

# 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

# **Bauer**<sup>TM</sup>

## **1633E-B**

## **70 LB PRO BREAKER HAMMER**



Visit our website at: <http://www.harborfreight.com>  
Email our technical support at: [productsupport@harborfreight.com](mailto:productsupport@harborfreight.com)

**64608**

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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### **⚠ WARNING**






Read this material before using this product. Failure to do so can result in serious injury.  
**SAVE THIS MANUAL.**

## Table of Contents

Safety .....	2	Maintenance .....	13
Specifications .....	8	Parts List and Diagram .....	18
Setup .....	8	Warranty .....	20
Operation .....	10		

# Bauer™

### 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.
	Indicates a hazardous situation which, if not avoided, will result in death or serious injury.
	Indicates a hazardous situation which, if not avoided, could result in death or serious injury.
	Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.
	Addresses practices not related to personal injury.

## IMPORTANT SAFETY INFORMATION

### General Power Tool Safety Warnings

#### WARNING

**Read all safety warnings and 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.** *Safety 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 Trigger is in the off-position before connecting to power source, picking up or carrying the tool.** *Carrying power tools with your finger on the Trigger or energizing power tools that have the Trigger on invites accidents.*
4. **Do not overreach. Keep proper footing and balance at all times.** *This enables better control of the power tool in unexpected situations.*
5. **Dress properly. Do not wear loose clothing or jewelry. Keep your hair, clothing and gloves away from moving parts.** *Loose clothes, jewelry or long hair can be caught in moving parts.*
6. **If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used.** *Use of these devices can reduce dust-related hazards.*
7. **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

SAFETY

SETUP

OPERATION

MAINTENANCE

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 chisel, or performing any service.**
6. **Pull on chisel after installation and before use; chisel 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 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. 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.



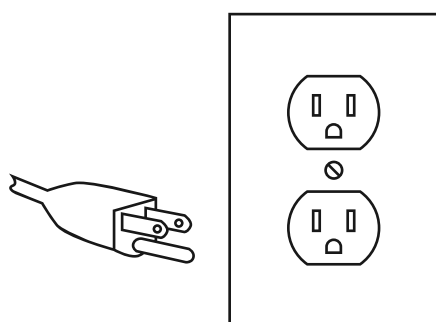
**SAVE THESE INSTRUCTIONS.**

**⚠ 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.

## Grounded Tools: Tools with Three Prong Plugs

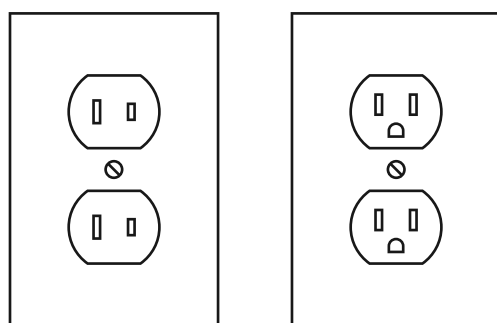


**3-Prong Plug and Outlet**

1. Tools marked with "Grounding Required" have a three wire cord and three prong grounding plug. The plug must be connected to a properly grounded outlet. If the tool should electrically malfunction or break down, grounding provides a low resistance path to carry electricity away from the user, reducing the risk of electric shock. **(See 3-Prong Plug and Outlet.)**

2. The grounding prong in the plug is connected through the green wire inside the cord to the grounding system in the tool. The green wire in the cord must be the only wire connected to the tool's grounding system and must never be attached to an electrically "live" terminal. **(See 3-Prong Plug and Outlet.)**
3. The tool must be plugged into an appropriate outlet, properly installed and grounded in accordance with all codes and ordinances. The plug and outlet should look like those in the preceding illustration. **(See 3-Prong Plug and Outlet.)**

## Double Insulated Tools: Tools with Two Prong Plugs



**Outlets for 2-Prong Plug**

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 preceding illustration. **(See 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.**

## Symbology

	Double Insulated
<b>V</b>	Volts
~	Alternating Current
<b>A</b>	Amperes
n <sub>0</sub> 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.

# Bauer™

## Specifications

Electrical Rating	120VAC / 60Hz / 15A
Blows Per Minute	950 BPM
Included Chisels	1 Bull Point, 1 Flat

## 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.

## ⚠ 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.

**Note:** For additional information regarding the parts listed in the following pages, refer to *Parts List and Diagram* on page 18.

## Assembly

The only assembly required for the Breaker Hammer is the installing of the Left Handle (82) to the side of the Gear Box (86) and the Spline Axle (91).

1. First, slide Left Handle over the Spline Axle so that the end of the Spline Axle slides through the opening in the Left Handle. See Figure A.

