



Assembly Instructions	Instrucciones de Ensamblaje	Directives d'assemblage
Customer Service US: 1-800-645-2986	Servicio de atención al Cliente US: 1-800-645-2986	Service à la clientèle Canada: 888-645-2986

**Electric Drain Cleaner, for 2"-4" ID, 220 RPM, with 3/8" x 75 ft Cable
Model 670439**



**Electric Auto-Feed Drain Cleaner, for 2"-4" ID, 220 RPM, with 1/2" x 75 ft
Model 670440**



Read this manual thoroughly prior to installation, operation or maintenance. Keep these instructions in a safe location for future reference. For questions, visit globalindustrial.com or contact Customer Service at 1-800-645-2986.

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Safety

DANGER Indicates a hazard that will cause death or serious injury if not avoided

WARNING Indicates a hazard that could cause death or serious injury if not avoided

General Safety

Read all instructions, warnings, specifications, and ratings for the equipment. Failure to follow all instructions listed below may result in electric shock, fire, and/or serious injury.

Work Area Safety

- Keep work area well-lit and clean.
- DO NOT operate power tools in explosive atmospheres including mixtures of flammable gases, vapors, liquids, or dust. Power tools create sparks which may ignite the flammable materials.
- Keep children and bystanders away while operating a power tool. Distractions can cause you to lose control.

Personal Safety

- Use personal protective equipment (PPE) and always wear eye protection. Wear proper protective equipment such as hard hats, dust masks, non-skid safety shoes, and hearing protection for appropriate conditions to reduce chances of injuries.

DANGER: Never grasp the drain cleaning cable with a rag or cloth glove while it is rotating. Only use gloves that come with the machine or gloves that are recommended by Global Industrial

- Do not use a power tool while you are tired or under the influence of alcohol, drugs, or medication. Being inattentive while operating a power tool may result in serious personal injury.
- Dress properly. Do not wear any loose clothing or jewelry. Keep gloves, clothing, and hair away from moving parts. Loose clothes, jewelry, and hair can be caught in moving parts.
- Prevent accidental starting. Ensure the motor power switch (part 30a for model 670439/part 42A for model 670440) is OFF before connecting the power tool to a power source. Carrying a

power tool with your hand on the switch or connecting a power tool to a power source while the switch is ON invites accidents.

- Remove adjusting wrenches, keys, or tools before turning the power tool ON. A wrench, key, or tool left attached to a rotating part of the power tool can result in personal injury.
- Do not overreach. Keep proper balance and footing at all times. Using proper balance and footing allows better control of the power tool during unexpected situations.

Electric Safety

- Always use outlets that match the power tool plug. Never remove the grounding plug or make any other modifications. Ensure the outlet is properly installed and grounded. Do not use adapter plugs. Using unmodified plugs and outlets helps ensure grounding and reduces chances of electrical shock.
- Ensure the Ground Fault Circuit Interrupter (GFCI) provided with the power cord is functional before using the power tool. Always use a GFCI protected supply when using the power tool. GFCI reduces the risk of an electric shock.
- DO NOT contact any earthed or grounded surfaces such as refrigerators, ranges, pipes, and radiators.
- DO NOT expose a power tool to rain or wet conditions. Water in a power tool increases the risk of an electric shock.
- Always pull the plug – not the power cord – when disconnecting from the outlet. DO NOT abuse the power cord. Never use the power cord for carrying or pulling the power tool. Keep the power cord away from moving parts, sharp edges, heat, and oil. Replace damaged power cords as damages increases the risk of electric shock.
- Always use an extension cord for outdoor conditions and a GFCI when using the power tool outside. The GFCI on the power

cord will not prevent electric shock from the extension cord. Plugging in extension cords rated for outdoor use into a GFCI outlet can reduce the risk of an electric shock.

- DO NOT touch the power tool or the plug when hands are wet. Wet hands can increase the risk of electric shock.

