

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.

20j



50 FOOT DRAIN CLEANER



68285



68284

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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No portion of this manual or any artwork contained herein may be reproduced in any shape or form without the express written consent of Harbor Freight Tools. Diagrams within this manual may not be drawn proportionally. Due to continuing improvements, actual product may differ slightly from the product described herein. 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.

INSTRUCTIONS PERTAINING TO RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS

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 motor or cord 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 on page 4.
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.

14. To prevent cable from whipping, place Drain Cleaner as close to drain line as possible (within 2 feet) or thread cable through guide (not included).
15. Wear ANSI-approved splash-resistant safety goggles under face shield, NIOSH-approved dust mask/respirator, and heavy-duty LEATHER gloves during use.
16. Do not use in pipe containing drain cleaning chemicals.
17. Do not use in pipe obstructed by roots.
18. Do not operate the Drain Cleaner with the belt guard removed. Fingers can get caught between the drive belt and pulley.
19. To prevent Cable from whipping, place Drain Cleaner within 2 feet of drain line or thread Cable through guide (not included). Greater distances can result in the Cable twisting or kinking.
20. Keep gloved hand on the Cable whenever the Drain Cleaner is running.
21. Keep hands away from the rotating Drum and Distributor Tube. Do not reach into Drum unless the Drain Clean power cord is unplugged.
22. Use appropriate personal protective equipment while handling and using Drain Cleaner. 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 LEATHER work gloves, and may include equipment such as latex or rubber gloves, face shields, goggles, protective clothing, respirators and steel toed footwear.
23. 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 Cleaner. Do not eat or smoke while operating or handling Drain Cleaner. This will help prevent contamination with toxic or infectious material.
24. Keep children and bystanders away while operating a Drain Cleaner. Distractions can cause you to lose control.
25. Stay alert, watch what you are doing and use common sense when operating the Drain Cleaner. Do not use Drain Cleaner while you are tired or under the influence of drugs, alcohol or medication. A moment of inattention while operating may result in serious personal injury.
26. Prevent unintentional starting. Turn switch to the off-position before plugging in.
27. Have your Drain Cleaner serviced by a qualified repair person using only identical replacement parts. This will ensure that the safety of the Drain Cleaner is maintained.
28. Maintain labels and nameplates on the Drain Cleaner
These carry important safety information. If unreadable or missing, contact Harbor Freight Tools for a replacement.
29. Avoid unintentional starting.
Prepare to begin work before turning on the Drain Cleaner.
30. Do not operate the Drain Cleaner if it is sitting in standing water, or if the operator is in standing water.
31. Locate on a flat, level, and solid surface that is capable of supporting the weight of the Drain Cleaner.
32. Do not put too much stress on Cable. Quickly release tension if it starts to build in the cable. Excess tension will cause the Cable to twist, kink, or break.
33. One person must control both the Cable and the Foot Switch. If the Cutting Tool stops rotating, the operator must turn the Drain Cleaner motor off quickly.
34. 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 will unravel and break the Cable. Wait for the Drum to stop turning completely before changing the Rotation Switch.
35. Only use Drain Cleaner to clean drains of recommended sizes according to these instructions. Other uses or modifying the Drain Cleaner for other applications may increase the risk of injury.
36. People with pacemakers should consult their physician(s) before use. Electromagnetic fields in close proximity to heart pacemaker could cause pacemaker interference or pacemaker failure.
37. 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.

SAVE THESE INSTRUCTIONS

GROUNDING INSTRUCTIONS

SAFETY

1. 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.

SETUP

2. **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 electric 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.

3. This appliance is for use on a nominal 120 V circuit, and has a grounding plug that looks like the plug illustrated in Figure A.

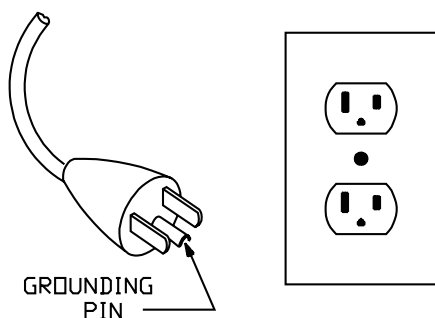


Figure A: 3-prong Plug

OPERATION

4. A temporary adaptor, which looks like the adaptor illustrated in Figures B and C, may be used to connect this plug to a 2-pole receptacle as shown in Figure B if a properly grounded outlet is not available.

