	150	115
9/16	48	36	60	45	75	56	95	70	125	90	155	115	175	130	225	160
5/8	67	50	85	62	105	78	135	100	170	125	215	160	215	160	300	225
3/4	120	30 87	150	110	190	140	240	175	300	225	375	280	425	310	550	400
7/8	120	140	240	175	190	140	240	175	490	360	625	200 450	700	500	875	400 650
110	130	140	240	175	130	140	240	175	430	500	025	400	700	500	075	000
1	290	210	360	270	290	210	360	270	725	540	925	675	1050	750	1300	975
1-1/8	470	300	510	375	470	300	510	375	900	675	1150	850	1450	1075	1850	1350
1-1/4	570	425	725	530	570	425	725	530	1300	950	1650	1200	2050	1500	2600	1950
1-3/8	750	550	950	700	750	550	950	700	1700	1250	2150	1550	2700	2000	3400	2550
1-1/2	1000	725	1250	925	990	725	1250	930	2250	1650	2850	2100	3600	2650	4550	3350

DO NOT use these values if a different torque value or tightening procedure is given for a specific application. Torque values listed are for general use only. Check tightness of fasteners periodically.

Shear bolts are designed to fail under predetermined loads. Always replace shear bolts with identical grade.

<sup>a</sup> "Lubricated" means coated with a lubricant such as engine oil, or fasteners with phosphate and oil coatings. "Dry" means plain or zinc plated without any lubrication.

<sup>b</sup> Grade 2 applies for hex cap screws (not hex bolts) up to 152 mm (6-in.) long. Grade 1 applies for hex cap screws over 152 mm (6-in.) long, and for all other types of bolts and screws of any length.

Fasteners should be replaced with the same or higher grade. If higher grade fasteners are used, these should only be tightened to the strength of the original.

Make sure fasteners threads are clean and that you properly start thread engagement. This will prevent them from failing when tightening.

Tighten plastic insert or crimped steel-type lock nuts to approximately 50 percent of the dry torque shown in the chart, applied to the nut, not to the bolt head. Tighten toothed or serrated-type lock nuts to the full torque value.

# ABBREVIATIONS

Abbreviations are used in place of some words.

AQS—Air Quality System CTM—Component Technical Manual ECU—Engine Control Unit EFI—Electronic Fuel Injection ID—Inside Diameter MST—Manual Shift Transmission OD—Outside Diameter ORS—O-Ring Seal PST—Power Shift Transmission PTO—Power Take-Off SCV—Selective Control Valve SMV—Slow Moving Vehicle SGB—SOUND-GARD Body

RX14331010,7 -19-05MAR91

# DEALER PREDELIVERY SERVICE

The John Deere delivery receipt, when properly filled out and signed by the dealer and customer, verifies predelivery and delivery services were satisfactorily performed. When delivering the tractor, give the customer his copy of the delivery receipt and operators manual. Be sure to explain their purposes to him.

Because of the shipping factors involved, plus extra finishing touches necessary to promote customer satisfaction, there are certain predelivery services that must be performed by the dealer. These services are listed in the first of two sections on the predelivery form which is attached to the tractor. The second section is a list of factory inspections that must be verified by the dealer. Fill the form out completely and sign it. Send a copy to the factory and file the original with the shop order for the job. This will certify the proper delivery service has been completed.

Perform all services listed and check each job off as it is completed.

# **SPECIFICATIONS**

TM1433 (19.11.11.01)	10-15-1	85-87-8960 Tractors Re
* Break-in period is 10 minutes		RX14331020,1 -19-10APR9
8960	rpm	1900
Fast Idle at Full Load: 8560-8760	rpm	2100
8560-8760 8960	rpm rpm	2275—2325 2025—2075
Fast Idle:		2075 2225
Slow Idle	rpm (all models)	775—825
8960 New Belt After Break In*	Tension Tension	1020—1110 N (230—250 lb force) 712—890 N (160—280 lb force)
8760 New Belt After Break In*	Tension Tension	490—670 N (110—150 lb force) 355—445 N (80—100 lb force)
8560 New Belt After Break In*	Tension Tension	425—465 N (95—105 lb force) 330—370 N (74—84 lb force)
Fan and Alternator Belt:		
All Models New Belt After Break In*	Tension Tension	580—620 N (130—140 lb force) 380—420 N (85—95 lb force)
Air Conditioning Compressor Belt:		
Thermostat	Opening Temperature	82°C (180°F)
8760	Compression	2280—2605 kPa (22.8—26.1 bar) (330—380 psi)
8560	Compression	2380—2790 kPa (23.8—27.9 bar) (345—405 psi)
Engine:		
Radiator Cap	Pressure Test	85—105 kPa (0.9—1.1 bar) (12—15 psi)
Radiator	Pressure Test	70—105 kPa (0.7—1.1 bar) (10—15 psi)
ltem	Measurement	Specification

R90

#### 8960 ENGINE REPAIR—SEE CUMMINS AUTHORIZED DEALER

Only Cummins Engine Company, its distributors, or servicing dealers are authorized to service the NTA 855 Engine.

