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2020 Chevrolet Traverse - FWD Service and Repair Manual

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- A history DTC clears after 40 consecutive warm-up cycles, if no failures are reported by this or any other non-emission related diagnostic.
- Clear the DTC with a scan tool.

Sample

Parameter	Description
Fuel Trim Reset	This device control is used to reset the Fuel Mass Observer data in case of a replacement.
Generator L-Terminal	The commanded states are ON and OFF. Selecting OFF commands the ECM to turn OFF the generator and stop generating an output voltage.
High Side Driver 1	This device control is used to override the state of the Shared High Side Driver 1 output.
High Side Driver 2	This device control is used to override the state of the Shared High Side Driver 2 output.
HO2S Heater Sensor 1	This device control is used to override the duty cycle of the oxygen sensor heaters.
Intake Air Flow Valve Motor	This function increases or decreases the position of the IAF valve.
Intake Air Flow Valve Position	This parameter displays the actual position of the intake air flow valve.
Intake Manifold Runner Control Valve	This device control is used to override the state of the intake manifold runner control output.
Malfunction Indicator Lamp (MIL)	This device control is used to either turn the Malfunction Indicator Lamp (MIL) on or off.
Misfire Graphic	This device control produces a misfire graphic while the engine is running.
NOx Catalyst Reductant Loading Reset	This device control is used to reset the adaptive values for the SCR (Selective Catalytic Reduction) data.
NOx Catalyst Reset	This device control is used to reset the Selective Catalytic Reduction (SCR) data in case of a replacement.
NOx Sensor 1 Heater- Engine Running	This device control is used to control the duty cycle of the NOx Sensor 1 Heater with the engine running. The Duty Cycle is fixed at a predetermined value and is controlled for a predetermined amount of time.
NOx Sensor 1 Reset	This device control is used to reset the NOx Sensor 1 data in case of a replacement. The engine must be Off and the Ignition On.

Scan Tool Output Control	Description
Right Rear Turn Signal/Stop Lamp	The BCM activates the right rear turn signal/stop lamp when you select On. The right rear turn signal/stop lamp should illuminate until commanded Off.
Right Rear Window Motor	The BCM activates the right rear window motor when you select Up/Down/Stop/Express Down. The right rear window should follow the appropriate command.
Right Stop Lamp	The BCM activates the right stop lamp when you select ON with a value of 100%. The right stop lamp should illuminate.
Right Trailer Turn Signal Lamp	The BCM activates the right trailer turn signal lamp when you select ON with a value of 100%. The right trailer turn signal lamp should illuminate.
Run Relay	The BCM actuates the run relay when you select On. The run relay should turn on.
Run/Crank Relay	The BCM actuates the run/crank relay when you select On. The run/crank relay should turn on.
Run/Start Power Mode Indicator	The BCM activates the run/start lamp when you select On. The value should be 100%. The green LED on engine start/stop button should illuminate until commanded Off.
Security Indicator	The BCM activates the security indicator command when you select On. The security indicator at center of dash (or at DRL sensor) should illuminate until commanded Off.
Stop Lamps	The BCM activates the stop lamps when you select ON with a value of 100%. The stop lamps should illuminate.
Tire Pressure Sensors Learn	The BCM activates the tire pressure sensor learn procedure when you select Learn.
Tire Type/Pressure Selection	When you select OK, you can change tire type and load range.
Trailer Backup Lamps	The BCM activates the trailer backup lamps when you select ON with a value of 100%. The trailer backup lamps should illuminate.

YOUR CURRENT VEHICLE

Front Differential Carrier Gasket Replacement

Front Differential Carrier Gasket Replacement (8.25 Inch Axle)

Inspection Procedure

Perform the following before disassembling the axle:

1. Remove the drain plug from the axle.
2. Drain the axle lubricant.
3. Inspect the oil and the case for metal chips.

Determine the source of the metal chips, such as a broken gear or bearing cage.

