




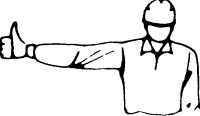

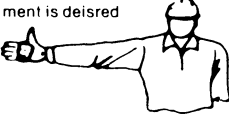

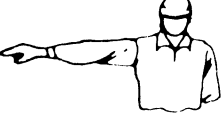




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## HAND SIGNALS

<p><b>USE LOAD LINE</b> Tap fist on head, then use regular signals</p> 	<p><b>RAISE LOAD</b></p> 	<p><b>LOWER LOAD</b></p> 	<p><b>RAISE LOAD SLOWLY</b></p> 
<p><b>LOWER LOAD SLOWLY</b></p> 	<p><b>RAISE BOOM</b></p> 	<p><b>LOWER BOOM</b></p> 	<p><b>RAISE BOOM AND LOWER LOAD</b> Extend thumb upward and flex fingers in and out as long as load movement is desired</p> 
<p><b>LOWER BOOM AND RAISE LOAD</b> Extend thumb downward and flex fingers in and out as long as load movement is desired</p> 	<p><b>SWING</b> - Extend arm with forefinger indicating direction of swing</p> 	<p><b>STOP</b> - Extend forearm and hand in horizontal position and make slicing motion</p> 	<p><b>DOG EVERYTHING</b></p> 

## ELECTRICAL CONDUCTOR CLEARANCE CHART

Conductor Voltage	Minimum Working Clearance from Conductor	Minimum Transit Clearance from Conductor
50,000 v. or less	10' (3.1m)	4' (1.3m)
Over 50,000 v. up to and including 345,000 v.	10' (3.1m) plus 0.4" (10.2mm) for each 1,000 v. over 50,000	10' (3.1m)
Over 345,000 up to and including 750,000 v.		16' (4.9m)

**NOTE:** Where local or other applicable safety codes or regulations specify greater clearance distances, the local or other applicable safety codes or regulations shall apply.

## **SAFETY PRECAUTIONS**

For your safety and the safety of those around you it is very important that you use caution when operating this equipment. Know the positions and functions of all controls before you start operation. **MAKE SURE YOU CHECK ALL CONTROLS IN A SAFE AREA BEFORE STARTING YOUR WORK.**

**READ THIS MANUAL COMPLETELY** and make sure you understand its contents. All equipment has limits. Make sure you understand all operating characteristics of this machine before starting to operate.

The safety information in this manual does not replace safety codes, insurance requirements, federal, state and local laws, rules and regulations. Know the regulations and laws that apply to your area and make sure that your machine is in agreement with such laws and regulations.



**WARNING: ELECTROCUTION HAZARD** - To prevent serious bodily injury:

NEVER operate this or any equipment in an area in which overhead powerlines, overhead or underground cables or power sources exist without first notifying the appropriate power company or utility company to de-energize the lines or take other suitable precautions.

NEVER operate machine, any part thereof, or load closer to any electrical powerline or power source than the distance specified or required by Federal, State/Provincial, Local, or other applicable safety codes or regulations. In addition, United States OSHA regulations require a flagman when operating in close proximity to energized powerlines.

NEVER operate machine without first consulting Federal, State/Provincial, Local or other applicable safety codes or regulations.

It is the employer's responsibility to implement the above precautions and to provide the employee(s) with all safety devices or means that may be necessary or required for any particular use, operations, set-up, or service.

**NOTE:** It is not necessary to come into contact with a utility line for the electrical energy to ground through the machine. **IF** electricity does ground through the machine, remain in the cab. **DO NOT ALLOW ANYONE TO TOUCH THE MACHINE STRUCTURE.**



**WARNING:** Always insure that the work area is clear of any people or obstructions **BEFORE** operating unit.



**WARNING:** Any changes to the controls must be clearly noted and posted in the Operator's Cab. If any control changes are made, a new Operator's Control Pattern decal must be installed in the cab to warn other operators of the changes.



**WARNING:** Never operate this machine unless you are fully aware of the location of all the controls.



Before starting the engine make sure all operating controls are in **NEUTRAL**.



