

Electric Eel®

MODEL D-5

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!



ELECTRIC EEL MANUFACTURING CO., INC.

501 West Leffel Lane, Springfield, Ohio 45506

Call Toll Free: (800) 833-1212 (937) 323-4644 FAX: (937) 323-3767

www.electriceel.com

Proudly Made in The USA Since 1939

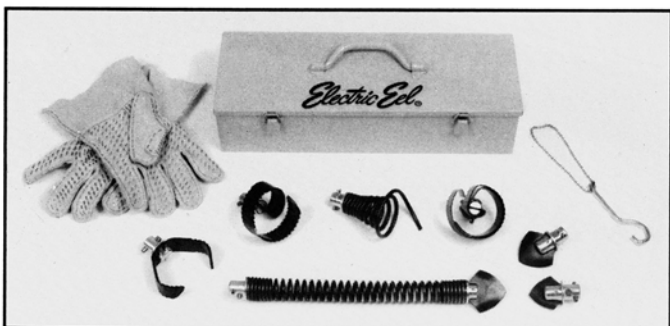
Description, Standard Features, Specifications

DESCRIPTION

The ELECTRIC EEL Model D-5 Drain Cleaning Machine is the latest of Electric Eels' complete line of quality sewer and drain cleaning equipment. This drum machine is specifically designed for the professional when cleaning 3" to 10" diameter lines through 200 feet.

STANDARD FEATURES

1. Built-in loading wheel in handle.
2. Heavy-duty 1/2 H.P. capacitor-type motor produces maximum torque.
3. Extra strength frame using 1 1/4" 14 ga. welded steel tubing.
4. Continuous belt skids for easy stair climbing.
5. Locking wheel brake.
6. Large 10" solid, wide wheels for easy handling and stable operation.
7. Built-in GFI, (Ground Fault Circuit interrupter), with 20 ft. line cord to protect operator from electrical shock.
8. Three sealed ball bearings for smooth drum rotation with thick wall guide tube for long life.
9. Air operated foot switch and cord assembly for ease of operation.
10. Snap-Lock tool connector.
11. Quick removable continuous cable feeder and drum.
12. High density polyethylene drum and belt guard will not rust or dent. Holds 110 feet of 3/4" inner-core cable.
13. Five position handle height adjustment.



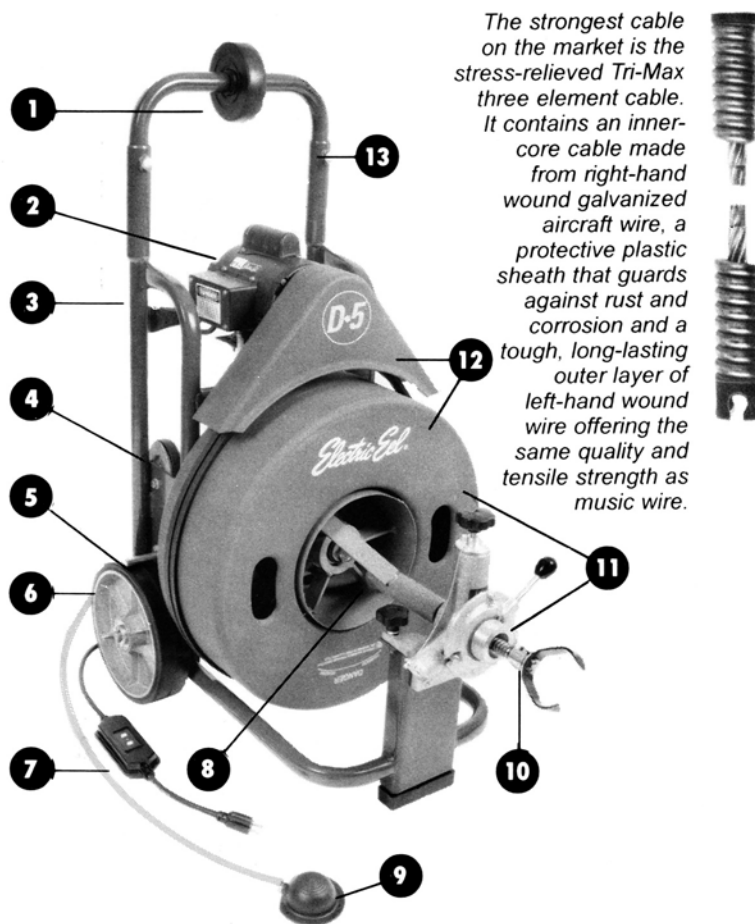
Model D-5 Standard Kit (D5K-3/4IC100) includes:

