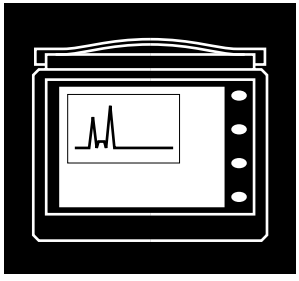
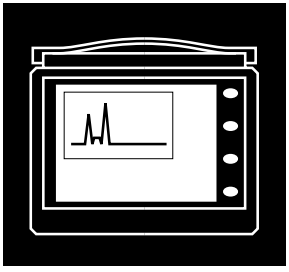


DTC Summaries

Jaguar XJ Range

Use the bookmarks at left to access the required DTC Summary.

JAGUAR



Powertrain DTC Summaries – OBD II

Jaguar XJ V8 N/A and V8 SC 2004 Model Year

Refer to pages 2 – 10 for important information regarding the use of "Powertrain DTC Summaries".

REFERENCE: It is recommended that the applicable "Electrical Guide" be referenced when using the information contained in this document.

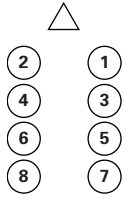
Reissued: May, 2003

KEY TO COLUMN HEADINGS

DTC	Diagnostic Trouble Code.
SYS	The powertrain system with which the DTC is associated – EMS (ALL SYSTEMS), V8 SC EMS, TRANS, 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 WDS. JAG – indicates that the DTC is not an OBD II code and is accessed only via WDS.
FAULT DESCRIPTION	Fault description.
MONITORING CONDITIONS	"DIAGNOSTIC MONITOR DRIVE CYCLE" for the particular DTC. Operate the vehicle as described to check for a recurrence of the DTC. Refer to pages 4 – 8. Use WDS Datalogger or Scan Tool to monitor specified engine parameter(s).
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". Refer to page 3 for definition of OBD "TRIP". N NO – indicates that the CHECK ENGINE MIL is not activated.
OTHER	Driver Warnings: N = None. R = RED MIL (warning lamp) plus Message Center message. A = AMBER MIL (warning lamp) plus Message Center message. C = Charge indicator.
DEFAULT ACTION	Control Module default action: Logged – DTC stored in ECM memory buffer; Flagged – DTC stored in ECM memory / CHECK ENGINE MIL activated.
CM PIN	ECM (system – Engine Management System) / TCM (system – Transmission) connector pin number(s).
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.

CYLINDER NUMBERING

Engine cylinder numbering is as follows:



OBD SYSTEM READINESS – ENGINE MANAGEMENT

If DTC P1000 is flagged after DTCs have been cleared, all engine management OBD diagnostic monitor drive cycles HAVE NOT BEEN COMPLETED.

If DTC P1111 is flagged after DTCs have been cleared, all engine management OBD diagnostic monitor drive cycles HAVE BEEN COMPLETED.

OBD SYSTEM READINESS – TRANSMISSION

Use WDS Datalogger "TOTAL NUMBER OF DTC SET" to determine if transmission OBD monitoring has been completed.

OBD "TRIPS"

The OBD system defines 1 TRIP as an ignition cycle (ignition key OFF; wait 30 seconds; ignition key ON) plus a minimum engine coolant temperature increase of 22 ˚C (40 ˚F) after which, the engine coolant temperature has to reach a minimum of 71 ˚C (160 ˚F).

OBD DIAGNOSTIC MONITORS

The Engine Management and Transmission Control systems are continuously checked during vehicle operation by the Engine Control Module (ECM) and Transmission Control Module (TCM) on-board diagnostic (OBD) facilities. Powertrain OBD incorporates seven 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 seven diagnostic monitors are as follows:

- Heated Oxygen Sensors Monitor
- Adaptive Fuel Monitor
- Misfire Monitor
- Catalyst Efficiency Monitor
- Evaporative System Monitor
- Exhaust Gas Recirculation 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

Upstream (Universal) oxygen sensors:

1 Engine OFF; cooling fans inoperative >20 seconds.

2 Start engine and bring to normal operating temperature >82 ˚C (180 ˚F).

3 Drive the vehicle between 3000 – 4000 rpm in 3rd gear at a steady speed. Lift foot completely off accelerator and coast to a stop within 30 seconds. Do not touch accelerator pedal for 4 seconds after coming to a stop.

4 Repeat Step 3.

5 Idle engine for 11 minutes.

Downstream oxygen sensors:

1 Start engine and bring to normal operating temperature >82 ˚C (180 ˚F).

2 Drive the vehicle steadily between 48 – 97 km/h (30 – 60 mph) for 10 minutes.

3 Drive the vehicle above 3000 rpm in 3rd gear at a steady speed. Lift foot completely off accelerator and coast for 30 seconds.

Oxygen sensor heaters:

1 Start engine and bring to normal operating temperature >82 ˚C (180 ˚F).

2 Idle engine for 3 minutes.

ADAPTIVE FUEL MONITOR DRIVE CYCLE

1 Start engine and bring to normal operating temperature >82 ˚C (180 ˚F).

2 Idle for a minimum of 10 minutes.

MISFIRE MONITOR DRIVE CYCLE

1 Record flagged DTC (s) and accompanying WDS DTC Monitor freeze frame(s) data.

2 Fuel level >25%.

3 Start the engine at a coolant temperature lower than the recorded freeze frame value (from Step 1).

4 Drive the vehicle to the recorded freeze frame conditions for 4 minutes. If CHECK ENGINE MIL flashes, lower the engine speed until the flashing stops.

Note regarding misfire monitor DTCs:

If, on the first trip, the misfire is severe enough to cause excess exhaust emission, the individual cylinder DTC plus DTC P1316 will be logged. The CHECK ENGINE MIL will not be activated. If the fault recurs on the second trip, the individual cylinder DTC plus DTC P1316 will be flagged, and the CHECK ENGINE MIL will be activated.

If, on the first trip, the misfire is severe enough to cause catalyst damage (more severe than excess exhaust emission), the CHECK ENGINE MIL will flash while the fault is present and the individual cylinder DTC plus DTC P1313 (bank 1), DTC P1314 (bank 2) will be logged. When the fault is no longer present the MIL will be deactivated. If the fault recurs on the second trip, the CHECK ENGINE MIL will flash while the fault is present and the individual cylinder DTC plus DTC P1313 (bank 1), DTC P1314 (bank 2) will be flagged. When the fault is no longer present the CHECK ENGINE MIL will be activated.

CATALYST EFFICIENCY MONITOR DRIVE CYCLE

1 Start engine and bring to normal operating temperature >75 ˚C (167 ˚F).

2 With the gear selector in Park or Neutral, hold the engine speed at 2500 rpm for 5 minutes.

3 Drive vehicle ensuring that vehicle speed exceeds 15 km/h (10 mph) and the engine speed exceeds 1500 rpm.

4 Stop the vehicle and check for any temporary DTCs using WDS.

EVAPORATIVE SYSTEM MONITOR DRIVE CYCLE (OBD II ONLY)

1 Ensure that fuel filler cap is fully closed (minimum three clicks, clockwise).

2 Fuel level >30% and <85%.

3 Using WDS, perform ECM DTC Clear (even if no DTCs are flagged).

4 Drive vehicle for a minimum of 2 minutes, and until engine is at normal operating temperature.

5 Using WDS, ensure that the EVAP Canister Purge Valve is operating by observing "PURGE VAPOR MANAGEMENT VALVE – DUTY CYCLE". If the valve is not active, ECM adaptions have not been learned. Conduct a "green ECM" Drive Cycle as described in Technical Service Bulletin.

6 Drive vehicle to the road where the EVAP System Drive Cycle will be conducted. Stop vehicle and switch OFF the ignition. Leave ignition OFF for 30 seconds, then restart the engine.

7 Accelerate briskly to 80 km/h (50 mph) ensuring that the engine speed reaches a minimum of 3500 rpm for a minimum of 5 seconds.

8 (0.040 inch EVAP Test) View WDS "PURGE VAPOR MANAGEMENT VALVE – DUTY CYCLE", "CANISTER CLOSE VALVE – VAPOR RECOVERY SYSTEM", and FUEL TANK PRESSURE – VAPOR RECOVERY SYSTEM". Avoiding high engine loads, drive the vehicle steadily between 65 km/h (40 mph) and 100 km/h (60 mph). Avoid driving conditions that will produce excessive fuel movement. WDS should give an indication that the test is active (it may take up to 30 minutes before the test will initialize). When the test has initialized (EVAP Canister Close Valve CLOSED), it will take approximately 90 seconds for the test to complete.

9 (0.020 inch EVAP Test) Continue driving vehicle as explained in Step 8 for an additional 10 minutes.

10 Gently coast the vehicle to a stop. Allow the engine to idle for 2 minutes and view WDS "PURGE VAPOR MANAGEMENT VALVE – DUTY CYCLE", "CANISTER CLOSE VALVE – VAPOR RECOVERY SYSTEM", and FUEL TANK PRESSURE – VAPOR RECOVERY SYSTEM". WDS should give an indication that the test is active. When the test has initialized (EVAP Canister Close Valve CLOSED), it will take approximately 90 seconds for the test to complete.

11 If the 0.020 inch EVAP Test is not activated, the purge system vapor concentration may be too great. To reduce the vapor concentration proceed as follows:

12 Drive the vehicle for an additional 30 minutes avoiding driving conditions that will produce excessive fuel movement. Repeat Step 10. If the 0.020 inch EVAP Test is still not activated, repeat the Drive Cycle from Step 6.

13 Using WDS, check for and clear flagged DTCs.

EXHAUST GAS RECIRCULATION MONITOR DRIVE CYCLE

1 Start engine and bring to normal operating temperature >82 ˚C (180 ˚F).

2 Drive the vehicle in 3rd gear at 2500 rpm. Maintain a steady speed for 1 minute, then lift foot completely off accelerator and coast for a minimum of 10 seconds.

COMPREHENSIVE COMPONENT MONITOR ENGINE MANAGEMENT DRIVE CYCLE

To avoid unnecessary complexity, a single comprehensive engine management drive cycle has not been developed for the XJ. Refer to the individual DTC for specific drive cycle / monitoring conditions.

COMPREHENSIVE COMPONENT MONITOR TRANSMISSION DRIVE CYCLE

To avoid unnecessary complexity, a single comprehensive transmission drive cycle has not been developed for the XJ. Refer to the individual DTC for specific drive cycle / monitoring conditions.

CONTROL MODULE AND GENERAL ACRONYMS

AMP	Power Amplifier
ASCM	Adaptive Speed Control Module
ASM	Air Suspension Module
AUDIO	Audio Unit
CATS	Computer Active Suspension System
CCM	Climate Control Module
CPM	Cellular Phone Module
DDM	Driver Door Module
DSCM	Dynamic Stability Control Module
DSM	Driver Seat Module
ECM	Engine Control Module
FEM	Front Electronic Module
HLM	Headlamp Levelling Module
IC	Instrument Cluster
IS	Intrusion Sensor
JGM	J-Gate Module
MCP	Multimedia Control Panel
NCM	Navigation Control Module
PAM	Parking Aid Module
PATS	Passive Anti-Theft System
PBM	Parking Brake Module
RCCM	Rear Climate Control Module
RCM	Restraints Control Module
REM	Rear Electronic Module
RMM	Rear Memory Module
SCLM	Steering Column Lock Module
TCM	Transmission Control Module
VAM	Voice Activation Module
VICS	Vehicle Information Control System

POWERTRAIN CONTROL ACRONYMS

A/C	Air conditioning
APP Sensor	Accelerator Pedal Position Sensor
ASC	Adaptive Speed Control
B+	Battery Voltage
Bank 1	RH Engine cylinder bank (cylinders 1, 3, 5, 7) (A Bank)
Bank 2	LH Engine cylinder bank (cylinders 2, 4, 6, 8) (B Bank)
BARO Sensor	Barometric Pressure Sensor
CAN	Controller Area Network
CKP Sensor	Crankshaft Position Sensor
CMP Sensor 1	Camshaft Position Sensor – Bank 1
CMP Sensor 2	Camshaft Position Sensor – Bank 2
DLC	Data Link Connector
DSC	Dynamic Stability Control
ECM	Engine Control Module
ECT Sensor	Engine Coolant Temperature Sensor
EFT Sensor	Engine Fuel Temperature Sensor
EGR	Exhaust Gas Recirculation
EOT Sensor	Engine Oil Temperature Sensor
EVAP Canister Close Valve	Evaporative Emission Canister Close Valve
EVAP Canister Purge Valve	Evaporative Emission Canister Purge Valve
FTP Sensor	Fuel Tank Pressure Sensor
HO2 Sensor 1/1	Heated Oxygen Sensor – Bank 1 / Upstream
HO2 Sensor 1/2	Heated Oxygen Sensor – Bank 1 / Downstream
HO2 Sensor 2/1	Heated Oxygen Sensor – Bank 2 / Upstream
HO2 Sensor 2/2	Heated Oxygen Sensor – Bank 2 / Downstream
IAT Sensor	Intake Air Temperature Sensor
IC	Instrument Cluster
IMT Valve 1	Intake Manifold Tuning Valve: Bottom
IMT Valve 2	Intake Manifold Tuning Valve: Top
IP Sensor	Injection Pressure Sensor
KS 1	Knock Sensor – Bank 1
KS 2	Knock Sensor – Bank 2
MAF Sensor	Mass Air Flow Sensor
MAP Sensor	Manifold Absolute Pressure Sensor
N/A	Normally Aspirated
SC	Supercharged
TCC	Torque converter clutch
TCM	Transmission Control Module
TFT Sensor	Transmission Fluid Temperature Sensor
TP Sensor	Throttle Position Sensor
V6	V6 Engine
V8	V8 Engine
VVT Solenoid Valve 1	Variable Valve Timing Solenoid Valve – Bank 1
VVT Solenoid Valve 2	Variable Valve Timing Solenoid Valve – Bank 2

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	CM PIN	POSSIBLE CAUSES
P0010	EMS OBD II	VVT circuit malfunction – bank 1	Idle engine 30 seconds Accelerate from stop through complete engine rpm range Coast to a stop Drive the vehicle steadily between 48 – 97 km/h (30 – 60 mph) for 5 minutes; coast to a stop Accelerate smoothly through complete accelerator pedal travel; coast to a stop Idle engine 30 seconds	2	N	ECM Default: – Bank 1 VVT hold current set at a constant value of 520 mA	PI1 –109	VVT solenoid valve disconnected VVT solenoid valve to ECM PWM drive circuit: open circuit, short circuit, high resistance VVT solenoid failure
P0020	EMS OBD II	VVT circuit malfunction – bank 2	Idle engine 30 seconds Accelerate from stop through complete engine rpm range; coast to a stop Drive the vehicle steadily between 48 – 97 km/h (30 – 60 mph) for 5 minutes; coast to a stop Accelerate smoothly through complete accelerator pedal travel; coast to a stop Idle engine 30 seconds	2	N	ECM Default: – Bank 2 VVT hold current set at a constant value of 520 mA	PI1 –110	VVT solenoid valve disconnected VVT solenoid valve to ECM PWM drive circuit: open circuit, short circuit, high resistance VVT solenoid failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	CM PIN	POSSIBLE CAUSES
P0031	EMS OBD II	HO2 Sensor heater control circuit low current – bank 1, upstream (1/1)	Heated oxygen sensors monitor drive cycle – page 5 (Oxygen sensor heaters)	2	N	ECM Default: – Bank 1 closed loop fuel metering and adaptive fuel metering inhibited – Canister purge inhibited – Bank 1 upstream HO2S heater control circuit switched off	PI1 –001 –002 –029 –030	HO2 Sensor 1/1 heater power supply circuit: open circuit HO2 Sensor 1/1 heater control circuit: open circuit, high resistance HO2 Sensor 1/1 heater ground circuit(s) fault (PI1–029, PI1–030) HO2 Sensor 1/1 heater failure
P0032	EMS OBD II	HO2 Sensor heater control circuit high current – bank 1, upstream (1/1)	Heated oxygen sensors monitor drive cycle – page 5 (Oxygen sensor heaters)	2	N	ECM Default: – Bank 1 closed loop fuel metering and adaptive fuel metering inhibited – Canister purge inhibited – Bank 1 upstream HO2S heater control circuit switched off	PI1 –001 –002 –029 –030	HO2 Sensor 1/1 heater control circuit: short circuit to ground HO2 Sensor 1/1 heater ground circuit(s) fault (PI1–029, PI1–030) HO2 Sensor 1/1 heater failure
P0037	EMS OBD II	HO2 Sensor heater control circuit low resistance – bank 1, downstream (1/2)	Heated oxygen sensors monitor drive cycle – page 5 (Oxygen sensor heaters)	2	N	None	PI1 –092	HO2 Sensor 1/2 heater control circuit: short circuit to ground HO2 Sensor 1/2 heater failure
P0038	EMS OBD II	HO2 Sensor heater control circuit high resistance – bank 1, downstream (1/2)	Heated oxygen sensors monitor drive cycle – page 5 (Oxygen sensor heaters)	2	N	None	PI1 –092	HO2 Sensor 1/2 heater control circuit: open circuit; high resistance HO2 Sensor 1/2 heater failure
P0051	EMS OBD II	HO2 Sensor heater control circuit low current – bank 2, upstream (2/1)	Heated oxygen sensors monitor drive cycle – page 5 (Oxygen sensor heaters)	2	N	ECM Default: – Bank 2 closed loop fuel metering and adaptive fuel metering inhibited – Canister purge inhibited – Bank 2 upstream HO2S heater control circuit switched off	PI1 –055 –056 –081 –082	HO2 Sensor 2/1 heater power supply circuit: open circuit HO2 Sensor 2/1 heater control circuit: open circuit, high resistance HO2 Sensor 2/1 heater ground circuit(s) fault (PI1–081, PI1–082) HO2 Sensor 2/1 heater failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	CM PIN	POSSIBLE CAUSES
P0052	EMS OBD II	HO2 Sensor heater control circuit high current – bank 2, upstream (2/1)	Heated oxygen sensors monitor drive cycle – page 5 (Oxygen sensor heaters)	2	N	ECM Default: – Bank 2 closed loop fuel metering and adaptive fuel metering inhibited – Canister purge inhibited – Bank 2 upstream HO2S heater control circuit switched off	PI1 –055 –056 –081 –082	HO2 Sensor 2/1 heater control circuit: short circuit to ground HO2 Sensor 2/1 heater ground circuit(s) fault (PI1–081, PI1–082) HO2 Sensor 2/1 heater failure
P0057	EMS OBD II	HO2 Sensor heater control circuit low resistance – bank 2, downstream (2/2)	Heated oxygen sensors monitor drive cycle – page 5 (Oxygen sensor heaters)	2	N	None	PI1 –093	HO2 Sensor 2/2 heater control circuit: short circuit to ground HO2 Sensor 2/2 heater failure
P0058	EMS OBD II	HO2 Sensor heater control circuit high resistance – bank 2, downstream (2/2)	Heated oxygen sensors monitor drive cycle – page 5 (Oxygen sensor heaters)	2	N	None	PI1 –093	HO2 Sensor 2/2 heater control circuit: open circuit; high resistance HO2 Sensor 2/2 heater failure
P0096	V8 SC EMS OBD II	IAT Sensor 2 circuit range / performance	Engine coolant temperature <40 ˚C (104 ˚F) Ambient temperature <40 ˚C (104 ˚F) Engine coolant temperature and ambient temperature within 10 ˚C (20 ˚F) of each other Start engine and drive above 1500 rpm at a steady speed for a minimum of 2 minutes	2	A	ECM Default: – Default value of 70 ˚C (158 ˚F) used	PI1 –072	IAT Sensor 2 disconnected IAT Sensor 2 to ECM sensing circuit: open circuit IAT Sensor 2 failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	CM PIN	POSSIBLE CAUSES
P0097	V8 SC EMS OBD II	IAT Sensor 2 circuit high voltage (low air temperature)	Ignition ON 10 seconds	2	A	ECM Default: – Default value of 70 ˚C (158 ˚F) used	PI1 –072	IAT Sensor 2 disconnected IAT Sensor 2 to ECM wiring: open circuit or high resistance IAT Sensor 2 to ECM sensing circuit: short circuit to B+ voltage IAT Sensor 2 failure
P0098	V8 SC EMS OBD II	IAT Sensor 2 circuit low voltage (high air temperature)	Ignition ON 10 seconds	2	A	ECM Default: – Default value of 70 ˚C (158 ˚F) used	PI1 –072	IAT Sensor 2 to ECM wiring: short circuit to ground IAT Sensor 2 failure
P0101	EMS OBD II	MAF Sensor circuit range / performance	Fuel level >25% Start engine and bring to normal operating temperature >82 ˚C (180 ˚F) Drive the vehicle steadily in 4th or 5th gear on a level road between 1200 – 1800 rpm; hold the engine speed constant for 40 seconds while maintaining a steady throttle	2	A	ECM Default: – Default air mass used – Adaptive fuel metering inhibited – Catalyst warm up ignition retard inhibited – Canister purge inhibited – Maximum engine speed reduced	PI1 –044	Blocked air cleaner Air intake leak Engine breather leak Throttle control malfunction MAF Sensor to ECM sensing circuit: high resistance, intermittent short circuit to ground MAF Sensor supply circuit: high resistance MAF Sensor failure Throttle adaption fault (check throttle position voltage at Ignition ON)

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	CM PIN	POSSIBLE CAUSES
P0102	EMS OBD II	MAF Sensor circuit low voltage	Ignition ON 10 seconds	2	A	ECM Default: – Default air mass used – Adaptive fuel metering inhibited – Catalyst warm up ignition retard inhibited – Canister purge inhibited – Maximum engine speed reduced	PI1 –044	Blocked air cleaner Air intake leak between MAF Sensor and throttle MAF Sensor to ECM sensing circuit: high resistance, open circuit, intermittent short circuit to ground MAF Sensor supply circuit: open circuit, short circuit to ground MAF Sensor failure
P0103	EMS OBD II	MAF Sensor circuit high voltage	Ignition ON 10 seconds	2	A	ECM Default: – Default air mass used – Adaptive fuel metering inhibited – Catalyst warm up ignition retard inhibited – Canister purge inhibited – Maximum engine speed reduced	PI1 –044 –045 –046	MAF Sensor to ECM sensing circuit: short circuit to B+ voltage MAF Sensor to ECM sensor ground circuit: open circuit MAF Sensor failure
P0105	EMS OBD II	MAP Sensor circuit malfunction	Fuel level >25% Start engine and bring to normal operating temperature >82 ˚C (180 ˚F) Drive the vehicle steadily in 4th or 5th gear on a level road between 1200 – 1800 rpm; hold the engine speed constant for 40 seconds while maintaining a steady throttle	2	N	ECM Default: – Default value of 1.013 BAR (29.92 in hg) used	PI1 –127	Intake manifold air leak (loose or missing component) MAP Sensor to ECM circuit(s) fault MAP Sensor failure Throttle adaption fault (check throttle position voltage at Ignition ON)

