

# List of Diagnostic Trouble Code (DTC)

## GENERAL DESCRIPTION

### 1. List of Diagnostic Trouble Code (DTC)

#### A: LIST

| DTC   | Item                                                                           | NOTE                                                                                                                                                                 |
|-------|--------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| P0011 | Intake Camshaft Position - Timing Over-Advanced or System Performance (Bank 1) | <Ref. to GD(H4DOTC)-10, DTC P0011 INTAKE CAMSHAFT POSITION - TIMING OVER-ADVANCED OR SYSTEM PERFORMANCE (BANK 1), Diagnostic Trouble Code (DTC) Detecting Criteria.> |
| P0016 | Crankshaft Position - Camshaft Position Correlation (Bank1)                    | <Ref. to GD(H4DOTC)-13, DTC P0016 CRANKSHAFT POSITION - CAMSHAFT POSITION CORRELATION (BANK1), Diagnostic Trouble Code (DTC) Detecting Criteria.>                    |
| P0018 | Crankshaft Position - Camshaft Position Correlation (Bank2)                    | <Ref. to GD(H4DOTC)-13, DTC P0018 CRANKSHAFT POSITION - CAMSHAFT POSITION CORRELATION (BANK2), Diagnostic Trouble Code (DTC) Detecting Criteria.>                    |
| P0021 | Intake Camshaft Position - Timing Over-Advanced or System Performance (Bank 2) | <Ref. to GD(H4DOTC)-13, DTC P0021 INTAKE CAMSHAFT POSITION - TIMING OVER-ADVANCED OR SYSTEM PERFORMANCE (BANK 2), Diagnostic Trouble Code (DTC) Detecting Criteria.> |
| P0030 | HO2S Heater Control Circuit (Bank 1 Sensor 1)                                  | <Ref. to GD(H4DOTC)-14, DTC P0030 HO2S HEATER CONTROL CIRCUIT (BANK 1 SENSOR 1), Diagnostic Trouble Code (DTC) Detecting Criteria.>                                  |
| P0031 | HO2S Heater Control Circuit Low (Bank 1 Sensor 1)                              | <Ref. to GD(H4DOTC)-16, DTC P0031 HO2S HEATER CONTROL CIRCUIT LOW (BANK 1 SENSOR 1), Diagnostic Trouble Code (DTC) Detecting Criteria.>                              |
| P0032 | HO2S Heater Control Circuit High (Bank 1 Sensor 1)                             | <Ref. to GD(H4DOTC)-18, DTC P0032 HO2S HEATER CONTROL CIRCUIT HIGH (BANK 1 SENSOR 1), Diagnostic Trouble Code (DTC) Detecting Criteria.>                             |
| P0037 | HO2S Heater Control Circuit Low (Bank 1 Sensor 2)                              | <Ref. to GD(H4DOTC)-20, DTC P0037 HO2S HEATER CONTROL CIRCUIT LOW (BANK 1 SENSOR 2), Diagnostic Trouble Code (DTC) Detecting Criteria.>                              |
| P0038 | HO2S Heater Control Circuit High (Bank 1 Sensor 2)                             | <Ref. to GD(H4DOTC)-22, DTC P0038 HO2S HEATER CONTROL CIRCUIT HIGH (BANK 1 SENSOR 2), Diagnostic Trouble Code (DTC) Detecting Criteria.>                             |
| P0068 | MAP/MAF - Throttle Position Correlation                                        | <Ref. to GD(H4DOTC)-24, DTC P0068 MAP/MAF - THROTTLE POSITION CORRELATION, Diagnostic Trouble Code (DTC) Detecting Criteria.>                                        |
| P0101 | Mass or Volume Air Flow Circuit Range/Performance                              | <Ref. to GD(H4DOTC)-26, DTC P0101 MASS OR VOLUME AIR FLOW CIRCUIT RANGE/PERFORMANCE, Diagnostic Trouble Code (DTC) Detecting Criteria.>                              |
| P0102 | Mass or Volume Air Flow Circuit Low Input                                      | <Ref. to GD(H4DOTC)-29, DTC P0102 MASS OR VOLUME AIR FLOW CIRCUIT LOW INPUT, Diagnostic Trouble Code (DTC) Detecting Criteria.>                                      |
| P0103 | Mass or Volume Air Flow Circuit High Input                                     | <Ref. to GD(H4DOTC)-31, DTC P0103 MASS OR VOLUME AIR FLOW CIRCUIT HIGH INPUT, Diagnostic Trouble Code (DTC) Detecting Criteria.>                                     |
| P0107 | Manifold Absolute Pressure/Barometric Pressure Circuit Low Input               | <Ref. to GD(H4DOTC)-33, DTC P0107 MANIFOLD ABSOLUTE PRESSURE/BAROMETRIC PRESSURE CIRCUIT LOW INPUT, Diagnostic Trouble Code (DTC) Detecting Criteria.>               |
| P0108 | Manifold Absolute Pressure/Barometric Pressure Circuit High Input              | <Ref. to GD(H4DOTC)-35, DTC P0108 MANIFOLD ABSOLUTE PRESSURE/BAROMETRIC PRESSURE CIRCUIT HIGH INPUT, Diagnostic Trouble Code (DTC) Detecting Criteria.>              |
| P0111 | Intake Air Temperature Sensor 1 Circuit Range/Performance                      | <Ref. to GD(H4DOTC)-37, DTC P0111 INTAKE AIR TEMPERATURE SENSOR 1 CIRCUIT RANGE/PERFORMANCE, Diagnostic Trouble Code (DTC) Detecting Criteria.>                      |
| P0112 | Intake Air Temperature Sensor 1 Circuit Low                                    | <Ref. to GD(H4DOTC)-39, DTC P0112 INTAKE AIR TEMPERATURE SENSOR 1 CIRCUIT LOW, Diagnostic Trouble Code (DTC) Detecting Criteria.>                                    |
| P0113 | Intake Air Temperature Sensor 1 Circuit High                                   | <Ref. to GD(H4DOTC)-41, DTC P0113 INTAKE AIR TEMPERATURE SENSOR 1 CIRCUIT HIGH, Diagnostic Trouble Code (DTC) Detecting Criteria.>                                   |
| P0117 | Engine Coolant Temperature Circuit Low                                         | <Ref. to GD(H4DOTC)-43, DTC P0117 ENGINE COOLANT TEMPERATURE CIRCUIT LOW, Diagnostic Trouble Code (DTC) Detecting Criteria.>                                         |
| P0118 | Engine Coolant Temperature Circuit High                                        | <Ref. to GD(H4DOTC)-45, DTC P0118 ENGINE COOLANT TEMPERATURE CIRCUIT HIGH, Diagnostic Trouble Code (DTC) Detecting Criteria.>                                        |