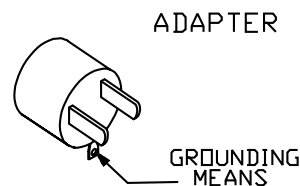


Figure B: Grounding Adapter

5. The temporary adaptor should be used only until a properly grounded outlet can be installed by a qualified electrician. The green colored rigid ear, lug, and the like, extending from the adaptor must be connected to a permanent ground such as a properly grounded outlet box cover. Whenever the adaptor is used, it must be held in place by the metal screw.

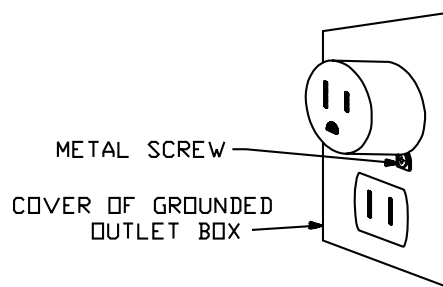


Figure C: Grounding Adapter Connection

6. The adapter should not be used if a three-slot grounded receptacle is available.
7. A qualified electrician should be consulted if there is any doubt as to whether an outlet box is properly grounded.
8. A qualified electrician should be consulted if there is any doubt as to whether an outlet box is properly grounded.

Ground Fault Circuit Interrupter (GFCI)

The appliance is equipped with a ground fault circuit interrupter (GFCI), which reduces the risk of electric shock. 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 should go out and power to the appliance should cut off.

WARNING! If the light does not go out when TEST button is pushed, do not use the appliance until it is properly repaired.

3. To restore power after TEST, push the RESET button.

WARNING! If the appliance doesn't start, stops while running, or if you experience an electric shock, disconnect the power cord and do not use the appliance. Have it repaired by a qualified electrician or replace it.

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

MAINTENANCE

Specifications

Electrical Rating	120VAC, 60Hz, 5.3A
Motor Speed	1716 RPM
Drum Speed	202 RPM
Power Cord	6'
Cable Size	Ø1/2" x 50' L
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)

INSTALLATION 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.

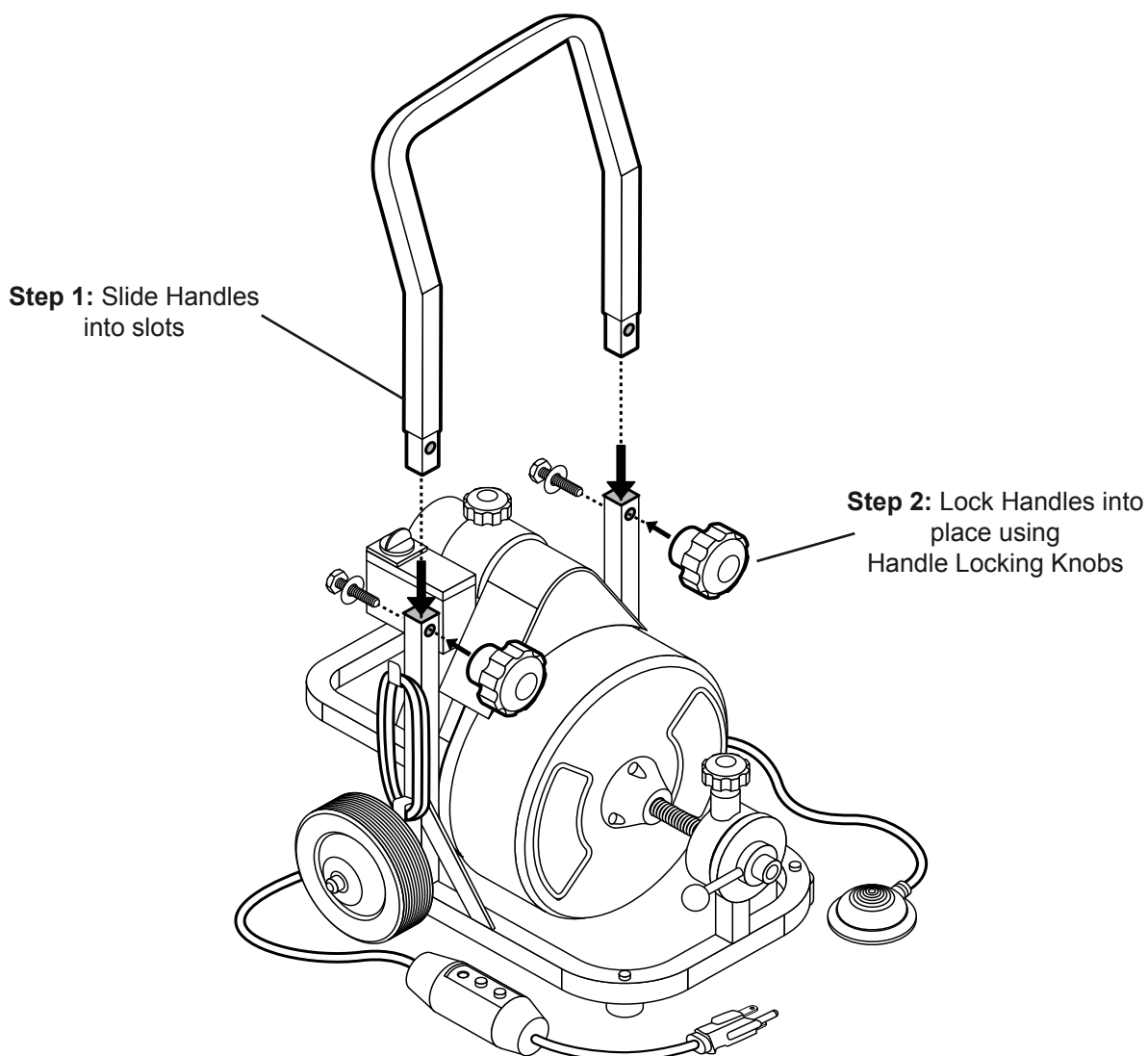
Note: No assembly needed for Item 68285.

