

## OBD II Fault Codes Reference Guide

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The Diagnostic Trouble Code numbering follows a standardized structure. All Diagnostic Trouble Codes have a letter followed by a 4-digit number (e.g. P1234). The first letter indicates the type of code:

P = Powertrain

C = Chassis

B = Body

U = Network Communication

The remaining 4-digit number specifies the problem within that system.

### P00XX Fuel and Air Metering and Auxiliary Emission Controls

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P0010	"A" Camshaft Position Actuator Circuit (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 (Bank 1)
P0014	"B" Camshaft Position - Timing Over-Advanced or System Performance (Bank 1)
P0015	"B" Camshaft Position -Timing Over-Retarded (Bank 1)
P0020	"A" Camshaft Position Actuator Circuit (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 (Bank 2)
P0024	"B" Camshaft Position - Timing Over-Advanced or System Performance (Bank 2)
P0025	"B" Camshaft Position - Timing Over-Retarded (Bank 2)
P0030	HO <sub>2</sub> S Heater Control Circuit (Bank 1 Sensor 1)
P0031	HO <sub>2</sub> S Heater Control Circuit Low (Bank 1 Sensor 1)
P0032	HO <sub>2</sub> S Heater Control Circuit High (Bank 1 Sensor 1)
P0033	Turbo Charger Bypass Valve Control Circuit
P0034	Turbo Charger Bypass Valve Control Circuit Low
P0035	Turbo Charger Bypass Valve Control Circuit High
P0036	HO <sub>2</sub> S Heater Control Circuit (Bank 1 Sensor 2)
P0037	HO <sub>2</sub> S Heater Control Circuit Low (Bank 1 Sensor 2)
P0038	HO <sub>2</sub> S Heater Control Circuit High (Bank 1 Sensor 2)
P0042	HO <sub>2</sub> S Heater Control Circuit (Bank 1 Sensor 3)
P0043	HO <sub>2</sub> S Heater Control Circuit Low (Bank 1 Sensor 3)
P0044	HO <sub>2</sub> S Heater Control Circuit High (Bank 1 Sensor 3)
P0050	HO <sub>2</sub> S Heater Control Circuit (Bank 2 Sensor 1)
P0051	HO <sub>2</sub> S Heater Control Circuit Low (Bank 2 Sensor 1)
P0052	HO <sub>2</sub> S Heater Control Circuit High (Bank 2 Sensor 1)
P0056	HO <sub>2</sub> S Heater Control Circuit (Bank 2 Sensor 2)
P0057	HO <sub>2</sub> S Heater Control Circuit Low (Bank 2 Sensor 2)
P0058	HO <sub>2</sub> S Heater Control Circuit High (Bank 2 Sensor 2)
P0062	HO <sub>2</sub> S Heater Control Circuit (Bank 2 Sensor 3)
P0063	HO <sub>2</sub> S Heater Control Circuit Low (Bank 2 Sensor 3)
P0064	HO <sub>2</sub> S 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
P0070	Ambient Air Temperature Sensor Circuit
P0071	Ambient Air Temperature Sensor Range/Performance
P0072	Ambient Air Temperature Sensor Circuit Low Input
P0073	Ambient Air Temperature Sensor Circuit High Input
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)
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)

