

## Normal Operating Temperature

Before driving the vehicle conduct a visual inspection of the transmission for leaks and check the COLD transmission fluid level.

- Set the parking brake, start the vehicle and allow it to idle in PARK for 3 to 5 minutes.
- Firmly depress the brake pedal, move the gear selector through each gear range, pausing 3 seconds in each range.
- With the vehicle level, accessories turned off, and the engine idling in PARK, check the fluid level.

The level should be between the tip of the dip stick and the hot mark.

## Transmission Fluid

- Check the smell and color of the transmission fluid

**RED** – OK

**FOAM** – High fluid level or contamination

**MILKY** – Contamination

**NON-TRANSPARENT PINK** – Fluid overheated

**LIGHT BROWN** – Contamination of oxidation

**Note:** Fluid will darken in normal use and does not always indicate contamination or oxidation

**BURNED SMELL** – Slipping / worn transmission components

If the transmission fluid shows signs of contamination drain the fluid and inspect the pan, filter and drained fluid for foreign material.

Large amounts of material or metal in the pan indicates internal transmission damage.

Very small amounts of foreign material may be caused by normal use. Change the fluid and filter and road test.

## Transmission fluid level

- Drive the vehicle for a minimum of 10 – 15 miles (16 – 24 km) or until the transmission is at normal operating temperature.
- With the vehicle level, set the parking brake and firmly depress the brake pedal.
- With the engine idling in PARK, move the gear selector through each gear range, pausing 3 seconds in each range.
- With the engine still running, select PARK and check the fluid level with the dipstick.

Transmission fluid level is critical to transmission operation. Level must be checked at the fluid temperatures listed below. PDU can be used to verify transmission fluid temperature.

DO NOT STALL TEST THE TRANSMISSION TO HEAT THE TRANSMISSION FLUID.

**ZF 4HP 24 E9** Transmission fluid normal operating temperature – 176° F (80° C)

**Powertrain 4L80-E** Transmission fluid normal operating temperature – 194° F (90° C)

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## NOTES