750B, 850B Crawler Dozer Operation and Test

TECHNICAL MANUAL

For complete service information also see:

TM1332 (20MAY92)
LITHO IN U.S.A.
ENGLISH

REFERENCE COPY

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.

Contents

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.

TM1332-19-20MAY92

210592

Section I
GENERAL INFORMATION

Contents

210592

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.

TS227 -UN-23AUG88

DX,FLAME -19-04JUN90

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).

TS204 -UN-23AUG88

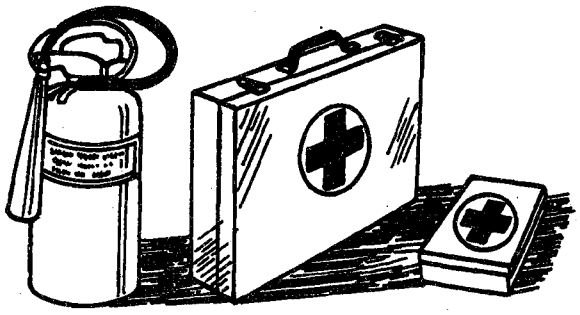
DX,SPARKS -19-04JUN90

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.



TS291 -UN-23AUG88

DX,FIRE2 -19-04JUN90

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1
2

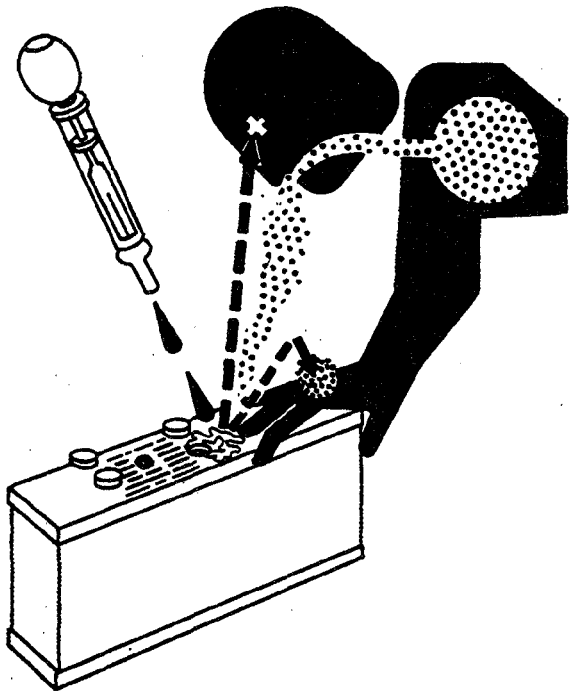
PREVENT ACID BURNS

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.



TS203 -UN-23AUG88

DX,POISON -19-04JUN90

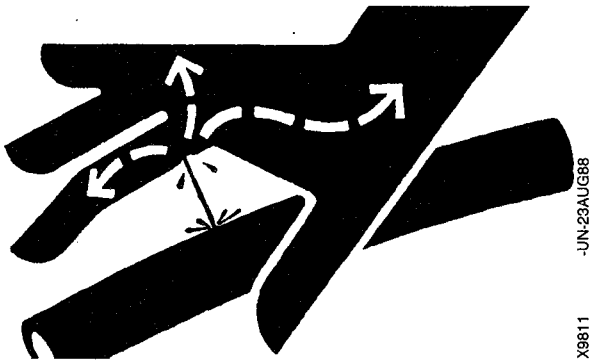
AVOID HIGH-PRESSURE FLUIDS

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.

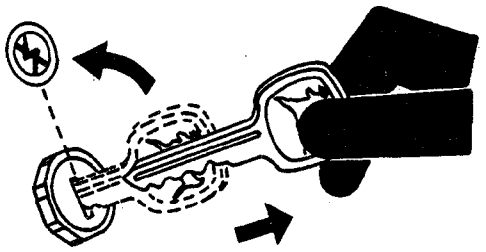


X9811 -UN-23AUG88

DX,FLUID -19-09AUG91

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.



