DESCRIPTION AND OPERATION > HANDS FREE PHONE > DESCRIPTION - HANDS FREE PHONE

A Uconnect™ Hands Free Phone system is factory-installed optional equipment. This system allows hands free use of compatible mobile phones for sending and receiving phone calls and text messages as well as for streaming audio from those devices through the audio system in the vehicle. The Hands Free Phone system includes the following major components, which are described in further detail elsewhere in this service information:

- **Bluetooth™ Antenna** - A Bluetooth™ antenna is internal and integral to the Radio Receiver Module (RRM).
- **Bluetooth™ Phone** - A compatible, customer-supplied and paired Bluetooth™ phone is a required component of the hands free phone system. A list of suggested phones and providers is available at: **http://www.chrysler.com/uconnect**
- **Body Control Module** - The Body Control Module (BCM) is located within the instrument panel on the driver side of the vehicle. The BCM is the configuration master node for the vehicle. Refer to MODULE, BODY CONTROL, DESCRIPTION AND OPERATION .
- **Electronic Vehicle Information Center Switch Pod** - The Electronic Vehicle Information Center (EVIC) switch pod is located in the left horizontal spoke of the steering wheel. In addition to the EVIC switch buttons the lower part of this switch pod contains the Uconnect™ Voice Recognition (VR) (also known as Voice Command) switch button and the Uconnect™ Phone switch button of the Hands Free Phone system. Refer to SWITCH, EVIC CONTROL, DESCRIPTION AND OPERATION .
- **Microphone** - A microphone is integral to the is integral to the roof lamp unit in the headliner near the center of the upper windshield opening header panel in vehicles equipped with the Uconnect™ Hands Free Phone system. Refer to MICROPHONE, DESCRIPTION AND OPERATION .
- **Radio Receiver Module** - The RRM is located within the instrument panel and is the primary component of the hands free phone system in this vehicle. Depending upon selected vehicle optional equipment the RRM may include a microcontroller, a Bluetooth™ transceiver, a navigation module, flash memory and sophisticated Advanced Speech Recognition (ASR) input capability through Voice Recognition (VR) software. The ASR software includes many different available languages. Each vehicle is equipped with a list of available languages, which are made available from the factory based upon languages most commonly used for the market destination. Refer to RADIO, DESCRIPTION AND OPERATION .

The RRM also contains a microcontroller and programming that allows it to communicate with other electronic modules in the vehicle over the Controller Area Network (CAN) - B data bus. Refer to COMMUNICATION, DESCRIPTION AND OPERATION .

The Uconnect™ Hands Free Phone system components cannot be adjusted or repaired. If any Hands Free Phone system component is damaged or ineffective, that component must be replaced. The Hands Free Phone system software is flash programmable through the Universal Serial Bus (USB) port.

DESCRIPTION AND OPERATION > HANDS FREE PHONE > OPERATION - HANDS FREE PHONE

The Uconnect™ Hands Free Phone system relies upon Bluetooth™ technology to enable wireless connectivity between Bluetooth™ compatible, paired and turned On mobile devices and the on-board entertainment system components. This system also relies upon ASR software to enable Voice Commands to control the mobile device as well as the components and features of some other on-board systems.

The system will recognize up to ten Bluetooth™ compatible devices, each of which is identified within the system by the name acquired from the device during the pairing process. The Hands Free Phone system will communicate with a paired device that is anywhere within the vehicle. However, covering the paired device with a metal object may block the signal.

The Hands Free Phone system is operated in one of two ways: actively or passively. Active operation begins with the vehicle operator depressing a push button in the EVIC switch pod on the face of the left horizontal spoke of the steering wheel. The Uconnect™ Voice Recognition (**VR**) (also known as Voice Command) button is depressed for hands free Voice Command access to available features other than the phone, or the Uconnect™ Phone (**Phone** is identified by a phone handset icon) button is depressed for hands free phone access.

The **VR** or **Phone** button press provides a resistor multiplexed input to the Local Interface Network (LIN) slave node integral to the EVIC switch pod. The LIN slave node sends an electronic **switch press** message to the LIN master node integral to the microcontroller of the BCM. The BCM is also a gateway to the CAN - B data bus and relays the message over the CAN - B data bus to the RRM.

When the RRM receives the electronic **switch press** message, the RRM suppresses any current audio output and issues an audible **beep** to indicate that the VR hardware is prepared to receive a Voice Command. Part of the Uconnect™ Hands Free Phone system hardware includes the VR microphone integral to the roof lamp unit in the headliner centered between the sun visors near the windshield. The microphone provides a hard wired input of Voice Commands to the VR engine within the RRM, and the ASR software converts that input into an electronic instruction message broadcast over the CAN - B data bus to invoke the appropriate system response. If no appropriate Voice Command is received within a few seconds following the audible **beep** , the system will provide an audible verbal output listing a menu of the available Voice Command options.

Passive operation begins when an incoming cellular call is received. If the Bluetooth™ phone is Short Message Service (SMS) text message capable and compatible with the Uconnect™ system (see the Uconnect™ web site), passive operation will also begin when an SMS text message is received. The call or SMS text message is relayed to the Bluetooth™ transceiver embedded within the RRM. The Bluetooth™ transceiver then instructs the RRM to announce the incoming call or message. The vehicle operator presses the Uconnect™ **Phone** button in the steering wheel switch pod or the soft button that will appear in the RRM display to accept the call or to accept the message.

The Bluetooth™ transceiver connects the voices of the two phone parties using outputs through the audio system speakers and inputs through the Uconnect™ hands free microphone. In the case of a text message, the Bluetooth™ transceiver sends the message to the VR hardware and the ASR software converts the message from text to voice and plays it through the audio system speakers.

If the RRM integrates the optional High-level Telematic Module (HTM), the text message can then be replied to by depressing the Uconnect™ **VR** button and giving an **SMS** Voice Command to select from several predetermined short text phrase responses. If the RRM has the Low-level Telematic Module (LTM) or the Entertainment Telematics Module (ETM), it can receive and display SMS text messages, but it is not equipped to reply to text messages.

The Hands Free Phone system operates on battery current received through a fused B(+) circuit, but also monitors the ignition status through electronic messages received over the CAN - B data bus. If a call is in progress when the status of the ignition transitions to Off, the system will continue to operate until the call has been completed.

The RRM receives electronic message inputs over the CAN - B data bus related to the Hands Free Phone system. The RRM is also connected to the CAN - C data bus; however, the RRM is not a CAN gateway. All electronic message outputs of the RRM are carried over the CAN - B data bus. When the RRM monitors a problem in any of the audio system circuits and components, or in any of the Bluetooth™ transceiver circuits, it stores a fault code or Diagnostic Trouble Code (DTC) in its memory circuit.

The hard wired circuits between components related to the RRM and the Hands Free Phone system may be diagnosed using conventional diagnostic tools and procedures. Refer to the appropriate wiring information. The wiring information includes wiring diagrams, proper wire and connector repair procedures, details of wire harness routing and retention, connector pin out information and location views for the various wire harness connectors, splices and grounds.

However, conventional diagnostic methods will not prove conclusive in the diagnosis of the RRM or the electronic controls and communication between modules and other devices that provide some features of the Hands Free Phone system. The most reliable, efficient and accurate means to diagnose the RRM or the electronic controls and communication related to Hands Free Phone system operation requires the use of a diagnostic scan tool. Refer to the appropriate diagnostic information.

DESCRIPTION AND OPERATION > NAVIGATION > DESCRIPTION - NAVIGATION

A factory-installed satellite navigation system based upon the Global Positioning System (GPS) is an available option on this vehicle. Depending upon the optional touchscreen Radio Receiver Module (RRM) selected for the vehicle, there are some variations in navigation system features available. Each system provides the vehicle operator with both visual and audible guidance to a chosen destination. An available premium navigation system includes such features as one-shot Voice Recognition (VR) destination entry, three dimensional city models and landmarks, digital terrain modeling, SiriusXM™ Travel Link and SiriusXM™ Traffic.

A RRM color touchscreen electronic display provides a graphical interface for programming, searching for and selecting destinations. In vehicles also equipped with a Uconnect™ Hands-Free telecommunication option, the available navigation systems are also equipped with Advanced Speech Recognition (ASR) input capability allowing hands-free operation. Each system provides visual guidance through dynamic maps with a turn-by-turn feature that can be enabled or disabled by the vehicle operator, while voice prompts through the audio system of the vehicle provide the vehicle operator with audible alerts and directions coordinated with the visual displays. The system also displays and logs valuable trip information such as speed, posted speed limit, distance and Estimated Time of Arrival (ETA).