Tool Safety and Use

- DO NOT reach into the rotating drum unless the power tool is OFF and disconnected from a power source. Hands may be caught in the moving parts which can cause serious injury.
 - DO NOT leave the **cleaning cable (5/10)** exposed outside of the drum while the machine is plugged in or the **motor power switch (30a/42A)** is ON. The cleaning cable can whip and cause serious injury.
 - Always check for damages to the cleaning cable in the drum by pulling the cable out while the power tool is OFF and disconnected from a power source before use. Perform frequent maintenance and replace damaged, kinked, or broken cables with identical replacements.
 - **Only use gloves recommended by Global Industrial for grasping the cleaning cable.** Loose fitting gloves such as cloth, rubber, latex, or coated gloves can get caught on the cleaning cable and cause serious injury.
 - **Keep glove-covered hand on the cleaning cable while the power tool is running.** Keeping gloved hands on the cable allows for better control and helps prevent the cable from breaking, twisting, or kinking which may lead to serious personal injury.
 - Use goggles, face shields, respirators, protective clothing, and latex or rubber gloves under the gloves recommended by Global Industrial to prevent the spread of toxic or infectious substances coming from the drain line. Drains may contain harmful chemicals, bacteria, and other toxic or infectious substances that may cause burns and personal injury.
- **DO NOT use the power tool without the belt guard (34/46) or cable guide (only for model 670440) installed.** The **belt guard (34/46)** helps reduce the risk of fingers getting caught between the belt and the pulley. The **cable guide** helps reduce the risk of hand injury.
 - **This power tool is designed for a one-person operation.** The operator must be able to turn the power tool OFF as soon as the cutter stops rotating to prevent the cleaning cable from breaking, twisting, and kinking.
 - **Only use the power tool for the recommended drain or pipe sizes.** Using a drain cleaner inappropriate for the job can cause the cleaning cable to break, twist, or kink, and can cause personal injury.
 - **DO NOT use the power tool at a distance greater than two feet from the opening.** Distances greater than two feet can cause the cleaning cable to break, twist, or kink.
 - **DO NOT use the power tool while in reverse (REV) unless specified in this manual.** Using the power tool while in reverse can cause damage to the cleaning cable. The power tool should only be in reverse (REV) to back the cleaning cable and cutter out of blockages or obstructions.
 - Always practice good hygiene before, during, and after the job. Avoid direct contact with your skin and eyes. DO NOT eat or smoke while handling or using the power tool. Wash hands and other body parts exposed to drain contents with warm soapy water. Keeping clean and protected reduces the risk of health hazards.
 - DO NOT use this power tool if the operator or power tool is standing in water. Using the power tool while on water increases the risk of

- electric shock.
- **Always check for risks of contact with utilities such as natural gas or electricity before using the power tool.** Look for utilities, damages to the drain, cross bores, and other objects the cutter may contact. Contact with these hazards can cause gas leaks, fires, explosions, electric shocks, or other serious injuries.
 - **DO NOT force the power tool. Let the cutter do the work.** Using the appropriate tool for the job is safer and more effective. Cutters that do not turn while the cleaning cable is turning can be due to an obstruction. Further use in this situation can cause twisting or damage to the cleaning cable and may result in serious injury.
 - **DO NOT use the power tool if the power switch does not turn it ON or OFF.** A Power tool which cannot be controlled with a switch is dangerous and must be repaired.
 - Always disconnect the power tool from any power source and/or remove batteries, if applicable, before changing accessories or storing the power tool. Disconnecting the power prevents accidental starting of the power tool.
 - **Keep power tools and accessories out of reach of children and untrained persons.** Power tools are dangerous when used without proper training and understanding of the power tool and these instructions.
 - Maintain accessories and tools with care. Ensure there are no damages, misalignment, binding of moving parts, or any other condition that may affect the power tool's use. Poorly maintained tools can cause accidents.
 - **Keep cutting accessories and tools sharp and clean.** Sharp and clean tools are easier to control, more effective, and less likely to bind.
 - **DO NOT use accessories that are**

not provided or recommended by Global Industrial. Accessories that are not suitable for the power tool increases the risk of injury.

