

Easy Rooter JuniorTM ***Operating Instructions***

**For 2" through 4" lines
(50mm—100mm)**



Your Easy Rooter Junior is designed to give you years of trouble-free, profitable service. However, no machine is better than its operator.

Read, understand and follow all safety warnings and instructions provided with the product. Failure to follow the warnings and instructions may result in electric shock and/or serious injury. Save all warnings and instructions for future reference.

SAVE THESE INSTRUCTIONS!

General
PIPE CLEANERS



WARNING
Read and understand operator's manual before using this machine. Failure to follow operating instructions could result in death or serious injury.

WARNING! Read and understand all instructions. Failure to follow all instructions listed below may result in electric shock, fire and/or serious personal injury. Replacement manuals are available upon request at no charge, or may be downloaded from our website, www.drainbrain.com. Instructional videos are available for download on our website, and may be ordered. If you have any questions or problems, please call General's customer service department at 412-771-6300.

SAVE THESE INSTRUCTIONS!

These instructions are intended to familiarize all personnel with the safe operation and maintenance procedures for the Easy Rooter Junior.

SAFETY SYMBOLS



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 hazard with a high level of risk which, if not avoided, will result in death or serious injury.



WARNING indicates a hazard with a medium level of risk which, if not avoided, could result in death or serious injury.



CAUTION indicates a hazard with a low level of risk which, if not avoided, will result in minor or moderate injury.



Electric shock resulting in death can occur if you plug this machine into an improperly wired outlet. If the ground wire is electrified, you can be electrocuted by just touching the machine, even when the power switch is off. A ground fault circuit interrupter will not protect you in this situation. Use a UL approved tester to determine if the outlet is safe.



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.



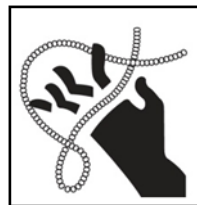
Only wear leather gloves. Never use any other type of glove, such as cloth, rubber, or coated gloves. Never grasp a rotating cable with a rag. These items could become wrapped around the cable and cause serious injury.



Always wear safety glasses and rubber soled, non-slip shoes. Use of this safety equipment may prevent serious injury.



Never operate machine with belt guard removed. Fingers can get caught between belt and pulley.



Do not overstress cables. Overstressing cables may cause twisting, kinking, or breaking of the cable and may result in serious injury.



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.

GENERAL POWER TOOL SAFETY WARNINGS*



WARNING

Read all safety warnings, instructions, illustrations and specifications provided with this power tool. Failure to follow all instructions listed below may result in electric shock, fire, and/or serious injury.

SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE.

*The text used in the general power tool safety warnings section of this manual is as required from the applicable UL/CSA standard. This section contains general safety practices for many different types of power tools. Not every precaution applies to every tool. And some do not apply to this 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 earthed (grounded) power tools. Unmodified plugs and matching outlets will reduce risk of electric shock.
2. **Avoid body contact with earthed or grounded surfaces, such as pipes, radiators, ranges and refrigerators.** There is an increased risk of electric shock if your body is earthed or 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.
6. **If operating a power tool in a damp location is unavoidable, use a ground fault circuit interrupter (GFCI) protected supply.** Use of a GFCI 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.** Protective equipment such as a 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 and/or BATTERY pack, 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 and clothing away from moving parts.** Loose clothes, jewelry or long hair can be caught in moving parts.
7. **If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used.** Use of dust collection can reduce dust-related hazards.
8. **Do not let familiarity gained from frequent use of tools allow you to become complacent and ignore tool safety principles.** A careless action can cause severe injury within a fraction of a second.

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 and/or remove the BATTERY pack, if detachable, from the power tool 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 and accessories. 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.
8. **Keep handles and grasping surfaces dry, clean and free from oil and grease.** Slippery handles and grasping surfaces do not allow for safe handling and control of the tool in unexpected situations.

Service

1. **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.

SPECIFIC SAFETY INFORMATION



WARNING

This section contains important safety information that is specific to this tool.

Read these precautions carefully before using this drain cleaning machine to reduce the risk of electrical shock or other serious injury.

SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE.

Keep this manual with machine for use by operator.

