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2006 JEEP Compass OEM Service and Repair Workshop Manual

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2. Release the clips on the back of the headlamp switch assembly and remove the E-Save switch.

INSTALLATION

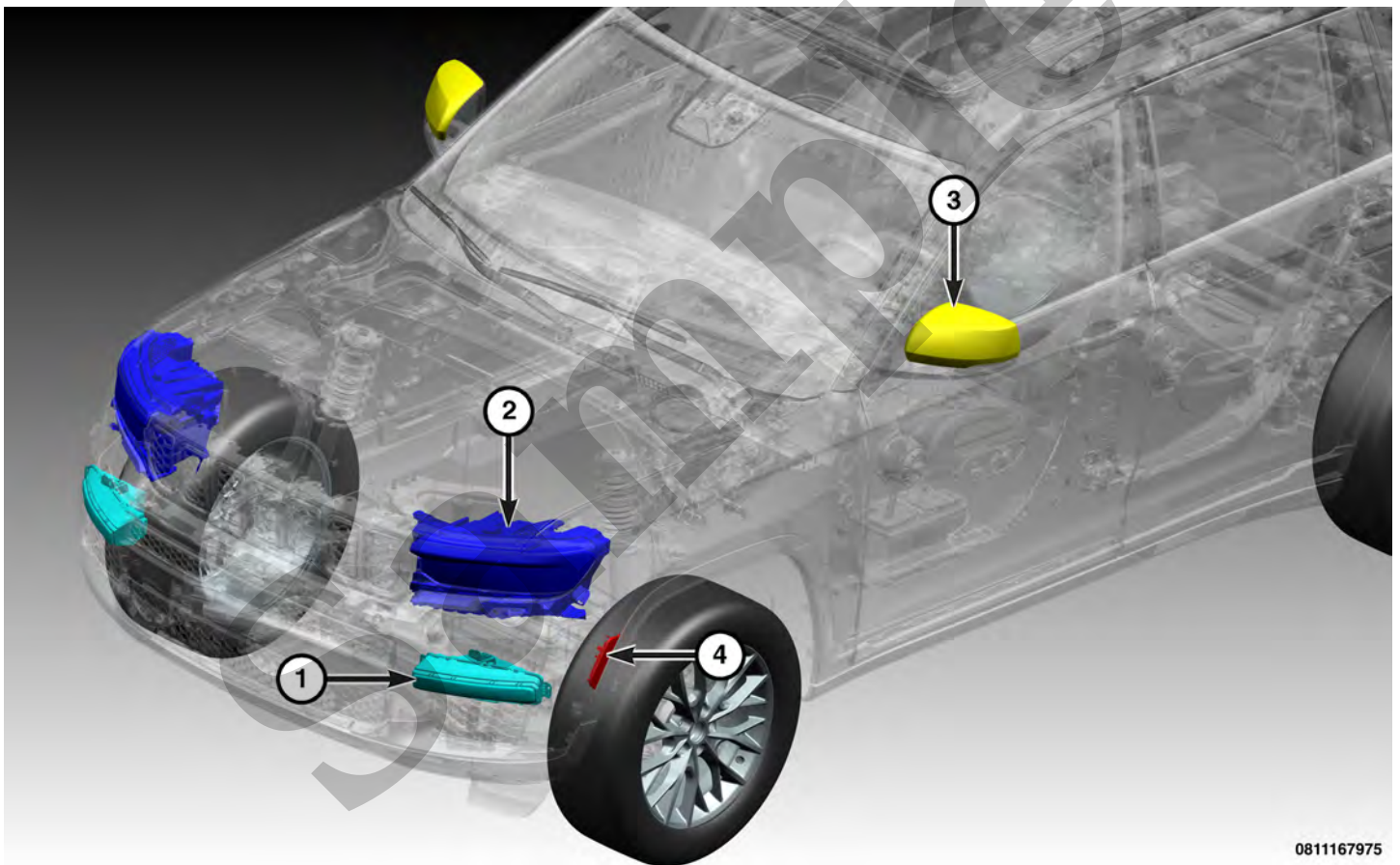
Follow the removal procedure in reverse for general reassembly of the components on the vehicle.

Sample

Exterior Lamps And Lighting

EXTERIOR LAMPS AND LIGHTING

DESCRIPTION



The Front Exterior Lamps and Lighting system contains several different components:

