1. List of Diagnostic Trouble Code (DTC)

A: LIST

DTC	Item	NOTE
P0011	Intake Camshaft Position - Timing Over-Advanced or System Perfor- mance (Bank 1)	<ref. -<br="" camshaft="" dtc="" gd(h4dotc)-10,="" intake="" p0011="" position="" to="">TIMING OVER-ADVANCED OR SYSTEM PERFORMANCE (BANK 1), Diagnostic Trouble Code (DTC) Detecting Criteria.></ref.>
P0016	Crankshaft Position - Camshaft Position Correlation (Bank1)	<ref. -="" cam-<br="" crankshaft="" dtc="" gd(h4dotc)-13,="" p0016="" position="" to="">SHAFT POSITION CORRELATION (BANK1), Diagnostic Trouble Code (DTC) Detecting Criteria.></ref.>
P0018	Crankshaft Position - Camshaft Position Correlation (Bank2)	<ref. -="" cam-<br="" crankshaft="" dtc="" gd(h4dotc)-13,="" p0018="" position="" to="">SHAFT POSITION CORRELATION (BANK2), Diagnostic Trouble Code (DTC) Detecting Criteria.></ref.>
P0021	Intake Camshaft Position - Timing Over-Advanced or System Perfor- mance (Bank 2)	<ref. -<br="" camshaft="" dtc="" gd(h4dotc)-13,="" intake="" p0021="" position="" to="">TIMING OVER-ADVANCED OR SYSTEM PERFORMANCE (BANK 2), Diagnostic Trouble Code (DTC) Detecting Criteria.></ref.>
P0030	HO2S Heater Control Circuit (Bank 1 Sensor 1)	<ref. (bank="" (dtc)="" 1="" 1),="" circuit="" code="" control="" criteria.="" detecting="" diagnostic="" dtc="" gd(h4dotc)-14,="" heater="" ho2s="" p0030="" sensor="" to="" trouble=""></ref.>
P0031	HO2S Heater Control Circuit Low (Bank 1 Sensor 1)	<ref. (bank="" (dtc)="" 1="" 1),="" circuit="" code="" control="" criteria.="" detecting="" diagnostic="" dtc="" gd(h4dotc)-16,="" heater="" ho2s="" low="" p0031="" sensor="" to="" trouble=""></ref.>
P0032	HO2S Heater Control Circuit High (Bank 1 Sensor 1)	<ref. (bank="" (dtc)="" 1="" 1),="" circuit="" code="" control="" criteria.="" detecting="" diagnostic="" dtc="" gd(h4dotc)-18,="" heater="" high="" ho2s="" p0032="" sensor="" to="" trouble=""></ref.>
P0037	HO2S Heater Control Circuit Low (Bank 1 Sensor 2)	<ref. (bank="" (dtc)="" 1="" 2),="" circuit="" code="" control="" criteria.="" detecting="" diagnostic="" dtc="" gd(h4dotc)-20,="" heater="" ho2s="" low="" p0037="" sensor="" to="" trouble=""></ref.>
P0038	HO2S Heater Control Circuit High (Bank 1 Sensor 2)	<ref. (bank="" (dtc)="" 1="" 2),="" circuit="" code="" control="" criteria.="" detecting="" diagnostic="" dtc="" gd(h4dotc)-22,="" heater="" high="" ho2s="" p0038="" sensor="" to="" trouble=""></ref.>
P0068	MAP/MAF - Throttle Position Cor- relation	<ref. (dtc)="" -="" code="" correlation,="" criteria.="" detecting="" diagnostic="" dtc="" gd(h4dotc)-24,="" maf="" map="" p0068="" position="" throttle="" to="" trouble=""></ref.>
P0101	Mass or Volume Air Flow Circuit Range/Performance	<ref. air="" cir-<br="" dtc="" flow="" gd(h4dotc)-26,="" mass="" or="" p0101="" to="" volume="">CUIT RANGE/PERFORMANCE, Diagnostic Trouble Code (DTC) Detecting Criteria.></ref.>
P0102	Mass or Volume Air Flow Circuit Low Input	<ref. (dtc)="" air="" circuit="" code="" criteria.="" detecting="" diagnostic="" dtc="" flow="" gd(h4dotc)-29,="" input,="" low="" mass="" or="" p0102="" to="" trouble="" volume=""></ref.>
P0103	Mass or Volume Air Flow Circuit High Input	<ref. (dtc)="" air="" circuit="" code="" criteria.="" detecting="" diagnostic="" dtc="" flow="" gd(h4dotc)-31,="" high="" input,="" mass="" or="" p0103="" to="" trouble="" volume=""></ref.>
P0107	Manifold Absolute Pressure/Baro- metric Pressure Circuit Low Input	<ref. absolute="" dtc="" gd(h4dotc)-33,="" manifold="" p0107="" pres-<br="" to="">SURE/BAROMETRIC PRESSURE CIRCUIT LOW INPUT, Diagnostic Trou- ble Code (DTC) Detecting Criteria.></ref.>
P0108	Manifold Absolute Pressure/Baro- metric Pressure Circuit High Input	<ref. absolute="" dtc="" gd(h4dotc)-35,="" manifold="" p0108="" pres-<br="" to="">SURE/BAROMETRIC PRESSURE CIRCUIT HIGH INPUT, Diagnostic Trou- ble Code (DTC) Detecting Criteria.></ref.>
P0111	Intake Air Temperature Sensor 1 Circuit Range/Performance	<ref. air="" dtc="" gd(h4dotc)-37,="" intake="" p0111="" sen-<br="" temperature="" to="">SOR 1 CIRCUIT RANGE/PERFORMANCE, Diagnostic Trouble Code (DTC) Detecting Criteria.></ref.>
P0112	Intake Air Temperature Sensor 1 Circuit Low	<ref. (dtc)="" 1="" air="" circuit="" code="" criteria.="" detecting="" diagnostic="" dtc="" gd(h4dotc)-39,="" intake="" low,="" p0112="" sen-sor="" temperature="" to="" trouble=""></ref.>
P0113	Intake Air Temperature Sensor 1 Circuit High	<ref. air="" dtc="" gd(h4dotc)-41,="" intake="" p0113="" sen-<br="" temperature="" to="">SOR 1 CIRCUIT HIGH, Diagnostic Trouble Code (DTC) Detecting Criteria.></ref.>