## P01XX Fuel and Air Metering

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P0100	Mass or Volume Air Flow Circuit
P0101	Mass or Volume Air Flow Circuit Range/Performance Problem
P0102	Mass or Volume Air Flow Circuit Low Input
P0103	Mass or Volume Air Flow Circuit High Input
P0104	Mass or Volume Air Flow Circuit Intermittent
P0105	Manifold Absolute Pressure/Barometric Pressure Circuit
P0106	Manifold Absolute Pressure/Barometric Pressure Circuit Range/Performance Problem
P0107	Manifold Absolute Pressure/Barometric Pressure Circuit Low Input
P0108	Manifold Absolute Pressure/Barometric Pressure Circuit High Input
P0109	Manifold Absolute Pressure/Barometric Pressure Circuit Intermittent
P0110	Intake Air Temperature Circuit
P0111	Intake Air Temperature Circuit Range/Performance Problem
P0112	Intake Air Temperature Circuit Low Input
P0113	Intake Air Temperature Circuit High Input
P0114	Intake Air Temperature Circuit Intermittent
P0115	Engine Coolant Temperature Circuit
P0116	Engine Coolant Temperature Circuit Range/Performance Problem
P0117	Engine Coolant Temperature Circuit Low Input
P0118	Engine Coolant Temperature Circuit High Input
P0119	Engine Coolant Temperature Circuit Intermittent
P0120	Throttle/Pedal Position Sensor/Switch A Circuit
P0121	Throttle/Pedal Position Sensor/Switch A Circuit Range/Performance Problem
P0122	Throttle/Pedal Position Sensor/Switch A Circuit Low Input
P0123	Throttle/Pedal Position Sensor/Switch A Circuit High Input
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)
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 Malfunction (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)
P0140	O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 2)
P0141	O2 Sensor Heater Circuit (Bank 1 Sensor 2)
P0142	O2 Sensor Circuit Malfunction (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
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 Malfunction (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)
P0160	O2 Sensor Circuit No Activity Detected (Bank 2 Sensor 2)
P0161	O2 Sensor Heater Circuit (Bank 2 Sensor 2)
P0162	O2 Sensor Circuit Malfunction (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 Malfunction (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 Input
P0179	Fuel Composition Sensor Circuit High Input
P0180	Fuel Temperature Sensor A Circuit
P0181	Fuel Temperature Sensor A Circuit Range/Performance
P0182	Fuel Temperature Sensor A Circuit Low Input
P0183	Fuel Temperature Sensor A Circuit High Input
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 Input
P0188	Fuel Temperature Sensor B Circuit High Input
P0189	Fuel Temperature Sensor B Circuit Intermittent
P0190	Fuel Rail Pressure Sensor Circuit
P0191	Fuel Rail Pressure Sensor Circuit Range/Performance
P0192	Fuel Rail Pressure Sensor Circuit Low Input

P0193	Fuel Rail Pressure Sensor Circuit High Input
P0194	Fuel Rail Pressure Sensor Circuit Intermittent
P0195	Engine Oil Temperature Sensor
P0196	Engine Oil Temperature Sensor Range/Performance
P0197	Engine Oil Temperature Sensor Low
P0198	Engine Oil Temperature Sensor High
P0199	Engine Oil Temperature Sensor Intermittent

## P02XX Fuel and Air Metering

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P0200	Injector Circuit
P0201	Injector Circuit - Cylinder 1
P0202	Injector Circuit - Cylinder 2
P0203	Injector Circuit - Cylinder 3
P0204	Injector Circuit - Cylinder 4
P0205	Injector Circuit - Cylinder 5
P0206	Injector Circuit - Cylinder 6
P0207	Injector Circuit - Cylinder 7
P0208	Injector Circuit - Cylinder 8
P0209	Injector Circuit - Cylinder 9
P0210	Injector Circuit - Cylinder 10
P0211	Injector Circuit - Cylinder 11
P0212	Injector Circuit - 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 Over Speed Condition
P0220	Throttle/Pedal Position Sensor/Switch "B" Circuit
P0221	Throttle/Pedal Position Sensor/Switch "B" Circuit Range/Performance Problem
P0222	Throttle/Pedal Position Sensor/Switch "B" Circuit Low Input
P0223	Throttle/Pedal Position Sensor/Switch "B" Circuit High Input
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 Problem
P0227	Throttle/Pedal Position Sensor/Switch "C" Circuit Low Input
P0228	Throttle/Pedal Position Sensor/Switch "C" Circuit High Input
P0229	Throttle/Pedal Position Sensor/Switch "C" Circuit Intermittent
P0230	Fuel Pump Primary Circuit
P0231	Fuel Pump Secondary Circuit Low
P0232	Fuel Pump Secondary Circuit High
P0233	Fuel Pump Secondary Circuit Intermittent
P0234	Turbo/Super Charger Overboost Condition
P0235	Turbo/Super Charger Boost Sensor "A" Circuit
P0236	Turbo/Super Charger Boost Sensor "A" Circuit Range/Performance
P0237	Turbo/Super Charger Boost Sensor "A" Circuit Low
P0238	Turbo/Super Charger Boost Sensor "A" Circuit High
P0239	Turbo/Super Charger Boost Sensor "B" Circuit
P0240	Turbo/Super Charger Boost Sensor "B" Circuit Range/Performance
P0241	Turbo/Super Charger Boost Sensor "B" Circuit Low
P0242	Turbo/Super Charger Boost Sensor "B" Circuit High