**CAUTION:** Never leave the engine running when the machine is unattended.



**CAUTION:** Whenever releasing grease from the track adjustment cylinder, loosen the Adapter **SLOWLY**. Very high pressures can exist in the adjustment cylinder when under tension. The adapter fitting could fly loose and cause personal injury.



**WARNING:** Stay away from pit edges or other unstable ground conditions that may give away.



**CAUTION:** **BEWARE** of caving edges and overhanging banks while digging. **ALWAYS** keep a close check on the pitmen - quickly alert them of any possible cave-in.



**CAUTION:** **ALWAYS** be sure that the boom is resting on the ground before leaving machine. Never shut down until the machine has been moved a safe distance from a high bank or pit.



**CAUTION:** **ALWAYS** get a signalman if you cannot see a moving load. Then ensure that the signalman is in full view at all times. **AGREE** in advance of the set of signals to be used.



CAUTION: At all times during operation BE ALERT! Watch for people or obstructions. ALWAYS USE EXTREME CAUTION when operating in the vicinity of people.



Never get on or off a machine while it is moving.



CAUTION: The only person required when the machine is operating is the Operator. Never allow anyone to ride on the outside of the machine. Never allow anyone to ride in or on the attachment.



WARNING: Before swinging, check the area around the machine for people or objects within range of the boom or counterweight.



WARNING: Never pass the boom, bucket or any other attachment over the heads of people. Sound the warning horn and wait for the area to be cleared before proceeding.



CAUTION: Never obstruct the house brake lever. It may be necessary to use it for an emergency stop.



DANGER: Always be certain of the exact location of utility pipes when digging. THIS IS AN ABSOLUTE NECESSITY WHEN WORKING NEAR GAS LINES. Mark the location of these lines BEFORE digging and then have someone check their position periodically while digging is underway.



WARNING: USE EXTREME CARE WHEN TRAVELING ON SLOPES. If the Boom is crowded all the way out it will outweigh the Counterweight. If the Boom is crowded all the way in the Counterweight outweighs the Boom. If it becomes necessary to swing the Turntable on a slope or hillside, swing the heavier part of the Turntable to the uphill side.



Always use both hands when climbing on or off the machine.



**CAUTION:** ENGAGE digging brakes whenever the unit is not "crawling". Accidental engagement of the Drive Lock Button will cause the machine to immediately move in the forward direction.



**WARNING:** DO NOT service the machine with the engine running. If necessary to make checks with engine operating, have one man stay at the controls while the other makes the check.



Inspect your machine daily for loose, worn or damaged parts. Have unsafe conditions corrected **IMMEDIATELY**.



**CAUTION:** When checking coolant level, remove radiator cap slowly to relieve pressure within the system.



**WARNING:** Wear Eye Protection when servicing this machine.



**CAUTION:** To prevent injury, use care when working with bucket close to machine. It is possible to move the bucket into the cab structure and break the windows.



**POISON/DANGER: BATTERY ACID CAUSES SEVERE BURNS.** Batteries contain sulfuric acid. Avoid contact with skin, eyes or clothing.

Antidote: **EXTERNAL** - flush with water. **INTERNAL** - drink large quantities of water or milk. Follow with Milk of Magnesia, beaten egg or vegetable oil. Call physician immediately. **EYES:** Flush with water for 15 minutes and get prompt medical attention.

**KEEP OUT OF REACH OF CHILDREN.**



**WARNING:** Do NOT allow battery fluid to contact skin, eyes, fabric or painted surfaces. Battery fluid is sulfuric acid solution which could cause serious injury or property damage.



**WARNING:** Because of the danger of explosion always present when connecting live batteries to dead batteries, **NEVER** lean over batteries when connecting jumper cables.



**WARNING: BATTERIES PRODUCE EXPLOSIVE GASES.** Keep flames, sparks and cigarettes away. Ventilate when charging or using in enclosed space. Always shield eyes when working near batteries.



**WARNING:** This machine must be level when torquing turntable capscrews. Since it is necessary to disconnect the swing brake, the boom will swing to the down side unless the machine is level. Blocking or resting the boom in the required position is not recommended.



