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› PROTACTOR 2 Pole 40 Amp AC Contactor (Model LEPUSPTLSHI5015) Instruction Manual

PROTACTOR LEPUSPTLSHI5015

PROTACTOR 2 Pole 40 Amp AC Contactor (Model LEPUSPTLSHI5015) Instruction Manual

Your guide to installation, operation, and maintenance.

1. INTRODUCTION

This manual provides comprehensive instructions for the PROTACTOR 2 Pole 40 Amp AC Contactor, Model LEPUSPTLSHI5015. This heavy-duty, enclosed contactor is designed as a replacement for residential 2-pole contactors rated at 40 Amps or less, featuring 24-volt coils. It is suitable for use in air conditioning and heat pump systems. Please read this manual thoroughly before installation and operation to ensure safe and correct usage.

2. SAFETY INFORMATION

WARNING: Electrical work should only be performed by qualified personnel. Failure to follow these safety instructions could result in electric shock, fire, or serious injury.

- Always disconnect power to the unit before installing, servicing, or removing the contactor.
- Verify that the replacement contactor's specifications (Amperage, Voltage, Coil Voltage) match or exceed the original unit's requirements.
- Ensure all wiring connections are secure and properly insulated.
- Do not operate the contactor if it appears damaged.
- Wear appropriate personal protective equipment (PPE) when working with electrical systems.

3. PRODUCT OVERVIEW

The PROTACTOR 2 Pole 40 Amp AC Contactor is engineered for reliability and ease of installation. Key features include:

- **40 FLA Amp Rating:** Suitable for various residential AC and heat pump applications.
- **2 Pole Design:** Controls two lines of power.
- **24 Volt Coil:** Standard coil voltage for many HVAC systems.
- **Enclosed Contacts:** Protects against insects and debris, enhancing longevity.

- **Encapsulated Coil:** No exposed tape wrapping for improved durability.
- **Heavy Lug Terminals:** Provides secure connections for high voltage wiring.
- **Quick Connect Terminals:** Four male 1/4" quick connect terminals on each line voltage connection for wiring flexibility. Double 1/4" male quick connects for low voltage coil terminals.
- **Visible Plunger:** Allows for positive verification of contact engagement.



Figure 3.1: Main view of the PROTACTOR 2 Pole 40 Amp AC Contactor. This image shows the overall design, including the main terminals and the coil connections.