- D-5 power unit with power cable feed
- Two (2) 3/4" x 50 Ft. Tri-Max cables
- Set of seven (7) cleaning tools
- 10 Ft. anchor cable. 2 Ft. flex leader
- Pair of staple palm leather gloves
- Tool box with spanner wrench

SPECIFICATIONS

- Drum Capacity 110 ft. inner-core cable.
 Drum..... High density polyethylene.
 Line Capacity 3" to 10" up to 200 ft.
 Weight (machine only) 120 lis.
 Frame..... 1 1/4" open space welded steel tubing
 Tires 10" solid wheels
 Cable connector .. 10 ft. of 3/4" cable anchored to drum

MODEL D-5



Drain Cleaning Machine


Record below and retain product model and serial numbers which are located on nameplate.

Model
No.

Serial
No.

Safety Instructions

The following safety rules for operating Electric Eel Sewer and Drain Cleaning equipment **MUST** be read and followed carefully before operating this machine.



⚠ DANGER ⚠

To prevent serious injuries including:

- Shock, electrocution or burns due to improper grounding.
- Serious injuries to body, limbs or hands and feet due to cables that twist, kink and break.
- Eye injuries caused by loose cable, thrown debris or splashed water.

READ SAFETY INFORMATION THOROUGHLY!

⚠ DANGER ⚠

TO PREVENT SERIOUS BODILY INJURY:

General Safety

1. **ALWAYS** wear reinforced leather gloves and safety glasses when operating equipment.
2. Place this machine within 3 ft. of inlet, and keep both hands on rotating cable during operation.
3. Do not wear loose clothing, or jewelry while operating this machine.
4. Use foot switch to operate machine while keeping good footing and balance at all times.
DO NOT OVERREACH!
5. Keep belt guard in place during operation.
6. The model D-5 Drain Cleaning machine should be operated by one person only. Additional personnel in the working area should observe all safety instructions.
7. Wear rubber soled non-slip shoes.

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.

8. **ALWAYS** avoid direct contact of skin, facial area and especially eyes with drain water. 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 any other damage occurs.
10. **NEVER** attempt to service equipment beyond the recommendations of the operating instructions. All other servicing should be referred to qualified service personnel.
11. To maintain safe operations, use only identical replacement parts and cables from Electric Eel.
12. **ALWAYS** keep clear of rotating drums, cages, shafts, pulleys, belts, or other rotating parts.

⚠ DANGER ⚠

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

General Safety - Electrical

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.
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, disconnect from electrical source.
6. If an extension cord is used, the power source must be equipped with a ground fault interrupter circuit and properly grounded.
7. Only use 14/3 or larger three-wire extension cords with three prong grounding plugs and three-pole receptacles.
8. When using extension cord outdoors only use those intended for outdoor use. (Indicated on cord by suffix "W-A" after the cord type.)



DANGER



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

1. **DO NOT** operate machine in reverse except to free cleaning tool from an obstruction.
2. **DO NOT** continue to operate machine when cleaning tool becomes stuck in an obstruction.
EXCESS TORQUE ON A CABLE COULD CAUSE IT TO FRACTURE. (Refer to operating instructions, to free cleaning tool.)
3. **NEVER** handle any cable under tension.*
4. **NEVER** force a tool and cable into a pipeline blockage. This may overload the cable or tool and cause it to fracture.
5. **ALWAYS** wear reinforced leather gloves and safety glasses when operating machine.
6. Keep both hands on rotating cable when machine is running.
7. Use correct tool for the job or application. Check the tool listing for the correct tool and line size.
8. To maintain safe and efficient operation clean thoroughly all cables with water after use. Acids in the drain and sewer lines can attack and deteriorate the metal of the cables and tools. Deterioration will cause weakness in cable and tools and result in fracture or breakage.
9. Replace all cables and tools that become deteriorated, worn, kinked, bent, or any other damage that occurs.

