



Powertrain DTC Summaries – OBD II

Jaguar S-TYPE 2001 Model Year

STARTING VIN: L86902

Refer to page 2 for important information regarding the use of “Powertrain DTC Summaries”.

Revised April, 2002:

P0325, P0330

KEY TO COLUMN HEADINGS

DTC	Diagnostic Trouble Code.
SYS	The powertrain system the DTC is associated with – EMS, TRANS, PCM, ABS/TC (DSC). DTC retrieval tools: OBD II – indicates that the DTC is an OBD II code and can be accessed via a generic scan tool or PDU / WDS. JAG – indicates that the DTC is not an OBD II code and is accessed only via PDU / WDS.
FAULT DESCRIPTION	Fault description.
MONITORING CONDITIONS	“DIAGNOSTIC MONITOR DRIVE CYCLE” for the particular DTC. Operate the vehicle as described to check for a reoccurrence of the DTC. Refer to pages 4 – 8. KOEO and KOER PDU / WDS self tests must be carried out to check for a reoccurrence of the fault. Refer to page 3.
CHECK ENGINE MIL (CK ENG)	1 1 TRIP – indicates that the CHECK ENGINE MIL is activated by a fault occurring during ONE “TRIP”. 2 2 TRIPS – indicates that the CHECK ENGINE MIL is activated by a fault occurring during TWO CONSECUTIVE “TRIPS”. N NO – indicates that the CHECK ENGINE MIL is not activated.
OTHER	Driver Warnings: N None R RED MIL A AMBER MIL M MESSAGE “SYSTEM FAULT” C Charge indicator H Engine High Temperature indicator S Speed Control indicator T Traction Control indicator
DEFAULT ACTION	Control Module default action: Logged – DTC stored in PCM memory buffer; Flagged – DTC stored in PCM memory / CHECK ENGINE MIL activated.
POSSIBLE CAUSES	Possible causes are listed in the order of diagnostic checking. HIGH VOLTAGE – High voltage can be either sensor supply voltage (5 volts) or B+ voltage.

OBD II SYSTEM READINESS

If DTC P1000 is flagged after DTCs have been cleared, all SIX (6) OBD II diagnostic monitor drive cycles have not been completed. Refer to OBD monitor drive cycles, pages 3 – 8.

SELF TESTS

Two technician initiated component self tests are available using PDU / WDS:

KOEO Key (ignition) On Engine Off – The KOEO self test determines if system components are operating within tolerances with the ignition switched ON and the engine stopped.

KOER Key (ignition) On Engine Running – The KOER self test determines if system components are operating within tolerances with the ignition switched on and the engine running. KOER flags self-test DTC P1001 if a component fails to operate within the specified limits but does not activate the CHECK ENGINE MIL.

OBD DIAGNOSTIC MONITORS

The Engine Management and Transmission Control systems are continuously checked during vehicle operation by the Powertrain Control Module (PCM) on-board diagnostic (OBD) facility. The PCM OBD incorporates six diagnostic monitors. Each monitor has an associated group of DTCs. The diagnostic monitors will complete the diagnostic test(s) if a specified service "drive cycle" is carried out.

The six diagnostic monitors are as follows:

- Heated Oxygen Sensors Monitor
- Adaptive Fuel Monitor
- Misfire Monitor
- Catalyst Efficiency Monitor
- Evaporative System Monitor
- Comprehensive Component Monitor (Engine Management / Transmission)

DIAGNOSTIC MONITORS DRIVE CYCLES

Technicians can ensure that an OBD Monitor drive cycle is completed and that all or specific components have been checked by completing a specified drive cycle. Use the following service drive cycles to confirm that the components and subsystems covered by the Diagnostic Monitors are operating correctly.

HEATED OXYGEN SENSORS MONITOR DRIVE CYCLE

NOTE: The HO2 Sensor Monitor will also be completed during the Catalyst Efficiency Monitor drive cycle.

- 1 Fuel level >25%.
- 2 Start engine and bring to normal operating temperature >82 °C (180 °F).
- 3 Drive vehicle on a level road. Avoid harsh acceleration.
- 4 Maintain a steady speed between 64 km/h (40 mph) and 97 km/h (60 mph) for 10 seconds.

ADAPTIVE FUEL MONITOR DRIVE CYCLE

- 1 Fuel level >25%.
- 2 Start engine and bring to normal operating temperature >82 °C (180 °F).

MISFIRE MONITOR DRIVE CYCLE

- 1 Fuel level >25%.
- 2 Start engine and bring to normal operating temperature >82 °C (180 °F).
- 3 Drive vehicle on a level road. Accelerate at 50% throttle up to 105 km/h (65 mph).
- 4 Release throttle and coast down to 80 km/h (50mph).
- 5 The misfire monitor will complete once acceleration is resumed.

CATALYST EFFICIENCY MONITOR DRIVE CYCLE

The catalyst efficiency monitor operates by comparing the number of downstream HO2 Sensor "swings" to a given number of upstream HO2 Sensor "swings" while the vehicle is cruising in each of two AM (mass air flow) stages. The AM and IMAF values vary between V6 and V8 vehicles due to differences in MAF Sensor characteristics.

- 1 Fuel level >25%.
- 2 Connect PDU / WDS so that the AM (mass air flow, grams per second) PID can be observed while driving. If AM cannot be accessed, read IMAF (mass air flow sensor raw voltage).
- 3 Start engine and bring to normal operating temperature >82 °C (180 °F).
- 4 Drive vehicle on a level road. Avoid harsh acceleration.
- 5 Stage 1 – Maintain a steady speed of approximately 80 km/h (50 mph). Adjust the speed as necessary to stay within the stage 1 range. Maintain this speed for 3 minutes.
- 6 Stage 2 – Maintain a steady speed of approximately 97 km/h (60 mph). Adjust the speed as necessary to stay within the stage 2 range. Maintain this speed for 3 minutes.

	V8		V6	
	AM	IMAF	AM	IMAF
Stage 1	15.9 – 19.7 grams per second	3.15 v – 3.40 v	15.9 – 19.7 grams per second	3.40 v – 3.70 v
Stage 2	21.2 – 24.2 grams per second	3.50 v – 3.80 v	21.9 – 25.7 grams per second	3.90 v – 4.25 v

EVAPORATIVE SYSTEM MONITOR DRIVE CYCLE

The EVAP drive cycle requires that the vehicle not be operated for six hours prior to completing the drive cycle. A 20-minute driving period is required because the EVAP check is dependant on purge flow rate.

- 1 Engine OFF >6 hours.
- 2 Fuel level 15% – 85%.
- 3 Ambient temperature 5 – 43 °C (40 – 110 °F).
- 4 Surface elevation no higher than 2,957 meter (9,700 feet) above sea level.
- 5 Start engine and bring to normal operating temperature >82 °C (180 °F). Idle for 5 minutes.
- 6 Drive vehicle on a level road.
- 7 Maintain a steady speed between 72 km/h (45 mph) and 121 km/h (75 mph) for 20 minutes.
- 8 The EVAP monitor will perform a 30 second EVAP system check sometime during the 20 minute cruise period.

COMPREHENSIVE COMPONENT MONITOR ENGINE MANAGEMENT DRIVE CYCLE

The Comprehensive Component Monitor Engine Management drive cycle requires that the vehicle not be operated for six hours prior to completing the drive cycle. The drive cycles are the same for V6 and V8 except for the "idle in Drive" time period. The additional "idle in Drive" time for V8 is to allow the AAI check to occur.

- 1 Engine OFF >6 hours
- 2 Fuel level >25%.
- 3 Start engine and bring to normal operating temperature >82 °C (180 °F).
- 4 Transmission Mode switch – Normal.
- 5 Switch off all heavy electrical consumers: air conditioning, heaters, etc.
- 6 Idle for 15 seconds.
- 7 Select 2nd Gear; accelerate slowly.
- 8 After 5 seconds, select 3rd Gear; accelerate slowly.
- 9 After 5 seconds, select 4th Gear; accelerate slowly.
- 10 After 5 seconds, select Drive; cruise at 72 km/h (45 mph) for 30 seconds.
- 11 Stop vehicle in a safe place. Do not turn the steering wheel after stopping.
- 12 Idle in Drive with foot hard on brake pedal. (Idle in Drive 30 seconds – V6; 3 minutes – V8).
- 13 From stop, accelerate to 80 km/h (50 mph) at 50% throttle. Cruise for 30 seconds.
- 14 Stop vehicle and repeat "idle in Drive". Do not move the steering wheel.

COMPREHENSIVE COMPONENT MONITOR TRANSMISSION DRIVE CYCLE

The Comprehensive Component Monitor transmission drive cycle will "check" all transmission system components.

- 1 Start engine.
- 2 Move transmission mode switch between Normal and Sport. Verify switch state illumination.
- 3 Move the gear selector to all positions in the J Gate for five (5) seconds each. Verify the state illumination in each position.
- 4 Drive vehicle to bring the transmission fluid temperature up to normal operating temperature.
- 5 Stop vehicle.
- 6 Switch off all heavy electrical consumers: air conditioning, heaters, etc.
- 7 Transmission mode switch – Normal.
- 8 Select 2nd Gear; accelerate slowly. After 5 seconds, select 3rd Gear; accelerate slowly. After 5 seconds, select 4th Gear; accelerate slowly. After 5 seconds, select Drive; cruise at 72 km/h (45 mph) for 30 seconds.
- 9 Stop vehicle.
- 10 Use the J Gate to shift through all gears while accelerating briskly to 87 km/h (55 mph). Cruise at this speed to allow torque converter lockup to occur in fifth gear.
- 11 Stop vehicle and repeat steps 8 through 10.

POWERTRAIN CONTROL ACRONYMS:

AAI Valve	Air Assist Injection Valve	IAT Sensor	Intake Air Temperature Sensor
A/C	Air conditioning	IMT Valve	Intake Manifold Tuning Valve
APP Sensor	Accelerator Pedal Position Sensor	IP Sensor	Injection Pressure Sensor
B+	Battery Voltage	KS 1	Knock Sensor – RH Bank
CHT Sensor	Cylinder Head Temperature Sensor	KS 2	Knock Sensor – LH Bank
CKP Sensor	Crankshaft Position Sensor	MAF Sensor	Mass Air Flow Sensor
CMP Sensor 1	Camshaft Position Sensor – RH Bank	PCM	Powertrain Control Module
CMP Sensor 2	Camshaft Position Sensor – LH Bank	PSP Switch	Power Steering Pressure Switch
DLC	Data Link Connector	PTEC	Powertrain Electronic Control
ECT Sensor	Engine Coolant Temperature Sensor	SCP	Standard Corporate Protocol Network
EFT Sensor	Engine Fuel Temperature Sensor	TACM	Throttle Actuator Control Module
EOT Sensor	Engine Oil Temperature Sensor	TCC	Torque converter clutch
EVAP Canister Close Valve	Evaporative Emission Canister Close Valve	TFT Sensor	Transmission Fluid Temperature Sensor
EVAP Canister Purge Valve	Evaporative Emission Canister Purge Valve	TP Sensor	Throttle Position Sensor
FTP Sensor	Fuel Tank Pressure Sensor	WTV Valve 1	Variable Valve Timing Valve – RH Bank
HO2 Sensor 1 / 1	Heated Oxygen Sensor – RH Bank / Upstream	WTV Valve 2	Variable Valve Timing Valve – LH Bank
HO2 Sensor 1 / 2	Heated Oxygen Sensor – RH Bank / Downstream		
HO2 Sensor 2 / 1	Heated Oxygen Sensor – LH Bank / Upstream		
HO2 Sensor 2 / 2	Heated Oxygen Sensor – LH Bank / Downstream		

POWERTRAIN CONTROL PDU / WDS ACRONYMS:

