

**980
Excavator
Operators Manual**

9-4542



Reprinted






THIS SAFETY ALERT SYMBOL INDICATES IMPORTANT SAFETY MESSAGES IN THIS MANUAL. WHEN YOU SEE THIS SYMBOL, CAREFULLY READ THE MESSAGE THAT FOLLOWS AND BE ALERT TO THE POSSIBILITY OF PERSONAL INJURY OR DEATH.

M171B

If Safety Decals on this machine use the words **Danger, Warning or Caution**, which are defined as follows:

- **DANGER:** Indicates an immediate hazardous situation which if not avoided, will result in death or serious injury. The color associated with Danger is RED.
- **WARNING:** Indicates an potentially hazardous situation which if not avoided, will result in serious injury. The color associated with Warning is ORANGE.
- **CAUTION:** Indicates an potentially hazardous situation which if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices. The color associated with Caution is YELLOW.

If Safety Decals on this machine are ISO two panel Pictorial, decals are defined as follows:

- The first panel indicates the nature of the hazard.
- The second panel indicates the appropriate avoidance of the hazard.
- Background color is YELLOW.
- Prohibition symbols such as   and  if used, are RED.



WARNING

IMPROPER OPERATION OF THIS MACHINE CAN CAUSE INJURY OR DEATH. BEFORE USING THIS MACHINE, MAKE CERTAIN THAT EVERY OPERATOR:

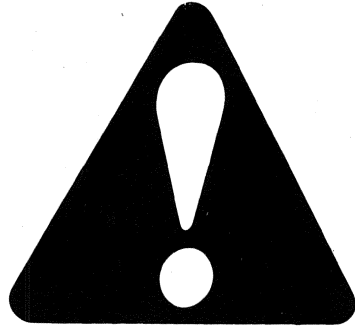
- Is instructed in safe and proper use of the machine.
- Reads and understands the Manual(s) pertaining to the machine.
- Reads and understands ALL Safety Decals on the machine.
- Clears the area of other persons.
- Learns and practices safe use of machine controls in a safe, clear area before operating this machine on a job site.

It is your responsibility to observe pertinent laws and regulations and follow Case Corporation instructions on machine operation and maintenance.

TABLE OF CONTENTS

SAFETY PRECAUTIONS	1
TO THE CASE 980 OWNER	5
DEFINITION OF RIGHT AND LEFT HAND	6
SERIAL NUMBER LOCATIONS	7
GENERAL SPECIFICATIONS	8
OPERATING INSTRUCTIONS	
Controls in Operator's Cab	13
Instrument Panel in Operator's Cab	20
Engine Run-in Procedure	24
Engine Starting Procedure	25
Cold Weather Starting	27
Cold Weather Operation	29
Hot Weather Operation	31
Driving the Crawler	32
FUELS AND LUBRICANTS	
Diesel Fuel	34
Capacities	36
MAINTENANCE AND LUBRICATION	
Lubrication and Servicing Schedule	37
Lubrication Fitting Locations	41
Engine Oil and Fuel Filters	47
Diesel Fuel System	50
Air Cleaning System	57
Cooling System	60
Turbocharger	66
Electrical System	68
Hydraulic System	74
Mechanical Components	78
Turntable Bolt Torquing Procedure	89
ALPHABETICAL INDEX	98

SAFETY PRECAUTIONS



THIS SAFETY ALERT SYMBOL INDICATES IMPORTANT SAFETY MESSAGES IN THIS MANUAL. WHEN YOU SEE THIS SYMBOL, CAREFULLY READ THE MESSAGE THAT FOLLOWS AND BE ALERT TO THE POSSIBILITY OF PERSONAL INJURY.

WARNING: The swing and crowd controls may be interchanged to be either foot pedal or hand lever actuated. Even if you are an experienced 980 Excavator operator, check the controls to be sure they are connected as you are accustomed to operating.

As with any piece of well engineered equipment, this machine could be dangerous in careless hands. Learn these common sense rules for safe operation and FOLLOW THEM! Your life may depend on it.

Always use two hands when climbing on or off the 980. The steps can adequately hold any item you may wish to carry up.

Never pass the boom or bucket or any other attachment over people. If necessary use your warning horn and wait for them to move.

Use utmost CAUTION when working near utility lines. See Electrical Conductor Clearance Chart in this Manual for recommended distances of separation between the boom and the high lines. Remember that it is not necessary to actually come in contact with the high power line for the electrical energy to ground through the machine.



