



DTC Summaries

PowerTrain 4L80-E Transmission Control System: XJ12 and XJR (AJ16 SC) – OBD II

OBD II MONITORING CONDITIONS

DTCs can be accessed only through the DLC (diagnostic link connector).
Using PDU, select ToolBox, DTC, and 4L80-E.

MIL Activation

CHECK ENGINE MIL: A number in the CHECK ENG. MIL column indicates the consecutive trips required to activate the MIL. The CHECK ENGINE MIL activates for OBD II related transmission faults. Activation will store engine management DTC P1775 in the ECM memory.

TRANSMISSION MIL: A number in the TRANS. MIL column indicates the consecutive trips required to activate the MIL.

DTC	FAULT DESCRIPTION	OBD II MONITORING CONDITIONS	CHECK ENG. MIL	TRANS. MIL	LIMP HOME	POSSIBLE CAUSES
P0605	TCM data corrupted	Start engine	1	1	√	TCM failure
P0703	Brake switch input error	More than 10 accelerations to more than 20 mph (32 km/h), no brake during acceleration. More than 6 decelerations to less than 5 mph (8 km/h), brake applied. Each acceleration or deceleration within 25 seconds.	—	1	—	Brake switch incorrect adjustment Brake switch to TCM wire: open circuit, short circuit to ground or B+ voltage Brake switch ground circuit: open circuit Brake switch failure
P0706	Pressure switch manifold range / performance	Crank engine for 8 seconds. Start engine. Operate gear selector through all ranges. Drive vehicle above 10 mph (16 km/h) for more than 25 seconds.	2	1	—	Gear selector cable incorrect adjustment Pressure manifold switch to TCM harness open circuit, short circuit to ground or B+ voltage Linear switch to TCM signal circuit: open circuit, short circuit to ground or B+ voltage Linear switch failure Pressure switch manifold failure
P0712	Fluid temperature sensor circuit low voltage or fluid temperature above 307° F (153° C)	Switch ignition ON for more than 25 seconds.	2	—	—	Transmission internal harness temp. sensor circuit: short circuit to ground Transmission to TCM harness temp. sensor circuit: short circuit to ground Temperature sensor failure
P0713	Fluid temperature sensor circuit high voltage or fluid temperature below -54° F (-48° C)	Switch ignition ON for more than 10 seconds.	2	—	—	Transmission internal harness temp. sensor circuit: open circuit or short circuit to B+ voltage Transmission to TCM harness temp. sensor circuit: open circuit or short circuit to B+ voltage Temperature sensor failure
P0715	Transmission input speed, no signal	Drive vehicle above 15 mph (24 km/h).	2	1	—	Input speed sensor to TCM circuit: open circuit or short circuit to ground Speed sensor failure

DTC	FAULT DESCRIPTION	OBD II MONITORING CONDITIONS	CHECK ENG. MIL	TRANS. MIL	LIMP HOME	POSSIBLE CAUSES
P0716	Transmission input speed signal out of range	Drive vehicle above 15 mph (24 km/h).	2	1	—	Input speed sensor to TCM circuit: short circuit to B+ voltage Speed sensor failure
P0720	Transmission output speed signal low	Drive vehicle with engine speed above 3000 rpm, but not at full throttle, for more than 4 seconds.	2	1	√	Output speed sensor to TCM circuit: open circuit or short circuit to ground Speed sensor failure Transmission failure, no drive
P0721	Transmission output speed signal out of range	Drive vehicle.	2	1	√	Output speed sensor to TCM circuit: short circuit to B+ voltage Speed sensor failure
P0726	Engine speed signal out of range	Run engine above 1000 rpm.	2	1	—	ECM to TCM engine speed signal circuit: intermittent short circuit to ground or B+ voltage ECM engine speed signal error
P0727	Engine speed signal low	Drive vehicle. Accelerate up hill to more than 30 mph.	2	1	—	Engine stalled while driving ECM to TCM engine speed signal circuit: open circuit or short circuit to ground or B+ voltage ECM engine speed signal error
P0730	Transmission gear ratio incorrect	Drive vehicle above 7 mph (11 km/h) with TCC applied and throttle angle greater than 11%. Fluid temperature must be above 32° F (0° C).	2	1	—	Low transmission fluid level Refer to P0706 Transmission mechanical / hydraulic failure
P0741	TCC slipping / stuck OFF	Drive vehicle in fourth gear for 25 seconds with TCC applied and throttle angle between 15% and 50%. Fluid temperature must be between 68° F (20° C) and 285° F (141° C).	2	1	—	Transmission internal harness TCC solenoid circuit: open circuit, short circuit to ground or B+ voltage Transmission to TCM harness TCC solenoid circuit: open circuit, short circuit to ground or B+ voltage TCC solenoid failure

