

Technical data on the vehicle

Make	Hyundai	Date:	11-11-2011
Model	H1 2,5 TCI	Owner	_____
Year	2002-2009	Registration No.	_____
Engine	D4BH	VIN	_____
Variant		1. Reg. Date	_____

Technical item	Data
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Engine

Engine ID code	D4BH
Number of cylinders	R4 i
Number of valves	8, OHC
Capacity/ (bore/ stroke)	2476 cm ³ (91,1/ 95,0)
Compression ratio	21,0: 1
Max. output kW (din hp)/ rpm	74 (101)/ 3800
Max. torque NM/ rpm	240/ 2000
Engine code location	Engine block right front side
Vehicle Identification Number location	Firewall
Production year code in VIN	10th digit production year, 2 = 2002 i
Valve clearance, inlet (cold/ hot)	0.15 cold/ 0.25 warm i
Valve clearance, exhaust (cold/ hot)	0.15 cold/ 0.25 warm i
Valve angle/ seat angle	45° - 45° 30' / 45°
Compression pressure, bar	19.0 (Max. difference 3.0)
Oil pressure/ rpm, bar	Min. 0.8/ idle speed
Radiator cap, bar/ thermostat °C	0,75 - 1,05/ 82° C
Clutch freeplay, mm	6.0 - 13.0 at pedal
Timing belt: Renewal interval	90,000 km/ 6 years i
Timing belt: Inspection	60,000 km/ 3 years
Noise measurement, dB(A) at rpm	83/ 2850 (A/T 77/ 2850)
Drive belt	i

Engine management

Engine management system	COVEC-F
Diagnostic connector	Left side under dashboard at A - door post i
Pump/ pump type	Bosch VE
Pump position, mm	(Electronic)
Adjustment method	(Electronic)
Dynamic injection inspection	(Electronic)
Injector opening pressure, new, bar	150
Injector opening pressure, used, bar	Min. 132
Injection order	1 - 3 - 4 - 2 (Cylinder 1 at timing gear) i

Electrical system

Battery	12 V 88 Ah
Starter motor current (cranking), A	100 A
Voltage relay, Volt at/ amp.	13,9 - 15,3
Terminal definitions DIN 72 552	
Alternator max, A	12V 75/ 110

Wheel alignment (2WD)

Load	Unloaded
Toe-in, °	0° 00' ± 16'
Camber°	0° 00' ± 30' i
Camber, max. difference on R and L side	30'
Caster°	3° 00' ± 30' i
Caster, max. difference on R and L side	30'
KPI/SAI°	15° 40'
Toe-out on turns, inner wheel°	33° 55' ÷ 3°
Toe-out on turns, outer wheel°	32° 07'

Technical item	Data
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Wheel alignment (2WD)

Rear camber°	0°
Rear toe-in °	0° i
Tyre size	195 R 14 C 8 PR box van
Tyre pressure, front/ rear, bar	2,2 - 2,8/ 2,2 - 2,8
Free play in suspension parts	Factory data i
Wheel offset, mm	5½J x 14 = 40 mm
Top speed	140 - 148

Tightening torques

Tightening, NM	Torque standards
Cylinder head bolts, stage 1, Nm	105 - 115 Nm cold (Step-by-step) i
Cylinder head bolts, stage 2, Nm	115 - 125 Nm warm
Cylinder head bolts, stage 3, Nm	(Max. distortion 0.2 mm)
Cylinder head bolts, stage 4, Nm	(Cylinder head height 94 ± 0.1 mm)
Cylinder head bolts, stage 5, Nm	(No grinding)
Main bearings, Nm	75 - 85
Connection rod bearings, Nm	45 - 48
Flywheel, Nm	130 - 140
Crankshaft pulley/ vibration damp. Nm	170 - 190/ (Rocker arm assembly 35 - 40 Nm)
Camshaft pulley/ bearings, Nm	65 - 75/ 19 - 21
Pump pulley/ idle wheel, Nm	80 - 90/ (Balance wheel 34 - 40 Nm)
Timing belt tensioner, Nm	22 - 30
Nozzle retainer/ Nozzle in cylinder head	35 - 40/ 50 - 60
Glow plug	15 - 20
Wheel nuts/ bolts, Nm	120 - 140
Wheel hub, front/ rear, Nm	30 + loosen + 8 i

Brakes

Front, min. thickness (new)	22.4 mm (24.0 mm)
Rear, min. thickness (new)	272,0 mm (270,0 mm)

Capacities

Engine oil/ - incl. filter, litre	5,8/ 6,5 (APi. SG, SAE 10W40)
Manual transmission, litre	2,4 (APi. GL-4 SAE 75W/ 85W) i
Automatic transmission, litre	(Total 7,0) (DIAMOND ATF SP-II)
Final drive, litre	(APi. GL-4) transfer gear 1.4 (ATF SP II) i
Power steering, litre	(Dexron II)
Cooling system, litre	8,7
A/C fluid, type/ gram	R134a/ car 1300 ± 10, van 650 ± 25
A/C oil, type/ cm³	i

MOT

Towing weights kg: w/ w.out brakes	1500/ 700
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Environmental parametres

Idle speed, rpm	750 ± 30
Smoke gas density (K-value)	0.7
EU norm	Euro 3

Remarks

n

n

n n

Order No.:

Mechanic

Timing gear marking

Main belt: Cylinder 1 in compression TDC. Markings by A, B and C align.

Belt tensioning:

Turn the crank very little in its direction of rotation, so that the camshaft mark is 2 teeth after the fixed mark by B. Loosen the belt tensioner - and retighten - first at long slot.

Control:

Turn the crank back again until markings align.

Under pressure with finger by D belt should give 4 - 5 mm.

Belt for balance shafts:

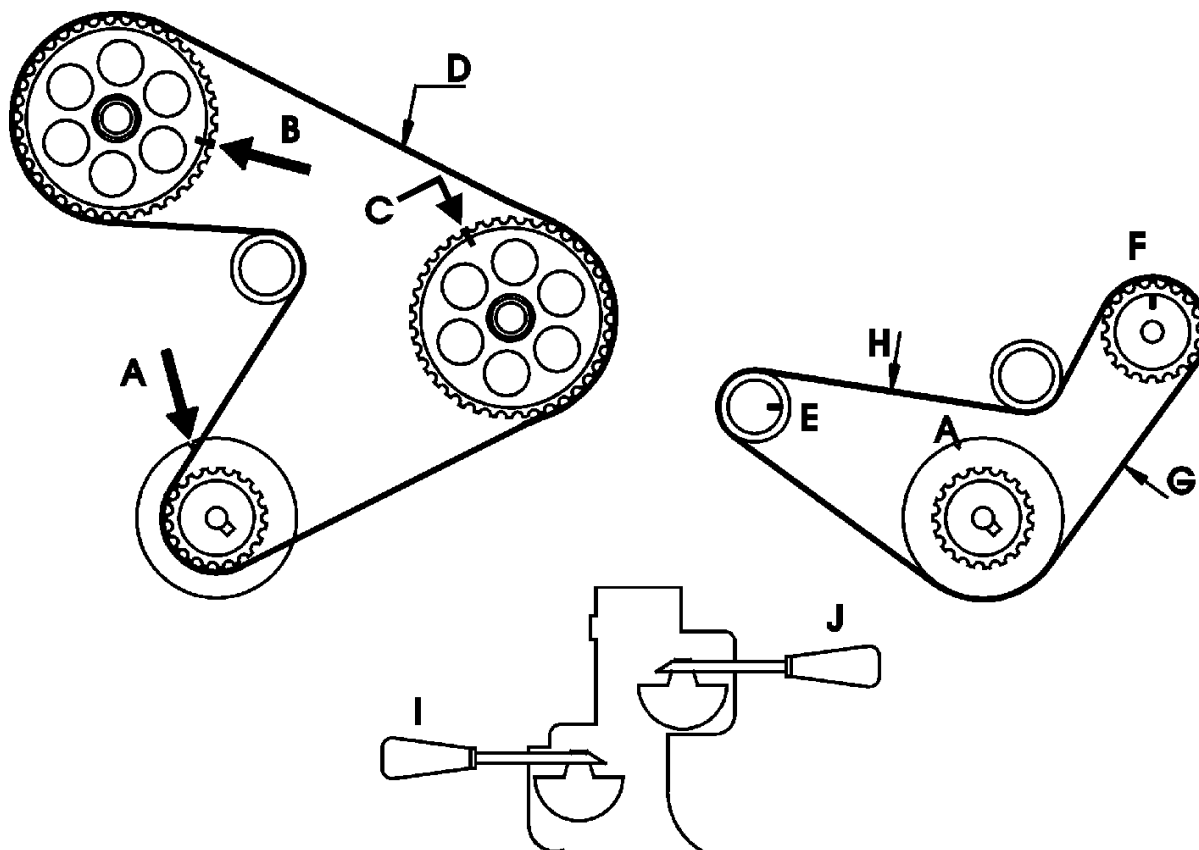
Cylinder 1 in compression TDC, markings by A, E and F align.

Belt tensioning:

Push by H. Loosen the belt tensioner - and retighten (lower nut first).