Drain Cleaning Machine Safety

1. **Before using the tool, test the ground fault circuit interrupter (GFCI) provided with the supply cord to insure it is operating correctly.** A properly operating GFCI reduces the risk of electrical shock.
2. **Only use extension cords that are protected by a GFCI.** The GFCI on the machine power cord will not prevent electrical shock from the extension cords.
3. **Only grasp the rotating cable with gloves recommended by the manufacturer.** Latex or loose fitting gloves or rags can become wrapped around the cable and may result in serious personal injury.
4. **Do not allow the cutter to stop turning while the cable is turning.** This can overstress the cable and may cause twisting, kinking or breaking of the cable and may result in serious personal injury.
5. **One person must control both the cable and the switch.** If the cutter stops rotating, the operator must be able to turn the tool off to prevent the cable from twisting, kinking and breaking.
6. **Use latex or rubber gloves inside the gloves recommended by the manufacturer, goggles, face shields, protective clothing, and respirator when chemicals, bacteria or other toxic or infectious substances are suspected to be in a drain line.** Drains may contain chemicals, bacteria and other substances that may cause burns, be toxic or infectious or may result in other serious personal injury.
7. **Practice good hygiene. Do not eat or smoke while handling or operating the tool. After handling or operating drain cleaning equipment, use hot, soapy water to wash hands and other body parts exposed to drain contents.** This will help reduce the risk of health hazards due to exposure to toxic or infectious material.
8. **Only use the drain cleaner for the recommended drain sizes.** Using the wrong size drain cleaner can lead to twisting, kinking or breaking of the cable and may result in personal injury.

Specific Safety Information for Easy Rooter Junior

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 injury.
2. **Do not overstress cables.** Keep a leather-gloved hand on the cable for control when machine is running. Overstressing the cables because of an obstruction may cause twisting, kinking, or breaking of the cable and may result in injury.
3. **Never operate the machine with the belt guard removed.** Fingers can get caught between belt and pulley.
4. **Place the machine at a distance not greater than two feet (.6m) from the drain opening.** Greater distances can result in cable twisting or kinking.
5. **Do not operate the machine in reverse (REV).** Operating machine in reverse can result in cable damage and is used only to back cutting tool out of obstruction.
6. **Keep hands away from rotating drum.** Do not reach into drum unless machine is unplugged. Hand may be cause in moving parts resulting in serious injury.
7. **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.
8. **Do not operate machine while standing in water.** Will increase risk of electric shock.
9. **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.
10. **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 (kinked or broken) cables with genuine GENERAL replacement cables.
11. **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.

Ground Fault Circuit Interrupter (GFCI)

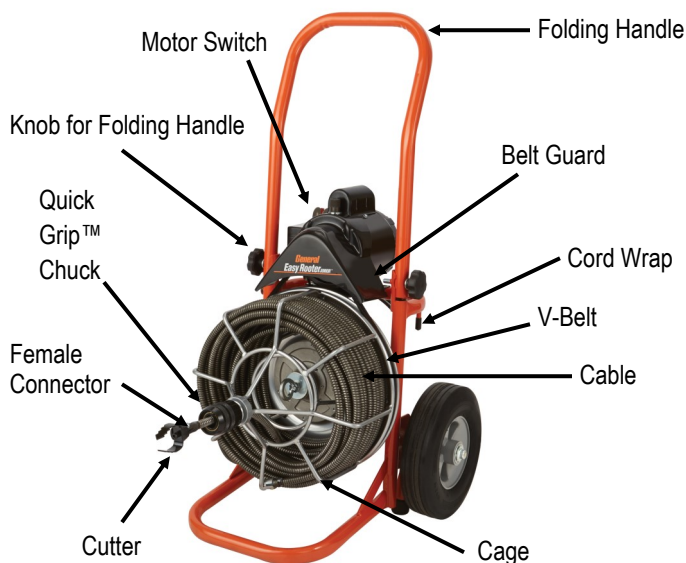
Your machine is equipped with a ground fault circuit interrupter, which protects you against shock if a short circuit should occur. Check that receptacle is properly grounded. Test the GFCI before each use.

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, **DO NOT USE THE MACHINE** 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



NOTE: Do not operate machine if warning labels on the switch box and power cord are missing or illegible.

Operating Instructions

Set-Up



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





1. Be sure the motor switch is in the **off** position.
2. Place machine at a distance not greater than two feet (.6m) from the drain opening. If you cannot get the machine this close to the opening, run the cable through a hose or pipe to prevent cable whipping. Always keep a leather-gloved hand on the cable.
3. 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.
4. Select the proper cutting tool (See Cutter Application Chart—Table 2). A good tool to start with is the Arrow Head or 1-1/2" U-Cutter. After the line is opened, follow with larger blades, which scrape the inside edges of the pipe, assuring a real cleaning job.
5. Insert the cutter into the female connector at the end of the 1/2" cable and tighten the connecting screw and lock washer *firmly* in place.



