

4555, 4755, 4955 and 4560, 4760, 4960 Tractors Repair

For complete service information also see:

4555-4955 and 4560-4960 Tractors

Operation and Tests	TM1461
6076 Engines.	CTM6
Radial Piston Pumps	CTM7
Engine Accessories	CTM11
MFWD Axles 1100 Series	CTM17

**John Deere Waterloo Works
TM1460 (15MAY01)**

LITHO IN U.S.A.
ENGLISH

Introduction

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 55 SERIES AND 60 SERIES TRACTORS

This technical manual covers repair information for 4555, 4560, 4755, 4760, 4955, and 4960 tractors for North America. This manual also covers 4755 and 4955 tractors for the European market.

NOTE: The changes listed below make your current TM obsolete. Discard TM1460 dated 06Jul90. Please remove this page and route through your service department.

Repair information will cover all models. Photographs will generally show VERSION A tractors, however, VERSION B tractors will be called out where major differences exist. See reference below.

Version A

**55 Series Tractors North America
(All)**

**4755—4955 Tractors European Market
(—040000)**

Version B

**60 Series Tractors North America
(All)**

**4755—4955 Tractors European Market
(040001—)**

<https://www.ebooklibonline.com>

Hello dear friend!

Thank you very much for reading.

Enter the link into your browser.

The full manual is available for immediate download.

<https://www.ebooklibonline.com>

TECHNICAL MANUAL CHANGES

- SECTION 05—

Added Safety as a Separate Section

- SECTION 20—

Access to Injection Nozzles and Valve
Cover on Version B Tractors

- SECTION 30—

Revised Air Intake Procedure

- SECTION 40—

Added Version B Harness Routings

- SECTION 50—

Revised Transmission Repair Procedures

- SECTION 55—

Revised Transmission Repair Procedures

- SECTION 70—

Pump Installation Timing

- SECTION 80—

Revised Rear Wheel Adjustment Procedure

- SECTION 90—

Added SOUND-GARD Door Adjustment

- SECTION 99—

Revised Dealer Fabricated Tools

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,TM1460,DLR1 -19-04SEP91

Contents

SECTION 05—SAFETY

Group 05—Safety Information

SECTION 10—GENERAL INFORMATION

Group 05—Machine Specifications

Group 10—Predelivery Service

Group 15—Tune-up

Group 20—Lubrication

SECTION 15—SEPARATION

Group 05—Front Axle

Group 10—Front End

Group 15—Front End and Engine

Group 20—Engine

Group 25—SOUND-GARD Body

Group 30—Power Shift Clutch Housing

Group 31—QUAD-RANGE Clutch Housing

Group 35—Transmission

Group 40—Final Drive

SECTION 20—ENGINE

Group 05—Service

Group 10—Cooling System

SECTION 30—FUEL AND AIR

Group 05—Air Intake System

Group 10—Diesel Fuel System

SECTION 40—ELECTRICAL REPAIR

Group 05—Connector Repair

Group 10—Harness Replacement

Group 15—Alternator

Group 20—Starting Circuit

Group 25—Lighting Circuit Repair

Group 30—INTELLITRAK Monitoring System

Group 35—Accessory Components

Group 40—Hitch Electronic Control Components

Group 45—Electronic Governor Control
Components

Group 50—Auxiliary Lighting and Electrical
Components (European)

