

## Homelite 678169004

# Homelite, Ryobi, Ridgid Pressure Washer Thermal Release Valve (2-Pack) - Model 678169004 Instruction Manual

## 1. INTRODUCTION

This manual provides essential information for the installation, operation, and maintenance of your Homelite, Ryobi, and Ridgid compatible Thermal Release Valve, part number 678169004. This valve is a critical component designed to protect your pressure washer pump from damage caused by overheating due to recirculating water when the spray gun is not actively engaged. Proper installation and understanding of its function will ensure the longevity and safe operation of your pressure washer.

## 2. SAFETY INFORMATION

Always prioritize safety when working with pressure washers and their components. Failure to follow safety instructions can result in serious injury or property damage.

- **Disconnect Power:** Before performing any maintenance or installation, ensure the pressure washer engine is turned off and cooled down. Disconnect the spark plug wire to prevent accidental starting.
- **Release Pressure:** Always relieve any residual pressure in the system by squeezing the spray gun trigger after shutting off the water supply and engine.
- **Wear Protective Gear:** Use appropriate personal protective equipment (PPE), including safety glasses, gloves, and sturdy footwear.
- **Read Pressure Washer Manual:** Consult your pressure washer's original instruction manual for specific safety guidelines and procedures related to your model.
- **Professional Installation:** If you are unsure about any step, seek assistance from a qualified service technician.

## 3. PRODUCT OVERVIEW

The Thermal Release Valve (TRV) is a small, brass-colored component with a white plastic tip, designed to be installed directly into the pressure washer pump. Its primary function is to prevent thermal damage to the pump. When the water inside the pump reaches a critical temperature (typically due to prolonged idling without

spraying), the valve automatically opens to release the superheated water and draw in cooler water, thus regulating the pump's internal temperature.



Figure 1: Two Homelite, Ryobi, Ridgid Pressure Washer Thermal Release Valves (Part #678169004). These valves are essential for protecting your pressure washer pump from overheating.

4. SPECIFICATIONS

Feature	Specification
Part Number	678169004
Material	Plastic (tip), Brass/Metal (body)
Item Dimensions (L x W x H)	0.75 x 1.5 x 1.75 inches
Inlet Connection Size	0.25 Inches
Inlet Connection Type	Threaded
Maximum Operating Pressure	125 Pound per Square Inch
Number of Ports	1
Item Weight	0.16 ounces

## 5. COMPATIBILITY

This thermal release valve (part #678169004) is compatible with a wide range of Homelite, Ryobi, and Ridgid pressure washer models. Please verify your specific model number against the list below to ensure proper fitment:

- BM802711, BM802823, BM80320X, BM80913, BM80913A, BM80915, BM80915D, BM80915E, BM80919, BM80919A, BM80919B, BM80919D, BM80919E, BM80920, BM80930
- CT80020, CT80701, CT80801, CT80806
- GC80747, GC80922
- HL252300, HL80833, HL80835, HLCA80710, HU80432, HU80432A, HU80709, HU80709A, HU80722, HU80722A, HU80833, HU80833A, HU80911, HU80911A, HUCA80443
- PS262311, PS282411, PS80310E, PS803125, PS80312E, PS80312E-ECOM, PS80313E, PS80313E-ECOM, PS80314E, PS803155E, PS803166E, PS80325, PS80516A, PS80903A, PS80903B, PS80943, PS80944, PS80945, PS80945A, PS80946, PS80946A, PS80946B, PS80947, PS809050, PS80960, PS80979, PS80979A, PS80979B, PS80983, PS80995, PS80995A, PS80996, PS8C310E, PS8C312E
- RD80955, RY142300, RY802700, RY802700A, RY8C2700, RY802723, RY802800, RY802900, RY803000, RY803000E, RY803001, RY803100, RY803111, RY80518, RY80533, RY80544, RY80930, RY80931, RY80935, RY80940, RY80940B
- UT80432, UT80432A, UT80516, UT80522, UT80522A, UT80522B, UT80522D, UT80522D, UT80522E, UT80522F, UT80522G, UT80546, UT80709, UT80835, UT80911, UT80933, UT80953, UT80953A, UT80953B, UT80953D, UT80953E, UT80977, UT80993, UT80993A, UT80993B, UT80993D, UT80993E, UT80993F
- WF80710, WF80911, HUCA80709A, HUCA80833

## 6. INSTALLATION

Replacing the thermal release valve is a straightforward process. Follow these steps carefully:

1. **Preparation:** Ensure the pressure washer is turned off, the engine is cool, and the water supply is disconnected. Release any remaining pressure by squeezing the spray gun trigger.
2. **Locate the Old Valve:** Identify the existing thermal release valve on your pressure washer pump. It is typically a small, threaded component.
3. **Remove the Old Valve:** Using an appropriate wrench (often 13mm or similar, depending on your pump model), carefully unscrew the old thermal release valve counter-clockwise. Be prepared for a small amount of water to drain from the pump.
4. **Prepare the New Valve:** Apply a small amount of thread sealant or Teflon tape to the threads of the new thermal release valve to ensure a watertight seal.
5. **Install the New Valve:** Thread the new valve into the pump opening clockwise. Hand-tighten first, then use a wrench to tighten it securely, but do not overtighten.
6. **Position the Slit:** If your valve has a small relief slit, ensure it is pointed downwards to direct any released water towards the ground and away from the engine or other components.
7. **Test:** Reconnect the water supply and turn it on. Check for any leaks. Start the pressure washer and operate it briefly to confirm proper function.