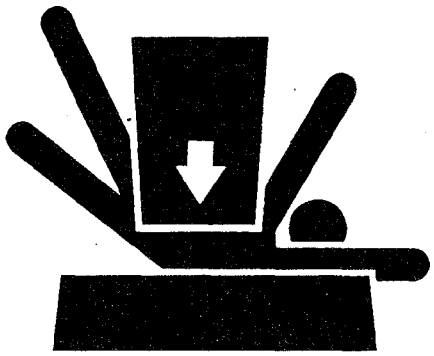
TS230 -UN-24MAY89

DX,PARK -19-04JUN90

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.



TS229 -UN-23AUG88

DX,LOWER -19-04JUN90

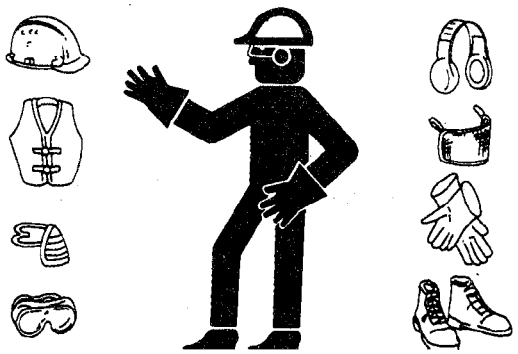
WEAR PROTECTIVE CLOTHING

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.



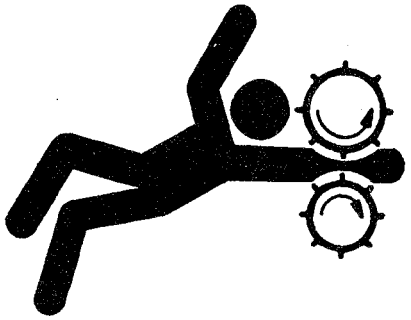
TS206 -UN-23AUG88

DX,WEAR -19-10SEP90

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.



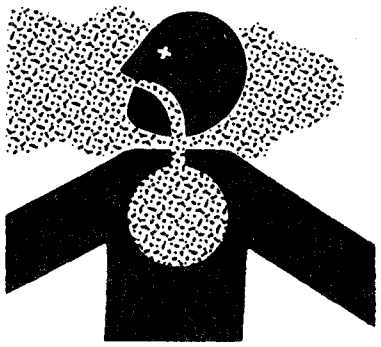
TS228 -UN-23AUG88

DX,LOOSE -19-04JUN90

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.

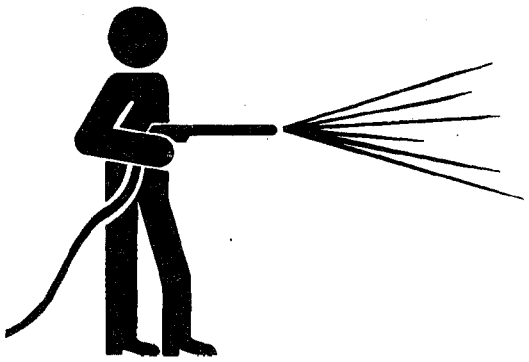


TS220 -UN-23AUG88

DX,AIR -19-04JUN90

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.



T6642EJ -UN-18OCT88

DX,CLEAN -19-04JUN90

REMOVE PAINT BEFORE WELDING OR HEATING

Avoid potentially toxic fumes and dust.

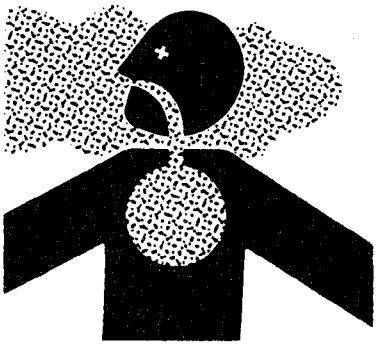
Hazardous fumes can be generated when paint is heated by welding, soldering, or using a torch.

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.



TS220 -UN-23AUG88

DX,PAINT -19-04JUN90

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.

TS953 -UN-15MAY90

DX,TORCH -19-05OCT90

ILLUMINATE WORK AREA SAFELY

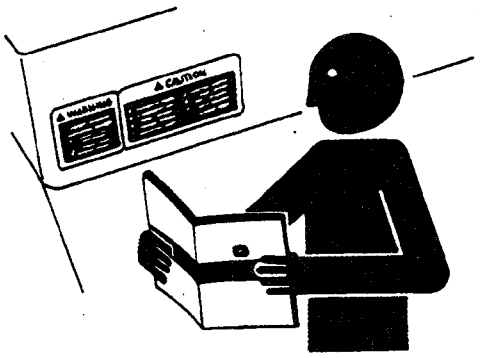
Illuminate your work area adequately but safely. Use a portable safety light for working inside or under the machine. Make sure the bulb is enclosed by a wire cage. The hot filament of an accidentally broken bulb can ignite spilled fuel or oil.

