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2007 JEEP Grand Cherokee OEM Service and Repair Workshop Manual

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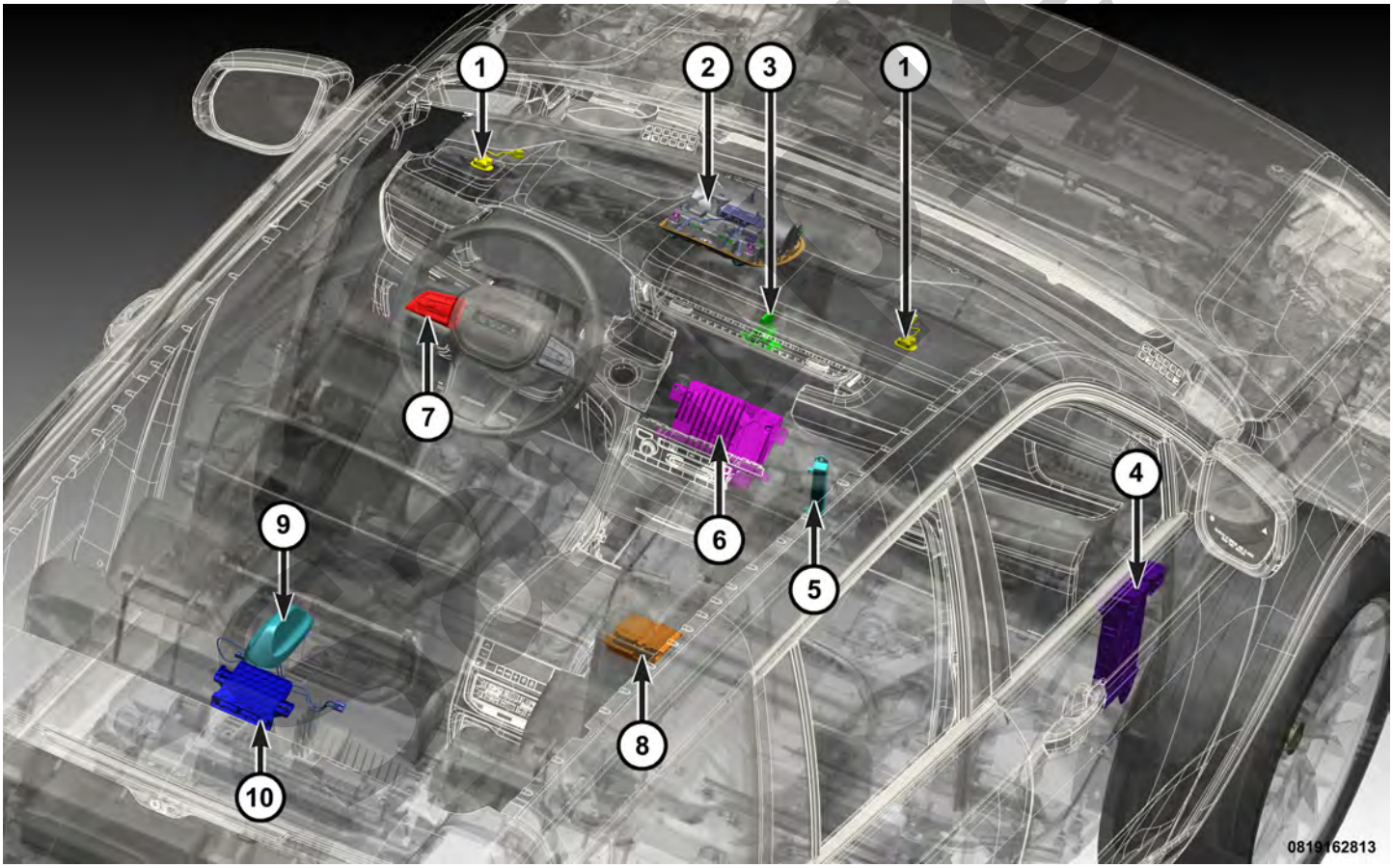
YOUR CURRENT VEHICLE

Uconnect + Siriusxm Guardian

UCONNECT + SIRIUSXM GUARDIAN

DESCRIPTION



The Uconnect® + SiriusXM® Guardian™ system includes the following major components:

