

Steve Caruso Automotive Consultant

# Generic OBD2 DTC list for Powertrain Systems

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# SAE Diagnostic Trouble Codes for: POWERTRAIN SYSTEMS

## SAE P00XX Codes FUEL AND AIR METERING

P0001 Fuel Volume Regulator Control Circuit/Open  
P0002 Fuel Volume Regulator Control Circuit Range/Performance  
P0003 Fuel Volume Regulator Control Circuit Low  
P0004 Fuel Volume Regulator Control Circuit High  
P0005 Fuel Shutoff Valve "A" Control Circuit/Open  
P0006 Fuel Shutoff Valve "A" Control Circuit Low  
P0007 Fuel Shutoff Valve "A" Control Circuit High  
P0008 Engine Position System Performance Bank 1  
P0009 Engine Position System Performance Bank 2  
P000A "A" Camshaft Position Slow Response Bank 1  
P000B "B" Camshaft Position Slow Response Bank 1  
P000C "A" Camshaft Position Slow Response Bank 2  
P000D "B" Camshaft Position Slow Response Bank 2  
P000E Fuel Volume Regulator Control Exceeded Learning Limit  
P000F Fuel System Over Pressure Relief Valve Activated  
P0010 "A" Camshaft Position Actuator Circuit/Open Bank 1  
P0011 "A" Camshaft Position - Timing Over-Advanced or System Performance Bank 1  
P0012 "A" Camshaft Position - Timing Over-Retarded Bank 1  
P0013 "B" Camshaft Position - Actuator Circuit/Open Bank 1  
P0014 "B" Camshaft Position - Timing Over-Advanced or System Performance Bank 1  
P0015 "B" Camshaft Position - Timing Over-Retarded Bank 1  
P0016 Crankshaft Position - Camshaft Position Correlation Bank 1 Sensor A  
P0017 Crankshaft Position - Camshaft Position Correlation Bank 1 Sensor B  
P0018 Crankshaft Position - Camshaft Position Correlation Bank 2 Sensor A  
P0019 Crankshaft Position - Camshaft Position Correlation Bank 2 Sensor B  
P001A "A" Camshaft Profile Control Circuit/Open Bank 1  
P001B "A" Camshaft Profile Control Circuit Low Bank 1  
P001C "A" Camshaft Profile Control Circuit High Bank 1  
P001D "A" Camshaft Profile Control Circuit/Open Bank 2  
P001E "A" Camshaft Profile Control Circuit Low Bank 2  
P001F "A" Camshaft Profile Control Circuit High Bank 2  
P0020 "A" Camshaft Position Actuator Circuit/Open Bank 2  
P0021 "A" Camshaft Position - Timing Over-Advanced or System Performance Bank 2  
P0022 "A" Camshaft Position - Timing Over-Retarded Bank 2  
P0023 "B" Camshaft Position - Actuator Circuit/Open Bank 2  
P0024 "B" Camshaft Position - Timing Over-Advanced or System Performance Bank 2

P0025 "B" Camshaft Position - Timing Over-Retarded Bank 2  
P0026 Intake Valve Control Solenoid Circuit Range/Performance Bank 1  
P0027 Exhaust Valve Control Solenoid Circuit Range/Performance Bank 1  
P0028 Intake Valve Control Solenoid Circuit Range/Performance Bank 2  
P0029 Exhaust Valve Control Solenoid Circuit Range/Performance Bank 2  
P002A "B" Camshaft Profile Control Circuit/Open Bank 1  
P002B "B" Camshaft Profile Control Circuit Low Bank 1  
P002C "B" Camshaft Profile Control Circuit High Bank 1  
P002D "B" Camshaft Profile Control Circuit/Open Bank 2  
P002E "B" Camshaft Profile Control Circuit Low Bank 2  
P002F "B" Camshaft Profile Control Circuit High Bank 2  
P0030 HO2S Heater Control Circuit Bank 1 Sensor 1  
P0031 HO2S Heater Control Circuit Low Bank 1 Sensor 1  
P0032 HO2S Heater Control Circuit High Bank 1 Sensor 1  
P0033 Turbocharger/Supercharger Bypass Valve Control Circuit  
P0034 Turbocharger/Supercharger Bypass Valve Control Circuit Low  
P0035 Turbocharger/Supercharger Bypass Valve Control Circuit High  
P0036 HO2S Heater Control Circuit Bank 1 Sensor 2  
P0037 HO2S Heater Control Circuit Low Bank 1 Sensor 2  
P0038 HO2S Heater Control Circuit High Bank 1 Sensor 2  
P0039 Turbocharger/Supercharger Bypass Valve Control Circuit Range/Performance  
P003A Turbocharger/Supercharger Boost Control "A" Position Exceeded Learning Limit  
P003B Turbocharger/Supercharger Boost Control "B" Position Exceeded Learning Limit  
P003C "A" Camshaft Profile Control Performance/Stuck Off Bank 1  
P003D "A" Camshaft Profile Control Stuck On Bank 1  
P003E "A" Camshaft Profile Control Performance/Stuck Off Bank 2  
P003F "A" Camshaft Profile Control Stuck On Bank 2  
P0040 O2 Sensor Signals Swapped Bank 1 Sensor 1/Bank 2 Sensor 1  
P0041 O2 Sensor Signals Swapped Bank 1 Sensor 2/Bank 2 Sensor 2  
P0042 HO2S Heater Control Circuit Bank 1 Sensor 3  
P0043 HO2S Heater Control Circuit Low Bank 1 Sensor 3  
P0044 HO2S Heater Control Circuit High Bank 1 Sensor 3  
P0045 Turbocharger/Supercharger Boost Control "A" Circuit/Open  
P0046 Turbocharger/Supercharger Boost Control "A" Circuit Range/Performance  
P0047 Turbocharger/Supercharger Boost Control "A" Circuit Low  
P0048 Turbocharger/Supercharger Boost Control "A" Circuit High  
P0049 Turbocharger/Supercharger Turbine Overspeed  
P004A Turbocharger/Supercharger Boost Control "B" Circuit/Open  
P004B Turbocharger/Supercharger Boost Control "B" Circuit Range/Performance  
P004C Turbocharger/Supercharger Boost Control "B" Circuit Low  
P004D Turbocharger/Supercharger Boost Control "B" Circuit High  
P004E Turbocharger/Supercharger Boost Control "A" Circuit Intermittent/Erratic  
P004F Turbocharger/Supercharger Boost Control "B" Circuit Intermittent/Erratic  
P0050 HO2S Heater Control Circuit Bank 2 Sensor 1  
P0051 HO2S Heater Control Circuit Low Bank 2 Sensor 1  
P0052 HO2S Heater Control Circuit High Bank 2 Sensor 1  
P0053 HO2S Heater Resistance Bank 1 Sensor 1  
P0054 HO2S Heater Resistance Bank 1 Sensor 2  
P0055 HO2S Heater Resistance Bank 1 Sensor 3  
P0056 HO2S Heater Control Circuit Bank 2 Sensor 2  
P0057 HO2S Heater Control Circuit Low Bank 2 Sensor 2  
P0058 HO2S Heater Control Circuit High Bank 2 Sensor 2  
P0059 HO2S Heater Resistance Bank 2 Sensor 1  
P005A "B" Camshaft Profile Control Performance/Stuck Off Bank 1  
P005B "B" Camshaft Profile Control Stuck On Bank 1  
P005C "B" Camshaft Profile Control Performance/Stuck Off Bank 2

P005D "B" Camshaft Profile Control Stuck On Bank 2  
P005E Turbocharger/Supercharger Boost Control "B" Supply Voltage Circuit Low  
P005F Turbocharger/Supercharger Boost Control "B" Supply Voltage Circuit High  
P0060 HO2S Heater Resistance Bank 2 Sensor 2  
P0061 HO2S Heater Resistance Bank 2 Sensor 3  
P0062 HO2S Heater Control Circuit Bank 2 Sensor 3  
P0063 HO2S Heater Control Circuit Low Bank 2 Sensor 3  
P0064 HO2S Heater Control Circuit High Bank 2 Sensor 3  
P0065 Air Assisted Injector Control Range/Performance  
P0066 Air Assisted Injector Control Circuit or Circuit Low  
P0067 Air Assisted Injector Control Circuit High  
P0068 MAP/MAF - Throttle Position Correlation  
P0069 Manifold Absolute Pressure - Barometric Pressure Correlation  
P006A MAP - Mass or Volume Air Flow Correlation Bank 1  
P006B MAP - Exhaust Pressure Correlation  
P006C MAP - Turbocharger/Supercharger Inlet Pressure Correlation  
P006D Barometric Pressure - Turbocharger/Supercharger Inlet Pressure Correlation  
P006E Turbocharger/Supercharger Boost Control "A" Supply Voltage Circuit Low  
P006F Turbocharger/Supercharger Boost Control "A" Supply Voltage Circuit High  
P0070 Ambient Air Temperature Sensor Circuit  
P0071 Ambient Air Temperature Sensor Range/Performance  
P0072 Ambient Air Temperature Sensor Circuit Low  
P0073 Ambient Air Temperature Sensor Circuit High  
P0074 Ambient Air Temperature Sensor Circuit Intermittent  
P0075 Intake Valve Control Solenoid Circuit Bank 1  
P0076 Intake Valve Control Solenoid Circuit Low Bank 1  
P0077 Intake Valve Control Solenoid Circuit High Bank 1  
P0078 Exhaust Valve Control Solenoid Circuit Bank 1  
P0079 Exhaust Valve Control Solenoid Circuit Low Bank 1  
P007A Charge Air Cooler Temperature Sensor Circuit Bank 1  
P007B Charge Air Cooler Temperature Sensor Circuit Range/Performance Bank 1  
P007C Charge Air Cooler Temperature Sensor Circuit Low Bank 1  
P007D Charge Air Cooler Temperature Sensor Circuit High Bank 1  
P007E Charge Air Cooler Temperature Sensor Circuit Intermittent/Erratic Bank 1  
P007F Charge Air Cooler Temperature Sensor Bank1/Bank2 Correlation  
P0080 Exhaust Valve Control Solenoid Circuit High Bank 1  
P0081 Intake Valve Control Solenoid Circuit Bank 2  
P0082 Intake Valve Control Solenoid Circuit Low Bank 2  
P0083 Intake Valve Control Solenoid Circuit High Bank 2  
P0084 Exhaust Valve Control Solenoid Circuit Bank 2  
P0085 Exhaust Valve Control Solenoid Circuit Low Bank 2  
P0086 Exhaust Valve Control Solenoid Circuit High Bank 2  
P0087 Fuel Rail/System Pressure - Too Low  
P0088 Fuel Rail/System Pressure - Too High  
P0089 Fuel Pressure Regulator 1 Performance  
P008A Low Pressure Fuel System Pressure - Too Low  
P008B Low Pressure Fuel System Pressure - Too High  
P008C Fuel Cooler Pump Control Circuit/Open  
P008D Fuel Cooler Pump Control Circuit Low  
P008E Fuel Cooler Pump Control Circuit High  
P008F Engine Coolant Temperature/Fuel Temperature Correlation  
P0090 Fuel Pressure Regulator 1 Control Circuit/Open  
P0091 Fuel Pressure Regulator 1 Control Circuit Low  
P0092 Fuel Pressure Regulator 1 Control Circuit High  
P0093 Fuel System Leak Detected - Large Leak  
P0094 Fuel System Leak Detected - Small Leak

P0095 Intake Air Temperature Sensor 2 Circuit Bank 1  
P0096 Intake Air Temperature Sensor 2 Circuit Range/Performance Bank 1  
P0097 Intake Air Temperature Sensor 2 Circuit Low Bank 1  
P0098 Intake Air Temperature Sensor 2 Circuit High Bank 1  
P0099 Intake Air Temperature Sensor 2 Circuit Intermittent/Erratic Bank 1  
P009A Intake Air Temperature/Ambient Air Temperature Correlation  
P009B Fuel Pressure Relief Control Circuit/Open  
P009C Fuel Pressure Relief Control Circuit Low  
P009D Fuel Pressure Relief Control Circuit High  
P009E Fuel Pressure Relief Control Performance/Stuck Off  
P009F Fuel Pressure Relief Control Stuck On  
P00A0 Charge Air Cooler Temperature Sensor Circuit Bank 2  
P00A1 Charge Air Cooler Temperature Sensor Circuit Range/Performance Bank 2  
P00A2 Charge Air Cooler Temperature Sensor Circuit Low Bank 2  
P00A3 Charge Air Cooler Temperature Sensor Circuit High Bank 2  
P00A4 Charge Air Cooler Temperature Sensor Circuit Intermittent/Erratic Bank 2  
P00A5 Intake Air Temperature Sensor 2 Circuit Bank 2  
P00A6 Intake Air Temperature Sensor 2 Circuit Range/Performance Bank 2  
P00A7 Intake Air Temperature Sensor 2 Circuit Low Bank 2  
P00A8 Intake Air Temperature Sensor 2 Circuit High Bank 2  
P00A9 Intake Air Temperature Sensor 2 Circuit Intermittent/Erratic Bank 2  
P00AA Intake Air Temperature Sensor 1 Circuit Bank 2  
P00AB Intake Air Temperature Sensor 1 Circuit Range/Performance Bank 2  
P00AC Intake Air Temperature Sensor 1 Circuit Low Bank 2  
P00AD Intake Air Temperature Sensor 1 Circuit High Bank 2  
P00AE Intake Air Temperature Sensor 1 Circuit Intermittent Bank 2  
P00AF Turbocharger/Supercharger Boost Control "A" Module Performance  
P00B0 Turbocharger/Supercharger Boost Control "B" Module Performance  
P00B1 Radiator Coolant Temperature Sensor Circuit  
P00B2 Radiator Coolant Temperature Sensor Circuit Range/Performance  
P00B3 Radiator Coolant Temperature Sensor Circuit Low  
P00B4 Radiator Coolant Temperature Sensor Circuit High  
P00B5 Radiator Coolant Temperature Sensor Circuit Intermittent/Erratic  
P00B6 Radiator Coolant Temperature/Engine Coolant Temperature Correlation  
P00B7 Engine Coolant Flow Low/Performance  
P00B8 MAP - Mass or Volume Air Flow Correlation Bank 2  
P00B9 Low Pressure Fuel System Pressure - Too Low, Low Ambient Temperature  
P00BA Low Fuel Pressure - Forced Limited Power  
P00BB Fuel Injector Insufficient Flow - Forced Limited Power  
P00BC Mass or Volume Air Flow "A" Circuit Range/Performance – Air Flow Too Low  
P00BD Mass or Volume Air Flow "A" Circuit Range/Performance – Air Flow Too High  
P00BE Mass or Volume Air Flow "B" Circuit Range/Performance – Air Flow Too Low  
P00BF Mass or Volume Air Flow "B" Circuit Range/Performance – Air Flow Too High

# SAE P01XX Codes

## FUEL AND AIR METERING

P0100 Mass or Volume Air Flow "A" Circuit  
P0101 Mass or Volume Air Flow "A" Circuit Range/Performance  
P0102 Mass or Volume Air Flow "A" Circuit Low  
P0103 Mass or Volume Air Flow "A" Circuit High  
P0104 Mass or Volume Air Flow "A" Circuit Intermittent  
P0105 Manifold Absolute Pressure/Barometric Pressure Circuit  
P0106 Manifold Absolute Pressure/Barometric Pressure Circuit Range/Performance  
P0107 Manifold Absolute Pressure/Barometric Pressure Circuit Low  
P0108 Manifold Absolute Pressure/Barometric Pressure Circuit High  
P0109 Manifold Absolute Pressure/Barometric Pressure Circuit Intermittent  
P010A Mass or Volume Air Flow "B" Circuit  
P010B Mass or Volume Air Flow "B" Circuit Range/Performance  
P010C Mass or Volume Air Flow "B" Circuit Low  
P010D Mass or Volume Air Flow "B" Circuit High  
P010E Mass or Volume Air Flow "B" Circuit Intermittent/Erratic  
P010F Mass or Volume Air Flow Sensor A/B Correlation  
P0110 Intake Air Temperature Sensor 1 Circuit Bank 1  
P0111 Intake Air Temperature Sensor 1 Circuit Range/Performance Bank 1  
P0112 Intake Air Temperature Sensor 1 Circuit Low Bank 1  
P0113 Intake Air Temperature Sensor 1 Circuit High Bank 1  
P0114 Intake Air Temperature Sensor 1 Circuit Intermittent Bank 1  
P0115 Engine Coolant Temperature Sensor 1 Circuit  
P0116 Engine Coolant Temperature Sensor 1 Circuit Range/Performance  
P0117 Engine Coolant Temperature Sensor 1 Circuit Low  
P0118 Engine Coolant Temperature Sensor 1 Circuit High  
P0119 Engine Coolant Temperature Sensor 1 Circuit Intermittent  
P011A Engine Coolant Temperature Sensor 1/2 Correlation  
P011B Engine Coolant Temperature/Intake Air Temperature Correlation  
P011C Charge Air Temperature/Intake Air Temperature Correlation Bank 1  
P011D Charge Air Temperature/Intake Air Temperature Correlation Bank 2  
P0120 Throttle/Pedal Position Sensor/Switch "A" Circuit  
P0121 Throttle/Pedal Position Sensor/Switch "A" Circuit Range/Performance  
P0123 Throttle/Pedal Position Sensor/Switch "A" Circuit High  
P0124 Throttle/Pedal Position Sensor/Switch "A" Circuit Intermittent  
P0125 Insufficient Coolant Temperature for Closed Loop Fuel Control  
P0126 Insufficient Coolant Temperature for Stable Operation  
P0127 Intake Air Temperature Too High  
P0128 Coolant Thermostat (Coolant Temperature Below Thermostat Regulating Temperature)  
P0129 Barometric Pressure Too Low  
P012A Turbocharger/Supercharger Inlet Pressure Sensor Circuit Downstream of throttle valve  
P012B Turbocharger/Supercharger Inlet Pressure Sensor Circuit Range/Performance Downstream of throttle valve  
P012C Turbocharger/Supercharger Inlet Pressure Sensor Circuit Low Downstream of throttle valve  
P012D Turbocharger/Supercharger Inlet Pressure Sensor Circuit High Downstream of throttle valve

P012E Turbocharger/Supercharger Inlet Pressure Sensor Circuit Intermittent/Erratic Downstream  
throttle valve

P0130 O2 Sensor Circuit Bank 1 Sensor 1

P0131 O2 Sensor Circuit Low Voltage Bank 1 Sensor 1

P0132 O2 Sensor Circuit High Voltage Bank 1 Sensor 1

P0133 O2 Sensor Circuit Slow Response Bank 1 Sensor 1

P0134 O2 Sensor Circuit No Activity Detected Bank 1 Sensor 1

P0135 O2 Sensor Heater Circuit Bank 1 Sensor 1

P0136 O2 Sensor Circuit Bank 1 Sensor 2

P0137 O2 Sensor Circuit Low Voltage Bank 1 Sensor 2

P0138 O2 Sensor Circuit High Voltage Bank 1 Sensor 2

P0139 O2 Sensor Circuit Slow Response Bank 1 Sensor 2

P013A O2 Sensor Slow Response - Rich to Lean Bank 1 Sensor 2

P013B O2 Sensor Slow Response - Lean to Rich Bank 1 Sensor 2

P013C O2 Sensor Slow Response - Rich to Lean Bank 2 Sensor 2

P013D O2 Sensor Slow Response - Lean to Rich Bank 2 Sensor 2

P013E O2 Sensor Delayed Response - Rich to Lean Bank 1 Sensor 2

P013F O2 Sensor Delayed Response - Lean to Rich Bank 1 Sensor 2

P0140 O2 Sensor Circuit No Activity Detected Bank 1 Sensor 2

P0141 O2 Sensor Heater Circuit Bank 1 Sensor 2

P0142 O2 Sensor Circuit Bank 1 Sensor 3

P0143 O2 Sensor Circuit Low Voltage Bank 1 Sensor 3

P0144 O2 Sensor Circuit High Voltage Bank 1 Sensor 3

P0145 O2 Sensor Circuit Slow Response Bank 1 Sensor 3

P0146 O2 Sensor Circuit No Activity Detected Bank 1 Sensor 3

P0147 O2 Sensor Heater Circuit Bank 1 Sensor 3

P0148 Fuel Delivery Error

P0149 Fuel Timing Error

P014A O2 Sensor Delayed Response - Rich to Lean Bank 2 Sensor 2

P014B O2 Sensor Delayed Response - Lean to Rich Bank 2 Sensor 2

P014C O2 Sensor Slow Response - Rich to Lean Bank 1 Sensor 1

P014D O2 Sensor Slow Response - Lean to Rich Bank 1 Sensor 1

P014E O2 Sensor Slow Response - Rich to Lean Bank 2 Sensor 1

P014F O2 Sensor Slow Response - Lean to Rich Bank 2 Sensor 1

P0150 O2 Sensor Circuit Bank 2 Sensor 1

P0151 O2 Sensor Circuit Low Voltage Bank 2 Sensor 1

P0152 O2 Sensor Circuit High Voltage Bank 2 Sensor 1

P0153 O2 Sensor Circuit Slow Response Bank 2 Sensor 1

P0154 O2 Sensor Circuit No Activity Detected Bank 2 Sensor 1

P0155 O2 Sensor Heater Circuit Bank 2 Sensor 1

P0156 O2 Sensor Circuit Bank 2 Sensor 2

P0157 O2 Sensor Circuit Low Voltage Bank 2 Sensor 2

P0158 O2 Sensor Circuit High Voltage Bank 2 Sensor 2

P0159 O2 Sensor Circuit Slow Response Bank 2 Sensor 2

P015A O2 Sensor Delayed Response - Rich to Lean Bank 1 Sensor 1

P015B O2 Sensor Delayed Response - Lean to Rich Bank 1 Sensor 1

P015C O2 Sensor Delayed Response - Rich to Lean Bank 2 Sensor 1

P015D O2 Sensor Delayed Response - Lean to Rich Bank 2 Sensor 1

P0160 O2 Sensor Circuit No Activity Detected Bank 2 Sensor 2

P0161 O2 Sensor Heater Circuit Bank 2 Sensor 2

P0162 O2 Sensor Circuit Bank 2 Sensor 3

P0163 O2 Sensor Circuit Low Voltage Bank 2 Sensor 3

P0164 O2 Sensor Circuit High Voltage Bank 2 Sensor 3

P0165 O2 Sensor Circuit Slow Response Bank 2 Sensor 3

P0166 O2 Sensor Circuit No Activity Detected Bank 2 Sensor 3

P0167 O2 Sensor Heater Circuit Bank 2 Sensor 3

P0168 Fuel Temperature Too High  
P0169 Incorrect Fuel Composition  
P0170 Fuel Trim Bank 1  
P0171 System Too Lean Bank 1  
P0172 System Too Rich Bank 1  
P0173 Fuel Trim Bank 2  
P0174 System Too Lean Bank 2  
P0175 System Too Rich Bank 2  
P0176 Fuel Composition Sensor Circuit  
P0177 Fuel Composition Sensor Circuit Range/Performance  
P0178 Fuel Composition Sensor Circuit Low  
P0179 Fuel Composition Sensor Circuit High  
P0180 Fuel Temperature Sensor "A" Circuit  
P0181 Fuel Temperature Sensor "A" Circuit Range/Performance  
P0182 Fuel Temperature Sensor "A" Circuit Low  
P0183 Fuel Temperature Sensor "A" Circuit High  
P0184 Fuel Temperature Sensor "A" Circuit Intermittent  
P0185 Fuel Temperature Sensor "B" Circuit  
P0186 Fuel Temperature Sensor "B" Circuit Range/Performance  
P0187 Fuel Temperature Sensor "B" Circuit Low  
P0188 Fuel Temperature Sensor "B" Circuit High  
P0189 Fuel Temperature Sensor "B" Circuit Intermittent  
P018A Fuel Pressure Sensor "B" Circuit  
P018B Fuel Pressure Sensor "B" Circuit Range/Performance  
P018C Fuel Pressure Sensor "B" Circuit Low  
P018D Fuel Pressure Sensor "B" Circuit High  
P018E Fuel Pressure Sensor "B" Circuit Intermittent/Erratic  
P018F Fuel System Over Pressure Relief Valve Frequent Activation  
P0190 Fuel Rail Pressure Sensor "A" Circuit  
P0191 Fuel Rail Pressure Sensor "A" Circuit Range/Performance  
P0192 Fuel Rail Pressure Sensor "A" Circuit Low  
P0193 Fuel Rail Pressure Sensor "A" Circuit High  
P0194 Fuel Rail Pressure Sensor "A" Circuit Intermittent/Erratic  
P0195 Engine Oil Temperature Sensor Circuit  
P0196 Engine Oil Temperature Sensor Range/Performance  
P0197 Engine Oil Temperature Sensor Circuit Low  
P0198 Engine Oil Temperature Sensor Circuit High  
P0199 Engine Oil Temperature Sensor Circuit Intermittent/Erratic



# SAE P02XX Codes

## FUEL AND AIR METERING

P0200 Injector Circuit/Open  
P0201 Injector Circuit/Open - Cylinder 1  
P0202 Injector Circuit/Open - Cylinder 2  
P0203 Injector Circuit/Open - Cylinder 3  
P0204 Injector Circuit/Open - Cylinder 4  
P0205 Injector Circuit/Open - Cylinder 5  
P0206 Injector Circuit/Open - Cylinder 6  
P0207 Injector Circuit/Open - Cylinder 7  
P0208 Injector Circuit/Open - Cylinder 8  
P0209 Injector Circuit/Open - Cylinder 9  
P020A Cylinder 1 Injection Timing  
P020B Cylinder 2 Injection Timing  
P020C Cylinder 3 Injection Timing  
P020D Cylinder 4 Injection Timing  
P020E Cylinder 5 Injection Timing  
P020F Cylinder 6 Injection Timing  
P0210 Injector Circuit/Open - Cylinder 10  
P0211 Injector Circuit/Open - Cylinder 11  
P0212 Injector Circuit/Open - Cylinder 12  
P0213 Cold Start Injector 1  
P0214 Cold Start Injector 2  
P0215 Engine Shutoff Solenoid  
P0216 Injector/Injection Timing Control Circuit  
P0217 Engine Coolant Over Temperature Condition  
P0218 Transmission Fluid Over Temperature Condition  
P0219 Engine Overspeed Condition  
P021A Cylinder 7 Injection Timing  
P021B Cylinder 8 Injection Timing  
P021C Cylinder 9 Injection Timing  
P021D Cylinder 10 Injection Timing  
P021E Cylinder 11 Injection Timing  
P021F Cylinder 12 Injection Timing  
P0220 Throttle/Pedal Position Sensor/Switch "B" Circuit  
P0221 Throttle/Pedal Position Sensor/Switch "B" Circuit Range/Performance  
P0222 Throttle/Pedal Position Sensor/Switch "B" Circuit Low  
P0223 Throttle/Pedal Position Sensor/Switch "B" Circuit High  
P0224 Throttle/Pedal Position Sensor/Switch "B" Circuit Intermittent  
P0225 Throttle/Pedal Position Sensor/Switch "C" Circuit  
P0226 Throttle/Pedal Position Sensor/Switch "C" Circuit Range/Performance  
P0227 Throttle/Pedal Position Sensor/Switch "C" Circuit Low  
P0228 Throttle/Pedal Position Sensor/Switch "C" Circuit High  
P0229 Throttle/Pedal Position Sensor/Switch "C" Circuit Intermittent  
P022A Charge Air Cooler Bypass Control "A" Circuit /Open  
P022B Charge Air Cooler Bypass Control "A" Circuit Low  
P022C Charge Air Cooler Bypass Control "A" Circuit High  
P022D Charge Air Cooler Bypass Control "B" Circuit /Open  
P022E Charge Air Cooler Bypass Control "B" Circuit Low

P022F Charge Air Cooler Bypass Control "B" Circuit High  
P0230 Fuel Pump Primary Circuit  
P0231 Fuel Pump Secondary Circuit Low  
P0232 Fuel Pump Secondary Circuit High  
P0233 Fuel Pump Secondary Circuit Intermittent  
P0234 Turbocharger/Supercharger "A" Overboost Condition  
P0235 Turbocharger/Supercharger Boost Sensor "A" Circuit  
P0236 Turbocharger/Supercharger Boost Sensor "A" Circuit Range/Performance  
P0237 Turbocharger/Supercharger Boost Sensor "A" Circuit Low  
P0238 Turbocharger/Supercharger Boost Sensor "A" Circuit High  
P0239 Turbocharger/Supercharger Boost Sensor "B" Circuit  
P023A Charge Air Cooler Coolant Pump Control Circuit/Open  
P023B Charge Air Cooler Coolant Pump Control Circuit Low  
P023C Charge Air Cooler Coolant Pump Control Circuit High  
P023D Manifold Absolute Pressure - Turbocharger/Supercharger Boost Sensor "A" Correlation  
P023E Manifold Absolute Pressure - Turbocharger/Supercharger Boost Sensor "B" Correlation  
P023F Fuel Pump Secondary Circuit/Open  
P0240 Turbocharger/Supercharger Boost Sensor "B" Circuit Range/Performance  
P0241 Turbocharger/Supercharger Boost Sensor "B" Circuit Low  
P0242 Turbocharger/Supercharger Boost Sensor "B" Circuit High  
P0243 Turbocharger/Supercharger Wastegate Solenoid "A"  
P0244 Turbocharger/Supercharger Wastegate Solenoid "A" Range/Performance  
P0245 Turbocharger/Supercharger Wastegate Solenoid "A" Low  
P0246 Turbocharger/Supercharger Wastegate Solenoid "A" High  
P0247 Turbocharger/Supercharger Wastegate Solenoid "B"  
P0248 Turbocharger/Supercharger Wastegate Solenoid "B" Range/Performance  
P0249 Turbocharger/Supercharger Wastegate Solenoid "B" Low  
P024A Charge Air Cooler Bypass Control "A" Range/Performance  
P024B Charge Air Cooler Bypass Control "A" Stuck  
P024C Charge Air Cooler Bypass Position Sensor "A" Circuit  
P024D Charge Air Cooler Bypass Position Sensor "A" Circuit Range/Performance  
P024E Charge Air Cooler Bypass Position Sensor "A" Circuit Low  
P024F Charge Air Cooler Bypass Position Sensor "A" Circuit High  
P0250 Turbocharger/Supercharger Wastegate Solenoid "B" High  
P0251 Injection Pump Fuel Metering Control "A" (Cam/Rotor/Injector)  
P0252 Injection Pump Fuel Metering Control "A" Range/Performance (Cam/Rotor/Injector)  
P0253 Injection Pump Fuel Metering Control "A" Low (Cam/Rotor/Injector)  
P0254 Injection Pump Fuel Metering Control "A" High (Cam/Rotor/Injector)  
P0255 Injection Pump Fuel Metering Control "A" Intermittent (Cam/Rotor/Injector)  
P0256 Injection Pump Fuel Metering Control "B" (Cam/Rotor/Injector)  
P0257 Injection Pump Fuel Metering Control "B" Range/Performance (Cam/Rotor/Injector)  
P0258 Injection Pump Fuel Metering Control "B" Low (Cam/Rotor/Injector)  
P0259 Injection Pump Fuel Metering Control "B" High (Cam/Rotor/Injector)  
P025A Fuel Pump Module Control Circuit/Open  
P025B Fuel Pump Module Control Circuit Range/Performance  
P025C Fuel Pump Module Control Circuit Low  
P025D Fuel Pump Module Control Circuit High  
P0260 Injection Pump Fuel Metering Control "B" Intermittent (Cam/Rotor/Injector)  
P0261 Cylinder 1 Injector Circuit Low  
P0262 Cylinder 1 Injector Circuit High  
P0263 Cylinder 1 Contribution/Balance  
P0264 Cylinder 2 Injector Circuit Low  
P0265 Cylinder 2 Injector Circuit High  
P0266 Cylinder 2 Contribution/Balance  
P0267 Cylinder 3 Injector Circuit Low  
P0268 Cylinder 3 Injector Circuit High