The navigation system includes the following major components, which are described in further detail elsewhere in this service information:

- **Body Control Module** - The Body Control Module (BCM) is located within the instrument panel on the driver side of the vehicle. The BCM is the configuration master node for the vehicle. Refer to MODULE, BODY CONTROL, DESCRIPTION AND OPERATION .
- **Combination Antenna** - The navigation module acquires GPS position data through a roof-mounted combination antenna that also receives satellite audio and cellular signals. Refer to

ANTENNA, SATELLITE, AUDIO, DESCRIPTION AND OPERATION .

- **Electronic Vehicle Information Center** - The Electronic Vehicle Information Center (EVIC) is an electronic display within the Instrument Panel Cluster (IPC). When Turn-By-Turn navigation is enabled through the EVIC Personal Settings menu, the EVIC displays turn-by-turn directions to the chosen destination supplemental to the navigation display within the RRM touchscreen unit. Refer to CENTER, ELECTRONIC VEHICLE INFORMATION, DESCRIPTION AND OPERATION .
- **Electronic Vehicle Information Center Switch Pod** - The EVIC switch pod is located in the left horizontal spoke of the steering wheel. In addition to the EVIC switch buttons the lower part of this switch pod contains the Uconnect™ Voice Recognition (VR) (also known as Voice Command) switch button and the Uconnect™ Phone switch button of the Uconnect™ Hands-Free Phone system. Refer to CENTER, ELECTRONIC VEHICLE INFORMATION, DESCRIPTION AND OPERATION .
- **Microphone** - A microphone is integral to the roof lamp unit in the headliner near the center of the upper windshield opening header panel in vehicles equipped with the Uconnect™ Hands-Free Phone system. Refer to MICROPHONE, DESCRIPTION AND OPERATION .
- **Radio Receiver Module** - The RRM contains the central components of the navigation system. A navigation module is internal and integral to each RRM that is equipped with navigation capability. The navigation module contains all of the navigation system hardware and software. Hardware includes the GPS receiver, an electronic gyroscope, a microcontroller and flash memory for system software and map data storage. Refer to RADIO, DESCRIPTION AND OPERATION .

The BCM, the IPC and the RRM each contain a microcontroller and programming that allows them to communicate with other electronic modules in the vehicle using the Controller Area Network - B (CAN - B) data bus. Refer to COMMUNICATION, DESCRIPTION AND OPERATION .

The navigation system components cannot be adjusted or repaired. If any of the navigation system components is damaged or ineffective, that component must be replaced. The external combination antenna can be repaired separately from the RRM. The navigation system software as well as the map data is flash programmable through the Universal Serial Bus (USB) port.

DESCRIPTION AND OPERATION > NAVIGATION > OPERATION - NAVIGATION

The optional navigation system is active whenever the Radio Receiver Module (RRM) electronic display is powered On. If a navigation system menu or map isn't being actively displayed, the system is still operating in the background. The menu, map or route that was active when the RRM was powered Off along with all other user-relevant information is saved in nonvolatile memory by the navigation module for display again the next time the RRM electronic display is powered On and the navigation system is selected.

Once a destination is selected, the navigation system uses information from stored map data to quickly calculate a route. As the vehicle is driven along that route, the vehicle operator is guided with visual displays and voice prompts. Any variances from that route will cause the navigation system to automatically recalculate and deliver a revised route to the chosen destination.

When Turn-By-Turn Navigation is enabled through the Personal Settings menu of the Electronic Vehicle Information Center (EVIC), the EVIC supplements the RRM display with a more focused turn-by-turn display which includes: the name of the approaching crossroad, an arrow indicating the upcoming turn direction and a countdown to indicate the distance to that turn.

All vehicles have their original map and Points-Of-Interest (POI) data stored in nonvolatile flash memory integral to the navigation module integral and internal to the RRM. Updated map and POI data as well as updated navigation software for these vehicles can be uploaded to the system using USB media. The originally installed data is based upon the market for which the vehicle was manufactured. Navigation software updates are also uploaded to the system using USB media.

The GPS receiver of the navigation module is capable of acquiring and tracking GPS signal inputs through the roof-mounted combination antenna from numerous satellites simultaneously to calculate and display the position and direction of the vehicle. However, when access to satellite signals is blocked by bridges, tunnels or other obstacles, the navigation module relies upon Dead Reckoning (DR) to aid in calculating vehicle position and direction. The navigation module uses pulse signals from the wheel speed sensors, a Reverse gear indicator input and an internal electronic gyroscope sensor to provide DR vehicle position and direction calculations to supplement GPS satellite signals.

User input mechanisms for the navigation system include the RRM touchscreen and the Uconnect™ Hands-Free VR verbal commands. The VR function uses ASR software. Master control of the VR function is handled by the VR engine internal and integral to the RRM. The VR recognizes and responds to certain global commands, while other commands are specific to the RRM or the navigation system.

For safety reasons some input, editing and setting features of the navigation system are restricted when the vehicle is in motion or when a hands-free phone call is active. This includes many features that require touchscreen inputs. However, many of those same features disabled for touchscreen inputs remain enabled for Uconnect™ Hands-Free VR inputs.

The navigation module receives electronic message inputs within the RRM over the Controller Area Network - B (CAN - B) data bus; however, the RRM is not a CAN gateway. All electronic message outputs of the navigation module and the RRM are carried over the CAN - B data bus. When the RRM monitors a problem in any of the audio system circuits and components, or in any of the navigation system antenna circuits, it stores a fault code or Diagnostic Trouble Code (DTC) in its memory circuit. The external combination antenna may be diagnosed separately from the RRM.

The hard wired circuits between components related to the RRM and the navigation system may be diagnosed using conventional diagnostic tools and procedures. Refer to the appropriate wiring information. The wiring information includes wiring diagrams, proper wire and connector repair procedures, details of wire harness routing and retention, connector pin out information and location views for the various wire harness connectors, splices and grounds.

However, conventional diagnostic methods will not prove conclusive in the diagnosis of the RRM or the electronic controls and communication between modules and other devices that provide some features of the navigation system. The most reliable, efficient and accurate means to diagnose the RRM or the electronic controls and communication related to navigation system operation requires the use of a diagnostic scan tool. Refer to the appropriate diagnostic information.

DESCRIPTION AND OPERATION > DESCRIPTION AND OPERATION - UCONNECT ACCESS > DESCRIPTION - UCONNECT ACCESS

A Uconnect™ Access system is factory-installed optional equipment that uses an embedded cellular module within the Radio Receiver Module (RRM) to enable several mobile connectivity features. Vehicles equipped with the Uconnect™ Access system can be readily identified by two switch buttons in the front roof lamp unit identified with **ASSIST** and **9-1-1** labels.

To enable Uconnect™ Access, a subscription must be completed by the customer. Detailed directions

for subscription along with other information relating to Uconnect™ Access can be found on **www.driveuconnect.com** or within the Uconnect™ owner's manual supplement for the supported radios.

> *NOTE:*
>
> *A free trial period of Uconnect™ Access may be offered with the sale of a new vehicle. Registration will be required to activate the trial subscription.*

Subscription to Uconnect™ Access provides many features that allow cellular smart phones to be put away in favor of the integrated mobile connectivity features and functionality accessible through the use of the radio, steering wheel and voice controls in the vehicle. All Access features are only available based on subscription. Features are continually being added or changed and offerings at the time this information was last updated included:

- **9-1-1/Assist** - The following call features are executed through the embedded cellular module of the RRM:
    - **9-1-1** - Pressing the **9-1-1** button will initiate an emergency call to a Public Safety Answering Point (PSAP). The Global Positioning System (GPS) coordinates of the vehicle are made available to the emergency operator in the event help needs to be sent. In addition it opens a two way voice channel with the emergency operator allowing communication between the vehicle occupant and the emergency operator.
    - **Assist** - Pressing the **ASSIST** button will present the customer with three choices. Uconnect™ Care, Vehicle Care or Roadside Assistance. These selection options are presented as soft keys in the RRM display. Selecting any one of these choices will place a call to the selected group. If there are questions about Uconnect™ Services, Uconnect™ Care can be contacted; if there are questions related to vehicle functionality, Vehicle Care can be contacted; or, if Roadside Assistance is needed, a direct call can be made.
- **Applications** - Some of the Uconnect™ Access applications (apps) presently available include:
    - **Points Of Interest Search** - A Points Of Interest (POI) Search app gives the vehicle owner access to Yelp (POI) local business and destination information previously available on the Internet or through a mobile app, adapted for use on the radio in their vehicle. The Yelp POI Search app provides searches using predefined search categories, or custom searches using keywords and voice recognition.
    - **Via Mobile** - The Via Mobile app leverages apps already installed on a compatible and paired iPhone or Android smart phone to enable accessibility to streaming Internet audio content through the RRM and audio system components within the vehicle. This app enables one touch access and a hands-free, radio-like user interface with no expenses besides those already being incurred to access the same content through the existing smart phone data plan. There are presently smart phone apps available for streaming audio content such as Aha Radio, iHeart Radio, Pandora and Slacker. When additional apps are made available there could potentially be access to streaming news, sports, weather, social media, comedy, audio books and other content such as special interest podcasts.
- **Notifications** - Customers have the option to sign up for automatic electronic mail (email) or text message (Short Message Service/SMS) notifications when an Access remote services command is processed or if their vehicle theft alarm has been triggered. These notifications are set up

through the Mopar® Owner Connect account of the customer (**www.MoparOwnerConnect.com**).

