

# Owner's Manual & Safety Instructions

**Save This Manual** Keep this manual for the safety warnings and precautions, assembly, operating, inspection, maintenance and cleaning procedures. Write the product's serial number in the back of the manual near the assembly diagram (or month and year of purchase if product has no number). Keep this manual and the receipt in a safe and dry place for future reference.

23i

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

## **1642E-B**

## **1" SDS-PLUS TYPE VARIABLE SPEED ROTARY HAMMER**



**Drill bit sold  
separately.**

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

**63443**

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.**

# Table of Contents

Safety .....	2	Maintenance .....	11
Specifications .....	8	Parts List and Diagram .....	14
Setup .....	8	Warranty .....	16
Operation.....	9		

SAFETY

SETUP

OPERATION

MAINTENANCE

## 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 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

- Keep work area clean and well lit.**  
*Cluttered or dark areas invite accidents.*
- 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.*
- Keep children and bystanders away while operating a power tool.**  
*Distractions can cause you to lose control.*

## Electrical Safety

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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

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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 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. **Remove any adjusting key or wrench before turning the power tool on.** *A wrench or a key left attached to a rotating part of the power tool may result in personal injury.*
5. **Do not overreach. Keep proper footing and balance at all times.** *This enables better control of the power tool in unexpected situations.*
6. **Dress properly. Do not wear loose clothing or jewelry. Keep your hair, clothing and gloves away from moving parts.** *Loose clothes, jewelry or long hair can be caught in moving parts.*
7. **If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used.** *Use of dust collection can reduce dust-related hazards.*
8. **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

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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.

## Rotary Hammer Safety Warnings

1. **Wear ear protectors with rotary hammers.**  
*Exposure to noise can cause hearing loss.*
2. **Use auxiliary handle(s), if supplied with the tool.**  
*Loss of control can cause personal injury.*
3. **Hold power tool by insulated gripping surfaces, when performing an operation where the cutting accessory may contact hidden wiring or its own cord.** *Cutting accessory contacting a "live" wire may make exposed metal parts of the power tool "live" and could give the operator an electric shock.*
4. Let bit cool before touching, changing or adjusting it. Bits heat up dramatically while in use, and can burn you.
5. If the drill bit jams, release the Trigger immediately; drill torque can cause injury or break bit.
6. Maintain labels and nameplates on the tool. These carry important safety information. If unreadable or missing, contact Harbor Freight Tools for a replacement.
7. Avoid unintentional starting.  
Prepare to begin work before turning on the tool.
8. 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.
9. When using a handheld power tool, maintain a firm grip on the tool with both hands to resist starting torque.
10. 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.
11. This product is not a toy.  
Keep it out of reach of children.
12. 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.
  - Do not use with Trigger locked on.
  - 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.
13. The warnings, precautions, and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.

## Vibration Safety

This tool vibrates during use. Repeated or long-term exposure to vibration may cause temporary or permanent physical injury, particularly to the hands, arms and shoulders. To reduce the risk of vibration-related injury:

1. Anyone using vibrating tools regularly or for an extended period should first be examined by a doctor and then have regular medical check-ups to ensure medical problems are not being caused or worsened from use. Pregnant women or people who have impaired blood circulation to the hand, past hand injuries, nervous system disorders, diabetes, or Raynaud's Disease should not use this tool. If you feel any symptoms related to vibration (such as tingling, numbness, and white or blue fingers), seek medical advice as soon as possible.
2. Do not smoke during use. Nicotine reduces the blood supply to the hands and fingers, increasing the risk of vibration-related injury.

3. Wear suitable gloves to reduce the vibration effects on the user.
4. Use tools with the lowest vibration when there is a choice.
5. Include vibration-free periods each day of work.
6. Grip tool as lightly as possible (while still keeping safe control of it). Let the tool do the work.
7. To reduce vibration, maintain the tool as explained in this manual. If any abnormal vibration occurs, stop use immediately.

