

# DIAGNOSTIC AND FAULT CODES

## FAULT CODE TABLE

P-CODE	MODULE	DESCRIPTION	CAUSE	ACTION
P0079	ECM	E-RAVE® solenoid open circuit or shorted to ground	Disconnected E-RAVE solenoid. Damaged E-RAVE solenoid, wires or terminals.	Check for approximately 12 volts between E-RAVE solenoid RD/OR wire and chassis. Check for approximately 30 ohms between E-RAVE solenoid terminals. Check system circuit J1B-22.
P0106	ECM	Intake air pressure sensor functional problem	Damaged air pressure sensor inside in the ECM.	Replace the ECM.
P0107	ECM	Intake air pressure sensor voltage too low	Damaged air pressure sensor inside in the ECM.	Replace the ECM.
P0108	ECM	Intake air pressure sensor voltage too high	Damaged air pressure sensor inside in the ECM.	Replace the ECM.
P0111	ECM	Air temperature sensor functional problem	Intermittent air temperature sensor reading or circuit wires shorted to ground.	Check system circuits J1A-20 for continuity to terminal 2 of the ATS connector and J1A-27 for continuity to terminal 1 of the ATS connector. Check circuits J1A-20 and J1A-27 for resistivity to ground. Sensor can have an intermittent reading, replace the sensor if necessary.
P0112	ECM	Air temperature sensor voltage too low	Air temperature sensor or circuit wires shorted to ground.	Disconnect the sensor and check for a change in the fault code. If the fault code stays the same, look for a short circuit on the harness. If the fault code is different, replace the sensor. Check system circuits J1A-20 for continuity to terminal 2 of the ATS connector. Check system circuits J1A-20 for resistivity to ground.
P0113	ECM	Air temperature sensor voltage too high	Disconnected sensor or sensor's resistance too high.	Check for disconnected air temperature sensor on the airbox. Check the air temperature sensor for approximately 2280 to 2736 ohms at 19 to 21°C (66 to 70°F). Replace the sensor if necessary. Check system circuits J1A-20 for continuity to terminal 2 of the ATS connector and J1A-27 for continuity to terminal 1 of the ATS connector.

## Subsection XX (DIAGNOSTIC AND FAULT CODES)

P0116	ECM	Coolant temperature sensor functional problem	Intermittent coolant temperature sensor reading or circuit wires shorted to ground.	Check system circuit J1A-19 for continuity to terminal 1 of the CTS connector and J1A-27 for continuity to terminal 2 of the CTS connector. Check circuit J1A-19 and J1A-27 for resistivity to ground. Replace the sensor if necessary.
P0117	ECM	Coolant temperature sensor voltage too low	Coolant temperature sensor or circuit wires shorted to ground.	Disconnect the sensor and check for a change in the fault code. If the fault code stays the same, look for a short circuit on the harness. If the fault code is different, replace the sensor. Check for leakage between sensor's connection and ground. Check system circuit J1A-19 for continuity to terminal 1 of the CTS connector and J1A-27 for continuity to terminal 2 of the CTS connector. Check circuit J1A-19 and J1A-27 for resistivity to ground.
P0118	ECM	Coolant temperature sensor voltage too high	Disconnected sensor or sensor's resistance too high.	Check for disconnected coolant temperature sensor. Check the engine temperature sensor for approximately 2280 to 2736 ohms at 19 to 21°C (66 to 70°F). Replace the sensor if necessary. Check system circuit J1A-19 for continuity to terminal 1 of the CTS connector and J1A-27 for continuity to terminal 2 of the CTS connector.
P0121	ECM	Throttle position sensor functional problem	Damaged circuit wires or connector, damaged throttle position sensor.	Check throttle position sensor connector for 5 volts between pin 1 and 2. Check system circuits J1A-10 for continuity to terminal 1 of the TPS connector, J1A-26 for continuity to terminal 2 of the TPS connector and J1A-1 for continuity to terminal 3 of the TPS connector. Refer to the Shop Manual for complete throttle position sensor testing procedure.
P0122	ECM	Throttle position sensor voltage too low	Damaged circuit wires, damaged throttle position sensor or damaged ECM pins.	Check throttle position sensor connector for 5 volts between pin 1 and 2. Check system circuits J1A-10 for continuity to terminal 1 of the TPS connector, J1A-26 for continuity to terminal 2 of the TPS connector and J1A-1 for continuity to terminal 3 of the TPS connector. Refer to the Shop Manual for complete throttle position sensor testing procedure.

