

Owner's Manual & Safety Instructions

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.

23i

BauerTM

1/2" X 50 FT. DRAIN CLEANING DRUM MACHINE



22202E-B



**22201E-B
WITH POWER FEED**

Visit our website at: <http://www.harborfreight.com>
Email our technical support at: productsupport@harborfreight.com

When unpacking, make sure that the product is intact and undamaged. If any parts are missing or broken, please call 1-888-866-5797 as soon as possible.

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Tools required for assembly and service may not be included.

⚠ 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 INSTRUCTIONS

WARNING - When using electric appliances, basic precautions should always be followed, including the following:

1. Read all the instructions before using the appliance.
2. To reduce the risk of injury, close supervision is necessary when an appliance is used near children.
3. Do not contact moving parts.
4. Only use attachments recommended or sold by the manufacturer.
5. Do not use outdoors.
6. To disconnect, turn all controls to the off ("O") position, then remove plug from outlet.
7. Do not unplug by pulling on cord. To unplug, grasp the plug, not the cord.
8. Unplug from outlet when not in use and before servicing or cleaning.
9. Do not operate any appliance with a damaged cord or plug, or after the appliance malfunctions or is dropped or damaged in any manner. Return appliance to the nearest authorized service facility for examination, repair, or electrical or mechanical adjustment.
10. To reduce the risk of electrical shock, do not put Drain Cleaner in water or other liquid. Do not place or store appliance where it can fall or be pulled into a tub or sink.
11. Connect to a properly grounded outlet only. See Grounding Instructions.
12. Risk of Electric Shock. Keep extension cord connection dry and off the ground.
13. Do not wear cloth gloves or loose clothing, or use a rag to grasp the cable to prevent entanglement.

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.*
2. Maintain labels and nameplates on the tool. These carry important safety information. If unreadable or missing, contact Harbor Freight Tools for a replacement.

Drain Cleaner Safety Warnings

1. **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.
2. Avoid unintentional starting. Prepare to begin work before turning on the tool.
3. **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.
4. **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
5. **Unplug the Drain Cleaner from its electrical outlet before performing any inspection, maintenance, or cleaning procedures.**
6. **Do not leave the Drain Cleaner unattended while running.** Turn power off if you have to leave the Drain Cleaner.
7. **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.
8. **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
9. **Before each use, check all nuts, bolts, and screws for tightness.** Vibration during operation may cause these to loosen.
10. **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.
11. **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.
12. **Do not operate the Drain Cleaner with the belt guard removed.** Fingers can get caught between the drive belt and pulley.
13. **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.
14. **Position Drain Cleaner within two feet of drain opening.** Greater distances can result in the cable twisting or kinking.
15. **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.
16. **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.
17. **Keep hands away from the rotating Drum and Distributor Tube.** Do not reach into Drum unless the Drain Clean power cord is unplugged.
18. **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.
19. **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.

20. **Do not operate this machine if operator or machine is standing in water.** Operating machine while in water increases the risk of electrical shock.
21. **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.
22. **Be aware of possible damage to drain lines that may result from the discovery of roots and other obstacles.**
23. **WARNING! TO PREVENT SERIOUS INJURY: 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.
24. 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.

Ground Fault Circuit Interrupter Protection

This Drain Cleaner is provided with a ground-fault circuit-interrupter (GFCI) built into the plug of the power-supply cord. This device provides additional protection from the risk of electric shock. Should replacement of the plug or cord become necessary, use only identical replacement parts that include GFCI protection.



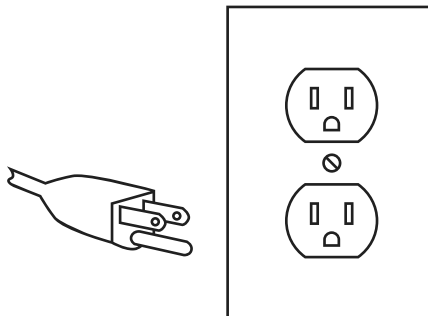
SAVE THESE INSTRUCTIONS.

GROUNDING INSTRUCTIONS

This appliance must be grounded. In the event of malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This appliance is equipped with a cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into an appropriate outlet that is properly installed and grounded in accordance with all local codes and ordinances.

DANGER - Improper connection of the equipment-grounding conductor can result in a risk of electric shock. The conductor with insulation having an outer surface that is green with or without yellow stripes is the equipment-grounding conductor. If repair or replacement of the cord or plug is necessary, do not connect the equipment-grounding conductor to a live terminal. Check with a qualified electrician or serviceman if the grounding instructions are not completely understood, or if in doubt as to whether the appliance is properly grounded. Do not modify the plug provided with the appliance – if it will not fit the outlet, have a proper outlet installed by a qualified electrician.

This appliance is for use on a nominal 120 V circuit, and has a grounding plug that looks like the plug illustrated in **3-Prong Plug and Outlet**.



3-Prong Plug and Outlet

Extension Cords

SAFETY

1. **Grounded** tools require a three wire extension cord. If an extension cord (or a longer detachable power-supply cord) is used:
 - a. The marked electrical rating of the detachable power-supply cord or extension cord should be at least as great as the electrical rating of the appliance,
 - b. If the appliance is of the grounded type, the extension cord should be a grounding-type 3-wire cord, and
 - c. The longer extension cord (or a longer detachable power-supply cord) should be arranged so that it will not drape over the countertop or tabletop where it can be tripped over, snagged, or pulled on unintentionally (especially by children).
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 6.)**
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. 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.
7. Protect the extension cords from sharp objects, excessive heat, and damp or wet areas.
8. Store appliance indoors when not in use. Keep out of reach of children.

SETUP


OPERATION




MAINTENANCE

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

V	Volts
~	Alternating Current
A	Amperes
n ₀ xxxx/min.	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.

SAFETY

Specifications

Electrical Rating	120V~, 60Hz, 4.6A
Motor Speed RPM	n ₀ : 1750/min
Power Cord	6ft with GFCI plug
Cable Type	Ø1/2" x 50ft
Drain Pipe Capacity	2" to 4" I.D.

