

**450D
Crawler Bulldozer
455D
Crawler Loader**



TECHNICAL MANUAL

TM1291 (Oct-87)
LITHO IN U.S.A.

TO ALL JOHN DEERE DEALERS

**IMPORTANT: PLEASE REMOVE THIS PAGE AND ROUTE THROUGH YOUR
SERVICE DEPARTMENT.**

This is a complete revision for TM-1291, 450D Crawler Bulldozer
and 455D Crawler Loader.

Binder and tabs from old manual may be saved and used with this
bound manual.

The new pages are dated (Oct-87). Listed below is a brief
explanation of "WHAT" was changed and "WHY" it was changed.

This manual was revised to include the correct art and story for
steering pedal configuration.

**Thanks very much for your reading,
Want to get more information,
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**Have any questions please write to me:
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450D CRAWLER BULLDOZER AND 455D CRAWLER LOADER TECHNICAL MANUAL TM-1291 (OCT-87)

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INTRODUCTION AND SAFETY INFORMATION

INTRODUCTION

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 troubleshooting, general maintenance, and basic types of failures and their causes. FOS Manuals are for training new personnel and for reference by experienced technicians.

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



63A-T85958, T28r1 D01, 450382

FEATURES OF THIS TECHNICAL MANUAL

- John Deere ILLUSTRATION format emphasizing detailed pictures and fewer words in easy-to-use modules.
- Removal and installation groups preceding some repair groups.
- A section of system diagnostic testing.
- Table of contents of all sections at the front of the manual and a listing of all groups and headings at the front of each section.
- Special tools and specifications listed at the front of each group they are used in.
- Special tools illustrated in numerical order at end of manual.
- Alphabetical listing of all major components, specifications, and special tools.
- Safety rules, general specifications, and lubrication specifications.

This technical manual was planned and written for you - an experienced service technician. Keep it in a permanent binder in the shop where it is handy. Refer to it when you need to know correct service procedures or specifications.

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



63A-T85959 T28r1 II15 150383

SAFETY AND YOU



CAUTION: This safety symbol is used for important safety messages. When you see this symbol, follow the safety message to avoid personal injury.



63A/T81214 T861 1102 150245

AVOID FIRE HAZARDS

Be prepared if an accident or fire should occur. Know where the first aid kit and the fire extinguishers are located — know how to use them.

Do not smoke while refueling or handling highly flammable material.

Shut off the engine when refueling.

Use care in refueling if the engine is hot.

Do not use open pans of gasoline or diesel fuel for cleaning parts. Use good commercial, nonflammable solvents.

Provide adequate ventilation when charging batteries.

Do not check battery charge by placing metal objects across the posts.

Do not allow sparks or open flame near batteries.

Do not smoke near battery.

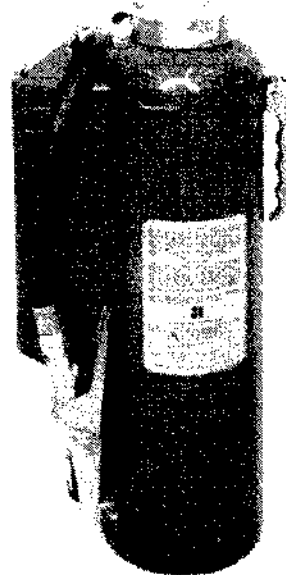
Never check fuel, battery electrolyte, or coolant levels with an open flame.

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

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

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

Inspect electrical wiring for worn or frayed insulation. Install new wiring if wires are damaged.



88A/T86875 T82/SKSA L 150383

PREVENT FIRES BEFORE STARTING ENGINE

If machine is equipped with a fire extinguisher, check for correct charge.

Open both side shields and grille and remove trash.

Remove trash from other bottom guards, drive lines, batteries, hydraulic lines, fuel tank and operator's station.

Check for leaking fuel lines, hydraulic lines, hoses, or fittings with a piece of cardboard or wood. Do not use your hands. Tighten loose fittings. If lines are bent or hoses kinked, install new parts.

