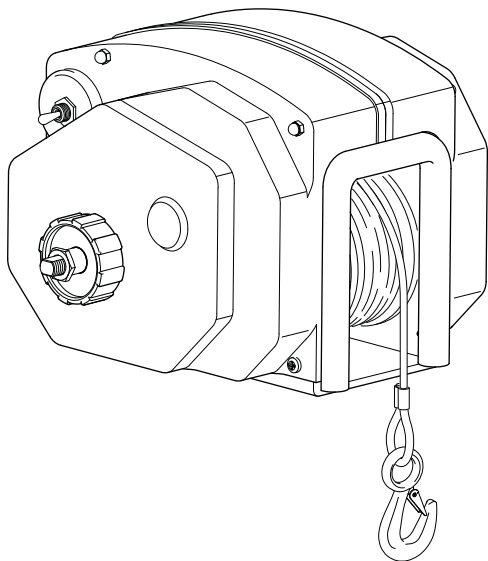


### BOAT TRAILER WINCH



pw315101

- ◆ *12 Volt Powered Winch*
- ◆ *Power-In/Free-Wheel Out Operation*



**Thoroughly read the manual furnished with this product and be familiar with the controls. Do not allow individuals to operate the winch without understanding the safe operation and procedures for the equipment.**

## PROPRIETARY STATEMENT

The *Powerwinch* Trailer Winch is a product of Carefree of Colorado, located in Broomfield, Colorado, USA. The information contained in or disclosed in this document is considered PROPRIETARY to Carefree of Colorado. Every effort has been made to ensure that the information presented in the document is accurate and complete. However, Carefree of Colorado assumes no liability for errors or for any damages that result from the use of this document.

The information contained in this manual pertains to the current configuration of the models listed on the title page. Earlier model configurations may differ from the information given. Carefree of Colorado reserves the right to cancel, change, alter or add any parts and assemblies, described in this manual, without prior notice.


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## SAFETY INFORMATION


The following Safety Precautions Must be followed at ALL Times. Failure to follow the warnings and cautions in this manual could result in serious injury and/or property damage.


 **WARNING** ALWAYS unplug the wiring harness before attempting to install, relocate, service or perform maintenance on the winch.


 **WARNING** NEVER use the winch to lift or move people or animals.


 **WARNING** NEVER use the winch for overhead lifting.


 **WARNING** NEVER attempt to pull a load greater than the rated load of the winch.

 **WARNING** NEVER use the winch to exclusively hold, support or permanently secure the load. Use separate straps to support the load.

 **WARNING** ALWAYS stand away from the winch during operation. ALWAYS stand clear of the area behind and between the load and the winch. Serious injury could occur if the cable breaks.

 **WARNING** NEVER wear loose fitting clothes, scarves, ties or jewelry when operating the winch. Loose clothing can become caught in moving parts.


 **WARNING** ALWAYS block the vehicle wheels to help prevent the vehicle from moving when pulling a load with the winch.

 **CAUTION** ALWAYS use the recommended cable. Never substitute rope for cable.

 **CAUTION** ALWAYS keep hands clear of the cable spool (drum area).

 **CAUTION** ALWAYS wear leather gloves when handling the cable.

### CALIFORNIA PROPOSITION 65

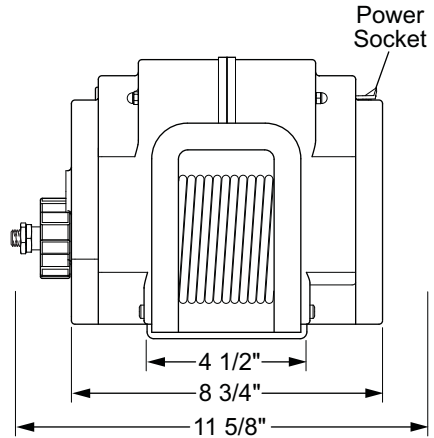
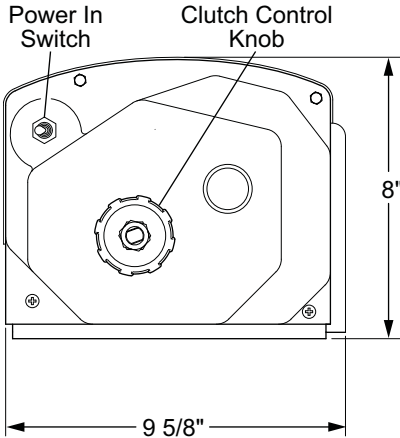
 **WARNING** This product contains chemicals known to the state of California to cause cancer or birth defects or other reproductive harm. California's Proposition 65 requires this warning to be given to customers in the state of California.

