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2009 Pontiac G8 | G8 Service Manual | Transmission | Automatic Transmission - 6L50/6L80/6L90 |

Diagnostic Information and Procedures | Document ID: 2140011

Transmission Fluid Check

Since the transmission on this vehicle is not equipped with a fill tube and dipstick, the following procedure is used to rectify the transmission fluid level and to inspect the condition of the transmission fluid.

Note: The transmission fluid level must only be checked when the transmission fluid temperature (TFT) is between 30 - 50°C (80 - 122°F). If the TFT is not within the specified range, operate the vehicle to increase the temperature of the transmission fluid or allow the transmission fluid to cool. Correcting the transmission fluid level with a TFT outside this range will result in either an underfilled or over-filled transmission.

- 1. Observe the TFT using the driver information center (DIC) or a scan tool.
- 2. Start the engine and let the engine idle.

Note: Make sure that the engine RPM is between 500-800 RPM.

- 3. Depress and hold the brake pedal and move the shift lever through each gear range. Pause for at least 3 seconds in each gear position. Move the shift lever to PARK.
- 4. Let the engine idle for 1 minute.

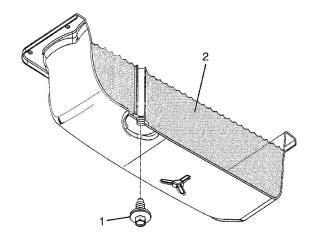
Warning: Refer to <u>Safety Glasses Warning</u> in the Preface section.

Danger: To avoid any vehicle damage, serious personal injury or death when major components are removed from the vehicle and the vehicle is supported by a hoist, support the vehicle with jack stands at the opposite end from which the components are being removed and strap the vehicle to the hoist.

Note: Do not switch the engine OFF.

Note: Make sure that the shift lever is in PARK position.

5. Raise the vehicle on a hoist and make sure that the vehicle is level.



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Caution: The engine must be running when the transmission fluid fill plug is removed, or excessive fluid loss will occur. Transmission fluid may be hot. Since the actual fluid level is unknown, stand clear when removing the fill plug. Have a container ready to capture any lost fluid. Do not turn the engine off with the fill plug removed, as you can be injured by hot transmission fluid being expelled out of the oil fill opening.

Note: Continue to monitor the TFT. If the TFT rises above or drops below the specified range, install the transmission fluid level check plug (1) and repeat the previous steps.

- 6. Remove the transmission fluid level check plug (1) from the transmission fluid pan.
 - If the transmission fluid (2) is flowing out of the transmission fluid pan inspection hole in a steady stream the transmission is over-filled. Let the transmission fluid (2) drain until the transmission fluid (2) drips from the transmission fluid pan inspection hole.
 - If no transmission fluid (2) drips out of the transmission fluid pan inspection hole, the transmission is under-filled. Add transmission fluid (2) until the transmission fluid (2) drips out. Refer to Transmission Fluid Fill Procedure
- 7. Inspect the transmission fluid colour. The transmission fluid should be red or dark brown.
 - If the transmission fluid colour is very dark or black and has a burnt odour, remove the transmission fluid pan. Inspect the transmission fluid and inside of the transmission fluid pan for excessive metal particles or other debris. A small amount of friction material inside the transmission fluid pan is normal. If large pieces of friction material or metal particles are seen in the transmission fluid or transmission fluid pan, overhaul the transmission and flush the transmission fluid cooler and transmission fluid cooler lines.
 - If the transmission fluid appears cloudy or milky, it is an indication that the transmission fluid may be contaminated with engine coolant or water. Refer to Engine Coolant/Water in Transmission.

Caution: Refer to <u>Fastener Caution</u> in the Preface section.

- 8. Replace the transmission fluid level check plug (1) and tighten to 25 N·m (18 lb. ft)
- 9. Inspect for external leaks. Refer to Fluid Leak Diagnosis.
- 10. Lower the vehicle.
- 11. Switch the engine OFF.