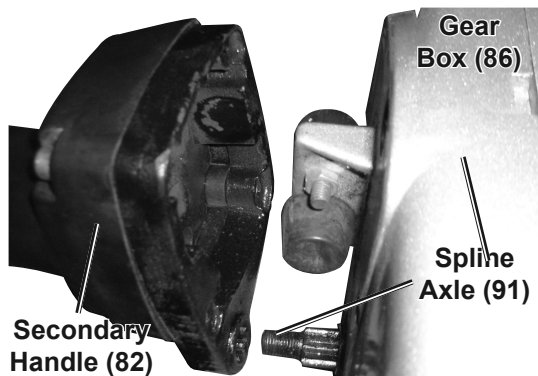


Figure A

2. With your other hand, hold and slightly twist Right Handle (51) while slowly manipulating Left Handle over the Spline Axle until the splines line up and it fits snug into place. See Figure B.

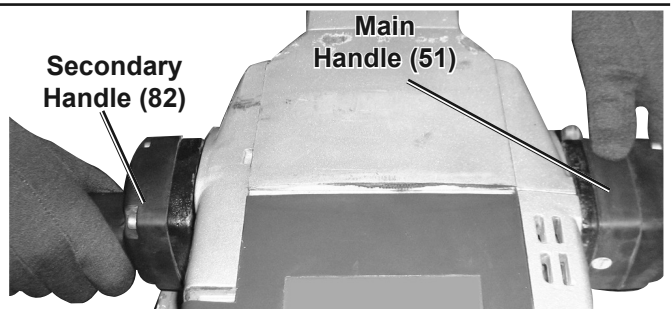


Figure B

3. Thread Nut (40) over tip of Spline Axle. Use Wrench (not included) to fasten Nut, securing Left Handle in place. Periodically, check Nut for tightness. See Figure C.

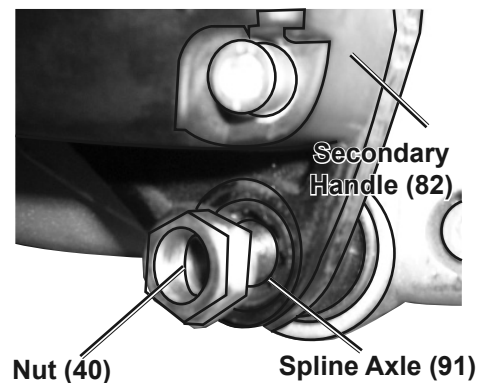
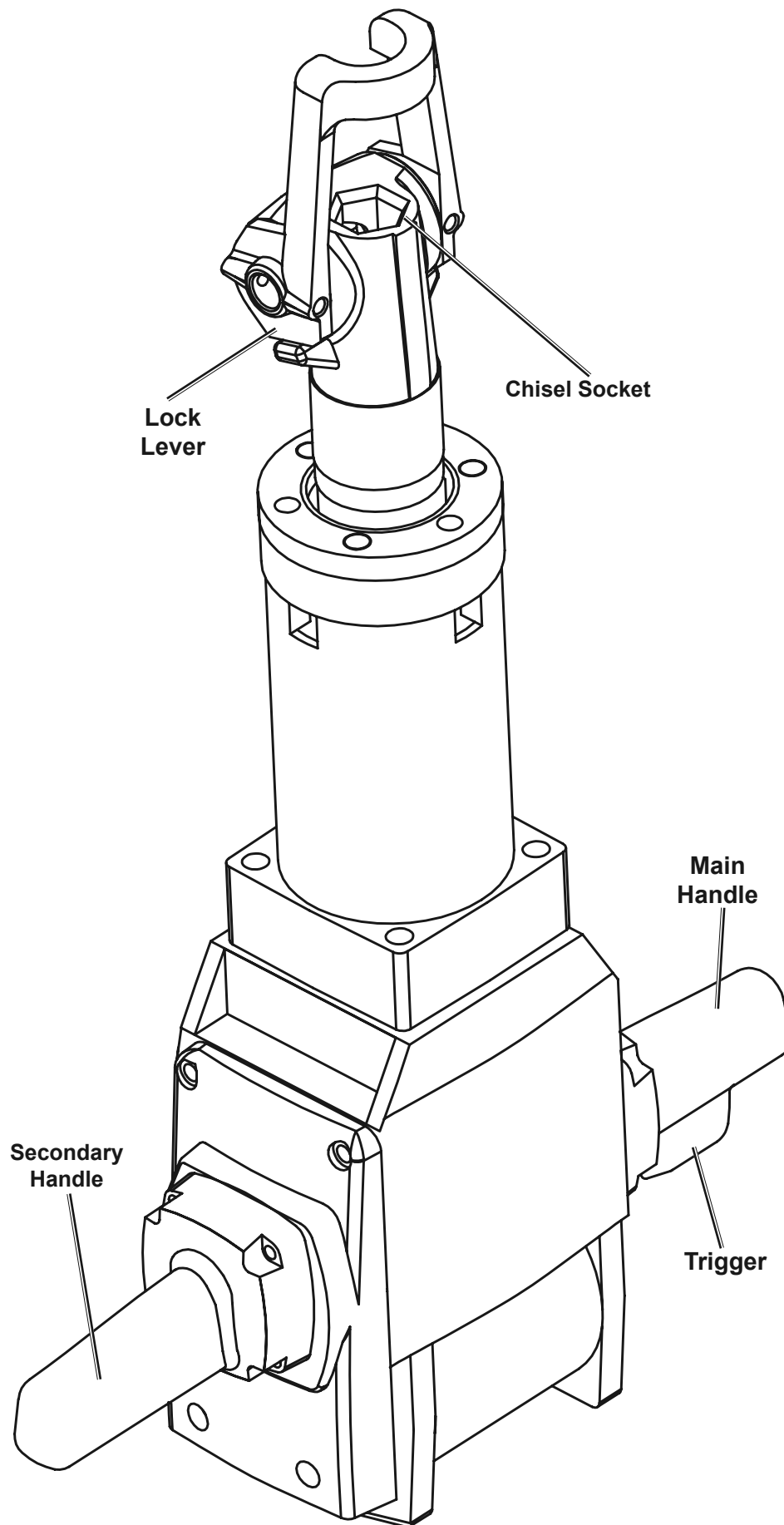