Component Index

1.	Microphones
2.	Uconnect® Sirius XM® Guardian™ Switches in the overhead console
3.	Long Term Evolution 2 (LTE2) Antenna

The radio contains a microcontroller and programming that allows it to communicate with other electronic modules in the vehicle over the Controller Area Network – Interior High Speed (CAN-IHS) data bus. In vehicles equipped with Uconnect® Access, the radio also uses electronic message communication with other electronic modules in the vehicle over the CAN – Chassis (CAN-C) data bus (Refer to Electrical/8E - Electronic Control Modules/COMMUNICATION/Description and Operation).

The Uconnect® Access system components cannot be adjusted or repaired. If any Uconnect® Access system component is damaged or ineffective, that component must be replaced. The external combination antenna can be repaired separately from the radio. The Uconnect® Access system software is flash programmable through the USB port.

OPERATION

Uconnect® + SiriusXM® Guardian™ capability relies on cellular (telematics) technology and subscribed services that are controlled through Digital Rights Management (DRM). The management or DRM along with specific services occur wirelessly through the cloud. Digital rights and a subscription determine the specific services a customer is eligible to receive. Data feeds between assembly plants and its radio suppliers are provided to the cellular provider to enable initial capability or provisioning. This initial data must exist in the database of the cellular provider or functionality will be unavailable. Base features are supported through software that exists within the applicable radio platform and cellular connectivity is provided through the embedded cellular module.

Signal strength and data capability is shown adjacent to the **Apps** orb soft key found at the lower center of the radio touch screen. Depending on location and coverage, data capability can change. Signal strength is a major factor for any wireless connectivity. Fourth Generation (4G) LTE data is the highest connectivity available at this time yet is backwards compatible when 4G is not available. Remote Service features (Start, Lock, Unlock, and others) rely on data capability. If the vehicle is located in an area of no or low coverage, the Remote Services features may not function. Signal strength and data capability can suffer from the same situations any cellular device might experience. Parking structures, blocks, drops and dead zones can affect performance at any time.

The two switch buttons in the overhead console identified with **ASSIST** and **SOS** provide a resistor multiplexed input to the Local Interface Network (LIN) slave node integral to the overhead console. The LIN slave node sends an electronic **switch press** message to the LIN master node integral to the BCM. The BCM relays the message over the CAN-IHS data bus, where it is retrieved by the radio.

Bluetooth®/Wi-Fi Antenna

Component Index

The Bluetooth®/Wi-Fi antenna is mounted behind the floor console right upper valance panel.

The antenna is used to receive and transmit the RF signals for Bluetooth® and Wi-Fi data.

Body Control Module (BCM)

HANDS FREE PHONE DIAGNOSIS		
CONDITION	**POSSIBLE CAUSES**	**CORRECTION**
PHONE NOT AVAILABLE	1. Bluetooth® phone not paired to the radio.	1. Be certain that the phone is Bluetooth® compatible and is paired to the radio.
	2. Bluetooth® phone not present or turned OFF.	2. Be certain that the paired phone is present, turned ON and that the Bluetooth® option is enabled in the phone.
	3. Bluetooth® phone has low battery.	3. At low battery levels, some phones will turn OFF Bluetooth® functionality. Be certain that the phone battery is charged to an adequate level.
	4. The boot procedure for the radio, the phone or both did not complete successfully.	4. Cycle both the radio and the phone OFF, then ON again in an attempt to complete a successful boot procedure.
	5. A phone freeze has occurred.	5. Power cycle the phone. Refer to the operator's manual for the phone.
PHONE PAIRING FAILED	1. The phone is not Bluetooth® enabled.	1. The Bluetooth® transceiver requires that the cellular phone be Bluetooth® enabled. The phone must be upgraded to one that is Bluetooth® enabled. A list of suggested phones is available at: **https://www.driveuconnect.com/**
	2. The phone does not support the Bluetooth® Hands Free Profile.	2. The Bluetooth® transceiver requires that the cellular phone support the Hands Free Profile. The phone must be upgraded to one that supports the Hands Free Profile. A list of suggested phones is available at: **https://www.driveuconnect.com/**
	3. Incorrect discovered Bluetooth® device selected in phone.	3. Be certain to select Uconnect® in the discovered Bluetooth® devices in the phone for pairing.
	4. The PIN of the phone is not the same as the	4. The PIN assigned by the radio during pairing must match the PIN of the phone.