T82/CRSA A 080483

PREVENT FIRES AFTER STOPPING ENGINE

Temperature in engine compartment may go up immediately after you stop the engine. **BE ON GUARD FOR FIRES.**

Before you clean trash from the engine compartment, wait until the engine has cooled. Open side shields to cool the engine faster. While the engine cools, clean trash from other areas.

T82/CRSA B 061202

HANDLE STARTING FLUID SAFELY

If your machine is equipped with a starting fluid starting aid, remember starting fluid is highly flammable. **DO NOT** incinerate or puncture a starting fluid container. **DO NOT** store a starting fluid container in a high-temperature area.



88A/T90207 T82/CRSA G 210283

UNDERSTAND MACHINE OPERATION

Only qualified people should operate the machine.

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



88A/T90203 T82/CRSA B 210283

Introduction And Safety Information

WEAR PROTECTIVE CLOTHING

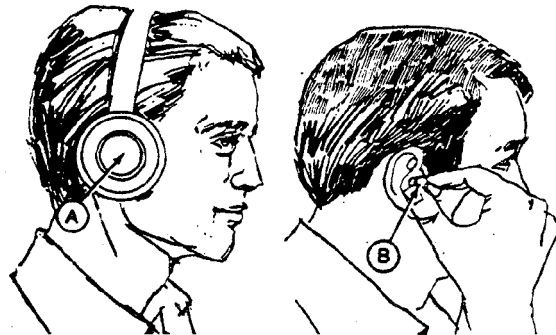
Wear fairly tight clothing . . . and safety equipment.



88A:T85056 T82:EXSA B 100183

PROTECT AGAINST NOISE

Prolonged exposure to loud noise can cause impairment or loss of hearing. Wear a suitable hearing protective device such as earmuffs (A) or earplugs (B) to protect against objectionable or uncomfortable loud noise.

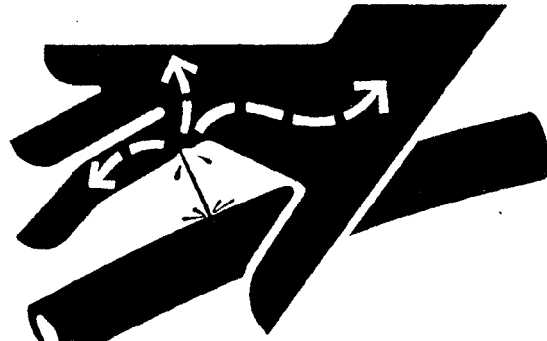


88A:X7662 T82:BHSA E 100183

AVOID HIGH-PRESSURE FLUIDS

Escaping fluid under pressure can penetrate the skin causing serious injury. Relieve pressure before disconnecting hydraulic or other lines. Tighten all connections before applying pressure. Keep hands and body away from pinholes and nozzles which eject fluids under high pressure. Use a piece of cardboard or paper to search for leaks. Do not use your hand.

If ANY fluid is injected into the skin, it must be surgically removed within a few hours by a doctor familiar with this type injury or gangrene may result.



88A:X9811 T82:BHSA F 100183

START ENGINE FROM OPERATOR'S SEAT ONLY

Avoid possible injury or death from machinery runaway.

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

NEVER start engine while standing on ground. Start engine only from operator's seat, with transmission in neutral, neutral-lock lever in LOCK position and brake lock lever engaged.

T82:CRSA AD 260483

USE HAND HOLDS AND STEPS

When you get on and off the machine, use handholds and steps.



88A/T90204 T62/CRSA C 210283

INSPECT MACHINE

Inspect your machine carefully each day before you start it.
See "Pre-Start Inspection".



88A/T90205 T62/CRSA C 210283

OPERATE MACHINE SAFELY

DO use your seat belt if your machine has a roll-over protective structure (ROPS).

DO NOT use your seat belt if your machine does not have a ROPS.



