

# LIST OF DIAGNOSTIC TROUBLE CODE (DTC)

ENGINE (DIAGNOSTICS)

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

### A: LIST

| DTC   | Item                                                                     | Index                                                                                                                                                                      |
|-------|--------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| P0011 | A Camshaft Position-Timing Over-Advanced or System Performance (Bank 1)  | <Ref. to EN(H4DOTC)-75, DTC P0011 — “A” CAMSHAFT POSITION-TIMING OVER-ADVANCED OR SYSTEM PERFORMANCE (BANK 1) —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).> |
| P0021 | A Camshaft Position-Timing Over-advanced or System Performance (Bank 2)  | <Ref. to EN(H4DOTC)-76, DTC P0021 — “A” CAMSHAFT POSITION-TIMING OVER-ADVANCED OR SYSTEM PERFORMANCE (BANK 2) —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).> |
| P0030 | HO2S Heater Control Circuit (Bank 1 Sensor 1)                            | <Ref. to EN(H4DOTC)-77, DTC P0030 — HO2S HEATER CONTROL CIRCUIT (BANK 1 SENSOR 1) —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                             |
| P0031 | HO2S Heater Control Circuit Low (Bank 1 Sensor 1)                        | <Ref. to EN(H4DOTC)-79, DTC P0031 — HO2S HEATER CONTROL CIRCUIT LOW (BANK 1 SENSOR 1) —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                         |
| P0032 | HO2S Heater Control Circuit High (Bank 1 Sensor 1)                       | <Ref. to EN(H4DOTC)-82, DTC P0032 — HO2S HEATER CONTROL CIRCUIT HIGH (BANK 1 SENSOR 1) —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                        |
| P0037 | HO2S Heater Control Circuit Low (Bank 1 Sensor 2)                        | <Ref. to EN(H4DOTC)-84, DTC P0037 — HO2S HEATER CONTROL CIRCUIT LOW (BANK 1 SENSOR 2) —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                         |
| P0038 | HO2S Heater Control Circuit High (Bank 1 Sensor 2)                       | <Ref. to EN(H4DOTC)-87, DTC P0038 — HO2S HEATER CONTROL CIRCUIT HIGH (BANK 1 SENSOR 2) —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                        |
| P0068 | Manifold Absolute Pressure/Barometric Pressure Circuit Range/Performance | <Ref. to EN(H4DOTC)-89, DTC P0068 — MANIFOLD ABSOLUTE PRESSURE/BAROMETRIC PRESSURE CIRCUIT RANGE/PERFORMANCE —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>  |
| P0101 | Mass or Volume Air Flow Circuit Range/Performance                        | <Ref. to EN(H4DOTC)-91, DTC P0101 — MASS OR VOLUME AIR FLOW CIRCUIT RANGE/PERFORMANCE —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                         |
| P0102 | Mass or Volume Air Flow Circuit Low Input                                | <Ref. to EN(H4DOTC)-93, DTC P0102 — MASS OR VOLUME AIR FLOW CIRCUIT LOW INPUT —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                                 |
| P0103 | Mass or Volume Air Flow Circuit High Input                               | <Ref. to EN(H4DOTC)-96, DTC P0103 — MASS OR VOLUME AIR FLOW CIRCUIT HIGH INPUT —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                                |
| P0107 | Manifold Absolute Pressure/Barometric Pressure Circuit Low Input         | <Ref. to EN(H4DOTC)-98, DTC P0107 — MANIFOLD ABSOLUTE PRESSURE/BAROMETRIC PRESSURE CIRCUIT LOW INPUT —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>          |
| P0108 | Manifold Absolute Pressure/Barometric Pressure Circuit High Input        | <Ref. to EN(H4DOTC)-100, DTC P0108 — MANIFOLD ABSOLUTE PRESSURE/BAROMETRIC PRESSURE CIRCUIT HIGH INPUT —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>        |
| P0111 | Intake Air Temperature Circuit Range/Performance                         | <Ref. to EN(H4DOTC)-102, DTC P0111 — INTAKE AIR TEMPERATURE CIRCUIT RANGE/PERFORMANCE —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                         |
| P0112 | Intake Air Temperature Circuit Low Input                                 | <Ref. to EN(H4DOTC)-104, DTC P0112 — INTAKE AIR TEMPERATURE CIRCUIT LOW INPUT —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                                 |
| P0113 | Intake Air Temperature Circuit High Input                                | <Ref. to EN(H4DOTC)-106, DTC P0113 — INTAKE AIR TEMPERATURE CIRCUIT HIGH INPUT —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                                |
| P0117 | Engine Coolant Temperature Circuit Low Input                             | <Ref. to EN(H4DOTC)-109, DTC P0117 — ENGINE COOLANT TEMPERATURE CIRCUIT LOW INPUT —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                             |
| P0118 | Engine Coolant Temperature Circuit High Input                            | <Ref. to EN(H4DOTC)-111, DTC P0118 — ENGINE COOLANT TEMPERATURE CIRCUIT HIGH INPUT —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                            |