TS223 -UN-23AUG88

DX,LIGHT -19-04JUN90

REPLACE SAFETY SIGNS

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



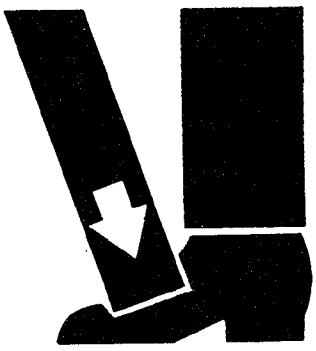
TS201 -UN-23AUG88

DX,SIGNS1 -19-04JUN90

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.



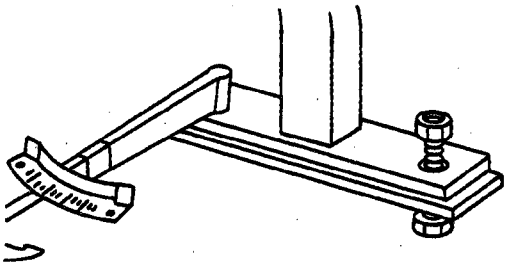
TS226 -UN-23AUG88

DX,LIFT -19-04JUN90

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.



TS212 -UN-23AUG88

DX,ROPS3 -19-04JUN90

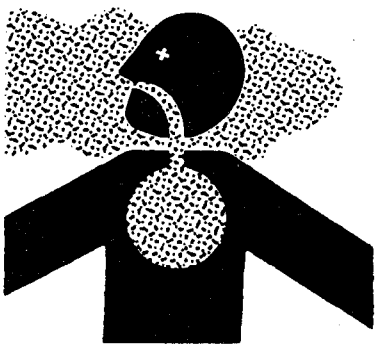
AVOID HARMFUL ASBESTOS DUST

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.



TS220 -UN-23AUG88

DX,DUST -19-15MAR91

PRACTICE SAFE MAINTENANCE

Understand service procedure before doing work. Keep area clean and dry.

Never lubricate or service machine while it is moving. Keep hands, feet, and clothing from power-driven parts. Disengage all power and operate controls to relieve pressure. Lower equipment to the ground. Stop the engine. Remove the key. Allow machine to cool.

Securely support any machine elements that must be raised for service work.

Keep all parts in good condition and properly installed. Fix damage immediately. Replace worn or broken parts. Remove any buildup of grease, oil, or debris.

Disconnect battery ground cable (-) before making adjustments on electrical systems or welding on machine.

TS218 -UN-23AUG88

DX,SERV -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.

TS779 -UN-08NOV89

DX,REPAIR -19-04JUN90

DISPOSE OF WASTE PROPERLY

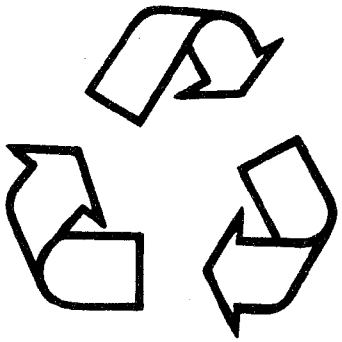
Improperly disposing of waste can threaten the environment and ecology. Potentially harmful waste used with John Deere equipment include such items as oil, fuel, coolant, brake fluid, filters, and batteries.

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.



TS1133 -UN-26NOV90

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.

TS231 -19-07OCT88

DX,LIVE -19-04JUN90

750B GENERAL SPECIFICATIONS

Net engine power is with standard equipment including air cleaner, exhaust system, alternator, and cooling fan, at standard conditions per SAE J1349 and DIN 6270B using No. 2-D fuel @ 35 API gravity. No derating is required up to 10 000 ft (3050 m) altitude. Gross power is without cooling fan.