Assembly for 68284

⚠ 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.

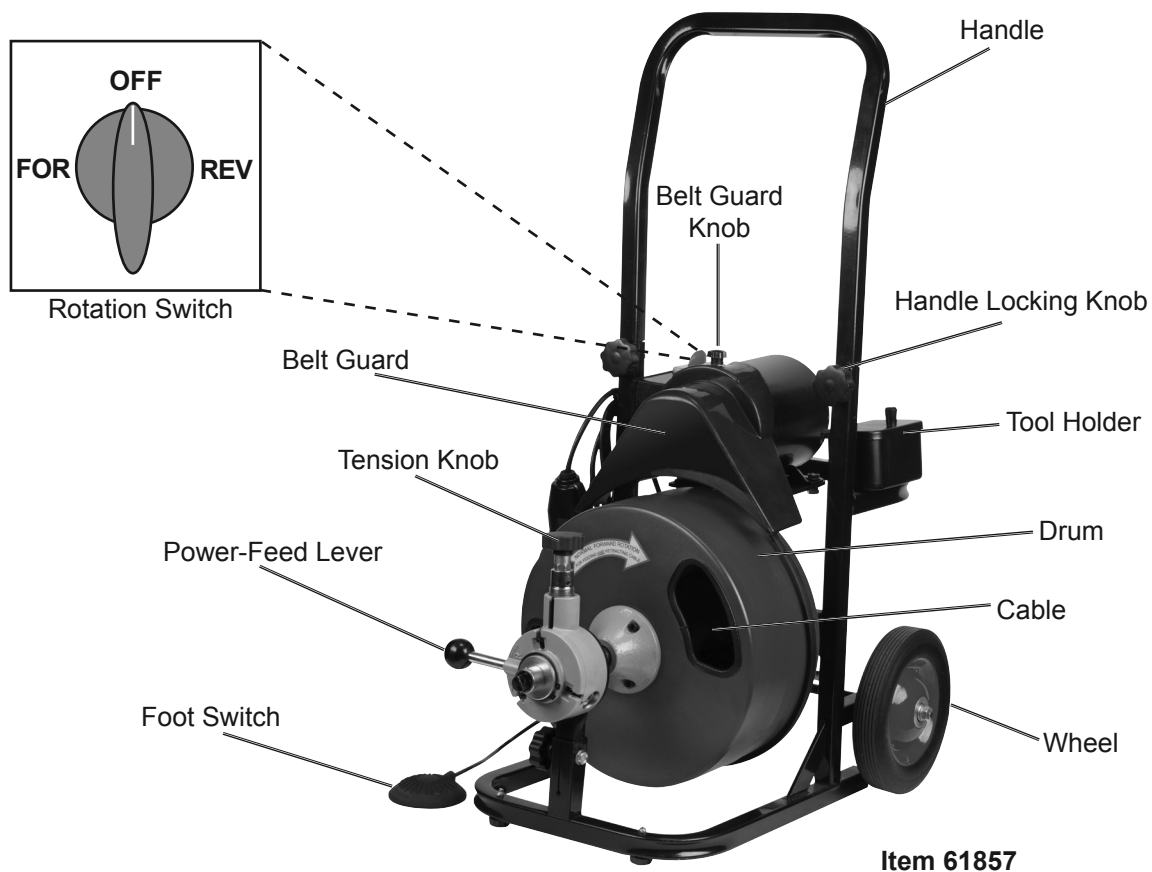
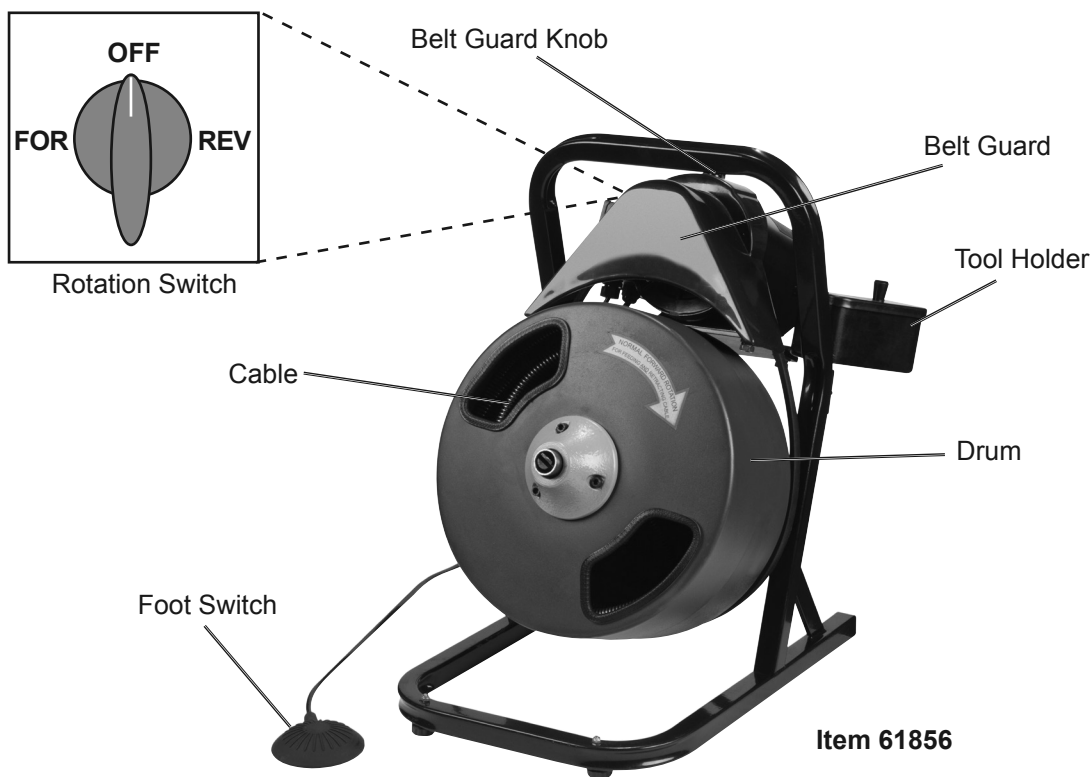