# LIST OF DIAGNOSTIC TROUBLE CODE (DTC)

ENGINE (DIAGNOSTICS)

| DTC   | Item                                                                             | Index                                                                                                                                                                              |
|-------|----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| P0122 | Throttle/Pedal Position Sensor/Switch "A" Circuit Low Input                      | <Ref. to EN(H4DOTC)-114, DTC P0122 — THROTTLE/PEDAL POSITION SENSOR/SWITCH "A" CIRCUIT LOW INPUT —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                      |
| P0123 | Throttle/Pedal Position Sensor/Switch "A" Circuit High Input                     | <Ref. to EN(H4DOTC)-117, DTC P0123 — THROTTLE/PEDAL POSITION SENSOR/SWITCH "A" CIRCUIT HIGH INPUT —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                     |
| P0125 | Insufficient Coolant Temperature for Closed Loop Fuel Control                    | <Ref. to EN(H4DOTC)-121, DTC P0125 — INSUFFICIENT COOLANT TEMPERATURE FOR CLOSED LOOP FUEL CONTROL —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                    |
| P0128 | Coolant Thermostat (Coolant Temperature Below Thermostat Regulating Temperature) | <Ref. to EN(H4DOTC)-123, DTC P0128 — COOLANT THERMOSTAT (COOLANT TEMPERATURE BELOW THERMOSTAT REGULATING TEMPERATURE) —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).> |
| P0129 | Atmospheric Pressure Sensor Circuit Range/Performance                            | <Ref. to EN(H4DOTC)-124, DTC P0129 — ATMOSPHERIC PRESSURE SENSOR CIRCUIT RANGE/PERFORMANCE —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                            |
| P0131 | O <sub>2</sub> Sensor Circuit Low Voltage (Bank 1 Sensor 1)                      | <Ref. to EN(H4DOTC)-125, DTC P0131 — O <sub>2</sub> SENSOR CIRCUIT LOW VOLTAGE (BANK 1 SENSOR 1) —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                      |
| P0132 | O <sub>2</sub> Sensor Circuit High Voltage (Bank 1 Sensor 1)                     | <Ref. to EN(H4DOTC)-127, DTC P0132 — O <sub>2</sub> SENSOR CIRCUIT HIGH VOLTAGE (BANK 1 SENSOR 1) —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                     |
| P0133 | O <sub>2</sub> Sensor Circuit Slow Response (Bank 1 Sensor 1)                    | <Ref. to EN(H4DOTC)-129, DTC P0133 — O <sub>2</sub> SENSOR CIRCUIT SLOW RESPONSE (BANK 1 SENSOR 1) —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                    |
| P0134 | O <sub>2</sub> Sensor Circuit No Activity Detected (Bank 1 Sensor 1)             | <Ref. to EN(H4DOTC)-131, DTC P0134 — O <sub>2</sub> SENSOR CIRCUIT NO ACTIVITY DETECTED (BANK 1 SENSOR 1) —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>             |