Figure C





## 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.

### 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.**

Chisels come with or without collars. Figure D shows installation of a chisel without a collar (the included chisel is without a collar). Figure H shows installation of a chisel with a collar.

**Note:** If the Chisel doesn't slide in easily, apply grease to the loading end of the Chisel.

#### Mounting Chisels without a Collar

1. Pull the Lock Lever to the side, just far enough to allow the Chisel to be inserted, as shown in Figure D.

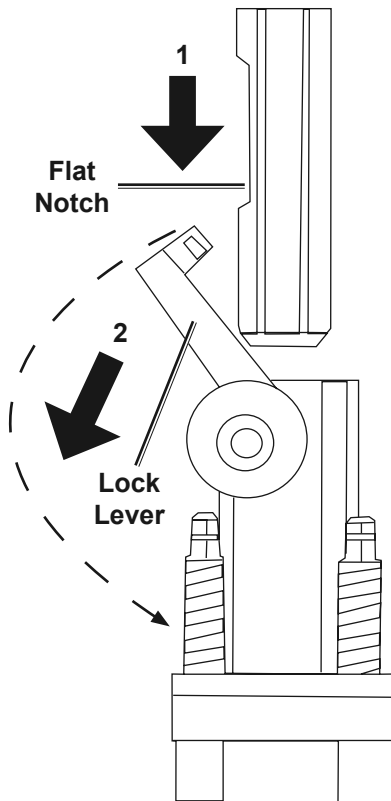


Figure D

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

2. Position the Lock Lever as shown in Figure D and Figure E. Insert Chisel with the Flat Notch facing the Lock Lever, as shown.

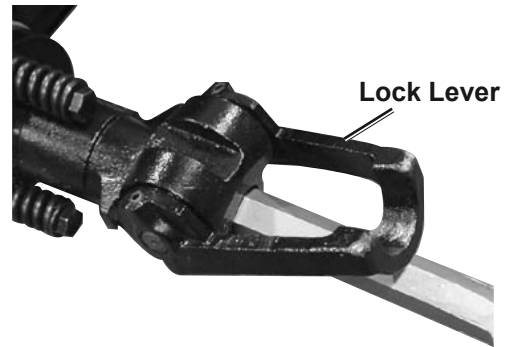


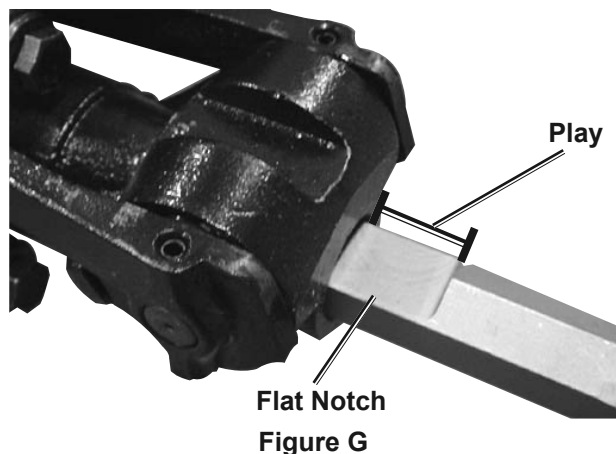
Figure E

3. Slide the Chisel in as far as it will go.
4. Pull the Lock Lever back until it touches the Spring, locking the Chisel into place. See Figure F.



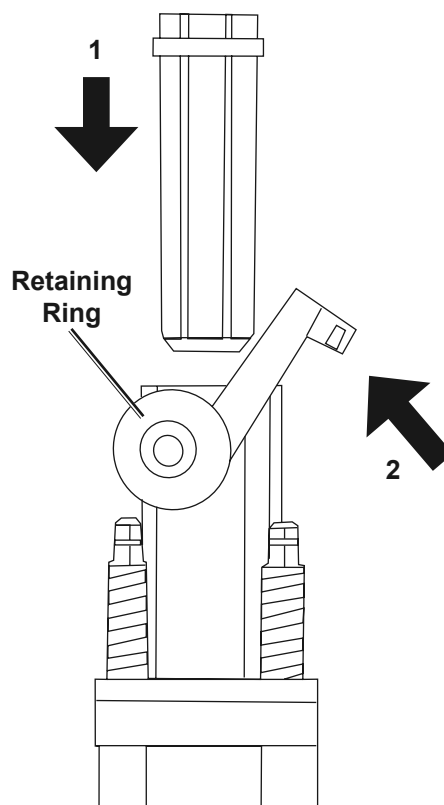
Figure F

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



## Mounting Chisels with a Collar

- Pull the Lock Lever open about 30-40° to the second engaging position as shown in Figure 2.
- Insert the collared Chisel.
- Slide the Chisel in as far as it will go.
- Return the Lock Lever to its original position to lock the Chisel in place. Physically check that the Chisel is secure before operating. The Chisel will have approximately 1-3/4" of play, but should not come out when pulled.