P0243	Turbo/Super Charger Wastegate Solenoid "A"
P0244	Turbo/Super Charger Wastegate Solenoid "A" Range/Performance
P0245	Turbo/Super Charger Wastegate Solenoid "A" Low
P0246	Turbo/Super Charger Wastegate Solenoid "A" High
P0247	Turbo/Super Charger Wastegate Solenoid "B"
P0248	Turbo/Super Charger Wastegate Solenoid "B" Range/Performance
P0249	Turbo/Super Charger Wastegate Solenoid "B" Low
P0250	Turbo/Super Charger 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)
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 4 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
P0298	Engine Oil Over Temperature

## P03XX Ignition System or Misfire

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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)
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 Input (Bank 1 or Single Sensor)
P0328	Knock Sensor 1 Circuit High Input (Bank 1 or Single Sensor)
P0329	Knock Sensor 1 Circuit Input Intermittent (Bank 1 or Single Sensor)
P0330	Knock Sensor 2 Circuit (Bank 2)
P0331	Knock Sensor 2 Circuit Range/Performance (Bank 2)
P0332	Knock Sensor 2 Circuit Low Input (Bank 2)
P0333	Knock Sensor 2 Circuit High Input (Bank 2)
P0334	Knock Sensor 2 Circuit Input Intermittent (Bank 2)
P0335	Crankshaft Position Sensor A Circuit
P0336	Crankshaft Position Sensor A Circuit Range/Performance
P0337	Crankshaft Position Sensor A Circuit Low Input
P0338	Crankshaft Position Sensor A Circuit High Input
P0339	Crankshaft Position Sensor A Circuit Intermittent
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 Input (Bank 1 or Single Sensor)
P0343	Camshaft Position Sensor "A" Circuit High Input (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)
P0348	Camshaft Position Sensor "A" Circuit Range/Performance (Bank 2)
P0347	Camshaft Position Sensor "A" Circuit Low Input (Bank 2)
P0348	Camshaft Position Sensor "A" Circuit High Input (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 "F" 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
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 Input (Bank 1)
P0368	Camshaft Position Sensor "B" Circuit High Input (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 Pulse
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
P0380	Glow Plug/Heater Circuit "A"
P0381	Glow Plug/Heater Indicator Circuit
P0382	Glow Plug/Heater Circuit "B"
P0385	Crankshaft Position Sensor "B" Circuit
P0386	Crankshaft Position Sensor "B" Circuit Range/Performance
P0387	Crankshaft Position Sensor "B" Circuit Low Input
P0388	Crankshaft Position Sensor "B" Circuit High Input
P0389	Crankshaft Position Sensor "B" Circuit Intermittent
P0390	Camshaft Position Sensor "B" Circuit
P0391	Camshaft Position Sensor "B" circuit Range/Performance (Bank 2)
P0392	Camshaft Position Sensor "B" Circuit Low Input (Bank 2)
P0393	Camshaft Position Sensor "B" Circuit High Input (Bank 2)
P0394	Camshaft Position Sensor "B" Circuit Intermittent (Bank 2)

## P04XX Auxiliary Emission Controls

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P0400	Exhaust Gas Recirculation Flow
P0401	Exhaust Gas Recirculation Flow Insufficient Detected
P0402	Exhaust Gas Recirculation Flow Excessive Detected
P0403	Exhaust Gas Recirculation Control Circuit
P0404	Exhaust Gas Recirculation 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
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
P0416	Secondary Air Injection System Relay "A" Circuit
P0419	Secondary Air Injection System Relay "B" Circuit