# SPECIFICATIONS

Various load conditions affect winch performance. The line pull required for a specific application depends on the weight of the load, condition of the trailer rollers, and the degree of the loading ramp incline. The charts below are based on a single line pull and provided as a guideline in calculating pulling capabilities.

**⚠ WARNING** The cable fasteners on this or any winch are not designed to hold rated loads independently. Always leave a minimum of five wraps of cable on the drum to achieve the rated load values.

## Winch Specifications



pw315001

Model	Line Speed @ Capacity (FPM)	Gear Ratio	Voltage	Circuit Breaker	Unit Weight
315	15	270:1	12VDC	30 amps	22 lbs.

## Approximate Rolling Load Capacities (values are in pounds)

% Incline	Level	5%	10%	20%	30%	50%	70%	100%
° Incline	0°	3°	6°	11°	17°	26°	35°	45°
315	16500	10005	7530	5250	3915	2790	2295	1935

- A 10% incline (6°) is 1 foot rise in 10 feet.
- To convert from pounds (lbs) to kilograms (kgs) divide by 2.2.
- Capacity can be increased by using a pulley block.

## Winch & Boat Capacities (values are in pounds)

	Vertical Lift Capacity	Approximate Boat Weight*	Approximate Boat Size*
315	1650	4000	14-17 Feet

\* Boat size and weight is approximate and varies depending on boat type. When calculating boat weight, use the fully loaded weight that includes boat, motor, fuel, water, gear etc.

## MOUNTING THE UNIT

### MOUNTING THE UNIT

The following instructions are for standard mounting of the winch. A quick mount kit is available (p/n P7700000AJ). If installing with the quick mount kit, follow the directions with the kit. Steps 3, 4 and 6 apply when using the kit.

The winch can be mounted on the trailer in the same position and location as an existing hand winch.

1. Remove the existing hand winch.
2. Position the unit on the trailer mount stand.
3. Confirm that the winch's cable hook and the bow eye on the boat are at the same height when the boat is in the fully loaded position on the trailer.

If the bow eye is too high, extra pull is required of the winch and extra stress is exerted on the boat's stern and bow eye.

If necessary to create equal height, raise or lower the winch stand. In most cases, trailer manufacturers have adaptors available for use with a winch.

4. Confirm that there is a minimum of 12 inches clearance between the winch and the bow eye when the boat is in the fully loaded position. If necessary, extend the bow stop to obtain the clearance.
5. Bolt the unit using a minimum of two (2) 3/8" grade 5 machine bolts and lock nuts. If the existing mounting holes do not line up with the winch, use the bottom of the winch as a template and drill two (2) 7/16" holes in the mounting surface of the trailer stand.

## WIRING THE UNIT



### WARNING

**ALWAYS disconnect the battery before working on electrical equipment.**



### WARNING

**ALWAYS use the recommended wire size and rated circuit breakers. Failure to use the furnished and recommended sizes can cause a fire hazard and void warranty.**



### NOTICE

**When routing the wiring, avoid sources of heat.**

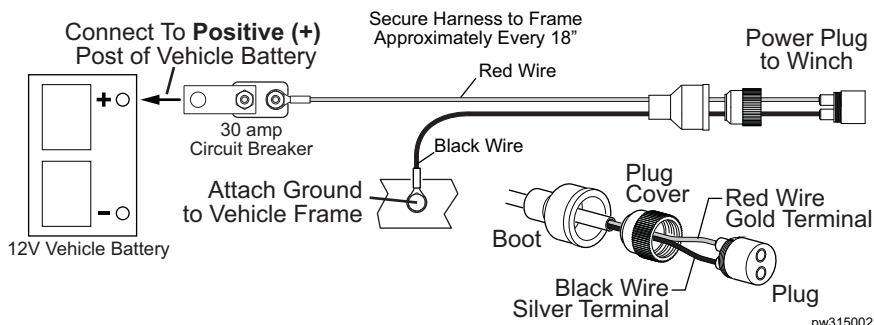


### NOTICE

**When routing the wiring, avoid sharp edges that can cut or fray the wire insulation.**

The following instructions are for permanently wiring the winch. Two additional wiring kits are available and sold separately: A universal bumper wiring kit (p/n P7702101AJ) and a quick connect wiring harness (p/n P7866000AJ) for temporary connections. If installing one of the kits, follow the directions with the kit.