Drum Dimensions	13" x 6.3"
Drum Capacity	up to 75' of 1/2" Cable (Not Included) up to 100' of 3/8" Cable (Not Included)
59533 includes Power Feed	

SETUP

For Household and Commercial Use.

OPERATION

MAINTENANCE

Setup - Before Use:

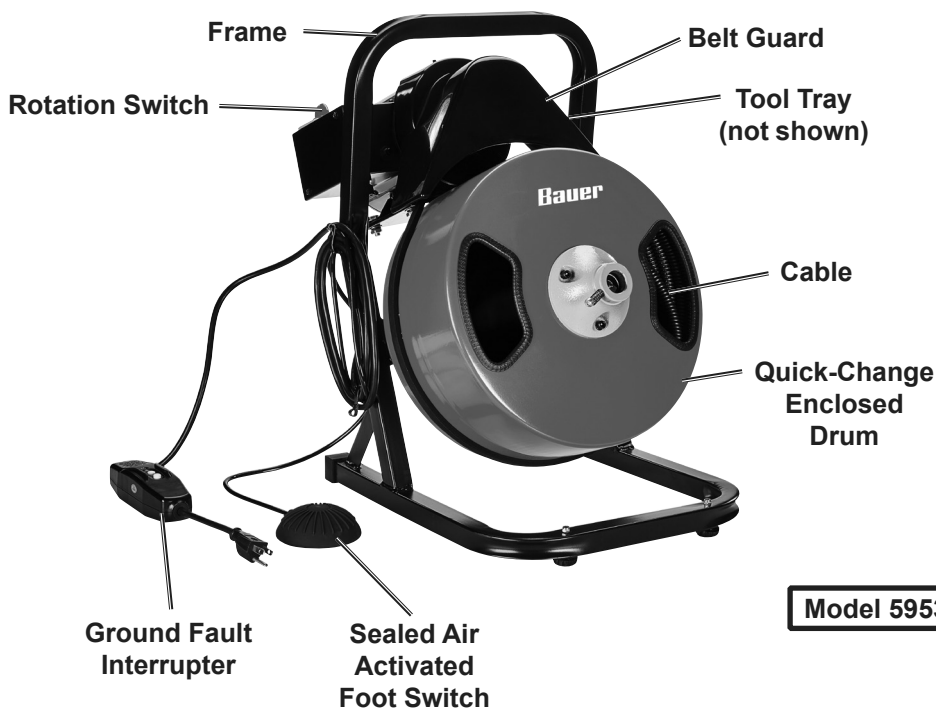
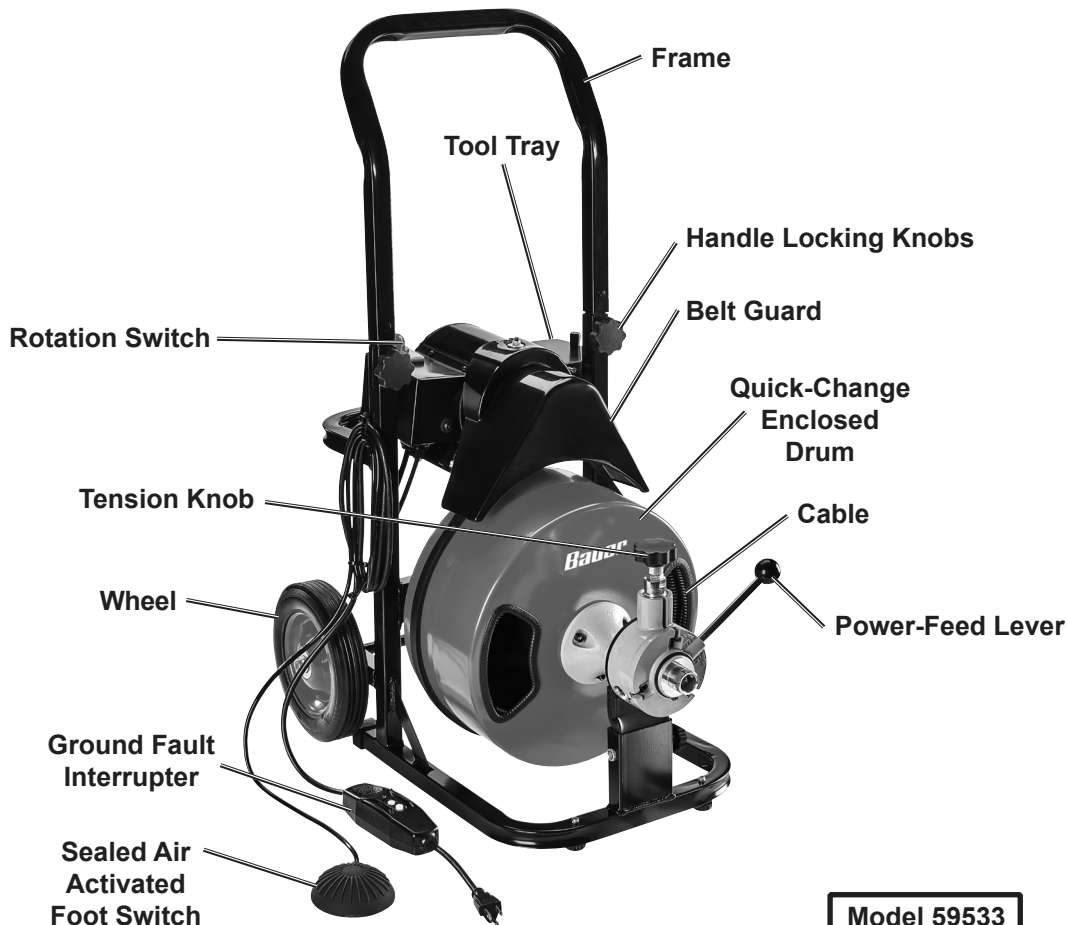


Read the **ENTIRE** IMPORTANT SAFETY INFORMATION section at the beginning of this manual including all text under subheadings therein before set up or use of this product.