- **Remote Services** - The distance of remote services normally available through the Remote Keyless Entry (RKE) FOB with Integrated Key (FOBIK) can be extended through cellular connectivity. These services may include remote door Lock/Unlock, remote horn and lights (Panic Mode) and remote start. An active Access subscription is required and the customer must install the Uconnect™ Access Via Mobile smart phone app on their phone. The app can be obtained through the Mopar® Owner Connect account of the customer (**www.MoparOwnerConnect.com**) or by downloading it from the play store for their phone. Once the smart phone app is installed, the remote services can be controlled by the customer on line through their Mopar® Owner Connect account.

> *NOTE:*
>
> *Remote services are only available based on factory installed options. Options installed at the dealer are not eligible for these services.*

- **Stolen Vehicle Assistance** - If the vehicle is stolen, stolen vehicle assistance can be used to help the police locate the vehicle. This service is based on the request of the customer to Uconnect™ Care and must first be reported to local authorities and a police report reference number obtained. Uconnect™ Care will not provide stolen vehicle assistance without a police report reference number.

- **Voice Texting** - Voice Texting enhances the Voice Text Reply feature of the Uconnect™ Access subscription. While Voice Text Reply provides pre-formatted messages, it also lets the customer create custom messages. A message is spoken as if talking to the intended message recipient and the Uconnect™ Access voice-to-text technology converts the voice message into a text message.

> *NOTE:*
>
> *Voice Texting and Voice Text Reply are compatible with most phones that support Bluetooth Message Access Protocol (MAP) or AT Messaging Protocol. Always check compatibility by accessing Mobile Device Support at:* ***Uconnectphone.com*** *. These features are not available in all markets.*

- **Wi-Fi Hot Spot** - Vehicles equipped with the Uconnect™ Access system can become a Wi-Fi hot spot with payment of a daily, weekly or monthly subscription option. This system allows the use of the vehicle as a Wi-Fi hot spot for connecting consumer Wi-Fi devices to the Internet through a Wi-Fi antenna and an embedded cellular connection that are internal and integral to the RRM and the external cellular combination antenna. The external combination antenna can be repaired separately from the RRM. The Wi-Fi Hot Spot system software is flash programmable through the Universal Serial Bus (USB) port.

Refer to **www.driveuconnect.com** for the latest information and helpful videos describing all of the Uconnect™ services and offerings. The Uconnect™ Access system includes the following major components, which are described in further detail elsewhere in this service information:

- **Access Switches** - In vehicles equipped with Uconnect™ Access, the front roof lamp unit also contains two integral push button switches and a Light Emitting Diode (LED) indicator located on the rearward-facing housing for activation of the **ASSIST** and **9-1-1** features.

- **Bluetooth™ Antennas** - Bluetooth™ antennas are internal and integral to the RRM.
- **Bluetooth™ Phone** - A customer-supplied and paired Bluetooth™ smart phone is a required component of the Uconnect™ Access system to enable remote services.
- **Body Control Module** - The Body Control Module (BCM) is the configuration master node for the vehicle. Refer to MODULE, BODY CONTROL, DESCRIPTION AND OPERATION .
- **Combination Antenna** - The RRM sends and receives cellular data through a roof-mounted combination antenna that also receives satellite audio and GPS navigation signals. Refer to ANTENNA, SATELLITE, AUDIO, DESCRIPTION AND OPERATION .
- **Electronic Vehicle Information Center Switch Pod** - The Electronic Vehicle Information Center (EVIC) switch pod is located in the left horizontal spoke of the steering wheel. In addition to the EVIC switch buttons the lower portion of this switch pod contains the Voice Recognition (VR) switch button and the Phone switch button of the hands-free phone system. Refer to SWITCH, EVIC CONTROL, DESCRIPTION AND OPERATION .
- **Microphone** - A microphone is integral to the roof lamp unit in the headliner near the center of the upper windshield opening header panel in vehicles equipped with the Uconnect™ Hands Free Phone system. Refer to MICROPHONE, DESCRIPTION AND OPERATION .
- **Occupant Restraint Controller** - The Occupant Restraint Controller (ORC) module has a dedicated hard wired circuit that provides an input to the RRM whenever a Supplemental Restraint System (SRS) deployment occurs in the vehicle. Refer to MODULE, OCCUPANT RESTRAINT, DESCRIPTION AND OPERATION .
- **Radio Frequency Hub Module** - The Radio Frequency Hub Module (RFHM) is a key component of the Uconnect™ Access remote vehicle services feature. The RFHM is located on the upper liftgate opening header and concealed above the headliner within the passenger compartment. Refer to MODULE, RADIO FREQUENCY (RF HUB), DESCRIPTION AND OPERATION .
- **Radio Receiver Module** - The RRM is located near the top of the instrument panel center stack area and is the primary component of the Uconnect™ Access system in this vehicle. The RRM includes a microcontroller, a Bluetooth™ transceiver, a navigation module, flash memory and sophisticated Advanced Speech Recognition (ASR) input capability through VR software. The ASR software includes many different available languages. Each vehicle is equipped with a list of available languages, which are made available from the factory based upon languages most commonly used for the market destination. Refer to MODULE, RADIO RECEIVER, DESCRIPTION AND OPERATION .
- **Uconnect™ Access Registration And Applications** - Uconnect™ Access registration must be completed before individual RRM apps or Uconnect™ Access subscription packages can be purchased from the Uconnect™ Store Front. The Uconnect™ Access Via Mobile smart phone app must also be installed on the user's compatible smart phone for the remote vehicle services features to operate. Many additional Uconnect™ Access apps are under development for later release.
- **Wi-Fi Antenna** - The Wireless Local Area Network (WLAN) (also known as Wi-Fi) antenna is internal and integral to the RRM.
- **Wi-Fi Device** - A customer-supplied Wi-Fi capable device is a required component of the Wi-Fi Hot Spot system.

The RRM contains a microcontroller and programming that allows it to communicate with other electronic modules in the vehicle over the Controller Area Network - B (CAN - B) data bus. In vehicles equipped

with Uconnect™ Access, the RRM also uses electronic message communication with other electronic modules in the vehicle over the CAN - C data bus. Refer to 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 RRM. The Uconnect™ Access system software is flash programmable through the USB port.

DESCRIPTION AND OPERATION > DESCRIPTION AND OPERATION - UCONNECT ACCESS > OPERATION - UCONNECT ACCESS

Uconnect™ Access 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 Chrysler 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 RRM 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 right corner of the radio touchscreen. Relative signal strength is indicated by a bar graph and data capability is indicated by the display of either a **3G** (full capability), **1X** (text capable only) or a **0** with a strike-through symbol (no data capability). Depending on location and coverage, data capability can change. Signal strength is a major factor for any wireless connectivity. Third Generation (3G) data is the highest connectivity available at this time. Remote Service features (Start, Lock, Unlock, etc.) 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 on the front roof lamp unit identified with **ASSIST** and **9-1-1** provide a hard wired input to the Local Interface Network (LIN) slave node integral to the front roof lamp unit. 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 - B data bus, where it is retrieved by the RRM.

If the vehicle has the optional Uconnect™ Access Via Mobile application (also known as app) downloaded, installed and enabled on their smart phone their Uconnect™ Access subscription can provide remote services features. In the Uconnect™ Access system the Via Mobile app on the smart phone calls the RRM in the vehicle. The RRM communicates through electronic messages over the CAN - C data bus with the RFHM and the RFHM communicates over the CAN - C bus with the BCM to achieve the requested remote features. While the RRM uses electronic message communication over both the CAN - C data bus and the CAN - B data bus, the RRM is not a CAN gateway.

If a Bluetooth™ phone is SMS text message capable and compatible with the Uconnect™ Access system (see the Uconnect™ web site for a phone compatibility list), a Uconnect™ Access subscription provides an enhanced Voice Texting feature. This SMS text message free form dictation feature is used to compose a response when a text message is received. The call or SMS text message is relayed to the Bluetooth™ transceiver embedded within the RRM. The Bluetooth™ transceiver then instructs the RRM to announce the incoming call or message. The vehicle operator presses the Uconnect™ **Phone** button in the EVIC switch pod or the soft button that will appear in the RRM touchscreen display to accept the message and dictate a response.