OPERATING INSTRUCTIONS



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.

User-Operated Controls



Cutting Tool Accessories

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

Spade Cutter

Starting tool

For cutting and scraping.



C-Cutter

Finishing tool

For grease stoppages and cleaning pipe walls.



Boring Bulb Cutter

Starting tool

For removing loose objects.



Arrow Cutter (2 pieces)

Finishing tool

For scraping the inside edges of pipes.



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 Cutting Tool 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.

THIS APPLIANCE IS INTENDED FOR HOUSEHOLD USE ONLY

SAFETY

SETUP

OPERATION

MAINTENANCE

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 splash-resistant safety goggles, NIOSH-approved dust mask/respirator under face shield, and heavy-duty LEATHER gloves, and other appropriate protective equipment when setting up the Drain Cleaner. For extra protection from chemicals and bacteria on the appliance and in the work area, wear latex, rubber or other liquid barrier gloves under

the heavy-duty LEATHER 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 Cable. 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 appliance and Cutting Tools for any signs of wear and damage. If necessary, replace worn or damaged parts prior to using the Drain Cleaner. 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 appliance 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 appliance or control from slipping during use.
4. Verify Foot Switch is attached to Drain Cleaner.
5. Verify Drain Cleaner is properly assembled. Inspect the appliance 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.
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.
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.
14. Before use, fully retract the Cable with no more than 2" of Cable outside of the appliance. This will keep the Cable from “whipping” when the appliance 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 **FOR** position.
17. Move Power-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 appliance 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 arrow on the Drum. **If the rotation is not correct, do not use the appliance 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 appliance.

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 appliance and operator that will remain relatively dry. Do not use the appliance 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.

Cable Size	Pipe Size	Typical Applications
1/2" (included)	2" to 4"	Roof stacks and small floor drains (no roots)
3/8" (not included)	1-1/2" to 3"	Roof stacks, laundry lines and small drains (no roots)

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. To prevent Cable from whipping, place Drain Cleaner within 2 feet of drain line or thread Cable through guide (not included).
The greater the distance from the drain access, the higher the risk of the Cable twisting or kinking.
13. If the Drain Cleaner cannot be placed within 2 feet of the drain access, use appropriate-sized pipes and fittings to extend the drain access back to within 2 feet 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 Cutting Tool to the end of the Cable. Slide the base of the Cutting 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.

