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2019 Chevrolet Volt Service and Repair Manual

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Replace control valve solenoid body

- **NOTE**

  Note

  Select “Replace Solenoid” at the MCVM Characterization selection screen.

  Replace solenoid (currently not an available Service Procedure)

- **NOTE**

  Note

  Select “Refresh Characterization Data” at the MCVM Characterization selection screen.

  Replace TCM

To perform solenoid characterization after a transmission component replacement:

1. Document the new Transmission Unique Number (TUN) or Part Unique Number (PUN) as required.
   - The TUN location may be found here: Transmission Identification Information. Since the TUN can be difficult to access when the transmission is installed in the vehicle, ensure you document the 16-digit TUN prior to installing the transmission in the vehicle.
   - The PUN location may be found here: Control Valve Solenoid Body Identification Information. Before installing the control valve solenoid body onto the transmission, document the 16-digit PUN. If the control valve solenoid body PUN has not been saved for reference, it may be necessary to disassemble the control valve solenoid body from the transmission to clearly read the control valve solenoid body PUN.
2. Log into TIS2Web/SPS.
3. Type the vehicle identification number (VIN).
4. Perform the SPS Transmission Control Module programming event.
   - Select “Transmission Control Module - Programming” to update TCM calibrations and Solenoid Characterization data.

     OR

   - Select “Transmission Control Module - MCVM Operations” to update Solenoid Characterization data only.

Parameter	System State	Expected Value	Description
Command			displays On when the Fuel Pressure Regulator 2 High Control Circuit is Commanded ON by the engine control module.
Fuel Pressure Regulator 2 High Control Circuit High Voltage Test Status	—	OK	This parameter displays the state of the Fuel Pressure Regulator 2 High Control Circuit. The parameter displays Malfunction if the Fuel Pressure Regulator 2 High Control Circuit is shorted to voltage.
Fuel Pressure Regulator 2 High Control Circuit Low Voltage Test Status	—	OK	This parameter displays the state of the Fuel Pressure Regulator 2 High Control Circuit. The parameter displays Malfunction if the Fuel Pressure Regulator 2 High Control Circuit is shorted to ground.
Fuel Pressure Regulator 2 High Control Driver Overtemperature	—	No	This parameter displays the state of the Fuel Pressure Regulator 2 High Control Driver circuit. The parameter displays Yes if the Fuel Pressure Regulator 2 High Control Driver Overtemperature is detected.
Fuel Pressure Sensor	Engine Idling	kPa/PSI	For Port Fuel Injected (PFI) systems, this Parameter displays fuel rail pressure at the engine. For high pressure fuel systems, this Parameter indicates the low side fuel pressure before the high pressure pump.
Fuel Pressure Sensor	Ignition ON	Volts	This parameter displays the fuel supply pressure sensor analog input as a percentage of its reference voltage.
Fuel Pump 2 Relay Command	Ignition ON	On / Off	This parameter contains several signals associated with the status of the fuel system
Fuel Pump 2 Relay Command	Ignition ON	On / Off	This parameter contains the commanded state of the secondary fuel pump output along with the status of its associated short to ground, open circuit, and short to power tests
Fuel Pump 2 Relay Control Circuit High Voltage Test Status	Ignition ON	OK, Malfunction, Not Run	This parameter contains the commanded state of the secondary fuel pump output along with the status of its associated short to ground, open circuit, and short to power tests
Fuel Pump 2 Relay Control Circuit Low Voltage Test Status	Ignition ON	OK, Malfunction, Not Run	This parameter contains the commanded state of the secondary fuel pump output along with the status of its