P0117	Engine Coolant Temperature Circuit Low	<ref. coolant="" dtc="" engine="" gd(h4dotc)-43,="" p0117="" tempera-<br="" to="">TURE CIRCUIT LOW, Diagnostic Trouble Code (DTC) Detecting Criteria.></ref.>
P0118	Engine Coolant Temperature Circuit High	<ref. coolant="" dtc="" engine="" gd(h4dotc)-45,="" p0118="" tempera-<br="" to="">TURE CIRCUIT HIGH, Diagnostic Trouble Code (DTC) Detecting Criteria.></ref.>

DTC	Item	NOTE
P0122	Throttle/Pedal Position Sensor/ Switch "A" Circuit Low	<ref. "a"="" (dtc)="" circuit="" code="" criteria.="" detecting="" diagnostic="" dtc="" gd(h4dotc)-47,="" low,="" p0122="" pedal="" position="" sensor="" switch="" throttle="" to="" trouble=""></ref.>
P0123	Throttle/Pedal Position Sensor/ Switch "A" Circuit High	<ref. dtc="" gd(h4dotc)-49,="" p0123="" pedal="" position<br="" throttle="" to="">SENSOR/SWITCH "A" CIRCUIT HIGH, Diagnostic Trouble Code (DTC) Detecting Criteria.></ref.>
P0125	Insufficient Coolant Temperature for Closed Loop Fuel Control	<ref. coolant="" dtc="" gd(h4dotc)-51,="" insufficient="" p0125="" tem-<br="" to="">PERATURE FOR CLOSED LOOP FUEL CONTROL, Diagnostic Trouble Code (DTC) Detecting Criteria.></ref.>
P0126	Insufficient Engine Coolant Temperature for Stable Operation	<ref. (dtc)="" code="" coolant="" criteria.="" detecting="" diagnostic="" dtc="" engine="" for="" gd(h4dotc)-54,="" insufficient="" operation,="" p0126="" stable="" temperature="" to="" trouble=""></ref.>
P0128	Coolant Thermostat (Engine Coolant Temperature Below Thermostat Regulating Temperature)	<ref. (dtc)="" (engine="" below="" code="" coolant="" criteria.="" detecting="" diagnostic="" dtc="" gd(h4dotc)-56,="" p0128="" regulating="" temperature="" temperature),="" thermostat="" to="" trouble=""></ref.>
P0131	O2 Sensor Circuit Low Voltage (Bank 1 Sensor 1)	<ref. (bank="" (dtc)="" 1="" 1),="" circuit="" code="" criteria.="" detecting="" diagnostic="" dtc="" gd(h4dotc)-58,="" low="" o2="" p0131="" sensor="" to="" trouble="" volt-age=""></ref.>
P0132	O2 Sensor Circuit High Voltage (Bank 1 Sensor 1)	<ref. (bank="" (dtc)="" 1="" 1),="" circuit="" code="" criteria.="" detecting="" diagnostic="" dtc="" gd(h4dotc)-60,="" high="" o2="" p0132="" sensor="" to="" trouble="" volt-age=""></ref.>
P0133	O2 Sensor Circuit Slow Response (Bank 1 Sensor 1)	<ref. circuit="" dtc="" gd(h4dotc)-62,="" o2="" p0133="" sensor="" slow<br="" to="">RESPONSE (BANK 1 SENSOR 1), Diagnostic Trouble Code (DTC) Detecting Criteria.></ref.>
P0134	O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 1)	<ref. (bank="" (dtc)="" 1="" 1),="" activity="" circuit="" code="" criteria.="" detected="" detecting="" diagnostic="" dtc="" gd(h4dotc)-65,="" no="" o2="" p0134="" sensor="" to="" trouble=""></ref.>
P0137	O2 Sensor Circuit Low Voltage (Bank 1 Sensor 2)	<ref. (bank="" (dtc)="" 1="" 2),="" circuit="" code="" criteria.="" detecting="" diagnostic="" dtc="" gd(h4dotc)-67,="" low="" o2="" p0137="" sensor="" to="" trouble="" volt-age=""></ref.>
P0138	O2 Sensor Circuit High Voltage (Bank 1 Sensor 2)	<ref. (bank="" (dtc)="" 1="" 2),="" circuit="" code="" criteria.="" detecting="" diagnostic="" dtc="" gd(h4dotc)-70,="" high="" o2="" p0138="" sensor="" to="" trouble="" volt-age=""></ref.>
P0139	O2 Sensor Circuit Slow Response (Bank 1 Sensor 2)	<ref. circuit="" dtc="" gd(h4dotc)-71,="" o2="" p0139="" sensor="" slow<br="" to="">RESPONSE (BANK 1 SENSOR 2), Diagnostic Trouble Code (DTC) Detecting Criteria.></ref.>
P0140	O2 Sensor Circuit No Activity Detected (Bank1 Sensor2)	<ref. circuit="" dtc="" gd(h4dotc)-71,="" o2="" p0139="" sensor="" slow<br="" to="">RESPONSE (BANK 1 SENSOR 2), Diagnostic Trouble Code (DTC) Detecting Criteria.></ref.>
P0171	System Too Lean (Bank 1)	<ref. (bank="" 1),<br="" dtc="" gd(h4dotc)-79,="" lean="" p0171="" system="" to="" too="">Diagnostic Trouble Code (DTC) Detecting Criteria.></ref.>
P0172	System Too Rich (Bank 1)	<ref. (bank="" 1),<br="" dtc="" gd(h4dotc)-82,="" p0172="" rich="" system="" to="" too="">Diagnostic Trouble Code (DTC) Detecting Criteria.></ref.>
P0181	Fuel Temperature Sensor "A" Circuit Range/Performance	<ref. "a"="" (dtc)="" circuit="" code="" criteria.="" detecting="" diagnostic="" dtc="" fuel="" gd(h4dotc)-85,="" p0181="" performance,="" range="" sensor="" temperature="" to="" trouble=""></ref.>
P0182	Fuel Temperature Sensor "A" Circuit Low Input	<ref. "a"="" (dtc)="" circuit="" code="" criteria.="" detecting="" diagnostic="" dtc="" fuel="" gd(h4dotc)-88,="" input,="" low="" p0182="" sensor="" temperature="" to="" trouble=""></ref.>
P0183	Fuel Temperature Sensor "A" Circuit High Input	<ref. "a"="" (dtc)="" circuit="" code="" criteria.="" detecting="" diagnostic="" dtc="" fuel="" gd(h4dotc)-90,="" high="" input,="" p0183="" sensor="" temperature="" to="" trouble=""></ref.>
