

WARNING Gas 2500 PSI High Pressure Sewer and Drain Cleaner

Any piece of equipment can be dangerous if not operated properly. **YOU** are responsible for the safe operation of this equipment. The operator must carefully read and follow any warnings, safety signs and instructions provided with or located on the equipment. Do not remove, defeat, deface or render inoperable any of the safety devices or warnings on this equipment. IF any safety devices or warnings have been removed, defeated, defaced or rendered inoperable, **DO NOT USE THIS EQUIPMENT!!!**

<<< DANGER >>> <<< DANGER >>> <<< DANGER >>>

HIGH PRESSURE SPRAY CAN CAUSE EXTREMELY SERIOUS INJURY. THE PRESSURE STREAM CAN PIERCE SKIN, DAMAGE EYES, BURST EAR DRUMS. USE EXTREME CAUTION! NEVER TOUCH A LEAKING HOSE, IT CAN PIERCE SKIN. SHUT THE UNIT DOWN BEFORE HANDLING IT!

⚠ WARNING: Operating, servicing and maintaining this equipment can expose you to chemicals including engine exhaust, carbon monoxide and lead, which are known to the State of California to cause cancer and birth defects or other reproductive harm. To minimize your exposure, avoid breathing exhaust, do not idle the engine except as necessary, operate and service your equipment in a well-ventilated area and wear gloves or wash your hands frequently when servicing your equipment. For more information go to www.P65warnings.ca.gov

Use extreme caution whenever operating, moving, loading or unloading this equipment. During and after operation the Muffler and other components are Extremely Hot and will cause Serious Burns.

Never operate power equipment of any kind if you are tired or if you are under the influence of alcohol, drugs, medication or any substance that could affect your ability or judgment. Be alert! If you get tired while operating this equipment, take a break. Tiredness may result in loss of control.

Provide adequate ventilation when operating this equipment. Internal combustion engines consume oxygen and give off deadly carbon monoxide gas.

IMPORTANT SAFETY RULES TO FOLLOW

1. Never remove jetter hose from drain while gas engine is running or hose is pressurized. **2.** Read this manual thoroughly before operating any Electric Eel sewer/drain cleaning machine. **3.** Unsafe operation of this machine may result in serious bodily injury or damage to the machine. **Read the operating instructions carefully before operating any Electric Eel product. Sewer/drain cleaning can be dangerous if proper safety procedures are not followed. Know the proper operation, limitations, and correct applications of all Electric Eel products before use.**

GENERAL OPERATING WARNINGS:

1. Never remove jetter hose from the drain line while electric motor is running or hose is pressurized. **2.** Always wear safety glasses, face shield and rubber gloves when operating machine. **3.** Always avoid eye or skin contact with acids or caustic substances while cleaning sewers and drains. **4.** Before beginning work, ask the customer if either acids or caustic substances are present in the pipe to be cleaned and **ALWAYS** neutralize or remove such substances from the drain line before cleaning. Exposure to these chemicals can cause serious injury to operator and damage equipment. **5.** Never expose any skin cuts to drains and sewers and sewer cleaning equipment. Since drains and sewers carry bacteria, the possibility of infectious disease exists. **6.** Always avoid contact with ears, eyes, or mouth with contents of pipe to lower risk of bacterial infection **7.** Never leave the equipment unattended once you have turned it on. If you must leave, shut off the equipment & relieve the pressure. **8.** Always wear non-skid footwear. **9.** Never spray flammable liquids. Spraying flammable liquids could cause fire or explosion, and is a danger to personnel. Do not use as a spray unit for any material except to spray water inside pipes. **10.** Never let children or untrained adults operate the machine. Children should not be allowed in the area of operation. **11.** Never spray toxic chemicals such as weed killer or insecticide. Such chemicals are a danger to personnel. Do not use as a spray unit for any material except to spray water inside pipes. **12.** Always locate drain/sewer cleaning machine as close as possible to opening of pipe - be sure hoses are not allowed to whip. **13.** Never point end of hose at a person while operating.

CAUTIONS:

1. Keep all decals, labels, warning, caution, & instructions with machine. Contract A Tool Shed immediately if new decals or labels are needed. **2.** Never wear loose fitting clothing while operating any Electric Eel sewer/drain cleaning machine. **3.** Never operate machine when fatigued or tired. **4.** Always place machine and controls in a stable and accessible position for safe operation. **5.** Never exceed limitation of equipment or accessories and Always lift with your legs, not your back. **6.** Always keep clear of all rotating parts.

GASOLINE ENGINE WARNINGS:

1. Fuel is highly flammable. Use extreme caution when filling fuel tank. **Never** fill while machine is running or when engine is hot. **2.** Never smoke around any gasoline powered machine. **3.** In case of fuel spill, use proper methods to clean up the spill and move the machine to another area until vapors have cleared. **4.** Always stop the engine prior to any repairs or maintenance and before leaving the machine. **5.** Never touch the engine during operation. The muffler and other parts of the engine get very hot and cause serious burns. **6.** Never locate the equipment where there may be combustible materials or fumes. This can cause an explosion. **7.** Never locate or operate the equipment in small areas or near exhaust fans. If the equipment does not have an adequate oxygen supply, carbon monoxide will build up and can cause a danger to you and nearby personnel.