Manual Feed Operation (for Item 61856)

SAFETY

⚠ WARNING

TO PREVENT SERIOUS INJURY FROM TWISTED OR BROKEN CABLES, CABLE ENDS WHIPPING AROUND, APPLIANCE 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 NIOSH-approved dust mask/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.

SETUP

1. To prevent Cable from whipping, place Drain Cleaner within 2 feet of drain line or thread Cable through guide (not included).
2. Position the Drain Cleaner so that you can operate Foot Switch while having one hand on Cable at all times. This will keep Cable from hazardously "whipping" when activating the Drain Cleaner. Also, make sure Rotation Switch on top of Drain Cleaner is within reach.
5. Step on the Foot Switch and continue feeding Cable into the drain.
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 may indicate a change in drain line (such as a drain trap, elbow, etc.), a build up in the drain (mud or grease), or the actual blockage. Continue to slowly feed the Cable until the Cable reaches the blockage.

OPERATION

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 **FOR** position.
4. With the Drain Cleaner off, pull the Cable out of Drum with both gloved hands and feed into the drain. Gradually work the Cable as far into the drain as it will go.

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 the Cable becomes lodged in a narrow part of the drain or in a drain trap, 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, press the Foot Switch and continue feeding.

MAINTENANCE



NOTICE

Rotation Switch controls rotation of drum only. **DO NOT USE ROTATION SWITCH IN REV 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, the Cable will start to wind up or twist. If so, immediately turn off, let tension release, and then pull back on Cable to free Cutting Tool from the drain blockage. If Cable cannot be freed by pulling back, briefly turn the motor on in **REV** setting to free the Cutting Tool.
2. Once Cutting Tool is free of blockage and is turning again, slowly feed rotating Cutting Tool back into blockage. Do not force Cutting Tool through blockage.
3. Allow the spinning and cutting to break up and work its way through the blockage.

CAUTION! Do not keep Cable rotating if Cutting Tool is lodged in a blockage. If Cutting Tool stops turning and Drum keeps rotating, Cable can twist, kink, break, or tangle in the drain.

NOTICE: While working through the blockage, the Cutting Tool and Cable can get clogged with debris and cuttings from blockage, preventing further cleaning. The Cable and Cutting Tool will then need to be retrieved from drain and the debris removed. See "Retrieving Drain Cleaner Cable on page 11".

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.

WARNING! 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 the Rotation Switch to **OFF** position.
2. Pull back on the Cable to free it from the blockage. If the Cutting Tool will not come free, place the Rotation Switch in **REV** position.
3. Hold the Cable with both gloved hands, press the Foot Switch for several seconds, then release, and pull on the Cable until it is free of the blockage.
4. Place the Rotation Switch in the **FOR** position and continue cleaning the drain.

WARNING! Do not operate Drain Cleaner in reverse for any longer than is needed to free the Cutting Tool from blockage (for no more than several seconds at a time).

Retrieving Drain Cleaner Cable

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

NOTE: Pay attention to the water level. There could be blockages farther down in the 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 IN REV 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 68284)

⚠ WARNING

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

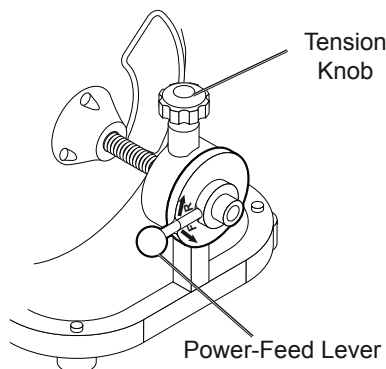
Follow operating instructions for your model explicitly.

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

- ANSI-approved splash-resistant safety goggles and NIOSH-approved dust mask/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. To prevent Cable from whipping, place Drain Cleaner within 2 feet of drain line or thread Cable through guide (not included).
2. Position the Drain Cleaner so that you can operate Foot Switch while having one hand on Cable at all times. This will keep Cable from hazardously “whipping” when activating the Drain Cleaner. Also, make sure Rotation Switch on top of Drain Cleaner and Power-Feed Lever are within reach.
3. Loosen 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. Tighten Tension Knob.
4. After making sure the Rotation Switch is in the **FOR** position, Tension Knob has been tightened, and the Power-Feed Lever is in the **F** (down) position, press the Foot Switch to start feeding the Cable further into the drain.
5. If the Cable becomes lodged (for example: in a narrow part of the drain, in a drain trap, etc.), Move Power-Feed Lever to exactly between **F** and **R** settings, otherwise Cable will start moving, and allow the Cable to try and work itself past the obstruction.
6. If Cable still won't pass obstruction, release the Foot Switch and use sharp downward thrusts to try and pass obstruction. Once Cable is past, put the Power-Feed Lever in the **F** (down) position, press the Foot Switch, and continue feeding.

