Preliminary Inspection

Overview

The preliminary inspection is part of Automatic Transmission Diagnosis. The preliminary inspection is used to find obvious causes for transmission concern.

Underhood Inspection

To correctly diagnose a concern, first understand the customer concern or condition. Customer contact may be required to understand the conditions, including when the concern occurs. For example:

1. Look for missing or damaged air induction components.
2. Inspect the wire harness for proper routing, especially near the rear of the cylinder heads. Make sure the harness is not chafed or pinched.
3. Inspect transmission fluid cooler for proper mounting and check for any missing air deflectors.

Under Vehicle Inspection

1. Place the selector lever in D.
2. With the vehicle in NEUTRAL, position it on a hoist.
   REFER to: Jacking and Lifting (100-02 Jacking and Lifting, Description and Operation).
3. Inspect transmission case for evidence of leaks.
4. Inspect transmission fluid cooler lines for proper routing, pinches, or kinks.
5. Inspect transmission fluid cooler mounting and check for any missing air deflectors.
6. Adjust the selector lever cable. (If equipped)
   REFER to: Selector Lever Cable Adjustment (307-05 Automatic Transmission External Controls, General Procedures).
   REFER to: Selector Lever Cable Adjustment (307-05 Automatic Transmission External Controls) .

Transmission Fluid Inspection

Transmission fluid condition can provide many clues to the nature of the transmission concern. Proper transmission fluid level can only be determined with the transmission fluid at a specified temperature range. It is not necessary to verify exact transmission fluid level at this time. If the transmission fluid is below operating temperature, it is expected to be low on the transmission fluid level indicator. Transmission fluid temperatures below 30.2°F (-1°C) may not show up on a transmission fluid level indicator.

1. With the vehicle in NEUTRAL, position it on a hoist.
   REFER to: Jacking and Lifting (100-02 Jacking and Lifting, Description and Operation).
   Remove the transmission fluid fill plug and transmission fluid level indicator.

2. Allow the transmission fluid to drip onto a facial tissue or white sheet of paper.
3. Examine the stain.
4. Small black particles are typically burnt friction material.
5. Small shiny metallic particles indicate excessive hard part wear.
6. Foamy pink color indicates either water or engine coolant in the transmission.

Water in Transmission Fluid

To correctly repair an automatic transmission that has had water or coolant introduced into the system, completely disassemble, clean, and replace the following parts:

- All internal and external seals
- All friction material
- Torque converter
- All parts with bonded seals
- All solenoids
- All transmission fluid filters

Prior to installing the transmission, flush and clean the transmission fluid cooler(s) and the transmission fluid cooler tubes and hoses.