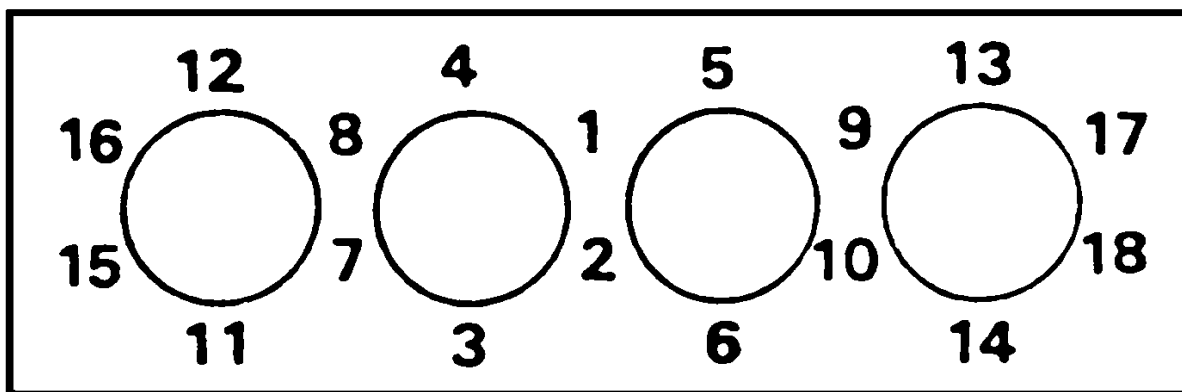
Control:

With pressure applied (by hand) at G the belt should give 4 - 5 mm. (When dismantling balance shaft pulleys keep the shafts in place with bolt/ screwdriver at I and J).



Pic. 1

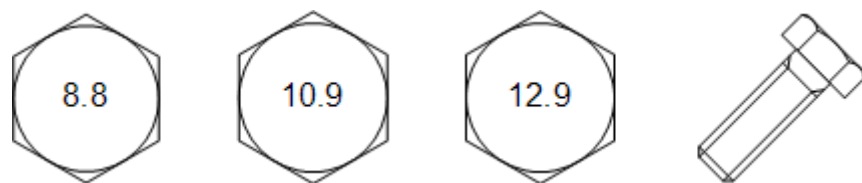
Tightening sequence



Pic. 1

Tightening torques

M4	8.8	2.4 Nm
M4	10.9	3.6 Nm
M5	8.8	5.0 Nm
M5	10.9	7.3 Nm
M5	12.9	8.0 Nm
M6	8.8	8.6 Nm
M6	10.9	12.6 Nm
M6	12.9	14.0 Nm
M7	8.8	14.0 Nm
M7	10.9	20.5 Nm
M7	12.9	22.5 Nm
M8	8.8	20.5 Nm
M8	10.9	30.5 Nm
M8	12.9	33.5 Nm
M8x1	8.8	22 Nm
M8x1	10.9	32 Nm
M8x1	12.9	35.5 Nm
M10	8.8	41 Nm
M10	10.9	60 Nm
M10	12.9	66 Nm
M10x1	8.8	44 Nm
M10x1	10.9	65 Nm
M10x1	12.9	72 Nm
M12	8.8	71 Nm
M12	10.9	104 Nm
M12	12.9	116 Nm
M12x1.5	8.8	73 Nm
M12x1.5	10.9	108 Nm
M12x1.5	12.9	120 Nm
M14	8.8	112 Nm
M14	10.9	165 Nm
M14	12.9	185 Nm
M14x1.5	8.8	120 Nm
M14x1.5	10.9	175 Nm
M14x1.5	12.9	195 Nm
M16	8.8	175 Nm
M16	10.9	255 Nm
M16	12.9	280 Nm
M16x1.5	8.8	180 Nm
M16x1.5	10.9	265 Nm
M16x1.5	12.9	295 Nm
M18	8.8	240 Nm
M18	10.9	355 Nm
M18	12.9	395 Nm
M18x1.5	8.8	265 Nm
M18x1.5	10.9	385 Nm
M18x1.5	12.9	430 Nm



Pic. 1

General EOBD

Faultcode	Possible cause(s)
P0001	Fuel Volume Regulator Control Circuit / Open
P0002	Fuel Volume Regulator Control Circuit Range/Performance
P0003	Fuel Volume Regulator Control Circuit Low
P0004	Fuel Volume Regulator Control Circuit High
P0005	Fuel Shut-Off Valve A Control Circuit / Open
P0006	Fuel Shut-Off Valve A Control Circuit Low
P0007	Fuel Shut-Off Valve A Control Circuit High
P0008	Engine Position System Performance - Bank 1
P0009	Engine Position System Performance - Bank 2
P0010	Intake Camshaft Position Actuator Circuit / Open (Bank 1)
P0011	Intake Camshaft Position Timing - Over-Advanced (Bank 1)
P0012	Intake Camshaft Position Timing - Over-Retarded (Bank 1)
P0013	Exhaust Camshaft Position Actuator Circuit / Open (Bank 1)
P0014	Exhaust Camshaft Position Timing - Over-Advanced (Bank 1)
P0015	Exhaust Camshaft Position Timing - Over-Retarded (Bank 1)
P0016	Crankshaft Position - Camshaft Position Correlation - Bank 1 Sensor A
P0017	Crankshaft Position - Camshaft Position Correlation - Bank 1 Sensor B
P0018	Crankshaft Position - Camshaft Position Correlation - Bank 2 Sensor A
P0019	Crankshaft Position - Camshaft Position Correlation - Bank 2 Sensor B
P0020	Intake Camshaft Position Actuator Circuit / Open (Bank 2)
P0021	Intake Camshaft Position Timing - Over-Advanced (Bank 2)
P0022	Intake Camshaft Position Timing - Over-Retarded (Bank 2)
P0023	Exhaust Camshaft Position Actuator Circuit / Open (Bank 2)
P0024	Exhaust Camshaft Position Timing - Over-Advanced (Bank 2)
P0025	Exhaust Camshaft Position Timing - Over-Retarded (Bank 2)
P0026	Intake Valve Control Solenoid Circuit Range/Performance (Bank 1)
P0027	Exhaust Valve Control Solenoid Circuit Range/Performance (Bank 1)
P0028	Intake Valve Control Solenoid Circuit Range/Performance (Bank 2)
P0029	Exhaust Valve Control Solenoid Circuit Range/Performance (Bank 2)
P0030	O2 Sensor Circuit Heater Control Circuit (Bank 1, Sensor 1)
P0031	O2 Sensor Circuit Heater Control Circuit Low (Bank 1, Sensor 1)
P0032	O2 Sensor Circuit Heater Control Circuit High (Bank 1, Sensor 1)
P0033	Turbocharger/Supercharger Bypass Valve Control Circuit / Open
P0034	Turbocharger/Supercharger Bypass Valve Control Circuit Low
P0035	Turbocharger/Supercharger Bypass Valve Control Circuit High
P0036	O2 Sensor Circuit Heater Control Circuit (Bank 1, Sensor 2)
P0037	O2 Sensor Circuit Heater Control Circuit Low (Bank 1, Sensor 2)
P0038	O2 Sensor Circuit Heater Control Circuit High (Bank 1, Sensor 2)
P0039	Turbocharger/Supercharger Bypass Valve Control Circuit Range/Performance
P0040	O2 Sensor Circuit Sensor Signals Exchanged Bank 1 Sensor 1 / Bank 2 Sensor 1
P0041	O2 Sensor Circuit Sensor Signals Exchanged Bank 1 Sensor 2 / Bank 2 Sensor 2
P0042	O2 Sensor Circuit Heater Control Circuit (Bank 1, Sensor 3)
P0043	O2 Sensor Circuit Heater Control Circuit Low (Bank 1, Sensor 3)
P0044	O2 Sensor Circuit Heater Control Circuit High (Bank 1, Sensor 3)
P0045	Turbocharger/Supercharger Boost Control Solenoid Circuit / Open
P0046	Turbocharger/Supercharger Boost Control Solenoid Circuit Range/Performance
P0047	Turbocharger/Supercharger Boost Control Solenoid Circuit Low
P0048	Turbocharger/Supercharger Boost Control Solenoid Circuit High
P0049	Turbocharger/Supercharger Turbine Overspeed
P0050	O2 Sensor Circuit Heater Control Circuit (Bank 2, Sensor 1)
P0051	O2 Sensor Circuit Heater Control Circuit Low (Bank 2, Sensor 1)
P0052	O2 Sensor Circuit Heater Control Circuit High (Bank 2, Sensor 1)
P0053	O2 Sensor Circuit Heater Resistance (Bank 1, Sensor 1)
P0054	O2 Sensor Circuit Heater Resistance (Bank 1, Sensor 2)
P0055	O2 Sensor Circuit Heater Resistance (Bank 1, Sensor 3)
P0056	O2 Sensor Circuit Heater Control Circuit (Bank 2, Sensor 2)
P0057	O2 Sensor Circuit Heater Control Circuit Low (Bank 2, Sensor 2)
P0058	O2 Sensor Circuit Heater Control Circuit High (Bank 2, Sensor 2)
P0059	O2 Sensor Circuit Heater Resistance (Bank 2, Sensor 1)

