

Save This Manual Keep this manual for the safety warnings and precautions, assembly, operating, inspection, maintenance and cleaning procedures. Write the product's serial number in the back of the manual near the assembly diagram (or month and year of purchase if product has no number). Keep this manual and the receipt in a safe and dry place for future reference.

AUTO FEED DRAIN CLEANER

Owner's Manual & Safety Instructions

WARNING

Read this material before using this product.
Failure to do so can result in serious injury.
SAVE THIS MANUAL.

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WARNING SYMBOLS AND DEFINITIONS

	This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.
 DANGER	Indicates a hazardous situation which, if not avoided, will result in death or serious injury.
 WARNING	Indicates a hazardous situation which, if not avoided, could result in death or serious injury.
 CAUTION	Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.
NOTICE CAUTION	Addresses practices not related to personal injury.

IMPORTANT SAFETY INFORMATION

General Power Tool Safety Warnings

WARNING

Read all safety warnings and instructions.

Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.

Save all warnings and instructions for future reference.

The term "power tool" in the warnings refers to your mains-operated (corded) power tool.

Work area safety

- 1. Keep work area clean and well lit.**
Cluttered or dark areas invite accidents.
- 2. Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust.** *Power tools create sparks which may ignite the dust or fumes.*
- 3. Keep children and bystanders away while operating a power tool.**
Distractions can cause you to lose control.

Electrical safety

1. **Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with grounded power tools.** *Unmodified plugs and matching outlets will reduce risk of electric shock.*
2. **Avoid body contact with grounded surfaces such as pipes, radiators, ranges and refrigerators.** *There is an increased risk of electric shock if your body is grounded.*
3. **Do not expose power tools to rain or wet conditions.** *Water entering a power tool will increase the risk of electric shock.*
4. **Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts.** *Damaged or entangled cords increase the risk of electric shock.*
5. **When operating a power tool outdoors, use an extension cord suitable for outdoor use.** *Use of a cord suitable for outdoor use reduces the risk of electric shock.*

Personal safety

1. **Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication.** *A moment of inattention while operating power tools may result in serious personal injury.*
2. **Use personal protective equipment. Always wear eye protection.** *Safety equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.*
3. **Prevent unintentional starting. Ensure the switch is in the off-position before connecting to power source, picking up or carrying the tool.** *Carrying power tools with your finger on the switch or energizing power tools that have the switch on invites accidents.*
4. **Remove any adjusting key or wrench before turning the power tool on.** *A wrench or a key left attached to a rotating part of the power tool may result in personal injury.*
5. **Do not overreach. Keep proper footing and balance at all times.** *This enables better control of the power tool in unexpected situations.*
6. **Dress properly. Do not wear loose clothing or jewelry. Keep your hair, clothing and gloves away from moving parts.** *Loose clothes, jewelry or long hair can be caught in moving parts.*
7. **Only use safety equipment that has been approved by an appropriate standards agency.** *Unapproved safety equipment may not provide adequate protection. Eye protection must be ANSI-approved and breathing protection must be NIOSH-approved for the specific hazards in the work area.*

Power tool use and care

1. **Do not force the power tool. Use the correct power tool for your application.** *The correct power tool will do the job better and safer at the rate for which it was designed.*
2. **Do not use the power tool if the switch does not turn it on and off.** *Any power tool that cannot be controlled with the switch is dangerous and must be repaired.*
3. **Disconnect the plug from the power source before making any adjustments, changing accessories, or storing power tools.** *Such preventive safety measures reduce the risk of starting the power tool accidentally.*
4. **Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool. Power tools are dangerous in the hands of untrained users.**
5. **Maintain power tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation. If damaged, have the power tool repaired before use.** *Many accidents are caused by poorly maintained power tools.*
6. **Keep cutting tools sharp and clean.** *Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.*
7. **Use the power tool, accessories and tool bits etc. in accordance with these instructions, taking into account the working conditions and the work to be performed.** *Use of the power tool for operations different from those intended could result in a hazardous situation.*

Service

Have your power tool serviced by a qualified repair person using only identical replacement parts.
This will ensure that the safety of the power tool is maintained.