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.



NOTICE

Rotation Switch controls rotation of drum only. **DO NOT USE ROTATION SWITCH IN REV 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! TO PREVENT SERIOUS INJURY: Do not remove gloved hand from Cable until all the tension is released.

3. Put Power-Feed Lever in up (R) 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 Tool to break up and work through blockage.

NOTICE: 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

Rotation Switch controls rotation of drum only. **DO NOT USE ROTATION SWITCH IN REV 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.

USER-MAINTENANCE INSTRUCTIONS



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 Cable

1. Thoroughly flush Drain Cleaner Cable 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 Cable has 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! TO PREVENT SERIOUS INJURY:
Do not attempt to remove a rotating cable.

Cleaning/Lubrication

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. For Item 61857 (Power-Feed Drain Cleaner), hose off 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.

WARNING! Risk of shock! Do not allow water to get into the motor or any other electrical components.

Removing and Installing Belt

1. Loosen Belt Guard Retaining Knob and slide Belt Guard off.
2. Use screwdriver to slide Belt off back of Drain Cleaner Drum.
3. Slide new Belt onto belt pulley above Drum.
4. Slide new Belt onto rear of Drum until securely in place.
5. Slide Belt Guard back into place. Tighten Belt Guard Retaining Knob to lock Belt Guard back into place.

WARNING! TO PREVENT SERIOUS INJURY: Do not operate the Drain Cleaner without the Belt Guard in place.

Installing Replacement Cable

1. Remove old Cable by pulling Cable completely out of Drum. 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. Store indoors out of the reach of children.
3. **⚠ WARNING! TO PREVENT SERIOUS INJURY: If the supply cord of this appliance 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 Rotation Switch to 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 appliance serviced by qualified electrician before further use.
Cable kinks, twists, or breaks.	1. 1. Too much force on the cable. 2. 2. Too much slack between Drain Cleaner and drainpipe inlet. 3. 3. Cable used is wrong size for drain pipe. 4. 4. Cable exposed to acid. 5. 5. Cable worn out.	1. 1. Do not force cable. Let Cutting Tool do the work. 2. 2. Move Drain Cleaner to within 2 feet of drainpipe inlet. 3. 3. Change cable size. 4. 4. Clean and oil cable regularly. 5. 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 Cutting Tool do the work. 2. Retract Cable with the Rotation Switch in the FOR position. 3. Technician should lubricate distributor tube bearings.
Power Cord GFCI trips when unit is plugged in or when Foot Switch is pressed.	1. Motor Rotation 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 Rotation Switch. 2. Have Power Cord replaced by a qualified technician. 3. Have Motor repaired or replaced by a qualified technician. 4. Dry cord and unit. 5. Electrician must replace Power Cord with GFCI.
Motor does not operate or the Foot Switch sticks.	Pneumatic Foot Switch may have a leak.	Check for leaks in air line leading from Foot Switch. Check for tears and holes in Foot Switch. Replace if needed.
The Rotation 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 Rotation Switch to the OFF position and allow the motor to stop before changing from FOR to REV or vice versa.

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.

68285 Parts List

Part	Description
1	Drum Connecting Cable
2	Bolt
3	Spring Washer
4	Cable
5	Bolt
6	Front Hub Bushing
7	Drum
8	Bolt
9	Fiber Washer
10	Distributor Tube/Inner Drum
11	Flat Washer
12	Rear Shaft Retaining Ring
13	Flat Washer
14	Flat Washer
15	Rear Hub
16	Drum Shaft
17	Frame
18	Rubber Foot
19	Bolt
20	Flat Washer

Part	Description
21	Shaft Spacer
22	Bolt
23	Motor Support Spring
24	Bolt
25	Motor Support
26	Motor
27	V-Belt Pulley
28	Bolt
29	V-Belt (A1118)
30	Belt Guard
31	Belt Guard Knob
32	Bolt
33	Nut
34	Tool Holder
35	Bolt
36	Retaining Pin Collar & Set Screw
37	Retaining Pin Spring
38	Drum Shaft Retaining Pin
39	Rubber Leg Tip
40	Bolt