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	CM PIN	POSSIBLE CAUSES
P0106	EMS OBD II	BARO Sensor circuit range / performance	Engine temperature cool (cooling fans not running) Remove ignition key for 20 seconds (cooling fans not running) Ignition key in, position II for 5 seconds (do not start) Repeat cycle twice more	2	N	ECM Default: – Default value of 1 BAR (29.53 in hg) used	—	BARO Sensor failure (internal ECM fault)
P0107	EMS OBD II	BARO Sensor circuit low voltage	Ignition ON 10 seconds	2	N	ECM Default: – Default value of 1 BAR (29.53 in hg) used	—	BARO Sensor failure (internal ECM fault)
P0108	EMS OBD II	BARO Sensor circuit high voltage	Ignition ON 10 seconds	2	N	ECM Default: – Default value of 1 BAR (29.53 in hg) used	—	BARO Sensor failure (internal ECM fault)
P0111	EMS OBD II	IAT Sensor circuit range / performance	Engine OFF; coolant temperature <35 ˚C (95 ˚F) Start engine and hold 3000 rpm in P or N for 30 seconds	2	N	ECM Default: – Default value substituted: 50 ˚C (122 ˚F)	PI1 –071	Blocked air cleaner Air intake leak Engine breather leak IAT Sensor to ECM wiring: open circuit or high resistance IAT Sensor to ECM sensing circuit: short circuit to high voltage IAT Sensor failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	CM PIN	POSSIBLE CAUSES
P0112	EMS OBD II	IAT Sensor circuit high voltage (low air temperature)	Ignition ON 10 seconds	2	N	ECM Default: – Default value substituted: 50 ˚C (122 ˚F)	PI1 –071	IAT Sensor disconnected IAT Sensor to ECM wiring: open circuit or high resistance IAT Sensor to ECM sensing circuit: short circuit to B+ voltage IAT Sensor failure
P0113	EMS OBD II	IAT Sensor circuit low voltage (high air temperature)	Ignition ON 10 seconds	2	N	ECM Default: – Default value substituted: 50 ˚C (122 ˚F)	PI1 –071	IAT Sensor to ECM wiring: short circuit to ground IAT Sensor failure
P0116	EMS OBD II	ECT Sensor circuit range / performance	Engine coolant temperature and ambient temperature within 10 ˚C (20 ˚F) of each other Start engine and drive the vehicle steadily in 4th or 5th gear above 1700 rpm until the engine coolant temperature reaches 80 ˚C (176 ˚F) CAUTION: Overheating is possible if the ECT sensor is faulty and cooling fans do not operate.	2	A	ECM Default: – EOT value substituted (no greater than 95 ˚C (203 ˚F) – Closed loop fuel metering inhibited – Adaptive fuel metering inhibited – Catalyst warm-up ignition retard inhibited – Canister purge inhibited – Maximum engine speed reduced	PI1 –070	ECT Sensor disconnected Low coolant level Contaminated coolant Engine thermostat failure ECT Sensor to ECM sensing circuit: open circuit, high resistance when hot, intermittent high resistance ECT Sensor failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	CM PIN	POSSIBLE CAUSES
P0117	EMS OBD II	ECT Sensor circuit high voltage (low coolant temperature)	Ignition ON 10 seconds	2	A	ECM Default: – EOT value substituted (no greater than 95 ˚C (203 ˚F) – Closed loop fuel metering inhibited – Adaptive fuel metering inhibited – Catalyst warm-up ignition retard inhibited – Canister purge inhibited – Maximum engine speed reduced	PI1 –070	ECT Sensor disconnected ECT Sensor to ECM sensing circuit: high resistance, open circuit, short circuit to B+ voltage ECT Sensor failure
P0118	EMS OBD II	ECT Sensor circuit low voltage (high coolant temperature)	Ignition ON 10 seconds	2	A	ECM Default: – EOT value substituted (no greater than 95 ˚C (203 ˚F) – Closed loop fuel metering inhibited – Adaptive fuel metering inhibited – Catalyst warm-up ignition retard inhibited – Canister purge inhibited – Maximum engine speed reduced	PI1 –070	Engine overheat condition ECT Sensor to ECM wiring: short circuit to ground ECT Sensor failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	CM PIN	POSSIBLE CAUSES
P0121	EMS OBD II	TP Sensor range / performance (TP1 compared to TP2)	Battery voltage >10 volts Ignition ON Slowly press accelerator pedal to the floor over a 5-second period Slowly return the pedal to rest Repeat 3 times	2	R	ECM Default: – Throttle motor and throttle motor relay disabled – Throttle valve opening set to default value – Idle speed controlled by fuel injection intervention – Idle speed adaption inhibited	PI1 –075 –076	TP Sensor to ECM wiring: open circuit, high resistance TP Sensor to ECM sensing circuits (TP1 or TP2): short circuit to B+ voltage TP Sensor failure
P0122	EMS OBD II	TP Sensor circuit 1 low voltage	Battery voltage >10 volts Ignition ON Slowly press accelerator pedal to the floor over a 5-second period Slowly return the pedal to rest Repeat 3 times	2	R	ECM Default: – Throttle motor and throttle motor relay disabled – Throttle valve opening set to default value – Idle speed controlled by fuel injection intervention – Idle speed adaption inhibited	PI1 –075	TP Sensor to ECM sensing circuit (TP1): open circuit, short circuit to ground, high resistance TP Sensor failure
P0123	EMS OBD II	TP Sensor circuit 1 high voltage	Battery voltage >10 volts Ignition ON Slowly press accelerator pedal to the floor over a 5-second period Slowly return the pedal to rest Repeat 3 times	2	R	ECM Default: – Throttle motor and throttle motor relay disabled – Throttle valve opening set to default value – Idle speed controlled by fuel injection intervention – Idle speed adaption inhibited	PI1 –075	TP Sensor to ECM sensing circuit (TP1): short circuit to high voltage TP Sensor failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	CM PIN	POSSIBLE CAUSES
P0125	EMS OBD II	ECT Sensor response (for closed loop fuel control) (Coolant thermostat monitor)	Engine coolant temperature and ambient temperature within 10 ˚C (20 ˚F) of each other Start engine and drive the vehicle steadily in 4th or 5th gear above 1700 rpm until the engine coolant temperature reaches 80 ˚C (176 ˚F) CAUTION: Overheating is possible if the ECT sensor is faulty and cooling fans do not operate.	2	A	ECM Default: – EOT value substituted (no greater than 95 ˚C (203 ˚F) – Closed loop fuel metering inhibited – Adaptive fuel metering inhibited – Catalyst warm-up ignition retard inhibited – Canister purge inhibited – Maximum engine speed reduced	PI1 –070	ECT Sensor disconnected Low coolant level Contaminated coolant Engine coolant thermostat failure ECT Sensor to ECM 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
P0128	EMS OBD II	Coolant thermostat range / performance	Engine OFF; coolant temperature <35 ˚C (95 ˚F) Start engine and drive until normal engine operating temperature >85 ˚C (180 ˚F)	2	N	None	—	Contaminated coolant Engine coolant thermostat failure ECT Sensor failure (ECT Sensor DTC(s) also flagged)
P0131	EMS OBD II	HO2 Sensor sense circuit low current – bank 1, upstream (1/1) (Universal oxygen sensor: lean condition at ECM – high current at sensor)	Heated oxygen sensors monitor drive cycle – page 5 (Upstream oxygen sensors)	2	N	None	PI1 –083 –084	HO2 Sensor 1/1 disconnected HO2 Sensor 1/1 to ECM variable current circuit fault (HO2 Sensor pin 3) ECM to HO2 Sensor 1/1 constant current circuit fault (HO2 Sensor pin 4) HO2 Sensor 1/1 failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	CM PIN	POSSIBLE CAUSES
P0132	EMS OBD II	HO2 Sensor sense circuit high current – bank 1, upstream (1/1) (Universal oxygen sensor: rich condition at ECM – low current at sensor)	Heated oxygen sensors monitor drive cycle – page 5 (Upstream oxygen sensors)	2	N	None	PI1 –083 –084	HO2 Sensor 1/1 disconnected HO2 Sensor 1/1 to ECM variable current circuit fault (HO2 Sensor pin 3) ECM to HO2 Sensor 1/1 constant current circuit fault (HO2 Sensor pin 4) 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 5 (Upstream oxygen sensors)	2	N	ECM Default: – Bank 1 closed loop fuel metering inhibited – Canister purge inhibited	PI1 –083 –084	Engine misfire HO2 Sensor 1/1 disconnected HO2 Sensor 1/1 mechanical damage HO2 Sensor 1/1 to ECM wiring fault HO2 Sensor 1/1 short circuit to ground HO2 Sensor 1/1 to ECM wiring shield open circuit HO2 Sensor 1/1 heater circuit fault Exhaust leak Low exhaust temperature Injector flow partially blocked Catalyst efficiency decrease HO2 Sensor 1/1 failure
P0137	EMS OBD II	HO2 Sensor sense circuit low voltage – bank 1, downstream (1/2)	Heated oxygen sensors monitor drive cycle – page 5 (Downstream oxygen sensors)	2	N	None	PI1 –128	HO2 Sensor 1/2 disconnected HO2 Sensor 1/2 to ECM wiring open circuit HO2 Sensor 1/2 short circuit to ground HO2 Sensor 1/2 failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	CM PIN	POSSIBLE CAUSES
P0138	EMS OBD II	HO2 Sensor sense circuit high voltage – bank 1, downstream (1/2)	Heated oxygen sensors monitor drive cycle – page 5 (Downstream oxygen sensors)	2	N	None	PI1 –128	HO2 Sensor 1/2 sensing circuit: short circuit to high voltage HO2 Sensor 1/2 ground (BRD – braided shield) open circuit HO2 Sensor 1/2 failure
P0140	EMS OBD II	HO2 Sensor sense circuit no activity – bank 1, downstream (1/2)	Heated oxygen sensors monitor drive cycle – page 5 (Downstream oxygen sensors)	2	N	None	PI1 –128	HO2 Sensor 1/2 disconnected HO2 Sensor 1/2 mechanical damage HO2 Sensor 1/2 to ECM wiring open circuit HO2 Sensor 1/2 sensing circuit: short circuit to high voltage HO2 Sensor 1/2 short circuit to ground HO2 Sensor 1/2 ground (BRD – braided shield) open circuit Exhaust leak Low exhaust temperature HO2 Sensor 1/2 failure
P0151	EMS OBD II	HO2 Sensor sense circuit low current – bank 2, upstream (2/1) (Universal oxygen sensor: lean condition at ECM – high current at sensor)	Heated oxygen sensors monitor drive cycle – page 5 (Upstream oxygen sensors)	2	N	None	PI1 –107 –108	HO2 Sensor 2/1 disconnected HO2 Sensor 2/1 to ECM variable current circuit fault (HO2 Sensor pin 3) ECM to HO2 Sensor 2/1 constant current circuit fault (HO2 Sensor pin 4) HO2 Sensor 2/1 failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	CM PIN	POSSIBLE CAUSES
P0152	EMS OBD II	HO2 Sensor sense circuit high current – bank 2, upstream (2/1) (Universal oxygen sensor: rich condition at ECM – low current at sensor)	Heated oxygen sensors monitor drive cycle – page 5 (Upstream oxygen sensors)	2	N	None	PI1 –107 –108	HO2 Sensor 2/1 disconnected HO2 Sensor 2/1 to ECM variable current circuit fault (HO2 Sensor pin 3) ECM to HO2 Sensor 2/1 constant current circuit fault (HO2 Sensor pin 4) HO2 Sensor 2/1 failure
P0153	EMS OBD II	HO2 Sensor sense circuit slow response – bank 2, upstream (2/1)	Heated oxygen sensors monitor drive cycle – page 5 (Upstream oxygen sensors)	2	N	ECM Default: – Bank 1 closed loop fuel metering inhibited – Canister purge inhibited	PI1 –107 –108	Engine misfire HO2 Sensor 2/1 disconnected HO2 Sensor 2/1 mechanical damage HO2 Sensor 2/1 to ECM wiring fault HO2 Sensor 2/1 short circuit to ground HO2 Sensor 2/1 to ECM wiring shield open circuit HO2 Sensor 2/1 heater circuit fault Exhaust leak Low exhaust temperature Injector flow partially blocked Catalyst efficiency decrease HO2 Sensor 2/1 failure
P0157	EMS OBD II	HO2 Sensor sense circuit low voltage – bank 2, downstream (2/2)	Heated oxygen sensors monitor drive cycle – page 5 (Downstream oxygen sensors)	2	N	None	PI1 –129	HO2 Sensor 2/2 disconnected HO2 Sensor 2/2 to ECM wiring open circuit HO2 Sensor 2/2 short circuit to ground HO2 Sensor 2/2 failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	CM PIN	POSSIBLE CAUSES
P0158	EMS OBD II	HO2 Sensor sense circuit high voltage – bank 2, downstream (2/2)	Heated oxygen sensors monitor drive cycle – page 5 (Downstream oxygen sensors)	2	N	None	PI1 –129	HO2 Sensor 2/2 sensing circuit: short circuit to high voltage HO2 Sensor 2/2 ground (BRD – braided shield) open circuit HO2 Sensor 2/2 failure
P0160	EMS OBD II	HO2 Sensor sense circuit no activity – bank 2, downstream (2/2)	Heated oxygen sensors monitor drive cycle – page 5 (Downstream oxygen sensors)	2	N	None	PI1 –129	HO2 Sensor 2/2 disconnected HO2 Sensor 2/2 mechanical damage HO2 Sensor 2/2 to ECM wiring open circuit HO2 Sensor 2/2 sensing circuit short circuit to high voltage HO2 Sensor 2/2 short circuit to ground HO2 Sensor 2/2 ground (BRD – braided shield) open circuit Exhaust leak Low exhaust temperature HO2 Sensor 2/2 failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	CM PIN	POSSIBLE CAUSES
P0171	EMS OBD II	Bank 1 combustion too lean	Start engine and bring to normal operating temperature >82 ˚C (180 ˚F) Idle for 10 minutes	2	N	ECM Default: – Bank 1 catalyst warm-up ignition retard inhibited – Bank 1 closed loop fuel metering inhibited – Canister purge inhibited – Maximum engine speed reduced	—	Engine misfire Air intake leak between MAF Sensor and cylinder head Fuel filter / system restriction Fuel injector restriction IP Sensor fault (low fuel pressure) Low fuel pump output HO2 Sensor(s) (1/1, 1/2) harness wiring condition fault EFT Sensor fault (low fuel temperature) MAF Sensor fault (low intake air flow) Exhaust leak (before catalyst) ECM receiving incorrect signal from one or more of the following components: ECT Sensor, MAF Sensor, IAT Sensor, IP Sensor, EFT Sensor, TP Sensor
P0172	EMS OBD II	Bank 1 combustion too rich	Start engine and bring to normal operating temperature >82 ˚C (180 ˚F) Idle for 10 minutes	2	N	ECM Default: – Bank 1 catalyst warm-up ignition retard inhibited – Bank 1 closed loop fuel metering inhibited – Canister purge inhibited – Maximum engine speed reduced	—	Restricted air filter Leaking fuel injector(s) IP Sensor fault (high fuel pressure) EFT Sensor fault (high fuel temperature) MAF Sensor fault (high intake air flow) HO2 Sensor(s) (1/1, 1/2) harness wiring condition fault ECM receiving incorrect signal from one or more of the following components: ECT Sensor, MAF Sensor, IAT Sensor, IP Sensor, EFT Sensor, TP Sensor

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	CM PIN	POSSIBLE CAUSES
P0174	EMS OBD II	Bank 2 combustion too lean	Start engine and bring to normal operating temperature >82 ˚C (180 ˚F) Idle for 10 minutes	2	N	ECM Default: – Bank 2 catalyst warm-up ignition retard inhibited – Bank 2 closed loop fuel metering inhibited – Canister purge inhibited – Maximum engine speed reduced	—	Engine misfire Air intake leak between MAF Sensor and cylinder head Fuel filter / system restriction Fuel injector restriction IP Sensor fault (low fuel pressure) Low fuel pump output HO2 Sensor(s) (2/1, 2/2) harness wiring condition fault EFT Sensor fault (low fuel temperature) MAF Sensor fault (low intake air flow) Exhaust leak (before catalyst) ECM receiving incorrect signal from one or more of the following components: ECT Sensor, MAF Sensor, IAT Sensor, IP Sensor, EFT Sensor, TP Sensor
P0175	EMS OBD II	Bank 2 combustion too rich	Start engine and bring to normal operating temperature >82 ˚C (180 ˚F) Idle for 10 minutes	2	N	ECM Default: – Bank 2 catalyst warm-up ignition retard inhibited – Bank 2 closed loop fuel metering inhibited – Canister purge inhibited – Maximum engine speed reduced	—	Restricted air filter Leaking fuel injector(s) IP Sensor fault (high fuel pressure) EFT Sensor fault (high fuel temperature) MAF Sensor fault (high intake air flow) HO2 Sensor(s) (2/1, 2/2) harness wiring condition fault ECM receiving incorrect signal from one or more of the following components: ECT Sensor, MAF Sensor, IAT Sensor, IP Sensor, EFT Sensor, TP Sensor

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	CM PIN	POSSIBLE CAUSES
P0181	EMS OBD II	EFT Sensor range / performance	Engine OFF; coolant temperature <35 ˚C (95 ˚F) Start engine and drive until normal engine operating temperature >82 ˚C (180 ˚F) Drive for an additional 25 minutes	2	N	ECM Default: – Default value of 25 ˚C (77 ˚F) used	PI1 –050	EFT Sensor disconnected EFT Sensor to ECM sensing circuit: high resistance, open circuit, short circuit to ground short circuit to high voltage EFT Sensor to splice sensor ground circuit: high resistance, open circuit EFT Sensor failure
P0182	EMS OBD II	EFT Sensor circuit low voltage (high temperature)	Ignition ON 10 seconds	2	N	ECM Default: – Default value of 25 ˚C (77 ˚F) used	PI1 –050	EFT Sensor to ECM sensing circuit: short circuit to ground EFT Sensor to splice sensor ground circuit: short circuit EFT Sensor failure
P0183	EMS OBD II	EFT Sensor circuit high voltage (low temperature)	Ignition ON 10 seconds	2	N	ECM Default: – Default value of 25 ˚C (77 ˚F) used	PI1 –050	EFT Sensor disconnected EFT Sensor to ECM sensing circuit: high resistance, open circuit, short circuit to high voltage EFT Sensor to splice sensor ground circuit: high resistance, open circuit EFT Sensor failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	CM PIN	POSSIBLE CAUSES
P0191	EMS OBD II	IP Sensor circuit range / performance	Fuel level >25% Idle engine 30 seconds Accelerate from stop through complete engine rpm range; coast to a stop Drive the vehicle steadily between 48 – 97 km/h (30 – 60 mph) for 5 minutes; coast to a stop Accelerate smoothly through complete accelerator pedal travel; coast to a stop Idle engine 30 seconds	2	N	ECM Default: – Default value of 3.80 BAR (55.11 psi) used – Fuel pump feedback control inhibited	PI1 –073	Fuel filter / system restriction Fuel system leak Incorrect fuel pump output IP Sensor to ECM sensing circuit: high resistance, open circuit, short circuit to ground, short circuit to high voltage IP Sensor to splice sensor supply circuit: high resistance, open circuit IP Sensor to splice sensor ground circuit: high resistance, open circuit, short circuit to ground, short circuit to high voltage IP Sensor failure
P0192	EMS OBD II	IP Sensor sensor circuit low voltage (low pressure)	Ignition ON 10 seconds	2	N	ECM Default: – Default value of 3.80 BAR (55.11 psi) used – Fuel pump feedback control inhibited	PI1 –073	IP Sensor disconnected IP Sensor to ECM sensing circuit: open circuit or short circuit to ground IP Sensor to splice sensor supply circuit: high resistance open circuit IP Sensor failure
P0193	EMS OBD II	IP Sensor sensor circuit high voltage (high pressure)	Ignition ON 10 seconds	2	N	ECM Default: – Default value of 3.80 BAR (55.11 psi) used – Fuel pump feedback control inhibited	PI1 –073	IP Sensor to ECM wiring (supply, sense): short circuit to each other IP Sensor to ECM sense circuit: short circuit to high voltage IP Sensor to splice sensor ground circuit: open circuit IP Sensor failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	CM PIN	POSSIBLE CAUSES
P0196	EMS OBD II	EOT Sensor range / performance	Engine OFF; coolant temperature < 35 ˚C (95 ˚F) Start engine and drive until normal engine operating temperature > 82 ˚C (180 ˚F)	2	N	ECM Default: – ECT substituted	PI1 –078	EOT Sensor to ECM sensing circuit; high resistance when hot, intermittent high resistance EOT Sensor failure
P0197	EMS OBD II	EOT Sensor low voltage (high temperature)	Ignition ON 10 seconds	2	N	ECM Default: – ECT substituted	PI1 –078	EOT Sensor to ECM sensing circuit: short circuit to ground EOT Sensor failure
P0198	EMS OBD II	EOT Sensor high voltage (low temperature)	Ignition ON 10 seconds	2	N	ECM Default: – ECT substituted	PI1 –078	EOT Sensor disconnected EOT Sensor to ECM sensing circuit: high resistance, open circuit, short circuit to B+ voltage EOT Sensor failure
P0201	EMS OBD II	Fuel injector 1 circuit malfunction	Start engine Battery voltage > 12 volts Idle for 2 minutes	2	A	ECM Default: – Bank 1 closed loop fuel metering inhibited – Bank 1 adaptive fuel metering inhibited – Bank 1 catalyst warm up ignition retard inhibited – Canister purge inhibited – Maximum engine speed reduced	PI1 –120	Injector disconnected Injector harness wiring: open circuit, short circuit Injector failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	CM PIN	POSSIBLE CAUSES
P0202	EMS OBD II	Fuel injector 2 circuit malfunction	Start engine Battery voltage >12 volts Idle for 2 minutes	2	A	ECM Default: – Bank 2 closed loop fuel metering inhibited – Bank 2 adaptive fuel metering inhibited – Bank 2 catalyst warm up ignition retard inhibited – Canister purge inhibited – Maximum engine speed reduced	PI1 –115	Injector disconnected Injector harness wiring: open circuit, short circuit Injector failure
P0203	EMS OBD II	Fuel injector 3 circuit malfunction	Start engine Battery voltage >12 volts Idle for 2 minutes	2	A	ECM Default: – Bank 1 closed loop fuel metering inhibited – Bank 1 adaptive fuel metering inhibited – Bank 1 catalyst warm up ignition retard inhibited – Canister purge inhibited – Maximum engine speed reduced	PI1 –114	Injector disconnected Injector harness wiring: open circuit, short circuit Injector failure
P0204	EMS OBD II	Fuel injector 4 circuit malfunction	Start engine Battery voltage >12 volts Idle for 2 minutes	2	A	ECM Default: – Bank 2 closed loop fuel metering inhibited – Bank 2 adaptive fuel metering inhibited – Bank 2 catalyst warm up ignition retard inhibited – Canister purge inhibited – Maximum engine speed reduced	PI1 –119	Injector disconnected Injector harness wiring: open circuit, short circuit Injector failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	CM PIN	POSSIBLE CAUSES
P0205	EMS OBD II	Fuel injector 5 circuit malfunction	Start engine Battery voltage > 12 volts Idle for 2 minutes	2	A	ECM Default: – Bank 1 closed loop fuel metering inhibited – Bank 1 adaptive fuel metering inhibited – Bank 1 catalyst warm up ignition retard inhibited – Canister purge inhibited – Maximum engine speed reduced	PI1 –113	Injector disconnected Injector harness wiring: open circuit, short circuit Injector failure
P0206	EMS OBD II	Fuel injector 6 circuit malfunction	Start engine Battery voltage > 12 volts Idle for 2 minutes	2	A	ECM Default: – Bank 2 closed loop fuel metering inhibited – Bank 2 adaptive fuel metering inhibited – Bank 2 catalyst warm up ignition retard inhibited – Canister purge inhibited – Maximum engine speed reduced	PI1 –118	Injector disconnected Injector harness wiring: open circuit, short circuit Injector failure
P0207	EMS OBD II	Fuel injector 7 circuit malfunction	Start engine Battery voltage > 12 volts Idle for 2 minutes	2	A	ECM Default: – Bank 1 closed loop fuel metering inhibited – Bank 1 adaptive fuel metering inhibited – Bank 1 catalyst warm up ignition retard inhibited – Canister purge inhibited – Maximum engine speed reduced	PI1 –117	Injector disconnected Injector harness wiring: open circuit, short circuit Injector failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	CM PIN	POSSIBLE CAUSES
P0208	EMS OBD II	Fuel injector 8 circuit malfunction	Start engine Battery voltage > 12 volts Idle for 2 minutes	2	A	ECM Default: – Bank 2 closed loop fuel metering inhibited – Bank 2 adaptive fuel metering inhibited – Bank 2 catalyst warm up ignition retard inhibited – Canister purge inhibited – Maximum engine speed reduced	PI1 –112	Injector disconnected Injector harness wiring: open circuit, short circuit Injector failure
P0222	EMS OBD II	TP Sensor sense circuit 2 (TP2) low voltage	Battery voltage > 10 volts Ignition ON Slowly press accelerator pedal to the floor over a 5-second period Slowly return the pedal to rest Repeat 3 times	2	R	ECM Default: – Throttle motor and throttle motor relay disabled – Throttle valve opening set to default value – Idle speed controlled by fuel injection intervention – Idle speed adaption inhibited	PI1 –076	TP Sensor to ECM sensing circuit (TP2): open circuit, short circuit to ground, high resistance TP Sensor failure
P0223	EMS OBD II	TP Sensor sense circuit 2 (TP2) high voltage	Battery voltage > 10 volts Ignition ON Slowly press accelerator pedal to the floor over a 5-second period Slowly return the pedal to rest Repeat 3 times	2	R	ECM Default: – Throttle motor and throttle motor relay disabled – Throttle valve opening set to default value – Idle speed controlled by fuel injection intervention – Idle speed adaption inhibited	PI1 –076	TP Sensor to ECM sensing circuit (TP2): short circuit to high voltage TP Sensor failure
P0230	REM*	Fuel pump drive circuit fault * DTC flagged by REM and stored in REM	None	N	N	None	CR73 –3 –4	Fuel pump drive circuit(s): short circuit to B+ voltage REM fuel pump drive failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	CM PIN	POSSIBLE CAUSES
P0231	REM*	Fuel pump drive circuit fault * DTC flagged by REM and stored in REM	None	N	N	None	CR73 –3 –4	Fuel pump drive circuit(s): open circuit REM fuel pump drive failure
P0232	REM*	Fuel pump drive circuit fault * DTC flagged by REM and stored in REM	None	N	N	None	CR73 –3 –4	Fuel pump drive circuit(s): short circuit to ground, short circuit to each other REM fuel pump drive failure
P0300	EMS OBD II	Random misfire detected * Refer to Misfire Note, page 6	Misfire monitor drive cycle – page 6	1 or 2*	N	None	—	ECM to ignition coil primary circuit fault (Cylinder misfire detected DTC also flagged) Fuel injector circuit fault(s) (Injector DTCs also flagged) Ignition coil failure Spark plug failure / fouled / incorrect gap Cylinder compression low Fuel delivery pressure (low / high) Fuel injector(s) restricted / leaking Fuel injector(s) continuously open Fuel contamination Worn camshaft / broken valve spring(s)
P0301	EMS OBD II	Misfire detected – cylinder 1 * Refer to Misfire Note, page 6	Misfire monitor drive cycle – page 6	1 or 2*	N	None	—	Refer to P0300 Possible Causes
P0302	EMS OBD II	Misfire detected – cylinder 2 * Refer to Misfire Note, page 6	Misfire monitor drive cycle – page 6	1 or 2*	N	None	—	Refer to P0300 Possible Causes
P0303	EMS OBD II	Misfire detected – cylinder 3 * Refer to Misfire Note, page 6	Misfire monitor drive cycle – page 6	1 or 2*	N	None	—	Refer to P0300 Possible Causes

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	CM PIN	POSSIBLE CAUSES
P0304	EMS OBD II	Misfire detected – cylinder 4 * Refer to Misfire Note, page 6	Misfire monitor drive cycle – page 6	1 or 2*	N	None	—	Refer to P0300 Possible Causes
P0305	EMS OBD II	Misfire detected – cylinder 5 * Refer to Misfire Note, page 6	Misfire monitor drive cycle – page 6	1 or 2*	N	None	—	Refer to P0300 Possible Causes
P0306	EMS OBD II	Misfire detected – cylinder 6 * Refer to Misfire Note, page 6	Misfire monitor drive cycle – page 6	1 or 2*	N	None	—	Refer to P0300 Possible Causes
P0307	EMS OBD II	Misfire detected – cylinder 7 * Refer to Misfire Note, page 6	Misfire monitor drive cycle – page 6	1 or 2*	N	None	—	Refer to P0300 Possible Causes
P0308	EMS OBD II	Misfire detected – cylinder 8 * Refer to Misfire Note, page 6	Misfire monitor drive cycle – page 6	1 or 2*	N	None	—	Refer to P0300 Possible Causes
P0327	EMS OBD II	Bank 1 KS sense circuit out of range – low voltage	Start engine Battery voltage >12 volts Idle for 2 minutes	2	A	ECM Default: – Maximum ignition retard – Maximum engine speed reduced	PI1 –098	Poor sensor contact with the cylinder block KS to ECM sense circuit short circuit to ground KS failure
P0328	EMS OBD II	Bank 1 KS sense circuit out of range – high voltage	Start engine Battery voltage >12 volts Idle for 2 minutes	2	A	ECM Default: – Maximum ignition retard – Maximum engine speed reduced	PI1 –098	Poor sensor contact with the cylinder block KS to ECM sense circuit: high resistance, open circuit, short circuit to high voltage KS failure
P0332	EMS OBD II	Bank 2 KS sense circuit out of range – low voltage	Start engine Battery voltage >12 volts Idle for 2 minutes	2	A	ECM Default: – Maximum ignition retard – Maximum engine speed reduced	PI1 –099	Poor sensor contact with the cylinder block KS to ECM sense circuit short circuit to ground KS failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	CM PIN	POSSIBLE CAUSES
P0333	EMS OBD II	Bank 2 KS sense circuit out of range – high voltage	Start engine Battery voltage > 12 volts Idle for 2 minutes	2	A	ECM Default: – Maximum ignition retard – Maximum engine speed reduced	PI1 –099	Poor sensor contact with the cylinder block KS to ECM sense circuit: high resistance, open circuit, short circuit to high voltage KS failure
P0335	EMS OBD II	CKP Sensor circuit malfunction	Start engine; increase engine speed to 1500 rpm and hold for 30 seconds Repeat 2 additional times NOTE: If CKP Sensor fault exists, engine will start after approximately 5 seconds of cranking as the ECM will default to CMP Sensor 1 signal for synchronization.	2	A	ECM Default: – Maximum engine speed reduced – CMP Sensor 1 signal used for synchronization	PI1 –036 –037	CKP Sensor disconnected CKP Sensor gap incorrect / foreign matter on sensor face CKP Sensor sensing circuit: open circuit, short circuit to ground, short circuit to high voltage CKP Sensor failure
P0336	EMS OBD II	CKP Sensor circuit range / performance	Start engine; momentarily race the engine; stop engine Repeat 2 additional times Start engine; drive vehicle; select 2nd gear Accelerate smoothly through complete accelerator pedal travel; coast to a stop	2	A	ECM Default: – Maximum engine speed reduced	PI1 –036 –037	CKP Sensor reluctor: foreign matter / damaged teeth CKP Sensor sensing circuit: intermittent open circuit, short circuit to ground, short circuit to high voltage CKP Sensor failure
P0340	EMS OBD II	CMP Sensor 1 circuit malfunction – bank 1	Start engine; momentarily race the engine; stop engine Repeat 2 additional times Idle engine 1 minute	2	N	ECM Default: – Bank 1 and bank 2 VVT valves set to full retard	PI1 –094 –095	CMP Sensor disconnected CMP Sensor gap incorrect / foreign matter on sensor face CMP Sensor sensing circuit: open circuit, short circuit to ground, short circuit to high voltage CMP Sensor 1 failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	CM PIN	POSSIBLE CAUSES
P0341	EMS OBD II	CMP Sensor 1 circuit range / performance – bank 1	Start engine; momentarily race the engine; stop engine Repeat 2 additional times Idle engine 1 minute	2	N	ECM Default: – Bank 1 and bank 2 VVT valves set to full retard	PI1 –094 –095	CMP Sensor disconnected CMP Sensor gap incorrect / foreign matter on sensor face CMP Sensor sensing circuit: open circuit, short circuit to ground, short circuit to high voltage CMP Sensor 1 failure
P0351	EMS OBD II	Ignition module primary circuit malfunction – cylinder 1	Start engine Battery voltage >12 volts Idle for 2 minutes	2	A	ECM Default: – Bank 1 closed loop fuel metering inhibited – Bank 1 sub feedback control inhibited – Bank 1 adaptive fuel metering inhibited – Maximum engine speed reduced – Fuel injection cut off (cylinder 1)	PI1 –087	ECM to ignition module / coil primary circuit: open circuit, short circuit to ground, high resistance Ignition module / coil ground circuit: open circuit, high resistance Ignition module / coil B+ voltage supply circuit: open circuit Ignition module / coil failure
P0352	EMS OBD II	Ignition module primary circuit malfunction – cylinder 2	Start engine Battery voltage >12 volts Idle for 2 minutes	2	A	ECM Default: – Bank 2 closed loop fuel metering inhibited – Bank 2 sub feedback control inhibited – Bank 2 adaptive fuel metering inhibited – Maximum engine speed reduced – Fuel injection cut off (cylinder 2)	PI1 –061	ECM to ignition module / coil primary circuit: open circuit, short circuit to ground, high resistance Ignition module / coil ground circuit: open circuit, high resistance Ignition module / coil B+ voltage supply circuit: open circuit Ignition module / coil failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	CM PIN	POSSIBLE CAUSES
P0353	EMS OBD II	Ignition module primary circuit malfunction – cylinder 3	Start engine Battery voltage > 12 volts Idle for 2 minutes	2	A	ECM Default: – Bank 1 closed loop fuel metering inhibited – Bank 1 sub feedback control inhibited – Bank 1 adaptive fuel metering inhibited – Maximum engine speed reduced – Fuel injection cut off (cylinder 3)	PI1 –088	ECM to ignition module / coil primary circuit: open circuit, short circuit to ground, high resistance Ignition module / coil ground circuit: open circuit, high resistance Ignition module / coil B+ voltage supply circuit: open circuit Ignition module / coil failure
P0354	EMS OBD II	Ignition module primary circuit malfunction – cylinder 4	Start engine Battery voltage > 12 volts Idle for 2 minutes	2	A	ECM Default: – Bank 2 closed loop fuel metering inhibited – Bank 2 sub feedback control inhibited – Bank 2 adaptive fuel metering inhibited – Maximum engine speed reduced – Fuel injection cut off (cylinder 4)	PI1 –062	ECM to ignition module / coil primary circuit: open circuit, short circuit to ground, high resistance Ignition module / coil ground circuit: open circuit, high resistance Ignition module / coil B+ voltage supply circuit: open circuit Ignition module / coil failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	CM PIN	POSSIBLE CAUSES
P0355	EMS OBD II	Ignition module primary circuit malfunction – cylinder 5	Start engine Battery voltage >12 volts Idle for 2 minutes	2	A	ECM Default: – Bank 1 closed loop fuel metering inhibited – Bank 1 sub feedback control inhibited – Bank 1 adaptive fuel metering inhibited – Maximum engine speed reduced – Fuel injection cut off (cylinder 5)	PI1 –089	ECM to ignition module / coil primary circuit: open circuit, short circuit to ground, high resistance Ignition module / coil ground circuit: open circuit, high resistance Ignition module / coil B+ voltage supply circuit: open circuit Ignition module / coil failure
P0356	EMS OBD II	Ignition module primary circuit malfunction – cylinder 6	Start engine Battery voltage >12 volts Idle for 2 minutes	2	A	ECM Default: – Bank 2 closed loop fuel metering inhibited – Bank 2 sub feedback control inhibited – Bank 2 adaptive fuel metering inhibited – Maximum engine speed reduced – Fuel injection cut off (cylinder 6)	PI1 –063	ECM to ignition module / coil primary circuit: open circuit, short circuit to ground, high resistance Ignition module / coil ground circuit: open circuit, high resistance Ignition module / coil B+ voltage supply circuit: open circuit Ignition module / coil failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	CM PIN	POSSIBLE CAUSES
P0357	EMS OBD II	Ignition module primary circuit malfunction – cylinder 7	Start engine Battery voltage > 12 volts Idle for 2 minutes	2	A	ECM Default: – Bank 1 closed loop fuel metering inhibited – Bank 1 sub feedback control inhibited – Bank 1 adaptive fuel metering inhibited – Maximum engine speed reduced – Fuel injection cut off (cylinder 7)	PI1 –090	ECM to ignition module / coil primary circuit: open circuit, short circuit to ground, high resistance Ignition module / coil ground circuit: open circuit, high resistance Ignition module / coil B+ voltage supply circuit: open circuit Ignition module / coil failure
P0358	EMS OBD II	Ignition module primary circuit malfunction – cylinder 8	Start engine Battery voltage > 12 volts Idle for 2 minutes	2	A	ECM Default: – Bank 2 closed loop fuel metering inhibited – Bank 2 sub feedback control inhibited – Bank 2 adaptive fuel metering inhibited – Maximum engine speed reduced – Fuel injection cut off (cylinder 8)	PI1 –064	ECM to ignition module / coil primary circuit: open circuit, short circuit to ground, high resistance Ignition module / coil ground circuit: open circuit, high resistance Ignition module / coil B+ voltage supply circuit: open circuit Ignition module / coil failure
P0400	EMS OBD II	EGR flow malfunction	EGR Monitor drive cycle – page 8	2	N	None	—	EGR valve incorrectly fitted or loose EGR pipe blocked EGR valve stuck open / closed, blocked EGR valve failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	CM PIN	POSSIBLE CAUSES
P0405	EMS OBD II	EGR valve drive circuits low voltage	Ignition ON 10 seconds	2	N	None	IP1 –057 –058 –059 –060	EGR valve power supply circuit open circuit EGR valve to ECM drive circuit pair (EGR valve pins 1 / 4, 6 / 3): open circuit, high resistance EGR valve failure (stepper motor open circuit)
P0406	EMS OBD II	EGR valve drive circuits high voltage	Ignition ON 10 seconds	2	N	None	IP1 –057 –058 –059 –600	EGR valve to ECM drive circuit pair (EGR valve pins 1 / 4, 6 / 3): short circuit to ground or high voltage EGR valve failure (stepper motor short circuit)
P0420	EMS OBD II	Catalytic converter system efficiency below threshold – bank 1	Catalyst efficiency monitor drive cycle – page 6 * If a replacement new catalyst fails the catalyst efficiency monitor test causing DTC P0420 to be flagged, drive the vehicle 16 kilometres (10 miles) and repeat the drive cycle.	2	N	None	—	Catalyst failure* due to following causes: – Thermal melt-down – Fractured or mis-shaped substrate – Poisoned substrate from high oil consumption or incorrect fuel Upstream and downstream HO2 Sensors swapped positions HO2 Sensor to ECM wiring fault HO2 Sensor heater to ECM wiring fault HO2 Sensor heater failure Upstream HO2 Sensor failure Downstream HO2 Sensor failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	CM PIN	POSSIBLE CAUSES
P0430	EMS OBD II	Catalytic converter system efficiency below threshold – bank 2	Catalyst efficiency monitor drive cycle – page 6 * If a replacement new catalyst fails the catalyst efficiency monitor test causing DTC P0430 to be flagged, drive the vehicle 16 kilometres (10 miles) and repeat the drive cycle.	2	N	None	—	Catalyst failure* due to following causes: – Thermal melt-down – Fractured or mis-shaped substrate – Poisoned substrate from high oil consumption or incorrect fuel Upstream and downstream HO2 Sensors swapped positions HO2 Sensor to ECM wiring fault HO2 Sensor heater to ECM wiring fault HO2 Sensor heater failure Upstream HO2 Sensor failure Downstream HO2 Sensor failure
P0442	EMS OBD II	EVAP system leak detected – small leak (0.040 inch leak)	Evaporative system monitor drive cycle – page 7	2	N	ECM Default: – Canister purge inhibited – Adaptive fuel metering inhibited	—	Fuel cap not fitted correctly Fuel cap seal defective EVAP system leak (canister damage, pipework damage) EVAP canister leaking EVAP Canister Close Valve failure Fuel tank leak
P0443	EMS OBD II	EVAP Canister Purge Valve circuit malfunction (This fault will be detected as part of the 0.040 inch EVAP test. Refer to page 7.)	Evaporative system monitor drive cycle – page 7	2	N	ECM Default: – Canister purge inhibited – Adaptive fuel metering inhibited	PI1 –066	EVAP Canister Purge Valve failure (leaking)