HIGH PRESSURE SEWER/DRAIN CLEANING:

High pressure water jetting is the utilization of high-pressure water combined with sufficient flow to remove debris in sewer and drain lines. A high-pressure water jetter used in sewer and drain cleaning consists of the following components. *A Pump, Gas engine, hose reel with a given length of hose, a water source and a various assortment of nozzles.*

A drain line is cleaned with high pressure water by directing water pressure and flow through a nozzle. Pressure cuts through a stoppage while flow clears it away.

PRE-OPERATING CHECKLIST

IMPORTANT: Review material carefully before proceeding to operational instructions. **1.** The inlet screen must be cleaned regularly before each use to avoid damage to the pump and pulsator. Unscrew cap underneath filter, remove the screen, rinse thoroughly with water, and replace the screen. **2.** Before using the machine, make certain the incoming water does not contain any impurities such as dirt, debris, or foreign objects. Turn water on for at least 15 seconds and let it run before connecting hose to machine to remove any debris. **3.** Hose used for water supply should have an inside diameter of at least 5/8 inch. If unit is run without proper water supply, pump damage can occur. The supply must be capable of providing the flow rate required by the pump. **4.** Water temperature should not exceed 160 ° F as high temperature can cause failure of seals in pump. **5.** Check the level of the pump oil before each use. The oil should be half way up the sight glass.

HOSE SELECTION

When using a new hose, run water through it to clean it out before attaching a nozzle.

Hose Size	Pipe Size	Typical Applications
1/8"	1 1/2" - 2"	Bathroom sinks, showers, smaller lines
1/4"	2" - 4"	Laundry drains, kitchen sinks

It is important to select the largest possible hose size in order to have as much pressure as possible at the end of the hose. Pressure is measured at the pump, not at the end of the hose. When choosing hose size, keep in mind that pressure is lost as water travels through the length of the hose. The longer the distance water travels the greater the pressure decreases. Also, the smaller the diameter of the hose, the greater the loss of pressure per foot will be.

NOZZLE SELECTION

Make sure the nozzle you use matches the size of the pump. For example, a 1500 PSI pump requires a different nozzle than a 2500 PSI pump. Selecting the wrong nozzle will cause either a pressure loss, or a buildup of too much pressure, which can damage the machine. All nozzles have holes in the rear to propel the hose down the line, as well as to clean the line. A nozzle with both a rear and forward hole is used to penetrate solid grease or sludge blockages. Always check nozzles before each use for possible clogs.

2500 PSI NOZZLES

1/8"	40 Degree	Multiple Rear Jets
1/8"	25 Degree	Multiple Rear Jets w/Forward Jet
1/4"	40 Degree	Multiple Rear Jets
1/4"	15 Degree	Multiple Rear Jets
1/4"	15 Degree	Multiple Rear Jets w/Forward Jet

The 15 degree nozzles have a tighter spray pattern and more driving power for longer runs. The 40-degree nozzles have a wider spray pattern for removing grease from the walls of a drain.

STEPS FOR SAFE OPERATION

IMPORTANT: Before proceeding with the operation of the machine, be sure you have read carefully and understand all warnings, caution, and the pre-operation checklist. Check oil levels.

1. Connect one end of the supply (garden) hose to the water faucet. Turn water faucet on fully and purge air from the hose line - turn water off. Connect the other end of the hose to the water inlet connection at pump. Select and securely fasten nozzle to jet hose. Insert hose into the line to be cleaned **at least 3 feet.** **2.** Turn on the water faucet. **3.** Start engine. **4.** Open water valve to jetter hose. The hose will begin to advance into the drain line. Pull additional hose from the reel and guide it into the line. **5.** The Electric Eel jetter will operate up to 2500 PSI. if the machine is operating at a lower pressure, the pressure control knob can be turned clockwise to increase pressure. The operating pressure is shown on the pressure gauge. Turn the knob counterclockwise to decrease the pressure. **6.** Always pull the water jet hose back one-half the distance advanced. The actual cleaning of the line takes place when the hose is pulled back toward the operator. By moving the hose back and forth, it also helps ensure that the hose is not caught in the pipeline. **7.** If the hose fails to advance down the line or has difficulty in maneuvering around bends, rotate the hose by forming a loop of hose near the drain opening, then rotate the hose 90 degrees to 180 degrees until the hose advances. If possible, it is always best to clean a line from the lower end.

PULSATION

The Electric Eel jetter (2500 PSI) comes equipped with a pulsator. The pulsator will assist in moving the jetter hose into the pipeline and around tight bends easier. The pulsating action in the hose reduces drag on the jetter hose, and with the assistance of the nozzle, causes the jetter to propel itself into the drain line. **Always start the engine with the pulse off.** It may not always be necessary to use the pulsation feature on lines with minimum blockage. The job can usually be completed without pulsation.

TO ENGAGE IN PULSATION:

1. Make sure the unit is running and hose is in line **at least 3 feet.** **2.** Turn the pulse valve clockwise until a noticeable pulsation can be felt in the hose. **3.** Adjust the knob until desired pulsation level is reached. **4.** When the line has been cleared, turn off the pulsation completely.

SHUTDOWN

After blockage has been cleared and water is flowing through the line, close water supply valve to jetter hose. Turn off motor. Retract hose from line and rewind on reel.

If the person receiving this handout will not be the user of the equipment, forward these instructions to the operator. **IF** there is any doubt as to the operation or safety of the equipment, **DO NOT USE!!! CALL A TOOL SHED IMMEDIATELY!!!**

FAILURE TO FOLLOW THESE INSTRUCTIONS COULD RESULT IN INJURY OR DEATH