

DIAGNOSTIC SYSTEM AND FAULT CODES

FAULT CODE TABLE

P-CODE	MODULE	DESCRIPTION	CAUSE	ACTION
C2109	SCM	Release Valve Activation delay Exceed	If pressure threshold not reach after calibrated time delay (When release valve activated)	Open SCM Activation page in BUDS, performe a combined test in System self test sequence section
C210A	SCM	Suspension Valve Activation time Exceed	If the suspension valve maximum allowed activation time in a specific time window is exceeded for (counter > CntExceed).	Open SCM Activation page in BUDS, performe a combined test in System self test sequence section
C210B	SCM	Outlet Valve Activation time Exceed	If the suspension valve maximum allowed activation time in a specific time window is exceeded for (counter > CntExceed).	Open SCM Activation page in BUDS, performe a combined test in System self test sequence section
C2111	SCM	Pressure sensor signal Invalid	Sensor input voltage < 0.5V for hardcoded debounce time	Open SCM Activation page in BUDS, performe a pressure sensor test in System self test sequence section
C21D0	SCM	Pressure threshold not Reach outlet adjustment	If pressure threshold not reach after calibrated time delay (threshold change in function of compressor temperature) (When outlet pressure adjustment activated)	Open SCM Activation page in BUDS, performe a combined test in System self test sequence section
C21D2	SCM	Compressor over temperature condition	If over temp threshold reach for time delay	Open SCM Activation page in BUDS, performe a pressure test in System self test sequence section
C21D3	SCM	Over pressure detected	If pressure > 350PSI	Open SCM Activation page in BUDS, performe a pressure sensor test in System self test sequence section
C21E0	SCM	Pressure threshold not reach Rear suspension adjustment	If pressure threshold not reach after calibrated time delay (threshold change in function of compressor temperature) (When Rear suspension adjustment activated)	Open SCM Activation page in BUDS, performe a combined test in System self test sequence section

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P0032	ECM	Internal fault path number for Max error: power stage of heater of Sensor upstream catalyst	Damaged O2 sensor, damaged circuit wires, damaged connector or damaged ECM output pins.	<p>Check fuse. Disconnect HO2S1.</p> <p>Measure voltage between harness connector HO2S1-C and ground (expected value = 11 to 13 volts). Measure resistance between HO2S1 pin C and D (expected value = 7 to 12 ohms). Disconnect ECM-B. Measure resistance between harness connector HO2S1-D and ground (expected value > open). Measure resistance from harness connector: HO2S1-D to ECMB-L2 (expected value: < 2 ohms).</p>
P0037	ECM	Internal fault path number for Min error : power stage of heater of Sensor upstream catalyst, LSU 2	Blown fuse, damaged or disconnected O2 sensor, damaged or disconnected circuit wires, damaged ECM output pins.	<p>Check fuse. Disconnect HO2S2.</p> <p>Measure voltage between harness connector HO2S2-C and ground (expected value = 11 to 13 volts). Measure resistance between HO2S2 pin C and D (expected value = 7 to 12 ohms). Disconnect ECM-B. Measure resistance between harness connector HO2S2-D and ground (expected value > open). Measure resistance from harness connector: HO2S2-D to ECMB-L3 (expected value: < 2 ohms).</p>
P0038	ECM	Internal fault path number for Max error: power stage of heater of Sensor upstream catalyst, LSU 2	Blown fuse, damaged or disconnected O2 sensor, damaged or disconnected circuit wires, damaged ECM output pins.	<p>Check fuse. Disconnect HO2S2.</p> <p>Measure voltage between harness connector HO2S2-C and ground (expected value = 11 to 13 volts). Measure resistance between HO2S2 pin C and D (expected value = 7 to 12 ohms). Disconnect ECM-B. Measure resistance between harness connector HO2S2-D and ground (expected value > open). Measure resistance from harness connector: HO2S2-D to ECMB-L3 (expected value: < 2 ohms).</p>