P0060	O2 Sensor Circuit Heater Resistance (Bank 2 Sensor 2)
P0061	O2 Sensor Circuit Heater Resistance (Bank 2 Sensor 3)
P0062	O2 Sensor Circuit Heater Control Circuit (Bank 2 Sensor 3)
P0063	O2 Sensor Circuit Heater Control Circuit Low (Bank 2 Sensor 3)
P0064	O2 Sensor Circuit Heater Control Circuit High (Bank 2 Sensor 3)
P0065	Air Assisted Injector Control Range/Performance
P0066	Air Assisted Injector Control Circuit or Circuit Low
P0067	Air Assisted Injector Control Circuit High
P0068	MAP / MAF - Throttle Position Correlation
P0069	MAP - Barometric Pressure Correlation
P0070	Ambient Air Temperature Sensor Circuit
P0071	Ambient Air Temperature Sensor Range/Performance
P0072	Ambient Air Temperature Sensor Circuit Low Input
P0073	Ambient Air Temperature Sensor Circuit High Input
P0074	Ambient Air Temperature Sensor Circuit Intermittent/Erratic
P0075	Intake Valve Control Circuit (Bank 1)
P0076	Intake Valve Control Circuit Low (Bank 1)
P0077	Intake Valve Control Circuit High (Bank 1)
P0078	Exhaust Valve Control Circuit (Bank 1)
P0079	Exhaust Valve Control Circuit Low (Bank 1)
P0080	Exhaust Valve Control Circuit High (Bank 1)
P0081	Intake Valve Control Circuit (Bank 2)
P0082	Intake Valve Control Circuit Low (Bank 2)
P0083	Intake Valve Control Circuit High (Bank 2)
P0084	Exhaust Valve Control Circuit (Bank 2)
P0085	Exhaust Valve Control Circuit Low (Bank 2)
P0086	Exhaust Valve Control Circuit High (Bank 2)
P0087	Fuel Rail/System Pressure - Too Low
P0088	Fuel Rail/System Pressure - Too High
P0089	Fuel Pressure Regulator Performance
P0090	Fuel Pressure Regulator Control Circuit
P0091	Fuel Pressure Regulator Control Circuit Low
P0092	Fuel Pressure Regulator Control Circuit High
P0093	Fuel System Leak Detected - Large Leak
P0094	Fuel System Leak Detected - Small Leak
P0095	Intake Air Temperature Sensor 2 Circuit
P0096	Intake Air Temperature Sensor 2 Circuit Range/Performance
P0097	Intake Air Temperature Sensor 2 Circuit Low Input
P0098	Intake Air Temperature Sensor 2 Circuit High Input
P0099	Intake Air Temperature Sensor 2 Circuit Intermittent/Erratic
P0100	Mass or Volume Air Flow Circuit Malfunction
P0101	Mass or Volume Air Flow Circuit Range/Performance Problem
P0102	Mass or Volume Air Flow Circuit Low Input
P0103	Mass or Volume Air Flow Circuit High Input
P0104	Mass or Volume Air Flow Circuit Intermittent
P0105	Manifold Absolute Pressure/Barometric Pressure Circuit Malfunction
P0106	Manifold Absolute Pressure/Barometric Pressure Circuit Range/Performance Problem
P0107	Manifold Absolute Pressure/Barometric Pressure Circuit Low Input
P0108	Manifold Absolute Pressure/Barometric Pressure Circuit High Input
P0109	Manifold Absolute Pressure/Barometric Pressure Circuit Intermittent
P0110	Intake Air Temperature Circuit Malfunction
P0111	Intake Air Temperature Circuit Range/Performance Problem
P0112	Intake Air Temperature Circuit Low Input
P0113	Intake Air Temperature Circuit High Input
P0114	Intake Air Temperature Circuit Intermittent
P0115	Engine Coolant Temperature Circuit Malfunction
P0116	Engine Coolant Temperature Circuit Range/Performance Problem
P0117	Engine Coolant Temperature Circuit Low Input
P0118	Engine Coolant Temperature Circuit High Input
P0119	Engine Coolant Temperature Circuit Intermittent
P0120	Throttle Pedal Position Sensor/Switch A Circuit Malfunction
P0121	Throttle/Pedal Position Sensor/Switch A Circuit Range/Performance Problem
P0122	Throttle/Pedal Position Sensor/Switch A Circuit Low Input
P0123	Throttle/Pedal Position Sensor/Switch A Circuit High Input
P0124	Throttle/Pedal Position Sensor/Switch A Circuit Intermittent

P0125	Insufficient Coolant Temperature for Closed Loop Fuel Control
P0126	Insufficient Coolant Temperature for Stable Operation
P0127	Intake Air Temperature Too High
P0128	Coolant Thermostat (Coolant Temperature Below Thermostat Regulating Temperature)
P0129	Barometric Pressure Too Low
P0130	O2 Sensor Circuit Malfunction (Bank 1 Sensor 1)
P0131	O2 Sensor Circuit Low Voltage (Bank 1 Sensor 1)
P0132	O2 Sensor Circuit High Voltage (Bank 1 Sensor 1)
P0133	O2 Sensor Circuit Slow Response (Bank 1 Sensor 1)
P0134	O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 1)
P0135	O2 Sensor Heater Circuit Malfunction (Bank 1 Sensor 1)
P0136	O2 Sensor Circuit Malfunction (Bank 1 Sensor 2)
P0137	O2 Sensor Circuit Low Voltage (Bank 1 Sensor 2)
P0138	O2 Sensor Circuit High Voltage (Bank 1 Sensor 2)
P0139	O2 Sensor Circuit Slow Response (Bank 1 Sensor 2)
P0140	O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 2)
P0141	O2 Sensor Heater Circuit Malfunction (Bank 1 Sensor 2)
P0142	O2 Sensor Circuit Malfunction (Bank 1 Sensor 3)
P0143	O2 Sensor Circuit Low Voltage (Bank 1 Sensor 3)
P0144	O2 Sensor Circuit High Voltage (Bank 1 Sensor 3)
P0145	O2 Sensor Circuit Slow Response (Bank 1 Sensor 3)
P0146	O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 3)
P0147	O2 Sensor Heater Circuit Malfunction (Bank 1 Sensor 3)
P0148	Fuel Delivery Error
P0149	Fuel Timing Error
P0150	O2 Sensor Circuit Malfunction (Bank 2 Sensor 1)
P0151	O2 Sensor Circuit Low Voltage (Bank 2 Sensor 1)
P0152	O2 Sensor Circuit High Voltage (Bank 2 Sensor 1)
P0153	O2 Sensor Circuit Slow Response (Bank 2 Sensor 1)
P0154	O2 Sensor Circuit No Activity Detected (Bank 2 Sensor 1)
P0155	O2 Sensor Heater Circuit Malfunction (Bank 2 Sensor 1)
P0156	O2 Sensor Circuit Malfunction (Bank 2 Sensor 2)
P0157	O2 Sensor Circuit Low Voltage (Bank 2 Sensor 2)
P0158	O2 Sensor Circuit High Voltage (Bank 2 Sensor 2)
P0159	O2 Sensor Circuit Slow Response (Bank 2 Sensor 2)
P0160	O2 Sensor Circuit No Activity Detected (Bank 2 Sensor 2)
P0161	O2 Sensor Heater Circuit Malfunction (Bank 2 Sensor 2)
P0162	O2 Sensor Circuit Malfunction (Bank 2 Sensor 3)
P0163	O2 Sensor Circuit Low Voltage (Bank 2 Sensor 3)
P0164	O2 Sensor Circuit High Voltage (Bank 2 Sensor 3)
P0165	O2 Sensor Circuit Slow Response (Bank 2 Sensor 3)
P0166	O2 Sensor Circuit No Activity Detected (Bank 2 Sensor 3)
P0167	O2 Sensor Heater Circuit Malfunction (Bank 2 Sensor 3)
P0168	Engine Fuel Temperature Too High
P0169	Incorrect Fuel Composition
P0170	Fuel Trim Malfunction (Bank 1)
P0171	System Too Lean (Bank 1)
P0172	System Too Rich (Bank 1)
P0173	Fuel Trim Malfunction (Bank 2)
P0174	System Too Lean (Bank 2)
P0175	System Too Rich (Bank 2)
P0176	Fuel Composition Sensor Circuit Malfunction
P0177	Fuel Composition Sensor Circuit Range/Performance
P0178	Fuel Composition Sensor Circuit Low Input
P0179	Fuel Composition Sensor Circuit High Input
P0180	Fuel Temperature Sensor A Circuit Malfunction
P0181	Fuel Temperature Sensor A Circuit Performance
P0182	Fuel Temperature Sensor A Circuit Low Input
P0183	Fuel Temperature Sensor A Circuit High Input
P0184	Fuel Temperature Sensor A Circuit Intermittent
P0185	Fuel Temperature Sensor B Circuit Malfunction
P0186	Fuel Temperature Sensor B Circuit Range/Performance
P0187	Fuel Temperature Sensor U Circuit Low Input
P0188	Fuel Temperature Sensor B Circuit High Input
P0189	Fuel Temperature Sensor B Circuit Intermittent