DTC	FAULT DESCRIPTION	OBD II MONITORING CONDITIONS	CHECK ENG. MIL	TRANS. MIL	LIMP HOME	POSSIBLE CAUSES
P0742	TCC stuck ON	Drive vehicle longer than 5 seconds in 2nd, 3rd or 4th gear with TCC OFF, throttle angle greater than 15%.	2	1	—	Transmission internal harness TCC solenoid circuit: open circuit, short circuit to ground or B+ voltage Transmission to TCM harness TCC solenoid circuit: open circuit, short circuit to ground or B+ voltage TCC solenoid failure
P0743	TCC circuit output state does not match command state	Drive vehicle in fourth gear with TCC applied.	2	1	—	Ignition switched power circuit to TCC solenoid open circuit or short circuit to ground Transmission internal harness TCC solenoid circuit: open circuit, short circuit to ground or B+ voltage Transmission to TCM harness TCC solenoid circuit: open circuit, short circuit to ground or B+ voltage TCC solenoid failure
P0748	Force motor (pressure control regulator solenoid) current high	Run engine. Move gear selector through all ranges.	—	1	—	Force motor to TCM circuit high resistance or short circuit to ground Force motor failure
P0751	Shift solenoid A stuck ON or OFF	Drive vehicle. Accelerate up hill with gear selector in D.	2	1	√	Ignition switched power circuit to solenoid; open circuit or short circuit to ground Transmission internal harness shift solenoid circuit: open circuit, short circuit to ground or B+ voltage Transmission to TCM harness shift solenoid circuit: open circuit, short circuit to ground or B+ voltage Shift solenoid failure

DTC	FAULT DESCRIPTION	OBD II MONITORING CONDITIONS	CHECK ENG. MIL	TRANS. MIL	LIMP HOME	POSSIBLE CAUSES
P0753	Shift solenoid A output state does not match command state	Drive vehicle through all forward gears with gear selector in D.	2	1	√	Transmission internal harness shift solenoid circuit: open circuit, short circuit to ground or B+ voltage Transmission to TCM harness shift solenoid circuit: open circuit, short circuit to ground or B+ voltage Shift solenoid failure
P0756	Shift solenoid B stuck ON or OFF	Drive vehicle above 10 mph (16 km/h) for more than 10 seconds.	2	1	√	Ignition switched power circuit to solenoid; open circuit or short circuit to ground Transmission internal harness shift solenoid circuit: open circuit, short circuit to ground or B+ voltage Transmission to TCM harness shift solenoid circuit: open circuit, short circuit to ground or B+ voltage Shift solenoid failure
P0758	Shift solenoid B output state does not match command state	Drive vehicle through all forward gears with gear selector in D.	2	1	√	Transmission internal harness shift solenoid circuit: open circuit, short circuit to ground or B+ voltage Transmission to TCM harness shift solenoid circuit: open circuit, short circuit to ground or B+ voltage Shift solenoid failure
P1739	Transmission slipping	Drive vehicle in fourth gear for 25 seconds with TCC applied and throttle angle between 15% and 50%. Fluid temperature must be between 68° F (20° C) and 285° F (141° C).	2	1	—	Low transmission fluid level Transmission mechanical / hydraulic failure

DTC	FAULT DESCRIPTION	OBD II MONITORING CONDITIONS	CHECK ENG. MIL	TRANS. MIL	LIMP HOME	POSSIBLE CAUSES
P1780	Torque reduction signal error	Start engine. Allow to run more than 12 seconds.	2*	1	—	ECM internal torque signal error
P1781	Engine torque signal out of range	Start engine. Allow to run more than 12 seconds.	2*	1	—	ECM to TCM torque signal circuit: open circuit, short circuit to ground or B+ voltage ECM torque signal error
P1782	Traction control signal voltage low	Switch ignition ON. Operate traction control switch.	—	—	—	ABS / TC CM to TCM signal circuit: short circuit to ground ABS / TC CM signal error
P1783	Transmission hot mode, fluid temperature above 250° F (122° C)	Switch ignition ON.	—	—	—	High transmission fluid temperature; severe operating conditions Blocked transmission cooler Restricted fluid flow to cooler
P1785	TRANSMISSION MIL	Switch ignition ON.	—	—	—	TCM to instrument pack TRANSMISSION MIL circuit: open circuit, short circuit to ground or B+ voltage Instrument pack failure
P1791	TPS signal	Switch ignition ON.	2	1	—	ECM to TCM TPS signal circuit: open circuit, short circuit to ground or B+ voltage ECM TPS signal output error
P1794	TCM voltage supply out of range	Run engine above 1500 rpm for five seconds.	2	1	√	Ignition switched TCM power fuse defective LH heelboard fuse box to TCM ignition switched power circuit: open circuit, high resistance or short circuit to ground Charging circuit failure
P1796	Kickdown switch signal active	Switch ignition ON. Operate accelerator through full range of travel.	—	—	—	Kickdown switch adjustment Kickdown switch to TCM circuit: short circuit to ground Kickdown switch failure

* Depending on other fault parameters, CHECK ENGINE MIL may not activate.