# List of Diagnostic Trouble Code (DTC)

## GENERAL DESCRIPTION

| DTC   | Item                                                                                          | NOTE                                                                                                                                                                          |
|-------|-----------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| P0122 | Throttle/Pedal Position Sensor/<br>Switch "A" Circuit Low                                     | <Ref. to GD(H4DOTC)-47, DTC P0122 THROTTLE/PEDAL POSITION SENSOR/SWITCH "A" CIRCUIT LOW, Diagnostic Trouble Code (DTC) Detecting Criteria.>                                   |
| P0123 | Throttle/Pedal Position Sensor/<br>Switch "A" Circuit High                                    | <Ref. to GD(H4DOTC)-49, DTC P0123 THROTTLE/PEDAL POSITION SENSOR/SWITCH "A" CIRCUIT HIGH, Diagnostic Trouble Code (DTC) Detecting Criteria.>                                  |
| P0125 | Insufficient Coolant Temperature<br>for Closed Loop Fuel Control                              | <Ref. to GD(H4DOTC)-51, DTC P0125 INSUFFICIENT COOLANT TEMPERATURE FOR CLOSED LOOP FUEL CONTROL, Diagnostic Trouble Code (DTC) Detecting Criteria.>                           |
| P0126 | Insufficient Engine Coolant Temperature<br>for Stable Operation                               | <Ref. to GD(H4DOTC)-54, DTC P0126 INSUFFICIENT ENGINE COOLANT TEMPERATURE FOR STABLE OPERATION, Diagnostic Trouble Code (DTC) Detecting Criteria.>                            |
| P0128 | Coolant Thermostat (Engine Coolant<br>Temperature Below Thermostat<br>Regulating Temperature) | <Ref. to GD(H4DOTC)-56, DTC P0128 COOLANT THERMOSTAT (ENGINE COOLANT TEMPERATURE BELOW THERMOSTAT REGULATING TEMPERATURE), Diagnostic Trouble Code (DTC) Detecting Criteria.> |
| P0131 | O2 Sensor Circuit Low Voltage<br>(Bank 1 Sensor 1)                                            | <Ref. to GD(H4DOTC)-58, DTC P0131 O2 SENSOR CIRCUIT LOW VOLTAGE (BANK 1 SENSOR 1), Diagnostic Trouble Code (DTC) Detecting Criteria.>                                         |
| P0132 | O2 Sensor Circuit High Voltage<br>(Bank 1 Sensor 1)                                           | <Ref. to GD(H4DOTC)-60, DTC P0132 O2 SENSOR CIRCUIT HIGH VOLTAGE (BANK 1 SENSOR 1), Diagnostic Trouble Code (DTC) Detecting Criteria.>                                        |
| P0133 | O2 Sensor Circuit Slow Response<br>(Bank 1 Sensor 1)                                          | <Ref. to GD(H4DOTC)-62, DTC P0133 O2 SENSOR CIRCUIT SLOW RESPONSE (BANK 1 SENSOR 1), Diagnostic Trouble Code (DTC) Detecting Criteria.>                                       |
| P0134 | O2 Sensor Circuit No Activity<br>Detected (Bank 1 Sensor 1)                                   | <Ref. to GD(H4DOTC)-65, DTC P0134 O2 SENSOR CIRCUIT NO ACTIVITY DETECTED (BANK 1 SENSOR 1), Diagnostic Trouble Code (DTC) Detecting Criteria.>                                |
| P0137 | O2 Sensor Circuit Low Voltage<br>(Bank 1 Sensor 2)                                            | <Ref. to GD(H4DOTC)-67, DTC P0137 O2 SENSOR CIRCUIT LOW VOLTAGE (BANK 1 SENSOR 2), Diagnostic Trouble Code (DTC) Detecting Criteria.>                                         |
| P0138 | O2 Sensor Circuit High Voltage<br>(Bank 1 Sensor 2)                                           | <Ref. to GD(H4DOTC)-70, DTC P0138 O2 SENSOR CIRCUIT HIGH VOLTAGE (BANK 1 SENSOR 2), Diagnostic Trouble Code (DTC) Detecting Criteria.>                                        |
| P0139 | O2 Sensor Circuit Slow Response<br>(Bank 1 Sensor 2)                                          | <Ref. to GD(H4DOTC)-71, DTC P0139 O2 SENSOR CIRCUIT SLOW RESPONSE (BANK 1 SENSOR 2), Diagnostic Trouble Code (DTC) Detecting Criteria.>                                       |
| P0140 | O2 Sensor Circuit No Activity<br>Detected (Bank1 Sensor2)                                     | <Ref. to GD(H4DOTC)-71, DTC P0139 O2 SENSOR CIRCUIT SLOW RESPONSE (BANK 1 SENSOR 2), Diagnostic Trouble Code (DTC) Detecting Criteria.>                                       |
| P0171 | System Too Lean (Bank 1)                                                                      | <Ref. to GD(H4DOTC)-79, DTC P0171 SYSTEM TOO LEAN (BANK 1), Diagnostic Trouble Code (DTC) Detecting Criteria.>                                                                |
| P0172 | System Too Rich (Bank 1)                                                                      | <Ref. to GD(H4DOTC)-82, DTC P0172 SYSTEM TOO RICH (BANK 1), Diagnostic Trouble Code (DTC) Detecting Criteria.>                                                                |
| P0181 | Fuel Temperature Sensor "A" Circuit<br>Range/Performance                                      | <Ref. to GD(H4DOTC)-85, DTC P0181 FUEL TEMPERATURE SENSOR "A" CIRCUIT RANGE/PERFORMANCE, Diagnostic Trouble Code (DTC) Detecting Criteria.>                                   |
| P0182 | Fuel Temperature Sensor "A" Circuit<br>Low Input                                              | <Ref. to GD(H4DOTC)-88, DTC P0182 FUEL TEMPERATURE SENSOR "A" CIRCUIT LOW INPUT, Diagnostic Trouble Code (DTC) Detecting Criteria.>                                           |
| P0183 | Fuel Temperature Sensor "A" Circuit<br>High Input                                             | <Ref. to GD(H4DOTC)-90, DTC P0183 FUEL TEMPERATURE SENSOR "A" CIRCUIT HIGH INPUT, Diagnostic Trouble Code (DTC) Detecting Criteria.>                                          |
| P0222 | Throttle/Pedal Position Sensor/<br>Switch "B" Circuit Low                                     | <Ref. to GD(H4DOTC)-92, DTC P0222 THROTTLE/PEDAL POSITION SENSOR/SWITCH "B" CIRCUIT LOW, Diagnostic Trouble Code (DTC) Detecting Criteria.>                                   |
| P0223 | Throttle/Pedal Position Sensor/<br>Switch "B" Circuit High                                    | <Ref. to GD(H4DOTC)-94, DTC P0223 THROTTLE/PEDAL POSITION SENSOR/SWITCH "B" CIRCUIT HIGH, Diagnostic Trouble Code (DTC) Detecting Criteria.>                                  |