P0269 Cylinder 3 Contribution/Balance  
P0270 Cylinder 4 Injector Circuit Low  
P0271 Cylinder 4 Injector Circuit High  
P0272 Cylinder 4 Contribution/Balance  
P0273 Cylinder 5 Injector Circuit Low  
P0274 Cylinder 5 Injector Circuit High  
P0275 Cylinder 5 Contribution/Balance  
P0276 Cylinder 6 Injector Circuit Low  
P0277 Cylinder 6 Injector Circuit High  
P0278 Cylinder 6 Contribution/Balance  
P0279 Cylinder 7 Injector Circuit Low  
P0280 Cylinder 7 Injector Circuit High  
P0281 Cylinder 7 Contribution/Balance  
P0282 Cylinder 8 Injector Circuit Low  
P0283 Cylinder 8 Injector Circuit High  
P0284 Cylinder 8 Contribution/Balance  
P0285 Cylinder 9 Injector Circuit Low  
P0286 Cylinder 9 Injector Circuit High  
P0287 Cylinder 9 Contribution/Balance  
P0288 Cylinder 10 Injector Circuit Low  
P0289 Cylinder 10 Injector Circuit High  
P0290 Cylinder 10 Contribution/Balance  
P0291 Cylinder 11 Injector Circuit Low  
P0292 Cylinder 11 Injector Circuit High  
P0293 Cylinder 11 Contribution/Balance  
P0294 Cylinder 12 Injector Circuit Low  
P0295 Cylinder 12 Injector Circuit High  
P0296 Cylinder 12 Contribution/Balance  
P0297 Vehicle Overspeed Condition  
P0298 Engine Oil Over Temperature  
P0299 Turbocharger/Supercharger "A" Underboost Condition  
P029A Cylinder 1 - Fuel Trim at Max Limit  
P029B Cylinder 1 - Fuel Trim at Min Limit  
P029C Cylinder 1 - Injector Restricted  
P029D Cylinder 1 - Injector Leaking  
P029E Cylinder 2 - Fuel Trim at Max Limit  
P029F Cylinder 2 - Fuel Trim at Min Limit  
P02A0 Cylinder 2 - Injector Restricted  
P02A1 Cylinder 2 - Injector Leaking  
P02A2 Cylinder 3 - Fuel Trim at Max Limit  
P02A3 Cylinder 3 - Fuel Trim at Min Limit  
P02A4 Cylinder 3 - Injector Restricted  
P02A5 Cylinder 3 - Injector Leaking  
P02A6 Cylinder 4 - Fuel Trim at Max Limit  
P02A7 Cylinder 4 - Fuel Trim at Min Limit  
P02A8 Cylinder 4 - Injector Restricted  
P02A9 Cylinder 4 - Injector Leaking  
P02AA Cylinder 5 - Fuel Trim at Max Limit  
P02AB Cylinder 5 - Fuel Trim at Min Limit  
P02AC Cylinder 5 - Injector Restricted  
P02AD Cylinder 5 - Injector Leaking  
P02AE Cylinder 6 - Fuel Trim at Max Limit  
P02AF Cylinder 6 - Fuel Trim at Min Limit  
P02B0 Cylinder 6 - Injector Restricted  
P02B1 Cylinder 6 - Injector Leaking  
P02B2 Cylinder 7 - Fuel Trim at Max Limit

P02B3 Cylinder 7 - Fuel Trim at Min Limit  
P02B4 Cylinder 7 - Injector Restricted  
P02B5 Cylinder 7 - Injector Leaking  
P02B6 Cylinder 8 - Fuel Trim at Max Limit  
P02B7 Cylinder 8 - Fuel Trim at Min Limit  
P02B8 Cylinder 8 - Injector Restricted  
P02B9 Cylinder 8 - Injector Leaking  
P02BA Cylinder 9 - Fuel Trim at Max Limit  
P02BB Cylinder 9 - Fuel Trim at Min Limit  
P02BC Cylinder 9 - Injector Restricted  
P02BD Cylinder 9 - Injector Leaking  
P02BE Cylinder 10 - Fuel Trim at Max Limit  
P02BF Cylinder 10 - Fuel Trim at Min Limit  
P02C0 Cylinder 10 - Injector Restricted  
P02C1 Cylinder 10 - Injector Leaking  
P02C2 Cylinder 11 - Fuel Trim at Max Limit  
P02C3 Cylinder 11 - Fuel Trim at Min Limit  
P02C4 Cylinder 11 - Injector Restricted  
P02C5 Cylinder 11 - Injector Leaking  
P02C6 Cylinder 12 - Fuel Trim at Max Limit  
P02C7 Cylinder 12 - Fuel Trim at Min Limit  
P02C8 Cylinder 12 - Injector Restricted  
P02C9 Cylinder 12 - Injector Leaking  
P02CA Turbocharger/Supercharger "B" Overboost Condition  
P02CB Turbocharger/Supercharger "B" Underboost Condition  
P02CC Cylinder 1 Fuel Injector Offset Learning At Min Limit  
P02CD Cylinder 1 Fuel Injector Offset Learning At Max Limit  
P02CE Cylinder 2 Fuel Injector Offset Learning At Min Limit  
P02CF Cylinder 2 Fuel Injector Offset Learning At Max Limit  
P02D0 Cylinder 3 Fuel Injector Offset Learning At Min Limit  
P02D1 Cylinder 3 Fuel Injector Offset Learning At Max Limit  
P02D2 Cylinder 4 Fuel Injector Offset Learning At Min Limit  
P02D3 Cylinder 4 Fuel Injector Offset Learning At Max Limit  
P02D4 Cylinder 5 Fuel Injector Offset Learning At Min Limit  
P02D5 Cylinder 5 Fuel Injector Offset Learning At Max Limit  
P02D6 Cylinder 6 Fuel Injector Offset Learning At Min Limit  
P02D7 Cylinder 6 Fuel Injector Offset Learning At Max Limit  
P02D8 Cylinder 7 Fuel Injector Offset Learning At Min Limit  
P02D9 Cylinder 7 Fuel Injector Offset Learning At Max Limit  
P02DA Cylinder 8 Fuel Injector Offset Learning At Min Limit  
P02DB Cylinder 8 Fuel Injector Offset Learning At Max Limit  
P02DC Cylinder 9 Fuel Injector Offset Learning At Min Limit  
P02DD Cylinder 9 Fuel Injector Offset Learning At Max Limit  
P02DE Cylinder 10 Fuel Injector Offset Learning At Min Limit  
P02DF Cylinder 10 Fuel Injector Offset Learning At Max Limit  
P02E0 Diesel Intake Air Flow Control Circuit/Open  
P02E1 Diesel Intake Air Flow Control Performance  
P02E2 Diesel Intake Air Flow Control Circuit Low  
P02E3 Diesel Intake Air Flow Control Circuit High  
P02E4 Diesel Intake Air Flow Control Stuck Open  
P02E5 Diesel Intake Air Flow Control Stuck Closed  
P02E6 Diesel Intake Air Flow Position Sensor Circuit  
P02E7 Diesel Intake Air Flow Position Sensor Circuit Range/Performance  
P02E8 Diesel Intake Air Flow Position Sensor Circuit Low  
P02E9 Diesel Intake Air Flow Position Sensor Circuit High  
P02EA Diesel Intake Air Flow Position Sensor Circuit Intermittent/Erratic

P02EB Diesel Intake Air Flow Control Motor Current Range/Performance  
P02EC Diesel Intake Air Flow Control System - High Air Flow Detected  
P02ED Diesel Intake Air Flow Control System - Low Air Flow Detected  
P02EE Cylinder 1 Injector Circuit Range/Performance  
P02EF Cylinder 2 Injector Circuit Range/Performance  
P02F0 Cylinder 3 Injector Circuit Range/Performance  
P02F1 Cylinder 4 Injector Circuit Range/Performance  
P02F2 Cylinder 5 Injector Circuit Range/Performance  
P02F3 Cylinder 6 Injector Circuit Range/Performance  
P02F4 Cylinder 7 Injector Circuit Range/Performance  
P02F5 Cylinder 8 Injector Circuit Range/Performance  
P02F6 Cylinder 9 Injector Circuit Range/Performance  
P02F7 Cylinder 10 Injector Circuit Range/Performance  
P02F8 Cylinder 11 Injector Circuit Range/Performance  
P02F9 Cylinder 12 Injector Circuit Range/Performance  
P02FA Diesel Intake Air Flow Position Sensor Minimum/Maximum Stop Performance

## SAE P03XX Codes

### IGNITION SYSTEM OR MISFIRE

P0300 Random/Multiple Cylinder Misfire Detected  
P0301 Cylinder 1 Misfire Detected  
P0302 Cylinder 2 Misfire Detected  
P0303 Cylinder 3 Misfire Detected  
P0304 Cylinder 4 Misfire Detected  
P0305 Cylinder 5 Misfire Detected  
P0306 Cylinder 6 Misfire Detected  
P0307 Cylinder 7 Misfire Detected  
P0308 Cylinder 8 Misfire Detected  
P0309 Cylinder 9 Misfire Detected  
P0310 Cylinder 10 Misfire Detected  
P0311 Cylinder 11 Misfire Detected  
P0312 Cylinder 12 Misfire Detected  
P0313 Misfire Detected With Low Fuel  
P0314 Single Cylinder Misfire (Cylinder not Specified)  
P0315 Crankshaft Position System Variation Not Learned  
P0316 Engine Misfire Detected on Startup (First 1000 Revolutions)  
P0317 Rough Road Hardware Not Present  
P0318 Rough Road Sensor "A" Signal Circuit  
P0319 Rough Road Sensor "B" Signal Circuit  
P0320 Ignition/Distributor Engine Speed Input Circuit  
P0321 Ignition/Distributor Engine Speed Input Circuit Range/Performance  
P0322 Ignition/Distributor Engine Speed Input Circuit No Signal  
P0323 Ignition/Distributor Engine Speed Input Circuit Intermittent  
P0324 Knock Control System Error  
P0325 Knock Sensor 1 Circuit Bank 1 or Single Sensor

P0326 Knock Sensor 1 Circuit Range/Performance Bank 1 or Single Sensor  
P0327 Knock Sensor 1 Circuit Low Bank 1 or Single Sensor  
P0328 Knock Sensor 1 Circuit High Bank 1 or Single Sensor  
P0329 Knock Sensor 1 Circuit Intermittent Bank 1 or Single Sensor  
P032A Knock Sensor 3 Circuit Bank 1  
P032B Knock Sensor 3 Circuit Range/Performance Bank 1  
P032C Knock Sensor 3 Circuit Low Bank 1  
P032D Knock Sensor 3 Circuit High Bank 1  
P032E Knock Sensor 3 Circuit Intermittent Bank 1  
P0330 Knock Sensor 2 Circuit Bank 2  
P0331 Knock Sensor 2 Circuit Range/Performance Bank 2  
P0332 Knock Sensor 2 Circuit Low Bank 2  
P0333 Knock Sensor 2 Circuit High Bank 2  
P0334 Knock Sensor 2 Circuit Intermittent Bank 2  
P0335 Crankshaft Position Sensor "A" Circuit  
P0336 Crankshaft Position Sensor "A" Circuit Range/Performance  
P0337 Crankshaft Position Sensor "A" Circuit Low  
P0338 Crankshaft Position Sensor "A" Circuit High  
P0339 Crankshaft Position Sensor "A" Circuit Intermittent  
P033A Knock Sensor 4 Circuit Bank 2  
P033B Knock Sensor 4 Circuit Range/Performance Bank 2  
P033C Knock Sensor 4 Circuit Low Bank 2  
P033D Knock Sensor 4 Circuit High Bank 2  
P033E Knock Sensor 4 Circuit Intermittent Bank 2  
P0340 Camshaft Position Sensor "A" Circuit Bank 1 or Single Sensor  
P0341 Camshaft Position Sensor "A" Circuit Range/Performance Bank 1 or Single Sensor  
P0342 Camshaft Position Sensor "A" Circuit Low Bank 1 or Single Sensor  
P0343 Camshaft Position Sensor "A" Circuit High Bank 1 or Single Sensor  
P0344 Camshaft Position Sensor "A" Circuit Intermittent Bank 1 or Single Sensor  
P0345 Camshaft Position Sensor "A" Circuit Bank 2  
P0346 Camshaft Position Sensor "A" Circuit Range/Performance Bank 2  
P0347 Camshaft Position Sensor "A" Circuit Low Bank 2  
P0348 Camshaft Position Sensor "A" Circuit High Bank 2  
P0349 Camshaft Position Sensor "A" Circuit Intermittent Bank 2  
P0350 Ignition Coil Primary/Secondary Circuit  
P0351 Ignition Coil "A" Primary/Secondary Circuit  
P0352 Ignition Coil "B" Primary/Secondary Circuit  
P0353 Ignition Coil "C" Primary/Secondary Circuit  
P0354 Ignition Coil "D" Primary/Secondary Circuit  
P0355 Ignition Coil "E" Primary/Secondary Circuit  
P0356 Ignition Coil "F" Primary/Secondary Circuit  
P0357 Ignition Coil "G" Primary/Secondary Circuit  
P0358 Ignition Coil "H" Primary/Secondary Circuit  
P0359 Ignition Coil "I" Primary/Secondary Circuit  
P0360 Ignition Coil "J" Primary/Secondary Circuit  
P0361 Ignition Coil "K" Primary/Secondary Circuit  
P0362 Ignition Coil "L" Primary/Secondary Circuit  
P0363 Misfire Detected - Fueling Disabled  
P0365 Camshaft Position Sensor "B" Circuit Bank 1  
P0366 Camshaft Position Sensor "B" Circuit Range/Performance Bank 1  
P0367 Camshaft Position Sensor "B" Circuit Low Bank 1  
P0368 Camshaft Position Sensor "B" Circuit High Bank 1  
P0369 Camshaft Position Sensor "B" Circuit Intermittent Bank 1  
P0370 Timing Reference High Resolution Signal "A"  
P0371 Timing Reference High Resolution Signal "A" Too Many Pulses  
P0372 Timing Reference High Resolution Signal "A" Too Few Pulses

P0373 Timing Reference High Resolution Signal "A" Intermittent/Erratic Pulses  
P0374 Timing Reference High Resolution Signal "A" No Pulses  
P0375 Timing Reference High Resolution Signal "B"  
P0376 Timing Reference High Resolution Signal "B" Too Many Pulses  
P0377 Timing Reference High Resolution Signal "B" Too Few Pulses  
P0378 Timing Reference High Resolution Signal "B" Intermittent/Erratic Pulses  
P0379 Timing Reference High Resolution Signal "B" No Pulses  
P037D Glow Plug Sense Circuit  
P037E Glow Plug Sense Circuit Low  
P037F Glow Plug Sense Circuit High  
P0380 Glow Plug/Heater Circuit "A"  
P0381 Glow Plug/Heater Indicator Circuit  
P0382 Glow Plug/Heater Circuit "B"  
P0383 Glow Plug Control Module Control Circuit Low  
P0384 Glow Plug Control Module Control Circuit High  
P0385 Crankshaft Position Sensor "B" Circuit  
P0386 Crankshaft Position Sensor "B" Circuit Range/Performance  
P0387 Crankshaft Position Sensor "B" Circuit Low  
P0388 Crankshaft Position Sensor "B" Circuit High  
P0389 Crankshaft Position Sensor "B" Circuit Intermittent  
P0390 Camshaft Position Sensor "B" Circuit Bank 2  
P0391 Camshaft Position Sensor "B" Circuit Range/Performance Bank 2  
P0392 Camshaft Position Sensor "B" Circuit Low Bank 2  
P0393 Camshaft Position Sensor "B" Circuit High Bank 2  
P0394 Camshaft Position Sensor "B" Circuit Intermittent Bank 2

## SAE P04XX Codes

### AUXILIARY EMISSION CONTROLS

P0400 Exhaust Gas Recirculation "A" Flow  
P0401 Exhaust Gas Recirculation "A" Flow Insufficient Detected  
P0402 Exhaust Gas Recirculation "A" Flow Excessive Detected  
P0403 Exhaust Gas Recirculation "A" Control Circuit  
P0404 Exhaust Gas Recirculation "A" Control Circuit Range/Performance  
P0405 Exhaust Gas Recirculation Sensor "A" Circuit Low  
P0406 Exhaust Gas Recirculation Sensor "A" Circuit High  
P0407 Exhaust Gas Recirculation Sensor "B" Circuit Low  
P0408 Exhaust Gas Recirculation Sensor "B" Circuit High  
P0409 Exhaust Gas Recirculation Sensor "A" Circuit  
P040A Exhaust Gas Recirculation Temperature Sensor "A" Circuit  
P040B Exhaust Gas Recirculation Temperature Sensor "A" Circuit Range/Performance  
P040C Exhaust Gas Recirculation Temperature Sensor "A" Circuit Low  
P040D Exhaust Gas Recirculation Temperature Sensor "A" Circuit High  
P040E Exhaust Gas Recirculation Temperature Sensor "A" Circuit Intermittent/Erratic  
P040F Exhaust Gas Recirculation Temperature Sensor "A"/"B" Correlation

P0410 Secondary Air Injection System  
P0411 Secondary Air Injection System Incorrect Flow Detected  
P0412 Secondary Air Injection System Switching Valve "A" Circuit  
P0413 Secondary Air Injection System Switching Valve "A" Circuit Open  
P0414 Secondary Air Injection System Switching Valve "A" Circuit Shorted  
P0415 Secondary Air Injection System Switching Valve "B" Circuit  
P0416 Secondary Air Injection System Switching Valve "B" Circuit Open  
P0417 Secondary Air Injection System Switching Valve "B" Circuit Shorted  
P0418 Secondary Air Injection System Control "A" Circuit  
P0419 Secondary Air Injection System Control "B" Circuit  
P041A Exhaust Gas Recirculation Temperature Sensor "B" Circuit  
P041B Exhaust Gas Recirculation Temperature Sensor "B" Circuit Range/Performance  
P041C Exhaust Gas Recirculation Temperature Sensor "B" Circuit Low  
P041D Exhaust Gas Recirculation Temperature Sensor "B" Circuit High  
P041E Exhaust Gas Recirculation Temperature Sensor "B" Circuit Intermittent/Erratic  
P041F Secondary Air Injection System Switching Valve "A" Circuit Low  
P0420 Catalyst System Efficiency Below Threshold Bank 1  
P0421 Warm Up Catalyst Efficiency Below Threshold Bank 1  
P0422 Main Catalyst Efficiency Below Threshold Bank 1  
P0423 Heated Catalyst Efficiency Below Threshold Bank 1  
P0424 Heated Catalyst Temperature Below Threshold Bank 1  
P0425 Catalyst Temperature Sensor Circuit Bank 1 Sensor 1  
P0426 Catalyst Temperature Sensor Circuit Range/Performance Bank 1 Sensor 1  
P0427 Catalyst Temperature Sensor Circuit Low Bank 1 Sensor 1  
P0428 Catalyst Temperature Sensor Circuit High Bank 1 Sensor 1  
P0429 Catalyst Heater Control Circuit Bank 1  
P042A Catalyst Temperature Sensor Circuit Bank 1 Sensor 2  
P042B Catalyst Temperature Sensor Circuit Range/Performance Bank 1 Sensor 2  
P042C Catalyst Temperature Sensor Circuit Low Bank 1 Sensor 2  
P042D Catalyst Temperature Sensor Circuit High Bank 1 Sensor 2  
P042E Exhaust Gas Recirculation "A" Control Stuck Open  
P042F Exhaust Gas Recirculation "A" Control Stuck Closed  
P0430 Catalyst System Efficiency Below Threshold Bank 2  
P0431 Warm Up Catalyst Efficiency Below Threshold Bank 2  
P0432 Main Catalyst Efficiency Below Threshold Bank 2  
P0433 Heated Catalyst Efficiency Below Threshold Bank 2  
P0434 Heated Catalyst Temperature Below Threshold Bank 2  
P0435 Catalyst Temperature Sensor Circuit Bank 2 Sensor 1  
P0436 Catalyst Temperature Sensor Circuit Range/Performance Bank 2 Sensor 1  
P0437 Catalyst Temperature Sensor Circuit Low Bank 2 Sensor 1  
P0438 Catalyst Temperature Sensor Circuit High Bank 2 Sensor 1  
P0439 Catalyst Heater Control Circuit Bank 2  
P043A Catalyst Temperature Sensor Circuit Bank 2 Sensor 2  
P043B Catalyst Temperature Sensor Circuit Range/Performance Bank 2 Sensor 2  
P043C Catalyst Temperature Sensor Circuit Low Bank 2 Sensor 2  
P043D Catalyst Temperature Sensor Circuit High Bank 2 Sensor 2  
P043E Evaporative Emission System Leak Detection Reference Orifice Low Flow  
P043F Evaporative Emission System Leak Detection Reference Orifice  
P0440 Evaporative Emission System  
P0441 Evaporative Emission System Incorrect Purge Flow  
P0442 Evaporative Emission System Leak Detected (small leak)  
P0443 Evaporative Emission System Purge Control Valve Circuit  
P0444 Evaporative Emission System Purge Control Valve Circuit Open  
P0445 Evaporative Emission System Purge Control Valve Circuit Shorted  
P0446 Evaporative Emission System Vent Control Circuit  
P0447 Evaporative Emission System Vent Control Circuit Open



P0448 Evaporative Emission System Vent Control Circuit Shorted  
P0449 Evaporative Emission System Vent Valve/Solenoid Circuit  
P044A Exhaust Gas Recirculation Sensor "C" Circuit  
P044B Exhaust Gas Recirculation Sensor "C" Circuit Range/Performance  
P044C Exhaust Gas Recirculation Sensor "C" Circuit Low  
P044D Exhaust Gas Recirculation Sensor "C" Circuit High  
P044E Exhaust Gas Recirculation Sensor "C" Circuit Intermittent/Erratic  
P044F Secondary Air Injection System Switching Valve "A" Circuit High  
P0450 Evaporative Emission System Pressure Sensor/Switch  
P0451 Evaporative Emission System Pressure Sensor/Switch Range/Performance  
P0452 Evaporative Emission System Pressure Sensor/Switch Low  
P0453 Evaporative Emission System Pressure Sensor/Switch High  
P0454 Evaporative Emission System Pressure Sensor/Switch Intermittent  
P0455 Evaporative Emission System Leak Detected (large leak)  
P0456 Evaporative Emission System Leak Detected (very small leak)  
P0457 Evaporative Emission System Leak Detected (fuel cap loose/off)  
P0458 Evaporative Emission System Purge Control Valve Circuit Low  
P0459 Evaporative Emission System Purge Control Valve Circuit High  
P045A Exhaust Gas Recirculation "B" Control Circuit  
P045B Exhaust Gas Recirculation "B" Control Circuit Range/Performance  
P045C Exhaust Gas Recirculation "B" Control Circuit Low  
P045D Exhaust Gas Recirculation "B" Control Circuit High  
P045E Exhaust Gas Recirculation "B" Control Stuck Open  
P045F Exhaust Gas Recirculation "B" Control Stuck Closed  
P0460 Fuel Level Sensor "A" Circuit  
P0461 Fuel Level Sensor "A" Circuit Range/Performance  
P0462 Fuel Level Sensor "A" Circuit Low  
P0463 Fuel Level Sensor "A" Circuit High  
P0464 Fuel Level Sensor "A" Circuit Intermittent  
P0465 EVAP Purge Flow Sensor Circuit  
P0466 EVAP Purge Flow Sensor Circuit Range/Performance  
P0467 EVAP Purge Flow Sensor Circuit Low  
P0468 EVAP Purge Flow Sensor Circuit High  
P0469 EVAP Purge Flow Sensor Circuit Intermittent  
P046A Catalyst Temperature Sensor 1/2 Correlation Bank 1  
P046B Catalyst Temperature Sensor 1/2 Correlation Bank 2  
P046C Exhaust Gas Recirculation Sensor "A" Circuit Range/Performance  
P046D Exhaust Gas Recirculation Sensor "A" Circuit Intermittent/Erratic  
P046E Exhaust Gas Recirculation Sensor "B" Circuit Range/Performance  
P046F Exhaust Gas Recirculation Sensor "B" Circuit Intermittent/Erratic  
P0470 Exhaust Pressure Sensor "A" Circuit  
P0471 Exhaust Pressure Sensor "A" Circuit Range/Performance  
P0472 Exhaust Pressure Sensor "A" Circuit Low  
P0473 Exhaust Pressure Sensor "A" Circuit High  
P0474 Exhaust Pressure Sensor "A" Circuit Intermittent/Erratic  
P0475 Exhaust Pressure Control Valve "A"  
P0476 Exhaust Pressure Control Valve "A" Range/Performance  
P0477 Exhaust Pressure Control Valve "A" Low  
P0478 Exhaust Pressure Control Valve "A" High  
P0479 Exhaust Pressure Control Valve "A" Intermittent  
P047A Exhaust Pressure Sensor "B" Circuit  
P047B Exhaust Pressure Sensor "B" Circuit Range/Performance  
P047C Exhaust Pressure Sensor "B" Circuit Low  
P047D Exhaust Pressure Sensor "B" Circuit High  
P047E Exhaust Pressure Sensor "B" Circuit Intermittent/Erratic  
P047F Exhaust Pressure Control Valve "A" Stuck Open  
P0480 Fan 1 Control Circuit

P0481 Fan 2 Control Circuit  
P0482 Fan 3 Control Circuit  
P0483 Fan Rationality Check  
P0492 Secondary Air Injection System Insufficient Flow Bank 2  
P0493 Fan Overspeed  
P0494 Fan Speed Low  
P0495 Fan Speed High  
P0496 Evaporative Emission System High Purge Flow  
P0497 Evaporative Emission System Low Purge Flow  
P0498 Evaporative Emission System Vent Valve Control Circuit Low  
P0499 Evaporative Emission System Vent Valve Control Circuit High  
P049A Exhaust Gas Recirculation "B" Flow  
P049B Exhaust Gas Recirculation "B" Flow Insufficient Detected  
P049C Exhaust Gas Recirculation "B" Flow Excessive Detected  
P049D Exhaust Gas Recirculation "A" Control Position Exceeded Learning Limit  
P049E Exhaust Gas Recirculation "B" Control Position Exceeded Learning Limit  
P049F Exhaust Pressure Control Valve "B"  
P04A0 Exhaust Pressure Control Valve "B" Range/Performance  
P04A1 Exhaust Pressure Control Valve "B" Low  
P04A2 Exhaust Pressure Control Valve "B" High  
P04A3 Exhaust Pressure Control Valve " B" Intermittent  
P04A4 Exhaust Pressure Control Valve "B" Stuck Open  
P04A5 Exhaust Pressure Control Valve "B" Stuck Closed  
P04A6 Exhaust Pressure Control Valve "B" Position Sensor/Switch Circuit  
P04A7 Exhaust Pressure Control Valve "B" Position Sensor/Switch Circuit Range/Performance  
P04A8 Exhaust Pressure Control Valve "B" Position Sensor/Switch Circuit Low  
P04A9 Exhaust Pressure Control Valve "B" Position Sensor/Switch Circuit High  
P04AA Exhaust Pressure Control Valve "B" Position Sensor/Switch Circuit Intermittent/Erratic  
P0484 Fan Circuit Over Current  
P0485 Fan Power/Ground Circuit  
P0486 Exhaust Gas Recirculation Sensor "B" Circuit  
P0487 Exhaust Gas Recirculation Throttle Control Circuit "A" /Open  
P0488 Exhaust Gas Recirculation Throttle Control Circuit "A" Range/Performance  
P0489 Exhaust Gas Recirculation "A" Control Circuit Low  
P048A Exhaust Pressure Control Valve "A" Stuck Closed  
P048B Exhaust Pressure Control Valve Position Sensor/Switch Circuit  
P048C Exhaust Pressure Control Valve Position Sensor/Switch Circuit Range/Performance  
P048D Exhaust Pressure Control Valve Position Sensor/Switch Circuit Low  
P048E Exhaust Pressure Control Valve Position Sensor/Switch Circuit High  
P048F Exhaust Pressure Control Valve Position Sensor/Switch Circuit Intermittent/Erratic  
P0490 Exhaust Gas Recirculation "A" Control Circuit High  
P0491 Secondary Air Injection System Insufficient Flow Bank 1

# SAE P05XX Codes

## VEHICLE SPEED, IDLE CONTROL, AND AUXILIARY INPUTS

P0500 Vehicle Speed Sensor "A"  
P0501 Vehicle Speed Sensor "A" Range/Performance  
P0502 Vehicle Speed Sensor "A" Circuit Low  
P0503 Vehicle Speed Sensor "A" Intermittent/Erratic/High  
P0504 Brake Switch "A"/"B" Correlation  
P0505 Idle Air Control System  
P0506 Idle Air Control System RPM Lower Than Expected  
P0507 Idle Air Control System RPM Higher Than Expected  
P0508 Idle Air Control System Circuit Low  
P0509 Idle Air Control System Circuit High  
P050A Cold Start Idle Air Control System Performance  
P050B Cold Start Ignition Timing Performance  
P050C Cold Start Engine Coolant Temperature Performance  
P050D Cold Start Rough Idle  
P050E Cold Start Engine Exhaust Temperature Too Low  
P050F Brake Assist Vacuum Too Low  
P0510 Closed Throttle Position Switch  
P0511 Idle Air Control Circuit  
P0512 Starter Request Circuit  
P0513 Incorrect Immobilizer Key  
P0514 Battery Temperature Sensor Circuit Range/Performance  
P0515 Battery Temperature Sensor Circuit  
P0516 Battery Temperature Sensor Circuit Low  
P0517 Battery Temperature Sensor Circuit High  
P0518 Idle Air Control Circuit Intermittent  
P0519 Idle Air Control System Performance  
P051A Crankcase Pressure Sensor Circuit  
P051B Crankcase Pressure Sensor Circuit Range/Performance  
P051C Crankcase Pressure Sensor Circuit Low  
P051D Crankcase Pressure Sensor Circuit High  
P051E Crankcase Pressure Sensor Circuit Intermittent/Erratic  
P051F Positive Crankcase Ventilation Filter Restriction  
P0520 Engine Oil Pressure Sensor/Switch Circuit  
P0521 Engine Oil Pressure Sensor/Switch Range/Performance  
P0522 Engine Oil Pressure Sensor/Switch Low  
P0523 Engine Oil Pressure Sensor/Switch High  
P0524 Engine Oil Pressure Too Low  
P0525 Cruise Control Servo Control Circuit Range/Performance  
P0526 Fan Speed Sensor Circuit  
P0527 Fan Speed Sensor Circuit Range/Performance  
P0528 Fan Speed Sensor Circuit No Signal  
P0529 Fan Speed Sensor Circuit Intermittent  
P052A Cold Start "A" Camshaft Position Timing Over-Advanced Bank 1  
P052B Cold Start "A" Camshaft Position Timing Over-Retarded Bank 1  
P052C Cold Start "A" Camshaft Position Timing Over-Advanced Bank 2

