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2020 Chevrolet Traverse - AWD Service and Repair Manual

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        - The engine speed is within 375 RPM of the previous test that failed.
        - The engine coolant temperature is in the same range of the previous test that failed.
- The following applies to fuel trim DTCs:
    - If the control module detects a fuel trim condition during 2 consecutive trips, the control module illuminates the MIL.
    - If the control module detects a fuel trim condition during 2 non-consecutive trips, the stored conditions are compared with the current conditions. The control module illuminates the MIL when the following conditions occur:
        - The engine load is within 20 percent of the previous test that failed.
        - The engine speed is within 375 RPM of the previous test that failed.
        - The engine coolant temperature is in the same range of the previous test that failed.

Conditions for Clearing the MIL/DTC – Type A or Type B

- The control module turns OFF the MIL after 4 consecutive ignition cycles that the diagnostic runs and does not fail.
- A current DTC, Last Test Failed, clears when the diagnostic runs and passes.
- A history DTC clears after 40 consecutive warm-up cycles, if no failures are reported by this or any other emission related diagnostic.
- Clear the MIL and the DTC with a scan tool.

Non-Emissions Related DTCs

Action Taken When the DTC Sets – Type C

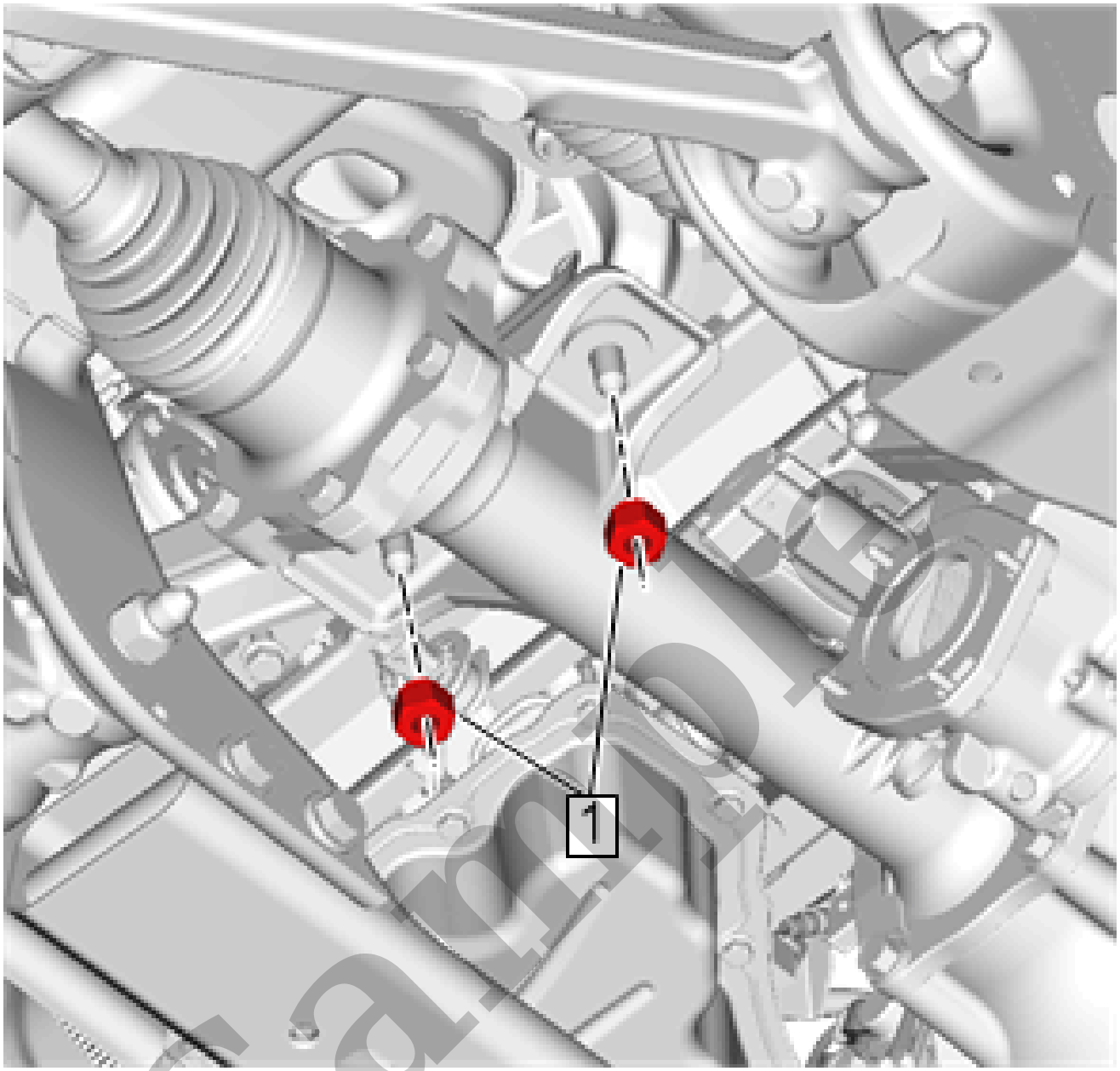
- The control module stores the DTC information into memory when the diagnostic runs and fails.
- The MIL will not illuminate.
- The control module records the operating conditions at the time the diagnostic fails. The control module stores this information in the Failure Records.
- The driver information center, if equipped, may display a message.