If your dealership is authorized to service this engine, refer to the Cummins service literature.

Engine warranty may be void on any unauthorized service.

RX14331020,2 -19-10APR90

# PERFORM PRELIMINARY ENGINE TESTS-8560 AND 8760

Before tuning up a tractor, determine if a tune-up will restore operating efficiency. Perform the following preliminary tests:

- Loosen crankcase drain plug and check for water seepage after engine has been stopped for several hours. A few drops could be due to condensation, but any more would indicate the need for engine repair.
- Inspect coolant for oil film with engine stopped. Inspect coolant for air bubbles with engine running. Either condition would indicate the need for engine repair.
- Perform dynamometer test. Record horsepower. (See Dynamometer Test—TM1434, Section 220.)
- Perform compression test. (See CTM6 or CTM42 for 6076 Engines, or CTM20, for 6101 Engines.)
- Perform Tune-up

RX14331020,3 -19-20MAR92

# TUNE-UP AND ADJUSTMENTS

Inspect the following for tractor tune-up:

#### Engine

- · Change oil and filter
- Clean crankcase vent tube (Sec 20—Grp 05)
- Adjust valve clearance (See CTM for 8560 and 8760 or Cummins authorized dealer for 8960)

#### Air Intake System

- Inspect air cleaners (Sec 30-Grp 05)
- Tighten air intake connections (Sec 30-Grp 05)
- Check air intake restriction (Sec 30-Grp 05)

#### **Cooling System**

- Clean grille screens, radiator, and oil cooler (Sec 20—Grp 10)
- Flush cooling system (Sec 20—Grp 10)
- Test radiator and cap (Sec 20-Grp 10)
- Replace engine coolant-conditioner filter (Sec 20—Grp 10)
- Inspect and adjust belts (Sec 20-Grp 10)
- Inspect hoses

#### **Fuel System**

- · Check fuel tanks for water
- Replace fuel filters (Sec 30-Grp 10)
- Adjust injection pump timing (Sec 30-Grp 10)
- Bleed fuel system (Sec 30-Grp 10)
- Adjust slow and fast idle (Sec 30-Grp 10)

#### **Electrical System**

- Service batteries (Sec 40-Grp 01)
- · Inspect battery cables
- Inspect and adjust alternator belt (Sec 40—Grp 15)
- Check neutral start switch (Sec 40—Grp 20)

#### Hydraulic System

- Clean hydraulic breather (Sec 70—Grp 25)
- · Change oil and filter

#### Lubrication

• See Lubrication—Group 20

RX14331020,3A -19-08MAY91

# PERFORM FINAL ENGINE TEST

Repeat dynamometer test. (See Dynamometer Test—TM1434, Section 220.) Record and compare performance with previous test.

RX14331020,36 -19-20MAR92

PN=26

# LUBRICATE TRACTOR PROPERLY

IMPORTANT: Correct selection and proper use of lubricating oils and grease is very important in keeping upkeep costs low, while providing long tractor life with satisfactory service.

Use only lubricants specified in this section. Lubricate at the intervals listed and according to the following instructions.

RX14331025,1 -19-10APR90

### **DIESEL ENGINE OIL**

Use oil viscosity based on the expected air temperature range during the period between oil changes.

John Deere TORQ-GARD SUPREME PLUS-50<sup>™</sup> engine oil is recommended. This oil is specially formulated to provide superior protection against high temperature thickening and wear as well as exceptional cold weather starting performance; these properties allow an extended drain interval and may result in longer engine life.

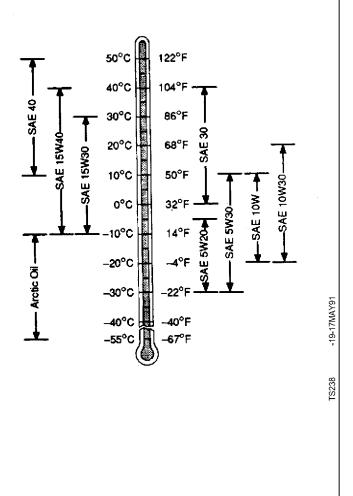
If John Deere TORQ-GARD SUPREME PLUS-50 engine oil and a John Deere oil filter are used, the oil and filter change interval may be extended by 50 hours.

John Deere TORQ-GARD SUPREME<sup>®</sup> engine oil is also recommended. Other oils may be used if they meet one or more of the following:

- API Service Classification CE or CD
- Military Specification MIL-L-2104E or MIL-L-2104D or MIL-L-2104C

SAE 5W20, SAE 5W30, and arctic oil viscosity grades meeting API Service Classification CC may be used, but oil and filter must be changed at one-half the normal interval.

Oils meeting Military Specification MIL-L-46167B may be used as arctic oils.



DX,ENOIL -19-05JUN91

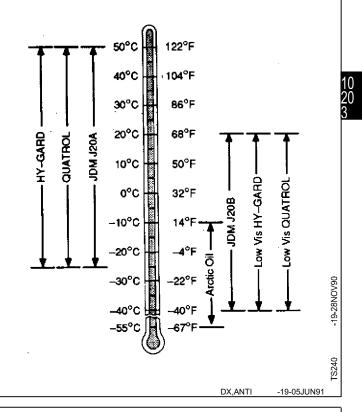
# ANTI-CHATTER TRANSMISSION/HYDRAULIC OIL

Use oil viscosity based on the expected air temperature range during the period between oil changes.