ACCF	Air conditioning clutch output – fault detected	EFPT	Fuel injection pressure sensor (raw input)
ACCON	A/C clutch commanded on	EFPT1	Fuel injection pressure sensor before PCM default action
ACP	Air conditioning high side pressure	EFT	Engine fuel temperature sensor (raw input)
ADCF	Adaptive damping control output – fault detected	EFT1	Engine fuel temperature sensor before PCM default action
AFT1F	Adaptive fueling table 1 – failure	EOTA	Engine oil temperature -actual
AFT2F	Adaptive fueling table 2 – failure	EPCS1	Electronic pressure control solenoid 1
ASLIP	Actual torque converter slip value	EPCS2	Electronic pressure control solenoid 2
ATMR1	Time since engine start	EPCS3	Electronic pressure control solenoid 3
CAM ANGLE1	Actual position of right camshaft	EPCSF	Electronic pressure control solenoid fault detected
CAMDC	Variable valve timing right bank duty cycle	FP1	Fuel pump – output fault detected
CAMERR	Actual position of right camshaft	FPDC	Modulated fuel pump control – duty cycle
CANPF	EVAP Canister purge output – fault detected	FTPT	Fuel tank pressure sensor
CANVF	EVAP Canister close valve output – fault detected	FUEL	Fuel tank level
CCSF	Coast clutch solenoid fault detected	GEAR	In gear
CHTC	Cylinder head temperature before PCM default action	GRCUR	Current transmission gear ratio
CLOOP	Closed loop fuel	HO2S11	HO2S bank 1 upstream sensor voltage – before correcting for %h(CSD) condition.
CLOOP1	Closed loop fuel with HO2S fault	HO2S12	HO2S bank 1 downstream sensor voltage – before correcting for %h(CSD) condition.
CLV	Calculated load value	HO2S1D	HO2S voltage – bank 1 downstream
CVSDC	EVAP Canister close valve duty cycle		
DOLF	Data link output – fault detected		
ECT	Engine coolant temperature – degrees Celsius		
ECT2	Engine coolant temperature – degrees Fahrenheit		
ECTF	Engine coolant temperature sensor failure		
EDF	Low speed fan output – fault detected		

POWERTRAIN CONTROL PDU / WDS ACRONYMS:

HO2S1F	Heated oxygen sensor 1 – failure	LSFP	Low speed fuel pump output – fault detected
HO2S1U	HO2S voltage – bank 1 upstream	MAFF	Mass air flow sensor – failure
HO2S1UA	HO2S bank 1 upstream heater current monitor	MILF	CHECK ENGINE MIL output fault detected
HO2S2D	HO2S voltage – bank 2 downstream	O212F	HO2S bank 1 downstream – heater fault detected
HO2S2F	Heated oxygen sensor 2 – failure	OLOOP3	Open loop fuel – conditions not met; go to closed loop
HO2S2U	HO2S voltage – bank 2 upstream	OTRIP	OBDDII trip completed
HTR11	HO2S bank 1 upstream – heater On	PNPS	Park neutral position sensor
IAC1	Idle speed control- fault detected	REVS	Reverse switch (not used – manual transmission)
IAC2	Idle speed control output – over current fault detected	RPM1	Engine speed
IATF	Intake air temperature sensor failure	RPM2	Engine speed
IMCDC	Intake manifold communications control – duty cycle	RTT	Transmission gear ratio
IMCF	Inlet manifold communications output – fault indicated	SAFTOT	Spark advance
IMRCF	Inlet manifold runner control output fault indicated	SCACL	Cruise control set/ acceleration switch
INDSA	Park neutral position sensor	SCAN	Cruise control cancel switch
INJ1	Air assist injection fault	SCN	Cruise control null state
ISC1	Idle speed control – desired RPM	SCOF	Cruise control Off switch
KAMRF1	Adaptive fuel correction multiplier – bank 1	SCON	Cruise control On switch
KAMRF2	Adaptive fuel correction multiplier – bank 2	SCRES	Cruise control resume switch
LAMBSE1	Desired open loop equivalence ratio – bank 1	SCTAP	Cruise control coast tap down switch
LAMBSE2	Desired open loop equivalence ratio – bank 2	SLIPA	Absolute torque converter slip value (not used)
LOAD	Air charge load normalized to sea level	SLIPD	Desired torque converter slip value (not used)

POWERTRAIN CONTROL PDU / WDS ACRONYMS:

SSCM	Shift solenoids – commanded gear	TOTFM	Transmission fluid temperature before PCM default action
SSDCM	Shift solenoids commanded gear	TOTLK	Transmission over temperature lockup mode
SSDF	Shift solenoid output fault	TPS	Throttle position
SSD1	Shift solenoid 1	TPSF	Throttle position sensor failure
SSD1F	Shift solenoid 1 output fault	TRS1	Transmission range sensor 1
SSD2	Shift solenoid 2	TRS2	Transmission range sensor 2
SSD2F	Shift solenoid 2 output fault	TRS3	Transmission range sensor 3
SSD3	Shift solenoid 3	TRS4	Transmission range sensor 4
SSD3F	Shift solenoid 3 output fault	TSS	Turbine speed sensor
TCCDC	Torque converter clutch solenoid duty cycle	VCT1F	Variable valve timing bank 1 output – fault detected
TCCF	Torque converter clutch solenoid duty cycle fault detected	VCT2F	Variable valve timing bank 2 output – fault detected
TCS	Transmission control switch (D – 4 switch)	VMVDC	EVAP Canister purge valve duty cycle
TCTF	Secondary throttle output – fault detected	VMVM	EVAP Canister purge valve output state monitor
TIS	Transmission input speed (Turbine speed)	VPWR	Battery voltage
TMILF	Transmission fault lamp output fault detected	VSF	Variable speed fan level
TOS	Transmission output speed (OSS)	VSS	Vehicle speed sensor
TOT2	Actual transmission fluid temperature (TFT)		

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	POSSIBLE CAUSES
P0065	V8 EMS OBD II	Air assisted fuel injection (AAI) control range / performance	KOEO – page 3, or Comprehensive component monitor engine management drive cycle – page 7	2	N	None	AAI System piping: restricted, disconnected, broken AAI Valve failure
P0066	V8 EMS OBD II	Air assisted fuel injection (AAI) control circuit malfunction	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor engine management drive cycle – page 7	2	N	None	AAI Valve B+ power supply circuit fault AAI Valve to PCM PWM drive circuit: open circuit, high resistance, short circuit AAI Valve failure
P0102	EMS OBD II	MAF Sensor sense circuit low voltage	KOER – page 3, or Comprehensive component monitor engine management drive cycle – page 7	2	N	None	Restricted air filter MAF Sensor to PCM sensing circuit: high resistance, open circuit or intermittent short circuit to ground MAF Sensor supply circuit: open circuit or short circuit to ground MAF Sensor failure
P0103	EMS OBD II	MAF Sensor sense circuit high voltage	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor engine management drive cycle – page 7	2	N	None	MAF Sensor to PCM reference ground circuit: open circuit MAF Sensor to PCM sensing circuit: short circuit to high voltage MAF Sensor failure
P0112	EMS OBD II	IAT Sensor sense circuit high voltage (low temperature)	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor engine management drive cycle – page 7	2	N	PCM Default: – IAT default value 38 °C (100 °F)	IAT Sensor to PCM wiring: open circuit or high resistance IAT Sensor to PCM sensing circuit: short circuit to high voltage IAT Sensor failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	POSSIBLE CAUSES
P0113	EMS OBD II	IAT Sensor sense circuit low voltage (high temperature)	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor engine management drive cycle – page 7	2	N	PCM Default: – IAT default value 38 °C (100 °F)	IAT Sensor to PCM sensing circuit: short circuit to ground IAT Sensor failure
P0116	EMS JAG	ECT (V8) / CHT (V6) Sensor shift preventing OBD Monitor completion	Comprehensive component monitor engine management drive cycle – page 7	N	N	None	Low coolant level Contaminated coolant Engine coolant thermostat failure CHT Sensor to cylinder head poor contact – V6 ECT / CHT Sensor to PCM sensing circuit: high resistance, open circuit or short circuit to high voltage ECT / CHT Sensor failure
P0117	V8 EMS OBD II	ECT Sensor sense circuit low voltage (high temperature)	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor engine management drive cycle – page 7	2	N	PCM Default: – ECT default value 102 °C (215 °F)	ECT Sensor to PCM sensing circuit: short circuit to ground ECT Sensor failure
P0118	V8 EMS OBD II	ECT Sensor sense circuit high voltage (low temperature)	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor engine management drive cycle – page 7	2	N	PCM Default: – ECT default value 102 °C (215 °F)	ECT Sensor to PCM wiring: open circuit or high resistance ECT Sensor to PCM sensing circuit: short circuit to high voltage ECT Sensor failure
P0122	EMS JAG	TP Sensor sense circuit low voltage – TP1	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor engine management drive cycle – page 7	N	A, M	None (as long as normal TP signals are received from remaining sensors)	TP Sensor to PCM sensing circuit * 1" (TP Sensor pin 10): open circuit or high resistance TP Sensor failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	POSSIBLE CAUSES
P0123	EMS JAG	TP Sensor sense circuit high voltage – TP1	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor engine management drive cycle – page 7	N	A, M	None (as long as normal TP signals are received from remaining sensors)	TP Sensor to PCM sensing circuit * 1" (TP Sensor pin 10): short circuit to high voltage TP Sensor failure
P0124	EMS JAG	TP Sensor signal intermittent – TP1	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor engine management drive cycle – page 7	N	N	None (as long as normal TP signals are received from remaining sensors)	TP Sensor to PCM sensing circuit * 1" (TP Sensor pin 10) intermittent: open circuit, high resistance, short circuit to ground or high voltage TP Sensor failure
P0125	EMS OBD II	ECT / CHT Sensor response insufficient for closed loop fuel metering control (Coolant thermostat monitor)	Comprehensive component monitor engine management drive cycle – page 7	2	N	None	Low coolant level Contaminated coolant Engine coolant thermostat failure CHT Sensor to cylinder head poor contact – V6 ECT / CHT Sensor to PCM sensing circuit: high resistance, open circuit or short circuit to high voltage Engine cooling fan stuck on high speed Above normal air flow through engine compartment due to accident damage and/or missing panels
P0131	EMS OBD II	HO2 Sensor sense circuit low voltage – bank 1, upstream (1/1)	Heated oxygen sensors monitor drive cycle – page 4	2	N	None	HO2 Sensor 1/1 disconnected HO2 Sensor 1/1 to PCM sensing circuit: open circuit HO2 Sensor 1/1 short circuit to ground HO2 Sensor 1/1 failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	POSSIBLE CAUSES
P0132	EMS OBD II	HO2 Sensor sense circuit high voltage – bank 1, upstream (1/1)	KOER – page 3, or Heated oxygen sensors monitor drive cycle – page 4	2	N	None	HO2 Sensor 1/1 to PCM sensing circuit: short circuit to high voltage HO2 Sensor 1/1 reference ground circuit (HO2 sensor to splice): open circuit HO2 Sensor 1/1 failure
P0133	EMS OBD II	HO2 Sensor sense circuit slow response – bank 1, upstream (1/1)	Heated oxygen sensors monitor drive cycle – page 4	2	N	None	Engine misfire HO2 Sensor 1/1 disconnected HO2 Sensor 1/1 mechanical damage HO2 Sensor 1/1 to PCM wiring: intermittent open circuit HO2 Sensor 1/1 to PCM sensing circuit: short circuit to high voltage HO2 Sensor 1/1 short circuit to ground HO2 Sensor 1/1 reference ground circuit (HO2 sensor to splice): open circuit HO2 Sensor 1/1 heater circuit fault Exhaust leak Low exhaust temperature Injector flow partially restricted Catalyst efficiency decrease HO2 Sensor 1/1 failure
P0135	EMS OBD II	HO2 Sensor heater circuit malfunction – bank 1, upstream (1/1)	KOEO – page 3, or KOER – page 3, or Heated oxygen sensors monitor drive cycle – page 4	2	N	None	HO2 Sensor 1/1 disconnected HO2 Sensor 1/1 heater power supply: open circuit HO2 Sensor 1/1 heater to ECM wiring: short circuit or open circuit HO2 Sensor 1/1 heater failure
P0136	EMS OBD II	HO2 Sensor sense circuit malfunction – bank 1, downstream (1/2)	Heated oxygen sensors monitor drive cycle – page 4	2	N	None	HO2 Sensor 1/2 to PCM sensing circuit: open circuit, high resistance, short circuit to ground or high voltage HO2 Sensor 1/2 failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	POSSIBLE CAUSES
P0138	EMS OBD II	HO2 Sensor sense circuit high voltage – bank 1, downstream (1/2)	KOER – page 3, or Heated oxygen sensors monitor drive cycle – page 4	2	N	None	HO2 Sensor 1/2 to PCM sensing circuit: short circuit to high voltage HO2 Sensor 1/2 reference ground circuit (HO2 sensor to splice): open circuit HO2 Sensor 1/2 failure
P0141	EMS OBD II	HO2 Sensor heater circuit malfunction – bank 1, downstream (1/2)	KOEO – page 3, or KOER – page 3, or Heated oxygen sensors monitor drive cycle – page 4	2	N	None	HO2 Sensor 1/2 disconnected HO2 Sensor 1/2 heater power supply: open circuit HO2 Sensor 1/2 heater to ECM wiring: short circuit or open circuit HO2 Sensor 1/2 heater failure
P0151	EMS OBD II	HO2 Sensor sense circuit low voltage – bank 2, upstream (2/1)	Heated oxygen sensors monitor drive cycle – page 4	2	N	None	HO2 Sensor 2/1 disconnected HO2 Sensor 2/1 to PCM sensing circuit: open circuit HO2 Sensor 2/1 short circuit to ground HO2 Sensor 2/1 failure
P0152	EMS OBD II	HO2 Sensor sense circuit high voltage – bank 2, upstream (2/1)	KOER – page 3, or Heated oxygen sensors monitor drive cycle – page 4	2	N	None	HO2 Sensor 2/1 to PCM sensing circuit: short circuit to high voltage HO2 Sensor 2/1 reference ground circuit (HO2 sensor to splice): open circuit HO2 Sensor 2/1 failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	POSSIBLE CAUSES
P0153	EMS OBD II	HO2 Sensor sense circuit slow response – bank 2, upstream (2/1)	Heated oxygen sensors monitor drive cycle – page 4	2	N	None	Engine misfire HO2 Sensor 2/1 disconnected HO2 Sensor 2/1 mechanical damage HO2 Sensor 2/1 to PCM wiring: intermittent open circuit HO2 Sensor 2/1 to PCM sensing circuit: short circuit to high voltage HO2 Sensor 2/1 short circuit to ground HO2 Sensor 2/1 reference ground circuit (HO2 sensor to splice): open circuit HO2 Sensor 2/1 heater circuit fault Exhaust leak Low exhaust temperature Injector flow partially restricted Catalyst efficiency decrease HO2 Sensor 2/1 failure
P0155	EMS OBD II	HO2 Sensor heater circuit malfunction – bank 2, upstream (2/1)	KOEO – page 3, or KOER – page 3, or Heated oxygen sensors monitor drive cycle – page 4	2	N	None	HO2 Sensor 2/1 disconnected HO2 Sensor 2/1 heater power supply: open circuit HO2 Sensor 2/1 heater to ECM wiring: short circuit or open circuit HO2 Sensor 2/1 heater failure
P0156	EMS OBD II	HO2 Sensor sense circuit malfunction – bank 2, downstream (2/2)	Heated oxygen sensors monitor drive cycle – page 4	2	N	None	HO2 Sensor 2/2 to PCM sensing circuit: open circuit, high resistance, short circuit to ground or high voltage HO2 Sensor 2/2 failure
P0158	EMS OBD II	HO2 Sensor sense circuit high voltage – bank 2, downstream (2/2)	KOER – page 3, or Heated oxygen sensors monitor drive cycle – page 4	2	N	None	HO2 Sensor 2/2 to PCM sensing circuit: short circuit to high voltage HO2 Sensor 2/2 reference ground circuit (HO2 sensor to splice): open circuit HO2 Sensor 2/2 failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	POSSIBLE CAUSES
P0161	EMS OBD II	HO2 Sensor heater circuit malfunction – bank 2, downstream (2/2)	KOEO – page 3, or KOER – page 3, or Heated oxygen sensors monitor drive cycle – page 4	2	N	None	HO2 Sensor 2/2 disconnected HO2 Sensor 2/2 heater power supply: open circuit HO2 Sensor 2/2 heater to ECM wiring: short circuit or open circuit HO2 Sensor 2/2 heater failure
P0171	EMS OBD II	System too lean – bank 1	Adaptive fuel monitor drive cycle – page 4	2	N	None	Engine misfire Air intake leak between MAF Sensor and throttle Fuel filter, system restriction Fuel injector restriction Fuel pressure sensor failure (low fuel pressure) Low fuel pump output HO2 Sensor(s) (1/1, 1/2) harness wiring condition fault Exhaust leak (before catalyst) PCM receiving incorrect signal from one or more of the following components: ECT or CHT Sensor, MAF Sensor, IAT Sensor, IP Sensor, EFT Sensor, TP Sensor(s), TACM
P0172	EMS OBD II	System too rich – bank 1	Adaptive fuel monitor drive cycle – page 4	2	N	None	Restricted air filter Leaking fuel injector(s) Fuel pressure sensor failure (high fuel pressure) PCM receiving incorrect signal from one or more of the following components: ECT or CHT Sensor, MAF Sensor, IAT Sensor, IP Sensor, EFT Sensor, TP Sensor(s), TACM

