

Preliminary Inspection

Overview

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

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.

Underhood Inspection

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. With the vehicle in NEUTRAL, position it on a hoist.
REFER to: Jacking and Lifting - Overview (100-02 Jacking and Lifting, Description and Operation).
2. Inspect transmission case for evidence of leaks.
3. Inspect transmission fluid cooler lines for proper routing, pinches, or kinks.
4. Inspect transmission fluid cooler mounting and check for any missing air deflectors.
5. Adjust the selector lever cable.
REFER to: Selector Lever Cable Adjustment - 6-Speed Automatic Transmission â€“ 6R100 (307-05A Automatic Transmission External Controls - 6-Speed Automatic Transmission â€“ 6R100, General Procedures).

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 within 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 Â°F (-1 Â°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 - Overview (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. Under normal conditions, the fluid color will darken and may develop an odor. Color and odor should not be used to determine the condition of the fluid or transmission.
4. Trace amounts of black or shiny metallic particles may be present from normal wear and operation. Presence of a few particles in the sample do not necessarily indicate a transmission concern.
5. Large quantities of black particles are typically burnt friction material.
6. Large quantities of small to medium sized shiny metallic particles may indicate excessive hard part wear.
7. 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.

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