

CHICAGO  WELDING®

SOLDERING GUN KIT 180 WATT WITH LIGHT

Model 04328

ASSEMBLY AND OPERATING INSTRUCTIONS



Visit our website at: <http://www.harborfreight.com>



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

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For technical questions or replacement parts, please call 1-800-444-3353.

Specifications

Soldering Power	180 watts; heats to 1135° F
Power Consumption	120V~, 60Hz, 1.5A
Line Cord	18 AWG x 2C, UL Listed; 2-prong polarized plug
Weight	2.35 lbs.
Features	Frontal light to illuminate workpiece
Lightbulb	6 volt, 3 watt
Accessories	3 - Soldering Tips 1 - Roll rosin cord solder 1 - Solder flux



Note: Performance of this tool may vary depending on variations in local line voltage. Extension cord usage may also affect tool performance.

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.

Important Safety Information

In this manual, on the labeling, and all other information provided with this product:



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

DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.

⚠ WARNING

WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.

⚠ CAUTION

CAUTION, used with the safety alert symbol, indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

NOTICE

NOTICE is used to address practices not related to personal injury.

CAUTION

CAUTION, without the safety alert symbol, is used to address practices not related to personal injury.

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 or battery-operated (cordless) power tool.

- 1. Work area safety**
 - a. Keep work area clean and well lit.**
Cluttered or dark areas invite accidents.
 - b. 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.*
 - c. Keep children and bystanders away while operating a power tool.** *Distractions can cause you to lose control.*
- 2. Electrical safety**
 - a. 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.*
 - b. 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.*
 - c. Do not expose power tools to rain or wet conditions.** *Water entering a power tool will increase the risk of electric shock.*

- d. **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.**
- e. **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.**
- f. **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.**

3. Personal safety

- a. **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.**
- b. **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.**
- c. **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 energizing power tools that have the switch on invites accidents.**
- d. **Do not overreach. Keep proper footing and balance at all times. This enables better control of the power tool in unexpected situations.**
- e. **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.**
- f. **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.**

4. Power tool use and care

- a. **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.**

- b. **Do not use the power tool if the switch does not turn it on and off. Any power tool that cannot be controlled with the switch is dangerous and must be repaired.**
- c. **Disconnect the plug from the power source and/or the battery pack from the power tool before making any adjustments, changing accessories, or storing power tools. Such preventive safety measures reduce the risk of starting the power tool accidentally.**
- d. **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.**
- e. **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.**
- f. **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.**

5. Service

- a. **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.**

SPECIFIC SAFETY RULES

1. **Maintain labels and nameplates on the Soldering Gun.** These carry important information. If unreadable or missing, contact Harbor Freight Tools for a replacement.
2. **Always wear safety impact eye goggles and heavy work gloves when using the Soldering Gun.** Using personal safety devices reduce the risk for injury. Safety impact eye goggles and heavy work gloves are available from Harbor Freight Tools.
3. **Maintain a safe working environment.** Keep the work area well lit. Make sure there is adequate surrounding workspace. Always keep the work area free of obstructions, grease, oil, trash, and other debris. Do not use a power tool in areas near flammable chemicals, dusts, and vapors. Do not use this product in a damp or wet location.

4. **Make sure to read and understand all instructions and safety precautions as outlined in the instruction manual.**
5. **Always keep the extension cord away from heated parts on the tool.**
6. **Avoid unintentional starting.** Make sure you are prepared to begin work before turning on the Soldering Gun.
7. **When using the Soldering Gun, always maintain a firm grip on the tool.**
8. **Connect tool to properly grounded outlets.** To provide continued protection against risk of electric shock, connect to properly grounded outlets only. Do not immerse the Soldering Gun in water.
9. **Use of any accessory or attachment other than those mentioned in the manual may result in personal injury and/or property damage.**
10. **Avoid Serious Burns.** The Soldering Gun reaches 1135° F. Do not point the Soldering Gun, or turn yourself toward another person while soldering.
11. **Do not open Soldering Gun.** Do not attempt to open and repair this unit. It must be serviced by a qualified technician.
12. **Indoor use only.** This product was designed primarily for indoor use only.
13. **Avoid damaging equipment and tools.** Always de-energize any circuits or wires to be soldered before making connections and soldering.
14. **Do not breathe soldering fumes.** Never breath soldering fumes as they may make you ill.
15. **Never lay the Soldering Gun down where the heated parts can contact flammable materials or electrical wires.**
16. **Never leave the Soldering Gun unattended when it is plugged into an electrical outlet.** Turn off the tool, and unplug it from its electrical outlet before leaving.
17. **Always unplug the Soldering Gun from its electrical outlet before performing and inspection, maintenance, or cleaning procedures.**
18. **WARNING:** This product, when used for welding, plasma cutting, soldering, or similar applications, produces chemicals known to the State of California to cause cancer and birth defects (or other reproductive harm). (California Health & Safety Code § 25249.5, et seq.)

