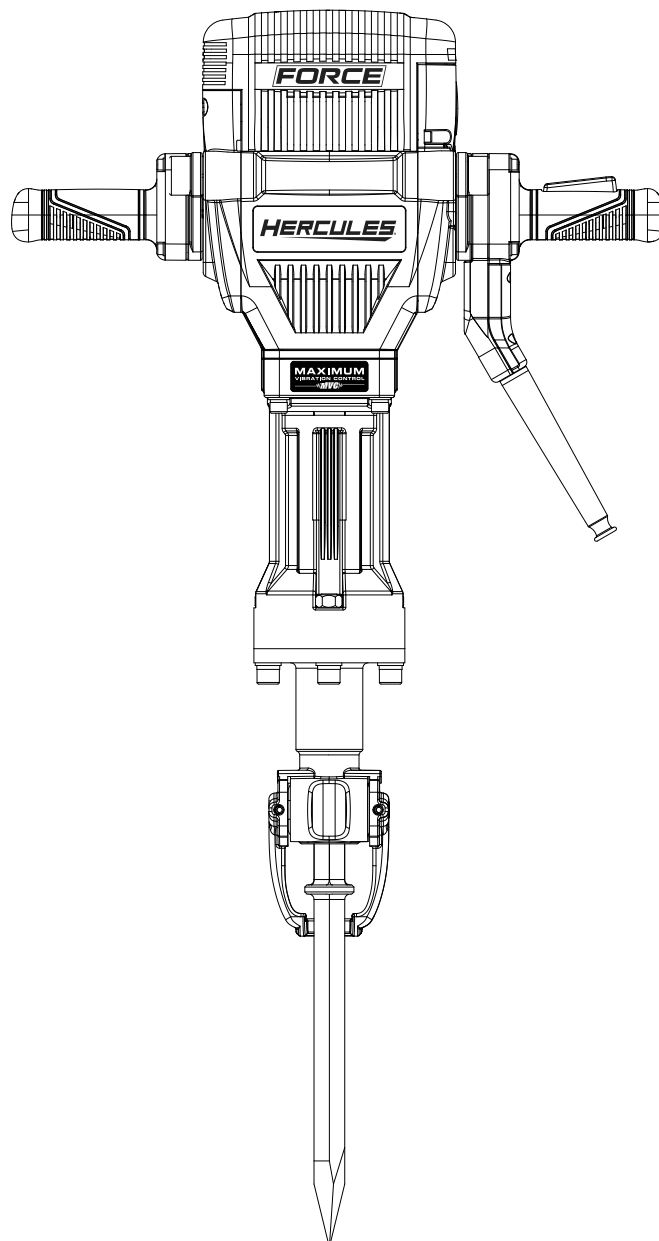




Owner's Manual & Safety Instructions

23j



**Model
HE31**

Bits sold separately.

1-1/8" Hex Breaker Hammer

⚠WARNING: To prevent serious injury, User must read and understand Owner's Manual. SAVE THIS MANUAL.

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. Reference 56407

IMPORTANT SAFETY INFORMATION

GENERAL POWER TOOL SAFETY WARNINGS

WARNING

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

Save all warnings and instructions for future reference.

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

Work Area Safety

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

Electrical Safety

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

Personal Safety

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

Power Tool Use and Care

1. **Do not force the power tool. Use the correct power tool for your application.**
The correct power tool will do the job better and safer at the rate for which it was designed.
2. **Do not use the power tool if the Trigger does not turn it on and off.**
Any power tool that cannot be controlled with the Trigger is dangerous and must be repaired.

