

# Electric Eel<sup>®</sup>

## MODEL S Drain Cleaning Machine

Operator's Manual



Purchase Date: \_\_\_\_\_

Serial Number: \_\_\_\_\_

**!! DANGER !!**

**FOR YOUR SAFETY**

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



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[www.electriceel.com](http://www.electriceel.com) Proudly Made in The USA Since 1939

## Safety Instructions

The following safety rules for operating ELECTRIC EEL's Model S Drain Cleaning equipment **MUST** be read carefully before operating this equipment.



**TO PREVENT SERIOUS BODILY INJURY AND AVOID DANGER FROM ROTATING CABLES AND EQUIPMENT:**

## General Safety

1. **ALWAYS** wear heavy reinforced leather gloves and safety glasses when operating this equipment.
2. Place this machine within 2 feet of inlet between drain opening and machine. Keep one hand on the tool's pistol grip handle and the other on the red hand guard at the front of the tool **BEHIND** the chuck.
3. **NEVER HANDLE ANY CABLE UNDER TENSION.\* ALWAYS** relieve all tension build-up before attempting to handle cable, by releasing the trigger switch and turning off the power by **UNPLUGGING** the cord.
4. Keep good footing and balance at all times. **DO NOT OVERREACH!**
5. **DO NOT WEAR** loose clothing or jewelry while operating this machine.
6. The Model "S" Drain Cleaning Machine should be **OPERATED BY ONE PERSON ONLY**. Additional personnel in the work area should observe all safety instructions.
7. Wear rubber-soled **NON-SLIP SHOES**, **HEAVY LEATHER** gloves, and **EYE** protection.
8. **ALWAYS AVOID** direct contact of drain water with skin, facial area and especially the **EYES**. Chemical compounds used in drains can result in serious burns and other injuries.
9. **REPLACE** fittings, cables, and any rotating parts as soon as they become visibly worn. **REPLACE** any cables which become fractured, bent, kinked, or otherwise damaged.
10. **NEVER** attempt to service equipment beyond the recommendations of the operating instructions. All other servicing should be referred to qualified Electric Eel service personnel.
11. To maintain safe operation, **USE ONLY** identical replacement parts and cables from Electric Eel.

\*Relieve all tension build-up before attempting to handle cable.

## General Safety (cont.)

12. **ALWAYS KEEP CLEAR** of rotating parts.
13. **DO NOT** continue to operate the tool when it becomes stuck in an obstruction. **EXCESS TWISTING AND TORQUE ON A CABLE COULD CAUSE IT TO FRACTURE. FRACTURES CAN CAUSE INJURIES.**
14. Reverse rotation if necessary to prevent unnecessary twisting or build-up of torque on a cable. Keep machine under control at all times.
15. **NEVER** force a tool and cable into pipeline blockage. This may overload the cable or tool and cause fracture to either or both.
16. Use **CORRECT TOOL** for the job or application. Check the tool chart and use the proper tool for the size of the line being cleaned.
17. To maintain safe and efficient operation **CLEAN THOROUGHLY** all cables and tools with fresh water after use. Chemicals in the drain and sewer lines can attack and deteriorate the metal of the cables and tools. Deterioration can cause premature fracture or breakage in tools or cable.



**TO AVOID SERIOUS BODILY INJURY AND TO AVOID DANGER FROM ELECTRICAL SHOCK:**

1. **ALWAYS** use a ground fault interrupted circuit with a properly grounded outlet for all electrical cords, connections, and parts as installed by factory. **DO NOT** make any alterations.
2. **NEVER** use machine in damp or wet conditions. Do not stand in water or on wet floors.
3. **NEVER** expose machine to rain.
4. **THE USER SHOULD NEVER ATTEMPT TO SERVICE THE ELECTRICAL COMPONENTS.** For safety reasons all electrical replacement components should be installed by a qualified electrician.
5. Before making adjustments or changes to power units, unplug and disconnect from electrical source.

**READ SAFETY INFORMATION THOROUGHLY!**

# Description/Specifications

**NOTE:** Always refer to Operating and Safety Instructions before operating any drain and sewer cleaning equipment.

## DESCRIPTION

The ELECTRIC EEL Model S Drain Cleaning Machine has an excellent reputation for handling Small Drain Problems. This machine is specifically designed for cleaning 1-1/4 to 2-1/2 inch diameter drain lines, using cable diameters of 1/4, 5/16, or 3/8 inches, 25 to 35 feet long.