P0222	Throttle/Pedal Position Sensor/ Switch "B" Circuit Low	<ref. "b"="" (dtc)="" circuit="" code="" criteria.="" detecting="" diagnostic="" dtc="" gd(h4dotc)-92,="" low,="" p0222="" pedal="" position="" sensor="" switch="" throttle="" to="" trouble=""></ref.>
P0223	Throttle/Pedal Position Sensor/ Switch "B" Circuit High	<ref. "b"="" (dtc)="" circuit="" code="" criteria.="" detecting="" diagnostic="" dtc="" gd(h4dotc)-94,="" high,="" p0223="" pedal="" position="" sensor="" switch="" throttle="" to="" trouble=""></ref.>

DTC	Item	NOTE
P0230	Fuel Pump Primary Circuit	<ref. (dtc)="" circuit,="" code="" criteria.="" detecting="" diagnostic="" dtc="" fuel="" gd(h4dotc)-96,="" p0230="" primary="" pump="" to="" trouble=""></ref.>
P0244	Turbo/Super Charger Wastegate Solenoid "A" Range/Performance	<ref. charger<br="" dtc="" gd(h4dotc)-98,="" p0244="" super="" to="" turbo="">WASTEGATE SOLENOID "A" RANGE/PERFORMANCE, Diagnostic Trouble Code (DTC) Detecting Criteria.></ref.>
P0245	Turbo/Super Charger Wastegate Solenoid "A" Low	<ref. charger<br="" dtc="" gd(h4dotc)-100,="" p0245="" super="" to="" turbo="">WASTEGATE SOLENOID "A" LOW, Diagnostic Trouble Code (DTC) Detect- ing Criteria.></ref.>
P0246	Turbo/Super Charger Wastegate Solenoid "A" High	<ref. charger<br="" dtc="" gd(h4dotc)-102,="" p0246="" super="" to="" turbo="">WASTEGATE SOLENOID "A" HIGH, Diagnostic Trouble Code (DTC) Detect- ing Criteria.></ref.>
P0301	Cylinder 1 Misfire Detected	<ref. 1="" cylinder="" dtc="" gd(h4dotc)-104,="" misfire<br="" p0301="" to="">DETECTED, Diagnostic Trouble Code (DTC) Detecting Criteria.></ref.>
P0302	Cylinder 2 Misfire Detected	<ref. 2="" cylinder="" dtc="" gd(h4dotc)-111,="" misfire<br="" p0302="" to="">DETECTED, Diagnostic Trouble Code (DTC) Detecting Criteria.></ref.>
P0303	Cylinder 3 Misfire Detected	<ref. 3="" cylinder="" dtc="" gd(h4dotc)-111,="" misfire<br="" p0303="" to="">DETECTED, Diagnostic Trouble Code (DTC) Detecting Criteria.></ref.>
P0304	Cylinder 4 Misfire Detected	<ref. (dtc)="" 4="" code="" criteria.="" cylinder="" detected,="" detecting="" diagnostic="" dtc="" gd(h4dotc)-111,="" misfire="" p0304="" to="" trouble=""></ref.>
P0327	Knock Sensor 1 Circuit Low (Bank 1 or Single Sensor)	<ref. (bank="" (dtc)="" 1="" circuit="" code="" criteria.="" detecting="" diagnostic="" dtc="" gd(h4dotc)-112,="" knock="" low="" or="" p0327="" sensor="" sensor),="" single="" to="" trouble=""></ref.>
P0328	Knock Sensor 1 Circuit High (Bank 1 or Single Sensor)	<ref. (bank="" (dtc)="" 1="" circuit="" code="" criteria.="" detecting="" diagnostic="" dtc="" gd(h4dotc)-114,="" high="" knock="" or="" p0328="" sensor="" sensor),="" single="" to="" trouble=""></ref.>
P0335	Crankshaft Position Sensor "A" Circuit	<ref. crankshaft="" dtc="" gd(h4dotc)-116,="" p0335="" position="" sen-<br="" to="">SOR "A" CIRCUIT, Diagnostic Trouble Code (DTC) Detecting Criteria.></ref.>
P0336	Crankshaft Position Sensor "A" Circuit Range/Performance	<ref. crankshaft="" dtc="" gd(h4dotc)-118,="" p0336="" position="" sen-<br="" to="">SOR "A" CIRCUIT RANGE/PERFORMANCE, Diagnostic Trouble Code (DTC) Detecting Criteria.></ref.>
P0340	Camshaft Position Sensor "A" Circuit (Bank 1 or Single Sensor)	<ref. camshaft="" dtc="" gd(h4dotc)-120,="" p0340="" position="" sensor<br="" to="">"A" CIRCUIT (BANK 1 OR SINGLE SENSOR), Diagnostic Trouble Code (DTC) Detecting Criteria.></ref.>
P0345	Camshaft Position Sensor "A" Circuit (Bank 2)	<ref. camshaft="" dtc="" gd(h4dotc)-122,="" p0345="" position="" sensor<br="" to="">"A" CIRCUIT (BANK 2), Diagnostic Trouble Code (DTC) Detecting Criteria.></ref.>
P0410	Secondary Air Injection System	<ref. (dtc)="" air="" code="" criteria.="" detecting="" diagnostic="" dtc="" gd(h4dotc)-123,="" injection="" p0410="" secondary="" system,="" to="" trouble=""></ref.>
P0411	Secondary Air Injection System Incorrect Flow Detected	<ref. (dtc)="" air="" code="" criteria.="" detected,="" detecting="" diagnostic="" dtc="" flow="" gd(h4dotc)-128,="" incorrect="" injection="" p0411="" secondary="" system="" to="" trouble=""></ref.>
P0413	Secondary Air Injection System Switching Valve "A" Circuit Open	<ref. air="" dtc="" gd(h4dotc)-129,="" injection<br="" p0413="" secondary="" to="">SYSTEM SWITCHING VALVE "A" CIRCUIT OPEN , Diagnostic Trouble Code (DTC) Detecting Criteria.></ref.>
P0414	Secondary Air Injection System Switching Valve "A" Circuit Shorted	<ref. air="" dtc="" gd(h4dotc)-130,="" injection<br="" p0414="" secondary="" to="">SYSTEM SWITCHING VALVE "A" CIRCUIT SHORTED, Diagnostic Trouble Code (DTC) Detecting Criteria.></ref.>
