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2008 CHEVROLET Suburban OEM Service and Repair Workshop Manual

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YOUR CURRENT VEHICLE

No Torque Converter Clutch Apply

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Checks	Causes
Torque Converter Assembly (1)	Diagnose torque converter for possible internal damage. Refer to Torque Converter Diagnosis.

Road Test

Road Test

The following test provides a method of evaluating the condition of the automatic transmission. The test is structured so that most driving conditions would be achieved. The test is divided into the following parts:

- Electrical Function Check
- Upshift Control and Torque Converter Clutch (TCC) Apply
- Part Throttle Step-In Downshifts
- Manual Downshifts
- Coasting Downshifts
- Manual Gear Range Selection
  - REVERSE
  - Driver Shift Control

NOTE

Note

Complete the test in the sequence given. Incomplete testing cannot guarantee an accurate evaluation.

NOTE

Note

If the vehicle you are testing is a Hybrid/Electric Vehicle and is equipped with an eAssist or BAS propulsion system, please refer to the applicable vehicle Owner Manual/Supplement for a complete description and an explanation of operating conditions for the automatic stop/start feature. When performing this Road

- Engine Speed
- Transmission ISS
- Transmission OSS
- Vehicle Speed
- IMS
- Commanded Gear
- Gear Ratio
- Brake Pedal Position
- ECT, Engine Data List
- Trans. Fluid Temp.
- Calc. Throttle Position
- Ignition Voltage
- Transmission Control Solenoid Valve 1-9
- TCC Slip Speed

5. Check the garage shifts.
    1. Apply the brake pedal and ensure the parking brake is set.
    2. Move the gear selector through the following ranges:
        - PARK to REVERSE
        - REVERSE to NEUTRAL
        - NEUTRAL to DRIVE
        - DRIVE to REVERSE
        - REVERSE to DRIVE
    3. Pause 2 to 3 seconds in each gear position.
    4. Verify the gear engagements are immediate (less than 2 seconds to complete if trans fluid temperature is above 20°C) and not harsh. Note that these shifts may be almost imperceptible in

3. Pause 2 to 3 seconds in each range.
4. Return gear selector to PARK.
5. Verify that all selector positions match the scan tool display.

7. Check throttle position input.
    1. Apply the brake pedal and ensure the parking brake is set.
    2. Ensure the gear selector is in PARK.
    3. Monitor the scan tool Calc. Throttle Position while increasing and decreasing engine speed with the throttle pedal. The scan tool Calc. Throttle Position percentage should increase and decrease with engine speed.

If any of the above checks do not perform properly, record the result for reference after completion of the road test.

Upshift Control and Torque Converter Clutch (TCC) Apply

The TCM calculates the upshift points based primarily on 2 inputs: throttle position and vehicle speed. When the TCM determines that conditions are met for a shift to occur, the TCM commands the shift by varying current to the appropriate transmission control solenoids to control oncoming and offgoing clutch pressures.

Perform the following steps:

1. Monitor the following scan tool parameters:
    - Calc. Throttle Position
    - Vehicle Speed
    - Engine Speed
    - Transmission ISS
    - Transmission OSS
    - Commanded Gear
    - Transmission Control Solenoid Valve 1-9
    - TCC Slip Speed
2. Place the gear selector in the DRIVE position.