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 (Bank 1)
P0426	Catalyst Temperature Sensor Range/Performance (Bank 1)
P0427	Catalyst Temperature Sensor Low Input (Bank 1)
P0428	Catalyst Temperature Sensor High Input (Bank 1)
P0429	Catalyst Heater Control Circuit (Bank 1)
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 (Bank 2)
P0436	Catalyst Temperature Sensor Range/Performance (Bank 2)
P0437	Catalyst Temperature Sensor Low Input (Bank 2)
P0438	Catalyst Temperature Sensor High Input (Bank 2)
P0439	Catalyst Heater Control Circuit (Bank 2)
P0440	Evaporative Emission Control System
P0441	Evaporative Emission Control System Incorrect Purge Flow
P0442	Evaporative Emission Control System Leak Detected (small leak)
P0443	Evaporative Emission Control System Purge Control Valve Circuit
P0444	Evaporative Emission Control System Purge Control Valve Circuit Open
P0445	Evaporative Emission Control System Purge Control Valve Circuit Shorted
P0446	Evaporative Emission Control System Vent Control Circuit
P0447	Evaporative Emission Control System Vent Control Circuit Open
P0448	Evaporative Emission Control System Vent Control Circuit Shorted
P0449	Evaporative Emission Control System Vent Valve/Solenoid Circuit
P0450	Evaporative Emission Control System Pressure Sensor
P0451	Evaporative Emission Control System Pressure Sensor Range/Performance
P0452	Evaporative Emission Control System Pressure Sensor Low Input
P0453	Evaporative Emission Control System Pressure Sensor High input
P0454	Evaporative Emission Control System Pressure Sensor Intermittent
P0455	Evaporative Emission Control System Leak Detected (gross leak)
P0456	Evaporative Emission Control System Leak Detected (very small leak)
P0457	Evaporative Emission Control System Leak Detected (fuel cap loose/off)
P0460	Fuel Level Sensor Circuit
P0461	Fuel Level Sensor Circuit Range/Performance
P0462	Fuel Level Sensor Circuit Low Input
P0463	Fuel Level Sensor Circuit High Input
P0464	Fuel Level Sensor Circuit Intermittent
P0465	EVAP Purge Flow Sensor Circuit
P0466	EVAP Purge Flow Sensor Circuit Range/Performance
P0467	EVAP Purge Flow Sensor Circuit Low Input
P0468	EVAP Purge Flow Sensor Circuit High Input
P0469	EVAP Purge Flow Sensor Circuit Intermittent
P0470	Exhaust Pressure Sensor
P0471	Exhaust Pressure Sensor Range/Performance
P0472	Exhaust Pressure Sensor Low
P0473	Exhaust Pressure Sensor High
P0474	Exhaust Pressure Sensor Intermittent
P0475	Exhaust Pressure Control Valve



P0476	Exhaust Pressure Control Valve Range/Performance
P0477	Exhaust Pressure Control Valve Low
P0478	Exhaust Pressure Control Valve High
P0479	Exhaust Pressure Control Valve Intermittent
P0480	Cooling Fan 1 Control Circuit
P0481	Cooling Fan 2 Control Circuit
P0482	Cooling Fan 3 Control Circuit
P0483	Cooling Fan Rationality Check
P0484	Cooling Fan Circuit Over Current
P0485	Cooling Fan Power/Ground Circuit
P0486	Exhaust Gas Recirculation Sensor "B" Circuit
P0487	Exhaust Gas Recirculation Throttle Position Control Circuit
P0488	Exhaust Gas Recirculation Throttle Position Control Range/Performance
P0491	Secondary Air Injection System (Bank 1)
P0492	Secondary Air Injection System (Bank 2)

## P05XX Vehicle Speed, Idle Control, and Auxiliary Inputs

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P0500	Vehicle Speed Sensor
P0501	Vehicle Speed Sensor Range/Performance
P0502	Vehicle Speed Sensor Circuit Low Input
P0503	Vehicle Speed Sensor Intermittent/Erratic/High
P0505	Idle Control System
P0506	Idle Control System RPM Lower Than Expected
P0507	Idle Control System RPM Higher Than Expected
P0508	Idle Control System Circuit Low
P0509	Idle Control System Circuit High
P0510	Closed Throttle Position Switch
P0512	Starter Request Circuit
P0513	Incorrect Immobilizer Key ("Immobilizer pending SAE J1930 approval)
P0515	Battery Temperature Sensor Circuit
P0516	Battery Temperature Sensor Circuit Low
P0517	Battery Temperature Sensor Circuit High
P0520	Engine Oil Pressure Sensor/Switch Circuit
P0521	Engine Oil Pressure Sensor/Switch Range/Performance
P0522	Engine Oil Pressure Sensor/Switch Low Voltage
P0523	Engine Oil Pressure Sensor/Switch High Voltage
P0524	Engine Oil Pressure Too Low
P0530	A/C Refrigerant Pressure Sensor Circuit
P0531	A/C Refrigerant Pressure Sensor Circuit Range/Performance
P0532	A/C Refrigerant Pressure Sensor Circuit Low Input
P0533	A/C Refrigerant Pressure Sensor Circuit High Input
P0534	Air Conditioner Refrigerant Charge Loss
P0540	Intake Air Heater Circuit
P0541	Intake Air Heater Circuit Low
P0542	Intake Air Heater Circuit High
P0544	Exhaust Gas Temperature Sensor Circuit (Bank 1)