## SPECIFICATIONS

- Line Capacity ..... 1-1/4 to 2-1/2 inches
- Kit Weight..... 35 lbs  
(with 35 feet of cable).
- Frame..... 1" open space framework of welded tube
- Power ..... Variable speed 0 to 600 RPM, 120 VAC, 60 Hertz, 3.2 AMPS, Type 4, 1/2" reversing drill with double ball bearing gear head for longer life. Double Insulated motor for increased operator protection and smooth, quiet performance.
- Cable Chuck..... Jacobs type easy-to-tighten, made of new composite material with hardened steel liner and jaws, fits securely in place and resists rust for longer life.
- Cable Drum..... Made of lightweight Stainless steel providing excellent durability and is corrosion resistant when exposed to the harsh liquids used in cleaning drains. The red Cast aluminum hand guard is designed for safety and ease-of-use.
- Cables ..... Constructed of certified music wire. Inner core, (IC) cables have a **genuine** galvanized aircraft wire inner core for corrosion resistance and long-lasting operation.

- Expanded end cables, (E), are available to open kitchen and bath drains or go down vents in 1/4", 5/16", and 3/8" diameters.
- Expanded end inner core cables, (EIC), are specifically designed to break through tough clogs while resisting kinks, and is available in 5/16" and 3/8" diameters.
- Special tools can be easily attached to 5/16" and 3/8" inner core cables, (IC), using a DH-4 swivel fitting, (Drop Head), to enable the cleaning tools to follow the contour of the drain.

## Operating Instructions



**OPERATOR MUST BE THOROUGHLY FAMILIAR WITH ALL SAFETY INSTRUCTIONS BEFORE OPERATING THIS EQUIPMENT**

The Model S Drain Cleaner is designed to clean drain pipes that are between 1-1/4" and 2-1/2" in diameter. A variety of accessory cables and heads are listed on the following pages of this manual. The following chart shows the recommended cable dimensions for cleaning the various size drains.

DRAIN SIZE	CABLE SIZE
1-1/4"	1/4 or 5/16"
1-1/2"	5/16 or 3/8"
2" - 2-1/2"	5/16 or 3/8"

DO NOT use a cable in a larger drain than recommended: damage to the cable, tool, or personal injury could result.

## DRAIN CLEANER CHUCK

The Drain Cleaner is equipped with a KEYLESS type chuck. To operate chuck, grasp the outer body of the chuck with your hand and twist it counter-clockwise to OPEN: twist it clockwise to CLOSE. (see Fig. 1).

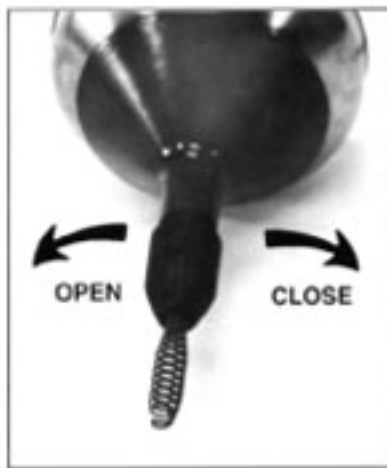


Figure 1

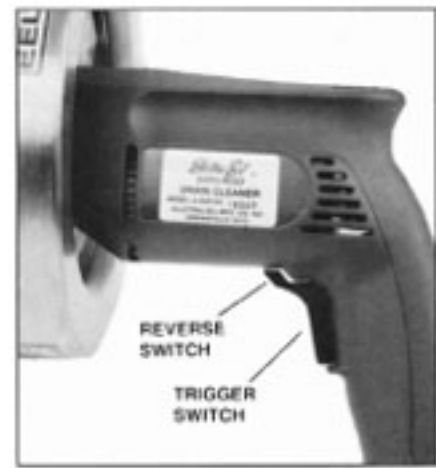


Figure 3

## INSTALL CABLE INTO DRUM

**CAUTION: UNPLUG AND DISCONNECT DRAIN CLEANER FROM POWER SOURCE.**

1. Use a vise or pair of pliers to make a bend in the tail end of the cable. This bend should be approximately 30 degrees, and located about 1" from the tail end of the cable, (see Fig. 2).
2. Turn Drain Cleaner chuck counterclockwise to open.

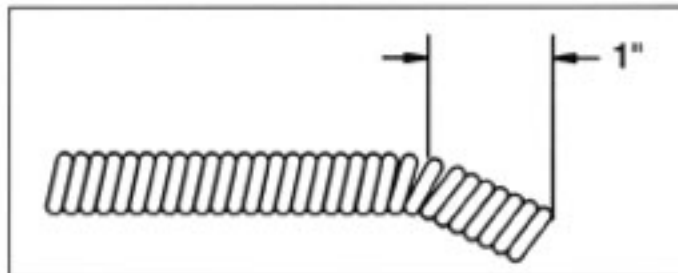


Figure 2

3. Insert tail end of cable through chuck jaws and into drum. Use short (10" to 12" at a time), thrusts to feed remainder of the cable into drum.
4. Turn chuck body clockwise to close chuck jaws, securing the cable in the drum.