## Silicosis Safety Measures

Masonry drilling on materials such as concrete (which contains crystalline silica) can cause silicosis (a serious lung disease), cancer and death. To reduce crystalline silica exposures in the workplace and prevent silicosis and silicosis-related deaths:

1. Conduct air monitoring to measure worker exposures.
2. Use containment methods to control the hazard and protect adjacent workers from exposure.
3. Practice good personal hygiene to avoid unnecessary exposure to silica dust.
4. Wear washable or disposable protective clothes at the work site. Shower and change into clean clothes before leaving the work site to prevent contamination of cars, homes and other work areas. Avoid skin exposure.
5. Always wear a NIOSH approved respirator and safety goggles. Ventilate the work area properly.
6. Provide periodic medical examinations for all workers who may be exposed to crystalline silica.
7. Post signs to warn workers about the hazard and to inform them about required protective equipment.
8. Provide workers with training that includes information about health effects, work practices and protective equipment for crystalline silica.
9. Report all cases of silicosis to State health departments and to OSHA or the Mine Safety and Health Administration (MSHA).



**SAVE THESE INSTRUCTIONS.**

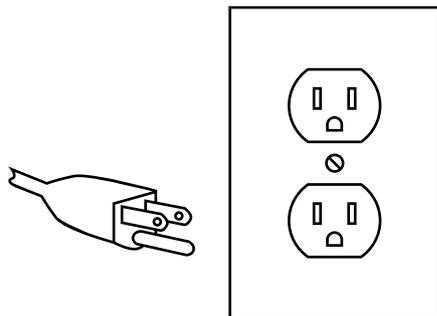
**⚠ WARNING**



**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**

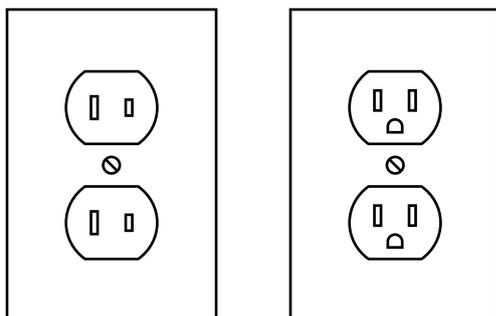


**3-Prong Plug and Outlet**

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

- Grounded** tools require a three wire extension cord. **Double Insulated** tools can use either a two or three wire extension cord.
- 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.)
- 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.)
- 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.)
- 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.)
- 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.

- 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.
- 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
	Volts
	Alternating Current
	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.

## Specifications

Electrical Rating	120VAC / 60Hz / 7.3A
No Load Speed	$n_0$ : 0-1150 RPM
Impact Rate	0-5100 BPM
Chuck Style	SDS-Plus Type
Chuck Size	1" (26mm)

