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2007 JEEP Compass OEM Service and Repair Workshop Manual

Go to manual page

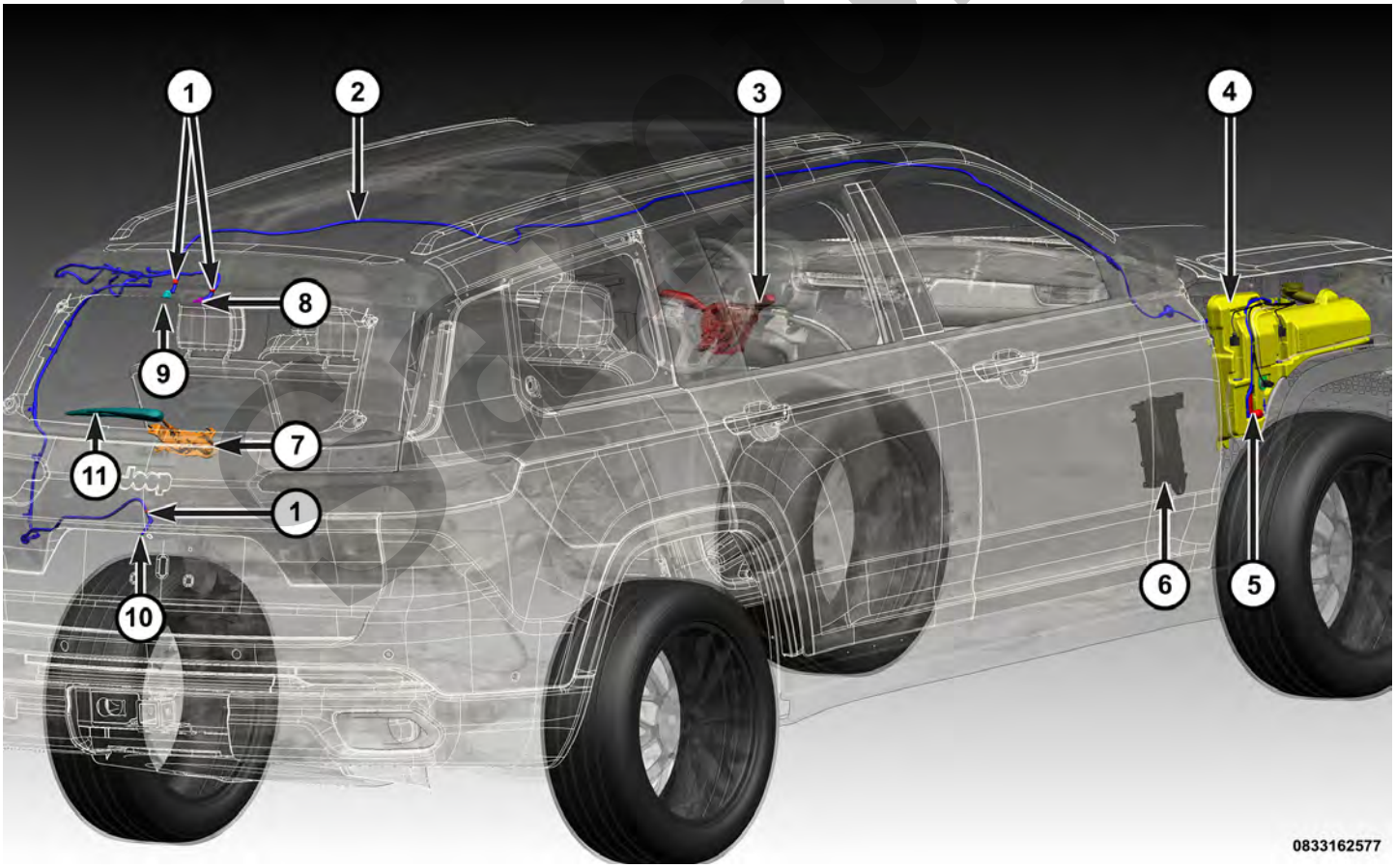
Rear Wiper And Washer System

REAR WIPER AND WASHER SYSTEM

DESCRIPTION

NOTE

LHD model shown. RHD model similar.



The rear wiper/washer system consists of the following components:

Component Index

- Ignition status
- Reverse gear status
- Auto start info
- Rain sensor level setting
- Rain sensor status

Rear Wiper/Washer Outputs:

- Wiper status
- Rain sensor selections
- Wiper motor command
- Washer pump command
- Rear wiper movement status
- Rear wiper motor status
- SCCM status
- Washer fluid level low

Check Valve

Component Index

The rear check valves provide more than one function in this application. They prevent washer fluid from draining out of the rear washer supply hoses back to the washer reservoir. This drain-back would result in a lengthy delay from when the rear washer switch is actuated until washer fluid was dispensed through the rear washer nozzle, because the washer pump would have to refill the rear washer plumbing from the reservoir to the nozzle. Such a drain-back condition could also result in water, dirt, or other outside contaminants being siphoned into the washer system through the washer nozzle orifice. This water could subsequently freeze and plug the nozzles, while other contaminants could interfere with proper nozzle operation and cause improper nozzle spray patterns. In addition, the rear check valves prevent washer fluid from siphoning out through the rear washer nozzles after the rear washer system is turned OFF.