SECTION 50—POWER TRAIN--QUAD-RANGE TRANSMISSION

Group 05—Clutch Oil Pressure Regulating Valve
Housing

Group 10—Clutch Operating Piston Housing

Group 15—Perma-Clutch

Group 20—Quad-Range Planetary

Group 25—Quad-Range Transmission and
Charge Pump

Group 30—Shift Lever Assembly

Group 35—PTO Gear Train

Group 40—Adjust PTO Clutch Rod

SECTION 55—POWER TRAIN--POWER SHIFT TRANSMISSION

Group 05—Remove and Install Traction Clutch
Valve Housing

Group 10—Traction Clutch Valve Housing

Group 15—Remove and Install Transmission
Control Valve Housing

Group 20—Transmission Control Valves and
Accumulators

Group 25—Remove and Install Traction Clutch

Group 30—Traction Clutch and Drive Shafts

Group 35—Input Planetary

Group 40—Reduction Gear Train

Group 45—Output Planetary

Group 50—Speed Selector Assembly

Group 55—Charge Pump Assembly

Group 60—PTO Gear Train WITH MFWD

Group 65—PTO Gear Train WITHOUT MFWD

Group 70—PTO Clutch Rod

Group 75—MFWD Gear Train

Group 80—MFWD Clutch

SECTION 56—DIFFERENTIAL AND FINAL DRIVE

Group 05—Differential

Group 10—Differential Lock Valve

Group 15—Final Drive

Continued on next page

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.

TM1460-19-15MAY01

COPYRIGHT© 1991
DEERE & COMPANY
Moline, Illinois
All rights reserved
A John Deere ILLUSTRATION® Manual
Previous Editions
Copyright 1990, 1989 Deere & Company

SECTION 60—STEERING AND BRAKES

- Group 05—Remove and Install Power Steering Components
 - Group 10—Steering Column
 - Group 15—Metering Pump
 - Group 20—Steering Valve
 - Group 25—Steering Motor
- Group 30—Remove and Install Brake Valve and Brake Accumulator
 - Group 35—Brake Valve
 - Group 40—Brake Accumulator
 - Group 45—Bleeding Brakes and Testing Brake Accumulator
- Group 50—Brake Pistons, Plates and Disks
- Group 55—Auxiliary Trailer Brake (European)
- Group 60—Secondary Brake (European)
- Group 65—Auxiliary Steering System (European)

SECTION 70—HYDRAULICS

- Group 05—Hydraulic System Repair
- Group 10—Main Hydraulic Pump
- Group 15—Oil Filter Relief Valve and Return Manifold
- Group 20—Hydraulic Oil Cooler and Bypass Valve
- Group 25—Rockshaft, Draft Control and Lift Assist Cylinders
- Group 30—Hitch Control Valve
- Group 35—Control Valves
- Group 40—Selective Control Valves and Breakaway Couplers
- Group 45—Remote Cylinder
- Group 50—Transmission-Hydraulic Cleanup

SECTION 80—MISCELLANEOUS

- Group 05—Rear Wheels
- Group 10—Front Axle

SECTION 90—OPERATOR STATION REPAIR

- Group 05—Air Conditioning System
- Group 10—Air Conditioning System Service
- Group 15—Heating System
- Group 20—Seat
- Group 25—ROPS and SOUND-GARD Body

SECTION 99—DEALER FABRICATED TOOLS

- Group 05—Fabricated Tools

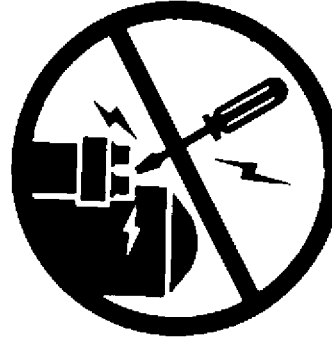
Index

PREVENT MACHINE RUNAWAY

Avoid possible injury or death from machinery runaway.

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

NEVER start engine while standing on ground. Start engine only from operator's seat, with transmission in neutral or park.



DX,BYPAS1 -19-04JUN90

05
05
1
-UN-11JAN89
TS177

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

-UN-23AUG88
TS227

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°C (60°F).



DX,SPARKS -19-04JUN90

-UN-23AUG88
TS204

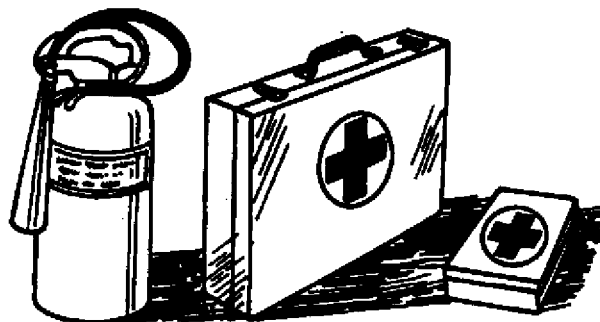
05-05-2

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.