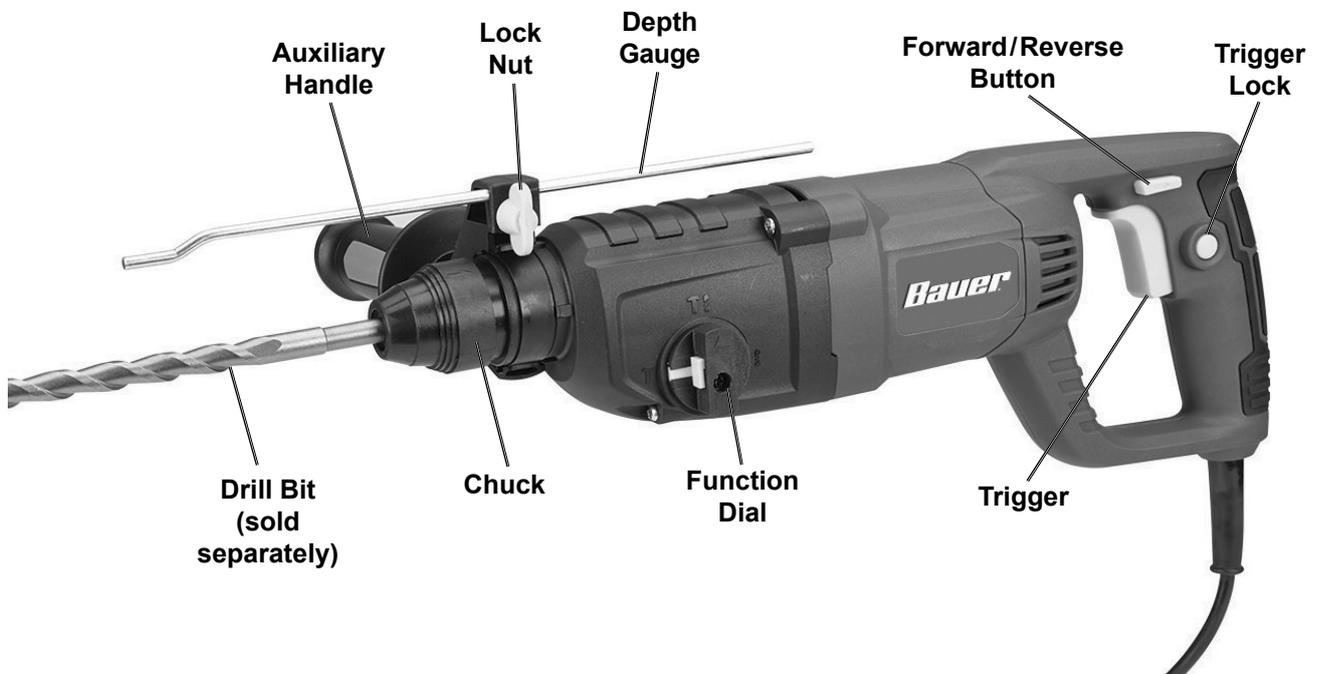
## Setup - Before Use:



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.

**Note:** For additional information regarding the parts listed in the following pages, refer to *Parts List and Diagram* on page 14.

## Functions



## 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.

### Adjusting the Auxiliary Handle

1. The Auxiliary Handle can be placed in a variety of positions.
2. To adjust the Auxiliary Handle, turn the Handle counterclockwise to loosen the band. Slide the Handle on or off the Rotary Hammer or to the desired position, then turn the Handle clockwise to secure it in place.

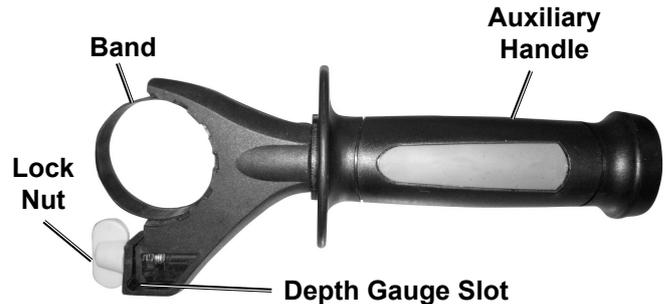


Figure A

### Using the Depth Gauge

1. The Depth Gauge can only be used if the Auxiliary Handle is in place and positioned on either side or the top of the Rotary Hammer. The body of the Hammer will interfere with the Depth Gauge if the Handle is in the bottom position.
2. Loosen the Lock Nut, then slide the Depth Gauge through the Depth Gauge Slot on the Auxiliary Handle. **See Figure A.**
3. Position the Depth Gauge as needed, then tighten the Lock Nut to secure the Depth Gauge in place.

### Selecting the Function

**CAUTION!** Move the Function Dial only when the Motor is stopped. Attempting to move the Function Dial while the Motor is engaged will result in abrupt Bit rotation and can cause property damage or injury.

**NOTICE:** When moving the Function Dial, make sure the Dial clicks into the desired position. If not actively engaged, the Dial could slip out of position resulting in tool damage.