	6. Multiple similar sounding names in the phone book.	6. For increased performance it is recommended that the user do not enter similar sounding names in the phone book.
	7. Phone book download not yet completed.	7. Depending upon the size of the contact list on the phone, the download may not have had time to complete. If the Phone Book button on the radio phone screen appears greyed out, the contact list download is still in progress. Wait until download completes.
	8. High noise levels within the passenger compartment.	8. ASR engine performance is increased when noise conditions in the passenger compartment are lowered. Ideal conditions include having the windows closed and the blower fan set to LOW or OFF.
	9. Passengers are talking while the user is attempting to issue a voice command.	9. Although designed to focus on sounds from the driver seated position, the directional microphones will pick up sounds from any seating position in the vehicle. ASR engine performance is increased in low noise environments.
	10. Foreign objects interfering with microphone input.	10. Verify that there are no foreign objects obstructing the microphones in the headliner that could be interfering with microphone reception.
	11. The microphone is not properly attached to the headliner.	11. The microphones must be firmly mounted to the headliner. Be certain the microphone is properly installed.
	12. The incorrect Uconnect® switch button is being pressed.	12. Phone features are accessed using the Uconnect® **Phone** button on the steering wheel or the **Phone** soft key in the radio display. Other Uconnect® Voice Recognition features are accessed using the Uconnect® **VR** button or soft key.
	13. Microphone failure.	13. Use a diagnostic scan tool and the appropriate diagnostic procedures for additional diagnosis of the microphone.
POOR PHONE AUDIO QUALITY	1. High noise levels within the passenger compartment.	1. ASR engine performance is increased when noise conditions in the passenger compartment are lowered. Ideal

- With the radio ON, enter the **Dealer Mode** menu by pressing the SCREEN OFF button, then immediately lightly press the lower left and upper right corners of the display screen until the menu appears (about 5-10 seconds).

1. Navigate through the **System Information** menu to the **Radio Part Information** menu.
2. *Write down/photograph the **Serial Number** , **Software Version** and **Application Version** (as applicable to the radio in the vehicle) listed on the **Radio Part Information** menu. The serial number begins with a **T** .

2. Navigate back to the **Dealer Mode** menu.

The network engineer will need the connectivity information which is dependant on the radio in the vehicle. The method of obtaining this information is by using one of two methods:

Method One

1. Navigate through the **##Menu Basic** menu to the **##RTN#** menu.
2. *Write down/photograph the **MDN** number listed on the **##RTN#** menu.
3. *Write down/photograph the **MEID** number listed on the **##RTN#** menu.

Method Two

1. Navigate through the **Service Information** menu to the **Connectivity (Information)** menu.
2. *Write down/photograph the **MSISDN** number listed on the **Connectivity (Information)** menu.
3. *Write down/photograph the **IMEI** number listed on the **Connectivity (Information)** menu.
4. *Write down/photograph the **ICCID** number listed on the **Connectivity (Information)** menu.

3. Place a call to Uconnect® Care. Provide your dealer code, name, call back number and the Vehicle Identification Number (VIN). Request a ticket be opened with the network engineers to assist with Uconnect® + SiriusXM® Guardian™ diagnostics. A ticket will be opened with the network engineers and a call back will occur within 15 minutes for additional assistance and diagnostics. If there is no call back within 15 minutes, create a STAR case and submit the pictures and information along with scan and configuration reports.

- **Vehicle Phone Requires Service** – This message can indicate a fault with the antenna, the overhead console, communication with the Occupant Restraint Controller (ORC) module or any of the hardwired circuits between these components. Check for an active or stored Diagnostic Trouble Code (DTC) for any of the listed components. Follow all of the steps found in the diagnostic information for the retrieved DTC and fully check the hardwired circuitry associated with the DTC. If no DTC can be retrieved, an internal failure within the radio may exist.