Front Exterior Lamps and Lighting

1.	Front Fog Lamps
2.	Front Lamp Unit - Includes Turn Signal and Reflex Lamps.

	<p>For the turn signal strategy, the fog lamps are activated according to the status of the signal lamps. When the turn signal lamps are active, so is the respective side cornering lamp. The cornering lamps have requirements to be met before they will operate. Those requirements are:</p> <ul style="list-style-type: none"> • Ignition RUN state • Low beam headlamps ON • Steering angle sensor status is reporting that it is operational with no faults • Hazard switch is OFF • Vehicle wheel speed signal is valid and available to be read • Vehicle wheel speed is at or below 40 km/h (25 mph) • The fog lamps are not activated • The transmission is not engaged in R everse or P ark • The park brake is not engaged
Daytime Running Lamps (DRLs)	DRLs are standard equipment on vehicles manufactured for sale in Canada and optional on vehicles manufactured for the United States. Canadian vehicles illuminate the high beam filament of each headlamp bulb at a reduced intensity to serve as the DRL units. Refer to Daytime Running Lamps for additional information.
Exterior Lamp Fail-Safe Operation	The Instrument Panel Cluster (IPC) and the BCM provide a fail-safe feature which will automatically turn ON the low beam headlamps and all park lamps when the ignition position is in the ON position and there is no detected communication over the LIN or CAN data buses.
Exterior Lamp Load Shedding	The BCM provides a battery saver feature which will automatically turn OFF all exterior lamps that remain ON with the ignition position in the LOCK position after a timed interval of about eight minutes.
Headlamp Delay	The standard equipment low or high beam headlamps remain illuminated for a customer-programmable delay period of 0 (disabled), 30, 60 or 90 seconds when the headlamps are turned OFF after the ignition has been turned to the OFF position. Refer to Headlamp Delay for additional information.
Headlamps ON with Snow (HOWS)	The HOWS feature is designed to automatically turn on the headlamps when the terrain selector is switched to Snow Mode for increased safety while driving in snowy conditions. This is not a customer programmable feature.
Headlamps ON with	HOWW is a feature designed to automatically turn on the headlamps when the wiper system is activated. This is a customer programmable option. HOWW is active when the option is enabled and the headlamp switch is in the AUTO position. HOWW is cancelled by rotating

Daytime Running Lamps

Features

Vehicles equipped with the DRL feature illuminate the high beam filament of both headlamp bulbs at a reduced intensity when the engine is running, the parking brake is released, the headlamps are turned OFF, and the optional automatic transmission gear selector lever is in any position except PARK. The park lamps may be ON or OFF for DRL to operate. For vehicles with a manual transmission, the DRL will operate in any transmission gear selector lever position. The BCM must be programmed appropriately for this feature to be enabled.

Once enabled, anytime the BCM receives electronic messages over the CAN data bus from the PCM indicating the engine is running, from the IPC indicating the status of the left (lighting) multifunction switch is in any position except headlamps ON and the parking brake lever is released, and from the TCM indicating the automatic transmission gear selector lever is in any position except PARK, the BCM provides a pulse width modulated voltage output to the headlamp high beam bulb filaments through high side drivers on the right and left high beam feed circuits to produce illumination at a reduced intensity.

Central ADAS Decision Module (CADM)

Component Index

The CADM is used in the exterior lamps and lighting system to provide the automatic high beam feature. For additional information on the automatic high beam system, refer to [Features](#).

Front Fog Lamps

Component Index

The front fog lamps have a path to ground at all times through their connection to the engine compartment wire harness. The engine compartment wire harness has takeouts with eyelet terminals that are secured by nuts to ground studs on the front end sheet metal within the engine compartment. The BCM monitors a hardwired multiplex input from the headlamp switch to determine whether the fog lamps are selected.

When the BCM receives a **front fog lamp request** message it then controls front fog lamp operation by controlling a battery voltage output through high side drivers on right and left fog lamp feed circuits. The BCM also sends the appropriate electronic message to the IPC to illuminate or extinguish the front fog lamp indicator. In certain markets where required, the BCM will automatically de-energize the front fog lamps any time the headlamp high beams are selected.

The BCM also provides a battery saver (load shedding) feature for the front fog lamps, which will turn these lamps OFF if they are left ON for more than about eight minutes with the ignition switch in the LOCK position, if there is a charging system failure, or if the electrical system voltage falls below about 11.75 volts for more

The license plate lamp output is always be activated with the front or rear park lamps. If the LED license plates lamp configuration is present, the BCM disables the license plate lamp PWM hardware output.

Long Range Camera Front

[Component Index](#)

The LRCF is used in the AHBS to provide ambient lighting levels to the CADM. The CADM uses the light intensity level signal to determine when to turn ON or OFF the AHBS.

Refer to [Features](#) for the AHBS.

Mirror Turn Signal Lamps

[Component Index](#)

If the configuration of the vehicle includes side repeater lamps, the two front Door Control Modules (DCM) enable the mirror turn signals to be activated and also perform the diagnostics on the signal mirrors. When the BCM outputs that the left or right turn signal state is ON and the right or left indicator is ON, the appropriate DCM mirrors the BCM signals blinking rate by use of a hardwired signal.

If the vehicle is equipped with mirror running lights, the BCM sets the output signal to the DCM to activate.

Rear Tail Lamp Assembly

[Component Index](#)

BACKUP LAMP - The backup (or reverse) lamps have a path to ground at all times through a takeout and eyelet terminal of the body wire harness that is secured by a nut to a ground stud on the body sheet metal within the passenger compartment. On vehicles with a manual transmission, the backup lamp switch provides a hardwired input to the BCM through a reverse switch signal circuit and the BCM provides battery voltage to the backup lamps on the backup lamp feed circuit whenever the ignition switch is in the ON position and the REVERSE position is selected with the transmission shift linkage.

