

CHICAGO
Electric[®]Power Tools

20 GALLON PARTS WASHER

Model 94702

ASSEMBLY & OPERATING INSTRUCTIONS



Due to continuing improvement, actual product may differ slightly from the product described herein.



3491 Mission Oaks Blvd., Camarillo, CA 93011
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For technical questions and replacement parts please call 1-800-444-3353.

THANK YOU for choosing a **HARBOR FREIGHT TOOLS** product. For future reference, please complete the owner's record below:

Model _____ **Serial No.** _____ **Purchase Date** _____

SAVE THE RECEIPT, WARRANTY AND THESE INSTRUCTIONS. It is important that you read the entire manual to become familiar with the unit BEFORE you begin assembly.

Technical Specifications

Pump:	120V ~, 60Hz, 0.23A
Power Cord:	62" L, SJT 18AWG X 3C
Material:	Formed 18 gauge sheet steel, flexible steel tubing
Overall Dimensions:	21-1/2" L X 31" W X 34-1/2" H (lid closed); 51-3/4" H (lid open)
Tank Capacity:	20 Gallons
Tank Dimensions:	19" L X 28" W X 10-1/4" D
Max Flow:	20 Liters per minute
Unit Weight:	50 Lbs.
Switch:	2-position rocker switch with internal light



READ ALL INSTRUCTIONS BEFORE USING THIS PRODUCT!

Safety Warnings and Precautions

WARNING: When using product, basic safety precautions should always be followed to reduce the risk of personal injury and damage to equipment.

Read all instructions before using this product!

GENERAL SAFETY RULES

WARNING!

READ AND UNDERSTAND ALL INSTRUCTIONS
Failure to follow all instructions listed below may result in
electric shock, fire, and/or serious injury.
SAVE THESE INSTRUCTIONS

WORK AREA

1. **Keep your work area clean and well lit.** Cluttered benches and dark areas invite accidents.
2. **Do not operate the Parts Washer in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust.** Electrical products create sparks which may ignite the dust or fumes.
3. **Keep bystanders, children, and visitors away while operating the Parts Washer.** Distractions can result in accidents and injuries.

ELECTRICAL SAFETY

4. **Grounded products must be plugged into an outlet properly installed and grounded in accordance with all codes and ordinances. Never remove the grounding prong or modify the plug in any way. Do not use any adapter plugs. Check with a qualified electrician if you are in doubt as to whether the outlet is properly grounded.** If a grounded product should electrically malfunction or break down, grounding provides a low resistance path to carry electricity away from the user.
5. **Double insulated products are equipped with a polarized plug (one blade is wider than the other). This plug will fit in a polarized outlet only one way. If the plug does not fit fully in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician to install a polarized outlet. Do not change the plug in any way.** Double insulation eliminates the need for the three wire grounded power cord and grounded power supply system.
6. **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.
7. **Do not expose the Parts Washer to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.
8. **Do not abuse the Power Cord. Never use the Power Cord to carry the Parts Washer or to pull the Plug from an outlet. Keep the Power Cord away from heat, oil, sharp edges, or moving parts. Replace damaged Power Cords immediately.** Damaged Power Cords increase the risk of electric shock.
9. **When operating the Parts Washer outside, use an outdoor extension cord marked “W-A” or “W”.** These extension cords are rated for outdoor use, and reduce the risk of electric shock.

PERSONAL SAFETY

10. **Stay alert. Watch what you are doing, and use common sense when operating the Parts Washer. Do not operate the Parts Washer while tired or under the influence of drugs, alcohol, or medication.**
11. **Dress properly. Do not wear loose clothing or jewelry. Contain long hair. Keep your hair and clothing away from the Parts Washer.** Loose clothes, jewelry, or long hair can be caught in the Parts Washer, causing personal injury.
12. **Avoid accidental starting. Be sure the Power Switch is off before plugging in.** Carrying the product with your finger on the Power Switch, or plugging in appliances with the Power Switch on, invites accidents.
13. **Use safety equipment. Always wear eye protection and heat resistant gloves during maintenance and operation.**
14. **Do not overreach. Keep proper footing and balance at all times.** Proper footing and balance enables better control of the Parts Washer in unexpected situations.
15. **Store idle tools out of reach of children and other untrained persons.** Tools are dangerous in the hands of untrained users.