Drain Cleaner Safety Warnings

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1. Maintain labels and nameplates on the tool. These carry important safety information. If unreadable or missing, contact Harbor Freight Tools for a replacement.
2. **Wear ANSI-approved safety impact eye goggles and heavy duty LEATHER work gloves when using the Drain Cleaner.** Never grasp a rotating cable with a rag or cloth glove. Using personal safety devices reduce the risk for injury. Safety impact eye goggles and heavy work gloves are available from Harbor Freight Tools.
3. Avoid unintentional starting. Prepare to begin work before turning on the tool.
4. **Do not force the Drain Cleaner.** This tool will do the work better and safer at the speed and capacity for which it was designed.
5. **Maintain a safe working environment.** Keep the work area well lit. Make sure there is adequate surrounding workspace. Always keep the work area free of obstructions, grease, oil, trash, and other debris. Do not use a power tool in areas near flammable chemicals, dusts, and vapors.
6. **Unplug the Drain Cleaner from its electrical outlet before performing any inspection, maintenance, or cleaning procedures.**
7. **Do not leave the Drain Cleaner unattended while running.** Turn power off if you have to leave the Drain Cleaner.
8. **Do not allow the cutter to stop turning while the machine is running.** This can overstress the cable and may cause twisting, kinking or breaking of the cable. Twisting, kinking or breaking cable may cause striking or crushing injuries.
9. **Keep gloved hand on the cable whenever the machine is running.** This provides better control of the cable and helps prevent twisting, kinking and breaking of the cable. Twisting, kinking or breaking cable may cause striking or crushing injuries.
10. **Before each use, check all nuts, bolts, and screws for tightness.** Vibration during operation may cause these to loosen.
11. **Avoid electrical shock.** Do not operate the Drain Cleaner if sitting in standing water, and if the operator is in standing water. Keep extension cord off the ground and away from water. Water increases the risk of electric shock.
12. **Install this product on a proper surface.** Locate on a flat, level, and solid surface that is capable of supporting the weight of the Drain Cleaner.
13. **Do not operate the Drain Cleaner with the belt guard removed.** Fingers can get caught between the drive belt and pulley.
14. **Do not put too much stress on cable.** Keep gloved hand on the cable for control when machine is running. In the course of drain cleaning, if the cable encounters an obstruction, it may stress the cable and cause the cable to twist, kink, or break. This may result in serious injury, and damage the equipment or pipes.
15. **Position Drain Cleaner within two feet of drain opening.** Greater distances can result in the cable twisting or kinking.
16. **One person must control both the cable and the Foot Switch.** If the cutter stops rotating, the operator must be able to turn the machine motor off to prevent twisting, kinking and breaking of the cable. Twisting, kinking or breaking cable may cause striking or crushing injuries.
17. **Reverse Motor direction only when pulling the Cable off an obstruction.** Trying to push the Cable down the pipe or pull it out of a pipe while in reverse operation can result in Cable damage. Make sure Drum has stopped turning before changing the Rotation Switch.
18. **Keep hands away from the rotating Drum and Distributor Tube.** Do not reach into Drum unless the Drain Clean power cord is unplugged.
19. **Use appropriate personal protective equipment while handling and using drain cleaning equipment.** Drains may contain chemicals, bacteria and other substances that may be toxic, infectious, cause burns or other issues. Appropriate personal protective equipment always includes ANSI-approved safety glasses and heavy-duty work gloves, and may include equipment such as latex or rubber gloves, face shields, goggles, protective clothing, respirators and steel toed footwear.
20. **Wash hands after use.** Use hot, soapy water to wash hands and other exposed body parts exposed to drain contents after handling or using drain cleaning equipment. Do not eat or smoke while operating or handling drain cleaning equipment. This will help prevent contamination with toxic or infectious material.

Drain Cleaner Safety Warnings (cont.)

21. **Do not operate this machine if operator or machine is standing in water.** Operating machine while in water increases the risk of electrical shock.
22. **Only use drain cleaning machine to clean drains of recommended sizes according to these instructions.** Other uses or modifying the drain cleaning machine for other applications may increase the risk of injury.
23. **Be aware of possible damage to drain lines that may result from the discovery of roots and other obstacles.**
24. **WARNING! People with pacemakers should consult their physician(s) before using this product.** Electromagnetic fields in close proximity to a heart pacemaker could cause interference to or failure of the pacemaker. In addition, people with pacemakers should adhere to the following:
 - Avoid operating power tools alone.
 - Properly maintain and inspect all tools before use to avoid electrical shock.
25. **WARNING!** Handling the cord on this product will expose you to lead, a chemical known to the State of California to cause cancer, and birth defects or other reproductive harm. Wash hands after handling. (California Health & Safety Code § 25249.5, *et seq.*)
26. The warnings, precautions, and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.

Vibration Safety

This tool vibrates during use.

Repeated or long-term exposure to vibration may cause temporary or permanent physical injury, particularly to the hands, arms and shoulders. To reduce the risk of vibration-related injury:

1. Anyone using vibrating tools regularly or for an extended period should first be examined by a doctor and then have regular medical check-ups to ensure medical problems are not being caused or worsened from use. Pregnant women or people who have impaired blood circulation to the hand, past hand injuries, nervous system disorders, diabetes, or Raynaud's Disease should not use this tool. If you feel any symptoms related to vibration (such as tingling, numbness, and white or blue fingers), seek medical advice as soon as possible.
2. Do not smoke during use. Nicotine reduces the blood supply to the hands and fingers, increasing the risk of vibration-related injury.
3. Wear suitable gloves to reduce the vibration effects on the user.
4. Use tools with the lowest vibration when there is a choice.
5. Include vibration-free periods each day of work.
6. Grip tool as lightly as possible (while still keeping safe control of it). Let the tool do the work.
7. To reduce vibration, maintain the tool as explained in this manual. If any abnormal vibration occurs, stop use immediately.



SAVE THESE INSTRUCTIONS.

Grounding

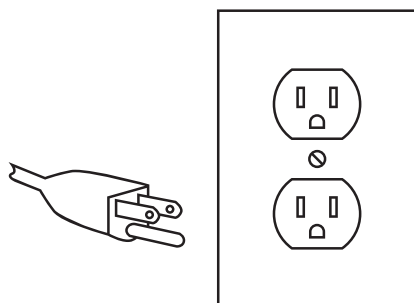
⚠ WARNING



TO PREVENT ELECTRIC SHOCK AND DEATH FROM INCORRECT GROUNDING WIRE CONNECTION:

Check with a qualified electrician if you are in doubt as to whether the outlet is properly grounded. Do not modify the power cord plug provided with the tool. Never remove the grounding prong from the plug. Do not use the tool if the power cord or plug is damaged. If damaged, have it repaired by a service facility before use. If the plug will not fit the outlet, have a proper outlet installed by a qualified electrician.

