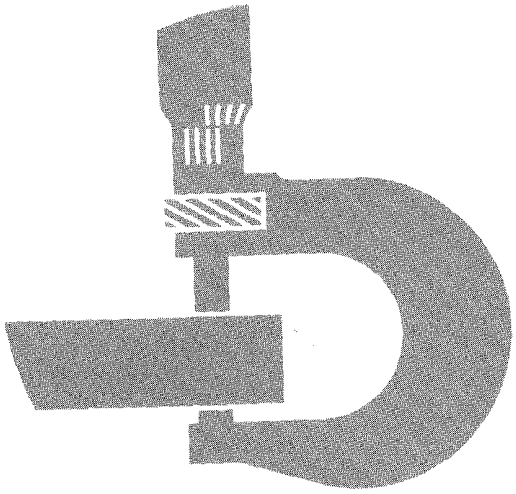
992D-LC
Excavator



TECHNICAL MANUAL

TM1463 (23OCT89)
LITHO IN U.S.A.

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.

O53,TMIFC -19-10MAR88

Contents

Section I
GENERAL INFORMATION

CONTENTS

231089

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

O53,FLAME -19-05JAN88

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

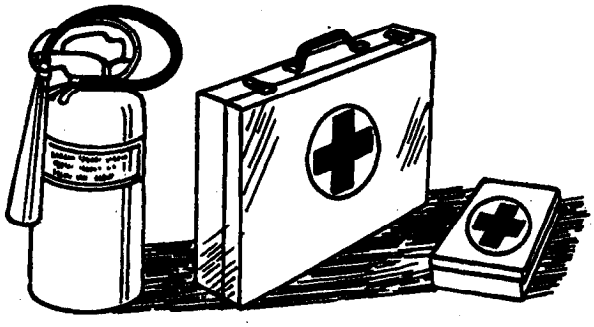
O53,SPARKS -19-05JAN88

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

O53,FIRE2 -19-03MAR88

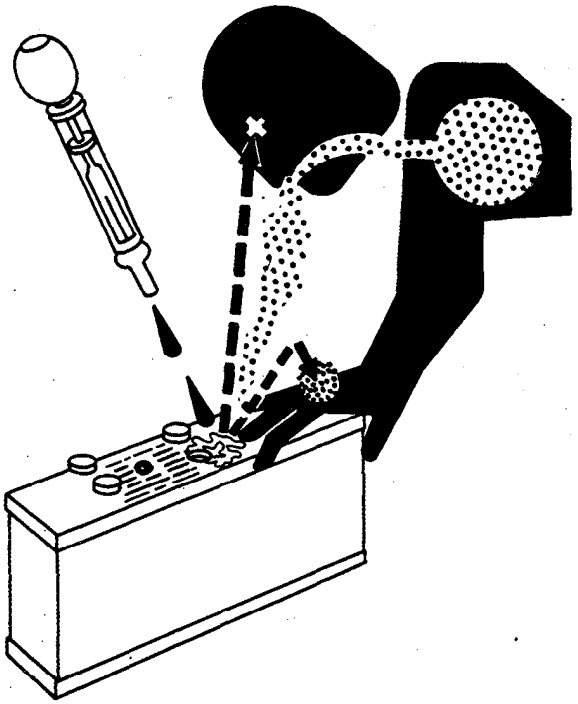
PREVENT ACID BURNS

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

O53,POISON -19-21DEC87

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.

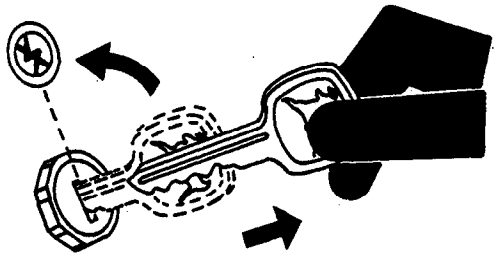
If an accident occurs, see a doctor immediately. Any fluid injected into the skin must be surgically removed within a few hours or gangrene may result. Doctors unfamiliar with this type of injury may call the Deere & Company Medical Department in Moline, Illinois, or other knowledgeable medical source.

X9811 -UN-23AUG88

O53,FLUID -19-01DEC88

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.