Adjust the Function Dial before using the Rotary Hammer. To adjust the Function Dial, press the Dial Release Button on the Function Dial, then rotate the dial until it clicks in place, with the arrow pointing at one of the three positions:

- a. **To Hammer:** Rotate the Function Dial to the Hammer setting.
- b. **To Drill:** Rotate the Function dial to the Drill setting.
- c. **To Hammer/Drill:** Rotate the Function Dial to the Hammer/Drill setting.

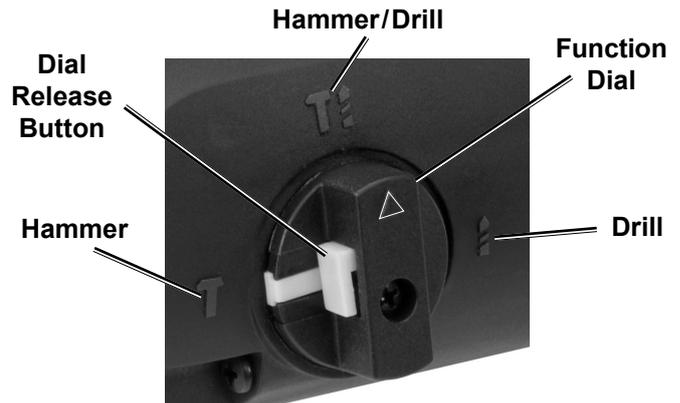


Figure B

## Changing SDS Type or SDS-Plus Type Drill Bits

**CAUTION!** Wear heavy-duty work gloves when inserting and removing drill bits. Drill bits become very hot during use. Do not remove drill bits until the bit has cooled. Do not strike stuck bits with a hammer.

1. Grease the drill bit shank before installing.
2. Pull back on the Chuck and insert the drill bit (sold separately). Make sure it slides all the way into the opening.

3. Release the Chuck.
4. Check that the drill bit is secured in place. It should not be able to be pulled out of the Chuck.

**NOTICE:** Use sharp bits. Dull, bent, or damaged bits will cause stress on the drill and/or break.

## 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 workpieces 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.

## Masonry Drilling Operation

1. Make sure that the Trigger is in the off-position and tool is unplugged.
2. Adjust the Auxiliary Handle as needed.
3. Select Forward or Reverse.
4. Select Function.
5. Adjust Depth Gauge.
6. Plug in the Power Cord.
7. Squeeze and hold the Trigger to turn on the Rotary Hammer.
8. To lock the Trigger in the ON position, squeeze the Trigger, press in the Trigger Lock button, and then release the Trigger. The tool will operate continuously. To stop the tool, squeeze and release the Trigger.
9. Do not apply excessive force, allow the tool to do the work.

### Concrete Drilling Tips:

- a. Do not add water to the drill hole.
  - b. Clean the bit flutes regularly while drilling.
  - c. Back the bit out of the hole often during drilling, especially when drilling deep holes.
  - d. Grease the bit shank and bit holder and keep the shank end of the bit dust and debris free.
  - e. Use the shortest bit practical.
  - f. When drilling deep holes, work in stages, use a short bit for the beginning of the hole, then change to a longer bit.
10. To prevent accidents, turn off the tool and unplug it after use. 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

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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,
  - 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. **⚠️ WARNING! TO PREVENT SERIOUS INJURY:** If the supply cord of this power tool is damaged, it must be replaced only by a qualified service technician.

# Troubleshooting

SAFETY

SETUP

OPERATION

MAINTENANCE

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 qualified technician service tool.</li> </ol>
Tool operates slowly.	<ol style="list-style-type: none"> <li>1. Forcing tool to work too fast.</li> <li>2. Extension cord too long or cord diameter too small.</li> </ol>	<ol style="list-style-type: none"> <li>1. Allow tool to work at its own rate.</li> <li>2. 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 on page 6.</li> </ol>
Performance decreases over time.	<ol style="list-style-type: none"> <li>1. Carbon brushes worn or damaged.</li> <li>2. Bit dull or damaged.</li> </ol>	<ol style="list-style-type: none"> <li>1. Have qualified technician replace brushes.</li> <li>2. Keep bits sharp. Replace as needed.</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. Bit 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 bits 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 on page 6.</li> </ol>
 <p><b>Follow all safety precautions whenever diagnosing or servicing the tool. Disconnect power supply before service.</b></p>		

## PLEASE READ THE FOLLOWING CAREFULLY

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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.