John Deere HY-GARD<sup>®</sup> Transmission/Hydraulic Oil is recommended. HY-GARD oil is specially formulated to minimize wet brake chatter, to provide optimum clutch engagement, and to provide maximum protection against mechanical wear, corrosion, and foaming.

Other oils may be used if they are QUATROL<sup>®</sup> oils or if they meet John Deere Standard JDM J20A or J20B.

Oils meeting Military Specification MIL-L-46167A may be used as arctic oils.



# EXTREME PRESSURE OR MULTIPURPOSE GREASE

Use grease based on the expected air temperature range during the service interval.

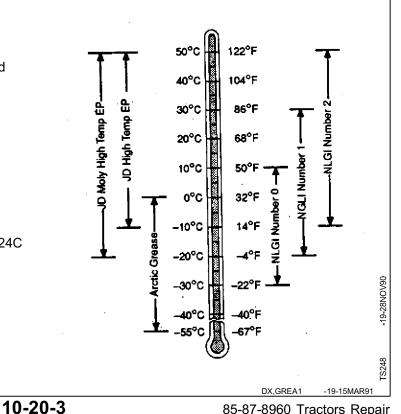
John Deere Moly High Temperature EP Grease and John Deere High Temperature EP Grease are recommended.

Other greases that may be used are:

• SAE Multipurpose EP Grease with 3 to 5 percent molybdenum disulfide.

• SAE Multipurpose EP Grease.

• Greases meeting Military Specification MIL-G-10924C may be used as arctic grease.



85-87-8960 Tractors Repair 190701 PN=30

# LUBRICATION SERVICE INTERVALS

# Engine:

Check Oil Level	ours
Change Oil and Filter * **	ours
Grease Fan Pillow Blocks (8960) Requi	red
Clean Crankcase Vent Tube	ours

#### Transmission:

Check Oil Level
Change Transmission Oil Filter *
Change Oil
Clean Sump Screen

#### Hydraulic System:

Check Oil Level	lours
Change Hydraulic Oil Filter * and as Req	uired
Change Oil	lours
Change Differential Oil	lours
Clean Axle/PTO Pump Sump Screen As Req	uired
Clean Charge Pump Sump Screen As Req	
Clean Main Hydraulic Pump Screen As Req	uired

### Lubrication of Grease Fittings:

Axle Bearings (wet conditions) Axle Bearings (normal conditions) . Hinge Pins		 	500 Hours
3-Point Hitch Lift Cylinder Pins and			
Gudgeon Spindle Bearings			
Telescoping Drive Shafts		 	250 Hours
Lower Driveline Bearing		 	250 Hours
3-Point Hitch Center Link and Lift Lin	nks	 	250 Hours
Seat Sliding and Swiveling Surfaces		 	As Required
* Change at 100 Hours during break-in period			
** Interval may be extended by 50 hours if John SUPREME PLUS-50 is used. This does not app			

RX14331025,2 -19-22MAY91

intervals.

# Section 15 Component Removal

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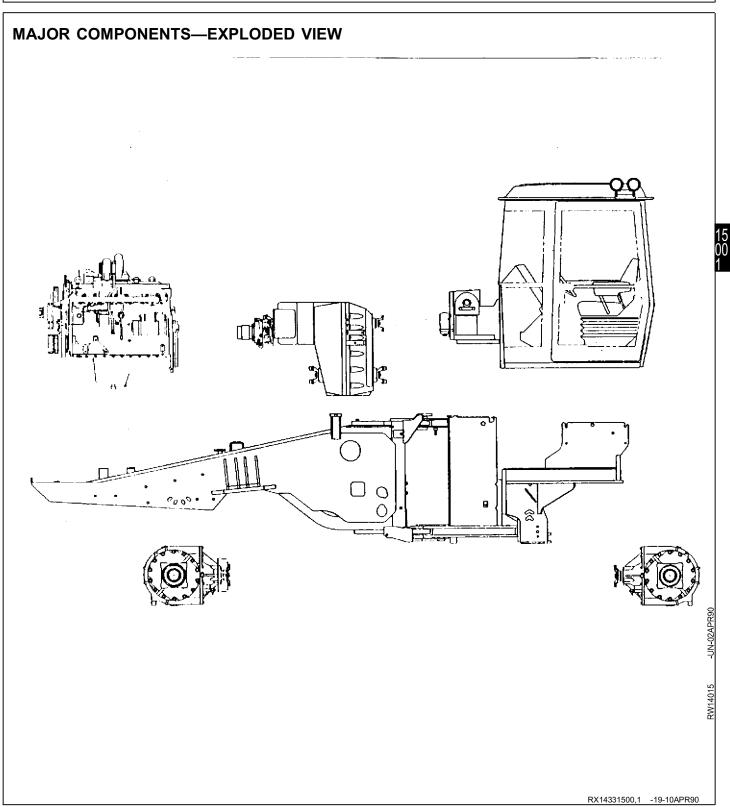
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Stand	
Install Power Shift Transmission Replace Transmission Mounting Pins and	15-30-8
Bushings	15-30-8