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	POSSIBLE CAUSES
P0174	EMS OBD II	System too lean – bank 2	Adaptive fuel monitor drive cycle – page 4	2	N	None	Engine misfire Air intake leak between MAF Sensor and throttle Fuel filter, system restriction Fuel injector restriction Fuel pressure sensor failure (low fuel pressure) Low fuel pump output HO2 Sensor(s) (2/1, 2/2) harness wiring condition fault Exhaust leak (before catalyst) PCM receiving incorrect signal from one or more of the following components: ECT or CHT Sensor, MAF Sensor, IAT Sensor, IP Sensor, EFT Sensor, TP Sensor(s), TACM
P0175	EMS OBD II	System too rich – bank 2	Adaptive fuel monitor drive cycle – page 4	2	N	None	Restricted air filter Leaking fuel injector(s) Fuel pressure sensor failure (high fuel pressure) PCM receiving incorrect signal from one or more of the following components: ECT or CHT Sensor, MAF Sensor, IAT Sensor, IP Sensor, EFT Sensor, TP Sensor(s), TACM
P0180	EMS OBD II	EFT Sensor circuit malfunction	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor engine management drive cycle – page 7	2	N	None	EFT Sensor disconnected EFT Sensor to PCM sensing circuit: high resistance, open circuit, short circuit to ground or high voltage EFT Sensor failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	POSSIBLE CAUSES
P0190	EMS OBD II	IP Sensor circuit malfunction	Comprehensive component monitor engine management drive cycle – page 7	2	N	None	IP Sensor reference ground circuit (to splice): open circuit IP Sensor reference voltage circuit (to splice): open circuit IP Sensor to PCM sensing circuit: open circuit, high resistance, short circuit to ground or high voltage IP Sensor failure
P0192	EMS OBD II	IP Sensor sense circuit low voltage (low pressure)	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor engine management drive cycle – page 7	2	N	None	IP Sensor reference voltage circuit (to splice): open circuit IP Sensor to PCM sensing circuit: open circuit, high resistance, short circuit to ground IP Sensor failure
P0193	EMS OBD II	IP Sensor sense circuit high voltage (high pressure)	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor engine management drive cycle – page 7	2	N	None	IP Sensor reference ground circuit (to splice): open circuit IP Sensor to PCM sensing circuit: short circuit to high voltage IP Sensor failure
P0196	EMS OBD II	EOT Signal does not follow CHT / ECT signal	Comprehensive component monitor engine management drive cycle – page 7	2	N	PCM Default: – V6 CHT substituted – V8 ECT substituted	EOT Sensor to PCM sensing circuit: high resistance when hot EOT Sensor to PCM sensing circuit: intermittent high resistance EOT Sensor failure
P0201	EMS JAG	Fuel injector 1/1 circuit malfunction	Comprehensive component monitor engine management drive cycle – page 7	N	N	None	Injector disconnected Injector harness wiring: open or short circuit Injector failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	POSSIBLE CAUSES
P0202	EMS JAG	Fuel injector 1/2 circuit malfunction	Comprehensive component monitor engine management drive cycle – page 7	N	N	None	Injector disconnected Injector harness wiring: open or short circuit Injector failure
P0203	EMS JAG	Fuel injector 1/3 circuit malfunction	Comprehensive component monitor engine management drive cycle – page 7	N	N	None	Injector disconnected Injector harness wiring: open or short circuit Injector failure
P0204	EMS JAG	Fuel injector 1/4 circuit malfunction (V8) Fuel injector 2/1 circuit malfunction (V6)	Comprehensive component monitor engine management drive cycle – page 7	N	N	None	Injector disconnected Injector harness wiring: open or short circuit Injector failure
P0205	EMS JAG	Fuel injector 2/1 circuit malfunction (V8) Fuel injector 2/2 circuit malfunction (V6)	Comprehensive component monitor engine management drive cycle – page 7	N	N	None	Injector disconnected Injector harness wiring: open or short circuit Injector failure
P0206	EMS JAG	Fuel injector 2/2 circuit malfunction (V8) Fuel injector 2/3 circuit malfunction (V6)	Comprehensive component monitor engine management drive cycle – page 7	N	N	None	Injector disconnected Injector harness wiring: open or short circuit Injector failure
P0207	V8 EMS JAG	Fuel injector 2/3 circuit malfunction	Comprehensive component monitor engine management drive cycle – page 7	N	N	None	Injector disconnected Injector harness wiring: open or short circuit Injector failure
P0208	V8 EMS JAG	Fuel injector 2/4 circuit malfunction	Comprehensive component monitor engine management drive cycle – page 7	N	N	None	Injector disconnected Injector harness wiring: open or short circuit Injector failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	POSSIBLE CAUSES
P0222	EMS JAG	TP Sensor sense circuit low voltage – TP2	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor engine management drive cycle – page 7	N	A, M	None (as long as normal TP signals are received from remaining sensors)	TP Sensor to PCM sensing circuit * 2" (TP Sensor pin 1); open circuit or high resistance TP Sensor failure
P0223	EMS JAG	TP Sensor sense circuit high voltage – TP2	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor engine management drive cycle – page 7	N	A, M	None (as long as normal TP signals are received from remaining sensors)	TP Sensor to PCM sensing circuit * 2" (TP Sensor pin 1); short circuit to high voltage TP Sensor failure
P0224	EMS JAG	TP Sensor signal intermittent – TP2	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor engine management drive cycle – page 7	N	N	None (as long as normal TP signals are received from remaining sensors)	TP Sensor to PCM sensing circuit * 2" (TP Sensor pin 1) intermittent; open circuit, high resistance, short circuit to ground or high voltage TP Sensor failure
P0227	EMS JAG	TP Sensor sense circuit low voltage – TP3	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor engine management drive cycle – page 7	N	A, M	None (as long as normal TP signals are received from remaining sensors)	TP Sensor to PCM sensing circuit * 3" (TP Sensor pin 2); open circuit or high resistance TP Sensor failure
P0228	EMS JAG	TP Sensor sense circuit high voltage – TP3	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor engine management drive cycle – page 7	N	A, M	None (as long as normal TP signals are received from remaining sensors)	TP Sensor to PCM sensing circuit * 3" (TP Sensor pin 2); short circuit to high voltage TP Sensor failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	POSSIBLE CAUSES
P0229	EMS JAG	TP Sensor signal intermittent – TP3	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor engine management drive cycle – page 7	N	N	None (as long as normal TP signals are received from remaining sensors)	TP Sensor to PCM sensing circuit “ 3” (TP Sensor pin 2) intermittent: open circuit, high resistance, short circuit to ground or high voltage TP Sensor failure
P0300	EMS OBD II	Random misfire detected	Misfire monitor drive cycle – page 4	1 or 2 **	N	None	Cylinder compression low Worn camshaft / broken valve spring(s) Fuel delivery pressure (low / high) Fuel injector(s) restricted / leaking Fuel injector(s) continuously open Fuel contamination Fuel injector circuit fault(s) (Injector DTCs also flagged) Spark plug failure / fouled / incorrect gap PCM to ignition coil primary circuit fault (Cylinder misfire detected DTC also flagged) Ignition coil failure
P0301	EMS OBD II	Misfire detected – cylinder 1 (1/1)	Misfire monitor drive cycle – page 4	1 or 2 **	N	None	Refer to P0300 Possible Causes
P0302	EMS OBD II	Misfire detected – cylinder 2 (1/2)	Misfire monitor drive cycle – page 4	1 or 2 **	N	None	Refer to P0300 Possible Causes
P0303	EMS OBD II	Misfire detected – cylinder 3 (1/3)	Misfire monitor drive cycle – page 4	1 or 2 **	N	None	Refer to P0300 Possible Causes
P0304	EMS OBD II	Misfire detected – cylinder 4 (1/4 V8, 2/1 V6)	Misfire monitor drive cycle – page 4	1 or 2 **	N	None	Refer to P0300 Possible Causes

**If the misfire is severe enough to cause catalyst damage, the individual cylinder DTC will be flagged immediately and the CHECK ENGINE MIL will flash.