Machine Set-up

AUTOMATIC CABLE FEEDER

Connect Automatic Cable Feeder at the base of the guide tube assembly as per figure 1 picture.

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

CABLE ASSEMBLY AND DRUM LOADING

DANGER: Exercise caution when removing cables from the package. Wound cables are under tension and may spring apart in a dangerous manner.

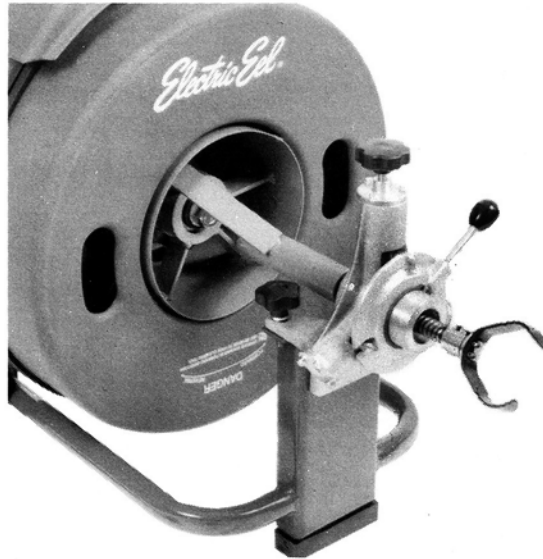
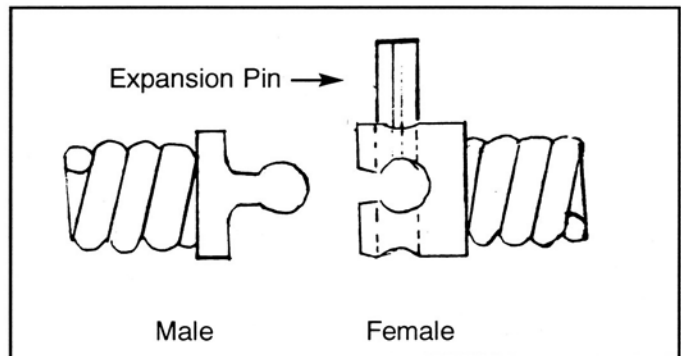


Figure 1

Figure 2



1. Unpackage cable, and uncoil by laying it out flat in an open area.
2. Connect male end of the working cable (connect no more than a total of 100 ft.) to female end of the 10 ft. tailpiece cable as shown in figure 2.
3. To initially load the drum with cable, lock the wheel brake and lay the machine on its back. With the machine resting on all 3 wheels, start hand feeding the cable in a downward fashion, into the drum. The rotating guide tube assembly will lay the cable in the drum as it is fed in.

TOOL SELECTION

It is important to choose the proper cleaning tool for each cleaning application. See the tool selection guide.

STANDARD cleaning tools and accessories



HDD-2T

HDD-2T. A 2 3/8" tool for making an initial opening in a 4" or larger pipeline.



A-1DC

A-1DC. A 1 7/8" tool for making an initial opening in a 4" or larger pipeline.



A-2DC

A-2DC. A 2 3/8" tool for making an initial opening in a 4" or larger pipeline.



A-14DC

A-14DC. A 3 1/2" diameter finishing tool for 4" pipelines. Will negotiate 4" "P" traps.



HDD-4S

HDD-4S. A 3 1/4" diameter heavy duty tool for difficult obstructions in 4" or larger pipelines.



HDD-7

HDD-7. A tool for retrieving broken cable, tools or other objects from pipeline.

OPTIONAL cleaning tools and accessories



U-4

U-3. A tool for removing grease in 3" diameter pipelines.



U-6

U-4. A tool for removing grease in 4" diameter pipelines.



U-6. A tool for removing grease in 6" diameter pipelines.



A-2-3DC

A-2-3DC. A 3" tool for removing hard deposits in 4" and larger diameter pipelines.



A-13DC

A-13-2DC. A finishing tool for 3" diameter conductor lines.