P052D Cold Start "A" Camshaft Position Timing Over-Retarded Bank 2  
P052E Positive Crankcase Ventilation Regulator Valve Performance  
P0530 A/C Refrigerant Pressure Sensor "A" Circuit  
P0531 A/C Refrigerant Pressure Sensor "A" Circuit Range/Performance  
P0532 A/C Refrigerant Pressure Sensor "A" Circuit Low  
P0533 A/C Refrigerant Pressure Sensor "A" Circuit High  
P0534 A/C Refrigerant Charge Loss  
P0535 A/C Evaporator Temperature Sensor Circuit  
P0536 A/C Evaporator Temperature Sensor Circuit Range/Performance  
P0537 A/C Evaporator Temperature Sensor Circuit Low  
P0538 A/C Evaporator Temperature Sensor Circuit High  
P0539 A/C Evaporator Temperature Sensor Circuit Intermittent  
P053A Positive Crankcase Ventilation Heater Control Circuit /Open  
P053B Positive Crankcase Ventilation Heater Control Circuit Low  
P053C Positive Crankcase Ventilation Heater Control Circuit High  
P0540 Intake Air Heater "A" Circuit  
P0541 Intake Air Heater "A" Circuit Low  
P0542 Intake Air Heater "A" Circuit High  
P0543 Intake Air Heater "A" Circuit Open  
P0544 Exhaust Gas Temperature Sensor Circuit Bank 1 Sensor 1  
P0545 Exhaust Gas Temperature Sensor Circuit Low Bank 1 Sensor 1  
P0546 Exhaust Gas Temperature Sensor Circuit High Bank 1 Sensor 1  
P0547 Exhaust Gas Temperature Sensor Circuit Bank 2 Sensor 1  
P0548 Exhaust Gas Temperature Sensor Circuit Low Bank 2 Sensor 1  
P0549 Exhaust Gas Temperature Sensor Circuit High Bank 2 Sensor 1  
P054A Cold Start "B" Camshaft Position Timing Over-Advanced Bank 1  
P054B Cold Start "B" Camshaft Position Timing Over-Retarded Bank 1  
P054C Cold Start "B" Camshaft Position Timing Over-Advanced Bank 2  
P054D Cold Start "B" Camshaft Position Timing Over-Retarded Bank 2  
P0550 Power Steering Pressure Sensor/Switch Circuit  
P0551 Power Steering Pressure Sensor/Switch Circuit Range/Performance  
P0552 Power Steering Pressure Sensor/Switch Circuit Low  
P0553 Power Steering Pressure Sensor/Switch Circuit High  
P0554 Power Steering Pressure Sensor/Switch Circuit Intermittent  
P0555 Brake Booster Pressure Sensor Circuit  
P0556 Brake Booster Pressure Sensor Circuit Range/Performance  
P0557 Brake Booster Pressure Sensor Circuit Low  
P0558 Brake Booster Pressure Sensor Circuit High  
P0559 Brake Booster Pressure Sensor Circuit Intermittent  
P0560 System Voltage  
P0561 System Voltage Unstable  
P0562 System Voltage Low  
P0563 System Voltage High  
P0564 Cruise Control Multi-Function Input "A" Circuit  
P0565 Cruise Control "On" Signal  
P0566 Cruise Control "Off" Signal  
P0567 Cruise Control "Resume" Signal  
P0568 Cruise Control "Set" Signal  
P0569 Cruise Control "Coast" Signal  
P056A Cruise Control "Increase Distance" Signal  
P056B Cruise Control "Decrease Distance" Signal  
P0570 Cruise Control "Accelerate" Signal  
P0571 Brake Switch "A" Circuit  
P0572 Brake Switch "A" Circuit Low  
P0573 Brake Switch "A" Circuit High  
P0574 Cruise Control System - Vehicle Speed Too High

P0575 Cruise Control Input Circuit  
P0576 Cruise Control Input Circuit Low  
P0577 Cruise Control Input Circuit High  
P0578 Cruise Control Multi-Function Input "A" Circuit Stuck  
P0579 Cruise Control Multi-Function Input "A" Circuit Range/Performance  
P0580 Cruise Control Multi-Function Input "A" Circuit Low  
P0581 Cruise Control Multi-Function Input "A" Circuit High  
P0582 Cruise Control Vacuum Control Circuit/Open  
P0583 Cruise Control Vacuum Control Circuit Low  
P0584 Cruise Control Vacuum Control Circuit High  
P0585 Cruise Control Multi-Function Input "A"/"B" Correlation  
P0586 Cruise Control Vent Control Circuit/Open  
P0587 Cruise Control Vent Control Circuit Low  
P0588 Cruise Control Vent Control Circuit High  
P0589 Cruise Control Multi-Function Input "B" Circuit  
P0590 Cruise Control Multi-Function Input "B" Circuit Stuck  
P0591 Cruise Control Multi-Function Input "B" Circuit Range/Performance  
P0592 Cruise Control Multi-Function Input "B" Circuit Low  
P0593 Cruise Control Multi-Function Input "B" Circuit High  
P0594 Cruise Control Servo Control Circuit/Open  
P0595 Cruise Control Servo Control Circuit Low  
P0596 Cruise Control Servo Control Circuit High  
P0597 Thermostat Heater Control Circuit/Open  
P0598 Thermostat Heater Control Circuit Low  
P0599 Thermostat Heater Control Circuit High

## SAE P06XX Codes

### COMPUTER AND AUXILIARY OUTPUTS

P0600 Serial Communication Link  
P0601 Internal Control Module Memory Check Sum Error  
P0602 Control Module Programming Error  
P0603 Internal Control Module Keep Alive Memory (KAM) Error  
P0604 Internal Control Module Random Access Memory (RAM) Error  
P0605 Internal Control Module Read Only Memory (ROM) Error  
P0606 Control Module Processor  
P0607 Control Module Performance  
P0608 Control Module VSS Output "A"  
P0609 Control Module VSS Output "B"  
P060A Internal Control Module Monitoring Processor Performance  
P060B Internal Control Module A/D Processing Performance

P060C Internal Control Module Main Processor Performance  
P060D Internal Control Module Accelerator Pedal Position Performance  
P060E Internal Control Module Throttle Position Performance  
P060F Internal Control Module Coolant Temperature Performance  
P0610 Control Module Vehicle Options Error  
P0611 Fuel Injector Control Module Performance  
P0612 Fuel Injector Control Module Relay Control  
P0613 TCM Processor  
P0614 ECM/TCM Incompatible  
P0615 Starter Relay Circuit  
P0616 Starter Relay Circuit Low  
P0617 Starter Relay Circuit High  
P0618 Alternative Fuel Control Module KAM Error  
P0619 Alternative Fuel Control Module RAM/ROM Error  
P061A Internal Control Module Torque Performance  
P061B Internal Control Module Torque Calculation Performance  
P061C Internal Control Module Engine RPM Performance  
P061D Internal Control Module Engine Air Mass Performance  
P061E Internal Control Module Brake Signal Performance  
P061F Internal Control Module Throttle Actuator Controller Performance  
P0620 Generator Control Circuit  
P0621 Generator Lamp/L Terminal Circuit  
P0622 Generator Field/F Terminal Circuit  
P0623 Generator Lamp Control Circuit  
P0624 Fuel Cap Lamp Control Circuit  
P0625 Generator Field/F Terminal Circuit Low  
P0626 Generator Field/F Terminal Circuit High  
P0627 Fuel Pump "A" Control Circuit/Open  
P0628 Fuel Pump "A" Control Circuit Low  
P0629 Fuel Pump "A" Control Circuit High  
P062A Fuel Pump "A" Control Circuit Range/Performance  
P062B Internal Control Module Fuel Injector Control Performance  
P062C Internal Control Module Vehicle Speed Performance  
P062D Fuel Injector Driver Circuit Performance Bank 1  
P062E Fuel Injector Driver Circuit Performance Bank 2  
P062F Internal Control Module EEPROM Error  
P0630 VIN Not Programmed or Incompatible - ECM/PCM  
P0631 VIN Not Programmed or Incompatible – TCM  
P0632 Odometer Not Programmed - ECM/PCM  
P0633 Immobilizer Key Not Programmed - ECM/PCM  
P0634 PCM/ECM/TCM Internal Temperature "A" Too High  
P0635 Power Steering Control Circuit  
P0636 Power Steering Control Circuit Low  
P0637 Power Steering Control Circuit High  
P0638 Throttle Actuator Control Range/Performance Bank 1  
P0639 Throttle Actuator Control Range/Performance Bank 2  
P063A Generator Voltage Sense Circuit  
P063B Generator Voltage Sense Circuit Range/Performance  
P063C Generator Voltage Sense Circuit Low  
P063D Generator Voltage Sense Circuit High  
P063E Auto Configuration Throttle Input Not Present  
P063F Auto Configuration Engine Coolant Temperature Input Not Present  
P0640 Intake Air Heater Control Circuit  
P0641 Sensor Reference Voltage "A" Circuit/Open  
P0642 Sensor Reference Voltage "A" Circuit Low  
P0643 Sensor Reference Voltage "A" Circuit High

P0644 Driver Display Serial Communication Circuit  
P0645 A/C Clutch Relay Control Circuit  
P0646 A/C Clutch Relay Control Circuit Low  
P0647 A/C Clutch Relay Control Circuit High  
P0648 Immobilizer Lamp Control Circuit  
P0649 Speed Control Lamp Control Circuit  
P064A Fuel Pump Control Module  
P064B PTO Control Module  
P064C Glow Plug Control Module  
P064D Internal Control Module O2 Sensor Processor Performance Bank 1  
P064E Internal Control Module O2 Sensor Processor Performance Bank 2  
P064F Unauthorized Software/Calibration Detected  
P0650 Malfunction Indicator Lamp (MIL) Control Circuit  
P0651 Sensor Reference Voltage "B" Circuit/Open  
P0652 Sensor Reference Voltage "B" Circuit Low  
P0653 Sensor Reference Voltage "B" Circuit High  
P0654 Engine RPM Output Circuit  
P0655 Engine Hot Lamp Output Control Circuit  
P0656 Fuel Level Output Circuit  
P0657 Actuator Supply Voltage "A" Circuit/Open  
P0658 Actuator Supply Voltage "A" Circuit Low  
P0659 Actuator Supply Voltage "A" Circuit High  
P065A Generator System Performance  
P065B Generator Control Circuit Range/Performance  
P065C Generator Mechanical Performance  
P065D Reductant System Malfunction Lamp Control Circuit  
P065E Intake Manifold Tuning Valve Performance Bank 1  
P065F Intake Manifold Tuning Valve Performance Bank 2  
P0660 Intake Manifold Tuning Valve Control Circuit/Open Bank 1  
P0661 Intake Manifold Tuning Valve Control Circuit Low Bank 1  
P0662 Intake Manifold Tuning Valve Control Circuit High Bank 1  
P0663 Intake Manifold Tuning Valve Control Circuit/Open Bank 2  
P0664 Intake Manifold Tuning Valve Control Circuit Low Bank 2  
P0665 Intake Manifold Tuning Valve Control Circuit High Bank 2  
P0666 PCM/ECM/TCM Internal Temperature Sensor "A" Circuit  
P0667 PCM/ECM/TCM Internal Temperature Sensor "A" Range/Performance  
P0668 PCM/ECM/TCM Internal Temperature Sensor "A" Circuit Low  
P0669 PCM/ECM/TCM Internal Temperature Sensor "A" Circuit High  
P066A Cylinder 1 Glow Plug Control Circuit Low  
P066B Cylinder 1 Glow Plug Control Circuit High  
P066C Cylinder 2 Glow Plug Control Circuit Low  
P066D Cylinder 2 Glow Plug Control Circuit High  
P066E Cylinder 3 Glow Plug Control Circuit Low  
P066F Cylinder 3 Glow Plug Control Circuit High  
P0670 Glow Plug Control Module Control Circuit/Open  
P0671 Cylinder 1 Glow Plug Circuit/Open  
P0672 Cylinder 2 Glow Plug Circuit/Open  
P0673 Cylinder 3 Glow Plug Circuit/Open  
P0674 Cylinder 4 Glow Plug Circuit/Open  
P0675 Cylinder 5 Glow Plug Circuit/Open  
P0676 Cylinder 6 Glow Plug Circuit/Open  
P0677 Cylinder 7 Glow Plug Circuit/Open  
P0678 Cylinder 8 Glow Plug Circuit/Open  
P0679 Cylinder 9 Glow Plug Circuit/Open  
P067A Cylinder 4 Glow Plug Control Circuit Low  
P067B Cylinder 4 Glow Plug Control Circuit High

P067C Cylinder 5 Glow Plug Control Circuit Low  
P067D Cylinder 5 Glow Plug Control Circuit High  
P067E Cylinder 6 Glow Plug Control Circuit Low  
P067F Cylinder 6 Glow Plug Control Circuit High  
P0680 Cylinder 10 Glow Plug Circuit/Open  
P0681 Cylinder 11 Glow Plug Circuit/Open  
P0682 Cylinder 12 Glow Plug Circuit/Open  
P0683 Glow Plug Control Module to PCM Communication Circuit  
P0684 Glow Plug Control Module to PCM Communication Circuit Range/Performance  
P0685 ECM/PCM Power Relay Control Circuit/Open  
P0686 ECM/PCM Power Relay Control Circuit Low  
P0687 ECM/PCM Power Relay Control Circuit High  
P0688 ECM/PCM Power Relay Sense Circuit/Open  
P0689 ECM/PCM Power Relay Sense Circuit Low  
P068A ECM/PCM Power Relay De-Energized Performance - Too Early  
P068B ECM/PCM Power Relay De-Energized Performance - Too Late  
P068C Cylinder 7 Glow Plug Control Circuit Low  
P068D Cylinder 7 Glow Plug Control Circuit High  
P068E Cylinder 8 Glow Plug Control Circuit Low  
P068F Cylinder 8 Glow Plug Control Circuit High  
P0690 ECM/PCM Power Relay Sense Circuit High  
P0691 Fan 1 Control Circuit Low  
P0692 Fan 1 Control Circuit High  
P0693 Fan 2 Control Circuit Low  
P0694 Fan 2 Control Circuit High  
P0695 Fan 3 Control Circuit Low  
P0696 Fan 3 Control Circuit High  
P0697 Sensor Reference Voltage "C" Circuit/Open  
P0698 Sensor Reference Voltage "C" Circuit Low  
P0699 Sensor Reference Voltage "C" Circuit High  
P069A Cylinder 9 Glow Plug Control Circuit Low  
P069B Cylinder 9 Glow Plug Control Circuit High  
P069C Cylinder 10 Glow Plug Control Circuit Low  
P069D Cylinder 10 Glow Plug Control Circuit High  
P069E Fuel Pump Control Module Requested MIL Illumination  
P069F Throttle Actuator Control Lamp Control Circuit  
P06A0 Variable A/C Compressor Control Circuit  
P06A1 Variable A/C Compressor Control Circuit Low  
P06A2 Variable A/C Compressor Control Circuit High  
P06A3 Sensor Reference Voltage "D" Circuit/Open  
P06A4 Sensor Reference Voltage "D" Circuit Low  
P06A5 Sensor Reference Voltage "D" Circuit High  
P06A6 Sensor Reference Voltage "A" Circuit Range/Performance  
P06A7 Sensor Reference Voltage "B" Circuit Range/Performance  
P06A8 Sensor Reference Voltage "C" Circuit Range/Performance  
P06A9 Sensor Reference Voltage "D" Circuit Range/Performance  
P06AA PCM/ECM/TCM Internal Temperature "B" Too High  
P06AB PCM/ECM/TCM Internal Temperature Sensor "B" Circuit  
P06AC PCM/ECM/TCM Internal Temperature Sensor "B" Range/Performance  
P06AD PCM/ECM/TCM Internal Temperature Sensor "B" Circuit Low  
P06AE PCM/ECM/TCM Internal Temperature Sensor "B" Circuit High  
P06AF Torque Management System - Forced Engine Shutdown  
P06B0 Sensor Power Supply "A" Circuit/Open  
P06B1 Sensor Power Supply "A" Circuit Low  
P06B2 Sensor Power Supply "A" Circuit High  
P06B3 Sensor Power Supply "B" Circuit/Open



P06B4 Sensor Power Supply "B" Circuit Low  
P06B5 Sensor Power Supply "B" Circuit High  
P06B6 Internal Control Module Knock Sensor Processor 1 Performance  
P06B7 Internal Control Module Knock Sensor Processor 2 Performance  
P06B8 Internal Control Module Non-Volatile Random Access Memory (NVRAM) Error  
P06B9 Cylinder 1 Glow Plug Circuit Range/Performance  
P06BA Cylinder 2 Glow Plug Circuit Range/Performance  
P06BB Cylinder 3 Glow Plug Circuit Range/Performance  
P06BC Cylinder 4 Glow Plug Circuit Range/Performance  
P06BD Cylinder 5 Glow Plug Circuit Range/Performance  
P06BE Cylinder 6 Glow Plug Circuit Range/Performance  
P06BF Cylinder 7 Glow Plug Circuit Range/Performance  
P06C0 Cylinder 8 Glow Plug Circuit Range/Performance  
P06C1 Cylinder 9 Glow Plug Circuit Range/Performance  
P06C2 Cylinder 10 Glow Plug Circuit Range/Performance  
P06C3 Cylinder 11 Glow Plug Circuit Range/Performance  
P06C4 Cylinder 12 Glow Plug Circuit Range/Performance  
P06C5 Cylinder 1 Glow Plug Incorrect  
P06C6 Cylinder 2 Glow Plug Incorrect  
P06CC Cylinder 8 Glow Plug Incorrect  
P06CD Cylinder 9 Glow Plug Incorrect  
P06CE Cylinder 10 Glow Plug Incorrect  
P06CF Cylinder 11 Glow Plug Incorrect  
P06D0 Cylinder 12 Glow Plug Incorrect  
P06D1 Internal Control Module Ignition Coil Control Performance  
P06C7 Cylinder 3 Glow Plug Incorrect  
P06C8 Cylinder 4 Glow Plug Incorrect  
P06C9 Cylinder 5 Glow Plug Incorrect  
P06CA Cylinder 6 Glow Plug Incorrect  
P06CB Cylinder 7 Glow Plug Incorrect

## SAE P07XX Codes

### TRANSMISSION

P0700 Transmission Control System (MIL Request)  
P0701 Transmission Control System Range/Performance  
P0702 Transmission Control System Electrical  
P0703 Brake Switch "B" Circuit  
P0704 Clutch Switch Input Circuit  
P0705 Transmission Range Sensor "A" Circuit (PRNDL Input)  
P0706 Transmission Range Sensor "A" Circuit Range/Performance  
P0707 Transmission Range Sensor "A" Circuit Low  
P0708 Transmission Range Sensor "A" Circuit High

P0709 Transmission Range Sensor "A" Circuit Intermittent  
P070A Transmission Fluid Level Sensor Circuit  
P070B Transmission Fluid Level Sensor Circuit Range/Performance  
P070C Transmission Fluid Level Sensor Circuit Low  
P070D Transmission Fluid Level Sensor Circuit High  
P070E Transmission Fluid Level Sensor Circuit intermittent/Erratic  
P070F Transmission Fluid Level Too Low  
P0710 Transmission Fluid Temperature Sensor "A" Circuit  
P0711 Transmission Fluid Temperature Sensor "A" Circuit Range/Performance  
P0712 Transmission Fluid Temperature Sensor "A" Circuit Low  
P0713 Transmission Fluid Temperature Sensor "A" Circuit High  
P0714 Transmission Fluid Temperature Sensor "A" Circuit Intermittent  
P0715 Input/Turbine Speed Sensor "A" Circuit  
P0716 Input/Turbine Speed Sensor "A" Circuit Range/Performance  
P0717 Input/Turbine Speed Sensor "A" Circuit No Signal  
P0718 Input/Turbine Speed Sensor "A" Circuit Intermittent  
P0719 Brake Switch "B" Circuit Low  
P071A Transmission Mode Switch "A" Circuit  
P071B Transmission Mode Switch "A" Circuit Low  
P071C Transmission Mode Switch "A" Circuit High  
P071D Transmission Mode Switch "B" Circuit  
P071E Transmission Mode Switch "B" Circuit Low  
P071F Transmission Mode Switch "B" Circuit High  
P0720 Output Speed Sensor Circuit  
P0721 Output Speed Sensor Circuit Range/Performance  
P0722 Output Speed Sensor Circuit No Signal  
P0723 Output Speed Sensor Circuit Intermittent  
P0724 Brake Switch "B" Circuit High  
P0725 Engine Speed Input Circuit  
P0726 Engine Speed Input Circuit Range/Performance  
P0727 Engine Speed Input Circuit No Signal  
P0728 Engine Speed Input Circuit Intermittent  
P0729 Gear 6 Incorrect Ratio  
P072A Stuck in Neutral  
P072B Stuck In Reverse  
P072C Stuck in Gear 1  
P072D Stuck in Gear 2  
P072E Stuck in Gear 3  
P072F Stuck in Gear 4  
P0730 Incorrect Gear Ratio  
P0731 Gear 1 Incorrect Ratio  
P0732 Gear 2 Incorrect Ratio  
P0733 Gear 3 Incorrect Ratio  
P0734 Gear 4 Incorrect Ratio  
P0735 Gear 5 Incorrect Ratio  
P0736 Reverse Incorrect Ratio  
P0737 TCM Engine Speed Output Circuit  
P0738 TCM Engine Speed Output Circuit Low  
P0739 TCM Engine Speed Output Circuit High  
P073A Stuck in Gear 5  
P073B Stuck in Gear 6  
P073C Stuck in Gear 7  
P073D Unable to Engage Neutral  
P073E Unable to Engage Reverse  
P073F Unable to Engage Gear 1  
P0740 Torque Converter Clutch Circuit/Open

P0741 Torque Converter Clutch Circuit Performance/Stuck Off  
P0742 Torque Converter Clutch Circuit Stuck On  
P0743 Torque Converter Clutch Circuit Electrical  
P0744 Torque Converter Clutch Circuit Intermittent  
P0745 Pressure Control Solenoid "A"  
P0746 Pressure Control Solenoid "A" Performance/Stuck Off  
P0747 Pressure Control Solenoid "A" Stuck On  
P0748 Pressure Control Solenoid "A" Electrical  
P0749 Pressure Control Solenoid "A" Intermittent  
P074A Unable To Engage Gear 2  
P074B Unable To Engage Gear 3  
P074C Unable To Engage Gear 4  
P074D Unable To Engage Gear 5  
P074E Unable To Engage Gear 6  
P074F Unable To Engage Gear 7  
P0750 Shift Solenoid "A"  
P0751 Shift Solenoid "A" Performance/Stuck Off  
P0752 Shift Solenoid "A" Stuck On  
P0753 Shift Solenoid "A" Electrical  
P0754 Shift Solenoid "A" Intermittent  
P0755 Shift Solenoid "B"  
P0756 Shift Solenoid "B" Performance/Stuck Off  
P0757 Shift Solenoid "B" Stuck On  
P0758 Shift Solenoid "B" Electrical  
P0759 Shift Solenoid "B" Intermittent  
P075A Shift Solenoid "G"  
P075B Shift Solenoid "G" Performance/Stuck Off  
P075C Shift Solenoid "G" Stuck On  
P075D Shift Solenoid "G" Electrical  
P075E Shift Solenoid "G" Intermittent  
P075F Transmission Fluid Level Too High  
P0760 Shift Solenoid "C"  
P0761 Shift Solenoid "C" Performance/Stuck Off  
P0762 Shift Solenoid "C" Stuck On  
P0763 Shift Solenoid "C" Electrical  
P0764 Shift Solenoid "C" Intermittent  
P0765 Shift Solenoid "D"  
P0766 Shift Solenoid "D" Performance/Stuck Off  
P0767 Shift Solenoid "D" Stuck On  
P0768 Shift Solenoid "D" Electrical  
P0769 Shift Solenoid "D" Intermittent  
P076A Shift Solenoid "H"  
P076B Shift Solenoid "H" Performance/Stuck Off  
P076C Shift Solenoid "H" Stuck On  
P076D Shift Solenoid "H" Electrical  
P076E Shift Solenoid "H" Intermittent  
P076F Gear 7 Incorrect Ratio  
P0770 Shift Solenoid "E"  
P0771 Shift Solenoid "E" Performance/Stuck Off  
P0772 Shift Solenoid "E" Stuck On  
P0773 Shift Solenoid "E" Electrical  
P0774 Shift Solenoid "E" Intermittent  
P0775 Pressure Control Solenoid "B"  
P0776 Pressure Control Solenoid "B" Performance/Stuck Off  
P0777 Pressure Control Solenoid "B" Stuck On  
P0778 Pressure Control Solenoid "B" Electrical

P0779 Pressure Control Solenoid "B" Intermittent  
P077A Output Speed Sensor Circuit - Loss of Direction Signal  
P077B Output Speed Sensor Circuit - Direction Error  
P0780 Shift Error  
P0781 1-2 Shift  
P0782 2-3 Shift  
P0783 3-4 Shift  
P0784 4-5 Shift  
P0785 Shift Timing Solenoid "A"  
P0786 Shift Timing Solenoid "A" Range/Performance  
P0787 Shift Timing Solenoid "A" Low  
P0788 Shift Timing Solenoid "A" High  
P0789 Shift Timing Solenoid "A" Intermittent  
P078A Shift Timing Solenoid "B"  
P078B Shift Timing Solenoid "B" Range/Performance  
P078C Shift Timing Solenoid "B" Low  
P078D Shift Timing Solenoid "B" High  
P078E Shift Timing Solenoid "B" Intermittent  
P0790 Normal/Performance Switch Circuit  
P0791 Intermediate Shaft Speed Sensor "A" Circuit  
P0792 Intermediate Shaft Speed Sensor "A" Circuit Range/Performance  
P0793 Intermediate Shaft Speed Sensor "A" Circuit No Signal  
P0794 Intermediate Shaft Speed Sensor "A" Circuit Intermittent  
P0795 Pressure Control Solenoid "C"  
P0796 Pressure Control Solenoid "C" Performance/Stuck Off  
P0797 Pressure Control Solenoid "C" Stuck On  
P0798 Pressure Control Solenoid "C" Electrical  
P0799 Pressure Control Solenoid "C" Intermittent  
P079A Transmission Friction Element "A" Slip Detected  
P079B Transmission Friction Element "B" Slip Detected  
P079C Transmission Friction Element "C" Slip Detected  
P079D Transmission Friction Element "D" Slip Detected  
P079E Transmission Friction Element "E" Slip Detected  
P079F Transmission Friction Element "F" Slip Detected  
P07A0 Transmission Friction Element "G" Slip Detected  
P07A1 Transmission Friction Element "H" Slip Detected  
P07A2 Transmission Friction Element "A" Performance/Stuck Off  
P07A3 Transmission Friction Element "A" Stuck On  
P07A4 Transmission Friction Element "B" Performance/Stuck Off  
P07A5 Transmission Friction Element "B" Stuck On  
P07A6 Transmission Friction Element "C" Performance/Stuck Off  
P07A7 Transmission Friction Element "C" Stuck On  
P07A8 Transmission Friction Element "D" Performance/Stuck Off  
P07A9 Transmission Friction Element "D" Stuck On  
P07AA Transmission Friction Element "E" Performance/Stuck Off  
P07AB Transmission Friction Element "E" Stuck On  
P07AC Transmission Friction Element "F" Performance/Stuck Off  
P07AD Transmission Friction Element "F" Stuck On  
P07AE Transmission Friction Element "G" Performance/Stuck Off  
P07AF Transmission Friction Element "G" Stuck On  
P07B0 Transmission Friction Element "H" Performance/Stuck Off  
P07B1 Transmission Friction Element "H" Stuck On  
P07B2 Transmission Park Position Sensor/Switch "A" Circuit/Open  
P07B3 Transmission Park Position Sensor/Switch "A" Circuit Low  
P07B4 Transmission Park Position Sensor/Switch "A" Circuit High  
P07B5 Transmission Park Position Sensor/Switch "A" Circuit Performance/Low

P07B6 Transmission Park Position Sensor/Switch "A" Circuit Performance High  
P07B7 Transmission Park Position Sensor/Switch "A" Circuit Intermittent/Erratic  
P07B8 Transmission Park Position Sensor/Switch "B" Circuit/Open  
P07B9 Transmission Park Position Sensor/Switch "B" Circuit Low  
P07BA Transmission Park Position Sensor/Switch "B" Circuit High  
P07BB Transmission Park Position Sensor/Switch "B" Circuit Performance/Low  
P07BC Transmission Park Position Sensor/Switch "B" Circuit Performance High  
P07BD Transmission Park Position Sensor/Switch "B" Circuit Intermittent/Erratic  
P07BE Transmission Park Position Sensor/Switch "A"/"B" Correlation

## SAE P08XX Codes

### TRANSMISSION

P0800 Transfer Case Control System (MIL Request)  
P0801 Reverse Inhibit Control Circuit  
P0802 Transmission Control System MIL Request Circuit/Open  
P0803 Upshift/Skip Shift Solenoid Control Circuit  
P0804 Upshift/Skip Shift Lamp Control Circuit  
P0805 Clutch Position Sensor Circuit  
P0806 Clutch Position Sensor Circuit Range/Performance  
P0807 Clutch Position Sensor Circuit Low  
P0808 Clutch Position Sensor Circuit High  
P0809 Clutch Position Sensor Circuit Intermittent  
P080A Clutch Position Not Learned  
P080B Upshift/Skip Shift Solenoid Control Circuit Range/Performance  
P080C Upshift/Skip Shift Solenoid Control Circuit Low  
P080D Upshift/Skip Shift Solenoid Control Circuit High  
P0810 Clutch Position Control Error  
P0811 Excessive Clutch "A" Slippage  
P0812 Reverse Input Circuit  
P0813 Reverse Output Circuit  
P0814 Transmission Range Display Circuit  
P0815 Upshift Switch Circuit  
P0816 Downshift Switch Circuit  
P0817 Starter Disable Circuit/Open  
P0818 Driveline Disconnect Switch Input Circuit  
P0819 Up and Down Shift Switch to Transmission Range Correlation  
P081A Starter Disable Circuit Low

