

Electric Eel®

EJ3000

High Pressure Sewer and Drain Cleaning Equipment

Operator's Manual



!! DANGER !!

FOR YOUR SAFETY

Before you operate or maintenance this equipment, READ this manual carefully and completely!

Purchase Date: _____

Serial Number: _____



ELECTRIC EEL MANUFACTURING CO., INC.

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www.electriceel.com

Proudly Made in The USA Since 1939

WARNING:

1. Never remove jetter hose from drain line while engine is running or hose is pressurized.
2. Read this manual thoroughly before operating the Electric eel sewer/drain cleaning machine.
3. Read included high pressure washer users manual thoroughly before operating high pressure sewer and drain cleaning equipment.
4. Unsafe operation of this machine may result in serious bodily injury or damage to the machine.

READ 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 OPERATIONS WARNINGS

1. **Never** remove the jetter hose from drain line while engine is running or hose is pressurized.
2. **Always** wear safety glasses, face shield, and rubber gloves when operating machine.
3. **Always** avoid eye 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 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 and relieve the -pressure.
8. **Always** wear non-skid footwear.
9. **Never** spray flammable liquids. Spraying flammable liquids could cause fire or explosion, and is 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.

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 a cloth 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 can 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 nearby personnel.

CAUTIONS

1. **Keep** all decals, labels, warnings, cautions, and instructions with machine.
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 limitations of equipment or accessories.
6. **Always** lift with your legs, not your back.

WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information, go to www.P65Warnings.ca.gov.

HIGH PRESSURE SEWER/ DRAIN CLEANING

High pressure water jetting is the utilization of high pressure water combined with sufficient water flow to remove debris in sewer and drain lines. A high pressure water jetter used in sewer and drain cleaning consists of the following equipments:

- a. Pump
- b. Engine or motor
- c. A hose reel with a given length of hose
- d. A water source
- e. 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-OPERATION 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 supply 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 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 140° F as higher temperature can cause failure of seals in pump.
5. Check the level of pump oil before each use. The oil should be half way up the site 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"	1½"-2"	Bathroom sinks, showers, smaller lines
1/4"	2"-4"	Laundry drains, kitchen sinks
3/8"	4"-8"	Septic line

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 a 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.

NOZZLE SELECTION

Make sure the nozzle you use matches the size of the pump. For example, a 1000 PSI pump requires a different nozzle than a 3000 PSI pump. Selecting the wrong nozzle will cause either a pressure loss, which will limit the cleaning ability, or a build up of too much pressure, which can damage the machine. All nozzles will 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 a forward hole is used to penetrate solid grease on sludge blockages. Always check nozzles before each use for possible clogs.

3000 PSI NOZZLES

1/8"	40 Degree	Multiple Rear Jets
1/8"	15 Degree	Multiple Rear Jets
1/8"	15 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 line.

STEPS FOR SAFE OPERATION

IMPORTANT: Before proceeding with the operations of the machine, be sure you have read carefully and understand all warnings, cautions, and the pre-operation checklist. Check oil levels and engine fuel on the gasoline engine.

1. Connect one end of the supply 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. Engine speed is controlled by a throttle valve on the pump. Opening the water supply valve to the jetter hose will increase engine speed. Closing the valve will return engine to idle.
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 gas jetter will operate up to 3000 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 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 to insure that the hose is not caught in the pipe.
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.

PULSATION

The Electric Eel gas jetter (3000 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 hose 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 unit is running and hose is in line.
2. Turn the pulse valve clockwise until a noticeable pulsation can be felt in hose.
3. Adjust knob until desired pulsation level is reached.
4. When the line has been cleared, turn off pulsation completely.

