



Technical Service Information

FORD 6R60/6R80

ERRATIC TRANSMISSION TEMPERATURE

COMPLAINT: A 2013 Ford F150 equipped with the 6R80 Transmission was overhauled and reinstalled back into the vehicle. On the initial road test the “trans temp” lamp came on. The truck was equipped with a dash mounted monitor which was set to engine rpm, vehicle speed, engine coolant temperature and transmission temperature. While driving the technician could see erratic behavior of transmission temperature, in fact the rise and fall of the temperature reading was in cadence with vehicle speed, refer to figure 1. The technician used an infra red temperature gun to read the transmission sump temperature which was 190°F.

This would indicate that the temperature sensor or circuit was malfunctioning. Checking the voltage on the temperature sensor signal wire unplugged indicated 4.9 volts which equaled the temperature being displayed on the monitor.

What followed was an electrical systems check which resulted in no problems found that could be related to the transmission temperature being displayed on the monitor. At this time the PCM and the valve body with the lead frame were replaced with did not fix the erratic temperature situation.

CAUSE: The rebuild technician used .083” steel plates to stack the low/reverse clutch, this created a clutch pack that was too tight. As a result of this, the low reverse frictions were burning and creating a great deal of heat. The ATF temperature sensor is mounted on the lead frame as seen in figure 2. The Temperature sensor is mounted directly below the low/reverse clutch pack as seen in the cutaway in figure 3.

The temperature sensors proximity to the overheated low/reverse clutch pack is what caused the transmission temperature to be so erratic.

CORRECTION: The low/reverse clutch pack was rebuilt using four .070” steel plates and one .083” steel plate which would result in a correct clutch clearance of .039” to .062”. After the transmission was reinstalled back into the vehicle, the road test results were normal transmission temperature readings and no other complaints.

A special thank you to Tyler at A+ Transmissions for the video clip and sharing his experience with ATSG.

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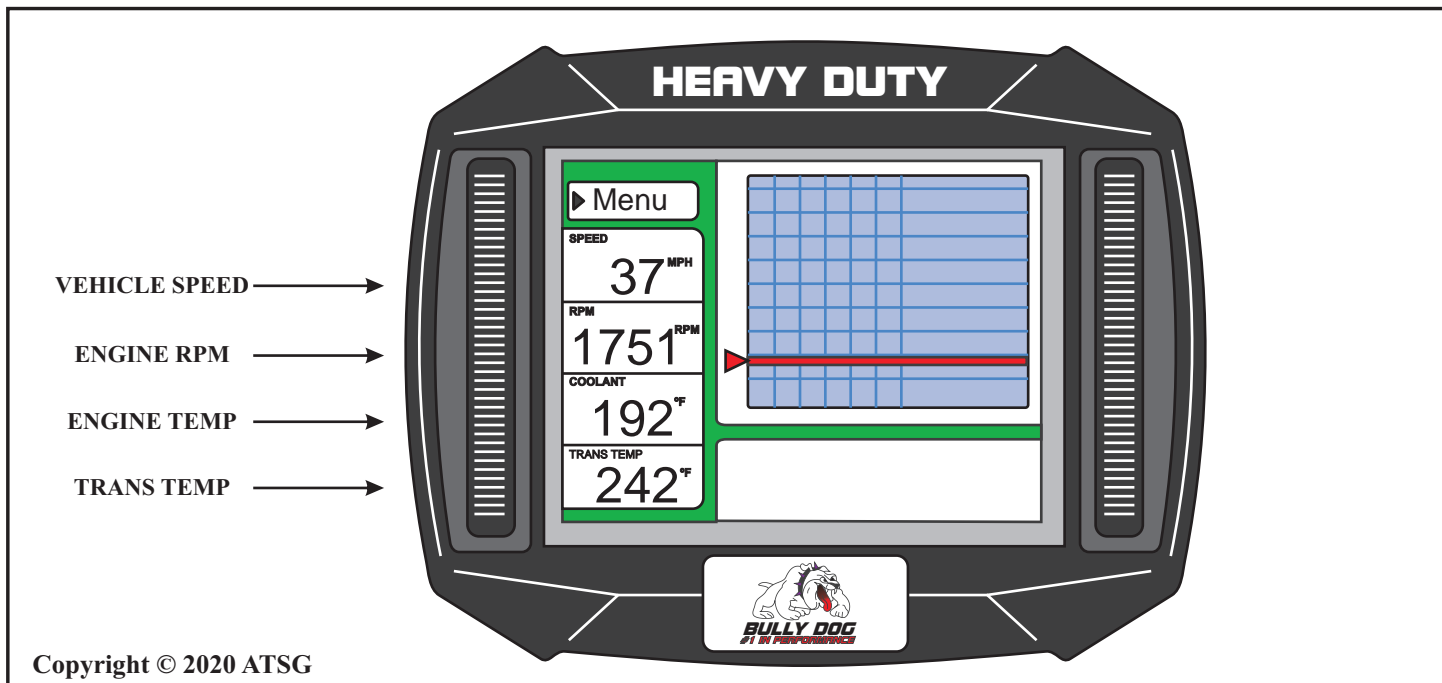