SPECIAL OR ESSENTIAL	TOOLS			
NOTE: Order tools according to				
U.S. SERVICE-GARD™ European Microfiche Too	Catalog or in the		DX,TOOLS	-19-05JUN91
		W18082 -UN-09APR90	,	
Gudgeon Oscillation Stop	JDG660		<b>_</b>	
Prevents gudgeon oscillation du	ring axle removal	Ţ	_Ţ	
			JDG660	-19-10APR90
SERVICE EQUIPMENT AN	ND TOOLS			
NOTE: Order tools from the U.S (MTC). Some tools may	5. SERVICEGARD™ Catalog be available from a local sup		ne Tool Ca	talog
Name		Use		
D05124ST Torque Multiplier		Remove and install axle mounting cap screws		
* DFRW22 Balancer Tool		Aid in axle and final drive removal or installation	9	
* Dealer Fabricated Tool—See Section S	99		RX14331505,	1 -19-10APR90
SPECIFICATIONS				
Item	Measurement	Specification		
Axle Housing to Frame Mounting Cap Screws	Torque	1070 N·m (790 lk	o-ft)	
Drive Shaft Cap Screws	Torque	150 N·m (110 lb-	ft)	
			RX14331505.	4B -19-31JAN92

#### AXLE AND FINAL DRIVE REPAIR— USE CTM-18

For complete repair information on the 1600 Series Axles, component technical manual (CTM-18) is also required.

Use the component technical manual in conjunction with this machine manual.



# REMOVE FRONT AXLE AND FINAL DRIVES

#### For tractors with PST, perform Steps 1a and 1b.

1a. Block rear wheels.

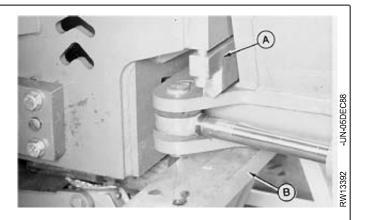
1b. Disconnect park brake cable at front axle.

#### For tractors with MST, perform Step 1c.

1c. Put transmission lever in "PARK" position.

RX14331505,4 -19-31JAN92

- 2. Disconnect drive shaft from axle.
- 3. Drain oil from axle assembly.
- 4. Disconnect hoses from axle.
- 5. Install JDG660 Gudgeon Oscillation Stop (A) to keep rear frame from oscillating.
- 6. Install stand under gudgeon (B).
- 7. Install jack stands under each side of front frame.
- 8. Remove tires from axle.

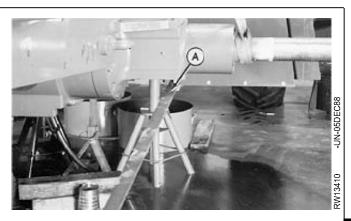


Tractors Repair 190701 PN=35

- 9. Attach hoist and straps or chains to each axle shaft.
- 10. Remove two outer axle mounting cap screws.
- NOTE: D05124ST Torque Multiplier may be needed to remove cap screws.

11. Attach DFRW22 Balancer Tool (A) to bottom of axle, using the two cap screws removed. (See Dealer Fabricated Tools—Section 99.)

- 12. Remove remaining cap screws.
- 13. Remove axle from tractor.



RX14331505,2B -19-13DEC91

# INSTALL FRONT AXLE AND FINAL DRIVES

- 1. Install axle to tractor and tighten mounting cap screws to 1070 N·m (790 lb-ft).
- NOTE: D05124ST Torque Multiplier may be needed to tighten cap screws.
- 2. Tighten drive shaft cap screws to 150 N·m (110 lb-ft).
- 3. Connect park brake cable for PST.
- 4. Install front tires.
- 5. Check hydraulic oil level.

RX14331505,3B -19-30JAN92

SPECIAL OR ESSENTIAL TOO NOTE: Order tools according to inform U.S. SERVICE-GARD™ Catal European Microfiche Tool Cata	nation given in the og or in the			DX,TOOLS	-19-05JUN91
Gudgeon Oscillation Stop		RW18082	-UN-09APR90		
Prevents gudgeon oscillation during a			( <u>-</u>		
revents guugeon oscillation uuning a	Ale removal		₩∟	U	
				JDG660	-19-10APR90
SERVICE EQUIPMENT AND T NOTE: Order tools from the U.S. SEF		a or from	the Europeen Microfish		talog
(MTC). Some tools may be av		•	the European Micronche		alog
Name		Us	e		
D05124ST Torque Multiplier			emove and install axle mounting cap screws		
* DFRW22 Balancer Tool			d in axle and final drive removal or installation		
* Dealer Fabricated Tool—See Section 99					
				RX14331505,	1 -19-10APR90
SPECIFICATIONS					
ltem	Measurement		Specification		
Axle Housing to Frame Mounting Cap Screws	Torque		1070 N·m (790 lb-	ft)	
Drive Shaft Cap Screws	Torque		150 N·m (110 lb-ft	i)	
Drawbar Support Stabilizer Link Cap Screws	Torque		620 N·m (460 lb-fl	:)	
Rear Drawbar Support Cap Screws	Torque		620 N·m (460 lb-fl	:)	

#### AXLE AND FINAL DRIVE REPAIR— **USE CTM-18**

For complete repair information on the 1600 Series Axles, component technical manual (CTM-18) is also required.