## Work Piece and Work Area Set Up

- 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.
- 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.
- Secure loose work pieces using a vise or clamps (not included) to prevent movement while working.
- 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.
- Protect power cord from crushing, abrasion, and scraping by broken rock or concrete.
- Keep power cord away from moving machines.

# General Operating Instructions

## ⚠ WARNING

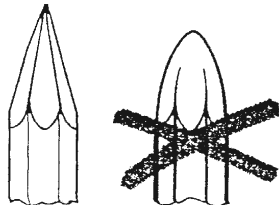
### TO PREVENT SERIOUS INJURY:

**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 Chisel for dullness, cracks, or other damage.



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

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.

SAFETY

SETUP

OPERATION

MAINTENANCE

## 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,
    - damaged cord/electrical wiring,
    - dull or cracked Chisel,
    - cracked or broken parts, and
    - 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.
  4. **!WARNING! If the supply cord of this power tool is damaged, it must be replaced only by a qualified service technician.**
- 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. Check Brushes every 100 hours of use of use and replace when necessary.

1. Unplug the Breaker Hammer.
2. Set the Breaker Hammer down on a work bench with the spline axles closer to the top. Remove the four Bolts (97) fastening Cover (96) in place. See Figure I.

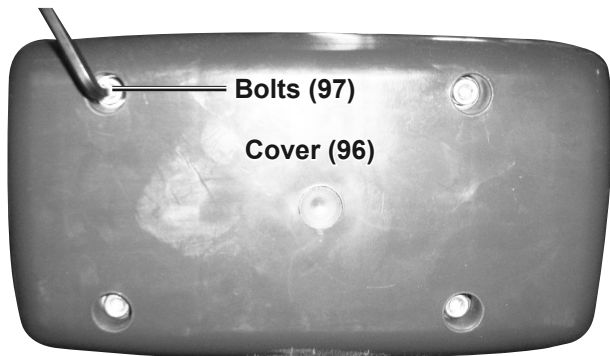


Figure I

3. Slide Cover off top of Breaker Hammer. See Figure J.

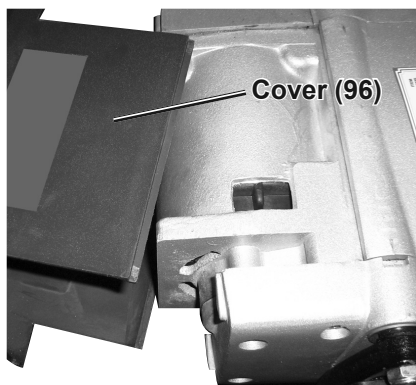


Figure J

4. Use a Wrench to loosen the Nut (40) holding the Left Handle (82) in place. See Figure K.

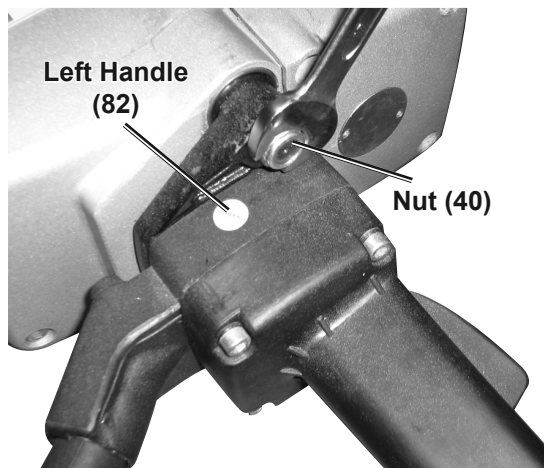


Figure K

**NOTICE:** When removing Left Handle, do not pull too far from Spline Axle (91). Only wiggle loose until partially off. See Figure L.

