DIAGNOSIS AND TESTING

Preliminary Inspection

The following items must be checked prior to beginning the diagnostic procedures:

Know and Understand the Concern

In order to correctly diagnose a concern, first understand the customer concern or condition. Customer contact may be necessary in order to begin to verify the concern. Understand the condition as to when the concern occurs, for example:

- hot or cold vehicle temperature.
- hot or cold ambient temperature.
- vehicle driving conditions.
- vehicle loaded/unloaded.

After understanding when and how the concern occurs, proceed to verify the concern.

Verification of Condition

This section provides information that must be used in both determining the actual cause of customer concerns and executing the appropriate procedures.

The following procedures must be used when verifying customer concerns for the engine.

Determine Customer Concern

NOTE: Some transmission conditions can cause engine concerns. An electronic pressure control short circuit can cause engine misfiring. The torque converter clutch not disengaging will stall the engine.

Determine customer concerns relative to vehicle use and dependent driving conditions, paying attention to the following items:

- Hot or cold vehicle operating temperature
- Hot or cold ambient temperatures
- Type of terrain
- Vehicle loaded/unloaded
- City/highway driving
- Upshift
- Downshift
- Coasting
- Engagement
- Noise/vibration — check for dependencies, either rpm dependent, vehicle speed dependent, shift dependent, gear dependent, range dependent or temperature dependent.

Check Fluid Level and Condition

Fluid Level Check

⚠ CAUTION: The vehicle should not be driven if the fluid level is low or internal failure could result.

NOTE: If the vehicle has been operated for an extended period of time at highway speeds, in city traffic, in hot weather, or pulling a trailer, the fluid must cool down 30 minutes to obtain an accurate reading.

This vehicle is not equipped with a fluid level indicator. An incorrect level may affect the transmission operation and can result in transmission damage. To correctly check and add fluid to the transmission, refer to Transmission Fluid Level Check in this section.

High Fluid Level

A fluid level that is too high can cause the fluid to become aerated due to the churning action of the rotating internal parts. This will cause erratic control pressure, foaming, loss of fluid from the vent tube and possible transmission damage. If an overfill reading is indicated, refer to Transmission Fluid Level Check in this section.

Low Fluid Level

A low fluid level can result in poor transmission engagement, slipping or damage. It can also indicate a leak in one of the transmission seals or gaskets.

Adding Fluid

⚠ CAUTION: The use of any type of transmission fluid other than specified can result in transmission damage.

If fluid must be added, add fluid in 0.25L (0.5 pint) increments through the fluid pan level check screw opening. Do not overfill the fluid, refer to Transmission Fluid Level Check in this section. For fluid type, refer to the General Specification chart in this section.

DIAGNOSIS AND TESTING (Continued)

Fluid Condition Check

1. Observe the color and the odor of the fluid. Under normal circumstances, the color should be dark reddish, not brown or black.
2. Allow the fluid to drip onto a facial tissue and examine the stain.
3. If evidence of solid material is found, the transmission fluid pan should be removed for further inspection.
4. If fluid contamination or transmission failure is confirmed by the sediment in the bottom of the transmission fluid pan, the transmission must be disassembled and completely cleaned.
5. Carry out diagnostic checks and adjustments. Refer to Diagnosis By Symptom in this section.