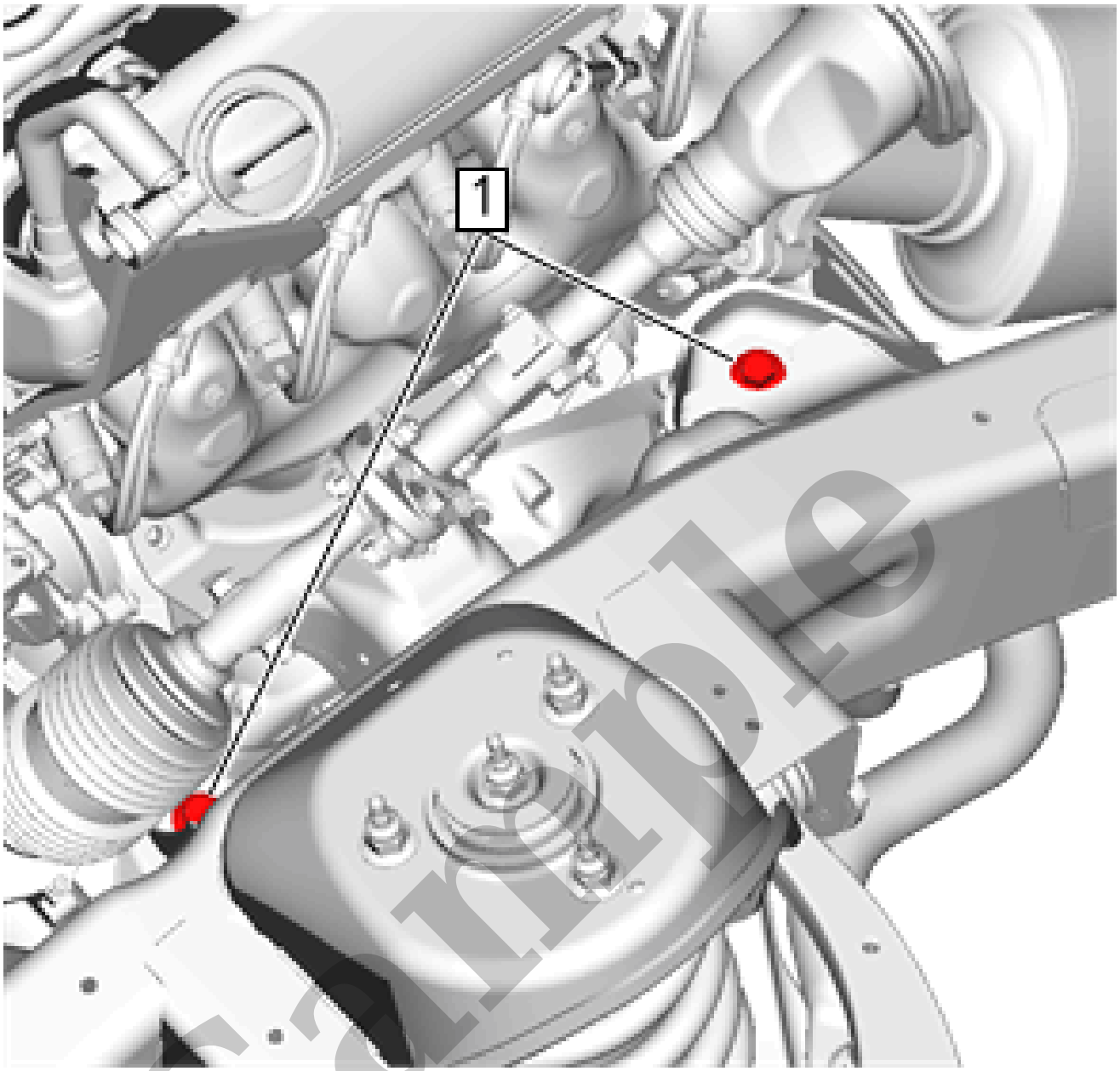
YOUR CURRENT VEHICLE

K83 Park Brake Control Module: Scan Tool Information

K83 Park Brake Control Module: Scan Tool Information

Parking Brake Control Module Scan Tool Data Parameters

Parameter	Expected Value	Description
Operating Conditions: Ignition ON, Parking Brake Off		
Battery Voltage	Varies	This displays the battery voltage (V).
Calculated System Temperature	Varies	The scan tool displays the parking brake control module temperature in degrees Celsius.
Electric Park Brake Calibration Test Status	Passed	The scan tool displays Passed or Failed. This parameter displays if the park brake calibration is properly programmed into the parking brake control module.
Park Brake Cable Position	Varies	The scan tool displays the current park brake position in counts. When the park brake is fully released the value will be 0 counts which will allow cable disassembly. The park brake cable position counts will display in range of 0-700 counts when released and 701-1300 counts when applied.
Park Brake Motor Command	Off	The scan tool displays On or Off. This parameter displays the status of the park brake motor.
Park Brake Motor Duty	Varies	The scan tool displays the pulse width modulated cycle as a percentage.

11. 

NOTE

Note

Some components not shown for graphic clarity.

Remove the front differential bracket upper bolts (1).