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| DTC   | Item                                                               | NOTE                                                                                                                                                       |
|-------|--------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| P0230 | Fuel Pump Primary Circuit                                          | <Ref. to GD(H4DOTC)-96, DTC P0230 FUEL PUMP PRIMARY CIRCUIT, Diagnostic Trouble Code (DTC) Detecting Criteria.>                                            |
| P0244 | Turbo/Super Charger Wastegate Solenoid "A" Range/Performance       | <Ref. to GD(H4DOTC)-98, DTC P0244 TURBO/SUPER CHARGER WASTEGATE SOLENOID "A" RANGE/PERFORMANCE, Diagnostic Trouble Code (DTC) Detecting Criteria.>         |
| P0245 | Turbo/Super Charger Wastegate Solenoid "A" Low                     | <Ref. to GD(H4DOTC)-100, DTC P0245 TURBO/SUPER CHARGER WASTEGATE SOLENOID "A" LOW, Diagnostic Trouble Code (DTC) Detecting Criteria.>                      |
| P0246 | Turbo/Super Charger Wastegate Solenoid "A" High                    | <Ref. to GD(H4DOTC)-102, DTC P0246 TURBO/SUPER CHARGER WASTEGATE SOLENOID "A" HIGH, Diagnostic Trouble Code (DTC) Detecting Criteria.>                     |
| P0301 | Cylinder 1 Misfire Detected                                        | <Ref. to GD(H4DOTC)-104, DTC P0301 CYLINDER 1 MISFIRE DETECTED, Diagnostic Trouble Code (DTC) Detecting Criteria.>                                         |
| P0302 | Cylinder 2 Misfire Detected                                        | <Ref. to GD(H4DOTC)-111, DTC P0302 CYLINDER 2 MISFIRE DETECTED, Diagnostic Trouble Code (DTC) Detecting Criteria.>                                         |
| P0303 | Cylinder 3 Misfire Detected                                        | <Ref. to GD(H4DOTC)-111, DTC P0303 CYLINDER 3 MISFIRE DETECTED, Diagnostic Trouble Code (DTC) Detecting Criteria.>                                         |
| P0304 | Cylinder 4 Misfire Detected                                        | <Ref. to GD(H4DOTC)-111, DTC P0304 CYLINDER 4 MISFIRE DETECTED, Diagnostic Trouble Code (DTC) Detecting Criteria.>                                         |
| P0327 | Knock Sensor 1 Circuit Low (Bank 1 or Single Sensor)               | <Ref. to GD(H4DOTC)-112, DTC P0327 KNOCK SENSOR 1 CIRCUIT LOW (BANK 1 OR SINGLE SENSOR), Diagnostic Trouble Code (DTC) Detecting Criteria.>                |
| P0328 | Knock Sensor 1 Circuit High (Bank 1 or Single Sensor)              | <Ref. to GD(H4DOTC)-114, DTC P0328 KNOCK SENSOR 1 CIRCUIT HIGH (BANK 1 OR SINGLE SENSOR), Diagnostic Trouble Code (DTC) Detecting Criteria.>               |
| P0335 | Crankshaft Position Sensor "A" Circuit                             | <Ref. to GD(H4DOTC)-116, DTC P0335 CRANKSHAFT POSITION SENSOR "A" CIRCUIT, Diagnostic Trouble Code (DTC) Detecting Criteria.>                              |
| P0336 | Crankshaft Position Sensor "A" Circuit Range/Performance           | <Ref. to GD(H4DOTC)-118, DTC P0336 CRANKSHAFT POSITION SENSOR "A" CIRCUIT RANGE/PERFORMANCE, Diagnostic Trouble Code (DTC) Detecting Criteria.>            |
| P0340 | Camshaft Position Sensor "A" Circuit (Bank 1 or Single Sensor)     | <Ref. to GD(H4DOTC)-120, DTC P0340 CAMSHAFT POSITION SENSOR "A" CIRCUIT (BANK 1 OR SINGLE SENSOR), Diagnostic Trouble Code (DTC) Detecting Criteria.>      |
| P0345 | Camshaft Position Sensor "A" Circuit (Bank 2)                      | <Ref. to GD(H4DOTC)-122, DTC P0345 CAMSHAFT POSITION SENSOR "A" CIRCUIT (BANK 2), Diagnostic Trouble Code (DTC) Detecting Criteria.>                       |
| P0410 | Secondary Air Injection System                                     | <Ref. to GD(H4DOTC)-123, DTC P0410 SECONDARY AIR INJECTION SYSTEM, Diagnostic Trouble Code (DTC) Detecting Criteria.>                                      |
| P0411 | Secondary Air Injection System Incorrect Flow Detected             | <Ref. to GD(H4DOTC)-128, DTC P0411 SECONDARY AIR INJECTION SYSTEM INCORRECT FLOW DETECTED, Diagnostic Trouble Code (DTC) Detecting Criteria.>              |
| P0413 | Secondary Air Injection System Switching Valve "A" Circuit Open    | <Ref. to GD(H4DOTC)-129, DTC P0413 SECONDARY AIR INJECTION SYSTEM SWITCHING VALVE "A" CIRCUIT OPEN , Diagnostic Trouble Code (DTC) Detecting Criteria.>    |
| P0414 | Secondary Air Injection System Switching Valve "A" Circuit Shorted | <Ref. to GD(H4DOTC)-130, DTC P0414 SECONDARY AIR INJECTION SYSTEM SWITCHING VALVE "A" CIRCUIT SHORTED , Diagnostic Trouble Code (DTC) Detecting Criteria.> |
| P0416 | Secondary Air Injection System Switching Valve "B" Circuit Open    | <Ref. to GD(H4DOTC)-131, DTC P0416 SECONDARY AIR INJECTION SYSTEM SWITCHING VALVE "B" CIRCUIT OPEN , Diagnostic Trouble Code (DTC) Detecting Criteria.>    |
| P0417 | Secondary Air Injection System Switching Valve "B" Circuit Shorted | <Ref. to GD(H4DOTC)-131, DTC P0417 SECONDARY AIR INJECTION SYSTEM SWITCHING VALVE "B" CIRCUIT SHORTED , Diagnostic Trouble Code (DTC) Detecting Criteria.> |
| P0418 | Secondary Air Injection System Control "A" Circuit Open            | <Ref. to GD(H4DOTC)-132, DTC P0418 SECONDARY AIR INJECTION SYSTEM CONTROL "A" CIRCUIT OPEN , Diagnostic Trouble Code (DTC) Detecting Criteria.>            |