SAFETY

Functions

SETUP



OPERATION

MAINTENANCE

Cutting Tool Accessories

Four Cutting Tools are included with each Drain Cleaner. Select appropriate tool for the cleaning job and attach to Cable. See table below.



Arrow Cutter



Boring Bulb Cutter



C-Cutter



Spade Cutter



Removal Tool

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.
Removal Tool	Tool changing; used for removing cutting tools once installed.

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

Once drain is flowing, more appropriate tools can be used on remaining blockage.

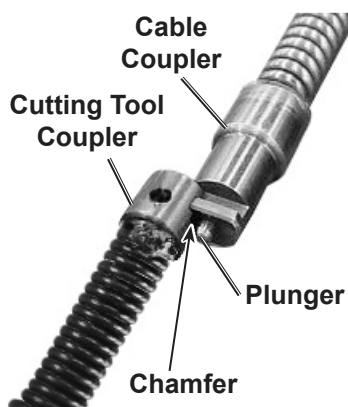
Keep in mind that the largest tool used should be no bigger than drain's inside diameter, minus an inch.

Properly used, Drain Cleaners and Accessories will not damage a drain in good condition and properly designed, constructed, and maintained. If Drain is in poor condition or not properly designed, drain cleaning work may damage drain. If possible, visually inspect drain's quality before operation.

To Install Cutting Tool:

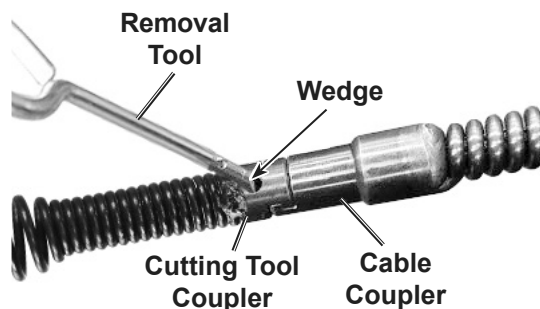
1. Align Cutting Tool Coupler and Cable Coupler grooves, with Cutting Tool Coupler Chamfer facing Plunger.
2. Slide Couplers together until Plunger locks into place.

Note: Check Plunger frequently for proper movement and lubricate as necessary.



To Remove Cutting Tool:

1. Insert Removal Tool into Cutting Tool Coupler hole with Wedge facing towards Cable Coupler Plunger.
2. Slide Couplers apart.



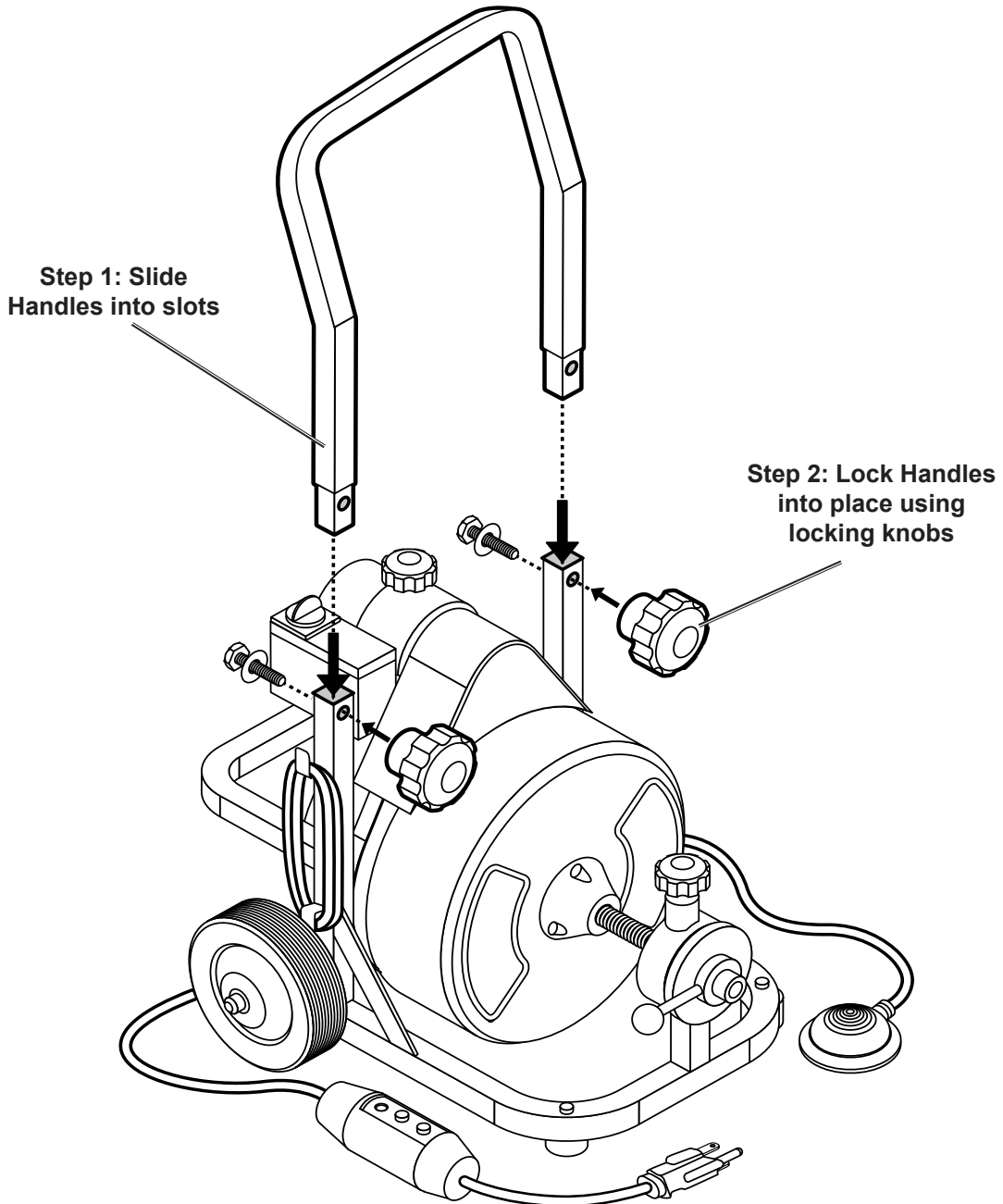
Assembly for 59533

Note: No assembly needed for Model 59534.