Use the component technical manual in conjunction with this machine manual.



#### **REMOVE REAR AXLE AND FINAL DRIVES**

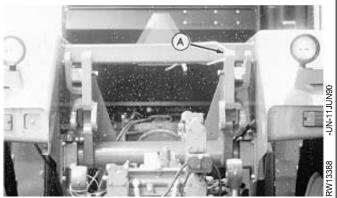
For tractors equipped WITH hitch and PTO, perform Steps 1—6. For tractors WITHOUT hitch and PTO, begin with Step 7.

1. Remove draft links, lift links, center link, and quick coupler.

2. Disconnect electrical harness from hitch control valve.

3. Disconnect lift cylinders from lift arm. Tie lift arm securely to brace (A).



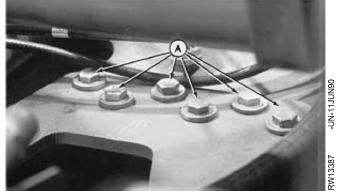


RX14331510,2 -19-31JAN92

4. Disconnect driveshaft from PTO drop box.

5. Disconnect upper inlet hose and bottom return hose from PTO drop box.

6. Remove six support bracket cap screws (A).



85-87-8960 Tractors Repair . 190701 PN=39

RX14331510,3 -19-10APR90

At first, excavation requires the eliminating any topsoil this is found with the aid of using an excavator machine. What is dug up can be reviewed with the aid of using a metallic detector for stray unearths however except the excavation web page has persevered to be untouched for a prolonged duration of time, there's a tiny layer of present day fabric at the floor this is of constrained archaeological interest.

In farm areas, any form of archaeological attributes need to be apparent underneath the floor. With city areas, they'll be thick layers of human deposits and simplest the uppermost may be seen to the bare eye. With both case, the first actual project is drawing a scaled web page plan which could display the rims of the excavation. This approach may be composed the usage of tape measures, or as it is greater not unusualplace those days, an digital general station. A grid is normally set up, to divide the web page.

Excavation is moreover beneficial for digging out homes and ditchs. When clearing dust out for roads or sub divisions, excavation is what looks after matters. Even aleven though there are some means, the time period excavation is used each time that the earth or dust is disturbed. Heavy equipment is likewise very not unusualplace with excavation, consisting of excavator machines or backhoes. Excavating crews run the system and dig up soil and rocks for regardless of the cause can be. Excavator machines are the maximum normally used equipment, as they could flow some of dust in a touch little bit of time.

Anytime you're collaborating in excavation, you need to continually use clever practices and be safe. If you intend to get down right into a hollow or trench, you need to continually use a trench box. Even aleven though the hollow won't be that deep, excavation web sites can regularly give way and at that point - matters are very risky and probably even deadly. For digging up uncommon artifacts or installing homes or roads, excavation is a few aspect that has been round for years and years. There can be lots to discover with excavation, as you will want to discover the satisfactory manner to run an excavator machine, shoot grade, and simply a way to nicely dig holes and ditchs in order that they might not give way.

volvo volvo dealer near me front end loader excavator contracts pay loader conexpo volvo finance volvo log

volvo financial services

volvo fina

care track

caretrack

wheel loader

wheeled loaders

wheel loaders

mining in chile

soil compactor

soil compactors

excavator volvo

volvo excavators

volvo excavator

volvo services

construction equipment volvo

volvo construction equipment

volvoce

excavators volvo

volvo 750 excavator

rock truck

rock trucks

conexpo las vegas 2020

480 volvo

volvo dumper truck

excavator wheeled

wheeled excavator

wheeled excavators

skid steer volvo

volvo skid steer volvo skid steers volvo skidsteer construction excavators articulate trucks articulated truck articulated trucks volvo ec750e cost volvo equipment ascendum machinery volvo loader volvo loaders dumper truck volvo front end loader small heavy equipment volvo volvo heavy equipment heavy equipment dealer near me heavy equipment dealers near me mini volvo excavator volvo mini excavators wheel loaders volvo volvo wheel loader wheel loader volvo volvo wheel loaders volvo wheeled loaders volvo equipment dealership volvo equipment dealer volvo equipment dealers