P0416	Secondary Air Injection System Switching Valve "B" Circuit Open	<ref. "b"="" (dtc)="" ,="" air="" circuit="" code="" criteria.="" detecting="" diagnostic="" dtc="" gd(h4dotc)-131,="" injection="" open="" p0416="" secondary="" switching="" system="" to="" trouble="" valve=""></ref.>
P0417	Secondary Air Injection System Switching Valve "B" Circuit Shorted	<ref. air="" dtc="" gd(h4dotc)-131,="" injection<br="" p0417="" secondary="" to="">SYSTEM SWITCHING VALVE "B" CIRCUIT SHORTED, Diagnostic Trouble Code (DTC) Detecting Criteria.></ref.>
P0418	Secondary Air Injection System Control "A" Circuit Open	<ref. air="" dtc="" gd(h4dotc)-132,="" injection<br="" p0418="" secondary="" to="">SYSTEM CONTROL "A" CIRCUIT OPEN , Diagnostic Trouble Code (DTC) Detecting Criteria.></ref.>

DTC	Item	NOTE
P0420	Catalyst System Efficiency Below Threshold (Bank 1)	<ref. (bank="" (dtc)="" 1),="" below="" catalyst="" code="" criteria.="" detecting="" diagnostic="" dtc="" efficiency="" gd(h4dotc)-133,="" p0420="" system="" threshold="" to="" trouble=""></ref.>
P0442	Evaporative Emission Control System Leak Detected (Small Leak)	<ref. (dtc)="" (small="" code="" control="" criteria.="" detected="" detecting="" diagnostic="" dtc="" emission="" evaporative="" gd(h4dotc)-136,="" leak="" leak),="" p0442="" system="" to="" trouble=""></ref.>
P0447	Evaporative Emission Control System Vent Control Circuit Open	<ref. (dtc)="" circuit="" code="" control="" criteria.="" detecting="" diagnostic="" dtc="" emission="" evaporative="" gd(h4dotc)-151,="" open,="" p0447="" system="" to="" trouble="" vent=""></ref.>
P0448	Evaporative Emission Control System Vent Control Circuit Shorted	<ref. (dtc)="" circuit="" code="" control="" criteria.="" detecting="" diagnostic="" dtc="" emission="" evaporative="" gd(h4dotc)-153,="" p0448="" shorted,="" system="" to="" trouble="" vent=""></ref.>
P0451	Evaporative Emission Control System Pressure Sensor	<ref. (dtc)="" code="" control="" criteria.="" detecting="" diagnostic="" dtc="" emission="" evaporative="" gd(h4dotc)-155,="" p0451="" pressure="" sensor,="" system="" to="" trouble=""></ref.>
P0452	Evaporative Emission Control System Pressure Sensor Low Input	<ref. (dtc)="" code="" control="" criteria.="" detecting="" diagnostic="" dtc="" emission="" evaporative="" gd(h4dotc)-157,="" input,="" low="" p0452="" pressure="" sensor="" system="" to="" trouble=""></ref.>
P0453	Evaporative Emission Control System Pressure Sensor High Input	<ref. (dtc)="" code="" control="" criteria.="" detecting="" diagnostic="" dtc="" emission="" evaporative="" gd(h4dotc)-159,="" high="" input,="" p0453="" pressure="" sensor="" system="" to="" trouble=""></ref.>
P0456	Evaporative Emission Control System Leak Detected (Very Small Leak)	<ref. (dtc)="" (very="" code="" control="" criteria.="" detected="" detecting="" diagnostic="" dtc="" emission="" evaporative="" gd(h4dotc)-161,="" leak="" leak),="" p0456="" small="" system="" to="" trouble=""></ref.>
P0457	Evaporative Emission Control System Leak Detected (Fuel Cap Loose/Off)	<ref. (dtc)="" (fuel="" cap="" code="" control="" criteria.="" detected="" detecting="" diagnostic="" dtc="" emission="" evaporative="" gd(h4dotc)-161,="" leak="" loose="" off),="" p0457="" system="" to="" trouble=""></ref.>
P0458	Evaporative Emission System Purge Control Valve Circuit Low	<ref. (dtc)="" circuit="" code="" control="" criteria.="" detecting="" diagnostic="" dtc="" emission="" evaporative="" gd(h4dotc)-162,="" low,="" p0458="" purge="" system="" to="" trouble="" valve=""></ref.>
P0459	Evaporative Emission System Purge Control Valve Circuit High	<ref. (dtc)="" circuit="" code="" control="" criteria.="" detecting="" diagnostic="" dtc="" emission="" evaporative="" gd(h4dotc)-164,="" high,="" p0459="" purge="" system="" to="" trouble="" valve=""></ref.>
P0461	Fuel Level Sensor "A" Circuit Range/Performance	<ref. "a"="" cir-<br="" dtc="" fuel="" gd(h4dotc)-166,="" level="" p0461="" sensor="" to="">CUIT RANGE/PERFORMANCE, Diagnostic Trouble Code (DTC) Detecting Criteria.></ref.>
P0462	Fuel Level Sensor "A" Circuit Low	<ref. "a"="" (dtc)="" cir-cuit="" code="" criteria.="" detecting="" diagnostic="" dtc="" fuel="" gd(h4dotc)-168,="" level="" low,="" p0462="" sensor="" to="" trouble=""></ref.>
P0463	Fuel Level Sensor "A" Circuit High	<ref. "a"="" (dtc)="" cir-cuit="" code="" criteria.="" detecting="" diagnostic="" dtc="" fuel="" gd(h4dotc)-170,="" high,="" level="" p0463="" sensor="" to="" trouble=""></ref.>