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	CM PIN	POSSIBLE CAUSES
P0444	EMS OBD II	EVAP Canister Purge Valve circuit open circuit	Evaporative system monitor drive cycle – page 7	2	N	ECM Default: – Canister purge inhibited – Adaptive fuel metering inhibited	PI1 –066	EVAP Canister Purge Valve disconnected EVAP Canister Purge Valve to ECM drive circuit: open circuit, high resistance EVAP Canister Purge Valve failure
P0445	EMS OBD II	EVAP Canister Purge Valve circuit short circuit	Evaporative system monitor drive cycle – page 7	2	N	ECM Default: – Canister purge inhibited – Adaptive fuel metering inhibited	PI1 –066	EVAP Canister Purge Valve to ECM drive circuit: short circuit to ground EVAP Canister Purge Valve failure
P0446	EMS OBD II	EVAP Canister Close Valve circuit malfunction (This fault will be detected as part of the 0.040 inch EVAP test. Refer to page 7.)	Evaporative system monitor drive cycle – page 7	2	N	ECM Default: – Canister purge inhibited – Adaptive fuel metering inhibited	PI1 –067	Fuel tank / EVAP canister atmospheric port: restricted, blocked EVAP Canister Close Valve failure (stuck closed)
P0447	EMS OBD II	EVAP Canister Close Valve circuit open circuit	Ignition ON 10 seconds	2	N	ECM Default: – Canister purge inhibited – Adaptive fuel metering inhibited	PI1 –067	EVAP Canister Close Valve power supply circuit: open circuit, short circuit EVAP Canister Close Valve to ECM drive circuit: open circuit, high resistance, short circuit to B+ voltage EVAP Canister Close Valve failure
P0448	EMS OBD II	EVAP Canister Close Valve circuit short circuit	Ignition ON 10 seconds	2	N	ECM Default: – Canister purge inhibited – Adaptive fuel metering inhibited	PI1 –067	EVAP Canister Close Valve to ECM drive circuit: short to ground EVAP Canister Close Valve failure
P0450	EMS OBD II	FTP Sensor malfunction (This fault will be detected as part of the 0.040 inch EVAP test. Refer to page 7.)	Evaporative system monitor drive cycle – page 7	2	N	None	PI1 –104	FTP Sensor failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	CM PIN	POSSIBLE CAUSES
P0452	EMS OBD II	FTP Sensor circuit low voltage (low pressure)	Ignition ON 10 seconds	2	N	None	PI1 –104	FTP Sensor disconnected FTP Sensor to ECM sense circuit: open circuit, short circuit to ground FTP Sensor to splice sensor supply circuit: open circuit, high resistance FTP Sensor failure
P0453	EMS OBD II	FTP Sensor circuit high voltage (high pressure)	Ignition ON 10 seconds	2	N	None	PI1 –104	FTP Sensor to splice sensor ground circuit: open circuit, high resistance FTP Sensor to ECM sense circuit: short circuit to high voltage FTP Sensor failure
P0455	EMS OBD II	EVAP system leak detected – gross leak (This fault will be detected as part of the 0.040 inch EVAP test. Refer to page 7.)	Evaporative system monitor drive cycle – page 7	2	N	ECM Default: – Canister purge inhibited – Adaptive fuel metering inhibited	—	Fuel cap off Fuel cap seal defective / missing EVAP system leak (canister damage, pipework damage) EVAP Canister Purge Valve to engine purge pipe: blocked, leaking, disconnected EVAP Canister Purge Valve failure (stuck closed) EVAP Canister Close Valve failure (stuck open) Fuel tank leak

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	CM PIN	POSSIBLE CAUSES
P0456	EMS OBD II	EVAP system leak detected – very small leak (0.020 inch leak)	Evaporative system monitor drive cycle – page 7	2	N	ECM Default: – Canister purge inhibited – Adaptive fuel metering inhibited	—	Fuel cap not fitted correctly Fuel cap seal defective EVAP system leak (canister damage, pipework damage) EVAP canister leaking EVAP Canister Close Valve failure Fuel tank leak
P0460	EMS OBD II	Fuel level sensor(s) circuit range / performance	Fuel tank empty Fill in stages: 1 / 4, 1/2, 3 / 4, full Check fuel gauge reading at each stage	2	N	None	—	Fuel level sensor to REM circuit(s): intermittent short circuit, open circuit, high resistance Fuel level sensor failure REM fault (incorrect fuel level data)
P0480	EMS OBD II	Radiator cooling fan module drive circuit malfunction	Start engine Battery voltage >12 volts Idle for 2 minutes	N	N	ECM Default: – With ignition ON, fan operates at maximum speed	PI1 –051	ECM to radiator cooling fan module drive circuit: short circuit, open circuit, high resistance Radiator cooling fan / module fault
P0506	EMS OBD II	Idle RPM lower than expected	Start engine and drive until normal engine operating temperature >82 ˚C (180 ˚F) Stop vehicle and idle 30 seconds Drive vehicle for 2 minutes Stop vehicle and idle 30 seconds Repeat drive / idle two additional times	2	N	None	—	Air intake restriction Accessory drive overload (defective / seized component) Throttle valve stuck closed Throttle body failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	CM PIN	POSSIBLE CAUSES
P0507	EMS OBD II	Idle RPM higher than expected	Start engine and drive until normal engine operating temperature >82 ˚C (180 ˚F) Stop vehicle and idle 30 seconds Drive vehicle for 2 minutes Stop vehicle and idle 30 seconds Repeat drive / idle two additional times	2	N	None	—	Intake air leak between MAF sensor and throttle Intake air leak between throttle and engine Engine crankcase breather leak Throttle valve stuck open Throttle body failure
P0532	EMS JAG	Air conditioning pressure sensor circuit low voltage (high pressure)	Start engine Use WDS to monitor air conditioning pressure sensor signal voltage Set climate control to a low temperature; operate for 2 minutes Switch off climate control; wait 2 minutes	N	N	ECM Default: – Air conditioning compressor clutch inhibited	PI1 –121	Air conditioning pressure sensor disconnected Air conditioning pressure sensor to ECM sense circuit: open circuit, short circuit to ground Air conditioning pressure sensor to splice sensor supply circuit: open circuit, high resistance Air conditioning pressure sensor failure
P0533	EMS JAG	Air conditioning pressure sensor circuit high voltage (low pressure)	Start engine Use WDS to monitor air conditioning pressure sensor signal voltage Set climate control to a low temperature; operate for 2 minutes Switch off climate control; wait 2 minutes	N	N	ECM Default: – Air conditioning compressor clutch inhibited	PI1 –121	Air conditioning pressure sensor to splice sensor ground circuit: open circuit, high resistance Air conditioning pressure sensor to ECM sense circuit: short circuit to high voltage Air conditioning pressure sensor failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	CM PIN	POSSIBLE CAUSES
P0560	EMS OBD II	Battery power supply voltage malfunction	Engine temperature cool (cooling fans not running) Remove ignition key for 20 seconds (cooling fans not running) Ignition key in, position II for 5 seconds (do not start) Repeat cycle two additional times	2	N	None	PI1 –022	ECM battery power supply open circuit, high resistance
P0566	EMS JAG	Speed control CANCEL switch ON fault	Ignition ON 45 seconds	N	A	ECM Default: – Speed control inhibited	PI1 –047	Speed control switches internal steering wheel circuit: short circuit to ground Steering wheel cassette reel: short circuit to ground Cassette reel to ECM circuit: short circuit to ground CANCEL switch failure (stuck ON)
P0567	EMS JAG	Speed control RESUME switch ON fault	Ignition ON 45 seconds	N	A	ECM Default: – Speed control inhibited	PI1 –047	Speed control switches internal steering wheel circuit: short circuit to ground Steering wheel cassette reel: short circuit to ground Cassette reel to ECM circuit: short circuit to ground RESUME switch failure (stuck ON)
P0568	EMS JAG	Speed control input signal low / high resistance	Ignition ON 45 seconds	N	A	ECM Default: – Speed control inhibited	PI1 –047	Speed control switches internal steering wheel circuit: open circuit; high resistance Steering wheel cassette reel open circuit, high resistance Cassette reel to ECM circuit: open circuit, high resistance

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	CM PIN	POSSIBLE CAUSES
P0569	EMS JAG	Speed control SET / – switch ON fault	Ignition ON for more than 5 minutes	N	A	ECM Default: – Speed control inhibited	PI1 –047	Speed control switches internal steering wheel circuit: short circuit to ground Steering wheel cassette reel: short circuit to ground Cassette reel to ECM circuit: short circuit to ground SET / – switch failure
P0570	EMS JAG	Speed control SET / + switch ON fault	Ignition ON for more than 5 minutes	N	A	ECM Default: – Speed control inhibited	PI1 –047	Speed control switches internal steering wheel circuit: short circuit to ground Steering wheel cassette reel: short circuit to ground Cassette reel to ECM circuit: short circuit to ground SET / + switch failure
P0603	EMS OBD II	ECM Keep alive memory error	Engine temperature cool (cooling fans not running) Remove ignition key for 20 seconds (cooling fans not running) Ignition key in, position II for 5 seconds (do not start) Repeat cycle two additional times	2	N	None	—	ECM Failure
P0605	TRANS OBD II	TCM Self test error	Ignition ON 10 seconds	2	A	TCM Default: – Mechanical limp home mode	—	TCM / control valve failure
P0606	TRANS OBD II	TCM “Watch dog” circuit malfunction	Ignition ON 10 seconds	2	A	TCM Default: – Mechanical limp home mode	—	TCM / control valve failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	CM PIN	POSSIBLE CAUSES
P0610	TRANS JAG	TCM Configuration error	Ignition ON 10 seconds	N	A	TCM Default: Mechanical limp home mode	—	Reconfigure TCM and / or ECM using WDS
P0616	EMS OBD II	Starter relay drive circuit low voltage / starter relay request on (ignition switch position III START)	Ignition ON Battery voltage > 12 volts P or N selected Crank engine for more than 2 seconds	2	N	None	PI1 –041	Starter relay drive circuit: open circuit, high resistance Starter relay failure
P0617	EMS OBD II	Starter relay drive circuit high voltage / starter relay request on (ignition switch position III START)	Ignition ON Battery voltage > 12 volts P or N selected Crank engine for more than 2 seconds	2	N	None	PI1 –041	Starter relay drive circuit: short circuit to high voltage Starter relay failure
P0641	TRANS OBD II	Sensor supply voltage circuit malfunction	Ignition ON 10 seconds	2	A	TCM Default: – Mechanical limp home mode	—	TCM / control valve failure
P0651	TRANS OBD II	Pressure regulator and shift solenoid supply circuit malfunction	Ignition ON 10 seconds	2	A	TCM Default: – Mechanical limp home mode	—	TCM / control valve failure
P0666	TRANS JAG	Substrate temperature sensor circuit malfunction	Drive the vehicle steadily between 48 – 97 km/h (30 – 60 mph) for 5 minutes Coast to a stop	N	N	None	—	TCM / control valve failure
P0701	TRANS OBD II	TCM control errors	Drive vehicle from stop to 113 km/h (70 mph) Coast to a stop	2	A	TCM Default: – Mechanical limp home mode	—	TCM / control valve failure Dynamic Stability Control system fault

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	CM PIN	POSSIBLE CAUSES
P0702	TRANS OBD II	TCM Battery power supply low voltage (short time)	Ignition ON 10 seconds	2	A	TCM Default: – Mechanical limp home mode	GB2 –14	Battery power supply fuse failure Battery power supply: intermittent open circuit
P0705	TRANS OBD II	Gear position switch circuit malfunction	Switch ignition ON Move the gear selector slowly from P to the 2 position, then back to P	2	A	TCM Default: – Mechanical limp home mode	—	TCM / control valve failure
P0706	TRANS JAG	J-Gate selector position plausibility fault	Switch ignition ON Move the gear selector slowly from P to the 2 position, then back to P	N	A	TCM Default: – Shift strategy fixed – J-Gate "manual" function disabled – If selected, Sport Mode disabled	—	TCM / J-Gate Module CAN fault J-Gate Module failure
P0709	TRANS JAG	J-Gate selector Intermediate position fault	Switch ignition ON Move the gear selector slowly from P to the 2 position, then back to P	N	A	TCM Default: – Shift strategy fixed – J-Gate "manual" function disabled – If selected, Sport Mode disabled	—	J-Gate Module failure
P0710	TRANS JAG	Transmission fluid temperature sensor circuit malfunction	Drive the vehicle steadily between 48 – 97 km/h (30 – 60 mph) for 5 minutes Coast to a stop	N	N	None	—	TCM / TCM fluid temperature sensor failure
P0711	TRANS JAG	Transmission fluid temperature range fault	Drive the vehicle steadily between 48 – 97 km/h (30 – 60 mph) for 5 minutes Coast to a stop	N	N	None	—	Transmission fluid over-temperature: drain and replace transmission fluid

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	CM PIN	POSSIBLE CAUSES
P0715	TRANS OBD II	Turbine speed sensor circuit failure	Drive the vehicle steadily between 48 – 97 km/h (30 – 60 mph) for 5 minutes Coast to a stop	2	A	TCM Default: – Mechanical limp home mode	—	TCM / TCM turbine speed sensor failure
P0720	TRANS JAG	Output speed sensor circuit failure	Drive vehicle from stop to 113 km/h (70 mph) Coast to a stop	N	N	TCM Default: – Substitute DSC vehicle speed for transmission output speed	—	TCM / control valve failure
P0721	TRANS OBD II	Output speed sensor signal gradient fault	Drive vehicle from stop to 113 km/h (70 mph) Coast to a stop	2	A	TCM Default: – Mechanical limp home mode – Substitute DSC vehicle speed for transmission output speed	—	Transmission mechanical failure TCM / control valve failure
P0725	TRANS OBD II	Engine over-speed range fault	Using full acceleration, drive vehicle from stop to 113 km/h (70 mph) Coast to a stop	2	A	TCM Default: – Mechanical limp home mode	—	TCM / ECM CAN Fault
P0729	TRANS OBD II	Sixth gear ratio fault	Drive vehicle from stop to 113 km/h (70 mph) Ensure that Sixth gear is engaged by moving the gear selector to the 5 position and observing that the transmission down shifts Coast to a stop	2	A	TCM Default: – Mechanical limp home mode	—	ECM torque signal fault Transmission mechanical failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	CM PIN	POSSIBLE CAUSES
P0730	TRANS JAG	Gear ratio fault	Drive vehicle from stop to 113 km/h (70 mph) Ensure that Sixth gear is engaged by moving the gear selector to the 5 position and observing that the transmission down shifts Coast to a stop	N	N	None	—	ECM torque signal fault Transmission mechanical failure
P0731	TRANS OBD II	First gear ratio fault	Start vehicle and select gear position 2 Accelerate hard until the engine speed reaches 4500 rpm, after the transmission has shifted to second gear Stop the vehicle Repeat two additional times	2	A	TCM Default: – Mechanical limp home mode	—	ECM torque signal fault Transmission mechanical failure
P0732	TRANS OBD II	Second gear ratio fault	Start vehicle and select gear position 2 Accelerate the vehicle until second gear is engaged Drive the vehicle for 5 minutes in second gear Vary the vehicle speed and acceleration rate	2	A	TCM Default: – Mechanical limp home mode	—	ECM torque signal fault Transmission mechanical failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	CM PIN	POSSIBLE CAUSES
P0733	TRANS OBD II	Third gear ratio fault	Start vehicle and select gear position 3 Accelerate the vehicle until third gear is engaged Drive the vehicle for 5 minutes in third gear Vary the vehicle speed and acceleration rate	2	A	TCM Default: – Mechanical limp home mode	—	ECM torque signal fault Transmission mechanical failure
P0734	TRANS OBD II	Fourth gear ratio fault	Start vehicle and select gear position 4 Accelerate the vehicle until fourth gear is engaged Drive the vehicle for 5 minutes in fourth gear Vary the vehicle speed and acceleration rate	2	A	TCM Default: – Mechanical limp home mode	—	ECM torque signal fault Transmission mechanical failure
P0735	TRANS OBD II	Fifth gear ratio fault	Start vehicle and select gear position 5 Accelerate the vehicle until fifth gear is engaged Drive the vehicle for 5 minutes in fifth gear Vary the vehicle speed and acceleration rate	2	A	TCM Default: – Mechanical limp home mode	—	ECM torque signal fault Transmission mechanical failure
P0736	TRANS OBD II	Reverse gear ratio fault	Start vehicle and select REVERSE gear Accelerate the vehicle at different rates for 1 minute	2	A	TCM Default: – Mechanical limp home mode	—	ECM torque signal fault Transmission mechanical failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	CM PIN	POSSIBLE CAUSES
P0740	TRANS OBD II	Torque converter clutch pressure regulator solenoid circuit malfunction	Drive the vehicle at 113 km/h (70 mph), then reduce the throttle angle until the torque convertor locks Ensure that the torque convertor remains locked for at least 1 minute	2	A	TCM Default: – Mechanical limp home mode	—	TCM / control valve failure
P0741	TRANS JAG	Torque converter clutch pressure regulator solenoid stuck open	Drive the vehicle at 113 km/h (70 mph), then reduce the throttle angle until the torque convertor locks Ensure that the torque convertor remains locked for at least 1 minute	N	N	TCM Default: – Deactivate torque converter clutch pressure regulator; lock up clutch disabled	—	TCM / control valve failure Transmission mechanical failure
P0743	TRANS OBD II	Torque converter clutch pressure regulator solenoid circuit plausibility error	Drive the vehicle at 113 km/h (70 mph), then reduce the throttle angle until the torque convertor locks Ensure that the torque convertor remains locked for at least 1 minute	2	A	TCM Default: – Mechanical limp home mode	—	TCM / control valve failure
P0750	TRANS OBD II	Pressure regulator solenoid 1 circuit malfunction	Drive the vehicle at 113 km/h (70 mph), then reduce the throttle angle until the torque convertor locks Ensure that the torque convertor remains locked for at least 1 minute	2	A	TCM Default: – Mechanical limp home mode	—	TCM / control valve failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	CM PIN	POSSIBLE CAUSES
P0753	TRANS OBD II	Pressure regulator solenoid 1 circuit plausibility error	Drive the vehicle at 113 km/h (70 mph), then reduce the throttle angle until the torque convertor locks Ensure that the torque convertor remains locked for at least 1 minute	2	A	TCM Default: – Mechanical limp home mode	—	TCM / control valve failure
P0755	TRANS OBD II	Pressure regulator solenoid 2 circuit malfunction	Drive the vehicle at 113 km/h (70 mph), then reduce the throttle angle until the torque convertor locks Ensure that the torque convertor remains locked for at least 1 minute	2	A	TCM Default: – Mechanical limp home mode	—	TCM / control valve failure
P0758	TRANS OBD II	Pressure regulator solenoid 2 circuit plausibility error	Drive the vehicle at 113 km/h (70 mph), then reduce the throttle angle until the torque convertor locks Ensure that the torque convertor remains locked for at least 1 minute	2	A	TCM Default: – Mechanical limp home mode	—	TCM / control valve failure
P0760	TRANS OBD II	Pressure regulator solenoid 3 circuit malfunction	Drive the vehicle at 113 km/h (70 mph), then reduce the throttle angle until the torque convertor locks Ensure that the torque convertor remains locked for at least 1 minute	2	A	TCM Default: – Mechanical limp home mode	—	TCM / control valve failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	CM PIN	POSSIBLE CAUSES
P0763	TRANS OBD II	Pressure regulator solenoid 3 circuit plausibility error	Drive the vehicle at 113 km/h (70 mph), then reduce the throttle angle until the torque convertor locks Ensure that the torque convertor remains locked for at least 1 minute	2	A	TCM Default: – Mechanical limp home mode	—	TCM / control valve failure
P0765	TRANS OBD II	Pressure regulator solenoid 4 circuit malfunction	Drive the vehicle at 113 km/h (70 mph), then reduce the throttle angle until the torque convertor locks Ensure that the torque convertor remains locked for at least 1 minute	2	A	TCM Default: – Mechanical limp home mode	—	TCM / control valve failure
P0768	TRANS OBD II	Pressure regulator solenoid 4 circuit plausibility error	Drive the vehicle at 113 km/h (70 mph), then reduce the throttle angle until the torque convertor locks Ensure that the torque convertor remains locked for at least 1 minute	2	A	TCM Default: – Mechanical limp home mode	—	TCM / control valve failure
P0770	TRANS OBD II	Pressure regulator solenoid 5 circuit malfunction	Drive the vehicle at 113 km/h (70 mph), then reduce the throttle angle until the torque convertor locks Ensure that the torque convertor remains locked for at least 1 minute	2	A	TCM Default: – Mechanical limp home mode	—	TCM / control valve failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	CM PIN	POSSIBLE CAUSES
P0773	TRANS OBD II	Pressure regulator solenoid 5 circuit plausibility error	Drive the vehicle at 113 km/h (70 mph), then reduce the throttle angle until the torque convertor locks Ensure that the torque convertor remains locked for at least 1 minute	2	A	TCM Default: – Mechanical limp home mode	—	TCM / control valve failure
P0780	TRANS JAG	Gear load fault	Drive the vehicle at 113 km/h (70 mph), then reduce the throttle angle until the torque convertor locks Ensure that the torque convertor remains locked for at least 1 minute	N	N	None	—	ECM torque signal fault Transmission mechanical failure
P0781	TRANS OBD II	1–2 / 2–1 Gear load fault	Drive the vehicle at 113 km/h (70 mph), then reduce the throttle angle until the torque convertor locks Ensure that the torque convertor remains locked for at least 1 minute	2	A	TCM Default: – Electronic limp home mode	—	ECM torque signal fault Transmission mechanical failure
P0782	TRANS OBD II	2–3 / 3–2 Gear load fault	Drive the vehicle at 113 km/h (70 mph), then reduce the throttle angle until the torque convertor locks Ensure that the torque convertor remains locked for at least 1 minute	2	A	TCM Default: – Electronic limp home mode	—	ECM torque signal fault Transmission mechanical failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	CM PIN	POSSIBLE CAUSES
P0783	TRANS OBD II	3–4 / 4–3 Gear load fault	Drive the vehicle at 113 km/h (70 mph), then reduce the throttle angle until the torque convertor locks Ensure that the torque convertor remains locked for at least 1 minute	2	A	TCM Default: – Electronic limp home mode	—	ECM torque signal fault Transmission mechanical failure
P0784	TRANS OBD II	4–5 / 5–4 Gear load fault	Drive the vehicle at 113 km/h (70 mph), then reduce the throttle angle until the torque convertor locks Ensure that the torque convertor remains locked for at least 1 minute	2	A	TCM Default: – Electronic limp home mode	—	ECM torque signal fault Transmission mechanical failure
P0787	TRANS OBD II	Shift solenoid circuit malfunction	Ignition ON 10 seconds	2	A	TCM Default: – Mechanical limp home mode	—	TCM / control valve failure
P0788	TRANS OBD II	Shift solenoid circuit plausibility error	Drive the vehicle at 113 km/h (70 mph), then reduce the throttle angle until the torque convertor locks Ensure that the torque convertor remains locked for at least 1 minute	2	A	TCM Default: – Mechanical limp home mode	—	TCM / control valve failure
P0825	TRANS JAG	Gear positions R, D plausibility error	Ignition ON Slowly move gear selector from Park to Drive, then back to Park	N	A	None	—	J-Gate incorrectly adjusted J-Gate Module failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	CM PIN	POSSIBLE CAUSES
P0829	TRANS OBD II	5–6 Gear load fault	Drive the vehicle at 113 km/h (70 mph), then reduce the throttle angle until the torque convertor locks Ensure that the torque convertor remains locked for at least 1 minute	2	A	TCM Default: – Electronic limp home mode	—	ECM torque signal fault Transmission mechanical failure
P0860	TRANS (ECM*) JAG	J-Gate CAN network malfunction * J-Gate / CAN monitored by ECM	Ignition ON 10 seconds	N	A	ECM Default: – Speed control inhibited – Maximum throttle opening for N range inhibited – Throttle opening limited to 30% – Maximum engine speed reduced	PI1 –123 –124	CAN open circuit fault CAN short circuit fault J-Gate Module failure
P1000	EMS JAG	System (OBD) check not complete since last memory clear	System Readiness Test	N	N	None	—	Refer to page 3
P1104	EMS OBD II	MAF Sensor ground malfunction	Ignition ON 10 seconds	2	A	ECM Default: – Calculated default air mass used – Adaptive fuel metering inhibited – Sub feedback control inhibited – Catalyst warm up ignition retard inhibited – EGR inhibited – Canister purge inhibited – Maximum engine speed reduced	PI1 –045 –046	MAF Sensor to ECM sensor ground circuit open circuit, short circuit to high voltage, high resistance MAF Sensor to ECM sensing circuit: open circuit MAF Sensor failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	CM PIN	POSSIBLE CAUSES
P1107	EMS OBD II	MAP Sensor sense circuit low voltage	Ignition ON 10 seconds	2	N	ECM Default: – Default value of 1.013 BAR (29.92 in hg) used	PI1 –127	MAP Sensor to ECM sense circuit: open circuit, short circuit to ground MAP Sensor sensor supply circuit (to splice): open circuit MAP Sensor failure
P1108	EMS OBD II	MAP Sensor sense circuit high voltage	Ignition ON 10 seconds	2	N	ECM Default: – Default value of 1.013 BAR (29.92 in hg) used	PI1 –127	MAP Sensor sensor ground circuit (to splice): open circuit MAP Sensor to ECM sense circuit: short circuit to high voltage MAP Sensor failure
P1111	EMS JAG	System (OBD) checks complete since last memory clear	System Readiness Test	N	N	None	—	Refer to page 3
P1122	EMS OBD II	APP Sensor sense circuit low voltage – APP1	Battery voltage > 10 volts Ignition ON Slowly press accelerator pedal to the floor over a 5-second period Slowly return the pedal to rest Repeat 3 times	2	R	ECM Default: – APP angle default value used – Speed control inhibited – APP adaptions (wear, variance) inhibited	PI1 –102	APP Sensor to ECM sense circuit (APP1): open circuit, short circuit to ground, high resistance APP Sensor sensor supply circuit: open circuit, high resistance APP Sensor failure
P1123	EMS OBD II	APP Sensor sense circuit high voltage – APP1 NOTE: This DTC could be flagged by both sensor element sensing circuit having faults.	Battery voltage > 10 volts Ignition ON Slowly press accelerator pedal to the floor over a 5-second period Slowly return the pedal to rest Repeat 3 times	2	R	ECM Default: – APP angle default value used – Speed control inhibited – APP adaptions (wear, variance) inhibited	PI1 –102 –103	APP Sensor sensor to ECM sense circuit(s) (APP1 or APP2): short circuit to high voltage APP Sensor sensor ground circuit(s): open circuit APP Sensor failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	CM PIN	POSSIBLE CAUSES
P1215	EMS OBD II	APP Sensor sense circuit low voltage – APP2	Battery voltage > 10 volts Ignition ON Slowly press accelerator pedal to the floor over a 5-second period Slowly return the pedal to rest Repeat 3 times	2	R	ECM Default: – APP angle default value used – Speed control inhibited – APP adaptions (wear, variance) inhibited	PI1 –103	APP Sensor to ECM sense circuit (APP2): open circuit, short circuit to ground, high resistance APP Sensor sensor supply circuit (to splice): open circuit, high resistance APP Sensor failure
P1216	EMS OBD II	APP Sensor sense circuit high voltage – APP2 NOTE: This DTC could be flagged by both sensor element sensing circuit having faults.	Battery voltage > 10 volts Ignition ON Slowly press accelerator pedal to the floor over a 5-second period Slowly return the pedal to rest Repeat 3 times	2	R	ECM Default: – APP angle default value used – Speed control inhibited – APP adaptions (wear, variance) inhibited	PI1 –102 –103	APP Sensor sensor to ECM sense circuit(s) (APP2 or APP1): short circuit to high voltage APP Sensor sensor ground circuit(s) (to splice): open circuit APP Sensor failure
P1224	EMS OBD II	Throttle control position error	Battery voltage > 10 volts Ignition ON Slowly press accelerator pedal to the floor over a 5-second period Slowly return the pedal to rest Repeat 3 times	2	R	ECM Default: – Engine shut down – Speed control disabled	PI1 –080 –106 –052 –134	Throttle motor failure Throttle body failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	CM PIN	POSSIBLE CAUSES
P1229	EMS OBD II	Throttle motor control circuit malfunction	Battery voltage >10 volts Ignition ON Slowly press accelerator pedal to the floor over a 5-second period Slowly return the pedal to rest Repeat 3 times	2	R	ECM Default: – Throttle motor and throttle motor relay disabled – Throttle valve opening set to default value – Idle speed controlled by fuel injection intervention – Idle speed adaption inhibited – Speed control disabled	PI1 –080 –106 –052 –134 –004 –005 –054	Throttle motor disconnected Throttle motor to ECM drive circuits: short circuit or open circuit ECM ground circuit fault(s) (PI1–004, 005, 054) Throttle motor failure Throttle body failure
P1233	V8 SC EMS OBD II	Fuel pump 2 drive circuit fault	Start engine Battery voltage >12 volts Idle for 2 minutes	2	N	ECM Default: – Fuel pump 2 feedback control inhibited	PI1 –053	ECM to Fuel pump 2 Module control drive circuit: open circuit, short circuit, high resistance Fuel pump 2 Module failure
P1234	EMS OBD II	No fuel pump (1 SC) commands received by ECM	Start engine Battery voltage >12 volts Idle for 2 minutes	2	N	ECM Default: – Fuel pump feedback control inhibited	PI1 –027	ECM to REM fuel pump control circuit: open circuit, short circuit, high resistance REM failure
P1235	REM* JAG	Fuel pump PWM control circuit out-of-range low * DTC flagged by REM and stored in REM	None	N	N	None	CR11 –19	ECM to REM fuel pump control circuit: open circuit, short circuit, high resistance ECM failure
P1236	REM* JAG	Fuel pump PWM control circuit out-of-range high * DTC flagged by REM and stored in REM	None	N	N	None	CR11 –18	ECM to REM fuel pump control circuit: open circuit, short circuit, high resistance ECM failure
P1236	EMS OBD II	Fuel pump (1 SC) not activated when requested by ECM	Start engine Battery voltage >12 volts Idle for 2 minutes	2	N	ECM Default: – Fuel pump feedback control inhibited	PI1 –027	ECM to REM fuel pump control circuit: open circuit, short circuit, high resistance REM failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	CM PIN	POSSIBLE CAUSES
P1240	EMS OBD II	Sensor power supply circuit malfunction	Ignition ON 10 seconds	2	R	None	PI1 –012 –013	ECM to sensors sensor supply voltage circuit(s): short circuit to ground, short circuit to high voltage, open circuit, high resistance
P1241	EMS OBD II	Sensor power supply circuit low voltage	Ignition ON 10 seconds	2	R	ECM Default: – Throttle motor and throttle motor relay disabled – Throttle valve opening set to default value – Idle speed controlled by fuel injection intervention – Idle speed adaption inhibited	PI1 –012 –013	ECM to sensors sensor supply voltage circuit(s): short circuit to ground
P1242	EMS OBD II	Sensor power supply circuit high voltage	Ignition ON 10 seconds	2	R	ECM Default: – Throttle motor and throttle motor relay disabled – Throttle valve opening set to default value – Idle speed controlled by fuel injection intervention – Idle speed adaption inhibited	PI1 –012 –013	ECM to sensors supply voltage circuit(s): open circuit, high resistance, short circuit to high voltage
P1243	EMS OBD II	Sensor ground circuits open circuit	Ignition ON 10 seconds	2	N	None	PI1 –019 –020	ECM to sensors sensor ground circuit(s): open circuit, high resistance
P1245	EMS OBD II	Engine crank signal low voltage	Remove starter relay Turn ignition switch to position III (START); hold for >1 second	2	N	None	PI1 –006	Ignition switch to ECM circuit: open circuit Ignition switch failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	CM PIN	POSSIBLE CAUSES
P1246	EMS OBD II	Engine crank signal high voltage	Drive vehicle >15 km/h (9 mph) between 1500 – 4000 rpm; stop vehicle Start and stop vehicle >5 times	2	N	None	PI1 –006	Ignition switch to ECM circuit: short circuit to high voltage Ignition switch failure
P1250	EMS OBD II	Throttle valve return spring malfunction	Idle engine Switch OFF ignition for 10 seconds Start engine and repeat	2	R	ECM Default: – Vehicle speed limited – Throttle opening limited to 30% – Speed control inhibited	—	Throttle return spring failure (throttle body failure)
P1251	EMS OBD II	Throttle motor relay OFF failure	Engine temperature cool (cooling fans not running) Remove ignition key for 20 seconds (cooling fans not running) Ignition key in, position II for 5 seconds (do not start) Repeat cycle two additional times	2	R	ECM Default: – Throttle motor and throttle motor relay disabled – Throttle valve opening set to default value – Idle speed controlled by fuel injection intervention – Idle speed adaption inhibited	PI1 –052	Throttle motor relay coil power supply circuit: open circuit (fuse) Throttle motor relay failure Throttle motor relay coil to ECM circuit: open circuit ECM ground circuit fault (relay coil drive)
P1254	EMS OBD II	Throttle “limp home” spring malfunction	Idle engine Switch OFF ignition for 10 seconds Start engine and repeat	2	R	ECM Default: – Vehicle speed limited – Throttle opening limited to 30% – Speed control inhibited	—	Throttle limp home spring failure (throttle body failure)