## Subsection XX (DIAGNOSTIC AND FAULT CODES)

P0123	ECM	Throttle position sensor voltage too high	Damaged circuit wires, damaged throttle position sensor or damaged ECM pins.	Check throttle position sensor connector for 5 volts between pin 1 and 2. Check system circuits J1A-10 for continuity to terminal 1 of the TPS connector, J1A-26 for continuity to terminal 2 of the TPS connector and J1A-1 for continuity to terminal 3 of the TPS connector. Refer to the Shop Manual for complete throttle position sensor testing procedure.
P0217	ECM	High coolant temperature detected	Poor cooling conditions. Engine may have been idling for too long. Low coolant level. Problem with cooling system.	Check coolant level. Check condition list to find out how it happened. Check cooling system.
P0230	ECM	Fuel pump over current	Damaged circuit wires, damaged fuel pump.	Check system circuit J2-4 for continuity to terminal 1 of the fuel pump connector. Check system circuit J2-4 for resistivity to ground. Replace the fuel pump if necessary.
P0231	ECM	Fuel pump open circuit or shorted to ground	Disconnected fuel pump. Damaged fuel pump, damaged circuit wires or connectors.	Check system circuit J2-4 for continuity to terminal 1 of the fuel pump connector. Check system circuit J2-12 for continuity to terminal 2 of the fuel pump connector. Check circuit J2-4 and J2-12 for resistivity to ground.
P0261	ECM	MAG injector open circuit or shorted to ground	Damaged or disconnected injector, circuit wires or ECM output pins. Damaged ECM output stage.	Check system circuit J1B-8 for continuity to terminal 1 of the MAG injector. Check system circuit J1B-1 for continuity to terminal 2 of the MAG injector. Check circuit J1B-8 and J1B-1 for resistivity to ground. Check for approximately 2.4 ohms on injector. Replace ECM.
P0262	ECM	MAG injector shorted to system voltage (over current)	Damaged injector, circuit wires or ECM output pins. Damaged ECM output stage.	Check for approximately 2.4 ohms on injector. Check if system circuit J1B-1 and J1B-8 are shorted to system voltage (60 V). Replace ECM.