4. Check the ring gear backlash. Refer to [Backlash Inspection and Adjustment](#).

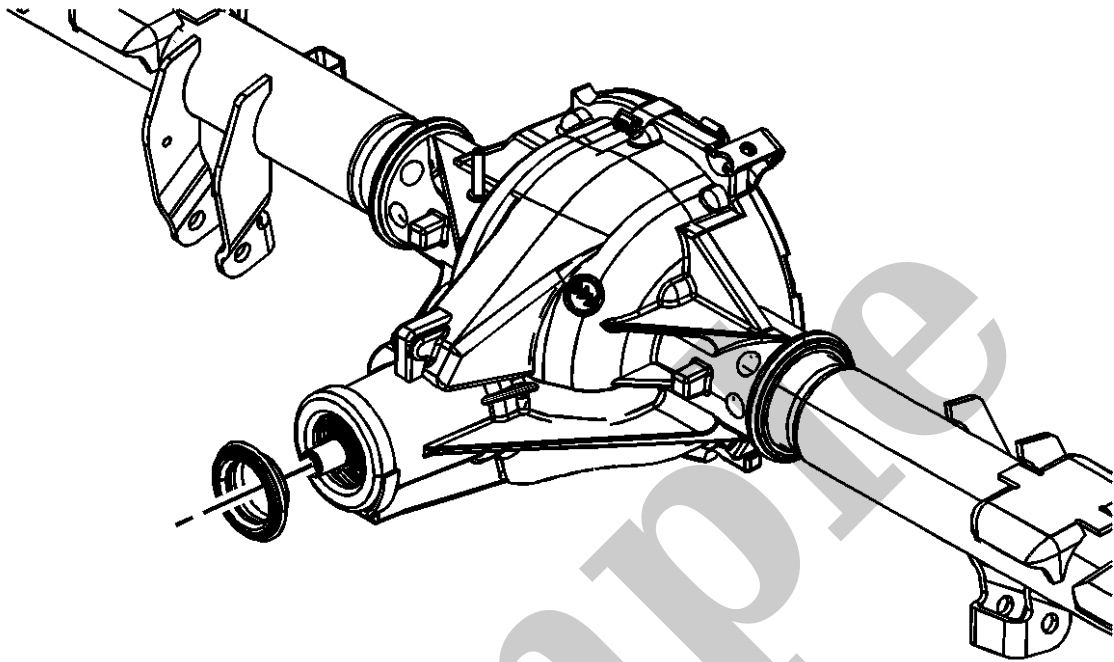
This information can be used in order to determine the cause of the axle problem. The information will also help when setting up and preloading the differential case.

Determine the cause of the axle problem before disassembly, if possible.

Removal Procedure

1. Install the differential carrier assembly in a vise.

- 40** Axle Shaft
- 41** Wheel Stud
- 42** Brake Rotor
- 43** Push Nut
- 44** Pinion Flange Nut
- 45** Pinion Flange Washer
- 46** Pinion Flange Assembly
- 47** Pinion Flange Seal Assembly
- 48** Drive Pinion Tail Bearing Assembly
- 49** Vent Connector
- 50** Axle Housing Assembly



1.

NOTE

Note

Check pinion seal bore and inside of carrier to make sure both are clean and free of debris, corrosion, and/or burrs.

Using the **DT-50871 Installer** and the **DT-22828 Installer** , install the new pinion oil seal.

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.
 - **If the A33 Media Disc Player loads the disc**
3. Verify the infotainment system successfully plays the audio from the disc.
 - **If the infotainment system does not play the audio from the disc.**
 1. Attempt to playback audio from another disc
 - If audio cannot be played from any disc, refer to Circuit/System testing.
 - **If the infotainment system plays the audio from the disc.**
4. Verify the A33 Media Disc Player ejects the disc.
 - **If the A33 Media Disc Player does not eject the disc**
Replace the A33 Media Disc Player.
 - **If the A33 Media Disc Player ejects the disc**
5. All OK. Refer to Diagnostic Aids.

Circuit/System Testing

1. Ignition OFF, disconnect the X1 harness connector at the A33 Media Disc Player.
2. Test for less than 10 Ω between the ground circuit terminal 7 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.

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.