⚠️ 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 Diagrams near the end of this manual.



Operating Instructions



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

!WARNING

TO PREVENT SERIOUS INJURY FROM ACCIDENTAL OPERATION:

Make sure that the Rotation Switch is in the off-position and unplug the tool from its electrical outlet before performing any procedure in this section.

Tool Set Up - Inspection

!WARNING

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:

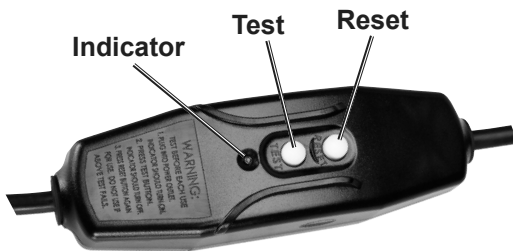
Before each use, inspect Drain Cleaner and correct any problems.

1. Once Drain Cleaner is assembled, check machine and cutters for signs of wear and damage. If necessary, replace worn or damaged parts prior to use. Dull or damaged cutting tools can lead to binding, cable breakage, and slow drain cleaning.
2. Verify Drain Cleaner is unplugged and inspect power cord, Ground Fault Circuit Interrupter (GFCI) and plug for damage. If plug has been modified, is missing grounding prong or cord is damaged, to avoid electrical shock, do not use machine until cord has been replaced by a qualified electrician.
3. Clean oil, grease or dirt from equipment handles and controls to 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 machine for broken, worn, missing, misaligned or binding parts or other condition which prevents safe and normal operation.
6. Make sure switches and handles move smoothly between positions and lock in place, and bumpers at bottom of handle are present and firmly attached.
7. Rotate drum and confirm it turns freely without binding.
8. Check warning labels are present, firmly attached and readable.
9. Confirm Belt Guard is securely fastened to Drain Cleaner.
10. Check cable for wear and damage. If any section of 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 cause cable failure. Replace cables that have multiple or excessively large kinks.
12. Look for spaces between cable coils. Kinking, stretching (pulling cable by hand) or running cable in reverse can deform cable. Cables with spaces between coils should be replaced.
13. Check for excessive corrosion. Corrosion weakens the cable, making it brittle. This is caused by storing cable wet or using cable with corrosive chemicals (found in chemical clog removers). Excessively corroded cable should be replaced.
14. Before use, fully retract cable with a maximum of 2" of cable outside of machine. This will keep cable from "whipping" when machine is turned on.
15. Set Rotation Switch to OFF position.

16. With dry hands, plug cord into grounded outlet and move Rotation Switch into Forward position.

WARNING! TO PREVENT ELECTRIC SHOCK AND DEATH: Test Ground Fault circuit interrupter (GFCI) before each use. The GFCI does not protect against electrical shock due to contact with both circuit conductors or a fault in any wiring supplying in this device. Do not alter or disable the GFCI.

17. Plug GFCI Power Plug into grounded, 120VAC electrical outlet.
 - a. Press RESET button. Indicator should light up.
 - b. Press TEST button. Indicator light will go out and power to machine should cut off.
 - c. **WARNING! TO PREVENT SERIOUS INJURY:** If Indicator does not go out when TEST button is pushed, machine should not be used until repairs can be made.
 - d. To restore power after test, push RESET button. **CAUTION!** If machine doesn't start, stops while running, or you experience a mild shock, do not use machine. Have it repaired or replaced by a licensed electrician.



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

18. Move Feed Lever to exactly in-between F and R settings or cable will start moving in or out during test.
19. Press Foot Switch and note direction of rotation of drum. **If Foot Switch does not control Drain Cleaner's operation, do not use machine until Foot Switch has been repaired.**
20. Drum should rotate clockwise when seen from front of drum. It will match drum direction shown on warning label and arrow on drum. **If rotation is not correct, do not use machine until repaired.**
21. After inspection, set Rotation Switch to OFF, dry off your hands, and unplug Drain Cleaner.
22. Once verified that Drain Cleaner is in good working order, inspect work area where machine will be used.

Work Area Set-Up

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

Manual Feed Operation (For Item 59534)

SAFETY

SETUP

OPERATION

MAINTENANCE

⚠ 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 tangle in the rotating 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 drain.
2. Position Drain Cleaner so you can operate Foot Switch while having one hand on cable at all times. This will keep cable from hazardously “whipping” when activating Drain Cleaner. Confirm Rotation Switch on top of Drain Cleaner is within reach.
6. As you feed cable, you may feel and see cable slow down and/or start to wind or load up (a “twisting” or “squirming” motion). This indicates a change in drain line (such as a drain trap, elbow, etc.), a build up in drain (mud or grease), or actual blockage. Continue to slowly feed cable until cable reaches blockage.

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

3. Make sure Rotation Switch is in Forward position.
4. With Drain Cleaner off, pull cable out of drum and feed into drain. Gradually work cable as far into drain as it will go.
5. Step on Foot Switch and continue feeding cable into drain.

CAUTION! Do not allow cable to build up outside drain. This can cause cable to twist, kink or break. When working with larger sewers or septic tanks, minimize the amount of cable fed to prevent kinking and knotting of cable.

7. If cable becomes lodged in a narrow part of drain or in a drain trap, allow cable to try and work itself past the obstruction. If cable still won't pass obstruction, release pressure from Foot Switch and use sharp downward thrusts to try and pass obstruction. Once cable is past, press Foot Switch and continue feeding.



