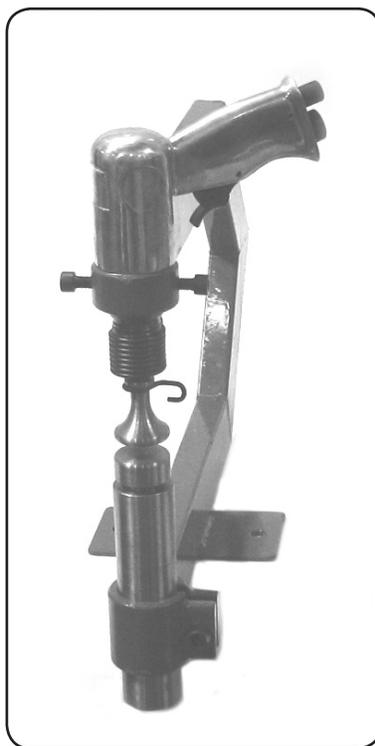


CENTRAL PNEUMATIC®

BENCHTOP PLANISHING HAMMER

Model 97028

ASSEMBLY AND OPERATING INSTRUCTIONS



Diagrams within this manual may not be drawn proportionally.
Due to continuing improvements, actual product may differ slightly from the product described herein.

Distributed exclusively by Harbor Freight Tools®.

3491 Mission Oaks Blvd., Camarillo, CA 93011

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.

REV 08b

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 SAFETY RULES



WARNING! Read all instructions

Failure to follow all instructions listed below may result in serious injury.

SAVE THESE INSTRUCTIONS

1. **Work area safety**

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

2. **Personal safety**

- a. Stay alert, watch what you are doing and use common sense when operating. Do not use this tool while you are tired or under the influence of drugs, alcohol or medication. *A moment of inattention while operating may result in serious personal injury.*
- b. Use safety equipment. Always wear ANSI-approved safety goggles and heavy-duty work gloves. *Safety equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.*
- c. Do not overreach. Keep proper footing and balance at all times. *This enables better control of the power tool in unexpected situations.*
- d. 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.*
- e. **WARNING:** The brass components of this product contain lead, a chemical known to the State of California to cause birth defects (or other reproductive harm). (California Health & Safety code § 25249.5, *et seq.*)

3. **Tool use and care**

- a. Do not force the tool. Use the correct tool for your application. *The correct tool will do the job better and safer at the rate for which it was designed.*
- b. Do not use the Planishing Hammer if the Trigger (16) does not completely start and stop the action of the tool. *If the Planishing Hammer cannot be controlled with the Trigger (16), it is dangerous and must be repaired.*
- c. Disconnect the Planishing Hammer from the air source before making any adjustments, changing accessories, or storing. *Such preventive safety measures reduce the risk of starting the tool accidentally.*
- d. Store the Planishing Hammer out of the reach of children and do not allow persons unfamiliar with this tool or these instructions to operate the Planishing Hammer. *Tools are dangerous in the hands of untrained users.*

- e. Maintain tools. Check for misalignment or binding of moving parts, breakage of parts, damaged or cracked hoses, bad connections and any other condition that may affect the tool's operation. If damaged, have the tool repaired before use. *Many accidents are caused by poorly maintained tools. Properly maintained tools are less likely to bind and are easier to control.*
- f. Use the Planishing Hammer in accordance with these instructions and in the manner intended for this particular type of tool, taking into account the working conditions and the work to be performed. *Use of this tool for operations different from those intended could result in a hazardous situation.*

4. **Service**

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

VIBRATION HAZARD

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

1. Anyone using vibrating tools regularly or for an extended period should first be examined by a doctor and then have regular medical check-ups to ensure medical problems are not being caused or worsened from use. Pregnant women or people who have impaired blood circulation to the hand, past hand injuries, nervous system disorders, diabetes, or Raynaud's Disease should not use this tool. If you feel any medical or physical symptoms related to vibration (such as tingling, numbness, and white or blue fingers), seek medical advice as soon as possible.
2. Do not smoke during use. Nicotine reduces the blood supply to the hands and fingers, increasing the risk of vibration-related injury.
3. Wear suitable gloves to reduce the vibration effects on the user.
4. Use tools with the lowest vibration when there is a choice between different processes.
5. Include vibration-free periods each day of work.
6. Grip the workpiece 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.