Figure 1

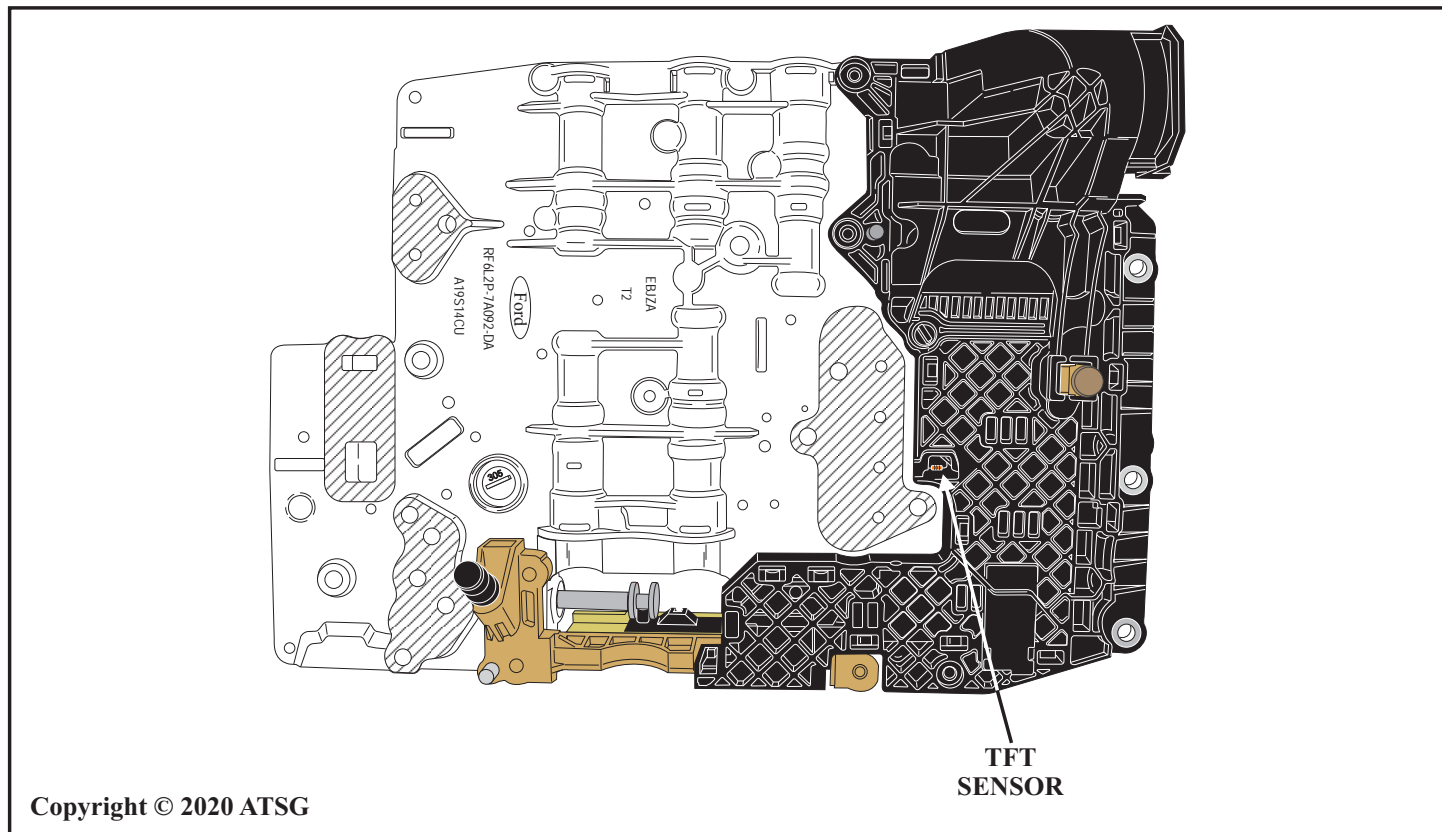


Figure 2