On automatic transmission equipped vehicles the TCM monitors a multiplex input from the Transmission Range Sensor (TRS), then sends the proper electronic **transmission gear selector status** messages to other electronic modules over the CAN. Whenever the ignition is in the ON position and the BCM receives an electronic message indicating the status of the transmission gear selector is REVERSE, it provides a battery voltage output through a high side driver to the backup lamps on the backup lamp feed circuit.

BRAKE LAMPS

BRAKE - The brake (or stop) lamps and the CHMSL each have a path to ground at all times through a takeout and eyelet terminal of the body wire harness that is secured by a nut to a ground stud on the body sheet metal within the passenger compartment. The CHMSL receives battery voltage directly on the stop lamp

combined rear lighting, the BCM uses the same circuit and relay to request stop lamp activation. The trailer tow receptacle receives this feed through both the right and left rear stop/turn signal feeds.

If there is a fault detected in the system by the BCM or TTM, the BCM will signal the IPC to display the appropriate message. If the TTM detects a fault in the circuits between it and the lighting outputs, the TTM will store a Diagnostic Trouble Code (DTC).

Sample

CONDITION	POSSIBLE CAUSES	CORRECTION
	4. Ineffective BCM inputs or outputs.	4. Use a diagnostic scan tool to test the BCM inputs and outputs. Refer to the appropriate diagnostic information.
UNINTENDED BRAKE LAMP ACTIVATIONS	1. Loose brake pedal due to cracked or missing bushing. This can be accompanied with Diagnostic Trouble Code (DTC) C0042-2A or P057B.	1. Check the brake pedal for side to side looseness. If the pedal pivot bushing is cracked or missing this will change the voltage output from the brake pedal sensor. Based on this incorrect voltage, the brake pedal sensor determines the pedal is depressed when it is not. This leads to false brake lamp activations and DTCs. If the pedal pivot bushing is found on the floor, do not attempt to install it. If the pedal pivot bushing is loose or cracked, or if the pedal assembly is found to have excessive play, replace the pedal assembly must be replaced (Refer to Brakes, Base/Hydraulic/Mechanical/PEDAL(S), Brake and/or Accelerator/Removal and Installation).

DAYTIME RUNNING LAMPS

NOTE

Before performing the following tests, determine whether the clearance (also known as position or park) lamps operate. If the clearance lamps are also ineffective, diagnose and repair that problem before attempting to repair the Daytime Running Lamps.

NOTE

The DRLs are disabled when the turn signals are active.

CONDITION	POSSIBLE CAUSES	CORRECTION
DAYTIME RUNNING LAMPS WILL NOT ILLUMINATE	1. Incorrect BCM programming.	1. Use the IPC to check and configure BCM if required.
	2. Automatic transmission in PARK position.	2. Place the transmission gear selector lever in any position except PARK.
	3. Parking brake applied.	3. Release the parking brake.

CONDITION	POSSIBLE CAUSES	CORRECTION
		settings if required. Refer to the appropriate diagnostic information.
	6. Drivers Assistance System Module (DASM) is inoperative on the bus or a loss of Controller Area Network-Chassis (CAN-C) bus communication.	6. Using the diagnostic scan tool, confirm the DASM is offline and test the CAN-C bus system.
	7. Ineffective ground circuit to the DASM.	7. Test and repair open ground circuit to the DASM as required.
	8. Ineffective feed circuit to the DASM.	8. Test and repair open fused run relay output circuit to the DASM if required.
	9. DASM imager lens dirty or obstructed.	9. Clean imager lens and windshield or remove obstructions from the windshield glass if required.
	10. DASM is in a limited function mode.	10. Use a diagnostic scan tool and check for Diagnostic Trouble Codes (DTCs) relative to DASM reliant components.

AUTO HIGH BEAM CONTROL - CRVMM EQUIPPED

CONDITION	POSSIBLE CAUSES	CORRECTION
AUTO HIGH BEAM CONTROL SYSTEM IS INOPERATIVE.	1. Feature is not enabled.	1. Enable Auto Low/High using the customer programmable features function located within the radio.
	2. Automatic headlamps are not turned ON .	2. Turn automatic headlamps ON using the control knob of the headlamp switch.
	3. Headlamp high beams are not selected.	3. Turn high beam headlamps ON using the stalk.
	4. Vehicle speed is below 21 kilometers per hour (kph) (14	4. Increase vehicle speed. This system designed to operate at speeds at or above 24

CONDITION	POSSIBLE CAUSES	DIAGNOSIS AND CORRECTION
		<p>3. Load the B+ circuit and then probe the B+ circuit with a test lamp to verify fuse operation. If there is power coming out of the fuse and at the trailer plug on the bumper, then operation is confirmed. The customer should review trailer wiring and trailer components for a short to ground or a circuit in the trailer has too high of load for this design causing fuse to open. Note: Going with a higher rated fuse is not acceptable as the circuit in the wiring harness is designed around fuse. Damage to vehicle wiring may occur.</p>

Sample