P0545	Exhaust Gas Temperature Sensor Circuit Low (Bank 1)
P0546	Exhaust Gas Temperature Sensor Circuit High (Bank 1)
P0547	Exhaust Gas Temperature Sensor Circuit (Bank 2)
P0548	Exhaust Gas Temperature Sensor Circuit Low (Bank 2)
P0549	Exhaust Gas Temperature Sensor Circuit High (Bank 2)
P0550	Power Steering Pressure Sensor Circuit
P0551	Power Steering Pressure Sensor Circuit Range/Performance
P0552	Power Steering Pressure Sensor Circuit Low Input
P0553	Power Steering Pressure Sensor Circuit High Input
P0554	Power Steering 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 Signal
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
P0570	Cruise Control Accel Signal
P0571	Cruise Control/Brake Switch A Circuit
P0572	Cruise Control/Brake Switch A Circuit Low
P0573	Cruise Control/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 through P0580 Reserved for Cruise Control Codes	

## P06XX Computer and Auxiliary Inputs

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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	ECM/PCM Processor
P0607	Control Module Performance
P0608	Control Module VSS Output "A"
P0609	Control Module VSS Output "B"
P0610	Control Module Vehicle Options Error
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
P0620	Generator Control Circuit
P0621	Generator Lamp "L" Terminal Control Circuit
P0622	Generator Field "F" Terminal Control Circuit
P0623	Generator Lamp Control Circuit

P0624	Fuel Cap Lamp Control Circuit
P0630	VIN Not Programmed or Mismatch - ECM/PCM
P0631	VIN Not Programmed or Mismatch - TCM
P0635	Power Steering Control Circuit
P0836	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)
P0640	Intake Air Heater Control 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 ("Immobilizer" pending SAE J1930 approval)
P0649	Speed Control Lamp Control Circuit
P0650	Malfunction Indicator Lamp (ML) Control Circuit
P0654	Engine RPM Output Circuit
P0655	Engine Hot Lamp Output Control Circuit
P0656	Fuel Level Output Circuit
P0660	Intake Manifold Tuning Valve Control Circuit (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 (Bank 2)
P0664	Intake Manifold Tuning Valve Control Circuit Low (Bank 2)
P0665	Intake Manifold Tuning Valve Control Circuit High (Bank 2)

## **P07XX Transmission**

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P0700	Transmission Control System (MIL Request)
P0701	Transmission Control System Range/Performance
P0702	Transmission Control System Electrical
P0703	Torque Converter/Brake Switch B Circuit
P0704	Clutch Switch In put Circuit Malfunction
P0705	Transmission Range Sensor Circuit Malfunction (PRNDL Input)
P0706	Transmission Range Sensor Circuit Range/Performance
P0707	Transmission Range Sensor Circuit Low Input
P0708	Transmission Range Sensor Circuit High Input
P0709	Transmission Range Sensor Circuit intermittent
P0710	Transmission Fluid Temperature Sensor Circuit
P0711	Transmission Fluid Temperature Sensor Circuit Range/Performance
P0712	Transmission Fluid Temperature Sensor Circuit Low Input
P0713	Transmission Fluid Temperature Sensor Circuit High Input
P0714	Transmission Fluid Temperature Sensor Circuit Intermittent
P0715	Input/Turbine Speed Sensor Circuit
P0716	Input/Turbine Speed Sensor Circuit Range/Performance
P0717	Input/Turbine Speed Sensor Circuit No Signal
P0718	Input/Turbine Speed Sensor Circuit Intermittent
P0719	Torque Converter/Brake Switch B Circuit Low
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	Torque Converter/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
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
P0739	TCM Engine Speed Output Circuit Low
P0739	TCM Engine Speed Output Circuit High
P0740	Torque Converter Clutch Circuit
P0741	Torque Converter Clutch Circuit Performance or 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 or Stuck Off
P0747	Pressure Control Solenoid "A" Stuck On
P0748	Pressure Control Solenoid "A" Electrical
P0749	Pressure Control Solenoid "A" Intermittent
P0750	Shift Solenoid "A"
P0751	Shift Solenoid "A" Performance or Stuck Off
P0752	Shift Solenoid "A" Stuck On
P0753	Shift Solenoid "A" Electrical
P0754	Shift Solenoid "A" Intermittent
P0765	Shift Solenoid "B"
P0756	Shift Solenoid "B" Performance or Stuck Off
P0757	Shift Solenoid "B" Stuck On
P0758	Shift Solenoid "B" Electrical
P0759	Shift Solenoid "B" Intermittent
P0760	Shift Solenoid "C"
P0761	Shift Solenoid "C" Performance or Stuck Off
P0762	Shift Solenoid "C" Stuck On
P0763	Shift Solenoid "C" Electrical
P0764	Shift Solenoid "C" Intermittent
P0765	Shift Solenoid "C"
P0766	Shift Solenoid "D" Performance or Stuck Off
P0767	Shift Solenoid "D" Stuck On
P0768	Shift Solenoid "D" Electrical
P0769	Shift Solenoid "D" Intermittent
P0770	Shift Solenoid "E"
P0771	Shift Solenoid "E" Performance or 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 or Stuck Off
P0777	Pressure Control Solenoid "B" Stuck On
P0778	Pressure Control Solenoid "B" Electrical
P0779	Pressure Control Solenoid "B" Intermittent
P0780	Shift
P0781	1-2 Shift
P0782	2-3 Shift
P0783	3-4 Shift
P0784	4-5 Shift
P0785	Shift/Timing Solenoid

