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2017 Chevrolet Silverado - 4WD Service and Repair Manual

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Note

This programming document applies to the B233 Radar Sensor Module – Short Range. For B218 Side Object Sensor Module (if equipped) refer to Side Object Sensor Programming and Setup.

Replace and Program Control Module or Reprogram Control Module

To program a replacement or an existing control module, perform the following procedure:

1. Access the Service Programming System (SPS) and follow the on-screen instructions.
2. On the SPS Supported Controllers screen, select B233LF Radar Sensor Module – Short Range Left Front - Programming and follow the on-screen instructions.
3. On the SPS Supported Controllers screen, select B233RLF Radar Sensor Module – Short Range Left Front - Setup and follow the on-screen instructions.
4. Clear DTCs.

Unsuccessful Programming Recovery

In the event of an interrupted or unsuccessful programming event, perform the following steps:

1. Ignition ON. Ensure the control module, DLC and programming tool connections are secure and the SPS software is up to date.
2. Verify the control module can be reprogrammed.
    - **If the control module cannot be reprogrammed**

    1. Ignition OFF for one minute, ignition ON.
    2. Verify the control module can be reprogrammed.
        - If the control module cannot be reprogrammed, replace the control module.
        - If the control module can be reprogrammed.
    3. All OK.

    - **If the control module can be reprogrammed**

3. All OK.

Repair Instructions

Parameter	System State	Expected Value	Description
Low Beam Decision Reason	—	Varies	The scan tool displays Tail Lights, On Coming Lights, Low Speed, City, Bright Scene, Fog, High Yaw, or Adverse weather
FCA Vehicle Type	—	Varies	The scan tool displays Unknown, Truck, Car, MotorBike, Bicycle, Pedestrian, or Undecided. This is the Forward Collision Alert type.
FCA Number of Vehicle Detected	—	Varies	The scan tool displays the number of vehicles detected between 0–255 depending on the number of vehicles detected.