SPECIFIC SAFETY RULES

WARNING! To prevent serious injury and/or property damage:

1. Wear ANSI-approved safety goggles and heavy-duty work gloves during use.
2. Do not exceed max air pressure of 100 PSI.
3. Disconnect from air supply when not in use.
4. Mount on flat, level surface able to support the weight of the Planishing Hammer and the material being hammered.
5. Inspect before each use; do not use if parts are loose or damaged.
6. Read this manual before set up and/or use.
7. Maintain labels and nameplates on the tool. These carry important safety information. If unreadable or missing, contact Harbor Freight Tools for a replacement.
8. Avoid unintentional starting. Prepare to begin work before turning on the tool.
9. Keep fingers away from the anvil head.
10. Do not leave the tool unattended when it is plugged into an air supply. Turn off the tool, and disconnect from air supply before leaving.
11. Use clamps (not included) or other practical ways to secure and support the workpiece to a stable platform. Holding the work by hand or against your body is unstable and may lead to loss of control.
12. This product is not a toy. Keep it out of reach of children.
13. Some dust created by power sanding, sawing, grinding, drilling, and other construction activities, contains chemicals known [to the State of California] to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:
Lead from lead-based paints
Crystalline silica from bricks and cement or other masonry products
Arsenic and chromium from chemically treated lumber
Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles. (California Health & Safety Code § 25249.5, *et seq.*)
14. 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.



SPECIFICATIONS

Construction Materials	Stand/Mounting Bracket: Formed Steel Anvil Shaft and Anvils: Machined Steel Air Hammer: Die-Cast Aluminum Air Hose: Black Braided Reinforced Rubber w/Crimped Brass Fittings
Mounting Plate Thickness	11 Gauge Steel Plate
Air Inlet Size	1/4" X 18 NPT (Female)
Activation Method	Variable Speed Remote Foot Pedal
Maximum Air Pressure	100 PSI
Air Consumption	90 PSI @11 SCFM
Blows Per Minute	700
Net Weight	16.20 lb
Hose Length	13 ft.

UNPACKING

When unpacking, check to make sure that the item is intact and undamaged. If any parts are missing or broken, please call Harbor Freight Tools at the number shown on the cover of this manual as soon as possible.

SET UP INSTRUCTIONS



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

Note: For additional information regarding the parts listed in the following pages, refer to the Assembly Diagram near the end of this manual.

ASSEMBLY

1. Mount the Frame (24) to workbench, and make sure it is fastened securely to prevent loosening during use.
2. The Frame can be filled with sand if you wish to help minimize sound and vibration.

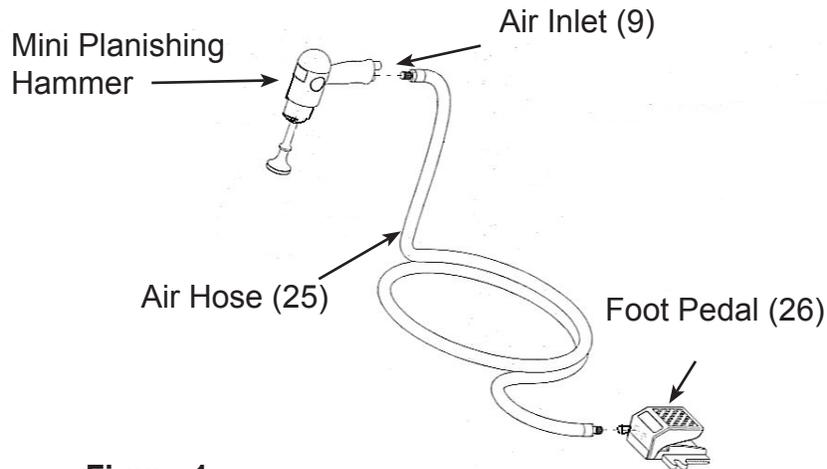
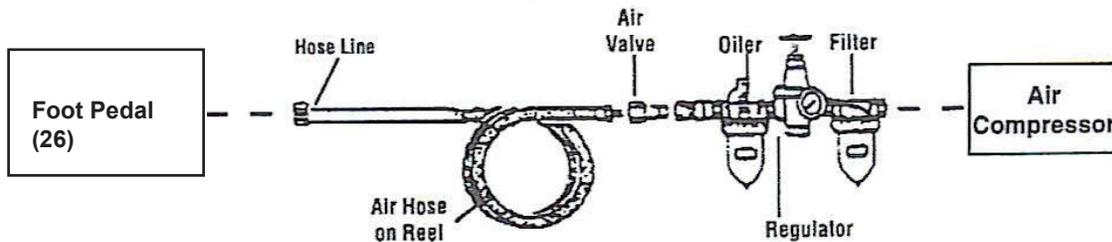


Figure 1

3. Connect the Rubber Air Hose (25) to both the Air Inlet (9) and the Foot Pedal (26). **See Figure 1.**



Recommended Air Line Components

Figure 2

4. Connect pneumatic air supply to the Foot Pedal (26). **See Figure 2 and Figure 3 on page 8.**
5. The air line components listed in Figure 2 are not included as part of this tool but may be purchased at Harbor Freight tools.
6. Be sure to tighten all fittings and connections.



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.