| P0137 | O <sub>2</sub> Sensor Circuit Low Voltage (Bank 1 Sensor 2)                      | <Ref. to EN(H4DOTC)-133, DTC P0137 — O <sub>2</sub> SENSOR CIRCUIT LOW VOLTAGE (BANK 1 SENSOR 2) —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                      |
| P0138 | O <sub>2</sub> Sensor Circuit High Voltage (Bank 1 Sensor 2)                     | <Ref. to EN(H4DOTC)-136, DTC P0138 — O <sub>2</sub> SENSOR CIRCUIT HIGH VOLTAGE (BANK 1 SENSOR 2) —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                     |
| P0139 | O <sub>2</sub> Sensor Circuit Slow Response (Bank 1 Sensor 2)                    | <Ref. to EN(H4DOTC)-139, DTC P0139 — O <sub>2</sub> SENSOR CIRCUIT SLOW RESPONSE (BANK 1 SENSOR 2) —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                    |
| P0171 | System too Lean (Bank 1)                                                         | <Ref. to EN(H4DOTC)-141, DTC P0171 — SYSTEM TOO LEAN (BANK 1) —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                                                         |
| P0172 | System too Rich (Bank 1)                                                         | <Ref. to EN(H4DOTC)-142, DTC P0172 — SYSTEM TOO RICH (BANK 1) —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                                                         |
| P0181 | Fuel Temperature Sensor "A" Circuit Range/Performance                            | <Ref. to EN(H4DOTC)-145, DTC P0181 — FUEL TEMPERATURE SENSOR "A" CIRCUIT RANGE/PERFORMANCE —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                            |
| P0182 | Fuel Temperature Sensor "A" Circuit Low Input                                    | <Ref. to EN(H4DOTC)-147, DTC P0182 — FUEL TEMPERATURE SENSOR "A" CIRCUIT LOW INPUT —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                                    |
| P0183 | Fuel Temperature Sensor "A" Circuit High Input                                   | <Ref. to EN(H4DOTC)-149, DTC P0183 — FUEL TEMPERATURE SENSOR "A" CIRCUIT HIGH INPUT —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                                   |
| P0222 | Throttle/Pedal Position Sensor/Switch "B" Circuit Low Input                      | <Ref. to EN(H4DOTC)-152, DTC P0222 — THROTTLE/PEDAL POSITION SENSOR/SWITCH "B" CIRCUIT LOW INPUT —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                      |
| P0223 | Throttle/Pedal Position Sensor/Switch "B" Circuit High Input                     | <Ref. to EN(H4DOTC)-155, DTC P0223 — THROTTLE/PEDAL POSITION SENSOR/SWITCH "B" CIRCUIT HIGH INPUT —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                     |