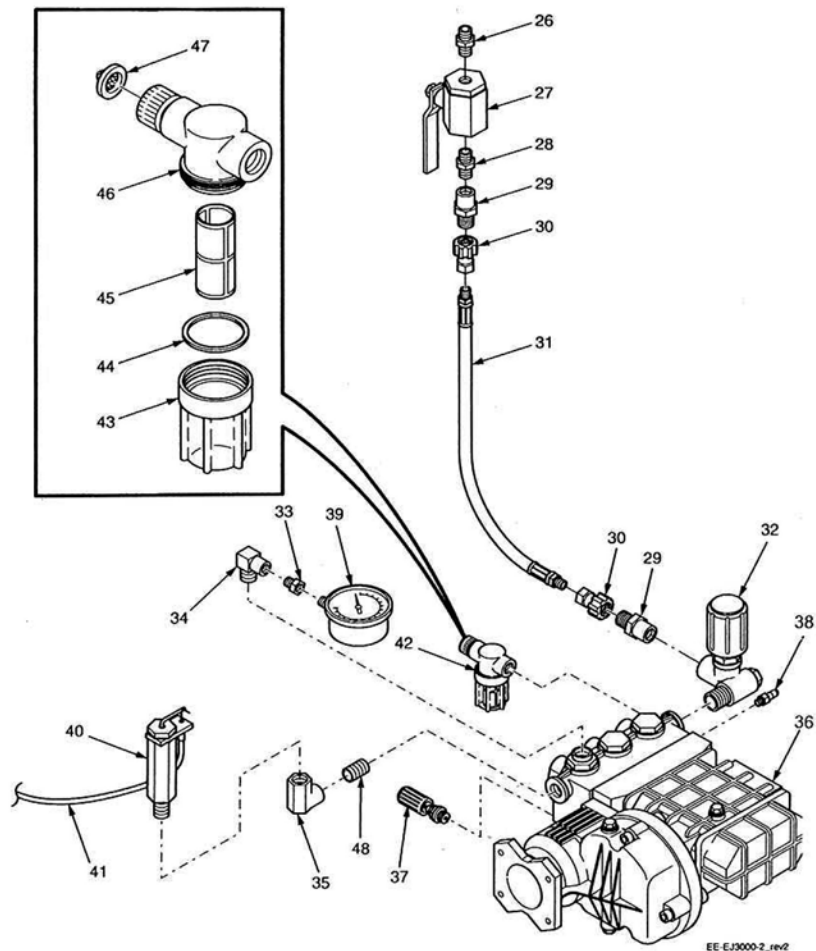
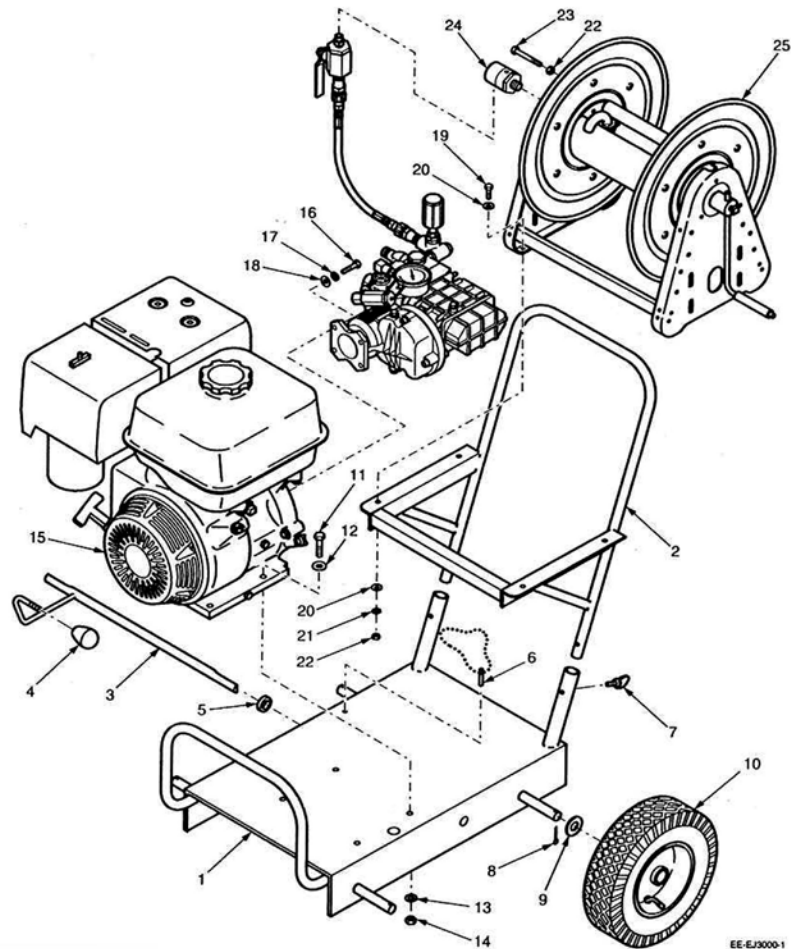
SHUTDOWN

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

CART REEL AND PORTABLE HAND REEL

An optional cart reel and portable hand reel is available for cleaning inside drain lines with the gas jetter. When using a cart reel or portable hand reel, make certain the cart reel valve is in the closed position until hose is inserted into drain line.