	2. Cellular antenna issue.	2. Refer to the Audio And Video System service information for additional diagnosis of the cellular (combination) antenna.
	3. Ineffective embedded cellular device.	3. Additional diagnosis of the radio requires the use of a diagnostic scan tool and the appropriate diagnostic procedures. Test and replace the radio, if required.

Navigation/Telecommunication Systems

NAVIGATION/TELECOMMUNICATION SYSTEMS

NAVIGATION SYSTEM - RESTORE OR UPDATE

Navigation System map and Point-Of-Interest (POI) data updates for North American Free Trade Agreement (NAFTA) vehicles may become available occasionally through the HERE website (**http://chryslergroup.navigation.com/home/en_US/ChryslerNA/USD**). Updates in non-NAFTA markets can be obtained at an authorized dealer. The updated information and some additional feature applications can be downloaded and copied to Universal Serial Bus (USB) media for transfer and installation to the navigation module within the radio in the vehicle. These are fee-based applications and updates, which are made at the option and expense of the customer.

However, a new radio is equipped with only a standard base version of the map and POI data. Before the dealer replaces an original radio with a new unit, the version of the map and POI data on the original radio must be noted.If the version of the map and POI data found on the new radio is not equal to or newer than the version that was found on the replaced radio. Updated data will need to be downloaded and installed on the new radio at the dealer's expense.