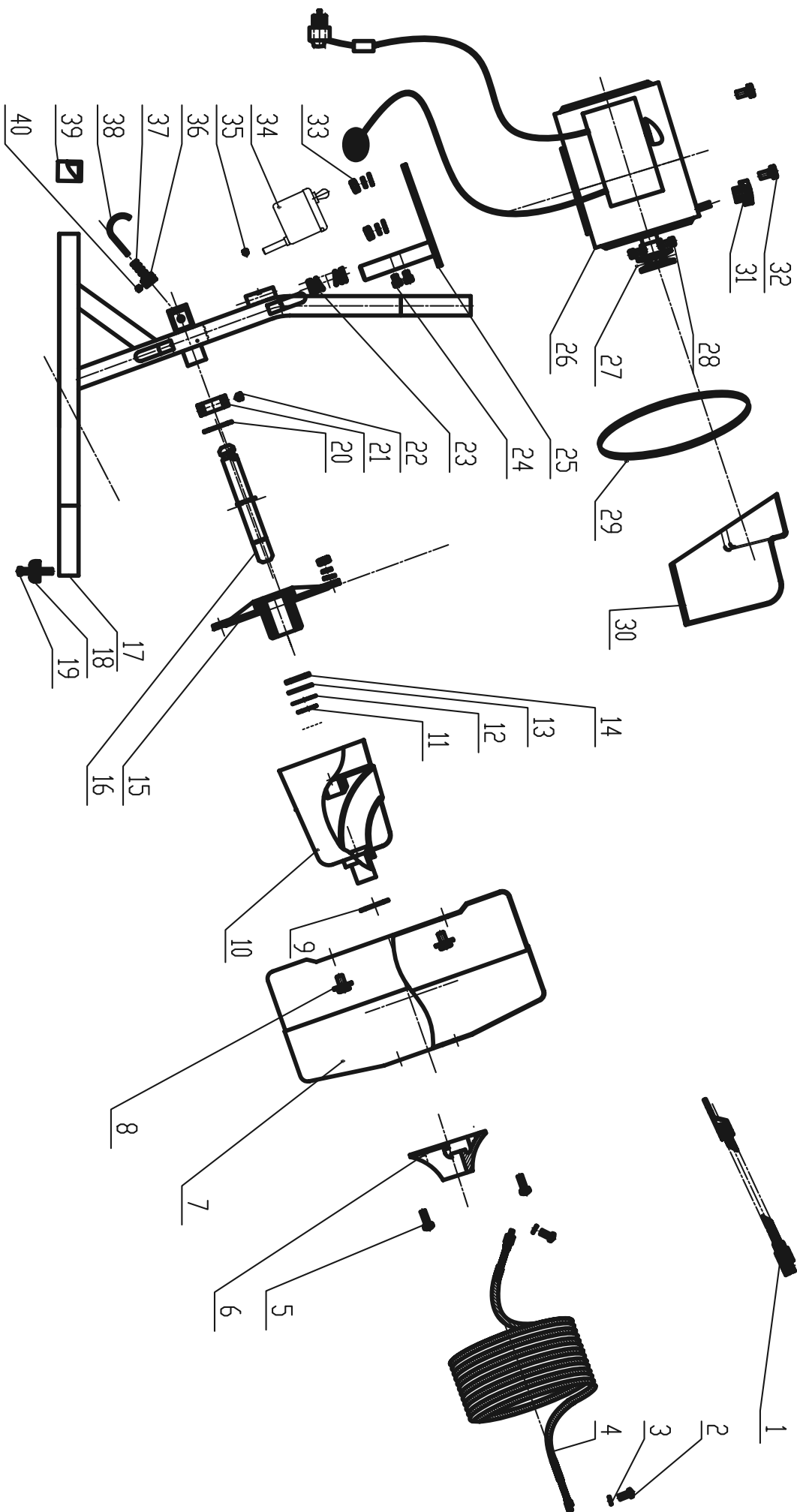
Record Product's Serial Number Here: _____

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 UPC 193175328977 when ordering for non-power-feed version.