Engine:
John Deere 6 cylinder turbocharged diesel
Rated power at 2100 rpm . . . . . SAE net horsepower, 120 hp (90 kW)
SAE gross horsepower, 128 hp (95 kW)
Bore and stroke . . . . . 4.19 x 5 in. (106.4 x 127 mm)
Piston displacement . . . . . 414 cu. in. (6.785 L)
Lubrication . . . . . Pressure system with full flow filters
Cooling . . . . . Pressurized with thermostat and controlled bypass
Fan . . . . . Blower
Dual-stage aspirated air cleaner with restriction indicator . . . . . Dry
Electrical system . . . . . 24-volt with 40-amp alternator
Batteries . . . . . two 12-volt
Cold cranking capacity at 0°F(-18°C) . . . . . 625 amps
Reserve capacity . . . . . 160 minutes each

Transmission:
Splitter drive . . . . . Pressure-lubricated helical gears drive both transmissions, main hydraulic pump, winch drive shaft and auxiliary pump drive
Speeds . . . . . Infinite from 0 to 6.5 mph (0 to 10.5 km/h) forward and reverse

Steering:
Steering is done hydrostaticlaly by varying track speed and/or direction. Hydrostatic steering eliminates the need for steering clutches and steering brakes, as well as the need for cross-steering when workin on steep slopes.

Brakes:
Parking . . . . . Hydtrostatic (dynamic) braking stops the crawler when the transmission control lever is moved to neutral. Wet-disk brakes are automatically applied when engine is stopped, or manually applied with center foot pedal during normal operation.

Hydraulic System (open center):
Pressure . . . . . 2000 psi (13 790 kPa) (137.9 bar)
Filter . . . . . 10 micron filter in return line with bypass
Pump . . . . . vane
Flow at 2100 rpm . . . . . 38gpm (144 L/min)

Tracks:
Track shoes each side 40
Ground contact area . . . . . 3240 sq in. (20 903 cm^2)
Wide track . . . . . 6120 sq in. (39 484 cm^2)
Ground pressure
6505 . . . . . 9.66 psi (66.6 kPa) (0.7 bar)
6520 . . . . . 9.05 psi (62.4 kPa) (0.6 bar)
6525 . . . . . 8.95 psi (61.7 kPa) (0.6 bar)
Narrow gauge . . . . . 9.02 psi (62.2 kPa) (0.6 bar)
Wide track . . . . . 5.10 psi (35.2 kPa) (0.4 bar)
General purpose . . . . . 7.71 psi (53.2 kPa) (0.5 bar)
Track gauge . . . . . 74 in. (1.88 m)
Narrow gauge . . . . . 64 in. (1.63 in.)
Minimum ground clearance . . . . . 14 in. (356 mm)