**Air Outlet, connect
hose to Hammer**

Figure 3

**Air Inlet, connect hose
to air compressor**

7. The Frame (24) should be positioned so that the mounted Mini Planishing Hammer is extending slightly over the edge of the workbench. This will help to accommodate various shapes being planished.
8. Screw off the Coil Spring (15) and remove the Anvil Head (21) and Hammer Shank (23) from the Cylinder (14).
9. Slide the Hammer Body (1) into the Frame (24).
10. Insert the Anvil Head (21) into the Anvil Shaft (19) and tighten in place with Hex Screw (20).
11. Place the Anvil Head (21) and Hammer Shank (23) into the Coil Spring (15) and screw onto the Cylinder (14). **See Parts List and Assembly Diagram on page 11 and 12.**

OPERATING INSTRUCTIONS

OPERATING INSTRUCTIONS

1. Turn on the Air Compressor (not included) and set it to 90 PSI. Do not exceed maximum air pressure of 100 PSI.
2. Before planishing, test the operation by pressing down on the Foot Pedal (26).
3. Adjust the cycle speed of the Planishing Hammer by turning the Regulator (4) clockwise or counterclockwise.
4. Using both hands, place the material to be planished between the Anvil Head (21) and the Hammer Shank (23).
5. Press down on the Foot Pedal (26) to operate planishing action.
6. When finished, remove your foot from the Foot Pedal (26) and wait for the action to stop completely.
7. Turn the air compressor off.
8. Press down on the Foot Pedal (26) to release any remaining air pressure within the Planishing Hammer.
9. To prevent accidents, always disconnect the air supply after use. Clean, then store the tool indoors out of children's reach.

MAINTENANCE AND SERVICING

▲WARNING

Risk of serious personal injury, unplug the tool from its air supply before performing any inspection, maintenance, or cleaning procedures.

Damaged equipment can fail, causing serious personal injury. 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 screws, misalignment or binding of moving parts, cracked or broken parts, damaged air hoses, and any other condition that may affect its safe operation.
2. **AFTER USE**, clean external surfaces of the tool with clean, moist cloth.
3. **WARNING! If the air hose is damaged, DO NOT attempt to repair it. It must be replaced.**

Troubleshooting

Problem	Possible Causes	Probable Solutions
Mini Planishing Hammer will not operate when Foot Pedal is depressed.	No air pressure in air line. Regulator valve is closed.	Check all hoses, connections and make sure the compressor is operating. Turn the valve counterclockwise.
Mini Planishing Hammer operates but at diminished pressure.	Air Pressure is below normal operating pressure of 90 PSI. Regulator valve is closed.	Check Regulator on compressor and Planishing Hammer. Turn the valve counterclockwise.

Be sure to follow all manufacturer's instructions, safety warnings and maintenance procedures in the manual of the air compressor you are using with this Mini Planishing Hammer.

LEASE 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.

Record Product's Serial Number Here: _____

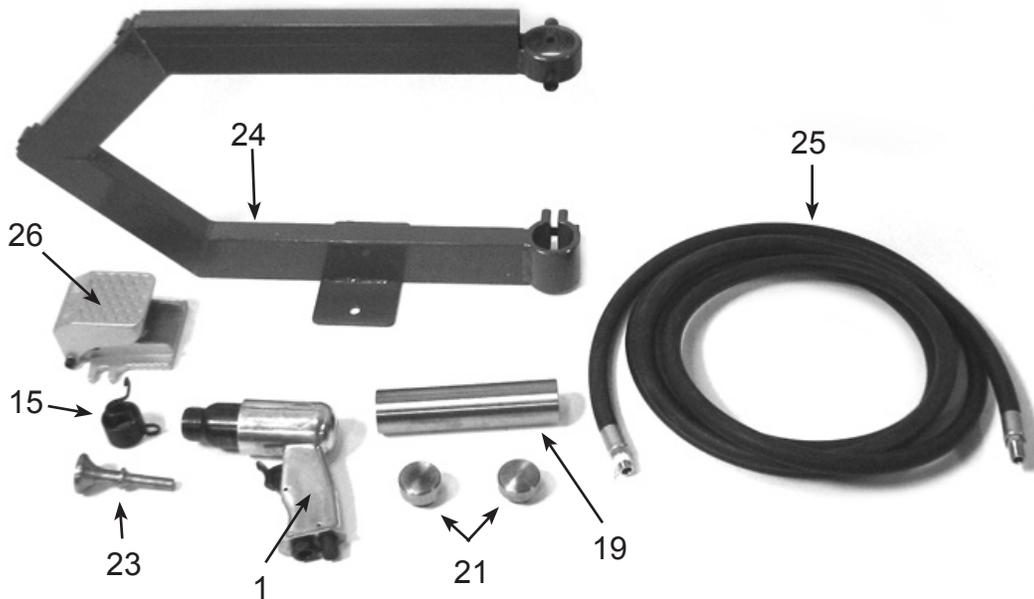
Note: If product has no serial number, record month and year of purchase instead.