# LIST OF DIAGNOSTIC TROUBLE CODE (DTC)

## ENGINE (DIAGNOSTICS)

| DTC   | Item                                                                  | Index                                                                                                                                                                   |
|-------|-----------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| P0230 | Fuel Pump Primary Circuit                                             | <Ref. to EN(H4DOTC)-159, DTC P0230 — FUEL PUMP PRIMARY CIRCUIT —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                                             |
| P0244 | Turbo/Super Charger Wastegate Solenoid “A” Range/Performance          | <Ref. to EN(H4DOTC)-162, DTC P0244 — TURBO/SUPER CHARGER WASTEGATE SOLENOID “A” RANGE/PERFORMANCE —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>          |
| P0245 | Turbo/Super Charger Wastegate Solenoid “A” Low                        | <Ref. to EN(H4DOTC)-164, DTC P0245 — TURBO/SUPER CHARGER WASTEGATE SOLENOID “A” LOW —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                        |
| P0246 | Turbo/Super Charger Wastegate Solenoid “A” High                       | <Ref. to EN(H4DOTC)-166, DTC P0246 — TURBO/SUPER CHARGER WASTEGATE SOLENOID “A” HIGH —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                       |
| P0301 | Cylinder 1 Misfire Detected                                           | <Ref. to EN(H4DOTC)-168, DTC P0301 — CYLINDER 1 MISFIRE DETECTED —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                                           |
| P0302 | Cylinder 2 Misfire Detected                                           | <Ref. to EN(H4DOTC)-168, DTC P0302 — CYLINDER 2 MISFIRE DETECTED —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                                           |
| P0303 | Cylinder 3 Misfire Detected                                           | <Ref. to EN(H4DOTC)-168, DTC P0303 — CYLINDER 3 MISFIRE DETECTED —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                                           |
| P0304 | Cylinder 4 Misfire Detected                                           | <Ref. to EN(H4DOTC)-169, DTC P0304 — CYLINDER 4 MISFIRE DETECTED —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                                           |
| P0327 | Knock Sensor 1 Circuit Low Input (Bank 1 or Single Sensor)            | <Ref. to EN(H4DOTC)-174, DTC P0327 — KNOCK SENSOR 1 CIRCUIT LOW INPUT (BANK 1 OR SINGLE SENSOR) —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>            |
| P0328 | Knock Sensor 1 Circuit High Input (Bank 1 or Single Sensor)           | <Ref. to EN(H4DOTC)-176, DTC P0328 — KNOCK SENSOR 1 CIRCUIT HIGH INPUT (BANK 1 OR SINGLE SENSOR) —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>           |
| P0335 | Crankshaft Position Sensor “A” Circuit                                | <Ref. to EN(H4DOTC)-178, DTC P0335 — CRANKSHAFT POSITION SENSOR “A” CIRCUIT —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                                |
| P0336 | Crankshaft Position Sensor “A” Circuit Range/Performance              | <Ref. to EN(H4DOTC)-180, DTC P0336 — CRANKSHAFT POSITION SENSOR “A” CIRCUIT RANGE/PERFORMANCE —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>              |
| P0340 | Camshaft Position Sensor “A” Circuit (Bank 1 or Single Sensor)        | <Ref. to EN(H4DOTC)-182, DTC P0340 — CAMSHAFT POSITION SENSOR “A” CIRCUIT (BANK 1 OR SINGLE SENSOR) —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>        |
| P0345 | Camshaft Position Sensor “A” Circuit (Bank 2)                         | <Ref. to EN(H4DOTC)-184, DTC P0345 — CAMSHAFT POSITION SENSOR “A” CIRCUIT (BANK 2) —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                         |
| P0420 | Catalyst System Efficiency Below Threshold (Bank 1)                   | <Ref. to EN(H4DOTC)-186, DTC P0420 — CATALYST SYSTEM EFFICIENCY BELOW THRESHOLD (BANK 1) —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                   |
| P0442 | Evaporative Emission Control System Leak Detected (small Leak)        | <Ref. to EN(H4DOTC)-188, DTC P0442 — EVAPORATIVE EMISSION CONTROL SYSTEM LEAK DETECTED (SMALL LEAK) —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>        |
| P0447 | Evaporative Emission Control System Vent Control Circuit Open         | <Ref. to EN(H4DOTC)-192, DTC P0447 — EVAPORATIVE EMISSION CONTROL SYSTEM VENT CONTROL CIRCUIT OPEN —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>         |
| P0448 | Evaporative Emission Control System Vent Control Circuit Shorted      | <Ref. to EN(H4DOTC)-195, DTC P0448 — EVAPORATIVE EMISSION CONTROL SYSTEM VENT CONTROL CIRCUIT SHORTED —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>      |
| P0451 | Evaporative Emission Control System Pressure Sensor Range/Performance | <Ref. to EN(H4DOTC)-197, DTC P0451 — EVAPORATIVE EMISSION CONTROL SYSTEM PRESSURE SENSOR RANGE/PERFORMANCE —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).> |
| P0452 | Evaporative Emission Control System Pressure Sensor Low Input         | <Ref. to EN(H4DOTC)-199, DTC P0452 — EVAPORATIVE EMISSION CONTROL SYSTEM PRESSURE SENSOR LOW INPUT —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>         |

# LIST OF DIAGNOSTIC TROUBLE CODE (DTC)

ENGINE (DIAGNOSTICS)

