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2019 Chevrolet Silverado 2500 3500 - 4WD Service and Repair Manual

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8. **NOTE**

   Note

   If the vehicle has keys with integrated transmitters, this step is not required because the integrated transmitters were already learned during the immobilizer learn process along with the keys.

   If the vehicle has keyless entry transmitters separated from the keys, refer to Remote Control Door Lock Transmitter Learn to re-learn all transmitters.

9. If ABS, Traction Control and/or Stabilitrak indicators are ON and DTC C0161 is set in the K17 Electronic Brake Control Module after performing K9 Body Control Module programming and setup, do the following:

   1. Disconnect the scan tool from the X84 Data Link Connector.
   2. Ignition/Vehicle OFF, all access doors closed, all vehicle systems OFF, and all keys at least 3 m (9.8 ft) away from the vehicle. It may take up to 10 min to power down.
   3. Ignition ON/Vehicle In Service Mode, verify DTC C0161 is in history. If not, repeat the above step to make sure the vehicle is in sleep mode.
   4. Use the scan tool to clear the DTCs.

Reprogram Control Module

NOTE

Note

If the vehicle has keyless entry transmitters separated from the keys, all transmitters have to be present before proceeding with the following steps.

To program an existing K9 Body Control Module, 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.

Parameter	System State	Expected Value	Description
EGR Cooler Bypass Valve Control Circuit Shorted Test Status	—	OK, Malfunction, Not Run	This parameter contains the control circuit status of the exhaust gas recirculation cooler bypass valve output
EGR Cooler Bypass Valve Control Driver Overcurrent	—	No	This parameter displays the state of the EGR Cooler Bypass Valve Control circuit. The parameter displays Yes if the EGR Cooler Bypass Valve Control Driver Overcurrent is detected.
EGR Cooler Bypass Valve Control Driver Overtemperature	—	No	This parameter displays the state of the EGR Cooler Bypass Valve Control circuit. The parameter displays Yes if Over Temperature is Detected and that the driver circuit has been shut OFF.
EGR Cooler Bypass Valve Control Driver Temperature Dependant Overcurrent	—	No	This parameter displays the state of the EGR Cooler Bypass Valve Control circuit. The parameter displays Yes if Temperature Dependent over Current Detected and that the driver circuit has been shut OFF.
EGR Cooler Bypass Valve Control Driver Undervoltage	—	No	This parameter displays the state of the EGR Cooler Bypass Valve Control circuit. The parameter displays Yes when the Under Voltage Detected indicates that the entire system voltage is low.
EGR Cooler Bypass Valve Learned Closed Position	—	OK, Malfunction, Not Run	This parameter contains the control circuit status of the exhaust gas recirculation cooler bypass valve output
EGR Cooler Bypass Valve Learned Open Position	—	OK, Malfunction, Not Run	This parameter contains the control circuit status of the exhaust gas recirculation cooler bypass valve output
EGR Cooler Bypass Valve Position	—	%	This parameter contains the actual exhaust gas recirculation (EGR) cooler bypass valve displacement determined by a position sensor (corrected based upon its learned minimum position).
EGR Cooler Bypass Valve Position Sensor	—	Volts	This parameter contains the Exhaust Gas Recirculation Cooler Bypass Valve position sensor analog input as a percentage of its reference voltage

YOUR CURRENT VEHICLE

K73 Telematics Communication Interface Control Module: Scan Tool Information

K73 Telematics Communication Interface Control Module: Scan Tool Information

Telematics Communication Interface Control Module Scan Tool Data Parameters

Parameter	System State	Expected Value	Description
Operating Conditions: Ignition ON			
GPS Data			
• Dead Reckoning Calibration Status	—	Calibrated or Not Calibrated	Indicates the dead reckoning calibration status.
• Position Calibration Method	—	Varies	Indicates the method used to determine current location. (0) GPS, (1) Wheel Speed Dead Reckoning only, (2) Combined Wheel Speed and GPS, (3) Gyro only, (4) Combined Gyro and GPS, (5) No Fix
• Month	—	MM	This displays the current month.
• Day	—	DD	This displays the current day of the month.
• Year	—	YY	This displays the current year.
• Hour	—	HH	This displays the GPS current hour (24 hour format – GMT).
• Minute	—	MM	This displays the GPS current minute.

