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2004 JEEP Cherokee/Liberty OEM Service and Repair Workshop Manual

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- Verify that the module housing latch is fully engaged.
- Use the scan tool to perform the proxy alignment.
- Perform the PLGM Power Learn Calibration Test procedure (Refer to Electrical/Power Liftgate/Standard Procedure).

YOUR CURRENT VEHICLE

PCM Programming

PCM PROGRAMMING

This procedure is required when one or more of the following situations are true:

- The Powertrain Control Module (PCM) has been replaced.
- Diagnostic Trouble Code (DTC) P1602 - PCM Not Programmed is set.
- An updated calibration or software release is available for either the PCM or Transmission Control Module (TCM).

This procedure assumes that the scan tool is properly configured to the dealership network with either a wired or wireless connection. For help on how to network the scan tool, use the "Help" tab at the top of the diagnostic application.

PROGRAMMING PROCEDURE - Using the scan tool:

1. If the PCM is being replaced with a new one, generate a scan report from the original PCM.
2. Obtain Authorization PIN which can be accessed by certain dealer personnel from the DealerCONNECT Key Code menu for use later.
3. Connect a battery charger to the vehicle to maintain adequate system voltage during the flash update.
4. Flash the PCM - If multiple calibrations are available, consult the scan report from the original PCM to determine the correct calibration part number.
5. Run the PCM “Misc functions” and select “Check PCM VIN” and follow the on screen instructions. When complete, select “Finish”.
6. Run Guided Diagnostic Immobilizer Modules Replacement (Guided Diagnostics can be accessed from the Activities section in the left margin menu). **You will need the PIN obtained in step 2.**
7. Navigate back to the home screen and select “PCM”
8. Perform the following routines if applicable
    - Cam Crank Relearn

DESCRIPTION	SPECIFICATION	COMMENT
Park Guide Bracket to Case Bolt	**13 N·m (10 Ft. Lbs.)**	–
Power Inverter Module (PIM) Retaining Bolts	**6 N·m (53 In. Lbs.)**	–
Powertrain Control Module (PCM) to Bracket Bolt	**8 N·m (71 In. Lbs.)**	–
PCM to Bracket Nut	**8 N·m (71 In. Lbs.)**	–
PCM Bracket to Body Bolt	**6 N·m (53 In. Lbs.)**	–
PCM Ground Wire	**7 N·m (62 In. Lbs.)**	–
PCM Ground Wire Nut	**20 N·m (15 Ft. Lbs.)**	–
Power Inverter Module to CCB Bolt	**6 N·m (53 In. Lbs.)**	–
Security Gateway Module (SGW) to Instrument Panel Bolt	**5 N·m (44 In. Lbs.)**	–
Video Routing Module (SGW) to Body Nuts	**8 N·m (71 In. Lbs.)**	–

YOUR CURRENT VEHICLE

Key Fob Programming

KEY FOB PROGRAMMING

NOTE

Do not put a laptop or other wireless device (cell phone, audio device, etc.) on top of or near the center console (between the seats to the dash). The Low Frequency (LF) antenna is below the center console and these devices may interrupt programming. Verify the key fob that is being programmed is inside the car away from nearby consumer electronics. Disconnect aftermarket cell phone chargers before attempting to program the key fob.

