

## Dorman 601-387

# Dorman 601-387 Radiator Shutter Assembly Instruction Manual

For Chevrolet Silverado 1500 (2019-2021)

## 1. INTRODUCTION

This instruction manual provides essential information for the proper installation, operation, and maintenance of the Dorman 601-387 Radiator Shutter Assembly. This component is designed to match the fit and function of the original equipment active grille shutter system, restoring its functionality in compatible vehicles.

**Vehicle Compatibility:** This assembly is compatible with Chevrolet Silverado 1500 models from 2019, 2020, and 2021. Always verify fitment for your specific vehicle trim before proceeding with installation.

## 2. SAFETY INFORMATION

Always observe the following safety precautions when working on your vehicle:

- Ensure the vehicle is turned off, the ignition is disabled, and the battery is disconnected before beginning any work.
- Wear appropriate personal protective equipment, including safety glasses and gloves.
- Work in a well-ventilated area.
- If you are unsure about any step, consult a qualified automotive technician or your vehicle's service manual.
- Keep all tools and parts organized to prevent loss or damage.

## 3. PACKAGE CONTENTS

Upon opening the package, verify that all components are present and undamaged:

- 1 Active Grille Shutter Assembly (Dorman 601-387)

If any items are missing or damaged, please contact Dorman customer support immediately.

## 4. INSTALLATION INSTRUCTIONS

The Dorman 601-387 Radiator Shutter Assembly is designed for a direct replacement and features a factory-style electrical connector for a plug-and-play installation. However, due to the complexity of automotive systems, professional installation is recommended. Always refer to your vehicle's specific service manual for detailed removal and installation procedures.

### 4.1 General Overview of the Assembly



**Figure 1:** Front view of the Dorman 601-387 Radiator Shutter Assembly, showing the active grille slats.



**Figure 2:** Rear view of the Dorman 601-387 Radiator Shutter Assembly, illustrating the structural components.

### 4.2 Electrical Connection

The assembly includes a factory-style electrical connector designed for direct compatibility with your vehicle's wiring harness. Ensure this connection is secure and free from debris.



**Figure 3:** Detailed view of the electrical connector for the shutter assembly, ensuring a secure plug-and-play connection.



**Figure 4:** An alternative close-up of the electrical connector, highlighting its design for easy integration.

### 4.3 Shutter Mechanism

The active grille shutter mechanism consists of multiple slats that open and close to regulate airflow. Ensure these slats move freely before and after installation.



**Figure 5:** Detailed view of the shutter slats and their pivot points, which control airflow.

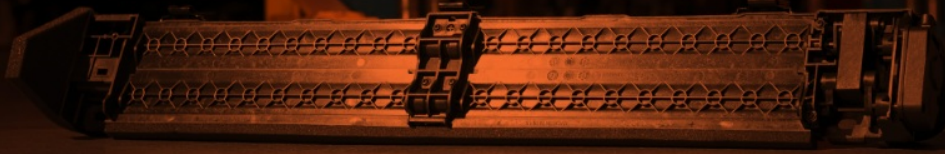


**Figure 6:** An additional close-up of the shutter mechanism, showing the intricate design for precise airflow regulation.

#### **4.4 Installation Context**

The active grille shutter assembly is typically located behind the front grille of the vehicle. Installation involves removing the front bumper cover and potentially other components to access the mounting points.

**CONTROL THE AIR FLOW.**  
**CONTROL THE COST.**



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**Figure 7:** An automotive technician demonstrating the installation process of a radiator shutter assembly into a vehicle's front end.

After installation, reconnect the battery and test the active grille shutter system to ensure proper operation. If any warning lights appear on the dashboard, consult your vehicle's diagnostic system or a qualified technician.

## 5. OPERATING PRINCIPLES

The active grille shutter system is an integral part of modern vehicle thermal management and aerodynamic efficiency. It operates automatically based on various factors:

- **Engine Temperature:** When the engine is cold, the shutters remain closed to help the engine reach its optimal operating temperature faster, improving fuel efficiency and reducing emissions.
- **Vehicle Speed:** At higher speeds, the shutters may close to improve the vehicle's aerodynamics, reducing drag and enhancing fuel economy.
- **Cooling Demand:** When the engine requires more cooling (e.g., during heavy loads, high ambient temperatures, or air conditioning use), the shutters will open to allow maximum airflow to the radiator.

The system is controlled by the vehicle's engine control unit (ECU), which monitors sensors to determine the optimal shutter position.

## 6. MAINTENANCE

The Dorman 601-387 Radiator Shutter Assembly is designed for durability and requires minimal routine maintenance. However, periodic inspection can help ensure its longevity and proper function:

- **Visual Inspection:** Periodically check the shutter slats for any signs of physical damage, cracks, or obstructions (e.g., leaves, debris).
- **Cleanliness:** Keep the area around the grille shutters clean to prevent debris from interfering with their movement. Use a soft cloth and mild cleaner if necessary.
- **Movement Check:** If accessible and safe to do so, observe the shutters' movement (e.g., during engine warm-up or after driving) to ensure they open and close smoothly without binding.

Avoid using high-pressure washers directly on the shutter mechanism, as this could potentially damage sensitive components.

## 7. TROUBLESHOOTING

If you experience issues with your active grille shutter system after installing the Dorman 601-387 assembly, consider the following common troubleshooting steps:

Symptom	Possible Cause	Solution
Check Engine Light / Warning Message	Faulty electrical connection, sensor issue, or motor malfunction.	<ul style="list-style-type: none"><li>• Verify the electrical connector is securely attached (refer to Figure 3 &amp; 4).</li><li>• Check for any visible damage to wiring.</li><li>• Scan for diagnostic trouble codes (DTCs) using an OBD-II scanner.</li></ul>
Shutters not opening/closing	Obstruction, motor failure, or control module issue.	<ul style="list-style-type: none"><li>• Inspect for physical obstructions preventing slat movement.</li><li>• Ensure the motor is receiving power (requires diagnostic tools).</li><li>• If the issue persists, professional diagnosis is recommended.</li></ul>
Unusual noises from grille area	Debris caught in mechanism, damaged motor, or loose components.	<ul style="list-style-type: none"><li>• Visually inspect the shutter mechanism for foreign objects.</li><li>• Ensure all mounting points are secure.</li><li>• If noise continues, seek professional inspection.</li></ul>

For complex issues or if troubleshooting steps do not resolve the problem, it is advisable to consult a certified automotive technician.

## 8. PRODUCT SPECIFICATIONS

Specification	Detail
Brand	Dorman
Model Number	601-387
Manufacturer Part Number	601-387
OEM Part Number	84652494
Item Weight	14.33 pounds
Product Dimensions	47.44 x 23.42 x 8.07 inches
Exterior Finish	Ready To Paint If Needed

Specification	Detail
Compatible Vehicles	Chevrolet Silverado 1500 (2019, 2020, 2021)

## 9. WARRANTY AND SUPPORT

Dorman products are manufactured to high-quality standards. For specific warranty information regarding your Dorman 601-387 Radiator Shutter Assembly, please refer to the warranty documentation included with your purchase or visit the official Dorman website.

For technical assistance, installation questions, or to report any issues, please contact Dorman customer support:

- **Dorman Official Website:** [www.dormanproducts.com](http://www.dormanproducts.com)
- Refer to the product packaging for direct contact information.

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