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2021 Chevrolet Suburban - 4WD Service and Repair Manual

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DTC	Diagnostic Procedure
B1093	Cellular, Entertainment, and Navigation - DTC B1025-B1135
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B1097	Cellular, Entertainment, and Navigation - DTC B1025-B1135
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B109B	Cellular, Entertainment, and Navigation - DTC B1025-B1135
B109C	Cellular, Entertainment, and Navigation - DTC B1025-B1135
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B10A0	Cellular, Entertainment, and Navigation - DTC B1025-B1135
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B10A4	Cellular, Entertainment, and Navigation - DTC B1025-B1135
B10A5	Cellular, Entertainment, and Navigation - DTC B1025-B1135
B10A6	Cellular, Entertainment, and Navigation - DTC B1025-B1135

Parameter	System State	Expected Value	Description
			continuous legislated emission related monitor and non-continuous legislated emission related monitor.
Fuel System Monitor Enabled This Ignition Cycle	—	Yes/No	This parameter displays the enable and completion status during the current driving / monitoring cycle of each continuous legislated emission related monitor and non-continuous legislated emission related monitor.
Fuel Tank Pressure Sensor	—	1.5 Volts	This parameter displays the voltage signal sent to the control module from the sensor used to monitor the pressure inside the fuel tank. The scan tool will display a low voltage when the pressure in the fuel tank is high. The scan tool will display a high voltage when the pressure in the fuel tank is low or in a vacuum.
Fuel Tank Pressure Sensor	—	0 inches H2O (0 mm Hg)	This parameter displays the fuel tank pressure as calculated based on a signal sent to the control module from the fuel tank pressure (FTP) sensor. The scan tool will display a low value when the pressure in the fuel tank is low or a vacuum. The scan tool will display a high value when the pressure in the fuel tank is high.
Fuel Tank Rated Capacity	—	Varies	This parameter displays the rated maximum quantity of fuel the fuel tank will hold. This is calibrated in the control module to match the vehicle. See Owner's Manual-Capacities and Specifications.
Fuel Trim Cylinder Balance Test Bank 1 or 2	—	Active/Inactive	This parameter displays the current state of the AFIM. A value of “Active” indicates that the monitor is currently performing an evaluation of the specified bank. A value of “Inactive” indicates that the monitor is NOT currently performing an evaluation of the specified bank.
Fuel Trim Cylinder Balance Test Counter Bank 1 or 2	—	Counts	This parameter displays the number of Air Fuel Imbalance Monitor tests that have been performed since a code clear or NVM reset for bank 1 or 2.
Fuel Trim Learn	—	Enabled	This parameter indicates if the control module is adjusting long term fuel trim in response to the short term fuel trim. The scan tool displays Enabled or Disabled. When conditions are appropriate for enabling long term fuel trim corrections, the scan tool displays Enabled.
Fuel Trim Memory Cell	—	#	This parameter displays the index of the entry within the array of long term fuel corrections that is active based upon