P081B Starter Disable Circuit High  
P081C Park Input Circuit  
P081D Neutral Input Circuit  
P081E Excessive Clutch "B" Slippage  
P0820 Gear Lever X-Y Position Sensor Circuit  
P0821 Gear Lever X Position Circuit  
P0822 Gear Lever Y Position Circuit  
P0823 Gear Lever X Position Circuit Intermittent  
P0824 Gear Lever Y Position Circuit Intermittent  
P0825 Gear Lever Push-Pull Switch (Shift Anticipate)  
P0826 Up and Down Shift Switch Circuit  
P0827 Up and Down Shift Switch Circuit Low  
P0828 Up and Down Shift Switch Circuit High  
P0829 5-6 Shift  
P082A Gear Lever X Position Circuit Range/Performance  
P082B Gear Lever X Position Circuit Low  
P082C Gear Lever X Position Circuit High  
P082D Gear Lever Y Position Circuit Range/Performance  
P082E Gear Lever Y Position Circuit Low  
P082F Gear Lever Y Position Circuit High  
P0830 Clutch Pedal Switch "A" Circuit  
P0831 Clutch Pedal Switch "A" Circuit Low  
P0832 Clutch Pedal Switch "A" Circuit High  
P0833 Clutch Pedal Switch "B" Circuit  
P0834 Clutch Pedal Switch "B" Circuit Low  
P0835 Clutch Pedal Switch "B" Circuit High  
P0836 Four Wheel Drive (4WD) Switch Circuit  
P0837 Four Wheel Drive (4WD) Switch Circuit Range/Performance  
P0838 Four Wheel Drive (4WD) Switch Circuit Low  
P0839 Four Wheel Drive (4WD) Switch Circuit High  
P083A Transmission Fluid Pressure Sensor/Switch "G" Circuit  
P083B Transmission Fluid Pressure Sensor/Switch "G" Circuit Range/Performance  
P083C Transmission Fluid Pressure Sensor/Switch "G" Circuit Low  
P083D Transmission Fluid Pressure Sensor/Switch "G" Circuit High  
P083E Transmission Fluid Pressure Sensor/Switch "G" Circuit Intermittent  
P083F Clutch Pedal Switch "A"/"B" Correlation  
P0840 Transmission Fluid Pressure Sensor/Switch "A" Circuit  
P0841 Transmission Fluid Pressure Sensor/Switch "A" Circuit Range/Performance  
P0842 Transmission Fluid Pressure Sensor/Switch "A" Circuit Low  
P0843 Transmission Fluid Pressure Sensor/Switch "A" Circuit High  
P0844 Transmission Fluid Pressure Sensor/Switch "A" Circuit Intermittent  
P0845 Transmission Fluid Pressure Sensor/Switch "B" Circuit  
P0846 Transmission Fluid Pressure Sensor/Switch "B" Circuit Range/Performance  
P0847 Transmission Fluid Pressure Sensor/Switch "B" Circuit Low  
P0848 Transmission Fluid Pressure Sensor/Switch "B" Circuit High  
P0849 Transmission Fluid Pressure Sensor/Switch "B" Circuit Intermittent  
P084A Transmission Fluid Pressure Sensor/Switch "H" Circuit  
P084B Transmission Fluid Pressure Sensor/Switch "H" Circuit Range/Performance  
P084C Transmission Fluid Pressure Sensor/Switch "H" Circuit Low  
P084D Transmission Fluid Pressure Sensor/Switch "H" Circuit High  
P084E Transmission Fluid Pressure Sensor/Switch "H" Circuit Intermittent  
P084F Park/Neutral Switch Output Circuit  
P0850 Park/Neutral Switch Input Circuit  
P0851 Park/Neutral Switch Input Circuit Low  
P0852 Park/Neutral Switch Input Circuit High  
P0853 Drive Switch Input Circuit

P0854 Drive Switch Input Circuit Low  
P0855 Drive Switch Input Circuit High  
P0856 Traction Control Input Signal  
P0857 Traction Control Input Signal Range/Performance  
P0858 Traction Control Input Signal Low  
P0859 Traction Control Input Signal High  
P085A Gear Shift Control Module "B" Communication Circuit  
P085B Gear Shift Control Module "B" Communication Circuit Low  
P085C Gear Shift Control Module "B" Communication Circuit High  
P085D Gear Shift Control Module "A" Performance  
P085E Gear Shift Control Module "B" Performance  
P0860 Gear Shift Control Module "A" Communication Circuit  
P0861 Gear Shift Control Module "A" Communication Circuit Low  
P0862 Gear Shift Control Module "A" Communication Circuit High  
P0863 TCM Communication Circuit  
P0864 TCM Communication Circuit Range/Performance  
P0865 TCM Communication Circuit Low  
P0866 TCM Communication Circuit High  
P0867 Transmission Fluid Pressure  
P0868 Transmission Fluid Pressure Low  
P0869 Transmission Fluid Pressure High  
P0870 Transmission Fluid Pressure Sensor/Switch "C" Circuit  
P0871 Transmission Fluid Pressure Sensor/Switch "C" Circuit Range/Performance  
P0872 Transmission Fluid Pressure Sensor/Switch "C" Circuit Low  
P0873 Transmission Fluid Pressure Sensor/Switch "C" Circuit High  
P0874 Transmission Fluid Pressure Sensor/Switch "C" Circuit Intermittent  
P0875 Transmission Fluid Pressure Sensor/Switch "D" Circuit  
P0876 Transmission Fluid Pressure Sensor/Switch "D" Circuit Range/Performance  
P0877 Transmission Fluid Pressure Sensor/Switch "D" Circuit Low  
P0878 Transmission Fluid Pressure Sensor/Switch "D" Circuit High  
P0879 Transmission Fluid Pressure Sensor/Switch "D" Circuit Intermittent  
P0880 TCM Power Input Signal  
P0881 TCM Power Input Signal Range/Performance  
P0882 TCM Power Input Signal Low  
P0883 TCM Power Input Signal High  
P0884 TCM Power Input Signal Intermittent  
P0885 TCM Power Relay Control Circuit/Open  
P0886 TCM Power Relay Control Circuit Low  
P0887 TCM Power Relay Control Circuit High  
P0888 TCM Power Relay Sense Circuit  
P0889 TCM Power Relay Sense Circuit Range/Performance  
P088A Transmission Fluid Filter Deteriorated  
P088B Transmission Fluid Filter Very Deteriorated  
P0890 TCM Power Relay Sense Circuit Low  
P0891 TCM Power Relay Sense Circuit High  
P0892 TCM Power Relay Sense Circuit Intermittent  
P0893 Multiple Gears Engaged  
P0894 Transmission Component Slipping  
P0895 Shift Time Too Short  
P0896 Shift Time Too Long  
P0897 Transmission Fluid Deteriorated  
P0898 Transmission Control System MIL Request Circuit Low  
P0899 Transmission Control System MIL Request Circuit High

# SAE P09XX Codes

## TRANSMISSION

P0900 Clutch Actuator Circuit/Open  
P0901 Clutch Actuator Circuit Range/Performance  
P0902 Clutch Actuator Circuit Low  
P0903 Clutch Actuator Circuit High  
P0904 Gate Select Position Circuit  
P0905 Gate Select Position Circuit Range/Performance  
P0906 Gate Select Position Circuit Low  
P0907 Gate Select Position Circuit High  
P0908 Gate Select Position Circuit Intermittent  
P0909 Gate Select Control Error  
P0910 Gate Select Actuator Circuit/Open  
P0911 Gate Select Actuator Circuit Range/Performance  
P0912 Gate Select Actuator Circuit Low  
P0913 Gate Select Actuator Circuit High  
P0914 Gear Shift Position Circuit  
P0915 Gear Shift Position Circuit Range/Performance  
P0916 Gear Shift Position Circuit Low  
P0917 Gear Shift Position Circuit High  
P0918 Gear Shift Position Circuit Intermittent  
P0919 Gear Shift Position Control Error  
P0920 Gear Shift Forward Actuator Circuit/Open  
P0921 Gear Shift Forward Actuator Circuit Range/Performance  
P0922 Gear Shift Forward Actuator Circuit Low  
P0923 Gear Shift Forward Actuator Circuit High  
P0924 Gear Shift Reverse Actuator Circuit/Open  
P0925 Gear Shift Reverse Actuator Circuit Range/Performance  
P0926 Gear Shift Reverse Actuator Circuit Low  
P0927 Gear Shift Reverse Actuator Circuit High  
P0928 Gear Shift Lock Solenoid/Actuator Control Circuit "A"/Open



P0929 Gear Shift Lock Solenoid/Actuator Control Circuit "A" Range/Performance  
P092A Gear Shift Lock Solenoid/Actuator Control Circuit "B"/Open  
P092B Gear Shift Lock Solenoid/Actuator Control Circuit "B" Range/Performance  
P092C Gear Shift Lock Solenoid/Actuator Control Circuit "B" Low  
P092D Gear Shift Lock Solenoid/Actuator Control Circuit "B" High  
P0930 Gear Shift Lock Solenoid/Actuator Control Circuit "A" Low  
P0931 Gear Shift Lock Solenoid/Actuator Control Circuit "A" High  
P0932 Hydraulic Pressure Sensor Circuit  
P0933 Hydraulic Pressure Sensor Range/Performance  
P0934 Hydraulic Pressure Sensor Circuit Low  
P0935 Hydraulic Pressure Sensor Circuit High  
P0936 Hydraulic Pressure Sensor Circuit Intermittent  
P0937 Hydraulic Oil Temperature Sensor Circuit  
P0938 Hydraulic Oil Temperature Sensor Range/Performance  
P0939 Hydraulic Oil Temperature Sensor Circuit Low  
P0940 Hydraulic Oil Temperature Sensor Circuit High  
P0941 Hydraulic Oil Temperature Sensor Circuit Intermittent  
P0942 Hydraulic Pressure Unit  
P0943 Hydraulic Pressure Unit Cycling Period Too Short  
P0944 Hydraulic Pressure Unit Loss of Pressure  
P0945 Hydraulic Pump Relay Circuit/Open  
P0946 Hydraulic Pump Relay Circuit Range/Performance  
P0947 Hydraulic Pump Relay Circuit Low  
P0948 Hydraulic Pump Relay Circuit High  
P0949 Auto Shift Manual Adaptive Learning Not Complete  
P0950 Auto Shift Manual Control Circuit  
P0951 Auto Shift Manual Control Circuit Range/Performance  
P0952 Auto Shift Manual Control Circuit Low  
P0953 Auto Shift Manual Control Circuit High  
P0954 Auto Shift Manual Control Circuit Intermittent  
P0955 Auto Shift Manual Mode Circuit  
P0956 Auto Shift Manual Mode Circuit Range/Performance  
P0957 Auto Shift Manual Mode Circuit Low  
P0958 Auto Shift Manual Mode Circuit High  
P0959 Auto Shift Manual Mode Circuit Intermittent  
P0960 Pressure Control Solenoid "A" Control Circuit/Open  
P0961 Pressure Control Solenoid "A" Control Circuit Range/Performance  
P0962 Pressure Control Solenoid "A" Control Circuit Low  
P0963 Pressure Control Solenoid "A" Control Circuit High  
P0964 Pressure Control Solenoid "B" Control Circuit/Open  
P0965 Pressure Control Solenoid "B" Control Circuit Range/Performance  
P0966 Pressure Control Solenoid "B" Control Circuit Low  
P0967 Pressure Control Solenoid "B" Control Circuit High  
P0968 Pressure Control Solenoid "C" Control Circuit/Open  
P0969 Pressure Control Solenoid "C" Control Circuit Range/Performance  
P0970 Pressure Control Solenoid "C" Control Circuit Low  
P0971 Pressure Control Solenoid "C" Control Circuit High  
P0972 Shift Solenoid "A" Control Circuit Range/Performance  
P0973 Shift Solenoid "A" Control Circuit Low  
P0974 Shift Solenoid "A" Control Circuit High  
P0975 Shift Solenoid "B" Control Circuit Range/Performance  
P0976 Shift Solenoid "B" Control Circuit Low  
P0977 Shift Solenoid "B" Control Circuit High  
P0978 Shift Solenoid "C" Control Circuit Range/Performance  
P0979 Shift Solenoid "C" Control Circuit Low  
P0980 Shift Solenoid "C" Control Circuit High

P0981 Shift Solenoid "D" Control Circuit Range/Performance  
P0982 Shift Solenoid "D" Control Circuit Low  
P0983 Shift Solenoid "D" Control Circuit High  
P0984 Shift Solenoid "E" Control Circuit Range/Performance  
P0985 Shift Solenoid "E" Control Circuit Low  
P0986 Shift Solenoid "E" Control Circuit High  
P0987 Transmission Fluid Pressure Sensor/Switch "E" Circuit  
P0988 Transmission Fluid Pressure Sensor/Switch "E" Circuit Range/Performance  
P0989 Transmission Fluid Pressure Sensor/Switch "E" Circuit Low  
P0990 Transmission Fluid Pressure Sensor/Switch "E" Circuit High  
P0991 Transmission Fluid Pressure Sensor/Switch "E" Circuit Intermittent  
P0992 Transmission Fluid Pressure Sensor/Switch "F" Circuit  
P0993 Transmission Fluid Pressure Sensor/Switch "F" Circuit Range/Performance  
P0994 Transmission Fluid Pressure Sensor/Switch "F" Circuit Low  
P0995 Transmission Fluid Pressure Sensor/Switch "F" Circuit High  
P0996 Transmission Fluid Pressure Sensor/Switch "F" Circuit Intermittent  
P0997 Shift Solenoid "F" Control Circuit Range/Performance  
P0998 Shift Solenoid "F" Control Circuit Low  
P0999 Shift Solenoid "F" Control Circuit High  
P099A Shift Solenoid "G" Control Circuit Range/Performance  
P099B Shift Solenoid "G" Control Circuit Low  
P099C Shift Solenoid "G" Control Circuit High  
P099D Shift Solenoid "H" Control Circuit Range/Performance  
P099E Shift Solenoid "H" Control Circuit Low  
P099F Shift Solenoid "H" Control Circuit High

## SAE P0AXX Codes

### HYBRID PROPULSION

P0A00 Motor Electronics Coolant Temperature Sensor Circuit  
P0A01 Motor Electronics Coolant Temperature Sensor Circuit Range/Performance  
P0A02 Motor Electronics Coolant Temperature Sensor Circuit Low  
P0A03 Motor Electronics Coolant Temperature Sensor Circuit High  
P0A04 Motor Electronics Coolant Temperature Sensor Circuit Intermittent  
P0A05 Motor Electronics Coolant Pump "A" Control Circuit/Open  
P0A06 Motor Electronics Coolant Pump "A" Control Circuit Low  
P0A07 Motor Electronics Coolant Pump "A" Control Circuit High  
P0A08 DC/DC Converter Status Circuit  
P0A09 DC/DC Converter Status Circuit Low  
P0A0A High Voltage System Interlock Circuit  
P0A0B High Voltage System Interlock Circuit Performance  
P0A0C High Voltage System Interlock Circuit Low  
P0A0D High Voltage System Interlock Circuit High  
P0A0E High Voltage System Interlock Circuit Intermittent  
P0A0F Engine Failed to Start  
P0A10 DC/DC Converter Status Circuit High

P0A11 DC/DC Converter Enable Circuit/Open  
P0A12 DC/DC Converter Enable Circuit Low  
P0A13 DC/DC Converter Enable Circuit High  
P0A14 Engine Mount "A" Control Circuit/Open  
P0A15 Engine Mount "A" Control Circuit Low  
P0A16 Engine Mount "A" Control Circuit High  
P0A17 Motor Torque Sensor Circuit  
P0A18 Motor Torque Sensor Circuit Range/Performance  
P0A19 Motor Torque Sensor Circuit Low  
P0A1A Generator Control Module  
P0A1B Drive Motor "A" Control Module  
P0A1C Drive Motor "B" Control Module  
P0A1D Hybrid Powertrain Control Module  
P0A1E Starter/Generator Control Module  
P0A1F Battery Energy Control Module  
P0A20 Motor Torque Sensor Circuit High  
P0A21 Motor Torque Sensor Circuit Intermittent  
P0A22 Generator Torque Sensor Circuit  
P0A23 Generator Torque Sensor Circuit Range/Performance  
P0A24 Generator Torque Sensor Circuit Low  
P0A25 Generator Torque Sensor Circuit High  
P0A26 Generator Torque Sensor Circuit Intermittent  
P0A27 Hybrid Battery Power Off Circuit  
P0A28 Hybrid Battery Power Off Circuit Low  
P0A29 Hybrid Battery Power Off Circuit High  
P0A2A Drive Motor "A" Temperature Sensor Circuit  
P0A2B Drive Motor "A" Temperature Sensor Circuit Range/Performance  
P0A2C Drive Motor "A" Temperature Sensor Circuit Low  
P0A2D Drive Motor "A" Temperature Sensor Circuit High  
P0A2E Drive Motor "A" Temperature Sensor Circuit Intermittent  
P0A2F Drive Motor "A" Over Temperature  
P0A30 Drive Motor "B" Temperature Sensor Circuit  
P0A31 Drive Motor "B" Temperature Sensor Circuit Range/Performance  
P0A32 Drive Motor "B" Temperature Sensor Circuit Low  
P0A33 Drive Motor "B" Temperature Sensor Circuit High  
P0A34 Drive Motor "B" Temperature Sensor Circuit Intermittent  
P0A35 Drive Motor "B" Over Temperature  
P0A36 Generator Temperature Sensor Circuit  
P0A37 Generator Temperature Sensor Circuit Range/Performance  
P0A38 Generator Temperature Sensor Circuit Low  
P0A39 Generator Temperature Sensor Circuit High  
P0A3A Generator Temperature Sensor Circuit Intermittent  
P0A3B Generator Over Temperature  
P0A3C Drive Motor "A" Inverter Over Temperature  
P0A3D Drive Motor "B" Inverter Over Temperature  
P0A3E Generator Inverter Over Temperature  
P0A3F Drive Motor "A" Position Sensor Circuit  
P0A40 Drive Motor "A" Position Sensor Circuit Range/Performance  
P0A4A Drive Motor "B" Position Sensor Circuit Overspeed  
P0A4B Generator Position Sensor Circuit  
P0A4C Generator Position Sensor Circuit Range/Performance  
P0A4D Generator Position Sensor Circuit Low  
P0A4E Generator Position Sensor Circuit High  
P0A4F Generator Position Sensor Circuit Intermittent  
P0A50 Generator Position Sensor Circuit Overspeed  
P0A51 Drive Motor "A" Current Sensor Circuit

P0A52 Drive Motor "A" Current Sensor Circuit Range/Performance  
P0A53 Drive Motor "A" Current Sensor Circuit Low  
P0A54 Drive Motor "A" Current Sensor Circuit High  
P0A55 Drive Motor "B" Current Sensor Circuit  
P0A56 Drive Motor "B" Current Sensor Circuit Range/Performance  
P0A57 Drive Motor "B" Current Sensor Circuit Low  
P0A58 Drive Motor "B" Current Sensor Circuit High  
P0A59 Generator Current Sensor Circuit  
P0A5A Generator Current Sensor Circuit Range/Performance  
P0A5B Generator Current Sensor Circuit Low  
P0A5C Generator Current Sensor Circuit High  
P0A5D Drive Motor "A" Phase U Current  
P0A5E Drive Motor "A" Phase U Current Low  
P0A5F Drive Motor "A" Phase U Current High  
P0A60 Drive Motor "A" Phase V Current  
P0A61 Drive Motor "A" Phase V Current Low  
P0A62 Drive Motor "A" Phase V Current High  
P0A63 Drive Motor "A" Phase W Current  
P0A64 Drive Motor "A" Phase W Current Low  
P0A65 Drive Motor "A" Phase W Current High  
P0A66 Drive Motor "B" Phase U Current  
P0A67 Drive Motor "B" Phase U Current Low  
P0A68 Drive Motor "B" Phase U Current High  
P0A69 Drive Motor "B" Phase V Current  
P0A6A Drive Motor "B" Phase V Current Low  
P0A6B Drive Motor "B" Phase V Current High  
P0A6C Drive Motor "B" Phase W Current  
P0A6D Drive Motor "B" Phase W Current Low  
P0A6E Drive Motor "B" Phase W Current High  
P0A6F Generator Phase U Current  
P0A70 Generator Phase U Current Low  
P0A71 Generator Phase U Current High  
P0A72 Generator Phase V Current  
P0A73 Generator Phase V Current Low  
P0A74 Generator Phase V Current High  
P0A75 Generator Phase W Current  
P0A76 Generator Phase W Current Low  
P0A77 Generator Phase W Current High  
P0A78 Drive Motor "A" Inverter Performance  
P0A79 Drive Motor "B" Inverter Performance  
P0A7A Generator Inverter Performance  
P0A7B Battery Energy Control Module Requested MIL Illumination  
P0A7C Motor Electronics Over Temperature  
P0A7D Hybrid Battery Pack State of Charge Low  
P0A7E Hybrid Battery Pack Over Temperature  
P0A41 Drive Motor "A" Position Sensor Circuit Low  
P0A42 Drive Motor "A" Position Sensor Circuit High  
P0A7F Hybrid Battery Pack Deterioration  
P0A80 Replace Hybrid Battery Pack  
P0A81 Hybrid Battery Pack Cooling Fan 1 Control Circuit/Open  
P0A82 Hybrid Battery Pack Cooling Fan 1 Performance/Stuck Off  
P0A83 Hybrid Battery Pack Cooling Fan 1 Stuck On  
P0A84 Hybrid Battery Pack Cooling Fan 1 Control Circuit Low  
P0A85 Hybrid Battery Pack Cooling Fan 1 Control Circuit High  
P0A86 14 Volt Power Module Current Sensor Circuit  
P0A87 14 Volt Power Module Current Sensor Circuit Range/Performance

P0A88 14 Volt Power Module Current Sensor Circuit Low  
P0A89 14 Volt Power Module Current Sensor Circuit High  
P0A8A 14 Volt Power Module Current Sensor Circuit Intermittent  
P0A8B 14 Volt Power Module System Voltage  
P0A8C 14 Volt Power Module System Voltage Unstable  
P0A8D 14 Volt Power Module System Voltage Low  
P0A8E 14 Volt Power Module System Voltage High  
P0A8F 14 Volt Power Module System Performance  
P0A90 Drive Motor "A" Performance  
P0A91 Drive Motor "B" Performance  
P0A92 Hybrid Generator Performance  
P0A93 Inverter "A" Cooling System Performance  
P0A94 DC/DC Converter Performance  
P0A95 High Voltage Fuse  
P0A96 Hybrid Battery Pack Cooling Fan 2 Control Circuit/Open  
P0A97 Hybrid Battery Pack Cooling Fan 2 Performance/Stuck Off  
P0A98 Hybrid Battery Pack Cooling Fan 2 Stuck On  
P0A99 Hybrid Battery Pack Cooling Fan 2 Control Circuit Low  
P0A9A Hybrid Battery Pack Cooling Fan 2 Control Circuit High  
P0A9B Hybrid Battery Temperature Sensor "A" Circuit  
P0A9C Hybrid Battery Temperature Sensor "A" Range/Performance  
P0A9D Hybrid Battery Temperature Sensor "A" Circuit Low  
P0A9E Hybrid Battery Temperature Sensor "A" Circuit High  
P0A9F Hybrid Battery Temperature Sensor "A" Circuit Intermittent/Erratic  
P0AA0 Hybrid Battery Positive Contactor Circuit  
P0AA1 Hybrid Battery Positive Contactor Circuit Stuck Closed  
P0AA2 Hybrid Battery Positive Contactor Circuit Stuck Open  
P0AA3 Hybrid Battery Negative Contactor Circuit  
P0AA4 Hybrid Battery Negative Contactor Circuit Stuck Closed  
P0AA5 Hybrid Battery Negative Contactor Circuit Stuck Open  
P0AA6 Hybrid Battery Voltage System Isolation Fault  
P0AA7 Hybrid Battery Voltage Isolation Sensor Circuit  
P0AA8 Hybrid Battery Voltage Isolation Sensor Circuit Range/Performance  
P0AA9 Hybrid Battery Voltage Isolation Sensor Circuit Low  
P0AAA Hybrid Battery Voltage Isolation Sensor Circuit High  
P0AAB Hybrid Battery Voltage Isolation Sensor Circuit Intermittent/Erratic  
P0AAC Hybrid Battery Pack Air Temperature Sensor "A" Circuit  
P0AAD Hybrid Battery Pack Air Temperature Sensor "A" Circuit Range/Performance  
P0AAE Hybrid Battery Pack Air Temperature Sensor "A" Circuit Low  
P0AAF Hybrid Battery Pack Air Temperature Sensor "A" Circuit High  
P0AB0 Hybrid Battery Pack Air Temperature Sensor "A" Circuit Intermittent/Erratic  
P0AB1 Hybrid Battery Pack Air Temperature Sensor "B" Circuit  
P0AB2 Hybrid Battery Pack Air Temperature Sensor "B" Circuit  
P0A43 Drive Motor "A" Position Sensor Circuit Intermittent  
P0A44 Drive Motor "A" Position Sensor Circuit Overspeed  
P0A45 Drive Motor "B" Position Sensor Circuit  
P0A46 Drive Motor "B" Position Sensor Circuit Range/Performance  
P0A47 Drive Motor "B" Position Sensor Circuit Low  
P0A48 Drive Motor "B" Position Sensor Circuit High  
P0A49 Drive Motor "B" Position Sensor Circuit Intermittent Range/Performance  
P0AB3 Hybrid Battery Pack Air Temperature Sensor "B" Circuit Low  
P0AB4 Hybrid Battery Pack Air Temperature Sensor "B" Circuit High  
P0AB5 Hybrid Battery Pack Air Temperature Sensor "B" Circuit Intermittent/Erratic  
P0AB6 Engine Mount "B" Control Circuit/Open  
P0AB7 Engine Mount "B" Control Circuit Low  
P0AB8 Engine Mount "B" Control Circuit High

P0AB9 Hybrid System Performance  
P0ABA Hybrid Battery Pack Voltage Sense "A" Circuit  
P0ABB Hybrid Battery Pack Voltage Sense "A" Circuit Range/Performance  
P0ABC Hybrid Battery Pack Voltage Sense "A" Circuit Low  
P0ABD Hybrid Battery Pack Voltage Sense "A" Circuit High  
P0ABE Hybrid Battery Pack Voltage Sense "A" Circuit Intermittent/Erratic  
P0ABF Hybrid Battery Pack Current Sensor "A" Circuit  
P0AC0 Hybrid Battery Pack Current Sensor "A" Circuit Range/Performance  
P0AC1 Hybrid Battery Pack Current Sensor "A" Circuit Low  
P0AC2 Hybrid Battery Pack Current Sensor "A" Circuit High  
P0AC3 Hybrid Battery Pack Current Sensor "A" Circuit Intermittent/Erratic  
P0AC4 Hybrid Powertrain Control Module Requested MIL Illumination  
P0AC5 Hybrid Battery Temperature Sensor "B" Circuit  
P0AC6 Hybrid Battery Temperature Sensor "B" Range/Performance  
P0AC7 Hybrid Battery Temperature Sensor "B" Circuit Low  
P0AC8 Hybrid Battery Temperature Sensor "B" Circuit High  
P0AC9 Hybrid Battery Temperature Sensor "B" Circuit Intermittent/Erratic  
P0ACA Hybrid Battery Temperature Sensor "C" Circuit  
P0ACB Hybrid Battery Temperature Sensor "C" Range/Performance  
P0ACC Hybrid Battery Temperature Sensor "C" Circuit Low  
P0ACD Hybrid Battery Temperature Sensor "C" Circuit High  
P0ACE Hybrid Battery Temperature Sensor "C" Circuit Intermittent/Erratic  
P0ACF Hybrid Battery Pack Cooling Fan 3 Control Circuit/Open  
P0AD0 Hybrid Battery Pack Cooling Fan 3 Performance/Stuck Off  
P0AD1 Hybrid Battery Pack Cooling Fan 3 Stuck On  
P0AD2 Hybrid Battery Pack Cooling Fan 3 Control Circuit Low  
P0AD3 Hybrid Battery Pack Cooling Fan 3 Control Circuit High  
P0AD4 Hybrid Battery Pack Air Flow System Insufficient Air Flow  
P0AD5 Hybrid Battery Pack Air Flow Valve "A" Control Circuit/Open  
P0AD6 Hybrid Battery Pack Air Flow Valve "A" Control Circuit Range/Performance  
P0AD7 Hybrid Battery Pack Air Flow Valve "A" Control Circuit Low  
P0AD8 Hybrid Battery Pack Air Flow Valve "A" Control Circuit High  
P0AD9 Hybrid Battery Positive Contactor Control Circuit/Open P0ADA  
Hybrid Battery Positive Contactor Control Circuit Range/Performance  
P0ADB Hybrid Battery Positive Contactor Control Circuit Low  
P0ADC Hybrid Battery Positive Contactor Control Circuit High  
P0ADD Hybrid Battery Negative Contactor Control Circuit/Open  
P0ADE Hybrid Battery Negative Contactor Control Circuit Range/Performance  
P0ADF Hybrid Battery Negative Contactor Control Circuit Low  
P0AE0 Hybrid Battery Negative Contactor Control Circuit High  
P0AE1 Hybrid Battery Precharge Contactor Circuit  
P0AE2 Hybrid Battery Precharge Contactor Circuit Stuck Closed  
P0AE3 Hybrid Battery Precharge Contactor Circuit Stuck Open  
P0AE4 Hybrid Battery Precharge Contactor Control Circuit  
P0AE5 Hybrid Battery Precharge Contactor Control Circuit Range/Performance  
P0AE6 Hybrid Battery Precharge Contactor Control Circuit Low  
P0AE7 Hybrid Battery Precharge Contactor Control Circuit High  
P0AE8 Hybrid Battery Temperature Sensor "D" Circuit  
P0AE9 Hybrid Battery Temperature Sensor "D" Range/Performance  
P0AEA Hybrid Battery Temperature Sensor "D" Circuit Low  
P0AEB Hybrid Battery Temperature Sensor "D" Circuit High  
P0AEC Hybrid Battery Temperature Sensor "D" Circuit Intermittent/Erratic  
P0AED Drive Motor Inverter Temperature Sensor "A" Circuit  
P0AEE Drive Motor Inverter Temperature Sensor "A" Circuit Range/Performance  
P0AEF Drive Motor Inverter Temperature Sensor "A" Circuit Low  
P0AF0 Drive Motor Inverter Temperature Sensor "A" Circuit High

P0AF1 Drive Motor Inverter Temperature Sensor "A" Circuit Intermittent/Erratic  
P0AF2 Drive Motor Inverter Temperature Sensor "B" Circuit  
P0AF3 Drive Motor Inverter Temperature Sensor "B" Circuit Range/Performance  
P0AF4 Drive Motor Inverter Temperature Sensor "B" Circuit Low  
P0AF5 Drive Motor Inverter Temperature Sensor "B" Circuit High  
P0AF6 Drive Motor Inverter Temperature Sensor "B" Circuit Intermittent/Erratic  
P0AF7 14 Volt Power Module Internal Temperature Too High  
P0AF8 Hybrid Battery System Voltage  
P0AF9 Hybrid Battery System Voltage Unstable  
P0AFA Hybrid Battery System Voltage Low  
P0AFB Hybrid Battery System Voltage High  
P0AFC Hybrid Battery Pack Sensor Module  
P0AFD Hybrid Battery Pack Temperature Too Low  
P0AFE Hybrid Battery System Voltage Too Low for Voltage Step Up Conversion  
P0AFF System Voltage Too Low for Voltage Step Down Conversion

## SAE P0BXX Codes

### HYBRID PROPULSION

P0B00 Auxiliary Transmission Fluid Pump Motor Phase U Current  
P0B01 Auxiliary Transmission Fluid Pump Motor Phase U Current Low  
P0B02 Auxiliary Transmission Fluid Pump Motor Phase U Current High  
P0B03 Auxiliary Transmission Fluid Pump Motor Phase V Current  
P0B04 Auxiliary Transmission Fluid Pump Motor Phase V Current Low  
P0B05 Auxiliary Transmission Fluid Pump Motor Phase V Current High  
P0B06 Auxiliary Transmission Fluid Pump Motor Phase W Current  
P0B07 Auxiliary Transmission Fluid Pump Motor Phase W Current Low  
P0B08 Auxiliary Transmission Fluid Pump Motor Phase W Current High  
P0B09 Auxiliary Transmission Fluid Pump Motor Supply Voltage Circuit/Open  
P0B0A Auxiliary Transmission Fluid Pump Motor Supply Voltage Circuit Low  
P0B0B Auxiliary Transmission Fluid Pump Motor Supply Voltage Circuit High  
P0B0C Auxiliary Transmission Fluid Pump Hydraulic Leakage  
P0B0D Auxiliary Transmission Fluid Pump Motor Control Module  
P0B0E Hybrid Battery Pack Current Sensor "B" Circuit  
P0B0F Hybrid Battery Pack Current Sensor "B" Circuit Range/Performance  
P0B10 Hybrid Battery Pack Current Sensor "B" Circuit Low  
P0B11 Hybrid Battery Pack Current Sensor "B" Circuit High