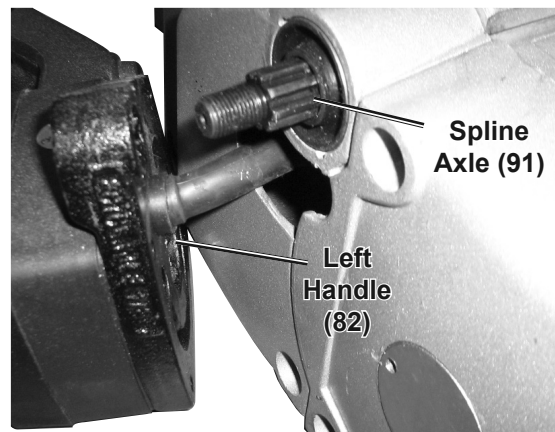


Figure L

5. Remove the four Bolts (5) from the side of the Gearbox (86). See Figure M.

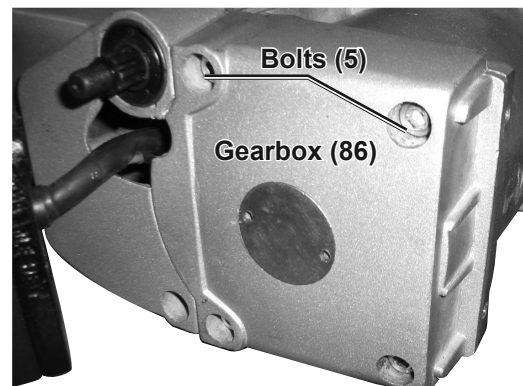


Figure M

6. Slide Gearbox open so that Wire Board (13) is visible. Remove Bolt (12) from Wire Fixing Board. See Figure N.

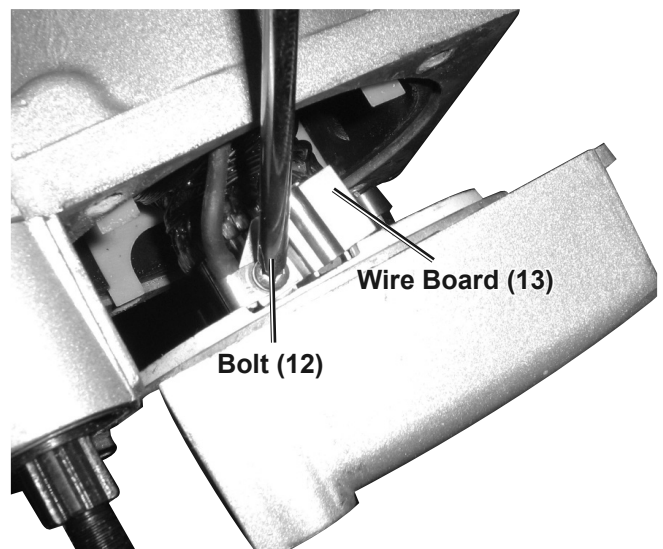


Figure N

7. Remove the Wire Board, then use tip of flat-edge screwdriver (not included) to carefully pop the Holder's spring off the top of the Carbon Brush (15). See Figure O.

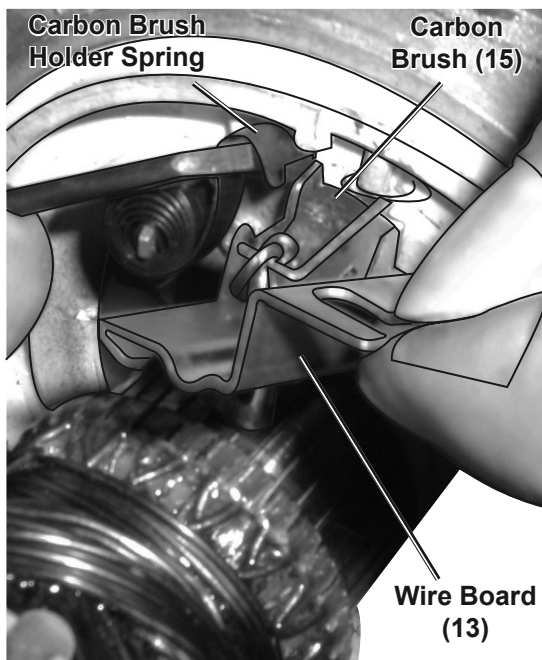


Figure O

**CAUTION!** The spring must be clear of the Holder lip to remove Carbon Brush.

8. Use the screwdriver to slide the Carbon Brush from the Holder. Then replace with new Carbon Brush.
9. Snap spring back into place and use Screw to replace Wire Board.

10. To better access the second Carbon Brush, turn the Breaker Hammer over. Repeat Steps 6 to 9 to replace second Carbon Brush.
11. Once both Carbon Brushes have been replaced, slide Gearbox shut.

**NOTICE:** When closing Gearbox, make sure tab along rim of Gearbox aligns with the slot in the housing. See Figure P.

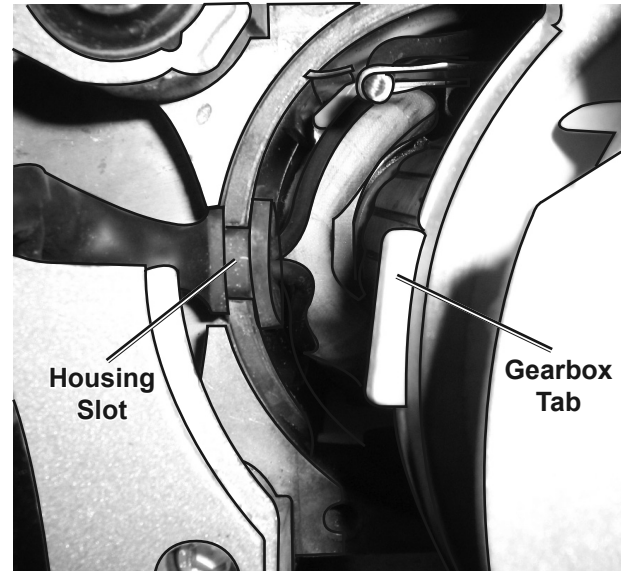


Figure P

12. Use the four screws to fasten the Gearbox back into place. Then replace Left Handle and fasten that into place against Gearbox. Replace Cover and fasten it into place using the Screws.