P0190	Fuel Rail Pressure Sensor Circuit Malfunction
P0191	Fuel Rail Pressure Sensor Circuit Range/Performance
P0192	Fuel Rail Pressure Sensor Circuit Low Input
P0193	Fuel Rail Pressure Sensor Circuit High Input
P0194	Fuel Rail Pressure Sensor Circuit Intermittent
P0195	Engine Oil Temperature Sensor Malfunction
P0196	Engine Oil Temperature Sensor Range/Performance
P0197	Engine Oil Temperature Sensor Low
P0198	Engine Oil Temperature Sensor High
P0199	Engine Oil Temperature Sensor Intermittent
P0200	Injector Circuit Malfunction
P0201	Injector Circuit Malfunction - Cylinder 1
P0202	Injector Circuit Malfunction - Cylinder 2
P0203	Injector Circuit Malfunction - Cylinder 3
P0204	Injector Circuit Malfunction - Cylinder 4
P0205	Injector Circuit Malfunction - Cylinder 5
P0206	Injector Circuit Malfunction - Cylinder 6
P0207	Injector Circuit Malfunction - Cylinder 7
P0208	Injector Circuit Malfunction - Cylinder 8
P0209	Injector Circuit Malfunction - Cylinder 9
P0210	Injector Circuit Malfunction - Cylinder 10
P0211	Injector Circuit Malfunction - Cylinder 11
P0212	Injector Circuit Malfunction - Cylinder 12
P0213	Cold Start Injector 1 Malfunction
P0214	Cold Start Injector 2 Malfunction
P0215	Engine Shut-Off Solenoid Malfunction
P0216	Injection Timing Control Circuit Malfunction
P0217	Engine Overtemperature Condition
P0218	Transmission Over Temperature Condition
P0219	Engine Overspeed Condition
P0220	Throttle/Pedal Position Sensor/Switch B Circuit Malfunction
P0221	Throttle/Pedal Position Sensor/Switch B Circuit Range/Performance Problem
P0222	Throttle/Pedal Position Sensor/Switch B Circuit Low Input
P0223	Throttle/Pedal Position Sensor/Switch B Circuit High Input
P0224	Throttle/Pedal Position Sensor/Switch B Circuit Intermittent
P0225	Throttle/Pedal Position Sensor/Switch C Circuit Malfunction
P0226	Throttle/Pedal Position Sensor/Switch C Circuit Range/Performance Problem
P0227	Throttle/Pedal Position Sensor/Switch C Circuit Low Input
P0228	Throttle/Pedal Position Sensor/Switch C Circuit High Input
P0229	Throttle/Pedal Position Sensor/Switch C Circuit Intermittent
P0230	Fuel Pump Primary Circuit Malfunction
P0231	Fuel Pump Secondary Circuit Low
P0232	Fuel Pump Secondary Circuit High
P0233	Fuel Pump Secondary Circuit Intermittent
P0234	Engine Overboost Condition
P0235	Turbocharger Boost Sensor A Circuit Malfunction
P0236	Turbocharger Boost Sensor A Circuit Range/Performance
P0237	Turbocharger Boost Sensor A Circuit Low
P0238	Turbocharger Boost Sensor A Circuit High
P0239	Turbocharger Boost Sensor B Circuit Malfunction
P0240	Turbocharger Boost Sensor B Circuit Range/Performance
P0241	Turbocharger Boost Sensor B Circuit Low
P0242	Turbocharger Boost Sensor B Circuit High
P0243	Turbocharger Wastegate Solenoid A Malfunction
P0244	Turbocharger Wastegate Solenoid A Range/Performance
P0245	Turbocharger Wastegate Solenoid A Low
P0246	Turbocharger Wastegate Solenoid A High
P0247	Turbocharger Wastegate Solenoid B Malfunction
P0248	Turbocharger Wastegate Solenoid B Range/Performance
P0249	Turbocharger Wastegate Solenoid B Low
P0250	Turbocharger Wastegate Solenoid B High
P0251	Injection Pump Fuel Metering Control "A" Malfunction (Cam/Rotor/Injector)
P0252	Injection Pump Fuel Metering Control "A" Range/Performance (Cam/Rotor/Injector)

P0253	Injection Pump Fuel Metering Control "A" Low (Cam/Rotor/Injector)
P0254	Injection Pump Fuel Metering Control "A" High (Cam/Rotor/Injector)
P0255	Injection Pump Fuel Metering Control "A" Intermittent (Cam/Rotor/Injector)
P0256	Injection Pump Fuel Metering Control "B" Malfunction (Cam/Rotor/Injector)
P0257	Injection Pump Fuel Metering Control "B" Range/Performance (Cam/Rotor/Injector)
P0258	Injection Pump Fuel Metering Control "B" Low (Cam/Rotor/Injector)
P0259	Injection Pump Fuel Metering Control "B" High (Cam/Rotor/Injector)
P0260	Injection Pump Fuel Metering Control "B" Intermittent (Cam/Rotor/Injector)
P0261	Cylinder 1 Injector Circuit Low
P0262	Cylinder 1 Injector Circuit High
P0263	Cylinder 1 Contribution/Balance Fault
P0264	Cylinder 2 Injector Circuit Low
P0265	Cylinder 2 Injector Circuit High
P0266	Cylinder 2 Contribution/Balance Fault
P0267	Cylinder 3 Injector Circuit Low
P0268	Cylinder 3 Injector Circuit High
P0269	Cylinder 3 Contribution/Balance Fault
P0270	Cylinder 4 Injector Circuit Low
P0271	Cylinder 4 Injector Circuit High
P0272	Cylinder 4 Contribution/Balance Fault
P0273	Cylinder 5 Injector Circuit Low
P0274	Cylinder 5 Injector Circuit High
P0275	Cylinder 5 Contribution/Balance Fault
P0276	Cylinder 6 Injector Circuit Low
P0277	Cylinder 6 Injector Circuit High
P0278	Cylinder 6 Contribution/Balance Fault
P0279	Cylinder 7 Injector Circuit Low
P0280	Cylinder 7 Injector Circuit High
P0281	Cylinder 7 Contribution/Balance Fault
P0282	Cylinder 8 Injector Circuit Low
P0283	Cylinder 8 Injector Circuit High
P0284	Cylinder 8 Contribution/Balance Fault
P0285	Cylinder 9 Injector Circuit Low
P0286	Cylinder 9 Injector Circuit High
P0287	Cylinder 9 Contribution/Balance Fault
P0288	Cylinder 10 Injector Circuit Low
P0289	Cylinder 10 Injector Circuit High
P0290	Cylinder 10 Contribution/Balance Fault
P0291	Cylinder 11 Injector Circuit Low
P0292	Cylinder 11 Injector Circuit High
P0293	Cylinder 11 Contribution/Balance Fault
P0294	Cylinder 12 Injector Circuit Low
P0295	Cylinder 12 Injector Circuit High
P0296	Cylinder 12 Contribution/Balance Fault
P0297	Vehicle Overspeed Condition
P0298	Engine Oil Overtemperature Condition
P0299	Turbo- / Supercharger Underboost
P0300	Random/Multiple Cylinder Misfire Detected
P0301	Cylinder 1 Misfire Detected
P0302	Cylinder 2 Misfire Detected
P0303	Cylinder 3 Misfire Detected
P0304	Cylinder 4 Misfire Detected
P0305	Cylinder 5 Misfire Detected
P0306	Cylinder 6 Misfire Detected
P0307	Cylinder 7 Misfire Detected
P0308	Cylinder 8 Misfire Detected
P0309	Cylinder 9 Misfire Detected
P0310	Cylinder 10 Misfire Detected
P0311	Cylinder 11 Misfire Detected
P0312	Cylinder 12 Misfire Detected
P0313	Misfire Detected With Low Fuel
P0314	Single Cylinder Misfire (Cylinder Not Specified)
P0315	Crankshaft Position System Variation Not Learned

P0316	Misfire Detected On Start-Up (First 1000 Revolutions)
P0317	Rough Road Hardware Not Present
P0318	Rough Road Sensor A Signal Circuit
P0319	Rough Road Sensor B Signal Circuit
P0320	Ignition/Distributor Engine Speed Input Circuit Malfunction
P0321	Ignition/Distributor Engine Speed Input Circuit Range/Performance
P0322	Ignition/Distributor Engine Speed Input Circuit No Signal
P0323	Ignition/Distributor Engine Speed Input Circuit Intermittent
P0324	Knock Control System Error
P0325	Knock Sensor 1 Circuit Malfunction (Bank 1 or Single Sensor)
P0326	Knock Sensor 1 Circuit Range/Performance (Bank 1 or Single Sensor)
P0327	Knock Sensor 1 Circuit Low Input (Bank 1 or Single Sensor)
P0328	Knock Sensor 1 Circuit High Input (Bank 1 or Single Sensor)
P0329	Knock Sensor 1 Circuit Input Intermittent (Bank 1 or Single Sensor)
P0330	Knock Sensor 2 Circuit Malfunction (Bank 2)
P0331	Knock Sensor 2 Circuit Range/Performance (Bank 2)
P0332	Knock Sensor 2 Circuit Low Input (Bank 2)
P0333	Knock Sensor 2 Circuit High Input (Bank 2)
P0334	Knock Sensor 2 Circuit Input Intermittent (Bank 2)
P0335	Crankshaft Position Sensor A Circuit Malfunction
P0336	Crankshaft Position Sensor A Circuit Range/Performance
P0337	Crankshaft Position Sensor A Circuit Low Input
P0338	Crankshaft Position Sensor A Circuit High Input
P0339	Crankshaft Position Sensor A Circuit Intermittent
P0340	Camshaft Position Sensor A Circuit Malfunction
P0341	Camshaft Position Sensor A Circuit Range/Performance
P0342	Camshaft Position Sensor A Circuit Low Input
P0343	Camshaft Position Sensor A Circuit High Input
P0344	Camshaft Position Sensor A Circuit Intermittent
P0345	Camshaft Position Sensor A Circuit (Bank 2)
P0346	Camshaft Position Sensor A Circuit Range/Performance (Bank 2)
P0347	Camshaft Position Sensor A Circuit Low Input (Bank 2)
P0348	Camshaft Position Sensor A Circuit High Input (Bank 2)
P0349	Camshaft Position Sensor A Circuit Intermittent (Bank 2)
P0350	Ignition Coil Primary/Secondary Circuit Malfunction
P0351	Ignition Coil A Primary/Secondary Circuit Malfunction
P0352	Ignition Coil B Primary/Secondary Circuit Malfunction
P0353	Ignition Coil C Primary/Secondary Circuit Malfunction
P0354	Ignition Coil D Primary/Secondary Circuit Malfunction
P0355	Ignition Coil B Primary/Secondary Circuit Malfunction
P0356	Ignition Coil F Primary/Secondary Circuit Malfunction
P0357	Ignition Coil G Primary/Secondary Circuit Malfunction
P0358	Ignition Coil H Primary/Secondary Circuit Malfunction
P0359	Ignition Coil I Primary/Secondary Circuit Malfunction
P0360	Ignition Coil I Primary/Secondary Circuit Malfunction
P0361	Ignition Coil K Primary/Secondary Circuit Malfunction
P0362	Ignition Coil L Primary/Secondary Circuit Malfunction
P0363	Misfire Detected - Fuelling Disabled
P0364	
P0365	Camshaft Position Sensor B Circuit (Bank 1)
P0366	Camshaft Position Sensor B Circuit Range/Performance (Bank 1)
P0367	Camshaft Position Sensor B Circuit Low Input (Bank 1)
P0368	Camshaft Position Sensor B Circuit High Input (Bank 1)
P0369	Camshaft Position Sensor B Circuit Intermittent (Bank 1)
P0370	Timing Reference High Resolution Signal A Malfunction
P0371	Timing Reference High Resolution Signal A Too Many Pulses
P0372	Timing Reference High Resolution Signal A Too Few Pulses
P0373	Timing Reference High Resolution Signal A Intermittent/Erratic Pulses
P0374	Timing Reference High Resolution Signal A No Pulses
P0375	Timing Reference High Resolution Signal B Malfunction
P0376	Timing Reference High Resolution Signal B Too Many Pulses
P0377	Timing Reference High Resolution Signal B Too Few Pulses
P0378	Timing Reference High Resolution Signal B Intermittent/Erratic Pulses
P0379	Timing Reference High Resolution Signal B No Pulses
P0380	Glow Plug/Heater Circuit "A" Malfunction
P0381	Glow Plug/Heater Indicator Circuit Malfunction