NOTICE

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 blockage and Drain Cleaner is still operating, cable will start to wind up or twist. If so, immediately turn off, let tension release, and pull back on cable to free cutting tool from drain blockage. If cable cannot be freed by pulling back, briefly turn motor on in REV setting to free tool.
2. Once tool is free of blockage and is turning again, slowly feed rotating cutting tool back into blockage. Do not force tool through blockage.
3. Allow spinning and cutting to break up and work its way through blockage.

WARNING! TO PREVENT SERIOUS INJURY: Do not keep cable rotating if tool is lodged in a blockage. If tool stops turning and drum keeps rotating, cable can twist, kink, break, or tangle in the drain.

NOTICE: While working through blockage, tool and cable can get clogged with debris and cuttings from blockage, preventing further cleaning. Cable and tool will need to be retrieved from drain and debris removed. See *Retrieving Drain Cleaner Cable* on page 15.

If Cutting Tool Lodges in Drain:

1. If cutting tool stops turning and cable cannot be pulled from blockage, release Foot Switch while holding cable with both hands.
2. The Drain Cleaner motor will stop and cable and drum will turn backwards until tension in cable is released.

CAUTION! Do not remove hands from cable or cable may kink, twist and break.

WARNING! TO PREVENT SERIOUS INJURY: Do not remove hands from cable until all the tension is released.

3. Place Rotation Switch in OFF position.

Freeing Lodged Cutting Tool

1. Release Foot Switch and turn Rotation Switch to OFF position.
2. Pull back on cable to free it from blockage. If tool will not come free, place Rotation Switch in Reverse position.
3. Hold cable with gloved hands, press Foot Switch for several seconds, then release, and pull on cable until free of blockage.
4. Place Rotation Switch in Forward position and continue cleaning drain.

WARNING! TO PREVENT SERIOUS INJURY: Do not operate Drain Cleaner in Reverse for any longer than is needed to free cutting tool from blockage (for no more than several seconds at a time).

Retrieving Drain Cleaner Cable

1. Once drain is clear, turn on faucet or use hose to flush debris out.
2. Pull cable from drain by hand and feed into Drain Cleaner until cable is a couple of feet from drain opening. A flow of water down the line will help clean cable as it is retrieved. (If necessary, change cutting tool and continue cleaning.)
3. Set Rotation Switch to OFF position, dry your hands, and unplug machine before removing end of cable from drain and returning it to the drum.

NOTE: Pay attention to water level. There could be blockages farther down in drain.

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



NOTICE

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.

Power Feed Operation (For Item 59533)

SAFETY

SETUP

OPERATION

MAINTENANCE

⚠ WARNING

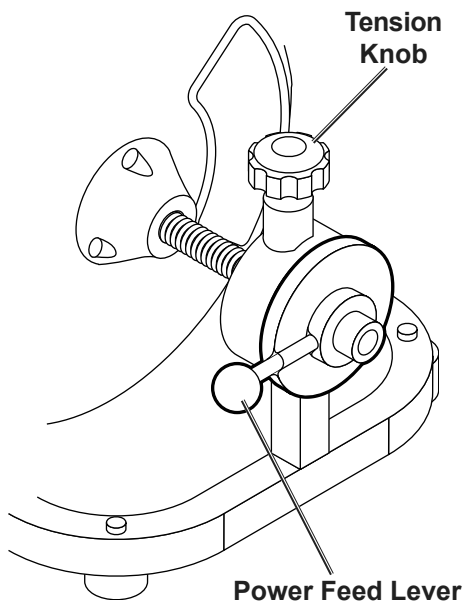
TO PREVENT SERIOUS INJURY FROM TWISTED OR BROKEN CABLES, CABLE ENDS WHIPPING AROUND, MACHINE TIPPING, CHEMICAL BURNS, INFECTIONS, ELECTRIC SHOCK AND OTHER CAUSES:

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 Drain Cleaner two feet from drain.
2. Release all tension from Tension Knob, then grab cable with both gloved hands and push cable into drain until at least one foot of cable is in drain. Retighten Tension Knob.
3. Confirm Rotation Switch is in Forward position, Tension Knob has been retightened, and Power Feed Lever is in Forward (down) position. Press Foot Switch to start feeding cable further into drain. Make sure you can operate Foot Switch while having at least one hand on cable at all times. Also make sure Rotation Switch on top of 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 Drain Cleaner with one person controlling the cable and another person controlling the Foot Switch. This can cause cable to kink, twist, and break, which can also lead to serious personal injury.

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



NOTICE

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 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.

CAUTION! Do not let cable build up outside drain.

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

WARNING! TO PREVENT SERIOUS INJURY: Do not remove gloved hand from cable until all tension is released.

3. Put Power Feed Lever in Reverse (up) 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.

NOTICE: While working through blockage, tool and cable can get clogged with debris from blockage, preventing further cleaning. Cable and tool will then need to be retrieved from drain and debris removed. See *Retrieving Drain Cleaner Cable* on page 17.

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 drain cleaner to locate and clear blockage further down drain.

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

WARNING! TO PREVENT SERIOUS INJURY: 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

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 build-up of sediment and any drain cleaning chemicals still on cable.
2. Once cables have been flushed, carefully tip Drain Cleaner forward to empty out remaining debris.
3. Once cable is clean and dry, pull cable from drum.
4. Lubricate with oily rag as you feed cable back into drum.

WARNING! TO PREVENT SERIOUS INJURY:
Do not attempt to remove a rotating cable.

Cleaning/Lubricating Housing

1. Drain Cleaner should be cleaned as needed with hot, soapy water and/or disinfectants.
2. Dry Drain Cleaner before storing or using again.
3. For Model 59533 (Power Feed Drain Cleaner), hose out power-feed assembly with clean water.
4. Once dry, thoroughly lubricate with 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 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! TO PREVENT SERIOUS INJURY: Do not operate Drain Cleaner without 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.