## Greasing Gearbox

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

1. Loosen the 4 Socket Head Bolts (57) that connect the Cylinder Case (58) to the Crank Shaft Case (8). Disassemble the Cylinder Case, Ram (60) and Piston (61). See Figure Q.
2. Clean the Cylinder Case, Piston and Ram thoroughly, inside and out.
3. Check the condition of the O-ring (62). If the outside diameter (OD) of O-ring is less than the Piston's OD, replace the O-ring.
4. Fill each of the 4 grooves inside the Cylinder Case with 0.5 ounces of synthetic high-temperature grease.
5. Slide the Ram back into the Cylinder Case and fill it with 0.5 ounces of tool oil.
6. Carefully slide the Piston into Ram, making sure that the O-ring stays in place and is not damaged.
7. Use the 4 Socket Head Bolts to connect the Cylinder Case to the Crank Shaft Case and tighten them securely.

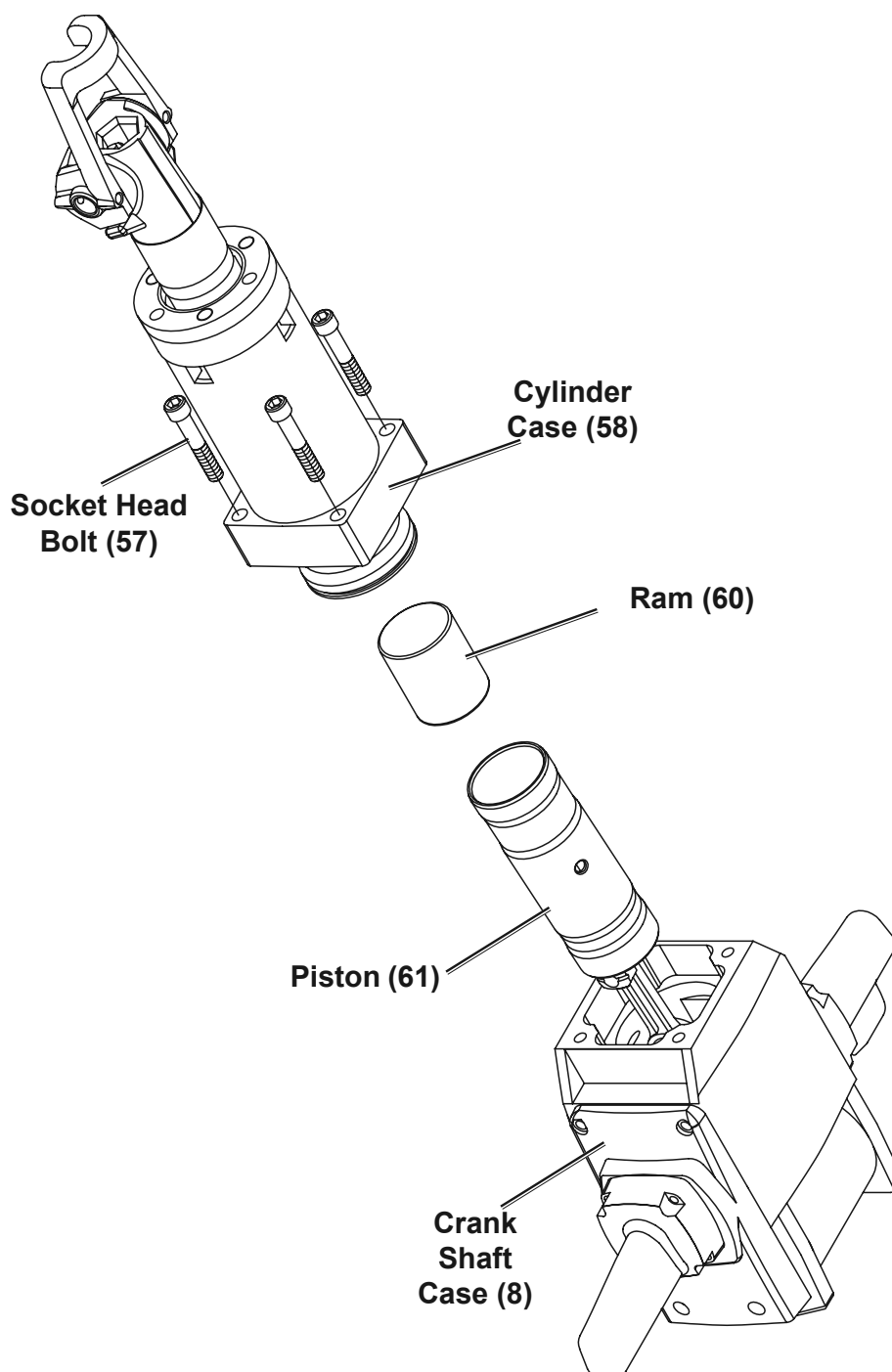



Figure Q



# Troubleshooting

Problem	Possible Causes	Likely Solutions
Tool will not start.	<ol style="list-style-type: none"> <li>1. Cord not connected.</li> <li>2. No power at outlet.</li> <li>3. Tool's thermal reset breaker tripped (if equipped).</li> <li>4. Internal damage or wear. (Carbon brushes or Trigger, for example.)</li> </ol>	<ol style="list-style-type: none"> <li>1. Check that cord is plugged in.</li> <li>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.</li> <li>3. Turn off tool and allow to cool. Press reset button on tool.</li> <li>4. Have technician service tool.</li> </ol>
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"> <li>1. Chisel dull or damaged.</li> <li>2. Internal lubrication cold.</li> <li>3. Carbon brushes worn or damaged.</li> </ol>	<ol style="list-style-type: none"> <li>1. Keep cutting chisels sharp. Replace as needed.</li> <li>2. Allow tool to operate with no load for 2 minutes before use.</li> <li>3. Have qualified technician replace brushes.</li> </ol>
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"> <li>1. Forcing tool to work too fast.</li> <li>2. Chisel dull or damaged.</li> <li>3. Blocked motor housing vents.</li> <li>4. Motor being strained by long or small diameter extension cord.</li> </ol>	<ol style="list-style-type: none"> <li>1. Allow tool to work at its own rate.</li> <li>2. Keep cutting chisels sharp. Replace as needed.</li> <li>3. Wear ANSI-approved safety goggles and NIOSH-approved dust mask/respirator while blowing dust out of motor using compressed air.</li> <li>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.</li> </ol>