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	POSSIBLE CAUSES
P0305	EMS OBD II	Misfire detected – cylinder 5 (2/1 V8, 2/2 V6)	Misfire monitor drive cycle – page 4	1 or 2 **	N	None	Refer to P0300 Possible Causes
P0306	EMS OBD II	Misfire detected – cylinder 6 (2/2 V8, 2/3 V6)	Misfire monitor drive cycle – page 4	1 or 2 **	N	None	Refer to P0300 Possible Causes
P0307	V8 EMS OBD II	Misfire detected – cylinder 7 (2/3 V8)	Misfire monitor drive cycle – page 4	1 or 2 **	N	None	Refer to P0300 Possible Causes
P0308	V8 EMS OBD II	Misfire detected – cylinder 8 (2/4 V8)	Misfire monitor drive cycle – page 4	1 or 2 **	N	None	Refer to P0300 Possible Causes
P0320	EMS OBD II	CKP Sensor circuit malfunction	Comprehensive component monitor engine management drive cycle – page 7	2	N	None (The engine will shut off)	CKP Sensor disconnected CKP Sensor gap incorrect CKP Sensor reluctor damaged teeth Foreign matter on CKP Sensor face – V8 Foreign matter on CKP Sensor (on drive plate) – V8 CKP Sensor sensing circuit: open circuit, high resistance, short circuit to ground or high voltage CKP Sensor failure
P0325	EMS OBD II	KS (knock sensor) circuit malfunction – bank 1 V8 – front (bank 2) V6	KOER – page 3, or Comprehensive component monitor engine management drive cycle – page 7	2	N	None	Poor sensor contact with the cylinder block KS to PCM sensing circuit (KS pin 2): open circuit, high resistance, short circuit to ground or high voltage KS to PCM reference ground circuit (KS pin 1): open circuit, high resistance, short circuit to high voltage KS failure

**If the misfire is severe enough to cause catalyst damage, the individual cylinder DTC will be flagged immediately and the CHECK ENGINE MIL will flash.

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	POSSIBLE CAUSES
P0330	EMS OBD II	KS (knock sensor) circuit malfunction – bank 2 V8 – rear (bank 1) V6	KOER – page 3, or Comprehensive component monitor engine management drive cycle – page 7	2	N	None	Poor sensor contact with the cylinder block KS to PCM sensing circuit (KS pin 2): open circuit, high resistance, short circuit to ground or high voltage KS to PCM reference ground circuit (KS pin 1): open circuit, high resistance, short circuit to high voltage KS failure
P0340	EMS OBD II	CMP Sensor circuit malfunction – bank 1	Comprehensive component monitor engine management drive cycle – page 7	2	N	PCM Default: – VVT inhibited (Decreased engine performance)	Bank 1 CMP Sensor disconnected Bank 1 CMP Sensor gap incorrect / foreign matter on sensor face Bank 1 CMP Sensor sensing circuit: open circuit, short circuit to ground, short circuit to high voltage Bank 1 CMP Sensor reference ground circuit (to splice): open circuit Bank 1 CMP Sensor failure
P0341	EMS OBD II	CMP Sensor circuit malfunction – bank 2	Comprehensive component monitor engine management drive cycle – page 7	2	N	PCM Default: – VVT inhibited (Decreased engine performance)	Bank 2 CMP Sensor disconnected Bank 2 CMP Sensor gap incorrect / foreign matter on sensor face Bank 2 CMP Sensor sensing circuit: open circuit, short circuit to ground, short circuit to high voltage Bank 2 CMP Sensor reference ground circuit (to splice): open circuit Bank 2 CMP Sensor failure
P0350	EMS OBD II	Ignition coil primary circuit malfunction – undetermined cylinder identification	Comprehensive component monitor engine management drive cycle – page 7	2	N	None	Ignition coils power supply: open circuit, short circuit Ignition suppression capacitor(s) failure Incorrect CKP Sensor air gap

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	POSSIBLE CAUSES
P0351	EMS OBD II	Ignition coil primary circuit malfunction – cylinder 1/1	Comprehensive component monitor engine management drive cycle – page 7	2	N	None	Ignition coil disconnected PCM to ignition coil primary circuit: open circuit, high resistance, short circuit to ground Ignition coil failure (If other individual ignition coil primary circuit DTCs are flagged, refer to P0350 Possible Causes)
P0352	EMS OBD II	Ignition coil primary circuit malfunction – cylinder 1/2	Comprehensive component monitor engine management drive cycle – page 7	2	N	None	Refer to P0531 Possible Causes
P0353	EMS OBD II	Ignition coil primary circuit malfunction – cylinder 1/3	Comprehensive component monitor engine management drive cycle – page 7	2	N	None	Refer to P0531 Possible Causes
P0354	EMS OBD II	Ignition coil primary circuit malfunction – V6 cylinder 2/1; V8 cylinder 1/4	Comprehensive component monitor engine management drive cycle – page 7	2	N	None	Refer to P0531 Possible Causes
P0355	EMS OBD II	Ignition coil primary circuit malfunction – V6 cylinder 2/2; V8 cylinder 2/1	Comprehensive component monitor engine management drive cycle – page 7	2	N	None	Refer to P0531 Possible Causes
P0356	EMS OBD II	Ignition coil primary circuit malfunction – V6 cylinder 2/3; V8 cylinder 2/2	Comprehensive component monitor engine management drive cycle – page 7	2	N	None	Refer to P0531 Possible Causes
P0357	V8 EMS OBD II	Ignition coil primary circuit malfunction – V8 cylinder 2/3	Comprehensive component monitor engine management drive cycle – page 7	2	N	None	Refer to P0531 Possible Causes
P0358	V8 EMS OBD II	Ignition coil primary circuit malfunction – V8 cylinder 2/4	Comprehensive component monitor engine management drive cycle – page 7	2	N	None	Refer to P0531 Possible Causes

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	POSSIBLE CAUSES
P0420	EMS OBD II	Catalytic converter system efficiency below threshold – bank 1	Catalyst efficiency monitor drive cycle – page 5	2	N	None	Bank 1 HO2 sensor(s) disconnected Bank 1 HO2 sensor(s) to PCM wiring fault Bank 1 HO2 sensor(s) heater to PCM wiring fault Bank 1 HO2 sensor(s) heater failure Bank 1 upstream HO2 sensor failure Bank 1 downstream HO2 sensor failure Bank 1 catalyst failure
P0430	EMS OBD II	Catalytic converter system efficiency below threshold – bank 2	Catalyst efficiency monitor drive cycle – page 5	2	N	None	Bank 2 HO2 sensor(s) disconnected Bank 2 HO2 sensor(s) to PCM wiring fault Bank 2 HO2 sensor(s) heater to PCM wiring fault Bank 2 HO2 sensor(s) heater failure Bank 2 upstream HO2 sensor failure Bank 2 downstream HO2 sensor failure Bank 2 catalyst failure
P0442	EMS OBD II	EVAP Control system leak detected – small leak (1 mm; 0.040 in.)	Evaporative system monitor drive cycle – page 6	2	N	None	Fuel cap seal defective EVAP system leak (canister damage, pipework damage) EVAP Canister purge valve to PCM drive circuit: open circuit, short circuit, high resistance EVAP Canister purge valve power supply circuit: open circuit EVAP Canister purge valve to engine purge pipe damaged / restricted / leaking EVAP Canister purge valve operating vacuum hose leak / restriction EVAP Canister purge failure Fuel tank leak

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	POSSIBLE CAUSES
P0443	EMS OBD II	EVAP Canister purge valve circuit malfunction	KOEO – page 3, or KOER – page 3, or Evaporative system monitor drive cycle – page 6	2	N	None	EVAP Canister purge valve to PCM drive circuit: open circuit, short circuit, high resistance EVAP Canister purge valve power supply circuit: open circuit EVAP Canister purge valve failure
P0451	EMS OBD II	FTP Sensor range / performance	Evaporative system monitor drive cycle – page 6	2	N	None	FTP Sensor disconnected FTP Sensor to PCM sensing circuit: open circuit, short circuit to ground, short circuit to B+ voltage FTP Sensor to PCM reference voltage circuit: open circuit or short circuit to ground FTP Sensor to PCM wiring (supply, sense, reference ground): short circuit to each other FTP Sensor failure
P0452	EMS OBD II	FTP Sensor circuit low voltage (low pressure)	KOEO – page 3, or KOER – page 3, or Evaporative system monitor drive cycle – page 6	2	N	None	FTP Sensor disconnected FTP Sensor to PCM sensing circuit: open circuit or short circuit to ground FTP Sensor to PCM reference voltage circuit: open circuit or short circuit to ground FTP Sensor failure
P0453	EMS OBD II	FTP Sensor circuit high voltage (high pressure)	KOEO – page 3, or KOER – page 3, or Evaporative system monitor drive cycle – page 6	2	N	None	FTP Sensor to PCM wiring (supply, sense, reference ground): short circuit to each other FTP Sensor to PCM sense circuit: short circuit to high voltage FTP Sensor to PCM reference ground circuit: open circuit FTP Sensor failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	POSSIBLE CAUSES
P0455	EMS OBD II	EVAP Control system control – leak detected: major leak	Evaporative system monitor drive cycle – page 6	2	N	None	Fuel cap off Fuel cap seal defective Fuel tank over filled EVAP system leak (canister damage, pipework damage) EVAP Canister purge valve to PCM drive circuit: open circuit, short circuit, high resistance EVAP Canister purge valve power supply circuit: open circuit EVAP Canister purge valve to engine purge pipe damaged / restricted / leaking EVAP Canister purge valve operating vacuum hose leak / restriction EVAP Canister purge failure FTP Sensor not responding to pressure changes (restricted / failure) Fuel tank leak
P0456	EMS OBD II	EVAP Control system control – leak detected: very small leak (0.5 mm; 0.020 in.)	Evaporative system monitor drive cycle – page 6	2	N	None	Fuel cap seal defective EVAP system leak (canister damage, pipework damage) EVAP Canister purge valve to PCM drive circuit: open circuit, short circuit, high resistance EVAP Canister purge valve power supply circuit: open circuit EVAP Canister purge valve to engine purge pipe damaged / restricted / leaking EVAP Canister purge valve operating vacuum hose leak / restriction EVAP Canister purge failure Fuel tank leak