volvo 750

swecon

asphalt compactors

asphalt compactor

volvo mini excavator

mini excavator volvo

volvo a40g

750 excavator

volvo a 40g

volvo ec 750e

volvo ec750e

volvo vdn

compactors asphalt

samsung excavators

samsung excavator

scat trak

volvo ecr 88

volvo ecr88

ecr88 volvo

volvo equipment dealer near me

volvo equipment dealers near me

volvo equipment dealership near me

volvo construction

volvo constructions

volvo ce

front end loader volvo

volvo backhoes

a60h volvo

volvo a60h volvo excavator 480 excavator volvo 480 480 volvo excavator volvo 700 excavator volvo excavator 700 volvo haul truck volvo shippensburg pa volvo shippensburg pennsylvania volvo front end loader vantage equipment volvo ec750e price mini front end loader volvo 750 excavator price pipelayer 55c 45c scat track volvo I90 rock truck volvo volvo rock truck volvo dealer network volvo articulated dump truck articulated dump truck volvo terex trucks volvo 140 excavator backhoe volvo blaw knox

volvo 480 excavator volvo backhoe ingersoll rand roller volvo 750 excavator specs volvo articulated dump trucks volvo excavator 140 volvooceanrace articulating trucks road pavers electric excavator wheel excavators dump truck volvo electric excavators guins letsdig18 volvo construction equipment parts champion motor graders shippensburg volvo volvo off road truck volvo oils volvo construction equipment dealer volvo off road trucks savage stone volvo construction equipment dealers volvo dozers volvo 170 h blaw knox pavers volvo I70h

volvo 220 volvo 750 excavator specifications volvo dozer volvo machine blaw knox paver volvo a40 volvo machinery big loaders construction equipment supplier scat trak skid steer volvo ec140el volvo I90 h volvo a25g a40f volvo volvo a30g volvo a40d wheeled mini excavator volvo a45g volvo heavy equipment dealers a30g volvo champion graders articulated truck volvo wheeled mini excavators champion grader volvo construction equipment dealer near me volvo 160 a25g volvo volvo ecr88 specs

volvo heavy equipment dealer is chris guins married michigan loader volvo I90h volvo I 90h ec 750 volvo volvo heavy equipment dealership volvo 750 excavator weight volvo articulating truck articulating truck construction excavator volvo dealer locator volvo coolant ex factor excavadoras construction equipment suppliers turner mining group volvo I 70 quarry aggregates excavator bucket types volvo I70 volvo roller volvo 250 volvo 350 volvo equipment parts near me 190 volvo specs motor grader volvo motor graders volvo

nearest volvo dealer ecr 88d volvo volvo excavator 220 volvo rollers volvo ecr38 volvo rental equipment a30d volvo volvo I90 specs gold rush excavator volvo ec750e specs volvo 290 volvo motor grader volvo articulated truck dd 24 vantage wear roller volvo volvo 160 excavator volvo a40g specs volvo equipment rental volvo track hoe volvo a60 volvo pavers volvo 540 volvo motor graders volvo 220 excavator volvo equipment rentals volvo graders volvo paver

ecr88d volvo volvo construction equipment usa volvo l60 h volvo shippensburg volvo grader conexpo las vegas volvo articulated trucks graders mini front end loaders pacwest machinery hwy equipment pipelayers front end loaders equipment dealer near me volvo dump truck equipment dealerships romco equipment equipment dealers near me doosan mega 300v doosan mega 300v specs doosan mega 300-v doosan mega 300v pdf doosan dx480lc doosan dx480lc excavator экскаватор doosan dx 480 lca doosan dx480lca

# Thank you very much



- 1. <u>https://www.heavymachineryequipment.com/downloads/john-deere-jd760a-scraper-workshop-repair-manual/</u>
- 2. <u>https://www.heavymachineryequipment.com/downloads/komatsu-d85c-12-workshop-service-repair-manual-download/</u>
- 3. <u>https://www.heavymachineryequipment.com/downloads/komatsu-pc290lc-6k-pc290nlc-6k-hydraulic-excavator-service-manual/</u>
- 4. <u>https://www.heavymachineryequipment.com/downloads/john-deere-jd760-elevating-scraper-service-repair-manual-sm2076/</u>
- 5. <u>https://www.heavymachineryequipment.com/downloads/john-deere-jd760-tractor-service-manual/</u>