The optional Wi-Fi hot spot feature of Uconnect™ Access utilizes the same operating principles and components as Uconnect™ Access for wireless connectivity. Digital rights to the Wi-Fi hot spot feature are provided based on a subscription separate from Uconnect™ Access. Several wireless devices can be supported in vehicles with the Wi-Fi hot spot feature and security to prevent unauthorized access can be enabled by the customer.

The hard wired circuits between components related to the RRM and the Uconnect™ Access system may be diagnosed using conventional diagnostic tools and procedures. Refer to the appropriate wiring information. The wiring information includes wiring diagrams, proper wire and connector repair procedures, details of wire harness routing and retention, connector pin out information and location views for the various wire harness connectors, splices and grounds.

However, conventional diagnostic methods will not prove conclusive in the diagnosis of the RRM or the electronic controls and communication between modules and other devices that provide some features of the Uconnect™ Access system. The most reliable, efficient and accurate means to diagnose the RRM or the electronic controls and communication related to Uconnect™ Access system operation requires the use of a diagnostic scan tool. Refer to the appropriate diagnostic information.

DIAGNOSIS AND TESTING > DIAGNOSIS AND TESTING - HANDS FREE PHONE

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 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.

The hard wired circuits between components related to the Radio Receiver Module (RRM) and the Uconnect™ Hands Free Phone system may be diagnosed using conventional diagnostic tools and procedures. Refer to the appropriate wiring information. The wiring information includes wiring diagrams, proper wire and connector repair procedures, details of wire harness routing and retention, connector pin out information and location views for the various wire harness connectors, splices and grounds.

However, conventional diagnostic methods will not prove conclusive in the diagnosis of the RRM or the electronic controls and communication between modules and other devices that provide some features of the Uconnect™ Hands Free Phone system. The most reliable, efficient and accurate means to diagnose the RRM or the electronic controls and communication related to Uconnect™ Hands Free Phone system operation requires the use of a diagnostic scan tool. Refer to the appropriate diagnostic information.

NOTE:

The MIT019 Multi-Media Interface Tester special tool may also be used for testing where no Diagnostic Trouble Code (DTC) has been recorded, such as with Bluetooth™ reception and phone pairing issues. Refer to DIAGNOSIS AND TESTING .

NOTE:

Validation and diagnosis of many of the conditions listed below will require access to both the paired Bluetooth™ device and the PIN required for that device.

HANDS FREE PHONE DIAGNOSIS		
CONDITION	POSSIBLE CAUSES	CORRECTION
PHONE NOT AVAILABLE	1. Bluetooth phone not paired to the RRM.	1. Be certain that the phone is Bluetooth compatible and is paired to the RRM.
	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 RRM, the phone or both did not complete successfully.	4. Cycle both the RRM 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: **http://www.chrysler.com/uconnect** .
	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: **http://www.chrysler.com/uconnect**

	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 PIN assigned by the RRM during pairing.	4. The PIN assigned by the RRM during pairing must match the PIN of the phone.
	5. Phone pairing is locked (password protected).	5. To unlock phone pairing in the phone, be certain that password protection is turned Off.
	6. The RRM has reached the maximum number of allowed devices paired.	6. Remove one of the previously paired devices from the paired list of the RRM.
	7. The phone has reached the maximum number of allowed devices paired.	7. Remove one of the previously paired devices from the paired list of the phone, or delete the pairing history from the phone. Refer to the operator's manual for the phone.
	8. The boot procedure for the RRM, the phone or both did not complete successfully.	8. Cycle both the RRM and the phone Off, then On again in an attempt to complete a successful boot procedure.
	9. A phone freeze has occurred.	9. Perform a hard reset (power cycle) to the phone. Refer to the operator's manual for the phone.
PHONE WILL NOT RECONNECT AFTER PAIRING	1. Bluetooth settings in phone are incorrect.	1. Bluetooth settings in phone should be set to auto-connect or select Uconnect™ as a trusted device in phone.
	2. Phone pairing is locked (password protected).	2. To unlock phone pairing in the phone, be certain that password protection is turned Off.
	3. The boot procedure for the RRM, the phone or both did not complete successfully.	3. Cycle both the RRM and the phone Off, then On again in an attempt to complete a successful boot procedure.
	4. A phone freeze has occurred.	4. Perform a hard reset (power cycle) to the phone. Refer to the operator's manual for the phone.
POOR VOICE RECOGNITION	1. User is not waiting for the **beep** tone acknowledgment before issuing Voice Commands.	1. Be certain the user knows to wait for the acknowledgment **beep** tone prior to issuing Voice Commands.
	2. User is not issuing Voice Commands in a smooth and consistent speaking voice.	2. Be certain the user is issuing Voice Commands in a normal, smooth and consistent speaking voice. The Advanced Speech Recognition (ASR) engine is

		designed to recognize normal speech patterns and at a normal tone. Some users tend to speak to a computer loud and slow, which results in reduced performance.
	3. User is not using proper Voice Command syntax.	3. User must speak using proper Voice Command syntax.
	4. High noise levels within the passenger compartment.	4. 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.
	5. Passengers are talking while the user is attempting to issue a Voice Command.	5. Although designed to focus on sounds from the driver's seated position, the directional microphone will pick up sounds from any seating position in the vehicle. ASR engine performance is increased in low noise environments.
	6. Foreign objects interfering with microphone input.	6. Verify that there are no foreign objects hanging from the inside rear view mirror that could be interfering with microphone reception.
	7. The front roof lamp unit is not properly attached to the mount.	7. The front roof lamp unit must be firmly mounted to the mounting location. Be certain the lamp unit is properly installed.
	8. The incorrect Uconnect switch button is being depressed.	8. Phone features are accessed using the Uconnect **Phone** button on the steering wheel or the **Phone** soft key in the RRM display. Other Uconnect Voice Command features are accessed using the Uconnect **VR** button or soft key.
	9. Microphone failure.	9. Use a diagnostic scan tool and the appropriate diagnostic procedures for further diagnosis of the microphone.
PHONE BOOK DOES NOT DOWNLOAD	1. Phone does not support the Phone Book Access Profile (PBAP).	1. The Uconnect system requires that the cellular phone support the PBAP profile. To enable the Uconnect phone book download feature, the phone must be upgraded to one that is PBAP enabled. A list of suggested phones is available at: **http://www.chrysler.com/uconnect**
	2. Phone book transfer not enabled in phone during pairing.	2. Be certain that phone book transfer is accepted or enabled in the phone during pairing to enable the Uconnect phone book download feature.
	3. Missing contacts from downloaded phone book.	3. Only contacts with a phone number are downloaded from phone and the number of

		contacts downloaded is limited to 1000.
PHONE BOOK NAMES NOT RECOGNIZED CONSISTENTLY	1. User is not waiting for the **beep** tone acknowledgment before issuing Voice Commands.	1. Be certain the user knows to wait for the acknowledgment **beep** tone prior to issuing Voice Commands.
	2. User is not issuing Voice Commands in a smooth and consistent speaking voice.	2. Be certain the user is issuing Voice Commands in a normal, smooth and consistent speaking voice. The ASR engine is designed to recognize normal speech patterns and at a normal tone. Some users tend to speak to a computer loud and slow, which results in reduced performance.
	3. User is not using proper Voice Command syntax.	3. User must speak using proper Voice Command syntax (i.e.: say **Call** - then name, or say **Dial** - then number).
	4. Phone book names too short.	4. For increased performance, it is recommended to use both first and last names for phone book entries. Example: **Daniel Johnson** as opposed to **Dan** .
	5. Name not spoken by user as it appears in the phone book.	5. Speak the full contact name as it appears in the phone book. Do not use nicknames.
	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 RRM phone screen appears grayed 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's 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 hanging from the inside rear view mirror that could be interfering with microphone reception.

	11. The front roof lamp unit is not properly attached to the mount.	11. The front roof lamp unit must be firmly mounted to the mounting location. Be certain the lamp unit is properly installed.
	12. The incorrect Uconnect switch button is being depressed.	12. Phone features are accessed using the Uconnect **Phone** button on the steering wheel or the **Phone** soft key in the RRM display. Other Uconnect Voice Command 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 further 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 conditions include having the windows closed and the blower fan set to Low or Off.
	2. Passengers are talking while the user is attempting to issue a Voice Command.	2. Although designed to focus on sounds from the driver's 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.
	3. Foreign objects interfering with microphone input.	3. Verify that there are no foreign objects hanging from the inside rear view mirror that could be interfering with microphone reception.
	4. The front roof lamp unit is not properly attached to the mount.	4. The front roof lamp unit must be firmly mounted to the mounting location. Be certain the lamp unit is properly installed.
	5. Microphone failure.	5. Use a diagnostic scan tool and the appropriate diagnostic procedures for further diagnosis of the microphone.
NO PHONE AUDIO	1. The settings in the phone cause the phone audio to be routed to a handset.	1. Route the phone audio to the hands free device.
CALL LOG INOPERATIVE OR INACCURATE	1. Call log not supported by phone.	1. The Uconnect system requires that the cellular phone support the call log feature. To enable the Uconnect call log feature, the phone must be upgraded to one that is call log enabled. A list of suggested phones is available at: **http://www.chrysler.com /uconnect**
	2. The phone is not providing accurate call log data.	2. Refer to the operator's manual for the phone.

