

## **SSM 49099: 2019-2020 F-150 - 4WD - Electronic Shift On-The-Fly (ESOF) Diagnostic Tips**

2019-2020 F-150 vehicles equipped with four-wheel drive (4WD) have a revised transfer case control module (TCCM) strategy that will affect integrated wheel end (IWE) operation after initial start-up. The TCCM will not energize the solenoid to supply vacuum to the IWEs after the initial key cycle and a driven gear is selected. The IWEs will remain engaged for 0.8 km (0.5 mi) when the temperature is above 0°C (32°F) and 3 km (2 mi) when below 0°C (32°F). The strategy changes were implemented to improve vacuum supply management and axle warm up in cold temperatures. The engine must run for a minimum of 5 minutes to build sufficient vacuum before performing any vacuum related testing. Refer to the Workshop Manual (WSM) Section, 307-08A > Four-Wheel Drive Systems > System Operation and Component Description for additional information.

### **Vehicles:**

2019-2020            F-150 (P552) (FC)

### **Symptom Code:**

400000	ENGINE
497000	ENGINE NOISE CONCERNS
499000	ENGINE BASIC ENGINE
500000	DRIVELINE
508000	DRIVELINE TRANSFER CASE CONCERNS
597997	DRIVELINE NOISE CONCERNS
700000	NOISE AND VIBRATION
702000	NVH OTHER NOISE CONCERNS
702100	NVH NOISE CONCERN -- FRONT
702300	NVH NOISE CONCERN -- PASSENGER COMPARTMENT