General Cleaning, Maintenance, and Lubrication

1. **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.
2. **AFTER USE**, wipe external surfaces of the tool with clean cloth.
3. **⚠️WARNING! TO PREVENT SERIOUS INJURY: 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.	<ol style="list-style-type: none"> 1. Motor may have been shut off by its internal thermal protection switch, or auto reset breaker. 2. GFCI breaker tripped. 	<ol style="list-style-type: none"> 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.	<ol style="list-style-type: none"> 1. Too much force on 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. 	<ol style="list-style-type: none"> 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.	<ol style="list-style-type: none"> 1. Too much force on cable. 2. Motor running in reverse. 3. Distributor tube frozen. 	<ol style="list-style-type: none"> 1. Do not force cable. Let cutter tool do the work. 2. Retract Cable with Motor Direction Switch in Forward position. 3. Technician should lubricate distributor tube bearings.
Power Cord GFCI trips when unit is plugged in or when Foot Pedal is pressed.	<ol style="list-style-type: none"> 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. 	<ol style="list-style-type: none"> 1. Repair or replace Motor Direction Switch. 2. Repair or replace 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 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.
"Forward/Reverse" Switch does not work.	Centrifugal switch requires motor to come to a complete stop before it will allow direction of motor to be changed.	Move "Forward/Reverse" Switch to "Off" position and allow motor to stop before changing from "Forward" to "Reverse" or vice versa.

Parts List 59533

SAFETY

SETUP

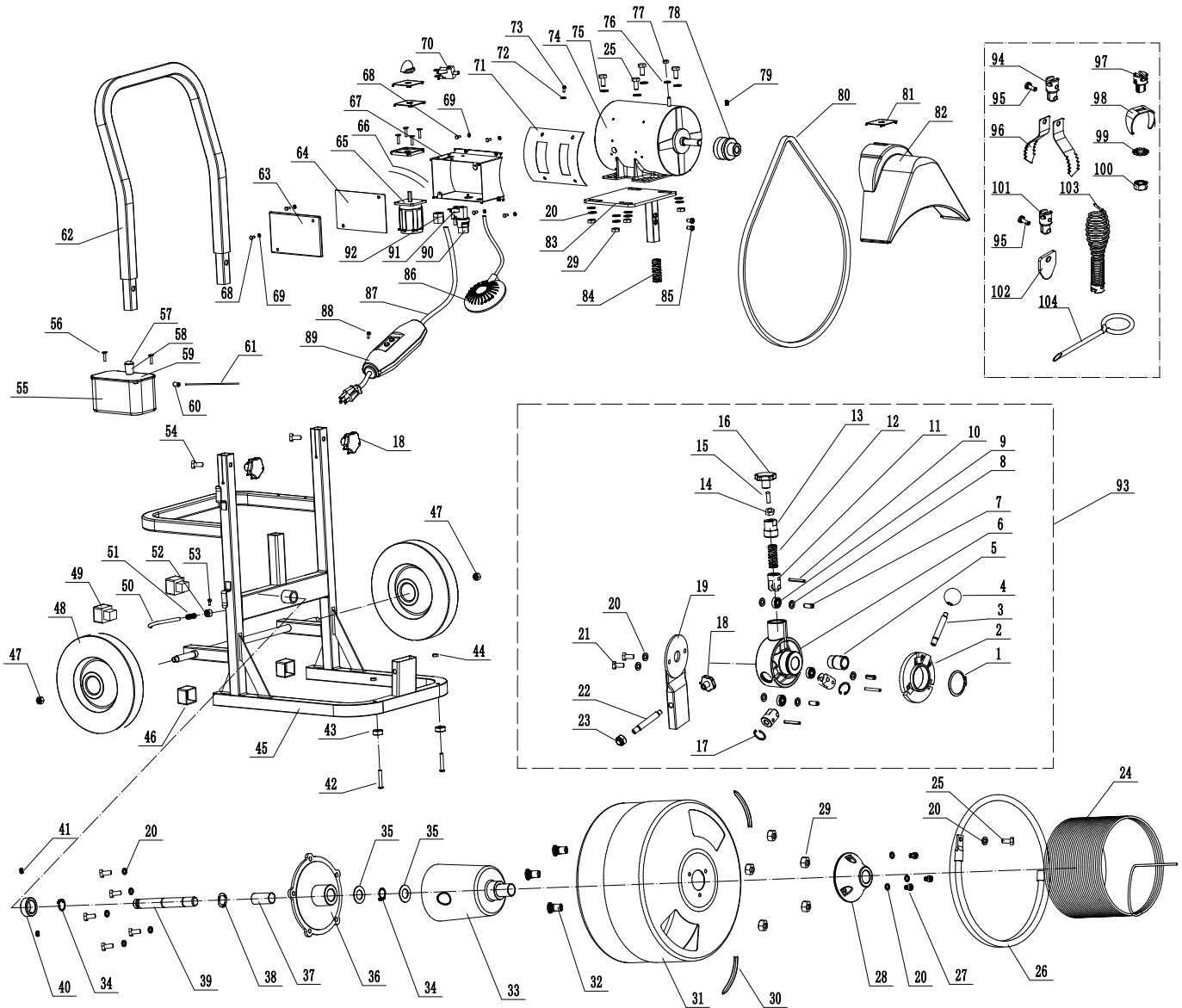
OPERATION

MAINTENANCE

Part	Description	Qty
1	Circlip Ø48	1
2	Cover	1
3	Power Feed Lever M8	1
4	Plastic Ball M8	1
5	Terminal A	1
6	Front Seat	1
7	Spring Pin Ø8×20	3
8	Washer	20
9	Bearing	3
10	Spring Pin Ø5×40	3
11	Terminal B	3
12	Spring	1
13	Terminal C	1
14	Nuts M10	1
15	Bolt M10×30	1
16	Lock Nut	1
17	Circlip Ø25	2
18	M8 Plastic Nut	3
19	Front Post	1
20	Spring Washer Ø8	12
21	Screw M8×16	3
22	Screw	1
23	M8 Hex Lock Nut	1
24	Cable	1
25	Bolt M8×20	10
26	Drum Connecting Cable	1
27	Bolt M6×20	5
28	Front Hub Bushing	1
29	Bolt M8×20	9
30	U-Type Rubber Seal	2
31	Drum	1
32	Cable/Nut/Washer	3
33	Distributor Tube/Inner Drum	1
34	Retaining Ring Ø25	2
35	Flat Washer Ø18×Ø34×2	2
36	Rear Hub	1
37	Rear Hub Sleeve	1
38	Washer Ø27	1
39	Drum Shaft	1
40	Spacer Ø32.6×Ø43.5×14	1
41	Screw M8×6	2
42	Screw M5×35	2
43	Rubber Foot	2
44	Nut M5	2
45	Frame	1
46	Rubber Leg Tip	2
47	Nut M10	2
48	8" Wheel	2
49	Rubber Foot	2
50	Drum Shaft Retaining Pin	1
51	Retaining Pin Spring Ø8.2×Ø1×26.5	1
52	Pin Sleeve	1