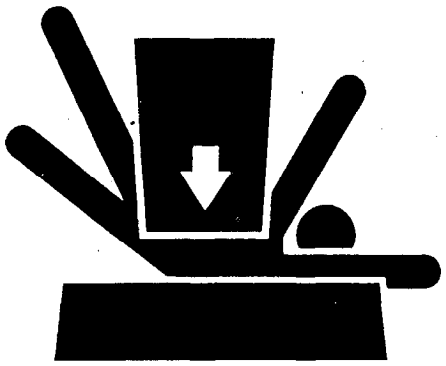
TS230 -UN-24MAY89

O53,PARK -19-05JAN88

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

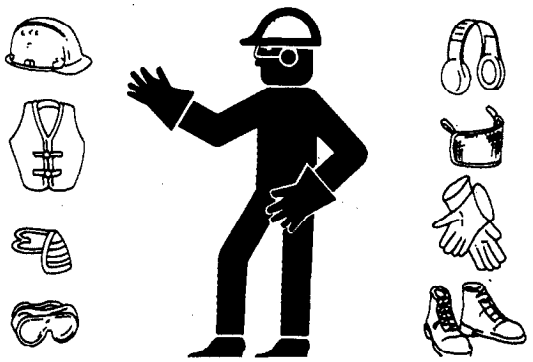
O53,LOWER -19-21DEC87

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.



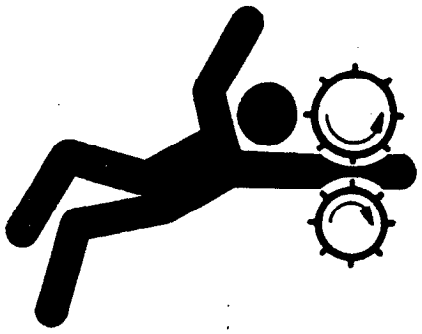
TS206 -UN-23AUG88

O53,WEAR -19-23APR87

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

O53,LOOSE -19-21DEC87

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.

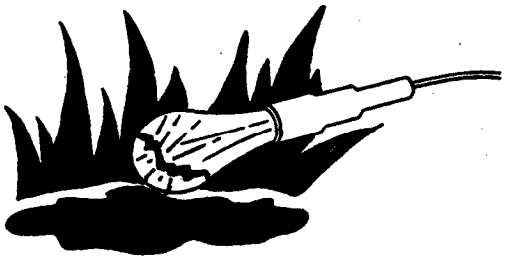
TS220 -UN-23AUG88

O53,AIR -19-05JAN88

UNDERSTAND CORRECT SERVICE

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.

Catch draining fuel, oil, or other fluids in suitable containers. Do not use food or beverage containers that may mislead someone into drinking from them. Wipe up spills at once.

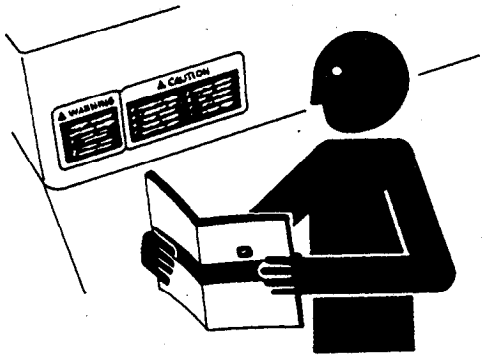


TS223 -UN-23AUG88

O53,LIGHT -19-23FEB88

REPLACE SAFETY SIGNS

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



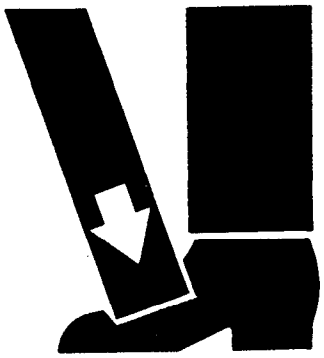
TS201 -UN-23AUG88

O53,SIGNS1 -19-22DEC87

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

O53,LIFT -19-05JAN88

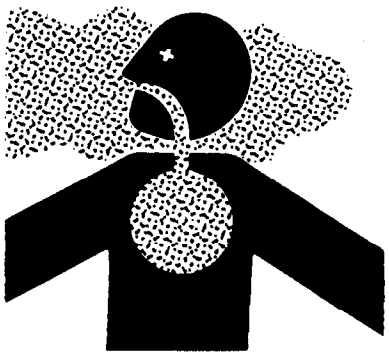
AVOID HARMFUL ASBESTOS DUST

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

Components in John Deere 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 of asbestos containing materials. When servicing, wear an approved respirator. A special vacuum cleaner is recommended to clean asbestos. If not available, wet the asbestos containing materials with a mist of oil or water.