SAFETY PRECAUTIONS

REQUIRED CLEARANCE AT ELECTRICAL CONDUCTORS

Voltage of Conductors	Minimum Vertical Clearance at Conductors	Minimum Lateral Clearance for Bare Conductors	Minimum Lateral Clearance for Covered Conductors
300 or less	8'	3'	3'
More than 300 to 750	8'	8'	3'
750-7500	10'	10'	10'
More than 7500	10' plus 1/10 foot for each 1000 V over 7500	10' plus 1/10 foot for each 1000 V over 7500	10' plus 1/10 foot for 1000 V over 7500

If above requirements are lower than state requirements, the state requirements shall be in effect.

Before disconnecting hydraulic lines, set the boom on the ground. Then shut off the Engine and work the controls to relieve pressure in the lines.

When digging near utility pipe lines, always get exact location. That is a **MUST** when working near gas lines. Mark the location of these lines **BEFORE** digging. Have someone check the position of these lines while digging.

To prevent slipping, always keep the deck and step areas free of oil, grease and refuse.

Know the area surrounding your Excavator. Check thoroughly in all directions before swinging, raising or lowering the boom.

When working in a pit or near high banks, keep a close check on the pit men . . . be quick to alert them to any possible cave-in. . . Beware of caving edges and overhanging banks.



SAFETY PRECAUTIONS

Position machine carefully to allow you to get away from area quickly in the event a slide starts on a high bank.

Before shutting down, pull machine away from high bank or pit.

Load truck from the rear, after making sure the operator of the truck is out of the cab, and away from the truck.

Make a dry run in tight areas. This will help you determine the best way of operation.

NEVER leave your machine with the boom off the ground.

Keep a fire extinguisher on hand and know how to use it. Check it for proper operation at least monthly.

Don't be a "Cowboy". Flashy, jerky operation may look fast, but the experienced operator know that a smooth, well-balanced work cycle gets more work done while preventing machine wear and regrettable accidents.

The house brake lever should be kept free of obstructions at all times in the event it must be used for an emergency stop.

Always check height and width of any possible obstructions before traveling with the unit. Check rated capacity of bridges.

Check all controls in an open area before working the machine to be sure of proper operation.

Always keep your eye on a moving load. If you can't see it, get a signalman and have him in full view at all times. Agree on the set of signals to be used ahead of time. See page 4.

*Many states provide standard hand signals. Know the recommended and required standard signals for the state you operate in.



SAFETY PRECAUTIONS









 <p>RAISE BOOM. Arm extended, fingers closed, thumb pointing upward.</p>	 <p>LOWER BOOM. Arm extended, fingers closed, thumb pointing downward.</p>	 <p>SWING. Arm extended, point with finger in direction of swing of boom.</p>	 <p>MOVE SLOWLY. Use one hand to give any motion signal and place other hand motionless in front of hand giving the motion signal. (Hoist Slowly shown as example)</p>
 <p>TRAVEL. (Both Tracks) Use both fists, in front of body, making a circular motion, about each other, indicating direction of travel; forward or backward. (For crawler cranes only)</p>	 <p>TRAVEL. (One Track) Lock the track on side indicated by raised fist. Travel opposite track in direction indicated by circular motion of other fist, rotated vertically in front of body. (For crawler cranes only)</p>	 <p>STOP. Arm extended, palm down, hold position rigidly.</p>	 <p>EMERGENCY STOP. Arm extended, palm down, move hand rapidly right and left.</p>

Figure 1. Hand Signals

NEVER move in any direction you can't clearly see until you have ascertained that all personnel are clear of the area, and it is safe to move the machine.

Do not smoke while refueling or using starting fluid.

Boom with attachments outweighs counterweight. When traveling across steep hills, place the boom on the uphill side if tool is attached. If no tool is attached, place counterweight on uphill side.

Keep the Engine Compartment clean. Clean out oil, grease, trash and flammable materials.