3. **Disconnect the plug from the power source before making any adjustments, changing accessories, or storing power tools.**
Such preventive safety measures reduce the risk of starting the power tool accidentally.
4. **Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool.** *Power tools are dangerous in the hands of untrained users.*
5. **Maintain power tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation. If damaged, have the power tool repaired before use.** *Many accidents are caused by poorly maintained power tools.*
6. **Keep cutting tools sharp and clean.** *Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.*
7. **Use the power tool, accessories and tool bits etc. in accordance with these instructions, taking into account the working conditions and the work to be performed.** *Use of the power tool for operations different from those intended could result in a hazardous situation.*

Service

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

Percussion Hammer Safety Warnings

1. **Wear ear protectors.** *Exposure to noise can cause hearing loss.*
2. **Use auxiliary handles supplied with the tool.** *Loss of control can cause personal injury.*
3. **Hold power tools by insulated gripping surfaces when performing an operation where the cutting tool may contact hidden wiring or its own cord.** *Contact with a "live" wire will make exposed metal parts of the tool "live" and shock the operator.*
4. **Keep clear of moving parts.**
5. **Unplug before inspecting, removing or installing bit, or performing any service.**
6. **Pull on bit after installation and before use; bit may move but MUST NOT slide out.**
7. **Wear steel-toed boots during use.**
8. **Do not operate this tool if you have back, neck, or wrist injuries, or other conditions that will be aggravated by the severe jerking forces that this tool exerts upon the operator.**
9. **Maintain labels and nameplates on the tool.** These carry important safety information. If unreadable or missing, contact Harbor Freight Tools for a replacement.
10. **Avoid unintentional starting. Prepare to begin work before turning on the tool.**
11. **Do not lay the tool down until it has come to a complete stop.** Moving parts can grab the surface and pull the tool out of your control.
12. **When using a handheld power tool, maintain a firm grip on the tool with both hands to resist starting torque.**
13. **Do not leave the tool unattended when it is plugged into an electrical outlet.** Turn off the tool, and unplug it from its electrical outlet before leaving.
14. **This product is not a toy. Keep it out of reach of children.**
15. **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. In addition, people with pacemakers should:
 - Avoid operating alone.
 - Properly maintain and inspect to avoid electrical shock.
 - Properly ground power cord. Ground Fault Circuit Interrupter (GFCI) should also be implemented – it prevents sustained electrical shock.
16. **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 medical or physical 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. **Use tools with the lowest vibration when there is a choice between different processes.**
4. **Include vibration-free periods each day of work.**
5. **Let the tool do the work.**
6. **To reduce vibration, maintain the tool as explained in this manual. If any abnormal vibration occurs, stop use immediately.**



SAVE THESE INSTRUCTIONS

GROUNDING INSTRUCTIONS



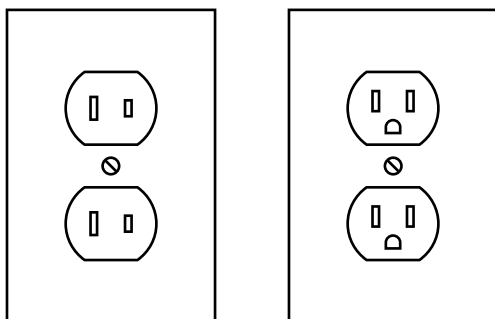
⚠️ WARNING

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

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

Double Insulated Tools: Tools with Two Prong Plugs

1. Tools marked "Double Insulated" do not require grounding. They have a special double insulation system which satisfies OSHA requirements and complies with the applicable standards of Underwriters Laboratories, Inc., the Canadian Standard Association, and the National Electrical Code.
2. Double insulated tools may be used in either of the 120 volt outlets shown in the following illustration. (See Outlets for 2-Prong Plug.)



Outlets for 2-Prong Plug

Extension Cords


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

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

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

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

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 Addresses practices not related to personal injury.