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	POSSIBLE CAUSES
P0460	EMS JAG	Fuel level sensor(s) circuit malfunction	KOEO – page 3, or KOER – page 3, or Evaporative system monitor drive cycle – page 6	N	N	None	Fuel level sensor(s) to RECM sense circuits: open circuit, high resistance, short circuit RECM / PCM SCP communication fault (U Code flagged) Fuel level sensor(s) failure
P0500	ABS/TC JAG	Vehicle speed circuit malfunction	Engine running; vehicle in motion	N	N	None	Rear wheel speed sensor(s) circuit(s): open circuit, high resistance, short circuit Rear wheel speed sensor(s) failure Front wheel speed sensor(s) circuit(s): open circuit, high resistance, short circuit Front wheel speed sensor(s) failure Instrument pack malfunction SCP Failure (code U1039 flagged)
P0503	TRANS JAG	Vehicle speed circuit – electrical noise	Engine running; vehicle in motion	N	N	None	Wheel speed sensor(s) circuit(s) electrical noise Instrument pack malfunction SCP Failure (code U1039 flagged)
P0505	EMS JAG	Idle air control malfunction	KOER – page 3, or Comprehensive component monitor engine management drive cycle – page 7	N	N	None	Engine air filter restricted / defective Engine air intake restricted / damaged PCM / TACM circuit fault TACM failure Throttle failure
P0602	PCM JAG	PCM Programming error	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor engine management drive cycle – page 7	N	N	None	PCM failure
P0603	PCM JAG	PCM Keep alive memory (KAM) test error	KOEO – page 3	N	N	None	PCM failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	POSSIBLE CAUSES
P0605	PCM JAG	PCM Read only memory (ROM) test error	KOEO – page 3	N	N	None	PCM failure
P0703	EMS JAG	Brake ON / OFF switch circuit malfunction	KOER – page 3, or Engine running: operate brake pedal	N	M, S	PCM Default: – Speed control inhibited	Brake switch to PCM signal circuit: open circuit, high resistance, short circuit Brake switch power supply circuit: open circuit, short circuit Brake switch signal circuit (gearshift interlock, ABS/TC, stop lamps): open circuit, short circuit Brake switch failure
P0705	TRANS OBD II	Range sensor circuit malfunction (sensor transmitting an invalid code)	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor transmission drive cycle – page 8	2	A, M	PCM Defaults to DRIVE (to maintain all five gears) J Gate gear selected illumination extinguished (Harsh shifts)	Range sensor incorrect alignment Gear selector cable incorrectly adjusted Range sensor circuit: intermittent open circuit: open circuit Range sensor failure
P0708	TRANS OBD II	Range sensor circuit open circuit	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor transmission drive cycle – page 8	2	A, M	PCM Defaults to DRIVE (to maintain all five gears) J Gate gear selected illumination extinguished (Harsh shifts)	Range sensor circuit open circuit Range sensor disconnected Range sensor failure
P0712	TRANS JAG	TFT Sensor sense circuit low voltage (high fluid temperature)	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor transmission drive cycle – page 8	N	A, M, T	PCM Default: – TFT calculated from ECT (V8) / CHT (V6) ABS/TCCM, DSCCM Default: – traction control inhibited (Firm shifts)	TFT Sensor sense circuit short circuit to ground TFT Sensor failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	POSSIBLE CAUSES
P0713	TRANS JAG	TFT Sensor sense circuit high voltage (low fluid temperature)	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor transmission drive cycle – page 8	N	A, M, T	PCM Default: – TFT calculated from ECT (V8) / CHT (V6) ABS/TCCM, DSCCM Default: – traction control inhibited (Firm shifts)	TFT Sensor sense circuit: open circuit, high resistance, short circuit to high voltage TFT Sensor failure
P0715	TRANS OBD II	Turbine speed sensor circuit malfunction	KOER – page 3, or Comprehensive component monitor transmission drive cycle – page 8	2	A, M	PCM Default: – Speed calculated from output speed sensor (Harsh TCC shifts)	Turbine speed sensor circuit: short circuit, high resistance, open circuit Turbine speed sensor failure
P0717	TRANS JAG	Turbine speed sensor sense circuit – no signal	KOER – page 3, or Comprehensive component monitor transmission drive cycle – page 8	N	A, M	PCM Default: – Speed calculated from output speed sensor (Harsh TCC shifts)	Turbine speed sensor sense circuit: open circuit Turbine speed sensor failure
P0718	TRANS JAG	Turbine speed sensor sense circuit – electrical noise	Comprehensive component monitor transmission drive cycle – page 8	N	A, M	PCM Default: – Speed calculated from output speed sensor (Harsh TCC shifts)	Turbine speed sensor sense circuit: short circuit, open circuit
P0720	TRANS OBD II	Output speed sensor circuit malfunction	Comprehensive component monitor transmission drive cycle – page 8	2	A, M	PCM Default: – Speed calculated from SCP vehicle speed message	Output speed sensor circuit: short circuit, high resistance, open circuit Output speed sensor failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	POSSIBLE CAUSES
P0721	TRANS JAG	Output speed sensor sense circuit – electrical noise	Comprehensive component monitor transmission drive cycle – page 8	N	A, M, T	PCM Default: – Speed calculated from SCP vehicle speed message ABS/TCCM, DSCCM Default: – traction control inhibited (Abnormal shift schedule)	Output speed sensor sense circuit: short circuit, open circuit
P0722	TRANS JAG	Output speed sensor sense circuit – intermittent signal	Comprehensive component monitor transmission drive cycle – page 8	N	A, M, T	PCM Default: – Speed calculated from SCP vehicle speed message ABS/TCCM, DSCCM Default: – traction control inhibited (Abnormal shift schedule)	Output speed sensor sense circuit intermittent: short circuit, high resistance, open circuit Output speed sensor failure
P0731	TRANS JAG	1st Gear ratio error	Comprehensive component monitor transmission drive cycle – page 8	N	A, M, T	PCM Default: – 1st Gear inhibited ABS/TCCM, DSCCM Default: – traction control inhibited	Shift solenoid circuit fault (shift solenoid DTC(s) also flagged) Pressure control solenoid circuit fault (pressure solenoid DTC(s) also flagged) Engine speed signal malfunction (CKP Sensor DTC(s) also flagged) Transmission mechanical failure
P0732	TRANS JAG	2nd Gear ratio error	Comprehensive component monitor transmission drive cycle – page 8	N	A, M, T	PCM Default: – 2nd Gear inhibited ABS/TCCM, DSCCM Default: – traction control inhibited	Shift solenoid circuit fault (shift solenoid DTC(s) also flagged) Pressure control solenoid circuit fault (pressure solenoid DTC(s) also flagged) Engine speed signal malfunction (CKP Sensor DTC(s) also flagged) Transmission mechanical failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	POSSIBLE CAUSES
P0733	TRANS JAG	3rd Gear ratio error	Comprehensive component monitor transmission drive cycle – page 8	N	A, M, T	PCM Default: – 3rd Gear inhibited ABS/TCCM, DSCCM Default: – traction control inhibited	Shift solenoid circuit fault (shift solenoid DTC(s) also flagged) Pressure control solenoid circuit fault (pressure solenoid DTC(s) also flagged) Engine speed signal malfunction (CKP Sensor DTC(s) also flagged) Transmission mechanical failure
P0734	TRANS JAG	4th Gear ratio error	Comprehensive component monitor transmission drive cycle – page 8	N	A, M, T	PCM Default: – 4th Gear inhibited ABS/TCCM, DSCCM Default: – traction control inhibited	Shift solenoid circuit fault (shift solenoid DTC(s) also flagged) Pressure control solenoid circuit fault (pressure solenoid DTC(s) also flagged) Engine speed signal malfunction (CKP Sensor DTC(s) also flagged) Transmission mechanical failure
P0735	TRANS JAG	5th Gear ratio error	Comprehensive component monitor transmission drive cycle – page 8	N	A, M, T	PCM Default: – 5th Gear inhibited ABS/TCCM, DSCCM Default: – traction control inhibited	Shift solenoid circuit fault (shift solenoid DTC(s) also flagged) Pressure control solenoid circuit fault (pressure solenoid DTC(s) also flagged) Engine speed signal malfunction (CKP Sensor DTC(s) also flagged) Transmission mechanical failure
P0741	TRANS JAG	TCC Slip detected	Comprehensive component monitor transmission drive cycle – page 8	N	A, M, T	Transmission will continue to attempt lock-up ABS/TCCM, DSCCM Default: – traction control inhibited	TCC solenoid circuit fault (TCC solenoid DTC(s) also flagged) Pressure control solenoid circuit fault (pressure solenoid DTC(s) also flagged) Transmission mechanical failure
P0743	TRANS OBD II	TCC Solenoid circuit malfunction	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor transmission drive cycle – page 8	2	A, M	PCM Default: – TCC Lock-up inhibited	TCC Drive circuit: open circuit; high resistance, short circuit to ground TCC solenoid failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	POSSIBLE CAUSES
P0745	TRANS OBD II	Pressure control solenoid 1 stuck	Comprehensive component monitor transmission drive cycle – page 8	2	A, M	PCM Default: – 1st, 2nd, 4th, 5th shift pattern	Pressure control solenoid 1 drive circuit: short circuit to ground; open circuit Pressure control solenoid 1 failure
P0750	TRANS OBD II	Shift solenoid 1 circuit malfunction	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor transmission drive cycle – page 8	2	A, M	PCM Default: – If short circuit to B+ V or open circuit – 3rd, 2nd, 3rd, 4th, 5th shift pattern – If short circuit to ground – 1st, 2nd, 3rd shift pattern (Harsh shifts)	Shift solenoid 1 drive circuit: short circuit to ground or B+ V; high resistance, open circuit Shift solenoid 1 failure
P0755	TRANS OBD II	Shift solenoid 2 circuit malfunction	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor transmission drive cycle – page 8	2	A, M	PCM Default: – If short circuit to B+ V or open circuit – 1st, 2nd, 4th, 5th shift pattern – If short circuit to ground – 3rd, 2nd, 3rd, 4th, 5th shift pattern (Harsh shifts)	Shift solenoid 2 drive circuit: short circuit to ground or B+ V; high resistance, open circuit Shift solenoid 2 failure
P0760	TRANS OBD II	Shift solenoid 3 circuit malfunction	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor transmission drive cycle – page 8	2	A, M	PCM Default: – If short circuit to B+ V or open circuit – 1st, 3rd, 4th, 5th shift pattern – If short circuit to ground – normal shift pattern (Harsh shifts)	Shift solenoid 3 drive circuit: short circuit to ground or B+ V; high resistance, open circuit Shift solenoid 3 failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	POSSIBLE CAUSES
P0765	TRANS JAG	Shift solenoid 4 circuit malfunction	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor transmission drive cycle – page 8	N	A, M	PCM Default: – DRIVE – normal shift pattern – Manual – 2, 3, 4 inhibited (Harsh shifts)	Shift solenoid 4 drive circuit: short circuit to ground or B+ V, high resistance, open circuit Shift solenoid 4 failure
P0775	TRANS OBD II	Pressure control solenoid 2 stuck	Comprehensive component monitor transmission drive cycle – page 8	2	A, M	PCM Default: – 1st, 1st, 3rd, 4th, 4th shift pattern	Pressure control solenoid 2 drive circuit: short circuit to ground; open circuit Pressure control solenoid 2 failure
P0779	TRANS JAG	Pressure control solenoid 2 drive circuit – intermittent low voltage	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor transmission drive cycle – page 8	N	A, M	PCM Default: – 1st, 1st, 3rd, 4th, 4th shift pattern	Pressure control solenoid 2 drive circuit: intermittent short circuit to ground
P0791	TRANS JAG	Intermediate speed sensor circuit	Comprehensive component monitor transmission drive cycle – page 8	N	A, M, T	PCM Default: – One-way clutch test inhibited ABS/TCCM, DSCCM Default: – traction control inhibited (Harsh shifts)	Intermediate speed sensor circuit: short circuit, high resistance, open circuit Intermediate speed sensor failure
P0794	TRANS JAG	Intermediate speed sensor sense circuit – intermittent signal	Comprehensive component monitor transmission drive cycle – page 8	N	A, M	PCM Default: – One-way clutch test inhibited (Harsh shifts)	Intermediate speed sensor sense circuit intermittent: short circuit, high resistance, open circuit Intermediate speed sensor failure
P0795	TRANS OBD II	Pressure control solenoid 3 stuck	Comprehensive component monitor transmission drive cycle – page 8	2	A, M	PCM Default: – 1st, 2nd, 3rd gears only	Pressure control solenoid 3 drive circuit: short circuit to ground, open circuit Pressure control solenoid 3 failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	POSSIBLE CAUSES
P0796	TRANS JAG	Pressure control solenoid 3 circuit – high voltage	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor transmission drive cycle – page 8	N	A, M, T	ABS/TCCM, DSCCM Default: – traction control inhibited (Harsh shifts)	Pressure control solenoid 3 drive circuit: short circuit to B+ V Pressure control solenoid 3 failure Transmission mechanical failure (other DTCs logged)
P0797	TRANS OBD II	Pressure control solenoid 3 circuit – low voltage	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor transmission drive cycle – page 8	2	A, M	PCM Default: – 1st, 2nd, 3rd gears only (Harsh shifts)	Pressure control solenoid 3 drive circuit: short circuit to ground Pressure control solenoid 3 failure Transmission mechanical failure (other DTCs logged)
P0799	TRANS JAG	Pressure control solenoid 3 drive circuit – intermittent low voltage	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor transmission drive cycle – page 8	N	A, M	PCM Default: – 1st, 2nd, 3rd gears only	Pressure control solenoid 3 drive circuit: intermittent short circuit to ground
P0814	TRANS JAG	J Gate illumination circuit failure – gear selected	Comprehensive component monitor transmission drive cycle – page 8	N	N	None	PCM / J Gate illumination circuit(s): short circuit, open circuit (PCM pins FH1-7, 8, 9)
P0840	TRANS JAG	Transmission pressure switch circuit malfunction	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor transmission drive cycle – page 8	N	A, M	PCM Default: – Manual 2nd, 3rd inhibited	Pressure switch to PCM signal circuit: short circuit, high resistance, open circuit Pressure switch transmission internal circuit: short circuit, high resistance, open circuit Pressure switch failure
P1000	PCM JAG	OBD System checks not complete since last memory clear	KOEO – page 3, or KOER – page 3, or Drive vehicle	N	N	None	Refer to page 3