## Subsection XX (DIAGNOSTIC AND FAULT CODES)

P0264	ECM	PTO injector open circuit or shorted to ground	Damaged or disconnected injector, circuit wires or ECM output pins. Damaged ECM output stage.	Check system circuit J1B-7 for continuity to terminal 2 of the PTO injector. Check system circuit J1B-2 for continuity to terminal 1 of the PTO injector. Check circuit J1B-7 and J1B-2 for resistivity to ground. Check for approximately 2.4 ohms on injector. Replace ECM.
P0265	ECM	PTO injector shorted to system voltage (over current)	Damaged injector, circuit wires or ECM output pins. Damaged ECM output stage.	Check for approximately 2.4 ohms on injector. Check if system circuit J1B-2 and J1B-7 are shorted to system voltage (60 V). Replace ECM.
P0326	ECM	Knock sensor below minimum noise	Damaged or disconnected knock sensor, damaged circuit wires or damaged connector.	Check system circuits J1A-33 for continuity to terminal 2 of knock sensor connector and J1A-34 for continuity to terminal 1 of knock sensor connector. Check sensor mounting surface and torque.
P0339	ECM	Crankshaft signal fault (lost of sync)	CPS signal not plausible, damaged circuit wires, damaged connector or damaged tooth wheel.	Check for 190 to 290 ohms between terminals J1A-6 and J1A-7 of ECM connector. Check for 2 volts AC between terminals J1A-6 and J1A-7 of ECM connector while cranking the engine.
P0351	ECM	MAG ignition coil open circuit or shorted to ground	Damaged circuit wires or connector, damaged or disconnected ignition coil.	Check system circuit J1B-26 for continuity to terminal 2 of the ignition coil connector. Check for 60 volts on terminal 3 of ignition coil connector. Check for continuity between terminal 1 of ignition coil connector and chassis.
P0352	ECM	PTO ignition coil open circuit or shorted to ground	Damaged circuit wires or connector, damaged or disconnected ignition coil.	Check system circuit J1B-19 for continuity to terminal 2 of the ignition coil connector. Check for 60 volts on terminal 3 of ignition coil connector. Check for continuity between terminal 1 of ignition coil connector and chassis.
P0426	ECM	Exhaust muffler temperature sensor functional problem	Intermittent exhaust muffler temperature sensor reading or circuit wires shorted to ground. Exhaust muffler temperature sensor disconnected from muffler.	Check for damaged sensor wire. Check for disconnected or unscrewed sensor.

## Subsection XX (DIAGNOSTIC AND FAULT CODES)

P0428	ECM	Exhaust muffler temperature sensor open circuit	Thermocouple sensor wire is open circuit.	Thermocouple sensor wire is open, replace with available kit.
P0480	ECM	Cooling fan relay open circuit or shorted to ground	Damaged or disconnected relay, damaged circuit wires or terminals.	Check for disconnected relay, damaged circuit wires. Check system circuit J1B-18 for continuity to relay connector.
P0484	ECM	Cooling fan relay shorted to battery	Damaged relay or damaged circuit wires.	Check for damaged relay or damaged circuit wires going to J1B-18.
P0562	ECM	12 V primary circuit voltage too low	Battery failure, damaged circuit wires or connection, too much load on electrical system.	Check battery condition, check if additional accessories are connected in the circuit.
P0563	ECM	12 V primary circuit voltage too high	An external battery charger may have been used, damaged ECM.	Measure 12 V primary circuit voltage on diagnostic connector pin 3 and 5 for approximately 14 volts while engine is running. If it's higher than 15.5 volts you may have a damaged ECM. Make sure no external power is connected to the primary 12 volt circuit.
P0601	ECM	ECM memory checksum error	Damaged ECM.	Replace ECM.
P0608	ECM	Sensor's power supply voltage too low	Damaged circuit wires, shorted TPS or E-RAVE position sensor.	Disconnect TPS and E-RAVE position sensor. Check E-RAVE positions sensor connector for 5 volts between pin 1 and 3. Check system circuit J1A-10 for resistivity to ground.
P1217	ECM	Engine shutdown at idle because overheat occurred	Engine coolant temperature reached a high value at idle and the engine was stopped for protection.	Avoid keeping the engine idling for too long. Inspect cooling system for leaks.
P1218	ECM	Major Engine overheat occurred	Poor cooling conditions. Engine may have been idling for too long. Low coolant level. Problem with cooling system.	Check coolant level. Check condition list to find out how it happened. Check cooling system.
P1231	ECM	Oil pump open circuit or shorted to ground	Damaged or disconnected oil pump, circuit wires or ECM output pins.	Check connection on oil pump, check system circuit J1B-23. Check WHITE/RED wire on oil pump connector for 60 volts.
P1233	ECM	Oil pump feedback switch do not close	Damaged or disconnected oil pump feedback switch circuit wires or ECM input pin.	Check connection on oil pump feedback switch, check system circuit J1A-32. Check black wire on oil pump feedback switch connector for resistivity to ground.