**WARNING:** To prevent injury from burns always use a non-flammable solvent for cleaning component parts. **DO NOT** use gasoline or other flammable substances.



**CAUTION: ENGINE FAN AND BELTS** To prevent possible serious injury avoid contact with rotating fan and belts.



Disconnect both leads from the batteries when working on the engine or electrical system. Always disconnect the Ground lead first.



**WARNING:** Never refuel when the engine is hot or running. **DO NOT SMOKE** when refueling, using starting fluid, or working with batteries.



**CAUTION: ALWAYS** keep the deck and step area free of oil, grease and refuse to minimize slipping.



When moving a load, keep it as close to the machine and as low to the ground as possible.



Keep a fire extinguisher on hand and **KNOW HOW TO USE IT.** Check it regularly to ensure it is in good working order.



**WARNING:** To prevent personal injury, keep hands clear of swing pinion while lubricating the turntable ring gear.



**WARNING:** If boom is removed, do not swing the turntable over the side of the crawler base. The machine will tip. Never remove the boom unless the upperstructure is directly over the front or rear of the crawler base.



**CAUTION:** Never wear rings or metal watch bands as you may ground a live circuit.



**CAUTION:** Think out the circuit before making or breaking a connection. A wrong connection may be painful and expensive.



**CAUTION:** Never attempt to disconnect any hydraulic lines unless boom is resting firmly on ground and hydraulic line pressure is relieved. To relieve line pressure, cycle the controls several times with engine off.



**CAUTION:** Do not depress valve pin in cold start cylinder. The contents are under pressure. Keep away from flame or sparks. Do not refill or incinerate empty cylinder.



**WARNING:** Secure latches when windows are in raised position. When closing hold grab handles while releasing each latch separately.



**WARNING:** Never attempt to operate with the load beyond the safe radius.



**CAUTION:** Hydraulic systems are highly pressurized. Escaping hydraulic oil, even an invisible pinhole leak, can penetrate body tissues causing serious injury. Use a piece of wood or cardboard when looking for leaks - never use the hands or other parts of the body.

Relieve hydraulic pressure before disconnecting circuits. When reassembling make absolutely certain all connections are tight.

If injured by hydraulic oil escaping under pressure, see a doctor immediately. Serious complications may arise if medical attention is not given at once.



## **INTRODUCTION**


This Handbook is designed to serve as a guide to safe and efficient operation of the DROTT 40 CRAWLER - Series "E". Strict adherence to the recommendations contained in these pages will ensure safer, more productive operation, will help decrease machine downtime, and help increase the life of component parts.

The book is divided into three sections preceded by a general section on directional reference, nomenclature and specifications.

Section I identifies the controls and their functions. It also gives information on starting, stopping and operating procedures.

Section II describes the various adjustments that are possible. It also covers the attachments that are available for use with the machine.

Section III discusses the Scheduled Preventive Maintenance requirements of the CRAWLER and provides the information necessary to fulfill these requirements.

	<p>THE POWER CRANE AND SHOVEL ASSOCIATION, A BUREAU OF THE CONSTRUCTION INDUSTRY MANUFACTURERS ASSOCIATION, HAS A LONG AND RESPECTED HISTORY. IT IS THE RECOGNIZED SPOKESMAN FOR THE INDUSTRY AT HOME AND OVERSEAS AND IN LIASON WITH THE FEDERAL GOVERNMENT. P.C.S.A. ACTIVELY PROMOTES ITS MEMBERS PRODUCTS, ESTABLISHES AND UPDATES INDUSTRY STANDARDS IN LINE WITH NEW TECHNOLOGY IN MATERIALS AND METHODS.</p>
<p><b>DROTT IS A MEMBER OF P.C.S.A.</b></p>	

**IMPORTANT:** Always install new decals whenever the old decals are destroyed, lost, painted over, or illegible. When individual parts are replaced that have decals attached, be sure to install a new decal with the new part. Replacement decals are available from your DROTT dealer.