HDD-3S

A-13DC. A finishing tool for 4" diameter conductor lines.



HDD-5S

HDD-3S. A heavy duty tool for 3" and larger diameter pipelines.



HDD-7S

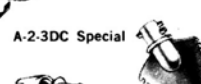
HDD-5S. A heavy duty tool for 6" diameter pipelines.



A-6ADC

HDD-7S. A heavy duty tool for 8" diameter pipelines.

A-6ADC. A 5" diameter finishing tool for 6" pipelines.



A-2-3DC Special

A-2-3DC Special. The best tool available for chopping ice in 4" diameter pipelines.



SC-19

SC-19. Provides a swivel joint between cleaning tool and cable.



ST-2

ST-2. A bulb shaped cleaning tool for use in 4" plastic pipeline.



ST-1

ST-1. A right wound retriever tool.



HDD-2A

HDD-2A. Another right hand wound retriever.

HDD-U3. A 12" spring with a U3 blade up front. For 3" pipelines.

HDD-U4. Same tool with a U4 blade. Can also be furnished with HD blades for 4" pipelines.

TOOL BOX (not shown). 4" high x 6 1/8" deep x 17 5/8" long. All steel construction. Grey enamel finish.



HDD-U3
HDD-U4

Operating Instructions



DANGER



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

FOR MANUAL FEED:

1. Place the drum machine within 3 ft. of the sewer cleanout.
2. Attach a small spear-type cleaning tool to the end of the cable. This tool will enable you to bore a starter hole in the obstruction, allowing back-up water to drain. **NOTE:** The 2' flexible leader should be used when negotiating P-traps or severe bends in the line.
3. Position foot actuator for easy operator accessibility.
4. Make sure FOR/REV switch is in the Forward position.
5. Hand-feed the cleaning tool and approximately one (1) foot of cable into sewer clean-out.
6. With gloved hands on cable begin depressing the foot actuator to start the machine. **Always** keep two hands on the cable in order to guide and control rotating cable.
7. Apply downward pressure with gloved hands on cable/rotating cable will slowly work its way into the line.
8. Repeat steps 6 and 7 until obstruction is met. This will become apparent as operator can no longer feed additional cable into the line and/or cable slows or fails to rotate. **Warning:** **Do Not** allow machine to run when cleaning tool becomes hung up in obstruction and cable fails to rotate. This will cause cable to kink and/or break use to excess torque build-up. If tool becomes hung up, switch motor from Forward to Reverse operation, and slowly back tool out of obstruction.
9. To work tool through obstruction; Place toggle switch in Forward direction and begin running cable into line again, until cable starts to encounter resistance. Operator should then pull on cable in order to back tool away from obstruction. This procedure should continue until tool has fully worked its way through obstruction. **Note:** For larger lines, it will be

necessary to repeat steps 5 through 9 with a larger tool or blade after obstruction has been penetrated.

10. To retrieve cable from sewer line, manually pull cable from sewer and hand-feed back into the machine in forward rotation. **Note:** It is recommended to use a continuous flush of water to clean tool, cable, and sewer line as cable is retrieved.
11. When tool is close to cleanout opening, release foot actuator and allow machine to come to complete stop.
12. Pull remaining cable and tool from sewer line and hand-feed cable back into machine.

OPERATING INSTRUCTIONS FOR USE WITH AUTOMATIC CABLE FEEDER:

1. Follow manual operating instructions Steps 1 through 5.
2. Place one gloved hand on the cable, in order to guide and control it as it rotates; and use the other hand to work the Feed Control Lever. **Danger:** Operator must keep one gloved hand on rotating cable at all times during operation to avoid cable from buckling.
3. In order to feed cable, the operator must move the variable speed control lever from neutral to the forward position, while depressing the foot actuator. **Note:** the speed at which the cable is fed can be controlled by moving the control lever toward Forward to increase speed and moving back toward neutral to slow speed.
4. Continue to automatically feed cable until obstruction is met. When cable begins to drag or rotation becomes difficult, move the lever to the neutral position and allow tool to cut away at the obstruction. **Danger:** NEVER force the cable or tool into the obstruction. Choose the proper feeding speed in order to give a smooth cutting action.