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P0108	ECM	Manifold Air Pressure Sensor voltage too High	Damaged sensor, wires shorted to battery +, ECM voltage supply too High.	<p>Make sure sensor connector is fully inserted. Measure voltage between harness connector pins 1 and 4 . (Expected value: 4.8 to 5.1 volts) Measure resistance from connector: ECMA-H3 to MAPTS-2 (Expected value: < 2 ohms) Measure resistance from connector: ECMA-G4 to MAPTS-3 (Expected value: < 2 ohms) Measure resistance from connector: ECMA-H2 to MAPTS-1 (Expected value: < 2 ohms) Measure resistance from connector: ECMA-B4 to MAPTS-4 (Expected value: < 2 ohms)</p>
P0112	ECM	Intake Air Temperature Sensor 1 circuit Low	Damaged sensor, damaged circuit wires, damaged connector or damaged ECM pins, ECM voltage supply Low	<p>Make sure sensor connector is fully inserted. Measure voltage between harness connector pins 1 and 4 . (Expected value: 4.8 to 5.1 volts) Measure resistance from connector: ECMA-H4 to ATS-1 (Expected value: < 2 ohms) Measure resistance from connector: ECMA-J4 to ATS-2 (Expected value: < 2 ohms)</p>
P0113	ECM	Intake Air Temperature Sensor 1 circuit High	Damaged sensor, wires shorted to battery +, ECM voltage supply too High.	<p>Make sure sensor connector is fully inserted. Measure voltage between harness connector pins 1 and 4 . (Expected value: 4.8 to 5.1 volts) Measure resistance from connector: ECMA-H4 to ATS-1 (Expected value: < 2 ohms) Measure resistance from connector: ECMA-J4 to ATS-2 (Expected value: < 2 ohms)</p>

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P0123	ECM	First Throttle Accelerator Sensor (TAS) shorted to battery +	Damaged circuit wires, damaged sensor or damaged ECM pins.	<p>Make sure sensor connector is fully inserted.</p> <p>Measure resistance from connector: ECMB-K1 to TAS-C (Expected value: < 2 ohms)</p> <p>Measure resistance from connector: ECMB-K3 to TAS-B (Expected value: < 2 ohms)</p> <p>Measure resistance from connector: ECMB-J3 to TAS-D (Expected value: < 2 ohms)</p>
P0127	ECM	Intake Air Temperature too High	Air Temperature in intake High	
P0130	ECM	ECU int. fault path no.: electrical diagnosis for lambda sensor upstream catalyst. npl-error	Damaged O2 sensor, damaged circuit wires, damaged connector or damaged ECM output pins.	<p>Check fuse.</p> <p>Disconnect HO2S1.</p> <p>Measure voltage between harness connector HO2S1-C and ground (expected value = 11 to 13 volts).</p> <p>Measure resistance between HO2S1 pin C and D (expected value = 7 to 12 ohms).</p> <p>Disconnect ECM-B.</p> <p>Measure resistance between harness connector HO2S1-D and ground (expected value > open).</p> <p>Measure resistance from harness connector: HO2S1-D to ECMB-L2 (expected value: < 2 ohms).</p>
P0131	ECM	ECU int. fault path no.: electrical diagnosis for lambda sensor upstream cat. min-error	Damaged O2 sensor, damaged circuit wires, damaged connector or damaged ECM output pins.	<p>Check fuse.</p> <p>Disconnect HO2S1.</p> <p>Measure voltage between harness connector HO2S1-C and ground (expected value = 11 to 13 volts).</p> <p>Measure resistance between HO2S1 pin C and D (expected value = 7 to 12 ohms).</p> <p>Disconnect ECM-B.</p> <p>Measure resistance between harness connector HO2S1-D and ground (expected value > open).</p> <p>Measure resistance from harness connector: HO2S1-D to ECMB-L2 (expected value: < 2 ohms).</p>

