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2019 Chevrolet Silverado 1500 - 4WD Service and Repair Manual

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EL-52545 ***Tire Pressure Monitor Sensor and RF Diagnostic Tool***

For equivalent regional tools, refer to Special Tools.

Replace and Program Control Module

NOTE

Note

A minimum of two valid keys (or keys with integrated transmitters) have to be present before proceeding with the following steps.

To program a replacement K9 Body Control Module (BCM), perform the following procedure:

1. **NOTE**

   Note

   Make sure the vehicle ignition switch state is in appropriate position for the following step.

   - For Key Ignition System, begin with the ignition in the RUN position.
   - For Push Button Start System, begin with the vehicle in vehicle OFF power mode. The Service Programming System will power mode the vehicle.

   Access the Service Programming System (SPS) and follow the on-screen instructions.

2. On the SPS Supported Controllers screen, select K9 Body Control Module - Programming and follow the on-screen instructions.

3. Perform the following for the appropriate ignition type prior to proceeding with the next step:

   - Key Ignition System: Key in the ignition and any additional keys must be away from the vehicle at least 3 m.
   - Push Button Start System: Keyless entry transmitter must be in the programming pocket. Refer to the Remote Keyless Entry (RKE) System Operation document in the owner manual for the exact pocket location. All additional transmitters must be away from the vehicle at least 3 m.

4. **NOTE**

   Note

Parameter	System State	Expected Value	Description
			coolant temperature is high, the scan tool will display a high temperature.
EGR/Camshaft Position Monitor Complete	—	Yes/No	This parameter displays the status of the EGR/Camshaft Position Monitor. The parameter will display Yes when the EGR/Camshaft Position Monitor is complete.
EGR/Camshaft Position Monitor Complete This Ignition Cycle	—	Yes/No	This parameter displays the status of the EGR/Camshaft Position Monitor for this Ignition Cycle. The parameter will display Yes when the EGR/Camshaft Position Monitor is complete this Ignition Cycle.
EGR/Camshaft Position Monitor Enabled	—	Yes/No	This parameter displays the status of the EGR/Camshaft Position Monitor. The parameter will display Yes when the EGR/Camshaft Position Monitor is Enabled.
EGR/Camshaft Position Monitor Enabled This Ignition Cycle	—	Yes/No	This parameter displays the status of the EGR/Camshaft Position Monitor for this Ignition Cycle. The parameter will display Yes when the EGR/Camshaft Position Monitor is Enabled this Ignition Cycle.
EGR Command	—	%	This parameter displays the commanded duty cycle for the exhaust gas recirculation (EGR) output.
EGR Control Circuit 1 High Voltage Status	—	OK	This parameter displays the state of the EGR Control circuit 1. The parameter displays Malfunction if the EGR Control circuit 1 is shorted to voltage.
EGR Control Circuit 1 Low Voltage Status	—	OK	This parameter displays the state of the EGR Control circuit 1. The parameter displays Malfunction if the EGR Control circuit 1 is shorted to ground.
EGR Control Circuit 2 High Voltage Status	—	OK	This parameter displays the state of the EGR Control circuit 2. The parameter displays Malfunction if the EGR Control circuit 2 is shorted to voltage.
EGR Control Circuit 2 Low Voltage Status	—	OK	This parameter displays the state of the EGR Control circuit 2. The parameter displays Malfunction if the EGR Control circuit 2 is shorted to ground.
EGR Control Circuit Open Test Status	—	OK	This parameter displays the state of the EGR Control circuit. The parameter displays Malfunction if the EGR Control circuit