## Subsection XX (DIAGNOSTIC AND FAULT CODES)

P1326	ECM	High engine detonation detected on MAG side	Poor fuel quality, low fuel pressure, wrong timing offset, damaged spark plug, engine temperature too high, worn piston/ring.	Measure fuel pressure, check timing offset, check spark plug, check coolant system, check for evidence of piston erosion.
P1327	ECM	High engine detonation detected on PTO side	Poor fuel quality, low fuel pressure, wrong timing offset, damaged spark plug, engine temperature too high, worn piston/ring.	Measure fuel pressure, check timing offset, check spark plug, check coolant system, check for evidence of piston erosion.
P1351	ECM	MAG ignition shorted to system voltage	Damaged circuit wires or connector, damaged ignition coil.	Check system circuit J1B-26, check WHITE/RED wire on ignition coil connector for 60 volts.
P1352	ECM	PTO ignition shorted to system voltage	Damaged circuit wires or connector, damaged ignition coil.	Check system circuit J1B-19, check WHITE/RED wire on injector connector for 60 volts.
P1426	ECM	High exhaust muffler temperature detected	Damaged sensor, low fuel pump pressure, air leak in exhaust system, poor fuel quality.	Check fuel pump pressure, check sensor and replace if necessary, check components in exhaust system.
P1427	ECM	Temperature module not detected	Temperature module is set to be active with B.U.D.S. but the module is not connected or it is damaged. Damaged wires.	Check if temperature module is connected. Check for damaged connector or damaged wires. Check if 12 volts system is ok. Check for 12 volts between pin 3 and 4 on connector TM. Check for continuity between TM connector pin 1 and BUDS connector pin 1. Check for continuity between TM connector pin 2 and BUDS connector pin 2.
P1428	ECM	Tuned pipe temperature sensor open circuit	Damaged sensor or damaged sensor wire.	Replace the temperature sensor with the kit available from BRP.
P1429	ECM	Tuned pipe temperature sensor functional problem	Intermittent contact with the temperature sensor. Damaged sensor or damaged sensor wire.	Replace the temperature sensor with the kit available from BRP.
P1430	ECM	Thermocouple module not correctly set	Thermocouple module is connected but it is not set to be active with B.U.D.S.	Go to the setting tab with B.U.D.S. and check "With Thermocouple Module" under Vehicule configuration.
P1471	ECM	E-RAVE® position sensor functional problem	Damaged circuit wires or connector, damaged E-RAVE position sensor.	Check E-RAVE position sensor connector for 5 volts between pin 1 and 3. Check system circuit J1A-18.
P1472	ECM	E-RAVE® position sensor voltage too low	Damaged circuit wires or connector, damaged E-RAVE position sensor.	Check E-RAVE position sensor connector for 5 volts between pin 1 and 3. Check system circuit J1A-18.