P0B12 Hybrid Battery Pack Current Sensor "B" Circuit Intermittent/Erratic  
P0B13 Hybrid Battery Pack Current Sensor "A"/"B" Correlation  
P0B14 Hybrid Battery Pack Voltage Sense "B" Circuit  
P0B15 Hybrid Battery Pack Voltage Sense "B" Circuit Range/Performance  
P0B16 Hybrid Battery Pack Voltage Sense "B" Circuit Low  
P0B17 Hybrid Battery Pack Voltage Sense "B" Circuit High  
P0B18 Hybrid Battery Pack Voltage Sense "B" Circuit Intermittent/Erratic  
P0B19 Hybrid Battery Pack Voltage Sense "C" Circuit  
P0B1A Hybrid Battery Pack Voltage Sense "C" Circuit Range/Performance  
P0B1B Hybrid Battery Pack Voltage Sense "C" Circuit Low  
P0B1C Hybrid Battery Pack Voltage Sense "C" Circuit High  
P0B1D Hybrid Battery Pack Voltage Sense "C" Circuit Intermittent/Erratic  
P0B1E Hybrid Battery Pack Voltage Sense "D" Circuit  
P0B1F Hybrid Battery Pack Voltage Sense "D" Circuit Range/Performance  
P0B20 Hybrid Battery Pack Voltage Sense "D" Circuit Low  
P0B21 Hybrid Battery Pack Voltage Sense "D" Circuit High  
P0B22 Hybrid Battery Pack Voltage Sense "D" Circuit Intermittent/Erratic  
P0B23 Hybrid Battery "A" Voltage  
P0B24 Hybrid Battery "A" Voltage Unstable  
P0B25 Hybrid Battery "A" Voltage Low  
P0B26 Hybrid Battery "A" Voltage High  
P0B27 Hybrid Battery "B" Voltage  
P0B28 Hybrid Battery "B" Voltage Unstable  
P0B29 Hybrid Battery "B" Voltage Low  
P0B2A Hybrid Battery "B" Voltage High  
P0B2B Hybrid Battery "C" Voltage  
P0B2C Hybrid Battery "C" Voltage Unstable  
P0B2D Hybrid Battery "C" Voltage Low  
P0B2E Hybrid Battery "C" Voltage High  
P0B2F Hybrid Battery "D" Voltage  
P0B30 Hybrid Battery "D" Voltage Unstable  
P0B31 Hybrid Battery "D" Voltage Low  
P0B32 Hybrid Battery "D" Voltage High  
P0B33 High Voltage Service Disconnect Circuit  
P0B34 High Voltage Service Disconnect Circuit Performance  
P0B35 High Voltage Service Disconnect Circuit Low  
P0B36 High Voltage Service Disconnect Circuit High  
P0B37 High Voltage Service Disconnect Open  
P0B38 Motor Electronics Coolant Pump "B" Control Circuit/Open  
P0B39 Motor Electronics Coolant Pump "B" Control Circuit Low  
P0B3A Motor Electronics Coolant Pump "B" Control Circuit High  
P0B3B Hybrid Battery Voltage Sense "A" Circuit  
P0B3C Hybrid Battery Voltage Sense "A" Circuit Range/Performance  
P0B3D Hybrid Battery Voltage Sense "A" Circuit Low  
P0B3E Hybrid Battery Voltage Sense "A" Circuit High  
P0B3F Hybrid Battery Voltage Sense "A" Circuit Intermittent/Erratic  
P0B40 Hybrid Battery Voltage Sense "B" Circuit  
P0B41 Hybrid Battery Voltage Sense "B" Circuit Range/Performance  
P0B42 Hybrid Battery Voltage Sense "B" Circuit Low  
P0B43 Hybrid Battery Voltage Sense "B" Circuit High  
P0B44 Hybrid Battery Voltage Sense "B" Circuit Intermittent/Erratic  
P0B45 Hybrid Battery Voltage Sense "C" Circuit  
P0B46 Hybrid Battery Voltage Sense "C" Circuit Range/Performance  
P0B47 Hybrid Battery Voltage Sense "C" Circuit Low  
P0B48 Hybrid Battery Voltage Sense "C" Circuit High  
P0B49 Hybrid Battery Voltage Sense "C" Circuit Intermittent/Erratic



P0B4A Hybrid Battery Voltage Sense "D" Circuit  
P0B4B Hybrid Battery Voltage Sense "D" Circuit Range/Performance  
P0B4C Hybrid Battery Voltage Sense "D" Circuit Low  
P0B4D Hybrid Battery Voltage Sense "D" Circuit High  
P0B4E Hybrid Battery Voltage Sense "D" Circuit Intermittent/Erratic  
P0B4F Hybrid Battery Voltage Sense "E" Circuit  
P0B50 Hybrid Battery Voltage Sense "E" Circuit Range/Performance  
P0B51 Hybrid Battery Voltage Sense "E" Circuit Low  
P0B52 Hybrid Battery Voltage Sense "E" Circuit High  
P0B53 Hybrid Battery Voltage Sense "E" Circuit Intermittent/Erratic  
P0B54 Hybrid Battery Voltage Sense "F" Circuit  
P0B55 Hybrid Battery Voltage Sense "F" Circuit Range/Performance  
P0B56 Hybrid Battery Voltage Sense "F" Circuit Low  
P0B57 Hybrid Battery Voltage Sense "F" Circuit High  
P0B58 Hybrid Battery Voltage Sense "F" Circuit Intermittent/Erratic  
P0B59 Hybrid Battery Voltage Sense "G" Circuit  
P0B5A Hybrid Battery Voltage Sense "G" Circuit Range/Performance  
P0B5B Hybrid Battery Voltage Sense "G" Circuit Low  
P0B5C Hybrid Battery Voltage Sense "G" Circuit High  
P0B5D Hybrid Battery Voltage Sense "G" Circuit Intermittent/Erratic  
P0B5E Hybrid Battery Voltage Sense "H" Circuit  
P0B5F Hybrid Battery Voltage Sense "H" Circuit Range/Performance  
P0B60 Hybrid Battery Voltage Sense "H" Circuit Low  
P0B61 Hybrid Battery Voltage Sense "H" Circuit High  
P0B62 Hybrid Battery Voltage Sense "H" Circuit Intermittent/Erratic  
P0B63 Hybrid Battery Voltage Sense "I" Circuit  
P0B64 Hybrid Battery Voltage Sense "I" Circuit Range/Performance  
P0B65 Hybrid Battery Voltage Sense "I" Circuit Low  
P0B66 Hybrid Battery Voltage Sense "I" Circuit High  
P0B67 Hybrid Battery Voltage Sense "I" Circuit Intermittent/Erratic  
P0B68 Hybrid Battery Voltage Sense "J" Circuit  
P0B69 Hybrid Battery Voltage Sense "J" Circuit Range/Performance  
P0B6A Hybrid Battery Voltage Sense "J" Circuit Low  
P0B6B Hybrid Battery Voltage Sense "J" Circuit High  
P0B6C Hybrid Battery Voltage Sense "J" Circuit Intermittent/Erratic  
P0B6D Hybrid Battery Voltage Sense "K" Circuit  
P0B6E Hybrid Battery Voltage Sense "K" Circuit Range/Performance  
P0B6F Hybrid Battery Voltage Sense "K" Circuit Low  
P0B70 Hybrid Battery Voltage Sense "K" Circuit High  
P0B71 Hybrid Battery Voltage Sense "K" Circuit Intermittent/Erratic  
P0B72 Hybrid Battery Voltage Sense "L" Circuit  
P0B73 Hybrid Battery Voltage Sense "L" Circuit Range/Performance  
P0B74 Hybrid Battery Voltage Sense "L" Circuit Low  
P0B75 Hybrid Battery Voltage Sense "L" Circuit High  
P0B76 Hybrid Battery Voltage Sense "L" Circuit Intermittent/Erratic  
P0B77 Hybrid Battery Voltage Sense "M" Circuit  
P0B78 Hybrid Battery Voltage Sense "M" Circuit Range/Performance  
P0B79 Hybrid Battery Voltage Sense "M" Circuit Low  
P0B7A Hybrid Battery Voltage Sense "M" Circuit High  
P0B7B Hybrid Battery Voltage Sense "M" Circuit Intermittent/Erratic  
P0B7C Hybrid Battery Voltage Sense "N" Circuit  
P0B7D Hybrid Battery Voltage Sense "N" Circuit Range/Performance  
P0B7E Hybrid Battery Voltage Sense "N" Circuit Low  
P0B7F Hybrid Battery Voltage Sense "N" Circuit High  
P0B80 Hybrid Battery Voltage Sense "N" Circuit Intermittent/Erratic  
P0B81 Hybrid Battery Voltage Sense "O" Circuit

P0B82 Hybrid Battery Voltage Sense "O" Circuit Range/Performance  
P0B83 Hybrid Battery Voltage Sense "O" Circuit Low  
P0B84 Hybrid Battery Voltage Sense "O" Circuit High  
P0B85 Hybrid Battery Voltage Sense "O" Circuit Intermittent/Erratic  
P0B86 Hybrid Battery Voltage Sense "P" Circuit  
P0B87 Hybrid Battery Voltage Sense "P" Circuit Range/Performance  
P0B88 Hybrid Battery Voltage Sense "P" Circuit Low  
P0B89 Hybrid Battery Voltage Sense "P" Circuit High  
P0B8A Hybrid Battery Voltage Sense "P" Circuit Intermittent/Erratic  
P0B8B Hybrid Battery Voltage Sense "Q" Circuit  
P0B8C Hybrid Battery Voltage Sense "Q" Circuit Range/Performance  
P0B8D Hybrid Battery Voltage Sense "Q" Circuit Low  
P0B8E Hybrid Battery Voltage Sense "Q" Circuit High  
P0B8F Hybrid Battery Voltage Sense "Q" Circuit Intermittent/Erratic  
P0B90 Hybrid Battery Voltage Sense "R" Circuit  
P0B91 Hybrid Battery Voltage Sense "R" Circuit Range/Performance  
P0B92 Hybrid Battery Voltage Sense "R" Circuit Low  
P0B93 Hybrid Battery Voltage Sense "R" Circuit High  
P0B94 Hybrid Battery Voltage Sense "R" Circuit Intermittent/Erratic  
P0B95 Hybrid Battery Voltage Sense "S" Circuit  
P0B96 Hybrid Battery Voltage Sense "S" Circuit Range/Performance  
P0B97 Hybrid Battery Voltage Sense "S" Circuit Low  
P0B98 Hybrid Battery Voltage Sense "S" Circuit High  
P0B99 Hybrid Battery Voltage Sense "S" Circuit Intermittent/Erratic  
P0B9A Hybrid Battery Voltage Sense "T" Circuit  
P0B9B Hybrid Battery Voltage Sense "T" Circuit Range/Performance  
P0B9C Hybrid Battery Voltage Sense "T" Circuit Low  
P0B9D Hybrid Battery Voltage Sense "T" Circuit High  
P0B9E Hybrid Battery Voltage Sense "T" Circuit Intermittent/Erratic  
P0B9F Hybrid Battery Voltage Sense "U" Circuit  
P0BA0 Hybrid Battery Voltage Sense "U" Circuit Range/Performance  
P0BA1 Hybrid Battery Voltage Sense "U" Circuit Low  
P0BA2 Hybrid Battery Voltage Sense "U" Circuit High  
P0BA3 Hybrid Battery Voltage Sense "U" Circuit Intermittent/Erratic  
P0BA4 Hybrid Battery Voltage Sense "V" Circuit  
P0BA5 Hybrid Battery Voltage Sense "V" Circuit Range/Performance  
P0BA6 Hybrid Battery Voltage Sense "V" Circuit Low  
P0BA7 Hybrid Battery Voltage Sense "V" Circuit High  
P0BA8 Hybrid Battery Voltage Sense "V" Circuit Intermittent/Erratic  
P0BA9 Hybrid Battery Voltage Sense "W" Circuit  
P0BAA Hybrid Battery Voltage Sense "W" Circuit Range/Performance  
P0BAB Hybrid Battery Voltage Sense "W" Circuit Low  
P0BAC Hybrid Battery Voltage Sense "W" Circuit High  
P0BAD Hybrid Battery Voltage Sense "W" Circuit Intermittent/Erratic  
P0BAE Hybrid Battery Voltage Sense "X" Circuit  
P0BAF Hybrid Battery Voltage Sense "X" Circuit Range/Performance  
P0BB0 Hybrid Battery Voltage Sense "X" Circuit Low  
P0BB1 Hybrid Battery Voltage Sense "X" Circuit High  
P0BB2 Hybrid Battery Voltage Sense "X" Circuit Intermittent/Erratic  
P0BB3 Hybrid Battery Voltage Sense "Y" Circuit  
P0BB4 Hybrid Battery Voltage Sense "Y" Circuit Range/Performance  
P0BB5 Hybrid Battery Voltage Sense "Y" Circuit Low  
P0BB6 Hybrid Battery Voltage Sense "Y" Circuit High  
P0BB7 Hybrid Battery Voltage Sense "Y" Circuit Intermittent/Erratic  
P0BB8 Hybrid Battery Voltage Sense "Z" Circuit  
P0BB9 Hybrid Battery Voltage Sense "Z" Circuit Range/Performance

P0BBA Hybrid Battery Voltage Sense "Z" Circuit Low  
P0BBB Hybrid Battery Voltage Sense "Z" Circuit High  
P0BBC Hybrid Battery Voltage Sense "Z" Circuit Intermittent/Erratic  
P0BBD Hybrid Battery Pack Voltage Variation Exceeded Limit  
P0BBE Hybrid Battery Pack Voltage Variation  
P0BBF Hybrid Battery Pack Cooling Fan Supply Voltage Circuit/Open  
P0BC0 Hybrid Battery Pack Cooling Fan Supply Voltage Circuit Low  
P0BC1 Hybrid Battery Pack Cooling Fan Supply Voltage Circuit High  
P0BC2 Hybrid Battery Temperature Sensor "E" Circuit  
P0BC3 Hybrid Battery Temperature Sensor "E" Range/Performance  
P0BC4 Hybrid Battery Temperature Sensor "E" Circuit Low  
P0BC5 Hybrid Battery Temperature Sensor "E" Circuit High  
P0BC6 Hybrid Battery Temperature Sensor "E" Circuit Intermittent/Erratic  
P0BC7 Hybrid Battery Pack Cooling Fan Sense Circuit/Open  
P0BC8 Hybrid Battery Pack Cooling Fan Sense Range/Performance  
P0BC9 Hybrid Battery Pack Cooling Fan Sense Circuit Low  
P0BCA Hybrid Battery Pack Cooling Fan Sense Circuit High  
P0BCB Hybrid Battery Pack Cooling Fan Sense Circuit Intermittent/Erratic  
P0BCC Generator Inverter Temperature Sensor Circuit  
P0BCD Generator Inverter Temperature Sensor Circuit Range/Performance  
P0BCE Generator Inverter Temperature Sensor Circuit Low  
P0BCF Generator Inverter Temperature Sensor Circuit High  
P0BD0 Generator Inverter Temperature Sensor Circuit Intermittent/Erratic  
P0BD1 Drive Motor Inverter Temperature Sensor "C" Circuit  
P0BD2 Drive Motor Inverter Temperature Sensor "C" Circuit Range/Performance  
P0BD3 Drive Motor Inverter Temperature Sensor "C" Circuit Low  
P0BD4 Drive Motor Inverter Temperature Sensor "C" Circuit High  
P0BD5 Drive Motor Inverter Temperature Sensor "C" Circuit Intermittent/Erratic  
P0BD6 Drive Motor Inverter Temperature Sensor "D" Circuit  
P0BD7 Drive Motor Inverter Temperature Sensor "D" Circuit Range/Performance  
P0BD8 Drive Motor Inverter Temperature Sensor "D" Circuit Low  
P0BD9 Drive Motor Inverter Temperature Sensor "D" Circuit High  
P0BDA Drive Motor Inverter Temperature Sensor "D" Circuit Intermittent/Erratic  
P0BDB Drive Motor Inverter Temperature Sensor "E" Circuit  
P0BDC Drive Motor Inverter Temperature Sensor "E" Circuit Range/Performance  
P0BDD Drive Motor Inverter Temperature Sensor "E" Circuit Low  
P0BDE Drive Motor Inverter Temperature Sensor "E" Circuit High  
P0BDF Drive Motor Inverter Temperature Sensor "E" Circuit Intermittent/Erratic  
P0BE0 Drive Motor Inverter Temperature Sensor "F" Circuit  
P0BE1 Drive Motor Inverter Temperature Sensor "F" Circuit Range/Performance  
P0BE2 Drive Motor Inverter Temperature Sensor "F" Circuit Low  
P0BE3 Drive Motor Inverter Temperature Sensor "F" Circuit High  
P0BE4 Drive Motor Inverter Temperature Sensor "F" Circuit Intermittent/Erratic  
P0BE5 Drive Motor "A" Phase U Current Sensor Circuit  
P0BE6 Drive Motor "A" Phase U Current Sensor Circuit Range/Performance  
P0BE7 Drive Motor "A" Phase U Current Sensor Circuit Low  
P0BE8 Drive Motor "A" Phase U Current Sensor Circuit High  
P0BE9 Drive Motor "A" Phase V Current Sensor Circuit  
P0BEA Drive Motor "A" Phase V Current Sensor Circuit Range/Performance  
P0BEB Drive Motor "A" Phase V Current Sensor Circuit Low  
P0BEC Drive Motor "A" Phase V Current Sensor Circuit High  
P0BED Drive Motor "A" Phase W Current Sensor Circuit  
P0BEE Drive Motor "A" Phase W Current Sensor Circuit Range/Performance  
P0BEF Drive Motor "A" Phase W Current Sensor Circuit Low  
P0BF0 Drive Motor "A" Phase W Current Sensor Circuit High  
P0BF1 Drive Motor "B" Phase U Current Sensor Circuit

P0BF2 Drive Motor "B" Phase U Current Sensor Circuit Range/Performance  
P0BF3 Drive Motor "B" Phase U Current Sensor Circuit Low  
P0BF4 Drive Motor "B" Phase U Current Sensor Circuit High  
P0BF5 Drive Motor "B" Phase V Current Sensor Circuit  
P0BF6 Drive Motor "B" Phase V Current Sensor Circuit Range/Performance  
P0BF7 Drive Motor "B" Phase V Current Sensor Circuit Low  
P0BF8 Drive Motor "B" Phase V Current Sensor Circuit High  
P0BF9 Drive Motor "B" Phase W Current Sensor Circuit  
P0BFA Drive Motor "B" Phase W Current Sensor Circuit Range/Performance  
P0BFB Drive Motor "B" Phase W Current Sensor Circuit Low  
P0BFC Drive Motor "B" Phase W Current Sensor Circuit High  
P0BFD Drive Motor "A" Phase U-V-W Current Sensor Correlation  
P0BFE Drive Motor "B" Phase U-V-W Current Sensor Correlation  
P0BFF Drive Motor "A" Current

## SAE P0CXX Codes

### HYBRID PROPULSION

P0C00 Drive Motor "A" Current Low  
P0C01 Drive Motor "A" Current High  
P0C02 Drive Motor "B" Current  
P0C03 Drive Motor "B" Current Low  
P0C04 Drive Motor "B" Current High  
P0C05 Drive Motor "A" Phase U-V-W Circuit/Open  
P0C06 Drive Motor "A" Phase U-V-W Circuit Low  
P0C07 Drive Motor "A" Phase U-V-W Circuit High  
P0C08 Drive Motor "B" Phase U-V-W Circuit/Open  
P0C09 Drive Motor "B" Phase U-V-W Circuit Low  
P0C0A Drive Motor "B" Phase U-V-W Circuit High  
P0C0B Drive Motor "A" Inverter Power Supply Circuit/Open  
P0C0C Drive Motor "A" Inverter Power Supply Circuit Low  
P0C0D Drive Motor "A" Inverter Power Supply Circuit High  
P0C0E Drive Motor "B" Inverter Power Supply Circuit/Open  
P0C0F Drive Motor "B" Inverter Power Supply Circuit Low  
P0C10 Drive Motor "B" Inverter Power Supply Circuit High  
P0C11 Drive Motor "A" Inverter Phase U Over Temperature  
P0C12 Drive Motor "A" Inverter Phase V Over Temperature  
P0C13 Drive Motor "A" Inverter Phase W Over Temperature  
P0C14 Drive Motor "B" Inverter Phase U Over Temperature  
P0C15 Drive Motor "B" Inverter Phase V Over Temperature  
P0C16 Drive Motor "B" Inverter Phase W Over Temperature  
P0C17 Drive Motor "A" Position Sensor Not Learned  
P0C18 Drive Motor "B" Position Sensor Not Learned  
P0C19 Drive Motor "A" Torque Delivered Performance

P0C1A Drive Motor "B" Torque Delivered Performance  
P0C1B Auxiliary Transmission Fluid Pump Control Module Internal Temperature Too High  
P0C1C Auxiliary Transmission Fluid Pump Control Module Internal Temperature Sensor Circuit  
P0C1D Auxiliary Transmission Fluid Pump Control Module Internal Temperature Sensor Circuit  
Range/Performance  
P0C1E Auxiliary Transmission Fluid Pump Control Module Internal Temperature Sensor Circuit Low  
P0C1F Auxiliary Transmission Fluid Pump Control Module Internal Temperature Sensor Circuit High  
P0C20 Auxiliary Transmission Fluid Pump Phase U-V-W Circuit/Open  
P0C21 Auxiliary Transmission Fluid Pump Phase U-V-W Circuit Low  
P0C22 Auxiliary Transmission Fluid Pump Phase U-V-W Circuit High  
P0C23 Auxiliary Transmission Fluid Pump Control Module Circuit/Open  
P0C24 Auxiliary Transmission Fluid Pump Control Module Circuit Low  
P0C25 Auxiliary Transmission Fluid Pump Control Module Circuit High  
P0C26 Auxiliary Transmission Fluid Pump Motor Current  
P0C27 Auxiliary Transmission Fluid Pump Motor Current Low  
P0C28 Auxiliary Transmission Fluid Pump Motor Current High  
P0C29 Auxiliary Transmission Fluid Pump Driver Circuit Performance  
P0C2A Auxiliary Transmission Fluid Pump Motor Stalled  
P0C2B Auxiliary Transmission Fluid Pump Control Module Feedback Signal  
P0C2C Auxiliary Transmission Fluid Pump Control Module Feedback Signal Range/Performance  
P0C2D Auxiliary Transmission Fluid Pump Control Module Feedback Signal Low  
P0C2E Auxiliary Transmission Fluid Pump Control Module Feedback Signal High  
P0C2F Internal Control Module Drive Motor/Generator - Engine Speed Sensor Performance  
P0C30 Hybrid Battery Pack State of Charge High  
P0C31 Inverter "B" Cooling System Performance  
P0C32 Hybrid Battery Cooling System Performance  
P0C33 Hybrid Battery Temperature Sensor "F" Circuit  
P0C34 Hybrid Battery Temperature Sensor "F" Circuit Range/Performance  
P0C35 Hybrid Battery Temperature Sensor "F" Circuit Low  
P0C36 Hybrid Battery Temperature Sensor "F" Circuit High  
P0C37 Hybrid Battery Temperature Sensor "F" Circuit Intermittent/Erratic  
P0C38 DC/DC Converter Temperature Sensor "A" Circuit  
P0C39 DC/DC Converter Temperature Sensor "A" Range/Performance  
P0C3A DC/DC Converter Temperature Sensor "A" Low  
P0C3B DC/DC Converter Temperature Sensor "A" High  
P0C3C DC/DC Converter Temperature Sensor "A" Intermittent/Erratic  
P0C3D DC/DC Converter Temperature Sensor "B" Circuit  
P0C3E DC/DC Converter Temperature Sensor "B" Range/Performance  
P0C3F DC/DC Converter Temperature Sensor "B" Low  
P0C40 DC/DC Converter Temperature Sensor "B" High  
P0C41 DC/DC Converter Temperature Sensor "B" Intermittent/Erratic  
P0C42 Hybrid Battery Pack Coolant Temperature Sensor Circuit  
P0C43 Hybrid Battery Pack Coolant Temperature Sensor Circuit Range/Performance  
P0C44 Hybrid Battery Pack Coolant Temperature Sensor Circuit Low  
P0C45 Hybrid Battery Pack Coolant Temperature Sensor Circuit High  
P0C46 Hybrid Battery Pack Coolant Temperature Sensor Circuit Intermittent/Erratic  
P0C47 Hybrid Battery Pack Coolant Pump Control Circuit/Open  
P0C48 Hybrid Battery Pack Coolant Pump Control Circuit Low  
P0C49 Hybrid Battery Pack Coolant Pump Control Circuit High  
P0C4A Hybrid Battery Pack Coolant Pump Control Performance  
P0C4B Hybrid Battery Pack Coolant Pump Supply Voltage Circuit/Open  
P0C4C Hybrid Battery Pack Coolant Pump Supply Voltage Circuit Low  
P0C4D Hybrid Battery Pack Coolant Pump Supply Voltage Circuit High  
P0C4E Drive Motor "A" Position Exceeded Learning Limit  
P0C4F Drive Motor "B" Position Exceeded Learning Limit  
P0C50 Drive Motor "A" Position Sensor Circuit "A"

P0C51 Drive Motor "A" Position Sensor Circuit "A" Range/Performance  
P0C52 Drive Motor "A" Position Sensor Circuit "A" Low  
P0C53 Drive Motor "A" Position Sensor Circuit "A" High  
P0C54 Drive Motor "A" Position Sensor Circuit "A" Intermittent/Erratic  
P0C55 Drive Motor "B" Position Sensor Circuit "A"  
P0C56 Drive Motor "B" Position Sensor Circuit "A" Range/Performance  
P0C57 Drive Motor "B" Position Sensor Circuit "A" Low  
P0C58 Drive Motor "B" Position Sensor Circuit "A" High  
P0C59 Drive Motor "B" Position Sensor Circuit "A" Intermittent/Erratic  
P0C5A Drive Motor "A" Position Sensor Circuit "B"  
P0C5B Drive Motor "A" Position Sensor Circuit "B" Range/Performance  
P0C5C Drive Motor "A" Position Sensor Circuit "B" Low  
P0C5D Drive Motor "A" Position Sensor Circuit "B" High  
P0C5E Drive Motor "A" Position Sensor Circuit "B" Intermittent/Erratic  
P0C5F Drive Motor "B" Position Sensor Circuit "B"  
P0C60 Drive Motor "B" Position Sensor Circuit "B" Range/Performance  
P0C61 Drive Motor "B" Position Sensor Circuit "B" Low  
P0C62 Drive Motor "B" Position Sensor Circuit "B" High  
P0C63 Drive Motor "B" Position Sensor Circuit "B" Intermittent/Erratic  
P0C64 Generator Position Sensor Circuit "A"  
P0C65 Generator Position Sensor Circuit "A" Range/Performance  
P0C66 Generator Position Sensor Circuit "A" Low  
P0C67 Generator Position Sensor Circuit "A" High  
P0C68 Generator Position Sensor Circuit "A" Intermittent/Erratic  
P0C69 Generator Position Sensor Circuit "B"  
P0C6A Generator Position Sensor Circuit "B" Range/Performance  
P0C6B Generator Position Sensor Circuit "B" Low  
P0C6C Generator Position Sensor Circuit "B" High  
P0C6D Generator Position Sensor Circuit "B" Intermittent/Erratic  
P0C6E Hybrid Battery Temperature Sensor "A"/"B" Correlation  
P0C6F Hybrid Battery Temperature Sensor "B"/"C" Correlation  
P0C70 Hybrid Battery Temperature Sensor "C"/"D" Correlation  
P0C71 Hybrid Battery Temperature Sensor "D"/"E" Correlation  
P0C72 Hybrid Battery Temperature Sensor "E"/"F" Correlation  
P0C73 Motor Electronics Coolant Pump "A" Control Performance  
P0C74 Motor Electronics Coolant Pump "B" Control Performance  
P0C75 Hybrid Battery System Discharge Time Too Short  
P0C76 Hybrid Battery System Discharge Time Too Long  
P0C77 Hybrid Battery System Precharge Time Too Short  
P0C78 Hybrid Battery System Precharge Time Too Long  
P0C79 Drive Motor "A" Inverter Voltage Too High  
P0C7A Drive Motor "B" Inverter Voltage Too High  
P0C7B Generator Inverter Voltage Too High  
P0C7C Hybrid Battery Temperature Sensor "G" Circuit  
P0C7D Hybrid Battery Temperature Sensor "G" Range/Performance  
P0C7E Hybrid Battery Temperature Sensor "G" Circuit Low  
P0C7F Hybrid Battery Temperature Sensor "G" Circuit High  
P0C80 Hybrid Battery Temperature Sensor "G" Circuit Intermittent/Erratic  
P0C81 Hybrid Battery Temperature Sensor "H" Circuit  
P0C82 Hybrid Battery Temperature Sensor "H" Range/Performance  
P0C83 Hybrid Battery Temperature Sensor "H" Circuit Low  
P0C84 Hybrid Battery Temperature Sensor "H" Circuit High  
P0C85 Hybrid Battery Temperature Sensor "H" Circuit Intermittent/Erratic  
P0C86 Hybrid Battery Temperature Sensor "F"/"G" Correlation  
P0C87 Hybrid Battery Temperature Sensor "G"/"H" Correlation

# SAE P20XX Codes

## FUEL AND AIR METERING AND AUXILIARY EMISSION CONTROLS

P2000 NOx Adsorber Efficiency Below Threshold Bank 1  
P2001 NOx Adsorber Efficiency Below Threshold Bank 2  
P2002 Diesel Particulate Filter Efficiency Below Threshold Bank 1  
P2003 Diesel Particulate Filter Efficiency Below Threshold Bank 2  
P2004 Intake Manifold Runner Control Stuck Open Bank 1  
P2005 Intake Manifold Runner Control Stuck Open Bank 2  
P2006 Intake Manifold Runner Control Stuck Closed Bank 1  
P2007 Intake Manifold Runner Control Stuck Closed Bank 2  
P2008 Intake Manifold Runner Control Circuit/Open Bank 1  
P2009 Intake Manifold Runner Control Circuit Low Bank 1  
P200A Intake Manifold Runner Performance Bank 1  
P200B Intake Manifold Runner Performance Bank 2  
P200C Diesel Particulate Filter Over Temperature Bank 1  
P200D Diesel Particulate Filter Over Temperature Bank 2  
P200E Catalyst System Over Temperature Bank 1  
P200F Catalyst System Over Temperature Bank 2  
P2010 Intake Manifold Runner Control Circuit High Bank 1  
P2011 Intake Manifold Runner Control Circuit/Open Bank 2  
P2012 Intake Manifold Runner Control Circuit Low Bank 2  
P2013 Intake Manifold Runner Control Circuit High Bank 2  
P2014 Intake Manifold Runner Position Sensor/Switch Circuit Bank 1  
P2015 Intake Manifold Runner Position Sensor/Switch Circuit Range/Performance Bank 1  
P2016 Intake Manifold Runner Position Sensor/Switch Circuit Low Bank 1  
P2017 Intake Manifold Runner Position Sensor/Switch Circuit High Bank 1  
P2018 Intake Manifold Runner Position Sensor/Switch Circuit Intermittent Bank 1  
P2019 Intake Manifold Runner Position Sensor/Switch Circuit Bank 2  
P201A Reductant Injection Valve Circuit Range/Performance Bank 2 Unit 1  
P2020 Intake Manifold Runner Position Sensor/Switch Circuit Range/Performance Bank 2  
P2021 Intake Manifold Runner Position Sensor/Switch Circuit Low Bank 2  
P2022 Intake Manifold Runner Position Sensor/Switch Circuit High Bank 2  
P2023 Intake Manifold Runner Position Sensor/Switch Circuit Intermittent Bank 2  
P2024 Evaporative Emissions (EVAP) Fuel Vapor Temperature Sensor Circuit  
P2025 Evaporative Emissions (EVAP) Fuel Vapor Temperature Sensor Performance  
P2026 Evaporative Emissions (EVAP) Fuel Vapor Temperature Sensor Circuit Low Voltage  
P2027 Evaporative Emissions (EVAP) Fuel Vapor Temperature Sensor Circuit High Voltage  
P2028 Evaporative Emissions (EVAP) Fuel Vapor Temperature Sensor Circuit Intermittent  
P2029 Fuel Fired Heater Disabled  
P202A Reductant Tank Heater Control Circuit/Open  
P202B Reductant Tank Heater Control Circuit Low  
P202C Reductant Tank Heater Control Circuit High  
P202D Reductant Leakage