Grounded Tools: Tools with Three Prong Plugs



3-Prong Plug and Outlet

1. Tools marked with "Grounding Required" have a three wire cord and three prong grounding plug. The plug must be connected to a properly grounded outlet. If the tool should electrically malfunction or break down, grounding provides a low resistance path to carry electricity away from the user, reducing the risk of electric shock. (See 3-Prong Plug and Outlet.)
2. The grounding prong in the plug is connected through the green wire inside the cord to the grounding system in the tool. The green wire in the cord must be the only wire connected to the tool's grounding system and must never be attached to an electrically "live" terminal. (See 3-Prong Plug and Outlet.)
3. The tool must be plugged into an appropriate outlet, properly installed and grounded in accordance with all codes and ordinances. The plug and outlet should look like those in the preceding illustration. (See 3-Prong Plug and Outlet.)

Ground Fault Circuit Interrupter (GFCI)

Your machine is equipped with a ground fault circuit interrupter (GFCI), which protects you against shock if a short circuit should occur. Check that the receptacle is properly grounded and test the GFCI before each use.

1. Plug the GFCI Power Plug into a grounded, 120 VAC electrical outlet.
2. Press the TEST button. The GFCI indicator light will go out and power to the machine should cut off.
3. **WARNING!** If the light does not go out when test button is pushed, equipment should not be used until proper repairs can be made.
4. To restore power after test, push the reset button. **WARNING!** If the machine doesn't start, stops while running, or if you experience a mild shock, do not use the machine. Have it repaired or replaced by a licensed electrician.

Note: The Power Cord is not GFCI protected from the GFCI unit to the 3-prong plug in the electrical outlet.

Extension Cords

1. ***Grounded*** tools require a three wire extension cord. ***Double Insulated*** tools can use either a two or three wire extension cord.
2. As the distance from the supply outlet increases, you must use a heavier gauge extension cord. Using extension cords with inadequately sized wire causes a serious drop in voltage, resulting in loss of power and possible tool damage. (See Table A on page 7.)
3. The smaller the gauge number of the wire, the greater the capacity of the cord. For example, a 14 gauge cord can carry a higher current than a 16 gauge cord. (See Table A.)
4. When using more than one extension cord to make up the total length, make sure each cord contains at least the minimum wire size required. (See Table A.)
5. If you are using one extension cord for more than one tool, add the nameplate amperes and use the sum to determine the required minimum cord size. (See Table A.)
6. If you are using an extension cord outdoors, make sure it is marked with the suffix "W-A" ("W" in Canada) to indicate it is acceptable for outdoor use.

7. Make sure the extension cord is properly wired and in good electrical condition. Always replace a damaged extension cord or have it repaired by a qualified electrician before using it.
8. Protect the extension cords from sharp objects, excessive heat, and damp or wet areas.

TABLE A: RECOMMENDED MINIMUM WIRE GAUGE FOR EXTENSION CORDS* (120/240 VOLT)

NAMEPLATE AMPERES (at full load)	EXTENSION CORD LENGTH				
	25'	50'	75'	100'	150'
0 – 2.0	18	18	18	18	16
2.1 – 3.4	18	18	18	16	14
3.5 – 5.0	18	18	16	14	12
5.1 – 7.0	18	16	14	12	12
7.1 – 12.0	18	14	12	10	-
12.1 – 16.0	14	12	10	-	-
16.1 – 20.0	12	10	-	-	-

* Based on limiting the line voltage drop to five volts at 150% of the rated amperes.

Symbology

	Double Insulated
	Volts Alternating Current
	Amperes
	No Load Revolutions per Minute (RPM)

	WARNING marking concerning Risk of Eye Injury. Wear ANSI-approved safety goggles with side shields.
	Read the manual before set-up and/or use.
	WARNING marking concerning Risk of Fire. Do not cover ventilation ducts. Keep flammable objects away.
	WARNING marking concerning Risk of Electric Shock. Properly connect power cord to appropriate outlet.

Specifications

Electrical Rating	120V~, 60Hz, 4A
Motor Speed	1800 RPM
Cable Type	1/2" Dia.
Drain Pipe Capacity	2" to 4" I.D.