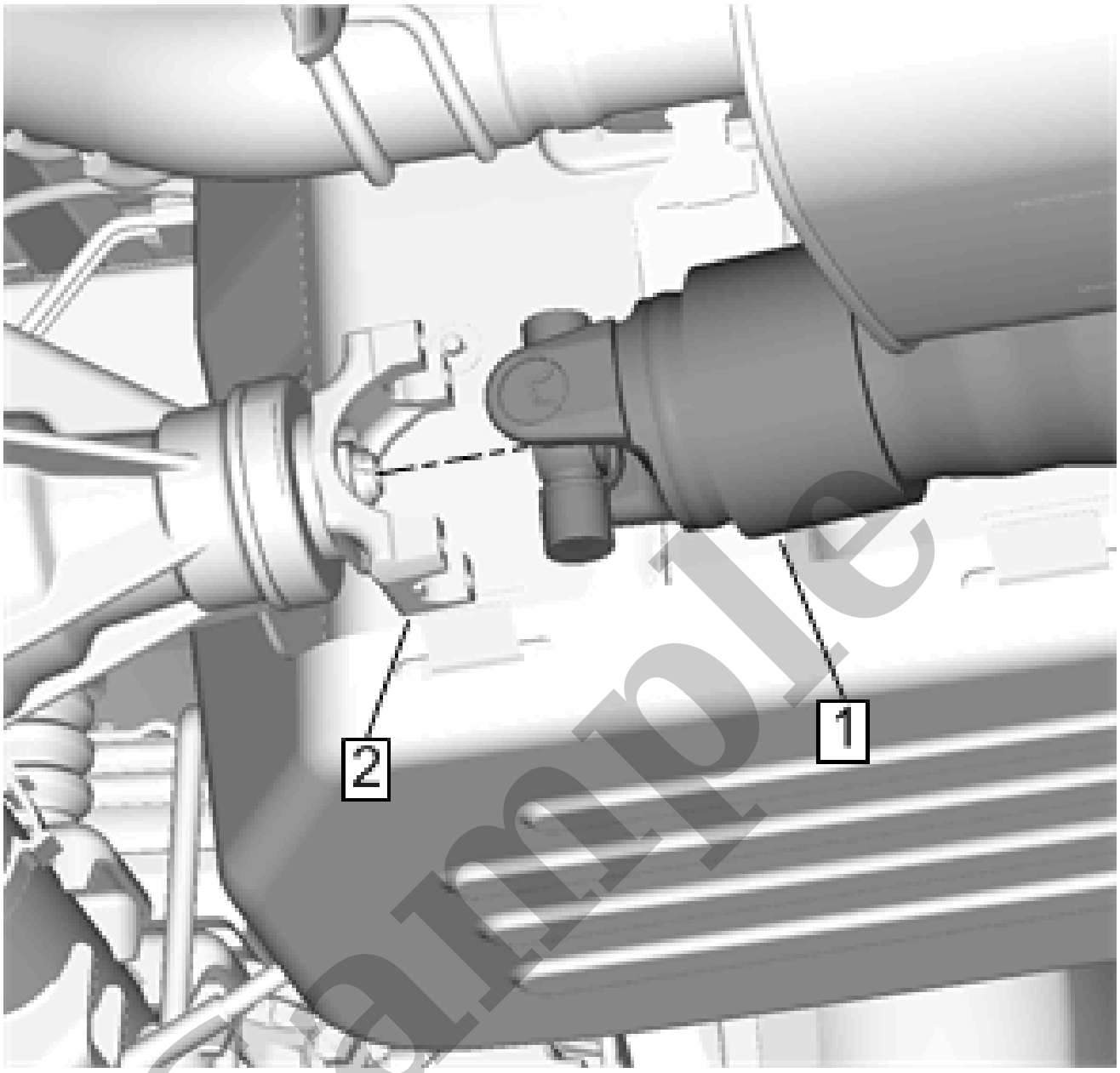
YOUR CURRENT VEHICLE

Axle Preload and Backlash Specifications

Axle Preload and Backlash Specifications

Axle Preload and Backlash Specifications

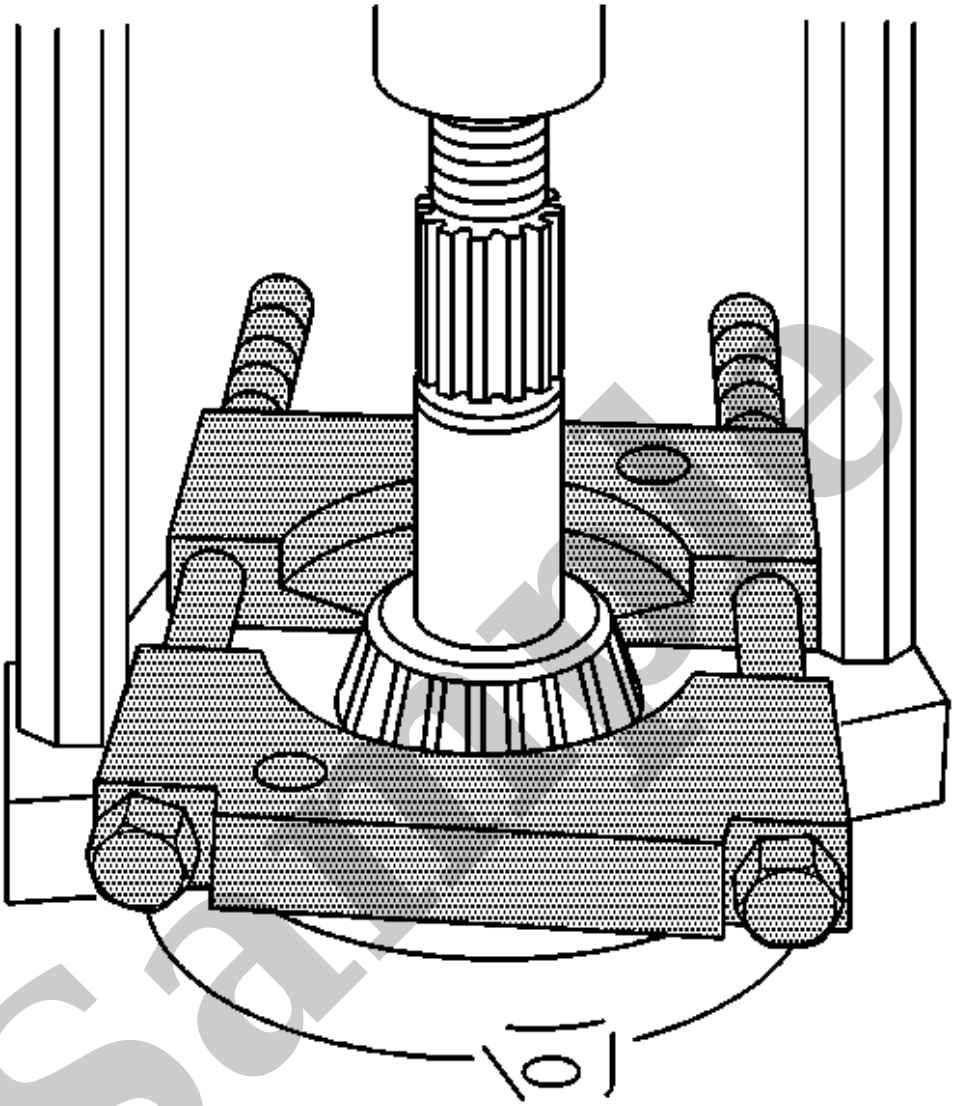
Application	Specification	
	Metric	English
Backlash	0.08–0.25 mm	0.003–0.010 in
Backlash (Preferred) (8.25 Axle)	0.13–0.18 mm	0.005–0.007 in
Pinion Bearing Preload, New Bearings	1.7–3.4 N·m	15–30 lb in
Pinion Bearing Preload, Used Bearings	1.0–2.3 N·m	10–20 lb in
Pinion and Differential Case Bearing Preload, New Bearings (8.25 Inch Axle)	2.3–4.5 N·m	20–40 lb in
Pinion and Differential Case Bearing Preload, Used Bearings (8.25 Inch Axle	1.6–3.4 N·m	14–30 lb in

6. 

Install the propeller shaft (1) to the rear axle pinion yoke (2).

2. Remove the differential assembly. Refer to Differential Replacement.

3. Remove the drive pinion from the axle. Refer to Drive Pinion and Ring Gear Replacement.



4. Using the **J 22912** ***remover*** and a press, remove the differential pinion bearing.

control.

Audio to the wired headphone jack is transmitted through the vehicle harness from the media disc player. A rotary control near the headphone jack is used to adjust the volume.

Diagnostic Aids

- Refer to the owners manual or supplements for information on operating the rear seat entertainment system, compatible media, and compatible devices.
- Verify the external audio or video device is operating normally before performing this diagnostic procedure.

Reference Information

Schematic Reference

Video System Schematics

Connector End View Reference

Master Electrical Component List

Description and Operation

Video Entertainment 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

Special Tools

EL-50334-20 Multi-Media Interface Tester (MIT)

Circuit/System Verification

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.

7. Verify that audio is heard from channel 2 on each headphone, using the headphone controls to select channel 2.

   - **If audio is heard from some, but not all, headphones.**

     Replace the inoperative headphone.