## Subsection XX (DIAGNOSTIC AND FAULT CODES)

P1473	ECM	E-RAVE® position sensor voltage too high	Damaged circuit wires or connector, damaged E-RAVE position sensor.	Check E-RAVE position sensor connector for 5 volts between pin 1 and 3. Check system circuit J1A-18.
P1476	ECM	RAVE valve middle position not reached	Damaged bellows. Damaged or disconnected hoses. Damaged E-RAVE solenoid valve. Adjustment of the link between the two E-RAVE valves. Carbon deposit around E-RAVE parts.	Check for damaged bellows. Check for damaged or disconnected vacuum hoses. Check for damaged or disconnected pressure hoses. Check if the E-RAVE valves move freely. Clean and make the necessary adjustment if necessary.
P1477	ECM	RAVE valve close position not reached	Damaged bellows. Damaged or disconnected hoses. Damaged E-RAVE solenoid valve. Adjustment of the link between the two E-RAVE valves. Carbon deposit around E-RAVE parts.	Check for damaged bellows. Check for damaged or disconnected vacuum hoses. Check for damaged or disconnected pressure hoses. Check if the E-RAVE valves move freely. Clean and make the necessary adjustment if necessary.
P1478	ECM	RAVE valve open position not reached	Damaged bellows. Damaged or disconnected hoses. Damaged E-RAVE solenoid valve. Adjustment of the link between the two E-RAVE valves. Carbon deposit around E-RAVE parts.	Check for damaged bellows. Check for damaged or disconnected vacuum hoses. Check for damaged or disconnected pressure hoses. Check if the E-RAVE valves move freely. Clean and make the necessary adjustment if necessary.
P1532	ECM	High ECM temperature detected	Poor fuel flow in ECM. Damaged ECM.	Check fuel system for clogged filter, damaged regulator or damaged fuel pump.
P1533	ECM	Major ECM overheat occurred	Low fuel pressure, low fuel circulation in ECM.	Check fuel pump pressure, check fuel line for pinched hose.
P1549	ECM	Major exhaust muffler overheat occurred	Damaged sensor, low fuel pump pressure, air leak in exhaust system, poor fuel quality.	Check fuel pump pressure, check sensor and replace if necessary, check components in exhaust system.
P1562	ECM	Low voltage on system voltage circuit	Damaged circuit wires, connector, injector, ignition coil, oil pump, capacitor or ECM.	Check for inverted wires on magneto connector, loose connection on capacitor. Check for defective component as describe in Possible Causes.
P1563	ECM	High voltage on system voltage circuit	Damaged circuit wires, connector or ECM.	Check for inverted wires on magneto connector, loose connection on capacitor.
P1621	ECM	Overload on 12 V primary circuit	Damaged circuit wires or connector.	Check RED/ORANGE circuit for damaged or shorted wires. Check tail light, headlamp or diagnostic connector.

## Subsection XX (DIAGNOSTIC AND FAULT CODES)

P1622	ECM	Overload on 12 V secondary circuit	Damaged circuit wires or connector.	Check RED/YELLOW circuit for damaged or shorted wire. Check connections on visor outlet, check heated grips if equipped with standard gauge.
P1623	ECM	Overload on 12 V battery circuit	Damaged circuit wires, connector or battery.	Check RED/WHITE circuit for damaged or shorted wire. Check battery condition. A blown 30 amp fuse is a good indication of a problem with the wires or the battery.
P1656	ECM	D.E.S.S.® line shorted to ground	Damaged circuit wires or mixed up connections.	Check system circuits J1A-23 for continuity to terminal 1 of D.E.S.S. post connector, J1A-11 for continuity to terminal 3 of D.E.S.S. post connector and J1A-5 for continuity to terminal 2 of D.E.S.S. post connector. Check system circuit J1A-23 for continuity to circuit J1A-5 when D.E.S.S. key is installed on D.E.S.S. post. Check system circuit J1A-11 for continuity to the center contact of the D.E.S.S. post connector and circuit J1A-5 for continuity to the outer ring of the D.E.S.S. post. Check system circuits J1A-5, J1A-11 and J1A-23 for continuity to ground.
P1676	ECM	Battery relay open circuit or shorted to ground	Damaged or disconnected relay, circuit wires or terminals.	Check for disconnected relay, damaged circuit wires.
P1679	ECM	Accessory relay open circuit or shorted to ground	Damaged or disconnected relay, circuit wires or terminals.	Check for disconnected relay, damaged circuit wires.
P2299	ECM	Incompatibility between brake lever position and engine/vehicle speed	Brake lever was left in Park position. The pilot kept a constant pressure applied on the brake lever while running. Defective or stuck brake switch. Brake circuit is shorted to 12 volts.	Check if the brake switch operate properly. Check if brake switch is secured on the master cylinder. Check for 12 volts at ECM connector J1A_30 when brake is applied. Check for 0 volt at ECM connector J1A-30 when brake is not applied. Check for a faulty ground on the brake light.