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

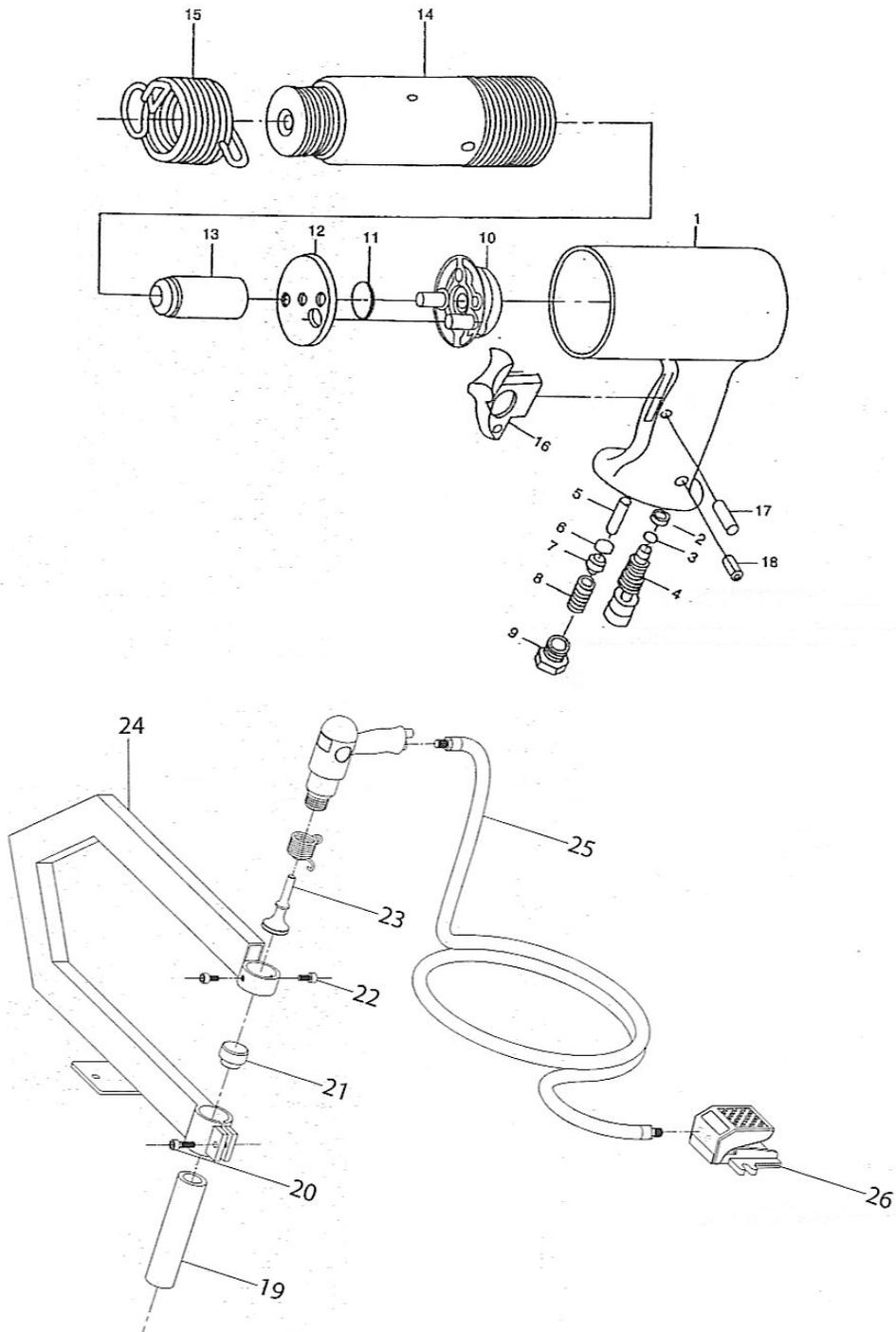
PARTS LIST

Part	Description	Q'ty	Part	Description	Q'ty
1	Body	1	14	Cylinder	1
2	Rubber Gasket	1	15	Coil Spring	1
3	O-Ring	2	16	Trigger	1
4	Regulator	1	17	Pin	1
5	Control Pin	1	18	Pin	1
6	O-Ring	1	19	Anvil Shaft	1
7	Ball	1	20	Hex Screw	1
8	Spring	1	21	Anvil Head	2
9	Air Inlet	1	22	Hex Screw	2
10	Rear Valve	1	23	Hammer Shank	1
11	Valve Disk	1	24	Frame	1
12	Front Valve	1	25	Air Hose	1
13	Piston	1	26	Foot Pedal	1

PARTS PHOTO



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.

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