Part	Description	Qty
53	Retaining Pin Screw/Set Screw M4×10	7
54	Bolt M8×35	3
55	Tool Holder	1
56	Screw St4.8×20	2
57	Taper Nut M6	1
58	Screw M6×10	1
59	Tool Holder Cover	1
60	Nut M2.5	1
61	Spoke M2.5×140	1
62	Folding Handle	1
63	Electrical Box Cover	1
64	Insulating Mat	1
65	Rotation Switch	1
66	Wire 18awg 140mm	2
67	Electrical Box	1
68	Screw M4×6	6
69	Washer Ø4	6
70	Fuse	1
71	Insulating Mat	1
72	External Tooth Washer Ø4	1
73	Screw M4×8	1
74	Motor	1
75	Washer Ø8.5×Ø16×1	8
76	Washer Ø6×Ø20×2	1
77	Nut M6	1
78	V-Belt Pulley	1
79	Screw M6×18	1
80	V-Belt (A1118)	1
81	Foam Pad	1
82	Belt Guard	1
83	Motor Support	1
84	Motor Support Spring	1
85	Bolt M6×18	2
86	Foot Switch	1
87	Power Cord	1
88	Screw M4×8	1
89	GFCI	1
90	Current Protector	1
91	Switch	1
92	Waterproof Connector	1
93	Power Feed Assembly	1
94	Adapter Coupling	1
95	Screw	2
96	Side Cutter	2
97	Adapter Coupling	1
98	C-Cutter	1
99	Star Washer	1
100	Nut	1
101	Adapter Coupling	1
102	Arrowhead Cutter	1
103	Boring Bulb Cutter	1
104	Removal Tool	1

Assembly Diagram 59533



Record Product's Serial Number Here: _____

Note: If product has no serial number, record month and year of purchase instead.

Note: Some parts are listed and shown for illustration purposes only, and are not available individually as replacement parts. Parts may not be interchangeable. Specify item number when ordering. Reference UPC 193175473509 with Power Feed. Reference UPC 193175473516 without Power Feed.

PLEASE READ THE FOLLOWING CAREFULLY

THE MANUFACTURER AND/OR DISTRIBUTOR HAS PROVIDED THE PARTS LIST AND ASSEMBLY DIAGRAM IN THIS MANUAL AS A REFERENCE TOOL ONLY. NEITHER THE MANUFACTURER OR DISTRIBUTOR MAKES ANY REPRESENTATION OR WARRANTY OF ANY KIND TO THE BUYER THAT HE OR SHE IS QUALIFIED TO MAKE ANY REPAIRS TO THE PRODUCT, OR THAT HE OR SHE IS QUALIFIED TO REPLACE ANY PARTS OF THE PRODUCT. IN FACT, THE MANUFACTURER AND/OR DISTRIBUTOR EXPRESSLY STATES THAT ALL REPAIRS AND PARTS REPLACEMENTS SHOULD BE UNDERTAKEN BY CERTIFIED AND LICENSED TECHNICIANS, AND NOT BY THE BUYER. THE BUYER ASSUMES ALL RISK AND LIABILITY ARISING OUT OF HIS OR HER REPAIRS TO THE ORIGINAL PRODUCT OR REPLACEMENT PARTS THERETO, OR ARISING OUT OF HIS OR HER INSTALLATION OF REPLACEMENT PARTS THERETO.