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	POSSIBLE CAUSES
P1001	PCM JAG	KOER not complete	KOER – page 3	N	N	None	Refer to page 3
P1100	EMS JAG	MAF Sensor signal intermittent	Comprehensive component monitor engine management drive cycle – page 7	N	N	None	MAF Sensor to PCM sensing circuit intermittent: open circuit, high resistance, short circuit MAF Sensor supply circuit intermittent: open circuit or short circuit MAF Sensor failure
P1101	EMS JAG	MAF Sensor out of self test range	KOEO – page 3, or KOER – page 3	N	N	None	MAF Sensor to PCM sensing circuit: open circuit, high resistance, short circuit MAF Sensor supply circuit: open circuit or short circuit MAF Sensor failure
P1112	EMS JAG	IAT Sensor signal intermittent	Comprehensive component monitor engine management drive cycle – page 7	N	N	PCM Default: – IAT default value 38 °C (100 °F)	IAT Sensor to PCM sensing circuit intermittent: open circuit, high resistance, short circuit IAT Sensor reference ground circuit (to splice): intermittent open circuit IAT Sensor failure
P1116	V8 EMS JAG	ECT Sensor out of self test range	KOEO – page 3, or KOER – page 3	N	N	PCM Default: – ECT default value 102 °C (215 °F)	IAT Sensor to PCM sensing circuit: open circuit, high resistance, short circuit IAT Sensor reference ground circuit (to splice): open circuit IAT Sensor failure
P1117	EMS JAG	ECT / CHT Sensor signal intermittent	Comprehensive component monitor engine management drive cycle – page 7	N	N	PCM Default: – ECT / CHT default value 102 °C (215 °F)	ECT / CHT Sensor to PCM sensing circuit intermittent: open circuit, high resistance, short circuit ECT / CHT Sensor reference ground circuit (to splice): intermittent open circuit ECT / CHT Sensor failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	POSSIBLE CAUSES
P1121	EMS OBD II	TP Sensor signals inconsistent with MAF Sensor signals	Comprehensive component monitor engine management drive cycle – page 7	2	N	None (as long as normal TP signals are received)	TP Sensors to PCM wiring harness fault MAF Sensor to PCM wiring harness fault TP Sensor(s) failure MAF Sensor failure
P1122	EMS JAG	APP Sensor circuit low voltage – APP1	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor engine management drive cycle – page 7	N	A, M	None (as long as normal APP signals are received from remaining sensors)	APP Sensor to PCM sensing circuit * 1* (sensor pin 5): open circuit or high resistance APP Sensor reference voltage (sensor pin 10): open circuit APP Sensor failure
P1123	EMS JAG	APP Sensor circuit high voltage – APP1	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor engine management drive cycle – page 7	N	A, M	None (as long as normal APP signals are received from remaining sensors)	APP Sensor to PCM sensing circuit * 1* (sensor pin 5): short circuit to high voltage APP Sensor reference ground (sensor pin 9): open circuit APP Sensor failure
P1124	EMS JAG	TP Sensor out of self test range	KOEO – page 3, or KOER – page 3, or	N	N	None (as long as normal TP signals are received)	Accelerator pedal depressed during self test One or more individual TP Sensors to PCM sensing circuits: open circuit, high resistance, short circuit to ground or high voltage TP Sensor failure
P1125	EMS JAG	TP Sensor signal intermittent	Comprehensive component monitor engine management drive cycle – page 7	N	N	None	One or more individual TP Sensors to PCM sensing circuits: open circuit, high resistance, short circuit to ground or high voltage TP Sensor failure
P1127	EMS JAG	Exhaust not warm enough; downstream HO2 Sensors not tested	KOER – page 3, or Heated oxygen sensors monitor drive cycle – page 4	N	N	None	Engine not at normal operating temperature Exhaust system leak / failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	POSSIBLE CAUSES
P1128	EMS JAG	Upstream HO2 Sensors swapped from bank to bank	KOER – page 3, or Heated oxygen sensors monitor drive cycle – page 4	N	N	None	Upstream HO2 Sensors swapped from bank to bank Upstream HO2 Sensors to PCM wiring fault
P1129	EMS JAG	Downstream HO2 Sensors swapped from bank to bank	KOER – page 3, or Heated oxygen sensors monitor drive cycle – page 4	N	N	None	Downstream HO2 Sensors swapped from bank to bank Downstream HO2 Sensors to PCM wiring fault
P1130	EMS OBD II	Lack of HO2 Sensor swing, adaptive fuel at limit – bank 1, upstream (1/1)	Heated oxygen sensors monitor drive cycle – page 4	2	N	None	HO2 Sensor 1/1 disconnected HO2 Sensor 1/1 to PCM wiring fault Engine induction air leak between MAF Sensor and throttle Exhaust system leak Contaminated fuel Fuel in engine oil Engine misfire HO2 Sensor 1/1 failure Fuel injection fault PCM Keep alive memory (KAM) error
P1131	EMS OBD II	Lack of HO2 Sensor swing, sensor indicates lean – bank 1, upstream (1/1)	KOER – page 3, or Heated oxygen sensors monitor drive cycle – page 4	2	N	None	HO2 Sensor 1/1 to PCM wiring fault Engine induction air leak between MAF Sensor and throttle Exhaust system leak HO2 Sensor 1/1 failure Fuel injection fault PCM Keep alive memory (KAM) error

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	POSSIBLE CAUSES
P1132	EMS OBD II	Lack of HO2 Sensor swing, sensor indicates rich – bank 1, upstream (1/1)	KOER – page 3, or Heated oxygen sensors monitor drive cycle – page 4	2	N	None	HO2 Sensor 1/1 to PCM wiring fault Exhaust system restriction Contaminated fuel Fuel in engine oil HO2 Sensor 1/1 failure Fuel injection fault PCM Keep alive memory (KAM) error
P1133	EMS OBD II	Bank 1 fuel metering control shifted lean	Comprehensive component monitor engine management drive cycle – page 7	2	N	None	Temporary contamination of HO2 Sensor 1/1 causing "lean drift" Temporary contamination of HO2 Sensor 1/2 causing "rich drift" Engine misfire HO2 Sensors 1/1 and 1/2 to PCM wiring fault(s) Engine induction air leak between MAF Sensor and throttle Exhaust system leak Water in bank 1 spark plug well(s) HO2 Sensors 1/1 and/or 1/2 failure
P1134	EMS OBD II	Bank 1 fuel metering control shifted rich	Comprehensive component monitor engine management drive cycle – page 7	2	N	None	Temporary contamination of HO2 Sensor 1/1 causing "rich drift" Temporary contamination of HO2 Sensor 1/2 causing "lean drift" Engine misfire HO2 Sensors 1/1 and 1/2 to PCM wiring fault(s) Exhaust system restriction Water in bank 1 spark plug well(s) HO2 Sensors 1/1 and/or 1/2 failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	POSSIBLE CAUSES
P1135	EMS JAG	APP Sensor signal intermittent – APP1	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor engine management drive cycle – page 7	N	N	None (as long as normal APP signals are received from remaining sensors)	APP Sensor to PCM sensing circuit * 1* (sensor pin 5): intermittent: open circuit, high resistance, short circuit APP Sensor reference voltage (sensor pin 10): intermittent open circuit APP Sensor reference ground (sensor pin 9): intermittent open circuit APP Sensor failure
P1137	EMS JAG	Lack of HO2 Sensor swing, sensor indicates lean – bank 1, downstream (1/2)	KOER – page 3, or Heated oxygen sensors monitor drive cycle – page 4	N	N	None	HO2 Sensor 1/2 to PCM wiring fault HO2 Sensor 1/2 failure
P1138	EMS JAG	Lack of HO2 Sensor swing, sensor indicates rich – bank 1, downstream (1/2)	KOER – page 3, or Heated oxygen sensors monitor drive cycle – page 4	N	N	None	HO2 Sensor 1/2 to PCM wiring fault HO2 Sensor 1/2 failure
P1150	EMS OBD II	Lack of HO2 Sensor swing, adaptive fuel at limit – bank 2, upstream (2/1)	Heated oxygen sensors monitor drive cycle – page 4	2	N	None	HO2 Sensor 2/1 disconnected HO2 Sensor 2/1 to PCM wiring fault Engine induction air leak between MAF Sensor and throttle Exhaust system leak Contaminated fuel Fuel in engine oil Engine misfire HO2 Sensor 1/1 failure Fuel injection fault PCM Keep alive memory (KAM) error