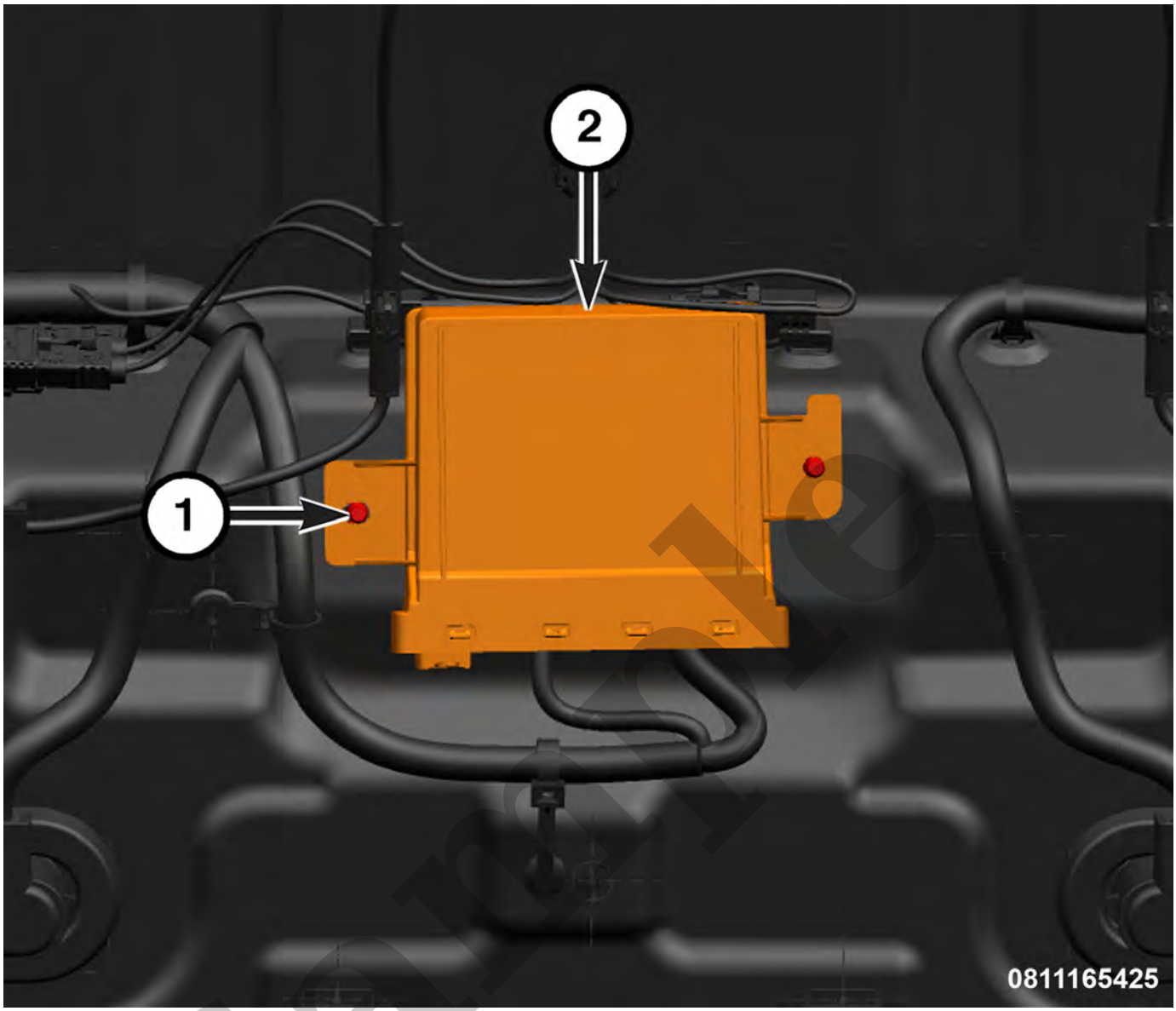
Using Service Library, obtain a Personal Identification Number (PIN) prior to starting the programming routine.

Sitting in the vehicle with the doors closed is a requirement for this routine to complete properly.

When prompted to push button for pairing any button on the key fob must be pressed and released within the requested time.

1. Using the diagnostic scan tool, select the Radio Frequency (RF) Hub.
2. Select the “Miscellaneous Functions” tab.
3. Select and run the “Program Ignition FOBIKs” procedure and follow the screen prompts.

If the key fob fails to program or is inoperative (Refer to Non-DTC Diagnostics/Starting/Diagnosis and Testing).



