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2019 Chevrolet Traverse - AWD 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:

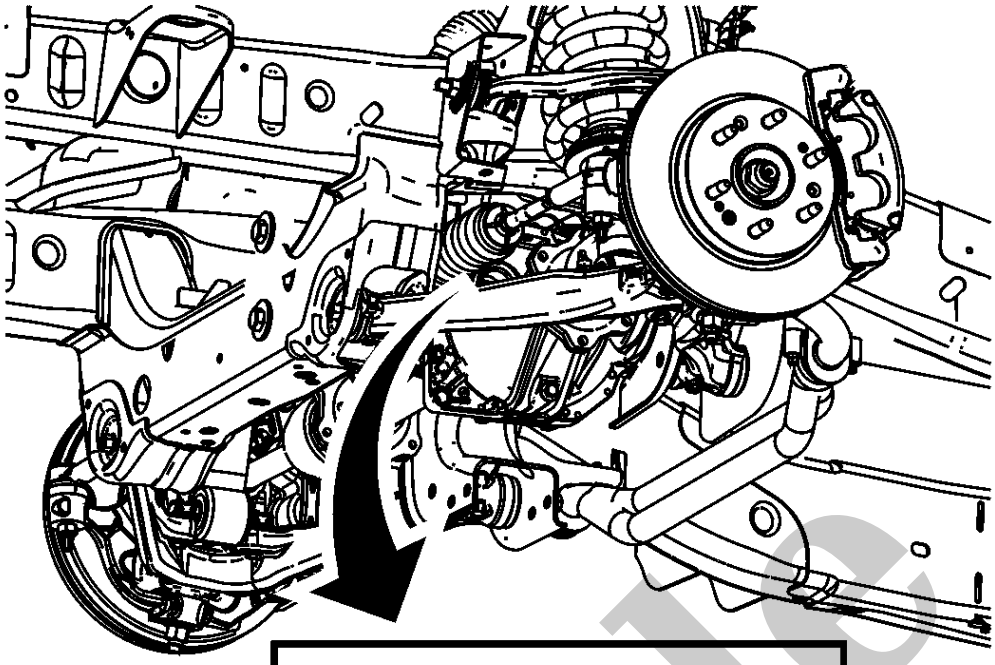
1. Document the new Transmission Unique Number (TUN). The TUN location may be found here: Transmission Identification Information. Since the TUN can be difficult to access when the transmission is installed in the vehicle, ensure you document the 16-digit TUN prior to installing the transmission in the vehicle.
2. Use a generically available QR Code/data matrix scanner to obtain the Part Unique Number (PUN). The PUN location may be found here: Control Valve Solenoid Body Identification Information. Before installing the control valve solenoid body onto the transmission, scan the data matrix.
3. Log into TIS2Web/SPS.
4. Type the vehicle identification number (VIN).
5. Perform the SPS Transmission Control Module programming event.
   - Select “Transmission Control Module - Programming” to update TCM calibrations and Solenoid Characterization data.

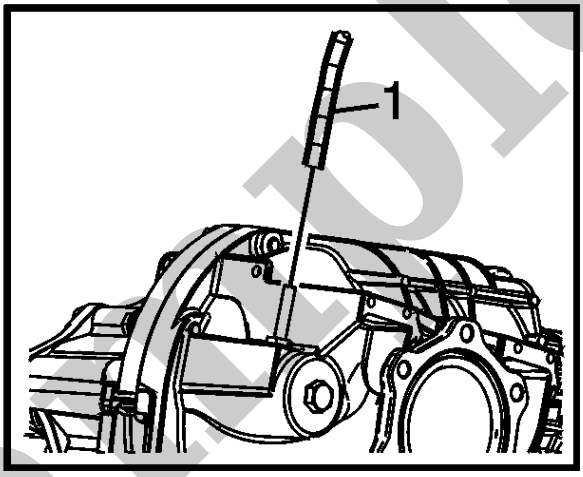
     OR

   - Select “Transmission Control Module - MCVM Operations” to update Solenoid Characterization data only.
6. From the “MCVM (Mechanical Characterization and Virtual Matching) Operation Selection” screen, select the applicable service procedure to be performed. You will be prompted to provide the necessary Transmission Unique Number (TUN) when replacing a transmission part.