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	CM PIN	POSSIBLE CAUSES
P1260	EMS JAG	Security input malfunction	Start engine	N	N	None	—	Invalid ignition key code Passive anti-theft system (PATS) signal to instrument pack missing or corrupted Security message (PATS) CAN failure NOTE: To clear this DTC, the failure must first be rectified, followed by an ignition ON cycle to allow a successful PATS identification exchange between the ECM and the IC. The fault code can then be cleared.
P1313	EMS OBD II	Misfire rate catalyst damage – bank 1 NOTE: This DTC will flag only when accompanied by an individual cylinder misfire DTC: P0300 – P0308.	Misfire monitor drive cycle – page 6	2	A	ECM Default: – Maximum engine speed reduced	—	ECM to ignition coil primary circuit fault (Cylinder misfire detected DTC also flagged) Fuel injector circuit fault(s) (Injector DTCs also flagged) Ignition coil failure Spark plug failure / fouled / incorrect gap Cylinder compression low Fuel delivery pressure (low / high) Fuel injector(s) restricted / leaking Fuel injector(s) continuously open Fuel contamination Worn camshaft / broken valve spring(s)

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	CM PIN	POSSIBLE CAUSES
P1314	EMS OBD II	Misfire rate catalyst damage – bank 2 NOTE: This DTC will flag only when accompanied by an individual cylinder misfire DTC: P0300 – P0308.	Misfire monitor drive cycle – page 6	2	A	ECM Default: – Maximum engine speed reduced	—	ECM to ignition coil primary circuit fault (Cylinder misfire detected DTC also flagged) Fuel injector circuit fault(s) (Injector DTCs also flagged) Ignition coil failure Spark plug failure / fouled / incorrect gap Cylinder compression low Fuel delivery pressure (low / high) Fuel injector(s) restricted / leaking Fuel injector(s) continuously open Fuel contamination Worn camshaft / broken valve spring(s)
P1316	EMS OBD II	Misfire excess emission NOTE: This DTC will flag only when accompanied by an individual cylinder misfire DTC: P0300 – P0308.	Misfire monitor drive cycle – page 6	2	N	None	—	ECM to ignition coil primary circuit fault (Cylinder misfire detected DTC also flagged) Fuel injector circuit fault(s) (Injector DTCs also flagged) Ignition coil failure Spark plug failure / fouled / incorrect gap Cylinder compression low Fuel delivery pressure (low / high) Fuel injector(s) restricted / leaking Fuel injector(s) continuously open Fuel contamination Worn camshaft / broken valve spring(s)

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	CM PIN	POSSIBLE CAUSES
P1338	EMS OBD II	Fuel pump (1 SC) drive circuit low / high voltage	Start engine Battery voltage > 12 volts Idle for 2 minutes	2	N	ECM Default: – Fuel pump feedback control inhibited	PI1 –027	REM to fuel pump drive circuit: open circuit, short circuit, high resistance REM failure Fuel pump failure
P1339	V8 SC EMS OBD II	Fuel pump 2 drive circuit low voltage / high voltage fault	Start engine Battery voltage > 12 volts Idle for 2 minutes	2	N	ECM Default: – Fuel pump 2 feedback control inhibited	PI1 –053 –011	Fuel pump 2 Module to fuel pump drive circuit: open circuit, short circuit, high resistance Fuel pump 2 Module to ECM monitor circuit: open circuit, short circuit, high resistance Fuel pump 2 Module failure Fuel pump 2 failure
P1340	EMS OBD II	CMP Sensor 2 circuit malfunction – bank 2	Start engine; momentarily race the engine; stop engine Repeat 2 additional times Idle engine 1 minute	2	N	ECM Default: – Bank 1 and bank 2 VVT valves set to full retard	PI1 –068 –069	CMP Sensor disconnected CMP Sensor gap incorrect / foreign matter on sensor face CMP Sensor sensing circuit: open circuit, short circuit to ground, short circuit to high voltage CMP Sensor 2 failure
P1341	EMS OBD II	CMP Sensor 2 circuit range / performance – bank 2	Start engine; momentarily race the engine; stop engine Repeat 2 additional times Idle engine 1 minute	2	N	ECM Default: – Bank 1 and bank 2 VVT valves set to full retard	PI1 –068 –069	CMP Sensor disconnected CMP Sensor gap incorrect / foreign matter on sensor face CMP Sensor sensing circuit: open circuit, short circuit to ground, short circuit to high voltage CMP Sensor 2 failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	CM PIN	POSSIBLE CAUSES
P1344	EMS OBD II	APP Sensor sense circuits APP1 and APP2 range / performance	Battery voltage >10 volts Ignition ON Slowly press accelerator pedal to the floor over a 5-second period Slowly return the pedal to rest Repeat 3 times	2	R	ECM Default: – APP angle default value used – Speed control inhibited – APP adaptions (wear, variance) inhibited	PI1 –102 –103	APP Sensor to ECM sense circuits: short circuit, open circuit, high resistance APP Sensor sensor supply circuits: short circuit, open circuit, high resistance APP Sensor sensor ground circuits: open circuit APP Sensor failure
P1367	EMS OBD II	Ignition module(s) / coil(s) bank 1 fault	Start engine Battery voltage >12 volts Idle for 2 minutes	2	A	ECM Default: – Closed loop fuel metering inhibited – Adaptive fuel metering inhibited – Catalyst warm up ignition retard inhibited – EGR Inhibited – Canister purge inhibited – Maximum engine speed reduced – Fuel injection cut off (bank 1)	PI1 –131	Ignition monitoring circuit between splice and ECM: open circuit, short circuit to ground, short circuit to B+ voltage Ignition module(s) / coil(s) bank 1 ground circuit fault

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	CM PIN	POSSIBLE CAUSES
P1368	EMS OBD II	Ignition module(s) / coil(s) bank 2 fault	Start engine Battery voltage > 12 volts Idle for 2 minutes	2	A	ECM Default: – Closed loop fuel metering inhibited – Adaptive fuel metering inhibited – Catalyst warm up ignition retard inhibited – EGR Inhibited – Canister purge inhibited – Maximum engine speed reduced – Fuel injection cut off (bank 2)	PI1 –132	Ignition monitoring circuit between splice and ECM: open circuit, short circuit to ground, short circuit to B+ voltage Ignition module(s) / coil(s) bank 2 ground circuit fault
P1384	EMS OBD II	VVT solenoid malfunction – bank 1	Idle engine 30 seconds Accelerate from stop through complete engine rpm range; coast to a stop Drive the vehicle steadily between 48 – 97 km/h (30 – 60 mph) for 5 minutes; coast to a stop Accelerate smoothly through complete accelerator pedal travel; coast to a stop Idle engine 30 seconds	2	N	ECM Default: – Bank 1 VVT hold current set at a constant valve of 450 mA	PI1 –109	VVT Solenoid Valve 1 to ECM PWM drive circuit fault VVT Solenoid Valve 1 ground circuit fault VVT Solenoid Valve 1 failure Oil contamination VVT 1 oil flow fault VVT / camshaft mechanical failure – bank 1

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	CM PIN	POSSIBLE CAUSES
P1396	EMS OBD II	VVT solenoid malfunction – bank 2	Idle engine 30 seconds Accelerate from stop through complete engine rpm range; coast to a stop Drive the vehicle steadily between 48 – 97 km/h (30 – 60 mph) for 5 minutes; coast to a stop Accelerate smoothly through complete accelerator pedal travel; coast to a stop Idle engine 30 seconds	2	N	ECM Default: – Bank 2 VVT hold current set at a constant valve of 450 mA	PI1 –110	VVT Solenoid Valve 2 to ECM PWM drive circuit fault VVT Solenoid Valve 2 ground circuit fault VVT Solenoid Valve 2 failure Oil contamination VVT 2 oil flow fault VVT / camshaft mechanical failure – bank 2
P1410	V8 SC EMS JAG	Air cleaner solenoid valve drive circuit malfunction	Start engine Idle for 2 minutes	N	N	None	PI1 –014	ECM to air cleaner solenoid circuit: open circuit, short circuit, high resistance Air cleaner solenoid failure
P1474	V8 SC EMS OBD II	Intercooler coolant pump malfunction	Start engine and bring to normal engine operating temperature >80 °C (176 °F) Drive vehicle in Drive at 80 km/h (50 mph) – 105 km/h (65 mph) for >10 minutes	2	N	ECM Default: – Default value of 70 °C (158 °F) used	—	Intercooler coolant pump failure
P1516	EMS OBD II	Gear change P / N driving malfunction	Drive vehicle >15 km/h (9 mph) between 1500 – 4000 rpm for >10 seconds	2	A	ECM Default: – Speed control inhibited – Maximum engine speed reduced	PI1 –031	ECM P / N circuit: short circuit to high voltage; high resistance Gear selector cable setting incorrect J-Gate assembly incorrect setting J-Gate / ECM CAN fault

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	CM PIN	POSSIBLE CAUSES
P1517	EMS OBD II	Gear change P / N starting malfunction	Start engine in P Start engine in N Check that engine does not start in R, D, 5, 4, 3, 2	2	A	ECM Default: – Speed control inhibited – Maximum throttle opening for N range inhibited – Maximum engine speed reduced	PI1 –031	ECM P / N circuit: short circuit to ground, short circuit to high voltage; high resistance Gear selector cable setting incorrect J-Gate assembly incorrect setting J-Gate / ECM CAN fault
P1571	EMS JAG	Brake ON / OFF switch; brake cancel switch malfunction (Brake ON / OFF switch – normally open; brake cancel switch – normally closed)	Start engine; idle in P, N Press brake pedal for >10 seconds; release brake pedal Repeat 5 times –or– Drive >80 km/h (50 mph) >1 minute (do not press the brake pedal); momentarily press the brake pedal Repeat 10 times –or– Using WDS, monitor both circuits Pedal at rest = "0" (both circuits); pedal pressed = "1" (both circuits)	N	A	ECM Default: – Speed control inhibited – Maximum engine speed reduced – J-Gate locked in Park	PI1 –008 –009	Brake ON / OFF switch to ECM circuit: open circuit, short circuit to ground, high resistance Brake ON / OFF power supply circuit: open circuit Brake ON / OFF switch failure Brake cancel switch to ECM circuit: open circuit, short circuit to ground, high resistance Brake cancel switch power supply circuit: open circuit Brake cancel switch failure
P1582	EMS JAG	"Flight recorder" data is stored if any one of five conditions occur:	1 Inertia switch activated 2 Throttle Limp Home mode 3 Engine starts and stumbles 4 Engine fail to start 5 Engine stall	N	N	None	PI1 –010	If none of the five conditions occur, check: Inertia switch to ECM circuit: short circuit to B+ voltage Inertia switch failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	CM PIN	POSSIBLE CAUSES
P1603	TRANS OBD II	TCM Internal communications error	Ignition ON 10 seconds	1	A	None	—	TCM / control valve failure
P1605	TRANS JAG	TCM RAM error	Ignition ON, then OFF Cycle ignition switch 6 times	N	N	None	GB2 –14	Battery power supply circuit: open circuit, short circuit to ground TCM / control valve failure
P1606	EMS OBD II	EMS control relay malfunction	Ignition key switched OFF >5 seconds; cooling fans not running	1	N	None	PI1 –040	ECM control relay failure ECM control relay to ECM circuit fault ECM control relay coil power supply open circuit ECM ground circuit fault (relay coil drive)
P1609	EMS OBD II	ECM microprocessor to microprocessor communication failure	Ignition ON 10 seconds	2	R	ECM Default: – Throttle motor and throttle motor relay disabled – Throttle valve opening set to default value – Idle speed controlled by fuel injection intervention – Idle speed adaption inhibited	—	ECM Failure
P1611	EMS OBD II	ECM sub CPU failure	Drive vehicle Engage speed control Refer to Owner's Handbook and ensure that speed control engages normally	2	R	ECM Default: – Throttle motor and throttle motor relay disabled – Throttle valve opening set to default value – Idle speed controlled by fuel injection intervention – Idle speed adaption inhibited	—	ECM Failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	CM PIN	POSSIBLE CAUSES
P1631	EMS OBD II	Throttle motor relay coil drive circuit OFF failure	Engine temperature cool (cooling fans not running) Remove ignition key for 20 seconds (cooling fans not running) Ignition key in, position II for 5 seconds (do not start) Repeat cycle twice more	2	R	ECM Default: – Throttle motor and throttle motor relay disabled – Throttle valve opening set to default value – Idle speed controlled by fuel injection intervention – Idle speed adaption inhibited	PI1 –052	Throttle motor relay coil power supply circuit: open circuit (fuse) Throttle motor relay failure Throttle motor relay coil to ECM drive circuit: open circuit, short circuit to ground
P1632	EMS OBD II	Generator charge system failure / generator "CHARGE / FAULT" circuit failure	Battery voltage > 12 volts Switch OFF all electrical consumers Start engine; idle for 16 minutes with all electrical consumers switched OFF If no recurrence of DTC(s): hold engine > 1500 rpm for 1 minute in N	2	C	None	PI1 –079	ECM to generator "CHARGE / FAULT" circuit: short circuit, open circuit, high resistance Generator regulator failure Generator failure
P1633	EMS OBD II	ECM main CPU failure	Ignition ON 10 seconds	2	R	ECM Default: – Throttle motor and throttle motor relay disabled – Throttle valve opening set to default value – Idle speed controlled by fuel injection intervention – Idle speed adaption inhibited	—	ECM Failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	CM PIN	POSSIBLE CAUSES
P1634	EMS OBD II	Throttle "watch dog" circuit malfunction	Idle engine Switch OFF ignition for 10 seconds Start engine and repeat	2	R	ECM Default: – Vehicle speed limited – Throttle opening limited to 30% – Speed control inhibited	—	ECM Failure
P1637	EMS OBD II	CAN ECM to DSCM network malfunction	Ignition ON 10 seconds	2	A	ECM Default: – Speed control inhibited – Maximum throttle opening for N range inhibited – Throttle opening limited to 30% – Maximum engine speed reduced	PI1 –123 –124	CAN open circuit fault – DSCM to ECM CAN short circuit fault DSCM failure ECM failure
P1638	EMS OBD II	CAN ECM / IC network malfunction	Ignition ON 10 seconds	1	N	None (Engine will not start – PATS failure)	PI1 –123 –124	CAN open circuit fault – IC to ECM CAN short circuit fault IC failure ECM failure
P1642	EMS OBD II	CAN circuit malfunction	Ignition ON 10 seconds	1	A	ECM Default: – Speed control inhibited – Maximum throttle opening for N range inhibited – Throttle opening limited to 30% – Maximum engine speed reduced (Engine will not start – PATS failure)	PI1 –123 –124	CAN short circuit fault Control module failure – check for additional flagged DTC(s) to locate control module source

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	CM PIN	POSSIBLE CAUSES
P1643	EMS OBD II	CAN ECM / TCM network malfunction	Ignition ON 10 seconds	2	A	ECM Default: – Speed control inhibited – Maximum throttle opening for N range inhibited – Throttle opening limited to 30% – Maximum engine speed reduced	PI1 –123 –124	CAN open circuit fault – TCM to ECM CAN short circuit fault TCM failure ECM failure
P1646	EMS OBD II	ECM HO2 Sensor control malfunction – bank 1 upstream (1/1)	Drive vehicle for 10 minutes	2	N	ECM Default: – HO2S 1/1 control circuit inhibited	—	HO2 Sensor 1/1 heater failure HO2 Sensor 1/1 sensing circuit: short circuit to ground, short circuit to high voltage, open circuit, high resistance ECM failure
P1647	EMS OBD II	ECM HO2 Sensor control malfunction – bank 2 upstream (2/1)	Drive vehicle for 10 minutes	2	N	ECM Default: – HO2S 2/1 control circuit inhibited	—	HO2 Sensor 2/1 heater failure HO2 Sensor 2/1 sensing circuit: short circuit to ground, short circuit to high voltage, open circuit, high resistance ECM failure
P1648	EMS OBD II	ECM internal Knock Sensor CPU self test failure	Start engine Battery voltage >12 volts Idle for 2 minutes	2	A	ECM Default: – Maximum ignition retard – Maximum engine speed reduced	—	ECM failure
P1656	EMS OBD II	TP Sensor amplifier circuit malfunction	Ignition ON 10 seconds	2	A	ECM Default: – Maximum engine speed reduced	PI1 –075	ECM failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	CM PIN	POSSIBLE CAUSES
P1657	EMS OBD II	Throttle motor relay coil drive circuit ON failure	Engine temperature cool (cooling fans not running) Remove ignition key for 20 seconds (cooling fans not running) Ignition key in, position II for 5 seconds (do not start) Repeat cycle two additional times	2	R	ECM Default: – Vehicle speed limited – Throttle opening limited to 30% – Speed control inhibited	PI1 –052 –134	Throttle motor relay failure Throttle motor relay coil to ECM drive circuit: short circuit to B+ voltage
P1658	EMS OBD II	Throttle motor relay ON failure	Engine temperature cool (cooling fans not running) Remove ignition key for 20 seconds (cooling fans not running) Ignition key in, position II for 5 seconds (do not start) Repeat cycle two additional times	2	R	ECM Default: – Vehicle speed limited – Throttle opening limited to 30% – Speed control inhibited	PI1 –052	Throttle motor relay failure Throttle motor relay coil to ECM drive circuit: short circuit to B+ voltage
P1672	EMS JAG	CAN ECM / ASM network malfunction	Ignition ON 10 seconds	N	N	ECM Default: None ASM Default: – Firm suspension setting	PI1 –123 –124	CAN open circuit fault – ASM to ECM CAN short circuit fault ASM failure ECM failure
P1696	EMS JAG	CAN ECM / ASCM network malfunction	Ignition ON 10 seconds	N	N	ECM Default: – Speed control inhibited	PI1 –123 –124	CAN open circuit fault – ASCM to ECM CAN short circuit fault ASCM failure ECM failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	CM PIN	POSSIBLE CAUSES
P1697	EMS JAG	Adaptive speed control HEADWAY switch(es) circuit malfunction	Ignition ON 45 seconds	N	A	ECM Default: – Speed control inhibited	PI1 –047	Speed control switches internal steering wheel circuit: short circuit to ground Steering wheel cassette reel: short circuit to ground Cassette reel to ECM circuit: short circuit to ground HEADWAY + / – switch(es) failure (stuck ON)
P1699	EMS OBD II	CAN ECM / CCM network malfunction	Ignition ON 10 seconds	2	N	None	PI1 –123 –124	CAN open circuit fault – CCM to ECM CAN short circuit fault CCM failure ECM failure
P1749	TRANS JAG	PARK / NEUTRAL circuit malfunction	Ignition ON Move gear selector to N; leave in N for 5 seconds, then return to P	N	N	None	GB2 –10	TCM TO ECM P / N circuit: open circuit, short circuit to ground, short circuit to B+ voltage TCM / control valve failure
P1774	TRANS JAG	CAN TCM / J-Gate Module network malfunction	Ignition ON 10 seconds	N	A	TCM Default: – Manual gear selection disabled – Sport mode disabled	GB2 –2 –6	CAN open circuit fault – TCM to J-Gate Module CAN short circuit fault J-Gate Module failure
P1783	TRANS OBD II	Transmission over-temperature shut-down	Drive vehicle for 1 hour while continually performing hard acceleration starts / stops	N	A	TCM Default: – Mechanical limp home mode	—	Transmission fluid level low Transmission fluid cooler circuit: obstructed, leaking Transmission fluid cooler fins blocked by debris Transmission mechanical failure

DTC	SYS	FAULT DESCRIPTION	MONITORING CONDITIONS	CK ENG	OTHER	DEFAULT ACTION	CM PIN	POSSIBLE CAUSES
P1794	TRANS OBD II	TCM ignition switched power supply circuit malfunction	Ignition ON 10 seconds	2	A	TCM Default: – Mechanical limp home mode	GB2 –9	Ignition switched power supply fuse failure Ignition switched power supply circuit: short circuit to ground, open circuit
P1796	TRANS OBD II	CAN network fault	Ignition ON 10 seconds	2	A	TCM Default: – Mechanical limp home mode	GB2 –2 –6	CAN open circuit or short circuit fault TCM / control valve failure
P1797	TRANS OBD II	CAN TCM / ECM network malfunction	Ignition ON 10 seconds	2	A	TCM Default: – Mechanical limp home mode	GB2 –2 –6	CAN open circuit fault – TCM to ECM CAN short circuit fault ECM failure TCM / control valve failure
P1798	TRANS JAG	CAN TCM / IC network malfunction	Ignition ON 10 seconds	N	N	None	GB2 –2 –6	CAN open circuit fault – TCM to IC CAN short circuit fault IC failure TCM / control valve failure
P1799	TRANS JAG	CAN TCM / DSCM network malfunction	Ignition ON 10 seconds	N	N	TCM Default: – Substitute transmission output speed for DSC vehicle speed	GB2 –2 –6	CAN open circuit fault – TCM to DSCM CAN short circuit fault DSCM failure TCM / control valve failure

Body DTC Summaries

Jaguar XJ Range 2004 Model Year

Refer to pages 2 and 3 for important information regarding the use of "Body DTC Summaries".

KEY TO COLUMN HEADINGS

DTC	Diagnostic Trouble Code.
CM	The control module(s) the DTC is associated with. Refer to page 3.
SYSTEM	The vehicle system the DTC is associated with. Refer to the applicable Electrical Guide Figure for circuit details.
FAULT DESCRIPTION	Fault description. If available, customer symptom (complaint) information is provided in this column.
MIL	Y = MIL (warning indicator) is activated. N = MIL (warning indicator) is not activated. M = Message displayed.
CM PIN	Control module connector pin number(s).
POSSIBLE CAUSES	Suggested possible causes listed in order of probability.

REFERENCE: It is recommended that the applicable "Electrical Guide" be referenced when using the information contained in this document.