# List of Diagnostic Trouble Code (DTC)

## GENERAL DESCRIPTION

| DTC   | Item                                                                   | NOTE                                                                                                                                                          |
|-------|------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| P0420 | Catalyst System Efficiency Below Threshold (Bank 1)                    | <Ref. to GD(H4DOTC)-133, DTC P0420 CATALYST SYSTEM EFFICIENCY BELOW THRESHOLD (BANK 1), Diagnostic Trouble Code (DTC) Detecting Criteria.>                    |
| P0442 | Evaporative Emission Control System Leak Detected (Small Leak)         | <Ref. to GD(H4DOTC)-136, DTC P0442 EVAPORATIVE EMISSION CONTROL SYSTEM LEAK DETECTED (SMALL LEAK), Diagnostic Trouble Code (DTC) Detecting Criteria.>         |
| P0447 | Evaporative Emission Control System Vent Control Circuit Open          | <Ref. to GD(H4DOTC)-151, DTC P0447 EVAPORATIVE EMISSION CONTROL SYSTEM VENT CONTROL CIRCUIT OPEN, Diagnostic Trouble Code (DTC) Detecting Criteria.>          |
| P0448 | Evaporative Emission Control System Vent Control Circuit Shorted       | <Ref. to GD(H4DOTC)-153, DTC P0448 EVAPORATIVE EMISSION CONTROL SYSTEM VENT CONTROL CIRCUIT SHORTED, Diagnostic Trouble Code (DTC) Detecting Criteria.>       |
| P0451 | Evaporative Emission Control System Pressure Sensor                    | <Ref. to GD(H4DOTC)-155, DTC P0451 EVAPORATIVE EMISSION CONTROL SYSTEM PRESSURE SENSOR, Diagnostic Trouble Code (DTC) Detecting Criteria.>                    |
| P0452 | Evaporative Emission Control System Pressure Sensor Low Input          | <Ref. to GD(H4DOTC)-157, DTC P0452 EVAPORATIVE EMISSION CONTROL SYSTEM PRESSURE SENSOR LOW INPUT, Diagnostic Trouble Code (DTC) Detecting Criteria.>          |
| P0453 | Evaporative Emission Control System Pressure Sensor High Input         | <Ref. to GD(H4DOTC)-159, DTC P0453 EVAPORATIVE EMISSION CONTROL SYSTEM PRESSURE SENSOR HIGH INPUT, Diagnostic Trouble Code (DTC) Detecting Criteria.>         |
| P0456 | Evaporative Emission Control System Leak Detected (Very Small Leak)    | <Ref. to GD(H4DOTC)-161, DTC P0456 EVAPORATIVE EMISSION CONTROL SYSTEM LEAK DETECTED (VERY SMALL LEAK), Diagnostic Trouble Code (DTC) Detecting Criteria.>    |
| P0457 | Evaporative Emission Control System Leak Detected (Fuel Cap Loose/Off) | <Ref. to GD(H4DOTC)-161, DTC P0457 EVAPORATIVE EMISSION CONTROL SYSTEM LEAK DETECTED (FUEL CAP LOOSE/OFF), Diagnostic Trouble Code (DTC) Detecting Criteria.> |
| P0458 | Evaporative Emission System Purge Control Valve Circuit Low            | <Ref. to GD(H4DOTC)-162, DTC P0458 EVAPORATIVE EMISSION SYSTEM PURGE CONTROL VALVE CIRCUIT LOW, Diagnostic Trouble Code (DTC) Detecting Criteria.>            |
| P0459 | Evaporative Emission System Purge Control Valve Circuit High           | <Ref. to GD(H4DOTC)-164, DTC P0459 EVAPORATIVE EMISSION SYSTEM PURGE CONTROL VALVE CIRCUIT HIGH, Diagnostic Trouble Code (DTC) Detecting Criteria.>           |
| P0461 | Fuel Level Sensor "A" Circuit Range/Performance                        | <Ref. to GD(H4DOTC)-166, DTC P0461 FUEL LEVEL SENSOR "A" CIRCUIT RANGE/PERFORMANCE, Diagnostic Trouble Code (DTC) Detecting Criteria.>                        |
| P0462 | Fuel Level Sensor "A" Circuit Low                                      | <Ref. to GD(H4DOTC)-168, DTC P0462 FUEL LEVEL SENSOR "A" CIRCUIT LOW, Diagnostic Trouble Code (DTC) Detecting Criteria.>                                      |
| P0463 | Fuel Level Sensor "A" Circuit High                                     | <Ref. to GD(H4DOTC)-170, DTC P0463 FUEL LEVEL SENSOR "A" CIRCUIT HIGH, Diagnostic Trouble Code (DTC) Detecting Criteria.>                                     |
| P0464 | Fuel Level Sensor Circuit Intermittent                                 | <Ref. to GD(H4DOTC)-172, DTC P0464 FUEL LEVEL SENSOR CIRCUIT INTERMITTENT, Diagnostic Trouble Code (DTC) Detecting Criteria.>                                 |
| P0483 | Fan Rationality Check                                                  | <Ref. to GD(H4DOTC)-175, DTC P0483 FAN RATIONALITY CHECK, Diagnostic Trouble Code (DTC) Detecting Criteria.>                                                  |
| P0502 | Vehicle Speed Sensor "A" Circuit Low Input                             | <Ref. to GD(H4DOTC)-176, DTC P0502 VEHICLE SPEED SENSOR "A" CIRCUIT LOW INPUT, Diagnostic Trouble Code (DTC) Detecting Criteria.>                             |
| P0503 | Vehicle Speed Sensor "A" Intermittent/Erratic/High                     | <Ref. to GD(H4DOTC)-177, DTC P0503 VEHICLE SPEED SENSOR "A" INTERMITTENT/ERRATIC/HIGH, Diagnostic Trouble Code (DTC) Detecting Criteria.>                     |
| P0506 | Idle Air Control System RPM Lower Than Expected                        | <Ref. to GD(H4DOTC)-178, DTC P0506 IDLE AIR CONTROL SYSTEM RPM LOWER THAN EXPECTED, Diagnostic Trouble Code (DTC) Detecting Criteria.>                        |
| P0507 | Idle Air Control System RPM Higher Than Expected                       | <Ref. to GD(H4DOTC)-180, DTC P0507 IDLE AIR CONTROL SYSTEM RPM HIGHER THAN EXPECTED, Diagnostic Trouble Code (DTC) Detecting Criteria.>                       |
| P0512 | Starter Request Circuit                                                | <Ref. to GD(H4DOTC)-182, DTC P0512 STARTER REQUEST CIRCUIT, Diagnostic Trouble Code (DTC) Detecting Criteria.>                                                |