Parameter	System State	Expected Value	Description
		Malfunction Warning Service Bay Test Warm Up Combustion Mode, Reductant System Malfunction Warning Service Bay Test Combustion Mode, SOx Purge Combustion Mode, Emissions Combustion Mode, Fast Exhaust System Warm-Up, Exhaust System Warm-Up	
Fuel Level Sensor	—	Volts	This parameter displays the voltage from the sensor used to monitor the fuel level inside the fuel tank.
Fuel Level Sensor Rear Tank	—	Volts	This parameter contains the unfiltered fuel level sensor analog input for the secondary fuel tank as a percentage of its reference voltage.
Fuel Pressure Sensor	—	kPa (PSI)	For Port Fuel Injected (PFI) systems, this parameter displays undefaulted fuel rail pressure at the engine. For high pressure fuel systems, this parameter indicates the undefaulted low side fuel pressure before the high pressure pump.
Fuel Pressure Sensor	—	Volts	This parameter contains the fuel supply pressure sensor analog input as a percentage of its reference voltage.
Fuel Pressure Regulator 1 Command	—	%	This parameter displays the Fuel Pressure Regulator 1 duty cycle as commanded by the engine control module.
Fuel Pressure Regulator 1 Control Circuit	—	On/Off	This parameter displays the current command of the fuel pressure regulator 1.

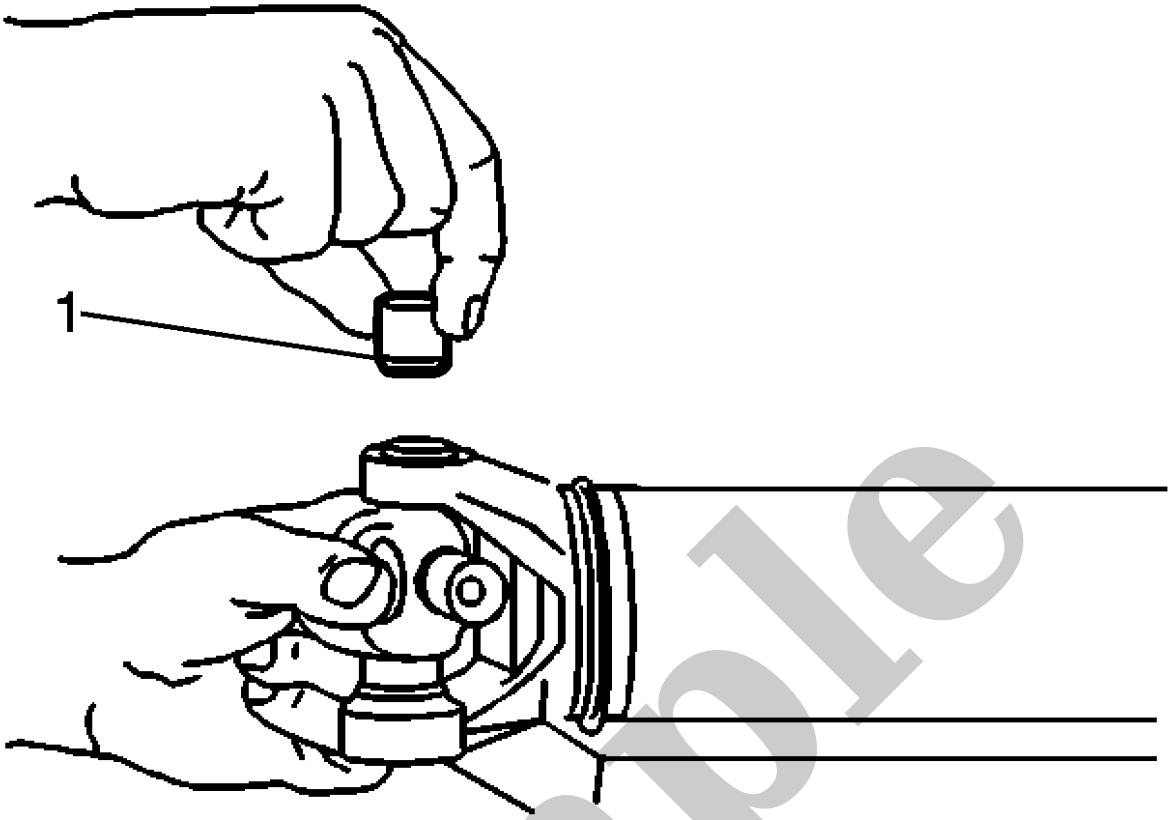
Parameter	Expected Value	Definition
Bluetooth Device Supports Internet Access - Dial-Up/Personal Area Network	Varies	The scan tool displays Yes or No. Indicates if the currently connected Bluetooth device supports internet access though the device's dial-up or personal area network.
Bluetooth Device Class - Phone	Varies	The scan tool displays Yes or No. Indicates if the currently connected Bluetooth device class is identified as a phone.
Bluetooth Device Class - Audio/Video	Varies	The scan tool displays Yes or No. Indicates if the currently connected Bluetooth device class is identified as an audio and/or video device.
Bluetooth Device Class - Computer	Varies	The scan tool displays Yes or No. Indicates if the currently connected Bluetooth device class is identified as a computing device.
Bluetooth Device Class - LAN or Network Access Point	Varies	The scan tool displays Yes or No. Indicates if the currently connected Bluetooth device class is identified as a Local Area Network (LAN) or Network Access Point (NAP) device.
WLAN Link Quality	Counts	The scan tool displays the connection quality in counts, with higher numbers indicating a better connection.
App 1 Identifier	Varies	The scan tool displays the numeric identifier for the installed internet application number 1
App 1 Version	Varies	The scan tool displays the version number for the installed internet application number 1
App 2 Identifier	Varies	The scan tool displays the numeric identifier for the installed internet application number 2
App 2 Version	Varies	The scan tool displays the version number for the installed internet application number 2
App 3 Identifier	Varies	The scan tool displays the numeric identifier for the installed internet application number 3