- Always use the power tool, accessories, and tools while following these instructions and in consideration of the job and working conditions. Using a power tool in situations different from those intended increases the risk of injury.
- **DO NOT use the power tool when handles are dirty, slippery, or covered in oil.** Always keep the handles clean before using the power tool to ensure safe handling and control during unexpected situations.

Service

- Always have the power tool serviced by a qualified repair person using only identical replacement parts. Professional service reduces the risk of injury.

Major Components Diagram of Model 670439



Figure 1. Components Diagram of Model 670439

Major Components Diagram of Model 670440



Figure 2. Components Diagram of Model 670440

Table 1 Included Cutters and Accessories

Cutter/Accessory	Picture
1-1/8" Bulb Auger	
5/8" Straight Auger	
1-7/8" C-Cutter	
1" Grease Cutter	
1-7/16" Spiral Saw Tooth Cutter	
Heavy-duty leather gloves and PVC gloves	
Cable Guide (Only for Model 670440)	

Table 2 Cleaning Cable Application Examples

Cable Size	Pipe Size	Application Examples
1/2"	2" to 4"	Roof stacks, small floor drains (no roots)
3/8"	1 1/2" to 4"	Roof stacks, laundry lines, small drains

Accessories and Replacements

Model	Description
670443	Global Industrial; Wire Core Cable with Drum Assembly, 1/2" x 50', For Use With 670439 670440
670466	Global Industrial; Wire Core Cable with Drum Assembly, 1/2" x 75 ft, Use With 670439 670440
670476	Global Industrial; Wire Core Cable with Drum Assembly, 3/8" x 75 ft, Use With 670439 670440
670446	Global Industrial; 5-Piece Replacement Cutter Set, For Use With 670439/670440 Drain Cleaners

