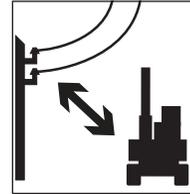


# Operate Safely

## Utilities – Overhead And Underground

**DANGER!** Electrocutation or serious injury will result from **CONTACTING** or **APPROACHING** power lines or apparatus. Maintain **Minimum Approach Distance**. (See chart.)

**DANGER!** Death or serious injury will result from touching or being near a machine that is in contact with or near an energized electrical source. **Never approach power lines with any part of the machine or load unless all local, state/provincial and federal (OSHA) required safety precautions have been taken.** Use extreme caution because high voltage sources can arc without contact.



**Do Not Approach Energized Power Lines**



**Stay Clear of Energized Equipment**

REQUIRED CLEARANCE FOR NORMAL VOLTAGE IN OPERATION NEAR HIGH VOLTAGE POWER LINES		
Normal Voltage, kV (Phase to Phase)	Minimum Approach Distance [Note (1)]	
	ft	(m)
to 50	10	(3.05)
Over 50 to 200	15	(4.6)
Over 200 to 350	20	(6.1)
Over 350 to 500	25	(7.62)
Over 500 to 750	35	(10.67)
Over 750 to 1,000	45	(13.72)

NOTE: (1) Environmental conditions such as fog, smoke or precipitation may require increased clearances.

Check overhead clearances; maintain Minimum Approach Distance. If possible, have power to the lines de-energized and visibly grounded. If not possible, request a signal person for guidance to maintain at least the Minimum Approach Distance. (See chart.)

If machine or load contacts an energized line, stay in the machine and attempt to break contact. Warn others to stay away from the machine. If the machine catches fire and you are forced to leave, jump clear of the machine with both feet together and hop away. **DO NOT** touch machine and ground at the same time. Do not walk or run.

# Operate Safely

## Locate All Underground Utilities

Confirm that One-Call has been contacted. Confirm that any utilities not subscribing to One-Call have been contacted. Confirm that the site has been marked or cleared. (See page 7, **One-Call First**.)

Obtain all information pertaining to the locate request, including the One-Call confirmation code or ticket number. If the facility owner has provided a locate sketch, obtain a copy. Review any engineering drawings provided by utilities. This information should be retained.

Personally verify One-Call utility marks. There are variations in all states.

Take a copy of the locate sketch to the job site. Confirm all of the locates. Review the site for signs of unmarked utilities. These signs may include pedestals, pole risers, meters, trench lines, manhole covers, sewer drain outlets, etc. Review not only the immediate area, but also the perimeter of the area for utility markers.

Additionally, the area should be swept by an experienced operator using a device to locate utilities and large metal objects such as tanks and pipes.

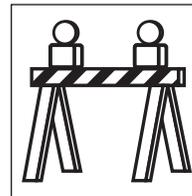
Any inconsistencies with line locations or any inaccurate locates must be resolved.

When excavating near underground services, expose the service by hand-digging or by using soft excavation such as vacuum excavation if permitted by local utilities.

When gas lines are present on the site, do not smoke or do anything to cause a spark in the vicinity of a gas line.

Make plans to restrict working area access—with cones and tape, barriers, warning signs, fences, etc.—until the job is complete.

Make certain that you are in compliance with all local, state/provincial, national and other requirements and regulations, including those regarding open excavations, or “potholes.”



# Operate Safely

## Trenching Safety Precautions

Before starting any digging project, contact the local One-Call service by dialing 811 (USA only) to have underground utilities located. A One-Call referral number, **1-888-258-0808**, is also available for both USA and Canada. (See page 7, **One-Call First** and page 36, **Utilities—Overhead And Underground.**)

Follow the worksite plan for proper construction of the trench. Check with your supervisor if you are unsure of correct construction or if conditions change.

Stay alert to changes in soil conditions. Trench collapse is hazardous to all workers in the area and could cause the machine to slide into the trench.

Keep heavy loads and equipment as far from the trench as possible.

Keep spoil and stored materials such as pipe at least two feet from the edge of the trench.

Keep personnel clear of equipment and attachments.

Never swing a load or attachment over anyone.

Do not undercut the machine. Be careful when raising stabilizers that the machine does not tip and slide into the trench.

**WARNING!** Use caution in backfilling operations. Do not get too close to the edge of the cut. **The weight of the machine plus the fill could cause the trench wall to collapse.** Before backfilling, see the manufacturer's manual for any special instructions.



**Keep Personnel  
Clear of Equipment  
and Attachments**