DX,FIRE2 -19-04JUN90

TS291 -UN-23AUG88

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:

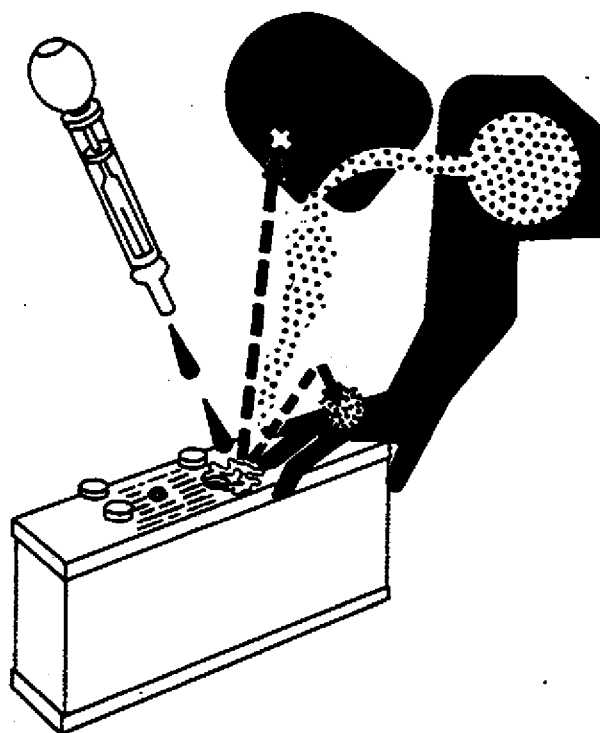
1. Filling batteries in a well-ventilated area.
2. Wearing eye protection and rubber gloves.
3. Avoiding breathing fumes when electrolyte is added.
4. Avoiding spilling or dripping electrolyte.
5. Use proper jump start procedure.

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

TS203 -UN-23AUG88

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

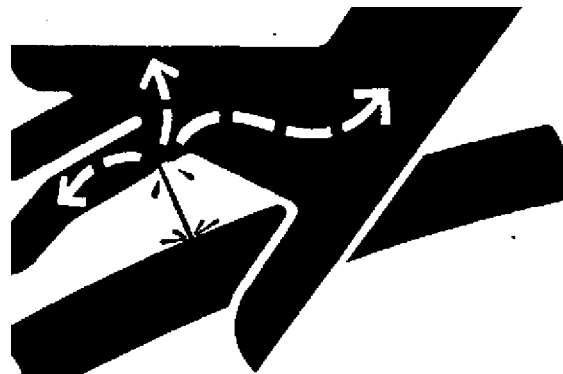
AVOID HIGH-PRESSURE FLUIDS

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

05-05-3

TS1132 -UN-26NOV90

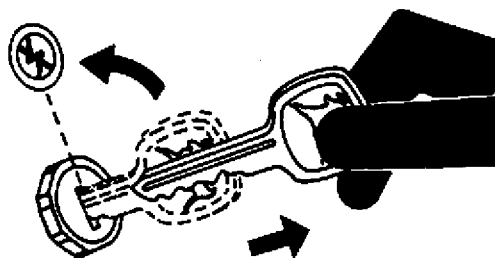
X9811 -UN-23AUG88

05
05
4

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.



DX,PARK

-19-04JUN90

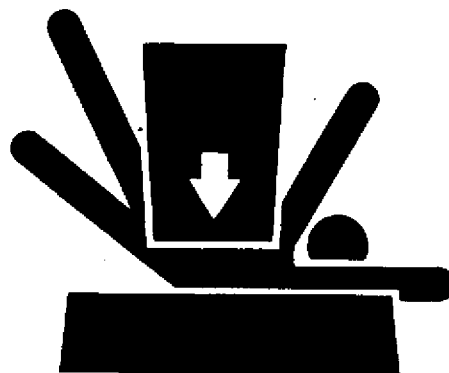
-UN-24MAY89

TS230

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.