CONTROL MODULE AND GENERAL ACRONYMS

AMP	Power Amplifier
ASCM	Adaptive Speed Control Module
ASM	Air Suspension Module
AUDIO	Audio Unit
CATS	Computer Active Suspension
CCM	Climate Control Module
CPM	Cellular Phone Module
DDM	Driver Door Module
DSCM	Dynamic Stability Control Module
DSM	Driver Seat Module
ECM	Engine Control Module
FEM	Front Electronic Module
HLM	Headlamp Leveling Module
IC	Instrument Cluster
IS	Intrusion Sensor
JGM	J-Gate Module
MCP	Multimedia Control Panel
NCM	Navigation Control Module
PAM	Parking Aid Module
PATS	Passive Anti-Theft System
PBM	Parking Brake Module
RCCM	Rear Climate Control Module
RCM	Restraints Control Module
REM	Rear Electronic Module
RMM	Rear Memory Module
SCLM	Steering Column Lock Module
TCM	Transmission Control Module
VAM	Voice Activation Module
VICS	Vehicle Information Control System

DTC	CM	SYSTEM	FAULT DESCRIPTION	MIL	CM PIN	POSSIBLE CAUSES
B1201	REM	Instrumentation	RH fuel level sensor circuit failure	N	CR4 -15 CR11 -23	RH fuel level sensor failure Check ECM P DTCs
B1202	IC	Instrumentation	RH fuel level sensor circuit fault	N	—	RH fuel level sensor(s) circuit(s): open circuit RH fuel level sensor SCP message error RH fuel level sensor(s) failure Check REM for flagged DTC
B1202	REM	Instrumentation	RH fuel level sensor circuit fault	N	CR4 -15 CR11 -23	RH fuel level sensor circuit: open circuit
B1203	REM	Instrumentation	RH fuel level sensor circuit fault	N	CR4 -15 CR11 -23	RH fuel level sensor circuit: short circuit to B+ voltage
B1204	IC	Instrumentation	RH fuel level sensor circuit fault	N	—	RH fuel level sensor(s) circuit(s): short circuit to ground RH fuel level sensor SCP message error RH fuel level sensor(s) failure Check REM for flagged DTC
B1204	REM	Instrumentation	RH fuel level sensor circuit fault	N	CR4 -15 CR11 -23	RH fuel level sensor circuit: short circuit to ground
B1205	IC	Trip Computer	Trip computer switch signal circuit fault	N	IP7 -4	Trip computer switch signal circuit: open circuit, short circuit to ground, short circuit to B+ voltage Trip computer switch failure (auxiliary lighting switch)

DTC	CM	SYSTEM	FAULT DESCRIPTION	MIL	CM PIN	POSSIBLE CAUSES
B1209	IC	Trip Computer	Trip computer cycle switch circuit fault	N	IP7 -14	Trip computer cycle switch signal circuit: open circuit, short circuit to ground, short circuit to B+ voltage Trip computer cycle switch failure (main lighting switch)
B1213	IC	Security	Less than two (2) keys are programmed	N	—	Program at least two keys using WDS
B1231	DSCM	Dynamic Stability Control (monitored by Adaptive Speed Control System)	Longitudinal acceleration threshold exceeded	Y M	—	Brake booster vacuum low Brake booster failure Brake pressure sensor failure Brake hydraulic unit failure ASCM failure
B1231	RCM	Advanced Restraint System	Crash data memory full Flash code 13	Y	—	Replace RCM
B1234	DDM	Door Mirrors	Mirror movement “joy stick” circuits fault	N	DD12 -14 -15 -16 -17	Mirror movement “joy stick” circuits: open circuit, short circuit to ground Driver door switch pack ground fault Driver door switch pack mirror movement “joy stick” failure
B1238	AUDIO	In-Car Entertainment	CD autochanger over-temperature fault	N	—	Switch OFF CD autochanger. Load CD autochanger, and play media to check for reoccurrence. CD autochanger failure
B1238	MCP	Rear In-Car Entertainment	Multimedia control panel over-temperature fault	N	—	Switch OFF MCP. Switch ON, and play media to check for reoccurrence. MCP failure
B1246	IC	Dimmer-Controlled Lighting	Dimmer switch signal circuit fault	N	IP7 -5	Dimmer switch signal circuit: open circuit, short circuit to ground, short circuit to B+ voltage Dimmer switch failure (auxiliary lighting switch)

DTC	CM	SYSTEM	FAULT DESCRIPTION	MIL	CM PIN	POSSIBLE CAUSES
B1299	PAM	Parking Aid	Sensor power supply circuit(s) fault	N	CR52 -2 -15	Front sensor power supply circuit: short circuit to ground Rear sensor power supply circuit: short circuit to ground
B1312	ASM	Air Suspension	ASM to HLM PWM signal circuit fault	M	CR93 -3	ASM to HLM PWM signal circuit: open circuit, short circuit to ground
B1313	FEM	Switched System Power	Switched system power relays drive circuit failure	N	CR1 -13	Switched system power relays drive circuit: over-current fault
B1313	REM	Switched System Power	Switched system power relays drive circuit failure	N	CR4 -4	Switched system power relays drive circuit: over-current fault
B1314	FEM	Switched System Power	Switched system power relays drive circuit fault	N	CR1 -13	Switched system power relays drive circuit: open circuit
B1314	REM	Switched System Power	Switched system power relays drive circuit fault	N	CR4 -4	Switched system power relays drive circuit: open circuit
B1315	FEM	Switched System Power	Switched system power relays drive circuit fault	N	CR1 -13	Switched system power relays drive circuit: short circuit to B+ voltage
B1315	REM	Switched System Power	Switched system power relays drive circuit fault	N	CR4 -4	Switched system power relays drive circuit: short circuit to B+ voltage
B1317	DSCM	Dynamic Stability Control	Battery voltage out of range – high	Y M	EC30 -1 -16 -32 -47	Charging system high voltage fault DSCM ground fault
B1317	IC	Instrument Cluster	Battery voltage out of range – high	N	IP6 -3	Charging system high voltage fault IC ground fault
B1317	PBM	Electronic Parking Brake	Battery voltage out of range – high	Y M	CR50 -1	Charging system high voltage fault PBM ground fault

DTC	CM	SYSTEM	FAULT DESCRIPTION	MIL	CM PIN	POSSIBLE CAUSES
B1317	RCM	Advanced Restraint System	Battery voltage out of range – high: >15 ± V	N	CR86 -12	Charging system over voltage fault
B1318	DSCM	Dynamic Stability Control	Battery voltage out of range – low	Y M	EC30 -1 -16 -32 -47	Charging system low voltage fault DSCM battery power supply circuit(s): high resistance
B1318	HLM (LH or RH)	HID Headlamps	Battery voltage out of range – low	N	EC101 -7 EC103 -7	Charging system low voltage fault Headlamp leveling (LH or RH) ignition power supply circuit: high resistance
B1318	IC	Instrument Cluster	Battery voltage out of range – low	N	IP6 -3	Charging system low voltage fault IC battery power supply circuit(s): high resistance
B1318	PBM	Electronic Parking Brake	Battery voltage out of range – low	Y M	CR50 -1	Charging system low voltage fault PBM battery power supply circuit(s): high resistance
B1318	RCM	Advanced Restraint System	Battery voltage out of range – low: >10.4 ± V	N	CR86 -12	Charging system low voltage fault Ignition switched power supply circuit: high resistance
B1342	AMP	In-Car Entertainment – Power Amplifier circuits	Power amplifier internal fault	N	—	AMP failure
B1342	ASCM	Adaptive Speed Control	Control module failure	Y M	—	ASCM failure
B1342	ASM	Air Suspension	Control module failure	M	—	ASM failure
B1342	AUDIO	In-Car Entertainment	Control module failure	N	—	AUDIO failure
B1342	CPM	Telephone	CPM internal fault	N	—	CPM failure

DTC	CM	SYSTEM	FAULT DESCRIPTION	MIL	CM PIN	POSSIBLE CAUSES
B1342	DSCM	Dynamic Stability Control	Control module failure	Y* M	—	DSCM failure * CHECK ENGINE MIL
B1342	HLM (LH or RH)	HID Headlamps	Control module failure	N	—	HLM (LH or RH) failure
B1342	IC	Instrument Cluster	Control module failure	N	—	IC failure
B1342	MCP	Rear In-Car Entertainment	Multimedia control panel internal fault	N	—	MCP failure
B1342	NCM	Navigation	NCM internal fault	N	—	NCM failure
B1342	PAM	Parking Aid	PAM internal fault	N	—	PAM failure
B1342	PBM	Electronic Parking Brake	Control module failure	Y M	—	PBM failure
B1342	RCM	Advanced Restraint System	RCM internal fault	N	—	RCM failure
B1342	SCLM	Security (Steering Column Lock Module)	Control module failure CUSTOMER SYMPTOM: Steering column locking inoperative	N	—	SCLM failure
B1342	VAM	Voice Activation Module	Control module configuration error	N	—	Reconfigure VAM using WDS
B1352	IC	Instrument Cluster	Ignition “key-in” switch circuit fault CUSTOMER SYMPTOMS: Key-in audible warning inoperative; steering column and driver seat entry / exit memory functions inoperative	N	IP5 -2	IC to key-in switch circuit: open circuit, short circuit to ground Key-in switch failure

DTC	CM	SYSTEM	FAULT DESCRIPTION	MIL	CM PIN	POSSIBLE CAUSES
B1432	FEM	Wash / Wipe System	Wiper ON / OFF relay drive circuit fault	N	EC36 -1	Wiper ON / OFF relay drive circuit: short circuit to B+ voltage, over-current fault
B1433	FEM	Wash / Wipe System	Wiper ON / OFF relay drive circuit fault	N	EC36 -1	Wiper ON / OFF relay drive circuit: short circuit to ground
B1436	FEM	Wash / Wipe System	Wiper fast / slow relay drive circuit fault	N	EC36 -17	Wiper fast / slow relay drive circuit: short circuit to B+ voltage, over-current fault
B1437	FEM	Wash / Wipe System	Wiper fast / slow relay drive circuit fault	N	EC36 -17	Wiper fast / slow relay drive circuit: short circuit to ground
B1438	FEM	Wash / Wipe System	Wiper master switch signal circuit fault	N	CR85 -16	Wiper master switch signal circuit: short circuit to ground
B1439	FEM	Wash / Wipe System	Wiper master switch signal circuit fault	N	CR85 -16	Wiper master switch signal circuit: open circuit, short circuit to B+ voltage
B1440	FEM	Wash / Wipe System	Wiper momentary wipe switch signal circuit fault	N	CR85 -9	Wiper momentary wipe switch signal circuit: open circuit, short circuit to B+ voltage
B1441	FEM	Wash / Wipe System	Wiper momentary wipe switch signal circuit fault	N	CR85 -9	Wiper momentary wipe switch signal circuit: short circuit to ground
B1450	FEM	Wash / Wipe System	Wash / wipe switch signal circuit fault	N	CR85 -10	Wash / wipe switch signal circuit: short circuit to ground
B1451	FEM	Wash / Wipe System	Wash / wipe switch signal circuit fault	N	CR85 -10	Wash / wipe switch signal circuit: open circuit, short circuit to B+ voltage
B1452	FEM	Wash / Wipe System	Intermittent wipe switch signal circuit fault	N	CR85 -13	Intermittent wipe switch signal circuit: open circuit, short circuit to B+ voltage
B1453	FEM	Wash / Wipe System	Intermittent wipe switch signal circuit fault	N	CR85 -13	Intermittent wipe switch signal circuit: short circuit to ground

DTC	CM	SYSTEM	FAULT DESCRIPTION	MIL	CM PIN	POSSIBLE CAUSES
B1458	FEM	Wash / Wipe System	Windshield washer pump drive circuit failure	N	CR85 -4	Windshield washer pump drive circuit: over-current
B1459	FEM	Wash / Wipe System	Windshield washer pump drive circuit fault	N	CR85 -4	Windshield washer pump drive circuit: open circuit
B1460	FEM	Wash / Wipe System	Windshield washer pump drive circuit fault	N	CR85 -4	Windshield washer pump drive circuit: short circuit to B+ voltage
B1470	HLM (LH or RH)	HID Headlamps (Dip Beam)	Lamp (dip beam) failure	N	EC102 -1 -2 -4 EC104 -1 -2 -4	HLM to dip beam (HID lamp) circuit fault Dip beam (HID lamp) failure
B1470	IC	Exterior Lighting: Front	Headlamp switch signal circuit fault CUSTOMER SYMPTOM: Headlamp switch inoperative	N	IP7 -13	Headlamp switch signal circuit: open circuit, short circuit to ground, short circuit to B+ voltage Main lighting switch failure
B1471	ASM	Air Suspension	ASM to HLM PWM signal circuit fault	M	CR93 -3	ASM to HLM PWM signal circuit: short circuit to B+ voltage
B1474	FEM	Switched System Power	Switched system power relays drive circuit fault	N	CR1 -13	Switched system power relays drive circuit: short circuit to B+ voltage, over-current fault
B1474	REM	Switched System Power	Switched system power relays drive circuit fault	N	CR4 -4	Switched system power relays drive circuit: short circuit to B+ voltage, over-current fault

DTC	CM	SYSTEM	FAULT DESCRIPTION	MIL	CM PIN	POSSIBLE CAUSES
B1499	REM	Exterior Lighting: Rear	LH rear turn signal drive circuit failure	N	CR71 -3	LH rear turn signal bulb failure LH rear turn signal drive circuit: short circuit to ground, short circuit to B+ voltage LH rear turn signal switched system power supply circuit: open circuit, short circuit to ground LH rear turn signal (tail lamp unit) failure
B1500	FEM	Exterior Lighting: Front	LH front turn signal drive circuit fault	N	CR10 -4	LH front turn signal drive circuit: open circuit
B1500	REM	Exterior Lighting: Rear	LH rear turn signal drive circuit fault	N	CR71 -3	LH rear turn signal drive circuit: open circuit
B1503	REM	Exterior Lighting: Rear	RH rear turn signal drive circuit failure	N	CR71 -4	RH rear turn signal bulb failure RH rear turn signal drive circuit: short circuit to ground, short circuit to B+ voltage RH rear turn signal switched system power supply circuit: open circuit, short circuit to ground RH rear turn signal (tail lamp unit) failure
B1504	FEM	Exterior Lighting: Front	RH front turn signal drive circuit fault	N	CR10 -10	RH front turn signal drive circuit: open circuit
B1504	REM	Exterior Lighting: Rear	RH rear turn signal drive circuit fault	N	CR71 -4	RH rear turn signal drive circuit: open circuit
B1529	DDM	Driver Memory Positions	Driver memory signal circuit fault	N	DD12 -10	Driver memory signal circuit: short circuit to B+ voltage
B1530	DDM	Driver Memory Positions	Driver memory signal circuit fault	N	DD12 -10	Driver memory signal circuit: short circuit to ground
B1567	IC	Exterior Lighting: Front	Headlamp switch main beam signal circuit fault CUSTOMER SYMPTOM: Headlamp main beam switch inoperative	N	IP7 -12	Headlamp switch main beam signal circuit: open circuit, short circuit to ground, short circuit to B+ voltage Main lighting switch failure

DTC	CM	SYSTEM	FAULT DESCRIPTION	MIL	CM PIN	POSSIBLE CAUSES
B1569	FEM	Exterior Lighting: Front	Headlamp main beam relay drive circuit fault	N	EC36 -21	Headlamp main beam relay drive circuit: short circuit to B+ voltage, over-current
B1570	FEM	Exterior Lighting: Front	Headlamp main beam relay drive circuit fault	N	EC36 -21	Headlamp main beam relay drive circuit: short circuit to ground
B1600	IC	Battery; Starter; Generator, Security	Ignition key transponder signal not received CUSTOMER SYMPTOM: Engine will not start	N	IP6 -4 -5 -6	Incorrect ignition key(s) Reconfigure instrument cluster for ignition keys using WDS PATS transceiver failure
B1601	IC	Battery; Starter; Generator, Security	IC PATS module received incorrect ignition key code from PATS transceiver CUSTOMER SYMPTOM: Engine will not start	N	IP6 -4 -5 -6	Reprogram instrument cluster for ignition keys using WDS PATS transceiver failure
B1602	IC	Battery; Starter; Generator, Security	IC PATS module received invalid form of ignition key code from PATS transceiver CUSTOMER SYMPTOM: Engine will not start	N	IP6 -4 -5 -6	PATS transceiver failure
B1633	DDM	Door Mirrors	Driver door mirror LEFT drive circuit fault	N	DD11 -1	Driver door mirror LEFT drive circuit: short circuit to B+ voltage
B1634	DDM	Door Mirrors	Driver door mirror LEFT drive circuit fault	N	DD11 -1	Driver door mirror LEFT drive circuit: short circuit to ground
B1637	DDM	Door Mirrors	Driver door mirror RIGHT drive circuit fault	N	DD11 -2	Driver door mirror RIGHT drive circuit: short circuit to B+ voltage
B1638	DDM	Door Mirrors	Driver door mirror RIGHT drive circuit fault	N	DD11 -2	Driver door mirror RIGHT drive circuit: short circuit to ground
B1671	ASM	Air Suspension	Battery voltage out of range	M	CR88 -1	Charging system low / high voltage fault Battery power supply circuit: high resistance

DTC	CM	SYSTEM	FAULT DESCRIPTION	MIL	CM PIN	POSSIBLE CAUSES
B1676	DDM	Driver Door Module	Battery voltage out of range	N	DD13 -11	Charging system low / high voltage fault Battery power supply circuit: high resistance
B1676	FEM	Front Electronic Module	Battery voltage out of range	N	CR9 -6	Charging system low / high voltage fault Battery power supply circuit: high resistance
B1676	REM	Rear Electronic Module	Battery voltage out of range: 9 v – 16 v	N	CR4 -3	Charging system low / high voltage fault Battery power supply circuit: high resistance
B1681	IC	Battery; Starter; Generator, Security	IC PATS module does not receive PATS transceiver signal CUSTOMER SYMPTOM: Engine will not start	N	IP6 -4 -5	IC to PATS transceiver circuit(s): open circuit, short circuit to ground, short circuit to each other, short circuit to B+ voltage, high resistance PATS transceiver failure
B1683	DDM	Door Mirrors	Mirror select RH circuit fault	N	DD12 -2	Mirror select circuit: short circuit to ground Driver door switch pack mirror select switch failure
B1689	IC	Exterior Lighting: Front	Autolamps / exit delay switch signal circuit fault CUSTOMER SYMPTOM: Headlamp autolamp function / exit delay function inoperative	N	IP7 -2	Autolamps / exit delay switch signal circuit: open circuit, short circuit Main lighting switch failure
B1775	DDM	Door Mirrors	Driver door mirror UP drive circuit fault	N	DD11 -3	Driver door mirror UP drive circuit: short circuit to B+ voltage
B1776	DDM	Door Mirrors	Driver door mirror UP drive circuit fault	N	DD11 -3	Driver door mirror UP drive circuit: short circuit to ground
B1780	DDM	Door Mirrors	Driver door mirror DOWN drive circuit fault	N	DD11 -4	Driver door mirror DOWN drive circuit: short circuit to B+ voltage
B1781	DDM	Door Mirrors	Driver door mirror DOWN drive circuit fault	N	DD11 -4	Driver door mirror DOWN drive circuit: short circuit to ground

DTC	CM	SYSTEM	FAULT DESCRIPTION	MIL	CM PIN	POSSIBLE CAUSES
B1838	FEM	Switched System Power	Switched system power relays drive circuit fault	N	CR1 -13	Switched system power relays drive circuit: short circuit ground
B1838	REM	Switched System Power	Switched system power relays drive circuit fault	N	CR4 -4	Switched system power relays drive circuit: short circuit ground
B1869	RCM	Advanced Restraint System	Airbag MIL circuit fault	N	CR86 -19	Airbag MIL circuit: open circuit
B1870	RCM	Advanced Restraint System	Airbag MIL circuit fault	Y	CR86 -19	Airbag MIL circuit: short circuit to B+ voltage
B1875	IC	Exterior Lighting: Front	Turn signals / hazard switch signal circuit fault CUSTOMER SYMPTOM: Turn signals and hazard warning inoperative	N	IP7 -1	Turn signals / hazard switch signal circuit: short circuit to ground, short circuit to B+ voltage Turn signals (main lighting switch) and / or hazard switch (center console switch pack) failure
B1884	RCM	Advanced Restraint System	Passenger airbag deactivated indicator lamp circuit fault Flash code 18	Y	CR86 -15	Passenger airbag deactivated indicator lamp circuit: open circuit, short circuit to ground
B1890	RCM	Advanced Restraint System	Passenger airbag deactivated indicator lamp circuit fault	Y	CR86 -15	Passenger airbag deactivated indicator lamp circuit: short circuit to B+ voltage
B1891	RCM	Advanced Restraint System	Airbag audible warning circuit fault	N	CR86 -22	Airbag audible warning circuit: short circuit to B+ voltage
B1892	RCM	Advanced Restraint System	Airbag audible warning circuit fault Flash code 53	Y	CR86 -22	Airbag audible warning circuit: open circuit, short circuit to ground
B1893	CPM	JaguarNet	JaguarNet GPS antenna circuit fault	N	TL43 -1	JaguarNet GPS antenna circuit: open circuit

DTC	CM	SYSTEM	FAULT DESCRIPTION	MIL	CM PIN	POSSIBLE CAUSES
B1895	DDM	Interior Lighting	Driver door puddle lamp drive circuit fault	N	DD12 -13	Driver door puddle lamp drive circuit: open circuit, short circuit to ground
B1921	RCM	Advanced Restraint System	RCM internal airbag diagnostic monitor ground circuit fault Flash code 14	Y	—	RCM mounting bracket contact: open circuit, high resistance
B1940	DSM	Driver Seat	Driver seat position(s) out of range (PID A102 indicates seat position function effected)	N	—	Seat range calibration error. Recalibrate seat positions using WDS
B1940	RMM	Powered Rear Seats	Rear seat position(s) out of range (PID A102 indicates seat position function effected)	N	—	Rear seat range calibration error. Recalibrate rear seat positions using WDS
B1987	FEM	Pedal Adjust	Pedal adjust motor fault	N	CR10 -2 -5	Pedal adjust motor stalled
B1990	FEM	Pedal Adjust	Pedal adjust motor position sensor circuit fault	N	CR9 -11 CR85 -15 -17	Pedal adjust motor position sensor circuit: open circuit, short circuit to ground Pedal adjust motor supply and / or ground circuit(s) fault
B1991	FEM	Pedal Adjust	Pedal adjust motor position sensor circuit fault	N	CR9 -11 CR85 -15 -17	Pedal adjust motor position sensor circuit: short circuit to B+ voltage Pedal adjust motor supply and / or ground circuit(s) fault
B2004	AUDIO	In-Car Entertainment	Audio unit media over-temperature fault	N	—	Switch OFF audio unit, and allow to cool. Switch audio unit ON, load and play media, and check for reoccurrence. AUDIO failure
B2022	FEM	Interior Lighting	Footwell and rear courtesy lamp drive circuit fault	N	CR10 -6	Footwell and rear courtesy lamp drive circuit: short circuit to B+ voltage

DTC	CM	SYSTEM	FAULT DESCRIPTION	MIL	CM PIN	POSSIBLE CAUSES
B2022	REM	Interior Lighting	Rear courtesy and footwell lighting drive circuit fault	N	CR71 -1	Rear courtesy and footwell lighting drive circuit: short circuit to B+ voltage
B2023	FEM	Interior Lighting	Footwell and rear courtesy lamp drive circuit fault	N	CR10 -6	Footwell and rear courtesy lamp drive circuit: open circuit, short circuit to ground
B2023	REM	Interior Lighting	Rear courtesy and footwell lighting drive circuit fault	N	CR71 -1	Rear courtesy and footwell lighting drive circuit: short circuit to ground
B2026	FEM	Dimmer-Controlled Lighting	Incandescent locate lighting drive circuit fault	N	CR85 -11	Incandescent locate lighting drive circuit: open circuit, short circuit to ground, short circuit to B+ voltage
B2027	FEM	Dimmer-Controlled Lighting	LED locate lighting drive circuit fault	N	CR86 -12	LED locate lighting drive circuit: open circuit, short circuit to ground, short circuit to B+ voltage
B2030	FEM	Exterior Lighting: Front	Front fog lamp relay drive circuit fault	N	EC36 -18	Front fog lamp relay drive circuit: short circuit to ground
B2035	FEM	Exterior Lighting: Front	LH front turn signal repeater lamp drive circuit fault	N	EC36 -7	LH front turn signal repeater lamp drive circuit: open circuit
B2037	FEM	Exterior Lighting: Front	RH front turn signal repeater lamp drive circuit fault	N	EC36 -19	RH front turn signal repeater lamp drive circuit: open circuit
B2087	FEM	Security System	Security ground sensing circuit fault	N	CR1 -25	Security ground sensing circuit: short circuit to B+ voltage, over-current fault
B2089	FEM	Interior Lighting	Passenger door puddle and approach lamp circuits fault(s)	N	CR1 -2 -5	Passenger door puddle and approach lamp circuits: open circuit, short circuit to ground, short circuit to B+ voltage
B2089	REM	Interior Lighting	Rear puddle lamps drive circuit(s) fault	N	CR13 -20 -22	Rear puddle lamps drive circuit(s): open circuit, short circuit to ground, short circuit to B+ voltage

DTC	CM	SYSTEM	FAULT DESCRIPTION	MIL	CM PIN	POSSIBLE CAUSES
B2102	CPM	JaguarNet	JaguarNet GPS antenna circuit fault	N	TL43 -1	JaguarNet GPS antenna circuit: short circuit
B2103	CPM	Telephone	Telephone antenna circuit fault	N	TL94 -1	Telephone antenna circuit: high resistance, open circuit
B2103	IC	Battery; Starter; Generator, Security	IC PATS module does not receive PATS transceiver data CUSTOMER SYMPTOM: Engine will not start	N	IP6 -5	IC to PATS transceiver data circuit: open circuit, short circuit to ground, short circuit to each other, short circuit to B+ voltage, high resistance PATS transceiver failure
B2112	DDM	Central Locking / Security / Powered Windows	Driver door latch set switch circuit fault	N	DD11 -16	Driver door latch set switch circuit: short circuit to ground Driver door latch set switch (key barrel) failure
B2116	DDM	Central Locking / Security / Powered Windows	Driver door latch reset switch circuit fault	N	DD11 -17	Driver door latch reset switch circuit: short circuit to ground Driver door latch reset switch (key barrel) failure
B2131	REM	Central Locking	Double lock status failure	N	CR4 -12	Double lock drive / status circuit: high resistance Passenger door lock motor and / or driver rear door lock motor failure
B2139	IC	Battery; Starter; Generator, Security	ECM identification does not match IC CUSTOMER SYMPTOM: Engine will not start	Y	—	Reconfigure IC using WDS
B2139	REM	Central Locking	Unlock data error (between DDM and REM)	N	—	DDM / REM SCP network fault DDM failure – Check DDM DTCs
B2141	CPM	Telephone	CPM configuration failure	N	—	Invalid telephone numbers present Reconfigure CPM using WDS
B2141	DSCM	Dynamic Stability Control	DSCM configuration failure	Y M	—	Reconfigure DSCM using WDS

DTC	CM	SYSTEM	FAULT DESCRIPTION	MIL	CM PIN	POSSIBLE CAUSES
B2141	IC	Battery; Starter; Generator, Security	ECM identification lost from instrument cluster non-volatile memory CUSTOMER SYMPTOM: Engine will not start	Y	—	Reconfigure IC using WDS
B2141	REM	Security	ECM identification lost from REM non-volatile memory CUSTOMER SYMPTOM: Engine will not start	Y	—	Reconfigure REM using WDS
B2143	IC	Instrumentation	Odometer memory failure	N	—	IC failure
B2147	DSM	Driver Seat	Driver seat switch circuit(s) fault	N	SD5 SD29	Driver seat switch circuit(s): short circuit to B+ voltage Driver seat switch failure
B2162	IC	Security	SCLM identification does not match IC CUSTOMER SYMPTOM: Engine will not start	Y	—	Reconfigure IC using WDS
B2162	REM	Rear Electronic Module	Data error (between IC and REM)	Y	—	Reconfigure REM using WDS
B2162	SCLM	Security	IC identification does not match SCLM CUSTOMER SYMPTOM: Engine will not start	Y	—	Reconfigure SCLM using WDS
B2168	DDM	Central Locking / Security / Powered Windows	Driver door latch unlock status switch circuit fault	N	DD13 -2	Driver door latch set switch circuit: short circuit to ground Driver door latch set switch (key barrel) failure
B2168	REM	Central Locking	REM unable to confirm passenger door UNLOCK condition	N	CR4 -22	Passenger door unlock status circuit: open circuit, short circuit to ground, short circuit to B+ voltage Passenger door unlock status switch ground fault Passenger door unlock status switch failure

DTC	CM	SYSTEM	FAULT DESCRIPTION	MIL	CM PIN	POSSIBLE CAUSES
B2168	SCLM	Security	SCLM unable to detect unlocked condition	N	—	SCLM failure
B2169	DDM	Central Locking / Security / Powered Windows	Driver door latch lock status switch circuit fault	N	DD13 -10	Driver door latch reset switch circuit: short circuit to ground Driver door latch reset switch (key barrel) failure
B2169	REM	Central Locking	REM unable to confirm passenger door LOCK condition	N	CR4 -21	Passenger door lock status circuit: open circuit, short circuit to ground, short circuit to B+ voltage Passenger door lock status switch ground fault Passenger door lock status switch failure
B2169	SCLM	Security	SCLM unable to detect locked condition	N	—	SCLM failure
B2170	FEM	Security System	SCLM ground supply circuit fault	N	CR85 -14	SCLM ground supply circuit: over-current
B2171	RMM	Powered Rear Seats	LH rear seat switch circuit(s) fault	N	LS5 -3 -6 -10 -13	LH rear seat switch circuit(s): short circuit to B+ voltage LH rear seat switch failure
B2173	RMM	Powered Rear Seats	RH rear seat switch circuit(s) fault	N	RS5 -3 -6 -10 -13	RH rear seat switch circuit(s): short circuit to B+ voltage RH rear seat switch failure
B2177	REM	Security	IS power supply circuit fault	N	CR13 -10	IS power supply circuit: open circuit, short circuit to ground IS failure
B2197	NCM	Television	Television screen module internal fault	N	—	Television screen module failure
B2199	NCM	Vehicle information control system	VICS module internal fault	N	—	VICS module failure