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| DTC   | Item                                                       | NOTE                                                                                                                                               |
|-------|------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| P0513 | Incorrect Immobilizer Key                                  | <Ref. to GD(H4DOTC)-183, DTC P0513 INCORRECT IMMOBILIZER KEY, Diagnostic Trouble Code (DTC) Detecting Criteria.>                                   |
| P0519 | Idle Air Control System Performance                        | <Ref. to GD(H4DOTC)-184, DTC P0519 IDLE AIR CONTROL SYSTEM PERFORMANCE, Diagnostic Trouble Code (DTC) Detecting Criteria.>                         |
| P0600 | Serial Communication Link                                  | <Ref. to GD(H4DOTC)-185, DTC P0600 SERIAL COMMUNICATION LINK, Diagnostic Trouble Code (DTC) Detecting Criteria.>                                   |
| P0604 | Internal Control Module Random Access Memory (RAM) Error   | <Ref. to GD(H4DOTC)-186, DTC P0604 INTERNAL CONTROL MODULE RANDOM ACCESS MEMORY (RAM) ERROR, Diagnostic Trouble Code (DTC) Detecting Criteria.>    |
| P0605 | Internal Control Module Read Only Memory (ROM) Error       | <Ref. to GD(H4DOTC)-187, DTC P0605 INTERNAL CONTROL MODULE READ ONLY MEMORY (ROM) ERROR, Diagnostic Trouble Code (DTC) Detecting Criteria.>        |
| P0607 | Control Module Performance                                 | <Ref. to GD(H4DOTC)-188, DTC P0607 CONTROL MODULE PERFORMANCE, Diagnostic Trouble Code (DTC) Detecting Criteria.>                                  |
| P0638 | Throttle Actuator Control Range/Performance (Bank 1)       | <Ref. to GD(H4DOTC)-190, DTC P0638 THROTTLE ACTUATOR CONTROL RANGE/PERFORMANCE (BANK 1), Diagnostic Trouble Code (DTC) Detecting Criteria.>        |
| P0691 | Fan 1 Control Circuit Low                                  | <Ref. to GD(H4DOTC)-193, DTC P0691 FAN 1 CONTROL CIRCUIT LOW, Diagnostic Trouble Code (DTC) Detecting Criteria.>                                   |
| P0692 | Fan 1 Control Circuit High                                 | <Ref. to GD(H4DOTC)-194, DTC P0692 FAN 1 CONTROL CIRCUIT HIGH, Diagnostic Trouble Code (DTC) Detecting Criteria.>                                  |
| P0700 | Transmission Control System (MIL Request)                  | <Ref. to GD(H4DOTC)-195, DTC P0700 TRANSMISSION CONTROL SYSTEM (MIL REQUEST), Diagnostic Trouble Code (DTC) Detecting Criteria.>                   |
| P0851 | Park/Neutral Switch Input Circuit Low (AT Model)           | <Ref. to GD(H4DOTC)-196, DTC P0851 PARK/NEUTRAL SWITCH INPUT CIRCUIT LOW (AT MODEL), Diagnostic Trouble Code (DTC) Detecting Criteria.>            |
| P0851 | Neutral Switch Input Circuit Low (MT Model)                | <Ref. to GD(H4DOTC)-197, DTC P0851 NEUTRAL SWITCH INPUT CIRCUIT LOW (MT MODEL), Diagnostic Trouble Code (DTC) Detecting Criteria.>                 |
| P0852 | Park/Neutral Switch Input Circuit High (AT Model)          | <Ref. to GD(H4DOTC)-198, DTC P0852 PARK/NEUTRAL SWITCH INPUT CIRCUIT HIGH (AT MODEL), Diagnostic Trouble Code (DTC) Detecting Criteria.>           |
| P0852 | Neutral Switch Input Circuit High (MT Model)               | <Ref. to GD(H4DOTC)-199, DTC P0852 NEUTRAL SWITCH INPUT CIRCUIT HIGH (MT MODEL), Diagnostic Trouble Code (DTC) Detecting Criteria.>                |
| P1152 | O2 Sensor Circuit Range/Performance (Low) (Bank1 Sensor1)  | <Ref. to GD(H4DOTC)-200, DTC P1152 O2 SENSOR CIRCUIT RANGE/PERFORMANCE (LOW) (BANK1 SENSOR1), Diagnostic Trouble Code (DTC) Detecting Criteria.>   |
| P1153 | O2 Sensor Circuit Range/Performance (High) (Bank1 Sensor1) | <Ref. to GD(H4DOTC)-203, DTC P1153 O2 SENSOR CIRCUIT RANGE/PERFORMANCE (HIGH) (BANK1 SENSOR1), Diagnostic Trouble Code (DTC) Detecting Criteria.>  |
| P1160 | Return Spring Failure                                      | <Ref. to GD(H4DOTC)-206, DTC P1160 RETURN SPRING FAILURE, Diagnostic Trouble Code (DTC) Detecting Criteria.>                                       |
| P1400 | Fuel Tank Pressure Control Solenoid Valve Circuit Low      | <Ref. to GD(H4DOTC)-208, DTC P1400 FUEL TANK PRESSURE CONTROL SOLENOID VALVE CIRCUIT LOW, Diagnostic Trouble Code (DTC) Detecting Criteria.>       |
| P1410 | Secondary Air Injection System Switching Valve Stuck Open  | <Ref. to GD(H4DOTC)-210, DTC P1410 SECONDARY AIR INJECTION SYSTEM SWITCHING VALVE STUCK OPEN, Diagnostic Trouble Code (DTC) Detecting Criteria.>   |
| P1418 | Secondary Air Injection System Control "A" Circuit Shorted | <Ref. to GD(H4DOTC)-212, DTC P1418 SECONDARY AIR INJECTION SYSTEM CONTROL "A" CIRCUIT SHORTED , Diagnostic Trouble Code (DTC) Detecting Criteria.> |
| P1420 | Fuel Tank Pressure Control Sol. Valve Circuit High         | <Ref. to GD(H4DOTC)-213, DTC P1420 FUEL TANK PRESSURE CONTROL SOL. VALVE CIRCUIT HIGH, Diagnostic Trouble Code (DTC) Detecting Criteria.>          |