TOOL USE AND CARE

16. **Do not use the Parts Washer if the Power Switch does not turn it on or off.** Any appliance that cannot be controlled with the Power Switch is dangerous and must be replaced.
17. **Disconnect the Power Cord before making any adjustments, changing accessories, or storing the Parts Washer.** Such preventive safety measures reduce the risk of turning on the product accidentally.
18. **Do not overload the Parts Washer. Use the correct Parts Washer for your application. The Parts Washer will do the job better and safer at the speed and capacity for which it was designed.**
19. **Store idle tools out of reach of children and other untrained persons.** The Parts Washer is dangerous in the hands of untrained users.
20. **Maintain the Parts Washer with care.** Do not use a damaged Parts Washer or damaged accessories. Tag damaged products “Do not use” until repaired.

SERVICE

21. **Parts Washer service must be performed only by qualified repair personnel.** Service or maintenance performed by unqualified personnel could result in a risk of injury.
22. **When servicing the Parts Washer, use only identical replacement parts. Follow instructions in the “*Inspection, Maintenance, And Cleaning*” section of this manual.** Use of unauthorized parts or failure to follow maintenance instructions may create a risk of electric shock or injury.

GROUNDING

WARNING!

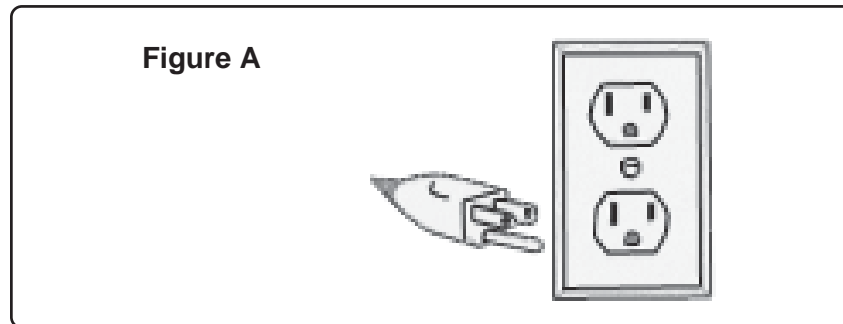
Improperly connecting the grounding wire can result in the risk of electric shock. Check with a qualified electrician if you are in doubt as to whether the outlet is properly grounded. Do not modify the power cord plug provided with the Buffer. Never remove the grounding prong from the plug. Do not use the Buffer 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.

GROUNDING TOOLS: TOOLS WITH THREE PRONG PLUGS

Note: The Parts Washer has a Three Prong Plug

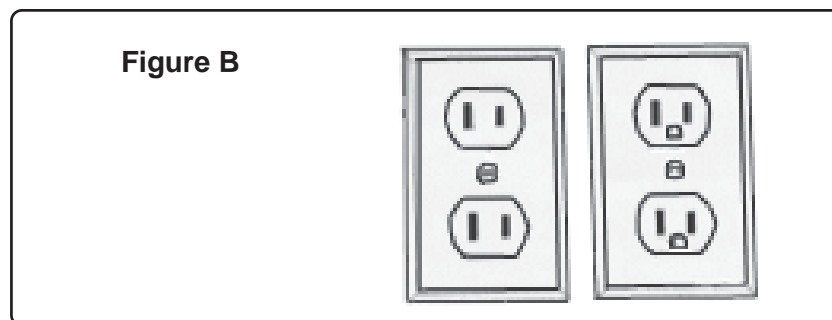
1. Tools marked with “Grounding Required” have a three wire cord and three prong grounding plug. The plug must be connected to a properly grounded outlet. If the Parts Washer should electrically malfunction or break down, grounding provides a low resistance path to carry electricity away from the user, reducing the risk of electric shock. **(See Figure A.)**

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 Polisher's grounding system and must never be attached to an electrically "live" terminal. **(See Figure A.)**
3. A grounded appliance 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 following illustration. **(See Figure A.)**



DOUBLE INSULATED APPLIANCES: APPLIANCES WITH TWO PRONG PLUGS

1. Appliances 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. **(See Figure B.)**
2. Double insulated tools may be used in either of the 120 volt outlets shown in the following illustration. **(See Figure B.)**



EXTENSION CORDS

1. **Grounded** appliances require a three wire extension cord. **Double Insulated** products 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 Figure C, next page.)**
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 Figure C.)**
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 Figure C.)**




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 Figure C.)**
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 your 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 your extension cords from sharp objects, excessive heat, and damp or wet areas.