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P0136	ECM	ECU int. fault path no.: electrical diagnosis for second lambda sensor upstream cat. npl-error	Damaged O2 sensor, damaged circuit wires, damaged connector or damaged ECM output pins.	<p>Check fuse. Disconnect HO2S2.</p> <p>Measure voltage between harness connector HO2S2-C and ground (expected value = 11 to 13 volts). Measure resistance between HO2S2 pin C and D (expected value = 7 to 12 ohms). Disconnect ECM-B. Measure resistance between harness connector HO2S2-D and ground (expected value > open). Measure resistance from harness connector: HO2S2-D to ECMB-L3 (expected value: < 2 ohms).</p>
P0137	ECM	ECU int. fault path no.: electrical diagnosis for second lambda sensor upstream cat. min-error	Damaged O2 sensor, damaged circuit wires, damaged connector or damaged ECM output pins.	<p>Check fuse. Disconnect HO2S2.</p> <p>Measure voltage between harness connector HO2S2-C and ground (expected value = 11 to 13 volts). Measure resistance between HO2S2 pin C and D (expected value = 7 to 12 ohms). Disconnect ECM-B. Measure resistance between harness connector HO2S2-D and ground (expected value > open). Measure resistance from harness connector: HO2S2-D to ECMB-L3 (expected value: < 2 ohms).</p>
P0138	ECM	ECU int. fault path no.: electrical diagnosis for second lambda sensor upstream cat. max-error	Damaged O2 sensor, damaged circuit wires, damaged connector or damaged ECM output pins.	<p>Check fuse. Disconnect HO2S2.</p> <p>Measure voltage between harness connector HO2S2-C and ground (expected value = 11 to 13 volts). Measure resistance between HO2S2 pin C and D (expected value = 7 to 12 ohms). Disconnect ECM-B. Measure resistance between harness connector HO2S2-D and ground (expected value > open). Measure resistance from harness connector: HO2S2-D to ECMB-L3 (expected value: < 2 ohms).</p>

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P0222	ECM	2nd Throttle Accelerator Sensor (TAS) shorted to GND	Damaged circuit wires, damaged sensor, or damaged ECM pins.	<p>Make sure sensor connector is fully inserted.</p> <p>Measure resistance from connector: ECMB-E1 to TAS-A (Expected value: < 2 ohms)</p> <p>Measure resistance from connector: ECMB-B3 to TAS-F (Expected value: < 2 ohms)</p> <p>Measure resistance from connector: ECMB-A3 to TAS-E (Expected value: < 2 ohms)</p>
P0223	ECM	2nd Throttle Accelerator Sensor (TAS) shorted to battery +	Damaged circuit wires, damaged sensor, or damaged ECM pins.	<p>Make sure sensor connector is fully inserted.</p> <p>Measure resistance from connector: ECMB-E1 to TAS-A (Expected value: < 2 ohms)</p> <p>Measure resistance from connector: ECMB-B3 to TAS-F (Expected value: < 2 ohms)</p> <p>Measure resistance from connector: ECMB-A3 to TAS-E (Expected value: < 2 ohms)</p>
P0231	ECM	Fuel Pump circuit shorted to ground, or open circuit	Blown fuse, damaged or disconnected fuel pump, damaged circuit wires, damaged connectors or damaged ECM output pins.	<p>Check fuse</p> <p>Measure voltage between harness connector FP-B and ground (Expected value: 11 to 13 volts)</p> <p>Measure resistance on the fuel pump connector between terminals B and C (Expected value: < 2 ohms)</p> <p>Measure resistance from harness connector: ECMB-M1 to FP-C (Expected value: < 2 ohms)</p> <p>Measure voltage between harness connector FP-C and ground (Expected value: 0 volts)</p>
P0232	ECM	Fuel Pump circuit shorted to battery +	Damaged fuel pump, damaged circuit wires, damaged connectors or damaged ECM output pins.	<p>Check fuse</p> <p>Measure voltage between harness connector FP-B and ground (Expected value: 11 to 13 volts)</p> <p>Measure resistance on the fuel pump connector between terminals B and C (Expected value: < 2 ohms)</p> <p>Measure resistance from harness connector: ECMB-M1 to FP-C (Expected value: < 2 ohms)</p> <p>Measure voltage between harness connector FP-C and ground (Expected value: 0 volts)</p>