19. **WARNING:** Handling the cord on this product will expose you to lead, a chemical known to the State of California to cause cancer, and birth defects or other reproductive harm. Wash hands after handling. (California Health & Safety Code § 25249.5, et seq.)
20. The warnings, precautions, and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.



SAVE THESE INSTRUCTIONS.

Grounding

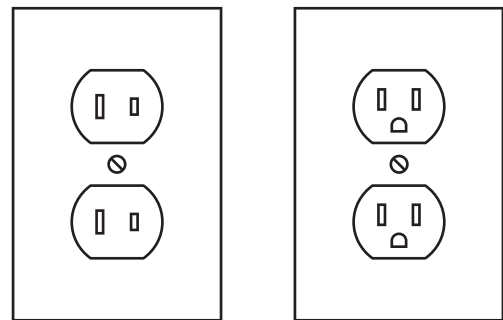
! WARNING



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



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 on page 5.)
- 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.

Symbology












	Double Insulated
	Canadian Standards Association
	Underwriters Laboratories, Inc.
	Volts Alternating Current
	Amperes
	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 Hearing Loss. Wear hearing protection.
	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.

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

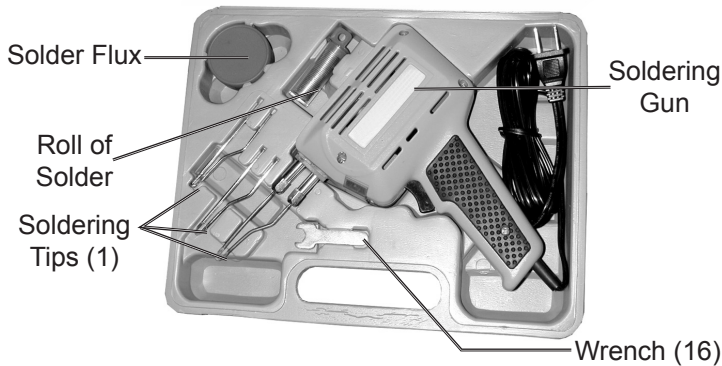
NAMEPLATE AMPERES (at full load)	EXTENSION CORD LENGTH				
	25'	50'	75'	100'	150'
0 – 2.0	18	18	18	18	16
2.1 – 3.4	18	18	18	16	14
3.5 – 5.0	18	18	16	14	12
5.1 – 7.0	18	16	14	12	12
7.1 – 12.0	18	14	12	10	-
12.1 – 16.0	14	12	10	-	-

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

UNPACKING

When unpacking, check to make sure all the parts shown on the **Parts List on page 13** are included. If any parts are missing or broken, please call Harbor Freight Tools at 1-800-444-3353 as soon as possible.

ASSEMBLY AND OPERATING INSTRUCTIONS



NOTE: For additional information regarding the parts listed in the following pages, refer to the **Assembly Diagram on page 14**.

CAUTION: Unplug the Power Cord of the Soldering Gun from its electrical outlet prior to making any adjustments to the tool.

Preparing the Soldering Tip

1. Using Wrench (16), check that the Soldering Tip Nuts (2) are not loose. Do not overtighten as you may strip the threads.
2. Set the Soldering Gun on the workbench, and plug the Line Cord into an electrical outlet.

3. Press on the Trigger Switch (12) until the Soldering Tip (1) heats up.
4. Apply a sufficient amount of rosin-core solder to melt over the entire tip of the Soldering Gun. Wipe the tip with a rag until the tip is clean and shiny.