Keep bystanders away from the area.

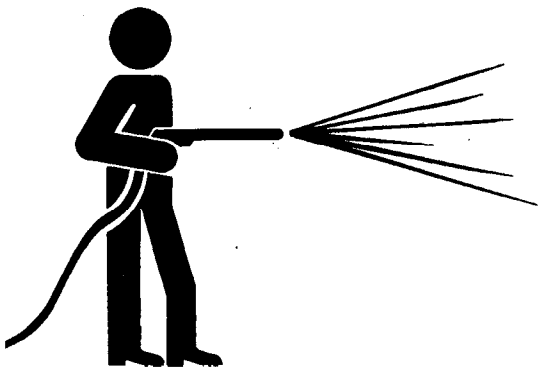


TS220 -UN-23AUG88

O53,DUST -19-14APR88

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

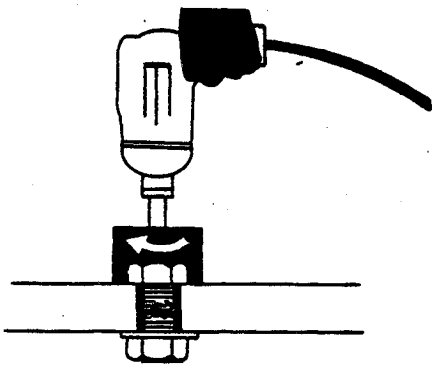
O53,CLEAN -19-19JAN88

USE TOOLS PROPERLY

Use tools appropriate to the work. Makeshift tools, parts, and procedures will not make good repairs.

Use pneumatic and electric tools only to loosen threaded parts and fasteners. Never use such tools to tighten fasteners, especially on light alloy parts.

Use only replacement parts meeting John Deere specifications.



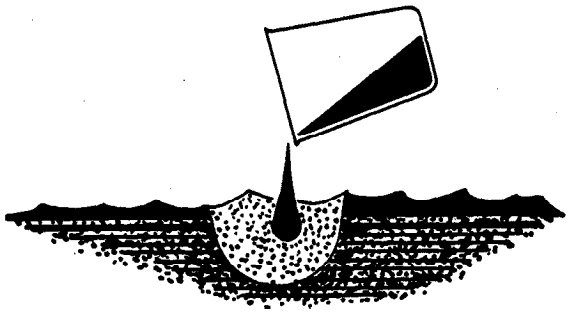
TS221 -UN-23AUG88

O53,REPAIR -19-21DEC87

DISPOSE FLUIDS PROPERLY

Improperly disposing of fluids can harm the environment and ecology. Before draining any fluids, find out the proper way to dispose of waste from your local environmental agency.

Avoid pouring oil into the ground, down a drain, or into a stream, pond, or lake. Observe relevant environmental protection regulations when disposing of oil, fuel, coolant, brake fluid, filters, batteries, and other harmful waste.