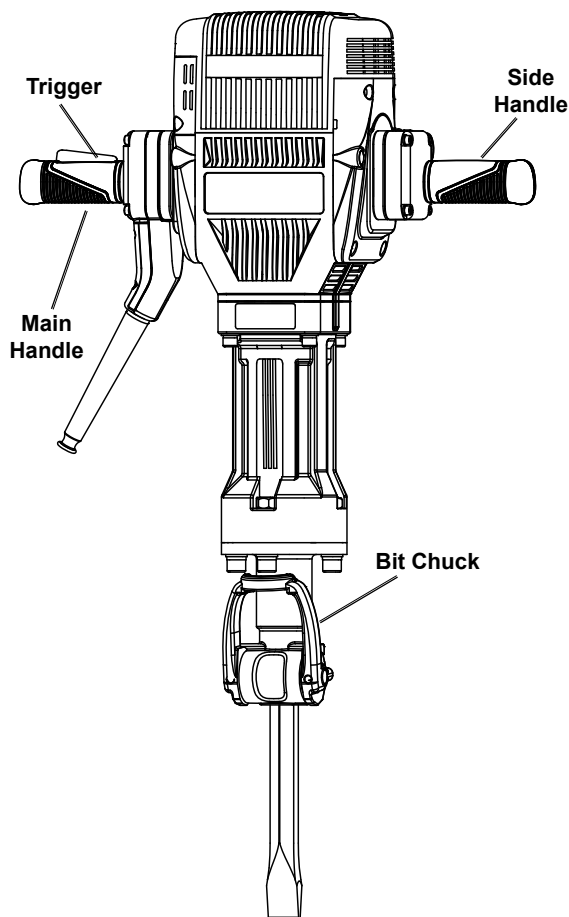
Symbology

	Double Insulated
V	Volts
~	Alternating Current
A	Amperes
n0 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.
	WARNING marking concerning Risk of Hearing Loss. Wear hearing protection.

Specifications

Electrical Rating	120VAC / 60Hz / 15A
Blows Per Minute	1000 BPM

Functional Description



OPERATION



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

Tool Set Up

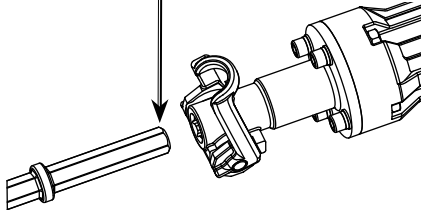
WARNING

TO PREVENT SERIOUS INJURY FROM ACCIDENTAL OPERATION:

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

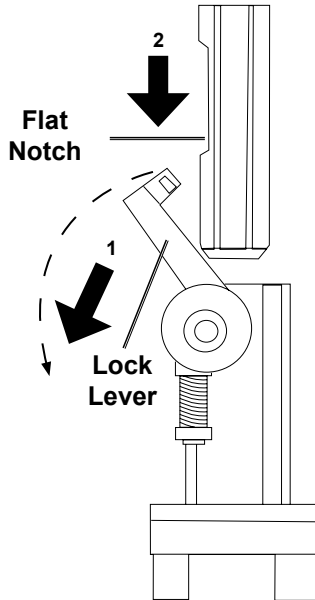
NOTICE: Clean the loading end of the bit to remove any debris, then lubricate the bit with grease.

Clean bit, then lubricate with grease.



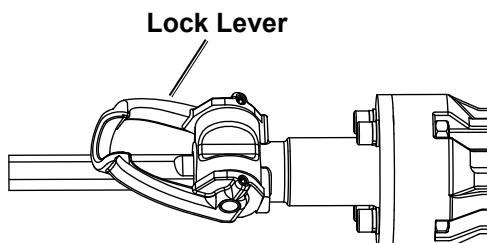
Install Collarless Bit

1. Pull the Lock Lever to the side, just far enough to allow the Bit to be inserted.



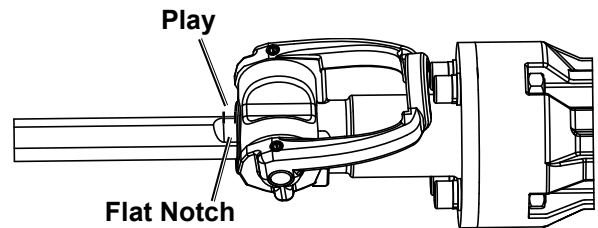
Note: Flat Notch on Collar-less Bit must face the Lock Lever.