When the washer pump pressurizes and pumps washer fluid from the reservoir through the rear washer plumbing, the fluid pressure unseats a diaphragm in each check valve from over a sump well within the valve by overriding the pressure applied to it by a piston and coiled spring. With the diaphragm unseated, washer fluid is allowed to flow toward the rear washer nozzle. When the washer pump stops operating, the spring pressure on the piston seats the diaphragm over the sump well in the valve and fluid flow in either direction within the rear washer plumbing is prevented.

Rear Surround View Camera Washer Nozzle

Component Index

Front Wiper And Washer System

FRONT WIPER AND WASHER SYSTEM

WARNING

To avoid serious or fatal injury on vehicles equipped with airbags, disable the Supplemental Restraint System (SRS) before attempting any steering wheel, steering column, airbags, airbag curtains, knee blocker, seat belt tensioner, impact sensor or instrument panel component diagnosis or service. Disconnect the Intelligent Battery Sensor (IBS)/negative battery cable assembly from the negative battery post, then wait two minutes for the system capacitor to discharge before performing further diagnosis or service. This is the only sure way to disable the SRS. Failure to take the proper precautions could result in accidental airbag deployment.

If the front wiper motor operates, but the wiper blades do not move on the windshield and the wiper arms are properly installed, replace the ineffective front wiper motor or wiper linkage module. If the washer pump/motor operates, but no washer fluid is dispensed on the glass; or, if the wipers operate, but chatter, lift, or do not clear the glass, clean and inspect the front wiper and washer system components as required (Refer to Electrical/8R - Wipers/Washers - Cleaning) and (Refer to 08 - Electrical/8R - Wipers/Washers - Inspection).

The hardwired front wiper and washer system circuits and components may be diagnosed using conventional diagnostic tools and procedures. Refer to the appropriate wiring information. The wiring information includes wiring diagrams, details of wire harness routing and retention, connector pin-out information and location views for the various wire harness connectors, splices and grounds. For proper wire repair, (Refer to Non-DTC Diagnostics/Circuit Testing Procedures/Standard Procedure) and connector repair procedures, (Refer to Non-DTC Diagnostics/Circuit Testing Procedures/Removal) and (Refer to Non-DTC Diagnostics/Circuit Testing Procedures/Installation).

However, conventional diagnostic methods will not prove conclusive in the diagnosis of the front wiper and washer system or the electronic controls and communication between other modules and devices that provide some features of the front wiper and washer system. The most reliable, efficient and accurate means to diagnose the front wiper and washer system or the electronic controls and communication related to front

2. From outside of the vehicle, carefully inspect the adhesive layers of the windshield glass and HLRSM for any large voids. If a void of greater than approximately 1 millimeter (0.04 inch) is observed, replace the HLRSM mounting bracket and windshield glass as a unit. If OK, go to **Step 3** .

3. At the interior of the windshield glass, lightly pull the HLRSM away from the windshield bracket to confirm that both sides of the spring steel HLRSM mounting band are fully engaged to the mounting bracket. If OK, go to **Step 4** . If not OK, reinstall the HLRSM to the bracket as required.

4. Remove the HLRSM from the mounting bracket. Inspect the HLRSM lenses and mounting bracket for contamination. If OK, go to **Step 5** . If not OK, clean any material from the lenses using rubbing alcohol and a lint-free cloth.

5. Carefully inspect the HLRSM for any physical damage, including scratches on the HLRSM lenses. If OK, go to **Step 6** . If not OK, replace the damaged HLRSM.

6. Carefully inspect the viewing surfaces at the HLRSM mounting bracket for any physical damage, including scratches. If not OK, replace the HLRSM bracket and windshield as a unit.