AUDIO OUTPUT TOO LOW	1. Volume setting on the Bluetooth device set too low.	1. Set the volume of the phone or other Bluetooth device to about three quarters (3/4) of full or maximum volume.
	2. Volume setting on the RRM set too low.	2. Set the volume of the RRM to the desired level during an active Uconnect Hands Free Phone call session.

DIAGNOSIS AND TESTING > DIAGNOSIS AND TESTING - NAVIGATION

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 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.

The hard wired circuits between components related to the Radio Receiver Module (RRM) and the Uconnect™ Navigation system may be diagnosed using conventional diagnostic tools and procedures. Refer to the appropriate wiring information. The wiring information includes wiring diagrams, proper wire and connector repair procedures, details of wire harness routing and retention, connector pin out information and location views for the various wire harness connectors, splices and grounds.

However, conventional diagnostic methods will not prove conclusive in the diagnosis of the RRM or the electronic controls and communication between modules and other devices that provide some features of the Uconnect™ Navigation system. The most reliable, efficient and accurate means to diagnose the RRM or the electronic controls and communication related to Uconnect™ Navigation system operation requires the use of a diagnostic scan tool. Refer to the appropriate diagnostic information.

DIAGNOSIS AND TESTING > DIAGNOSIS AND TESTING - UCONNECT ACCESS

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 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.

The hard wired circuits between components related to the Radio Receiver Module (RRM) and the

Uconnect™ Access system may be diagnosed using conventional diagnostic tools and procedures. Refer to the appropriate wiring information. The wiring information includes wiring diagrams, proper wire and connector repair procedures, details of wire harness routing and retention, connector pin out information and location views for the various wire harness connectors, splices and grounds.

However, conventional diagnostic methods will not prove conclusive in the diagnosis of the RRM or the electronic controls and communication between modules and other devices that provide some features of the Uconnect™ Access system.

A Light Emitting Diode (LED) indicator integral to the front roof lamp unit push buttons provides an indication of the status of the Uconnect™ Access embedded cellular device. Any fault indication is accompanied by a pop up screen in the RRM electronic touchscreen display. The following indications are provided whenever the status of the ignition is On or Accessory:

- **Solid Green** - No active call.
- **Flashing Green** - A Uconnect™ Access Care or 9-1-1 call is active.
- **Solid Red** - A CAN, embedded cellular device, cellular antenna or wiring fault has been detected.
- **Off** - No power supply to the front roof lamp unit.

In addition to the LED indicator in the push button, one of the following error messages may appear in the RRM touchscreen display. These error messages will coincide with a solid red push button LED indication.

- **Critical VIN Error** - This message typically indicates the radio data was not provisioned with the back end database, or that critical data within the RRM is missing. Diagnosis of this type of failure will require the assistance of the network provider.
    1. Enter the **Dealer Mode** menu by selecting the temperature up, temperature down and front defrost buttons simultaneously until the menu appears (about 5 to 8 seconds).
        1. Navigate through the **System Information** menu to the **Radio Part Information** menu.
        2. Write down the **Serial Number** listed on the **Radio Part Information** menu. The serial number begins with the characters, **T00BE** .
    2. Navigate back to the **Dealer Mode** menu.
        1. Navigate through the **##Menu Basic** menu to the **##RTN#** menu.
        2. Write down the **MDN** number listed on the **##RTN#** menu.
        3. Write down the **MSID** number listed on the **##RTN#** 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™ Access diagnostics. A ticket will be opened with the network engineers and a call back will occur within 15 minutes for further assistance and diagnostics.
- **Vehicle Phone Requires Service** - This message can indicate a fault with the antenna, the front roof lamp unit, communication with the Occupant Restraint Controller (ORC) module or any of the hard wired 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 hard wired circuitry associated with the DTC. If no DTC can be retrieved, an internal failure within the RRM may exist.

The Wi-Fi hot spot feature can only be diagnosed if the customer has subscribed for this additional feature. The same diagnostic steps associated with Uconnect™ Access will be used for Wi-Fi hot spot as they share the same network. In addition, each of the wireless devices of the customer must be properly paired for them to work.

NOTE:

The MIT019 Multi-Media Interface Tester special tool may also be used for testing where no DTC has been recorded, such as with Bluetooth™ reception and phone pairing issues. Refer to DIAGNOSIS AND TESTING .

NOTE:

Validation and diagnosis of many of the conditions listed below will require access to both the paired Bluetooth™ device and the PIN required for that device.

UCONNECT ACCESS DIAGNOSIS		
CONDITION	POSSIBLE CAUSES	CORRECTION
POOR VOICE RECOGNITION	1. User is not waiting for the **beep** tone acknowledgment before issuing Voice Commands.	1. Be certain the user knows to wait for the acknowledgment **beep** tone prior to issuing Voice Commands.
	2. User is not issuing Voice Commands in a smooth and consistent speaking voice.	2. Be certain the user is issuing Voice Commands in a normal, smooth and consistent speaking voice. The Advanced Speech Recognition (ASR) engine is designed to recognize normal speech patterns and at a normal tone. Some users tend to speak to a computer loud and slow, which results in reduced performance.
	3. User is not using proper Voice Command syntax.	3. User must speak using proper Voice Command syntax.
	4. High noise levels within the passenger compartment.	4. 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.
	5. Passengers are talking while the user is attempting to issue a Voice Command.	5. Although designed to focus on sounds from the driver's seated position, the directional microphone will pick up sounds from any seating position in the vehicle. ASR engine performance

		is increased in low noise environments.
	6. Foreign objects interfering with microphone input.	6. Verify that there are no foreign objects hanging from the inside rear view mirror that could be interfering with microphone reception.
	7. The front roof lamp unit is not properly attached to the mount.	7. The front roof lamp unit must be firmly mounted to the mounting location. Be certain the lamp unit is properly installed.
	8. The incorrect Uconnect switch button is being depressed.	8. Phone features are accessed using the Uconnect **Phone** button on the steering wheel or the **Phone** soft key in the RRM display. Other Uconnect Voice Command features are accessed using the Uconnect **VR** button or soft key.
	9. Microphone failure.	9. Use a diagnostic scan tool and the appropriate diagnostic procedures for further diagnosis of the microphone.
TEXT MESSAGING INOPERATIVE	1. The Bluetooth Message Access Profile (MAP) is not supported by the phone.	1. The Uconnect system requires that the cellular phone support the Bluetooth MAP for the text messaging feature. To enable the Uconnect text messaging feature, the phone must be upgraded to one that supports Bluetooth MAP. A list of suggested phones is available at: **http://www.chrysler.com/uconnect**
	2. The Connect-To-Your-Messages setting has not been accepted on the phone.	2. Accept the Connect-To-Your-Messages setting on the phone. Refer to the operator's manual for the phone.
ENHANCED VOICE-TO-TEXT (DICTATED) MESSAGING RESPONSE FEATURE INOPERATIVE	1. Uconnect registration incomplete.	1. Select the **Apps** soft key in the RRM display, then select the **Uconnect Registration App** soft key from the **Apps** list. For further assistance press the **ASSIST** button on the front roof lamp unit to contact Uconnect Customer Care.
	2. Uconnect Access subscription service is inactive.	2. This feature is only available with the Uconnect Access Advantage subscription service. Be certain that the subscription service account is active in the RRM.
	3. The Bluetooth MAP is not supported by the phone.	3. The Uconnect system requires that the cellular phone support the Bluetooth MAP for the text messaging feature. To enable the Uconnect text messaging feature, the phone must be upgraded to one that supports Bluetooth MAP. A list of suggested phones is available at: **http://www.chrysler.com/uconnect**
	4. The Connect-To-Your-Messages setting has not	4. Accept the Connect-To-Your-Messages setting on the phone. Refer to the operator's