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| DTC   | Item                                                                  | NOTE                                                                                                                                                         |
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| P1443 | Vent Control Solenoid Valve Function Problem                          | <Ref. to GD(H4DOTC)-215, DTC P1443 VENT CONTROL SOLENOID VALVE FUNCTION PROBLEM, Diagnostic Trouble Code (DTC) Detecting Criteria.>                          |
| P1491 | Positive Crankcase Ventilation (Blow-by) Function Problem             | <Ref. to GD(H4DOTC)-217, DTC P1491 POSITIVE CRANKCASE VENTILATION (BLOW-BY) FUNCTION PROBLEM, Diagnostic Trouble Code (DTC) Detecting Criteria.>             |
| P1518 | Starter Switch Circuit Low Input                                      | <Ref. to GD(H4DOTC)-219, DTC P1518 STARTER SWITCH CIRCUIT LOW INPUT, Diagnostic Trouble Code (DTC) Detecting Criteria.>                                      |
| P1560 | Back-up Voltage Circuit Malfunction                                   | <Ref. to GD(H4DOTC)-220, DTC P1560 BACK-UP VOLTAGE CIRCUIT MALFUNCTION, Diagnostic Trouble Code (DTC) Detecting Criteria.>                                   |
| P1570 | Antenna                                                               | <Ref. to GD(H4DOTC)-221, DTC P1570 ANTENNA, Diagnostic Trouble Code (DTC) Detecting Criteria.>                                                               |
| P1571 | Reference Code Incompatibility                                        | <Ref. to GD(H4DOTC)-221, DTC P1571 REFERENCE CODE INCOMPATIBILITY, Diagnostic Trouble Code (DTC) Detecting Criteria.>                                        |
| P1572 | IMM Circuit Failure (Except Antenna Circuit)                          | <Ref. to GD(H4DOTC)-221, DTC P1572 IMM CIRCUIT FAILURE (EXCEPT ANTENNA CIRCUIT), Diagnostic Trouble Code (DTC) Detecting Criteria.>                          |
| P1574 | Key Communication Failure                                             | <Ref. to GD(H4DOTC)-221, DTC P1574 KEY COMMUNICATION FAILURE, Diagnostic Trouble Code (DTC) Detecting Criteria.>                                             |
| P1576 | EGI Control Module EEPROM                                             | <Ref. to GD(H4DOTC)-221, DTC P1576 EGI CONTROL MODULE EEPROM, Diagnostic Trouble Code (DTC) Detecting Criteria.>                                             |
| P1577 | IMM Control Module EEPROM                                             | <Ref. to GD(H4DOTC)-221, DTC P1577 IMM CONTROL MODULE EEPROM, Diagnostic Trouble Code (DTC) Detecting Criteria.>                                             |
| P2004 | Intake Manifold Runner Control Stuck Open (Bank 1)                    | <Ref. to GD(H4DOTC)-222, DTC P2004 INTAKE MANIFOLD RUNNER CONTROL STUCK OPEN (BANK 1), Diagnostic Trouble Code (DTC) Detecting Criteria.>                    |
| P2005 | Intake Manifold Runner Control Stuck Open (Bank 2)                    | <Ref. to GD(H4DOTC)-223, DTC P2005 INTAKE MANIFOLD RUNNER CONTROL STUCK OPEN (BANK 2), Diagnostic Trouble Code (DTC) Detecting Criteria.>                    |
| P2006 | Intake Manifold Runner Control Stuck Closed (Bank 1)                  | <Ref. to GD(H4DOTC)-224, DTC P2006 INTAKE MANIFOLD RUNNER CONTROL STUCK CLOSED (BANK 1), Diagnostic Trouble Code (DTC) Detecting Criteria.>                  |
| P2007 | Intake Manifold Runner Control Stuck Closed (Bank 2)                  | <Ref. to GD(H4DOTC)-225, DTC P2007 INTAKE MANIFOLD RUNNER CONTROL STUCK CLOSED (BANK 2), Diagnostic Trouble Code (DTC) Detecting Criteria.>                  |
| P2008 | Intake Manifold Runner Control Circuit / Open (Bank 1)                | <Ref. to GD(H4DOTC)-226, DTC P2008 INTAKE MANIFOLD RUNNER CONTROL CIRCUIT / OPEN (BANK 1), Diagnostic Trouble Code (DTC) Detecting Criteria.>                |
| P2009 | Intake Manifold Runner Control Circuit Low (Bank 1)                   | <Ref. to GD(H4DOTC)-228, DTC P2009 INTAKE MANIFOLD RUNNER CONTROL CIRCUIT LOW (BANK 1), Diagnostic Trouble Code (DTC) Detecting Criteria.>                   |
| P2011 | Intake Manifold Runner Control Circuit / Open (Bank 2)                | <Ref. to GD(H4DOTC)-230, DTC P2011 INTAKE MANIFOLD RUNNER CONTROL CIRCUIT / OPEN (BANK 2), Diagnostic Trouble Code (DTC) Detecting Criteria.>                |
| P2012 | Intake Manifold Runner Control Circuit Low (Bank 2)                   | <Ref. to GD(H4DOTC)-232, DTC P2012 INTAKE MANIFOLD RUNNER CONTROL CIRCUIT LOW (BANK 2), Diagnostic Trouble Code (DTC) Detecting Criteria.>                   |
| P2016 | Intake Manifold Runner Position Sensor / Switch Circuit Low (Bank 1)  | <Ref. to GD(H4DOTC)-234, DTC P2016 INTAKE MANIFOLD RUNNER POSITION SENSOR / SWITCH CIRCUIT LOW (BANK 1), Diagnostic Trouble Code (DTC) Detecting Criteria.>  |
| P2017 | Intake Manifold Runner Position Sensor / Switch Circuit High (Bank 1) | <Ref. to GD(H4DOTC)-236, DTC P2017 INTAKE MANIFOLD RUNNER POSITION SENSOR / SWITCH CIRCUIT HIGH (BANK 1), Diagnostic Trouble Code (DTC) Detecting Criteria.> |
| P2021 | Intake Manifold Runner Position Sensor / Switch Circuit Low (Bank 2)  | <Ref. to GD(H4DOTC)-238, DTC P2021 INTAKE MANIFOLD RUNNER POSITION SENSOR / SWITCH CIRCUIT LOW (BANK 2), Diagnostic Trouble Code (DTC) Detecting Criteria.>  |