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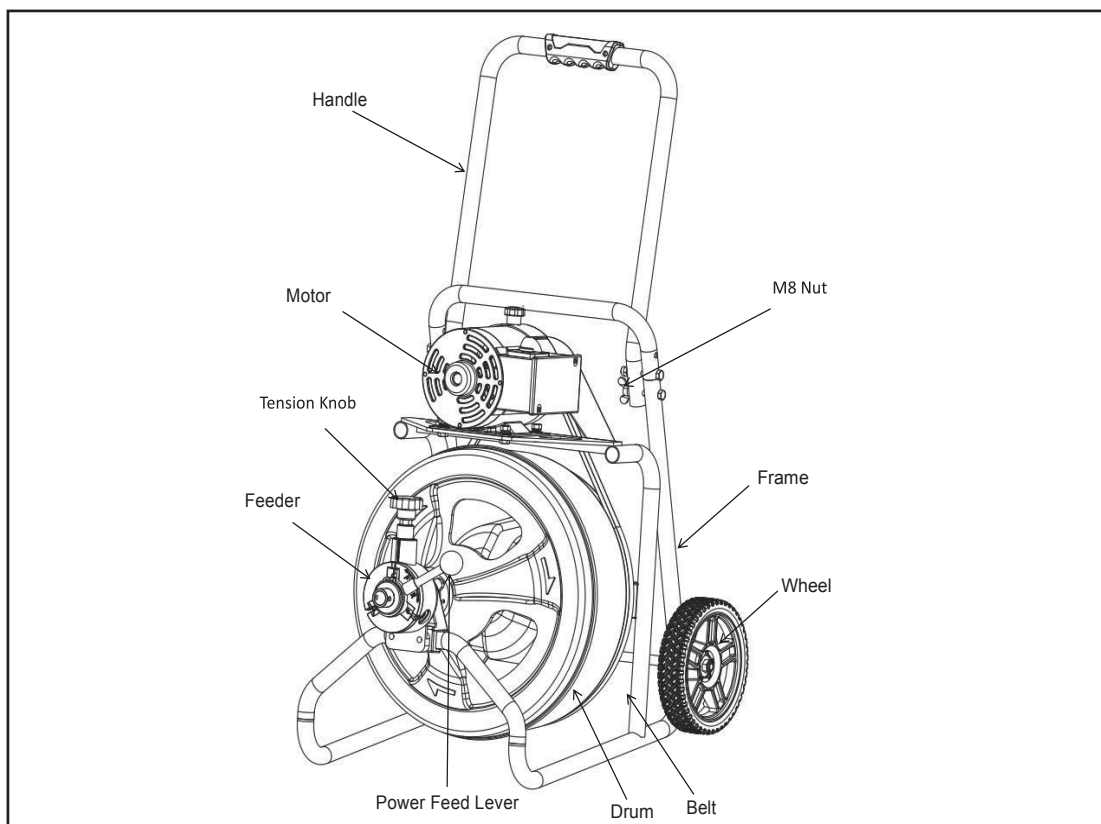
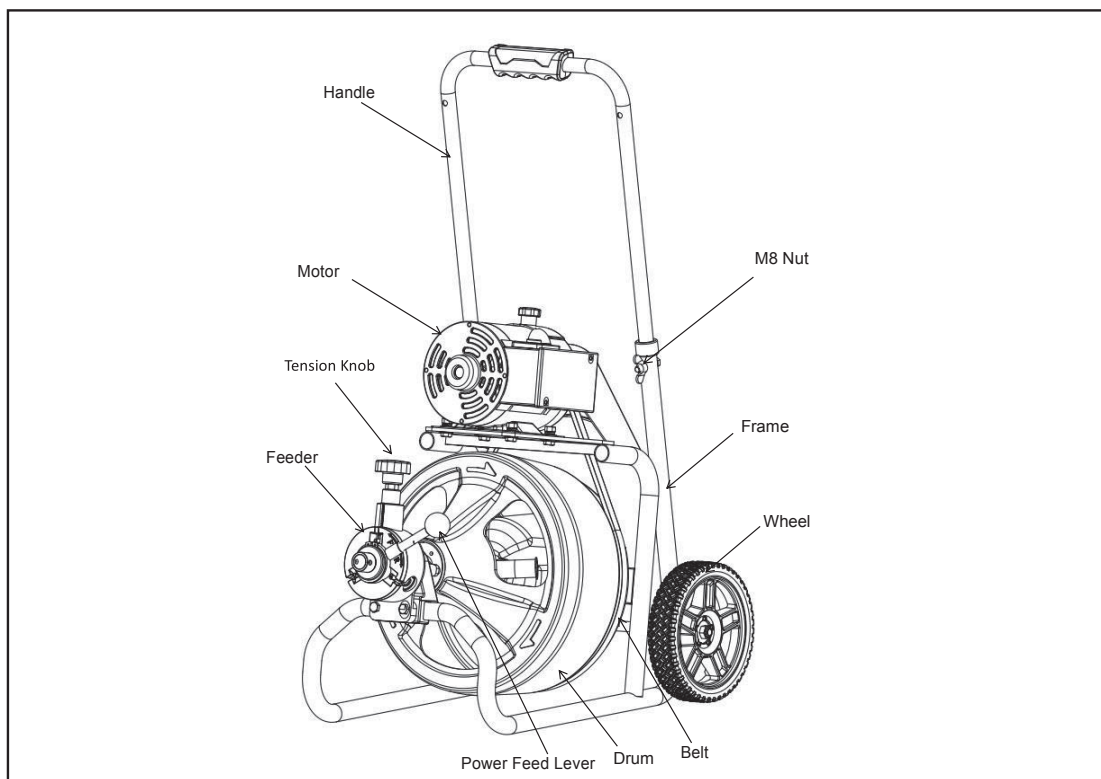
MAINTENANCE

Setup - Before Use:



Read the **ENTIRE IMPORTANT SAFETY INFORMATION** section at the beginning of this manual including all text under subheadings therein before set up or use of this product.

Functions



Cutting Tool Accessories

There are eight Cutting Tools included with each Drain Cleaner. Select the appropriate tool for the cleaning job and attach to Cable. Each is described in the table below.



Arrow Cutter



Arrow Cutter



Boring Bulb Cutter



Boring Bulb Cutter



C-Cutter



C-Cutter



Spade Cutter



Funnel Auger

Cutter Tool	Applications
Arrow Cutter	Starting tool; ideal for cutting and scraping
Boring Bulb Cutter	Starting tool; ideal for removing loose objects
C-Cutter	Finishing tool; ideal for grease stoppages and cleaning pipe walls.
Spade Cutter	Finishing tool; used for scraping the inside edges of pipes.
Funnel Auger	Used for breaking up remains of stoppage left by straight auger.

NOTICE: If the cause of the obstruction is unknown, use the Boring Bulb Cutter to explore the obstruction and, if possible, retrieve a piece to inspect. Once you can see the cause of the obstruction, select the appropriate tool for the job. Run the smallest available tool through the blockage to allow the backed up water to flow and carry away the debris as the drain is cleaned.