NOTE

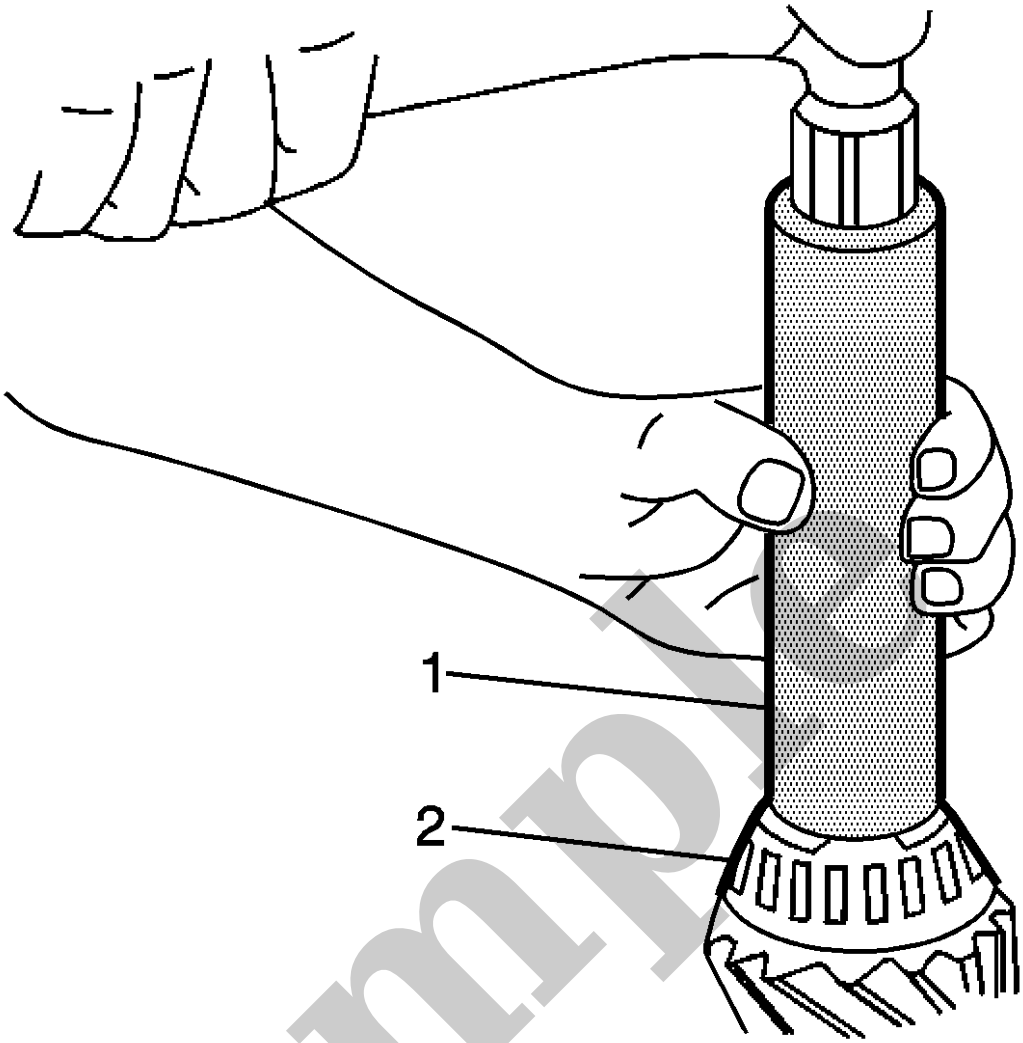
Note

Due to software and hardware variations, not all information may be applicable.

Front View Camera Module Scan Tool Output Controls

Output Control	Description
Clear Disable History Data	The frontview camera control module clears all disable history buffers when commanded from the scan tool.
Forward Collision Alert Switch	The frontview camera control module switches the forward collision alert system to Near, Medium or Far when commanded from the scan tool.
High Beams	The frontview camera control module switches the high beams On or Off when commanded from the scan tool.
Lane Departure Warning Indicator	The frontview camera control module switches the lane departure warning indicator On or Off when commanded from the scan tool.

Parameter	Expected Value	Definition
2nd Row Middle Seat Belt Reminder Sensor Pad Learn Status	Learned/Not Learned	The scan tool displays Learned or Not Learned. Learned is displayed if the rear middle seat belt reminder sensor pad has been learned by the SDM.
2nd Row Middle Seat Belt Status	Buckled/Unbuckled	The scan tool displays Buckled or Unbuckled. This is the state of the middle rear seat belt switch when the seat belt is buckled or unbuckled.
2nd Row Middle Seat Belt Reminder Sensor Pad Enable Status	Disabled/Enabled	The scan tool displays if the rear right seat belt reminder sensor pad is enabled to the SDM.
2nd Row Middle Seat Belt Reminder Sensor Pad Learn Status	Learned/Not Learned	The scan tool displays Learned or Not Learned. Learned is displayed if the rear right seat belt reminder sensor pad has been learned by the SDM.
2nd Row Right Seat Belt Status	Buckled/Unbuckled	The scan tool displays Buckled or Unbuckled. This is the state of the right rear seat belt switch when the seat belt is buckled or unbuckled.
Air Bag Malfunction Indicator	On/Off/Flashes	The scan tool will display On or Flashes if there is a problem with the SIR system. Any problems within the SIR system will illuminate the air bag indicator. The indicator will either flash or stay on.
Base Model Part Number	Varies, 8 Digit Number	The scan tool displays the part number of the SDM which is stored in non volatile memory.
Calibration Part Number	Varies, 8 Digit Number	The scan tool displays the part number of the calibration file in the SDM.
Deployment Loop 1-18 Enable Status	Enabled/Disabled	The scan tool displays Enabled or Disabled. This is the status of the air bag or pretensioner.
Deployment Loop 1-18 Learn Status	Learned/Not Learned	The scan tool displays Learned or Not learned. Learned is displayed if the SDM has defined the



3. Using the **J-35512** ***inner pinion bearing installer*** , install the inner pinion bearing onto the pinion gear.
4. Install the new collapsible spacer onto the pinion gear.
5. Lubricate the inner and the outer pinion bearings with axle lubricant. Use the proper fluid. Refer to Fluid and Lubricant Recommendations.
6. Install the outer pinion bearing into the differential carrier case half.

YOUR CURRENT VEHICLE

Front Drive Axle Inner Shaft Seal Replacement - Right Side

Front Drive Axle Inner Shaft Seal Replacement - Right Side (8.25 Inch Axle)

Special Tools

- **GE-8092** ***Driver Handle***
- **DT-45225** ***Seal Installer***

Equivalent regional tools: Special Tools

Removal Procedure

1. Raise and support the vehicle. Lifting and Jacking the Vehicle
2. Front Drive Axle Inner Shaft »Remove— Front Drive Axle Inner Shaft Replacement

YOUR CURRENT VEHICLE

Symptoms - Rear Drive Axle

Symptoms - Rear Drive Axle

Review the system and operation in order to familiarize yourself with the system functions. Refer to Rear Drive Axle Description and Operation.

Rear Axle Noise

The proper diagnosis is an important part of rear axle repair. In axle work, one of the most difficult conditions to diagnose is noise. Locating a broken axle shaft or broken differential gear presents little or no problems, but locating and isolating axle noise can be an entirely different matter.