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P0265	ECM	Cylinder 2 injector shorted to battery +	Damaged injector, damaged circuit wires, damaged connector or damaged ECM output pins.	<p>Disconnect injector 2</p> <p>Measure resistance between injector pin 1 and 2 (Expected value = 14 to 15 ohms).</p> <p>Measure resistance from harness connector: INJ2-1 to INJ2-2 (Expected value: > OPEN)</p> <p>Measure voltage between harness connector ECMA-K1 and ground. (Expected value: 0 volts)</p> <p>Check if HIC connector is connecting the engine harness to the vehicle harness.</p>
P0324	ECM	Diagnostic Fault Code for min error of knock sensor	Damaged knock sensor, damaged circuit wires, damaged connector or damaged ECM output pins.	Make sure sensor connector is fully inserted and check knock system.
P032A	ECM	Diagnostic Fault Code for min error of knock sensor	Damaged knock sensor, damaged circuit wires, damaged connector or damaged ECM output pins.	Make sure sensor connector is fully inserted and check knock system.
P0335	ECM	Crankshaft Position Sensor	Damaged CPS, damaged circuit wires, damaged connector or damaged ECM output pins.	<p>Make sure sensor connector is fully inserted.</p> <p>Measure resistance from connector: ECMA-H1 to CPS-1 (Expected value: < 2 ohms)</p> <p>Measure resistance from connector: ECMA-K2 to CPS-2 (Expected value: < 2 ohms)</p>
P0359	ECM	Ignition coil	Damaged ignition coil, damaged circuit wires, damaged connector or damaged ECM output pins.	<p>Open the ECM Activation page in BUDS</p> <p>Perform an ignition coil activation and check if ignition coil is reacting as expected</p> <p>Check fuse & HIC connector</p> <p>Measure resistance from harness connector: ECMA-M1 to BA-1 (Expected value: < 2 ohms)</p> <p>Measure voltage between harness connector BA-2 and ground. (Expected value: 11 to 13 volts)</p> <p>Check connector HIC that connects to engine harness to the vehicle harness.</p> <p>Refer to the service manual for detailed ignition coil testing procedure.</p>

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P0362	ECM	Ignition coil range/performance	Damaged ignition coil, damaged circuit wires, damaged connector or damaged ECM output pins.	<p>Open the ECM Activation page in BUDS</p> <p>Perform an ignition coil activation and check if ignition coil is reacting as expected</p> <p>Check fuse & HIC connector</p> <p>Measure resistance from harness connector: ECMA-M2 to BA-3 (Expected value: < 2 ohms)</p> <p>Measure voltage between harness connector BA-2 and ground. (Expected value: 11 to 13 volts)</p> <p>Check connector HIC that connects to engine harness to the vehicle harness.</p> <p>Refer to the service manual for detailed ignition coil testing procedure.</p>
P0461	CLUSTER	Fuel sender range performance	Damaged sender, damaged circuit wires, damaged connector or damaged Cluster pins	<p>Measure resistance between FP-1 and CL-21 (Expected value < 2 ohms).</p> <p>Measure resistance between FP-2 and CL-4 (Expected value < 2 ohms).</p> <p>Measure resistance between FP-1 and FP-2 (Expected value = 80 to 300 ohms).</p>
P0480	ECM	Radiator cooling fan relay	Blown fuse, damaged or disconnected relay, damaged circuit wires or connectors, damaged ECM output pins, damaged Relay.	<p>Check fuse</p> <p>Disconnect relay.</p> <p>Measure resistance between terminals 85 and 86 on relay. (Expected value: 70 to 90 Ohms)</p> <p>Measure resistance between harness connector PF-1E and ground. (Expected value > OPEN).</p> <p>Measure resistance from harness connector: ECMB-J4 to PF-1E (Expected value: < 2 ohms)</p>
P0500	DPS	Invalid or missing vehicle speed	No vehicle speed available & Vehicle is in (H or L Gear) with Engine RPM over 4000RPM. Damaged Vehicle Speed sensor circuit, Damaged sensor, Wrong mounting position of speed sensor.	<p>Check if vehicle speed is available in Monitoring page in BUDS.</p> <p>Check fuse</p> <p>Measure voltage between harness connector CV-A and ground. (Expected value: 11 to 13 volts)</p> <p>Measure resistance from connector: A-E1 to CV-B (Expected value: < 5 ohms) on SSV</p>