TS222 -UN-23AUG88

O53,DRAIN -19-23NOV88

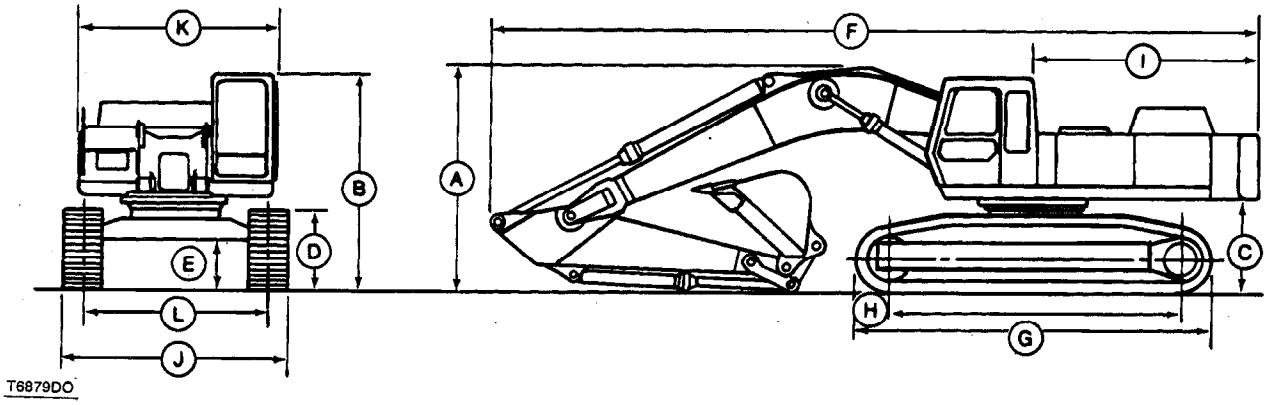
LIVE WITH SAFETY

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

TS231 -19-07OCT88

O53,LIVE -19-05JAN88

992D-LC SPECIFICATIONS



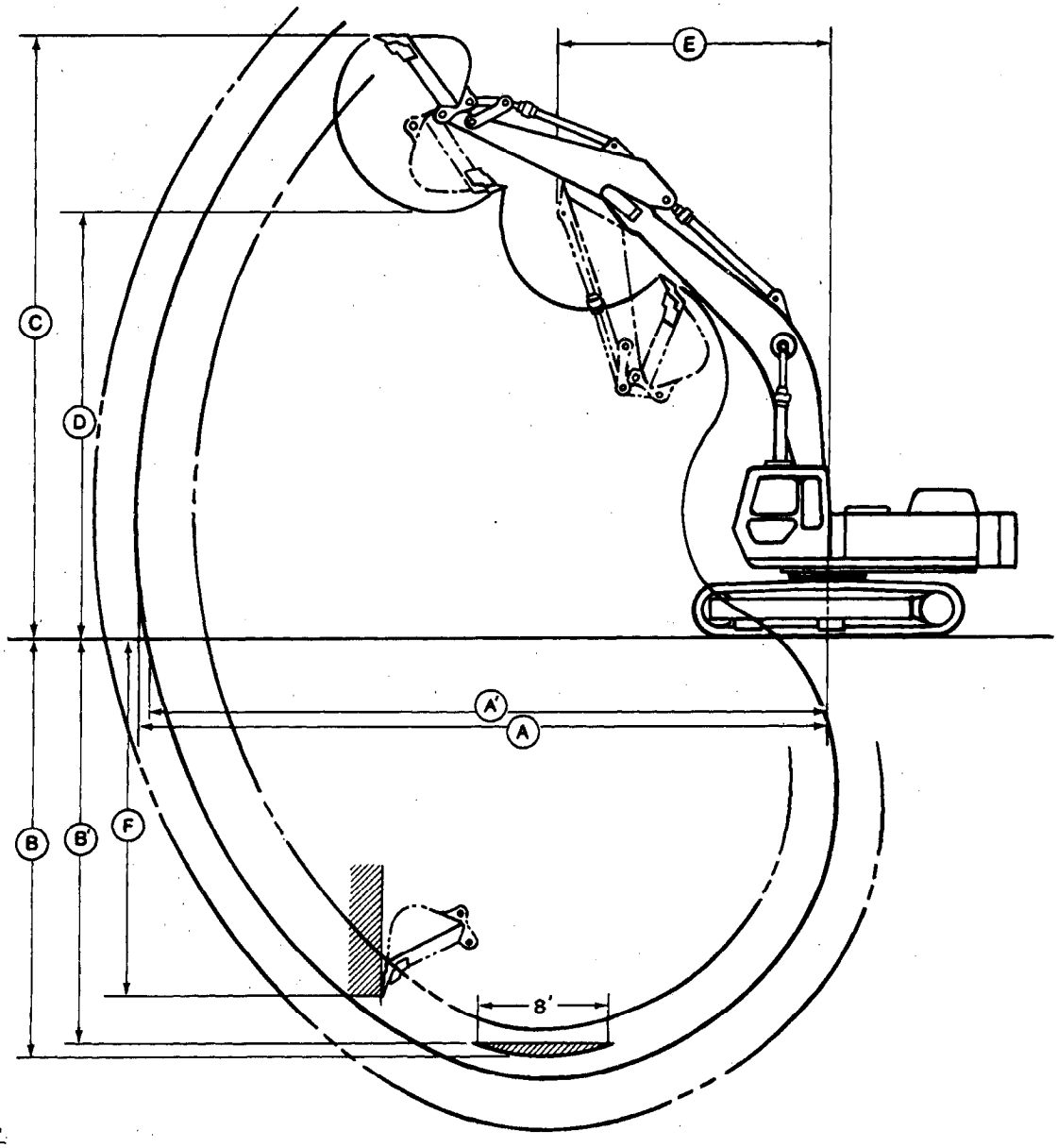
NOTE: Specifications and design subject to change without notice. Wherever applicable, specifications are in accordance with PCSA and SAE standards. Except where otherwise noted, these specifications are based on a unit with 750 mm (30 in.) triple grouser shoes, 3.9 m (154 in.) arm, and 1.82 m^3 (2-3/8 yd^3) bucket, full fuel tank and 80 kg (175 lb) operator.