- 6. <u>https://www.heavymachineryequipment.com/downloads/john-deere-jd760-tractor-service-repair-manual/</u>
- 7. <u>https://www.heavymachineryequipment.com/jhon-deere/john-deere-5010-i-tractor-service-repair-manual/</u>
- 8. <u>https://www.heavymachineryequipment.com/forklift/yale-a910-gc040-070vx-glc040-070vx-glc040-070vx-glc055svx-forklift-service-repair-manual/</u>
- 9. <u>https://www.heavymachineryequipment.com/jhon-deere/john-deere-50-60-70-series-tractor-service-repair-manual/</u>
- 10. <u>https://www.heavymachineryequipment.com/forklift/nichiyu-fb10p-300p-fb14p-300p-fb15p-300p-forklift-service-repair-manual/</u>
- 11. <u>https://www.heavymachineryequipment.com/downloads/john-deere-2140-tractor-service-manual/</u>
- 12. <u>https://www.heavymachineryequipment.com/downloads/john-deere-5220-5320-5420-5520-tractor-operation-manual/</u>
- 13. <u>https://www.heavymachineryequipment.com/downloads/john-deere-5220-5320-5420-5520-tractor-service-repair-manual/</u>
- 14. <u>https://www.heavymachineryequipment.com/downloads/john-deere-compact-utility-tractor-990-tm-1848-service-manual/</u>
- 15. <u>https://www.heavymachineryequipment.com/downloads/john-deere-5105-5205-tractor-service-repair-manual/</u>
- 16. <u>https://www.heavymachineryequipment.com/downloads/john-deere-4100-compact-utility-tractor-service-repair-manual/</u>
- 17. <u>https://www.heavymachineryequipment.com/downloads/john-deere-gt242-gt262-gt275-lawn-mower-service-repair-manual/</u>
- 18. <u>https://www.heavymachineryequipment.com/downloads/john-deere-2048hv-2254hv-sabre-garden-tractors-operators-manual/</u>
- 19. <u>https://www.heavymachineryequipment.com/downloads/john-deere-sabre-2048hv-2254hv-2554hv-garden-tractors-service-manual/</u>
- 20. <u>https://www.heavymachineryequipment.com/downloads/john-deere-316-318-420-lawn-garden-service-repair-manual/</u>
- 21. <u>https://www.heavymachineryequipment.com/downloads/john-deere-130-160-165-175-180-185-lawn-garden-tractor-service-repair-manual/</u>
- 22. <u>https://www.heavymachineryequipment.com/downloads/john-deere-lt133-lt155-lt166-lawn-garden-tractor-service-manual/</u>
- 23. <u>https://www.heavymachineryequipment.com/downloads/john-deere-5210-5310-5410-5510-tractor-service-repair-manual/</u>
- 24. <u>https://www.heavymachineryequipment.com/downloads/john-deere-scotts-s1642-s1742-s2046-s2546-lawn-tractor-repair-manual/</u>

- 25. <u>https://www.heavymachineryequipment.com/downloads/john-deere-7520-tractor-service-repair-manual/</u>
- 26. <u>https://www.heavymachineryequipment.com/downloads/john-deere-8430-8630-tractor-repair-technical-manual/</u>
- 27. <u>https://www.heavymachineryequipment.com/bobcat-parts/bobcat-t250-turbo-operation-</u> maintenance-manual/
- 28. <u>https://www.heavymachineryequipment.com/downloads/john-deere-5200-5300-5400-5500-service-repair-manual/</u>
- 29. <u>https://www.heavymachineryequipment.com/downloads/john-deere-2320-2420-utility-tractor-service-repair-manual/</u>
- 30. <u>https://www.heavymachineryequipment.com/downloads/john-deere-200cs-230cs-300cs-550cs-service-repair-manual/</u>
- 31. <u>https://www.heavymachineryequipment.com/downloads/john-deere-200-sprayer-service-repair-manual/</u>
- 32. <u>https://www.heavymachineryequipment.com/downloads/john-deere-2010-crawler-tractor-repair-service-manual/</u>
- 33. <u>https://www.heavymachineryequipment.com/downloads/john-deere-2000-series-2010-service-manual-for-tractors/</u>
- 34. <u>https://www.heavymachineryequipment.com/downloads/john-deere-200-and-900-cutting-platforms-service-repair-manual/</u>
- 35. <u>https://www.heavymachineryequipment.com/downloads/john-deere-ltr155-ltr166-ltr180-lawn-tractors-technical-manual/</u>
- 36. <u>https://www.heavymachineryequipment.com/downloads/john-deere-200-synchronous-thinner-service-repair-manual/</u>
- 37. <u>https://www.heavymachineryequipment.com/downloads/john-deere-200-208-210-212-214-216-tractors-service-repair-manual/</u>
- 38. <u>https://www.heavymachineryequipment.com/downloads/john-deere-1100-and-1150-outboard-planetary-axles-repair-manual/</u>
- 39. <u>https://www.heavymachineryequipment.com/downloads/john-deere-la130-la140-la150-lawn-tractor-service-repair-manual/</u>
- 40. <u>https://www.heavymachineryequipment.com/downloads/john-deere-300-series-oem-engine-service-repair-manual/</u>
- 41. <u>https://www.heavymachineryequipment.com/downloads/john-deere-4030-tractor-repair-technical-manual/</u>
- 42. <u>https://www.heavymachineryequipment.com/downloads/john-deere-4200-4300-4400-tractor-service-repair-manual/</u>
- 43. <u>https://www.heavymachineryequipment.com/downloads/john-deere-450c-crawler-dozer-repair-service-manual/</u>

