4L60/65/70E

Hard/Erratic Shifts, DTC P0716 and/or P0717

4L60E/4L65E/4L70E applications equipped with an input speed sensor may exhibit a hard/erratic shift complaint accompanied by P0716 and/or P0717 DTC stored in memory.

The input speed sensor is a hall switch. The sensor must have a good power supply and ground to operate. Check the power (Pin “E”) and ground (Pin “V”) supplied to the transmission with your digital multimeter.

The fastest way to check the sensor signal circuit is to use a signal generator and your scan tool. Remove the case connector and use the signal generator to supply a 12 volt square wave to the controller on the signal circuit. Monitor the input speed with your scan tool. If a speed signal is present, the problem is intermittent or you have a problem inside the transmission with the sensor or the harness.

If you do not have access to a signal generator visually inspect the signal circuit for damage between the transmission connector (pin “K”) and the PCM/TCM connector (pin “3” ckt 1230). With the PCM/TCM connector and the transmission connector disconnected, check ckt 1230 for a short to ground with an ohmmeter. If problems are not found, you will need to visually inspect the internal transmission harness and ISS for proper connection and damage.

One common cause for P0716/P0717 DTC has been the input speed sensor wiring. The sensor wiring has been known to short to ground on the pump assembly. Part of the ISS wiring is not shielded in conduit. Casting flash can lead to the sensor shorting to ground on the pump. If either the sensor signal circuit or the sensor voltage feed circuit short to ground, the sensor will not function. If you find the sensor wiring damaged you will need to replace the sensor and dress the sharp edges on the pump that caused the damaged.

4L60/65/70E

Hard/Erratic Shifts, DTC P0716 and/or P0717 (continued)

Input Speed Sensor wiring