2. Insert Bit with the Flat Notch facing the Lock Lever.



3. Slide the Bit in as far as it will go.
4. Pull the Lock Lever back until it locks the Bit into place.

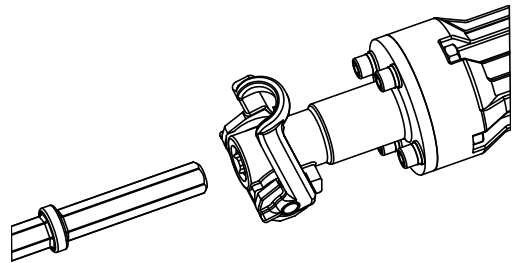
Note: Lock Lever will not lie flat against the chuck.



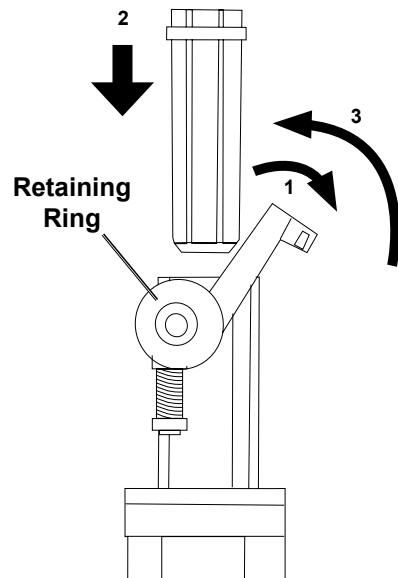
5. When the Bit is installed, there will be approximately 1-3/4" of play along the Flat Notch of the shank. Physically check that the Bit is secure before operating.

Install Collared Bit

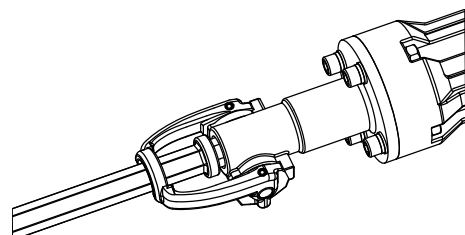
1. Pull the Lock Lever open about 70-80° to the second engaging position.



2. Insert the collared Bit.
3. Slide the Bit in as far as it will go.



4. Return the Lock Lever to its original position to lock the Bit in place.



5. Physically check that the Bit is secure before operating. The Bit will have approximately 1-3/4" of play, but should not come out when pulled.

Note: During extended operation, periodically remove the bit and re-lubricate the loading end with grease.

Workpiece and Work Area Set Up

1. Designate a work area that is clean and well-lit. The work area must not allow access by children or pets to prevent distraction and injury.
2. Route the power cord along a safe route to reach the work area without creating a tripping hazard or exposing the power cord to possible damage. The power cord must reach the work area with enough extra length to allow free movement while working.
3. Secure loose work pieces using a vise or clamps (not included) to prevent movement while working.
4. There must not be objects, such as utility lines, nearby that will present a hazard while working. If working in the ground or on a concrete slab on the earth, call local utility company to ensure that area is clear of utility lines.
5. Protect power cord from crushing, abrasion, and scraping by broken rock or concrete.
6. Keep power cord away from moving machines.

General Operation

⚠ WARNING

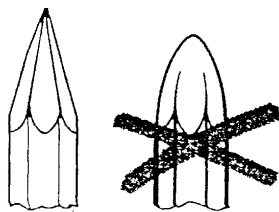
TO PREVENT SERIOUS INJURY:

Wear ANSI-approved safety goggles, ear protection, steel-toe boots, and dust mask during use.

Keep feet clear of Breaker Hammer.

Keep children and animals well clear of the work area.

1. Check Bit for dullness, cracks, or other damage.



CAUTION! Dull tipped bits can cause unnecessary bit movement, resulting in tool wear and possible injury. Use only sharp tipped bits.

2. Clearly mark the work area.
3. Make sure that the Trigger is in the off-position, then plug the tool into an outlet on a circuit rated to 20 amps.

4. Set the bit against the work area.

CAUTION! Keep power cord away from moving machines.