Assembly Diagrams for Model 670440

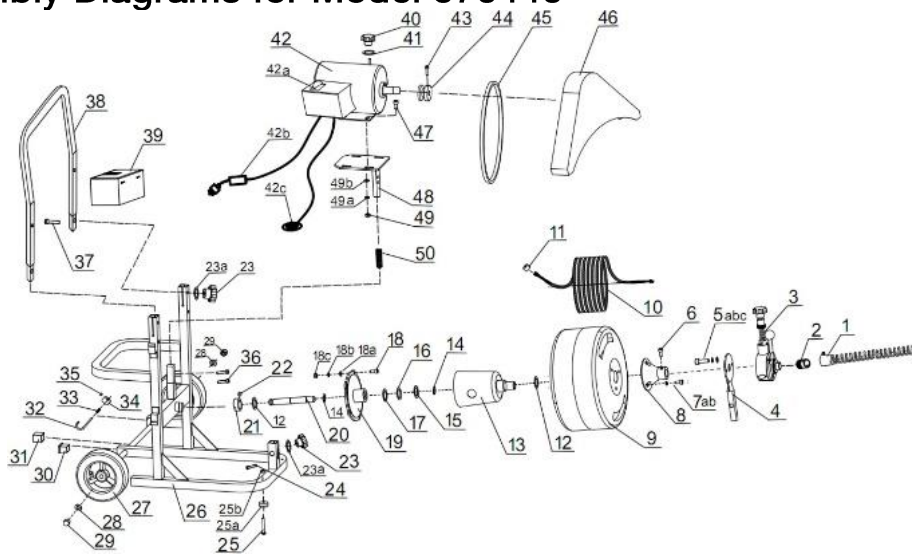


Figure 4. Assembly Diagram of Model 670440

Model 670440 Part List

No.	Description	Qty	No.	Description	Qty
1	Cable Guide	1	25a	Rubber Foot	2
2	Cable Sleeve	1	25b	M5 Lock Nut	2
3	Auto Feeder Set	1	26	Frame	1
4	Auto Feeder Holder	1	27	8" Rubber Wheel	2
5a	Bolt M8 x 20	2	28	Ø10 Flat Washer	2
5b	Ø8 Spring Washer	2	29	M10 Cap Nut	2
5c	Ø8 Flat Washer	2	30	Black Rubber End Plug	2
6	Bolt M8 x 25	1	31	Black Rubber End Cover	2
7a	Bolt M6 x 6	3	32	Drum Shaft Retaining Pin	1
7b	Ø6 Spring Washer	3	33	Retaining Pin Spring	1
8	Front Hub Bushing	1	34	Retaining Pin Sleeve	1
9	Drum	1	35	M6 Set Screw	1
10	Cable	1	36	Positioning Bolt M6x10	2
11	Cable Stopper	1	37	Bolt M8 x 35	2
12	Plastic Washer	2	38	Upper Handle	1
13	Distributor Tube	1	39	Tool Box	1
14	Ø19 Retaining Ring	2	40	Belt Guard Knob	1

No.	Description	Qty	No.	Description	Qty
15	Ø19 Flat Washer	1	41	Ø6 Big Flat Washer	1
16	Ø19 Wave Washer	1	42	Motor	1
17	Ø19 Fiber Washer	1	42a	Motor Power Switch	1
18	Bolt M8 x 20	5	42b	Power Cord with GFCI	1
18a	Ø8 Flat Washer	5	42c	Foot Switch	1
18b	Ø8 Spring Washer	5	43	M6 x 16 Pulley Set Screw	1
18c	M8 Lock Nut	5	44	Pulley	1
19	Rear Hub	1	45	V-Belt	1
20	Drum Shaft	1	46	Belt Guard	1
21	Shaft Spacer	1	47	Hex Bolt M8 x 20	4
22	M8 x 8 Set Screw	1	48	Motor Mount	1
23	M8 Knob Nut	3	49	Nut M8	4
23a	Ø8 Flat Washer	3	49a	Ø8 Spring Washer	4
24	Bolt M8 x 45	1	49b	Ø8 Flat Washer	4
25	Bolt M5 x 35	2	50	Suspension Spring	1

Installing and Removing Cutters

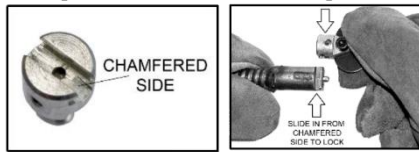


Figure 5. Installing Cutters

Slide the chamfered side of the female end of the cutter onto the male end of the cleaning cable until a click is heard.

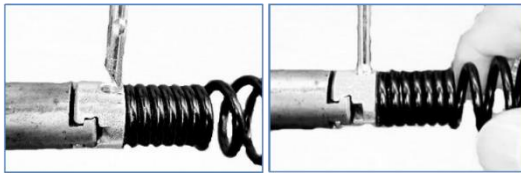


Figure 6. Removing Cutters

Insert the pin key into the hole of the cutter with the chamfered end of the key facing the cleaning cable. Hold the cleaning cable with one hand and slide the cutter off with the other hand.

Installing Cable Guide for Model 670440

Locate the lock pin on the adapter end of the **cable guide (1)** and pull the pin up as you slide the adapter onto the front of the **Auto-Feeder (3)**. Release the lock pin into the hole.

Operating Instructions for Model 670439

1. Ensure the **motor power switch (30a)** is in the OFF position.
2. Position the drain cleaner within two feet from the drain opening.
3. Connect the machine to an outlet that matches the plug.
4. Test the GFCI near the plug on the power cord by pressing the test button. A light should turn on to indicate the GFCI works. Then press the reset button. If the light doesn't turn on, the GFCI needs to be repaired. DO NOT use the machine until the GFCI has been repaired.
5. Place the **Foot Switch (30c)** in a convenient location where you can reach the motor switch with one hand and reach the **cleaning cable** with another hand.
6. Always keep a gloved hand on the cleaning cable. DO NOT use cloth or loose gloves. Use the gloves that come with the machine.
7. Select the proper cutting tool (See **Table 1 Included Cutters and Accessories**). A good tool to start

with is the Grease Cutter or Bulb Auger. After the pipe is opened, try larger blades to scrape the inside edges of the pipe.