Figure C

RECOMMENDED MINIMUM WIRE GAUGE FOR EXTENSION CORDS* (120 VOLT)					
NAMEPLATE AMPERES (At Full Load)	EXTENSION CORD LENGTH				
	25 Feet	50 Feet	75 Feet	100 Feet	150 Feet
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	1	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.

SYMBOLOLOGY

	Double Insulated
	Canadian Standards Association
	Underwriters Laboratories, Inc.
V ~	Volts Alternating Current
A	Amperes
n_o xxxx/min.	No Load Revolutions Per Minute (RPM)

SPECIFIC SAFETY RULES FOR THE 20 GALLON PARTS WASHER

1. **You should always wear ANSI approved safety glasses underneath a full face mask.** Also ensure that you are not operating the Parts Washer around flammable materials or liquids.
2. **Maintain labels and nameplates on the Parts Washer.** These carry important information. If the labels are unreadable or missing, contact Harbor Freight Tools for replacement.
3. **Carefully inspect the condition of the Parts Washer before use and check the Parts Washer continually during use. If any damage is noted, stop immediately and replace damaged components. Harbor Freight Tools cannot be held responsible for damage caused by using a product with defective components.**
4. **Never leave the Parts Washer unattended when it is plugged into an electrical outlet.** Turn off the Parts Washer and unplug it from its electrical outlet before leaving the work area.
5. **Exposure to aluminum oxide (a dust generated from material removing processes) can result in eye, skin and breathing irritation.** Always use a NIOSH (National Institute for Occupational Safety and Health) approved respirator and safety goggles. Avoid skin exposure. Proper ventilation in the work area is required.
6. **WARNING! People with pacemakers should consult their physician(s) before using this product. Operation of electrical equipment in close proximity to a heart pacemaker could cause interference or failure of the pacemaker.**
7. **Use water based solvents only in the Parts Washer. These are solvents with a PH of more than 7.** Use of any other type of solvents could cause personal injury.
8. **The melting point for the fusible link for fire prevention is 130° C/266° F, never use any other items to support the lid.** Close the lid when the Parts Washer is not in use.

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

Warning: The warnings, cautions, 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.

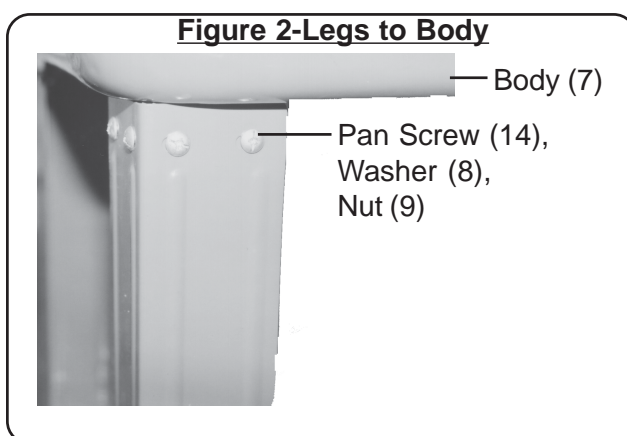
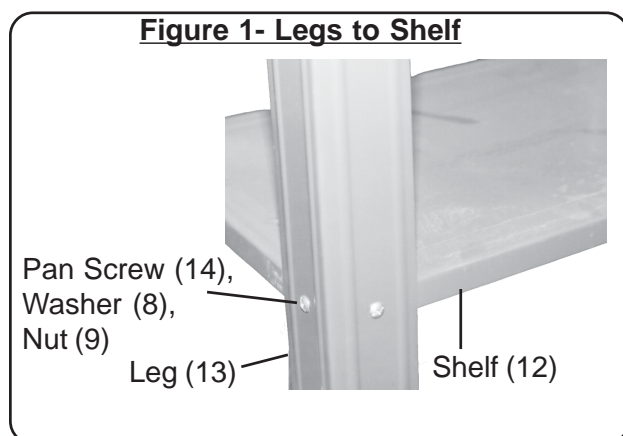
Unpacking

When unpacking your 20 Gallon Parts Washer, check to make sure that all parts listed in the parts list on page 10 are included. If any parts are missing or broken, please call **HARBOR FREIGHT TOOLS** at **1-800-444-3353**. It is important that you read the entire manual to become familiar with the product BEFORE you operate and use the Parts Washer.