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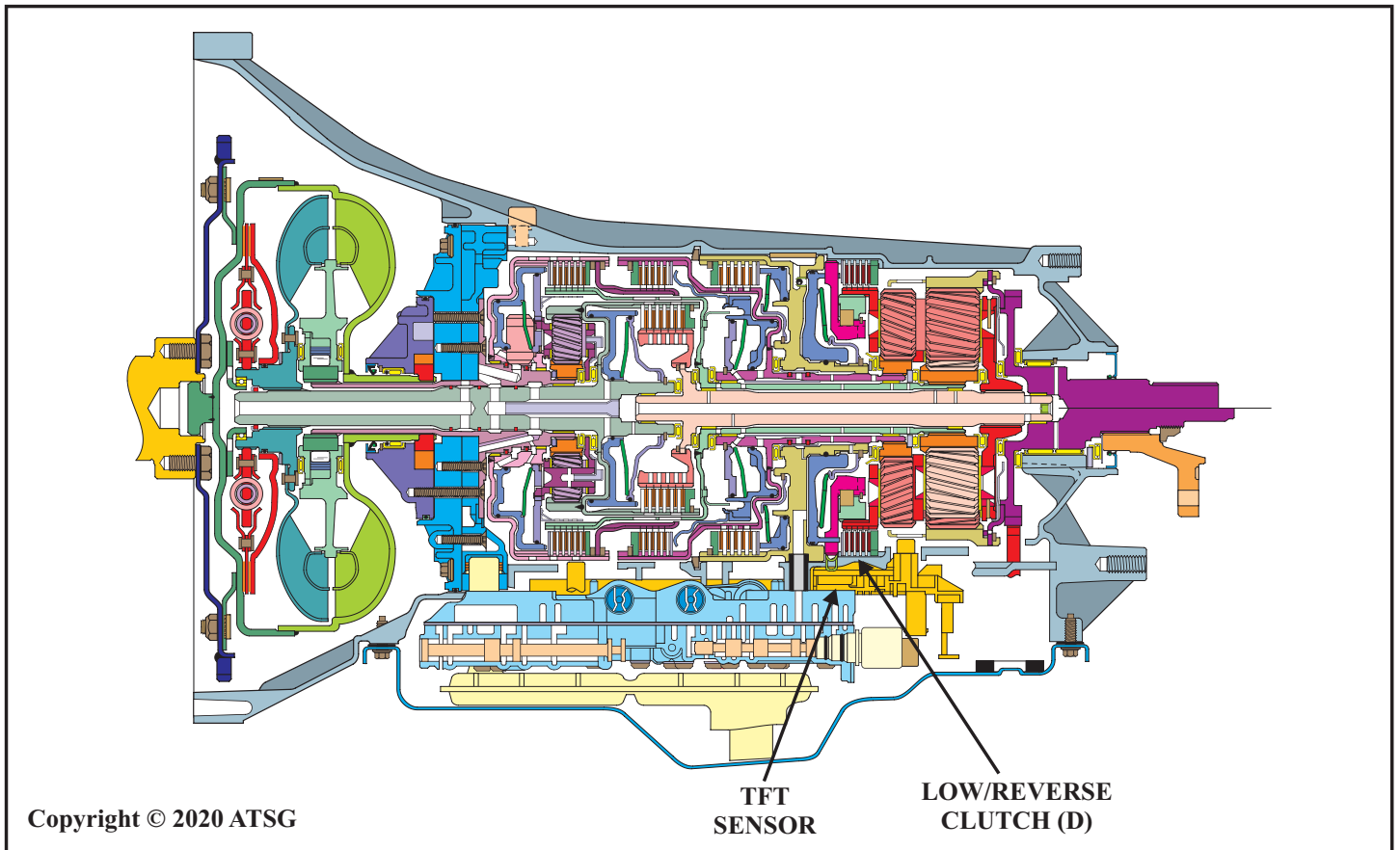


Figure 3