| DTC   | Item                                                                   | Index                                                                                                                                                                    |
|-------|------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| P0453 | Evaporative Emission Control System Pressure Sensor High Input         | <Ref. to EN(H4DOTC)-202, DTC P0453 — EVAPORATIVE EMISSION CONTROL SYSTEM PRESSURE SENSOR HIGH INPUT —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>         |
| P0456 | Evaporative Emission Control System Leak Detected (Very Small Leak)    | <Ref. to EN(H4DOTC)-205, DTC P0456 — EVAPORATIVE EMISSION CONTROL SYSTEM LEAK DETECTED (VERY SMALL LEAK) —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>    |
| P0457 | Evaporative Emission Control System Leak Detected (Fuel Cap Loose/Off) | <Ref. to EN(H4DOTC)-209, DTC P0457 — EVAPORATIVE EMISSION CONTROL SYSTEM LEAK DETECTED (FUEL CAP LOOSE/OFF) —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).> |
| P0458 | Evaporative Emission Control System Purge Control Valve Circuit Low    | <Ref. to EN(H4DOTC)-213, DTC P0458 — EVAPORATIVE EMISSION CONTROL SYSTEM PURGE CONTROL VALVE CIRCUIT LOW —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>    |
| P0459 | Evaporative Emission Control System Purge Control Valve Circuit High   | <Ref. to EN(H4DOTC)-215, DTC P0459 — EVAPORATIVE EMISSION CONTROL SYSTEM PURGE CONTROL VALVE CIRCUIT HIGH —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>   |
| P0461 | Fuel Level Sensor Circuit Range/Performance                            | <Ref. to EN(H4DOTC)-217, DTC P0461 — FUEL LEVEL SENSOR CIRCUIT RANGE/PERFORMANCE —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                            |
| P0462 | Fuel Level Sensor Circuit Low Input                                    | <Ref. to EN(H4DOTC)-220, DTC P0462 — FUEL LEVEL SENSOR CIRCUIT LOW INPUT —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                                    |
| P0463 | Fuel Level Sensor Circuit High Input                                   | <Ref. to EN(H4DOTC)-224, DTC P0463 — FUEL LEVEL SENSOR CIRCUIT HIGH INPUT —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                                   |
| P0464 | Fuel Level Sensor Circuit Intermittent                                 | <Ref. to EN(H4DOTC)-228, DTC P0464 — FUEL LEVEL SENSOR CIRCUIT INTERMITTENT —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                                 |
| P0483 | Cooling Fan Rationality Check                                          | <Ref. to EN(H4DOTC)-231, DTC P0483 — COOLING FAN RATIONALITY CHECK —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                                          |
| P0502 | Vehicle Speed Sensor Circuit Low Input                                 | <Ref. to EN(H4DOTC)-234, DTC P0502 — VEHICLE SPEED SENSOR CIRCUIT LOW INPUT —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                                 |
| P0503 | Vehicle Speed Sensor Intermittent/Erratic/High                         | <Ref. to EN(H4DOTC)-236, DTC P0503 — VEHICLE SPEED SENSOR INTERMITTENT/ERRATIC/HIGH —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                         |
| P0506 | Idle Control System RPM Lower Than Expected                            | <Ref. to EN(H4DOTC)-238, DTC P0506 — IDLE CONTROL SYSTEM RPM LOWER THAN EXPECTED —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                            |
| P0507 | Idle Control System RPM Higher Than Expected                           | <Ref. to EN(H4DOTC)-241, DTC P0507 — IDLE CONTROL SYSTEM RPM HIGHER THAN EXPECTED —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                           |
| P0512 | Starter Request Circuit                                                | <Ref. to EN(H4DOTC)-244, DTC P0512 — STARTER REQUEST CIRCUIT —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                                                |
| P0519 | Idle Control System Malfunction (Fail-Safe)                            | <Ref. to EN(H4DOTC)-247, DTC P0519 — IDLE CONTROL SYSTEM MALFUNCTION (FAIL-SAFE) —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                            |
| P0545 | Exhaust Gas Temperature Sensor Circuit Low-Bank 1                      | <Ref. to EN(H4DOTC)-250, DTC P0545 — EXHAUST GAS TEMPERATURE SENSOR CIRCUIT LOW-BANK 1 —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                      |
| P0546 | Exhaust Gas Temperature Sensor Circuit High-Bank 1                     | <Ref. to EN(H4DOTC)-252, DTC P0546 — EXHAUST GAS TEMPERATURE SENSOR CIRCUIT HIGH-BANK 1 —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                     |
| P0600 | Improper CAN communication                                             | <Ref. to EN(H4DOTC)-255, DTC P0600 — IMPROPER CAN COMMUNICATION —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                                             |
| P0604 | Internal Control Module Random Access Memory (RAM) Error               | <Ref. to EN(H4DOTC)-257, DTC P0604 — INTERNAL CONTROL MODULE RANDOM ACCESS MEMORY (RAM) ERROR —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>               |