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P0523	ECM	Engine oil pressure sensor sticking	Damaged switch, damaged circuit wires, damaged connector, damaged ECM pins.	Measure resistance between harness connector EOP and ground When engine stopped. (Expected value < 2 ohms) Measure resistance between harness connector EOP and ground When engine running. (Expected value = open) Measure resistance from harness connector: EOP to ECMA-E3 (Expected value: < 2 ohms) Check if HIC connector is properly connected (engine harness to the vehicle harness).
P0524	ECM	Engine oil pressure too Low	Damaged switch, damaged circuit wires, damaged connector, damaged ECM pins.	Measure resistance between harness connector EOP and ground When engine stopped. (Expected value < 2 ohms) Measure resistance between harness connector EOP and ground When engine running. (Expected value = open) Measure resistance from harness connector: EOP to ECMA-E3 (Expected value: < 2 ohms) Check if HIC connector is properly connected (engine harness to the vehicle harness)
P0551	DPS	TORQUE_SENSOR_OPEN	Damaged DPS	External troubleshooting is not possible Replace the DPS.
P0552	DPS	TORQUE_SENSOR_SHORT_GND	Damaged DPS	External troubleshooting is not possible Replace the DPS.
P0553	DPS	TORQUE_SENSOR_SHORT_5V	Damaged DPS	External troubleshooting is not possible Replace the DPS.
P0560	ECM	Non-plausibility error on system voltage	Battery failure, voltage regulator failure, damaged circuit wires or connection, damaged magneto generator. An external battery charger may have been used.	Measure battery voltage with engine stopped. (Expected value: 11 to 13 volts) Measure battery voltage with engine running. (Expected value: 13 to 14.7 volts) Check connections on voltage regulator. Check ground and positive connections on battery. Check ground on vehicle frame

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P0606	ECM	Control Module Processor	Faulty calibration Faulty programming Damaged ECM	Try updating the ECM calibration If the problem persists, reflash ECM If the problem persists, replace the ECM.
P060D	ECM	Throttle Accelerator Sensor (TAS) synchronistic error between sensor 1 and 2	Throttle Accelerator Sensors (TAS) plausibility check error	Make sure sensor connector is fully inserted. Measure resistance from connector: ECMB-K1 to TAS-C (Expected value: < 2 ohms) Measure resistance from connector: ECMB-K3 to TAS-B (Expected value: < 2 ohms) Measure resistance from connector: ECMB-E1 to TAS-A (Expected value: < 2 ohms) Measure resistance from connector: ECMB-J3 to TAS-D (Expected value: < 2 ohms) Measure resistance from connector: ECMB-B3 to TAS-F (Expected value: < 2 ohms) Measure resistance from connector: ECMB-A3 to TAS-E (Expected value: < 2 ohms)
P060E	ECM	Throttle position performance	TPS plausibility check error	Measure resistance from harness connector: TPS-1 to ECMA-F3 (Expected value: < 2 ohms) Measure resistance from harness connector: TPS-2 to ECMA-K4 (Expected value: < 2 ohms) Measure resistance from harness connector: TPS-4 to ECMA-K3 (Expected value: < 2 ohms) Measure resistance from harness connector: TPS-6 to ECMA-A2 (Expected value: < 2 ohms)
P0610	ECM	Variant Coding error	Faulty variant coding Faulty programming Wrong ECM after replacement	Try updating the ECM variant or calibration If the problem persists, reflash ECM If the problem persists, replace ECM.
P062F	ECM	Internal control module EEPROM error	Faulty calibration or variant Faulty programming Damaged ECM	Try updating the ECM variant or calibration If the problem persists, reflash ECM If the problem persists, replace ECM.
P0636	DPS	MOTOR LOW CURRENT FAULT	Internal error or damaged DPS	External troubleshooting is not possible Replace the DPS.

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P0686	ECM	Accessory relay circuit shorted to ground or open circuit	Blown fuse, damaged or disconnected relay, damaged circuit wires, damaged connectors or damaged ECM output pins	<p>Check fuse Disconnect Accessory relay and Lights relay & turn key switch (on w/lights) Measure voltage between harness connector PF1-10E and ground. (Expected value: 11 to 13 volts) Measure voltage between harness connector PF1-8D and ground. (Expected value: 11 to 13 volts) Measure resistance from harness connector: ECMB-G1 to PF1-12D (Expected value: < 2 ohms) Measure resistance from harness connector: ECMB-G1 to PF1-7C (Expected value: < 2 ohms) Measure resistance between terminals 85 and 86 on the 2 relays. (Expected value: 70 to 90 ohms)</p>
P0687	ECM	Accessory relay circuit shorted to battery +	Damaged relay, damaged circuit wires, damaged connector or damaged ECM output pins.	<p>Check fuse Disconnect Accessory relay and Lights relay & turn key switch (on w/lights) Measure voltage between harness connector PF1-10E and ground. (Expected value: 11 to 13 volts) Measure voltage between harness connector PF1-8D and ground. (Expected value: 11 to 13 volts) Measure resistance from harness connector: ECMB-G1 to PF1-12D (Expected value: < 2 ohms) Measure resistance from harness connector: ECMB-G1 to PF1-7C (Expected value: < 2 ohms) Measure resistance between terminals 85 and 86 on the 2 relays. (Expected value: 70 to 90 ohms)</p>