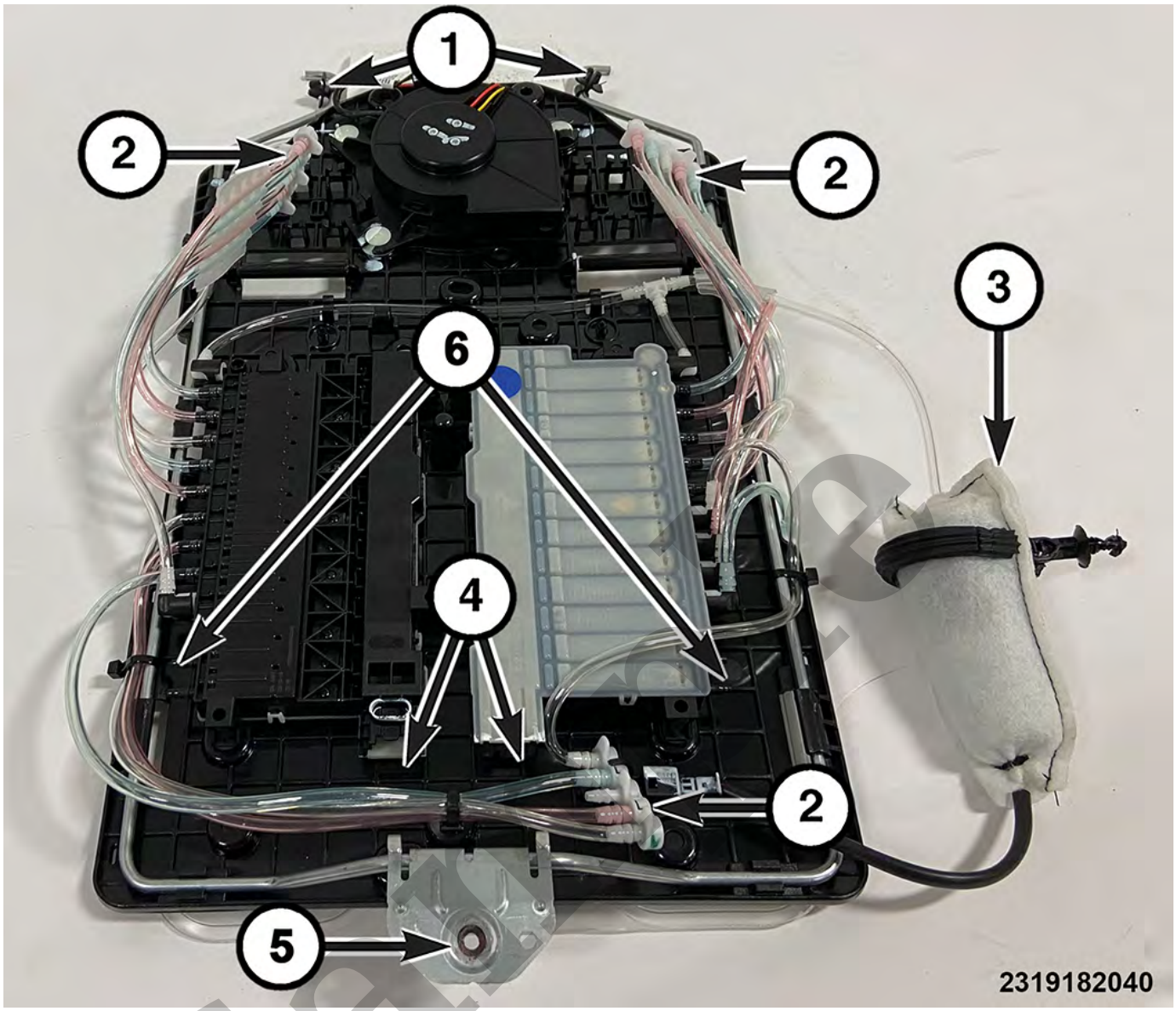
1 - Retainers
2 - Radio Frequency Hub (RF Hub)

3. Remove the retainers and remove the RFH from the vehicle.

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.