Parameter	Ignition=On—Cold	Ignition On - Engine Running—Operating temperature	48 km/h (30 MPH)	80 km/h (50 MPH)	Display Units
Circuit Low Voltage Test Status					
Transmission Control Solenoid Valve 1-9 Control Circuit Open Test Status	Not Run	OK	OK	OK	Not Run/OK/Malfunction
Transmission Fluid Temperature	21 °C (70 °F)	46 to 82 °C (115 to 180 °F)	46 to 82 °C (115 to 180 °F)	46 to 82 °C (115 to 180 °F)	°C (°F)
Transmission Hot Mode	No	No	Yes	Yes	No/Yes
Transmission Intermediate Speed Sensor	0 RPM	0 RPM	1025 RPM	1735 RPM	RPM
Transmission ISS	0 RPM	565 RPM	1025 RPM	1125 RPM	RPM
Transmission OSS	0 RPM	0 RPM	1025 RPM	1735 RPM	RPM
Up and Down Shift Switch 2	Inactive	Inactive	Inactive	Inactive	Inactive/Upshift/Downshift
Vehicle Speed Sensor	0 km/h (0 MPH)	0 km/h (0 MPH)	48 km/h (30 MPH)	80 km/h (50 MPH)	km/h (MPH)

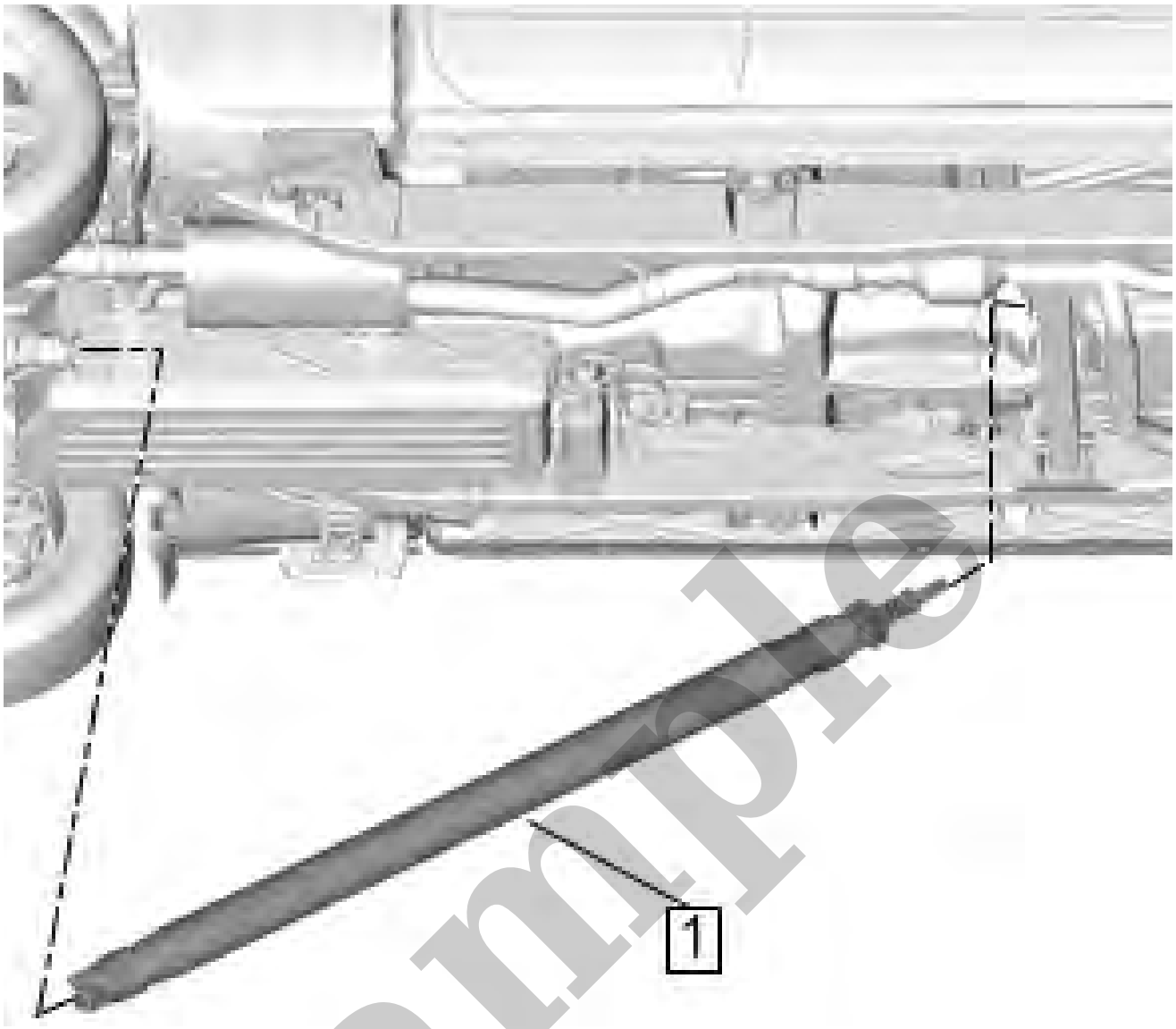
K71 Transmission Control ModuleScan Tool Control Function