P202E Reductant Injection Valve Circuit Range/Performance Bank 1 Unit 1  
P202F Reductant/Regeneration Supply Control Circuit Range/Performance  
P2030 Fuel Fired Heater Performance  
P2031 Exhaust Gas Temperature Sensor Circuit Bank 1 Sensor 2  
P2032 Exhaust Gas Temperature Sensor Circuit Low Bank 1 Sensor 2  
P2033 Exhaust Gas Temperature Sensor Circuit High Bank 1 Sensor 2  
P2034 Exhaust Gas Temperature Sensor Circuit Bank 2 Sensor 2  
P2035 Exhaust Gas Temperature Sensor Circuit Low Bank 2 Sensor 2  
P2036 Exhaust Gas Temperature Sensor Circuit High Bank 2 Sensor 2  
P2037 Reductant Injection Air Pressure Sensor "A" Circuit  
P2038 Reductant Injection Air Pressure Sensor "A" Circuit Range/Performance  
P2039 Reductant Injection Air Pressure Sensor "A" Circuit Low  
P203A Reductant Level Sensor Circuit  
P203B Reductant Level Sensor Circuit Range/Performance  
P203C Reductant Level Sensor Circuit Low  
P203D Reductant Level Sensor Circuit High  
P203E Reductant Level Sensor Circuit Intermittent/Erratic  
P203F Reductant Level Too Low  
P2040 Reductant Injection Air Pressure Sensor "A" Circuit High  
P2041 Reductant Injection Air Pressure Sensor "A" Circuit Intermittent  
P2042 Reductant Temperature Sensor Circuit  
P2043 Reductant Temperature Sensor Circuit Range/Performance  
P2044 Reductant Temperature Sensor Circuit Low  
P2045 Reductant Temperature Sensor Circuit High  
P2046 Reductant Temperature Sensor Circuit Intermittent  
P2047 Reductant Injection Valve Circuit/Open Bank 1 Unit 1  
P2048 Reductant Injection Valve Circuit Low Bank 1 Unit 1  
P2049 Reductant Injection Valve Circuit High Bank 1 Unit 1  
P204A Reductant Pressure Sensor Circuit  
P204B Reductant Pressure Sensor Circuit Range/Performance  
P204C Reductant Pressure Sensor Circuit Low  
P204D Reductant Pressure Sensor Circuit High  
P204E Reductant Pressure Sensor Circuit Intermittent/Erratic  
P204F Reductant System Performance Bank 1  
P2050 Reductant Injection Valve Circuit/Open Bank 2 Unit 1  
P2051 Reductant Injection Valve Circuit Low Bank 2 Unit 1  
P2052 Reductant Injection Valve Circuit High Bank 2 Unit 1  
P2053 Reductant Injection Valve Circuit/Open Bank 1 Unit 2  
P2054 Reductant Injection Valve Circuit Low Bank 1 Unit 2  
P2055 Reductant Injection Valve Circuit High Bank 1 Unit 2  
P2056 Reductant Injection Valve Circuit/Open Bank 2 Unit 2  
P2057 Reductant Injection Valve Circuit Low Bank 2 Unit 2  
P2058 Reductant Injection Valve Circuit High Bank 2 Unit 2  
P2059 Reductant Injection Air Pump Control Circuit/Open  
P205A Reductant Tank Temperature Sensor Circuit  
P205B Reductant Tank Temperature Sensor Circuit Range/Performance  
P205C Reductant Tank Temperature Sensor Circuit Low  
P205D Reductant Tank Temperature Sensor Circuit High  
P205E Reductant Tank Temperature Sensor Circuit Intermittent/Erratic  
P205F Reductant System Performance Bank 2  
P2060 Reductant Injection Air Pump Control Circuit Low  
P2061 Reductant Injection Air Pump Control Circuit High  
P2062 Reductant/Regeneration Supply Control Circuit/Open  
P2063 Reductant/Regeneration Supply Control Circuit Low  
P2064 Reductant/Regeneration Supply Control Circuit High  
P2065 Fuel Level Sensor "B" Circuit



P2066 Fuel Level Sensor "B" Performance  
P2067 Fuel Level Sensor "B" Circuit Low  
P2068 Fuel Level Sensor "B" Circuit High  
P2069 Fuel Level Sensor "B" Circuit Intermittent  
P206A Reductant Quality Sensor Circuit  
P206B Reductant Quality Sensor Circuit Range/Performance  
P206C Reductant Quality Sensor Circuit Low  
P206D Reductant Quality Sensor Circuit High  
P206E Intake Manifold Tuning (IMT) Valve Stuck Open Bank 2  
P206F Intake Manifold Tuning (IMT) Valve Stuck Closed Bank 2  
P2070 Intake Manifold Tuning (IMT) Valve Stuck Open Bank 1  
P2071 Intake Manifold Tuning (IMT) Valve Stuck Closed Bank 1  
P2072 Throttle Actuator Control System - Ice Blockage  
P2073 Manifold Absolute Pressure/Mass Air Flow - Throttle Position Correlation at Idle  
P2074 Manifold Absolute Pressure/Mass Air Flow - Throttle Position Correlation at Higher Load  
P2075 Intake Manifold Tuning (IMT) Valve Position Sensor/Switch Circuit Bank 1  
P2076 Intake Manifold Tuning (IMT) Valve Position Sensor/Switch Circuit Range/Performance Bank 1  
P2077 Intake Manifold Tuning (IMT) Valve Position Sensor/Switch Circuit Low Bank 1  
P2078 Intake Manifold Tuning (IMT) Valve Position Sensor/Switch Circuit High Bank 1  
P2079 Intake Manifold Tuning (IMT) Valve Position Sensor/Switch Circuit Intermittent Bank 1  
P207A Intake Manifold Tuning (IMT) Valve Position Sensor/Switch Circuit Bank 2 c  
P207B Intake Manifold Tuning (IMT) Valve Position Sensor/Switch Circuit Range/Performance Bank 2  
P207C Intake Manifold Tuning (IMT) Valve Position Sensor/Switch Circuit Low Bank 2  
P207D Intake Manifold Tuning (IMT) Valve Position Sensor/Switch Circuit High Bank 2  
P207E Intake Manifold Tuning (IMT) Valve Position Sensor/Switch Circuit Intermittent Bank 2  
P207F Reductant Quality Performance  
P2080 Exhaust Gas Temperature Sensor Circuit Range/Performance Bank 1 Sensor 1  
P2081 Exhaust Gas Temperature Sensor Circuit Intermittent Bank 1 Sensor 1  
P2082 Exhaust Gas Temperature Sensor Circuit Range/Performance Bank 2 Sensor 1  
P2083 Exhaust Gas Temperature Sensor Circuit Intermittent Bank 2 Sensor 1  
P2084 Exhaust Gas Temperature Sensor Circuit Range/Performance Bank 1 Sensor 2  
P2085 Exhaust Gas Temperature Sensor Circuit Intermittent Bank 1 Sensor 2  
P2086 Exhaust Gas Temperature Sensor Circuit Range/Performance Bank 2 Sensor 2  
P2087 Exhaust Gas Temperature Sensor Circuit Intermittent Bank 2 Sensor 2  
P2088 "A" Camshaft Position Actuator Control Circuit Low Bank 1  
P2089 "A" Camshaft Position Actuator Control Circuit High Bank 1  
P208A Reductant Pump Control Circuit/Open  
P208B Reductant Pump Control Range/Performance  
P208C Reductant Pump Control Circuit Low  
P208D Reductant Pump Control Circuit High  
P208E Reductant Injection Valve Stuck Closed Bank 1 Unit 1  
P208F Reductant Injection Valve Stuck Closed Bank 2 Unit 1  
P2090 "B" Camshaft Position Actuator Control Circuit Low Bank 1  
P2091 "B" Camshaft Position Actuator Control Circuit High Bank 1  
P2092 "A" Camshaft Position Actuator Control Circuit Low Bank 2  
P2093 "A" Camshaft Position Actuator Control Circuit High Bank 2  
P2094 "B" Camshaft Position Actuator Control Circuit Low Bank 2  
P2095 "B" Camshaft Position Actuator Control Circuit High Bank 2  
P2096 Post Catalyst Fuel Trim System Too Lean Bank 1  
P2097 Post Catalyst Fuel Trim System Too Rich Bank 1  
P2098 Post Catalyst Fuel Trim System Too Lean Bank 2  
P2099 Post Catalyst Fuel Trim System Too Rich Bank 2  
P209A Reductant Injection Air Pressure Sensor "B" Circuit  
P209B Reductant Injection Air Pressure Sensor "B" Circuit Range/Performance  
P209C Reductant Injection Air Pressure Sensor "B" Circuit Low  
P209D Reductant Injection Air Pressure Sensor "B" Circuit High

P209E Reductant Injection Air Pressure Sensor "A"/"B" Correlation  
P209F Reductant Tank Heater Control Circuit Performance  
P20A0 Reductant Purge Control Valve Circuit /Open  
P20A1 Reductant Purge Control Valve Performance  
P20AA Reductant Injection Air Pressure Control Valve Stuck Open  
P20AB Reductant Injection Air Pressure Control Valve Stuck Closed  
P20AC Reductant Metering Unit Temperature Sensor Circuit  
P20AD Reductant Metering Unit Temperature Sensor Circuit Range/Performance  
P20AE Reductant Metering Unit Temperature Sensor Circuit Low  
P20AF Reductant Metering Unit Temperature Sensor Circuit High  
P20B0 Reductant Metering Unit Temperature Sensor Circuit Intermittent/Erratic  
P20B1 Reductant Heater Coolant Control Valve Circuit/Open  
P20B2 Reductant Heater Coolant Control Valve Performance  
P20B3 Reductant Heater Coolant Control Valve Circuit Low  
P20B4 Reductant Heater Coolant Control Valve Circuit High  
P20B5 Reductant Metering Unit Heater Control Circuit/Open  
P20B6 Reductant Metering Unit Heater Control Circuit Performance  
P20B7 Reductant Metering Unit Heater Control Circuit Low  
P20B8 Reductant Metering Unit Heater Control Circuit High  
P20B9 Reductant Heater "A" Control Circuit/Open  
P20BA Reductant Heater "A" Control Circuit Performance  
P20BB Reductant Heater "A" Control Circuit Low  
P20BC Reductant Heater "A" Control Circuit High  
P20BD Reductant Heater "B" Control Circuit/Open  
P20BE Reductant Heater "B" Control Circuit Performance  
P20BF Reductant Heater "B" Control Circuit Low  
P20C0 Reductant Heater "B" Control Circuit High  
P20C1 Reductant Heater "C" Control Circuit/Open  
P20C2 Reductant Heater "C" Control Circuit Performance  
P20C3 Reductant Heater "C" Control Circuit Low  
P20C4 Reductant Heater "C" Control Circuit High  
P20C5 Reductant Heater "D" Control Circuit/Open  
P20C6 Reductant Heater "D" Control Circuit Performance  
P20C7 Reductant Heater "D" Control Circuit Low  
P20C8 Reductant Heater "D" Control Circuit High  
P20C9 Reductant Control Module Requested MIL Illumination  
P20CA Reductant Injection Air Pressure Leakage  
P20CB Exhaust Aftertreatment Fuel Injector "A" Control Circuit/Open  
P20CC Exhaust Aftertreatment Fuel Injector "A" Control Performance  
P20CD Exhaust Aftertreatment Fuel Injector "A" Control Circuit Low  
P20CE Exhaust Aftertreatment Fuel Injector "A" Control Circuit High  
P20CF Exhaust Aftertreatment Fuel Injector "A" Stuck Open  
P20D0 Exhaust Aftertreatment Fuel Injector "A" Stuck Closed  
P20D1 Exhaust Aftertreatment Fuel Injector "B" Control Circuit/Open  
P20D2 Exhaust Aftertreatment Fuel Injector "B" Control Performance  
P20D3 Exhaust Aftertreatment Fuel Injector "B" Control Circuit Low  
P20D4 Exhaust Aftertreatment Fuel Injector "B" Control Circuit High  
P20D5 Exhaust Aftertreatment Fuel Injector "B" Stuck Open  
P20D6 Exhaust Aftertreatment Fuel Injector "B" Stuck Closed  
P20D7 Exhaust Aftertreatment Fuel Supply Control Circuit/Open  
P20D8 Exhaust Aftertreatment Fuel Supply Control Performance  
P20D9 Exhaust Aftertreatment Fuel Supply Control Circuit Low  
P20DA Exhaust Aftertreatment Fuel Supply Control Circuit High  
P20DB Exhaust Aftertreatment Fuel Supply Control Stuck Open  
P20DC Exhaust Aftertreatment Fuel Supply Control Stuck Closed  
P20A2 Reductant Purge Control Valve Circuit Low

P20A3 Reductant Purge Control Valve Circuit High  
P20A4 Reductant Purge Control Valve Stuck Open  
P20A5 Reductant Purge Control Valve Stuck Closed  
P20A6 Reductant Injection Air Pressure Control Valve Circuit/Open  
P20A7 Reductant Injection Air Pressure Control Valve Performance  
P20A8 Reductant Injection Air Pressure Control Valve Circuit Low  
P20A9 Reductant Injection Air Pressure Control Valve Circuit High  
P20DD Exhaust Aftertreatment Fuel Pressure Sensor Circuit  
P20DE Exhaust Aftertreatment Fuel Pressure Sensor Circuit Range/Performance  
P20DF Exhaust Aftertreatment Fuel Pressure Sensor Circuit Low  
P20E0 Exhaust Aftertreatment Fuel Pressure Sensor Circuit High  
P20E1 Exhaust Aftertreatment Fuel Pressure Sensor Circuit Intermittent/Erratic  
P20E2 Exhaust Gas Temperature Sensor 1/2 Correlation Bank 1  
P20E3 Exhaust Gas Temperature Sensor 1/3 Correlation Bank 1  
P20E4 Exhaust Gas Temperature Sensor 2/3 Correlation Bank 1  
P20E5 Exhaust Gas Temperature Sensor 1/2 Correlation Bank 2  
P20E6 Reductant Injection Air Pressure Too Low  
P20E7 Reductant Injection Air Pressure Too High  
P20E8 Reductant Pressure Too Low  
P20E9 Reductant Pressure Too High  
P20EA Reductant Control Module Power Relay De-Energized Performance - Too Early  
P20EB Reductant Control Module Power Relay De-Energized Performance - Too Late  
P20EC SCR NOx Catalyst - Over Temperature Bank 1  
P20ED SCR NOx Pre-Catalyst - Over Temperature Bank 1  
P20EE SCR NOx Catalyst Efficiency Below Threshold Bank 1  
P20EF SCR NOx Pre-Catalyst Efficiency Below Threshold Bank 1  
P20F0 SCR NOx Catalyst - Over Temperature Bank 2  
P20F1 SCR NOx Pre-Catalyst - Over Temperature Bank 2  
P20F2 SCR NOx Catalyst Efficiency Below Threshold Bank 2  
P20F3 SCR NOx Pre-Catalyst Efficiency Below Threshold Bank 2  
P20F4 Reductant Consumption Too Low  
P20F5 Reductant Consumption Too High  
P20F6 Reductant Injection Valve Stuck Open Bank 1 Unit 1  
P20F7 Reductant Injection Valve Stuck Open Bank 2 Unit 1  
P2100 Throttle Actuator "A" Control Motor Circuit/Open  
P2101 Throttle Actuator "A" Control Motor Circuit Range/Performance  
P2102 Throttle Actuator "A" Control Motor Circuit Low  
P2103 Throttle Actuator "A" Control Motor Circuit High  
P2104 Throttle Actuator Control System - Forced Idle  
P2105 Throttle Actuator Control System - Forced Engine Shutdown  
P2106 Throttle Actuator Control System - Forced Limited Power  
P2107 Throttle Actuator Control Module Processor  
P2108 Throttle Actuator Control Module Performance  
P2109 Throttle/Pedal Position Sensor "A" Minimum Stop Performance  
P210A Throttle Actuator "B" Control Motor Circuit/Open  
P210B Throttle Actuator "B" Control Motor Circuit Range/Performance  
P210C Throttle Actuator "B" Control Motor Circuit Low  
P210D Throttle Actuator "B" Control Motor Circuit High  
P210E Throttle/Pedal Position Sensor/Switch "C"/"F" Voltage Correlation  
P2110 Throttle Actuator Control System - Forced Limited RPM  
P2111 Throttle Actuator Control System - Stuck Open  
P2112 Throttle Actuator Control System - Stuck Closed  
P2113 Throttle/Pedal Position Sensor "B" Minimum Stop Performance  
P2114 Throttle/Pedal Position Sensor "C" Minimum Stop Performance  
P2115 Throttle/Pedal Position Sensor "D" Minimum Stop Performance  
P2116 Throttle/Pedal Position Sensor "E" Minimum Stop Performance

P2117 Throttle/Pedal Position Sensor "F" Minimum Stop Performance  
P2118 Throttle Actuator Control Motor Current Range/Performance  
P2119 Throttle Actuator Control Throttle Body Range/Performance  
P2120 Throttle/Pedal Position Sensor/Switch "D" Circuit  
P2121 Throttle/Pedal Position Sensor/Switch "D" Circuit Range/Performance  
P2122 Throttle/Pedal Position Sensor/Switch "D" Circuit Low  
P2123 Throttle/Pedal Position Sensor/Switch "D" Circuit High  
P2124 Throttle/Pedal Position Sensor/Switch "D" Circuit Intermittent  
P2125 Throttle/Pedal Position Sensor/Switch "E" Circuit  
P2126 Throttle/Pedal Position Sensor/Switch "E" Circuit Range/Performance  
P2127 Throttle/Pedal Position Sensor/Switch "E" Circuit Low  
P2128 Throttle/Pedal Position Sensor/Switch "E" Circuit High  
P2129 Throttle/Pedal Position Sensor/Switch "E" Circuit Intermittent  
P212A Throttle Position Sensor/Switch "G" Circuit  
P212B Throttle Position Sensor/Switch "G" Circuit Range/Performance  
P212C Throttle Position Sensor/Switch "G" Circuit Low  
P212D Throttle Position Sensor/Switch "G" Circuit High  
P212E Throttle Position Sensor/Switch "G" Circuit Intermittent  
P2130 Throttle/Pedal Position Sensor/Switch "F" Circuit  
P2131 Throttle/Pedal Position Sensor/Switch "F" Circuit Range/Performance  
P2132 Throttle/Pedal Position Sensor/Switch "F" Circuit Low  
P2133 Throttle/Pedal Position Sensor/Switch "F" Circuit High  
P2134 Throttle/Pedal Position Sensor/Switch "F" Circuit Intermittent  
P2135 Throttle/Pedal Position Sensor/Switch "A"/"B" Voltage Correlation  
P2136 Throttle/Pedal Position Sensor/Switch "A"/"C" Voltage Correlation  
P2137 Throttle/Pedal Position Sensor/Switch "B"/"C" Voltage Correlation  
P2138 Throttle/Pedal Position Sensor/Switch "D"/"E" Voltage Correlation  
P2139 Throttle/Pedal Position Sensor/Switch "D"/"F" Voltage Correlation  
P213A Exhaust Gas Recirculation Throttle Control Circuit "B" /Open  
P213B Exhaust Gas Recirculation Throttle Control Circuit "B" Range/Performance  
P213C Exhaust Gas Recirculation Throttle Control Circuit "B" Low  
P213D Exhaust Gas Recirculation Throttle Control Circuit "B" High  
P213E Fuel Injection System Fault - Forced Engine Shutdown  
P213F Fuel Pump System Fault - Forced Engine Shutdown  
P2140 Throttle/Pedal Position Sensor/Switch "E"/"F" Voltage Correlation  
P2141 Exhaust Gas Recirculation Throttle Control Circuit "A" Low  
P2142 Exhaust Gas Recirculation Throttle Control Circuit "A" High  
P2143 Exhaust Gas Recirculation Vent Control Circuit/Open  
P2144 Exhaust Gas Recirculation Vent Control Circuit Low  
P2145 Exhaust Gas Recirculation Vent Control Circuit High  
P2146 Fuel Injector Group "A" Supply Voltage Circuit/Open  
P2147 Fuel Injector Group "A" Supply Voltage Circuit Low  
P2148 Fuel Injector Group "A" Supply Voltage Circuit High  
P2149 Fuel Injector Group "B" Supply Voltage Circuit/Open  
P2150 Fuel Injector Group "B" Supply Voltage Circuit Low  
P2151 Fuel Injector Group "B" Supply Voltage Circuit High  
P2152 Fuel Injector Group "C" Supply Voltage Circuit/Open  
P2153 Fuel Injector Group "C" Supply Voltage Circuit Low  
P2154 Fuel Injector Group "C" Supply Voltage Circuit High  
P2155 Fuel Injector Group "D" Supply Voltage Circuit/Open  
P2156 Fuel Injector Group "D" Supply Voltage Circuit Low  
P2157 Fuel Injector Group "D" Supply Voltage Circuit High  
P2158 Vehicle Speed Sensor "B"  
P2159 Vehicle Speed Sensor "B" Range/Performance  
P215A Vehicle Speed - Wheel Speed Correlation  
P215B Vehicle Speed - Output Shaft Speed Correlation

P215C Output Shaft Speed - Wheel Speed Correlation  
P2160 Vehicle Speed Sensor "B" Circuit Low  
P2161 Vehicle Speed Sensor "B" Intermittent/Erratic/High  
P2162 Vehicle Speed Sensor "A"/"B" Correlation  
P2163 Throttle/Pedal Position Sensor "A" Maximum Stop Performance  
P2164 Throttle/Pedal Position Sensor "B" Maximum Stop Performance  
P2165 Throttle/Pedal Position Sensor "C" Maximum Stop Performance  
P2166 Throttle/Pedal Position Sensor "D" Maximum Stop Performance  
P2167 Throttle/Pedal Position Sensor "E" Maximum Stop Performance  
P2168 Throttle/Pedal Position Sensor "F" Maximum Stop Performance  
P2169 Exhaust Pressure Regulator Vent Solenoid Control Circuit/Open  
P216A Fuel Injector Group "E" Supply Voltage Circuit/Open  
P216B Fuel Injector Group "E" Supply Voltage Circuit Low  
P216C Fuel Injector Group "E" Supply Voltage Circuit High  
P216D Fuel Injector Group "F" Supply Voltage Circuit/Open  
P216E Fuel Injector Group "F" Supply Voltage Circuit Low  
P216F Fuel Injector Group "F" Supply Voltage Circuit High  
P2170 Exhaust Pressure Regulator Vent Solenoid Control Circuit Low  
P2171 Exhaust Pressure Regulator Vent Solenoid Control Circuit High  
P2172 Throttle Actuator Control System - Sudden High Air Flow Detected  
P2173 Throttle Actuator Control System - High Air Flow Detected  
P2174 Throttle Actuator Control System - Sudden Low Air Flow Detected  
P2175 Throttle Actuator Control System - Low Air Flow Detected  
P2176 Throttle Actuator Control System - Idle Position Not Learned  
P2177 System Too Lean Off Idle Bank 1  
P2178 System Too Rich Off Idle Bank 1  
P2179 System Too Lean Off Idle Bank 2  
P217A Fuel Injector Group "G" Supply Voltage Circuit/Open  
P217B Fuel Injector Group "G" Supply Voltage Circuit Low  
P217C Fuel Injector Group "G" Supply Voltage Circuit High  
P217D Fuel Injector Group "H" Supply Voltage Circuit/Open  
P217E Fuel Injector Group "H" Supply Voltage Circuit Low  
P217F Fuel Injector Group "H" Supply Voltage Circuit High  
P2180 System Too Rich Off Idle Bank 2  
P2181 Cooling System Performance  
P2182 Engine Coolant Temperature Sensor 2 Circuit  
P2183 Engine Coolant Temperature Sensor 2 Circuit Range/Performance  
P2184 Engine Coolant Temperature Sensor 2 Circuit Low  
P2185 Engine Coolant Temperature Sensor 2 Circuit High  
P2186 Engine Coolant Temperature Sensor 2 Circuit Intermittent/Erratic  
P2187 System Too Lean at Idle Bank 1  
P2188 System Too Rich at Idle Bank 1  
P2189 System Too Lean at Idle Bank 2  
P2190 System Too Rich at Idle Bank 2  
P2191 System Too Lean at Higher Load Bank 1  
P2192 System Too Rich at Higher Load Bank 1  
P2193 System Too Lean at Higher Load Bank 2  
P2194 System Too Rich at Higher Load Bank 2  
P2195 O2 Sensor Signal Biased/Stuck Lean Bank 1 Sensor 1  
P2196 O2 Sensor Signal Biased/Stuck Rich Bank 1 Sensor 1  
P2197 O2 Sensor Signal Biased/Stuck Lean Bank 2 Sensor 1  
P2198 O2 Sensor Signal Biased/Stuck Rich Bank 2 Sensor 1  
P2199 Intake Air Temperature Sensor 1/2 Correlation

# SAE P22XX Codes

## FUEL AND AIR METERING AND AUXILIARY EMISSION CONTROLS

P2200 NOx Sensor Circuit Bank 1  
P2201 NOx Sensor Circuit Range/Performance Bank 1  
P2202 NOx Sensor Circuit Low Bank 1  
P2203 NOx Sensor Circuit High Bank 1  
P2204 NOx Sensor Circuit Intermittent Bank 1  
P2205 NOx Sensor Heater Control Circuit/Open Bank 1  
P2206 NOx Sensor Heater Control Circuit Low Bank 1  
P2207 NOx Sensor Heater Control Circuit High Bank 1  
P2208 NOx Sensor Heater Sense Circuit Bank 1  
P2209 NOx Sensor Heater Sense Circuit Range/Performance Bank 1  
P2210 NOx Sensor Heater Sense Circuit Low Bank 1  
P2211 NOx Sensor Heater Sense Circuit High Bank 1  
P2212 NOx Sensor Heater Sense Circuit Intermittent Bank 1  
P2213 NOx Sensor Circuit Bank 2  
P2214 NOx Sensor Circuit Range/Performance Bank 2  
P2215 NOx Sensor Circuit Low Bank 2  
P2216 NOx Sensor Circuit High Bank 2  
P2217 NOx Sensor Circuit Intermittent Bank 2  
P2218 NOx Sensor Heater Control Circuit/Open Bank 2  
P2219 NOx Sensor Heater Control Circuit Low Bank 2  
P2220 NOx Sensor Heater Control Circuit High Bank 2  
P2221 NOx Sensor Heater Sense Circuit Bank 2  
P2222 NOx Sensor Heater Sense Circuit Range/Performance Bank 2  
P2223 NOx Sensor Heater Sense Circuit Low Bank 2  
P2224 NOx Sensor Heater Sense Circuit High Bank 2  
P2225 NOx Sensor Heater Sense Circuit Intermittent Bank 2  
P2226 Barometric Pressure Sensor "A" Circuit  
P2227 Barometric Pressure Sensor "A" Circuit Range/Performance  
P2228 Barometric Pressure Sensor "A" Circuit Low  
P2229 Barometric Pressure Sensor "A" Circuit High  
P222A Barometric Pressure Sensor "B" Circuit  
P222B Barometric Pressure Sensor "B" Circuit Range/Performance  
P222C Barometric Pressure Sensor "B" Circuit Low  
P222D Barometric Pressure Sensor "B" Circuit High  
P222E Barometric Pressure Sensor "B" Circuit Intermittent/Erratic  
P222F Barometric Pressure Sensor "A"/"B" Correlation  
P2230 Barometric Pressure Sensor "A" Circuit Intermittent/Erratic  
P2231 O2 Sensor Signal Circuit Shorted to Heater Circuit Bank 1 Sensor 1  
P2232 O2 Sensor Signal Circuit Shorted to Heater Circuit Bank 1 Sensor 2  
P2233 O2 Sensor Signal Circuit Shorted to Heater Circuit Bank 1 Sensor 3  
P2234 O2 Sensor Signal Circuit Shorted to Heater Circuit Bank 2 Sensor 1  
P2235 O2 Sensor Signal Circuit Shorted to Heater Circuit Bank 2 Sensor 2