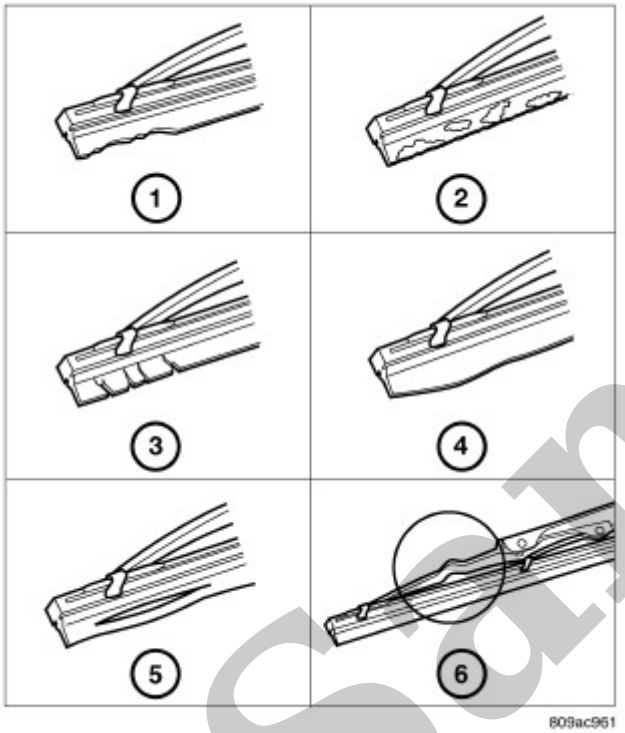
NOTE

The rear wiper and washer switches are integral to the multifunction switch in the Steering Column Control Module (SCCM). The multifunction switch communicates with the SCCM microcontroller, which is also integral to the SCCM. The SCCM microcontroller communicates with the Body Control Module (BCM) over the Controller Area Network (CAN) data bus. The BCM controls rear wiper motor operation through the rear wiper relay that is integral to the Printed Circuit Board (PCB) within the Power Distribution Center (PDC).Before performing any of the following tests, determine whether the other functions of the multifunction switch are operational. If other multifunction switch functions are ineffective, diagnose and repair that problem before attempting to repair the Rear Wiper and Washer System.

REAR WIPER AND WASHER SYSTEM DIAGNOSIS		
CONDITION	**POSSIBLE CAUSES**	**CORRECTION**
WIPER MOTOR DOES NOT OPERATE IN ANY SWITCH POSITION	1. Ineffective motor ground circuit.	1. Test and repair open wiper motor ground circuit, if required.
	2. Ineffective motor feed circuits.	2. Test and repair motor feed circuit between PDC and rear wiper motor, if required.
	3. Ineffective SCCM inputs or outputs.	3. Use a diagnostic scan tool and the appropriate diagnostic information for additional SCCM diagnosis.
	4. Ineffective BCM inputs or outputs.	4. Use a diagnostic scan tool and the appropriate diagnostic information for additional BCM diagnosis.
	5. Ineffective wiper motor.	5. Test and replace open or shorted wiper motor, if required.
WIPER DOES NOT PARK CORRECTLY	1. Ineffective wiper motor park switch input circuit.	1. Test and repair wiper park switch input circuit between BCM and rear wiper motor, if required.
	2. Ineffective BCM inputs or outputs.	2. Use a diagnostic scan tool and the appropriate diagnostic information for additional BCM diagnosis.

Wiper System Inspection

WIPER SYSTEM INSPECTION



1 - Worn or Uneven Edges	4 - Deformation or Fatigue
2 - Foreign Material Deposits	5 - Splitting
3 - Hardening or Cracking	6 - Damage

The wiper blades and wiper arms should be inspected periodically, not just when wiper performance problems are experienced. This inspection should include the following points:

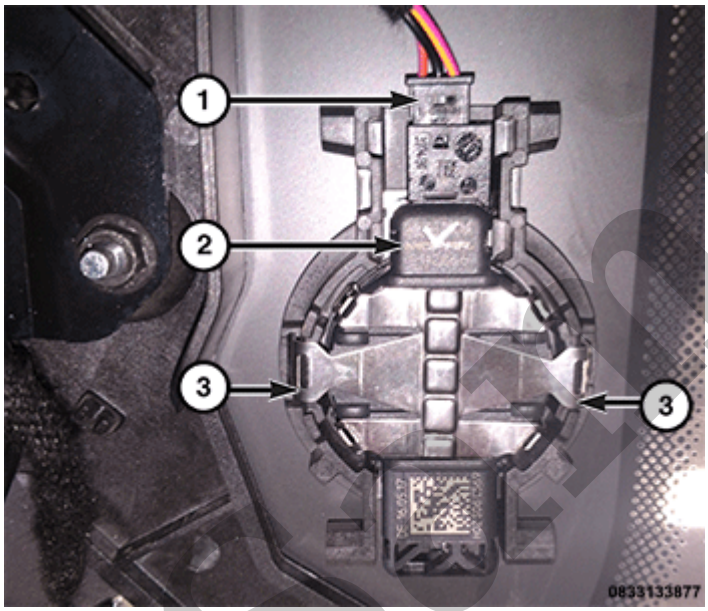
YOUR CURRENT VEHICLE

Humidity Rain Light Sensor Module

HUMIDITY RAIN LIGHT SENSOR MODULE

REMOVAL

1. Remove the inside rearview mirror (Refer to Body/Interior/MIRROR, Rearview/Removal and Installation).



1 - Wire Harness Connector
2 - Humidity Rain Light Sensor Module
3 - Retaining Strap

