

Checking Transmission Fluid Level and Condition

Checking fluid level and condition (color and odor) at regular intervals will provide early diagnosis information about the transmission. This information may be used to correct a condition that, if not detected early, could result in major transmission repairs.

IMPORTANT: When new, automatic transmission fluid is red in color. As the vehicle is driven, the transmission fluid will begin to look darker in color. The color may eventually appear light brown.

A dark brown color with burnt odor may indicate excessive fluid deterioration and signal a need for fluid change.

Fluid Level

When adding or changing fluid, use only DEXRON®-III. Refer to [Maintenance and Lubrication](#) in General Information section for maintenance information and servicing interval.

CAUTION: DO NOT OVERFILL.

Overfilling will cause foaming, loss of fluid, abnormal shifting and possible damage to the transmission.

1. Park the vehicle on level ground and apply the parking brake firmly.
2. Check fluid level with engine running at idle.

NOTE: Be sure that transmission fluid temperature is below 30°C (86°F).

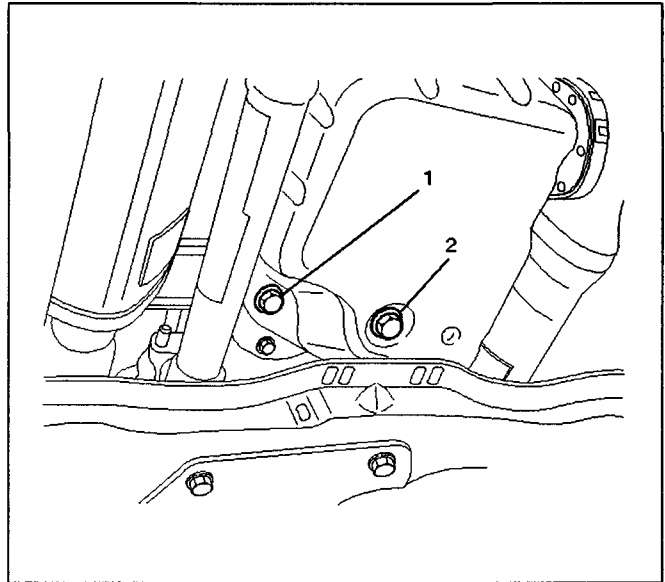
3. Move the selector lever through all gear ranges.
4. Move the selector lever to "Park".
5. Let engine idle for 3 minutes and open the overfill screw (1).
6. Add released transmission fluid until it flows out over the overfill screw opening.
7. Let engine idle until a fluid temperature between 32° C (90°F) and 57°C (135°F) is reached, then close the overfill screw (1).

Torque: 38 N*m (28 lb ft)

NOTE: Check transmission fluid temperature with scan tool.

Minimum fluid level - 57°C (135°F)

Maximum fluid level - 32°C (90°F)



CAUTION: Do not open overfill screw with engine stopped.

CAUTION: DO NOT CHECK FLUID LEVEL UNDER THESE CONDITIONS:

- Immediately after driving at sustained highway speeds.
- In heavy city traffic during hot weather.
- if vehicle is towing a trailer.

If the vehicle has been operated under these conditions, shut the engine off and allow the vehicle to "cool" for thirty (30) minutes. After the cool down period, restart the vehicle and continue from step 2 above.

Fluid Condition

	FLUID CONDITION			
	NORMAL*		CONTAMINATED	
COLOR	RED OR LIGHT BROWN	BROWN	NON-TRANSPARENT/PINK	BROWN
DRAIN REQUIRED?	NO	YES	YES	YES
CONTAMINATION	NONE	Very small amount of foreign material in bottom of pan	Contamination by coolant or other source	Large pieces of metal or other foreign material in bottom of pan
CORRECT LEVEL AND CONDITION	1. LOW LEVEL: A. Add fluid to obtain proper level & check for external leaks. See chart 16 on page 7A-39. B. Correct cause of leak. 2. HIGH LEVEL: - Remove excess fluid	- Remove both pans - Change filter - Flush cooler - Add new fluid - Check level	- Repair/replace radiator cooler - Transmission overhaul required - Check for: • Damaged plates and seals • Contaminated solenoids - Flush cooler - Add new fluid - Check level	- Transmission overhaul required - Flush cooler and cooler lines - Add new fluid - Check level

*Fluid should be changed according to maintenance schedule.

Test Driving

Some 4L30-E automatic transmission complaints will require a test drive as a part of the diagnostic procedure. Some codes will not set unless the vehicle is moving. The purpose of the test drive is to duplicate the customer's complaint condition and set a current Powertrain Control Module (PCM) trouble code. Perform this procedure before each 4L30-E automatic transmission repair, and again after repairs are made.

IMPORTANT:

- Duplicate the condition under which the customer's complaint was observed.
- Depending on the complaint, the line pressure gauge and the scan tool scan tool may be required during the test drive.
- During the test drive, it is important to record all necessary data from the areas being monitored, for use in diagnosis. Also listen for and note any unusual noises.

The following procedure should be used to test drive 4L30-E automatic transmission complaint vehicles:

1. Turn the ignition ON without starting the engine. Check that the "CHECK TRANS" lamp comes on for approximately 2 to 3 seconds and then goes out and remains out.
 - If the lamp is flashing, [GOTO Check Trans Indicator](#) in Transmission Control System (4L30-E) section.
 - If no serial data is present, [GOTO OBD System Check](#). Refer to Driveability and Emissions in Engine section.

- If the lamp stays ON or stays OFF, [GOTO "Check Trans"](#) Check in Transmission Control System (4L30-E) section.

2. Drive the vehicle. During the test drive, be sure that the transmission achieves normal operating temperature (approx. 20 minutes).

Allow the transmission to go through all of its gear ranges, checking shift timing and firmness. Duplicate the owner's complaint condition as closely as possible during the test drive.

3. If, during the test drive, the "CHECK TRANS" lamp comes on, use the scan tool to check for trouble codes.
4. If, during the test drive, a problem is felt, but the "CHECK TRANS" lamp does not come on and no trouble codes are present, drive the vehicle with the PCM disconnected (manually shifting the vehicle).
 - In Manual L, the vehicle operates in first gear.
 - In Manual 2, the vehicle operates in third gear.
 - In Manual 3 or "D", the vehicle operates in fourth gear.

If the problem still exists with the PCM disconnected, [refer to Mechanical/Hydraulic Diagnosis](#) in this section.

5. If no problem has been found at this point, check all underhood connections that supply power to the PCM and ignition fuses. Physically and visually inspect all the PCM harness connectors for loose or corroded terminals. Inspect the PCM ground points.