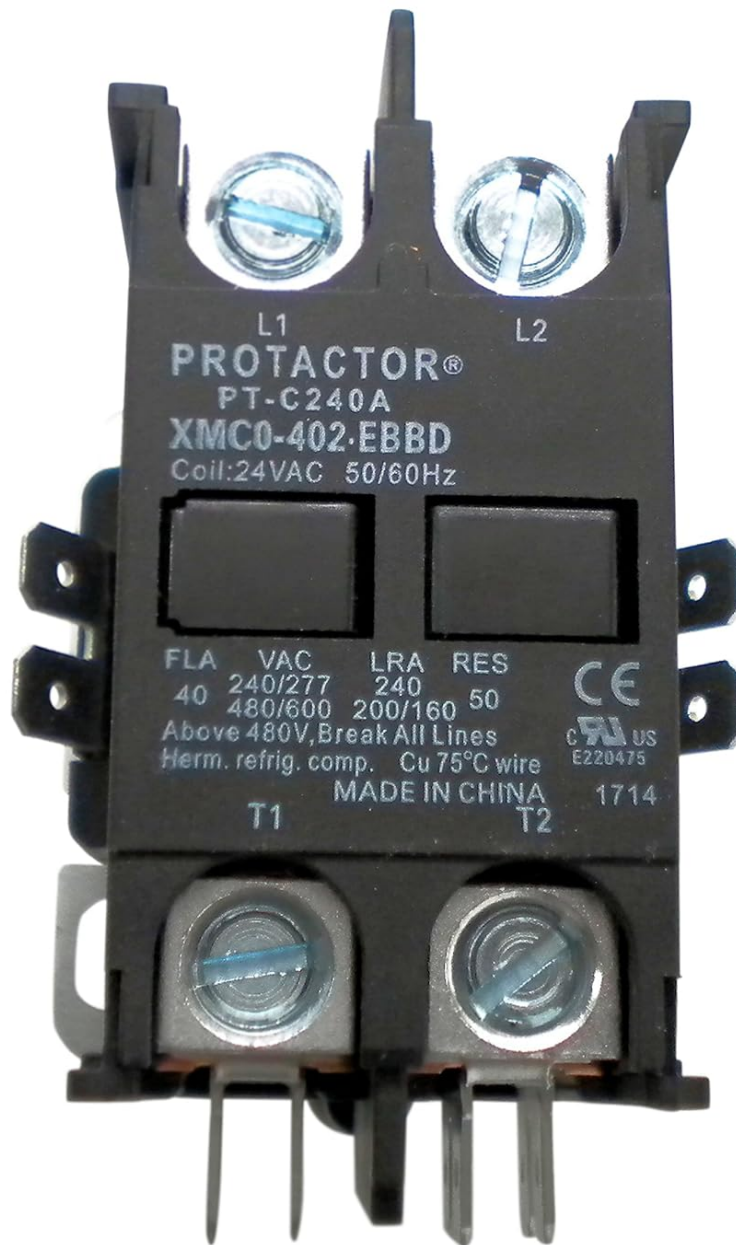


Figure 3.2: Front view of the contactor, highlighting the L1, L2, T1, T2 terminals and the coil voltage rating.

4. SPECIFICATIONS

Feature	Detail
Brand	PROTACTOR
Model Number	LEPUSPTLSHI5015
Amperage	40 Amps (FLA)
Voltage (Coil)	24 Volts
Wattage (Coil)	6 VA sealed / 31 VA inrush
Poles	2 Pole
Material	Plastic
Package Dimensions	3.27 x 2.24 x 2.24 inches
Weight	5.61 ounces
UL Listed	Yes

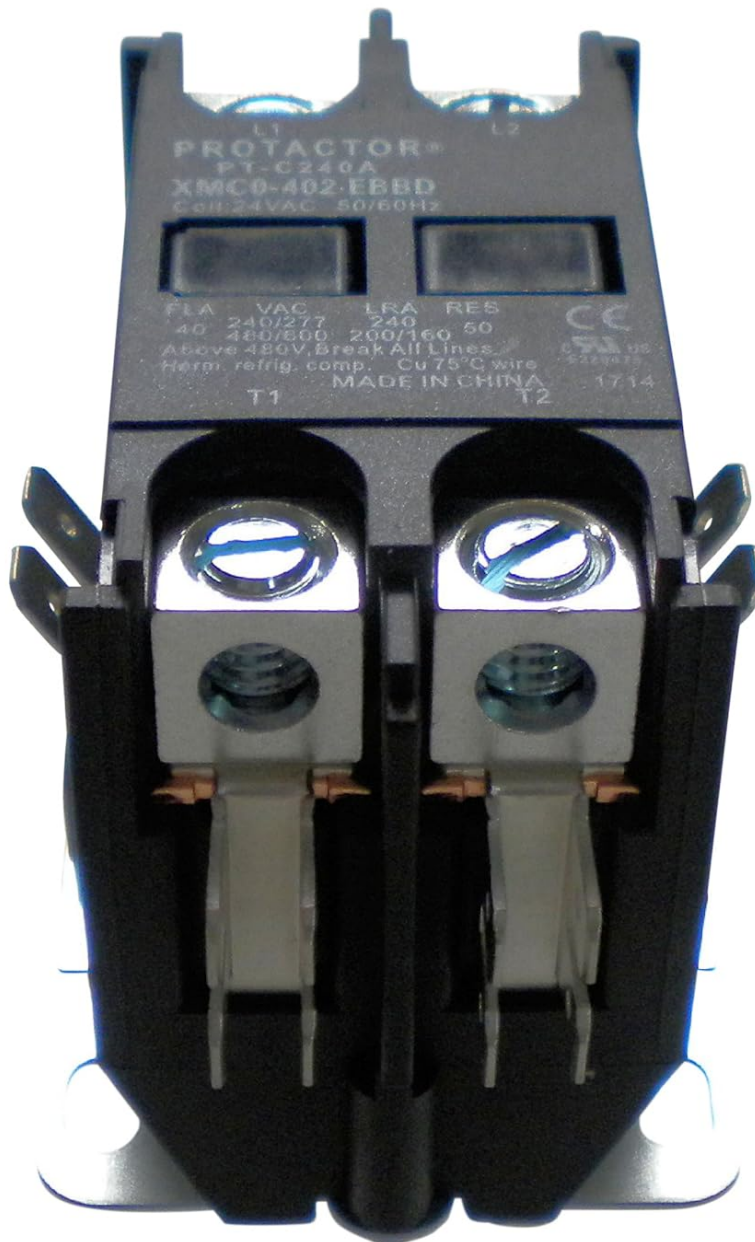


Figure 4.1: Side view of the contactor, showing the mounting bracket and terminal configuration.