Assembly

Your Parts Washer will require complete assembly before use. It is important that you read the entire manual to become familiar with the product BEFORE you set up and use the Parts Washer.

1. Set the Body (7) upside down onto your work surface. Be careful to avoid breaking or scratching the Cover (1).
2. Attach each of the four Legs (13) to the Shelf (12). Secure Legs (13) to the Shelf (12) with two Pan Screws (14), two Washers (8), and two Nuts (9) through each Leg (13) and into the Shelf (12)-see Figure 1.



3. Attach Legs (13) with Shelf (12) to the Body (7). Secure to the Body (7) with four Pan Screws (14), four Washers (8) and four Nuts (9)-see Figure 2.
4. Stand the Parts Washer on its Legs (13). Secure the Switch Box (21) in place on Pump Housing (18) with four Screws (22). Attach the Pump Housing (18) to the Body (7) by setting it into the hole located on the side and secure in place with Nuts (31) and Washers (32).
5. Insert the Filter Screen (17) into the Filter Cover (16). Slide the Pump Housing Cover (15) down into the slots on the front of the Pump Housing (18).

Operation

Warning: Do not use any highly volatile, flammable or combustible solvents, or fuels such as gasoline, diesel, or toluene. Use only non-corrosive water based solvents.

Warning: Parts being cleaned may contain and leave flammable or combustible residue or fluids in the Parts Washer. Check for solvent fumes to verify nonflammability and non-toxicity. Use in a well ventilated area. Do not smoke. Always dispose of solvents properly.

The pump must be immersed in liquid while operating. Fluid should be replaced and the Parts Washer cleaned on a regular basis to avoid hazardous conditions.

Warning: Chlorinated solvents such as 1-1-1 Trichloroethane and Methylene Chloride (also known as Methyl Chloride) can chemically react with aluminum and may explode. Many tools and pieces of equipment contain aluminum.

1. Fill the Body (7) with the proper cleaning solution. Fill the Body (7) to just below the horizontal crease on the Body (7).
2. Lift the Cover (1) and place the tool(s) to be cleaned into the Work Basket (2) if possible. Set Work Basket (2) and/or tools into the cleaning solution.
3. Make sure the Power Switch (23) is in the OFF position before plugging in the Parts Washer. When the Power Switch (23) is ON, the light in the switch will be lit up.
4. Plug the Parts Washer Electrical Cord into a grounded, 120 Volt, electrical outlet. Turn on the Parts Washer, making certain that the Power Switch (23) is lit up.
5. Once the tool is clean, press the Power Switch (23) to the OFF position. Unplug the Electrical Cord.
6. Remove the tool from the cleaning fluid and air dry or wipe them clean with a clean cloth.
7. Close the Cover (1) of the Parts Washer.

Replacing the Cleaning Solution

1. Make certain that the Parts Washer is OFF and that the Electric Cord is unplugged from the electrical outlet before performing any maintenance.
2. Place an empty container onto the Shelf directly below the Plug (11) and O-Ring (10). Make certain that the container is large enough to hold all of fluid that will drain from the Body (7).
3. Unscrew the Plug (11) from underneath the Body (7). Make certain the fluid is draining directly into the container.
4. Dispose of the used cleaning solution properly. Do not drain the cleaning solution into the street drains, house drains or into the earth. Contact your local municipal waste management officials for proper disposal methods.
5. Replace the Plug (11).

Cleaning the Flexible Pipe

1. Make certain that the Parts Washer is OFF and that the Electric Cord is unplugged from the electrical outlet before performing any maintenance.
2. Remove the Flexible Pipe (24) from the Elbow (26). Drain the pipe, inspect its interior for debris. Use compressed air to blow clean.
3. Reattach the Flexible Pipe (24) to the Elbow (26).