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P1130	ECM	ECU int. fault path no.: electrical diagnosis for lambda sensor upstream cat. Sig-error	Damaged O2 sensor, damaged circuit wires, damaged connector or damaged ECM output pins.	<p>Check fuse. Disconnect HO2S1.</p> <p>Measure voltage between harness connector HO2S1-C and ground (expected value = 11 to 13 volts). Measure resistance between HO2S1 pin C and D (expected value = 7 to 12 ohms). Disconnect ECM-B. Measure resistance between harness connector HO2S1-D and ground (expected value > open). Measure resistance from harness connector: HO2S1-D to ECMB-L2 (expected value: < 2 ohms).</p>
P1136	ECM	ECU int. fault path no.: electrical diagnosis for second lambda sensor upstream cat. Sig-error	Damaged O2 sensor, damaged circuit wires, damaged connector or damaged ECM output pins.	<p>Check fuse. Disconnect HO2S2.</p> <p>Measure voltage between harness connector HO2S2-C and ground (expected value = 11 to 13 volts). Measure resistance between HO2S2 pin C and D (expected value = 7 to 12 ohms). Disconnect ECM-B. Measure resistance between harness connector HO2S2-D and ground (expected value > open). Measure resistance from harness connector: HO2S2-D to ECMB-L3 (expected value: < 2 ohms).</p>
P1171	ECM	Diagnostic Fault code for Fuel Supply System (ORA Max Fault)	Injection and fuel supply system.	Check injector and fuel supply system.
P1172	ECM	Diagnostic Fault code for Fuel Supply System (ORA Min Fault)	Injection and fuel supply system.	Check injector and fuel supply system.
P1174	ECM	Diagnostic Fault code for Fuel Supply System (ORA Max Fault) Exhaust Bank2	Injection and fuel supply system.	Check injector and fuel supply system.
P1175	ECM	Diagnostic Fault code for Fuel Supply System (ORA Min Fault) Exhaust Bank2	Injection and fuel supply system.	Check injector and fuel supply system.
P1339	ECM	Signal fault at phase determination	backup phase detection strategies not able to find the correct phase	

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P1615	ECM	TPS position deviation fault	Throttle mechanical adjustment No initialization after throttle body/ECM replacement	Check throttle mechanical adjustment. Check idle stop for wear. Ensure throttle plate is against throttle stop. Check throttle angle at idle. Perform THROTTLE POSITION SENSOR INITIALIZATION in BUDS with throttle completely OFF. Refer to the service manual for more details.
P1616	ECM	Throttle limp-home-position failed	Throttle mechanical stop No initialization after throttle body/ECM replacement	Check throttle mechanical adjustment. Check idle stop for wear. Ensure throttle plate is against throttle stop. Check throttle angle at idle. Perform THROTTLE POSITION SENSOR INITIALIZATION in BUDS with throttle completely OFF. Refer to the service manual for more details.
P1619	ECM	TPS adaptation failure	Wrong throttle body mechanical position during reset of closed TPS or no initialization after ECM replacement.	Check THROTTLE cable adjustment. Check idle stop for wear. Ensure throttle plate is against throttle stop. Perform THROTTLE POSITION SENSOR INITIALIZATION in BUDS with throttle completely OFF.FF.
P1620	ECM	TPS adaptation failure	Wrong throttle body mechanical position during reset of closed TPS or no initialization after ECM replacement.	Check cable adjustment. Check idle stop for wear. Make sure throttle plate is against throttle stop. Perform THROTTLE POSITION SENSOR INITIALIZATION in BUDS with throttle completely OFF.
P1621	ECM	TPS adaptation cancelled lower mechanical stop failed	Throttle mechanical stop No initialization after throttle body/ECM replacement	Check cable adjustment. Check idle stop for wear. Ensure throttle plate is against throttle stop. Check throttle angle at idle. Perform THROTTLE POSITION SENSOR INITIALIZATION in BUDS with throttle completely OFF. Refer to the service manual for more details.