68285 Assembly Diagram



68284 Parts List

SAFETY

SETUP

OPERATION

MAINTENANCE

Part	Description
1	Power-Feed
2	Front Post
3	Bolt
4	Bolt
5	Cable
6	Drum Connecting Cable
7	Bolt
8	Front Hub Bushing
9	Drum
10	Connecting Cable / Nut / Washer
11	Fiber Washer
12	Distributor Tube / Inner Drum
13	Front Shaft Retaining Ring
14	Rear Shaft Retaining Ring
15	Flat Washer
16	Flat Washer
17	Rear Hub
18	Drum Shaft
19	Rubber Foot
20	Bolt
21	Frame
22	8" Wheel
23	Rubber Leg Tip

Part	Description
24	Drum Shaft Retaining Pin
25	Retaining Pin Spring
26	Retaining Pin Screw / Set Screw
27	Bolt
28	Tool Holder
29	Bolt
30	Motor
31	Handle
32	Belt Guard Knob
33	V-Belt Pulley
34	Bolt
35	V-Belt (A1118)
36	Belt Guard
37	Fiber Washer
38	Shaft Spacer
39	Screw
40	Bolt
41	Motor Support Spring
42	Motor Support
43	M8 Nut
44	M8 Bolt
45	Handle Locking Knob

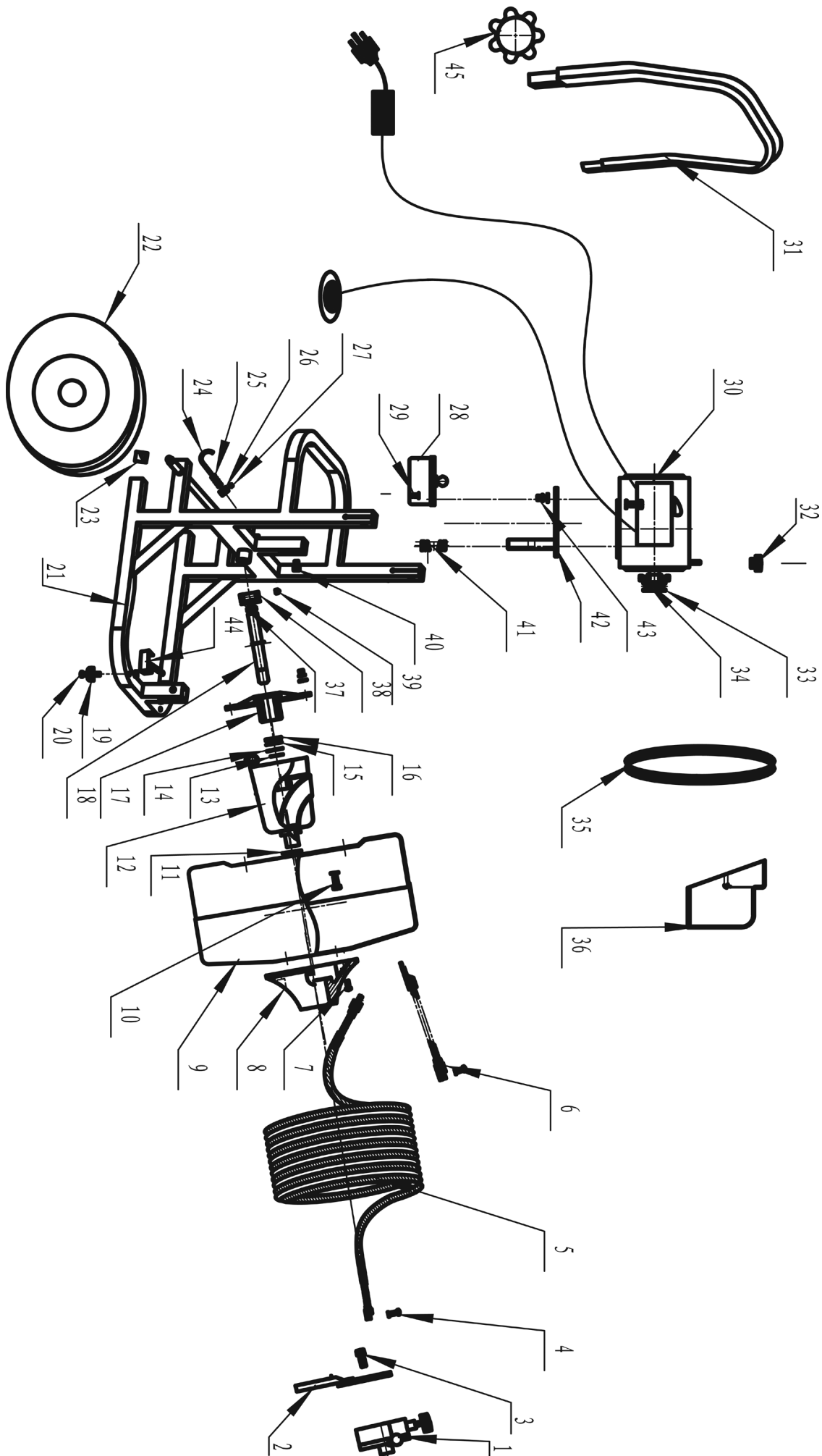
Record Product's Serial Number Here: _____

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 UPC 193175328960 when ordering for power-feed version.



68284 Assembly Diagram



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.



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