8. Slide the cutter onto the end of the cleaning cable.
9. Pull the cleaning cable out of the drum while the machine is OFF. Slide the cleaning cable into the drain as far as it will go. At least one foot (0.3 m) of the cable must be in the drain.
10. Don't leave too much slack on the cleaning cable as this will cause whipping. DO NOT tightly bend the cable. If the cleaning cable starts to bend or twist, turn the **motor power switch (30a)** to the **Reverse** position. Step on the **foot switch** only for a few seconds to move some of the cable out of the drain. When there is excess cable outside of the drain, take your foot off the **foot switch** and switch the **motor power switch (30a)** to the **Forward** position. Push the excess cable back into the drum. DO NOT leave too much of the cable exposed outside of the drum or the drain pipe as the cable can whip when the machine is on.
11. Position the **motor power switch (30a)** at the **Forward** position. While keeping a gloved hand on the cleaning cable, depress the **Foot Switch (30c)** to start the drum rotation.
12. Gently pull the cable out of the drum and feed it into the drain. DO NOT force the cable. Let the cutter do the work.

WARNING: Do not operate the drain cleaner with one person controlling the **cleaning cable** and another person controlling the switch.

13. DO NOT let the cutter get caught in a stoppage. When you feel the **cleaning cable** starting to twist in your hand, stop the machine by releasing the **Foot Switch (30c)** and pull the cable back with a gloved hand. Then continue moving the **cleaning cable** forward slowly towards the stoppage.
14. After the line is opened and you are ready to put the cleaning cable

back into the drum, ensure the **motor power switch (30a)** is still at the **Forward** position. This is important to prevent the cable from tangling in the drum. Push the cable with gloved hands back into the drum as you step on the **foot switch (30c)**.

DANGER: Always run the machine with the **motor power switch (30a)** in the **Forward** position for moving the cable into the drain line, out of the drain line, and into the drum. The **Reverse** position is only meant to be used for a few seconds to get a cable unstuck. The **Reverse** position is NOT for retracting the cable into the drum.

15. Take your foot off the **foot switch (30c)** when the cutting tool is near the drain opening.

DANGER: Never retract the cutting tool from the drain while the cable is rotating. The cleaning cable could whip and cause serious injury.

Operating Instructions for Model 670440

1. Ensure the **motor power switch (42A)** is in the OFF position.
2. Grab the **upper handle (38)** and tilt the machine back to let the drain cleaner roll on its wheels. Position the drain cleaner within two feet from the drain opening.
3. Connect the machine to an outlet that matches the plug.
4. Test the GFCI near the plug on the power cord by pressing the test button. A light should turn on to indicate the GFCI works. Then press the reset button. If the light doesn't turn on, the GFCI needs to be repaired. DO NOT use the machine until the GFCI has been repaired.
5. Ensure the cable guide is installed to prevent the cleaning cable from whipping. Always keep a gloved hand on the cable. DO NOT use cloth or loose gloves. Use the gloves that come with the machine.
6. Place the **Foot Switch (42C)** in a convenient location where you can reach the motor switch with one hand and reach the cleaning cable with another hand.
7. Select the proper cutting tool (See **Table 1 Included Cutters and**

Accessories). A good tool to start with is the Grease Cutter or Bulb Auger. After the pipe is opened, try larger blades to scrape the inside edges of the pipe.

8. Slide the cutter onto the end of the cleaning cable.
9. Pull the cleaning cable out of the drum while the machine is OFF. Slide the cleaning cable into the drain as far as it will go. At least one foot (0.3 m) of the cable must be in the drain.
10. Tighten the knob on the top of the **Auto-Feed** so that the **Auto-Feed** roller presses against the cable. DO NOT over tighten as this could cause excess cable wear.

WARNING: The **Auto-Feed** is designed for use with 1/2" and 3/8" cables only. 3/8" cables are optional accessories for Model 670440.