DTC	CM	SYSTEM	FAULT DESCRIPTION	MIL	CM PIN	POSSIBLE CAUSES
B2202	NCM	Navigation	VICS communications fault	N	—	NCM configured for VICS; vehicle information control module not installed Reconfigure NCM using WDS
B2204	NCM	Navigation	GPS antenna signal not received	N	TL37 -01 -02	NCM to Navigation GPS antenna circuit: open circuit
B2205	NCM	Navigation	NCM GPS receiver fault	N	TL37 -01 -02	Navigation GPS antenna obstructed NCM to Navigation GPS antenna circuit: high resistance, open circuit, short circuit NCM failure
B2206	NCM	Navigation	NCM gyroscope error	N	—	NCM failure
B2207	DDM	Driver Door Module	DDM internal ROM error	N	—	DDM failure
B2207	DSM	Driver Seat	DSM internal ROM error	N	—	DSM failure
B2207	FEM	Front Electronic Module	FEM internal ROM error	N	—	FEM failure
B2207	HLM (LH or RH)	HID Headlamps	HLM internal error	N	—	HLM (LH or RH) failure
B2207	NCM	Navigation	NCM internal error	N	—	NCM failure
B2207	PAM	Parking Aid	PAM internal error	N	—	PAM failure
B2207	REM	Rear Electronic Module	REM internal ROM error	N	—	REM failure
B2207	RMM	Powered Rear Seats	RMM internal ROM error	N	—	RMM failure

DTC	CM	SYSTEM	FAULT DESCRIPTION	MIL	CM PIN	POSSIBLE CAUSES
B2208	NCM	Navigation	NCM to telematics display communication fault	N	TL29 TL30	NCM to telematics communication circuit(s): high resistance, open circuit
B2249	FEM	Exterior Lighting: Front	Headlamp dip beam relay drive circuit fault	N	EC36 15	Headlamp dip beam relay drive circuit: short circuit to B+ voltage, over-current
B2258	FEM	Wash / Wipe System	Power wash relay drive circuit fault	N	EC36 -16	Power wash relay drive circuit: short circuit to B+ voltage, over-current
B2262	FEM	Wash / Wipe System	Wiper time-out fault	N	EC36 -3	Wiper motor failure
B2287	REM	Security	IS power supply circuit fault	N	CR13 -9	IS power supply circuit: open circuit, short circuit to ground IS failure
B2290	RCM	Advanced Restraint System	Passenger seat weight sensing (Occupancy Classification) CAN circuit fault Flash code 16	Y	CR87 -17 -18	Passenger seat weight sensing CAN circuit fault Passenger seat weight pressure sensor circuit fault Test using WDS
B2291	RCM	Advanced Restraint System	Passenger spatial sensing (Occupancy Position) CAN circuit fault Flash code 17	Y	CR87 -17 -18	Passenger spatial sensing CAN circuit fault Passenger spatial sensor(s) circuit(s) fault Test using WDS
B2292	RCM	Advanced Restraint System	Seat belt pretensioner circuit fault Flash code 33 – driver side Flash code 34 – passenger side	Y	CR87 -31 -32 CR87 -33 -34	Driver seat belt pretensioner circuit fault Passenger seat belt pretensioner circuit fault Test using WDS

DTC	CM	SYSTEM	FAULT DESCRIPTION	MIL	CM PIN	POSSIBLE CAUSES
B2293	RCM	Advanced Restraint System	Airbag circuit status fault Flash code 19 – driver side Flash code 21 – passenger side	Y	CR86 -1 -2 -05 -06 CR86 -3 -4 -13 -14	Driver airbag circuit fault Test using WDS Passenger airbag circuit fault Test using WDS
B2294	RCM	Advanced Restraint System	Curtain airbag circuit status fault Flash code 24 – driver side Flash code 25 – passenger side	Y	CR87 -03 -04 CR87 -05 -06	Driver curtain airbag circuit fault Test using WDS Passenger curtain airbag circuit fault Test using WDS
B2295	RCM	Advanced Restraint System	Side airbag circuit status fault Flash code 22 – driver side Flash code 23 – passenger side	Y	CR87 -01 -02 CR87 -21 -22	Driver side airbag circuit fault Test using WDS Passenger side airbag circuit fault Test using WDS

DTC	CM	SYSTEM	FAULT DESCRIPTION	MIL	CM PIN	POSSIBLE CAUSES
B2296	RCM	Advanced Restraint System	Impact sensor circuit status fault Flash code 42 – Front impact sensor Flash code 43 – Driver side impact sensor Flash code 44 – Passenger side impact sensor Flash code 45 – Driver rear side impact sensor Flash code 46 – Passenger rear side impact sensor	Y	CR87 -19 -20 CR87 -27 -28 CR87 -29 -30 CR87 -13 -14 CR87 -15 -16	Impact sensor circuit fault Test using WDS
B2309	DSM	Driver Seat	Driver seat motor(s) out of range (PID A106 indicates seat position function effected)	N	—	Driver seat motor circuit(s) fault DSM failure
B2309	RMM	Powered Rear Seats	Rear seat motor(s) out of range (PID A106 indicates seat position function effected)	N	—	Rear seat motor circuit(s) fault RMM failure
B2314	FEM	Door Mirrors	Passenger door mirror horizontal position sensor circuit fault	N	CR1 -7 -8 -22	Passenger door mirror horizontal position sensor circuit: short circuit to B+ voltage Passenger door mirror horizontal position sensor supply and / or ground circuit(s) fault
B2315	FEM	Door Mirrors	Passenger door mirror horizontal position sensor circuit fault	N	CR1 -7 -8 -22	Passenger door mirror horizontal position sensor circuit: open circuit, short circuit to ground Passenger door mirror horizontal position sensor supply and / or ground circuit(s) fault

DTC	CM	SYSTEM	FAULT DESCRIPTION	MIL	CM PIN	POSSIBLE CAUSES
B2318	FEM	Door Mirrors	Passenger door mirror vertical position sensor circuit fault	N	CR1 -11 -8 -22	Passenger door mirror vertical position sensor circuit: short circuit to B+ voltage Passenger door mirror vertical position sensor supply and / or ground circuit(s) fault
B2319	FEM	Door Mirrors	Passenger door mirror vertical position sensor circuit fault	N	CR1 -11 -8 -22	Passenger door mirror vertical position sensor circuit: open circuit, short circuit to ground Passenger door mirror vertical position sensor supply and / or ground circuit(s) fault
B2322	DDM	Door Mirrors	Driver door mirror horizontal position sensor circuit fault	N	DD11 -14	Driver door mirror horizontal position sensor circuit: short circuit to B+ voltage Driver door mirror horizontal position sensor failure
B2323	DDM	Door Mirrors	Driver door mirror horizontal position sensor circuit fault	N	DD11 -14	Driver door mirror horizontal position sensor circuit: short circuit to ground Driver door mirror horizontal position sensor failure
B2326	DDM	Door Mirrors	Driver door mirror vertical position sensor circuit fault	N	DD11 -15	Driver door mirror vertical position sensor circuit: short circuit to B+ voltage Driver door mirror vertical position sensor failure
B2327	DDM	Door Mirrors	Driver door mirror vertical position sensor circuit fault	N	DD11 -15	Driver door mirror vertical position sensor circuit: short circuit to ground Driver door mirror vertical position sensor failure
B2329	IC	Steering Column Adjust	Steering column reach position sensor circuit fault CUSTOMER SYMPTOM: Steering column reach movement inoperative	N	IP7 -9	Steering column reach position sensor circuit: open circuit, short circuit to ground Column reach position sensor failure

DTC	CM	SYSTEM	FAULT DESCRIPTION	MIL	CM PIN	POSSIBLE CAUSES
B2330	IC	Steering Column Adjust	Steering column reach position sensor circuit fault CUSTOMER SYMPTOM: Steering column reach movement inoperative	N	IP7 -9	Steering column reach position sensor circuit: short circuit to B+ voltage Column reach position sensor failure
B2333	IC	Steering Column Adjust	Steering column tilt position sensor circuit fault CUSTOMER SYMPTOM: Steering column tilt movement inoperative	N	IP7 -9	Steering column tilt position sensor circuit: open circuit, short circuit to ground Column tilt position sensor failure
B2334	IC	Steering Column Adjust	Steering column tilt position sensor circuit fault CUSTOMER SYMPTOM: Steering column tilt movement inoperative	N	IP7 -9	Steering column tilt position sensor circuit: short circuit to B+ voltage Column tilt position sensor failure
B2336	DDM	Door Mirrors	Mirror select LH circuit fault	N	DD12 -3	Mirror select circuit: short circuit to ground Driver door switch pack mirror select switch failure
B2351	IC	Steering Column Adjust	Steering column adjust switch signal circuit fault CUSTOMER SYMPTOM: Steering column adjust switch inoperative	N	IP7 -17	Steering column adjust switch signal circuit: short circuit to ground, short circuit to B+ voltage Steering column adjust switch failure
B2356	FEM	Front Seat Heaters	Driver (LHD), Passenger (RHD) seat heater drive circuit fault	N	CR10 -16	Driver (LHD), Passenger (RHD) seat heater drive circuit: short circuit to ground, short circuit to B+ voltage, over-current fault
B2356	REM	Rear Seat Heaters	LH rear seat heater drive circuit fault	N	CR71 -16	LH rear seat heater drive circuit: short circuit to ground, short circuit to B+ voltage, over-current fault
B2360	FEM	Powered Windows	Window motors global drive circuit fault	N	CR1 -15	Window motors global drive circuit: short circuit to B+ voltage, over-current fault

DTC	CM	SYSTEM	FAULT DESCRIPTION	MIL	CM PIN	POSSIBLE CAUSES
B2361	FEM	Front Seat Heaters	Passenger (LHD), Driver (RHD) seat heater drive circuit fault	N	CR10 -17	Passenger (LHD), Driver (RHD) seat heater drive circuit: excessive power consumption (shutdown by FEM)
B2361	REM	Rear Seat Heaters	RH rear seat heater drive circuit fault	N	CR71 -17	RH rear seat heater drive circuit: short circuit to ground, short circuit to B+ voltage, over-current fault
B2363	FEM	Wash / Wipe System	Rain sensing module signal circuit fault	N	CR1 -4	Rain sensing module signal circuit: open circuit, short circuit to ground, short circuit to B+ voltage Rain sensing module failure
B2369	ASCM	Adaptive Speed Control	Chime request circuit fault	Y M	EC23 -6	Chime request circuit: short circuit to ground Chime module failure
B2370	FEM	Front Seat Heaters	Driver (LHD), Passenger (RHD) seat heater drive circuit fault	N	CR10 -16	Driver (LHD), Passenger (RHD) seat heater drive circuit: excessive power consumption (shutdown by FEM)
B2370	REM	Rear Seat Heaters	LH rear seat heater drive circuit fault	N	CR71 -16	LH rear seat heater drive circuit: excessive power consumption (shutdown by REM)
B2371	FEM	Front Seat Heaters	LH seat heater switch signal circuit fault	N	CR85 -18	LH seat heater switch signal circuit: open circuit LH seat heater switch failure (center console)
B2371	REM	Rear Seat Heaters	LH rear seat heater switch signal circuit fault	N	CR4 -10	LH rear seat heater switch signal circuit: open circuit LH rear seat heater switch failure (rear center console)
B2372	FEM	Front Seat Heaters	RH seat heater switch signal circuit fault	N	CR85 -19	RH seat heater switch signal circuit: open circuit RH seat heater switch failure (center console)
B2372	REM	Rear Seat Heaters	RH rear seat heater switch signal circuit fault	N	CR11 -13	RH rear seat heater switch signal circuit: open circuit RH rear seat heater switch failure (rear center console)
B2373	DDM	Driver Memory Positions	Memory set indicator circuit fault	N	DD12 -7	Memory set indicator circuit: short circuit to B+ voltage

DTC	CM	SYSTEM	FAULT DESCRIPTION	MIL	CM PIN	POSSIBLE CAUSES
B2373	PAM	Parking Aid	Parking aid status indicator circuit fault	N	CR52 -19	Parking aid status indicator circuit: open circuit, short circuit to B+ voltage
B2375	SCLM	Security	Position sensor failure – unlocking	N	—	SCLM failure
B2376	SCLM	Security	Lock cycle timing invalid	N	—	Reconfigure SCLM using WDS SCLM failure
B2377	SCLM	Security	Unlock cycle timing invalid	N	—	Reconfigure SCLM using WDS SCLM failure
B2378	SCLM	Security	Position sensor failure – locking	N	—	SCLM failure
B2379	SCLM	Security	SCLM not configured	N	—	Reconfigure SCLM using WDS
B2401	AUDIO	In-Car Entertainment	Audio unit tape deck fault	N	—	Audio unit failure
B2403	AUDIO	In-Car Entertainment	CD autochanger failure	N	—	CD autochanger failure
B2408	AMP	In-Car Entertainment – Power Amplifier circuits	Speaker circuit(s) fault	N	All speaker	One or more speaker circuits: short circuit to ground Run "Audio Speaker Cycle Command" to test which channel is shorted.
B2414	FEM	Wash / Wipe System	Power wash relay drive circuit fault	N	EC36 -16	Powerwash relay drive circuit: short circuit to ground
B2431	IC	Security	Key fob transmitter programming error CUSTOMER SYMPTOM: Key fob transmitter inoperative	N	—	Reprogram key fob(s) Key fob transmitter failure
B2434	RCM	Advanced Restraint System	Driver seat belt switch circuit fault Flash code 51	Y	CR87 -25	Driver seat belt switch circuit: short circuit to ground

DTC	CM	SYSTEM	FAULT DESCRIPTION	MIL	CM PIN	POSSIBLE CAUSES
B2435	RCM	Advanced Restraint System	Driver seat belt switch circuit fault Flash code 51	Y	CR87 -25	Driver seat belt switch circuit: high resistance Driver seat belt switch failure
B2438	RCM	Advanced Restraint System	Passenger seat belt switch circuit fault Flash code 52	Y	CR87 -26	Passenger seat belt switch circuit: short circuit to ground
B2439	RCM	Advanced Restraint System	Passenger seat belt switch circuit fault Flash code 52	Y	CR87 -26	Passenger seat belt switch circuit: high resistance Passenger seat belt switch failure
B2442	REM	Security	IS signal circuit fault	N	CR4 -6	IS signal circuit: open circuit, short circuit to ground, short circuit to B+ voltage IS failure
B2472	IC	Exterior Lighting: Front Exterior Lighting: Rear	Fog lamp switch signal circuit fault CUSTOMER SYMPTOM: Fog lamp switch inoperative	N	IP7 -6	Fog lamp switch signal circuit: open circuit, short circuit to ground, short circuit to B+ voltage Auxiliary lighting switch failure
B2477	AMP	In-Car Entertainment – Power Amplifier circuits	Control module configuration failure	N	—	Reconfigure AMP using WDS
B2477	ASCM	Adaptive Speed Control	Control module configuration failure	Y M	—	Reconfigure ASCM using WDS
B2477	ASM	Air Suspension	Control module configuration failure	M	—	Reconfigure ASM using WDS
B2477	AUDIO	In-Car Entertainment	Control module configuration failure	N	—	Reconfigure AUDIO using WDS
B2477	CCM	Climate Control	Control module configuration failure	N	—	Reconfigure CCM using WDS
B2477	CPM	JaguarNet	Control module configuration failure	N	—	Reconfigure CPM using WDS
B2477	DDM	Driver Door Mirror	Control module configuration failure	N	—	Reconfigure DDM using WDS

DTC	CM	SYSTEM	FAULT DESCRIPTION	MIL	CM PIN	POSSIBLE CAUSES
B2477	FEM	Front Electronic Module	Control module configuration failure	N	—	Reconfigure FEM using WDS
B2477	HLM (LH or RH)	HID Headlamps	Control module configuration failure	N	—	Reconfigure HLM (LH or RH) using WDS
B2477	IC	Instrument Cluster	Control module configuration failure	N	—	Reconfigure IC using WDS
B2477	IS	Intrusion Sensor	Control module configuration failure	N	—	Reconfigure IS using WDS
B2477	PAM	Parking Aid	Control module configuration failure	N	—	Reconfigure PAM using WDS
B2477	PBM	Electronic Parking Brake	Control module configuration failure	Y M	—	Reconfigure PBM using WDS
B2477	RCM	Advanced Restraint System	Control module configuration failure Flash code 54	Y	—	Reconfigure RCM using WDS
B2477	REM	Rear Electronic Module	Control module configuration failure	N	—	Reconfigure REM using WDS
B2491	FEM	Exterior Lighting: Front	RH front side lamp drive circuit fault	N	EC36 -22	RH front side lamp drive circuit: short circuit to B+ voltage, over-current fault
B2493	FEM	Exterior Lighting: Front	LH front side lamp drive circuit fault	N	EC36 -15	LH front side lamp drive circuit: short circuit to B+ voltage, over-current fault
B2494	FEM	Security / Horns (Ancillaries)	Security horn relay drive circuit fault	N	EC36 -20	Security horn relay drive circuit: short circuit to B+ voltage, over-current fault
B2495	REM	Security	Passive security sounder drive circuit fault	N	CR13 -8	Passive security sounder drive circuit: open circuit, short circuit to ground Passive security sounder failure

DTC	CM	SYSTEM	FAULT DESCRIPTION	MIL	CM PIN	POSSIBLE CAUSES
B2496	FEM	Security / Horns	Security horn relay drive circuit fault	N	EC36 -20	Security horn relay drive circuit: short circuit to ground
B2499	DDM	Interior Lighting	Driver door mirror approach lamp drive circuit fault	N	DD12 -21	Driver door mirror approach lamp drive circuit: open circuit, short circuit to ground
B2512	FEM	Exterior Lighting: Front	Front fog lamps relay drive circuit fault	N	EC36 -18	Front fog lamps relay drive circuit: short circuit to B+ voltage, over-current fault
B2513	CCM	Climate Control	Blower drive signal circuit fault	N	AC101 -01	Blower drive signal circuit: short circuit to ground
B2513	RCCM	Rear Climate Control	Blower drive signal circuit fault	N	RA1 -14	Blower drive signal circuit: open circuit, short circuit to ground Rear blower controller failure
B2514	CCM	Climate Control	Blower drive signal circuit fault	N	AC101 -01	Blower drive signal circuit: short circuit to B+ voltage
B2514	RCCM	Rear Climate Control	Blower drive signal circuit fault	N	RA1 -14	Blower drive signal circuit: short circuit to B+ voltage
B2525	REM	Exterior Lighting: Rear	Reverse lamps drive circuit fault	N	CR71 -9	Reverse lamps bulb failure Reverse lamps drive circuit: open circuit, short circuit to ground Reverse lamp(s) failure (tail lamp unit)
B2526	REM	Exterior Lighting: Rear	Reverse lamps drive circuit fault	N	CR71 -9	Reverse lamps drive circuit: short circuit to B+ voltage
B2527	REM	Exterior Lighting: Rear	LH stop lamp drive circuit fault	N	CR71 -12	LH stop lamp bulb failure LH stop lamp drive circuit: open circuit, short circuit to ground, short circuit to B+ voltage LH stop lamp failure (tail lamp unit)

DTC	CM	SYSTEM	FAULT DESCRIPTION	MIL	CM PIN	POSSIBLE CAUSES
B2533	REM	Exterior Lighting: Rear	RH stop lamp drive circuit fault	N	CR71 -11	RH stop lamp bulb failure RH stop lamp drive circuit: open circuit, short circuit to ground, short circuit to B+ voltage RH stop lamp failure (tail lamp unit)
B2565	REM	Exterior Lighting: Rear	RH tail lamp drive circuit fault	N	CR71 -5	RH tail lamp bulb failure RH tail lamp drive circuit: open circuit, short circuit to ground, short circuit to B+ voltage RH tail lamp failure (tail lamp unit)
B2577	REM	Exterior Lighting: Rear	LH tail lamp drive circuit fault	N	CR71 -6	LH tail lamp bulb failure LH tail lamp drive circuit: open circuit, short circuit to ground, short circuit to B+ voltage LH tail lamp failure (tail lamp unit)
B2585	CCM	Climate Control	Smog sensor signal circuit fault	N	CR119 -08	Smog sensor signal circuit: short circuit to ground Smog sensor failure
B2598	FEM	Exterior Lighting: Front	Headlamp dip beam relay drive circuit fault	N	EC36 -15	Headlamp dip beam relay drive circuit: short circuit to ground
B2609	HLM (LH)	HID Headlamps	LH control module to stepper motor drive circuit fault	N	EC101 -6 -9 -10 -11	LH headlamp stepper motor and actuator failure
B2612	HLM (RH)	HID Headlamps	RH control module to stepper motor drive circuit fault	N	EC103 -6 -9 -10 -11	RH headlamp stepper motor and actuator failure

DTC	CM	SYSTEM	FAULT DESCRIPTION	MIL	CM PIN	POSSIBLE CAUSES
B2626	HLM (LH or RH)	HID Headlamps	Auto leveling not calibrated	N	—	Calibrate control module auto leveling using WDS
B2627	IC	Instrumentation	LH fuel level sensor circuit fault	N	—	LH fuel level sensor circuit(s): open circuit LH fuel level sensor SCP message error LH fuel level sensor(s) failure Check REM for flagged DTC
B2627	REM	Instrumentation	LH fuel level sensor circuit fault	N	CR4 -16 CR11 -23	LH fuel level sensor circuit: open circuit
B2628	IC	Instrumentation	LH fuel level sensor circuit fault	N	—	LH fuel level sensor circuit(s): short circuit to ground LH fuel level sensor SCP message error LH fuel level sensor(s) failure Check REM for flagged DTC
B2628	REM	Instrumentation	LH fuel level sensor circuit fault	N	CR4 -16 CR11 -23	LH fuel level sensor circuit: short circuit to ground
B2633	CPM	Telephone	Driver microphone circuit fault	N	TL7 -17 -18	Driver microphone circuit: open circuit Driver microphone failure
B2636	CPM	JaguarNet	SOS switch circuit fault	N	TL7 -15	SOS switch circuit: short circuit to ground SOS switch failure
B2637	CPM	JaguarNet	Information switch circuit fault	N	TL7 -31	Information switch circuit: short circuit to ground Information switch failure

DTC	CM	SYSTEM	FAULT DESCRIPTION	MIL	CM PIN	POSSIBLE CAUSES
B2638	CPM	Telephone	Telephone rechargeable battery fault	N	—	Battery charging circuit fault Incorrect battery installed
B2640	CPM	JaguarNet	Airbag deployment signal circuit fault	N	TL7 -30	Airbag deployment signal circuit: open circuit
B2641	CPM	JaguarNet	Airbag deployment signal circuit fault	N	TL7 -30	Airbag deployment signal circuit: short circuit to B+ voltage
B2642	AMP	In-Car Entertainment – Power Amplifier circuits	Low voltage detected	N	TL9 -3 -9	AMP battery supply circuit(s): intermittent open circuit, high resistance Battery / generator charging system fault AMP failure
B2642	AUDIO	In-Car Entertainment	Low voltage detected (monitored by CD autochanger)	N	TL5 -2	CD autochanger battery supply circuit: intermittent open circuit, high resistance Battery / generator charging system fault CD autochanger failure
B2642	MCP	Rear In-Car Entertainment	Low voltage detected	N	TL32 -2	MCP battery supply circuit(s): intermittent open circuit, high resistance Battery / generator charging system fault MCP failure
B2643	AMP	In-Car Entertainment – Power Amplifier circuits	High voltage detected	N	TL9 -3 -9	Battery / generator charging system fault AMP failure
B2645	REM	Rear Seat Heaters	RH rear seat heater temperature sensor signal out of range (low temperature)	N	CR4 -8 CR13 -16	RH rear seat heater temperature sensor signal circuit: open circuit, short circuit to ground, short circuit to B+ voltage RH rear seat heater temperature sensor failure
B2646	NCM	Television	TV antenna 1 circuit fault	N	CC13	TV antenna 1 circuit: open circuit
B2647	NCM	Television	TV antenna 2 circuit fault	N	CC14	TV antenna 2 circuit: open circuit

DTC	CM	SYSTEM	FAULT DESCRIPTION	MIL	CM PIN	POSSIBLE CAUSES
B2648	NCM	Television	TV antenna 3 circuit fault	N	CC15	TV antenna 3 circuit: open circuit
B2649	NCM	Television	TV antenna 4 circuit fault	N	CC16	TV antenna 4 circuit: open circuit
B2650	NCM	Television	TV antenna 1 circuit fault	N	CC13	TV antenna 1 circuit: short circuit
B2651	NCM	Television	TV antenna 2 circuit fault	N	CC14	TV antenna 2 circuit: short circuit
B2652	NCM	Television	TV antenna 3 circuit fault	N	CC15	TV antenna 3 circuit: short circuit
B2653	NCM	Television	TV antenna 4 circuit fault	N	CC16	TV antenna 4 circuit: short circuit
B2655	NCM	Telematics display	Telematics display internal fault	N	—	Telematics display failure
B2656	MCP	Rear In-Car Entertainment	DVD player not detected	N	—	DVD harness fault: open circuit, short circuit DVD failure
B2656	NCM	Navigation	NCM DVD error	N	—	NCM failure
B2665	REM	Security	Active security sounder drive circuit fault	N	CR4 -5	Active security sounder drive circuit: open circuit, short circuit to ground, short circuit to B+ voltage Active security sounder failure
B2691	RCM	Advanced Restraint System	Driver seat belt switch circuit fault Flash code 51	Y	CR87 -25	Driver seat belt switch circuit: open circuit, short circuit to B+ voltage
B2692	RCM	Advanced Restraint System	Passenger seat belt switch circuit fault Flash code 52	Y	CR87 -26	Passenger seat belt switch circuit: open circuit, short circuit to B+ voltage
B2704	FEM	Wash / Wipe System	Rain sensing module power supply circuit fault	N	CR1 -6	Rain sensing module power supply circuit: short circuit to ground

DTC	CM	SYSTEM	FAULT DESCRIPTION	MIL	CM PIN	POSSIBLE CAUSES
B2729	REM	Rear Seat Heaters	LH rear seat heater temperature sensor signal out of range (high temperature)	N	CR4 -9 CR13 -17	LH rear seat heater temperature sensor signal circuit: open circuit, short circuit to ground, short circuit to B+ voltage LH rear seat heater temperature sensor failure
B2736	DSCM	Dynamic Stability Control	Pedal travel sensor circuit fault	Y M	EC30 -24 -26 -40	Pedal travel sensor circuit: open circuit, short circuit to ground, short circuit to B+ voltage, short circuit to each other, high resistance Pedal travel sensor failure
B2739	DSCM	Dynamic Stability Control	Pedal travel sensor signal circuit fault	Y M	EC30 -40	Pedal travel sensor incorrectly mounted Pedal travel sensor signal circuit: open circuit, short circuit to ground, short circuit to B+ voltage, high resistance Pedal travel sensor failure Brake hydraulic unit failure
B2741	DSCM	Dynamic Stability Control	Yaw rate and lateral acceleration sensors cluster circuit fault	Y M	EC30 -5 –7 -25 -29	Yaw rate and lateral acceleration sensors cluster circuit: open circuit, short circuit to ground, short circuit to B+ voltage, short circuit to each other, high resistance Yaw rate and lateral acceleration sensors cluster failure
B2789	FEM	Glove Box Door (Ancillaries)	Glove box door motor drive circuit fault	N	EC36 -9	Glove box door motor drive circuit short circuit to B+ voltage, over-current fault
B2804	ASM	Air Suspension	Reservoir solenoid drive circuit fault	M	CR91 -8	Reservoir solenoid drive circuit: short circuit to B+ voltage Reservoir solenoid failure
B2807	ASM	Air Suspension	Pressure sensor signal circuit fault	M	CR90 -14	Pressure sensor signal circuit: short circuit to B+ voltage Pressure sensor failure
B2808	ASM	Air Suspension	Pressure sensor supply circuit fault	M	CR90 -13	Pressure sensor supply circuit: short circuit to B+ voltage

DTC	CM	SYSTEM	FAULT DESCRIPTION	MIL	CM PIN	POSSIBLE CAUSES
B2809	ASM	Air Suspension	Pressure sensor supply circuit fault	M	CR90 -13	Pressure sensor supply circuit: short circuit to ground
B2810	ASM	Air Suspension	Vent solenoid circuit fault	M	CR91 -10 -11	Vent solenoid circuit(s): open circuit, short circuit to ground, short circuit to B+ voltage Vent solenoid failure
B2826	CCM	Climate Control	Evaporator temperature sensor signal circuit fault	N	AC100 -02	Evaporator temperature sensor signal circuit: open circuit, short circuit to B+ voltage Evaporator temperature sensor failure
B2827	CCM	Climate Control	Evaporator temperature sensor signal circuit fault	N	AC100 -02	Evaporator temperature sensor signal circuit: short circuit to ground Evaporator temperature sensor failure
B2828	RCCM	Rear Climate Control	Rear evaporator temperature sensor signal circuit fault	N	RA1 -9	Rear evaporator temperature sensor signal circuit: short circuit to ground Rear evaporator temperature sensor failure
B2829	RCCM	Rear Climate Control	Rear evaporator temperature sensor signal circuit fault	N	RA1 -9	Rear evaporator temperature sensor signal circuit: open circuit, short circuit to B+ voltage Rear evaporator temperature sensor failure
B2830	HLM (LH or RH)	HID Headlamps	ASM vehicle attitude PWM signal out of range	N	EC101 -4 EC103 -4	ASM vehicle attitude PWM signal circuit: high resistance, intermittent high resistance ASM failure
B2831	HLM (LH or RH)	HID Headlamps	ASM vehicle attitude PWM signal circuit fault	N	EC101 -4 EC103 -4	ASM vehicle attitude PWM signal circuit: open circuit, short circuit to ground, short circuit to B+ voltage ASM failure