# LIST OF DIAGNOSTIC TROUBLE CODE (DTC)

## ENGINE (DIAGNOSTICS)

| DTC   | Item                                                        | Index                                                                                                                                                         |
|-------|-------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| P0605 | Internal Control Module Read Only Memory (ROM) Error        | <Ref. to EN(H4DOTC)-259, DTC P0605 — INTERNAL CONTROL MODULE READ ONLY MEMORY (ROM) ERROR —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>        |
| P0607 | Control Module Performance                                  | <Ref. to EN(H4DOTC)-260, DTC P0607 — CONTROL MODULE PERFORMANCE —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                                  |
| P0638 | Throttle Actuator Control Range/Performance (Bank 1)        | <Ref. to EN(H4DOTC)-263, DTC P0638 — THROTTLE ACTUATOR CONTROL RANGE/PERFORMANCE (BANK 1) —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>        |
| P0691 | Cooling Fan 1 Control Circuit Low                           | <Ref. to EN(H4DOTC)-264, DTC P0691 — COOLING FAN 1 CONTROL CIRCUIT LOW —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                           |
| P0692 | Cooling Fan 1 Control Circuit High                          | <Ref. to EN(H4DOTC)-267, DTC P0692 — COOLING FAN 1 CONTROL CIRCUIT HIGH —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                          |
| P0700 | Request AT MIL ON                                           | <Ref. to EN(H4DOTC)-270, DTC P0700 — REQUEST AT MIL ON —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                                           |
| P0851 | Neutral Switch Input Circuit Low                            | <Ref. to EN(H4DOTC)-271, DTC P0851 — NEUTRAL SWITCH INPUT CIRCUIT LOW —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                            |
| P0852 | Neutral Switch Input Circuit High                           | <Ref. to EN(H4DOTC)-273, DTC P0852 — NEUTRAL SWITCH INPUT CIRCUIT HIGH —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                           |
| P1086 | Tumble Generated Valve Position Sensor 2 Circuit Low        | <Ref. to EN(H4DOTC)-275, DTC P1086 — TUMBLE GENERATED VALVE POSITION SENSOR 2 CIRCUIT LOW —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>        |
| P1087 | Tumble Generated Valve Position Sensor 2 Circuit High       | <Ref. to EN(H4DOTC)-278, DTC P1087 — TUMBLE GENERATED VALVE POSITION SENSOR 2 CIRCUIT HIGH —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>       |
| P1088 | Tumble Generated Valve Position Sensor 1 Circuit Low        | <Ref. to EN(H4DOTC)-280, DTC P1088 — TUMBLE GENERATED VALVE POSITION SENSOR 1 CIRCUIT LOW —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>        |
| P1089 | Tumble Generated Valve Position Sensor 1 Circuit High       | <Ref. to EN(H4DOTC)-283, DTC P1089 — TUMBLE GENERATED VALVE POSITION SENSOR 1 CIRCUIT HIGH —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>       |
| P1090 | Tumble Generated Valve System 1 (Valve Open)                | <Ref. to EN(H4DOTC)-285, DTC P1090 — TUMBLE GENERATED VALVE SYSTEM 1 (VALVE OPEN) —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                |
| P1091 | Tumble Generated Valve System 1 (Valve Close)               | <Ref. to EN(H4DOTC)-286, DTC P1091 — TUMBLE GENERATED VALVE SYSTEM 1 (VALVE CLOSE) —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>               |
| P1092 | Tumble Generated Valve System 2 (Valve Open)                | <Ref. to EN(H4DOTC)-287, DTC P1092 — TUMBLE GENERATED VALVE SYSTEM 2 (VALVE OPEN) —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                |
| P1093 | Tumble Generated Valve System 2 (Valve Close)               | <Ref. to EN(H4DOTC)-288, DTC P1093 — TUMBLE GENERATED VALVE SYSTEM 2 (VALVE CLOSE) —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>               |
| P1094 | Tumble Generated Valve Signal 1 Circuit Malfunction (Open)  | <Ref. to EN(H4DOTC)-289, DTC P1094 — TUMBLE GENERATED VALVE SIGNAL 1 CIRCUIT MALFUNCTION (OPEN) —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>  |
| P1095 | Tumble Generated Valve Signal 1 Circuit Malfunction (Short) | <Ref. to EN(H4DOTC)-291, DTC P1095 — TUMBLE GENERATED VALVE SIGNAL 1 CIRCUIT MALFUNCTION (SHORT) —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).> |
| P1096 | Tumble Generated Valve Signal 2 Circuit Malfunction (Open)  | <Ref. to EN(H4DOTC)-293, DTC P1096 — TUMBLE GENERATED VALVE SIGNAL 2 CIRCUIT MALFUNCTION (OPEN) —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>  |
| P1097 | Tumble Generated Valve Signal 2 Circuit Malfunction (Short) | <Ref. to EN(H4DOTC)-295, DTC P1097 — TUMBLE GENERATED VALVE SIGNAL 2 CIRCUIT MALFUNCTION (SHORT) —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).> |