YOUR CURRENT VEHICLE

Universal Joint Replacement - Nylon Injected Ring

Universal Joint Replacement - Nylon Injected Ring

Special Tools

- **J-9522-3** ***U Joint Bearing Separator***
- **J-9522-5** ***U Joint Bearing Spacer Remover***

Disassembly Procedure

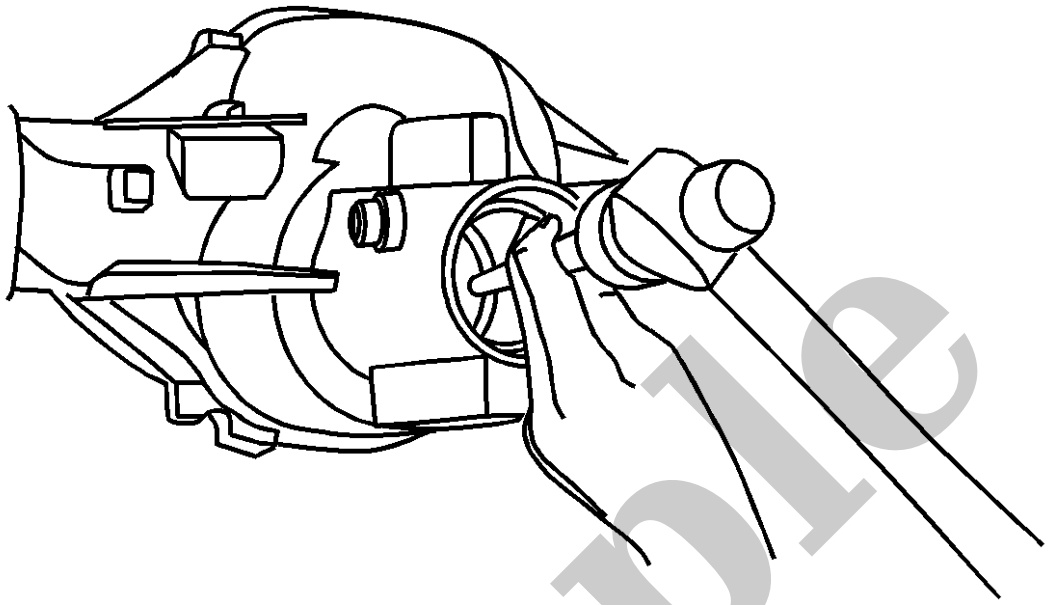
1. **CAUTION**

   Caution

   Never clamp propeller shaft tubing in a vise. Clamping propeller shaft tubing in a vise could dent or deform the tube causing an imbalance or unsafe condition. Always clamp on one of the yokes and support the shaft horizontally. Avoid damaging the slip yoke sealing surface. Nicks may damage the bushing or cut the lip seal.

   Support the propeller shaft in a line horizontal with the table of a press.

2. Mark the propeller shaft as to which end is the transmission end and which end goes to the rear axle.



7.

NOTE

Note

Move the drift back and forth between one side of the cup and the other in order to work the cups out of the housing evenly.

Using a hammer and a brass drift in the slots provided, remove the inner pinion bearing cup from the axle housing.

Assemble Procedure

Repair Instructions

Perform the Diagnostic Repair Verification after completing the repair.

- Audio Player and USB and Auxiliary In and Memory Card Receptacle Replacement
- Audio Player and USB Receptacle Replacement
- Control Module References for radio or human machine interface control module replacement, programming, and setup.

- Refer to the Owners Manual and/or the Navigation System Owners Manual for voice recognition use and commands.
- When the system recognizes the command the system will either perform the function or ask to confirm the choice by clearly saying “yes” or “no”.
- If experiencing difficulty with the system recognizing a command, confirm that the command is correct.
- Background noise such as a climate control fan positioned on high, open windows, or very loud outside noises, can cause voice commands to be misunderstood.

Reference Information

Schematic Reference

Radio/Navigation System Schematics

Connector End View Reference

Master Electrical Component List

Description and Operation

Radio/Audio System Description and Operation

Electrical Information Reference

- Circuit Testing
- Connector Repairs
- Testing for Intermittent Conditions and Poor Connections
- Wiring Repairs

Scan Tool Reference

Control Module References for scan tool information

Circuit/System Verification

1. Verify the OnStar ® voice recognition system is operating normally.
    - **If the OnStar ® voice recognition system is not operating normally.**

      Refer to OnStar Voice Recognition Malfunction.
    - **If the OnStar ® voice recognition system is operating normally.**
2. Ignition On/Vehicle in Service Mode. Infotainment system ON.