P0382	Glow Plug/Heater Circuit "B" Malfunction
P0385	Crankshaft Position Sensor B Circuit Malfunction
P0386	Crankshaft Position Sensor B Circuit Range/Performance
P0387	Crankshaft Position Sensor B Circuit Low Input
P0388	Crankshaft Position Sensor B Circuit High Input
P0389	Crankshaft Position Sensor B Circuit Intermittent
P0390	Camshaft Position Sensor B Circuit (Bank 2)
P0391	Camshaft Position Sensor B Circuit Range/Performance (Bank 2)
P0392	Camshaft Position Sensor B Circuit Low Input (Bank 2)
P0393	Camshaft Position Sensor B Circuit High Input (Bank 2)
P0394	Camshaft Position Sensor B Circuit Intermittent (Bank 2)
P0395	
P0396	
P0397	
P0398	
P0399	
P0400	Exhaust Gas Recirculation Flow Malfunction Detected
P0401	Exhaust Gas Recirculation Flow Insufficient Detected
P0402	Exhaust Gas Recirculation Flow Excessive Detected
P0403	Exhaust Gas Recirculation Circuit Malfunction
P0404	Exhaust Gas Recirculation Circuit Range/Performance
P0405	Exhaust Gas Recirculation Sensor A Circuit Low
P0406	Exhaust Gas Recirculation Sensor A Circuit High
P0407	Exhaust Gas Recirculation Sensor B Circuit Low
P0408	Exhaust Gas Recirculation Sensor B Circuit High
P0409	Exhaust Gas Recirculation Sensor A Circuit
P0410	Secondary Air Injection System Malfunction
P0411	Secondary Air Injection System Incorrect Flow Detected
P0412	Secondary Air Injection System Switching Valve A Circuit Malfunction
P0413	Secondary Air Injection System Switching Valve A Circuit Open
P0414	Secondary Air Injection System Switching Valve A Circuit Shorted
P0415	Secondary Air Injection System Switching Valve B Circuit Malfunction
P0416	Secondary Air Injection System Switching Valve B Circuit Open
P0417	Secondary Air Injection System Switching Valve B Circuit Shorted
P0418	Secondary Air Injection System Relay "A" Circuit Malfunction
P0419	Secondary Air Injection System Relay "B" Circuit Malfunction
P0420	Catalyst System Efficiency Below Threshold (Bank 1)
P0421	Warm-Up Catalyst Efficiency Below Threshold (Bank 1)
P0422	Main Catalyst Efficiency Below Threshold (Bank 1)
P0423	Heated Catalyst Efficiency Below Threshold (Bank 1)
P0424	Heated Catalyst Temperature Below Threshold (Bank 1)
P0425	Catalyst Temperature Sensor (Bank 1)
P0426	Catalyst Temperature Sensor Range/Performance (Bank 1)
P0427	Catalyst Temperature Sensor Low Input (Bank 1)
P0428	Catalyst Temperature Sensor High Input (Bank 1)
P0429	Catalyst Heater Control Circuit (Bank 1)
P0430	Catalyst System Efficiency Below Threshold (Bank 2)
P0431	Warm-Up Catalyst Efficiency Below Threshold (Bank 2)
P0432	Main Catalyst Efficiency Below Threshold (Bank 2)
P0433	Heated Catalyst Efficiency Below Threshold (Bank 2)
P0434	Heated Catalyst Temperature Below Threshold (Bank 2)
P0435	Catalyst Temperature Sensor (Bank 2)
P0436	Catalyst Temperature Sensor Range/Performance (Bank 2)
P0437	Catalyst Temperature Sensor Low Input (Bank 2)
P0438	Catalyst Temperature Sensor High Input (Bank 2)
P0439	Catalyst Heater Control Circuit (Bank 2)
P0440	Evaporative Emission Control System Malfunction
P0441	Evaporative Emission Control System Incorrect Purge Flow
P0442	Evaporative Emission Control System Leak Detected (Small Leak)
P0443	Evaporative Emission Control System Purge Control Valve Circuit Malfunction
P0444	Evaporative Emission Control System Purge Control Valve Circuit Open
P0445	Evaporative Emission Control System Purge Control Valve Circuit Shorted
P0446	Evaporative Emission Control System Vent Control Circuit Malfunction
P0447	Evaporative Emission Control System Vent Control Circuit Open
P0448	Evaporative Emission Control System Vent Control Circuit Shorted

P0449	Evaporative Emission Control System Vent Valve/Solenoid Circuit Malfunction
P0450	Evaporative Emission Control System Pressure Sensor Malfunction
P0451	Evaporative Emission Control System Pressure Sensor Range/Performance
P0452	Evaporative Emission Control System Pressure Sensor Low Input
P0453	Evaporative Emission Control System Pressure Sensor High Input
P0454	Evaporative Emission Control System Pressure Sensor Intermittent
P0455	Evaporative Emission Control System Tank Detected (Large Leak)
P0456	Evaporative Emission System Leak Detected (Very Small Leak)
P0457	Evaporative Emission System Leak Detected (Fuel Cap Loose/Off)
P0458	Evaporative Emission System Purge Control Valve Circuit Low
P0459	Evaporative Emission System Purge Control Valve Circuit High
P0460	Fuel Level Sensor Circuit Malfunction
P0461	Fuel Level Sensor Circuit Range/Performance
P0462	Fuel Level Sensor Circuit Low Input
P0463	Fuel Level Sensor Circuit High Input
P0464	Fuel Level Sensor Circuit Intermittent
P0465	Purge Flow Sensor Circuit Malfunction
P0466	Purge Flow Sensor Circuit Range/Performance
P0467	Purge Flow Sensor Circuit Low Input
P0468	Purge Flow Sensor Circuit High Input
P0469	Purge Flow Sensor Circuit Intermittent
P0470	Exhaust Pressure Sensor Malfunction
P0471	Exhaust Pressure Sensor Range/Performance
P0472	Exhaust Pressure Sensor Low
P0473	Exhaust Pressure Sensor High
P0474	Exhaust Pressure Sensor Intermittent
P0475	Exhaust Pressure Control Valve Malfunction
P0476	Exhaust Pressure Control Valve Range/Performance
P0477	Exhaust Pressure Control Valve Low
P0478	Exhaust Pressure Control Valve High
P0479	Exhaust Pressure Control Valve Intermittent
P0480	Cooling Fan 1 Control Circuit Malfunction
P0481	Cooling Fan 2 Control Circuit Malfunction
P0482	Cooling Fan 3 Control Circuit Malfunction
P0483	Cooling Fan Rationality Check Malfunction
P0484	Cooling Fan Circuit Over Current
P0485	Cooling Fan Power/Ground Circuit Malfunction
P0486	Exhaust Gas Recirculation Sensor B Circuit
P0487	EGR Throttle Position Control Circuit
P0488	EGR Throttle Position Control Range/Performance
P0489	Exhaust Gas Recirculation Control Circuit Low
P0490	Exhaust Gas Recirculation Control Circuit High
P0491	Secondary Air Injection System (Bank 1)
P0492	Secondary Air Injection System (Bank 2)
P0493	Fan Overspeed (Clutch Locked)
P0494	Fan Speed Low
P0495	Fan Speed High
P0496	Evaporative Emission System High Purge Flow
P0497	Evaporative Emission System Low Purge Flow
P0498	Evaporative Emission System Vent Control Circuit Low
P0499	Evaporative Emission System Vent Control Circuit High
P0500	Vehicle Speed Sensor Malfunction
P0501	Vehicle Speed Sensor Range/Performance
P0502	Vehicle Speed Sensor Circuit Low Input
P0503	Vehicle Speed Sensor Intermittent/Erratic/High
P0504	Brake Switch A / B Correlation
P0505	Idle Control System Malfunction
P0506	Idle Control System RPM Lower Than Expected
P0507	Idle Control System RPM Higher Than Expected
P0508	Idle Air Control System Circuit Low
P0509	Idle Air Control System Circuit High
P0510	Closed Throttle Position Switch Malfunction
P0511	Idle Air Control Circuit
P0512	Starter Request Circuit
P0513	Incorrect Immobilizer Key