DX,LOWER

-19-04JUN90

-UN-23AUG88

TS229

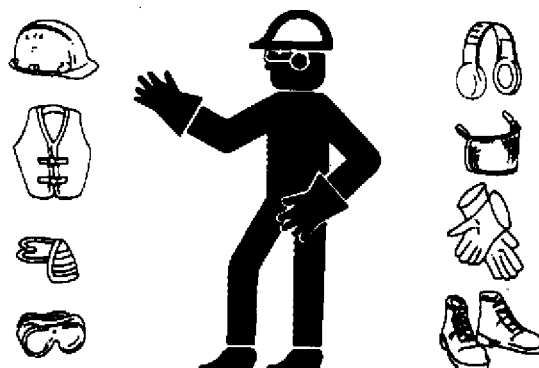
WEAR PROTECTIVE CLOTHING

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,WEAR

-19-10SEP90

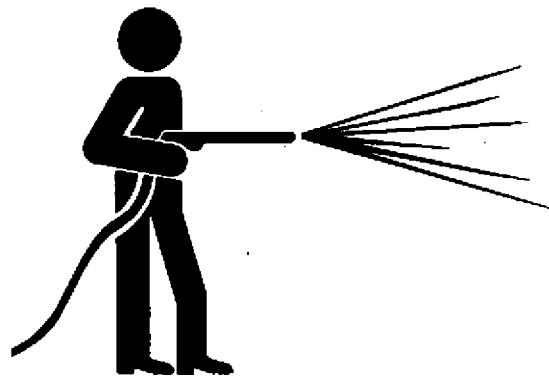
-UN-23AUG88

TS206

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.



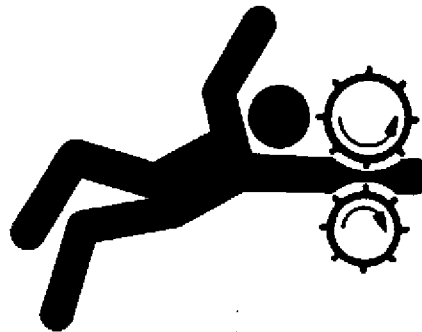
DX,CLEAN -19-04JUN90

T6642EJ -UN-18OCT88

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.



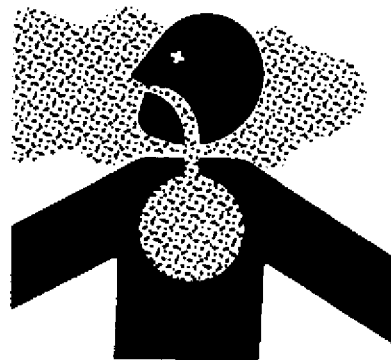
DX,LOOSE -19-04JUN90

TS228 -UN-23AUG88

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.



DX,AIR -19-04JUN90

TS220 -UN-23AUG88

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.

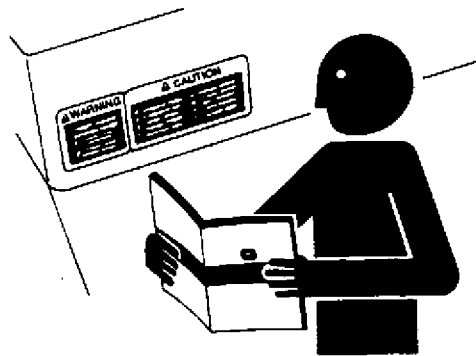


DX,LIGHT -19-04JUN90

TS223 -UN-23AUG88

REPLACE SAFETY SIGNS

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



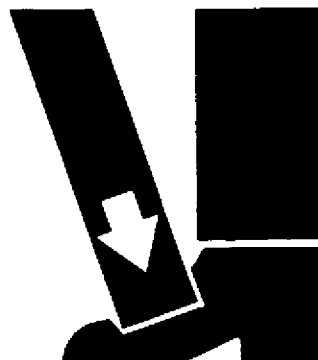
DX,SIGNS1 -19-04JUN90

TS201 -UN-23AUG88

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.



