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› AA Ignition HVAC Air Blend Door Actuator Heater Instruction Manual for Chevrolet Impala 2004-2013 (Model 52409974)

AA Ignition 52409974

AA Ignition HVAC Air Blend Door Actuator Heater Instruction Manual

Model: 52409974

INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of your AA Ignition HVAC Air Blend Door Actuator. This component is designed to control the temperature and direction of airflow within your vehicle's heating, ventilation, and air conditioning system. Proper installation and understanding of its function are crucial for optimal performance.

PRODUCT OVERVIEW

The AA Ignition HVAC Air Blend Door Actuator is a direct replacement part engineered to restore proper climate control functionality in compatible vehicles. It ensures accurate mixing of hot and cold air and directs airflow to the appropriate vents.



Image: The AA Ignition HVAC Air Blend Door Actuator, a black plastic component with a white shaft, designed for precise air temperature and flow control.

Key Features

- Controls temperature of air from AC vents and recirculation/outside air.
- Features a rugged internal circuit board and gears designed to resist heat, vibration, and corrosion.
- Direct replacement for the factory GM part.
- Redesigned housing and gears for enhanced longevity.
- Equipped with an OEM electrical connector and factory mounting points for a precise fit.

REPLACEMENT AIR DOOR ACTUATOR

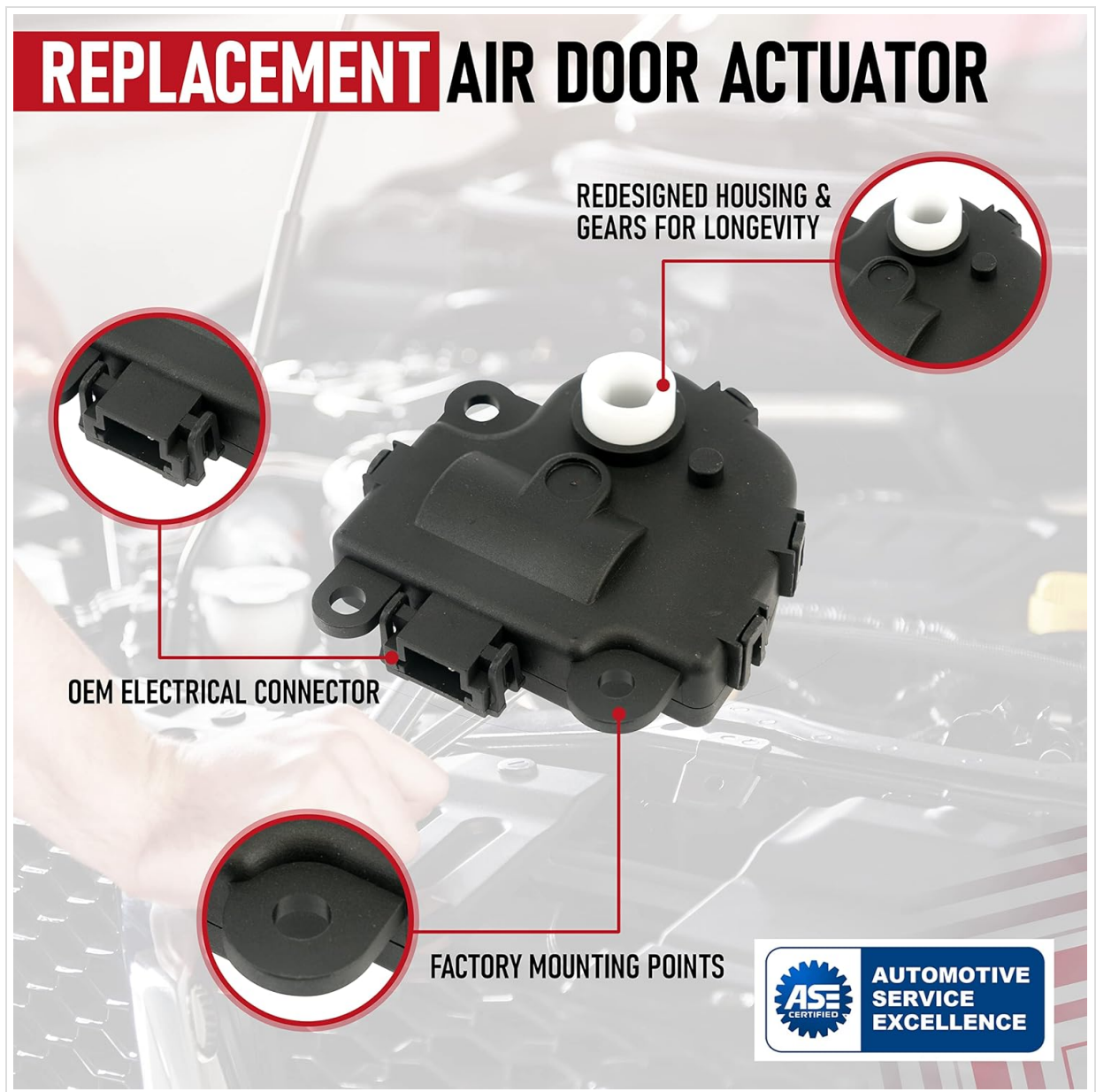


Image: A detailed view of the actuator highlighting its OEM electrical connector and factory mounting points, indicating a design for direct replacement.

Replaces Part Numbers

This actuator is designed to replace the following OEM part numbers:

- 1573517
- 1574122
- 15844096
- 22754988
- 52409974
- 604-108
- 15-74122
- 15-73517
- 604108

REPLACES PART NUMBERS:

✓ 1573517

✓ 1574122

✓ 15844096

✓ 22754988

✓ 52409974

✓ 604-108

✓ 15-74122

✓ 15-73517

✓ 604108



**AA Ignition is a registered trademark of GWA Auto Parts Inc.
Other trademarks are registered trademarks of auto manufactures.**

Image: A visual representation listing the various OEM part numbers that this AA Ignition actuator replaces, ensuring compatibility.

