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> Dorman 604-038 HVAC Blend Door Actuator User Manual for Dodge/Ram Models

Dorman 604-038

Dorman 604-038 HVAC Blend Door Actuator User Manual

Brand: Dorman | Model: 604-038

1. PRODUCT OVERVIEW

The Dorman 604-038 HVAC Blend Door Actuator is a direct replacement component designed to restore proper heating, ventilation, and air conditioning (HVAC) operation in compatible Dodge and Ram vehicles. This actuator controls the internal flaps or air doors within the vehicle's HVAC system, directing airflow to various vents and regulating temperature.



Figure 1: Top view of the Dorman 604-038 HVAC Blend Door Actuator.

Constructed from engineering-grade plastics and metals, this actuator is designed for durability and reliable operation. It is a position-specific component, meaning vehicles often have multiple HVAC door actuators, each designed for a particular location and function. Always verify the correct actuator for your specific application.

2. COMPATIBILITY

This Dorman 604-038 HVAC Blend Door Actuator is compatible with the following vehicle models and years:

- **Dodge Ram 1500:** 2009, 2010
- **Dodge Ram 2500:** 2010
- **Dodge Ram 3500:** 2010
- **Ram 1500:** 2011, 2012
- **Ram 2500:** 2011, 2012
- **Ram 3500:** 2011, 2012

- **Ram 4500:** 2011, 2012
- **Ram 5500:** 2011, 2012

OEM Part Numbers: ADA367; ADR4209; ADS4209; SK604038; 68048902AA; 68048902AB

Before purchasing and installing, it is crucial to confirm that this part matches the specific position and function of the actuator you need to replace in your vehicle. Consult your vehicle's service manual or a qualified technician if unsure.

3. WHAT'S IN THE BOX

The package for the Dorman 604-038 HVAC Blend Door Actuator typically includes:

- 1 x Dorman 604-038 HVAC Blend Door Actuator



Figure 2: Front view of the actuator, showing the electrical connector.

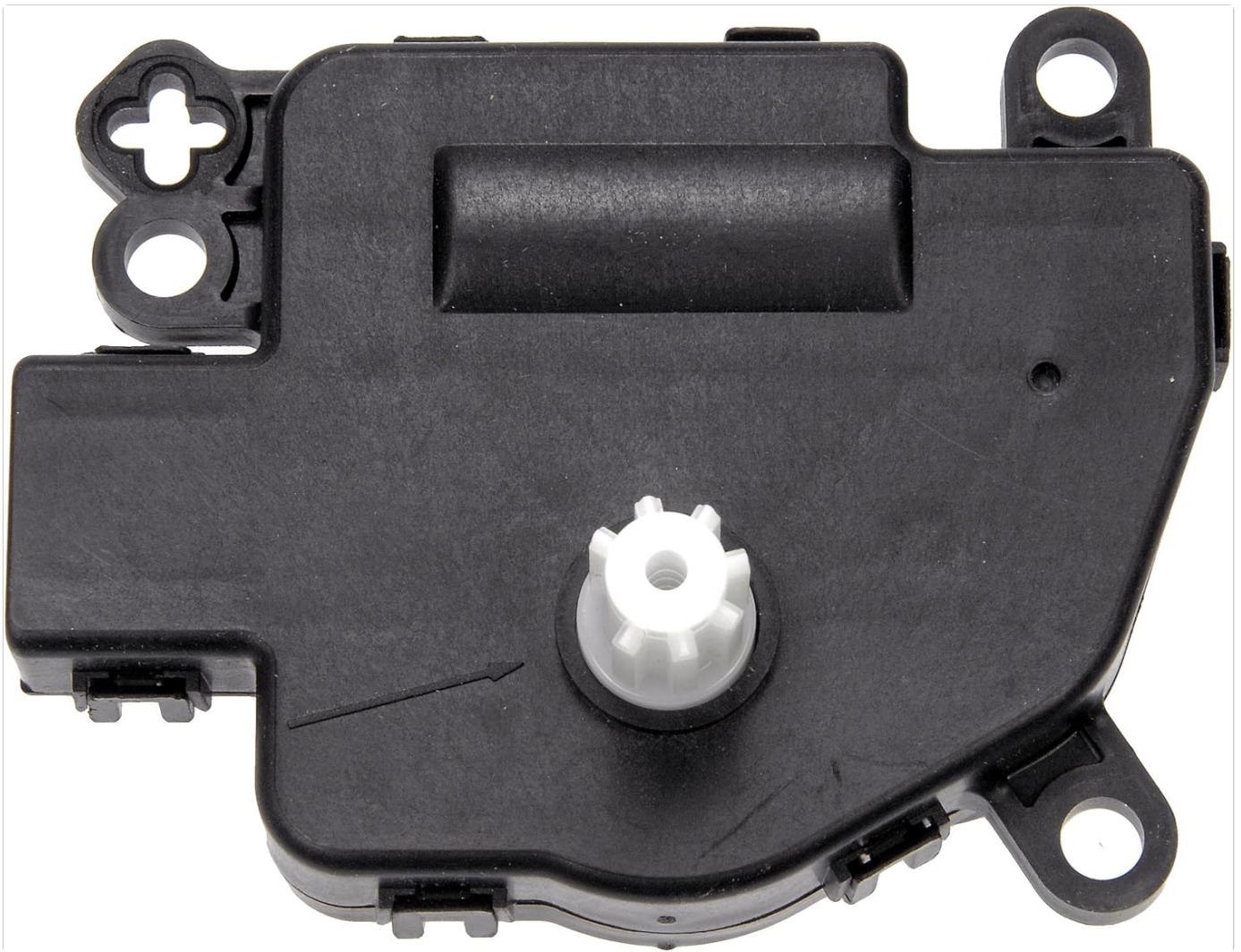


Figure 3: Rear view of the actuator, showing mounting points.