5. SETUP AND INSTALLATION

This contactor is designed to replace most residential two-pole contactors. Follow these steps for proper installation:

1. **Disconnect Power:** **Crucially, turn off all power to the HVAC unit at the main breaker before beginning any work.** Verify power is off using a voltage tester.
2. **Identify Wiring:** Carefully note the wiring connections on the existing contactor. Take photos if necessary. Identify the line voltage connections (L1, L2, T1, T2) and the low voltage coil connections.
3. **Remove Old Contactor:** Disconnect all wires from the old contactor. Unscrew or unclip the old contactor from its mounting location.
4. **Mount New Contactor:** The PROTACTOR contactor features a mounting base measuring 2-5/16" X 1-15/16" with four oblong mounting holes 1-5/8" x 1-5/8" on center. It also has four slots in the base for flexible mounting. Secure the new contactor in the same location as the old one using appropriate fasteners.
5. **Connect High Voltage Wires:** Connect the main power lines to the L1 and L2 terminals. Connect the load wires (to

The PROTRACTOR 2 Pole 40 Amp AC Contactor operates automatically in response to a 24-volt control signal from your thermostat or HVAC control board. When the thermostat calls for cooling or heating, it sends 24 volts to the contactor's coil. This energizes the coil, causing the internal plunger to pull in, closing the main contacts. This action allows high voltage power to flow from the L1/L2 terminals to the T1/T2 terminals, activating the compressor and outdoor fan motor. When the thermostat satisfies the call, the 24-volt signal to the coil is removed, the coil de-energizes, and the contacts open, interrupting the high voltage power to the outdoor unit.