- 44. <u>https://www.heavymachineryequipment.com/downloads/john-deere-4210-4310-4410-compact-tractor-service-repair-manual/</u>
- 45. <u>https://www.heavymachineryequipment.com/downloads/john-deere-335-375-385-435-and-535-round-balers-service-manual/</u>
- 46. <u>https://www.heavymachineryequipment.com/downloads/john-deere-550-crawler-dozer-service-repair-manual/</u>
- 47. <u>https://www.heavymachineryequipment.com/downloads/john-deere-210c-310c-315c-backhoe-loader-service-repair-manual/</u>
- 48. <u>https://www.heavymachineryequipment.com/downloads/john-deere-310a-and-310b-backhoe-loader-service-repair-manual/</u>
- 49. <u>https://www.heavymachineryequipment.com/downloads/john-deere-amt600-amt622-and-amt626-service-manual/</u>
- 50. <u>https://www.heavymachineryequipment.com/downloads/john-deere-xuv-620i-gator-utility-vehicle-repair-service-manual/</u>
- 51. <u>https://www.heavymachineryequipment.com/downloads/john-deere-4020-row-crop-tractor-repair-technical-manual/</u>
- 52. <u>https://www.heavymachineryequipment.com/downloads/john-deere-240-245-260-265-285-320-lawn-garden-service-repair-manual/</u>
- 53. <u>https://www.heavymachineryequipment.com/downloads/john-deere-rx63-rx73-rx75-sx75-rx95-sx95-riding-mowers-service-repair-manual/</u>
- 54. <u>https://www.heavymachineryequipment.com/downloads/john-deere-670-770-790-870-970-1070-utility-tractor-service-repair-manual/</u>
- 55. <u>https://www.heavymachineryequipment.com/downloads/john-deere-9400-9500-9600-combines-diagnosistechnical-manual/</u>
- 56. <u>https://www.heavymachineryequipment.com/downloads/john-deere-4940-self-propelled-sprayers-diagnostic-service-manual-tm113519/</u>
- 57. <u>https://www.heavymachineryequipment.com/downloads/john-deere-4940-self-propelled-sprayers-diagnostic-service-manual/</u>
- 58. <u>https://www.heavymachineryequipment.com/downloads/john-deere-1166-1169h-1174-1177-1177-service-repair-manual-download/</u>
- 59. <u>https://www.heavymachineryequipment.com/jhon-deere/john-deere-2054-2056-2058-2064-2066-service-repair-manual/</u>
- 60. <u>https://www.heavymachineryequipment.com/downloads/john-deere-2250-2450-2650-2650n-2850-3050-3350-3650-service-repair-manual/</u>
- 61. <u>https://www.heavymachineryequipment.com/downloads/john-deere-1350-1550-1750-1850-1850n-1950n-service-repair-manual/</u>
- 62. <u>https://www.heavymachineryequipment.com/downloads/john-deere-322-330-332-430-lawn-garden-tractor-service-manual/</u>

- 63. <u>https://www.heavymachineryequipment.com/downloads/john-deere-2040-2240-service-repair-manual/</u>
- 64. <u>https://www.heavymachineryequipment.com/downloads/john-deere-sabre-lawn-tractor-service-repair-manual-download/</u>
- 65. <u>https://www.heavymachineryequipment.com/downloads/john-deere-38-inch-46-inch-sabre-lawn-tractor-service-repair-manual/</u>
- 66. <u>https://www.heavymachineryequipment.com/downloads/stihl-e140-e160-e180-service-repair-manual/</u>
- 67. <u>https://www.heavymachineryequipment.com/downloads/john-deere-102-115-125-135-145-155c-190c-lawn-garden-tractor-manual/</u>
- 68. <u>https://www.heavymachineryeq.uipment.com/downloads/john-deere-x495-x595-lawn-garden-tractor-service-repair-manual/</u>
- 69. <u>https://www.heavymachineryequipment.com/downloads/john-deere-x465-x475-x485-x575-x585-tractor-service-repair-manual/</u>
- 70. <u>https://www.heavymachineryequipment.com/downloads/john-deere-lt150-lt160-lt170-lt180-lawn-tractors-service-repair-manual/</u>
- 71. <u>https://www.heavymachineryequipment.com/jhon-deere/john-deere-gx355-lawn-garden-tractor-service-repair-manual/</u>
- 72. <u>https://www.heavymachineryequipment.com/jhon-deere/john-deere-gx255-gx325-gx335-gx345-garden-tractors-service-manual/</u>
- 73. <u>https://www.heavymachineryequipment.com/jhon-deere/john-deere-l1642-l17-542-l2048-l2548-scotts-lawn-tractor-service-repair-manual/</u>
- 74. <u>https://www.heavymachineryequipment.com/downloads/john-deere-14-542gs-1642hs-17-542hs-sabre-lawn-tractor-service-repair-manual/</u>
- 75. <u>https://www.heavymachineryequipment.com/downloads/john-deere-sst15-sst16-sst18-spin-steer-lawn-tractor-service-manual/</u>
- 77. <u>https://www.heavymachineryequipment.com/jhon-deere/john-deere-8320rt-8345rt-8370rt-8rt-rw-tractor-service-repair-manual/</u>
- 78. <u>https://www.heavymachineryequipment.com/downloads/new-holland-t6030-t6050-t6070-t6080-t6090-tractor-service-repair-manual/</u>
- 79. <u>https://www.heavymachineryequipment.com/downloads/john-deere-350b-crawler-tractors-loaders-service-manual/</u>
- 80. <u>https://www.heavymachineryequipment.com/downloads/john-deere-lx277aws-lx279-lx288-lawn-tractors-service-manual/</u>