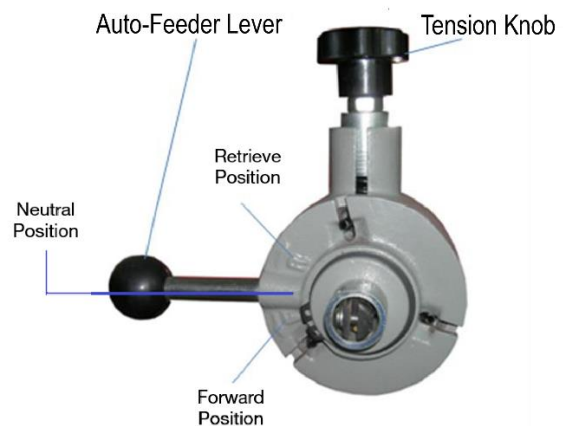


Figure 7. Auto-Feed Controls

The Auto-Feed Lever on the **Auto Feeder Set (3)** controls the feeding rate and the direction of the cable. Hold the lever down to the **Forward position** to pull the cable out of the drum and feed it into the drain. The lower the lever is pushed downward, the faster the cable will feed. Hold the lever up to the **Retrieve position** to retract the cable from the drain and push it back into the drum. When the lever is held in the middle at the **Neutral position**, the cable will continue to rotate with the drum but it will not move in or out of the feeder.

11. Set the **motor Power Switch (42A)** at the **Forward** position. Grab the cleaning cable with a gloved hand, and place your other hand on the **Auto-Feed Lever (3)**, which should be in the **Neutral position**. Step on the **Foot Switch (42C)** to start the

machine.

12. Feed the cable into the drain line by holding the **Auto-Feed Lever (3)** down (**Forward position**). Adjust the feeding rate with the Auto-Feed lever as the resistance changes. DO NOT force the cable – let the cutter do the work. The drain won't be cleaned faster and the cable could get damaged.
13. If the cleaning cable twists or bends, take your foot off the **Foot Switch (42C)**. Move the feed lever up (**Retrieve position**) and step on the foot pedal to retract some of the cable back into the drum.
14. If the cleaning cable can't pass a bend, try a smaller cable. 3/8" diameter cables are optional for Model 670440. (See Table 2 Cable Applications.)
15. When the cable reaches a stoppage, move the **Auto-Feed Lever (3)** to the middle (**Neutral**).
16. Slowly move the **Auto-Feed Lever (3)** down (**Forward**) to allow the cutter to chew the stoppage as it goes. Moving the cable back and forth slowly is effective and helps reduce stress on the cable.

NOTE: It's sometimes helpful to move the cable back and forth slowly. This can effectively remove the stoppage without damaging the cleaning cable. To move the cable back and away from the stoppage, move the **Auto-Feed lever (3)** up to the **Retrieve** position. Then move the **Auto-Feed lever (3)** down to the **Forward** position. Repeat as needed.

17. Ensure the cutter doesn't get caught in the stoppage as you work through it. This can cause the cleaning cable to kink and break. When you feel the cable start twisting in your hands, stop the machine and pull some of the cable back to free the cutter from the obstruction. Then, repeat the slow forward motion. Remember, no cutting takes place when the blade stops turning.
18. After the line is opened and you are ready to put the cleaning cable back into the drum, ensure the **motor power switch (42A)** is still at the **Forward** position. This is

important to prevent the cable from tangling in the drum. Move the **Auto-Feed lever (3)** up to the **Retrieve position** and step on the **foot switch (42C)** until the cutter tool is near the drain opening.

DANGER: Always run the machine with the **motor power switch (42A)** in the **Forward** position for moving the cable into the drain line, out of the drain line, and into the drum. The **Reverse** position is only meant to be used for a few seconds to get a cable unstuck. The **Reverse** position is NOT for retracting the cable into the drum.

19. When the cutter tool is near the drain opening, take your foot off the **Foot Switch (42C)**.

DANGER: Never retract the cutting tool from the drain while the cable is rotating. The cleaning cable could whip and cause serious injury.

