

Standard Motor Products AC552

Standard Motor Products AC552 Fuel Injection Idle Air Control Valve Instruction Manual

Model: AC552 | Brand: Standard Motor Products

1. INTRODUCTION AND PRODUCT OVERVIEW

The Standard Motor Products AC552 Fuel Injection Idle Air Control (IAC) Valve is a critical component in your vehicle's engine management system. It is designed to regulate the amount of air bypassing the throttle plate, thereby controlling the engine's idle speed. A properly functioning IAC valve ensures a smooth and stable idle, preventing stalling and maintaining optimal engine performance under various conditions. This manual provides essential information regarding the installation, operation, maintenance, and troubleshooting of your AC552 IAC Valve.

2. INSTALLATION GUIDE

Important: Installation of automotive components can be complex and may require specialized tools and knowledge. It is highly recommended that installation be performed by a qualified automotive technician. Incorrect installation can lead to vehicle damage or personal injury.

Safety Precautions:

- Always disconnect the vehicle's battery before beginning any electrical work.
- Ensure the engine is cool to the touch to prevent burns.
- Wear appropriate personal protective equipment, including gloves and eye protection.
- Refer to your vehicle's specific service manual for detailed instructions and torque specifications.

General Installation Steps (Consult Vehicle Manual for Specifics):

1. Locate the existing Idle Air Control Valve on your vehicle's throttle body.
2. Disconnect the electrical connector from the old IAC valve.
3. Remove any mounting bolts or screws securing the old valve.
4. Carefully remove the old IAC valve. Note the orientation and any gaskets.
5. Clean the mounting surface on the throttle body thoroughly to ensure a proper seal.
6. Install the new Standard Motor Products AC552 IAC Valve, ensuring any new gaskets are correctly seated.

7. Secure the valve with the mounting bolts/screws, tightening to the vehicle manufacturer's specified torque.
8. Reconnect the electrical connector.
9. Reconnect the vehicle's battery.
10. Start the engine and allow it to idle. The engine control unit (ECU) may need to "relearn" the idle parameters. This process can vary by vehicle; consult your vehicle's service manual for idle relearn procedures.



Figure 1: Front view of the Standard Motor Products AC552 Idle Air Control Valve. This image shows the main body and electrical connector.

3. OPERATING PRINCIPLES

The AC552 Idle Air Control Valve is an electromechanical device controlled by the vehicle's Engine Control Unit (ECU). Its primary function is to manage the engine's idle speed by precisely controlling the amount of air that bypasses the closed throttle plate. When the engine is idling, the throttle plate is closed, and the IAC valve opens or closes a passage to allow a controlled amount of air into the intake manifold.

The ECU constantly monitors engine parameters such as engine temperature, load, and electrical demands (e.g., air conditioning, power steering) and adjusts the IAC valve's position to maintain a stable and correct idle speed. This ensures smooth operation and prevents the engine from stalling, especially when accessories are engaged or during cold starts.



Figure 2: Angled view of the Standard Motor Products AC552 Idle Air Control Valve, highlighting its metallic and plastic components.

4. MAINTENANCE

The Standard Motor Products AC552 IAC Valve is designed for long-term reliability. While it generally does not require routine maintenance, certain conditions can affect its performance.

- **Inspection:** Periodically inspect the IAC valve and its electrical connector for any signs of damage, corrosion, or loose connections.
- **Cleaning:** Carbon buildup can sometimes accumulate around the pintle and seat of the IAC valve, restricting its movement. If symptoms of a faulty IAC valve appear, a professional may attempt to clean the valve using a specialized throttle body cleaner. However, excessive or improper cleaning can damage the valve.
- **Replacement:** If the IAC valve is determined to be faulty after diagnosis, replacement with a new unit like the AC552 is the recommended solution.

5. TROUBLESHOOTING

A malfunctioning Idle Air Control Valve can cause various engine performance issues. If you experience any of the following symptoms, the IAC valve may be a contributing factor:

- **Rough or Unstable Idle:** The engine idles erratically, fluctuates significantly, or feels "choppy."
- **Stalling:** The engine stalls frequently, especially when coming to a stop, decelerating, or when accessories (like AC) are engaged.
- **High Idle Speed:** The engine idles at a consistently higher RPM than normal.

- **Low Idle Speed:** The engine idles too low, almost to the point of stalling.
- **Check Engine Light:** The Check Engine Light (CEL) may illuminate, and diagnostic trouble codes (DTCs) related to idle control may be stored in the ECU.

If you suspect an issue with your IAC valve, it is advisable to have your vehicle diagnosed by a professional automotive technician. They can accurately test the valve and the associated electrical circuits to confirm the fault.

6. SPECIFICATIONS

Attribute	Detail
Model Number	AC552
Brand	Standard Motor Products
Material	Plastic, Metal
Item Dimensions (L x W x H)	3.03 x 3.03 x 3.63 inches
Item Weight	4 ounces
Exterior Finish	Painted
Inlet Connection Type	Push-Lock
Number of Ports	2
Valve Type	Air Control Valve
Country of Origin	United States

7. WARRANTY AND SUPPORT

For specific warranty information regarding your Standard Motor Products AC552 Fuel Injection Idle Air Control Valve, please refer to the documentation provided with your purchase or visit the official Standard Motor Products website. Warranty terms and conditions may vary.

If you require technical assistance, have questions about product compatibility, or need to report a defect, please contact Standard Motor Products customer support directly. Contact information can typically be found on their official website or product packaging.

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.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

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

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question