# LIST OF DIAGNOSTIC TROUBLE CODE (DTC)

ENGINE (DIAGNOSTICS)

| DTC   | Item                                                                   | Index                                                                                                                                                                     |
|-------|------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| P1110 | Atmospheric Pressure Sensor Circuit Malfunction (Low Input)            | <Ref. to EN(H4DOTC)-297, DTC P1110 — ATMOSPHERIC PRESSURE SENSOR CIRCUIT MALFUNCTION (LOW INPUT) —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>             |
| P1111 | Atmospheric Pressure Sensor Circuit Malfunction (High Input)           | <Ref. to EN(H4DOTC)-297, DTC P1111 — ATMOSPHERIC PRESSURE SENSOR CIRCUIT MALFUNCTION (HIGH INPUT) —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>            |
| P1152 | O <sub>2</sub> Sensor Circuit Range/Performance (Low) (Bank1 Sensor1)  | <Ref. to EN(H4DOTC)-298, DTC P1152 — O <sub>2</sub> SENSOR CIRCUIT RANGE/PERFORMANCE (LOW) (BANK 1 SENSOR 1) —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).> |
| P1153 | O <sub>2</sub> Sensor Circuit Range/Performance (High) (Bank1 Sensor1) | <Ref. to EN(H4DOTC)-299, DTC P1153 — O <sub>2</sub> SENSOR CIRCUIT RANGE/PERFORMANCE (HIGH) (BANK1 SENSOR1) —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>  |
| P1160 | Return Spring Failure                                                  | <Ref. to EN(H4DOTC)-301, DTC P1160 — RETURN SPRING FAILURE —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                                                   |
| P1301 | Misfire Detected (High Temperature Exhaust Gas)                        | <Ref. to EN(H4DOTC)-302, DTC P1301 — MISFIRE DETECTED (HIGH TEMPERATURE EXHAUST GAS) —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                         |
| P1312 | Exhaust Gas Temperature Sensor Malfunction                             | <Ref. to EN(H4DOTC)-304, DTC P1312 — EXHAUST GAS TEMPERATURE SENSOR MALFUNCTION —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                              |
| P1400 | Fuel Tank Pressure Control Solenoid Valve Circuit Low                  | <Ref. to EN(H4DOTC)-306, DTC P1400 — FUEL TANK PRESSURE CONTROL SOLENOID VALVE CIRCUIT LOW —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                   |
| P1420 | Fuel Tank Pressure Control Sol. Valve Circuit High                     | <Ref. to EN(H4DOTC)-309, DTC P1420 — FUEL TANK PRESSURE CONTROL SOL. VALVE CIRCUIT HIGH —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                      |
| P1443 | Vent Control Solenoid Valve Function Problem                           | <Ref. to EN(H4DOTC)-311, DTC P1443 — VENT CONTROL SOLENOID VALVE FUNCTION PROBLEM —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                            |
| P1446 | Fuel Tank Sensor Control Valve Circuit Low                             | <Ref. to EN(H4DOTC)-313, DTC P1446 — FUEL TANK SENSOR CONTROL VALVE CIRCUIT LOW —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                              |
| P1447 | Fuel Tank Sensor Control Valve Circuit High                            | <Ref. to EN(H4DOTC)-316, DTC P1447 — FUEL TANK SENSOR CONTROL VALVE CIRCUIT HIGH —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                             |
| P1448 | Fuel Tank Sensor Control Valve Range/Performance                       | <Ref. to EN(H4DOTC)-318, DTC P1448 — FUEL TANK SENSOR CONTROL VALVE RANGE/PERFORMANCE —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                        |
| P1491 | Positive Crankcase Ventilation (Blow-by) Function Problem              | <Ref. to EN(H4DOTC)-320, DTC P1491 — POSITIVE CRANKCASE VENTILATION (BLOW-BY) FUNCTION PROBLEM —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>               |
| P1518 | Starter Switch Circuit Low Input                                       | <Ref. to EN(H4DOTC)-322, DTC P1518 — STARTER SWITCH CIRCUIT LOW INPUT —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                                        |
| P1544 | Exhaust Gas Temperature Too High                                       | <Ref. to EN(H4DOTC)-325, DTC P1544 — EXHAUST GAS TEMPERATURE TOO HIGH —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                                        |
| P1560 | Back-Up Voltage Circuit Malfunction                                    | <Ref. to EN(H4DOTC)-327, DTC P1560 — BACK-UP VOLTAGE CIRCUIT MALFUNCTION —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                                     |
| P2088 | OCV Solenoid Valve Signal A Circuit Open (Bank 1)                      | <Ref. to EN(H4DOTC)-330, DTC P2088 — OCV SOLENOID VALVE SIGNAL A CIRCUIT OPEN (BANK 1) —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                       |
| P2089 | OCV Solenoid Valve Signal A Circuit Short (Bank 1)                     | <Ref. to EN(H4DOTC)-332, DTC P2089 — OCV SOLENOID VALVE SIGNAL A CIRCUIT SHORT (BANK 1) —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                      |