1. Slip the boot and cover over the end of the wire cable.
2. Strip approximately 3/8" of insulation from the red and black wires.
3. Attach the wires to the plug. The red wire goes to the gold terminal, the black wire goes to the silver terminal.
4. Screw the cover onto the plug and slip the boot over the cover.
5. Attach the circuit breaker to the battery's POSITIVE (+) post or positive (+) terminal of the starter solenoid.
6. Attach the ground wire (black) to the vehicle frame. Clean the metal frame with a wire brush or equivalent then attach the ground lug using a 5/16" bolt and lock nut (bolt and nut not furnished).
7. Route the wire under the vehicle and along the frame. Avoid sharp edges and moving parts. Secure the wire to the frame approximately every 18" using nylon ties or equivalent.



## OPERATING THE WINCH

**WARNING** To avoid personal injury and property damage, clear the area around and behind the boat of people, animals and obstructions before loading or unloading the boat.

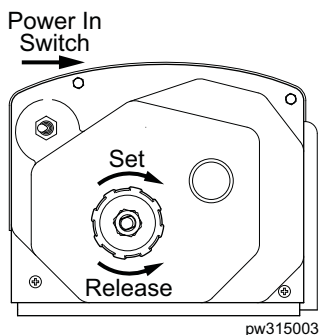
**WARNING** Never stand between the load or anchor point and the winch. Serious personal injury could occur if the cable breaks.

**WARNING** NEVER use the winch alone to secure the boat to the trailer during transit. Use separate straps or equivalent to secure the boat to the trailer.

**NOTICE** ALWAYS wear leather gloves when handling the cable. Steel cable can cause serious damage to hands.

### UNLOADING THE BOAT

1. Attach the cable hook to the boat's bow eye.
2. Connect the power to the winch. The plug goes into the socket on the right side of the winch.
3. Remove the tie down straps from the boat.
4. Slowly turn the clutch knob counterclockwise to release the winch brake.
5. Allow the boat to slide off the trailer. If necessary, the clutch knob can be tightened to slow the speed of the boat.
6. When the boat is in the water, release the cable hook.
7. Tighten the clutch control knob clockwise until finger tight to set the brake.
8. While maintaining tension in the cable, press the switch on the winch. Roll the cable up completely. Do NOT allow the cable to roll up loosely, damage to the cable and winch components could occur.



pw315003

**NOTICE** Do not allow the cable hook to roll into the winch. Damage to the level wind plate can occur.

9. Secure the cable hook to prevent any accidental injury or damage.

### LOADING THE BOAT

1. Align the boat and trailer.
2. Loosen the clutch knob (turn counterclockwise) and free-wheel the cable to the boat. Attach the hook to the boat's bow eye.

**NOTE:** If the winch cable is initially difficult to pull out, try engaging the motor for a few seconds with the clutch fully released. This should free the clutch allowing the cable to pull out.

3. Tighten the clutch control knob clockwise until finger tight to set the brake. Do NOT over tighten the clutch knob; over tightening can cause damage to the clutch.
4. Step clear of the cable and boat.
5. Press and hold the switch. Power in the cable until the boat touches the bow stop. Release the switch.
6. When fully loaded, secure the boat to the trailer.

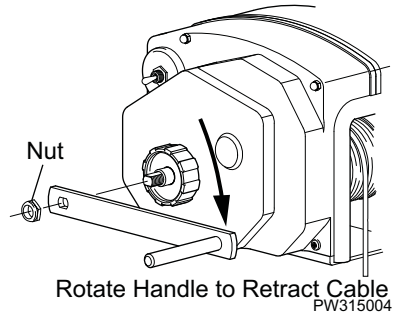
## EMERGENCY HAND CRANK

An optional emergency hand crank is available when there is no power (i.e. a dead battery).