**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 193175340306 when ordering parts.

Parts List

SAFETY

SETUP

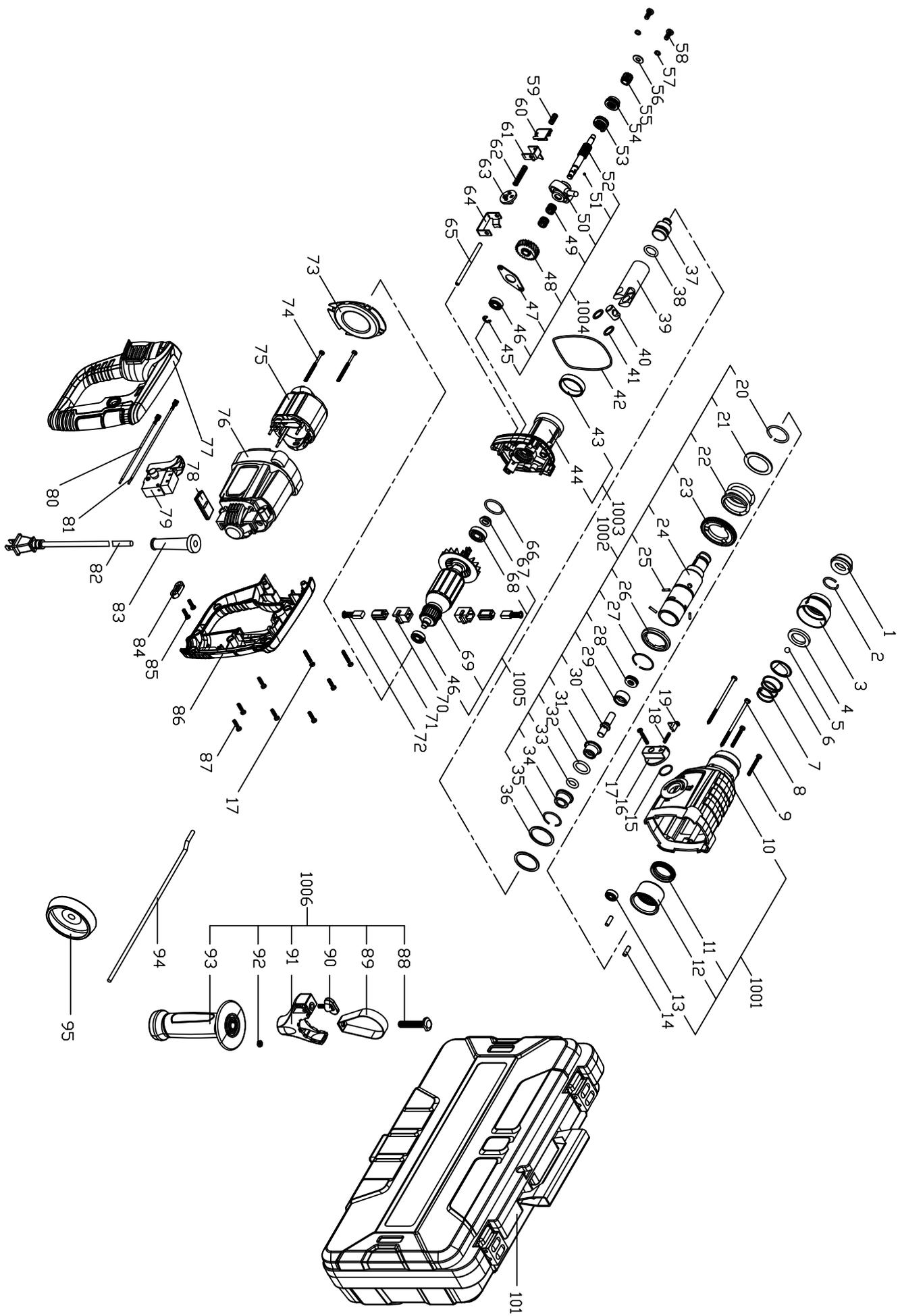
OPERATION

MAINTENANCE

Part	Description	Qty
1	Front Cover	1
2	Circlip	1
3	Chuck	1
4	Steel Ball Plate	1
5	Steel Ball	1
6	Steel Ball Board	1
7	Spring	1
8	Screw (ST4x90)	2
9	Screw (ST4x35)	2
<b>1001 Gear Box Assembly</b>		
10	Gear Box	1
11	Seal	1
12	Needle Bearing	1
13	Bearing (606-2Z)	1
14	Positioning Pin	2
15	O-Ring (Ø17xØ16)	1
16	Function Dial	1
17	Screw (ST4x25)	3
18	Button Spring	1
19	Dial Release Button	1
<b>1002 Rotating Sleeve Assembly</b>		
20	Circlip (Ø28xØ2.5)	1
21	Washer	1
22	Spring	1
23	Big Gear	1
24	Rotating Sleeve	1
25	Needle Roller (Ø2.5x11.8)	3
26	Clutch	1
27	Circlip (Ø29x1.5)	1
28	Rubber Plate	1
29	Guide Sleeve	1
30	Impact Hammer	1
31	Impact Hammer Cover	1
32	O-Ring (Ø18xØ3.5)	1
33	O-Ring (Ø10.6xØ3.7)	1
34	Guide Sleeve Holder	1
35	Circlip (Ø27.5xØ1.8)	1
36	Flat Washer	2
37	Pneumatic Hammer	1
38	O-Ring (Ø15xØ3)	1
39	Cylinder	1
40	Cylinder Pin	1
41	Cylinder Pad	2
42	O-Ring (Ø77xØ2)	1
<b>1003 Middle Cover Assembly</b>		
43	Oil-Retaining Bearing	1
44	Middle Cover	1
<b>1004 Intermediate Shaft Assembly</b>		
45	Split Washer	1
46	Bearing (607-2Z)	2