Once the drain is flowing, more appropriate tools can be used on the rest of the blockage.

Keep in mind that the largest tool used should be no bigger than the drain's inside diameter, minus an inch.

If properly used, the Drain Cleaners and assorted Drain Cleaner Accessories will not damage a drain that is in good condition and properly designed, constructed, and maintained. However, if the drain is in poor condition or has not been properly designed, the drain cleaning work may damage the drain. If possible, visually inspect the drain's quality before operation.

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Assembly

Note: No assembly needed for Model 68285.

⚠ WARNING

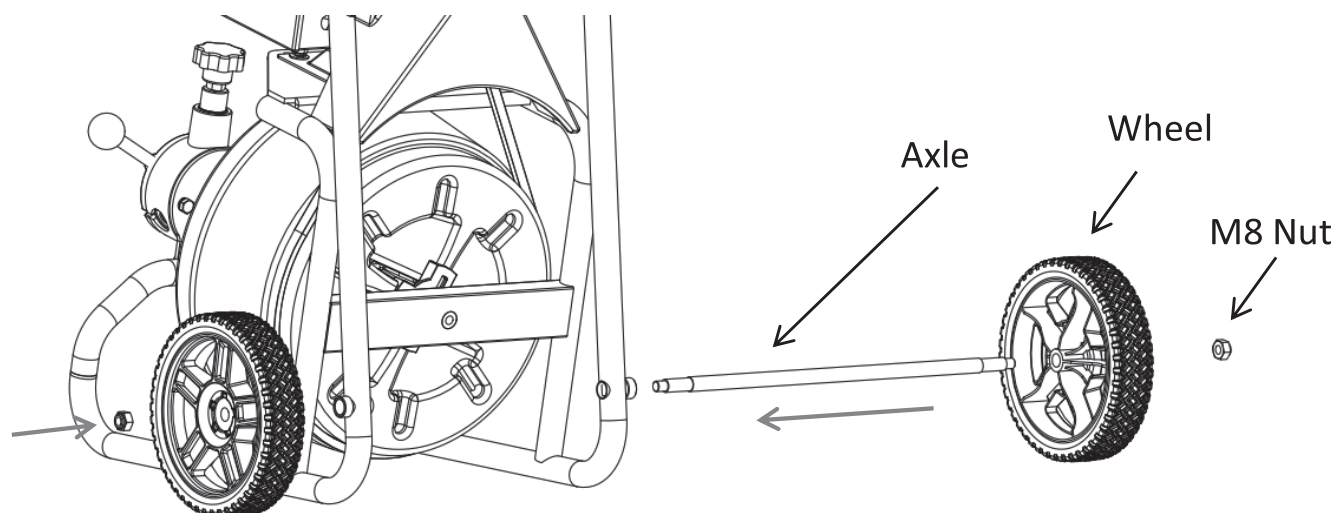
TO PREVENT SERIOUS INJURY FROM ACCIDENTAL OPERATION:

Turn the Rotation Switch of the tool to its “OFF” position and unplug the tool from its electrical outlet before assembling or making any adjustments to the tool.

Note: For additional information regarding the parts listed in the following pages, refer to the Assembly Diagram near the end of this manual.

Step 1: Put the Axle into holes.

Step 2: Put Wheels onto two ends of Axle, then fix by M8 Nut.



Operating Instructions



Read the **ENTIRE IMPORTANT SAFETY INFORMATION** section at the beginning of this manual including all text under subheadings therein before set up or use of this product.

Tool Set Up

⚠ WARNING

TO PREVENT SERIOUS INJURY FROM ACCIDENTAL OPERATION:

Turn the Rotation Switch of the tool to its “OFF” position and unplug the tool from its electrical outlet before assembling or making any adjustments to the tool.

TO PREVENT SERIOUS INJURY:

DO NOT OPERATE WITH ANY GUARD DISABLED, DAMAGED, OR REMOVED.



Wear ANSI-approved safety goggles, heavy-duty LEATHER workgloves, and other appropriate protective equipment when setting up your Drain Cleaner. For extra protection from chemicals and bacteria on the machine and in the work area, we recommend wearing latex, rubber or other liquid barrier gloves under the heavy-duty work gloves. Before use, inspect gloves to be sure they are free of defects or loose sections that could be caught in the Drain Cleaner. Rubber soled, non-slip shoes can help prevent slipping and electric shock, especially on wet surfaces.

TO PREVENT SERIOUS INJURY FROM ELECTRIC SHOCK, TWISTED/BROKEN CABLES, CHEMICAL BURNS, INFECTIONS AND OTHER CAUSES AND PREVENT DRAIN CLEANER DAMAGE:

Before each use, inspect Drain Cleaner and correct any problems.

1. Once the Drain Cleaner is assembled, check the device and cutters for any signs of wear and damage. If necessary, replace worn or damaged parts prior to using the drain cleaning machine. Dull or damaged cutting tools can lead to binding, cable breakage, and slow the drain cleaning.
2. Verify Drain Cleaner is unplugged and inspect the power cord, Ground Fault Circuit Interrupter (GFCI) and plug for damage. If the plug has been modified, is missing the grounding prong or if the cord is damaged, to avoid electrical shock, do not use the machine until the cord has been replaced by a qualified electrician.
3. Clean any oil, grease or dirt from all equipment handles and controls. This helps prevent the machine or control from slipping during use.
4. Verify Foot Switch is attached to Drain Cleaner.
5. Verify Drain Cleaner is properly assembled. Inspect the machine for broken, worn, missing, misaligned or binding parts or any other condition which may prevent safe and normal operation.
6. Make sure that switches and handles move smoothly between positions and lock in place, and that the bumpers at the bottom of the handle are present and firmly attached.