**WARNING**

**Never use the hand crank to assist a running motor. Serious personal injury can occur.**

1. Disconnect the power cord from the winch.
2. Tighten the clutch control knob clockwise until finger tight to set the brake. Do NOT over tighten the clutch knob; over tightening can cause damage to the clutch.
3. Remove the nut from the shaft on the left side of the winch.
4. Place the emergency handle onto the shaft and secure to the shaft with the nut removed previously. Tighten the nut snugly against the handle.
5. Turn the crank handle to wind in the cable.
6. After the boat has been secured on the trailer, remove the handle from the shaft. Replace the nut on the shaft and tighten until approximately 1/8" of thread is showing on the end of the shaft.
7. Store the handle.





## MAINTENANCE

### LUBRICATION

The following steps should be performed a minimum of once a year or when the unit is placed in storage.

**Cable:** Lubricate the cable with Whitmore's Wire Rope Spray, WD40 or equivalent. Spray the shaft and the cable as the cable is being wound.

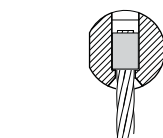
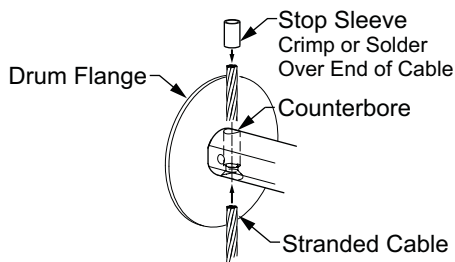
**Gears:** Remove the covers and lubricate the gears with lithium base grease. Be careful not to get grease on the clutch lining (refer to figure on page 9).

### REPLACING THE CABLE

**WARNING** Always use the exact Powerwinch replacement cable (p/n P7188800AJ). Winch rating and cable strength are matched for safe and optimum performance. NEVER replace the cable with rope.

**CAUTION** ALWAYS wear leather gloves when handling the cable. Steel cable can cause serious damage to hands.

1. Disconnect the power cable.
2. Loosen the clutch knob (turn counterclockwise) and free-wheel the cable completely out.



Completed Installation


pw315005

3. Cut the old cable off approximately 2" from the cable drum.
4. Insert the new cable through the shaft. The cable must be inserted through the side opposite the counter bore.
5. Insert the stop sleeve over the end of the cable until the cable is flush with the end of the stop. Solder or crimp the stop onto the cable.
6. Pull the cable back through the shaft until the stop is seated in the counter bore of hole.
7. Tighten the clutch control knob clockwise until finger tight to set the brake. DO NOT over tighten the clutch knob; over tightening can cause damage to the clutch.
8. Reconnect the power harness to the unit. Power-in the cable, keeping tension on the cable as it is winding. The cable must wind from the top of the cable spool.

**NOTICE** If the cable is not wound correctly, it may cause loss of power and risk damage to the level wind plate. If the cable is not correct (too loose or wound on one side), unwind the cable then rewind while keeping tension on the cable.

## TROUBLESHOOTING GUIDE

**WINCH DOES NOT OPERATE**

A.	Confirm power to winch 1. Check that vehicle battery is fully charged. 2. Confirm connections are for tight & clean. 3. Check wires that are worn or bare that may cause shorts.		Correct as required.
B.	Check circuit breaker at battery Bypass circuit breaker and test winch. Does the winch run?	YES	If winch runs, circuit breaker is bad, replace.
	 <b>CAUTION</b> Do not operate the winch without the circuit breaker. Removing the CB from the circuit is ONLY for testing.	NO	Reconnect circuit breaker. Contact your authorized service center.