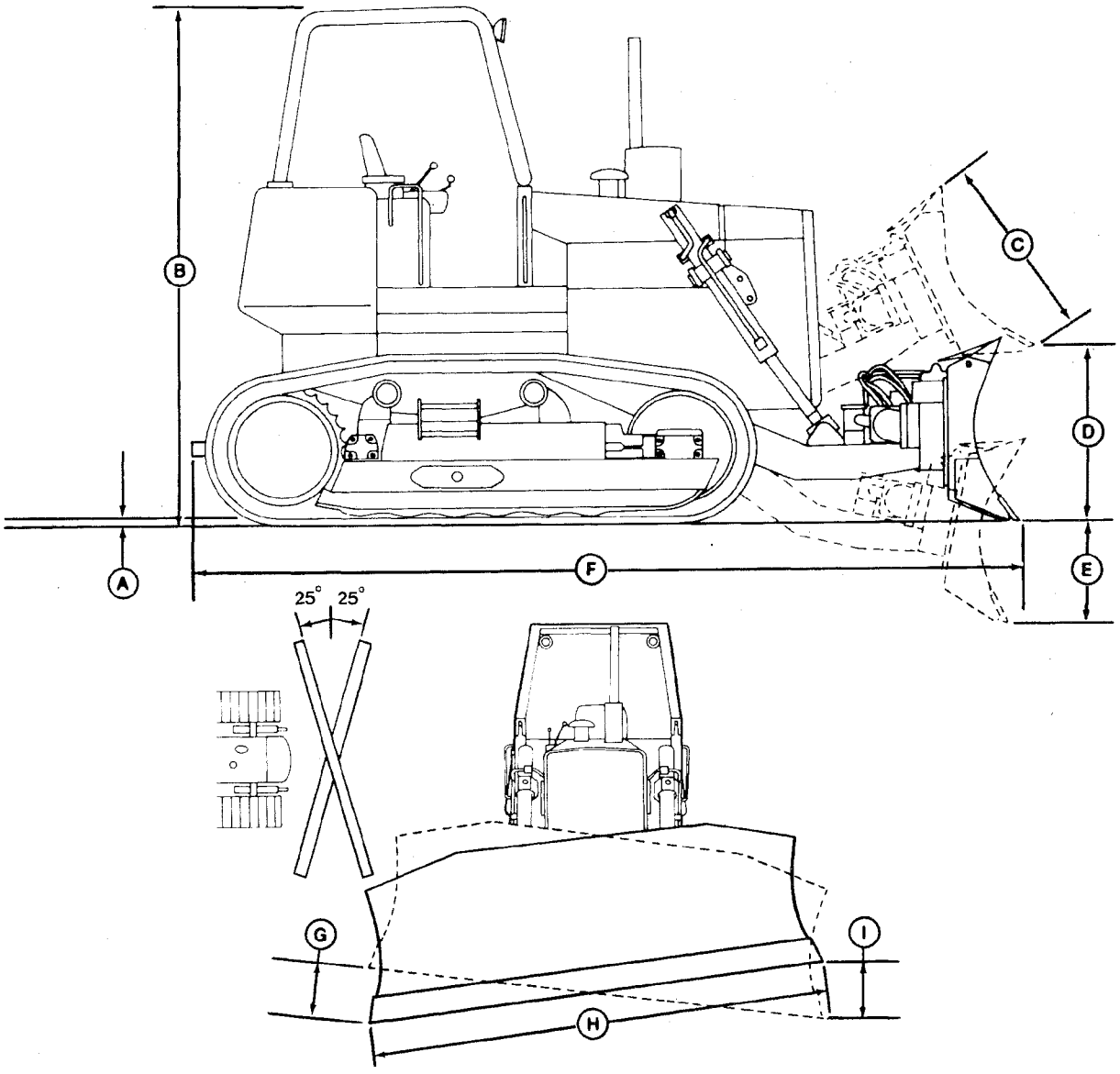
Capacities:	**U.S.**	**Metric**
Cooling system	7 gal	26.5 L
Fuel tank	73 gal	276 L
Crankcase, including filter	20 qt	19 L
Splitter drive	1.5 gal	5.7 L
Inner final drive (1st reduction)(each side)	8.5 gal	32.2 L
Outer final drive (2nd reduction)(each side)	3.5 gal	13.2 L
Inner final drive (narrow gauge) (each side)	5.4 gal	20.3 L
Hydraulic reservoir	27.5 gal	104 L
Hydrostatic transmission reservoir	23 gal	87 L

Operating Weight:
750B . . . . . 32 060 lb (14 540 kg)

NOTE: Specifications and design subject to change without notice. Wherever applicable, specifications are in accordance with ICED and SAE standards. Except where otherwise noted, these specifications are based on a unit equipped with 18 in. (457 mm) grousers [34 in. (864 mm) for the wide track and low ground pressure], roll-over protective canopy, full fuel tank, 175 lb (79 kg) operator, and standard equipment.