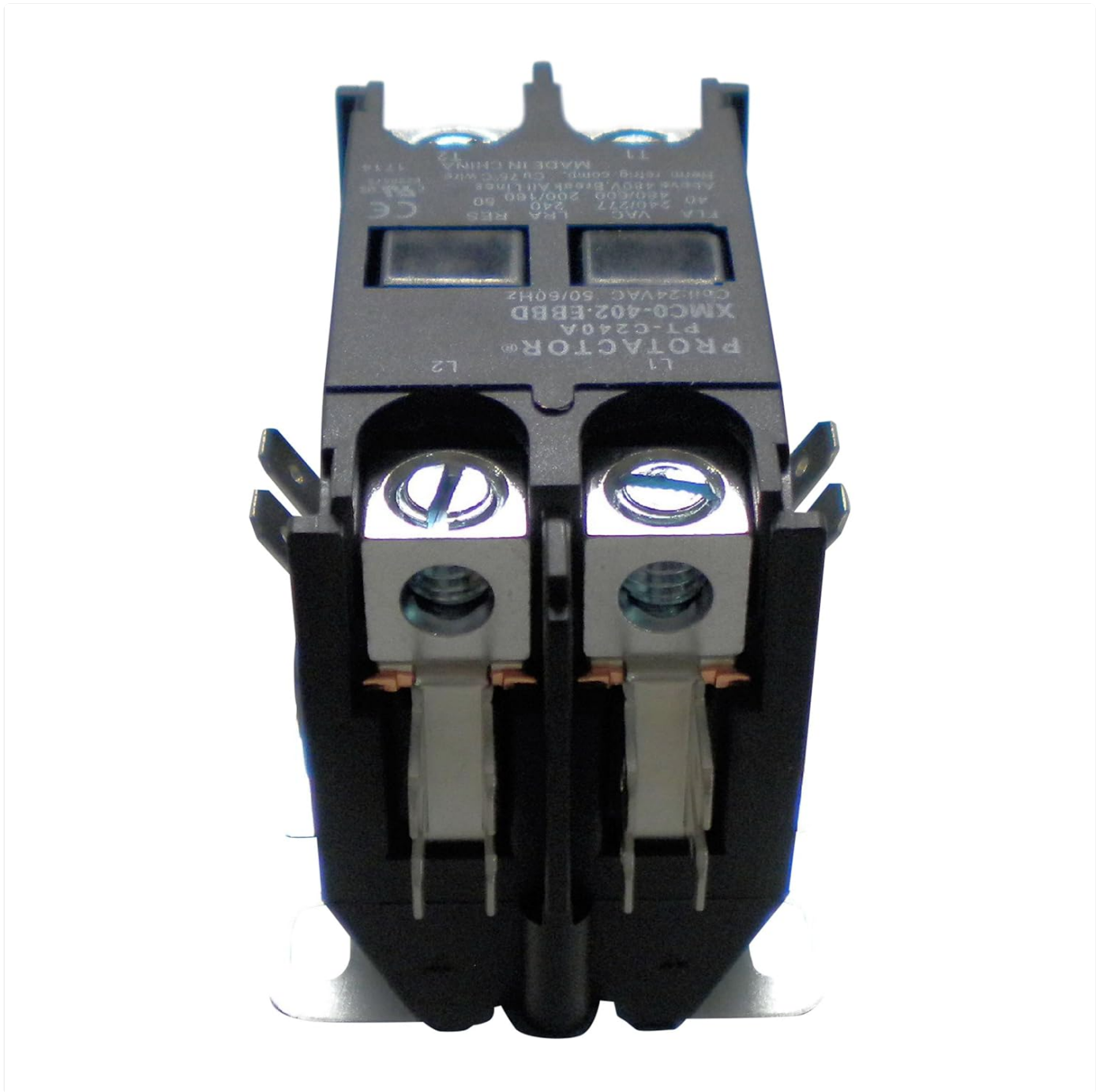


Figure 6.1: Top view of the contactor, showing the L1 and L2 input terminals.

7. MAINTENANCE

The PROTRACTOR contactor is designed for minimal maintenance. However, periodic inspection can help ensure optimal performance and longevity:

- **Visual Inspection:** Annually, with power disconnected, visually inspect the contactor for any signs of wear, corrosion, or damage to the terminals or housing.
- **Terminal Tightness:** Check that all wiring connections are tight. Loose connections can lead to overheating and

premature failure.

- **Cleanliness:** While the contacts are enclosed, ensure the surrounding area is free from excessive dust, debris, or insect nests.
- **Plunger Movement:** Observe the visible plunger during operation (from a safe distance) to ensure it moves freely and fully engages.