# LIST OF DIAGNOSTIC TROUBLE CODE (DTC)

## ENGINE (DIAGNOSTICS)

| DTC   | Item                                                              | Index                                                                                                                                                               |
|-------|-------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| P2092 | OCV Solenoid Valve Signal A Circuit Open (Bank 2)                 | <Ref. to EN(H4DOTC)-334, DTC P2092 — OCV SOLENOID VALVE SIGNAL A CIRCUIT OPEN (BANK 2) —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                 |
| P2093 | OCV Solenoid Valve Signal A Circuit Short (Bank 2)                | <Ref. to EN(H4DOTC)-336, DTC P2093 — OCV SOLENOID VALVE SIGNAL A CIRCUIT SHORT (BANK 2) —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                |
| P2096 | Post Catalyst Fuel Trim System Too Lean Bank 1                    | <Ref. to EN(H4DOTC)-338, DTC P2096 — POST CATALYST FUEL TRIM SYSTEM TOO LEAN BANK 1 —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                    |
| P2097 | Post Catalyst Fuel Trim System Too Rich Bank 1                    | <Ref. to EN(H4DOTC)-343, DTC P2097 — POST CATALYST FUEL TRIM SYSTEM TOO RICH BANK 1 —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                    |
| P2101 | Throttle Actuator Control Motor Circuit Range/Performance         | <Ref. to EN(H4DOTC)-348, DTC P2101 — THROTTLE ACTUATOR CONTROL MOTOR CIRCUIT RANGE/PERFORMANCE —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>         |
| P2102 | Throttle Actuator Control Motor Circuit Low                       | <Ref. to EN(H4DOTC)-355, DTC P2102 — THROTTLE ACTUATOR CONTROL MOTOR CIRCUIT LOW —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                       |
| P2103 | Throttle Actuator Control Motor Circuit High                      | <Ref. to EN(H4DOTC)-358, DTC P2103 — THROTTLE ACTUATOR CONTROL MOTOR CIRCUIT HIGH —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>                      |
| P2109 | Throttle/Pedal Position Sensor A Minimum Stop Performance         | <Ref. to EN(H4DOTC)-361, DTC P2109 — THROTTLE/PEDAL POSITION SENSOR A MINIMUM STOP PERFORMANCE —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>         |
| P2122 | Throttle/Pedal Position Sensor/Switch “D” Circuit Low Input       | <Ref. to EN(H4DOTC)-362, DTC P2122 — THROTTLE/PEDAL POSITION SENSOR/SWITCH “D” CIRCUIT LOW INPUT —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>       |
| P2123 | Throttle/Pedal Position Sensor/Switch “D” Circuit High Input      | <Ref. to EN(H4DOTC)-365, DTC P2123 — THROTTLE/PEDAL POSITION SENSOR/SWITCH “D” CIRCUIT HIGH INPUT —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>      |
| P2127 | Throttle/Pedal Position Sensor/Switch “E” Circuit Low Input       | <Ref. to EN(H4DOTC)-368, DTC P2127 — THROTTLE/PEDAL POSITION SENSOR/SWITCH “E” CIRCUIT LOW INPUT —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>       |
| P2128 | Throttle/Pedal Position Sensor/Switch “E” Circuit High Input      | <Ref. to EN(H4DOTC)-371, DTC P2128 — THROTTLE/PEDAL POSITION SENSOR/SWITCH “E” CIRCUIT HIGHT INPUT —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>     |
| P2135 | Throttle/Pedal Position Sensor/Switch “A”/“B” Voltage Rationality | <Ref. to EN(H4DOTC)-374, DTC P2135 — THROTTLE/PEDAL POSITION SENSOR/SWITCH “A”/“B” VOLTAGE RATIONALITY —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).> |
| P2138 | Throttle/Pedal Position Sensor/Switch “D”/“E” Voltage Rationality | <Ref. to EN(H4DOTC)-379, DTC P2138 — THROTTLE/PEDAL POSITION SENSOR/SWITCH “D”/“E” VOLTAGE RATIONALITY —, Diagnostic Procedure with Diagnostic Trouble Code (DTC).> |