P2236 O2 Sensor Signal Circuit Shorted to Heater Circuit Bank 2 Sensor 3  
P2237 O2 Sensor Positive Current Control Circuit/Open Bank 1 Sensor 1  
P2238 O2 Sensor Positive Current Control Circuit Low Bank 1 Sensor 1  
P2239 O2 Sensor Positive Current Control Circuit High Bank 1 Sensor 1  
P2240 O2 Sensor Positive Current Control Circuit/Open Bank 2 Sensor 1  
P2241 O2 Sensor Positive Current Control Circuit Low Bank 2 Sensor 1  
P2242 O2 Sensor Positive Current Control Circuit High Bank 2 Sensor 1  
P2243 O2 Sensor Reference Voltage Circuit/Open Bank 1 Sensor 1  
P2244 O2 Sensor Reference Voltage Performance Bank 1 Sensor 1  
P2245 O2 Sensor Reference Voltage Circuit Low Bank 1 Sensor 1  
P2246 O2 Sensor Reference Voltage Circuit High Bank 1 Sensor 1  
P2247 O2 Sensor Reference Voltage Circuit/Open Bank 2 Sensor 1  
P2248 O2 Sensor Reference Voltage Performance Bank 2 Sensor 1  
P2249 O2 Sensor Reference Voltage Circuit Low Bank 2 Sensor 1  
P2250 O2 Sensor Reference Voltage Circuit High Bank 2 Sensor 1  
P2251 O2 Sensor Negative Current Control Circuit/Open Bank 1 Sensor 1  
P2252 O2 Sensor Negative Current Control Circuit Low Bank 1 Sensor 1  
P2253 O2 Sensor Negative Current Control Circuit High Bank 1 Sensor 1  
P2254 O2 Sensor Negative Current Control Circuit/Open Bank 2 Sensor 1  
P2255 O2 Sensor Negative Current Control Circuit Low Bank 2 Sensor 1  
P2256 O2 Sensor Negative Current Control Circuit High Bank 2 Sensor 1  
P2257 Secondary Air Injection System Control "A" Circuit Low  
P2258 Secondary Air Injection System Control "A" Circuit High  
P2259 Secondary Air Injection System Control "B" Circuit Low  
P2260 Secondary Air Injection System Control "B" Circuit High  
P2261 Turbocharger/Supercharger Bypass Valve - Mechanical  
P2262 Turbocharger/Supercharger Boost Pressure Not Detected - Mechanical  
P2263 Turbocharger/Supercharger Boost System Performance  
P2264 Water in Fuel Sensor Circuit  
P2265 Water in Fuel Sensor Circuit Range/Performance  
P2266 Water in Fuel Sensor Circuit Low  
P2267 Water in Fuel Sensor Circuit High  
P2268 Water in Fuel Sensor Circuit Intermittent  
P2269 Water in Fuel Condition  
P226A Water in Fuel Lamp Control Circuit  
P226B Turbocharger/Supercharger Boost Pressure Too High - Mechanical  
P2270 O2 Sensor Signal Biased/Stuck Lean Bank 1 Sensor 2  
P2271 O2 Sensor Signal Biased/Stuck Rich Bank 1 Sensor 2  
P2272 O2 Sensor Signal Biased/Stuck Lean Bank 2 Sensor 2  
P2273 O2 Sensor Signal Biased/Stuck Rich Bank 2 Sensor 2  
P2274 O2 Sensor Signal Biased/Stuck Lean Bank 1 Sensor 3  
P2275 O2 Sensor Signal Biased/Stuck Rich Bank 1 Sensor 3  
P2276 O2 Sensor Signal Biased/Stuck Lean Bank 2 Sensor 3  
P2277 O2 Sensor Signal Biased/Stuck Rich Bank 2 Sensor 3  
P2278 O2 Sensor Signals Swapped Bank 1 Sensor 3/Bank 2 Sensor 3  
P2279 Intake Air System Leak  
P2280 Air Flow Restriction/Air Leak Between Air Filter and MAF  
P2281 Air Leak Between MAF and Throttle Body  
P2282 Air Leak Between Throttle Body and Intake Valves  
P2283 Injector Control Pressure Sensor Circuit  
P2284 Injector Control Pressure Sensor Circuit Range/Performance  
P2285 Injector Control Pressure Sensor Circuit Low  
P2286 Injector Control Pressure Sensor Circuit High  
P2287 Injector Control Pressure Sensor Circuit Intermittent  
P2288 Injector Control Pressure Too High  
P2289 Injector Control Pressure Too High - Engine Off

P228A Fuel Pressure Regulator 1 - Forced Engine Shutdown  
P228B Fuel Pressure Regulator 2 - Forced Engine Shutdown  
P228C Fuel Pressure Regulator 1 Exceeded Control Limits - Pressure Too Low  
P228D Fuel Pressure Regulator 1 Exceeded Control Limits - Pressure Too High  
P228E Fuel Pressure Regulator 1 Exceeded Learning Limits - Too Low  
P228F Fuel Pressure Regulator 1 Exceeded Learning Limits - Too High  
P2290 Injector Control Pressure Too Low  
P2291 Injector Control Pressure Too Low - Engine Cranking  
P2292 Injector Control Pressure Erratic  
P2293 Fuel Pressure Regulator 2 Performance  
P2294 Fuel Pressure Regulator 2 Control Circuit/Open  
P2295 Fuel Pressure Regulator 2 Control Circuit Low  
P2296 Fuel Pressure Regulator 2 Control Circuit High  
P2297 O2 Sensor Out of Range During Deceleration Bank 1 Sensor 1  
P2298 O2 Sensor Out of Range During Deceleration Bank 2 Sensor 1  
P2299 Brake Pedal Position/Accelerator Pedal Position Incompatible  
P229A Fuel Pressure Regulator 2 Exceeded Control Limits - Pressure Too Low  
P229B Fuel Pressure Regulator 2 Exceeded Control Limits - Pressure Too High  
P229C Fuel Pressure Regulator 2 Exceeded Learning Limits - Too Low  
P229D Fuel Pressure Regulator 2 Exceeded Learning Limits - Too High

## SAE P23XX Codes

### IGNITION SYSTEM OR MISFIRE

P2300 Ignition Coil "A" Primary Control Circuit Low  
P2301 Ignition Coil "A" Primary Control Circuit High  
P2302 Ignition Coil "A" Secondary Circuit  
P2303 Ignition Coil "B" Primary Control Circuit Low  
P2304 Ignition Coil "B" Primary Control Circuit High  
P2305 Ignition Coil "B" Secondary Circuit  
P2306 Ignition Coil "C" Primary Control Circuit Low  
P2307 Ignition Coil "C" Primary Control Circuit High  
P2308 Ignition Coil "C" Secondary Circuit  
P2309 Ignition Coil "D" Primary Control Circuit Low  
P2310 Ignition Coil "D" Primary Control Circuit High  
P2311 Ignition Coil "D" Secondary Circuit  
P2312 Ignition Coil "E" Primary Control Circuit Low  
P2313 Ignition Coil "E" Primary Control Circuit High  
P2314 Ignition Coil "E" Secondary Circuit  
P2315 Ignition Coil "F" Primary Control Circuit Low  
P2316 Ignition Coil "F" Primary Control Circuit High  
P2317 Ignition Coil "F" Secondary Circuit  
P2318 Ignition Coil "G" Primary Control Circuit Low  
P2319 Ignition Coil "G" Primary Control Circuit High  
P2320 Ignition Coil "G" Secondary Circuit  
P2321 Ignition Coil "H" Primary Control Circuit Low



P2322 Ignition Coil "H" Primary Control Circuit High  
P2323 Ignition Coil "H" Secondary Circuit  
P2324 Ignition Coil "I" Primary Control Circuit Low  
P2325 Ignition Coil "I" Primary Control Circuit High  
P2326 Ignition Coil "I" Secondary Circuit  
P2327 Ignition Coil "J" Primary Control Circuit Low  
P2328 Ignition Coil "J" Primary Control Circuit High  
P2329 Ignition Coil "J" Secondary Circuit  
P2330 Ignition Coil "K" Primary Control Circuit Low  
P2331 Ignition Coil "K" Primary Control Circuit High  
P2332 Ignition Coil "K" Secondary Circuit  
P2333 Ignition Coil "L" Primary Control Circuit Low  
P2334 Ignition Coil "L" Primary Control Circuit High  
P2335 Ignition Coil "L" Secondary Circuit  
P2336 Cylinder 1 Above Knock Threshold  
P2337 Cylinder 2 Above Knock Threshold  
P2338 Cylinder 3 Above Knock Threshold  
P2339 Cylinder 4 Above Knock Threshold  
P2340 Cylinder 5 Above Knock Threshold  
P2341 Cylinder 6 Above Knock Threshold  
P2342 Cylinder 7 Above Knock Threshold  
P2343 Cylinder 8 Above Knock Threshold  
P2344 Cylinder 9 Above Knock Threshold  
P2345 Cylinder 10 Above Knock Threshold  
P2346 Cylinder 11 Above Knock Threshold  
P2347 Cylinder 12 Above Knock Threshold

## SAE P24XX Codes

### AUXILIARY EMISSION CONTROLS

P2400 Evaporative Emission System Leak Detection Pump Control Circuit/Open  
P2401 Evaporative Emission System Leak Detection Pump Control Circuit Low  
P2402 Evaporative Emission System Leak Detection Pump Control Circuit High  
P2403 Evaporative Emission System Leak Detection Pump Sense Circuit/Open  
P2404 Evaporative Emission System Leak Detection Pump Sense Circuit Range/Performance  
P2405 Evaporative Emission System Leak Detection Pump Sense Circuit Low  
P2406 Evaporative Emission System Leak Detection Pump Sense Circuit High  
P2407 Evaporative Emission System Leak Detection Pump Sense Circuit Intermittent/Erratic  
P2408 Fuel Cap Sensor/Switch Circuit  
P2409 Fuel Cap Sensor/Switch Circuit Range/Performance  
P240A Evaporative Emission System Leak Detection Pump Heater Control Circuit/Open

P240B Evaporative Emission System Leak Detection Pump Heater Control Circuit Low  
P240C Evaporative Emission System Leak Detection Pump Heater Control Circuit High  
P2410 Fuel Cap Sensor/Switch Circuit Low  
P2411 Fuel Cap Sensor/Switch Circuit High  
P2412 Fuel Cap Sensor/Switch Circuit Intermittent/Erratic  
P2413 Exhaust Gas Recirculation System Performance  
P2414 O2 Sensor Exhaust Sample Error Bank 1 Sensor 1  
P2415 O2 Sensor Exhaust Sample Error Bank 2 Sensor 1  
P2416 O2 Sensor Signals Swapped Bank 1 Sensor 2/Bank 1 Sensor 3  
P2417 O2 Sensor Signals Swapped Bank 2 Sensor 2/Bank 2 Sensor 3  
P2418 Evaporative Emission System Switching Valve Control Circuit/Open  
P2419 Evaporative Emission System Switching Valve Control Circuit Low  
P2420 Evaporative Emission System Switching Valve Control Circuit High  
P2421 Evaporative Emission System Vent Valve Stuck Open  
P2422 Evaporative Emission System Vent Valve Stuck Closed  
P2423 HC Adsorption Catalyst Efficiency Below Threshold Bank 1  
P2424 HC Adsorption Catalyst Efficiency Below Threshold Bank 2  
P2425 Exhaust Gas Recirculation Cooling Valve Control Circuit/Open  
P2426 Exhaust Gas Recirculation Cooling Valve Control Circuit Low  
P2427 Exhaust Gas Recirculation Cooling Valve Control Circuit High  
P2428 Exhaust Gas Temperature Too High Bank 1  
P2424 HC Adsorption Catalyst Efficiency Below Threshold Bank 2  
P2425 Exhaust Gas Recirculation Cooling Valve Control Circuit/Open  
P2426 Exhaust Gas Recirculation Cooling Valve Control Circuit Low  
P2427 Exhaust Gas Recirculation Cooling Valve Control Circuit High  
P2428 Exhaust Gas Temperature Too High Bank 1  
P2429 Exhaust Gas Temperature Too High Bank 2  
P242A Exhaust Gas Temperature Sensor Circuit Bank 1 Sensor 3  
P242B Exhaust Gas Temperature Sensor Circuit Range/Performance Bank 1 Sensor 3  
P242C Exhaust Gas Temperature Sensor Circuit Low Bank 1 Sensor 3  
P242D Exhaust Gas Temperature Sensor Circuit High Bank 1 Sensor 3  
P242E Exhaust Gas Temperature Sensor Circuit Intermittent/Erratic Bank 1 Sensor 3  
P242F Diesel Particulate Filter Restriction - Ash Accumulation  
P2430 Secondary Air Injection System Air Flow/Pressure Sensor Circuit Bank 1  
P2431 Secondary Air Injection System Air Flow/Pressure Sensor Circuit Range/Performance Bank 1  
P2432 Secondary Air Injection System Air Flow/Pressure Sensor Circuit Low Bank 1  
P2433 Secondary Air Injection System Air Flow/Pressure Sensor Circuit High Bank 1  
P2434 Secondary Air Injection System Air Flow/Pressure Sensor Circuit Intermittent/Erratic Bank 1  
P2435 Secondary Air Injection System Air Flow/Pressure Sensor Circuit Bank 2  
P2436 Secondary Air Injection System Air Flow/Pressure Sensor Circuit Range/Performance Bank 2  
P2437 Secondary Air Injection System Air Flow/Pressure Sensor Circuit Low Bank 2  
P2438 Secondary Air Injection System Air Flow/Pressure Sensor Circuit High Bank 2  
P2439 Secondary Air Injection System Air Flow/Pressure Sensor Circuit Intermittent/Erratic  
P2440 Secondary Air Injection System Switching Valve Stuck Open Bank 1  
P2441 Secondary Air Injection System Switching Valve Stuck Closed Bank 1  
P2442 Secondary Air Injection System Switching Valve Stuck Open Bank 2  
P2443 Secondary Air Injection System Switching Valve Stuck Closed Bank 2  
P2444 Secondary Air Injection System Pump Stuck On Bank 1  
P2445 Secondary Air Injection System Pump Stuck Off Bank 1  
P2446 Secondary Air Injection System Pump Stuck On Bank 2  
P2447 Secondary Air Injection System Pump Stuck Off Bank 2  
P2448 Secondary Air Injection System High Air Flow Bank 1  
P2449 Secondary Air Injection System High Air Flow Bank 2  
P244A Diesel Particulate Filter Differential Pressure Too Low Bank 1  
P244B Diesel Particulate Filter Differential Pressure Too High Bank 1  
P244C Exhaust Temperature Too Low For Particulate Filter Regeneration Bank 1

P244D Exhaust Temperature Too High For Particulate Filter Regeneration Bank 1  
P244E Exhaust Temperature Too Low For Particulate Filter Regeneration Bank 2  
P244F Exhaust Temperature Too High For Particulate Filter Regeneration Bank 2  
P2450 Evaporative Emission System Switching Valve Performance/Stuck Open  
P2451 Evaporative Emission System Switching Valve Stuck Closed  
P2452 Diesel Particulate Filter Pressure Sensor "A" Circuit  
P2453 Diesel Particulate Filter Pressure Sensor "A" Circuit Range/Performance  
P2454 Diesel Particulate Filter Pressure Sensor "A" Circuit Low  
P2455 Diesel Particulate Filter Pressure Sensor "A" Circuit High  
P2456 Diesel Particulate Filter Pressure Sensor "A" Circuit Intermittent/Erratic  
P2457 Exhaust Gas Recirculation Cooling System Performance  
P2458 Diesel Particulate Filter Regeneration Duration  
P2459 Diesel Particulate Filter Regeneration Frequency  
P245A Exhaust Gas Recirculation Cooler Bypass Control Circuit/Open  
P245B Exhaust Gas Recirculation Cooler Bypass Control Circuit Range/Performance  
P245C Exhaust Gas Recirculation Cooler Bypass Control Circuit Low  
P245D Exhaust Gas Recirculation Cooler Bypass Control Circuit High  
P245E Diesel Particulate Filter Pressure Sensor "B" Circuit  
P245F Diesel Particulate Filter Pressure Sensor "B" Circuit Range/Performance  
P2460 Diesel Particulate Filter Pressure Sensor "B" Circuit Low  
P2461 Diesel Particulate Filter Pressure Sensor "B" Circuit High  
P2462 Diesel Particulate Filter Pressure Sensor "B" Circuit Intermittent/Erratic  
P2463 Diesel Particulate Filter Restriction - Soot Accumulation  
P2464 Diesel Particulate Filter Differential Pressure Too Low Bank 2  
P2465 Diesel Particulate Filter Differential Pressure Too High Bank 2  
P2466 Exhaust Gas Temperature Sensor Circuit Bank 2 Sensor 3  
P2467 Exhaust Gas Temperature Sensor Circuit Range/Performance Bank 2 Sensor 3  
P2468 Exhaust Gas Temperature Sensor Circuit Low Bank 2 Sensor 3  
P2469 Exhaust Gas Temperature Sensor Circuit High Bank 2 Sensor 3  
P246A Exhaust Gas Temperature Sensor Circuit Intermittent/Erratic Bank 2 Sensor 3  
P246B Vehicle Conditions Incorrect for Diesel Particulate Filter Regeneration  
P246C Diesel Particulate Filter Restriction - Forced Limited Power  
P246D Diesel Particulate Filter Pressure Sensor "A"/"B" Correlation  
P246E Exhaust Gas Temperature Sensor Circuit Bank 1 Sensor 4  
P246F Exhaust Gas Temperature Sensor Circuit Range/Performance Bank 1 Sensor 4  
P2470 Exhaust Gas Temperature Sensor Circuit Low Bank 1 Sensor 4  
P2471 Exhaust Gas Temperature Sensor Circuit High Bank 1 Sensor 4  
P2472 Exhaust Gas Temperature Sensor Circuit Intermittent/Erratic Bank 1 Sensor 4  
P2473 Exhaust Gas Temperature Sensor Circuit Bank 2 Sensor 4  
P2474 Exhaust Gas Temperature Sensor Circuit Range/Performance Bank 2 Sensor 4  
P2475 Exhaust Gas Temperature Sensor Circuit Low Bank 2 Sensor 4  
P2476 Exhaust Gas Temperature Sensor Circuit High Bank 2 Sensor 4  
P2477 Exhaust Gas Temperature Sensor Circuit Intermittent/Erratic Bank 2 Sensor 4  
P2478 Exhaust Gas Temperature Out of Range Bank 1 Sensor 1  
P2479 Exhaust Gas Temperature Out of Range Bank 1 Sensor 2  
P247A Exhaust Gas Temperature Out of Range Bank 1 Sensor 3  
P247B Exhaust Gas Temperature Out of Range Bank 1 Sensor 4  
P247C Exhaust Gas Temperature Out of Range Bank 2 Sensor 1  
P247D Exhaust Gas Temperature Out of Range Bank 2 Sensor 2  
P247E Exhaust Gas Temperature Out of Range Bank 2 Sensor 3  
P247F Exhaust Gas Temperature Out of Range Bank 2 Sensor 4  
P2480 Exhaust Gas Temperature Sensor Circuit/Open Bank 1 Sensor 5  
P2481 Exhaust Gas Temperature Sensor Circuit Low Bank 1 Sensor 5  
P2482 Exhaust Gas Temperature Sensor Circuit High Bank 1 Sensor 5  
P2483 Exhaust Gas Temperature Sensor Circuit Range/Performance Bank 1 Sensor 5  
P2484 Exhaust Gas Temperature Sensor Circuit Intermittent/Erratic Bank 1 Sensor 5

P2485 Exhaust Gas Temperature Sensor Circuit/Open Bank 2 Sensor 5  
P2486 Exhaust Gas Temperature Sensor Circuit Low Bank 2 Sensor 5  
P2487 Exhaust Gas Temperature Sensor Circuit High Bank 2 Sensor 5  
P2488 Exhaust Gas Temperature Sensor Circuit Range/Performance Bank 2 Sensor 5  
P2489 Exhaust Gas Temperature Sensor Circuit Intermittent/Erratic Bank 2 Sensor 5

## SAE P25XX Codes

### AUXILIARY INPUTS

P2500 Generator Lamp/L-Terminal Circuit Low  
P2501 Generator Lamp/L-Terminal Circuit High  
P2502 Charging System Voltage  
P2503 Charging System Voltage Low  
P2504 Charging System Voltage High  
P2505 ECM/PCM Power Input Signal  
P2506 ECM/PCM Power Input Signal Range/Performance  
P2507 ECM/PCM Power Input Signal Low  
P2508 ECM/PCM Power Input Signal High  
P2509 ECM/PCM Power Input Signal Intermittent  
P250A Engine Oil Level Sensor Circuit  
P250B Engine Oil Level Sensor Circuit Range/Performance  
P250C Engine Oil Level Sensor Circuit Low  
P250D Engine Oil Level Sensor Circuit High  
P250E Engine Oil Level Sensor Circuit Intermittent/Erratic  
P250F Engine Oil Level Too Low  
P2510 ECM/PCM Power Relay Sense Circuit Range/Performance  
P2511 ECM/PCM Power Relay Sense Circuit Intermittent  
P2512 Event Data Recorder Request Circuit/ Open  
P2513 Event Data Recorder Request Circuit Low  
P2514 Event Data Recorder Request Circuit High  
P2515 A/C Refrigerant Pressure Sensor "B" Circuit  
P2516 A/C Refrigerant Pressure Sensor "B" Circuit Range/Performance  
P2517 A/C Refrigerant Pressure Sensor "B" Circuit Low  
P2518 A/C Refrigerant Pressure Sensor "B" Circuit High  
P2519 A/C Request "A" Circuit  
P251A PTO Enable Switch Circuit/Open  
P251B PTO Enable Switch Circuit Low  
P251C PTO Enable Switch Circuit High  
P251D PTO Engine Shutdown Circuit/Open

P251E PTO Engine Shutdown Circuit Low  
P251F PTO Engine Shutdown Circuit High  
P2520 A/C Request "A" Circuit Low  
P2521 A/C Request "A" Circuit High  
P2522 A/C Request "B" Circuit  
P2523 A/C Request "B" Circuit Low  
P2524 A/C Request "B" Circuit High  
P2525 Vacuum Reservoir Pressure Sensor Circuit  
P2526 Vacuum Reservoir Pressure Sensor Circuit Range/Performance  
P2527 Vacuum Reservoir Pressure Sensor Circuit Low  
P2528 Vacuum Reservoir Pressure Sensor Circuit High  
P2529 Vacuum Reservoir Pressure Sensor Circuit Intermittent  
P252A Engine Oil Quality Sensor Circuit  
P252B Engine Oil Quality Sensor Circuit Range/Performance  
P252C Engine Oil Quality Sensor Circuit Low  
P252D Engine Oil Quality Sensor Circuit High  
P252E Engine Oil Quality Sensor Circuit Intermittent/Erratic  
P252F Engine Oil Level Too High  
P2530 Ignition Switch Run Position Circuit  
P2531 Ignition Switch Run Position Circuit Low  
P2532 Ignition Switch Run Position Circuit High  
P2533 Ignition Switch Run/Start Position Circuit  
P2534 Ignition Switch Run/Start Position Circuit Low  
P2535 Ignition Switch Run/Start Position Circuit High  
P2536 Ignition Switch Accessory Position Circuit  
P2537 Ignition Switch Accessory Position Circuit Low  
P2538 Ignition Switch Accessory Position Circuit High  
P2539 Low Pressure Fuel System Sensor Circuit  
P253A PTO Sense Circuit/Open  
P253B PTO Sense Circuit Range/Performance  
P253C PTO Sense Circuit Low  
P253D PTO Sense Circuit High  
P253E PTO Sense Circuit Intermittent/Erratic  
P253F Engine Oil Deteriorated  
P2540 Low Pressure Fuel System Sensor Circuit Range/Performance  
P2541 Low Pressure Fuel System Sensor Circuit Low  
P2542 Low Pressure Fuel System Sensor Circuit High  
P2543 Low Pressure Fuel System Sensor Circuit Intermittent  
P2544 Torque Management Request Input Signal "A"  
P2545 Torque Management Request Input Signal "A" Range/Performance  
P2546 Torque Management Request Input Signal "A" Low  
P2547 Torque Management Request Input Signal "A" High  
P2548 Torque Management Request Input Signal "B"  
P2549 Torque Management Request Input Signal "B" Range/Performance  
P254A PTO Speed Selector Sensor/Switch 1 Circuit/Open  
P254B PTO Speed Selector Sensor/Switch 1 Range/Performance  
P254C PTO Speed Selector Sensor/Switch 1 Circuit Low  
P254D PTO Speed Selector Sensor/Switch 1 Circuit High  
P254E PTO Speed Selector Sensor/Switch 1 Circuit Intermittent/Erratic  
P254F Engine Hood Switch Circuit  
P2550 Torque Management Request Input Signal "B" Low  
P2551 Torque Management Request Input Signal "B" High  
P2552 Throttle/Fuel Inhibit Circuit  
P2553 Throttle/Fuel Inhibit Circuit Range/Performance  
P2554 Throttle/Fuel Inhibit Circuit Low  
P2555 Throttle/Fuel Inhibit Circuit High

P2556 Engine Coolant Level Sensor/Switch Circuit  
P2557 Engine Coolant Level Sensor/Switch Circuit Range/Performance  
P2558 Engine Coolant Level Sensor/Switch Circuit Low  
P2559 Engine Coolant Level Sensor/Switch Circuit High  
P255A PTO Speed Selector Sensor/Switch 2 Circuit/Open  
P255B PTO Speed Selector Sensor/Switch 2 Range/Performance  
P255C PTO Speed Selector Sensor/Switch 2 Circuit Low  
P255D PTO Speed Selector Sensor/Switch 2 Circuit High  
P255E PTO Speed Selector Sensor/Switch 2 Circuit Intermittent/Erratic  
P255F A/C Request "A" Circuit Range/Performance  
P2560 Engine Coolant Level Low  
P2561 A/C Control Module Requested MIL Illumination  
P2562 Turbocharger Boost Control Position Sensor "A" Circuit  
P2563 Turbocharger Boost Control Position Sensor "A" Circuit Range/Performance  
P2564 Turbocharger Boost Control Position Sensor "A" Circuit Low  
P2565 Turbocharger Boost Control Position Sensor "A" Circuit High  
P2566 Turbocharger Boost Control Position Sensor "A" Circuit Intermittent  
P2567 Direct Ozone Reduction Catalyst Temperature Sensor Circuit  
P2568 Direct Ozone Reduction Catalyst Temperature Sensor Circuit Range/Performance  
P2569 Direct Ozone Reduction Catalyst Temperature Sensor Circuit Low  
P256A Engine Idle Speed Selector Sensor/Switch Circuit/Open  
P256B Engine Idle Speed Selector Sensor/Switch Range/Performance  
P256C Engine Idle Speed Selector Sensor/Switch Circuit Low  
P256D Engine Idle Speed Selector Sensor/Switch Circuit High  
P256E Engine Idle Speed Selector Sensor/Switch Circuit Intermittent/Erratic  
P256F A/C Request "B" Circuit Range/Performance  
P2570 Direct Ozone Reduction Catalyst Temperature Sensor Circuit High  
P2571 Direct Ozone Reduction Catalyst Temperature Sensor Circuit Intermittent/Erratic  
P2572 Direct Ozone Reduction Catalyst Deterioration Sensor Circuit  
P2573 Direct Ozone Reduction Catalyst Deterioration Sensor Circuit Range/Performance  
P2574 Direct Ozone Reduction Catalyst Deterioration Sensor Circuit Low  
P2575 Direct Ozone Reduction Catalyst Deterioration Sensor Circuit High  
P2576 Direct Ozone Reduction Catalyst Deterioration Sensor Circuit Intermittent/Erratic  
P2577 Direct Ozone Reduction Catalyst Efficiency Below Threshold  
P2578 Turbocharger Speed Sensor Circuit  
P2579 Turbocharger Speed Sensor Circuit Range/Performance  
P257A Vacuum Reservoir Control Circuit/Open  
P257B Vacuum Reservoir Control Circuit Low  
P257C Vacuum Reservoir Control Circuit High  
P257D Engine Hood Switch Circuit Range/Performance  
P257E Engine Hood Switch Circuit Low  
P257F Engine Hood Switch Circuit High  
P2580 Turbocharger Speed Sensor Circuit Low  
P2581 Turbocharger Speed Sensor Circuit High  
P2582 Turbocharger Speed Sensor Circuit Intermittent  
P2583 Cruise Control Front Distance Range Sensor Single Sensor or Center  
P2584 Fuel Additive Control Module Requested MIL Illumination  
P2585 Fuel Additive Control Module Warning Lamp Request  
P2586 Turbocharger Boost Control Position Sensor "B" Circuit  
P2587 Turbocharger Boost Control Position Sensor "B" Circuit Range/Performance  
P2588 Turbocharger Boost Control Position Sensor "B" Circuit Low  
P2589 Turbocharger Boost Control Position Sensor "B" Circuit High  
P258A Vacuum Pump Control Circuit/Open  
P258B Vacuum Pump Control Range/Performance  
P258C Vacuum Pump Control Circuit Low  
P258D Vacuum Pump Control Circuit High

P258E PTO Enable Switch Performance  
P258F Torque Management Request Output Signal  
P2590 Turbocharger Boost Control Position Sensor "B" Circuit Intermittent/Erratic  
P2591 Cruise Control Front Distance Range Sensor Left  
P2592 Cruise Control Front Distance Range Sensor Right

## SAE P26XX Codes

### COMPUTER AND AUXILIARY OUTPUTS

P2600 Coolant Pump "A" Control Circuit/Open  
P2601 Coolant Pump "A" Control Circuit Range/Performance  
P2602 Coolant Pump "A" Control Circuit Low  
P2603 Coolant Pump "A" Control Circuit High  
P2604 Intake Air Heater "A" Circuit Range/Performance  
P2605 Intake Air Heater "B" Circuit/Open  
P2606 Intake Air Heater "B" Circuit Range/Performance  
P2607 Intake Air Heater "B" Circuit Low  
P2608 Intake Air Heater "B" Circuit High  
P2609 Intake Air Heater System Performance  
P260A PTO Control Circuit/Open  
P260B PTO Control Circuit Low  
P260C PTO Control Circuit High  
P260D PTO Engaged Lamp Control Circuit  
P260E Diesel Particulate Filter Regeneration Lamp Control Circuit  
P260F Evaporative System Monitoring Processor Performance  
P2610 ECM/PCM Internal Engine Off Timer Performance  
P2611 A/C Refrigerant Distribution Valve Control Circuit/Open  
P2612 A/C Refrigerant Distribution Valve Control Circuit Low  
P2613 A/C Refrigerant Distribution Valve Control Circuit High  
P2614 Camshaft Position Signal Output Circuit/Open  
P2615 Camshaft Position Signal Output Circuit Low  
P2616 Camshaft Position Signal Output Circuit High  
P2617 Crankshaft Position Signal Output Circuit/Open  
P2618 Crankshaft Position Signal Output Circuit Low  
P2619 Crankshaft Position Signal Output Circuit High  
P261A Coolant Pump "B" Control Circuit/Open  
P261B Coolant Pump "B" Control Circuit Range/Performance  
P261C Coolant Pump "B" Control Circuit Low  
P261D Coolant Pump "B" Control Circuit High  
P2620 Throttle Position Output Circuit/Open  
P2621 Throttle Position Output Circuit Low  
P2622 Throttle Position Output Circuit High  
P2623 Injector Control Pressure Regulator Circuit/Open  
P2624 Injector Control Pressure Regulator Circuit Low  
P2625 Injector Control Pressure Regulator Circuit High  
P2626 O2 Sensor Pumping Current Trim Circuit/Open Bank 1 Sensor 1