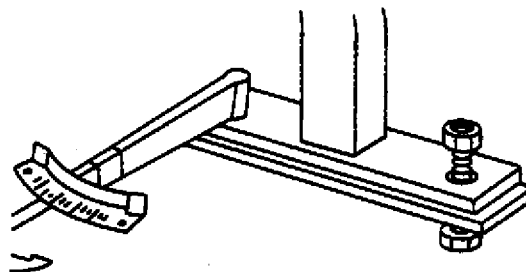
DX,LIFT -19-04JUN90

TS226 -UN-23AUG88

KEEP ROPS INSTALLED PROPERLY

Make certain all parts are reinstalled correctly if the roll-over protective structure (ROPS) is loosened or removed for any reason. Tighten mounting bolts to proper torque.

The protection offered by ROPS will be impaired if ROPS is subjected to structural damage, is involved in an overturn incident, or is in any way altered by welding, bending, drilling, or cutting. A damaged ROPS should be replaced, not reused.



DX,ROPS3 -19-04JUN90

TS212 -UN-23AUG88

SERVICE TIRES SAFELY

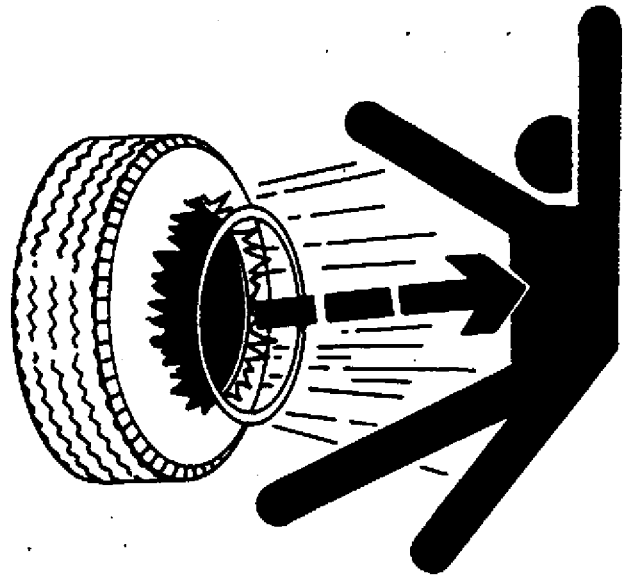
Explosive separation of a tire and rim parts can cause serious injury or death.

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.



DX,RIM

-19-24AUG90

TS211 -UN-23AUG88

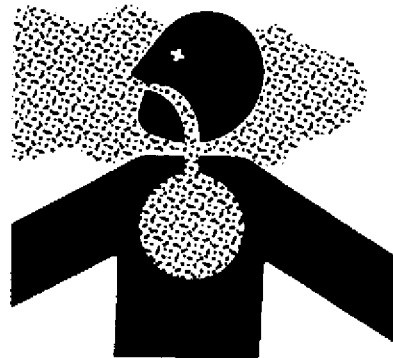
AVOID HARMFUL ASBESTOS DUST

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.



DX,DUST

-19-15MAR91

TS220 -UN-23AUG88

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.



DX,TORCH -19-05OCT90

TS953 -UN-15MAY90

REMOVE PAINT BEFORE WELDING OR HEATING

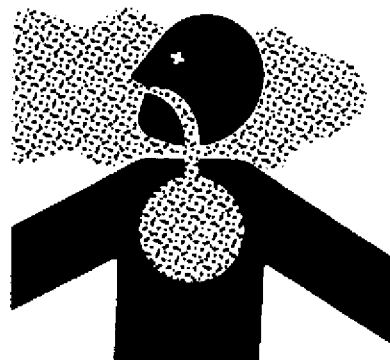
Avoid potentially toxic fumes and dust.

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

TS220 -UN-23AUG88

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.



DX,REPAIR -19-04JUN90

TS779 -UN-08NOV89

DISPOSE OF WASTE PROPERLY

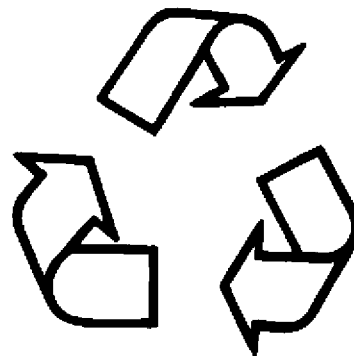
Improperly disposing of waste can threaten the environment and ecology. Potentially harmful waste used with John Deere equipment include such items as oil, fuel, coolant, brake fluid, filters, and batteries.