 <b>Follow all safety precautions whenever diagnosing or servicing the tool. Disconnect power supply before service.</b>		

## PLEASE READ THE FOLLOWING CAREFULLY

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**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. Specify UPC 193175340368 when ordering parts.

## Parts List

Part	Description	Qty
1	Top Cover	1
2	Locking Bolt M12×1.25	1
3	Circlip Ø38	1
4*	Deep Groove Ball Bearing 6301-2Z	1
5	Bolt M8×35	9
6	Motor Bottom Cover	1
7	Fan	1
8	Crankshaft Case	1
9	Motor Housing	1
10	Stator	1
11	Stator Holding Plate	2
12	Tap Bolt ST4.8×60	2
13	Wire Board	2
14	Rotor	1
15 <sup>1</sup>	Carbon Brush	2
16	Spring Washer Ø4	2
17	Bolt M4×12	4
18	Right Side Bottom Cover	1
19	Tap Bolt ST3.5×9.5	2
20	Inductance Cover	1
21	Inductance	1
22	Stator Wiring Sheath	1
23	Aire Baffle Assembly	1
24	Inductance Holding	1
25**	Oil Seal Cover	1
26**	Seal Ring	1
27*	Bearing NA4904 Inner Ring	2
28	Crankshaft	1
29	Roller Bearing NU206EM	1
30	Oil Seal Ø35× Ø52×8	1
31**	Roller	1
32	Circlip Ø52	2
33	Spline Cuff	2
34	Bolt M8×20	4
35**	Inductance Wiring Sheath	1
36	Switch Cover	1
37	Capacitance	1
38	Switch HY87	1
39	Switch Chamber	1
40	Locking Nut M10×1-6H	2
41	Right Side Pendulum	1
42	Tap Bolt ST4.2×19	2
43	Sheath Ring	1
44	Pin B5×28	1
45	Tap Bolt ST4.2×16	2
46	Switch Chamber Cover	1
47	Cable Nip	1
48	Tap Bolt ST4.8×25	2
49	Bolt M6×55	4
50	Spring Washer Ø6	4

Part	Description	Qty
51	Right Handle	1
52	Trigger	1
53	Trigger Holding	1
54	Tap Bolt ST4.2×13	2
55	Cord Sheath	1
56	Plug	1
57	Bolt M12×70	4
58	Cylinder Case	1
59**	O-Ring	1
60	Ram	1
61	Piston	1
62**	O-Ring	1
63	Piston Pin	1
64	Connector	1
65*	NA4904 Outer Ring	2
66	Front Fixing Seal Ring	1
67	Front Fixing Cover	1
68	Spring Ø45	1
69**	Orientation Sheath	1
70	Second Striker	1
71	O-Ring Ø45×Ø5	2
72**	Spring Ø6.5	3
73	Saddle Gasket	3
74	Pole Pin Ø8×55	2
75	Bolt M12×110	3
76	Locking Lever	1
77	Pin Axis	1
78**	Urethane Ring	2
79	Chisel Socket	1
80	Left Side Pendulum	1
81	Damping Plate	1
82	Left Handle	1
83	Bolt M6×30	4
84	Anti-Vibration Plate	2
85	Nut M6	2
86	Gearbox	1
87**	Seal Washer	1
88	Big Gear	1
89	Adjustment Gasket	1
90*	Deep Groove Ball Bearing 6205	1
91	Spine Axle	1
92	Medium Gear	1
93	Needle Bearing K16×20×12.5	2
94	Medium Axis	1
95	Felt Ring Seal	1
96	Cover	1
97	Bolt M6×20	4
98*	Bearing Kit	1
99**	Seal Kit	1