Noisy When Coasting

Noisy When Coasting

Noisy When Coasting

Checks	Action
DEFINITION: Noise is audible when slowing down and disappears when driving.	
Worn pinion and ring gear	Adjust or replace the pinion and the ring gear. Refer to Front Axle Disassemble.
Pinion and ring gear too tight	Adjust the pinion and the ring gear backlash. Refer to Backlash Inspection and Adjustment.



3.

Install the propeller shaft (1)

4. Align the reference marks made during removal.

Audio/Video Player Adapter - Audio or Video Malfunction

Audio/Video Player Adapter - Audio or Video Malfunction

Diagnostic Instructions

- Perform the Diagnostic System Check - Vehicle prior to using this diagnostic procedure.
- Review Strategy Based Diagnosis for an overview of the diagnostic approach.
- Diagnostic Procedure Instructions provides an overview of each diagnostic category.

Diagnostic Fault Information

Circuit	Short to Ground	Open/High Resistance	Short to Voltage	Signal Performance
B+	2	1	—	—
Rear Wired Headphone – Left Audio Signal	3	3	3	—
Rear Wired Headphone – Right Audio Signal	4	4	4	—
Rear Wired Headphone – Audio Common Signal	5	5	—	—
USB cable	1	B127A, U0196, 1	—	—
HDMI cable	6	U0196, 6	—	—
Ground	—	1	—	—

YOUR CURRENT VEHICLE

Video Entertainment System Wireless Headphone Malfunction

Video Entertainment System Wireless Headphone Malfunction (with DNU)

Diagnostic Instructions

- Perform the Diagnostic System Check - Vehicle prior to using this diagnostic procedure.
- Review Strategy Based Diagnosis for an overview of the diagnostic approach.
- Diagnostic Procedure Instructions provides an overview of each diagnostic category.

Circuit/System Description

The second row overhead display is located in the headliner. The display screen shows video from the media disc player, or an AUX input device. When equipped with RPO DNU, a 3rd row overhead display is added to the system.

The overhead displays receive power and ground from the vehicle harness. A discrete control circuit from the media disc player is used to control the power state of the displays. The displays receive all other video, audio, and control information via the LVDS cable.

The 2nd row display contains the infrared transmitters for the wireless headphones. During operation, the infrared transmitters may be visible as illuminated LEDs. The LEDs are not on visible on the 3rd row display. Both displays contain an infrared receiver for the remote control.

A power button on the headphone is used to turn the headphone on. A red LED illuminates when the headphone is turned ON. The headphones automatically turn OFF if they lose the infrared signal from the system for approximately 4 minutes in order to preserve their battery power. The signal may be lost if the system is turned off or if the headphones are out of range of the infrared signal transmitters.

Each set of headphones has a rotary volume control on one of the earpieces. to adjust the volume, adjust this control.

Audio to the wireless headphones is provided over 2 channels. Audio for channel 1 is from the source 2nd row display, audio for channel 2 is from the 3rd row display. This allows rear seat passengers to ut