88A/T90206 T62/CRSA E 180383

Before you move any equipment, be sure all persons are away from the machine.

When the machine is operating, ONLY the operator should be on it.

Keep operating area level.

Y82/CRSA F 210283

DRIVE CRAWLER BULLDOZER SAFELY

Drive carefully:

- on slopes.
- where room is limited.
- over rough ground, curbs, or tracks.
- near a ditch or excavation.

For traveling:

- carry blade low.
- keep machine in gear at all times.

Use accessory lights and safety devices to warn operators of other vehicles.



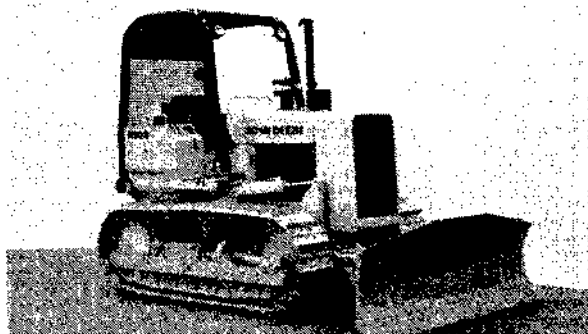
88A/T90208 T82/CRSA H 210283

PARK SAFELY

Be sure all equipment is on the ground or locked in position.

Before leaving operator's seat be sure machine will not move.

Remove keys from switches and locks.

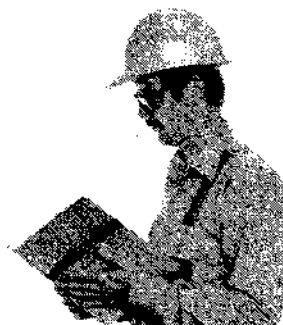


88A/T90209 T82/CRSA I 210283

UNDERSTAND CORRECT SERVICE

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

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



63A/T87356 T82/TL5A H 191282

Introduction And Safety Information

If it is necessary to make checks with the engine running, **ALWAYS USE TWO PEOPLE** — with the operator at the controls, able to see the person doing the checking.

Be sure transmission shift lever is in neutral. Apply and lock foot brake.

KEEP HANDS AWAY FROM MOVING PARTS.

T82;8HSA P 080482

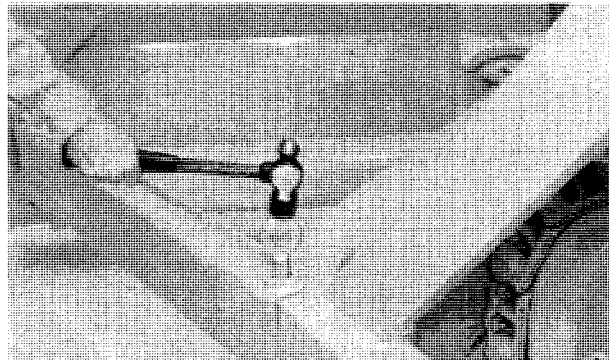
CLEAN THE MACHINE REGULARLY



88A/T90210 T82;CRSA J 210283

PROTECT AGAINST FLYING DEBRIS

When you drive connecting pins in or out, guard against injury from flying pieces of metal or debris. Wear goggles or safety glasses, hard hat, and gloves.

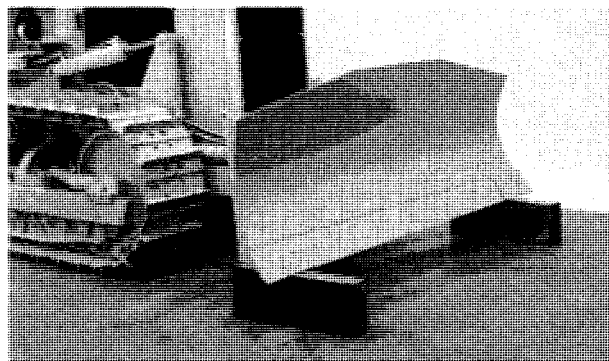


88A/T90211 T82;CRSA K 080483

SUPPORT RAISED EQUIPMENT

Do not work under raised equipment unless it has a support under it.