P0514	Battery Temperature Sensor Circuit Range/Performance
P0515	Battery Temperature Sensor Circuit
P0516	Battery Temperature Sensor Circuit Low
P0517	Battery Temperature Sensor Circuit High
P0518	Idle Air Control Circuit Intermittent
P0519	Idle Air Control Circuit System Performance
P0520	Engine Oil Pressure Sensor/Switch Circuit Malfunction
P0521	Engine Oil Pressure Sensor/Switch Range/Performance
P0522	Engine Oil Pressure Sensor/Switch Low Voltage
P0523	Engine Oil Pressure Sensor/Switch High Voltage
P0524	Engine Oil Pressure Too Low
P0525	Cruise Control Servo Control Circuit Range/Performance
P0526	Fan Speed Sensor Circuit
P0527	Fan Speed Sensor Circuit Range/Performance
P0528	Fan Speed Sensor Circuit No Signal
P0529	Fan Speed Sensor Circuit Intermittent
P0530	A/C Refrigerant Pressure Sensor Circuit Malfunction
P0531	A/C Refrigerant Pressure Sensor Circuit Range/Performance
P0532	A/C Refrigerant Pressure Sensor Circuit Low Input
P0533	A/C Refrigerant Pressure Sensor Circuit High Input
P0534	Air Conditioner Refrigerant Charge Loss
P0535	A/C Evaporator Temperature Sensor Circuit
P0536	A/C Evaporator Temperature Sensor Circuit Range/Performance
P0537	A/C Evaporator Temperature Sensor Circuit Low
P0538	A/C Evaporator Temperature Sensor Circuit High
P0539	A/C Evaporator Temperature Sensor Circuit Intermittent
P0540	Intake Air Heater A Circuit
P0541	Intake Air Heater A Circuit Low
P0542	Intake Air Heater A Circuit High
P0543	Intake Air Heater A Circuit Open
P0544	Exhaust Gas Temperature Sensor Circuit - Bank 1 Sensor 1
P0545	Exhaust Gas Temperature Sensor Circuit Low - Bank 1 Sensor 1
P0546	Exhaust Gas Temperature Sensor Circuit High - Bank 1 Sensor 1
P0547	Exhaust Gas Temperature Sensor Circuit - Bank 2 Sensor 1
P0548	Exhaust Gas Temperature Sensor Circuit Low - Bank 2 Sensor 1
P0549	Exhaust Gas Temperature Sensor Circuit High - Bank 2 Sensor 1
P0550	Power Steering Pressure Sensor Circuit Malfunction
P0551	Power Steering Pressure Sensor Circuit Range/Performance
P0552	Power Steering Pressure Sensor Circuit Low Input
P0553	Power Steering Pressure Sensor Circuit High Input
P0554	Power Steering Pressure Sensor Circuit Intermittent
P0555	Brake Booster Pressure Sensor Circuit
P0556	Brake Booster Pressure Sensor Circuit Range/Performance
P0557	Brake Booster Pressure Sensor Circuit Low Input
P0558	Brake Booster Pressure Sensor Circuit High Input
P0559	Brake Booster Pressure Sensor Circuit Intermittent
P0560	System Voltage Malfunction
P0561	System Voltage Unstable
P0562	System Voltage Low
P0563	System Voltage High
P0564	Cruise Control Multi-Function Input A Circuit
P0565	Cruise Control On Signal Malfunction
P0566	Cruise Control Off Signal Malfunction
P0567	Cruise Control Resume Signal Malfunction
P0568	Cruise Control Set Signal Malfunction
P0569	Cruise Control "Coast" Signal Malfunction
P0570	Cruise Control "Accel" Signal Malfunction
P0571	Cruise Control/Brake Switch A Circuit Malfunction
P0572	Cruise Control/Brake Switch A Circuit Low
P0573	Cruise Control/Brake Switch A Circuit High
P0574	Cruise Control System - Vehicle Speed Too High
P0575	Cruise Control Input Circuit
P0576	Cruise Control Input Circuit Low
P0577	Cruise Control Input Circuit High
P0578	Cruise Control Multi-Function Input A Circuit Stuck
P0579	Cruise Control Multi-Function Input A Circuit Range/Performance

P0580	Cruise Control Multi-Function Input A Circuit Low
P0581	Cruise Control Multi-Function Input A Circuit High
P0582	Cruise Control Vacuum Control Circuit /Open
P0583	Cruise Control Vacuum Control Circuit Low
P0584	Cruise Control Vacuum Control Circuit High
P0585	Cruise Control Multi-Function Input A / B Correlation
P0586	Cruise Control Vent Control Circuit / Open
P0587	Cruise Control Vent Control Circuit Low
P0588	Cruise Control Vent Control Circuit High
P0589	Cruise Control Multi-Function Input B Circuit
P0590	Cruise Control Multi-Function Input B Circuit Stuck
P0591	Cruise Control Multi-Function Input B Circuit Range/Performance
P0592	Cruise Control Multi-Function Input B Circuit Low
P0593	Cruise Control Multi-Function Input B Circuit High
P0594	Cruise Control Servo Control Circuit / Open
P0595	Cruise Control Servo Control Circuit Low
P0596	Cruise Control Servo Control Circuit High
P0597	Thermostat Heater Control Circuit / Open
P0598	Thermostat Heater Control Circuit Low
P0599	Thermostat Heater Control Circuit High
P0600	Serial Communication Link Malfunction
P0601	Internal Control Module Memory Check Sum Error
P0602	Control Module Programming Error
P0603	Internal Control Module Keep Alive Memory (KAM) Error
P0604	Internal Control Module Random Access Memory (RAM) Error
P0605	Internal Control Module Read Only Memory (ROM) Error (Module Identification Defined by SAE J1979)
P0606	PCM Processor Fault
P0607	Control Module Performance
P0608	Control Module VSS Output "A" Malfunction
P0609	Control Module VSS Output "B" Malfunction
P0610	Control Module Vehicle Options Error
P0611	Fuel Injector Control Module Performance
P0612	Fuel Injector Control Module Relay Control Circuit
P0613	TCM Processor
P0614	ECM / TCM Mismatch
P0615	Starter Relay Circuit
P0616	Starter Relay Circuit Low
P0617	Starter Relay Circuit High
P0618	Alternative Fuel Control Module KAM Error
P0619	Alternative Fuel Control Module RAM/ROM Error
P0620	Generator Control Circuit Malfunction
P0621	Generator Lamp "L" Control Circuit Malfunction
P0622	Generator Field "F" Control Circuit Malfunction
P0623	Generator Lamp Control Circuit
P0624	Fuel Cap Lamp Control Circuit
P0625	Generator Field Terminal Circuit Low
P0626	Generator Field Terminal Circuit High
P0627	Fuel Pump Control Circuit / Open
P0628	Fuel Pump Control Circuit Low
P0629	Fuel Pump Control Circuit High
P0630	VIN Not Programmed or Mismatch - ECM/PCM
P0631	VIN Not Programmed or Mismatch - TCM
P0632	Odometer Not Programmed - ECM/PCM
P0633	Immobilizer Key Not Programmed - ECM/PCM
P0634	PCM / ECM / TCM Internal Temperature Too High
P0635	Power Steering Control Circuit
P0636	Power Steering Control Circuit Low
P0637	Power Steering Control Circuit High
P0638	Throttle Actuator Control Range/Performance - Bank 1
P0639	Throttle Actuator Control Range/Performance - Bank 2
P0640	Intake Air Heater Control Circuit
P0641	Sensor Reference Voltage A Circuit/Open
P0642	Sensor Reference Voltage A Circuit Low
P0643	Sensor Reference Voltage A Circuit High
P0644	Driver Display Serial Communication Circuit