6.

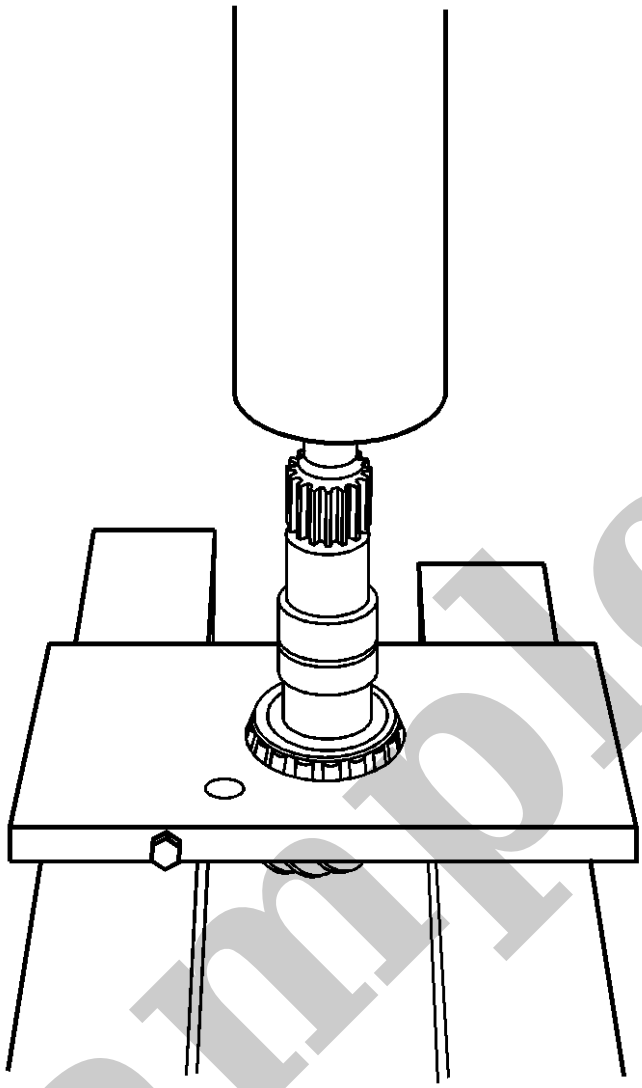
Remove the differential carrier vent hose (1).