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7. Rotate the drum and make sure that it turns freely without binding.
8. Check that all warning labels are present, firmly attached and readable.
9. Make sure Belt Guard is securely fastened to the Drain Cleaner.
10. Check the cable for any wear and damage. If any section of the cable is worn or flattened, replace cable before use.
11. Verify cable does not have multiple or excessive kinks (greater than 15°). Kinks weaken the cable and can cause cable failure. Replace any cables that have multiple or excessively large kinks.

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12. Look for spaces between the cable coils. Kinking, stretching (pulling cable by hand) or running the cable in reverse can deform the cable. Cables with spaces between the coils should be replaced.
13. Check for signs of excessive corrosion. Corrosion weakens the cable, making it brittle. This can be caused by storing the cable wet or using the cable with corrosive chemicals (often found in chemical clog removers). Excessively corroded cable should be replaced.

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14. Before use, fully retract the cable with no more than 2" of cable outside of the machine. This will keep the cable from "whipping" when the machine is turned on.
15. Set the Rotation Switch to the OFF position.
16. With dry hands, plug cord into properly grounded outlet and move the Rotation Switch into the Forward position.
17. Move Feed Lever to exactly between F and R settings, otherwise cable will start moving in or out during this test.
18. Press the Foot Switch and note the direction of rotation of the drum. **If the Foot Switch does not control the Drain Cleaner's operation, do not use the machine until the Foot Switch has been repaired.**
19. The drum should rotate clockwise when seen from the front of the drum. It will match the drum direction shown on the warning label and the arrow on the drum. **If the rotation is not correct, do not use the machine until it has been repaired.**
20. After inspection, set the Rotation Switch to OFF, dry off your hands, and unplug the Drain Cleaner.
21. Once you've verified that the Drain Cleaner is in good working order, inspect the work area where you will be using the machine.

Work Area Set-Up

1. Verify that work area has adequate lighting for the job.
2. Make sure work area is free of flammable liquids, vapors or dust that may ignite. Sparks can be generated during Drain Cleaner operation. Do not work in area until these sources of ignition have been identified and corrected.
3. Choose a firm, stable location for the machine and operator that will remain relatively dry. Do not use the machine while standing in water. If needed, remove the water from the work area.
4. Verify the electrical outlet is properly grounded. A three-prong or GFCI outlet may not be properly grounded. If in doubt, have outlet inspected by a licensed electrician.
5. Make sure there is a clear, unobstructed path from the Drain Cleaner to the electrical outlet.
6. Inspect the drain to be cleaned. If possible, determine the best access point(s) to the drain, the size(s) and length(s) of the drain, distance to tanks or mainlines, the nature of the blockage, presence of drain cleaning chemicals or other chemicals, etc.
7. If there are chemicals present in the drain, read and adhere to the specific safety measures required to work around those chemicals. Contact the chemical manufacturer for required safety instructions and information.
8. If necessary, remove fixture (toilet, sink, etc.) to allow access to the drain. **Do not feed the cable through a fixture.** This could damage the Drain Cleaner and the fixture.
9. Determine the correct drain cleaning cable size for the drain cleaning job. See Cable/Pipe Size chart below.
10. If needed, place protective covers over the work area floor. Cleaning the clogged drain can be a messy operation.
11. Make sure that the Drain Cleaner handle is locked into the upright position for transport. If the Drain Cleaner needs to be lifted, use proper lifting techniques or seek assistance if needed. Use caution when moving equipment up and down stairs. Wear appropriate footwear to help prevent slipping on floor.
12. Set the Drain Cleaner so that the drum opening is within 2 feet of the drain access. **The greater the distance from the drain access, the higher the risk of the cable twisting or kinking.**
13. If the machine cannot be placed with the drum opening within 2' of the drain access, use appropriate-sized pipes and fittings to extend the drain access back to within 2' of the drum opening. Improper cable support can allow the cable to kink and twist and can damage the cable or injure the operator.
14. If needed, set up barriers to keep bystanders away from the Drain Cleaner and work area during operation.
15. Select proper cutting tool. (See Cutting Tool Accessories on page 9).
16. Install the tool to the end of the cable. Slide the base of the Cutter Tool into the slot at the end of the cable. Fasten together using a screwdriver.
17. Position the Foot Switch for easy accessibility. You must be able to hold and control the cable, control the Foot Switch, and reach the Rotation Switch.
18. Confirm that the Rotation Switch is in the OFF position.
19. Run the cord along the clear path. With dry hands, plug the Drain Cleaner into a properly grounded outlet. Keep all connections dry and off the ground.
20. If the power cord is not long enough, use an extension cord that is in good condition and has a three prong plug similar to the one supplied on the Drain Cleaner. Keep the connection off the ground to prevent it from accidentally getting wet.
21. Also verify that the extension cord is rated for outdoor use and contains a W or W-A in the cord designation (i.e. SOW).
22. Verify the extension cord has sufficient wire size (16 AWG for 50' or less, 14 AWG for 50' – 100' long). Undersized wires can overheat, melting the insulation or causing a fire or other damage.
23. When using an extension cord, the GFCI on the Drain Cleaner does not protect the extension cord. If the outlet is not GFCI protected, use a plug-in type GFCI between the outlet and the extension cord. This will reduce the risk of shock if there is a fault in the extension cord.