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.



DX,DRAIN -19-09AUG91

TS1133 -UN-26NOV90

LIVE WITH SAFETY

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



DX,LIVE

-19-04JUN90

TS231 -19-07OCT88

Section 10 GENERAL INFORMATION

Contents

Page

Group 05—Machine Specifications

General Specifications	10-05-1
Torque Charts	
Metric	10-05-3
English	10-05-4
Abbreviations	10-05-5

Group 10—Predelivery Service

Dealer Predelivery Service	10-10-1
Specifications	10-10-2

Group 15—Tune-up

Perform Preliminary Engine Test	10-15-1
Tune-up and Adjustments	10-15-1
Perform Final Engine Test	10-15-2
Specifications	10-15-2

Group 20—Lubrication

Lubricate Tractor Properly	10-20-1
Engine Oil	10-20-2
Transmission/Hydraulic Oil	10-20-3
Axle Bearing Grease	10-20-4
Gear Oil	10-20-4
Lubricant Storage	10-20-5
Lubrication Specifications	10-20-6

GENERAL SPECIFICATIONS

POWER:

PTO (Factory observed at 2200 rpm)

4555 and 4560	155 hp (115.6 kW)
4755 and 4760	175 hp (130.5 kW)
4955 and 4960	200 hp (149.2 kW)

ENGINE:

Type	diesel
Aspiration:	
4555 and 4560	turbocharged
4755, 4760, 4955, and 4960	turbocharged and liquid-to-air after cooled
Cylinders	in-line 6
Slow idle speed	850 rpm
Governed speed range	800—2400 rpm
Operating speed range	1500—2200 rpm
Bore and stroke	4.56 x 4.75 in. (115.8 x 120.7 mm)
Compression ratio	16.0:1
Displacement	466 cu. in. (7.6 L)
Firing order	1-5-3-6-2-4
Valve clearance	
Intake	0.38 mm (0.015 in.)
Exhaust	0.51 mm (0.020 in.)
Lubrication system	full pressure-flow filtration

HYDRAULICS:

Type	closed-center, pressure compensating
Pump	8-piston, variable displacement
Pump displacement	4 cu. in. (65 cm ³)
Standby pressure	2530 psi (17 500 kPa) (175 bar)
Steering system	Hydrostatic power
Hitch lift capacity	
4555, 4560, 4755 and 4760	8870 lb (4027 kg)
4555, 4560, 4755 and 4760 *	9710 lb (4408 kg)
4955 and 4960	9710 lb (4408 kg)
4955 and 4960 *	10560 lb (4794 kg)

CAPACITIES:

Fuel tank	102 gal (386 L)
Cooling system	32 qt. (30.3 L)
Crankcase with filter	22 qt. (21.0 L)
Transmission-hydraulic system	
Power Shift	18.5 gal (70.5 L)
Power Shift with MFWD	20 gal (75 L)
QUAD-RANGE	26.9 gal. (102 L)
Mechanical-Front-Wheel-Drive	
Wheel Hubs	4.75 qt. (4.5 L)
Axle Housing	9.5 qt. (9 L)

* Optional lift-assist cylinder

RX14601010,1 -19-05APR91

DIMENSIONS (with standard tires):**WHEELBASE**

Two-Wheel Drive	3010 mm (118.5 in.)
MFWD	2974 mm (117.1 in.)

LENGTH (less hitch and drawbar)

Two-Wheel Drive	4531 mm (178.4 in.)
MFWD	4559 mm (179.5 in.)

OVERALL WIDTH (axle length)

Long Axle	2758 mm (108 in.)
Extra Long Axle	3012 mm (118 in.)

OVERALL HEIGHT (top of SOUND-GARD body)

Two-Wheel Drive	2982 mm (117.4 in.)
MFWD	3015 mm (118.8 in.)

