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› Dorman 931-509 Rear Passenger Side Door Lock Actuator Motor Instruction Manual

Dorman 931-509

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Model: 931-509 | Brand: Dorman

INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of the Dorman 931-509 Rear Passenger Side Door Lock Actuator Motor. Please read this manual thoroughly before beginning any work to ensure proper function and safety.

The Dorman 931-509 door lock actuator is designed as a direct replacement for the stock actuator on specific Hyundai Sonata models (2011, 2012, 2013, 2014). It has undergone extensive quality and safety testing to ensure reliable performance and a perfect fit.

PRODUCT OVERVIEW

The Dorman 931-509 is a rear passenger side door lock actuator motor. It integrates the necessary components to control the locking and unlocking mechanism of the vehicle's door.



Image: The Dorman 931-509 door lock actuator motor, showing the main housing and attached cables.

DOOR LOCK ACTUATORS

Benchmark tested up to 20,000 cycles to help ensure longevity



Image: A door lock actuator undergoing benchmark testing, demonstrating its ability to withstand up to 20,000 cycles for longevity.

DOOR LOCK ACTUATORS

Tensile tested to help ensure safety in collision



Image: A door lock actuator undergoing tensile testing, ensuring its safety and integrity in potential collision scenarios.

DOOR LOCK ACTUATORS

Temperature tested to help ensure internal components last



Image: A door lock actuator inside a chamber for temperature testing, verifying the durability of internal components under varying thermal conditions.



Image: An angled view of the Dorman 931-509 door lock actuator motor, highlighting its cables and connection points.



Image: A side view of the Dorman 931-509 door lock actuator motor, showing the latch mechanism and cable routing.



Image: A close-up view of the electrical connector on the Dorman 931-509 door lock actuator motor.

VEHICLE COMPATIBILITY

The Dorman 931-509 door lock actuator is compatible with the rear passenger side of the following vehicle models:

- **Hyundai Sonata:** 2011, 2012, 2013, 2014

Always verify fitment using your vehicle's specific year, make, and model before installation.

WHAT'S IN THE BOX

The package for the Dorman 931-509 includes:

- 1 x Dorman 931-509 Rear Passenger Side Door Lock Actuator Motor

SETUP AND INSTALLATION

Installation of the Dorman 931-509 door lock actuator requires mechanical knowledge and tools. If you are not comfortable performing this installation, it is recommended to seek professional assistance.

Required Tools (Not Included):

- Basic automotive hand tools (e.g., screwdrivers, socket set, trim removal tools)
- Safety glasses
- Gloves

Installation Steps:

1. **Safety First:** Disconnect the vehicle's battery to prevent accidental electrical shorts.
2. **Access the Door Panel:** Carefully remove the interior door panel of the rear passenger side door. Refer to your vehicle's service manual for specific instructions on trim removal.
3. **Remove Old Actuator:** Locate the existing door lock actuator. Disconnect any electrical connectors and unclip the control rods or cables attached to it. Remove the mounting bolts or screws securing the actuator to the door frame.
4. **Install New Actuator:** Position the new Dorman 931-509 actuator in place. Secure it with the mounting bolts or screws. Reconnect the control rods/cables and ensure they operate smoothly.
5. **Reconnect Electrical:** Plug in the electrical connector to the new actuator.
6. **Test Functionality:** Before reassembling the door panel, reconnect the vehicle's battery. Test the door lock and unlock functions using both the interior switch and the remote key fob to ensure proper operation.
7. **Reassemble Door Panel:** Once functionality is confirmed, carefully reattach the interior door panel, ensuring all clips and screws are properly secured.

Note: Specific steps may vary slightly depending on the exact vehicle model and year. Always consult a professional service manual for your specific vehicle.

OPERATING INSTRUCTIONS

Once installed, the Dorman 931-509 door lock actuator operates automatically as part of your vehicle's central locking system.

- **Locking:** Press the lock button on your vehicle's interior door panel or remote key fob. The actuator will engage, securing the door.
- **Unlocking:** Press the unlock button on your vehicle's interior door panel or remote key fob. The actuator will

disengage, allowing the door to be opened.

- **Manual Override:** In case of electrical failure, the door can typically be locked or unlocked manually using the physical lock knob on the interior door panel or the key in the exterior door cylinder (if applicable to the rear door).

MAINTENANCE

The Dorman 931-509 door lock actuator is designed for long-lasting, maintenance-free operation. No regular maintenance is required for the actuator itself.

However, it is recommended to:

- Keep the door interior clean and free of debris.
- Ensure that the door cables and rods connected to the actuator are not obstructed or bent, as this can impede proper function.
- If the door lock mechanism feels stiff or sluggish, it may indicate an issue with the mechanical linkages rather than the actuator itself. Consult a professional for diagnosis.

TROUBLESHOOTING

If you experience issues with your Dorman 931-509 door lock actuator, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
Door does not lock/unlock electrically.	<ul style="list-style-type: none">◦ Loose or disconnected electrical connector.◦ Blown fuse for the door lock system.◦ Faulty wiring.◦ Actuator failure.	<ul style="list-style-type: none">◦ Check and secure the electrical connector to the actuator.◦ Inspect and replace the relevant fuse in the vehicle's fuse box (consult your vehicle manual for fuse location).◦ Inspect wiring for damage or breaks.◦ If other solutions fail, the actuator may need replacement.
Door locks/unlocks intermittently.	<ul style="list-style-type: none">◦ Poor electrical connection.◦ Weak signal from remote (if applicable).◦ Mechanical obstruction or binding.	<ul style="list-style-type: none">◦ Ensure all connections are clean and secure.◦ Check remote battery.◦ Inspect door mechanism for anything blocking movement.

Problem	Possible Cause	Solution
Actuator makes noise but doesn't lock/unlock.	<ul style="list-style-type: none"> Internal gear damage within the actuator. Disconnected or broken control rod/cable. 	<ul style="list-style-type: none"> The actuator likely needs replacement. Inspect and reattach or replace any broken rods/cables.

If troubleshooting steps do not resolve the issue, professional diagnosis and repair are recommended.

SPECIFICATIONS

Attribute	Detail
Brand	Dorman
Model Number	931-509
Part Type	Rear Passenger Side Door Lock Actuator Motor
Compatible Vehicles	Hyundai Sonata (2011-2014)
Actuator Type	Electric
Contact Type	Normally Closed
Connector Type	Plug In
Terminal Type	Blade
Circuit Type	1-way
Material	Metal, Plastic
Dimensions (L x W x H)	12 x 8 x 8 inches
Item Weight	1 pound
UPC	019495467908

WARRANTY INFORMATION

Dorman offers a limited lifetime warranty on their door lock actuators. This warranty covers defects in material and workmanship under normal use and service. If a defect is found, the product will be repaired or replaced

free of charge.

For specific warranty terms and conditions, please refer to the official Dorman warranty policy or contact Dorman customer support.

SUPPORT AND CONTACT INFORMATION

For technical assistance, installation questions, or warranty claims, please contact Dorman Products directly.

- **Dorman Website:** www.dormanproducts.com
- **Customer Service:** Refer to the Dorman website for current contact methods (phone, email, or online support).

When contacting support, please have your product model number (931-509) and vehicle information readily available.

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