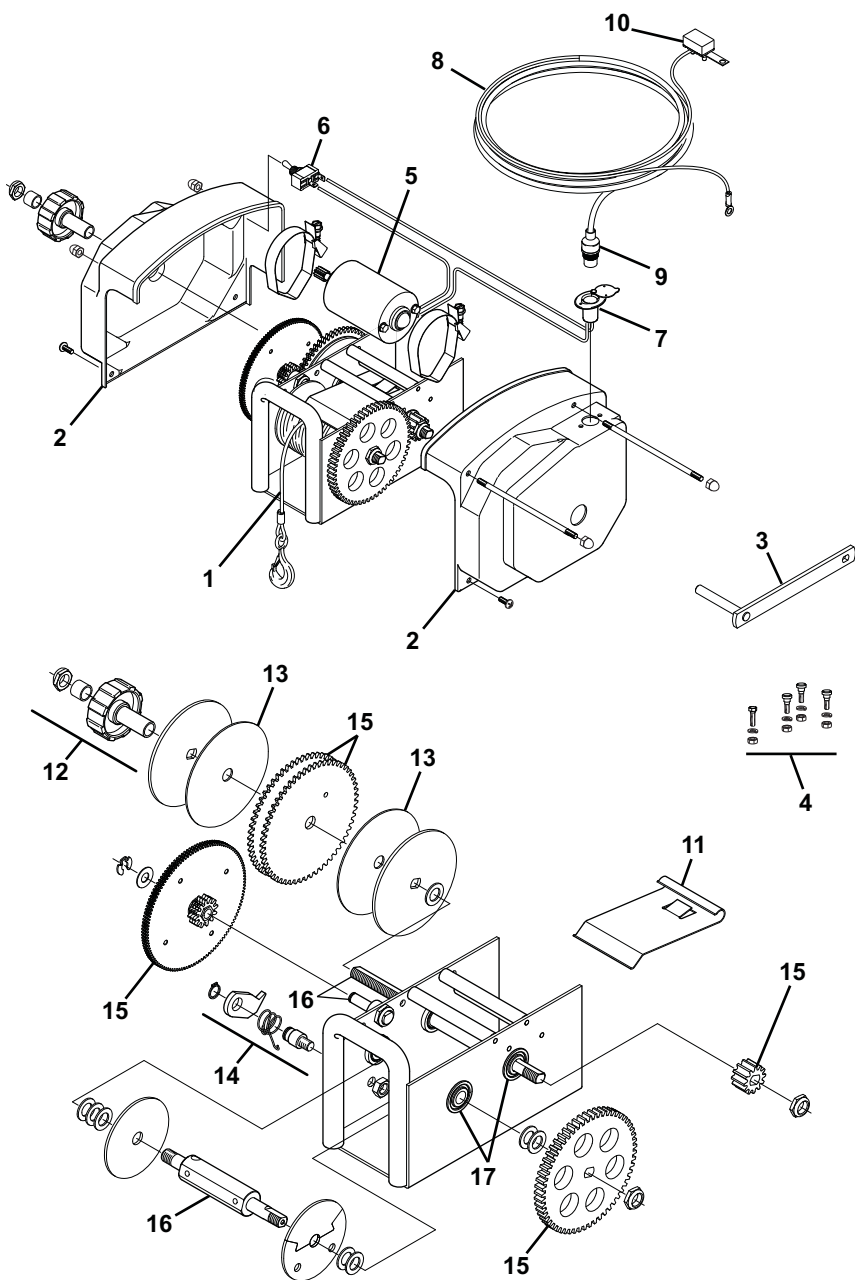
**LOAD SLIPS**

A.	Load slips during retrieval	Thrust washers and thrust bearings are worn or deformed. Replace
B.	Load slips back after boat is retrieved	Clutch bearing inside the 120 gear has failed. Replace gear assembly
C.	Check clutch lining The clutch lining is located on the 120 tooth gear under the LH (clutch side) of the case. Ensure that the clutch is clean free of grease.	Clean as required. If clutch lining is worn or damaged, replace the 120 tooth gear assy.

**CABLE DIFFICULT TO PULL OUT**

A.	If the winch cable is initially difficult to pull out, try engaging the motor for a few seconds with the clutch fully released. This should free the clutch allowing the cable to pull out.
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# REPLACEMENT PARTS LIST



**315 BOAT TRAILER WINCH****POWERWINCH**

<b>Item</b>	<b>Part Number</b>	<b>Description</b>	<b>Notes</b>
<b>1</b>	P7188500AJ	Cable Assy, 7/32" x 20'	1
<b>2</b>	R001266	Cover Kit	
<b>3</b>	P5594700AJ	Emergency Hand Crank	
<b>4</b>	P7700000AJ	Quick Mount Kit	
<b>5</b>	R001274	Motor Assy	1
<b>6</b>	R001267	Switch	
<b>7</b>	P7816100AJ	Socket, Power	
<b>8</b>	P7833901AJ	Wire Harness w/ items 9 & 10	
<b>9</b>	P7816001AJ	Plug, Wire Harness	
<b>10</b>	P7837200AJ	Circuit Breaker, 30amp	
<b>11</b>	R001260	Level Wind Plate	
<b>12</b>	P7940500AJ	Clutch Knob Kit	
<b>13</b>	R001262	Clutch Pad Kit	
<b>14</b>	R001265	Ratchet Pawl Kit	
<b>15</b>	R001264	Gear Kit	
<b>16</b>	R001268	Shaft Kit	
<b>17</b>	R001263	Bearing Kit	
<b>18</b>	R001269	Fastener Kit	

- Notes
1. Fasteners are included with kit.
  2. Fasteners and washers not indexed on illustration are part of the fastener kit (item 18).