5. Place one hand on the Side Handle and the other hand around the Main Handle.
6. Press down on the Trigger.

Note: Trigger does not lock. Keep pressure on the Trigger to keep running the tool.

7. Push the tip forcibly down to begin striking material.

NOTICE: Running tool with no load or "empty blows" will damage the Breaker Hammer.

CAUTION! Once activated, do not press, bear down, or thrust forcibly against the work surface. Allow the Breaker Hammer's own weight to supply the needed force.

Note: If the Breaker Hammer has not been used for a long time or is being used in low temperatures, the tool may require 3-5 minutes to warm up.

NOTE: Carbon Brushes will wear during use.

The Breaker Hammer will stop working if the Brushes are worn. This does NOT mean Breaker Hammer is malfunctioning or broken, only that the worn Brushes will need to be replaced with the included Brushes by a qualified technician.

8. When work is complete, release the Trigger. The Trigger is spring-loaded and will return to the off position automatically.
9. To prevent accidents, turn off the tool and disconnect its power supply after use.
10. Clean, then store the tool indoors out of children's reach.

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:

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

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, 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
 - any other condition that may affect its safe operation.
2. **AFTER USE**, wipe external surfaces of the tool with clean cloth.
3. Store in temperatures no lower than 50-60°F.

NOTE: The Breaker Hammer has airtight construction, allowing long periods of use (approximately six months of regular usage) before lubrication.

Replacing Carbon Brushes

NOTE: The Breaker Hammer will cease operation once Carbon Brushes are worn. Have brushes replaced by a qualified technician when necessary.

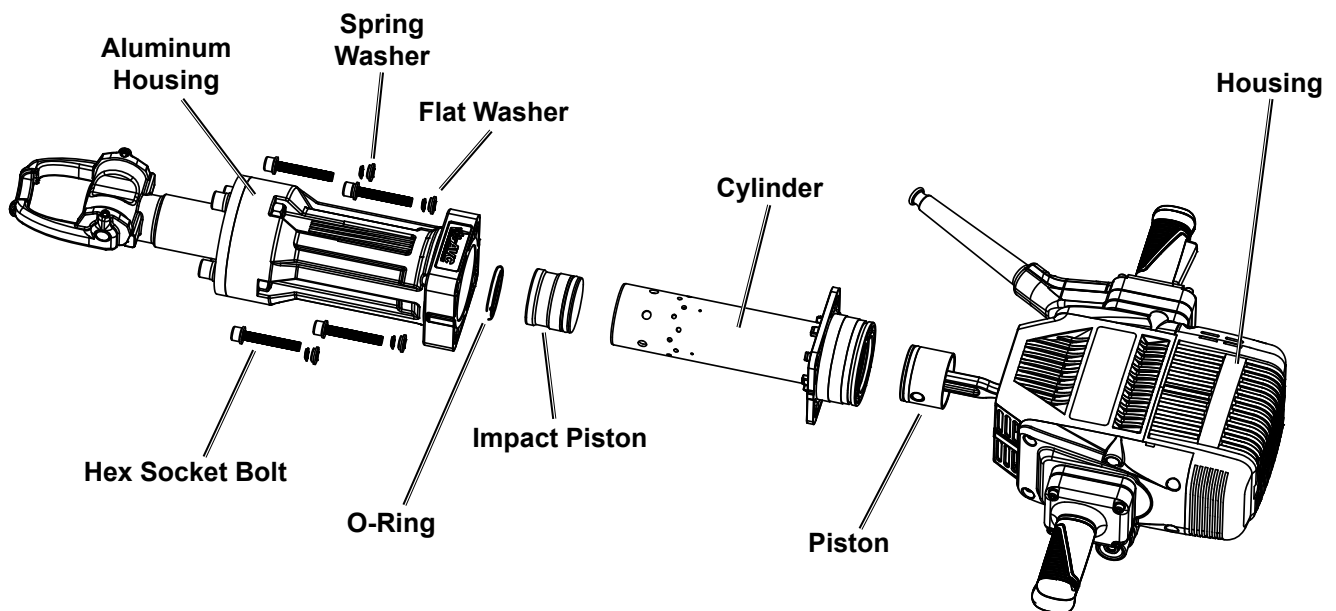
1. Remove the Fan Cover by removing the four Bolts and Flat Washers.
2. Slide Fan Cover off of Housing.
3. Remove Carbon Brush Bracket.
4. Remove Carbon Brushes from Bracket.