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P20EB	ECM	Main relay de-energized too late or sticking	Damaged circuit wires, damaged connectors or damaged ECM output pins. Damaged relay	Disconnect main relay Measure resistance between terminals 85 and 86 on relay. (Expected value: 70 to 90 Ohms)
P212C	ECM	2nd Throttle Accelerator Sensors (TPS) low	Damaged TPS, damaged circuit wires, damaged connector or damaged ECM output pins.	Ensure sensor connector is fully inserted. Measure resistance from connector: ECMB-J3 to TAS-D (Expected value: < 2 ohms) Measure resistance from connector: ECMB-B3 to TAS-F (Expected value: < 2 ohms) Measure resistance from connector: ECMB-A3 to TAS-E (Expected value: < 2 ohms)
P212D	ECM	2nd Throttle Accelerator Sensors (TPS) high	Damaged TPS, damaged circuit wires, damaged connector or damaged ECM output pins.	Ensure sensor connector is fully inserted. Measure resistance from connector: ECMB-J3 to TAS-D (Expected value: < 2 ohms) Measure resistance from connector: ECMB-B3 to TAS-F (Expected value: < 2 ohms) Measure resistance from connector: ECMB-A3 to TAS-E (Expected value: < 2 ohms)
P2228	ECM	Ambient pressure sensor shorted to ground	Damaged sensor, damaged circuit wires, damaged connector or damaged ECM pins, ECM voltage supply low	Make sure sensor connector is fully inserted. Measure voltage between harness connector pins 1 and 4. (Expected value: 4.8 to 5.1 volts) Measure resistance from connector: ECMA-F2 to APS-1 (Expected value: < 2 ohms) Measure resistance from connector: ECMA-G3 to APS-3 (Expected value: < 2 ohms) Measure resistance from connector: ECMA-B4 to APS-4 (Expected value: < 2 ohms)
P2229	ECM	Ambient pressure sensor short to V +	Damaged sensor, wires shorted to battery +, ECM voltage supply too high.	Make sure sensor connector is fully inserted. Measure voltage between harness connector pins 1 and 4. (Expected value: 4.8 to 5.1 volts) Measure resistance from connector: ECMA-F2 to APS-1 (Expected value: < 2 ohms) Measure resistance from connector: ECMA-G3 to APS-3 (Expected value: < 2 ohms) Measure resistance from connector: ECMA-B4 to APS-4 (Expected value: < 2 ohms)
P2279	ECM	Intake Air System leak	Check for cracked plenum	Intake or throttle body air leak

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P2801	ECM	Gear position sensor invalid range	Damaged circuit wires, damaged gear position sensor, damaged ECM pins or damaged transmission.	<p>Open ECM Monitoring page in BUDS, Verify that gear position information changes with gear selection changes on vehicle.</p> <p>Disconnect GBPS</p> <p>Measure voltage between harness connector 5-GBPS-1 and 5-GBPS-3. (Expected value: 4.8 to 5.1 volts)</p> <p>Measure resistance from connector: 5-ECM-B13 to 5-GBPS-2 (Expected value: < 2 ohms)</p> <p>Measure resistance from connector: 5-ECM-B22 to 5-GBPS-3 (Expected value: < 2 ohms)</p>
P2806	ECM	Gear position sensor angle defined area vs position not plausible	Damaged circuit wires, damaged gear position sensor, damaged ECM pins or damaged transmission.	<p>Open ECM Monitoring page in BUDS, Verify that gear position information changes with gear selection changes on vehicle.</p> <p>Disconnect GBPS</p> <p>Measure voltage between harness connector 5-GBPS-1 and 5-GBPS-3. (Expected value: 4.8 to 5.1 volts)</p> <p>Measure resistance from connector: 5-ECM-B13 to 5-GBPS-2 (Expected value: < 2 ohms)</p> <p>Measure resistance from connector: 5-ECM-B22 to 5-GBPS-3 (Expected value: < 2 ohms)</p>
U0073	CLUSTER	CAN bus off, no messages	Damaged circuit wires or damaged CLUSTER pins.	<p>Disconnect MPI2 from DB connector.</p> <p>Measure resistance between DB-1 and DB-2 (Expected value = 50 to 70 ohms).</p> <p>Measure resistance between DB-1 and CL-19 (Expected value < 2 ohms).</p> <p>Measure resistance between DB-2 and CL-18 (Expected value < 2 ohms).</p>
U0073	SCM	CAN-Bus failure, CAN-Bus OFF	Damaged circuit wires or damaged SCM pins.	<p>Disconnect MPI2 from DB connector.</p> <p>Measure resistance between DB-1 and DB-2 (Expected value = 50 to 70 ohms).</p> <p>Measure resistance between DB-1 and PCM-1 (expected value < 2 ohms).</p> <p>Measure resistance between DB-2 and PCM-2 (expected value < 2 ohms).</p>