47	Bearing Board (607)	1

Part	Description	Qty
48	Primary Gear	1
49	Needle Bearing (K9x12x10)	2
50	Swinging Rod Bearing	1
51	Steel Ball (SØ3)	1
52	Intermediate Shaft	1
53	Hammer Gear Clutch	1
54	Drill Gear Clutch	1
55	Small Gear	1
56	Flat Washer (Ø15xØ6x1)	1
57	Spring Washer (M5)	2
58	Screw (M5x12)	2
59	Locking Spring	1
60	Locking Plate	1
61	Drill Gear Block	1
62	Pick Spring	1
63	Inner Button	1
64	Hammer Gear Block	1
65	Guide Pillar	1
66	O-Ring (Ø24xØ2.2)	1
<b>1005 Armature Assembly</b>		
67	Oil Retaining Cover	1
68	Bearing (609-2RS)	1
69	Armature	1
70	Brush Holder	2
71	Copper Brush Holder	2
72	Carbon Brush	2
73	Guide Ring	1
74	Screw (ST4x55)	2
75	Stator	1
76	Housing	1
77	Left Handle	1
78	Forward/Reverse Button	1
79	Trigger	1
80	Lead Wire 1	1
81	Lead Wire 2	1
82	Power Cord	1
83	Cord Protector	1
84	Cable Clamp(GS)	1
85	Screw (ST4x14)	2
86	Right Handle	1
87	Screw (ST4x16)	6
<b>1006 Auxiliary Handle Assembly</b>		
88	T Slot Bolt (M8x45)	1
89	Band	1
90	Thumbscrew (M5x14)	1
91	Bracket	1
92	nut (M5)	1
93	Auxiliary Handle	1
94	Depth Gauge	1
95	Sleeve	1
101	Case	

# 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.

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

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