P0464	Fuel Level Sensor Circuit Intermittent	<ref. (dtc)="" circuit="" code="" criteria.="" detecting="" diagnostic="" dtc="" fuel="" gd(h4dotc)-172,="" intermittent,="" level="" p0464="" sensor="" to="" trouble=""></ref.>
P0483	Fan Rationality Check	<ref. (dtc)="" check,="" code="" criteria.="" detecting="" diagnostic="" dtc="" fan="" gd(h4dotc)-175,="" p0483="" rationality="" to="" trouble=""></ref.>
P0502	Vehicle Speed Sensor "A" Circuit Low Input	<ref. "a"<="" dtc="" gd(h4dotc)-176,="" p="" p0502="" sensor="" speed="" to="" vehicle=""> CIRCUIT LOW INPUT, Diagnostic Trouble Code (DTC) Detecting Criteria.></ref.>
P0503	Vehicle Speed Sensor "A" Intermit- tent/Erratic/High	<ref. "a"="" (dtc)="" code="" criteria.="" detecting="" diagnostic="" dtc="" erratic="" gd(h4dotc)-177,="" high,="" intermittent="" p0503="" sensor="" speed="" to="" trouble="" vehicle=""></ref.>
P0506	Idle Air Control System RPM Lower Than Expected	<ref. (dtc)="" air="" code="" control="" criteria.="" detecting="" diagnostic="" dtc="" expected,="" gd(h4dotc)-178,="" idle="" lower="" p0506="" rpm="" system="" than="" to="" trouble=""></ref.>
P0507	Idle Air Control System RPM Higher Than Expected	<ref. air="" control="" dtc="" gd(h4dotc)-180,="" idle="" p0507="" system<br="" to="">RPM HIGHER THAN EXPECTED, Diagnostic Trouble Code (DTC) Detecting Criteria.></ref.>
P0512	Starter Request Circuit	<ref. circuit,<br="" dtc="" gd(h4dotc)-182,="" p0512="" request="" starter="" to="">Diagnostic Trouble Code (DTC) Detecting Criteria.></ref.>

List of Diagnostic Trouble Code (DTC)

DTC	Item	NOTE
P0513	Incorrect Immobilizer Key	<ref. (dtc)="" code="" criteria.="" detecting="" diagnostic="" dtc="" gd(h4dotc)-183,="" immobilizer="" incorrect="" key,="" p0513="" to="" trouble=""></ref.>
P0519	Idle Air Control System Performance	<ref. air="" control="" dtc="" gd(h4dotc)-184,="" idle="" p0519="" system<br="" to="">PERFORMANCE, Diagnostic Trouble Code (DTC) Detecting Criteria.></ref.>
P0600	Serial Communication Link	<ref. (dtc)="" code="" communication="" criteria.="" detecting="" diagnostic="" dtc="" gd(h4dotc)-185,="" link,="" p0600="" serial="" to="" trouble=""></ref.>
P0604	Internal Control Module Random Access Memory (RAM) Error	<ref. control="" dtc="" gd(h4dotc)-186,="" internal="" module<br="" p0604="" to="">RANDOM ACCESS MEMORY (RAM) ERROR, Diagnostic Trouble Code (DTC) Detecting Criteria.></ref.>
P0605	Internal Control Module Read Only Memory (ROM) Error	<ref. control="" dtc="" gd(h4dotc)-187,="" internal="" module<br="" p0605="" to="">READ ONLY MEMORY (ROM) ERROR, Diagnostic Trouble Code (DTC) Detecting Criteria.></ref.>
P0607	Control Module Performance	<ref. control="" dtc="" gd(h4dotc)-188,="" module="" p0607="" perfor-<br="" to="">MANCE, Diagnostic Trouble Code (DTC) Detecting Criteria.></ref.>
P0638	Throttle Actuator Control Range/ Performance (Bank 1)	<ref. (bank="" (dtc)="" 1),="" actuator="" code="" control="" criteria.="" detecting="" diagnostic="" dtc="" gd(h4dotc)-190,="" p0638="" performance="" range="" throttle="" to="" trouble=""></ref.>
P0691	Fan 1 Control Circuit Low	<ref. (dtc)="" 1="" circuit="" code="" control="" criteria.="" detecting="" diagnostic="" dtc="" fan="" gd(h4dotc)-193,="" low,="" p0691="" to="" trouble=""></ref.>
P0692	Fan 1 Control Circuit High	<ref. (dtc)="" 1="" circuit="" code="" control="" criteria.="" detecting="" diagnostic="" dtc="" fan="" gd(h4dotc)-194,="" high,="" p0692="" to="" trouble=""></ref.>
P0700	Transmission Control System (MIL Request)	<ref. (dtc)="" (mil="" code="" control="" criteria.="" detecting="" diagnostic="" dtc="" gd(h4dotc)-195,="" p0700="" request),="" system="" to="" transmission="" trouble=""></ref.>
P0851	Park/Neutral Switch Input Circuit Low (AT Model)	<ref. (at="" (dtc)="" circuit="" code="" criteria.="" detecting="" diagnostic="" dtc="" gd(h4dotc)-196,="" input="" low="" model),="" neutral="" p0851="" park="" switch="" to="" trouble=""></ref.>
P0851	Neutral Switch Input Circuit Low (MT Model)	<ref. cir-<br="" dtc="" gd(h4dotc)-197,="" input="" neutral="" p0851="" switch="" to="">CUIT LOW (MT MODEL), Diagnostic Trouble Code (DTC) Detecting Crite- ria.></ref.>
P0852	Park/Neutral Switch Input Circuit High (AT Model)	<ref. (at="" (dtc)="" circuit="" code="" criteria.="" detecting="" diagnostic="" dtc="" gd(h4dotc)-198,="" high="" input="" model),="" neutral="" p0852="" park="" switch="" to="" trouble=""></ref.>
P0852	Neutral Switch Input Circuit High (MT Model)	<ref. cir-<br="" dtc="" gd(h4dotc)-199,="" input="" neutral="" p0852="" switch="" to="">CUIT HIGH (MT MODEL), Diagnostic Trouble Code (DTC) Detecting Crite- ria.></ref.>