Trouble Shooting

Table 3 Trouble Shooting Guidelines

Problem	Probable Cause	Solution
Cable kinks or breaks	Operator forced the cable	Do not force the cable. Let the cutter do the work
	Too much slack between machine and drain	Keep the machine within two feet from the drain
	Cable used in wrong size drain line	A cable that is too large or too small in diameter for a line is more likely to kink (See Table 2 Cleaning Cable Applications Examples)
Cable tangles in drum	Operator forced the cable	Do not force the cable. Let the cutter do the work
	Machine was running while the motor power switch (30a/42A) was in the Reverse direction for more than a few seconds	Do not set the motor power switch (30a/42A) in the Reverse position to retract the cable from the drain or to put the cable into the drum. The Reverse position is only meant to be used for a few seconds to get a cable unstuck. The Reverse position is NOT for retracting the cable into the drum. To retract a cable, leave the motor power switch in the Forward position and push the cable into the drum. For Model 670440, set the Auto-Feed lever to the Retrieve position.
	Distributing tube needs to be lubricated	Lubricate distributing tubes (Part 8 of Model 670439 and part 13 of Model 670440) . See assembly diagrams)
Cable caught in drain line	Cable is stuck at an obstruction	Reverse the motor for a few seconds by moving the motor power switch (30a/42A) to Reverse . Pull the cable while the drum is rotating in the Reverse direction. When the cable is freed, set the motor switch to Forward .
Drum stops while foot switch (30c/42C) or hose is pressed	Hole in the foot switch (30c/42C) or hose	Replace as required

Drum turns in one direction but not the other	Motor power switch failure	Replace the switch
Ground fault circuit interrupter trips and will not reset.	Damaged power cord or extension cord	Replace cords
	Short circuit in motor	Take motor to authorized repair center
	Faulty ground fault circuit interrupter	Replace ground fault circuit interrupter
Failure to feed for Model 670440	Cable tangled in drum	Do not run machine while the motor power switch (42A) is in the Reverse position. Only use cable sizes 3/8" and 1/2". 3/8" cables are optional. (See Table 2 Cleaning Cable Application Examples)
	Auto-Feed misadjusted	If the Auto-Feed tension knob on the Auto Feeder Set (3) is too loose the cable will slip. If it is too tight the Auto-Feed rollers will wear prematurely
	Auto-Feed roller frozen	Clean and lubricate Auto-Feed rollers regularly. Replace worn rollers.
	Worn cable	When cable coils wear flat, cable should be replaced

Maintenance and Repair

Wipe cleaning cables with light machine oil.

Auto-Feed Maintenance for

Model 670440

Keep Auto-Feed free of soil and grit by cleaning with fresh water. Then wipe moving parts with light machine oil. No disassembly is required unless dirt is obstructing rotation.

Damaged Roller

Excessive use may wear a roller. If a roller needs to be replaced, it is recommended to replace all three at the same time.

Replacing Drum and Assembly

Drum replacement

1. For Model 670440, remove the tool box, if attached, by lifting it straight up.
2. Remove the **belt guard (34/46)** by loosening the **belt guard knob (28/40)** on top.

3. The **motor** is supported by a **suspension spring (38/50)**. Place your hand on top of the **motor** case and push it down to lower the **motor**. This will relieve tension off the V-Belt. Then, slide the V-Belt off the back of the drum.
4. Locate the **drum-retaining pin** behind the drain cleaner **(24/32)**. Pull the **drum-retaining pin** to release the drum shaft, and pull the old drum off the machine.
5. To install the new **drum**, slide the **drum shaft** into the shaft hole on the frame. Lock the drum in with the **drum-retaining pin**.
6. Position the **V-Belt** around the drum, press down on the **motor** and slip the **V-belt** onto the **motor pulley**.
7. Reattach the **belt guard**.

Auto-Feed Disassembly for Model 670440

1. Remove the **Auto-Feed** tension knob, springs and spring plunger. Note the positioning of these parts for re-assembly. The top roller can now be removed.
2. Remove the snap rings and thrust washers from the bottom housing cylinders. The bottom rollers can now be removed.
3. Re-assembly is done in reverse order.