PARTS LIST

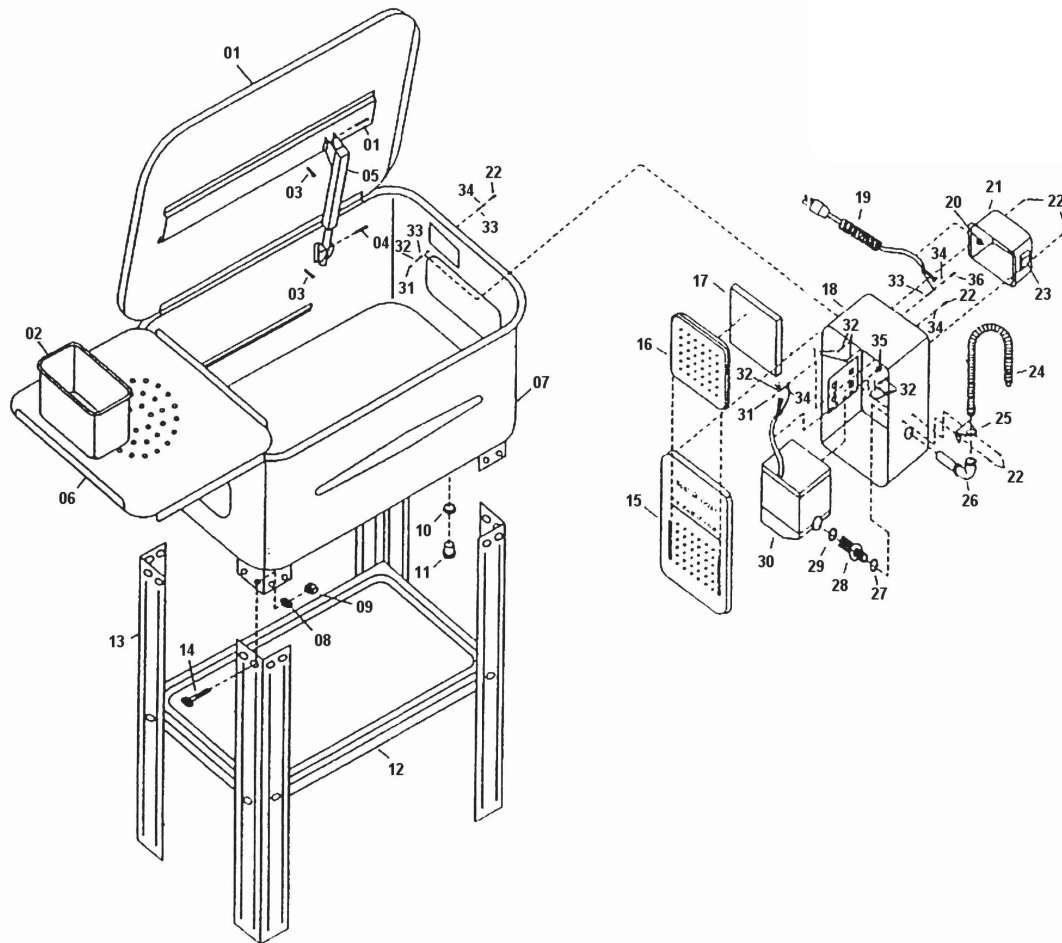
Part #	Description	Quantity	Part #	Description	Quantity
1	Cover	1	19	Electric Cord	1
2	Work Basket	1	20	Strain Relief	1
3	Spring Pan	2	21	Switch Box	1
4	Pin	2	22	Screw	6
5	Safety Plate	1	23	Switch	1
6	Work Shelf	1	24	Flexible Pipe	1
7	Body	1	25	Elbow Seat	1
8	Spring Washer	24	26	Elbow	1
9	Nut	24	27	Plastic Washer	1
10	O-Ring	1	28	Spigot	1
11	Plug	1	29	Seal Ring	1
12	Shelf	1	30	Pump	1
13	Leg	4	31	Nut	7
14	Pan Screw	24	32	Spring Washer	7
15	Pump Housing Cover	1	33	Dentiform Washer	4
16	Filter Cover	1	34	Flat Washer	2
17	Screen	1	35	Rubber Sheath	1
18	Pump Housing	1	36	Hex Screw	1

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

PLEASE READ THE FOLLOWING CAREFULLY

THE MANUFACTURER AND/OR DISTRIBUTOR HAS PROVIDED THE PARTS DIAGRAM IN THIS MANUAL AS A REFERENCE TOOL ONLY. NEITHER THE MANUFACTURER NOR 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.

ASSEMBLY AND PARTS DIAGRAM



WARRANTY

CHICAGO

Electric Power Tools

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 ninety 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, 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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