SHIPPING WEIGHT (average):

With SOUND-GARD and most popular wheel equipment

Two-Wheel Drive:

4555, 4560, 4755, and 4760 with QUAD-RANGE Transmission	7567 kg (16186 lb)
4955 and 4960 with POWER SHIFT Transmission	7917 kg (17457 lb)

With SOUND-GARD, Power Shift Transmission,

MFWD, and standard wheel equipment:

4555, 4560, 4755, and 4760	8482 kg (18703 lb)
4955 and 4960	8607 kg (18978 lb)

RX14601010.3 -19-04APR91

METRIC BOLT AND CAP SCREW TORQUE VALUES

Property Class and Head Markings	4.8		8.8		9.8		10.9		12.9	
										
Property Class and Nut Markings	5		10		10		10		12	
										

Size	Class 4.8				Class 8.8 or 9.8				Class 10.9				Class 12.9			
	Lubricated ^a		Dry ^a		Lubricated ^a		Dry ^a		Lubricated ^a		Dry ^a		Lubricated ^a		Dry ^a	
	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
M6	4.8	3.5	6	4.5	9	6.5	11	8.5	13	9.5	17	12	15	11.5	19	14.5
M8	12	8.5	15	11	22	16	28	20	32	24	40	30	37	28	47	35
M10	23	17	29	21	43	32	55	40	63	47	80	60	75	55	95	70
M12	40	29	50	37	75	55	95	70	110	80	140	105	130	95	165	120
M14	63	47	80	60	120	88	150	110	175	130	225	165	205	150	260	190
M16	100	73	125	92	190	140	240	175	275	200	350	225	320	240	400	300
M18	135	100	175	125	260	195	330	250	375	275	475	350	440	325	560	410
M20	190	140	240	180	375	275	475	350	530	400	675	500	625	460	800	580
M22	260	190	330	250	510	375	650	475	725	540	925	675	850	625	1075	800
M24	330	250	425	310	650	475	825	600	925	675	1150	850	1075	800	1350	1000
M27	490	360	625	450	950	700	1200	875	1350	1000	1700	1250	1600	1150	2000	1500
M30	675	490	850	625	1300	950	1650	1200	1850	1350	2300	1700	2150	1600	2700	2000
M33	900	675	1150	850	1750	1300	220	1650	2500	1850	3150	2350	2900	2150	3700	2750
M36	1150	850	1450	1075	2250	1650	2850	2100	3200	2350	4050	3000	3750	2750	4750	3500

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.

^a "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.

DX,TORQ2 -19-05JUN91

UNIFIED INCH BOLT AND CAP SCREW TORQUE VALUES

SAE Grade and Head Markings	1 or 2 ^b	5	5.1	5.2	8	8.2
	NO MARK 					
SAE Grade and Nut Markings	2	5			8	
	NO MARK 					

Size	Grade 1				Grade 2 ^b				Grade 5, 5.1, or 5.2				Grade 8 or 8.2			
	Lubricated ^a		Dry ^a		Lubricated ^a		Dry ^a		Lubricated ^a		Dry ^a		Lubricated ^a		Dry ^a	
	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	87	150	110	190	140	240	175	300	225	375	280	425	310	550	400
7/8	190	140	240	175	190	140	240	175	490	360	625	450	700	500	875	650
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.

^a "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.

^b 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.

DX,TORQ1 -19-15MAR91



Suggest:

If the above button click is invalid.

**Please download this document
first, and then click the above link
to download the complete manual.**

Thank you so much for reading

ABBREVIATIONS

Abbreviations are used in place of some words.

CTM—Component Technical Manual

Dk—Dark

ECU—Electronic Control Unit

FWD—Front Wheel Drive

ID—Inside Diameter

Lt—Light

MFWD—Mechanical Front Wheel Drive

OD—Outside Diameter

PST—Power Shift Transmission

PTO—Power Take-Off

QRT—QUAD-RANGE Transmission

ROPS—Roll-Over Protection Structure

SCV—Selective Control Valve

SGB—SOUND-GARD Body

SMV—Slow Moving Vehicle

RX14601010.7 -19-05APR91

10
05
5

<https://www.ebooklibonline.com>

Hello dear friend!

Thank you very much for reading.

Enter the link into your browser.

The full manual is available for immediate download.

<https://www.ebooklibonline.com>