Cable Application Chart (Table 1)

Cable Size	Pipe Size	Typical Applications
1/2"	2" to 4"	Laundry Tubs, Roof Vents, Stacks (No Roots)

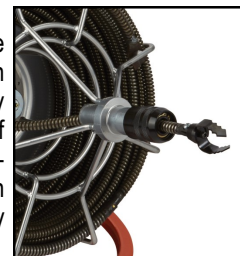
Cutter Application Chart (Table 2)

Cutter	Cat. #	Typical Applications
Arrow Head 	AH	Starting tool, ideal for cutting and scraping.
1-1/2" U-Cutter 	1-1/2UC	Starting tool, to remove loose objects.
2" U-Cutter 	2UC	Finishing tool, for scraping inside edges of pipe.
Small Retrieving Tool 	RTR-1	To remove loose objects.

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

Operation

1. Loosen the chuck at the front of the cage and pull the cable out of the cage, then put it into the drain until it will not go any farther. Pull another foot of cable out of the cage so that an arc is formed between the machine and drain. Tighten the chuck on the front of the cage firmly against the cable.
2. Put the motor switch in the **Forward** position. Then, with both leather-gloved hands on the cable, step on the foot pedal. Guide the cable into the line with a firm, even pressure.



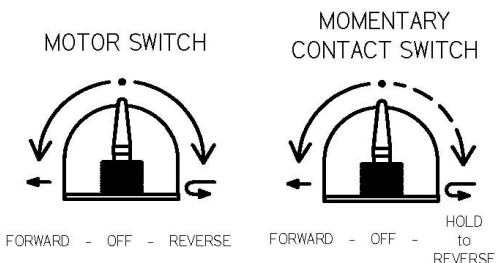
DO NOT USE TOO MUCH FORCE – LET THE CUTTER DO THE WORK.

3. Do not 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 cage in the opposite direction to relieve the twist on the cable. Push any excess cable back into the cage and then continue.



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

4. When the slack cable has been fed into the drain, stop the machine by taking your foot off the pedal. Loosen the chuck and pull another foot of cable from the cage. Tighten the chuck and continue feeding. Repeat the procedure until the drain line has been cleared.
5. If you are having trouble getting around bends, try putting the machine in reverse while applying steady pressure. 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.



Do not run motor in reverse for more than a few seconds at a time since this could cause tangling in the cage or kinking.

6. If you still cannot get around the bend, you are probably using too large of a cable. You may need to switch to a smaller machine (See Cable Application Chart).
7. After the line is opened, return the cable to the cage with the motor turning **Forward**. This is important to prevent tangling the cable in the cage or in the line.



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

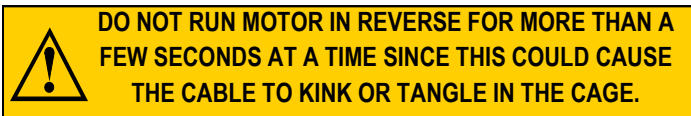
Hint: It's often helpful to have a small stream of water running in the line to wash the cuttings away while the machine is in operation and after.

Special Operations

IF CABLE GETS CAUGHT IN LINE

The motor can be reversed to free cable if it gets caught in the line. Use the following procedure:

1. Tighten chuck at front of cage firmly against cable.
2. Move toggle switch on motor to reverse position.
3. Wearing leather gloves, pull on cable while the cage is turning in reverse.



4. When the cable has been freed, loosen chuck and slide excess cable back into cage.
5. Move the toggle switch to the forward position again, and continue at Step 3 of the Operating Instructions.

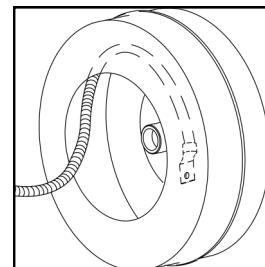
IF CABLE TANGLES IN CAGE

This is almost always caused by using too much pressure when feeding the cable or by feeding the cable while running the machine in reverse. To untangle, rotate cage in opposite direction. If cable has become badly tangled, which will not happen when machine is used properly, it may be necessary to pull the entire cable out of the cage and re-install it (See "How to Install Cable").

HOW TO INSTALL CABLE IN CAGE



1. Connect male end of cable to the cage connecting cable already attached to cage.
2. Remove V-Belt.
3. Turn cage with one hand while pushing cable into cage with other hand.
4. Be sure cable goes into cage as shown in the illustration, or cable will tangle in cage.
5. Replace V-Belt after cable is installed.