Preparing the Metal to be Soldered

1. If wires are to be soldered, thoroughly clean or scrape the wires so that only the clean copper is showing. Make the wire splice.
2. If other metals are to be soldered, thoroughly clean or scrape the metal surfaces. It may be necessary to apply acid flux (not supplied) to the metal surfaces before soldering.

Caution: If soldering on printed circuit boards, too much heat can soften the plastic form and loosen the metal eyelet connections. Use minimal heat, or solder with a low wattage soldering pencil. Never use acid core solder on wiring circuits.

Soldering

1. Press on the Trigger Switch (12) until the Soldering Tip (1) heats up.
2. Brush on solder flux, as needed, to the workpiece. Place the Soldering Tip to the joint, wiring splice, or metal to be soldered.
3. Apply solder to the wire splice or metal to be soldered, not the Soldering Tip. When the splice or metal is hot enough, it will melt the solder causing it to flow within the splice or between the metal surfaces.
4. When the solder has flowed over the entire wire splice or metal surface, remove the Soldering Tip and release the Trigger Switch. If you are new to soldering, you may find it helpful to practice soldering first on scrap wires and splices.

INSPECTION, MAINTENANCE, AND CLEANING



Procedures not specifically explained in this manual must be performed only by a qualified technician.

!WARNING

TO PREVENT SERIOUS INJURY FROM ACCIDENTAL OPERATION:

Release the Trigger, unplug the tool from its electrical outlet, and allow it to cool completely before performing any inspection, maintenance, or cleaning procedures.

TO PREVENT SERIOUS INJURY FROM TOOL FAILURE:

Do not use damaged equipment. If abnormal noise or vibration occurs, have the problem corrected before further use.

1. **BEFORE EACH USE**, inspect the general condition of the tool. Check for loose hardware, misalignment or binding of moving parts, cracked or broken parts, damaged electrical wiring, and any other condition that may affect its safe operation.

Maintenance

Note: Maintenance requiring disassembly of this tool should only be performed while the product is disconnected from the electrical supply circuit.

1. When you are finished soldering, heat up the Soldering Tip (1) again and apply a small amount of rosin-core solder to coat the tip. Wipe off with a rag. This will leave the tip clean and ready for use again.
2. If the Soldering Tip cracks or becomes eroded, the Soldering Tip needs to be replaced. In this condition, it will not heat up properly.

Accessories

Replacing the Soldering Tip

1. To replace the Soldering Tip, place the Wrench (16) over each Nut (2) and remove by turning counterclockwise.
2. Push the Nuts toward the Soldering Tip end, exposing the opposite ends of the Soldering Tip.
3. Guide the old Soldering Tip out of the Transformer Assembly (4) mounting posts (A). Refer to the Assembly Drawing on the next page.
4. Straighten out the ends of the old Soldering Tip using pliers, and remove the Nuts (2).
5. Place the Nuts over the mounting ends of the new Soldering Tip.
6. Using pliers, bend the mounting ends of the new Soldering Tip so that about 3/16 inch is at 90 degrees. If the bend is too long, the Nuts will not fit over mounting posts.
7. Guide the bent ends into the mounting posts of the Transformer Assembly.
8. Carefully tighten the Nuts over the mounting posts. Make sure that the Nuts fit squarely over threads or damage will occur to the mounting post threads. Do not overtighten.

Replacing the Light Bulb

1. Remove the Light Bulb Lens (15) from the front of the Soldering Gun.
2. Pull out the burnt Light Bulb and replace with a new one of the same voltage and type (see Specifications).
3. Replace the Light Bulb Lens.

