DIAGNOSIS AND TESTING (Continued)

EPC Solenoid

CAUTION: Do not attempt to hold the EPC switch depressed (minimum line pressure) and stall the transaxle (holding the vehicle with the brake while depressing the throttle with the transaxle in gear) or transaxle damage will result.

5. Observe line pressure. Record value. Line pressure should go to maximum value. If not, refer to Hydraulic / Mechanical Diagnosis and Pinpoint Test E concerning EPC solenoid.
6. Depress EPC switch. Line pressure should drop to a minimum value. Record value. If not, refer to Hydraulic / Mechanical Diagnosis and Pinpoint Test E concerning EPC solenoids.

Engagements

7. Verify that Bench / Drive switch is in DRIVE mode and gear select switch is in first gear position.
8. Depress EPC switch. Line pressure should drop to idle pressure. While holding EPC switch down, shift vehicle from PARK to REVERSE. Does vehicle shift into REVERSE? Shift vehicle from REVERSE to DRIVE. Does vehicle shift into DRIVE? RELEASE the EPC switch, pressure should return to maximum. Repeat engagements. With the EPC switch released, engagements should be **firm**.

Upshift / Downshift

NOTE: Upshifts and downshifts will be **firm** during this procedure.

NOTE: Pressure gauges may be removed from vehicle for these tests.

NOTE: Tests should be performed on the road. If performed on a hoist, the technician may not feel all shifts when engaged.

LEDs will turn GREEN when solenoids are activated and turn OFF when deactivated. Refer to the tester overlay for the proper status / shift sequence of the shift solenoids during upshifts and downshifts.

9. Shift vehicle into Overdrive (D) and accelerate to 24 km / h (15 mph). Select second gear by rotating gear select switch to second gear.
   - Did vehicle upshift to second gear?
   - Did appropriate shift solenoids activate / deactivate?
10. Accelerate to 40 km / h (25 mph) and select third gear.
    - Did vehicle upshift to third gear?
    - Did appropriate shift solenoids activate / deactivate?
11. Accelerate to 56-72 km / h (35-45 mph) and select fourth gear.
    - Did vehicle upshift to fourth gear?
    - Did appropriate shift solenoids activate / deactivate?
12. Reverse order to downshift.
    - Does vehicle downshift from fourth to third, third to second and second to first?
    - Did appropriate shift solenoids activate / deactivate?

Torque Converter Engagement

NOTE: Test should be performed on the road. If performed on a hoist, the technician may not feel all shifts when engaged.

CAUTION: Do not depress TCC switch with transaxle in gear and vehicle at a stop. Damage to torque converter clutch may result.

13. Accelerate and shift vehicle into third gear. Hold speed steady and depress the TCC switch.
    - Does converter engage?
    - Does engine rpm drop?
    - Did TCC solenoid activate?

Transmission Speed Sensor Function Check

NOTE: This test may be performed on the hoist or on the road.

14. Set voltmeter to 20 volts AC. Connect voltmeter positive lead to (+) TSS jack. Connect voltmeter negative lead to (-) TSS jack. Slowly accelerate vehicle and monitor voltmeter.
    - Does voltage increase with vehicle speed?

Removing the Transmission Tester and Clearing DTC's

CAUTION: Do not attempt to pry off connectors with a screwdriver. This will damage the connectors and could result in a transaxle concern.

1. Disconnect transmission tester from transaxle connector.
2. Install vehicle wiring harness connector. Verify connection by pulling up on the harness.
3. Install all heat shields that were previously removed.
4. Disconnect transmission tester power lead from cigar lighter.
5. Erase all DTC's using procedures in the Powertrain Control / Emissions Diagnosis Manual[25] (unlatch center button of Star Tester while DTC's are being displayed during KOEO).
6. Rerun On-Board Diagnostics to receive a pass code (111).
7. Verify that the customer concern has been eliminated.

Electrical Diagnosis

Use the following pinpoint tests to diagnose transaxle electrical concerns.

25 Can be purchased as a separate item.