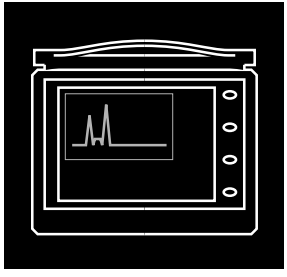
DTC	CM	SYSTEM	FAULT DESCRIPTION	MIL	CM PIN	POSSIBLE CAUSES
B2832	CCM	Climate Control	LH mode servo fault	N	AC100 -14	LH mode servo position sensor signal circuit: short circuit to ground, open circuit, short circuit to B+ voltage
					AC101 -11	LH mode servo drive circuit(s): open circuit, short circuit to ground
					-24	LH mode servo failure
			RH mode servo fault		AC100 -06	RH mode servo position sensor signal circuit: short circuit to ground, open circuit, short circuit to B+ voltage
					AC101 -10	RH mode servo drive circuit(s): open circuit, short circuit to ground
					-23	RH mode servo failure
B2832	RCCM	Rear Climate Control	Rear mode servo circuit fault	N	RA1 -1	Rear mode servo position sensor signal circuit: open circuit, short circuit to ground, short circuit to B+ voltage
						Rear mode servo position sensor failure (servo failure)
					-4 -5	Rear mode servo drive circuit(s): open circuit, short circuit to ground, short circuit to B+ voltage
						Rear mode servo failure
B2833	CCM	Climate Control	Sensor ground circuit fault	N	CR119 -18	Sensor ground circuit: open circuit
			Sensor supply circuit fault	N	AC100 -08	Sensor supply circuit: open circuit, short circuit to ground, short circuit to B+ voltage
			Sensor ground circuit fault	N	AC100 -16	Sensor ground circuit: open circuit
B2833	RCCM	Rear Climate Control	Sensor supply circuit fault	N	RA1 -11	Sensor supply circuit: open circuit, short circuit to ground, short circuit to B+ voltage

DTC	CM	SYSTEM	FAULT DESCRIPTION	MIL	CM PIN	POSSIBLE CAUSES
B2834	CCM	Climate Control	LH air mix servo fault	N	AC100 -13	LH air mix servo position sensor signal circuit: short circuit to ground, open circuit, short circuit to B+ voltage
					AC101 -08	LH air mix servo drive circuit(s): open circuit, short circuit to ground
					-21	LH air mix servo failure
			RH air mix servo fault		AC100 -05	RH air mix servo position sensor signal circuit: short circuit to ground, open circuit, short circuit to B+ voltage
					AC101 -07	RH air mix servo drive circuit(s): open circuit, short circuit to ground
					-20	RH air mix servo failure
B2834	RCCM	Rear Climate Control	LH rear air mix servo circuit fault	N	RA1 -2	LH rear air mix servo position sensor signal circuit: open circuit, short circuit to ground, short circuit to B+ voltage
						LH rear air mix servo position sensor failure (servo failure)
					RA2 -6	LH rear air mix servo drive circuit(s): open circuit, short circuit to ground, short circuit to B+ voltage
					-12	LH rear air mix servo failure
			RH rear air mix servo circuit fault	N	RA1 -3	RH rear air mix servo position sensor signal circuit: open circuit, short circuit to ground, short circuit to B+ voltage
						RH rear air mix servo position sensor failure (servo failure)
					RA2 -10	RH rear air mix servo drive circuit(s): open circuit, short circuit to ground, short circuit to B+ voltage
					-11	RH rear air mix servo failure

DTC	CM	SYSTEM	FAULT DESCRIPTION	MIL	CM PIN	POSSIBLE CAUSES
B2835	CCM	Climate Control	LH outlet air temperature sensor signal circuit fault	N	AC100 -10	LH outlet air temperature sensor signal circuit: short circuit to ground, open circuit, short circuit to B+ voltage LH outlet air temperature sensor failure
			RH outlet air temperature sensor signal circuit fault		AC100 -11	RH outlet air temperature sensor signal circuit: short circuit to ground, open circuit, short circuit to B+ voltage RH outlet air temperature sensor failure
B2836	CCM	Climate Control	In-car temperature sensor signal circuit fault	N	AC100 -01	In-car temperature sensor signal circuit: open circuit, short circuit to B+ voltage In-car temperature sensor failure
B2837	CCM	Climate Control	In-car temperature sensor signal circuit fault	N	AC100 -01	In-car temperature sensor signal circuit: short circuit to ground In-car temperature sensor failure
B2840	CCM	Climate Control	Ambient air temperature sensor signal circuit fault	N	CR119 -19	Ambient air temperature sensor signal circuit: open circuit, short circuit to B+ voltage Ambient air temperature sensor failure
B2841	CCM	Climate Control	Ambient air temperature sensor signal circuit fault	N	CR119 -19	Ambient air temperature sensor signal circuit: short circuit to ground Ambient air temperature sensor failure

DTC	CM	SYSTEM	FAULT DESCRIPTION	MIL	CM PIN	POSSIBLE CAUSES
B2842	CCM	Climate Control	LH cool air bypass / defrost servo fault	N	AC100 -15	LH cool air bypass / defrost servo position sensor signal circuit: short circuit to ground, open circuit, short circuit to B+ voltage
					AC101 -13	LH cool air bypass / defrost servo drive circuit(s): open circuit, short circuit to ground
					-26	LH cool air bypass / defrost servo failure
			RH cool air bypass / defrost servo fault		AC100 -07	RH cool air bypass / defrost servo position sensor signal circuit: short circuit to ground, open circuit, short circuit to B+ voltage
					AC101 -12	RH cool air bypass / defrost servo drive circuit(s): open circuit, short circuit to ground
					-25	RH cool air bypass / defrost servo failure
B2843	CCM	Climate Control	Air intake servo fault	N	AC100 -12	Air intake servo position sensor signal circuit: short circuit to ground, open circuit, short circuit to B+ voltage
					AC101 -09	Air intake servo drive circuit(s): open circuit, short circuit to ground
					-22	Air intake servo failure
B2844	CCM	Climate Control	Ignition signal circuit fault	N	CR119 -03	Ignition signal circuit: open circuit, short circuit to ground
B2844	RCCM	Rear Climate Control	Ignition supply circuit fault	N	RA2 -7	Ignition supply circuit: open circuit, short circuit to ground
B2846	CCM	Climate Control	Dual solar sensor signal circuit(s) fault	N	AC100 -03 -04	Dual solar sensor signal circuit(s): short circuit to ground, open circuit, short circuit to B+ voltage Dual solar sensor failure
B2879	IC	Engine Management	Fuel pump(s) fault (inferred fault)	N	—	Check ECM for flagged fuel DTCs

DTC	CM	SYSTEM	FAULT DESCRIPTION	MIL	CM PIN	POSSIBLE CAUSES
B2881	IC	Steering Column Adjust	Column reach out movement fault	N	IP7 -9	Steering column electrical or mechanical fault
B2882	IC	Steering Column Adjust	Column reach in movement fault	N	IP7 -9	Steering column electrical or mechanical fault
B2883	IC	Steering Column Adjust	Column tilt out movement fault	N	IP7 -20	Steering column electrical or mechanical fault
B2884	IC	Steering Column Adjust	Column tilt in movement fault	N	IP7 -20	Steering column electrical or mechanical fault
B2888	AUDIO	In-Car Entertainment	Audio unit media fault	N	—	Audio unit failure
B2909	RCM	Advanced Restraint System	Passenger seat belt tension sensor fault Flash code 16	Y	CR87 -17 -18	Passenger seat belt tension sensor CAN circuit fault Passenger seat belt tension sensor circuit fault Test using WDS
B2912	DSCM	Dynamic Stability Control	Reverse gear plausibility error	Y M	—	Reverse gear engaged CAN message fault Yaw rate and lateral acceleration sensors cluster failure
B2915	REM	Instrumentation	RH fuel level sensor circuit fault	N	CR4 -16 CR11 -23	LH fuel level sensor circuit: short circuit to B+ voltage



Chassis DTC Summaries

Jaguar XJ Range 2004 Model Year

Refer to pages 2 and 3 for important information regarding the use of "Chassis DTC Summaries".

KEY TO COLUMN HEADINGS

DTC	Diagnostic Trouble Code.
CM	The control module(s) the DTC is associated with. Refer to page 3.
SYSTEM	The vehicle system the DTC is associated with. Refer to the applicable Electrical Guide Figure for circuit details.
FAULT DESCRIPTION	Fault description. If available, customer symptom (complaint) information is provided in this column.
MIL	Y = MIL (warning indicator) is activated. N = MIL (warning indicator) is not activated. M = Message displayed.
CM PIN	Control module connector pin number(s).
POSSIBLE CAUSES	Suggested possible causes listed in order of probability.

REFERENCE: It is recommended that the applicable "Electrical Guide" be referenced when using the information contained in this document.

CONTROL MODULE AND GENERAL ACRONYMS

AMP	Power Amplifier
ASCM	Adaptive Speed Control Module
ASM	Air Suspension Module
AUDIO	Audio Unit
CATS	Computer Active Suspension
CCM	Climate Control Module
CPM	Cellular Phone Module
DDM	Driver Door Module
DSCM	Dynamic Stability Control Module
DSM	Driver Seat Module
ECM	Engine Control Module
FEM	Front Electronic Module
HLM	Headlamp Leveling Module
IC	Instrument Cluster
IS	Intrusion Sensor
JGM	J-Gate Module
MCP	Multimedia Control Panel
NCM	Navigation Control Module
PAM	Parking Aid Module
PATS	Passive Anti-Theft System
PBM	Parking Brake Module
RCCM	Rear Climate Control Module
RCM	Restraints Control Module
REM	Rear Electronic Module
RMM	Rear Memory Module
SCLM	Steering Column Lock Module
TCM	Transmission Control Module
VAM	Voice Activation Module
VICS	Vehicle Information Control System

DTC	CM	SYSTEM	FAULT DESCRIPTION	MIL	CM PIN	POSSIBLE CAUSES
C1093	DSCM	Dynamic Stability Control	Dynamic Stability Control disable CAN fault	N	EC30 -11 -12 -14 -15	Dynamic Stability Control disable switch (J-Gate) fault Dynamic Stability Control disable CAN message fault
C1094	PBM	Electronic Parking Brake	Parking brake apply switch circuit fault	Y M	CR32 -5 -12	Parking brake apply switch circuit: open circuit, short circuit to B+ voltage
C1095	DSCM	Dynamic Stability Control	DSCM pump failure	Y M	EC30 -1 -47	Pump B+ power supply circuit: open circuit, short circuit to ground Pump ground circuit: open circuit, high resistance DSCM failure
C1137	DSCM	Dynamic Stability Control	DSCM malfunction	Y* M	—	DSCM failure * CHECK ENGINE MIL
C1141	DSCM	Dynamic Stability Control	LH front wheel speed sensor mechanical fault	Y M	—	LH front wheel speed sensor reluctor tooth (teeth) missing or damaged
C1142	DSCM	Dynamic Stability Control	RH front wheel speed sensor mechanical fault	Y M	—	RH front wheel speed sensor reluctor tooth (teeth) missing or damaged
C1143	DSCM	Dynamic Stability Control	LH rear wheel speed sensor mechanical fault	Y M	—	LH rear wheel speed sensor reluctor tooth (teeth) missing or damaged
C1144	DSCM	Dynamic Stability Control	RH rear wheel speed sensor mechanical fault	Y M	—	RH rear wheel speed sensor reluctor tooth (teeth) missing or damaged
C1145	DSCM	Dynamic Stability Control	RH front wheel speed sensor circuit fault	Y* M	EC30 -33 -34	RH front wheel speed sensor circuit: open circuit, short circuit to B+ voltage, short circuit to ground, high resistance RH front wheel speed sensor failure *CHECK ENGINE MIL

DTC	CM	SYSTEM	FAULT DESCRIPTION	MIL	CM PIN	POSSIBLE CAUSES
C1155	DSCM	Dynamic Stability Control	LH front wheel speed sensor circuit fault	Y* M	EC30 -45 -46	LH front wheel speed sensor circuit: open circuit, short circuit to B+ voltage, short circuit to ground, high resistance LH front wheel speed sensor failure *CHECK ENGINE MIL
C1165	DSCM	Dynamic Stability Control	RH rear wheel speed sensor circuit fault	Y* M	EC30 -42 -43	RH rear wheel speed sensor circuit: open circuit, short circuit to B+ voltage, short circuit to ground, high resistance RH rear wheel speed sensor failure *CHECK ENGINE MIL
C1175	DSCM	Dynamic Stability Control	LH rear wheel speed sensor circuit fault	Y* M	EC30 -36 -37	LH rear wheel speed sensor circuit: open circuit, short circuit to B+ voltage, short circuit to ground, high resistance LH rear wheel speed sensor failure *CHECK ENGINE MIL
C1233	DSCM	Dynamic Stability Control	LH front wheel speed sensor signal missing	Y M	EC30 -45	LH front wheel speed sensor air gap too large LH front wheel speed sensor reluctor mechanical damage LH front wheel speed sensor signal circuit: high resistance LH front wheel speed sensor failure
C1234	DSCM	Dynamic Stability Control	RH front wheel speed sensor signal missing	Y M	EC30 -34	RH front wheel speed sensor air gap too large RH front wheel speed sensor reluctor mechanical damage RH front wheel speed sensor signal circuit: high resistance RH front wheel speed sensor failure
C1235	DSCM	Dynamic Stability Control	LH rear wheel speed sensor signal missing	Y M	EC30 -43	LH rear wheel speed sensor air gap too large LH rear wheel speed sensor reluctor mechanical damage LH rear wheel speed sensor signal circuit: high resistance LH rear wheel speed sensor failure

DTC	CM	SYSTEM	FAULT DESCRIPTION	MIL	CM PIN	POSSIBLE CAUSES
C1236	DSCM	Dynamic Stability Control	RH rear wheel speed sensor signal missing	Y M	EC30 -36	RH rear wheel speed sensor air gap too large RH rear wheel speed sensor reluctor mechanical damage RH rear wheel speed sensor signal circuit: high resistance RH rear wheel speed sensor failure
C1267	DSCM	Dynamic Stability Control	DSCM anti-lock functions temporarily disabled	Y M	—	DSCM failure Note: Attempt hard reset before replacing DSCM
C1277	DSCM	Dynamic Stability Control	Steering angle sensor circuit(s) fault	Y M	EC30 -3 -5 -6 -7	Steering angle sensor circuit(s): open circuit, intermittent open circuit, short circuit to B+ voltage, short circuit to ground, high resistance Steering angle sensor incorrectly mounted Steering angle sensor loose Steering angle sensor failure
C1279	DSCM	Dynamic Stability Control	Yaw rate sensor circuit(s) fault	Y M	EC30 -5 -7 -25 -29	Yaw rate and lateral acceleration sensors cluster circuit(s): open circuit, intermittent open circuit, short circuit to B+ voltage, short circuit to ground, high resistance Yaw rate sensor failure
C1280	DSCM	Dynamic Stability Control	Yaw rate sensor signal fault	Y M	EC30 -25 -29	Yaw rate and lateral acceleration sensors cluster incorrectly mounted Yaw rate and lateral acceleration sensors cluster loose Yaw rate and lateral acceleration sensors cluster failure
C1281	DSCM	Dynamic Stability Control	Lateral acceleration sensor circuit(s) fault	Y M	EC30 -5 -7 -25 -29	Yaw rate and lateral acceleration sensors cluster circuit(s): open circuit, intermittent open circuit, short circuit to B+ voltage, short circuit to ground, high resistance Lateral acceleration sensor failure
C1282	DSCM	Dynamic Stability Control	Lateral acceleration sensor signal fault	Y M	EC30 -25 -29	Yaw rate and lateral acceleration sensors cluster incorrectly mounted Yaw rate and lateral acceleration sensors cluster loose Yaw rate and lateral acceleration sensors cluster failure

DTC	CM	SYSTEM	FAULT DESCRIPTION	MIL	CM PIN	POSSIBLE CAUSES
C1285	DSCM	Dynamic Stability Control	Booster solenoid circuit fault	Y M	EC30 -17 -31	Booster solenoid circuit: open circuit, short circuit to ground Booster solenoid failure
C1286	DSCM	Dynamic Stability Control	Active brake booster mechanical failure	Y M	EC30 -27 -28 -30	Pedal force switch circuit: open circuit, short circuit to ground Pedal force switch failure DSCM failure Active brake booster mechanical failure
C1287	DSCM	Dynamic Stability Control	Pedal force switch circuit fault	Y M	EC30 -27 -28 -30	Pedal force switch circuit: open circuit, short circuit to ground, short circuit to B+ voltage Pedal force switch failure
C1288	DSCM	Dynamic Stability Control	Brake pressure sensor circuit fault	Y M	EC30 -18 -19 -20	Brake pressure sensor circuit: open circuit, short circuit to ground, short circuit to B+ voltage Brake pressure sensor failure
C1291	ASCM	Adaptive Speed Control	ASCM sensor temperature out of range	Y M	—	ASCM sensor too warm or too cold Normal operating temperature: -40 °C – 70 °C (-40 °F – 158 °F)
C1292	ASCM	Adaptive Speed Control	ASCM sensor blocked	Y M	—	Remove blockage from front of sensor
C1293	ASCM	Adaptive Speed Control	ASCM sensor alignment out of range	Y M	—	ASCM sensor alignment incorrect Mechanically realign sensor Perform complete service alignment
C1294	ASCM	Adaptive Speed Control	Active speed or vehicle speed out of range	Y M	—	Other control module (ECM, DSCM, IC, TCM) ASC speed related fault ASCM failure

DTC	CM	SYSTEM	FAULT DESCRIPTION	MIL	CM PIN	POSSIBLE CAUSES
C1295	DSCM	Dynamic Stability Control	Steering angle sensor circuit fault	Y M	EC30 -3 -5 -6 -7	Steering angle sensor circuit(s): open circuit, intermittent open circuit, short circuit to B+ voltage, short circuit to ground, high resistance Steering angle sensor failure
C1306	DSCM	Dynamic Stability Control	Steering angle sensor initialization failed	Y M	—	Steering angle sensor encoder ring incorrectly installed Steering angle sensor encoder ring loose Steering angle sensor encoder ring mechanical failure
C1307	DSCM	Dynamic Stability Control	Steering angle sensor encoder ring fault	Y M	EC30 -3 -6	Steering angle sensor encoder ring incorrectly installed Steering angle sensor encoder ring loose Steering angle sensor encoder ring mechanical failure Steering angle sensor signal circuit: short circuit to each other Steering angle sensor failure
C1414	RCM	Advanced Restraint System	Incorrect control module fitted	Y	—	Replace RCM (insure correct part number)
C1416	ASM	Air Suspension	RH front damper actuator drive circuit fault	M (CATS)	CR89 -10	RH front damper actuator drive circuit: short circuit to B+ voltage
C1417	ASM	Air Suspension	RH front damper actuator drive circuit fault	M (CATS)	CR89 -10	RH front damper actuator drive circuit: short circuit to ground
C1419	ASM	Air Suspension	RH front damper actuator drive circuit fault	M (CATS)	CR89 -10	RH front damper actuator drive circuit: open circuit
C1421	ASM	Air Suspension	LH front damper actuator drive circuit fault	M (CATS)	CR89 -1	LH front damper actuator drive circuit: short circuit to B+ voltage
C1422	ASM	Air Suspension	LH front damper actuator drive circuit fault	M (CATS)	CR89 -1	LH front damper actuator drive circuit: short circuit to ground
C1424	ASM	Air Suspension	LH front damper actuator drive circuit fault	M (CATS)	CR89 -1	LH front damper actuator drive circuit: open circuit

DTC	CM	SYSTEM	FAULT DESCRIPTION	MIL	CM PIN	POSSIBLE CAUSES
C1425	ASM	Air Suspension	RH rear damper actuator drive circuit fault	M (CATS)	CR89 -11	RH rear damper actuator drive circuit: short circuit to B+ voltage
C1426	ASM	Air Suspension	RH rear damper actuator drive circuit fault	M (CATS)	CR89 -11	RH rear damper actuator drive circuit: short circuit to ground
C1427	ASM	Air Suspension	RH rear damper actuator drive circuit fault	M (CATS)	CR89 -11	RH rear damper actuator drive circuit: open circuit
C1430	ASM	Air Suspension	LH rear damper actuator drive circuit fault	M (CATS)	CR89 -2	LH rear damper actuator drive circuit: short circuit to B+ voltage
C1431	ASM	Air Suspension	LH rear damper actuator drive circuit fault	M (CATS)	CR89 -2	LH rear damper actuator drive circuit: short circuit to ground
C1432	ASM	Air Suspension	LH rear damper actuator drive circuit fault	M (CATS)	CR89 -2	LH rear damper actuator drive circuit: open circuit
C1437	ASM	Air Suspension	Rear vertical accelerometer signal circuit fault	M (CATS)	CR91 -14	Rear vertical accelerometer signal circuit: short circuit to ground
C1438	ASM	Air Suspension	Rear vertical accelerometer signal circuit fault	M (CATS)	CR91 -14	Rear vertical accelerometer signal circuit: short circuit to B+ voltage
C1440	DSCM	Dynamic Stability Control	Brake pressure sensor signal circuit fault	Y M	EC30 -20	Brake pressure sensor signal circuit: open circuit, short circuit to B+ voltage, short circuit to ground Brake pressure sensor failure
C1446	DSCM	Dynamic Stability Control	Stop lamp circuit fault (CAN message)	Y M	EC30 -11 -12 -14 -15	Brake ON / OFF switch circuit fault Brake ON / OFF switch failure Brake ON / OFF switch CAN message fault
C1457	ASM	Air Suspension	Front vertical accelerometer signal circuit fault	M (CATS)	CR91 -17	Front vertical accelerometer signal circuit: short circuit to ground

DTC	CM	SYSTEM	FAULT DESCRIPTION	MIL	CM PIN	POSSIBLE CAUSES
C1458	ASM	Air Suspension	Front vertical accelerometer signal circuit fault	M (CATS)	CR91 -17	Front vertical accelerometer signal circuit: short circuit to B+ voltage
C1459	ASCM	Adaptive Speed Control	Forward alert switch and Adaptive Speed Control indicator circuit fault	Y M	EC23 -12	Forward alert switch and Adaptive Speed Control indicator circuit: open circuit, short circuit to B+ voltage
C1460	ASM	Air Suspension	Accelerometer sensor supply circuit fault	M (CATS)	CR91 -16	Accelerometer sensor supply circuit: open circuit, short circuit to ground, short circuit to B+ voltage
C1699	PAM	Parking Aid	LH rear sensor data circuit fault	Y	CR52 -11	LH rear sensor data circuit: short circuit to B+ voltage
C1700	PAM	Parking Aid	LH rear sensor data circuit fault	Y	CR52 -11 -15 -16	LH rear sensor data circuit: open circuit, short circuit ground
C1701	PAM	Parking Aid	LH rear sensor fault	Y	—	LH rear sensor failure
C1702	PAM	Parking Aid	RH rear sensor data circuit fault	Y	CR52 -24	RH rear sensor data circuit: short circuit to B+ voltage
C1703	PAM	Parking Aid	RH rear sensor data circuit fault	Y	CR52 -15 -16 -24	RH rear sensor data circuit: open circuit, short circuit ground
C1704	PAM	Parking Aid	RH rear sensor fault	Y	—	RH rear sensor failure
C1705	PAM	Parking Aid	LH rear center sensor data circuit fault	Y	CR52 -10	LH rear center sensor data circuit: short circuit to B+ voltage
C1706	PAM	Parking Aid	LH rear center sensor data circuit fault	Y	CR52 -10 -15 -16	LH rear center sensor data circuit: open circuit, short circuit ground

DTC	CM	SYSTEM	FAULT DESCRIPTION	MIL	CM PIN	POSSIBLE CAUSES
C1707	PAM	Parking Aid	LH rear center sensor fault	Y	—	LH rear center sensor failure
C1708	PAM	Parking Aid	RH rear center sensor data circuit fault	Y	CR52 -23	RH rear center sensor data circuit: short circuit to B+ voltage
C1709	PAM	Parking Aid	RH rear center sensor data circuit fault	Y	CR52 -23 -15 -16	RH rear center sensor data circuit: open circuit, short circuit ground
C1710	PAM	Parking Aid	RH rear center sensor fault	Y	—	RH rear center sensor failure
C1711	PAM	Parking Aid	LH front sensor data circuit fault	Y	CR52 -13	LH front sensor data circuit: short circuit to B+ voltage
C1712	FEM	Front Seat Heaters	LH front seat heater temperature sensor circuit fault	N	CR1 -16 -18	LH front seat heater temperature sensor circuit: open circuit, short circuit to B+ voltage
C1712	PAM	Parking Aid	LH front sensor data circuit fault	Y	CR52 -2 -4 -13	LH front sensor data circuit: open circuit, short circuit ground
C1712	REM	Rear Seat Heaters	LH rear seat heater temperature sensor circuit(s) fault	N	CR4 -9 CR13 -17	LH rear seat heater temperature sensor circuit(s): open circuit, short circuit to B+ voltage
C1713	FEM	Front Seat Heaters	LH front seat heater temperature sensor circuit fault	N	CR1 -16 -18	LH front seat heater temperature sensor circuit: short circuit to ground
C1713	PAM	Parking Aid	LH front sensor fault	Y	—	LH front sensor failure

DTC	CM	SYSTEM	FAULT DESCRIPTION	MIL	CM PIN	POSSIBLE CAUSES
C1713	REM	Rear Seat Heaters	LH rear seat heater temperature sensor circuit(s) fault	N	CR4 -9 CR13 -17	LH rear seat heater temperature sensor circuit(s): short circuit to ground
C1714	PAM	Parking Aid	RH front sensor data circuit fault	Y	CR52 -26	RH front sensor data circuit: short circuit to B+ voltage
C1715	FEM	Front Seat Heaters	RH front seat heater temperature sensor circuit fault	N	CR1 -17 -19	RH front seat heater temperature sensor circuit: open circuit, short circuit to B+ voltage
C1715	PAM	Parking Aid	RH front sensor data circuit fault	Y	CR52 -2 -4 -26	RH front sensor data circuit: open circuit, short circuit ground
C1715	REM	Rear Seat Heaters	RH rear seat heater temperature sensor circuit(s) fault	N	CR4 -8 CR13 -16	RH rear seat heater temperature sensor circuit(s): open circuit, short circuit to B+ voltage
C1716	FEM	Front Seat Heaters	RH front seat heater temperature sensor circuit fault	N	CR1 -17 -19	RH front seat heater temperature sensor circuit: short circuit to ground
C1716	PAM	Parking Aid	RH front sensor fault	Y	—	RH front sensor failure
C1716	REM	Rear Seat Heaters	RH rear seat heater temperature sensor circuit(s) fault	N	CR4 -8 CR13 -16	RH rear seat heater temperature sensor circuit(s): short circuit to ground
C1717	PAM	Parking Aid	LH front center sensor data circuit fault	Y	CR52 -12	LH front center sensor data circuit: short circuit to B+ voltage

DTC	CM	SYSTEM	FAULT DESCRIPTION	MIL	CM PIN	POSSIBLE CAUSES
C1718	PAM	Parking Aid	LH front center sensor data circuit fault	Y	CR52 -2 -4 -12	LH front center sensor data circuit: open circuit, short circuit ground
C1719	PAM	Parking Aid	LH front center sensor fault	Y	—	LH front center sensor failure
C1723	ASM	Air Suspension	Height sensor(s) supply circuit(s) fault	M	CR90 -1 CR90 -4 CR90 -7 CR90 -10	LH front height sensor supply circuit: open circuit, short circuit to ground, short circuit to B+ voltage RH front height sensor supply circuit: open circuit, short circuit to ground, short circuit to B+ voltage LH rear height sensor supply circuit: open circuit, short circuit to ground, short circuit to B+ voltage RH rear height sensor supply circuit: open circuit, short circuit to ground, short circuit to B+ voltage
C1730	DSCM	Dynamic Stability Control	Sensor signal supply voltage (nominal 5 V) out of range	Y M	EC30 -7 -18 -26 -27 -30	Sensor supply voltage circuit(s): short circuit to ground, short circuit to B+ voltage Dynamic Stability Control sensor(s) failure: brake pressure sensor, steering angle sensor, yaw rate and lateral acceleration sensor cluster, active brake booster force switch, pedal travel sensor DSCM failure
C1739	PAM	Parking Aid	RH front center sensor data circuit fault	Y	CR52 -25	RH front center sensor data circuit: short circuit to B+ voltage
C1740	PAM	Parking Aid	RH front center sensor data circuit fault	Y	CR52 -2 -4 -25	RH front center sensor data circuit: open circuit, short circuit ground
C1741	PAM	Parking Aid	RH front center sensor fault	Y	—	RH front center sensor failure

DTC	CM	SYSTEM	FAULT DESCRIPTION	MIL	CM PIN	POSSIBLE CAUSES
C1742	PAM	Parking Aid	Rear parking aid sounder circuit fault	Y	CR52 -14 -17	Rear parking aid sounder circuit(s): open circuit, short circuit to ground Rear parking aid sounder failure
C1743	PAM	Parking Aid	Rear parking aid sounder drive circuit fault	Y	CR52 -17	Rear parking aid sounder drive circuit: short circuit to B+ voltage
C1744	PAM	Parking Aid	Front parking aid sounder circuit fault	Y	CR52 -14 -18	Front parking aid sounder circuit(s): open circuit, short circuit to ground Front parking aid sounder failure
C1745	PAM	Parking Aid	Front parking aid sounder drive circuit fault	Y	CR52 -18	Front parking aid sounder drive circuit: short circuit to B+ voltage
C1748	ASCM	Adaptive Speed Control	Forward alert switch and Adaptive Speed Control indicator circuit fault	Y M	EC23 -12	Forward alert switch and Adaptive Speed Control indicator circuit: short circuit to ground
C1748	PAM	Parking Aid	Parking aid switch input circuit fault	N	CR52 -7	Parking aid switch input circuit: short circuit to ground Parking aid switch failure
C1769	PBM	Electronic Parking Brake	Parking brake apply switch circuit fault	Y M	CR32 -5 -12	Parking brake apply switch circuit: short circuit to ground
C1777	DSCM	Dynamic Stability Control	DSCM internal vacuum pressure circuit fault	Y M	—	DSCM failure Active brake booster failure
C1778	IC	Variable Assist Power Steering (VAPS)	Power steering failure	N	—	IC failure
C1782	PBM	Electronic Parking Brake	Parking brake release switch circuit fault	Y M	CR32 -6 -12	Parking brake release switch circuit: open circuit, short circuit to B+ voltage