5. If tool becomes hung up in the obstruction, move control lever to the Reverse position to back out tool. **Note:** It is not necessary to use the FOR/REV toggle switch on the motor at this time.
6. After tool has been removed from obstruction, move control lever back to the Forward position and continue to work through obstruction.
7. To retrieve cable from line, move control lever to the Reverse position (while continuing to operate drum in forward rotation) and cable will back out of line and feed into drum. **Note:** It is recommended to use a continuous flush of water to clean tool, cable, and sewer line as cable is retrieved.
8. When tool is close to cleanout opening, return Control Lever to neutral position, release foot actuator, and allow machine to come to complete stop.
9. Pull remaining cable and tool from sewer line and hand-feed cable back into machine.

Special Applications Procedure

CLEANING LINES FARTHER THAN 100 FEET:

When cleaning lines with an obstruction past 100 ft., it will be necessary to add additional cable (25' or 50' sections) to the cable already in line to be able to reach the obstruction. In this situation, use the following procedure.

1. After female coupling on the 10 ft. tailpiece cable (attached to Drum) is exposed past the guide tube assembly, stop the machine and disconnect the 100 ft. of cable. **Note:** Insure this cable cannot fall into pipe beyond the cleanout opening.

2. Now attach the male end of your extension to the tailpiece female fitting and feed the entire section into the drum. (Refer to Drum Loading Procedure)
3. Hook up the abandoned 100 ft. section of cable to the extension and continue operation.

MAIN SEWER OR SEPTIC TANK OVERRUN-

Operator should determine the approximate distance from cleanout opening to the main sewer or septic tank. Overrunning cable into these areas can cause cables to twist or knot-up preventing their retrieval.

REMOVING AND INSTALLING CABLE DRUM:

It may become necessary to remove the cable drum from the Model D-5 machine to replace with another Drum loaded with cable, repair broken cable or maintenance the machine. Follow this procedure:

1. Remove all tools from cable end.
2. Remove belt guard, (loosen the two wing nuts directly behind the guard).
3. Remove belts, (push down on motor to relieve tension).
4. Remove automatic feeder, (loosen but do not remove the two 5 lobe knobs with studs directly behind the feeder).
5. Remove the $\frac{3}{4}$ -10 Hex head $1\frac{3}{4}$ " long bolt on the back of the machine using a $1\frac{1}{8}$ " open end or socket wrench.
6. Lay the machine on its' back, (on the 3 wheels), and lift the drum, cable, guide tube, shaft and bearings up until the bottom end of the shaft clears its' seat in the frame).
7. To reinstall the drum reverse the above process making sure that in replacing the feeder the two conical washers are place between the bottom of the knobs and on top of the slots of the feeder before tightening same.

THE GROUND FAULT CIRCUIT INTERRUPTER

The machine is equipped with a Ground Fault Circuit Interrupter which is designed to prevent a serious electrical shock. This device should be tested on job site before putting the machine into operation, as follows:

1. Plug into (3) prong outlet, or if none available, use (2) prong adapter and attach the green (ground) wire to a known ground source—such as ground wire of a grounded electric supply systems or water pipe.
2. Press the test button on ground fault circuit interrupter. This should cause the reset button to pop out, shutting off power to machine and indicating that system is operating properly.
3. Push reset button in and power will be restored to machine.

WARNING: If reset button does not pop out when test button is depressed, this indicates a fault in the system and should be checked by an electrician.