Conditions for Clearing the DTC – Type C

- A current DTC Last Test Failed clears when the diagnostic runs and passes.

Parameter	Description
Fuel Injection Small Quantity Data Reset	This device control is used to reset the learned values of the small quantity adjustment (SQA) map in case of a fuel rail pressure sensor replacement.
Fuel Injection Small Quantity Learning Odometer Reset	This device control is used to initialize small quantity learn internal odometer to a default value.
Fuel Heater Relay	This device control is used to override the state of the Fuel Filter Heater output.
Fuel Injector Balance	This feature will allow the technician to inspect the fuel system for leaks after servicing the fuel system or after any other service procedure that required disconnection or removal of fuel system components.
Fuel Injector Correction Value Preset	This device control resets all injector NVC and ZFC values to the default value. This device control is to be used if the old ECM values cannot be transferred to the new ECM after replacement.
Fuel Pressure Regulator 1	This device control is intended for use on a Direct Injection (DI) high pressure fuel supply system to activate the fuel pressure regulator 1 at ignition ON, engine OFF. Both the low side and high side of the regulator are controlled together. Commanding the regulator to ON will modulate the high side driver to a calibratible “maximum” duty cycle. (Note: As this is an electrical circuit test, a regulator solenoid commanded to ON does not necessarily equate to the regulator state at maximum fuel pressure.)
Fuel Pressure Regulator 2	This device control is intended for use on a Direct Injection (DI) high pressure fuel supply system to activate the fuel pressure regulator 2 at ignition ON, engine OFF. Both the low side and high side of the regulator are controlled together. Commanding the regulator to ON will modulate the high side driver to a calibratible “maximum” duty cycle. (Note: As this is an electrical circuit test, a regulator solenoid commanded to ON does not necessarily equate to the regulator state at maximum fuel pressure.)
Fuel Pump Relay	This device control is used to override the state of the fuel pump output.
Fuel Pump 2 Relay	This device control is used to override the state of the electric secondary transfer pump output.
Fuel Rail Pressure	This device control is intended for use on a Direct Injection (DI) high pressure fuel supply system to override the commanded fuel high pressure output from the powertrain controller.
Fuel Trim Enable	This device control is used to deactivate the Fuel Mass Observer (FMO).

Scan Tool Output Control	Description
Pickup Bed Cargo Lamp	The BCM activates the pickup bed cargo lamp when you select On. The values should be 100%. The pickup bed cargo lamp should illuminate until commanded Off.
Rear Fog Lamp(s) Relay	The BCM activates the rear fog lamps when you select On. The rear fog lamps should turn on.
Right Brake Lamp	The BCM activates the right brake lamp when you select On. The value should be 100%. The right brake lamp should illuminate until commanded Off.
Right Dedicated Daytime Running Lamp	The BCM activates the right dedicated daytime running lamp when you select On. The value should be 100%. The right daytime running lamp should illuminate.
Right Front Park Lamp	The BCM activates the right front park lamp when you select ON with a value of 100%. The right front park lamp should illuminate.
Right Front Park Lamp/Daytime Running Lamp	The BCM activates the right front park lamp/daytime running lamp when you select ON with a value of 100%. The right front park lamp/daytime running lamp should illuminate.
Right Front Turn Signal Lamp	The BCM activates the right front turn signal lamp when you select On. The right front turn signal/hazard lamp should illuminate.
Right Headlamp Low Beam	The BCM activates the right headlamp low beam when you select On. The right headlamp low beam should illuminate.
Right Park Lamps	The BCM activates the right park lamps when you select ON with a value of 100%. The right park lamps should illuminate.
Right Rear Park Lamp	The BCM activates the right rear park lamp when you select ON with a value of 100%. The right rear park lamp should illuminate.
Right Rear Stop/Park Lamp	The BCM activates the right rear stop/park lamp when you select ON with a value of 100%. The right rear stop/park lamp should illuminate.
Right Rear Turn Signal Lamp	The BCM activates the right rear turn signal/hazard lamp when you select On. The right rear turn signal lamp should illuminate until commanded Off.

5. 

   Install the front differential carrier bracket nuts (1) and tighten to ***100 N·m (74 lb ft)***
6. Install the vent hose to the front differential carrier, if removed.
7. Install the wiring harness for the front drive axle actuator.
8. Install the front drive axle actuator electrical connector to the actuator.
9. Remove the hydraulic jack stand.
10. Connect the electrical connector and install the wiring harness to the steering gear.
11. Install the steering gear skid shield, if equipped. Refer to Steering Gear Skid Shield Replacement.
12. Remove the support and lower the vehicle.