DTC	CM	SYSTEM	FAULT DESCRIPTION	MIL	CM PIN	POSSIBLE CAUSES
C1783	PBM	Electronic Parking Brake	Parking brake release switch circuit fault	Y M	CR32 -6 -12	Parking brake release switch circuit: short circuit to ground
C1784	PBM	Electronic Parking Brake	Parking brake drive circuit(s) fault	Y M	CR50 -2 -3	Parking brake drive circuit(s): short circuit to ground, short circuit to each other
C1785	PBM	Electronic Parking Brake	Parking brake drive circuit(s) fault	Y M	CR50 -2 -3	Parking brake drive circuit(s): open circuit
C1786	PBM	Electronic Parking Brake	Parking brake motor internal fault	Y M	—	Parking brake motor failure
C1799	PBM	Electronic Parking Brake	Parking brake motor position sensor circuit fault	Y M	CR32 -4 -10 -12	Parking brake motor position sensor circuit(s): open circuit, short circuit to ground, short circuit to B+ voltage, high resistance Parking brake motor position sensor failure (parking brake motor failure)
C1800	ASM	Air Suspension	Reservoir solenoid drive circuit fault	M	CR91 -8	Reservoir solenoid drive circuit: open circuit, short circuit to B+ voltage Reservoir solenoid failure
C1801	PBM	Electronic Parking Brake	Motor current level / position conflict – apply	Y M	—	Parking brake motor failure
C1802	PBM	Electronic Parking Brake	Motor current level / position conflict – apply	Y M	—	Parking brake motor failure
C1803	PBM	Electronic Parking Brake	Motor current level / position conflict – release	Y M	—	Parking brake motor failure
C1830	ASM	Air Suspension	Air suspension relay drive circuit fault	M	CR91 -12	Air suspension relay drive circuit: open circuit, short circuit to ground, short circuit to B+ voltage

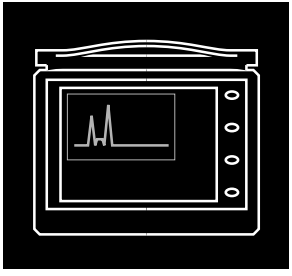
DTC	CM	SYSTEM	FAULT DESCRIPTION	MIL	CM PIN	POSSIBLE CAUSES
C1881	ASM	Air Suspension	RH front height sensor signal circuit fault	M	CR90 -5	RH front height sensor signal circuit: open circuit, short circuit to ground RH front height sensor failure
C1883	ASM	Air Suspension	RH front height sensor signal circuit fault	M	CR90 -5	RH front height sensor signal circuit: short circuit to B+ voltage
C1885	ASM	Air Suspension	RH rear height sensor signal circuit fault	M	CR90 -11	RH rear height sensor signal circuit: open circuit, short circuit to ground RH rear height sensor failure
C1887	ASM	Air Suspension	RH rear height sensor signal circuit fault	M	CR90 -11	RH rear height sensor signal circuit: short circuit to B+ voltage
C1889	ASM	Air Suspension	LH front height sensor signal circuit fault	M	CR90 -2	LH front height sensor signal circuit: open circuit, short circuit to ground LH front height sensor failure
C1891	ASM	Air Suspension	LH front height sensor signal circuit fault	M	CR90 -2	LH front height sensor signal circuit: short circuit to B+ voltage
C1893	ASM	Air Suspension	LH rear height sensor signal circuit fault	M	CR90 -8	LH rear height sensor signal circuit: open circuit, short circuit to ground LH rear height sensor failure
C1895	ASM	Air Suspension	LH rear height sensor signal circuit fault	M	CR90 -8	LH rear height sensor signal circuit: short circuit to B+ voltage
C1920	PAM	Parking Aid	Parking aid status LED circuit fault	N	CR52 -19	Parking aid status LED circuit: short circuit to ground Parking aid status LED failure
C1922	IC	Variable Assist Power Steering (VAPS)	Variable assist steering actuator solenoid drive circuit fault	N	IP6 -15 -17	IC VAPS power supply circuit: open circuit Variable assist steering actuator solenoid drive circuit: open circuit Variable assist steering actuator solenoid failure
C1923	IC	Variable Assist Power Steering (VAPS)	Variable assist steering actuator solenoid drive circuit fault	N	IP6 -15	Variable assist steering actuator solenoid drive circuit: short circuit to B+ voltage

DTC	CM	SYSTEM	FAULT DESCRIPTION	MIL	CM PIN	POSSIBLE CAUSES
C1924	IC	Variable Assist Power Steering (VAPS)	Variable assist steering actuator solenoid drive circuit fault	N	IP6 -15	Variable assist steering actuator solenoid drive circuit: short circuit to ground Variable assist steering actuator solenoid failure
C1935	ASCM	Adaptive Speed Control	Chime request circuit fault	Y M	EC23 -6	Chime request circuit: open circuit, short circuit to B+ voltage
C1947	RCM	Advanced Restraint System	Driver seat position switch circuit fault Flash code 49	Y	CR87 -23 -24	Driver seat position switch circuit(s): short circuit to ground
C1948	RCM	Advanced Restraint System	Driver seat position switch circuit fault Flash code 49	Y	CR87 -23 -24	Driver seat position switch circuit(s): high resistance Driver seat position switch failure
C1977	AUDIO	In Car Entertainment	Steering wheel audio switch circuit fault	N	CC8 -18	Steering wheel audio switch circuit: short circuit to ground
C1981	RCM	Advanced Restraint System	Driver seat position switch circuit fault Flash code 49	Y	CR87 -23 -24	Driver seat position switch circuit(s): open circuit, short circuit to B+ voltage Driver seat position switch failure
C1986	IC	Variable Assist Power Steering (VAPS)	VAPS initial vehicle speed above threshold	N	IP6 -2 -17	IC failure
C1989	PBM	Electronic Parking Brake	Parking brake apply and release switches simultaneously activated	Y M	CR32 -5 -6 -12	Parking brake apply and release switch circuits: short circuit to each other Electronic parking brake switch failure
C1991	ASM	Air Suspension	ASM calibration failure	M	—	Recalibrate ASM using WDS
C1993	ASM	Air Suspension	Pressure sensor signal circuit fault	M	CR90 -14	Pressure sensor signal circuit: open circuit, short circuit to ground Pressure sensor failure

DTC	CM	SYSTEM	FAULT DESCRIPTION	MIL	CM PIN	POSSIBLE CAUSES
C1994	DSCM	Dynamic Stability Control	Yaw control failure	Y M	EC30 -5 -7 -25 29	Yaw rate sensor failure DSCM failure
C1997	DSCM	Dynamic Stability Control	Pressure control failure	Y M	EC30 -17 -20 -31	Brake pressure sensor signal circuit: open circuit, short circuit to ground, short circuit to B+ voltage, high resistance Brake pressure sensor failure Booster solenoid circuit: open circuit, short circuit to ground, short circuit to B+ voltage, high resistance Booster solenoid failure Active brake booster failure
C2302	ASM	Air Suspension	Leveling plausibility error	M	—	Mechanical / pneumatic fault such as: – pipe disconnected – air leak
C2303	ASM	Air Suspension	Reservoir plausibility error	M	—	Mechanical / pneumatic fault such as: – pipe disconnected – air leak
C2304	ASM	Air Suspension	Damper actuator supply circuit(s) fault	M (CATS)	CR89 -4 CR89 -5 CR89 -7 CR89 -8	LH damper actuator supply circuit: short circuit to ground RH damper actuator supply circuit: short circuit to ground LH damper actuator supply circuit: short circuit to ground RH damper actuator supply circuit: short circuit to ground

DTC	CM	SYSTEM	FAULT DESCRIPTION	MIL	CM PIN	POSSIBLE CAUSES
C2305	ASM	Air Suspension	Damper actuator supply circuit(s) fault	M (CATS)	CR89 -4	LH damper actuator supply circuit: short circuit to B+ voltage
					CR89 -5	RH damper actuator supply circuit: short circuit to B+ voltage
					CR89 -7	LH damper actuator supply circuit: short circuit to B+ voltage
					CR89 -8	RH damper actuator supply circuit: short circuit to B+ voltage
C2778	DSCM	Dynamic Stability Control	Yaw rate and lateral acceleration sensors cluster sensor supply voltage circuit fault	Y M	EC30 -7	Yaw rate and lateral acceleration sensors cluster sensor supply voltage circuit: open circuit, short circuit to ground, short circuit to B+ voltage DSCM failure
C2779	ASM	Air Suspension	Air spring solenoid(s) supply and / or drive circuit fault	M	CR91 -1	Air spring solenoids supply circuit: short circuit to ground, short circuit to B+ voltage
					CR91 -2	LH front air spring solenoid drive circuit: open circuit, short circuit to ground, short circuit to B+ voltage
					CR91 -3	RH front air spring solenoid drive circuit: open circuit, short circuit to ground, short circuit to B+ voltage
					CR91 -5	LH rear air spring solenoid drive circuit: open circuit, short circuit to ground, short circuit to B+ voltage
					CR91 -6	RH rear air spring solenoid drive circuit: open circuit, short circuit to ground, short circuit to B+ voltage
C2780	ASM	Air Suspension	ASM requires configuration	M	—	Configure ASM using WDS
C2781	CCM	Climate Control	Air conditioning compressor clutch solenoid circuit fault	N	CR119 -4 -5	Air conditioning compressor clutch solenoid circuit: open circuit, short circuit to ground, short circuit to B+ voltage Air conditioning compressor clutch solenoid failure

DTC	CM	SYSTEM	FAULT DESCRIPTION	MIL	CM PIN	POSSIBLE CAUSES
C2783	DSCM	Dynamic Stability Control	Yaw rate and lateral acceleration sensors cluster incorrect specification	Y M	—	Incorrect yaw rate and lateral acceleration sensors cluster fitted
C2785	DSCM	Dynamic Stability Control	Dynamic Stability Control sensors out of calibration	Y M	—	DSCM failure



Network DTC Summaries

Jaguar XJ Range 2004 Model Year

Refer to pages 2 and 3 for important information regarding the use of "Network DTC Summaries".

KEY TO COLUMN HEADINGS

DTC	Diagnostic Trouble Code.
CM	The control module(s) the DTC is associated with. Refer to page 3.
SYSTEM	The vehicle system the DTC is associated with. Refer to the applicable Electrical Guide Figure for circuit details.
FAULT DESCRIPTION	Fault description. If available, customer symptom (complaint) information is provided in this column.
MIL	Y = MIL is activated. N = MIL is not activated. M = Message displayed.
CM PIN	Control module connector pin number(s).
POSSIBLE CAUSES	Suggested possible causes listed in order of probability.

REFERENCE: It is recommended that the applicable "Electrical Guide" be referenced when using the information contained in this document.

CONTROL MODULE AND GENERAL ACRONYMS

AMP	Power Amplifier
ASCM	Adaptive Speed Control Module
ASM	Air Suspension Module
AUDIO	Audio Unit
CATS	Computer Active Suspension
CCM	Climate Control Module
CPM	Cellular Phone Module
DDM	Driver Door Module
DSCM	Dynamic Stability Control Module
DSM	Driver Seat Module
ECM	Engine Control Module
FEM	Front Electronic Module
HLM	Headlamp Leveling Module
IC	Instrument Cluster
IS	Intrusion Sensor
JGM	J-Gate Module
MCP	Multimedia Control Panel
NCM	Navigation Control Module
PAM	Parking Aid Module
PATS	Passive Anti-Theft System
PBM	Parking Brake Module
RCCM	Rear Climate Control Module
RCM	Restraints Control Module
REM	Rear Electronic Module
RMM	Rear Memory Module
SCLM	Steering Column Lock Module
TCM	Transmission Control Module
VAM	Voice Activation Module
VICS	Vehicle Information Control System

DTC	CM	SYSTEM	FAULT DESCRIPTION	MIL	CM PIN	POSSIBLE CAUSES
U1147	IC	Security	SCP invalid or missing REM data during security operations	N	—	REM SCP circuit: open circuit, short circuit to B+ voltage, short circuit to ground REM SCP fault SCP network fault
U1260	DDM	Driver Door Module	SCP +ve circuit fault	N	DD13 -3	SCP +ve circuit: open circuit, short circuit to ground, short circuit to B+ voltage
U1260	DSM	Driver Seat	SCP +ve circuit fault	N	SD2 -1	SCP +ve circuit: open circuit, short circuit to ground, short circuit to B+ voltage
U1260	FEM	Front Electronic Module	SCP +ve circuit fault	N	CR9 -7	SCP +ve circuit: open circuit, short circuit to ground, short circuit to B+ voltage
U1260	REM	Rear Electronic Module	SCP +ve circuit fault	N	CR13 -1	SCP +ve circuit: open circuit, short circuit to ground, short circuit to B+ voltage
U1260	RMM	Rear Memory Module	SCP +ve circuit fault	N	CR38 -1	SCP +ve circuit: open circuit, short circuit to ground, short circuit to B+ voltage
U1261	DDM	Driver Door Module	SCP –ve circuit fault	N	DD13 -4	SCP –ve circuit: open circuit, short circuit to ground, short circuit to B+ voltage
U1261	DSM	Driver Seat	SCP –ve circuit fault	N	SD2 -12	SCP –ve circuit: open circuit, short circuit to ground, short circuit to B+ voltage
U1261	FEM	Front Electronic Module	SCP –ve circuit fault	N	CR9 -1	SCP –ve circuit: open circuit, short circuit to ground, short circuit to B+ voltage
U1261	REM	Rear Electronic Module	SCP –ve circuit fault	N	CR13 -2	SCP –ve circuit: open circuit, short circuit to ground, short circuit to B+ voltage
U1261	RMM	Rear Memory Module	SCP –ve circuit fault	N	CR38 -12	SCP –ve circuit: open circuit, short circuit to ground, short circuit to B+ voltage

DTC	CM	SYSTEM	FAULT DESCRIPTION	MIL	CM PIN	POSSIBLE CAUSES
U1262	AUDIO	In-Car Entertainment	SCP network circuit fault	N	CC8 -9 -10	SCP network circuit: open circuit, short circuit to B+ voltage, short circuit to ground SCP network fault Audio unit SCP failure
U1262	DDM	Driver Door Module	SCP circuit fault	N	DD13 -3 -4	SCP circuits: open circuit, short circuit to ground, short circuit to B+ voltage
U1262	IC	Instrument Cluster	SCP network circuit fault	N	IP6 -10 -20	SCP network circuit: open circuit, short circuit to B+ voltage, short circuit to ground SCP network fault IC SCP failure
U1751	IC	Central Locking	SCP missing REM steering column lock status message	N	—	REM SCP fault SCP network fault
U1752	IC	Central Locking	SCP missing FEM steering column lock status message	N	—	FEM SCP fault SCP network fault
U1900	ASM	Air Suspension	CAN communication fault	N	CR88 -7 -8	CAN circuit: open circuit, short circuit to B+ voltage, short circuit to ground ASM internal CAN fault CAN network fault
U1900	IC	Security (PATS)	CAN communication fault	N	IP6 -8 -9	CAN circuit: open circuit, short circuit to B+ voltage, short circuit to ground IC internal CAN fault CAN network fault
U1901	DSCM	Dynamic Stability Control	Local CAN network (steering angle sensor, yaw rate and lateral acceleration sensor) communication fault	N	EC30 -25 -29	Local CAN circuit: open circuit, short circuit to B+ voltage, short circuit to ground DSCM internal local CAN fault Local CAN network fault

DTC	CM	SYSTEM	FAULT DESCRIPTION	MIL	CM PIN	POSSIBLE CAUSES
U2003	AUDIO	In-Car Entertainment	CD autochanger not responding on D2B network	N	CC8 -19 TL5 -3 CC21 -1 -2	D2B "wake-up" circuit: open circuit, short circuit to B+ voltage CD autochanger D2B fault D2B network fault
U2008	AUDIO	In-Car Entertainment	CPM not responding on D2B network	N	CC8 -19 CC21 -1 -2	D2B "wake-up" circuit: open circuit, circuit to B+ voltage CPM D2B fault D2B network fault
U2012	DSCM	Dynamic Stability Control	CAN communication fault	N	EC30 -11 -12 -14 -15	CAN circuit: open circuit, short circuit to B+ voltage, short circuit to ground DSCM internal CAN fault CAN network fault
U2019	AUDIO	In-Car Entertainment	VAM not responding on D2B network	N	CC8 -19 CC21 -1 -2	D2B "wake-up" circuit: open circuit, circuit to B+ voltage VAM D2B fault D2B network fault
U2022	CCM	Climate Control	Control panel communication error	N	AC101 -2 AC101 -3	Control panel "clock" circuit: open circuit, short circuit to ground, short circuit to B+ voltage Control panel data circuit: open circuit, short circuit to ground, short circuit to B+ voltage Control panel failure
U2022	RCCM	Rear Climate Control	Control panel communication error	N	—	Control panel (RCCM) failure

DTC	CM	SYSTEM	FAULT DESCRIPTION	MIL	CM PIN	POSSIBLE CAUSES
U2023	ASCM	Adaptive Speed Control	CAN fault message received from other network module(s)	N	EC23 -4 -10	CAN / ASCM related fault: ECM, TCM, DSCM, IC ASCM internal CAN fault CAN network fault
U2150	DDM	Driver Door Module	SCP invalid REM data during security and locking operations	N	—	REM SCP circuit: open circuit, short circuit to B+ voltage, short circuit to ground REM SCP fault SCP network fault
U2150	IC	Central Locking	SCP missing or invalid REM steering column lock enable status message	N	—	REM SCP fault SCP network fault
U2152	IC	Central Locking	SCP missing or invalid FEM steering column lock enable status message	N	—	FEM SCP fault SCP network fault
U2160	DDM	Driver Door Module	SCP invalid IC data during security and locking operations	N	—	IC SCP circuit: open circuit, short circuit to B+ voltage, short circuit to ground IC SCP fault SCP network fault
U2195	DDM	Driver Door Module	SCP invalid SCLM data during security and locking operations	N	—	SCLM SCP circuit: open circuit, short circuit to B+ voltage, short circuit to ground SCLM SCP fault SCP network fault
U2195	IC	Central Locking	SCP missing or invalid SCLM steering column lock enable status message	N	—	SCLM SCP fault SCP network fault
U2196	IC	Instrumentation	CAN invalid ECM engine speed data	N	—	ECM CAN fault CAN network fault
U2197	IC	Instrumentation	CAN invalid DSCM vehicle speed data	N	—	DSCM CAN fault CAN network fault

DTC	CM	SYSTEM	FAULT DESCRIPTION	MIL	CM PIN	POSSIBLE CAUSES
U2199	IC	Instrumentation	CAN invalid ECM engine coolant temperature data	N	—	ECM CAN fault CAN network fault
U2200	IC	Instrumentation	CAN invalid DSCM odometer count “ODO count” data	N	—	DSCM CAN fault CAN network fault
U2202	DSCM	Dynamic Stability Control	CAN invalid configuration data received	N	EC30 -11 -12 -14 -15	ECM, TCM or ASCM incorrectly configured
U2501	ASCM	Adaptive Speed Control	CAN ECM “token” missing	N	EC23 -4 -10	CAN ECM "token" missing on network (other CAN modules also flag ECM "token" missing fault) ECM / CAN fault CAN network fault
U2502	ASCM	Adaptive Speed Control	CAN TCM “token” missing	N	EC23 -4 -10	CAN TCM "token" missing on network (other CAN modules also flag TCM "token" missing fault) TCM / CAN fault CAN network fault
U2503	ASCM	Adaptive Speed Control	CAN IC “token” missing	N	EC23 -4 -10	CAN IC "token" missing on network (other CAN modules also flag IC "token" missing fault) IC / CAN fault CAN network fault
U2504	ASCM	Adaptive Speed Control	CAN DSCM “token” missing	N	EC23 -4 -10	CAN DSCM "token" missing on network (other CAN modules also flag DSCCM "token" missing fault) DSCM / CAN fault CAN network fault
U2505	ASCM	Adaptive Speed Control	CAN TCM message missing	N	—	TCM CAN DTC flagged

DTC	CM	SYSTEM	FAULT DESCRIPTION	MIL	CM PIN	POSSIBLE CAUSES
U2506	AUDIO	In-Car Entertainment	D2B slave module unable to initialize its address	N	CC21 -1 -2	One or more slave modules duplicated on the D2B network ring
U2510	IC	Security (PATS)	CAN invalid ECM data for vehicle security (incorrect PATS identification – IC / ECM)	N	—	Reconfigure IC / ECM using WDS
U2511	IC	Controller Area Network	CAN communication failure – IC to ECM	N	IP6 -8 -9	CAN network circuit: open circuit, short circuit to B+ voltage, short circuit to ground CAN network fault ECM CAN failure
U2515	DSCM	Dynamic Stability Control	CAN adaptive speed control message missing	N	—	TCM CAN DTC flagged
U2515	IC	Instrumentation	CAN ASCM data missing	N	—	ASCM CAN DTC flagged
U2516	ASM	Air Suspension	CAN not responding	N	CR88 -7 -8	Multiple CAN modules with CAN DTCs flagged CAN circuit: open circuit, short circuit to B+ voltage, short circuit to ground ASM internal CAN fault CAN network fault
U2516	CCM	Climate Control	CAN not responding	N	CR119 -16 -17	Multiple CAN modules with CAN DTCs flagged CAN circuit: open circuit, short circuit to B+ voltage, short circuit to ground CCM internal CAN fault CAN network fault
U2516	IC	Controller Area Network	CAN network circuit fault	N	IP6 -8 -9	CAN network circuit: open circuit, short circuit to B+ voltage, short circuit to ground CAN network fault

DTC	CM	SYSTEM	FAULT DESCRIPTION	MIL	CM PIN	POSSIBLE CAUSES
U2516	RCCM	Rear Climate Control	CAN not responding	N	RA1 -8 -16	Multiple CAN modules with CAN DTCs flagged CAN circuit: open circuit, short circuit to B+ voltage, short circuit to ground CCM internal CAN fault CAN network fault
U2518	ASM	Air Suspension	CAN CCM message missing	N	—	CCM CAN DTC flagged
U2520	ASCM	Adaptive Speed Control	CAN IC missing	N	EC23 -4 -10	IC CAN circuit: open circuit, short circuit to B+ voltage, short circuit to ground IC CAN fault CAN network fault
U2520	CCM	Climate Control	CAN IC missing	N	CR119 -6 -7 16 -17	IC CAN circuit: open circuit, short circuit to B+ voltage, short circuit to ground IC CAN fault CAN network fault
U2521	ASCM	Adaptive Speed Control	CAN DSCM missing	N	EC23 -4 -10	DSCM CAN circuit: open circuit, short circuit to B+ voltage, short circuit to ground DSCM CAN fault CAN network fault
U2521	ASM	Air Suspension	CAN DSCM message missing	N	—	DSCM CAN DTC flagged
U2521	CCM	Climate Control	CAN DSCM missing	N	CR119 -6 -7 16 -17	DSCM CAN circuit: open circuit, short circuit to B+ voltage, short circuit to ground DSCM CAN fault CAN network fault
U2521	IC	Instrumentation	CAN DSCM vehicle speed data missing	N	—	DSCM CAN DTC flagged

DTC	CM	SYSTEM	FAULT DESCRIPTION	MIL	CM PIN	POSSIBLE CAUSES
U2522	ASCM	Adaptive Speed Control	CAN TCM missing	N	EC23 -4 -10	TCM CAN circuit: open circuit, short circuit to B+ voltage, short circuit to ground TCM CAN fault CAN network fault
U2522	DSCM	Dynamic Stability Control	CAN TCM missing	N	EC30 -11 -12 -14 -15	TCM CAN circuit: open circuit, short circuit to B+ voltage, short circuit to ground TCM CAN fault CAN network fault
U2522	IC	Instrumentation	CAN TCM gear selected data missing	N	—	TCM CAN DTC flagged
U2523	ASCM	Adaptive Speed Control	CAN ECM missing	N	EC23 -4 -10	ECM CAN circuit: open circuit, short circuit to B+ voltage, short circuit to ground ECM CAN fault CAN network fault
U2523	ASM	Air Suspension	CAN ECM message missing	N	—	ECM CAN DTC flagged
U2523	CCM	Climate Control	CAN ECM missing	N	CR119 -6 -7 16 -17	ECM CAN circuit: open circuit, short circuit to B+ voltage, short circuit to ground ECM CAN fault CAN network fault
U2523	DSCM	Dynamic Stability Control	CAN ECM missing	N	EC30 -11 -12 -14 -15	ECM CAN circuit: open circuit, short circuit to B+ voltage, short circuit to ground ECM CAN fault CAN network fault
U2523	IC	Instrumentation	CAN ECM engine speed data missing	N	—	ECM CAN DTC flagged
U2524	IC	Instrumentation	CAN ASM data missing	N	—	ASM CAN DTC flagged

DTC	CM	SYSTEM	FAULT DESCRIPTION	MIL	CM PIN	POSSIBLE CAUSES
U2525	CCM	Climate Control	CAN RCCM missing	N	CR119 -6 -7 16 -17	RCCM CAN circuit: open circuit, short circuit to B+ voltage, short circuit to ground RCCM CAN fault CAN network fault
U2527	DSCM	Dynamic Stability Control	Local CAN network (steering angle sensor, yaw rate and lateral acceleration sensor) transmit fault	N	EC30 -25 -29	Local CAN circuit: open circuit, short circuit to B+ voltage, short circuit to ground DSCM internal Local CAN fault Local CAN network fault
U2601	AMP	In-Car Entertainment	D2B “wake-up” circuit fault	N	TL9 -5	D2B “wake-up” circuit: short circuit to ground
U2601	AUDIO	In-Car Entertainment	D2B “wake-up” circuit fault	N	CC8 -19	D2B “wake-up” circuit: short circuit to ground
U2601	CPM	Telephone	D2B “wake-up” circuit fault	N	TL7 -23	D2B “wake-up” circuit: short circuit to ground
U2601	MCP	Rear In-Car Entertainment	D2B “wake-up” circuit fault	N	RC1 -6	D2B “wake-up” circuit: short circuit to ground
U2601	VAM	Voice Control	D2B “wake-up” circuit fault	N	TL68 -14	D2B “wake-up” circuit: short circuit to ground
U2602	AUDIO	In-Car Entertainment	D2B network “ring” incomplete (fault reported)	N	CC21 -1 -2	D2B network module disconnected D2B network circuit: open circuit
U2603	AUDIO	In-Car Entertainment	D2B network “ring” incomplete (fault not reported)	N	CC21 -1 -2	D2B network module disconnected D2B network circuit: open circuit

DTC	CM	SYSTEM	FAULT DESCRIPTION	MIL	CM PIN	POSSIBLE CAUSES
U2604	AUDIO	In-Car Entertainment	D2B network "ring" incomplete (corrupted fault report)	N	CC21 -1 -2	D2B network module disconnected D2B network circuit: open circuit
U2605	AUDIO	In-Car Entertainment	Audio unit unable to initialize its address	N	CC21 -1 -2	More than one master module (audio unit) on the D2B network ring
U2607	AUDIO	In-Car Entertainment	D2B slave module switched into bypass mode	N	CC21 -1 -2	One or more slave modules on the D2B network ring switched into bypass mode
U2609	AMP	In-Car Entertainment	D2B "wake-up" signal out of specification	N	TL9 -5	D2B "wake-up" circuit: high resistance D2B network slave module failure AMP failure
U2609	AUDIO	In-Car Entertainment	D2B "wake-up" signal out of specification	N	CC21 -19	D2B "wake-up" circuit: high resistance D2B network slave module failure
U2609	CPM	Telephone	D2B "wake-up" signal out of specification	N	TL7 -23	D2B "wake-up" circuit: high resistance D2B network slave module failure
U2609	MCP	Rear In-Car Entertainment	D2B "wake-up" signal out of specification	N	RC1 -6	D2B "wake-up" circuit: high resistance D2B network slave module failure MCP failure
U2609	VAM	Voice Control	D2B "wake-up" signal out of specification	N	TL68 -14	D2B "wake-up" circuit: high resistance D2B network slave module failure VAM failure
U2610	AMP	In-Car Entertainment	D2B network "position status report" not received	N	—	D2B network error

DTC	CM	SYSTEM	FAULT DESCRIPTION	MIL	CM PIN	POSSIBLE CAUSES
U2610	CPM	Telephone	D2B network "position status report" not received	N	—	D2B network error
U2610	MCP	Rear In-Car Entertainment	D2B network "position status report" not received	N	—	D2B network error
U2610	VAM	Voice Control	D2B network "position status report" not received	N	—	D2B network error
U2611	AMP	In-Car Entertainment	D2B network "alarm clear command" not received	N	—	D2B network error
U2611	CPM	Telephone	D2B network "alarm clear command" not received	N	—	D2B network error
U2611	MCP	Rear In-Car Entertainment	D2B network "alarm clear command" not received	N	—	D2B network error
U2611	VAM	Voice Control	D2B network "alarm clear command" not received	N	—	D2B network error
U2613	AUDIO	In-Car Entertainment	NCM not responding on D2B network	N	CC21 -19 CC21 -1 -2	D2B "wake-up" circuit: open circuit, short circuit to B+ voltage NCM D2B fault D2B network fault
U2614	AUDIO	In-Car Entertainment	AMP not responding on D2B network	N	CC21 -19 CC21 -1 -2	D2B "wake-up" circuit: open circuit, short circuit to B+ voltage AMP D2B fault D2B network fault
U2615	AUDIO	In-Car Entertainment	MCP not responding on D2B network	N	CC21 -19 CC21 -1 -2	D2B "wake-up" circuit: open circuit, short circuit to B+ voltage MCP D2B fault D2B network fault