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Standard Motor Products V172

Standard Motor Products V172 PCV Valve User Manual

Brand: Standard Motor Products | Model: V172

INTRODUCTION

The Standard Motor Products V172 PCV (Positive Crankcase Ventilation) Valve is a critical component designed to manage internal engine pressure and reduce emissions. This valve facilitates the removal of unburnt fuel and moisture vapors from the engine's crankcase, preventing sludge buildup and maintaining optimal engine performance. It operates as a one-way valve, allowing gases to exit the crankcase and be re-routed into the intake manifold for combustion, thereby preventing their release into the atmosphere.

PRODUCT OVERVIEW

The V172 PCV Valve from Standard Motor Products is engineered for durability and precise function. It is constructed from metal and features a machined exterior finish, ensuring reliable operation within the demanding environment of an automotive engine. This valve is designed with two ports for efficient positive crankcase ventilation.



Figure 1: The Standard Motor Products V172 PCV Valve, a metal component with two connection ports for positive crankcase ventilation.

SETUP AND INSTALLATION

Replacing a PCV valve is a common maintenance task. Always refer to your vehicle's specific service manual for detailed instructions and safety precautions. Ensure the engine is cool before beginning any work.

Safety Precautions:

- Wear appropriate personal protective equipment, including gloves and eye protection.
- Ensure the vehicle is on a level surface and the parking brake is engaged.
- Disconnect the negative terminal of the battery if working near electrical components.

General Installation Steps:

1. **Locate the PCV Valve:** Consult your vehicle's service manual to find the exact location of the PCV valve. It is typically located on the valve cover or intake manifold.
2. **Disconnect Hoses:** Carefully disconnect any hoses or tubes connected to the old PCV valve. These may be secured with clamps.
3. **Remove Old Valve:** Depending on the design, the valve may be threaded in, pressed in with a grommet, or secured with a

clip. Remove the old valve. Inspect the grommet (if present) for cracks or hardening and replace if necessary.

4. **Install New Valve:** Insert the new Standard Motor Products V172 PCV Valve into its housing. Ensure it is seated correctly and securely.
5. **Reconnect Hoses:** Reattach all hoses and secure them with their clamps.
6. **Verify:** Double-check all connections to ensure they are tight and there are no leaks.

OPERATING PRINCIPLES

The PCV valve operates based on engine vacuum. During normal engine operation, a small amount of combustion gases (blow-by) escapes past the piston rings and enters the crankcase. Without proper ventilation, these gases would build up pressure, leading to oil leaks and contamination. The PCV valve regulates the flow of these gases from the crankcase back into the intake manifold, where they are re-combusted. This process helps to:

- Reduce harmful emissions.
- Prevent sludge formation in the engine oil.
- Maintain proper engine pressure.
- Improve engine efficiency and longevity.

The valve's internal mechanism adjusts the flow rate based on engine vacuum, allowing more flow during high vacuum conditions (idle) and less during low vacuum conditions (acceleration).

MAINTENANCE

The PCV valve is a wear item and should be inspected and replaced periodically as part of routine vehicle maintenance. Consult your vehicle's owner's manual or service schedule for recommended replacement intervals. While some PCV valves can be cleaned, the Standard Motor Products V172 is typically replaced rather than cleaned to ensure optimal performance and prevent potential issues from a partially clogged or malfunctioning valve.

Signs of a Faulty PCV Valve:

- Rough engine idle.
- Increased oil consumption.
- Engine oil leaks (due to excessive crankcase pressure).
- Sludge buildup in the engine.
- Check Engine Light illumination (though this can indicate many issues).
- Poor fuel economy.

TROUBLESHOOTING

If you experience any of the symptoms listed under "Maintenance," a faulty PCV valve could be a contributing factor. Here are some basic troubleshooting steps:

1. **Visual Inspection:** Check the PCV valve and its hoses for cracks, blockages, or disconnections. Ensure the hoses are pliable and not hardened or collapsed.
2. **Shake Test (for some valves):** If the valve is removed, a common test for some types of PCV valves is to shake it. A working valve should rattle. If it doesn't rattle, it may be clogged or stuck. *Note: This test is not universally applicable to all PCV valve designs.*
3. **Vacuum Test:** With the engine running at idle, carefully remove the PCV valve from its grommet (if applicable) or disconnect the hose leading to it. You should hear a hissing sound as air is drawn into the valve, indicating vacuum. If there's no hiss or very little, the valve might be clogged or the vacuum source is compromised.

4. **Replacement:** If the valve is suspected to be faulty, the most reliable troubleshooting step is to replace it with a new Standard Motor Products V172 PCV Valve. This is often the most cost-effective and definitive solution.
- If symptoms persist after replacing the PCV valve, further diagnosis by a qualified mechanic is recommended, as other engine issues may be present.

SPECIFICATIONS

Brand	Standard Motor Products
Model Number	V172
Material	Metal
Item Dimensions (L x W x H)	1.5 x 1.2 x 2.9 inches
Item Weight	1.6 ounces
Exterior Finish	Machined
Inlet Connection Type	positive crankcase ventilation
Outlet Connection Type	Positive Crankcase Ventilation
Number of Ports	2
Valve Type	pcv
Country of Origin	China
UPC	091769038755

WARRANTY INFORMATION

Specific warranty details for the Standard Motor Products V172 PCV Valve are not provided in this manual. For comprehensive warranty information, please refer to the documentation included with your purchase or visit the official Standard Motor Products website. Warranty terms typically cover defects in material and workmanship for a specified period.

CUSTOMER SUPPORT

If you require further assistance, have questions regarding the installation, operation, or troubleshooting of your Standard Motor Products V172 PCV Valve, please contact Standard Motor Products customer support directly. You can typically find contact information on their official website or through the retailer where the product was purchased.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question

and use this page's manual context to help answer it.

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Question

Example: How do I reset this device or fix this error?

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