A—Boom Height	
2.9 m (114 in.)	3.56 m (11 ft 8 in.)
3.9 m (154 in.)	3.44 m (11 ft 3 in.)
4.9 m (193 in.)	4.54 m (14 ft 11 in.)
B—Cab Height	3.26 m (10 ft 8 in.)
C—Counterweight Clearance	1.34 m (4 ft 5 in.)
D—Undercarriage Height	1.19 m (3 ft 11 in.)
E—Minimum Ground Clearance	725 mm (2 ft 5 in.)
F—Overall Length	
2.9 m (114 in.)	11.87 m (38 ft 11 in.)
3.9 m (154 in.)	11.76 m (38 ft 7 in.)
4.9 m (193 in.)	11.76 m (38 ft 7 in.)
G—Undercarriage Length	5.47 m (17 ft 11 in.)
H—Distance between Tumblers	4.47 m (14 ft 8 in.)
I—Rear End Swing Radius	3.47 m (11 ft 5 in.)
Rear End Length	3.45 m (11 ft 4 in.)
J—Overall/Undercarriage Width, Work Position	
750 mm (30 in.) Shoes	3.64 m (11 ft 11 in.)
900 mm (36 in.) Shoes*	3.79 m (12 ft 5 in.)
Overall/Undercarriage Width, Transport Position	
750 mm (30 in.) Shoes	3.14 m (10 ft 4 in.)
900 mm (36 in.) Shoes*	3.29 m (10 ft 10 in.)
K—Upperstructure Width	3.02 m (9 ft 11 in.)
L—Track Gauge	
Work Position	2.89 m (9 ft 6 in.)
Transport Position	2.39 m (7 ft 10 in.)

**Note recommended for rock, hard surface, or forestry application.*

05T,115,M86 -19-29NOV88

992D-LC WORKING RANGES



-UN-06DEC88

	2.9 m (114 in.) Arm	3.9 m (154 in.) Arm	4.9 m (193 in.) Arm
A Maximum digging reach	11.39 m (37 ft 4 in.)	12.43 m (40 ft 9 in.)	13.35 m (43 ft 10 in.)
A[1] Maximum digging reach (on ground)	11.14 m (36 ft 7 in.)	12.2 m (40 ft 0 in.)	13.4 m (43 ft 1 in.)
B Maximum digging depth	7.27 m (23 ft 10 in.)	8.19 m (26 ft 10 in.)	9.09 m (29 ft 10 in.)
B[1] Maximum digging depth 2.44 m (8 ft) level	7.06 m (23 ft 2 in.)	8.05 m (26 ft 5 in.)	8.98 m (29 ft 6 in.)
C Maximum cutting height	10.04 m (32 ft 11 in.)	11.06 m (36 ft 3 in.)	11.72 m (38 ft 5 in.)
D Maximum dumping height	6.89 m (22 ft 7 in.)	7.76 m (25 ft 6 in.)	8.6 m (28 ft 3 in.)
E Minimum swing radius	5.06 m (16 ft 7 in.)	4.92 m (16 ft 2 in.)	4.98 m (16 ft 4 in.)
F Maximum vertical wall	4.35 m (14 ft 3 in.)	6.98 m (22 ft 11 in.)	8.37 m (27 ft 6 in.)

05T,115,M87 -19-30NOV88

231089