

8. **Only use accessories that are recommended by the manufacturer for your model.** Accessories that may be suitable for one tool may become hazardous when used on another tool.

Service

1. **Tool service must be performed only by qualified repair personnel.** Service or maintenance performed by unqualified repair personnel could result in injury.
2. **When servicing a tool, use only identical replacement parts. Follow instructions in the Maintenance section of this manual.** Use of unauthorized parts or failure to follow Maintenance Instructions may create a risk of electric shock or injury.

SPECIFIC SAFETY RULES

1. **Only wear leather gloves.** Never use any other type of glove, such as cloth, rubber, or coated gloves. Never grasp a rotating cable with a rag. These items could become wrapped around the cable and cause serious injury.
2. **Never operate machine with belt guard removed.** Fingers can get caught between belt and pulley.
3. **Do not overstress cables.** Keep leather-gloved hand on the cable for control when machine is running. Overstressing cables because of an obstruction may cause twisting, kinking, or breaking of the cable and may result in serious injury.
4. **Place the machine at a distance not greater than two feet from the opening.** Greater distances can result in cable twisting or kinking.
5. **Machine is designed for ONE-PERSON operation.** Operator must control foot switch and cable.
6. **Do not operate machine in reverse (REV).** Operating machine in reverse can result in cable damage and is used only to back cutting tool out of an obstruction.
7. **Keep hands away from rotating drum.** Do not reach into drum unless machine is unplugged. Hand may be caught in the moving parts resulting in serious injury.
8. **Be careful when cleaning drains where cleaning chemicals have been used.** Avoid direct contact with skin and eyes. Drain cleaning chemicals can cause serious burns as well as damage the cable.
9. **Do not operate machine if operator or machine is standing in water.** Will increase risk of electrical shock.
10. **Wear safety glasses and rubber soled, non-slip shoes.** Use of this safety equipment may prevent serious injury.
11. **Before starting each job, check that the cable in the drum is not broken or kinked, by pulling the cable out and checking for wear or breakage.** Always replace worn out (kinked or broken) cables with genuine GENERAL replacement cables.

12. **Only use this tool in the application for which it was designed. Follow the instructions on the proper use of the machine.** Other uses or modifying the drain cleaner for other applications may increase risk of injury.

Ground Fault Circuit Interrupter (GFCI)

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

1. Plug into 120-volt receptacle.
2. Push test button. Indicator light will go out and power to machine should cut off.
3. If 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 reset button. With the reset button depressed, if the machine doesn't start, stops while running, or if the operator experiences a mild shock, **do not use the machine!** Tag the machine out of service and take it to a motor repair center or return it to the factory for repairs.

! THE SECTION OF CORD BETWEEN THE WALL PLUG AND THE GFCI IS NOT IN THE PROTECTED CIRCUIT.

FEATURES



Cable Application Chart (Table 1)

Cable Size	Pipe Size	Typical Applications
1/2"	3" to 4"	Roof Stacks and Small Floor Drains (No roots)
3/8"	2" to 3"	Roof Stacks, Laundry Lines and Small Drains
*5/16"	1-1/2" to 2"	Sinks, Basins and Small Drains
*1/4"	1-1/4" to 2"	Small Lines, Tubs and Shower Drains

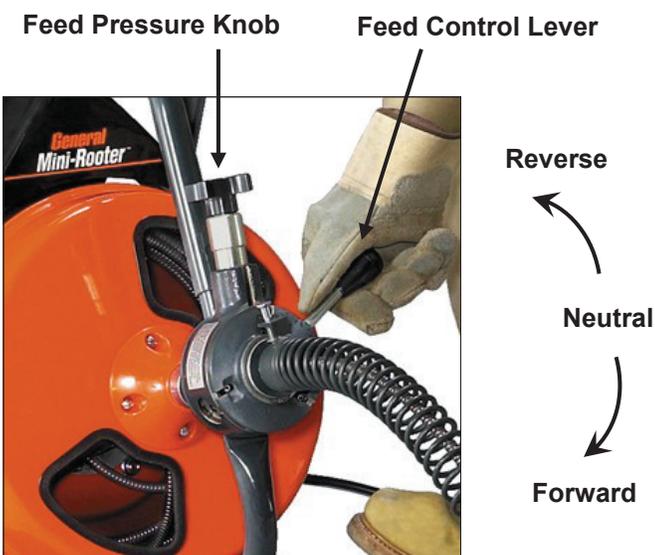
*The 1/4" and 5/16" diameter cables are for use with the J-Drum and Dual Drum.

Cutter Application Chart (Table 2)

Cutter	Cat. #	Typical Applications
Cutters for 3/8" and 1/2" Cables		
Arrow Head	AH	Starting tool, ideal for cutting and scraping.
Boring Gimlet	BG	Starting tool, to remove loose objects.
1-1/2" U-Cutter	1-1/2UC	Finishing tool, works well in grease stoppages.
2" Side Cutter Blade	2SCB	Finishing tool, for scraping inside edges of pipe.

Note: There are no fixed rules for what cutter to use. If one tool doesn't take care of a stoppage, simply try another.

POWER CABLE FEED (Optional)



OPERATING INSTRUCTIONS

Set-Up



MAKE SURE THE MOTOR SWITCH IS IN THE 'OFF' POSITION!