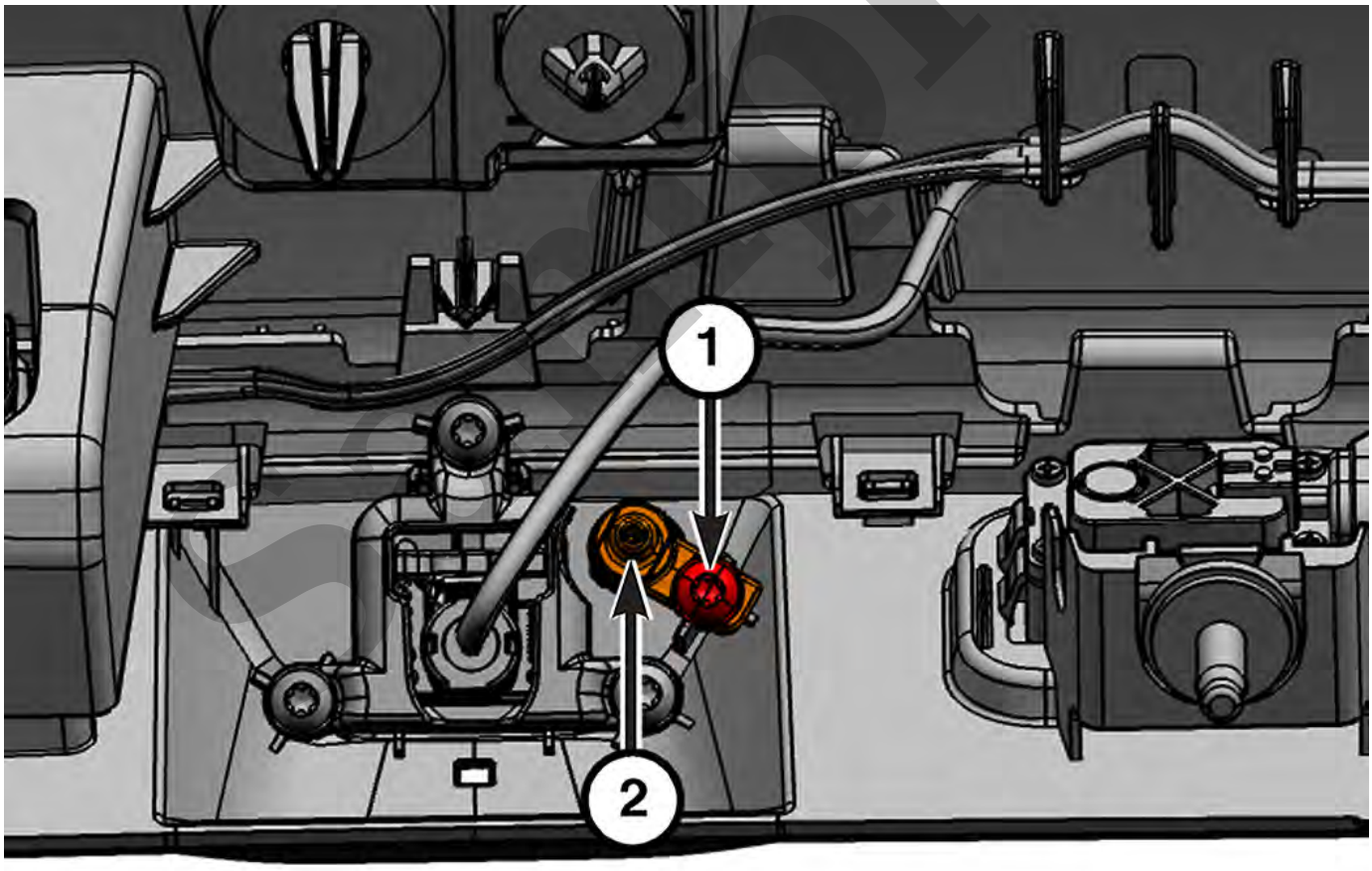
2. Press one side of the spring steel retaining strap on the Humidity Rain Light Sensor Module (HRLSM) towards the windshield while lightly prying the end of the strap closest to the glass away from the tab of the mounting bracket on the windshield. Then rotate the loose side of the HRLSM away from the glass far enough to disengage the other side of the strap from the other mounting bracket tab.

Back-Up Camera Washer Nozzle

BACK-UP CAMERA WASHER NOZZLE

REMOVAL

1. Remove the exterior handle lamp bar (Refer to Body/Decklid/Hatch/Liftgate/Tailgate/LAMP BAR, Exterior Handle/Removal and Installation).



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