4. With the trunnion seated in the bearing cup, press the bearing cup into the yoke until the bearing cup is flush with the yoke ear.
5. Install the opposite bearing cup part way into the yoke ear.
6. Ensure that the trunnions start straight and true into both bearing cups.
7. Press the opposite bearing cup into the yoke ear while working the cross all the time in order to inspect for free unbinding movement of the trunnions in the bearing cups.
8. **NOTE**

   Note

   If there seems to be a hang up or binding, stop pressing. Inspect the needle bearings for misalignment in the bearing cup.



4. Using the **DT-47688** ***remover*** or **DT-49275** ***remover*** and a press, remove the bearing from the drive pinion.

13. Replace the vehicle USB cable between the K74 Human Machine Interface Control Module and the X83 Auxiliary Audio Input Adapter.

Front Console USB Ports

1. Ignition OFF, disconnect the X1 harness connector at the X92 USB Receptacle.
2. Test for less than 10 Ω between the ground circuit terminal 4 and ground.
    - **If 10 Ω or greater**
        1. Ignition OFF.
        2. Test for less than 2 Ω in the ground circuit end to end.
            - If 2 Ω or greater, repair the open/high resistance in the circuit.
            - If less than 2 Ω, repair the open/high resistance in the ground connection.
    - **If less than 10 Ω**
3. Verify that a test lamp illuminates between the B+ circuit terminal 6 and ground.
    - **If the test lamp does not illuminate**
        1. Ignition OFF, remove the test lamp.
        2. Test for less than 2 Ω in the B+ circuit end to end.
            - If 2 Ω or greater, repair the open/high resistance in the circuit.
    - **If the test lamp illuminates**
4. Verify the USB cable is properly connected at all components and in-line connections, and there is no damage to the cable or connections.
    - **If connection problems or cable damage is noted.**

      Perform the appropriate repair or replacement to correct any issues.
    - **If no connection problems or cable damage is noted.**
5. Connect the X1 harness connector at the X92 USB Receptacle.
6. Disconnect the vehicle USB cable X4 harness connector at the K74 Human Machine Interface Control Module and the X2 harness connector at the X92 USB Receptacle.
7. Connect the EL-50034–14 Infotainment Test Cable and the EL-50334–2 Type-A Female to Mini-B Male Cable together. Connect the assembled test cable to the K74 Human Machine Interface Control Module and the X92 USB Receptacle.

1. Verify no DTCs are present.
    - **If any DTCs are present**

      Refer to Diagnostic Trouble Code (DTC) List - Vehicle.
    - **If no DTCs are present**
2. Turn ON the wireless headphones.
3. Verify the power indicator lamp on all wireless headphone illuminates.
    - **If the power indicator lamp does not illuminate on all wireless headphones.**

      Replace the inoperative headphone.
    - **If the power indicator lamp illuminates on all wireless headphones.**
4. Ignition ON, rear seat entertainment system ON. Using the remote control, select an audio source for channel 1.
5. Verify that audio is heard from channel 1 on each headphone, using the headphone controls to select channel 1.
    - **If audio is heard from some, but not all, headphones.**

      Replace the inoperative headphone.
    - **If audio is not heard from any headphones, or the audio heard is not clear.**

    1. Replace the P22A Video Display– 2nd Row.
    2. Ignition ON, rear seat entertainment system ON. Using the remote control, select an audio source for channel 1.
    3. Verify that audio is heard from channel 1 on each headphone, using the headphone controls to select channel 1.
        - If audio is heard from some, but not all, headphones, replace the inoperative headphone.
        - If audio is not heard from any headphones, or the audio heard is not clear, replace the A33 Media Disc Player.
        - If audio is heard from all headphones.
    4. All OK.
    - **If audio is heard from all headphones.**
6. Using the remote control, select an audio source for channel 2.