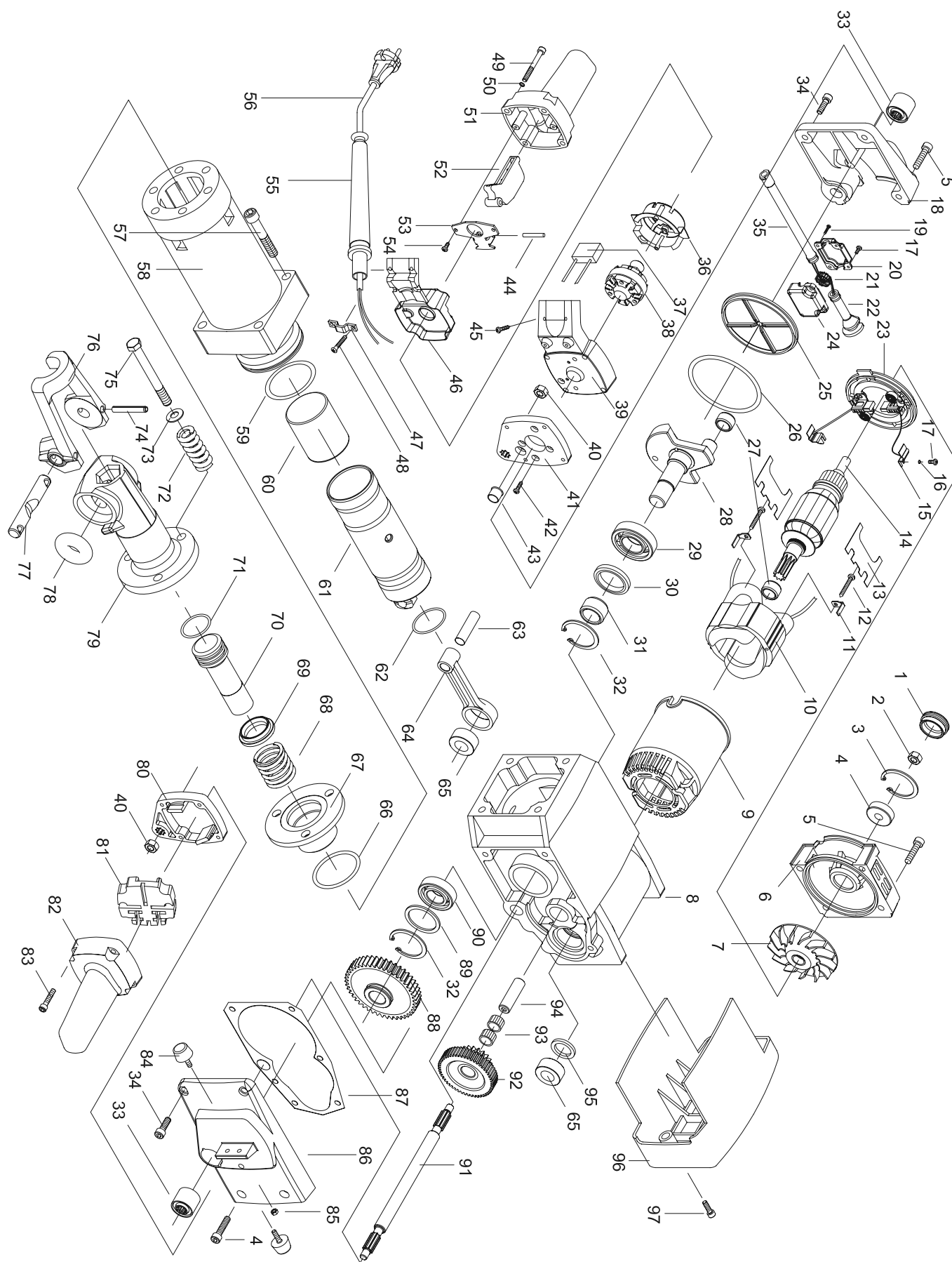
#15<sup>1</sup> - Two Carbon Brushes are installed; two replacement Brushes are included.

Parts with one or two asterisks are not available individually. You must purchase the parts kits.

#98\* - Bearing Kit includes part numbers 65\*, 90\*, 4\*, 27\*

#99\*\* - Seal Kit includes part numbers 62\*\*, 59\*\*, 87\*\*, 69\*\*, 35\*\*, 72\*\*, 78\*\*, 31\*\*, 26\*\*, 25\*\*

# Assembly Diagram



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.

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