P1152	O2 Sensor Circuit Range/Performance (Low) (Bank1 Sensor1)	<ref. <br="" circuit="" dtc="" gd(h4dotc)-200,="" o2="" p1152="" range="" sensor="" to="">PERFORMANCE (LOW) (BANK1 SENSOR1), Diagnostic Trouble Code (DTC) Detecting Criteria.></ref.>
P1153	O2 Sensor Circuit Range/Performance (High) (Bank1 Sensor1)	<ref. <br="" circuit="" dtc="" gd(h4dotc)-203,="" o2="" p1153="" range="" sensor="" to="">PERFORMANCE (HIGH) (BANK1 SENSOR1), Diagnostic Trouble Code (DTC) Detecting Criteria.></ref.>
P1160	Return Spring Failure	<ref. (dtc)="" code="" criteria.="" detecting="" diagnostic="" dtc="" failure,="" gd(h4dotc)-206,="" p1160="" return="" spring="" to="" trouble=""></ref.>
P1400	Fuel Tank Pressure Control Sole- noid Valve Circuit Low	<ref. (dtc)="" circuit="" code="" control="" criteria.="" detecting="" diagnostic="" dtc="" fuel="" gd(h4dotc)-208,="" low,="" p1400="" pressure="" solenoid="" tank="" to="" trouble="" valve=""></ref.>
P1410	Secondary Air Injection System Switching Valve Stuck Open	<ref. (dtc)="" air="" code="" criteria.="" detecting="" diagnostic="" dtc="" gd(h4dotc)-210,="" injection="" open,="" p1410="" secondary="" stuck="" switching="" system="" to="" trouble="" valve=""></ref.>
P1418	Secondary Air Injection System Control "A" Circuit Shorted	<ref. "a"="" (dtc)="" ,="" air="" circuit="" code="" control="" criteria.="" detecting="" diagnostic="" dtc="" gd(h4dotc)-212,="" injection="" p1418="" secondary="" shorted="" system="" to="" trouble=""></ref.>
P1420	Fuel Tank Pressure Control Sol. Valve Circuit High	<ref. (dtc)="" circuit="" code="" control="" criteria.="" detecting="" diagnostic="" dtc="" fuel="" gd(h4dotc)-213,="" high,="" p1420="" pressure="" sol.="" tank="" to="" trouble="" valve=""></ref.>

DTC	Item	NOTE
P1443	Vent Control Solenoid Valve Function Problem	<ref. (dtc)="" code="" control="" criteria.="" detecting="" diagnostic="" dtc="" function="" gd(h4dotc)-215,="" p1443="" problem,="" solenoid="" to="" trouble="" valve="" vent=""></ref.>
P1491	Positive Crankcase Ventilation (Blow-by) Function Problem	<ref. crankcase="" dtc="" gd(h4dotc)-217,="" p1491="" positive="" to="" venti-<br="">LATION (BLOW-BY) FUNCTION PROBLEM, Diagnostic Trouble Code (DTC) Detecting Criteria.></ref.>
P1518	Starter Switch Circuit Low Input	<ref. circuit="" dtc="" gd(h4dotc)-219,="" low<br="" p1518="" starter="" switch="" to="">INPUT, Diagnostic Trouble Code (DTC) Detecting Criteria.></ref.>
P1560	Back-up Voltage Circuit Malfunction	<ref. (dtc)="" back-up="" circuit="" code="" criteria.="" detecting="" diagnostic="" dtc="" gd(h4dotc)-220,="" malfunction,="" p1560="" to="" trouble="" voltage=""></ref.>
P1570	Antenna	<ref. (dtc)="" antenna,="" code="" criteria.="" detecting="" diagnostic="" dtc="" gd(h4dotc)-221,="" p1570="" to="" trouble=""></ref.>
P1571	Reference Code Incompatibility	<ref. code="" dtc="" gd(h4dotc)-221,="" incompati-<br="" p1571="" reference="" to="">BILITY, Diagnostic Trouble Code (DTC) Detecting Criteria.></ref.>
P1572	IMM Circuit Failure (Except Antenna Circuit)	<ref. (dtc)="" (except="" antenna="" circuit="" circuit),="" code="" criteria.="" detecting="" diagnostic="" dtc="" failure="" gd(h4dotc)-221,="" imm="" p1572="" to="" trouble=""></ref.>
P1574	Key Communication Failure	<ref. (dtc)="" code="" communication="" criteria.="" detecting="" diagnostic="" dtc="" failure,="" gd(h4dotc)-221,="" key="" p1574="" to="" trouble=""></ref.>
P1576	EGI Control Module EEPROM	<ref. (dtc)="" code="" control="" criteria.="" detecting="" diagnostic="" dtc="" eeprom,="" egi="" gd(h4dotc)-221,="" module="" p1576="" to="" trouble=""></ref.>
P1577	IMM Control Module EEPROM	<ref. (dtc)="" code="" control="" criteria.="" detecting="" diagnostic="" dtc="" eeprom,="" gd(h4dotc)-221,="" imm="" module="" p1577="" to="" trouble=""></ref.>
P2004	Intake Manifold Runner Control Stuck Open (Bank 1)	<ref. (bank="" (dtc)="" 1),="" code="" control="" criteria.="" detecting="" diagnostic="" dtc="" gd(h4dotc)-222,="" intake="" manifold="" open="" p2004="" runner="" stuck="" to="" trouble=""></ref.>
P2005	Intake Manifold Runner Control Stuck Open (Bank 2)	<ref. (bank="" (dtc)="" 2),="" code="" control="" criteria.="" detecting="" diagnostic="" dtc="" gd(h4dotc)-223,="" intake="" manifold="" open="" p2005="" runner="" stuck="" to="" trouble=""></ref.>
P2006	Intake Manifold Runner Control Stuck Closed (Bank 1)	<ref. (bank="" (dtc)="" 1),="" closed="" code="" control="" criteria.="" detecting="" diagnostic="" dtc="" gd(h4dotc)-224,="" intake="" manifold="" p2006="" runner="" stuck="" to="" trouble=""></ref.>