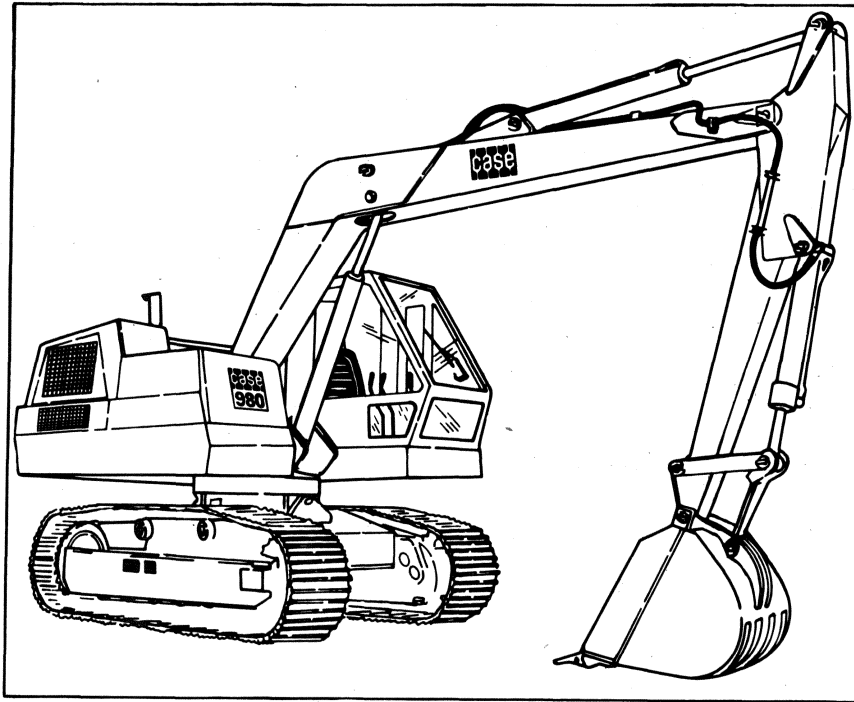


Figure 2. Case 980 Excavator

TO THE CASE 980 OWNER

Your new Case 980 Crawler has been designed, built and tested under the strictest conditions to insure you the highest quality and greatest productivity possible. It has been thoroughly tested under a multitude of conditions, many of them you will hopefully never encounter. This handbook has been assembled to acquaint you with the features, capabilities and operating procedures on the 980 Crawler. Read this manual through thoroughly and learn your machine before you attempt to operate it. The regular preventative maintenance and lubrication procedures recommended within will keep your 980 operating smoothly and efficiently for long, productive years. These maintenance procedures should become second nature to you.

As an Authorized Case Dealer, we stock genuine Case parts, which are manufactured with the same precision and skill as the original equipment. Our staff is kept informed on the best methods of servicing Case Equipment and is ready and able to serve you.

Should you require additional aid or information, do not hesitate to contact us. When you do, please include the model number (Case 980 Excavator) and the Serial Number of the machine.

5 *Your Authorized Case Dealer*

DEFINITION OF RIGHT HAND AND LEFT HAND

To avoid confusion when following the instructions in this manual, the use of the terms “right hand” and “left hand” must be understood. “Right hand” and “left hand” indicate the right and left of the Operator as he sits in the Cab, facing the front of the carbody. Since the turntable can be rotated through 360° it is possible for the front of the turntable to be over the rear of the carbody. The track drive and sprockets are considered as located at the rear of the carbody. Refer to Figures 3 and 4 below for correct directional reference.

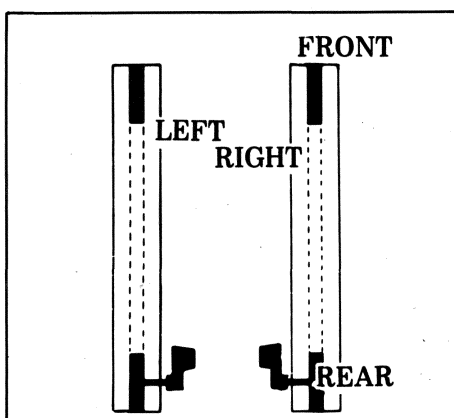


Figure 3. Directional Reference for Carbody

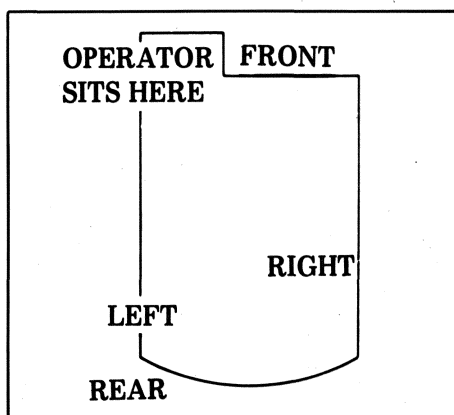


Figure 4. Directional Reference for Turntable