11 Differential Side Gear Thrust Washer

12 Differential Cross Pin

13 Differential Pinion Gear

14 Differential Pinion Gear Thrust Washer

15 Ring Gear Bolt

16 Differential Case Bearing Assembly

17 Differential Case Bearing Shim

18 Carrier Bearing Cap

19 Carrier Bearing Cap Bolt

20 Cover Pan Clip

21 Cover Pan Bolt

22 Cover Pan Bracket Assembly

23 Fill Plug Assembly

24 Cover Pan

25 Cover Pan Gasket

26 Drive Pinion

27 Drive Pinion Bearing Shim

28 Drive Pinion Head Bearing Assembly

29 Drive Pinion Bearing Spacer

30 VSES Sensor Assembly

31 VSES Sensor Bolt

32 VSES Exciter Ring Assembly

33 Axle Shaft Bearing Assembly

34 Axle Shaft Seal Assembly

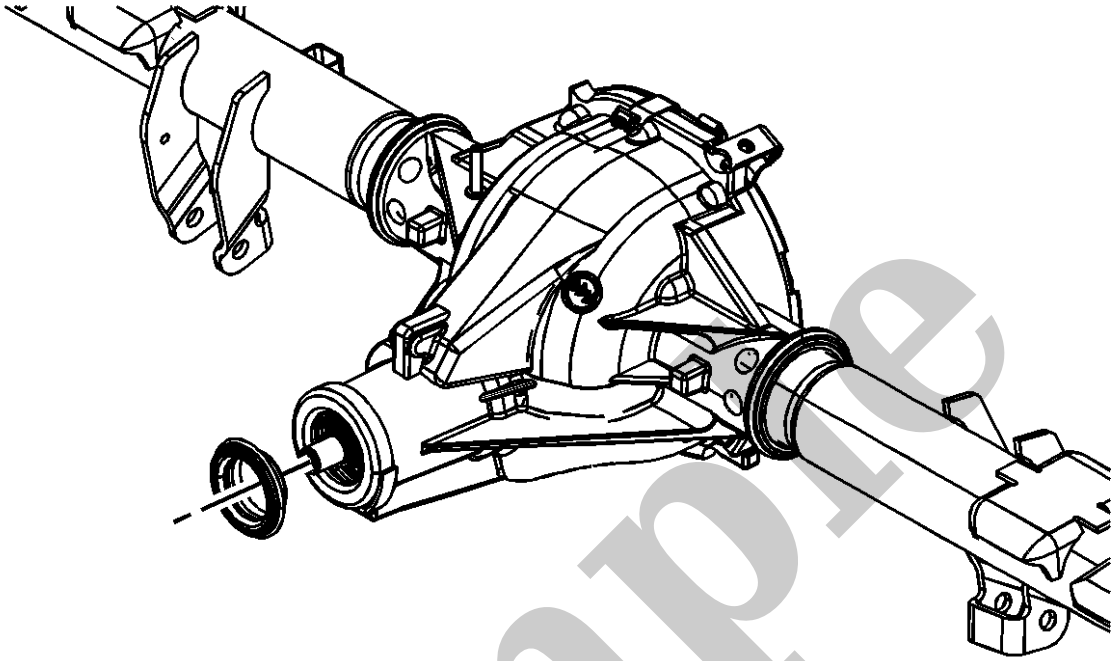
35 Park Brake Assembly

36 Park Brake Attachment Bolt

37 Caliper Bolt

38 Caliper Assembly

39 Axle Shaft C-Lock



9.

NOTE

Note

DO NOT damage the axle housing.

Using a suitable tool, remove the pinion oil seal.

Installation Procedure

- Refer to the owners manual for compatible disc and format types.
- 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.
- If the disc player wakes on GMLAN but does not receive a wake signal on the MOST communication enable circuit, the disc player will operate in MOST bypass mode. The disc player will allow MOST data communications to pass through, but will not actively communicate on the MOST bus. The infotainment system will operate, but audio disc playback and the rear seat entertainment system will not function. No DTCs will be set if this occurs. A short to ground or short to voltage on the MOST communication enable circuit will create DTCs stored in other modules and will affect the entire infotainment system.
- If the disc player cannot communicate on low speed GMLAN, but is awake and communicating on MOST, the infotainment system will operate normally, including all disc player and rear seat entertainment functions. If this occurs, no DTCs will be set but the scan tool will be unable to communicate with the disc player.

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

YOUR CURRENT VEHICLE

DTC B1025-B1135

DTC B1025-B1135 (UQ3)

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.

DTC Descriptors

DTC B1025	Left Front Audio Output Circuit
DTC B1035	Right Front Audio Output Circuit
DTC B1045	Left Rear Audio Output Circuit
DTC B1055	Right Rear Audio Output Circuit

For symptom byte information refer to Symptom Byte List.

Diagnostic Fault Information

Circuit	Short to Ground	Open/High Resistance	Short to Voltage	Signal Performance
Left Front Speaker Output Signal	B1025 02, 1	B1025 04, 1	B1025 01, 1, 2	—