## TO START AND STOP DRAIN CLEANER

**CAUTION:** Make sure TRIGGER SWITCH on tool is OFF, (see Fig. 3). Make sure that you are plugging into a household 120 Volt ground fault interrupter circuit.

Make sure cable is fully retracted into drum. Connect Drain Cleaner to power circuit.

1. Squeeze TRIGGER SWITCH (Fig. 3), to start motor. Release trigger switch to stop motor. The motor speed will increase the more the trigger switch is squeezed.
2. The REVERSING SWITCH is located above and in front of the trigger 1. switch, (see Fig. 3), and changes the direction of rotation of the cable.

FORWARD rotation is used when feeding the cable into the drain and when removing cable from drain. REVERSE rotation is ONLY used to free up the cable if it gets hung up.

FOR CLOCKWISE ROTATION release trigger switch and allow drum to stop rotating, push the reversing switch to the left side of the Drain Cleaner.

FOR COUNTERCLOCKWISE ROTATION release trigger switch and allow drum to stop rotating, push the reversing switch toward the right side of the Drain Cleaner.

**CAUTION:** Allow drum to completely stop rotating before changing direction of rotation.

**NOTE:** Never attempt to change direction of rotation while switch is ON. You may damage the switch interlock feature.

## HOW TO HOLD THE DRAIN CLEANER

Place one hand on the pistol grip handle at the rear of the tool and keep the other hand on the red hand guard at the front of the tool BEHIND the chuck, (see Fig. 4). KEEP CLEAR of the rotating drum while tool is in operation.



Figure 4

## INSERTING CABLE INTO DRAIN

1. Make certain that the reversing switch is set for FORWARD rotation, and that the power source matches the voltage on the tool's specification plate. Connect Drain Cleaner to ground fault interrupted power source.
2. Open chuck and pull out approximately one foot of cable.
3. Close chuck lightly.
4. Operate Drain Cleaner at low speed while slowly feeding cable into drain.

**NOTE:** If cable binds; STOP the tool immediately. Set switch for reverse rotation. Operate motor slowly while pulling back lightly on the Drain Cleaner to free the cable. DO NOT operate the tool in reverse for extended periods. Extended reverse operation can damage the cable.

5. Continue to operate tool at low speed while repeating steps 2 through 4 to feed additional cable into the drain until the obstruction is cleared.

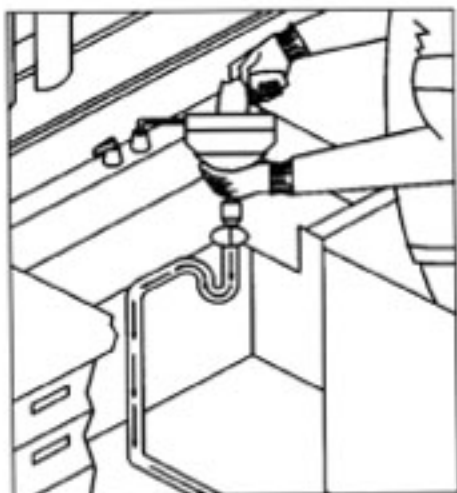


Figure 5

## TOILET GUIDE (OPTIONAL)

A Toilet Guide and Holder are optionally supplied with the Drain Cleaner kit. This accessory provides a guide to help start the drain cleaner cable into a toilet bowl, (see Fig. 6).

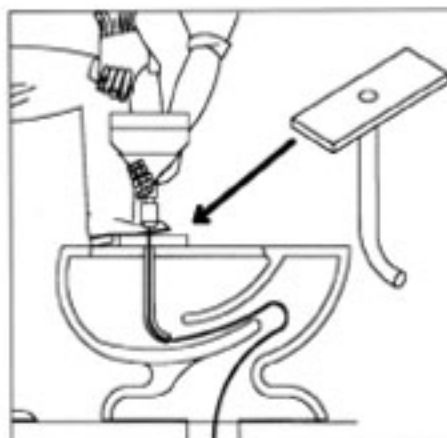


Figure 6

## STORAGE

The cable should always be thoroughly cleaned with fresh water and oiled prior to storing the Drain Cleaner.

**CAUTION:** UNPLUG AND DISCONNECT DRAIN CLEANER FROM POWER SOURCE.

1. Open the chuck and remove the entire cable from the drum.
2. Wash cable thoroughly and allow to dry.
3. Use an oily rag to coat cable with oil.
4. Reinstall the cable into the drum.

## MAINTENANCE

### KEEP TOOL CLEAN

Periodically blow out all air passages with dry compressed air. All plastic parts should be cleaned with a soft damp cloth. NEVER use solvents to clean plastic parts. They could possibly dissolve or otherwise damage the material.

