

2021 GMC Truck Yukon 4WD V8-5.3L

Vehicle > Maintenance > Fluids > Fluid - A/T > Service and Repair > Procedures > 10L80 (MQC) - Automatic Transmission

TRANSMISSION FLUID LEVEL AND CONDITION CHECK

Document ID: 4974697

This procedure checks both the transmission fluid level, as well as the condition of the fluid itself.

Warning: The transmission fluid temperature (TFT) must be between 75-80°C (167-176°F). If the TFT is lower than this temperature range, either idle or brake torque the vehicle to raise the fluid temperature. If the TFT is higher than this range, shut off the vehicle to allow the fluid to cool as required. Setting the fluid level with a TFT outside this range will result in either an over-fill or under-fill condition. If TFT is greater than 80°C = under-filled. If TFT is less than 75°C = over-filled. An under-filled transmission will cause premature component wear or damage. An over-filled transmission will cause fluid to overflow from the vent tube, possibly causing a fire that may result in serious bodily injury or severe vehicle damage, fluid foaming, or pump cavitation.

Note:

- For gas applications, the transmission fluid level should be checked only after the TFT has reached or exceeded an operating temperature of 70°C (158°F). Once the TFT has reached or exceeded 70°C (158°F), then you can check the fluid level.
- For diesel applications, the transmission fluid level should be checked only after the TFT has reached or exceeded an operating temperature of 105°C (221°F). Once the TFT has reached or exceeded 105°C (221°F), let the temperature cool back down to 75-80°C (167-176°F) before checking the fluid level.

1. Observe the TFT using the driver information center (DIC) or a scan tool.
2. Start and idle the engine.
3. Depress the brake pedal and move the shift lever through each gear range. Pause for at least 3 seconds in each range. Move the shift lever back to PARK. Ensure the engine RPM is low (500–800 RPM).
4. Allow the engine to idle for at least 1 minute.

Caution: To obtain the required transmission temperature, set the vehicle parking brake, run converter stalls while also applying the foot brake and placing the transmission in drive gear range to heat the transmission oil. Run 10 seconds on, then 10 seconds off converter stall. Brake torque is not to exceed 1500 engine RPM's. Failure to maintain 10 second intervals or exceeding 1500 engine RPM's may result in transmission internal damage.

5. Raise the vehicle on a hoist. The vehicle must be level, with the engine running and the shift lever in the PARK range.

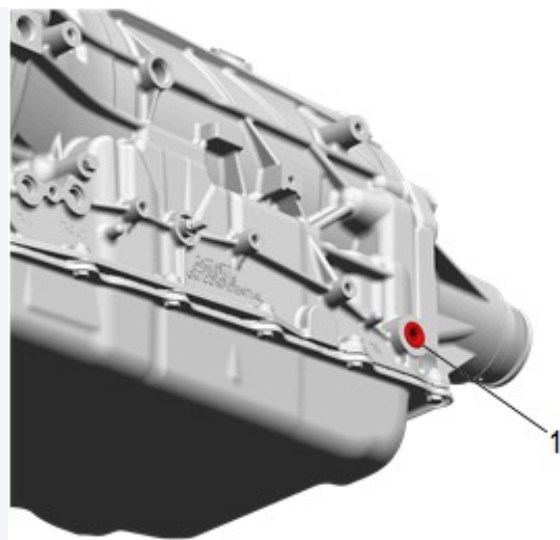
Danger: Transmission fluid is flammable and the area around the automatic transmission case

plug is hot due to the proximity of the exhaust system components. Always wear protective gloves to avoid personal injury. When draining the transmission, protect all exhaust components including the catalytic converter and catalytic converter heat shield from making contact with transmission fluid. Failure to do this could cause smoke and/or a fire resulting in serious bodily injury or severe vehicle damage.

Caution: THE ENGINE MUST BE RUNNING when the trans oil level check plug is removed or excessive fluid loss will occur, resulting in an under-filled condition. An under-filled transmission will cause premature component wear or damage.

Note: Continue to monitor the TFT. If the TFT is not within the specified values, reinstall the trans oil level check plug and repeat the previous steps.

6. Remove the automatic transmission case plug (1) from the transmission. Allow any fluid to drain.



- If the fluid is flowing as a steady stream, wait until the fluid begins to drip.
- If no fluid comes out, add fluid until fluid comes out in a steady stream and then drips out.

Transmission Fluid Fill Procedure

7. Inspect the fluid color. The fluid should be red or dark brown.
 - If the fluid color is very dark or black and has a burnt odor, inspect the fluid and inside of the bottom pan for excessive metal particles or other debris. A small amount of "friction" material in the bottom pan is a "normal" condition. If large pieces and/or metal particles are noted in the fluid or bottom pan, flush the oil cooler and cooler lines and overhaul the transmission. If there are no signs of transmission internal damage noted, replace the fluid filter assembly, repair the oil cooler, and flush the cooler lines.
 - Fluid that is cloudy or milky or appears to be contaminated with water indicates engine coolant or water contamination. Engine Coolant/Water in Transmission
8. If a NEW threaded component is being installed, loosen the adhesive using a metal pick or

similar tool before proceeding. If threaded component is reused, prepare the threaded component using the following steps:

1. Remove any loose cured adhesive from the external threads of the component using a lint free cloth.
2. Thread the cleaned component into the internal mating threads and remove to loosen trapped cured adhesive.
3. Remove loose debris from internal and external threads using compressed air.
4. Apply liquid thread locking adhesive in a strip along half of the length of the external threads, starting at the tip, just prior to installation. Adhesives, Fluids, Lubricants, and Sealers

Caution: Refer to Fastener Caution.

9. Install the automatic transmission case plug and tighten. Fastener Specifications
10. Inspect for external leaks. Fluid Leak Diagnosis