P0645	A/C Clutch Relay Control Circuit
P0646	A/C Clutch Relay Control Circuit Low
P0647	A/C Clutch Relay Control Circuit High
P0648	Immobilizer Lamp Control Circuit
P0649	Cruise Control Lamp Control Circuit
P0650	Malfunction Indicator Lamp (MIL) Control Circuit Malfunction
P0651	Sensor Reference Voltage B Circuit/Open
P0652	Sensor Reference Voltage B Circuit Low
P0653	Sensor Reference Voltage B Circuit High
P0654	Engine RPM Output Circuit Malfunction
P0655	Engine Hot Lamp Output Control Circuit Malfunction
P0656	Fuel Level Output Circuit Malfunction
P0657	Actuator Supply Voltage Circuit / Open
P0658	Actuator Supply Voltage Circuit Low
P0659	Actuator Supply Voltage Circuit High
P0660	Intake Manifold Tuning Valve Control Circuit / Open - Bank 1
P0661	Intake Manifold Tuning Valve Control Circuit Low - Bank 1
P0662	Intake Manifold Tuning Valve Control Circuit High - Bank 1
P0663	Intake Manifold Tuning Valve Control Circuit / Open - Bank 2
P0664	Intake Manifold Tuning Valve Control Circuit Low - Bank 2
P0665	Intake Manifold Tuning Valve Control Circuit High - Bank 2
P0666	PCM / ECM / TCM Internal Temperature Sensor Circuit
P0667	PCM / ECM / TCM Internal Temperature Sensor Range/Performance
P0668	PCM / ECM / TCM Internal Temperature Sensor Circuit Low
P0669	PCM / ECM / TCM Internal Temperature Sensor Circuit High
P0670	Glow Plug Module Control Circuit
P0671	Cylinder 1 Glow Plug Circuit
P0672	Cylinder 2 Glow Plug Circuit
P0673	Cylinder 3 Glow Plug Circuit
P0674	Cylinder 4 Glow Plug Circuit
P0675	Cylinder 5 Glow Plug Circuit
P0676	Cylinder 6 Glow Plug Circuit
P0677	Cylinder 7 Glow Plug Circuit
P0678	Cylinder 8 Glow Plug Circuit
P0679	Reserve for Future Glow plugs 9-12
P0680	Reserve for Future Glow plugs 9-12
P0681	Reserve for Future Glow plugs 9-12
P0682	Reserve for Future Glow plugs 9-12
P0683	Glow Plug Control Module to PCM Communication Circuit
P0684	Glow Plug Control Module to PCM Communication Circuit Range/Performance
P0685	ECM/PCM Power Relay Control Circuit/Open
P0686	ECM/PCM Power Relay Control Circuit Low
P0687	ECM/PCM Power Relay Control Circuit High
P0688	ECM/PCM Power Relay Sensor Circuit
P0689	ECM/PCM Power Relay Sensor Circuit Low
P0690	ECM/PCM Power Relay Sensor Circuit High
P0691	Fan 1 Control Circuit Low
P0692	Fan 1 Control Circuit High
P0693	Fan 2 Control Circuit Low
P0694	Fan 2 Control Circuit High
P0695	Fan 3 Control Circuit Low
P0696	Fan 3 Control Circuit High
P0697	Sensor Reference Voltage C Circuit / Open
P0698	Sensor Reference Voltage C Circuit Low
P0699	Sensor Reference Voltage C Circuit High
P0700	Transmission Control System Malfunction
P0701	Transmission Control System Range/Performance
P0702	Transmission Control System Electrical
P0703	Torque Converter/Brake Switch B Circuit Malfunction
P0704	Clutch Switch Input Circuit Malfunction
P0705	Transmission Range Sensor Circuit Malfunction (PRNDL Input)
P0706	Transmission Range Sensor Circuit Range/Performance
P0707	Transmission Range Sensor Circuit Low Input
P0708	Transmission Range Sensor Circuit High Input
P0709	Transmission Range Sensor Circuit Intermittent

P0710	Transmission Fluid Temperature Sensor Circuit Malfunction
P0711	Transmission Fluid Temperature Sensor Circuit Range/Performance
P0712	Transmission Fluid Temperature Sensor Circuit Low Input
P0713	Transmission Fluid Temperature Sensor Circuit High Input
P0714	Transmission Fluid Temperature Sensor Circuit Intermittent
P0715	Input/Turbine Speed Sensor Circuit Malfunction
P0716	Input/Turbine Speed Sensor Circuit Range/Performance
P0717	Input/Turbine Speed Sensor Circuit No Signal
P0718	Input/Turbine Speed Sensor Circuit Intermittent
P0719	Torque Converter/Brake Switch B Circuit Low
P0720	Output Speed Sensor Circuit Malfunction
P0721	Output Speed Sensor Circuit Range/Performance
P0722	Output Speed Sensor Circuit No Signal
P0723	Output Speed Sensor Circuit Intermittent
P0724	Torque Converter/Brake Switch B Circuit High
P0725	Engine Speed Input Circuit Malfunction
P0726	Engine Speed Input Circuit Range/Performance
P0727	Engine Speed Input Circuit No Signal
P0728	Engine Speed Input Circuit Intermittent
P0729	Gear 6 Incorrect Ratio
P0730	Incorrect Gear Ratio
P0731	Gear 1 Incorrect Ratio
P0732	Gear 2 Incorrect Ratio
P0733	Gear 3 Incorrect Ratio
P0734	Gear 4 Incorrect Ratio
P0735	Gear 5 Incorrect Ratio
P0736	Reverse Incorrect Ratio
P0737	TCM Engine Speed Output Circuit
P0738	TCM Engine Speed Output Circuit Low
P0739	TCM Engine Speed Output Circuit High
P0740	Torque Converter Clutch Circuit Malfunction
P0741	Torque Converter Clutch Circuit Performance or Stuck Off
P0742	Torque Converter Clutch Circuit Stuck On
P0743	Torque Converter Clutch Circuit Electrical
P0744	Torque Converter Clutch Circuit Intermittent
P0745	Pressure Control Solenoid Malfunction
P0746	Pressure Control Solenoid Performance or Stuck Off
P0747	Pressure Control Solenoid Stuck On
P0748	Pressure Control Solenoid Electrical
P0749	Pressure Control Solenoid Intermittent
P0750	Shift Solenoid A Malfunction
P0751	Shift Solenoid A Performance or Stuck Off
P0752	Shift Solenoid A Stuck On
P0753	Shift Solenoid A Electrical
P0754	Shift Solenoid A Intermittent
P0755	Shift Solenoid B Malfunction
P0756	Shift Solenoid B Performance or Stuck Off
P0757	Shift Solenoid B Stuck On
P0758	Shift Solenoid B Electrical
P0759	Shift Solenoid B Intermittent
P0760	Shift Solenoid C Malfunction
P0761	Shift Solenoid C Performance or Stuck Off
P0762	Shift Solenoid C Stuck On
P0763	Shift Solenoid C Electrical
P0764	Shift Solenoid C Intermittent
P0765	Shift Solenoid D Malfunction
P0766	Shift Solenoid D Performance or Stuck Off
P0767	Shift Solenoid D Stuck On
P0768	Shift Solenoid D Electrical
P0769	Shift Solenoid D Intermittent
P0770	Shift Solenoid E Malfunction
P0771	Shift Solenoid E Performance or Stuck Off
P0772	Shift Solenoid E Stuck On
P0773	Shift Solenoid E Electrical
P0774	Shift Solenoid E Intermittent
P0775	Pressure Control Solenoid B

P0776	Pressure Control Solenoid B Performance or Stuck Off
P0777	Pressure Control Solenoid B Stuck On
P0778	Pressure Control Solenoid B Electrical
P0779	Pressure Control Solenoid B Intermittent
P0780	Shift Malfunction
P0781	1-2 Shift Malfunction
P0782	2-3 Shift Malfunction
P0783	3-4 Shift Malfunction
P0784	4-5 Shift Malfunction
P0785	Shift/Timing Solenoid Malfunction
P0786	Shift/Timing Solenoid Range/Performance
P0787	Shift/Timing Solenoid Low
P0788	Shift/Timing Solenoid High
P0789	Shift/Timing Solenoid Intermittent
P0790	Normal/Performance Switch Circuit Malfunction
P0791	Intermediate Shaft Speed Sensor A Circuit
P0792	Intermediate Shaft Speed Sensor A Circuit Range/Performance
P0793	Intermediate Shaft Speed Sensor A Circuit No Signal
P0794	Intermediate Shaft Speed Sensor A Circuit Intermittent
P0795	Pressure Control Solenoid C
P0796	Pressure Control Solenoid C Performance or Stuck Off
P0797	Pressure Control Solenoid C Stuck On
P0798	Pressure Control Solenoid C Electrical
P0799	Pressure Control Solenoid C Intermittent
P0800	Transfer Case Control System (MIL Request)
P0801	Reverse Inhibit Control Circuit Malfunction
P0802	Transmission Control System MIL Request Circuit / Open
P0803	1-4 Upshift (Skip Shift) Solenoid Control Circuit Malfunction
P0804	1-4 Upshift (Skip Shift) Lamp Control Circuit Malfunction
P0805	Clutch Position Sensor Circuit
P0806	Clutch Position Sensor Circuit Range/Performance
P0807	Clutch Position Sensor Circuit Low
P0808	Clutch Position Sensor Circuit High
P0809	Clutch Position Sensor Circuit Intermittent
P0810	Clutch Position Control Error
P0811	Excessive Clutch Slippage
P0812	Reverse Input Circuit
P0813	Reverse Output Circuit
P0814	Transmission Range Display Circuit
P0815	Upshift Switch Circuit
P0816	Downshift Switch Circuit
P0817	Starter Disable Circuit
P0818	Driveline Disconnect Switch Input Circuit
P0819	Up and Down Shift Switch to Transmission Range Correlation
P0820	Gear Lever X-Y Position Sensor Circuit
P0821	Gear Lever X Position Sensor Circuit
P0822	Gear Lever Y Position Sensor Circuit
P0823	Gear Lever X Position Sensor Circuit Intermittent
P0824	Gear Lever Y Position Sensor Circuit Intermittent
P0825	Gear Lever Push/Pull Switch Circuit (Shift Anticipate)
P0826	Up and Down Switch Input Circuit
P0827	Up and Down Switch Input Circuit Low
P0828	Up and Down Switch Input Circuit High
P0829	5-6 Shift
P0830	Clutch Pedal Switch A Circuit
P0831	Clutch Pedal Switch A Circuit Low
P0832	Clutch Pedal Switch A Circuit High
P0833	Clutch Pedal Switch B Circuit
P0834	Clutch Pedal Switch B Circuit Low
P0835	Clutch Pedal Switch B Circuit High
P0836	Four Wheel Drive (4WD) Switch Circuit
P0837	Four Wheel Drive (4WD) Switch Circuit Range/Performance
P0838	Four Wheel Drive (4WD) Switch Circuit Low
P0839	Four Wheel Drive (4WD) Switch Circuit High
P0840	Transmission Fluid Pressure Sensor/Switch A Circuit
P0841	Transmission Fluid Pressure Sensor/Switch A Circuit Range/Performance