	been accepted on the phone.	manual for the phone.
UNABLE TO PURCHASE APPLICATIONS FROM UCONNECT STORE FRONT	1. Uconnect registration incomplete.	1. Select the **Apps** soft key in the RRM display, then select the **Uconnect Registration App** soft key from the **Apps** list. For further assistance press the **ASSIST** button on the front roof lamp unit to contact Uconnect Customer Care.
	2. Wallet is not set up.	2. Set up a valid wallet for the Uconnect store front in order to purchase application subscriptions.
	3. Cellular antenna issue.	3. Refer to the Audio And Video System service information for further diagnosis of the cellular (combination) antenna.
REMOTE SERVICES INOPERATIVE	1. Uconnect registration incomplete.	1. Select the **Apps** soft key in the RRM display, then select the **Uconnect Registration App** soft key from the **Apps** list. For further assistance press the **ASSIST** button on the front roof lamp unit to contact Uconnect Customer Care.
	2. Phone is not compatible.	2. Be certain that the phone is compatible and is paired to the RRM. A list of suggested phones is available at: **http://www.chrysler.com /uconnect** .
	3. Uconnect Access Via Mobile application (app) not downloaded or not fully installed to smart phone.	3. Download the Uconnect Access Via Mobile app to the user's smart phone from **www.MoparOwnerConnect.com** . Allow sufficient time for the Uconnect Access Via Mobile application (app) download to smart phone to complete. Download times will vary widely with the throughput performance of the user's smart phone and the accessibility of the user's cellular network services.
	4. Uconnect Access subscription service is inactive in the RRM.	4. This feature is only available with the Uconnect Access Advantage subscription service. Be certain that the subscription service account is active in the RRM.
	5. Cellular antenna issue.	5. Refer to the Audio And Video System service information for further diagnosis of the cellular (combination) antenna.
	5. Radio Frequency Hub Module (RFHM) issue.	5. Further diagnosis of the RFHM requires the use of a diagnostic scan tool and the appropriate diagnostic procedures.
AUDIO OUTPUT TOO LOW	1. Volume setting on Bluetooth device set too low.	1. Set the volume of the phone or other Bluetooth device to about three quarters (3/4) of full or maximum volume.

	2. Volume setting on the RRM.	2. Set the volume of the RRM to the desired level during an active Uconnect Access feature session.
UCONNECT ACCESS INOPERATIVE - NO GREEN OR RED LED INDICATOR	1. Status of ignition is Off.	1. Ignition status must be On or Accessory during Uconnect Access operation.
	2. Front roof lamp unit wiring not connected.	2. Be certain the wire harness for the front roof lamp unit is connected and fully engaged.
	3. Ineffective ground circuit.	3. Test and repair the open front roof lamp unit ground circuit if required.
	4. Ineffective feed circuit.	4. Test and repair the open front roof lamp unit feed circuit if required.
UCONNECT ACCESS INOPERATIVE - GREEN LED INDICATOR	1. Uconnect registration incomplete.	1. Select the **Apps** soft key in the RRM display, then select the **Uconnect Registration App** soft key from the **Apps** list. For further assistance press the **ASSIST** button on the front roof lamp unit to contact Uconnect Customer Care.
	2. Uconnect Access subscription service is inactive in the RRM.	2. Many Uconnect Access features are only available with the Uconnect Access subscription service. Be certain that the subscription service account is active in the RRM.
	3. Uconnect Access application (app) corrupt or improperly installed.	3. Perform the Uconnect Access System Reinstall Applications Standard Procedure. Refer to STANDARD PROCEDURE .
UCONNECT ACCESS INOPERATIVE - RED LED INDICATOR	1. Loss of Controller Area Network - B (CAN - B) or CAN - C communication.	1. Further diagnosis of CAN - B or CAN - C communication requires the use of a diagnostic scan tool and the appropriate diagnostic procedures.
	2. Cellular antenna issue.	2. Refer to the Audio And Video System service information for further diagnosis of the cellular (combination) antenna.
	3. Ineffective embedded cellular device.	3. Further diagnosis of the RRM requires the use of a diagnostic scan tool and the appropriate diagnostic procedures. Test and replace the RRM, if required.
WI-FI HOT SPOT INOPERATIVE	1. Uconnect registration incomplete.	1. Select the **Apps** soft key in the RRM display, then select the **Uconnect Registration App** soft key from the **Apps** list. For further assistance press the **ASSIST** button on the front roof lamp unit to contact Uconnect Customer Care.
	2. Uconnect Wi-Fi subscription service is inactive or expired in the RRM.	2. This feature is only available with the Uconnect Wi-Fi subscription service. Be certain that the subscription service account is active in the RRM.

	3. Wi-Fi capability is not enabled in user's Bluetooth device.	3. Confirm Wi-Fi setting in user's Bluetooth device is enabled. Refer to the user's manual for that device.
	4. Selected Wireless Access Point (WAP) is incorrect.	4. Confirm that correct WAP is selected in user's Bluetooth device. Refer to the user's manual for that device.
	5. Wireless Access Point (WAP) password or security settings incorrect.	5. Use the Application Settings menu of the RRM display to confirm or adjust the WAP password and security settings.
	6. Cellular antenna issue.	6. Refer to the Audio And Video System service information for further diagnosis of the cellular antenna.

STANDARD PROCEDURE > NAVIGATION SYSTEM - RESTORE OR UPDATE

Navigation System map and Point-Of-Interest (POI) data updates may become available occasionally through the Navteq Maps web site (www.navigation.com). The updated information as well as 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 Receiver Module (RRM) in the vehicle. These are fee-based applications and updates, which are made at the option and expense of the customer.

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

STANDARD PROCEDURE > UCONNECT ACCESS 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. This 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 Apps orb of the Radio Receiver Module (RRM). In addition, reinstalling applications may correct a Digital Rights Management (DRM) concern that is causing a No Subscription error for customers that were fully registered. 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 RRM.

During this procedure, the subscribed applications are removed from the RRM and reinstalled based upon data found on the cloud server. The applications reinstalled onto the RRM will be based upon valid subscriptions and is referred to as Digital Rights.

1. Navigate through the **Apps > Uconnect Store > My Apps > Settings** on the RRM touchscreen.
2. Select **Reinstall Apps** .
3. Press the **Continue** soft key to initiate the Reinstall Applications procedure, or press the **Help** soft key for more information.
4. When the **Apps reinstalled. Radio will restart shortly.** screen appears, press the **OK** soft key.
5. Once the request is processed, a screen will appear alerting the customer with the message, **Important: Application Data Reset Initiated. After Radio Resets, all application data will be lost. Please Wait.** After the RRM reset occurs, the apps will begin to be reinstalled. The reinstallation process may take up to 30 minutes, depending upon the number of apps and the cellular signal strength seen with the bar graph on the **Apps** soft key orb in the lower right corner of the RRM touchscreen.

NOTE:

One or two ignition cycles (including bus time-outs) may speed the reloading process following the radio reset.

STANDARD PROCEDURE > UCONNECT ACCESS SYSTEM - REMOVE ACCOUNTS

NOTE:

The following procedure is provided to the dealer technician as INFORMATION ONLY. This procedure is intended for use by the vehicle owner or operator. This procedure is used when selling the vehicle or cancelling the Uconnect Access account. Removing the account will disassociate the Vehicle Identification Number (VIN) from the account and remove Uconnect Access features from the vehicle. The Uconnect Access features can be reinstated by repeating the registration process through the Radio Receiver Module (RRM) and following the directions associated with registering for Uconnect Access.

The Remove Accounts procedure can be initiated by one of three methods:

- Through the touchscreen of the RRM.
- Through the Uconnect™ Call Center (**ASSIST** button in the front roof lamp unit) or under **Uconnect™ Apps** selection of the RRM display.
- Through the Uconnect™ Owners information accessed through the Mopar® Owner Connect web

site (www.moparownerconnect.com).

The following describes the Remove Accounts procedure accomplished through the RRM touchscreen:

1. Navigate through **Apps > Uconnect Store > My Apps > Settings** on the RRM touchscreen.
2. Select **Remove Uconnect Account** .
3. Press the **Continue** soft key after each of the two **Warning** screens, or press the **Cancel** soft key to abort the procedure.
4. When the **Authentication** screen is reached, enter the 4 digit **Uconnect Access ID** .
5. Press the **Continue** soft key to continue the Remove Accounts procedure, the **Help** soft key for additional information or the **Cancel** soft key to abort the Remove Accounts procedure.
6. When the **This vehicle has been removed from your account.** screen appears, press the **OK** soft key. Once the request is processed, a screen will appear alerting the customer with the message, **Important: Application Data Reset Initiated. After Radio Resets, all application data will be lost. Please Wait.**
7. After the radio reset occurs, Uconnect Access applications will no longer be available and the **Uconnect Registration** screen will appear each time the **Apps** soft key is selected until a new valid registration has been successfully completed.