Vehicle Compatibility

This actuator is compatible with a range of Chevrolet, Cadillac, Buick, and Pontiac vehicles. Please verify your vehicle's make, model, and year against the list below:

- Chevrolet Impala: 2004-2014
- Chevrolet Impala Limited: 2014-2016
- Chevrolet Corvette: 2005-2013
- Chevrolet Malibu: 2004-2008
- Chevrolet Monte Carlo: 2004-2006
- Buick Allure: 2005-2009
- Buick LaCrosse: 2005-2009
- Cadillac XLR: 2004-2009
- Pontiac Grand Prix: 2004-2008

FITS THE FOLLOWING VEHICLES

- 2004-2014 Chevy Impala®
- 2014-2016 Chevy Impala Limited®
- 2005-2013 Chevy Corvette®
- 2004-2008 Chevy Malibu®
- 2004-2006 Chevy Monte Carlo®
- 2005-2009 Buick Allure®
- 2005-2009 Buick LaCrosse®
- 2004-2009 Cadillac XLR®
- 2004-2008 Pontiac Grand Prix®

Image: A clear list detailing the specific vehicle makes, models, and years that are compatible with this HVAC blend door actuator.

SAFETY INFORMATION

Automotive repairs can be complex and potentially hazardous. Always prioritize safety when working on your vehicle. If you are unsure about any step, consult a qualified automotive technician.

- Always disconnect the vehicle's negative battery terminal before performing any electrical work or component replacement to prevent electrical shock or damage.
- Wear appropriate personal protective equipment, such as safety glasses and gloves.
- Ensure the vehicle is on a stable, level surface and properly supported if lifting is required.
- Refer to your vehicle's specific service manual for detailed safety precautions and procedures.

INSTALLATION (SETUP)

Replacing an HVAC blend door actuator typically involves accessing components behind the dashboard. The exact procedure varies by vehicle model and the specific actuator location (e.g., driver side temperature, passenger side temperature, recirculation).

ACTUATOR LOCATIONS



REPLACES THE FOLLOWING HVAC ACTUATORS:

1. Left Side - Driver side temperature
2. Middle - Passenger side temperature
3. Right Side - Recirculation

Image: A diagram illustrating the typical locations of HVAC actuators within a vehicle's dashboard, indicating positions for driver side temperature, passenger side temperature, and recirculation.