Cable Size	Pipe Size	Typical Applications
1/2" (included)	2" to 4"	Roof stacks and small floor drains (no roots)
3/8"	1-1/2" to 3"	Roof stacks, laundry lines and small drains (no roots)

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Power Feed Operation

⚠ WARNING

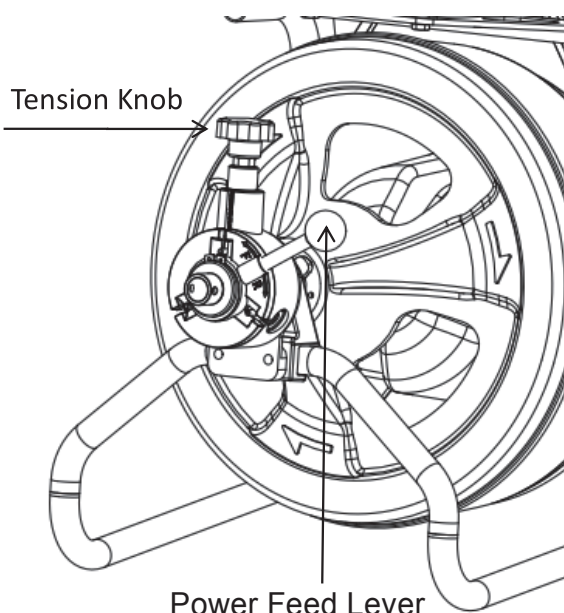
TO PREVENT SERIOUS INJURY FROM TWISTED OR BROKEN CABLES, CABLE ENDS WHIPPING AROUND, MACHINE TIPPING, CHEMICAL BURNS, INFECTIONS, ELECTRIC SHOCK AND OTHER CAUSES:

Follow operating instructions for your model explicitly.

Since drains likely contain hazardous chemicals or bacteria, wear appropriate protective equipment, such as:

- ANSI-approved splash-resistant safety goggles and respirator under face shield.
- Latex, rubber or other liquid barrier gloves under heavy-duty LEATHER work gloves.
Do not use a glove you are not currently wearing or a rag to hold the rotating cable. Cloth materials can get wrapped around the moving cable, leading to serious personal injury. Before use, inspect gloves to be sure they are free of defects or loose sections that could get caught in Drain Cleaner.
- Rubber soled, non-slip shoes to help prevent slipping and electric shock.

1. Position the Drain Cleaner two feet from the drain.
2. Release all tension from the Tension Knob, then grab the cable with both gloved hands and push the cable into the drain until at least one foot of cable is in the drain. Retighten Tension Knob.



3. After making sure the Rotation Switch is in the "Forward" position, Tension Knob has been retightened, and the Power Feed Lever is in the down (forward) position, press the Foot Switch to start feeding the cable further into the drain. Make sure you can operate the Foot Switch while having at least one hand on the cable at all times. Also make sure the Rotation Switch on top of the Drain Cleaner and Power Feed Lever are within reach.

WARNING! Only one person should operate the cable feed and the Foot Switch. Do not operate the Drain Cleaner with one person controlling the cable and another person controlling the Foot Switch. This can cause the cable to kink, twist, and break, which can also lead to serious personal injury.

4. If the cable becomes lodged (for example: in a narrow part of the drain, in a drain trap, etc.), put the Power Feed Lever in the "neutral" position and allow the cable to try and work itself past the obstruction. If cable still won't pass obstruction, release pressure from the Foot Switch and use sharp downward thrusts to try and pass obstruction. Once cable is past, put the Power Feed Lever in the down (forward) position, press the Foot Switch, and continue feeding.



NOTICE 0---Off 1---Forward 2---Reverse

Rotation Switch controls rotation of drum only. **DO NOT USE ROTATION SWITCH REVERSE POSITION WHILE REMOVING CABLE FROM PIPE.** Use reverse direction only momentarily for relieving pressure or untangling cable from a blockage.

Warranty void if cable damaged from allowing motor to twist excessively against blockage, or if drum is run in reverse long enough to unwind cable.

Working Through a Blockage

1. If cutting tool becomes lodged in a blockage and Drain Cleaner is still operating, cable will start to wind up or twist. If so, release pressure from Foot Switch and Drain Cleaner motor will stop.

WARNING! Do not let cable build up outside drain.

2. The cable and drum will turn backwards until the tension in the cable is released.

WARNING! Do not remove gloved hand from cable until all the tension is released.

3. Put Power Feed Lever in "reverse" position to pull cable back and free cutting tool from blockage.

4. If motor can't pull cable out, release pressure from Foot Switch and allow cable to stop spinning. Once cable has stopped spinning, grab cable with both gloved hands and pull cable free.

5. Once tool is free of blockage and is turning again, slowly feed rotating cutting tool back into blockage. Do not force tool through blockage. Allow cutting tip to break up and work through blockage.

CAUTION: While working through the blockage, tool and cable can get clogged with debris from blockage, preventing further cleaning. The cable and tool will then need to be retrieved from drain and debris removed.

Retrieving Drain Cleaner Cable

1. Once drain is clear, turn on faucet or use a hose to flush debris out.

NOTE: If water flow slows or stops, resume using the drain cleaner to locate and clear blockage further down the drain.

2. To retrieve cable, set Power Feed Lever in reverse (up) position but make sure Rotation Switch is still in **Forward** position.

WARNING! Do not retrieve cable with Rotation Switch set in Reverse position.

3. Keep one hand on cable. The cable can get caught while being retrieved.

4. Continue retrieving cable until you can pull cable by hand. Release foot from Foot Switch.

WARNING! Do not pull cable from drain while cable is still rotating. The cable can whip around, causing serious injury.