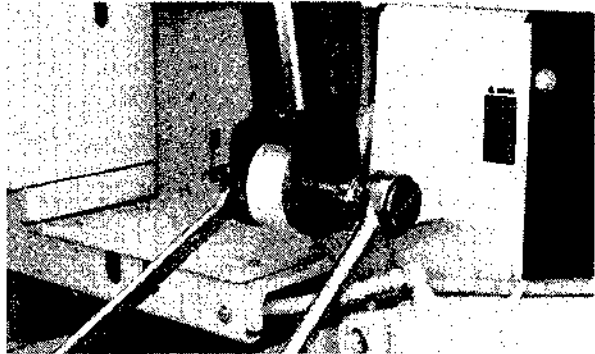
If a support is not available, lower equipment to the ground.



87A/T90212 T82;CRSA L 010683

KEEP ROPS INSTALLED PROPERLY

If ROLL-OVER protective equipment is loosened or removed for any reason, make certain all parts are reinstalled correctly. Tighten mounting bolts to proper torque. The protection offered by ROPS will be impaired if the ROPS is subject to structural damage, has been involved in an overturn incident or is in anyway altered. Damaged ROPS should be replaced, not reused.



88A/T90213 T82/CRSA N 120483

TEST COOLANT HEATER IN LIQUID ONLY

Use a heavy-duty grounded cord to connect coolant heater to electrical power.

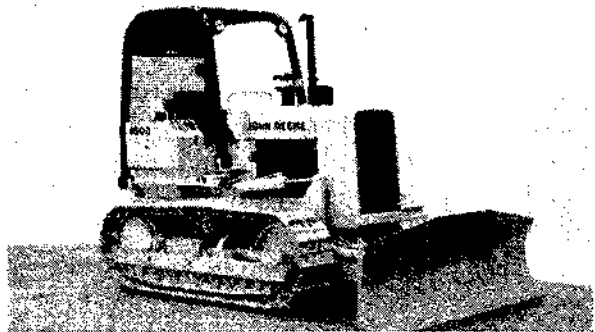
Do not plug into electrical power unless heating element is immersed in coolant. Sheath could burst and result in personal injury.



88A/T87098 T82/CRSA T 110183

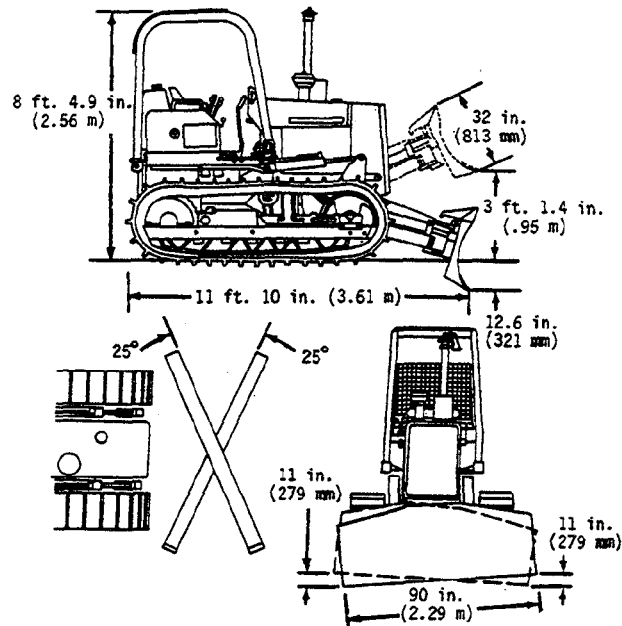
PREPARE MACHINE FOR REPAIR

1. Lower all equipment to the ground.
2. Put transmission in PARK or engage parking brake.
3. Stop the engine.
4. Operate all hydraulic control levers to release hydraulic pressure in the system.
5. Disconnect negative (-) battery cable.