MODEL D-5 Drain Cleaning Machine

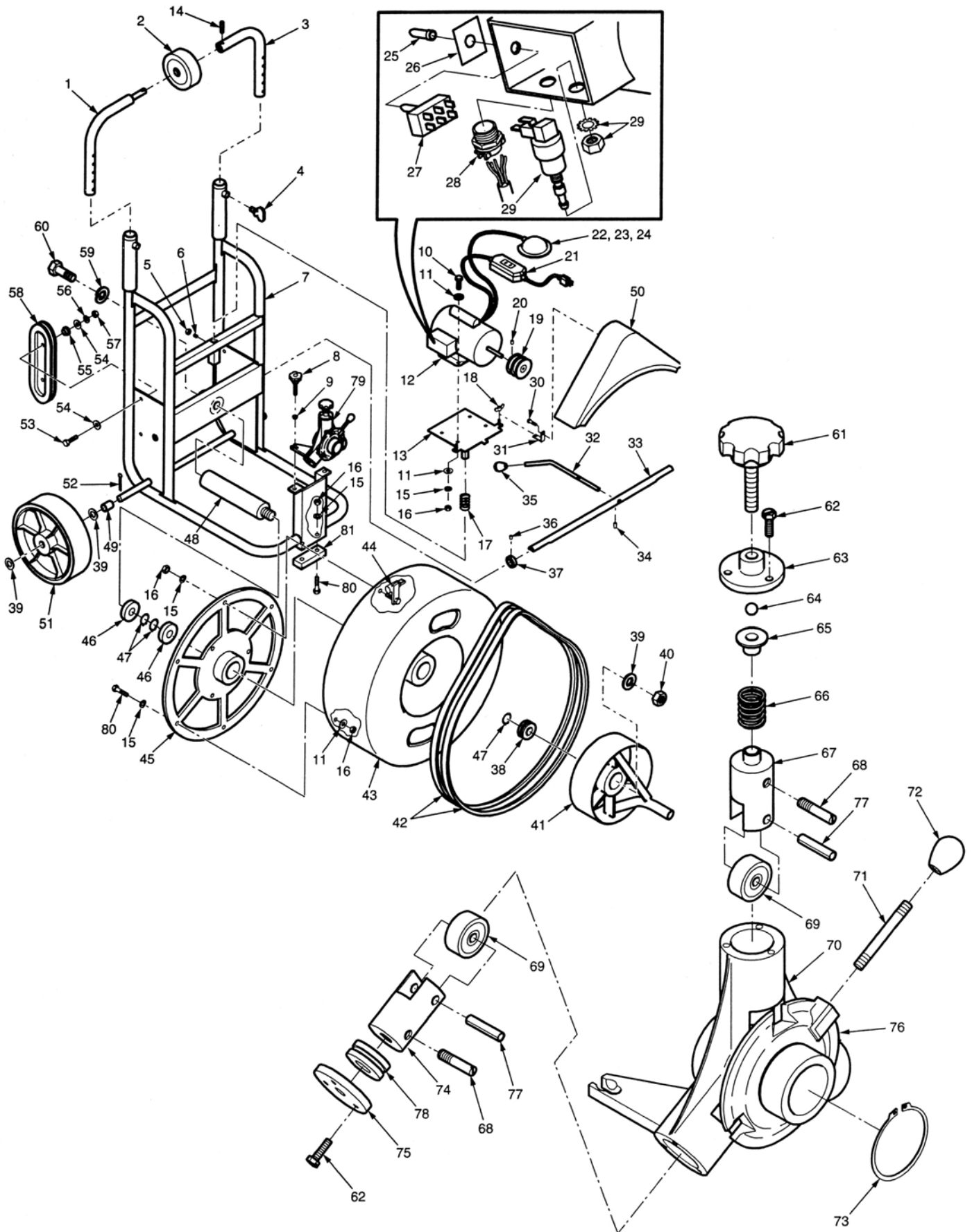
ITEM #	PART NUMBER	DESCRIPTION	AMT	ITEM #	PART NUMBER	DESCRIPTION	AMT
1	D14R	Handle Right	1	46	SER22	Back Plate Bearing	2
2	D-WL5	5" Loading Wheel	1	47	RR281	Retaining Ring	3
3	D14L	Handle Left	1	48	D20	Drum Shaft	1
4	DL-4	Thumb Screw	2	49	D12	Wheel Spacer	2
5	NU51624FHP	5/16-24 Hex Nut	1	50	D33	Belt Guard	1
6	SS5162458DP	5/16-24 x 5/8 Dog Point Set Screw	1	51	D-W10	10" Wheel	2
7	DI*	Frame	1	52	CP5321	5/32 x 1" Cotter pin	2
8	DE-15	Feeder Anchor Bolt	2	53	CSHH3816112	3/8-16 x 1 1/2" Bolt	4
9	DE-16	Feeder Anchor Washer	2	54	WA38S	3/8" Flatwasher	8
10	CSHH516181	5/16-18 x 1 Bolt	4	55	D40	Stair Glider Spacer	4
11	WA516S	5/16 Flatwasher	13	56	LW38	3/8 Lockwasher	4
12	DM-1/2	1/2 HP Motor	1	57	NU3816FHP	3/8-16 Hex Nut	4
13	D34	Motor Mount Plate	1	58	D-SG	Stair Glider	2
14	RP316114	3/16 x 1 1/4 Roll Pin	1	59	LW34G5	3/4" Lockwasher Grade 5	1
15	LW516	5/16 Lockwasher	12	60	CSHH3410112G5	3/4-10 x 1 1/2" Bolt Grade 5	1
16	NU51618FHP	5/16-18 Hex Nut	12	61	DE-7	Tension Handle and Shaft	1
17	D39	Motor Tension Spring	1	62	MSHH102434	10-24 x 3/4" Hex Head Machine Screw	9
18	NU1420W	1/4-20 Wing Nut	2	63	DE-5	Top Feeder Head Cap	1
19	DF-20	1/2" Pulley	1	64	BB38	3/8" Ball Bearing	1
20	SS51618516	5/16-18 x 5/16 Set Screw	1	65	DE-8	Ball Bearing Retainer	1
21	GFCI	Ground Fault Circuit Interrupter	1	66	DE-9	Tension Spring	1
22	FP-1A**	Foot Pedal with Hose Assembly	1	67	DE-3	Top Feeder Insert	1
23	FP-1	Foot Pedal	1	68	DE-12	Feeder Control Finger	3
24	FP-2	Air Hose	1	69	DE-10	Feeder Bearing	3