- Place machine within approximately two feet of drain opening. If you can't place the machine this close to the drain opening, run the cable through a metal guide tube to prevent cable whipping.
- Position the foot pedal for easy accessibility. The machine is designed for one-person operation. Be sure you can quickly remove your foot from the pedal in an emergency.
- Be sure the motor switch is in the **off** position.
- Select the proper cutting tool (See Cutter Application Chart—Table 2). A good tool to start with is the Arrow Head or Boring Gimlet. After the line is opened, follow with larger blades, which scrape the inside edges of the pipe, assuring a real cleaning job.
- Insert the cutter into the female connector at the end of the 3/8" or 1/2" cable and tighten the connecting screw and lock washer *firmly* in place.



Operation

- Begin by pulling the cable from the drum/cage and sliding it into the drain as far as it will go.
- Move the motor switch to the **forward** position.
- With both hands (wearing *leather* gloves) on the cable, depress the air foot pedal to start machine.
- Feed the cable into the line and against the obstruction with a firm, even pressure. Adjust the feeding rate to the resistance met. Do not force the cable – let the cutter do the work. The job won't get done any faster and you could damage the cable.

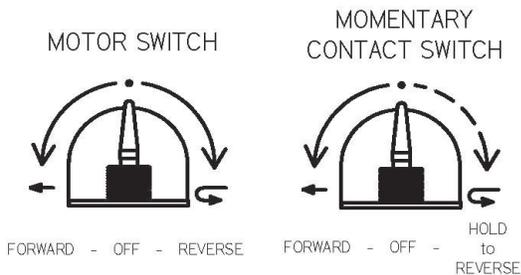
DO NOT USE TOO MUCH FORCE – LET THE CUTTER DO THE WORK.

- Don't leave too much slack in the cable since this will cause whipping. If the cable starts to bend or build up too much twist, release pressure on the foot pedal and rotate the drum in the opposite direction to relieve the twist on the cable. Push any excess cable back into the drum and then continue.



DO NOT ALLOW TOO MUCH SLACK IN THE CABLE BETWEEN MACHINE AND DRAIN OPENING SINCE THIS CAN CAUSE CABLE WHIPPING.

- If you're having trouble getting around tight bends, try putting the machine in reverse while applying steady pressure. (If using Power Cable Feed, putting motor in reverse will cause the feed control lever to operate opposite of normal.) Note: If your machine is equipped with a momentary contact reverse switch, you must hold the switch in position when operating the machine in reverse.



Don't run motor in reverse for more than a few seconds at a time as this could cause tangling in the drum or kinking.

- If you still can't get around the bend, you're probably using too large a cable. Switch to a 3/8" diameter cable, or even a smaller one if necessary. (See Cable Application Chart—Table 1)
- When the cable reaches the stoppage, allow the cable to progress forward slowly, chewing into the stoppage as it goes. This slow forward movement will reduce stress on the cable while doing a more thorough cleaning job. A back and forth action often works best.

Hint: It's often helpful to have a small stream of water running in the line to wash the cuttings away while the machine is in operation and after.

- Be careful not to let the cutter get caught in the stoppage as you work through it. This can cause kinking and breaking of the cable. When you feel the cable starting to twist in your hands, stop the machine and pull back on the cable. This will free the cutter from the obstruction. Then allow the cable to move forward slowly into the stoppage. Remember, no cutting takes place when the blades stop turning.
- After the line has been opened, retract the cable. Make sure the motor switch is in the **forward** position. This is important to prevent the cable from tangling in the drum or in the line.



DO NOT USE REVERSE TO PULL THE CABLE OUT OF THE DRAIN. RUNNING MACHINE IN REVERSE CAN CAUSE THE CABLE TO TANGLE IN THE DRUM.

- When the cutter is near the drain opening, take your foot off the pedal to stop drum rotation. Never retract the cutter from drain while cable is rotating. The cable could whip and cause serious injury.

POWER CABLE FEED

(Optional. Cat. # PO-MR)

The variable speed Power Cable Feed is designed for use with 3/8" and 1/2" cables. If the feed was purchased separately, see "How to Install Power Cable Feed."

- Be sure you have read and understand the instructions for manual feed before using the Power Cable Feed. Misuse of the feed can result in severe damage to the cable.
- Put the feed control handle in the neutral position. Then, loosen the feed pressure knob and pull three feet of cable from the drum/cage.
- Slide the guide tube (Cat. # MR-GT) over the cable and snap the tube into place on the feed spout. (Be sure to remove the cutter and connecting screw from the female connector first. Reattach desired cutter to cable after guide tube is attached to feed.)
- Place the machine at a distance not more than two feet from the drain opening. The guide tube should extend into drain. Guide tube extensions (Cat. # GTE) are also available.
- Tighten the feed pressure knob until the top roller contacts the cable. Then, tighten the knob another two turns.



Note: In operation, use the least pressure possible to get the job done in order to minimize wear on the feed and cable.

- Put the motor switch in the **forward** position (the drum rotates counter-clockwise when viewed from the front).
- The feed lever controls the feeding rate and direction of the cable. Move the lever down to feed the cable out of the drum. The further the lever is moved downward, the faster the cable will feed out. Move the lever up to retract the cable into the drum. When the lever is in the middle (neutral) position, the cable will spin in place.
- Place the end of the cable into the drain opening. Depress the air foot pedal and feed the cable slowly forward. Adjust the feeding rate to the resistance met. Don't feed faster than the cable is going into the drain.