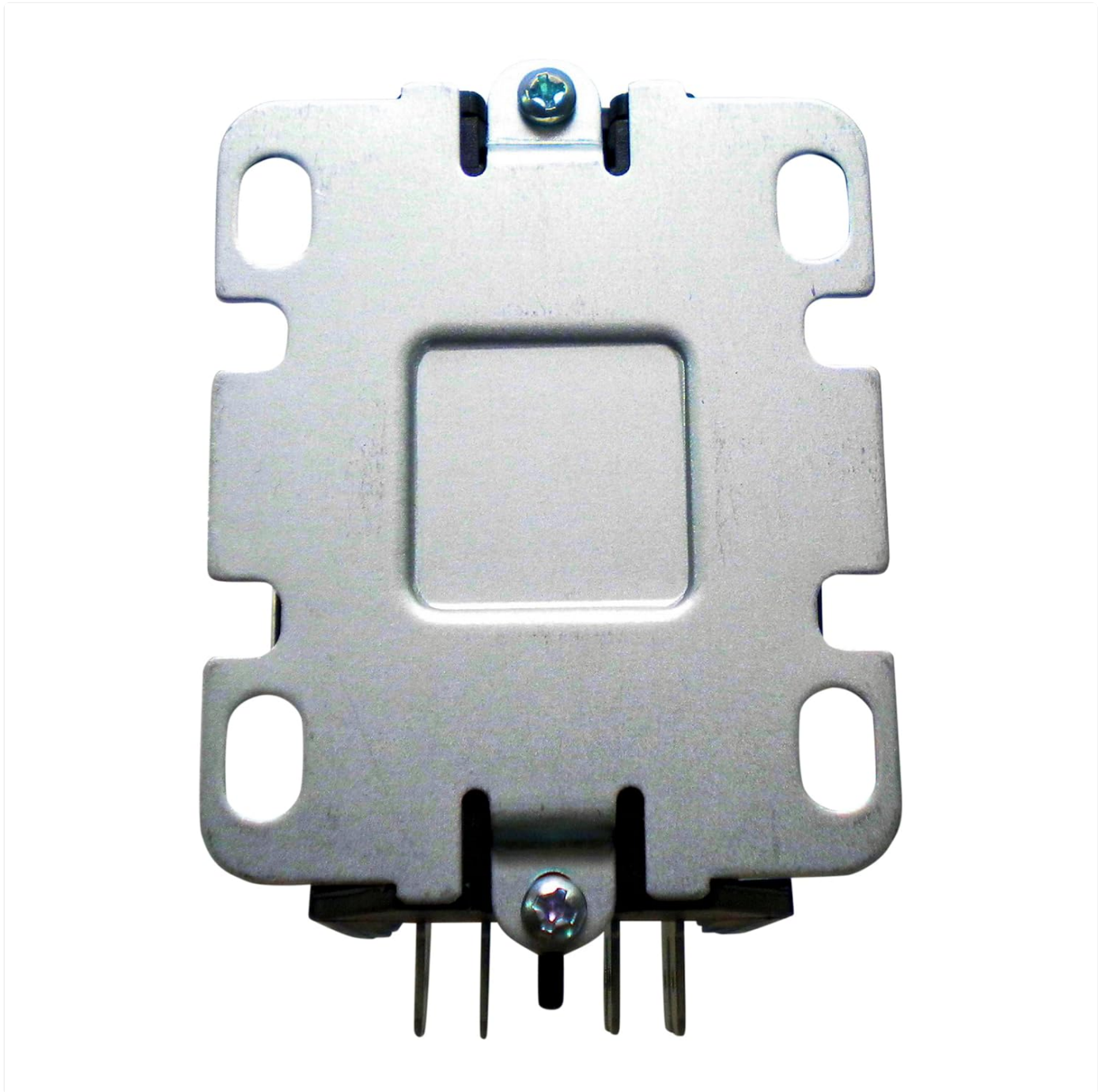


Figure 7.1: Bottom view of the contactor, showing the T1 and T2 output terminals.

8. TROUBLESHOOTING

If your HVAC outdoor unit is not operating correctly, consider the following troubleshooting steps related to the contactor:

Problem	Possible Cause	Solution
Contactors does not pull in (outdoor unit not starting)	No 24V to coil; Faulty coil; Open safety switch (e.g., high/low pressure switch, float switch)	Check for 24V at coil terminals. If present, coil may be faulty (replace contactor). Check safety switches for continuity.
Contactors hums loudly but doesn't pull in fully	Low 24V to coil; Mechanical obstruction; Damaged coil	Verify 24V supply. Inspect for debris. Replace contactor if coil is damaged.
Contactors pulls in, but outdoor unit still doesn't run	Main contacts are pitted/burnt; No high voltage to L1/L2; Faulty compressor/fan motor	With power off, check continuity across main contacts (L1-T1, L2-T2) when plunger is manually depressed. Check high voltage supply. Consult an HVAC technician for motor issues.
Contactors sticks in closed position	Welded contacts; Mechanical issue	Replace contactor immediately. This is a safety hazard.

Note: Always disconnect power before performing any troubleshooting or repairs. If you are unsure about any step, consult a qualified HVAC technician.

9. WARRANTY INFORMATION

This PROACTOR product is covered by an exclusive **two-year limited replacement policy**. If this part fails within two years from the date of purchase, return the defective part along with a copy of the original invoice to the place of purchase for replacement. Please contact the authorized PROACTOR dealer from whom you purchased the part for specific details and procedures regarding this warranty claim.

10. CUSTOMER SUPPORT

For further assistance, technical questions, or warranty inquiries, please contact your authorized PROACTOR dealer or the retailer where you purchased this product. When contacting support, please have your product model number (LEPUSPTLSHI5015) and purchase information readily available.

You may also visit the PROACTOR website for additional resources and contact information (if available).