P2007	Intake Manifold Runner Control Stuck Closed (Bank 2)	<ref. (bank="" (dtc)="" 2),="" closed="" code="" control="" criteria.="" detecting="" diagnostic="" dtc="" gd(h4dotc)-225,="" intake="" manifold="" p2007="" runner="" stuck="" to="" trouble=""></ref.>
P2008	Intake Manifold Runner Control Circuit / Open (Bank 1)	<ref. (bank="" (dtc)="" 1),="" circuit="" code="" control="" criteria.="" detecting="" diagnostic="" dtc="" gd(h4dotc)-226,="" intake="" manifold="" open="" p2008="" runner="" to="" trouble=""></ref.>
P2009	Intake Manifold Runner Control Circuit Low (Bank 1)	<ref. (bank="" (dtc)="" 1),="" circuit="" code="" control="" criteria.="" detecting="" diagnostic="" dtc="" gd(h4dotc)-228,="" intake="" low="" manifold="" p2009="" runner="" to="" trouble=""></ref.>
P2011	Intake Manifold Runner Control Circuit / Open (Bank 2)	<ref. (bank="" (dtc)="" 2),="" circuit="" code="" control="" criteria.="" detecting="" diagnostic="" dtc="" gd(h4dotc)-230,="" intake="" manifold="" open="" p2011="" runner="" to="" trouble=""></ref.>
P2012	Intake Manifold Runner Control Circuit Low (Bank 2)	<ref. (bank="" (dtc)="" 2),="" circuit="" code="" control="" criteria.="" detecting="" diagnostic="" dtc="" gd(h4dotc)-232,="" intake="" low="" manifold="" p2012="" runner="" to="" trouble=""></ref.>
P2016	Intake Manifold Runner Position Sensor / Switch Circuit Low (Bank 1)	<ref. (bank="" (dtc)="" 1),="" circuit="" code="" criteria.="" detecting="" diagnostic="" dtc="" gd(h4dotc)-234,="" intake="" low="" manifold="" p2016="" position="" runner="" sensor="" switch="" to="" trouble=""></ref.>
P2017	Intake Manifold Runner Position Sensor / Switch Circuit High (Bank 1)	<ref. (bank="" (dtc)="" 1),="" circuit="" code="" criteria.="" detecting="" diagnostic="" dtc="" gd(h4dotc)-236,="" high="" intake="" manifold="" p2017="" position="" runner="" sensor="" switch="" to="" trouble=""></ref.>
P2021	Intake Manifold Runner Position Sensor / Switch Circuit Low (Bank 2)	<ref. (bank="" (dtc)="" 2),="" circuit="" code="" criteria.="" detecting="" diagnostic="" dtc="" gd(h4dotc)-238,="" intake="" low="" manifold="" p2021="" position="" runner="" sensor="" switch="" to="" trouble=""></ref.>

List of Diagnostic Trouble Code (DTC)

DTC	Item	NOTE
P2022	Intake Manifold Runner Position Sensor / Switch Circuit High (Bank 2)	<ref. (bank="" (dtc)="" 2),="" circuit="" code="" criteria.="" detecting="" diagnostic="" dtc="" gd(h4dotc)-240,="" high="" intake="" manifold="" p2022="" position="" runner="" sensor="" switch="" to="" trouble=""></ref.>
P2088	OCV Solenoid Valve Signal A Circuit Open (Bank 1)	<ref. a<br="" dtc="" gd(h4dotc)-242,="" ocv="" p2088="" signal="" solenoid="" to="" valve="">CIRCUIT OPEN (BANK 1), Diagnostic Trouble Code (DTC) Detecting Crite- ria.></ref.>
P2089	OCV Solenoid Valve Signal A Circuit Short (Bank 1)	<ref. a<br="" dtc="" gd(h4dotc)-244,="" ocv="" p2089="" signal="" solenoid="" to="" valve="">CIRCUIT SHORT (BANK 1), Diagnostic Trouble Code (DTC) Detecting Crite- ria.></ref.>
P2092	OCV Solenoid Valve Signal A Circuit Open (Bank 2)	<ref. a<br="" dtc="" gd(h4dotc)-246,="" ocv="" p2092="" signal="" solenoid="" to="" valve="">CIRCUIT OPEN (BANK 2), Diagnostic Trouble Code (DTC) Detecting Crite- ria.></ref.>
P2093	Intake Camshaft Position Actuator Control Circuit High (Bank 2)	<ref. camshaft="" dtc="" gd(h4dotc)-248,="" intake="" p2093="" position<br="" to="">ACTUATOR CONTROL CIRCUIT HIGH (BANK 2), Diagnostic Trouble Code (DTC) Detecting Criteria.></ref.>
P2096	Post Catalyst Fuel Trim System Too Lean Bank 1	<ref. catalyst="" dtc="" fuel="" gd(h4dotc)-250,="" p2096="" post="" to="" trim<br="">SYSTEM TOO LEAN BANK 1, Diagnostic Trouble Code (DTC) Detecting Criteria.></ref.>
P2097	Post Catalyst Fuel Trim System Too Rich Bank 1	<ref. (dtc)="" 1,="" bank="" catalyst="" code="" criteria.="" detecting="" diagnostic="" dtc="" fuel="" gd(h4dotc)-252,="" p2097="" post="" rich="" system="" to="" too="" trim="" trouble=""></ref.>
P2101	Throttle Actuator Control Motor Circuit Range/Performance	<ref. (dtc)="" actuator="" circuit="" code="" control="" criteria.="" detecting="" diagnostic="" dtc="" gd(h4dotc)-254,="" motor="" p2101="" performance,="" range="" throttle="" to="" trouble=""></ref.>
P2102	Throttle Actuator Control Motor Circuit Low	<ref. (dtc)="" actuator="" circuit="" code="" control="" criteria.="" detecting="" diagnostic="" dtc="" gd(h4dotc)-256,="" low,="" motor="" p2102="" throttle="" to="" trouble=""></ref.>
P2103	Throttle Actuator Control Motor Circuit High	<ref. (dtc)="" actuator="" circuit="" code="" control="" criteria.="" detecting="" diagnostic="" dtc="" gd(h4dotc)-258,="" high,="" motor="" p2103="" throttle="" to="" trouble=""></ref.>