8 Pinion Flange Assembly

9 Pinion Seal

10 Pinion Tail Bearing Assembly

11 Carrier Housing

12 Output Shaft Seal Assembly

13 Output Shaft

14 Drain Plug Assembly

15 Drain Plug Washer

16 Fill Plug Assembly

17 Fill Plug O-ring Seal

18 Carrier Locator Pin

19 Vent Connector

20 Differential Case

21 Ring Gear

22 Output Shaft Bearing Assembly

23 8-Point Lock Ring

24 Sleeve and Insert Assembly

25 Differential Side Bearing Assembly

26 Differential Cross Pin Lock

27 Differential Pinion Thrust Washer

28 Differential Pinion Gear

29 Differential Side Gear Washer

30 Differential Side Gear

31 Output Shaft Snap Ring

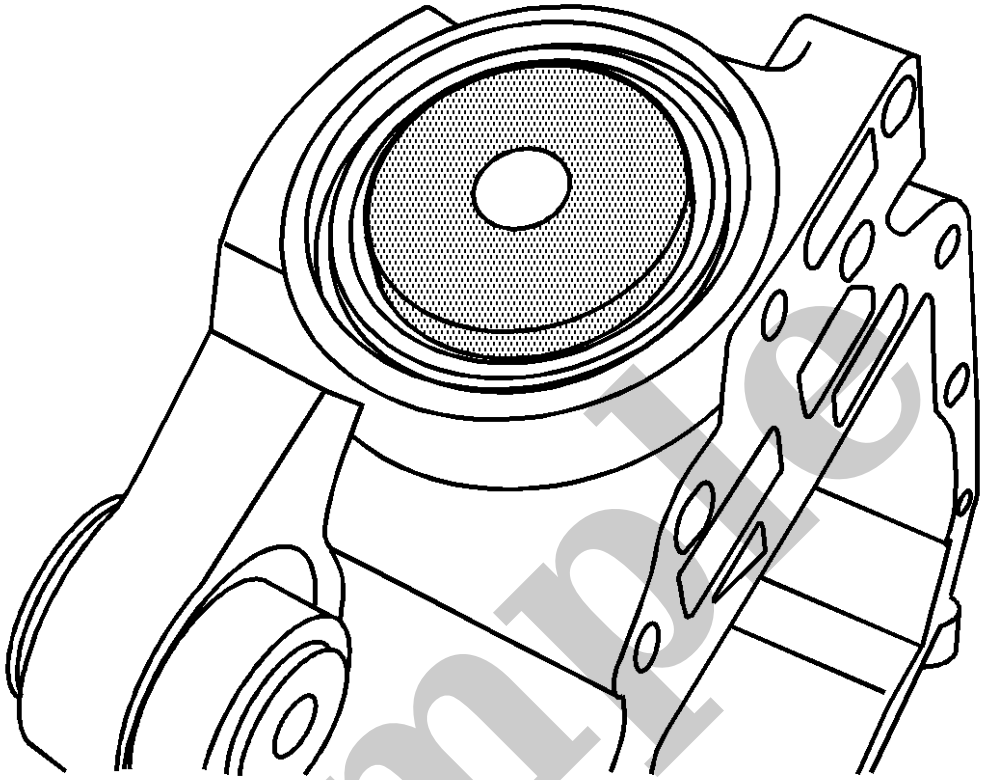
32 Differential Pinion Gear

33 Differential Pinion Gear Thrust Washer

34 Differential Side Gear

35 Differential Side Gear Washer

36 Differential Cross Pin



11.

Install the outer pinion bearing cup and the J-45858-1 or **J-45858-1A** ***pinion bearing race remover/installer*** over the outer pinion bearing cup bore.

Note

Measure each shim separately.

Measure the thickness of right side shim or the shim and service spacer in 3 locations.

7. **NOTE**

   Note

   - Add the average of each of the shim measurements together.
   - Record the measurement. This is the thickness for the right side shim pack.

   Calculate the average of the 3 measurements for each shim.

8. Assemble a new right side shim pack by increasing the appropriate amount of thickness to the original right side shim pack. If the original shim is cast iron production shim, assemble the shim pack using a service spacer and service shims. For example, to increase the backlash by ***0.05 mm (0.002 in)*** , add ***0.10 mm (0.004 in)*** of thickness to the right side shim pack.

12. Use the following procedure to decrease the backlash if the backlash is too large:

    1. Remove the bearing cap bolts and the bearing caps.

    2. **NOTE**

       Note

       Mark the bearing cups and the shims left or right.

       Remove the differential case assembly with the bearing cups and the shims.

    3. **NOTE**

       Note

       - Measure the production shim or the shim and service spacer in 3 locations.
       - Measure each shim separately.

       Measure the thickness of left side shim pack.

YOUR CURRENT VEHICLE

Differential Drive Pinion Gear Yoke Replacement

Differential Drive Pinion Gear Yoke Replacement (8.6 Inch Axle)

Special Tools

J-8614–01 ***Flange Holder and Remover***

For equivalent regional tools, refer to Special Tools.

Removal Procedure

CAUTION

Caution

Pinion nut is a single use fastener. Failure to replace the pinion nut with a NEW pinion nut, may lead to the pinion nut losing retention, and could cause loss of vehicle propulsion.

NOTE

Note

Observe and mark the positions of all the driveline components, relative to the propeller shaft and the axles, prior to disassembly. These components include the propeller shafts, drive axles, pinion flanges, output shafts, etc. Reassemble all the components in the exact places in which you removed the parts. Follow any specifications, torque values, and any measurements made prior to disassembly.

1. Raise and support the vehicle. Refer to Lifting and Jacking the Vehicle.
2. Remove the rear tire and wheel assembly. Refer to Tire and Wheel Removal and Installation.
3. Remove the rear disc brake rotor, if equipped. Refer to Rear Brake Rotor Replacement.
4. **NOTE**

- Disc player power, ground and MOST communication circuit issues will create DTCs stored in other modules and will affect the entire infotainment system. The purpose of this diagnostic is to address disc player only concerns where the remaining system functions normally.

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

Special Tools

EL-50334-50 USB Cable and Adapter Kit

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. Using a known good compact disc, verify the A33 Media Disc Player loads the disc.
    - **If the A33 Media Disc Player does not load the disc**

      Replace the A33 Media Disc Player.

Circuit	Short to Ground	Open/High Resistance	Short to Voltage	Signal Performance
Right Front Speaker Output Signal	B1035 02, 1	B1035 04, 1	B1035 01, 1, 2	—
Left Rear Speaker Output Signal	B1045 02, 1	B1045 04, 1	B1045 01, 1, 2	—
Right Rear Speaker Output Signal	B1055 02, 1	B1055 04, 1	B1055 01, 1, 2	—
1. No or reduced audio from speaker(s) on the affected audio circuit. 2. Noticeable audio distortion may be present.				

Circuit/System Description

Each of the audio output channel circuits (+) and (-), at the radio have a DC bias voltage that is approximately one half of battery voltage. When using a DMM, each of the audio output channel circuits will measure approximately 6.5 V DC. The audio being played on the system is produced by a varying AC voltage that is centered around the DC bias voltage on the same circuit. The AC voltage is what causes the speaker cone to move and produce sound. The frequency (Hz) of the AC voltage signal is directly related to the frequency of the input (audio source playing) to the audio system. Both the DC bias voltage and the AC voltage signals are needed for the audio system to properly produce sound.

Conditions for Running the DTC

- Vehicle in Service Mode/Ignition is ON or in the ACC position
- The system voltage is 9-16 V
- The test is run once during radio wake up

Conditions for Setting the DTC

B1025 01, B1035 01, B1045 01, B1055 01

The radio detects a short to voltage on the specified audio (+) or (–) circuit.

B1025 02, B1035 02, B1045 02, B1055 02

The radio detects a short to ground on the specified audio (+) or (–) circuit.