5. Place Rotation Switch in OFF position, dry your hands, unplug machine.
6. Release Tension Knob tension and pull remaining cable from drain by hand and feed into Drain Cleaner. If needed, change cutting tool and continue cleaning.



NOTICE 0---Off 1---Forward 2---Reverse

Rotation Switch controls rotation of drum only. **DO NOT USE ROTATION SWITCH REVERSE POSITION WHILE REMOVING CABLE FROM PIPE.** Use reverse direction only momentarily for relieving pressure or untangling cable from a blockage.

Warranty void if cable damaged from allowing motor to twist excessively against blockage, or if drum is run in reverse long enough to unwind cable.

Maintenance and Servicing



Procedures not specifically explained in this manual must be performed only by a qualified technician.

!WARNING

TO PREVENT SERIOUS INJURY FROM ACCIDENTAL OPERATION:

Turn the Rotation Switch of the tool to its “OFF” position and unplug the tool from its electrical outlet before performing any inspection, maintenance, or cleaning procedures.

TO PREVENT SERIOUS INJURY FROM TOOL FAILURE:

Do not use damaged equipment. If abnormal noise or vibration occurs, have the problem corrected before further use.

Cleaning Drain Cleaner Cables

1. Thoroughly flush Drain Cleaner cables with clean water after every use. Doing so will help prevent the build-up of sediment and any drain cleaning chemicals still in the cable.
2. Once cables have been flushed, carefully tip the Drain Cleaner forward to empty out any remaining debris.
3. Once the cable is clean and dry, pull the cable from the drum.
4. Lubricate with oily rag as you feed cable back into drum.

WARNING! Do not attempt to remove a rotating cable.

Cleaning/Lubricating Housing

1. The Drain Cleaner should be cleaned as needed with hot, soapy water and/or disinfectants.
2. Dry Drain Cleaner before storing or using again.
3. Hose out the power-feed assembly with clean water.
4. Once dry, thoroughly lubricate with a lightweight machine oil.
5. If Drain Cleaner drum is removed or changed, grease bearings with good general purpose grease.

Removing and Installing Belt

1. Loosen Belt Guard Knob and slide Belt Guard off from top of Drain Cleaner motor.
 2. Use screwdriver to slide belt off back of Drain Cleaner drum.
 3. Slide new belt into belt pulley above drum.
 4. Slide new belt onto rear of drum until securely in place.
 5. Slide Belt Guard pack into place above Drain Cleaner drum. Tighten Belt Guard Knob to lock Belt Guard back into place.
- WARNING! Do not operate the Drain Cleaner without the Belt Guard in place.**

Installing Replacement Cable

1. Remove old cable by pulling cable completely out. Separate cable from drum-connecting cable.
2. Connect new cable to drum-connecting cable and feed cable back into drum.

SAFETY

SETUP

OPERATION

MAINTENANCE

General Cleaning, Maintenance, and Lubrication

- BEFORE EACH USE**, inspect the general condition of the tool. Check for:
 - loose hardware,
 - misalignment or binding of moving parts,
 - cracked or broken parts,
 - damaged electrical wiring, and
 - any other condition that may affect its safe operation.
- AFTER USE**, wipe external surfaces of the tool with clean cloth.
- ⚠ WARNING! If the supply cord of this power tool is damaged, it must be replaced only by a qualified service technician.**

Troubleshooting

Problem	Probable Cause(s)	Solution(s)
Motor shuts off during use.	1. The motor may have been shut off by its internal thermal protection switch, or auto reset breaker. 2. GFCI breaker tripped.	1. Turn motor off. Allow motor to cool off completely before restarting and stay clear of cable when turning motor back on. 2. Make sure all electrical components are dry and all insulation is in good repair. Press reset button. If GFCI trips again, have machine serviced by qualified electrician before further use.
Cable kinks, twists, or breaks.	1. Too much force on the cable. 2. Too much slack between Drain Cleaner and drainpipe inlet. 3. Cable used is wrong size for drain pipe. 4. Cable exposed to acid. 5. Cable worn out.	1. Do not force cable. Let cutter do the work. 2. Move Drain Cleaner to within two feet of drainpipe inlet. 3. Change cable size. 4. Clean and oil cable regularly. 5. Replace cable.
Cable tangles in drum.	1. Too much force on the cable. 2. Motor running in reverse. 3. Distributor tube frozen.	1. Do not force cable. Let cutter tool do the work. 2. Retract Cable with the Motor Direction Switch in the Forward position. 3. Technician should lubricate distributor tube bearings.
Power Cord GFCI trips when unit is plugged in or when Foot Pedal is pressed.	1. Motor Direction Switch defective. 2. Frayed Power Cord. 3. Short circuit in Motor. 4. Excess moisture touching Power Cord or Drain Cleaner. 5. Faulty GFCI unit.	1. Repair or replace Motor Direction Switch. 2. Repair or replace the Power Cord. 3. Have Motor repaired by a qualified technician; Replace Motor. 4. Dry cord and unit. 5. Electrician must Replace Power Cord with GFCI.
Motor does not operate or the Foot Pedal sticks.	Pneumatic Foot Pedal may have a leak.	Check for leaks in air line leading from Foot Pedal. Check for tears and holes in Foot Pedal. Replace if needed.
The "Forward/Reverse" Switch does not work.	The centrifugal switch requires the motor to come to a complete stop before it will allow the direction of the motor to be changed.	Move the "Forward/Reverse" Switch to the "Off" position and allow the motor to stop before changing from "Forward" to "Reverse" or vice versa.