UCONNECT + SIRIUSXM GUARDIAN SYSTEM - REINSTALL APPLICATIONS

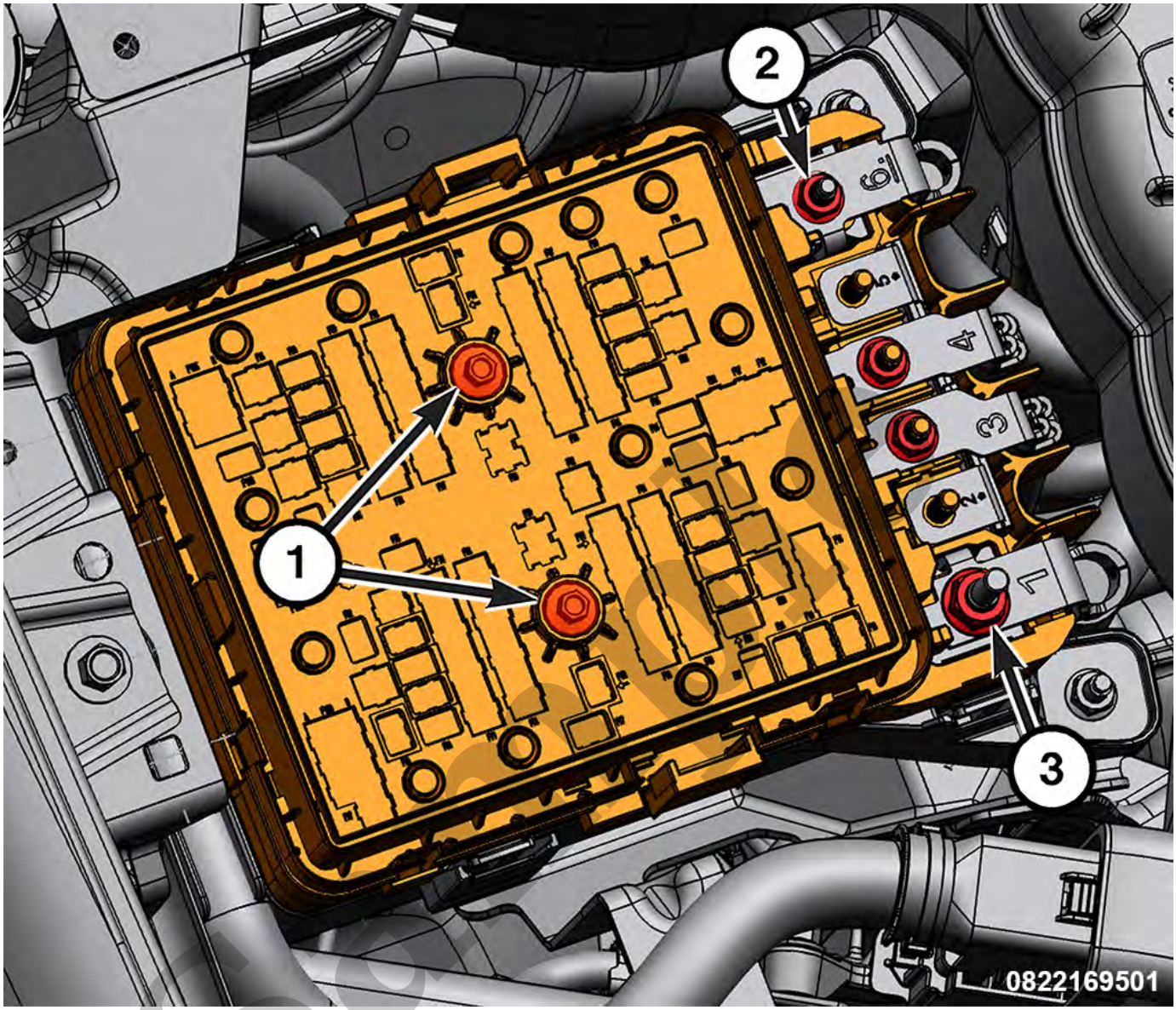
NOTE

The following procedure may assist the dealer technician in diagnosis by reloading the applications for which the vehicle owner or operator has valid subscriptions. The reloading procedure is primarily used to troubleshoot any application provisioning or data corruption issues. The reinstallation process may take up to 30 minutes, depending upon the number of apps and the cellular signal strength seen on the radio's Apps orb. Also, reinstalling applications may correct a Digital Rights Management (DRM) concern that is causing a No Subscription error for fully registered customers. This process may also help force DRM synchronization following a software or firmware update.

The Reinstall Applications procedure can only be initiated from the touchscreen of the radio.

During this procedure, the subscribed applications are removed from the radio and reinstalled based upon data found on the cloud server. The applications reinstalled to the radio will be based upon valid subscriptions

4. Remove the Engine Compartment PDC cover by pushing inward on the latches.



1 - Upper PDC Captive Screws
2 - Eyelet Nuts
3 - PDC to Battery (+) Nut

5. Remove the eyelet nuts and PDC to battery (+) nut, then disconnect the eyelet terminals from the PDC.

6. Loosen the upper PDC captive screws to release the electrical connections under the upper PDC.

INSTALLATION

Follow the removal procedure in reverse for general reassembly of the components on the vehicle. The steps listed below are calling out specific procedures that should be followed during installation.

- If removed, tighten the fasteners securely.

TORQUE SPECIFICATIONS - POWER DISTRIBUTION - ENGINE COMPARTMENT PDC

DESCRIPTION	SPECIFICATION	COMMENT
Eyelets to Lower Power Distribution Center (PDC) Stud Nuts	**8 N·m (71 In. Lbs.)**	–
Eyelets to Upper Power Distribution Center (PDC) Stud Nuts	**8 N·m (71 In. Lbs.)**	–
Fuse Array to Bus Bar Nut	**8 N·m (71 In. Lbs.)**	–
Fuse Link Nut	**8 N·m (71 In. Lbs.)**	–
Junction Block to Frame	**18 N·m (13 Ft. Lbs.)**	–
Junction Box to Instrument Panel	**6 N·m (53 In. Lbs.)**	–
Lower PDC to Body Nuts	**8 N·m (71 In. Lbs.)**	–
PDC to Battery (+) Nut	**15 N·m (11 Ft. Lbs.)**	–
PDC to Wiring Connector	**4 N·m (44 In. Lbs.)**	–
Upper PDC to Lower PDC Captive Screws	**6 N·m (53 In. Lbs.)**	–

Refer To List:

List 1

- 09 - Engine, 2.0L / Cooling System / Engine Cooling / BOTTLE, Coolant / Removal and Installation
- 09 - Engine, 3.6L / Engine Cooling / BOTTLE, Coolant / Removal and Installation
- 09 - Engine, 5.7L / Engine Cooling / BOTTLE, Coolant / Removal and Installation