P0786	Shift/Timing Solenoid Range/Performance
P0787	Shift/Timing Solenoid Low
P0788	Shift/Timing Solenoid High
P0789	Shift/Timing Solenoid Intermittent
P0790	Normal/Performance Switch Circuit
P0791	Intermediate Shaft Speed Sensor Circuit
P0792	Intermediate Shaft Speed Sensor Circuit Range/Performance
P0793	Intermediate Shaft Speed Sensor Circuit No Signal
P0794	Intermediate Shaft Speed Sensor Circuit Intermittent
P0795	Pressure Control Solenoid "C"
P0796	Pressure Control Solenoid "C" Performance or Stuck off
P0797	Pressure Control Solenoid "C" Stuck On
P0798	Pressure Control Solenoid "C" Electrical
P0799	Pressure Control Solenoid "C" Intermittent

## P08XX Transmission

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P0801	Reverse Inhibit Control Circuit
P0803	1-4 Upshift (Skip Shift) Solenoid Control Circuit
P0804	1-4 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
P0810	Clutch Position Control Error
P0811	Excessive Clutch 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
P0818	Driveline Disconnect Switch Input Circuit
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)
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
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

## **Additional Diagnostic Trouble Code Ranges**

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Other DTC ranges are defined for either manufacturer specific codes or under the control of SAE (Society of Automotive Engineers) and not yet defined. This section documents these additional ranges. Refer to your vehicle's repair manual for manufacturer specific Diagnostic Trouble Codes.

### **P09XX Transmission**

### **P1XXX Manufacturer Controlled**

P10XX Fuel and Air Metering and Auxiliary Emission Controls

P11XX Fuel and Air Metering

P12XX Fuel and Air Metering

P13XX Ignition System or Misfire

P14XX Auxiliary Emission Controls

P15XX Vehicle Speed, Idle Control, and Auxiliary Inputs

P16XX Computer and Auxiliary Outputs

P17XX Transmission

P18XX Transmission

P19XX Transmission

### **P2XXX SAE Controlled DTCs**

P20XX Fuel and Air Metering and Auxiliary Emission Controls

P21XX Fuel and Air Metering and Auxiliary Emission Controls

P22XX Fuel and Air Metering and Auxiliary Emission Controls

P23XX Ignition System or Misfire

P24XX SAE Reserved

P25XX SAE Reserved

P26XX SAE Reserved

P27XX SAE Reserved

P28XX SAE Reserved

P29XX SAE Reserved

## **P3XX Manufacturer Controlled and SAE Reserved**

P30XX Fuel and Air Metering and Auxiliary Emission Controls

P31XX Fuel and Air Metering and Auxiliary Emission Controls

P32XX Fuel and Air Metering and Auxiliary Emission Controls

P33XX Ignition System Misfire

P34XX SAE Reserved

P35XX SAE Reserved

P36XX SAE Reserved

P37XX SAE Reserved

P38XX SAE Reserved

P39XX SAE Reserved