NOTE: The cable must lay in the cage in the correct direction or it will tangle in the cage.



HOW TO EXCHANGE CAGES

1. Unscrew ring bolt in center of cage.
2. Lift belt guard off motor.
3. Push motor down far enough to slip V-Belt off.
4. Tilt Easy Rooter Junior on its back and lift cage off of shaft.
5. Reverse procedure to install cage.

MAINTENANCE



**DISCONNECT MACHINE FROM POWER SOURCE
BEFORE PERFORMING MAINTENANCE!**

To keep your machine operating smoothly, it is essential that all bearings and distributor tube bushings be lubricated. Oiling moving parts is particularly important where machine comes in contact with sand, grit and other abrasive material.

CABLE MAINTENANCE

To get maximum service from your cables, be sure that they are clean and well oiled. This not only provides running lubrication but greatly extends the life of the cables as well. Some users periodically pour oil directly into the cage. Then, as the cage turns, the cables get complete lubrication. Our SNAKE OIL is ideally suited for this purpose, since it not only lubricates the cables, it deodorizes them as well.

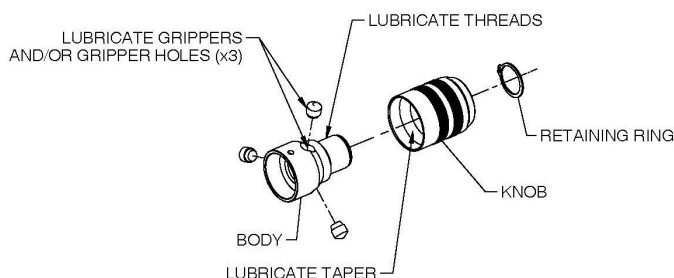


TANGLED CABLE: If a cable loops over itself in the cage, it will not feed properly. Remove and reload the cable to restore function. If the cable kinks, it is evidence of abuse and results from the use of too much pressure or use of the wrong size cable for the line. Do not force the cable — let the cutter do the work.

QUICK GRIP™ CHUCK MAINTENANCE

Keep chuck free of excessive soil and grit. It is recommended that the chuck be lubricated regularly. The chuck can be lubricated without removing the retaining ring by loosening the chuck knob to expose as much of the grippers as possible. If the chuck no longer properly grips the cable, the grippers may have to be replaced. To most effectively lubricate the chuck or to replace the grippers, follow the steps below.

1. Remove the retaining ring at the end of the chuck.
2. Remove chuck knob and remove grippers.
3. Clean parts thoroughly.
4. Lubricate areas illustrated below. (Marine grease is recommended.)
5. If necessary, replace all three grippers.
6. Install chuck knob.
7. Install retaining ring.



TROUBLE SHOOTING GUIDE (TABLE 3)

Problem	Probable Cause	Solution
Cable kinking, tangling or breaking.	Cable is being forced.	Do not force the cable! Let the cutter do the work.
	Cable used in incorrect pipe diameter.	Use 1/2" cables in 2" to 4" lines (Do not use 1/2" cables on roots).
	Motor switched to reverse.	Use reverse only if cable gets caught in pipe – only for a few seconds at a time.
	Cable exposed to acid.	Clean and oil cables regularly.
	Cable worn out.	Cable can be repaired using "Quick Fix" or "Repair Sleeve." If cable has broken several times, replace it.
Cable tangles in cage.	Operator forcing cable.	Do not force the cable. Let the cutter do the work.
	Machine running in reverse.	Do not run the machine in reverse to retract the cable from the drain.
Cage stops while foot pedal depressed.	Hole in pedal or hose.	Replace damaged component.
	Hole in diaphragm switch.	If no problem found with pedal or hose, replace diaphragm switch.
	Thermal overload activated.	Allow motor to cool. Press reset switch.
Cage turns in one direction but not other.	Faulty reverse switch or momentary contact switch.	Replace switch. Note: Momentary contact switch must be held in position when using reverse.
Ground Fault Circuit Interrupter trips when machine is plugged in or when foot pedal is depressed.	Frayed power cord.	Replace cord set.
	Short circuit in motor.	Take motor to authorized service center (Call General for Details).
	Excess moisture in area.	Remove excess moisture from area.
	Faulty Ground Fault Circuit Interrupter.	Replace Ground Fault Circuit Interrupter.
Motor turns but cage does not.	Slip clutch slipping because cable is being forced.	Do not force cable. Do not allow too much slack between cable and machine.
	Slip clutch is worn.	Replace slip clutch.

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