25	SW-Boot	Switch Boot	1	70	DE-17	Feeder Head Body	1
26	SW-FRP	Forward/Reverse Switch Plate	1	71	DE-13	Control Lever	1
27	SW-FR	Forward/Reverse Switch	1	72	DE-14	Control Lever Knob	1
28	TSC12	Two Screw Connector	1	73	RR237	Retaining Ring	1
29	TBS3218	Air Switch	1	74	DE-4	Lower Feeder Insert	2
30	MS142058FLH	1/4-20 x 5/8 Flat Head Screw	2	75	DE-6	Lower Feeder Head Cap	2
31	D36	Belt Guard Bracket	2	76	DE-2	Feeder Face Plate	1
32	D10	Brake Lever	1	77	RP516138	5/16" x 1 3/8" Roll Pin	3
33	D11	Brake Rod	1	78	DE-11	Feeder Insert Bearing	2
34	SS5161814	5/16-18 x 1/4 Set Screw	1	79	DE-17A***	Feeder Head Assembly	1
35	DE-14	Brake Lever Knob	1	80	CSHH51618114	5/16-18 x 1 1/4 Bolt	10
36	SS142014	1/4-20 x 1/4 Set Screw	2	81	D47	Rubber Pad	1
37	DF-8	Brake Rod Collar	2				
38	VER222	Guide Tube Bearing	1				
39	WA34S	3/4 Flatwasher SAE	5				
40	NU3410FHPG5	3/4-10 Hex Nut Grade 5	1				
41	D21	Guide Tube	1				
42	A72	V-Belt	2				
43	D16	Cable Drum	1				
44	D8	Cable Anchor	1				
45	D15	Back Plate	1				

** Includes Items 4 (2), 15 (2), 16 (2), 80 (2), and 81*

*** Includes Items 23, 24*

**** Includes Items 61 through 77*

MODEL D5 DRAIN CLEANING MACHINE



Electric Eel®

**CALL TOLL FREE
1-800-833-1212**

**ELECTRIC EEL MANUFACTURING CO., INC.
501 W. Leffel Lane, Springfield, Ohio 45506
PH: 937-323-4644
FAX: 937-323-3767**



ELECTRIC EEL MANUFACTURING CO., INC.
501 West Leffel Lane, Springfield, Ohio 45506
Call Toll Free: (800) 833-1212 (937) 323-4644 FAX: (937) 323-3767
www.electriceel.com *Proudly Made in The USA Since 1939*