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U0301	ECM	Variant Coding, software incompatibility (DFC_MoFVar)	Faulty calibration or variant Faulty programming Damaged ECM	Try updating the ECM variant or calibration If the problem persists, reflash ECM If the problem persists, replace ECM.
U0302	ECM	Variant Coding, software incompatibility (DFC_MTVARNPL)	Faulty calibration or variant Faulty programming Damaged ECM	Try updating the ECM variant or calibration If the problem persists, reflash ECM If the problem persists, replace ECM.
U0400	SCM	Variant Coding failure Software incompatibility	SCM not install on expected vehicle Faulty programming	Check if SCM is install on a valid vehicle Update SCM Open Vehicle Configuration in Setting page in BUDS & if check vehicle configuration is set as expected for the vehicle.
U0400	DPS	Variant Coding failure Software incompatibility	Faulty variant coding Faulty programming	Check in the BUDS Tab "vehicle configuration" if the DPS option is checked. Reflash the DPS with the latest software
U0426	ECM	Invalid Data Received From Vehicle Immobilizer Control Module	The Vehicle Immobilizer could not read the number of the access key.	Check for dirty or oxidized Key contact. Clean key contact if needed. Check for broke key contact Ensure sensor connector is fully inserted. Measure resistance between ECMB-A1 and CC-C (Expected value < 2 ohms). Measure resistance between ECMB-C2 and CC-E (Expected value < 2 ohms).
U2100	CLUSTER	Invalid message counter ECM (ECM_1 of VEHICLE_SPEED)	Message counter plausibility check failed	External troubleshooting is not possible Check for communication fault using BUDS
U220A	CLUSTER	Invalid message checksum ECM	Check Sum error	External troubleshooting is not possible Check for communication fault using BUDS

Subsection XX (DIAGNOSTIC SYSTEM AND FAULT CODES)

U0100	DPS	Lost communication with ECM (lost of CAN ID's)	Damaged CAN Bus wires to ECM, damaged DPS/ECM pins.	Disconnect MPI2 from DB connector. Measure resistance between DB-1 and DB-2 (Expected value = 50 to 70 ohms). Measure resistance between DB-1 and ECM B-C1 (Expected value < 5 ohms). Measure resistance between DB-2 and ECM B-C2 (Expected value < 5 ohms).
U0155	ECM	Lost communication with CLUSTER (lost of CAN ID's)	Missing CAN ID Module internal error Damaged circuit wires or damaged module pins.	Check for Cluster fault or ECM fault Measure voltage between harness connector CL-17 and ground. (Expected value = 11 to 13 volts) Disconnect MPI2 from DB connector. Measure resistance between DB-1 and DB-2 (Expected value = 50 to 70 ohms). Measure resistance between DB-1 and ECMB-C1 (Expected value < 2 ohms). Measure resistance between DB-2 and ECMB-C2 (Expected value < 2 ohms). Measure resistance between DB-1 and CL-19 (Expected value < 2 ohms). Measure resistance between DB-2 and CL-18 (Expected value < 2 ohms).
U0155	ECM	Lost communication with CLUSTER (lost of CAN ID's)	Missing CAN ID Module internal error Damaged circuit wires or damaged module pins.	Check for Cluster fault or ECM fault Measure voltage between harness connector CL-17 and ground. (Expected value = 11 to 13 volts) Disconnect MPI2 from DB connector. Measure resistance between DB-1 and DB-2 (Expected value = 50 to 70 ohms). Measure resistance between DB-1 and ECMB-C1 (Expected value < 2 ohms). Measure resistance between DB-2 and ECMB-C2 (Expected value < 2 ohms). Measure resistance between DB-1 and CL-19 (Expected value < 2 ohms). Measure resistance between DB-2 and CL-18 (Expected value < 2 ohms).