Parts List

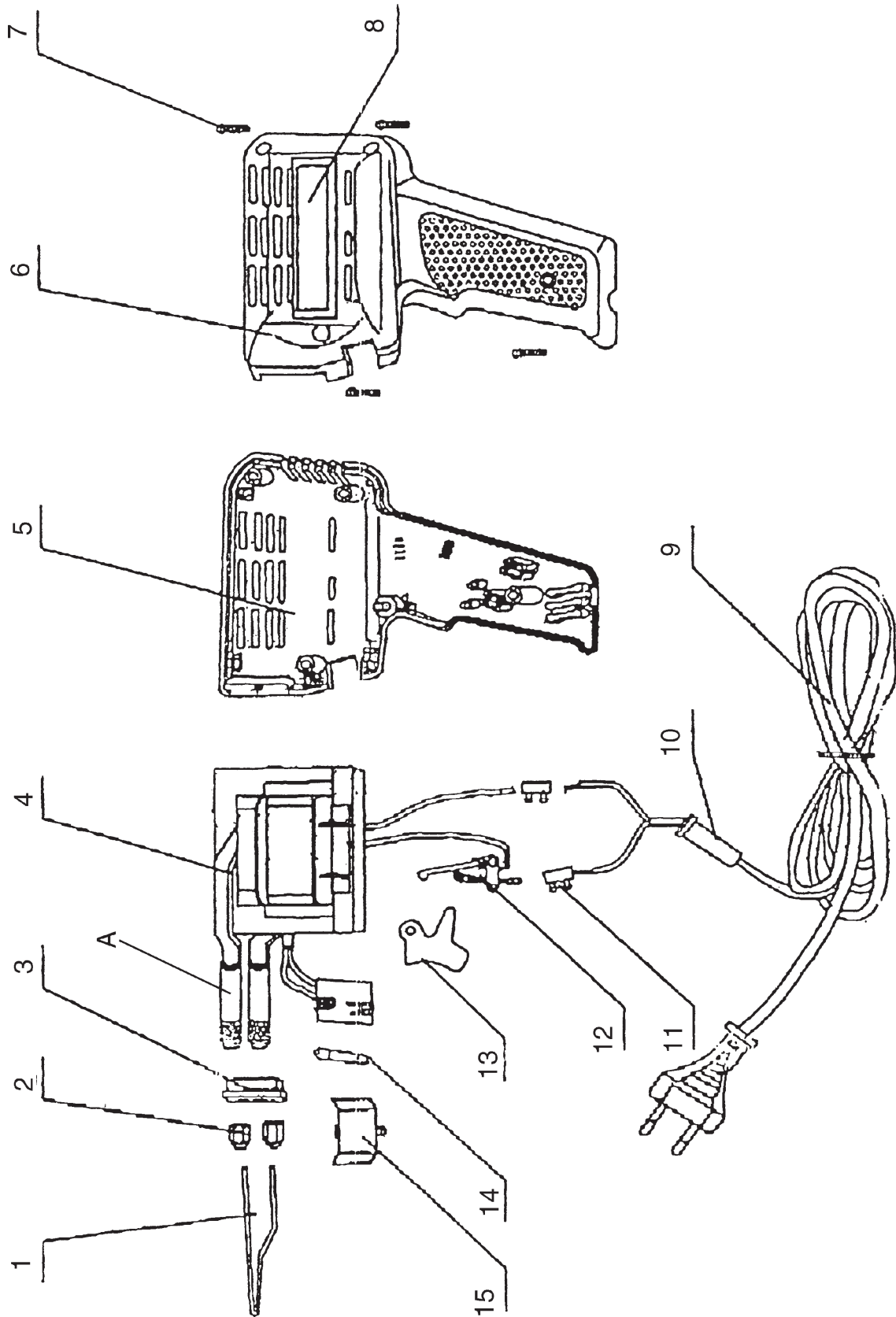
Item	Description	Qty
1	Soldering Tip	3
2	Nut	2
3	Heat Insulator	1
4	Transformer Asm.	1
5	Cover (right)	1
6	Cover (left)	1
7	Screw	4
8	Plate	2
9	Line Cord	1
10	Strain Relief, Line Cord	1
11	Terminal	2
12	Trigger	1
13	Button	1
14	Light Bulb	1
15	Lens, Light Bulb	1
16	Wrench	1
17	Blow Mold Case	1

PLEASE READ THE FOLLOWING CAREFULLY

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

NOTE: Some parts are listed and shown for illustration purposes only, and are not available individually as replacement parts.

ASSEMBLY DIAGRAM



Limited 1 Year 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 one year from the date of purchase (90 days if used by a professional contractor or if used as rental equipment). This warranty does not apply to damage due directly or indirectly, to misuse, abuse, negligence or accidents, repairs or alterations outside our facilities, 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.

3491 Mission Oaks Blvd. • PO Box 6009
Camarillo, CA 93011 • (800) 444-3353