### Installation Video Guides

**Thermal Release Valve for Pressure Washer Pump (Tool Daily)**

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This video demonstrates the installation of a thermal release valve into a pressure washer pump. It shows the valve being threaded into the pump housing, highlighting the simplicity of the replacement process.

### 7101359 Thermal Relief Valve (Timber Garner)

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This video provides a detailed view of the 7101359 Thermal Relief Valve, showcasing its components and design. While not a full installation guide, it offers a clear visual of the part itself.

### YAMATIC 7/8" Shaft Vertical Pressure Washer Pump (YAMATIC Power Center)

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This video demonstrates the overall installation of a pressure washer pump, which includes the thermal relief valve as part of the assembly. It provides context for where the valve is situated within the pump system.

## 7. OPERATION

The thermal release valve operates automatically. When the pressure washer is running but the spray gun is not being used, water recirculates within the pump. This recirculation can cause the water temperature to rise. If the water temperature exceeds a safe limit, the thermal release valve will activate, opening to discharge a small amount of hot water and allowing cooler water from the inlet to enter the pump. This process prevents the pump's internal components from overheating and sustaining damage.

## 8. MAINTENANCE

Regular maintenance of your thermal release valve is crucial for optimal pressure washer performance and longevity:

- **Regular Inspection:** Periodically inspect the valve for any signs of leaks, cracks, or corrosion.
- **Cleanliness:** Ensure the area around the valve is free from dirt and debris that could impede its function.
- **Winterization:** If storing your pressure washer in freezing temperatures, ensure the pump and all components, including the thermal release valve, are properly winterized to prevent ice damage. Consult your pressure washer manual for specific winterization procedures.
- **Replacement:** If the valve shows signs of wear, damage, or consistent leaking, replace it promptly with a genuine OEM or compatible part.

## 9. TROUBLESHOOTING

If you experience issues with your thermal release valve, consider the following:

- **Constant Water Discharge:** If the valve is continuously discharging water even when the pump is cool, it may be stuck open or faulty. This can lead to reduced pressure and water waste.
- **No Water Discharge (Overheating):** If the pump is overheating (indicated by steam or excessive heat) and the valve is not discharging water, it may be stuck closed or faulty. This can cause severe damage to the pump.
- **Leaks:** Check the threaded connection for proper tightening and the presence of thread sealant. If leaks persist from the valve body itself, the valve may be damaged internally.

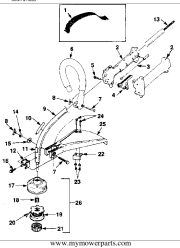
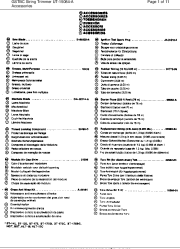

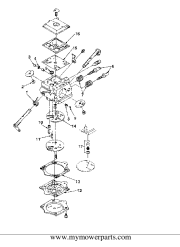
In most troubleshooting scenarios involving a faulty thermal release valve, replacement is the recommended solution.

## 10. WARRANTY AND SUPPORT

For warranty information regarding your thermal release valve, please refer to the documentation provided by the manufacturer or retailer at the time of purchase. If you require further assistance or have questions not covered in this manual, please contact the product's customer support or a certified pressure washer service center.

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### Related Documents - 678169004

	<p><a href="#">Homelite HLT15 String Trimmer UT-20602 Parts Manual   Diagrams &amp; Parts List</a></p> <p>Comprehensive parts manual for the Homelite HLT15 String Trimmer (Model UT-20602). Includes detailed parts lists, diagrams, and assembly information for various components like the boom, head, engine, carburetors, and accessories. Find replacement parts for your Homelite trimmer. Contact Homelite Discount Parts at 606-678-9623 or 606-561-4983.</p>
	<p><a href="#">Homelite GSTBC String Trimmer UT-15084-A Parts List and Diagrams</a></p> <p>Detailed parts list and exploded view diagrams for the Homelite GSTBC String Trimmer UT-15084-A. Find replacement parts for accessories, engine, carburetor, boom, and head.</p>
	<p><a href="#">Homelite UT44172 Cordless Grass Shear Blade Replacement Guide</a></p> <p>A detailed guide from iFixit on how to replace the shear blades on the Homelite UT44172 Cordless Grass Shear. Includes tools, parts, and step-by-step instructions.</p>
	<p><a href="#">Homelite Super EZ-AO Chain Saw UT-10537-A Parts Manual and Diagrams</a></p> <p>Find genuine replacement parts and detailed diagrams for the Homelite Super EZ-AO Chain Saw, model UT-10537-A. Essential for maintenance and repair.</p>

Comprehensive parts list and exploded view diagrams for the Homelite XLW Chain Saw (Model UT-10618-A) with automatic oiling. Find part numbers and descriptions for maintenance and repair.

Detailed parts list and assembly diagrams for the Homelite Timberman 45 cc 18" Chain Saw, model UT-10910. Includes components for accessories, carburetor, muffler, air filter, engine housing, fuel tank, oil tank, engine internals, oil pump, clutch, chain brake, drive case cover, handles, starter, and ignition.