## WARRANTY

Carefree of Colorado (hereafter referred to as Carefree) warrants to the FIRST retail Purchaser that the Powerwinch Product described in this manual is free of defects in material and workmanship within the terms and conditions as set forth below. Carefree's obligation under this warranty is limited to the repair or replacement, at Carefree's option, of any defective component within the stated warranty period. THIS WARRANTY IS NOT TRANSFERABLE.

### **1. DURATION**

- a) 1 year on parts and labor.
- b) Carefree will pay the transportation charges for return shipment to the purchaser of any product received for legitimate warranty repair.

Warranty duration is not extended by the length of time the product is not in use or the time that the purchaser is deprived the use of the product. The duration of coverage is determined by the date of the original product purchase, not the date of repairs.

### **2. WHAT IS COVERED UNDER THIS WARRANTY**

Defects in the manufacturer's material and workmanship of product under normal use, and which occur within the duration of the warranty period.

### **3. WHAT IS NOT COVERED UNDER THIS WARRANTY**

- a) Improper installation and/or any consequent damage or failure that results from improper installation of the product.
- b) Normal wear.
- c) Conditions that are not related to the material or workmanship of the product: including any failure that results from an accident, wind, rain, or other acts of God.
- d) Purchaser's abuse, including but not limited to neglect; failure to operate, use or maintain the product in accordance with the instructions provided with the product.
- e) Any component not sold or manufactured by Carefree.
- f) Any failure that results from the use of another manufacturer's product with a Carefree product that is not specifically approved by Carefree.
- g) Any incidental, indirect, or consequential loss, damage or expense that may result from any defect, failure or malfunction of the product.
- h) The removal or alteration of any product component or device. In the event of such removal or alteration, this warranty is void.
- i) Any expense related to delivery or pick-up of product to/from the service dealer.

### **4. RESPONSIBILITIES OF THE PURCHASER**

IN ORDER FOR THE WARRANTY TO BE HONORED, THE PURCHASER MUST HAVE PROOF OF PURCHASE. FAILURE TO PROVIDE THE REQUIRED DOCUMENTATION MAY DELAY OR VOID ANY WARRANTY CLAIM.

- a) Retain dated proof of purchase for the product, and provide it as requested.
- b) Perform "Periodic Maintenance" as specified in Owner's Manual.
- c) Use reasonable care in maintenance, operation, use and storage of the product in accordance with the instructions contained in the owner's manual.

**THIS WARRANTY GIVES THE OWNER SPECIFIC LEGAL RIGHTS. THE LAWS OF CERTAIN JURISDICTIONS MAY GRANT THE OWNER ADDITIONAL RIGHTS AND PRIVILEGES.** Except as set forth above; Carefree makes no warranty, whether statutory or otherwise, including without limitation, any warranty of merchantability or fitness for a particular purpose. Carefree shall have no liability except to repair, replace or adjust defective products and parts. Carefree specifically excludes any liability, whether in contract, tort or otherwise, for personal injury, property damage, economic or consequential losses. Carefree has not authorized any person or company to alter the terms of this warranty.

It is Carefree of Colorado's policy and practice to continuously improve the company's products and services. Therefore, Carefree reserves the right to make changes in design and components, without notice, whenever it is believed the quality of the product will be improved, but without incurring any obligation to incorporate such improvements in any product, which has been shipped, or in service.

FOR YOUR RECORDS:

DEALER/INSTALLER

NAME: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

PHONE: \_\_\_\_\_

PURCHASE DATE: \_\_\_\_\_

PART NUMBER: \_\_\_\_\_

SERIAL NUMBER: \_\_\_\_\_

PRODUCT NAME \_\_\_\_\_

OR DESCRIPTION: \_\_\_\_\_

\_\_\_\_\_

***Retain your original proof of purchase.  
It is required for all warranty repairs and returns.***

**NOTES:**

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