P2627 O2 Sensor Pumping Current Trim Circuit Low Bank 1 Sensor 1  
P2628 O2 Sensor Pumping Current Trim Circuit High Bank 1 Sensor 1  
P2629 O2 Sensor Pumping Current Trim Circuit/Open Bank 2 Sensor 1  
P262A ISO/SAE Reserved  
P262B ISO/SAE Reserved  
P262C ISO/SAE Reserved  
P262D ISO/SAE Reserved  
P262E ISO/SAE Reserved  
P262F ISO/SAE Reserved  
P2630 O2 Sensor Pumping Current Trim Circuit Low Bank 2 Sensor 1  
P2631 O2 Sensor Pumping Current Trim Circuit High Bank 2 Sensor 1  
P2632 Fuel Pump "B" Control Circuit /Open  
P2633 Fuel Pump "B" Control Circuit Low  
P2634 Fuel Pump "B" Control Circuit High  
P2635 Fuel Pump "A" Low Flow/Performance  
P2636 Fuel Pump "B" Low Flow/Performance  
P2637 Torque Management Feedback Signal "A"  
P2638 Torque Management Feedback Signal "A" Range/Performance  
P2639 Torque Management Feedback Signal "A" Low  
P2640 Torque Management Feedback Signal "A" High  
P2641 Torque Management Feedback Signal "B"  
P2642 Torque Management Feedback Signal "B" Range/Performance  
P2643 Torque Management Feedback Signal "B" Low  
P2644 Torque Management Feedback Signal "B" High  
P2645 "A" Rocker Arm Actuator Control Circuit/Open Bank 1  
P2646 "A" Rocker Arm Actuator System Performance/Stuck Off Bank 1  
P2647 "A" Rocker Arm Actuator System Stuck On Bank 1  
P2648 "A" Rocker Arm Actuator Control Circuit Low Bank 1  
P2649 "A" Rocker Arm Actuator Control Circuit High Bank 1  
P264A "A" Rocker Arm Actuator Position Sensor Circuit Bank 1  
P264B "A" Rocker Arm Actuator Position Sensor Circuit Range/Performance Bank 1  
P264C "A" Rocker Arm Actuator Position Sensor Circuit Low Bank 1  
P264D "A" Rocker Arm Actuator Position Sensor Circuit High Bank 1  
P264E "A" Rocker Arm Actuator Position Sensor Circuit Intermittent/Erratic Bank 1  
P2650 "B" Rocker Arm Actuator Control Circuit/Open Bank 1  
P2651 "B" Rocker Arm Actuator System Performance/Stuck Off Bank 1  
P2652 "B" Rocker Arm Actuator System Stuck On Bank 1  
P2653 "B" Rocker Arm Actuator Control Circuit Low Bank 1  
P2654 "B" Rocker Arm Actuator Control Circuit High Bank 1  
P2655 "A" Rocker Arm Actuator Control Circuit/Open Bank 2  
P2656 "A" Rocker Arm Actuator System Performance/Stuck Off  
P2658 "A" Rocker Arm Actuator Control Circuit Low Bank 2  
P2659 "A" Rocker Arm Actuator Control Circuit High  
P2626 O2 Sensor Pumping Current Trim Circuit/Open Bank 1 Sensor 1  
P2627 O2 Sensor Pumping Current Trim Circuit Low Bank 1 Sensor 1  
P2628 O2 Sensor Pumping Current Trim Circuit High Bank 1 Sensor 1  
P2629 O2 Sensor Pumping Current Trim Circuit/Open Bank 2 Sensor 1  
P2630 O2 Sensor Pumping Current Trim Circuit Low Bank 2 Sensor 1  
P2631 O2 Sensor Pumping Current Trim Circuit High Bank 2 Sensor 1  
P2632 Fuel Pump "B" Control Circuit /Open  
P2633 Fuel Pump "B" Control Circuit Low  
P2634 Fuel Pump "B" Control Circuit High  
P2635 Fuel Pump "A" Low Flow/Performance  
P2636 Fuel Pump "B" Low Flow/Performance  
P2637 Torque Management Feedback Signal "A"  
P2638 Torque Management Feedback Signal "A" Range/Performance



P2639 Torque Management Feedback Signal "A" Low  
P2640 Torque Management Feedback Signal "A" High  
P2641 Torque Management Feedback Signal "B"  
P2642 Torque Management Feedback Signal "B" Range/Performance  
P2643 Torque Management Feedback Signal "B" Low  
P2644 Torque Management Feedback Signal "B" High  
P2645 "A" Rocker Arm Actuator Control Circuit/Open Bank 1  
P2646 "A" Rocker Arm Actuator System Performance/Stuck Off Bank 1  
P2647 "A" Rocker Arm Actuator System Stuck On Bank 1  
P2648 "A" Rocker Arm Actuator Control Circuit Low Bank 1  
P2649 "A" Rocker Arm Actuator Control Circuit High Bank 1  
P264A "A" Rocker Arm Actuator Position Sensor Circuit Bank 1  
P264B "A" Rocker Arm Actuator Position Sensor Circuit Range/Performance Bank 1  
P264C "A" Rocker Arm Actuator Position Sensor Circuit Low Bank 1  
P264D "A" Rocker Arm Actuator Position Sensor Circuit High Bank 1  
P264E "A" Rocker Arm Actuator Position Sensor Circuit Intermittent/Erratic Bank 1  
P2650 "B" Rocker Arm Actuator Control Circuit/Open Bank 1  
P2651 "B" Rocker Arm Actuator System Performance/Stuck Off Bank 1  
P2652 "B" Rocker Arm Actuator System Stuck On Bank 1  
P2653 "B" Rocker Arm Actuator Control Circuit Low Bank 1  
P2654 "B" Rocker Arm Actuator Control Circuit High Bank 1  
P2655 "A" Rocker Arm Actuator Control Circuit/Open Bank 2  
P2656 "A" Rocker Arm Actuator System Performance/Stuck Off Bank 2  
P2657 "A" Rocker Arm Actuator System Stuck On Bank 2  
P2658 "A" Rocker Arm Actuator Control Circuit Low Bank 2  
P2659 "A" Rocker Arm Actuator Control Circuit High Bank 2  
P265A "B" Rocker Arm Actuator Position Sensor Circuit Bank 1  
P265B "B" Rocker Arm Actuator Position Sensor Circuit Range/Performance Bank 1  
P265C "B" Rocker Arm Actuator Position Sensor Circuit Low Bank 1  
P265D "B" Rocker Arm Actuator Position Sensor Circuit High Bank 1  
P265E "B" Rocker Arm Actuator Position Sensor Circuit Intermittent/Erratic Bank 1  
P2660 "B" Rocker Arm Actuator Control Circuit/Open Bank 2  
P2661 "B" Rocker Arm Actuator System Performance/Stuck Off Bank 2  
P2662 "B" Rocker Arm Actuator System Stuck On Bank 2  
P2663 "B" Rocker Arm Actuator Control Circuit Low Bank 2  
P2664 "B" Rocker Arm Actuator Control Circuit High Bank 2  
P2665 Fuel Shutoff Valve "B" Control Circuit/Open  
P2666 Fuel Shutoff Valve "B" Control Circuit Low  
P2667 Fuel Shutoff Valve "B" Control Circuit High  
P2668 Fuel Mode Indicator Lamp Control Circuit  
P2669 Actuator Supply Voltage "B" Circuit /Open  
P266A "A" Rocker Arm Actuator Position Sensor Circuit Bank 2  
P266B "A" Rocker Arm Actuator Position Sensor Circuit Range/Performance Bank 2  
P266C "A" Rocker Arm Actuator Position Sensor Circuit Low Bank 2  
P266D "A" Rocker Arm Actuator Position Sensor Circuit High Bank 2  
P266E "A" Rocker Arm Actuator Position Sensor Circuit Intermittent/Erratic Bank 2  
P2670 Actuator Supply Voltage "B" Circuit Low  
P2671 Actuator Supply Voltage "B" Circuit High  
P2672 Injection Pump Timing Offset  
P2673 Injection Pump Timing Calibration Not Learned  
P2674 Injection Pump Fuel Calibration Not Learned  
P2675 Air Cleaner Inlet Control Circuit/Open  
P2676 Air Cleaner Inlet Control Circuit Low  
P2677 Air Cleaner Inlet Control Circuit High  
P2678 Coolant Degassing Valve Control Circuit/Open  
P2679 Coolant Degassing Valve Control Circuit Low

P267A "B" Rocker Arm Actuator Position Sensor Circuit Bank 2  
P267B "B" Rocker Arm Actuator Position Sensor Circuit Range/Performance Bank 2  
P267C "B" Rocker Arm Actuator Position Sensor Circuit Low Bank 2  
P267D "B" Rocker Arm Actuator Position Sensor Circuit High Bank 2  
P267E "B" Rocker Arm Actuator Position Sensor Circuit Intermittent/Erratic Bank 2  
P2680 Coolant Degassing Valve Control Circuit High  
P2681 Engine Coolant Bypass Valve Control Circuit/Open  
P2682 Engine Coolant Bypass Valve Control Circuit Low  
P2683 Engine Coolant Bypass Valve Control Circuit High  
P2684 Actuator Supply Voltage "C" Circuit/Open  
P2685 Actuator Supply Voltage "C" Circuit Low  
P2686 Actuator Supply Voltage "C" Circuit High  
P2687 Fuel Supply Heater Control Circuit/Open  
P2688 Fuel Supply Heater Control Circuit Low  
P2689 Fuel Supply Heater Control Circuit High  
P268A Fuel Injector Calibration Not Learned/Programmed  
P268B High Pressure Fuel Pump Calibration Not Learned/Programmed  
P268C Cylinder 1 Injector Data Incompatible  
P268D Cylinder 2 Injector Data Incompatible  
P268E Cylinder 3 Injector Data Incompatible  
P268F Cylinder 4 Injector Data Incompatible  
P2690 Cylinder 5 Injector Data Incompatible  
P2691 Cylinder 6 Injector Data Incompatible  
P2692 Cylinder 7 Injector Data Incompatible  
P2693 Cylinder 8 Injector Data Incompatible  
P2694 Cylinder 9 Injector Data Incompatible  
P2695 Cylinder 10 Injector Data Incompatible  
P2696 Injector Data Incompatible  
P2697 Exhaust Aftertreatment Fuel Injector "A" Circuit/Open  
P2698 Exhaust Aftertreatment Fuel Injector "A" Performance  
P2699 Exhaust Aftertreatment Fuel Injector "A" Circuit Low  
P269A Exhaust Aftertreatment Fuel Injector "A" Circuit High  
P269B Exhaust Aftertreatment Glow Plug Control Circuit/Open  
P269C Exhaust Aftertreatment Glow Plug Control Performance  
P269D Exhaust Aftertreatment Glow Plug Control Circuit Low  
P269E Exhaust Aftertreatment Glow Plug Control Circuit High  
P269F Exhaust Aftertreatment Glow Plug Circuit/Open  
P26A0 Exhaust Aftertreatment Glow Plug Performance  
P26A1 Exhaust Aftertreatment Glow Plug Circuit Low  
P26A2 Exhaust Aftertreatment Glow Plug Circuit High

# SAE P27XX Codes

## TRANSMISSION

P2700 Transmission Friction Element "A" Apply Time Range/Performance  
P2701 Transmission Friction Element "B" Apply Time Range/Performance  
P2702 Transmission Friction Element "C" Apply Time Range/Performance  
P2703 Transmission Friction Element "D" Apply Time Range/Performance  
P2704 Transmission Friction Element "E" Apply Time Range/Performance  
P2705 Transmission Friction Element "F" Apply Time Range/Performance  
P2706 Shift Solenoid "F"  
P2707 Shift Solenoid "F" Performance/Stuck Off  
P2708 Shift Solenoid "F" Stuck On  
P2709 Shift Solenoid "F" Electrical  
P2710 Shift Solenoid "F" Intermittent  
P2711 Unexpected Mechanical Gear Disengagement  
P2712 Hydraulic Power Unit Leakage  
P2713 Pressure Control Solenoid "D"  
P2714 Pressure Control Solenoid "D" Performance/Stuck Off  
P2715 Pressure Control Solenoid "D" Stuck On  
P2716 Pressure Control Solenoid "D" Electrical  
P2717 Pressure Control Solenoid "D" Intermittent  
P2718 Pressure Control Solenoid "D" Control Circuit/Open  
P2719 Pressure Control Solenoid "D" Control Circuit Range/Performance  
P2720 Pressure Control Solenoid "D" Control Circuit Low  
P2721 Pressure Control Solenoid "D" Control Circuit High  
P2722 Pressure Control Solenoid "E"  
P2723 Pressure Control Solenoid "E" Performance/Stuck Off  
P2724 Pressure Control Solenoid "E" Stuck On  
P2725 Pressure Control Solenoid "E" Electrical  
P2726 Pressure Control Solenoid "E" Intermittent  
P2727 Pressure Control Solenoid "E" Control Circuit/Open  
P2728 Pressure Control Solenoid "E" Control Circuit Range/Performance  
P2729 Pressure Control Solenoid "E" Control Circuit Low  
P2730 Pressure Control Solenoid "E" Control Circuit High  
P2731 Pressure Control Solenoid "F"  
P2732 Pressure Control Solenoid "F" Performance/Stuck Off  
P2733 Pressure Control Solenoid "F" Stuck On  
P2734 Pressure Control Solenoid "F" Electrical  
P2735 Pressure Control Solenoid "F" Intermittent  
P2736 Pressure Control Solenoid "F" Control Circuit/Open  
P2737 Pressure Control Solenoid "F" Control Circuit Range/Performance  
P2738 Pressure Control Solenoid "F" Control Circuit Low  
P2739 Pressure Control Solenoid "F" Control Circuit High  
P273A Transmission Friction Element "G" Apply Time Range/Performance  
P273B Transmission Friction Element "H" Apply Time Range/Performance  
P2740 Transmission Fluid Temperature Sensor "B" Circuit"  
P2741 Transmission Fluid Temperature Sensor "B" Circuit Range/Performance

P2742 Transmission Fluid Temperature Sensor "B" Circuit Low  
P2743 Transmission Fluid Temperature Sensor "B" Circuit High  
P2744 Transmission Fluid Temperature Sensor "B" Circuit Intermittent  
P2745 Intermediate Shaft Speed Sensor "B" Circuit  
P2746 Intermediate Shaft Speed Sensor "B" Circuit Range/Performance  
P2747 Intermediate Shaft Speed Sensor "B" Circuit No Signal  
P2748 Intermediate Shaft Speed Sensor "B" Circuit Intermittent  
P2749 Intermediate Shaft Speed Sensor "C" Circuit  
P2750 Intermediate Shaft Speed Sensor "C" Circuit Range/Performance  
P2751 Intermediate Shaft Speed Sensor "C" Circuit No Signal  
P2752 Intermediate Shaft Speed Sensor "C" Circuit Intermittent  
P2753 Transmission Fluid Cooler Control Circuit/Open  
P2754 Transmission Fluid Cooler Control Circuit Low  
P2755 Transmission Fluid Cooler Control Circuit High  
P2756 Torque Converter Clutch Pressure Control Solenoid  
P2757 Torque Converter Clutch Pressure Control Solenoid Control Circuit Performance/Stuck Off  
P2758 Torque Converter Clutch Pressure Control Solenoid Control Circuit Stuck On  
P2759 Torque Converter Clutch Pressure Control Solenoid Control Circuit Electrical  
P2760 Torque Converter Clutch Pressure Control Solenoid Control Circuit Intermittent  
P2761 Torque Converter Clutch Pressure Control Solenoid Control Circuit/Open  
P2762 Torque Converter Clutch Pressure Control Solenoid Control Circuit Range/Performance  
P2763 Torque Converter Clutch Pressure Control Solenoid Control Circuit High  
P2764 Torque Converter Clutch Pressure Control Solenoid Control Circuit Low  
P2765 Input/Turbine Speed Sensor "B" Circuit  
P2766 Input/Turbine Speed Sensor "B" Circuit Range/Performance  
P2767 Input/Turbine Speed Sensor "B" Circuit No Signal  
P2768 Input/Turbine Speed Sensor "B" Circuit Intermittent  
P2769 Torque Converter Clutch Circuit Low  
P2770 Torque Converter Clutch Circuit High  
P2771 Four Wheel Drive (4WD) Low Switch Circuit  
P2772 Four Wheel Drive (4WD) Low Switch Circuit Range/Performance  
P2773 Four Wheel Drive (4WD) Low Switch Circuit Low  
P2774 Four Wheel Drive (4WD) Low Switch Circuit High  
P2775 Upshift Switch Circuit Range/Performance  
P2776 Upshift Switch Circuit Low  
P2777 Upshift Switch Circuit High  
P2778 Upshift Switch Circuit Intermittent/Erratic  
P2779 Downshift Switch Circuit Range/Performance  
P2780 Downshift Switch Circuit Low  
P2781 Downshift Switch Circuit High  
P2782 Downshift Switch Circuit Intermittent/Erratic  
P2783 Torque Converter Temperature Too High  
P2784 Input/Turbine Speed Sensor "A"/"B" Correlation  
P2785 Clutch Actuator Temperature Too High  
P2786 Gear Shift Actuator Temperature Too High  
P2787 Clutch Temperature Too High  
P2788 Auto Shift Manual Adaptive Learning at Limit  
P2789 Clutch "A" Adaptive Learning at Limit  
P278A Kick Down Switch Circuit  
P278B Kick Down Switch Circuit Range/Performance  
P278C Kick Down Switch Circuit Low  
P278D Kick Down Switch Circuit High  
P278E Kick Down Switch Circuit Intermittent/Erratic  
P278F Clutch "B" Adaptive Learning at Limit  
P2790 Gate Select Direction Circuit  
P2791 Gate Select Direction Circuit Low

P2792 Gate Select Direction Circuit High  
P2793 Gear Shift Direction Circuit  
P2794 Gear Shift Direction Circuit Low  
P2795 Gear Shift Direction Circuit High  
P2796 Auxiliary Transmission Fluid Pump Control Circuit/Open  
P2797 Auxiliary Transmission Fluid Pump Performance  
P2798 Auxiliary Transmission Fluid Pump Control Circuit Low  
P2799 Auxiliary Transmission Fluid Pump Control Circuit High  
P279A Transfer Case Gear High Incorrect Ratio  
P279B Transfer Case Gear Low Incorrect Ratio  
P279C Transfer Case Gear Neutral Incorrect Ratio  
P279D Four Wheel Drive (4WD) Range Signal Circuit  
P279E Four Wheel Drive (4WD) Range Signal Circuit Range/Performance  
P279F Four Wheel Drive (4WD) Range Signal Circuit Low  
P27A0 Four Wheel Drive (4WD) Range Signal Circuit High

## SAE P28XX Codes

### TRANSMISSION

P2800 Transmission Range Sensor "B" Circuit (PRNDL Input)  
P2801 Transmission Range Sensor "B" Circuit Range/Performance  
P2802 Transmission Range Sensor "B" Circuit Low  
P2803 Transmission Range Sensor "B" Circuit High  
P2804 Transmission Range Sensor "B" Circuit Intermittent  
P2805 Transmission Range Sensor "A"/"B" Correlation  
P2806 Transmission Range Sensor Alignment  
P2807 Pressure Control Solenoid "G"  
P2808 Pressure Control Solenoid "G" Performance/Stuck Off  
P2809 Pressure Control Solenoid "G" Stuck On  
P280A Transmission Range Sensor "A" Circuit Not Learned  
P280B Transmission Range Sensor "B" Circuit Not Learned  
P2810 Pressure Control Solenoid "G" Electrical  
P2811 Pressure Control Solenoid "G" Intermittent  
P2812 Pressure Control Solenoid "G" Control Circuit/Open  
P2813 Pressure Control Solenoid "G" Control Circuit Range/Performance  
P2814 Pressure Control Solenoid "G" Control Circuit Low  
P2815 Pressure Control Solenoid "G" Control Circuit High  
P2816 Pressure Control Solenoid "H"  
P2817 Pressure Control Solenoid "H" Performance/Stuck Off  
P2818 Pressure Control Solenoid "H" Stuck On  
P2819 Pressure Control Solenoid "H" Electrical  
P281A Pressure Control Solenoid "H" Intermittent  
P281B Pressure Control Solenoid "H" Control Circuit/Open  
P281C Pressure Control Solenoid "H" Control Circuit Range/Performance  
P281D Pressure Control Solenoid "H" Control Circuit Low

P281E Pressure Control Solenoid "H" Control Circuit High  
P281F Pressure Control Solenoid "J"  
P2820 Pressure Control Solenoid "J" Performance/Stuck Off  
P2821 Pressure Control Solenoid "J" Stuck On  
P2822 Pressure Control Solenoid "J" Electrical  
P2823 Pressure Control Solenoid "J" Intermittent  
P2824 Pressure Control Solenoid "J" Control Circuit/Open  
P2825 Pressure Control Solenoid "J" Control Circuit Range/Performance  
P2826 Pressure Control Solenoid "J" Control Circuit Low  
P2827 Pressure Control Solenoid "J" Control Circuit High  
P2828 Pressure Control Solenoid "K"  
P2829 Pressure Control Solenoid "K" Performance/Stuck Off  
P282A Pressure Control Solenoid "K" Stuck On  
P282B Pressure Control Solenoid "K" Electrical  
P282C Pressure Control Solenoid "K" Intermittent  
P282D Pressure Control Solenoid "K" Control Circuit/Open  
P282E Pressure Control Solenoid "K" Control Circuit Range/Performance  
P282F Pressure Control Solenoid "K" Control Circuit Low  
P2830 Pressure Control Solenoid "K" Control Circuit High  
P2831 Shift Fork "A" Position Circuit  
P2832 Shift Fork "A" Position Circuit Range/Performance  
P2833 Shift Fork "A" Position Circuit Low  
P2834 Shift Fork "A" Position Circuit High  
P2835 Shift Fork "A" Position Circuit Intermittent  
P2836 Shift Fork "B" Position Circuit  
P2837 Shift Fork "B" Position Circuit Range/Performance  
P2838 Shift Fork "B" Position Circuit Low  
P2839 Shift Fork "B" Position Circuit High  
P283A Shift Fork "B" Position Circuit Intermittent  
P283B Shift Fork "C" Position Circuit  
P283C Shift Fork "C" Position Circuit Range/Performance  
P283D Shift Fork "C" Position Circuit Low  
P283E Shift Fork "C" Position Circuit High  
P283F Shift Fork "C" Position Circuit Intermittent  
P2840 Shift Fork "D" Position Circuit  
P2841 Shift Fork "D" Position Circuit Range/Performance  
P2842 Shift Fork "D" Position Circuit Low  
P2843 Shift Fork "D" Position Circuit High  
P2844 Shift Fork "D" Position Circuit Intermittent  
P2845 Shift Fork "A" Position Sensor Incorrect Neutral Position Indicated  
P2846 Shift Fork "B" Position Sensor Incorrect Neutral Position Indicated  
P2847 Shift Fork "C" Position Sensor Incorrect Neutral Position Indicated  
P2848 Shift Fork "D" Position Sensor Incorrect Neutral Position Indicated  
P2849 Shift Fork "A" Stuck  
P284A Shift Fork "B" Stuck  
P284B Shift Fork "C" Stuck  
P284C Shift Fork "D" Stuck  
P284D Shift Fork "A" Unrequested Movement  
P284E Shift Fork "B" Unrequested Movement  
P284F Shift Fork "C" Unrequested Movement  
P2850 Shift Fork "D" Unrequested Movement  
P2851 Shift Fork Position Sensor "A"/"B" Correlation  
P2852 Shift Fork Position Sensor "C"/"D" Correlation  
P2853 Clutch "A" Pressure Discharge Performance  
P2854 Clutch "B" Pressure Discharge Performance  
P2855 Clutch "A" Pressure Charge Performance

P2856 Clutch "B" Pressure Charge Performance  
P2857 Clutch "A" Pressure Engagement Performance  
P2858 Clutch "B" Pressure Engagement Performance  
P2859 Clutch "A" Pressure Disengagement Performance  
P285A Clutch "B" Pressure Disengagement Performance

## SAE P2AXX Codes

### FUEL AND AIR METERING AND AUXILIARY EMISSION CONTROLS

P2A00 O2 Sensor Circuit Range/Performance Bank 1 Sensor 1  
P2A01 O2 Sensor Circuit Range/Performance Bank 1 Sensor 2  
P2A02 O2 Sensor Circuit Range/Performance Bank 1 Sensor 3  
P2A03 O2 Sensor Circuit Range/Performance Bank 2 Sensor 1  
P2A04 O2 Sensor Circuit Range/Performance Bank 2 Sensor 2  
P2A05 O2 Sensor Circuit Range/Performance Bank 2 Sensor 3  
P2A06 O2 Sensor Negative Voltage Bank 1 Sensor 1  
P2A07 O2 Sensor Negative Voltage Bank 1 Sensor 2  
P2A08 O2 Sensor Negative Voltage Bank 1 Sensor 3  
P2A09 O2 Sensor Negative Voltage Bank 2 Sensor 1  
P2A10 O2 Sensor Negative Voltage Bank 2 Sensor 2  
P2A11 O2 Sensor Negative Voltage Bank 2 Sensor 3

## SAE P2BXX Codes

### FUEL AND AIR METERING AND AUXILIARY EMISSION CONTROLS

P2BA7 NOx Exceedence - Empty Reagent Tank  
P2BA8 NOx Exceedence - Interruption of Reagent Dosing Activity  
P2BA9 NOx Exceedence - Insufficient Reagent Quality  
P2BAA NOx Exceedence - Low Reagent Consumption  
P2BAB NOx Exceedence - Incorrect EGR Flow  
P2BAC NOx Exceedence - Deactivation of EGR  
P2BAD NOx Exceedence - Root Cause Unknown  
P2BAE NOx Exceedence - NOx control monitoring system

## SAE P34XX Codes

### CYLINDER DEACTIVATION

P3400 Cylinder Deactivation System Bank 1  
P3401 Cylinder 1 Deactivation/Intake Valve Control Circuit/Open  
P3402 Cylinder 1 Deactivation/Intake Valve Control Circuit Performance  
P3403 Cylinder 1 Deactivation/Intake Valve Control Circuit Low  
P3404 Cylinder 1 Deactivation/Intake Valve Control Circuit High  
P3405 Cylinder 1 Exhaust Valve Control Circuit/Open  
P3406 Cylinder 1 Exhaust Valve Control Circuit Performance  
P3407 Cylinder 1 Exhaust Valve Control Circuit Low  
P3408 Cylinder 1 Exhaust Valve Control Circuit High  
P3409 Cylinder 2 Deactivation/Intake Valve Control Circuit/Open  
P3410 Cylinder 2 Deactivation/Intake Valve Control Circuit Performance  
P3411 Cylinder 2 Deactivation/Intake Valve Control Circuit Low  
P3412 Cylinder 2 Deactivation/Intake Valve Control Circuit High  
P3413 Cylinder 2 Exhaust Valve Control Circuit/Open  
P3414 Cylinder 2 Exhaust Valve Control Circuit Performance  
P3415 Cylinder 2 Exhaust Valve Control Circuit Low  
P3416 Cylinder 2 Exhaust Valve Control Circuit High  
P3417 Cylinder 3 Deactivation/Intake Valve Control Circuit/Open  
P3418 Cylinder 3 Deactivation/Intake Valve Control Circuit Performance  
P3419 Cylinder 3 Deactivation/Intake Valve Control Circuit Low  
P3420 Cylinder 3 Deactivation/Intake Valve Control Circuit High  
P3421 Cylinder 3 Exhaust Valve Control Circuit/Open  
P3422 Cylinder 3 Exhaust Valve Control Circuit Performance  
P3423 Cylinder 3 Exhaust Valve Control Circuit Low



P3424 Cylinder 3 Exhaust Valve Control Circuit High  
P3425 Cylinder 4 Deactivation/Intake Valve Control Circuit/Open  
P3426 Cylinder 4 Deactivation/Intake Valve Control Circuit Performance  
P3427 Cylinder 4 Deactivation/Intake Valve Control Circuit Low  
P3428 Cylinder 4 Deactivation/Intake Valve Control Circuit High  
P3429 Cylinder 4 Exhaust Valve Control Circuit/Open  
P3430 Cylinder 4 Exhaust Valve Control Circuit Performance  
P3431 Cylinder 4 Exhaust Valve Control Circuit Low  
P3432 Cylinder 4 Exhaust Valve Control Circuit High  
P3433 Cylinder 5 Deactivation/Intake Valve Control Circuit/Open  
P3434 Cylinder 5 Deactivation/Intake Valve Control Circuit Performance  
P3435 Cylinder 5 Deactivation/Intake Valve Control Circuit Low  
P3436 Cylinder 5 Deactivation/Intake Valve Control Circuit High  
P3437 Cylinder 5 Exhaust Valve Control Circuit/Open  
P3438 Cylinder 5 Exhaust Valve Control Circuit Performance  
P3439 Cylinder 5 Exhaust Valve Control Circuit Low  
P3440 Cylinder 5 Exhaust Valve Control Circuit High  
b3441 Cylinder 6 Deactivation/Intake Valve Control Circuit/Open  
P3442 Cylinder 6 Deactivation/Intake Valve Control Circuit Performance  
P3443 Cylinder 6 Deactivation/Intake Valve Control Circuit Low  
P3444 Cylinder 6 Deactivation/Intake Valve Control Circuit High  
P3445 Cylinder 6 Exhaust Valve Control Circuit/Open  
P3446 Cylinder 6 Exhaust Valve Control Circuit Performance  
P3447 Cylinder 6 Exhaust Valve Control Circuit Low  
P3448 Cylinder 6 Exhaust Valve Control Circuit High  
P3449 Cylinder 7 Deactivation/Intake Valve Control Circuit/Open  
P3450 Cylinder 7 Deactivation/Intake Valve Control Circuit Performance  
P3451 Cylinder 7 Deactivation/Intake Valve Control Circuit Low  
P3452 Cylinder 7 Deactivation/Intake Valve Control Circuit High  
P3453 Cylinder 7 Exhaust Valve Control Circuit/Open  
P3454 Cylinder 7 Exhaust Valve Control Circuit Performance  
P3455 Cylinder 7 Exhaust Valve Control Circuit Low  
P3456 Cylinder 7 Exhaust Valve Control Circuit High  
P3457 Cylinder 8 Deactivation/Intake Valve Control Circuit/Open  
P3458 Cylinder 8 Deactivation/Intake Valve Control Circuit Performance  
P3459 Cylinder 8 Deactivation/Intake Valve Control Circuit Low  
P3460 Cylinder 8 Deactivation/Intake Valve Control Circuit High  
P3461 Cylinder 8 Exhaust Valve Control Circuit/Open  
P3462 Cylinder 8 Exhaust Valve Control Circuit Performance  
P3463 Cylinder 8 Exhaust Valve Control Circuit Low  
P3464 Cylinder 8 Exhaust Valve Control Circuit High  
P3465 Cylinder 9 Deactivation/Intake Valve Control Circuit/Open  
P3466 Cylinder 9 Deactivation/Intake Valve Control Circuit Performance  
P3467 Cylinder 9 Deactivation/Intake Valve Control Circuit Low  
P3468 Cylinder 9 Deactivation/Intake Valve Control Circuit High  
P3469 Cylinder 9 Exhaust Valve Control Circuit/Open  
P3470 Cylinder 9 Exhaust Valve Control Circuit Performance  
P3471 Cylinder 9 Exhaust Valve Control Circuit Low  
P3472 Cylinder 9 Exhaust Valve Control Circuit High  
P3473 Cylinder 10 Deactivation/Intake Valve Control Circuit/Open  
P3474 Cylinder 10 Deactivation/Intake Valve Control Circuit Performance  
P3475 Cylinder 10 Deactivation/Intake Valve Control Circuit Low  
P3476 Cylinder 10 Deactivation/Intake Valve Control Circuit High  
P3477 Cylinder 10 Exhaust Valve Control Circuit/Open  
P3478 Cylinder 10 Exhaust Valve Control Circuit Performance  
P3479 Cylinder 10 Exhaust Valve Control Circuit Low

P3480 Cylinder 10 Exhaust Valve Control Circuit High  
P3481 Cylinder 11 Deactivation/Intake Valve Control Circuit/Open  
P3482 Cylinder 11 Deactivation/Intake Valve Control Circuit Performance  
P3483 Cylinder 11 Deactivation/Intake Valve Control Circuit Low  
P3484 Cylinder 11 Deactivation/Intake Valve Control Circuit High  
P3485 Cylinder 11 Exhaust Valve Control Circuit/Open  
P3486 Cylinder 11 Exhaust Valve Control Circuit Performance  
P3487 Cylinder 11 Exhaust Valve Control Circuit Low  
P3488 Cylinder 11 Exhaust Valve Control Circuit High  
P3489 Cylinder 12 Deactivation/Intake Valve Control Circuit/Open  
P3490 Cylinder 12 Deactivation/Intake Valve Control Circuit Performance  
P3491 Cylinder 12 Deactivation/Intake Valve Control Circuit Low  
P3492 Cylinder 12 Deactivation/Intake Valve Control Circuit High  
P3493 Cylinder 12 Exhaust Valve Control Circuit/Open  
P3494 Cylinder 12 Exhaust Valve Control Circuit Performance  
P3495 Cylinder 12 Exhaust Valve Control Circuit Low  
P3496 Cylinder 12 Exhaust Valve Control Circuit High  
P3497 Cylinder Deactivation System Bank 2