ANTENNA, NAVIGATION > DESCRIPTION AND OPERATION > DESCRIPTION AND OPERATION > DESCRIPTION

The navigation antenna is integrated into a roof-mounted combination antenna that also receives satellite audio and cellular signals. Refer to ANTENNA, SATELLITE, AUDIO, DESCRIPTION AND OPERATION .

ANTENNA, NAVIGATION > DESCRIPTION AND OPERATION > DESCRIPTION AND OPERATION > OPERATION

The navigation module acquires Global Positioning System (GPS) position data through a roof-mounted combination antenna that also receives satellite audio and cellular signals. Refer to ANTENNA, SATELLITE, AUDIO, DESCRIPTION AND OPERATION .

ANTENNA, NAVIGATION > DIAGNOSIS AND TESTING > DIAGNOSIS AND TESTING - NAVIGATION ANTENNA

Refer to DIAGNOSIS AND TESTING .

ANTENNA, NAVIGATION > REMOVAL AND INSTALLATION > REMOVAL AND INSTALLATION > REMOVAL

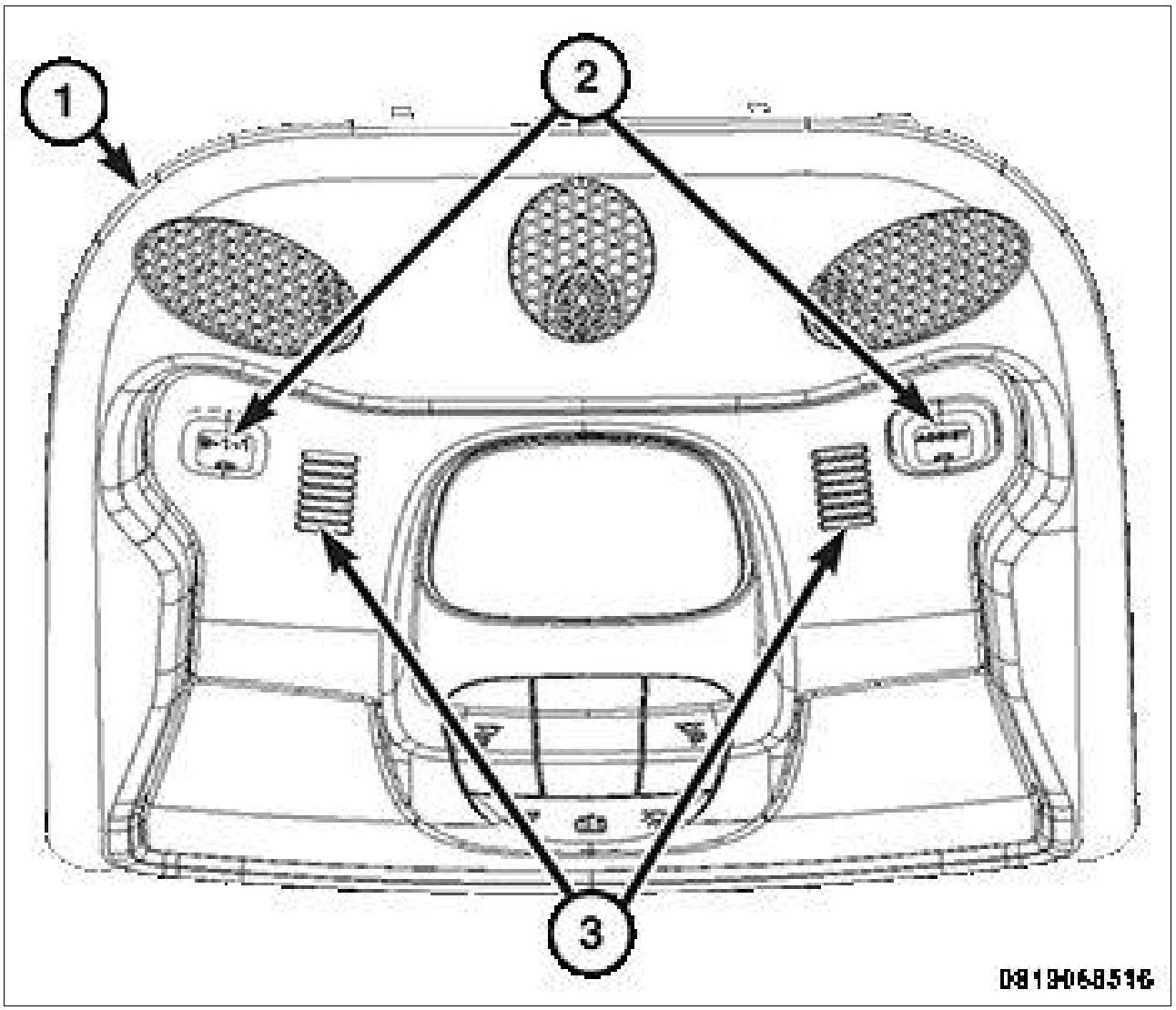
The navigation antenna is serviced as a unit with the combination antenna located on the roof panel. Refer to ANTENNA, SATELLITE, AUDIO, REMOVAL AND INSTALLATION .

ANTENNA, NAVIGATION > REMOVAL AND INSTALLATION > REMOVAL AND INSTALLATION > INSTALLATION

The navigation antenna is serviced as a unit with the combination antenna located on the roof panel. Refer to ANTENNA, SATELLITE, AUDIO, REMOVAL AND INSTALLATION .

MICROPHONE > DESCRIPTION AND OPERATION > DESCRIPTION AND OPERATION > DESCRIPTION

Fig 1: Roof Lamp Unit, Push Buttons & Grilles



Courtesy of CHRYSLER GROUP, LLC

Vehicles equipped with the optional hands-free system have a microphone mounted above a grille (3) in

the roof lamp unit (1) located between the two sun visors in the headliner near the windshield opening header. The microphone is powered by and provides a hard wired input to the Radio Receiver Module (RRM) in the instrument panel whenever the Voice Recognition (VR) feature of the hands-free system is active. This microphone is connected to the vehicle electrical system through a dedicated pigtail wire harness and connector to a dedicated take out and connector of the overhead wire harness.

In vehicles equipped with the optional Uconnect™ Access system, the front roof lamp unit also houses both a **9-1-1** push button and a **Assist** push button (2).

The microphone cannot be adjusted or repaired and, if damaged or ineffective, it must be replaced.

MICROPHONE > DESCRIPTION AND OPERATION > DESCRIPTION AND OPERATION > OPERATION

When the hands-free VR control circuitry integral and internal to the RRM detects the appropriate inputs or requests, it energizes the circuitry of the microphone within the front lamp unit housing. The microphone remains active until it is deactivated by the hands-free VR control circuitry, or until the status of the ignition transitions to Off, whichever occurs first.

The inputs from the microphone is processed, filtered and redirected by the VR control circuitry and logic as appropriate. Those inputs can be redirected to the Advanced Speech Recognition (ASR) engine or to the audio send circuitry of the Bluetooth™ transceiver. Each of these electronic modules is also integral and internal to the RRM.

The status of the Uconnect™ Access **Assist** and **9-1-1** push buttons is relayed by the Local Interface Network (LIN) slave node integral to the front roof lamp unit via the LIN data bus to the Body Control Module (BCM), which is a LIN master node. The BCM is also a Controller Area Network (CAN) data bus gateway and relays the push button status information to the RRM over the CAN - B data bus.

The hard wired inputs and outputs of the microphone in the front lamp unit housing may be diagnosed using conventional diagnostic tools and procedures. Refer to the appropriate wiring information. However, conventional diagnostic methods will not prove conclusive in the diagnosis of the microphone or the electronic controls and communication between modules and other devices that provide some features of the RRM controlled microphone. The most reliable, efficient and accurate means to diagnose the RRM or the electronic controls and communication related to RRM-controlled microphone operation requires the use of a diagnostic scan tool. Refer to the appropriate diagnostic information.