5. Insert new Carbon Brushes into Bracket.
6. Replace Carbon Brush Bracket and slide Fan Cover back over Housing.
7. Replace Bolts and Flat Washers until securely fastened.

Greasing Gearbox

Note: Due to the possibility of accidental damage and/or contamination, only a qualified technician should disassemble and lubricate this item.

1. Remove the four Socket Bolts and Washers that connect the Aluminum Housing to the Housing. Disassemble the Aluminum Housing, Cylinder and Piston.
2. Clean the Aluminum Housing, Piston and Cylinder thoroughly, inside and out.
3. Check the condition of the O-Ring. If the outside diameter (OD) of the O-Ring is less than the Piston's OD, replace the O-Ring.
4. Fill each of the 4 grooves inside the Aluminum Housing with 0.5 ounces of synthetic high-temperature grease.
5. Slide the Cylinder back into the Cylinder Case and fill it with 0.5 ounces of tool oil.
6. Carefully slide the Piston into the Ram, making sure that the O-Ring stays in place and is not damaged.
7. Replace the Socket Bolts and Washers to connect the Aluminum Housing to the Housing and tighten securely.



Troubleshooting

Problem	Possible Causes	Likely Solutions
Tool will not start.	<ol style="list-style-type: none"> 1. Cord not connected. 2. No power at outlet. 3. Tool's thermal reset breaker tripped (if equipped). 4. Internal damage or wear. (Carbon brushes or Trigger, for example.) 	<ol style="list-style-type: none"> 1. Check that cord is plugged in. 2. Check power at outlet. If outlet is unpowered, turn off tool and check circuit breaker. If breaker is tripped, make sure circuit is right capacity for tool and circuit has no other loads. 3. Turn off tool and allow to cool. Press reset button on tool. 4. Have technician service tool.
Tool operates slowly.	Extension cord too long or wire size too small.	Eliminate use of extension cord. If an extension cord is needed, use shorter/heavier gauge cord. See <i>Extension Cords</i> in <i>GROUNDING</i> section.
Performance decreases over time.	<ol style="list-style-type: none"> 1. Bit dull or damaged. 2. Internal lubrication cold. 3. Carbon brushes worn or damaged. 	<ol style="list-style-type: none"> 1. Keep cutting bits sharp. Replace as needed. 2. Allow tool to operate with no load for 5 minutes before use. 3. Have qualified technician replace brushes.
Excessive noise or rattling.	Internal damage or wear. (Carbon brushes or bearings, for example.)	Have technician service tool.
Overheating.	<ol style="list-style-type: none"> 1. Forcing tool to work too fast. 2. Bit dull or damaged. 3. Blocked motor housing vents. 4. Motor being strained by long or small diameter extension cord. 	<ol style="list-style-type: none"> 1. Allow tool to work at its own rate. 2. Keep cutting bits sharp. Replace as needed. 3. Wear ANSI-approved safety goggles and NIOSH-approved dust mask/respirator while blowing dust out of motor using compressed air. 4. Eliminate use of extension cord. If an extension cord is needed, use one with the proper diameter for its length and load. See <i>Extension Cords</i> in <i>GROUNDING</i> section.



**Follow all safety precautions whenever diagnosing or servicing the tool.
Disconnect power supply before service.**

Record Product's Serial Number Here:_____

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

Note: Replacement parts are not available for this item. Refer to UPC 792363564076.

LIMITED 90 DAYS 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.

Visit our website at: <http://www.harborfreight.com>
Email our technical support at: productsupport@harborfreight.com
For technical questions, please call 1-888-866-5797

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