MODEL EJ3000 DRAIN CLEANING MACHINE



MODEL EJ3000 DRAIN CLEANING MACHINE

ITEM #	PART #	DESCRIPTION	AMT	ITEM #	PART #	DESCRIPTION	AMT
1	JB-1A	Jetter Base	1	25	3000-HR*	Reel Assy. – Reel Craft	1
2	JB-2A	Handle Reel Support	1	26	33250808	1/2 Nipple	1
3	JB-3A	Brake Shaft	1	27	3000-BV	1/2 Ball Valve	1
4	DE-14	Brake Lever Knob	1	28	33250806	Reducer	1
5	DF-8	Brake Shaft Collar	2	29	33415	Male Quick Connect Coupler	2
6	JB-5	Brake Retainer Pin	1	30	33411	Female Quick Connect Coupler	2
7	DL-4	Thumb Screw	2	31	JB-6	Pony Hose	1
8	CP532114	5/32 x 1 1/4 Cotter Pin	4	32	3000-ULVU	Unloader – UDOR	1
9	D-WA34P	3/4 USS Flatwasher	4	33	32200604	Bushing	1
10	325-WP4106	Wheel and Tire Assy.	4	34	55020606	3/8 Elbow	1
11	CSHH3816134	3/8-16 x 1 3/4 Hex Head Screw	4	35	509053*****	Elbow	1
12	WA38S	3/8 SAE Flatwasher	4	36	519488	Pump/Gearbox Assy.	1
13	LW38	3/8 Lockwasher	4	37	3000-PVU***	Pulse Valve – UDOR	4
14	NU3816FHP	3/8 Hex Nut	4	38	3000-TRVU****	Thermal Relief Valve – UDOR	1
15	EJE-13	Engine 13 HP	1	39	3000-PG	Pressure Gauge	1
16	CS51624114G5	5/16-24 x 1 1/4 Hex Head Screw	4	40	3000-TBV	Throttle Back Valve and Cable	1
17	LW516	5/16 Lockwasher	4	41	3000-TBVC	Throttle Back Valve Cable Only	1
18	1500-HRSWSE	5/16 SAE Flatwasher	4	42	3000-FBA	Filter Bowl Assy.	1
19	CSHH516181	5/16-18 x 1 Hex Head Screw	4	43	3000-FB	Filter Bowl	1
20	WA516S	5/16 SAE Flatwasher	8	44	3000-FBG	Gasket	1
21	LW516	5/16 Lockwasher	4	45	3000-FBS	Filter Screen	1
22	NU51618FHP	5/16 Hex Nut	6	46	3000-FBC	Filter Cap	1
23	CSHH51618234	5/16-18 x 2 3/4 Hex Head Screw	2	47	3000-IS	Inlet Screen	1
24	3000-HRSWRC*	Swivel Assy. – Reel Craft	1	48	33250606	3/8 Nipple	1

* Prior to SN 1126 (July 24, 1996) use Hose Tract Swivel (Part #1244A) and Reel Assy.

** Use for Serial #1311 and #1316 to present. Use Giant Part #22995A (Part #23720 replaced 22995A August 2001) for Serial #1071 and #1076 to #1315. Use Cat Part #7572 for Serial #1075 and earlier.

*** Use for Serial #1311 and #1316 to present. Use Giant Part #8199 for Serial #1071 and #1076 to #1315.

**** Use for Serial #1311 and #1316 to present. Use Giant Part #509-306 for Serial #1071 and #1076 to #1315.

***** Prior to Serial #1311 use 509056. Item 48 not required with 509056 elbow.



**CALL TOLL FREE
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