MICROPHONE > DIAGNOSIS AND TESTING > DIAGNOSIS AND TESTING - MICROPHONE

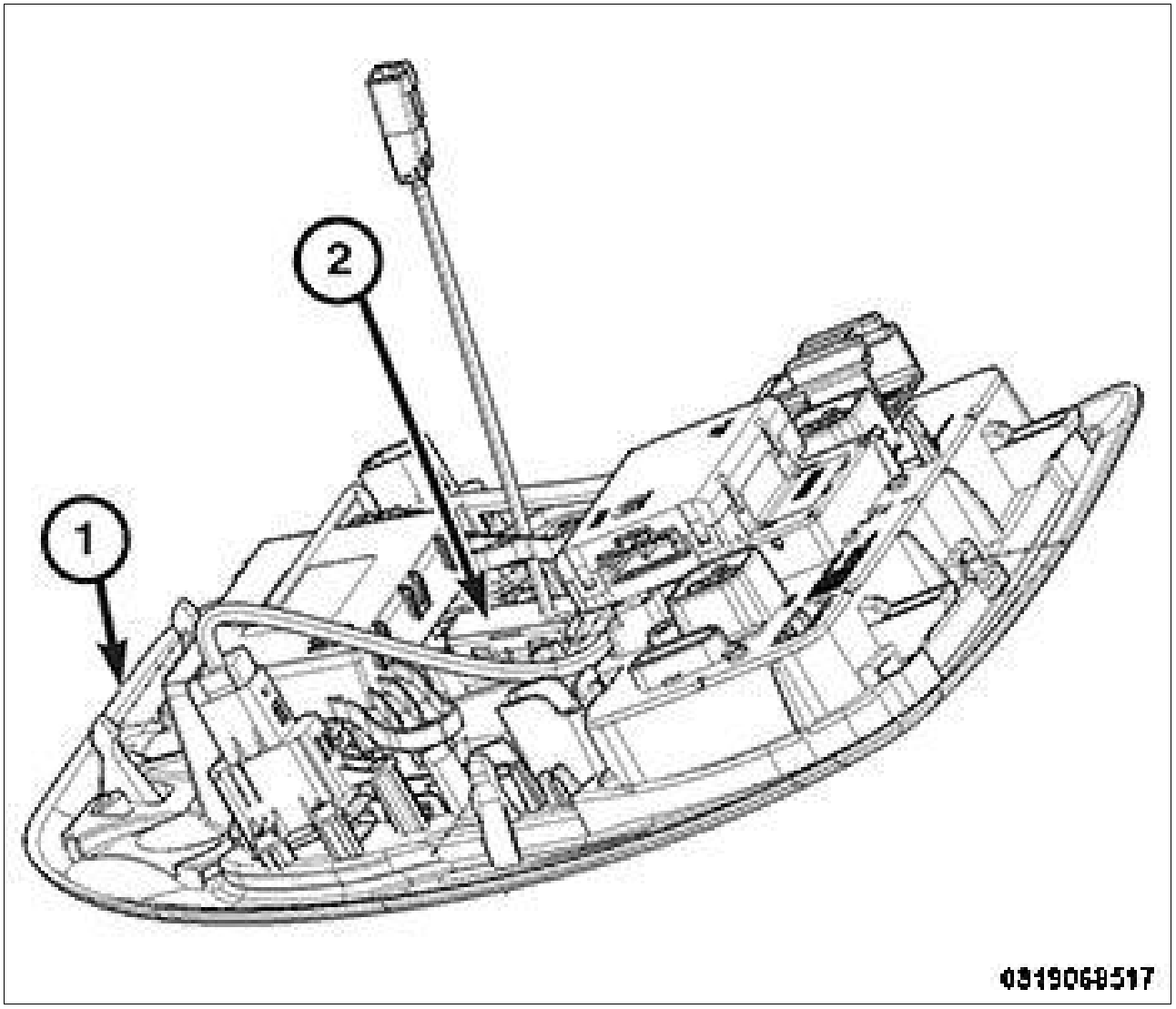
WARNING:

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 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.

The hard wired inputs and outputs of the microphone in the front lamp unit housing may be diagnosed using conventional diagnostic tools and procedures. Refer to the appropriate wiring information. However, conventional diagnostic methods will not prove conclusive in the diagnosis of the microphone or the electronic controls and communication between modules and other devices that provide some features of the Radio Receiver Module (RRM) controlled microphone. The most reliable, efficient and accurate means to diagnose the RRM or the electronic controls and communication related to RRM-controlled microphone operation requires the use of a diagnostic scan tool. Refer to the appropriate diagnostic information.

MICROPHONE > REMOVAL AND INSTALLATION > REMOVAL AND INSTALLATION > REMOVAL

Fig 1: Front Roof Lamp Unit & Microphone

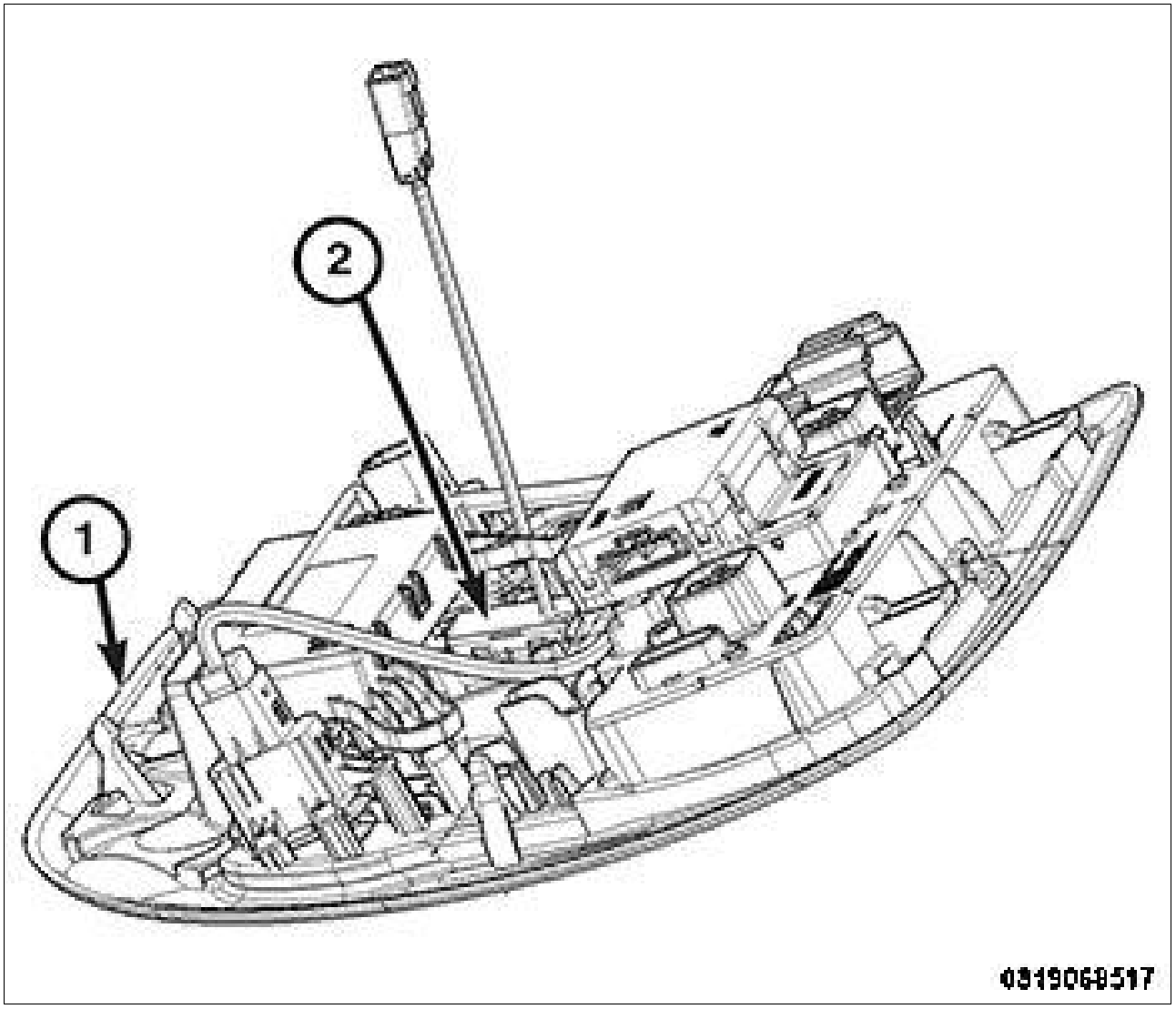


Courtesy of CHRYSLER GROUP, LLC

1. Disconnect and isolate the negative cable from the battery. If equipped with an Intelligent Battery Sensor (IBS), disconnect the IBS connector before disconnecting the negative cable from the battery.
2. Remove the front roof lamp unit (1) from the headliner. Refer to LAMP, DOME, REMOVAL AND INSTALLATION .
3. Release the retainer that secures the microphone (2) to the back of the roof lamp housing.
4. Remove the microphone from the roof lamp.

MICROPHONE > REMOVAL AND INSTALLATION > REMOVAL AND INSTALLATION > INSTALLATION

Fig 1: Front Roof Lamp Unit & Microphone



Courtesy of CHRYSLER GROUP, LLC

1. Position the microphone (2) to the back of the front roof lamp unit housing (1).
2. Firmly press the microphone into the housing until the retainer is fully engaged.
3. Install the roof lamp unit into the headliner. Refer to LAMP, DOME, REMOVAL AND INSTALLATION .
4. Connect the negative cable to the battery. If equipped with an Intelligent Battery Sensor (IBS), reconnect the IBS connector.