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	POSSIBLE CAUSES
P1151	EMS OBD II	Lack of HO2 Sensor swing, sensor indicates lean – bank 2, upstream (2/1)	KOER – page 3, or Heated oxygen sensors monitor drive cycle – page 4	2	N	None	HO2 Sensor 2/1 to PCM wiring fault Engine induction air leak between MAF Sensor and throttle Exhaust system leak HO2 Sensor 2/1 failure Fuel injection fault PCM Keep alive memory (KAM) error
P1152	EMS OBD II	Lack of HO2 Sensor swing, sensor indicates rich – bank 2, upstream (2/1)	KOER – page 3, or Heated oxygen sensors monitor drive cycle – page 4	2	N	None	HO2 Sensor 2/1 to PCM wiring fault Exhaust system restriction Contaminated fuel Fuel in engine oil HO2 Sensor 2/1 failure Fuel injection fault PCM Keep alive memory (KAM) error
P1153	EMS OBD II	Bank 2 fuel metering control shifted lean	Comprehensive component monitor engine management drive cycle – page 7	2	N	None	Temporary contamination of HO2 Sensor 2/1 causing "lean drift" Temporary contamination of HO2 Sensor 2/2 causing "rich drift" Engine misfire HO2 Sensors 2/1 and 2/2 to PCM wiring fault(s) Engine induction air leak between MAF Sensor and throttle Exhaust system leak Water in bank 2 spark plug well(s) HO2 Sensors 2/1 and/or 2/2 failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	POSSIBLE CAUSES
P1154	EMS OBD II	Bank 2 fuel metering control shifted rich	Comprehensive component monitor engine management drive cycle – page 7	2	N	None	Temporary contamination of HO2 Sensor 2/1 causing "rich drift" Temporary contamination of HO2 Sensor 2/2 causing "lean drift" Engine misfire HO2 Sensors 2/1 and 2/2 to PCM wiring fault(s) Exhaust system restriction Water in bank 2 spark plug well(s) HO2 Sensors 2/1 and/or 2/2 failure
P1157	EMS JAG	Lack of HO2 Sensor swing, sensor indicates lean – bank 2, downstream (2/2)	KOER – page 3, or Heated oxygen sensors monitor drive cycle – page 4	N	N	None	HO2 Sensor 2/2 to PCM wiring fault HO2 Sensor 2/2 failure
P1158	EMS JAG	Lack of HO2 Sensor swing, sensor indicates rich – bank 2, downstream (2/2)	KOER – page 3, or Heated oxygen sensors monitor drive cycle – page 4	N	N	None	HO2 Sensor 2/2 to PCM wiring fault HO2 Sensor 2/2 failure
P1183	EMS OBD II	EOT Sensor circuit malfunction	Comprehensive component monitor engine management drive cycle – page 7	2	N	PCM Default: – V6 CHT substituted – V8 ECT substituted	EOT Sensor to PCM sensing circuit: open circuit, high resistance, short circuit EOT Sensor reference ground circuit (to splice): open circuit EOT Sensor failure
P1184	EMS JAG	EOT Sensor out of self test range	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor engine management drive cycle – page 7	N	N	PCM Default: – V6 CHT substituted – V8 ECT substituted	EOT Sensor to PCM sensing circuit: high resistance when hot EOT Sensor to PCM sensing circuit: intermittent high resistance EOT Sensor failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	POSSIBLE CAUSES
P1214	EMS JAG	APP Sensor signal intermittent – APP2	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor engine management drive cycle – page 7	N	N	None (as long as normal APP signals are received from remaining sensors)	APP Sensor to PCM sensing circuit * 2* (sensor pin 4) intermittent: open circuit, high resistance, short circuit APP Sensor reference voltage (sensor pin 8): intermittent open circuit APP Sensor reference ground (sensor pin 6): intermittent open circuit APP Sensor failure
P1215	EMS JAG	APP Sensor circuit low voltage – APP3	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor engine management drive cycle – page 7	N	A, M	None (as long as normal APP signals are received from remaining sensors)	APP Sensor to PCM sensing circuit * 3* (sensor pin 7): open circuit or high resistance APP Sensor reference voltage (sensor pin 3): open circuit APP Sensor failure
P1216	EMS JAG	APP Sensor circuit high voltage – APP3	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor engine management drive cycle – page 7	N	A, M	None (as long as normal APP signals are received from remaining sensors)	APP Sensor to PCM sensing circuit * 1* (sensor pin 7): short circuit to high voltage APP Sensor reference ground (sensor pin 2) open circuit APP Sensor failure
P1217	EMS JAG	APP Sensor signal intermittent – APP3	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor engine management drive cycle – page 7	N	N	None (as long as normal APP signals are received from remaining sensors)	APP Sensor to PCM sensing circuit * 3* (sensor pin 7) intermittent: open circuit, high resistance, short circuit APP Sensor reference voltage (sensor pin 3): intermittent open circuit APP Sensor reference ground (sensor pin 2): intermittent open circuit APP Sensor failure
P1222	EMS JAG	APP Sensor circuit low voltage – APP2	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor engine management drive cycle – page 7	N	A, M	None (as long as normal APP signals are received from remaining sensors)	APP Sensor to PCM sensing circuit * 2* (sensor pin 4): open circuit or high resistance APP Sensor reference voltage (sensor pin 8): open circuit APP Sensor failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	POSSIBLE CAUSES
P1223	EMS JAG	APP Sensor circuit high voltage – APP2	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor engine management drive cycle – page 7	N	A, M	None (as long as normal APP signals are received from remaining sensors)	APP Sensor to PCM sensing circuit * 2* (sensor pin 4): short circuit to high voltage APP Sensor reference ground (sensor pin 6): open circuit APP Sensor failure
P1233	EMS JAG	Fuel delivery system disabled or inoperative	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor engine management drive cycle – page 7	N	N	None (Engine shut off)	PCM to RECM fuel pump drive signal circuit (PCM pin FH1-58): open circuit, high resistance, short circuit RECM to fuel pump drive circuit: open circuit, high resistance, short circuit Fuel pump relay power supply: open circuit, short circuit Fuel pump relay to RECM power supply circuit: open circuit Fuel pump relay failure
P1235	EMS JAG	Fuel pump control out of range	KOER – page 3, or Comprehensive component monitor engine management drive cycle – page 7	N	N	None (Engine running too rich / lean)	PCM to RECM fuel pump drive signal circuit (PCM pin FH1-58) intermittent: open circuit, high resistance, short circuit RECM to fuel pump drive circuit intermittent: open circuit, high resistance, short circuit
P1237	EMS JAG	Fuel pump secondary circuit malfunction	KOER – page 3, or Comprehensive component monitor engine management drive cycle – page 7	N	N	None (Engine shut off)	RECM to fuel pump drive circuit: open circuit, high resistance, short circuit Fuel pump relay power supply: open circuit, short circuit Fuel pump relay to RECM power supply circuit: open circuit Fuel pump relay failure
P1246	EMS JAG	Generator load input to PCM failure	KOER – page 3	N	M, C	None	Accessory drive belt failure PCM to generator load circuit (PCM pin PI1-50): open circuit, high resistance, short circuit Generator failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	POSSIBLE CAUSES
P1260	EMS JAG	Vehicle theft detected – engine disabled (PCM SCP input from PATS, INST, GECCM)	KOEO – page 3	N	N	None	Invalid ignition key code Passive anti-theft system (PATS) signal to instrument pack missing or corrupted PATS SCP message failure
P1285	V6 EMS OBD II	Cylinder head over temperature sensed	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor engine management drive cycle – page 7	2	M, H	PCM Default: – fail-safe cooling strategy	Coolant level low / leak Coolant contaminated Cooling system thermostat defective Excessive load on engine – high elevation, steep grade, trailer towing
P1288	V6 EMS JAG	CHT Sensor out of self test range	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor engine management drive cycle – page 7	N	N	PCM Default: – CHT default value 102 °C (215 °F)	Engine not at normal operating temperature Engine overheat condition – refer to P1285 CHT Sensor disconnected CHT Sensor to PCM circuit fault PCM cooling fan circuit failure Cooling fan module to fan motor circuit failure Cooling fan module failure
P1289	V6 EMS OBD II	CHT Sensor sense circuit high voltage (low temperature)	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor engine management drive cycle – page 7	2	N	PCM Default: – CHT default value 102 °C (215 °F)	CHT Sensor to cylinder head poor contact CHT Sensor to PCM sensing circuit: high resistance, open circuit or short circuit to high voltage CHT Sensor failure
P1290	V6 EMS OBD II	CHT Sensor sense circuit low voltage (high temperature)	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor engine management drive cycle – page 7	2	N	PCM Default: – CHT default value 102 °C (215 °F)	Engine overheat condition – refer to P1285 CHT Sensor to PCM wiring: short circuit to ground CHT Sensor failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	POSSIBLE CAUSES
P1299	V6 EMS OBD II	Fail-safe cooling mode active	Comprehensive component monitor engine management drive cycle – page 7	1	M, H	PCM Default: – fail-safe cooling strategy	Engine overheat condition – refer to P1285 PCM cooling fan circuit failure Cooling fan module to fan motor circuit failure Cooling fan module failure
P1309	EMS OBD II	Misfire monitor failure	Misfire monitor drive cycle – page 4	2	N	None	CKP Sensor fault – refer to P0320 CMP Sensor(s) fault – refer to P0340, P0341 PCM failure
P1380	EMS OBD II	VVT Solenoid circuit malfunction – bank 1	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor engine management drive cycle – page 7	2	N	None	Bank 1 VVT solenoid valve disconnected Bank 1 VVT solenoid valve to PCM PWM drive circuit fault Bank 1 VVT solenoid valve power supply circuit fault Bank 1 VVT solenoid failure
P1381	EMS OBD II	VVT Over advanced – bank 1	KOER – page 3, or Comprehensive component monitor engine management drive cycle – page 7	2	N	None	Bank 1 VVT solenoid valve to PCM PWM drive circuit fault Bank 1 VVT actuator oil supply fault Bank 1 VVT actuator stuck
P1383	EMS OBD II	VVT Over retarded – bank 1	KOER – page 3, or Comprehensive component monitor engine management drive cycle – page 7	2	N	None	Bank 1 VVT solenoid valve to PCM PWM drive circuit fault Bank 1 VVT actuator oil supply fault Bank 1 VVT actuator stuck
P1385	EMS OBD II	VVT Solenoid circuit malfunction – bank 2	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor engine management drive cycle – page 7	2	N	None	Bank 2 VVT solenoid valve disconnected Bank 2 VVT solenoid valve to PCM PWM drive circuit fault Bank 2 VVT solenoid valve power supply circuit fault Bank 2 VVT solenoid failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	POSSIBLE CAUSES
P1386	EMS OBD II	VVT Over advanced – bank 2	KOER – page 3, or Comprehensive component monitor engine management drive cycle – page 7	2	N	None	Bank 2 VVT solenoid valve to PCM PWM drive circuit fault Bank 2 VVT actuator oil supply fault Bank 2 VVT actuator stuck
P1388	EMS OBD II	VVT Over retarded – bank 2	KOER – page 3, or Comprehensive component monitor engine management drive cycle – page 7	2	N	None	Bank 2 VVT solenoid valve to PCM PWM drive circuit fault Bank 2 VVT actuator oil supply fault Bank 2 VVT actuator stuck
P1450	EMS OBD II	System unable to bleed-up fuel tank vacuum	Evaporative system monitor drive cycle – page 6	2	N	None	Restricted vapor piping – fuel tank to EVAP canister purge valve EVAP Canister purge valve stuck open
P1451	EMS OBD II	EVAP Canister close valve circuit malfunction	KOEO – page 3, or KOER – page 3, or Evaporative system monitor drive cycle – page 6	2	N	None	EVAP Canister close valve to PCM drive circuit: open circuit, high resistance, short circuit EVAP Canister close valve power supply circuit: open circuit, short circuit EVAP Canister close valve failure
P1460	EMS JAG	A/C compressor cut-out malfunction	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor engine management drive cycle – page 7	N	N	None (PCM inhibits A/C clutch engagement during: engine cranking, wide open throttle, throttle limp home mode)	PCM to A/C compressor clutch relay circuit: open circuit, short circuit A/C compressor clutch relay to A/C compressor circuit: open circuit, short circuit A/C compressor clutch relay failure A/C compressor clutch ground circuit: open circuit A/C compressor clutch failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	POSSIBLE CAUSES
P1461	EMS JAG	A/C Pressure sensor high voltage (high pressure)	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor engine management drive cycle – page 7	N	N	None	A/C Pressure sensor to PCM wiring (supply, sense, reference ground): short circuit to each other A/C Pressure sensor to PCM sensing circuit: short circuit to high voltage A/C Pressure sensor failure
P1462	EMS JAG	A/C Pressure sensor low voltage (low pressure)	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor engine management drive cycle – page 7	N	N	None	A/C Pressure sensor to PCM sensing circuit: open circuit or short circuit to ground A/C Pressure sensor to PCM reference voltage circuit: open circuit or short circuit to ground A/C Pressure sensor to PCM reference ground circuit: open circuit A/C Pressure sensor failure
P1464	EMS JAG	A/C Pressure sensor out of self test range	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor engine management drive cycle – page 7	N	N	None	A/C Pressure sensor to PCM wiring fault A/C Pressure sensor failure
P1474	EMS JAG	Radiator cooling fan control circuit malfunction	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor engine management drive cycle – page 7	N	N	None	PCM to cooling fan module circuit: open circuit, high resistance, short circuit Cooling fan module failure
P1500	ABS/TC JAG	Vehicle speed circuit intermittent malfunction	Engine running: vehicle in motion	N	N	None	Rear wheel speed sensor(s) circuit(s) intermittent: open circuit, high resistance, short circuit Front wheel speed sensor(s) circuit(s) intermittent: open circuit, high resistance, short circuit

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	POSSIBLE CAUSES
P1501	ABS/TC JAG	Vehicle speed out of self test range	KOER – page 3	N	N	None	Vehicle speed above 8 km/h (5 mph) preventing KOER self test from completing
P1506	EMS OBD II	Idle air control over speed error	KOER – page 3, or Comprehensive component monitor engine management drive cycle – page 7	2	N	None	Intake manifold air leak PCM / TACM circuit fault TACM failure Throttle failure
P1507	EMS OBD II	Idle air control under speed error	KOER – page 3, or Comprehensive component monitor engine management drive cycle – page 7	2	N	None	Engine air filter restricted / defective Engine air intake restricted / damaged PCM / TACM circuit fault TACM failure Throttle failure
P1532	V6 EMS JAG	IMT Valve control circuit malfunction – top valve	KOEO – page 3, or Comprehensive component monitor engine management drive cycle – page 7	N	N	None	IMT Valve (top) disconnected IMT Valve (top) to PCM drive circuit fault IMT Valve (top) power supply circuit fault IMT Valve (top) failure
P1534	EMS JAG	Air bag(s) deployed (Restraints control module (RCM) input to PCM) circuit malfunction	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor engine management drive cycle – page 7	N	A, M	None	PCM to RCM airbag deployed circuit: open circuit, high resistance, short circuit to ground RCM fault
P1549	V6 EMS JAG	IMT Valve control circuit malfunction – bottom valve	KOEO – page 3, or Comprehensive component monitor engine management drive cycle – page 7	N	N	None	IMT Valve (bottom) disconnected IMT Valve (bottom) to PCM drive circuit fault IMT Valve (bottom) power supply circuit fault IMT Valve (bottom) failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	POSSIBLE CAUSES
P1565	EMS JAG	Speed control command switch input (steering wheel switches) out of range – high voltage	Drive vehicle; operate all speed control steering wheel switches	N	M, S	PCM Default: – speed control inhibited	Speed control steering wheel switches to PCM signal circuit (PCM pin FH1-57): short circuit to B+ V Speed control steering wheel switch(es) failure
P1566	EMS JAG	Speed control command switch input (steering wheel switches) out of range – low voltage	Drive vehicle; operate all speed control steering wheel switches	N	M, S	PCM Default: – speed control inhibited	Speed control steering wheel switches to PCM wiring: open circuit, high resistance, short circuit to ground Speed control steering wheel switch(es) failure
P1572	EMS OBD II	Brake cancel switch out of self test range	Ignition ON; operate brake pedal	2	M, S	PCM Default: – speed control inhibited	Brake cancel switch to PCM signal circuit: open circuit, high resistance, short circuit Brake cancel switch power supply circuit: open circuit, short circuit Brake cancel switch failure
P1573	EMS OBD II	TP Sensor signals malfunction – more than one signal failure	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor engine management drive cycle – page 7	2	R, M	Throttle limp home mode: – high idle speed – no accelerator pedal response	TP Sensor to PCM sensing circuits (sensor pins 1, 2, 10): open circuit, high resistance, short circuit TP Sensor to PCM reference voltage circuits (sensor pins 4, 3): open circuit, high resistance, short circuit TP Sensor to PCM reference ground circuits (sensor pins 6, 7): open circuit, high resistance, short circuit TP Sensor failure
P1574	EMS JAG	TP Sensor signals disagree – one signal failure	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor engine management drive cycle – page 7	N	A, M	None (as long as normal signals are received from the remaining two sensors)	Refer to P1573 Possible Causes