**CAUTION:** Wear Safety Glasses while using compressed air.

### FAILURE TO START

Should your tool fail to start, check to make sure the prongs of the plug on the cord plug are making good contact in the outlet. Also, check for blown fuses or open circuit breakers in the line.

## SERVICE AND REPAIRS

All quality tools will eventually require servicing or replacement of parts due to wear from normal use. These operations, including brush inspection and replacement should only be performed by either an AUTHORIZED SKIL or ELECTRIC EEL Service Center. All repairs made by these agencies are fully guaranteed against defective material and workmanship. We cannot guarantee repairs made or attempted by anyone other than these agencies.

Should you have any questions about your tool, feel free to write us at anytime. In any communications, please give all information shown on the nameplate of your tool (model number, type, serial number, etc.).

## OPTIONAL DROP HEAD TOOLS

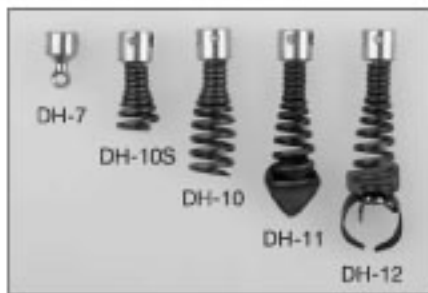


Figure 7

## MODEL S DRAIN CLEANING MACHINE

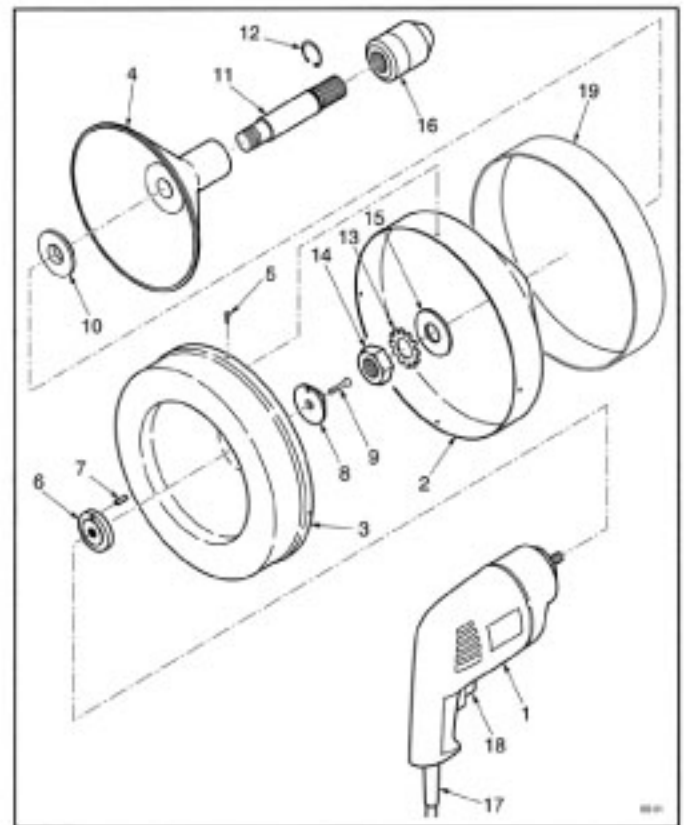


Figure 8

ITEM NUMBER	PART NUMBER	DESCRIPTION	AMT
1	S-DRL	Replacement Drill . . . . .	1
2	S-1	Stainless Steel Drum . . . . .	1
3	S-2	Drum Cover . . . . .	1
4	S-4	Hand Guard . . . . .	1
5	MS63238SS	Stainless Sheet Metal Screw . . . . .	1
6	S-7 (See Note 1)	Spacer . . . . .	1
7	RP1812	Spiral Pin for S-7 . . . . .	1
8	S-8	Lock Collar . . . . .	1
9	LHS103278	Left Hand Thread Screw . . . . .	1
10	S-6	Collar . . . . .	1
11	S-5 (See Note 2)	Spindle . . . . .	1
12	RR87	Retaining Ring . . . . .	1
13	LW34E	External Lockwasher . . . . .	1
14	NU3416J	Hex Jam Nut . . . . .	1
15	S-9	Washer . . . . .	1
16	S-JC	Jacobs Chuck . . . . .	1
17	S-PC	Plug In Cord . . . . .	1
18	S-TRSW (See Note 3)	Trigger Switch . . . . .	1
19	S-EDB	Elastic Drum Band . . . . .	1

**Note:**

- 1 Includes Item 7
- 2 S-5A Includes Items 10 through 15
- 3 Prior to Serial No. 13871 use Part Number S-TRSWO - April 1999