General Installation Steps:

1. **Prepare the Vehicle:** Ensure the vehicle is turned off and the negative battery terminal is disconnected.
2. **Access the Actuator:** Depending on the actuator's location, you may need to remove dashboard panels, the glove compartment, or other interior trim pieces. Consult your vehicle's service manual for precise instructions on accessing the specific actuator you are replacing.
3. **Disconnect Electrical Connector:** Carefully unplug the electrical connector from the old actuator.
4. **Remove Old Actuator:** Unscrew any mounting screws or clips securing the old actuator and carefully remove it from its position. Note its orientation.
5. **Install New Actuator:** Align the new AA Ignition actuator with the blend door shaft. It may be necessary to manually rotate the actuator's shaft or the blend door to ensure proper alignment. Secure the new actuator with the mounting screws or clips.
6. **Reconnect Electrical Connector:** Plug the electrical connector firmly into the new actuator.
7. **Test Functionality:** Before reassembling all interior panels, reconnect the battery and test the HVAC system. Cycle through all temperature settings (hot to cold) and airflow directions (defrost, vent, floor) to ensure the new actuator operates correctly and smoothly.
8. **Reassemble:** Once proper operation is confirmed, reassemble all removed interior panels and trim pieces.

Important: If you encounter difficulty or are unfamiliar with automotive electrical or interior component removal, it is highly recommended to seek assistance from a certified mechanic.

OPERATION

Once correctly installed, the AA Ignition HVAC Air Blend Door Actuator operates automatically as an integral part of your vehicle's climate control system. It responds to commands from the climate control panel to adjust the blend door's position.

- **Temperature Control:** When you adjust the temperature setting on your vehicle's climate control, the actuator moves the blend door to allow more or less heated or cooled air to mix, achieving the desired cabin temperature.
- **Airflow Direction:** Similarly, when you select different airflow modes (e.g., dashboard vents, floor vents, defrost), the actuator repositions the blend door to direct air to the chosen outlets.

The actuator's movement should be smooth and quiet. Any unusual noises or lack of response from the climate control system may indicate an issue.

MAINTENANCE

The AA Ignition HVAC Air Blend Door Actuator is a sealed, maintenance-free component. It does not require lubrication, cleaning, or periodic adjustments.

- **Regular System Checks:** It is advisable to periodically test your vehicle's HVAC system by cycling through all temperature and airflow settings to ensure all components, including the actuator, are functioning correctly.
- **Environmental Factors:** While designed for durability, extreme environmental conditions or prolonged exposure to excessive vibration can affect any automotive component over time.

No user-serviceable parts are inside the actuator. Attempting to open or modify the unit will void the warranty.

TROUBLESHOOTING

If you experience issues with your vehicle's climate control system after installing or while using the AA Ignition HVAC Air Blend Door Actuator, consider the following common symptoms and potential solutions:

Symptom	Possible Cause	Solution
Clicking or ticking noise from dashboard	Actuator gears stripped or motor failing to find home position.	This often indicates a faulty actuator. Replacement is typically required.
Air temperature does not change (e.g., only hot or only cold air)	Blend door stuck or actuator not moving it.	Inspect the actuator and blend door for obstructions or mechanical failure. Ensure the actuator is properly seated.
Air does not flow to selected vents (e.g., stuck on defrost)	Mode door actuator failure or blend door obstruction.	Verify the correct actuator is being addressed (temperature vs. mode). Check for electrical connection issues.
No response from climate controls	Electrical connection issue, blown fuse, or climate control module fault.	Check the electrical connector to the actuator. Inspect relevant fuses in your vehicle's fuse box. If issues persist, professional diagnosis is recommended.

If troubleshooting steps do not resolve the issue, or if you are uncomfortable performing these checks, it is recommended to consult a certified automotive technician for further diagnosis and repair.

SPECIFICATIONS

- **Model:** 52409974
- **Item Weight:** Approximately 4 ounces
- **Product Dimensions:** Approximately 4 x 1 x 4 inches
- **Voltage:** 12 Volts
- **OEM Part Numbers Replaced:** 15-74122, 1573517, 15844096, 22754988, 604-108
- **Special Features:** Heating and Cooling Functionality

WARRANTY AND SUPPORT

AA Ignition stands behind the quality of its products.

Lifetime Warranty

This AA Ignition HVAC Air Blend Door Actuator is backed by a Lifetime Warranty. If the actuator ever fails due to manufacturing defects or normal wear, please contact AA Ignition customer support for a free replacement.

Customer Support

For technical assistance, installation guidance, or to process a warranty claim, please visit the official AA Ignition website or contact their customer service department. Contact information can typically be found on the product packaging or the brand's online store page.