05T,115,C83 -19-13FEB92

750B/6505 ALL HYDRAULIC DOZER

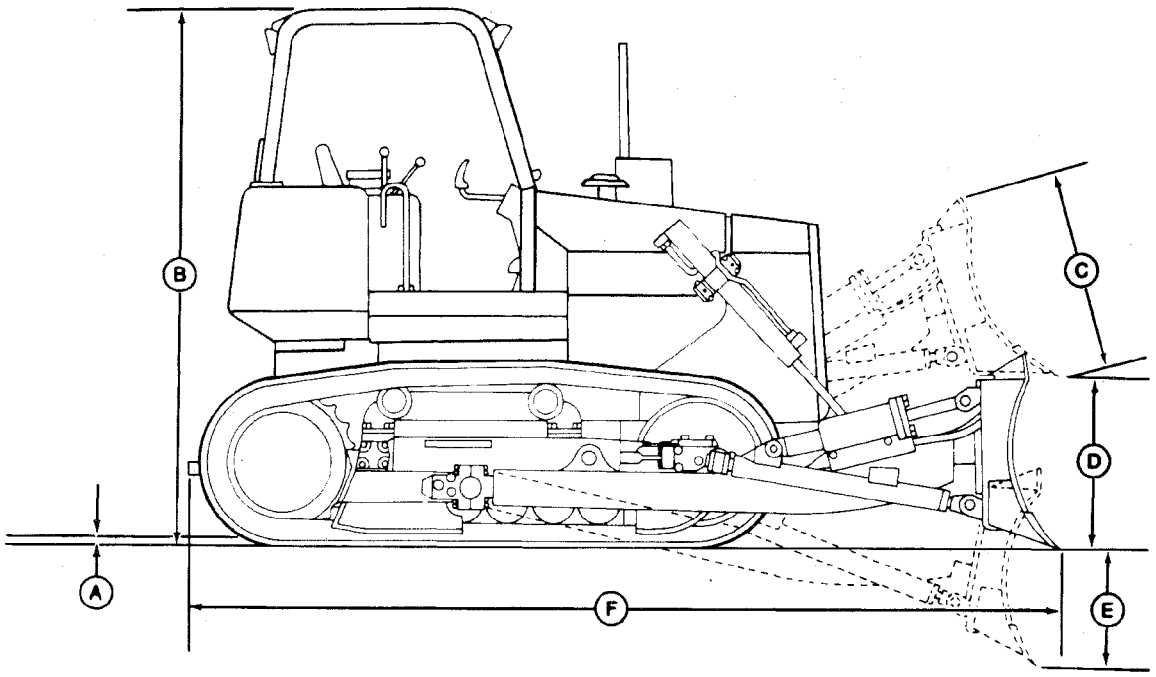


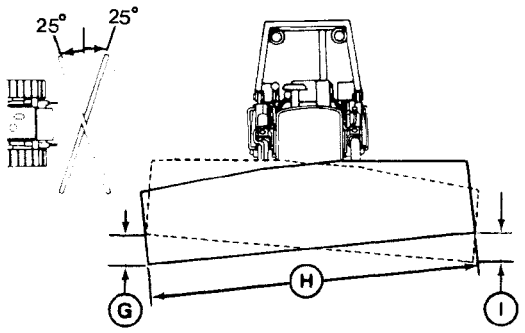
T7640AC -UN-28OCT91

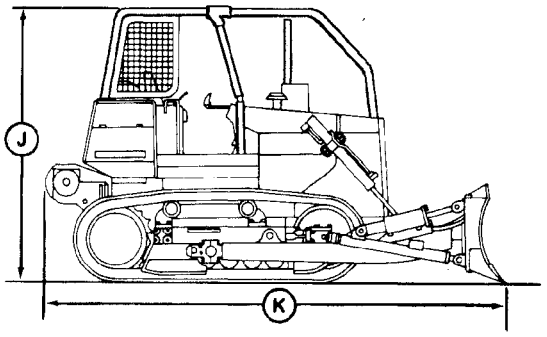
	U.S.	Metric
A with single grouser	2.2 in.	55 mm
B	10 ft 1.8 in.	3.09 m
C	43.6 in.	1.11 m
D	36.0 in.	914 mm
E	20.0 in.	508 mm
F	16 ft 2.3 in.	4.94 m
G	16.8 in.	426 mm
H	10 ft 8.5 in.	3.26 m
I	16.8 in.	426 mm

05T,115,C84 -19-23OCT91

750B/6520 ANGLE DOZER







T7640AA -UN-28OCT91

	U.S.	Metric
A with single grouser	2.2 in.	55 mm
B	10 ft 1.8 in.	3.09 m
C	38.4 in.	975 mm
D	37.5 in.	953 mm
E	25.0 in.	635 mm
F	15 ft 9.6 in.	4.82 m
G	12.8 in.	324 mm
H	12 ft 5.6 in.	3.79 m
I	12.8 in.	324 mm
J	10 ft 1.8 in.	3.09 m
K	16 ft 9.3 in.	5.11 m

05T,115,C85 -19-23OCT91

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