4. INSTALLATION (SETUP)

The Dorman 604-038 is designed as a direct replacement for the original actuator. Installation typically involves removing the old actuator and installing the new one in its place. Due to the location of these components behind the dashboard, access can be challenging.

Key Installation Steps:

1. **Access:** Gain access to the blend door actuator. This may require removing dashboard components, glove box, or other interior trim.
2. **Removal:** Disconnect the electrical connector and remove the mounting screws securing the old actuator. Carefully detach the old actuator from the HVAC housing.
3. **Installation:** Position the new Dorman 604-038 actuator, ensuring the shaft aligns correctly with the blend door mechanism. Secure it with the mounting screws and reconnect the electrical connector.
4. **Recalibration:** After installation, this actuator requires recalibration using an appropriate scan tool. If you do not have access to a scan tool, consult a qualified service center for this procedure.

EASIER INSTALL

Includes alignment tool to position door correctly for proper install and calibration.

**Fits any
1/4" ratchet**



Figure 4: An alignment tool may be included to assist with proper door positioning during installation.

Installation Video Resource:

Your browser does not support the video tag.

Video 1: An overview from Dorman Products on HVAC air door actuators, including their function and replacement considerations. This video provides general guidance on air door actuators.

5. OPERATION

The HVAC blend door actuator is responsible for controlling the blend door, which mixes hot and cold air to achieve the desired temperature inside the vehicle cabin. It also manages the direction of airflow (e.g., to the dashboard vents, floor vents, or defroster) and can switch between fresh air intake and recirculated cabin air.

When you adjust the temperature or airflow settings on your vehicle's climate control panel, the actuator receives signals from the control unit and moves the blend door to the appropriate position. This precise movement ensures optimal climate comfort for the vehicle occupants.

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Video 2: This video illustrates the function of an HVAC blend door actuator in regulating cabin temperature and airflow.

6. MAINTENANCE

The Dorman 604-038 HVAC Blend Door Actuator is designed for long-term reliability and typically does not require routine maintenance. However, it is advisable to:

- Periodically check your vehicle's HVAC system for proper function, ensuring air flows correctly and temperature can be regulated.
- Address any unusual noises (e.g., clicking) from the dashboard area promptly, as this can indicate an actuator issue.
- Ensure your cabin air filter is clean and replaced as per your vehicle manufacturer's recommendations to maintain optimal airflow and reduce strain on HVAC components.

7. TROUBLESHOOTING

If you experience issues with your vehicle's HVAC system, the blend door actuator may be a contributing factor. Common symptoms of a failing blend door actuator include:

- **Clicking or Ticking Noise:** A repetitive clicking or ticking sound coming from behind the dashboard, especially when changing temperature or vent settings.
- **Incorrect Temperature Output:** Air blowing too hot or too cold, regardless of the climate control setting.
- **Improper Airflow Direction:** Air not blowing from the selected vents (e.g., air only from defrost, not from face vents).
- **Inconsistent Airflow:** Airflow changing unexpectedly or not responding to controls.

Troubleshooting Steps:

1. **Identify the Faulty Actuator:** Many vehicles have multiple actuators. Listen carefully for the source of any clicking noise. Some technicians recommend feeling the actuators while changing settings to pinpoint the failing unit.
2. **Verify Part Number:** Ensure you have the correct Dorman 604-038 actuator for the specific position and function required in your vehicle.
3. **Check Electrical Connection:** Ensure the electrical connector is securely attached to the actuator.
4. **Recalibration:** As noted in the installation section, recalibration with a scan tool is often necessary after replacement. This step is critical for proper function.

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Video 3: This video demonstrates the replacement process for an HVAC blend door actuator in a Dodge Ram 1500, which can be helpful for troubleshooting and repair.

8. SPECIFICATIONS

Feature	Specification
Brand	Dorman
Model Number	604-038
Item Weight	0.32 ounces (approx. 9 grams)
Product Dimensions	5.2 x 4.1 x 2.5 inches
Material	Engineering-grade Plastics and Metals
Position	Center (as per product specifications, but verify for your specific vehicle)
OEM Part Numbers	ADA367; ADR4209; ADS4209; SK604038; 68048902AA; 68048902AB

9. WARRANTY AND SUPPORT

For specific warranty information and technical support regarding your Dorman 604-038 HVAC Blend Door Actuator, please refer to the documentation included with your purchase or visit the official Dorman Products website. You may also contact Dorman customer service directly for assistance.

Dorman is committed to providing quality replacement parts and support for vehicle owners and repair professionals.

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