## List of Diagnostic Trouble Code (DTC)

### GENERAL DESCRIPTION

| DTC   | Item                                                                  | NOTE                                                                                                                                                         |
|-------|-----------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| P2022 | Intake Manifold Runner Position Sensor / Switch Circuit High (Bank 2) | <Ref. to GD(H4DOTC)-240, DTC P2022 INTAKE MANIFOLD RUNNER POSITION SENSOR / SWITCH CIRCUIT HIGH (BANK 2), Diagnostic Trouble Code (DTC) Detecting Criteria.> |
| P2088 | OCV Solenoid Valve Signal A Circuit Open (Bank 1)                     | <Ref. to GD(H4DOTC)-242, DTC P2088 OCV SOLENOID VALVE SIGNAL A CIRCUIT OPEN (BANK 1), Diagnostic Trouble Code (DTC) Detecting Criteria.>                     |
| P2089 | OCV Solenoid Valve Signal A Circuit Short (Bank 1)                    | <Ref. to GD(H4DOTC)-244, DTC P2089 OCV SOLENOID VALVE SIGNAL A CIRCUIT SHORT (BANK 1), Diagnostic Trouble Code (DTC) Detecting Criteria.>                    |
| P2092 | OCV Solenoid Valve Signal A Circuit Open (Bank 2)                     | <Ref. to GD(H4DOTC)-246, DTC P2092 OCV SOLENOID VALVE SIGNAL A CIRCUIT OPEN (BANK 2), Diagnostic Trouble Code (DTC) Detecting Criteria.>                     |
| P2093 | Intake Camshaft Position Actuator Control Circuit High (Bank 2)       | <Ref. to GD(H4DOTC)-248, DTC P2093 INTAKE CAMSHAFT POSITION ACTUATOR CONTROL CIRCUIT HIGH (BANK 2), Diagnostic Trouble Code (DTC) Detecting Criteria.>       |
| P2096 | Post Catalyst Fuel Trim System Too Lean Bank 1                        | <Ref. to GD(H4DOTC)-250, DTC P2096 POST CATALYST FUEL TRIM SYSTEM TOO LEAN BANK 1, Diagnostic Trouble Code (DTC) Detecting Criteria.>                        |
| P2097 | Post Catalyst Fuel Trim System Too Rich Bank 1                        | <Ref. to GD(H4DOTC)-252, DTC P2097 POST CATALYST FUEL TRIM SYSTEM TOO RICH BANK 1, Diagnostic Trouble Code (DTC) Detecting Criteria.>                        |
| P2101 | Throttle Actuator Control Motor Circuit Range/Performance             | <Ref. to GD(H4DOTC)-254, DTC P2101 THROTTLE ACTUATOR CONTROL MOTOR CIRCUIT RANGE/PERFORMANCE, Diagnostic Trouble Code (DTC) Detecting Criteria.>             |
| P2102 | Throttle Actuator Control Motor Circuit Low                           | <Ref. to GD(H4DOTC)-256, DTC P2102 THROTTLE ACTUATOR CONTROL MOTOR CIRCUIT LOW, Diagnostic Trouble Code (DTC) Detecting Criteria.>                           |
| P2103 | Throttle Actuator Control Motor Circuit High                          | <Ref. to GD(H4DOTC)-258, DTC P2103 THROTTLE ACTUATOR CONTROL MOTOR CIRCUIT HIGH, Diagnostic Trouble Code (DTC) Detecting Criteria.>                          |
| P2109 | Throttle/Pedal Position Sensor "A" Minimum Stop Performance           | <Ref. to GD(H4DOTC)-260, DTC P2109 THROTTLE/PEDAL POSITION SENSOR "A" MINIMUM STOP PERFORMANCE, Diagnostic Trouble Code (DTC) Detecting Criteria.>           |
| P2122 | Throttle/Pedal Position Sensor/ Switch "D" Circuit Low Input          | <Ref. to GD(H4DOTC)-262, DTC P2122 THROTTLE/PEDAL POSITION SENSOR/SWITCH "D" CIRCUIT LOW INPUT, Diagnostic Trouble Code (DTC) Detecting Criteria.>           |
| P2123 | Throttle/Pedal Position Sensor/ Switch "D" Circuit High Input         | <Ref. to GD(H4DOTC)-264, DTC P2123 THROTTLE/PEDAL POSITION SENSOR/SWITCH "D" CIRCUIT HIGH INPUT, Diagnostic Trouble Code (DTC) Detecting Criteria.>          |
| P2127 | Throttle/Pedal Position Sensor/ Switch "E" Circuit Low Input          | <Ref. to GD(H4DOTC)-266, DTC P2127 THROTTLE/PEDAL POSITION SENSOR/SWITCH "E" CIRCUIT LOW INPUT, Diagnostic Trouble Code (DTC) Detecting Criteria.>           |
| P2128 | Throttle/Pedal Position Sensor/ Switch "E" Circuit High Input         | <Ref. to GD(H4DOTC)-268, DTC P2128 THROTTLE/PEDAL POSITION SENSOR/SWITCH "E" CIRCUIT HIGH INPUT, Diagnostic Trouble Code (DTC) Detecting Criteria.>          |
| P2135 | Throttle/Pedal Position Sensor/ Switch "A"/"B" Voltage Correlation    | <Ref. to GD(H4DOTC)-270, DTC P2135 THROTTLE/PEDAL POSITION SENSOR/SWITCH "A"/"B" VOLTAGE CORRELATION, Diagnostic Trouble Code (DTC) Detecting Criteria.>     |
| P2138 | Throttle/Pedal Position Sensor/ Switch "D"/"E" Voltage Correlation    | <Ref. to GD(H4DOTC)-272, DTC P2138 THROTTLE/PEDAL POSITION SENSOR/SWITCH "D"/"E" VOLTAGE CORRELATION, Diagnostic Trouble Code (DTC) Detecting Criteria.>     |
| P2227 | Barometric Pressure Circuit Range/Performance                         | <Ref. to GD(H4DOTC)-274, DTC P2227 BAROMETRIC PRESSURE CIRCUIT RANGE/PERFORMANCE, Diagnostic Trouble Code (DTC) Detecting Criteria.>                         |
| P2228 | Barometric Pressure Circuit Low                                       | <Ref. to GD(H4DOTC)-275, DTC P2228 BAROMETRIC PRESSURE CIRCUIT LOW, Diagnostic Trouble Code (DTC) Detecting Criteria.>                                       |
| P2229 | Barometric Pressure Circuit High                                      | <Ref. to GD(H4DOTC)-276, DTC P2229 BAROMETRIC PRESSURE CIRCUIT HIGH, Diagnostic Trouble Code (DTC) Detecting Criteria.>                                      |