Any gear driven unit, especially an automotive drive axle where the engine torque multiplication occurs at a 90 degree turn in the driveline, produces a certain amount of noise. Therefore, an interpretation must be made for each vehicle in order to determine where the noise is normal or if a problem actually exists. A certain amount of noise must be expected and cannot be eliminated by conventional repairs or adjustment.

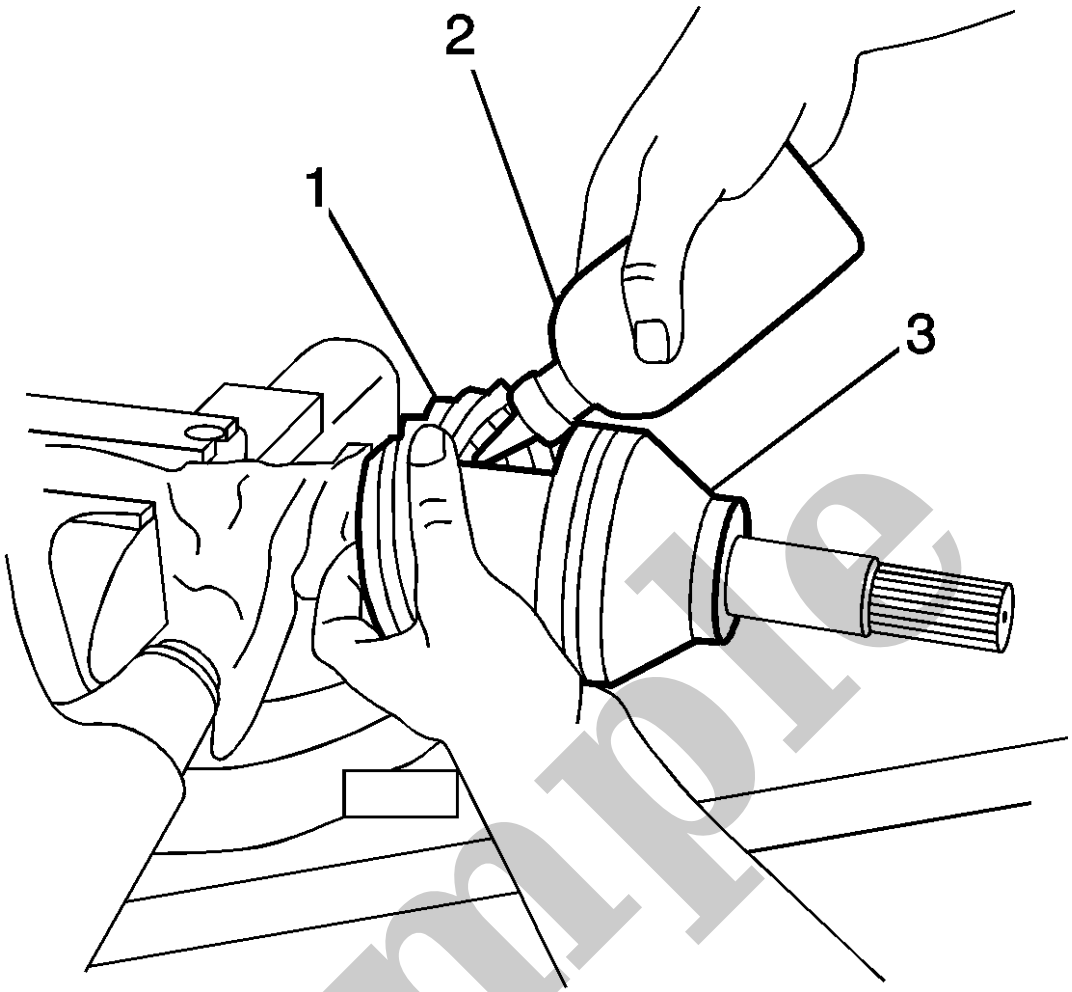
Normal axle noise can be described as a slight noise heard only at a certain speed or under unusual or remote conditions. For example, the noise tends to reach a peak at speeds from 60–100 km/h (40–60 mph) depending on road and load conditions, or on gear ratio and tire size. This slight noise is in no way indicative of trouble in the axle assembly.

Driveline noises may confuse even the best technician. Vehicle noises coming from tires, transmission, propeller shaft, universal joints, and front or rear wheel bearings are often mistaken for axle noise.

Visual/Physical Inspection

- Inspect the system for loose or missing fasteners.
- Inspect the system for leaking components.
- Inspect the system for obvious damage or conditions which may cause the symptom.

Symptom List



7.

Place approximately half of the lubricant (2) in the boot (1) and the remaining half in the tripot housing (3).

3. Test or replace the P19 Speaker.

Repair Instructions

Perform the Diagnostic Repair Verification after completing the repair.

- Speaker Replacement Reference
- Control Module References for audio amplifier replacement, programming, and setup.