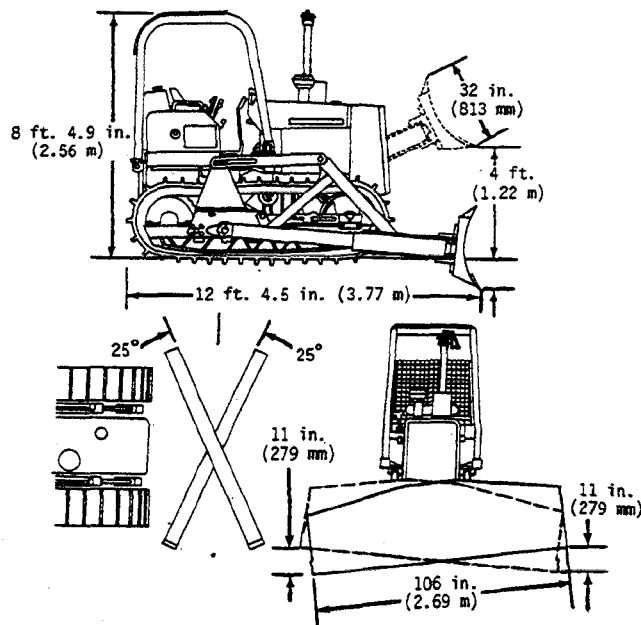
88A/T90209 T82/CRSA AB 200683

Group II GENERAL SPECIFICATIONS



450D Crawler Dozer With 6405 Blade

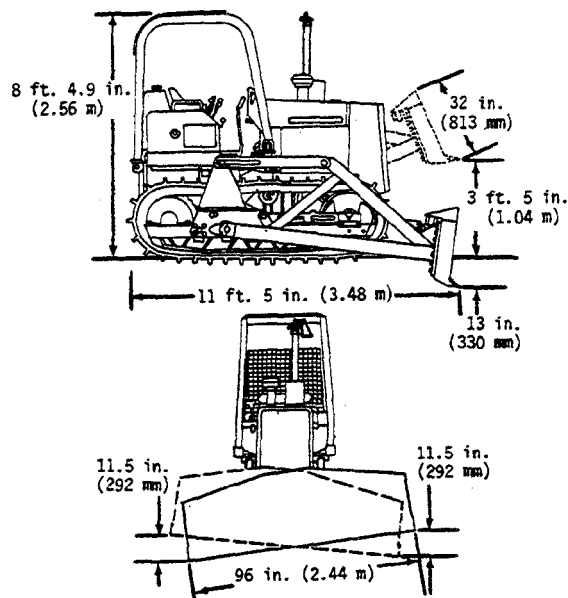
88A/T90425 T82/CRSP A 250283



450D Crawler Dozer With 6410 Blade

88A/T90426 T82/CRSP C 250283

General Specifications



450D Crawler Dozer With 6415 Blade

88A/T98427 T82/CRSP D 250283

450D Crawler Dozer

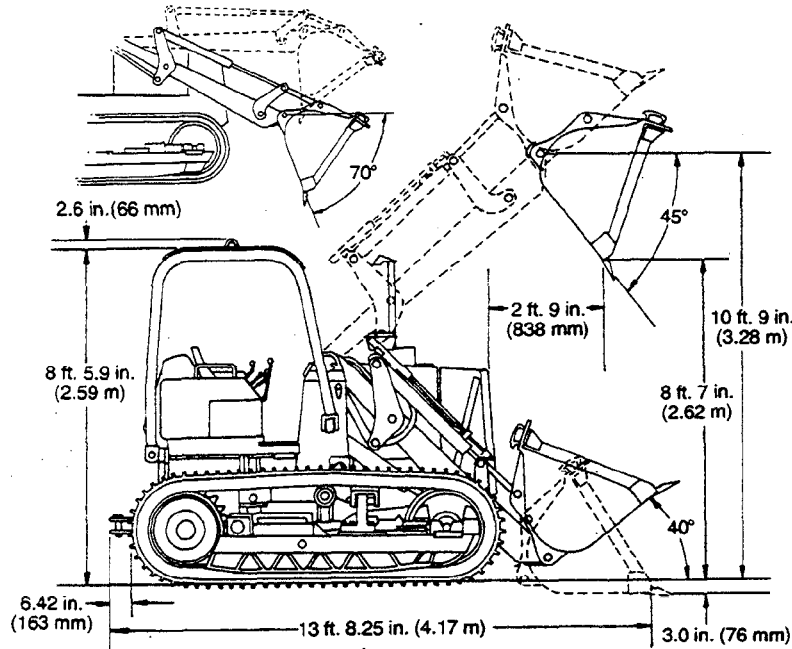
Capacities:	U.S.	Metric
Engine coolant	4 gal	15.0 L
Engine oil including filter	9 qt	8.5 L
Transmission	8 gal	30.3 L
Final drive (each side)	6.25 qt	5.9 L
Hydraulic reservoir	6 gal	22.7 L
Hydraulic system:		
(6405 dozer)	9.5 gal	36.0 L
(6410 dozer)	8.5 gal	32.2 L
(6415 dozer)	8.5 gal	32.2 L
Steering clutch housing (each side)	7 gal	26.5 L
Fuel tank	31 gal	117.3 L

SAE Operating Weight:	
16 in. (406 mm) grouser shoes	12,260 lb (5560 kg)
6405 dozer and 16 in. (406 mm) grouser shoes	14,640 lb (6640 kg)
6410 dozer and 18 in. (457 mm) grouser shoes	14,830 lb (6727 kg)
6415 dozer and 18 in. (457 mm) grouser shoes	15,240 lb (6913 kg)

(Specifications and design subject to change without notice. Wherever applicable, specifications are in accordance with ICED and SAE Standards. Except where otherwise noted, these specifications are based on a unit with roll-over protective structure and standard equipment.)

T82/CRSP M 200683

General Specifications