Parts List 59534

SAFETY

SETUP

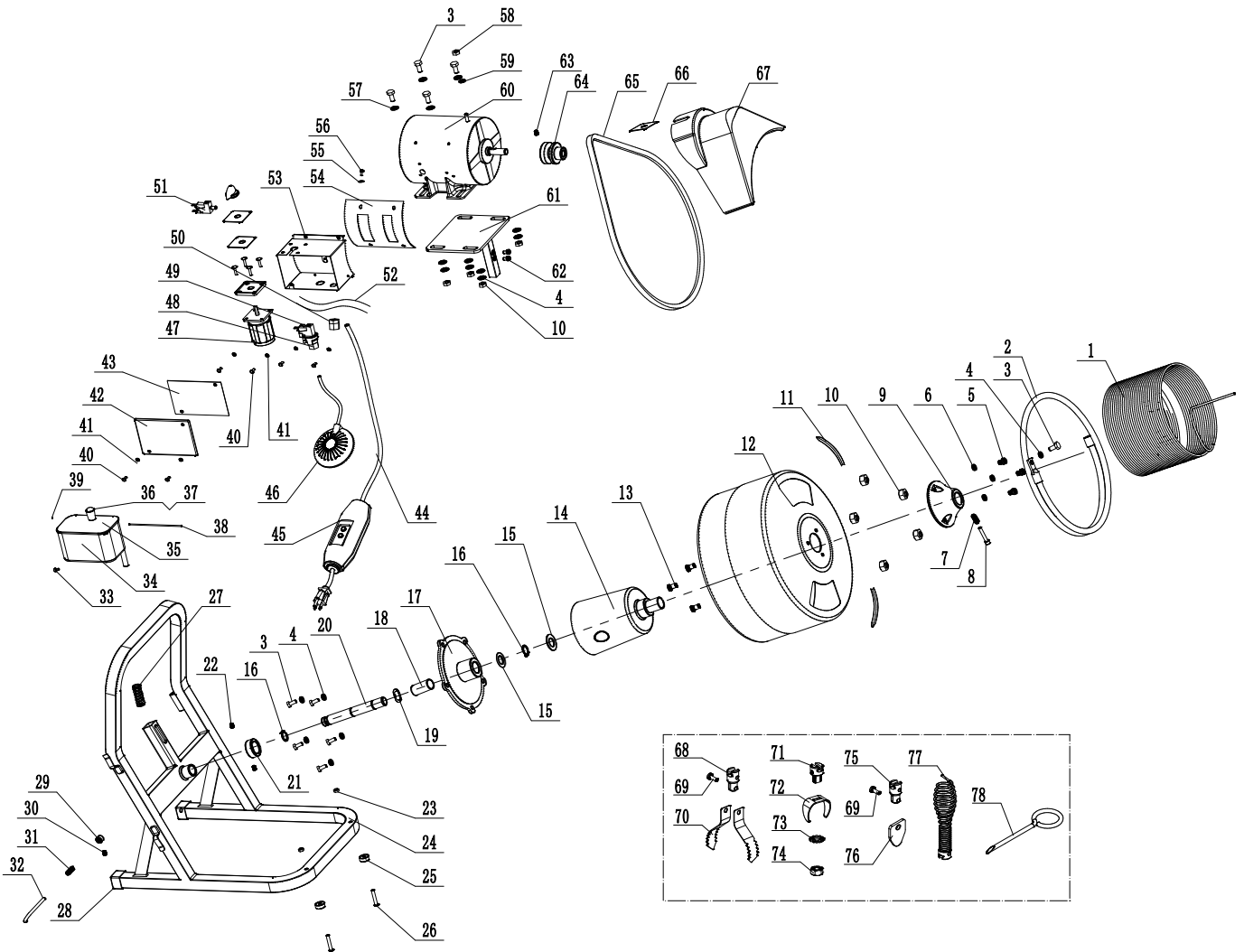
OPERATION

MAINTENANCE

Part	Description	Qty
1	Cable	1
2	Drum Cable	1
3	Bolt M8×20	10
4	Washer Ø8	10
5	Screw M6×20	3
6	Washer Ø6	3
7	Compression Spring Ø1×Ø7.5×20	1
8	Screw M6×30	1
9	Front Hub Bushing	1
10	Locknut M6	5
11	U-Type Rubber Seal	2
12	Drum	1
13	Cable/Nut/Washer M6	3
14	Distributor Tube/Inner Drum	1
15	Flat Washer Ø18×Ø34×2	2
16	Retaining Ring Ø25	2
17	Rear Hub	1
18	Rear Hub Sleeve	1
19	Washer Ø27	1
20	Drum Shaft Ø25.4×158.5	1
21	Spacer Ø31.5×Ø43.5×14	1
22	Screw M8×6	2
23	Locknut M5	2
24	Frame	1
25	Rubber Foot	2
26	Screw M5×35	2
27	Motor Frame Spring Ø2.8×Ø14.9×45	1
28	Rubber Leg Tip	2
29	Positioning Sleeve	1
30	Screw M4×10	1
31	Retaining Pin Spring	1
32	Drum Shaft Retaining Pin	1
33	Screw M5×16	1
34	Tool Holder	1
35	Tool Holder Cover	1
36	Taper Nut M6	1
37	Screw M6×10	1
38	Spoke M2.5×140	1
39	Nut M2.5	1

Part	Description	Qty
40	Screw M4×6	6
41	Washer Ø4	6
42	Electrical Box Cover	1
43	Insulating Mat	1
44	Power Cord	1
45	GFCI	1
46	Foot Switch	1
47	Rotation Switch	1
48	Current Protector	1
49	Switch	1
50	Waterproof Connector	1
51	Fuse 4A	1
52	Wire 18awg 140mm	2
53	Electrical Box	1
54	Insulating Mat	1
55	External Tooth Washer Ø4	1
56	Screw M4×8	1
57	Washer Ø8.5×Ø16×1	8
58	Locknut M6	4
59	Washer Ø6×Ø20×2	4
60	Motor	1
61	Motor Support	1
62	Screw M6×18	2
63	Socket Set Screw M6×18	1
64	V-Belt Pulley	1
65	V-Belt(A1118)	1
66	Foam Pad	1
67	Belt Guard	1
68	Adapter Coupling	1
69	Screw	2
70	Side Cutter	2
71	Adapter Coupling	1
72	C-Cutter	1
73	Star Washer	1
74	Nut	1
75	Adapter Coupling	1
76	Arrowhead Cutter	1
77	Boring Bulb Cutter	1
78	Removal Tool	1

Assembly Diagram 59534



SAFETY

SETUP

OPERATION

MAINTENANCE

Limited 90 Day Warranty

Harbor Freight Tools Co. makes every effort to assure that its products meet high quality and durability standards, and warrants to the original purchaser that this product is free from defects in materials and workmanship for the period of 90 days from the date of purchase. This warranty does not apply to damage due directly or indirectly, to misuse, abuse, negligence or accidents, repairs or alterations outside our facilities, criminal activity, improper installation, normal wear and tear, or to lack of maintenance. We shall in no event be liable for death, injuries to persons or property, or for incidental, contingent, special or consequential damages arising from the use of our product. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation of exclusion may not apply to you. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS.

To take advantage of this warranty, the product or part must be returned to us with transportation charges prepaid. Proof of purchase date and an explanation of the complaint must accompany the merchandise. If our inspection verifies the defect, we will either repair or replace the product at our election or we may elect to refund the purchase price if we cannot readily and quickly provide you with a replacement. We will return repaired products at our expense, but if we determine there is no defect, or that the defect resulted from causes not within the scope of our warranty, then you must bear the cost of returning the product.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

The logo for Bauer, featuring the word "Bauer" in a bold, italicized, sans-serif font. The letters are black with a white outline, and a small trademark symbol (TM) is located at the bottom right of the word.

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