P2109	Throttle/Pedal Position Sensor "A" Minimum Stop Performance	<ref. "a"="" (dtc)="" code="" criteria.="" detecting="" diagnostic="" dtc="" gd(h4dotc)-260,="" minimum="" p2109="" pedal="" performance,="" position="" sensor="" stop="" throttle="" to="" trouble=""></ref.>
P2122	Throttle/Pedal Position Sensor/ Switch "D" Circuit Low Input	<ref. dtc="" gd(h4dotc)-262,="" p2122="" pedal="" position<br="" throttle="" to="">SENSOR/SWITCH "D" CIRCUIT LOW INPUT, Diagnostic Trouble Code (DTC) Detecting Criteria.></ref.>
P2123	Throttle/Pedal Position Sensor/ Switch "D" Circuit High Input	<ref. dtc="" gd(h4dotc)-264,="" p2123="" pedal="" position<br="" throttle="" to="">SENSOR/SWITCH "D" CIRCUIT HIGH INPUT, Diagnostic Trouble Code (DTC) Detecting Criteria.></ref.>
P2127	Throttle/Pedal Position Sensor/ Switch "E" Circuit Low Input	<ref. dtc="" gd(h4dotc)-266,="" p2127="" pedal="" position<br="" throttle="" to="">SENSOR/SWITCH "E" CIRCUIT LOW INPUT, Diagnostic Trouble Code (DTC) Detecting Criteria.></ref.>
P2128	Throttle/Pedal Position Sensor/ Switch "E" Circuit High Input	<ref. dtc="" gd(h4dotc)-268,="" p2128="" pedal="" position<br="" throttle="" to="">SENSOR/SWITCH "E" CIRCUIT HIGH INPUT, Diagnostic Trouble Code (DTC) Detecting Criteria.></ref.>
P2135	Throttle/Pedal Position Sensor/ Switch "A"/"B" Voltage Correlation	<ref. dtc="" gd(h4dotc)-270,="" p2135="" pedal="" position<br="" throttle="" to="">SENSOR/SWITCH "A"/"B" VOLTAGE CORRELATION, Diagnostic Trouble Code (DTC) Detecting Criteria.></ref.>
P2138	Throttle/Pedal Position Sensor/ Switch "D"/"E" Voltage Correlation	<ref. "d"="" "e"="" (dtc)="" code="" correlation,="" criteria.="" detecting="" diagnostic="" dtc="" gd(h4dotc)-272,="" p2138="" pedal="" position="" sensor="" switch="" throttle="" to="" trouble="" voltage=""></ref.>
P2227	Barometric Pressure Circuit Range/Performance	<ref. (dtc)="" barometric="" circuit="" code="" criteria.="" detecting="" diagnostic="" dtc="" gd(h4dotc)-274,="" p2227="" performance,="" pressure="" range="" to="" trouble=""></ref.>
P2228	Barometric Pressure Circuit Low	<ref. barometric="" cir-<br="" dtc="" gd(h4dotc)-275,="" p2228="" pressure="" to="">CUIT LOW, Diagnostic Trouble Code (DTC) Detecting Criteria.></ref.>
P2229	Barometric Pressure Circuit High	<ref. barometric="" cir-<br="" dtc="" gd(h4dotc)-276,="" p2229="" pressure="" to="">CUIT HIGH, Diagnostic Trouble Code (DTC) Detecting Criteria.></ref.>

List of Diagnostic Trouble Code (DTC)

DTC	Item	NOTE
P2431	Secondary Air Injection System Air Flow /Pressure Sensor Circuit Range/Performance	<ref. air="" dtc="" gd(h4dotc)-277,="" injection<br="" p2431="" secondary="" to="">SYSTEM AIR FLOW /PRESSURE SENSOR CIRCUIT RANGE/PERFOR- MANCE, Diagnostic Trouble Code (DTC) Detecting Criteria.></ref.>
P2432	Secondary Air Injection System Air Flow /Pressure Sensor Circuit Low	<ref. air="" dtc="" gd(h4dotc)-278,="" injection<br="" p2432="" secondary="" to="">SYSTEM AIR FLOW /PRESSURE SENSOR CIRCUIT LOW, Diagnostic Trouble Code (DTC) Detecting Criteria.></ref.>
P2433	Secondary Air Injection System Air Flow /Pressure Sensor Circuit High	<ref. air="" dtc="" gd(h4dotc)-279,="" injection<br="" p2433="" secondary="" to="">SYSTEM AIR FLOW /PRESSURE SENSOR CIRCUIT HIGH, Diagnostic Trouble Code (DTC) Detecting Criteria.></ref.>
P2440	Secondary Air Injection System Switching Valve Stuck Open (Bank1)	<ref. air="" dtc="" gd(h4dotc)-280,="" injection<br="" p2440="" secondary="" to="">SYSTEM SWITCHING VALVE STUCK OPEN (BANK1), Diagnostic Trouble Code (DTC) Detecting Criteria.></ref.>
P2441	Secondary Air Injection System Switching Valve Stuck Closed (Bank1)	<ref. air="" dtc="" gd(h4dotc)-280,="" injection<br="" p2441="" secondary="" to="">SYSTEM SWITCHING VALVE STUCK CLOSED (BANK1), Diagnostic Trou- ble Code (DTC) Detecting Criteria.></ref.>
P2442	Secondary Air Injection System Switching Valve Stuck Open (Bank2)	<ref. air="" dtc="" gd(h4dotc)-280,="" injection<br="" p2442="" secondary="" to="">SYSTEM SWITCHING VALVE STUCK OPEN (BANK2), Diagnostic Trouble Code (DTC) Detecting Criteria.></ref.>
P2443	Secondary Air Injection System Switching Valve Stuck Closed (Bank2)	<ref. air="" dtc="" gd(h4dotc)-280,="" injection<br="" p2443="" secondary="" to="">SYSTEM SWITCHING VALVE STUCK CLOSED (BANK2), Diagnostic Trou- ble Code (DTC) Detecting Criteria.></ref.>
P2444	Secondary Air Injection System Pump Stuck On	<ref. (dtc)="" air="" code="" criteria.="" detecting="" diagnostic="" dtc="" gd(h4dotc)-281,="" injection="" on,="" p2444="" pump="" secondary="" stuck="" system="" to="" trouble=""></ref.>