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	POSSIBLE CAUSES
P1576	EMS OBD II	APP Sensor signals malfunction – more than one signal failure	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor engine management drive cycle – page 7	2	R, M	Throttle limp home mode: – high idle speed – no accelerator pedal response	APP Sensor to PCM sensing circuits (sensor pins 4, 5, 7): open circuit, high resistance, short circuit APP Sensor to PCM reference voltage circuits (sensor pins 3, 8, 10): open circuit, high resistance, short circuit APP Sensor to PCM reference ground circuits (sensor pins 2, 6, 9): open circuit, high resistance, short circuit APP Sensor failure
P1577	EMS JAG	APP Sensor signals disagree – one signal failure	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor engine management drive cycle – page 7	N	A, M	None (as long as normal signals are received from the remaining two sensors)	Refer to P1576 Possible Causes
P1580	EMS OBD II	Internal throttle monitor PCM override (Electronic throttle system failure)	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor engine management drive cycle – page 7	2	R, M	Throttle limp home mode: – high idle speed – no accelerator pedal response (Engine may stop if fuel injection is canceled)	TP Sensor circuit fault – TP Sensor DTC(s) flagged Throttle circuit fault – throttle DTC(s) flagged Uneven throttle valve movement due to debris on throttle valve and/or shaft (Test for smooth actuation by moving the throttle valve by hand while the ignition is switched OFF.) PCM Failure
P1581	EMS JAG	PCM Throttle monitor malfunction	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor engine management drive cycle – page 7	N	A, M	PCM Default: – cruise control inhibited – possible engine disable	PCM Failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	POSSIBLE CAUSES
P1582	EMS JAG	Throttle data recorder data available	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor engine management drive cycle – page 7	N	N	None	Vehicle impact To reuse PCM: 100 Ignition key cycles, then Clear DTC using PDU / WDS, or Additional 40 ignition key cycles
P1584	EMS OBD II	Throttle actuation malfunction	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor engine management drive cycle – page 7	2	A, M	PCM Default: Failure Mode #1: TACM operates in open loop control. (Engine may stall and throttle response will be harsh.) Failure Mode #2: TACM operates in normal closed loop mode but with reduced torque output. (Engine may stall.)	Throttle Body failure
P1585	EMS OBD II	TACM self test failure (Electronic throttle system failure)	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor engine management drive cycle – page 7	2	R, M	PCM Default: – engine will stop, or possibly run at very low idle speed	TACM Failure (Throttle Body failure)
P1586	EMS OBD II	TACM to PCM communication (SCP) failure	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor engine management drive cycle – page 7	2	A, M	PCM Default: – engine will stop, or possibly run at very low idle speed	TACM power supply or ground circuits: open circuit, high resistance SCP circuit fault – U Code flagged TACM Failure (Throttle Body failure)

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	POSSIBLE CAUSES
P1587	EMS OBD II	PCM to TACM throttle command redundancy circuit malfunction	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor engine management drive cycle – page 7	2	A, R*, M	If only one command circuit fails: None If both command circuits fail: Throttle limp home mode – high idle speed – no accelerator pedal response R* If both command circuits fail	PCM to TACM redundant control circuits (TACM pins 2, 3): open circuit, high resistance, short circuit TACM Failure (Throttle Body failure) PCM Failure
P1588	EMS JAG	Throttle return spring failure detected	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor engine management drive cycle – page 7	N	A, M	Throttle limp home mode	Throttle body failure
P1589	EMS OBD II	TACM unable to control throttle valve to commanded throttle angle	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor engine management drive cycle – page 7	2	R, M	PCM Default: – engine will stop, or possibly run at very low idle speed	Throttle valve stuck due to obstruction Throttle body failure
P1633	PCM OBD II	Keep alive memory (KAM) voltage too low	Drive vehicle	1	N	None	Vehicle battery voltage low Battery power supply to PCM interrupted for longer than 20 seconds during engine operation
P1635	EMS JAG	Wheel / axle ratio out of acceptable range	Drive vehicle	N	N	None	Incorrect size tire(s) fitted to vehicle Incorrect size wheel(s) fitted to vehicle
P1636	PCM OBD II	PCM Internal communication error	Comprehensive component monitor engine management drive cycle – page 7	2	N	PCM Default: – self test partially inhibited	PCM Failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	POSSIBLE CAUSES
P1650	EMS JAG	PSP Switch out of self test range	KOEO – page 3, or KOER – page 3	N	N	None	PSP switch to PCM signal circuit: open circuit, high resistance, short circuit PSP switch reference ground circuit (to splice): open circuit PSP switch failure
P1700	TRANS OBD II	Transmission intermediate failure	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor transmission drive cycle – page 8	2	N	PCM Default: – 2nd and 5th gears only	Clear DTC 1700 Diagnose and repair other flagged DTCs Conduct drive cycle – if P1700 reflags: transmission mechanical failure (direct one- way clutch)
P1702	TRANS JAG	Range sensor circuit intermittent malfunction	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor transmission drive cycle – page 8	N	N	PCM Defaults to DRIVE (to maintain all five gears) J Gate gear selected illumination extinguished (Harsh shifts)	Gear selector cable incorrectly adjusted Range sensor circuit intermittent: open circuit or short circuit Range sensor failure
P1704	TRANS JAG	Range sensor circuit not indicating P / N during self test	KOEO – page 3, or KOER – page 3	N	T	ABS/TCCM, DSCCM Default: – traction control inhibited	Selector not in P / N Range sensor incorrect alignment Gear selector cable incorrectly adjusted Gear selector mechanical failure Range sensor failure
P1705	TRANS JAG	Range sensor out of self test range	KOEO – page 3, or KOER – page 3	N	N	None	Range sensor incorrect alignment Gear selector cable incorrectly adjusted Gear selector mechanical failure Range sensor failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	POSSIBLE CAUSES
P1711	TRANS JAG	TFT Out of self test range	KOEO – page 3, or KOER – page 3	N	T	ABS/TCCM, DSCCM Default: – traction control inhibited	Transmission not at normal operating temperature TFT Sense circuit: short circuit, high resistance, open circuit TFT Sensor failure
P1713	TRANS JAG	TFT Signal – no change at low range during vehicle operation	Comprehensive component monitor transmission drive cycle – page 8	N	T	PCM Default: – TFT calculated from ECT (V8) / CHT (V6) ABS/TCCM, DSCCM Default: – traction control inhibited	TFT Sensor circuit: high resistance, open circuit TFT Sensor failure
P1714	TRANS OBD II	Shift solenoid 1 stuck – mechanical failure	Comprehensive component monitor transmission drive cycle – page 8	2	A, M	PCM Default: – 1st, 2nd, 3rd shift pattern or – 3rd, 2nd, 3rd, 4th, 5th shift pattern (Shift pattern depends on position of stuck solenoid)	Shift solenoid 1 mechanical failure
P1715	TRANS OBD II	Shift solenoid 2 stuck – mechanical failure	Comprehensive component monitor transmission drive cycle – page 8	2	A, M	PCM Default: – 1st, 2nd, 4th, 5th shift pattern or – 3rd, 2nd, 3rd, 4th, 5th shift pattern (Shift pattern depends on position of stuck solenoid)	Shift solenoid 2 mechanical failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	POSSIBLE CAUSES
P1716	TRANS OBD II	Shift solenoid 3 stuck – mechanical failure	Comprehensive component monitor transmission drive cycle – page 8	2	A, M	PCM Default: – 1st, 1st, 3rd, 4th, 5th shift pattern or – normal shift pattern (Shift pattern depends on position of stuck solenoid)	Shift solenoid 3 mechanical failure
P1717	TRANS JAG	Shift solenoid 4 stuck – mechanical failure	Comprehensive component monitor transmission drive cycle – page 8	N	A, M	PCM Default: – DRIVE – normal shift pattern – Manual – 2, 3, 4 inhibited	Shift solenoid 4 mechanical failure
P1718	TRANS JAG	TFT Signal – no change at high range during vehicle operation	Comprehensive component monitor transmission drive cycle – page 8	N	T	PCM Default: – TFT calculated from ECT (V8) / CHT (V6) ABS/TCCM, DSCCM Default: – traction control inhibited	TFT Sensor circuit short circuit TFT Sensor failure
P1740	TRANS OBD II	TCC solenoid stuck – mechanical failure	Comprehensive component monitor transmission drive cycle – page 8	2	A, M	None (TCC applied / released depending on position of stuck solenoid)	TCC solenoid mechanical failure
P1746	TRANS JAG	Pressure control solenoid 1 circuit low voltage	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor transmission drive cycle – page 8	N	A, M, T	PCM Default: – normal shift pattern (Harsh shifts)	Pressure control solenoid 1 drive circuit: short circuit to ground Pressure control solenoid 1 failure Transmission mechanical failure (other DTCs logged)

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	POSSIBLE CAUSES
P1747	TRANS OBD II	Pressure control solenoid 1 circuit high voltage	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor transmission drive cycle – page 8	2	A, M	PCM Default: – 1st, 2nd, 4th, 5th shift pattern (Harsh shifts)	Pressure control solenoid 1 drive circuit: short circuit to B+ V; open circuit Pressure control solenoid 1 failure Transmission mechanical failure (other DTCs logged)
P1760	TRANS JAG	Pressure control solenoid 1 drive circuit intermittent low voltage	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor transmission drive cycle – page 8	N	A, M	PCM Default: – 1st, 2nd, 4th, 5th shift pattern	Pressure control solenoid 1 drive circuit: intermittent short circuit to ground
P1780	TRANS OBD II	D – 4th switch out of self test range	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor transmission drive cycle – page 8	2	A, M	PCM Default: – Manual 4th inhibited	D – 4th Switch power supply open circuit D – 4th Switch / PCM sense circuit: short circuit, high resistance, open circuit D – 4th Switch failure
P1783	TRANS JAG	Transmission over temperature condition indicated – >127 °C (270 °F)	Comprehensive component monitor transmission drive cycle – page 8	N	T	PCM Default: – TCC Lock-up in all gears ABS/TCCM, DSCCM Default: – traction control inhibited	Excessive vehicle load Transmission fluid level low Transmission fluid contaminated Transmission fluid cooler failure (clogged) TFT Sensor fault – refer to P0712
P1788	TRANS JAG	Pressure control solenoid 2 circuit high voltage	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor transmission drive cycle – page 8	N	T	PCM Default: – normal shift pattern ABS/TCCM, DSCCM Default: – traction control inhibited (Harsh shifts)	Pressure control solenoid 2 drive circuit: short circuit to B+ V; open circuit Pressure control solenoid 2 failure Transmission mechanical failure (other DTCs logged)

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	POSSIBLE CAUSES
P1789	TRANS OBD II	Pressure control solenoid 2 drive circuit low voltage	KOEO – page 3, or KOER – page 3, or Comprehensive component monitor transmission drive cycle – page 8	2	A, M	PCM Default: – 1st, 1st, 3rd, 4th, 4th shift pattern (Harsh shifts)	Pressure control solenoid 2 drive circuit: short circuit to ground Pressure control solenoid 2 failure Transmission mechanical failure (other DTCs logged)