# List of Diagnostic Trouble Code (DTC)

## GENERAL DESCRIPTION

| DTC   | Item                                                                               | NOTE                                                                                                                                                                      |
|-------|------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| P2431 | Secondary Air Injection System Air Flow /Pressure Sensor Circuit Range/Performance | <Ref. to GD(H4DOTC)-277, DTC P2431 SECONDARY AIR INJECTION SYSTEM AIR FLOW /PRESSURE SENSOR CIRCUIT RANGE/PERFORMANCE, Diagnostic Trouble Code (DTC) Detecting Criteria.> |
| P2432 | Secondary Air Injection System Air Flow /Pressure Sensor Circuit Low               | <Ref. to GD(H4DOTC)-278, DTC P2432 SECONDARY AIR INJECTION SYSTEM AIR FLOW /PRESSURE SENSOR CIRCUIT LOW, Diagnostic Trouble Code (DTC) Detecting Criteria.>               |
| P2433 | Secondary Air Injection System Air Flow /Pressure Sensor Circuit High              | <Ref. to GD(H4DOTC)-279, DTC P2433 SECONDARY AIR INJECTION SYSTEM AIR FLOW /PRESSURE SENSOR CIRCUIT HIGH, Diagnostic Trouble Code (DTC) Detecting Criteria.>              |
| P2440 | Secondary Air Injection System Switching Valve Stuck Open (Bank1)                  | <Ref. to GD(H4DOTC)-280, DTC P2440 SECONDARY AIR INJECTION SYSTEM SWITCHING VALVE STUCK OPEN (BANK1), Diagnostic Trouble Code (DTC) Detecting Criteria.>                  |
| P2441 | Secondary Air Injection System Switching Valve Stuck Closed (Bank1)                | <Ref. to GD(H4DOTC)-280, DTC P2441 SECONDARY AIR INJECTION SYSTEM SWITCHING VALVE STUCK CLOSED (BANK1), Diagnostic Trouble Code (DTC) Detecting Criteria.>                |
| P2442 | Secondary Air Injection System Switching Valve Stuck Open (Bank2)                  | <Ref. to GD(H4DOTC)-280, DTC P2442 SECONDARY AIR INJECTION SYSTEM SWITCHING VALVE STUCK OPEN (BANK2), Diagnostic Trouble Code (DTC) Detecting Criteria.>                  |
| P2443 | Secondary Air Injection System Switching Valve Stuck Closed (Bank2)                | <Ref. to GD(H4DOTC)-280, DTC P2443 SECONDARY AIR INJECTION SYSTEM SWITCHING VALVE STUCK CLOSED (BANK2), Diagnostic Trouble Code (DTC) Detecting Criteria.>                |
| P2444 | Secondary Air Injection System Pump Stuck On                                       | <Ref. to GD(H4DOTC)-281, DTC P2444 SECONDARY AIR INJECTION SYSTEM PUMP STUCK ON, Diagnostic Trouble Code (DTC) Detecting Criteria.>                                       |