- Program the RF Hub (Refer to 08 - Electrical/8E - Electronic Control Modules/MODULE, Radio Frequency (RF Hub)/Module Programming).



1 - Upper Retainer	4 - Wire Harness Connectors
2 - Hose Connection	5 - Fastener
3 - Pump	6 - Hose Connection

5. Remove the wire harness connectors, and hose connections as equipped.
6. Remove the fastener and release pump from frame.
7. Release the upper retainers.
8. Remove the seat massage module assembly from the seat back.

INSTALLATION

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

networking functionality through the CAN-FD. The SGW module is a framed gateway, that also does provide a signal gateway as a dominant module on several CANs.

For additional information regarding the description and operation of the vehicle communication, (Refer to Electrical/8E - Electronic Control Modules/COMMUNICATION/Description and Operation).

For additional information regarding the SGW Diagnostic Trouble Code (DTC) information, (Refer to DTC-Based Diagnostics/MODULE, Security Gateway (SGW)/Diagnosis and Testing).

For additional information regarding the communication diagnostics of the SGW module, (Refer to Non-DTC Diagnostics/Communication/Diagnosis and Testing).

SYSTEM SIGNALS

SGW - Pass Through System Signals and Associated CAN Electronic Control Units (ECUs)

NOTE

The pass through system signals are dependent upon the associated CAN ECUs equipped in the vehicle and configuration.

SYSTEM SIGNALS	ASSOCIATED CAN ECUS
ACC Stop & Go with Enhanced Lane Centering Integration	BCM, BSM, CADM, DTCM, PCM, SGW, TCM
Adaptive Cruise Control with Stop & Go	BCM, BSM, CADM, DTCM, PCM, SGW, TCM
ADAS Cloud Management	CADM, GNMM, SGW, TBM,
ADAS Indication Management	CADM, IPC, SGW
ADAS Indication Management with Enhanced Lane Centering Support	BCM, CADM, IPC, SGW
Advanced Parking Assistance with Surround View Integration	ASBM, BCM, CVPAM, EPS, ETM, IPC, SGW
Antenna Information Management Radio	RADIO, SGW
Audio Output Management - Radio, Non-Amplified, Amplified, &	AMP, BCM, PCM, RADIO, SGW

Radio SDK Integration for CAN-B	BCM, IPC, RADIO, TBM, SGW
Ready to Drive Management_PHEV	AHCP, BCM, BPCM, HCP, IPC, PCM, SGW
Rear Seat Entertainment System Radio & VRM	BCM, ICS, RADIO, SGW, VRM
Rear Seat Reminder Alert	BCM, IPC, SGW, TBM
Remote Control Management by RFHM	BCM, RFHM, SGW
Smart Alternator Management (LIN)	BCM, PCM, SGW
Starter Relay Management	BCM, PCM, SGW
Surround View Camera Management Radio	BCM, CVPAM, RADIO, SGW
Tire Pressure Monitoring System	BCM, IPC, RADIO, RFHM, SGW
Traffic Sign Information Management	BCM, CADM, IPC, SGW
Trip Computer	IPC, RADIO, RADIO, SGW
Vehicle Controls Management Radio	RADIO SGW
Vehicle Setup Management	BCM, IPC, RADIO, SGW
Video Parking Assistance Radio	RADIO, SGW
Voice Request Management Time and Date Repetition Radio	BCM, RADIO, SGW

DESCRIPTION	SPECIFICATION	COMMENT
PCM Ground Wire	**7 N·m (62 In. Lbs.)**	–
PCM Ground Wire Nut	**20 N·m (15 Ft. Lbs.)**	–
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Refer To List:

List 1

- 24 - Heating and Air Conditioning / Distribution, Front / OUTLET, Air / Removal and Installation
- 24 - Heating and Air Conditioning / Distribution, Rear / OUTLET, Air / Removal and Installation