P0842	Transmission Fluid Pressure Sensor/Switch A Circuit Low
P0843	Transmission Fluid Pressure Sensor/Switch A Circuit High
P0844	Transmission Fluid Pressure Sensor/Switch A Circuit Intermittent
P0845	Transmission Fluid Pressure Sensor/Switch B Circuit
P0846	Transmission Fluid Pressure Sensor/Switch B Circuit Range/Performance
P0847	Transmission Fluid Pressure Sensor/Switch B Circuit Low
P0848	Transmission Fluid Pressure Sensor/Switch B Circuit High
P0849	Transmission Fluid Pressure Sensor/Switch B Circuit Intermittent
P0850	Park / Neutral Switch Input Circuit
P0851	Park / Neutral Switch Input Circuit Low
P0852	Park / Neutral Switch Input Circuit High
P0853	Drive Switch Input Circuit
P0854	Drive Switch Input Circuit Low
P0855	Drive Switch Input Circuit High
P0856	Traction Control Input Signal
P0857	Traction Control Input Signal Range/Performance
P0858	Traction Control Input Signal Low
P0859	Traction Control Input Signal High
P0860	Gear Shift Module Communication Circuit
P0861	Gear Shift Module Communication Circuit Low
P0862	Gear Shift Module Communication Circuit High
P0863	TCM Communication Circuit
P0864	TCM Communication Circuit Range/Performance
P0865	TCM Communication Circuit Low
P0866	TCM Communication Circuit High
P0867	Transmission Fluid Pressure
P0868	Transmission Fluid Pressure Low
P0869	Transmission Fluid Pressure High
P0870	Transmission Fluid Pressure Sensor/Switch C Circuit
P0871	Transmission Fluid Pressure Sensor/Switch C Circuit Range/Performance
P0872	Transmission Fluid Pressure Sensor/Switch C Circuit Low
P0873	Transmission Fluid Pressure Sensor/Switch C Circuit High
P0874	Transmission Fluid Pressure Sensor/Switch C Circuit Intermittent
P0875	Transmission Fluid Pressure Sensor/Switch D Circuit
P0876	Transmission Fluid Pressure Sensor/Switch D Circuit Range/Performance
P0877	Transmission Fluid Pressure Sensor/Switch D Circuit Low
P0878	Transmission Fluid Pressure Sensor/Switch D Circuit High
P0879	Transmission Fluid Pressure Sensor/Switch D Circuit Intermittent
P0880	TCM Power Input Signal
P0881	TCM Power Input Signal Range/Performance
P0882	TCM Power Input Signal Low
P0883	TCM Power Input Signal High
P0884	TCM Power Input Signal Intermittent
P0885	TCM Power Relay Control Circuit /Open
P0886	TCM Power Relay Control Circuit Low
P0887	TCM Power Relay Control Circuit High
P0888	TCM Power Relay Sensor Circuit
P0889	TCM Power Relay Sensor Circuit Range/Performance
P0890	TCM Power Relay Sensor Circuit Low
P0891	TCM Power Relay Sensor Circuit High
P0892	TCM Power Relay Sensor Circuit Intermittent
P0893	Multiple Gears Engaged
P0894	Transmission Component Slipping
P0895	Shift Time Too Short
P0896	Shift Time Too Long
P0897	Transmission Fluid Deteriorated
P0898	Transmission Control System MIL Request Circuit Low
P0899	Transmission Control System MIL Request Circuit High
P0900	Clutch Actuator Circuit / Open
P0901	Clutch Actuator Circuit Range/Performance
P0902	Clutch Actuator Circuit Low
P0903	Clutch Actuator Circuit High
P0904	Gate Select Position Circuit [Senses Left / Right Position]
P0905	Gate Select Position Circuit Range/Performance
P0906	Gate Select Position Circuit Low

P0907	Gate Select Position Circuit High
P0908	Gate Select Position Circuit Intermittent
P0909	Gate Select Control Error
P0910	Gate Select Actuator Circuit / Open [left / right motion]
P0911	Gate Select Actuator Circuit Range/Performance
P0912	Gate Select Actuator Circuit Low
P0913	Gate Select Actuator Circuit High
P0914	Gear Shift Position Circuit [Senses Forward / Rearward Position, Odd / Even Gears]
P0915	Gear Shift Position Circuit Range/Performance
P0916	Gear Shift Position Circuit Low
P0917	Gear Shift Position Circuit High
P0918	Gear Shift Position Circuit Intermittent
P0919	Gear Shift Position Control Error
P0920	Gear Shift Forward Actuator Circuit / Open [Forward Motion, Odd Gears, 1,3,5]
P0921	Gear Shift Forward Actuator Circuit Range/Performance
P0922	Gear Shift Forward Actuator Circuit Low
P0923	Gear Shift Forward Actuator Circuit High
P0924	Gear Shift Reverse Actuator Circuit / Open [Rearward Motion, Even Gears, 2,4,6]
P0925	Gear Shift Reverse Actuator Circuit Range/Performance
P0926	Gear Shift Reverse Actuator Circuit Low
P0927	Gear Shift Reverse Actuator Circuit High
P0928	Gear Shift Lock Solenoid Circuit / Open
P0929	Gear Shift Lock Solenoid Circuit Range/Performance
P0930	Gear Shift Lock Solenoid Circuit Low
P0931	Gear Shift Lock Solenoid Circuit High
P0932	Hydraulic Pressure Sensor Circuit
P0933	Hydraulic Pressure Sensor Range/Performance
P0934	Hydraulic Pressure Sensor Circuit Low Input
P0935	Hydraulic Pressure Sensor Circuit High Input
P0936	Hydraulic Pressure Sensor Circuit Intermittent
P0937	Hydraulic Oil Temperature Sensor Circuit
P0938	Hydraulic Oil Temperature Sensor Range/Performance
P0939	Hydraulic Oil Temperature Sensor Circuit Low Input
P0940	Hydraulic Oil Temperature Sensor Circuit High Input
P0941	Hydraulic Oil Temperature Sensor Circuit Intermittent
P0942	Hydraulic Pressure Unit
P0943	Hydraulic Pressure Unit Cycle Period Too Short
P0944	Hydraulic Pressure Unit Loss of Pressure
P0945	Hydraulic Pump Relay Circuit / Open
P0946	Hydraulic Pump Relay Circuit Range/Performance
P0947	Hydraulic Pump Relay Circuit Low
P0948	Hydraulic Pump Relay Circuit High
P0949	ASM Adaptive Learning Not Done
P0950	ASM Control Circuit [Up / Down / Auto / etc]
P0951	ASM Control Circuit Range/Performance
P0952	ASM Control Circuit Low
P0953	ASM Control Circuit High
P0954	ASM Control Circuit Intermittent
P0955	ASM Mode Circuit [Performance / Winter / Sport / etc]
P0956	ASM Mode Circuit Range/Performance
P0957	ASM Mode Circuit Low
P0958	ASM Mode Circuit High
P0959	ASM Mode Circuit Intermittent
P0960	Pressure Control Solenoid A Control Circuit / Open
P0961	Pressure Control Solenoid A Control Circuit Range/Performance
P0962	Pressure Control Solenoid A Control Circuit Low
P0963	Pressure Control Solenoid A Control Circuit High
P0964	Pressure Control Solenoid B Control Circuit / Open
P0965	Pressure Control Solenoid B Control Circuit Range/Performance
P0966	Pressure Control Solenoid B Control Circuit Low
P0967	Pressure Control Solenoid B Control Circuit High
P0968	Pressure Control Solenoid C Control Circuit / Open
P0969	Pressure Control Solenoid C Control Circuit Range/Performance
P0970	Pressure Control Solenoid C Control Circuit Low

P0971	Pressure Control Solenoid C Control Circuit High
P0972	Shift Solenoid A Control Circuit Range/Performance
P0973	Shift Solenoid A Control Circuit Low
P0974	Shift Solenoid A Control Circuit High
P0975	Shift Solenoid B Control Circuit Range/Performance
P0976	Shift Solenoid B Control Circuit Low
P0977	Shift Solenoid B Control Circuit High
P0978	Shift Solenoid C Control Circuit Range/Performance
P0979	Shift Solenoid C Control Circuit Low
P0980	Shift Solenoid C Control Circuit High
P0981	Shift Solenoid D Control Circuit Range/Performance
P0982	Shift Solenoid D Control Circuit Low
P0983	Shift Solenoid D Control Circuit High
P0984	Shift Solenoid E Control Circuit Range/Performance
P0985	Shift Solenoid E Control Circuit Low
P0986	Shift Solenoid E Control Circuit High
P0987	Transmission Fluid Pressure Sensor/Switch E Circuit
P0988	Transmission Fluid Pressure Sensor/Switch E Circuit Range/Performance
P0989	Transmission Fluid Pressure Sensor/Switch E Circuit Low
P0990	Transmission Fluid Pressure Sensor/Switch E Circuit High
P0991	Transmission Fluid Pressure Sensor/Switch E Circuit Intermittent
P0992	Transmission Fluid Pressure Sensor/Switch F Circuit
P0993	Transmission Fluid Pressure Sensor/Switch F Circuit Range/Performance
P0994	Transmission Fluid Pressure Sensor/Switch F Circuit Low
P0995	Transmission Fluid Pressure Sensor/Switch F Circuit High
P0996	Transmission Fluid Pressure Sensor/Switch F Circuit Intermittent
P0997	Shift Solenoid F Control Circuit Range/Performance
P0998	Shift Solenoid F Control Circuit Low
P0999	Shift Solenoid F Control Circuit High