455D Crawler Loader

88A/T92254 T82/CRSP K 170583

455D CRAWLER LOADER

455D Crawler Loader

Capacities:	U.S.	Metric
Engine coolant	4 gal	15.0 L
Engine oil including filter	9 qt	8.5 L
Transmission	8 gal	30.3 L
Final drive (each side)	6.25 qt	5.9 L
Hydraulic reservoir	6 gal	22.7 L
Hydraulic system:		
(6405 dozer)	9.5 gal	36.0 L
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T82/CRSP N 200683



Group III CAP SCREW TORQUE VALVES




HARDWARE TORQUE SPECIFICATIONS

Check all cap screws and nuts, which can be easily reached, to be sure they are tight. If hardware is loose, tighten it to torque shown on chart below unless a special torque is specified.

T82:EXMA V 150383

NOTE: Torques shown are for dry (no lubrication on threads) hardware.

NOTE: Torque wrench tolerance is ± 10 percent of specified torque.

Cap Screw Size-Inches	Customary Hardware					
						
	Grade B		Grade D		Grade F	
	lb-ft.	(N-m)	lb-ft.	(N-m)	lb-ft.	(N-m)
1/4	----	----	10	(14)	14	(19)
5/16	----	----	20	(27)	30	(41)
3/8	----	----	35	(47)	50	(68)
7/16	35	(47)	55	(75)	80	(108)
1/2	55	(75)	85	(115)	120	(163)
9/16	75	(102)	130	(176)	175	(237)
5/8	105	(142)	170	(230)	240	(325)
3/4	185	(251)	300	(407)	425	(576)
7/8	160	(217)	445	(603)	685	(929)
1	250	(339)	670	(908)	1030	(1396)
1-1/8	330	(447)	910	(1234)	1460	(1979)
1-1/4	480	(651)	1250	(1695)	2060	(2793)

88A/T88884 T82:EXMA S 150383