

1996 2.2L (LN2) S Truck (with 4L60-E Transmission) Engine Diagnostic Parameters

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SENSED PARAMETER	FAULT CODE	SENSOR SIGNAL TYPE	ACCEPTABLE OPERATING RANGE AND RATIONALITY	PRIMARY MALF DETECTION PARAMETER	SECONDARY MONITORING PARAMETERS AND CONDITIONS	MONITORING TIME LENGTH AND FREQUENCY OF CHECK	MONITORING METHOD	FAULT CODE STORAGE AND MIL ILLUMINATION
MANIFOLD PRESSURE SENSOR RATIONALITY	P0106	ANALOG	1.6V - 2.1V UNDER IDLE CONDITIONS	CHANGE OF MAP > .33V	RPM Δ < 150 IAC Δ < 10 CTS TP SENSOR Δ < 1% EGR Δ < 0% ABOVE CONDITIONS STABLE FOR AT LEAST 0.4 SECONDS NO MAP SENSOR HIGH/LOW DTC'S	5/10 CTS 125 mS PER CT CONTINUOUS CHECK	PRESSURE DIFFERENTIAL SENSOR	DTC TYPE A
MANIFOLD PRESSURE TOO LOW	P0107	ANALOG	NORMAL OPERATING RANGE OF .55V - 4.7V	MAP < .20V	RPM < 1200 TP SENSOR >15.2 % NO TP SENSOR HIGH/LOW DTC'S	80/100 CTS 125mS PER CT CONTINUOUS CHECK	PRESSURE DIFFERENTIAL SENSOR	DTC TYPE A
MANIFOLD PRESSURE TOO HIGH	P0108	ANALOG	NORMAL OPERATING RANGE OF .55V - 4.7V	MAP > 3.80V	TP SENSOR < 12% VSS < 1MPH ENGINE SHOULD RUN FOR AT LEAST 20 - 40 SEC BEFORE MALF ENABLE NO TP SENSOR HIGH/LOW DTC'S	80/100 CTS 125mS PER CT CONTINUOUS CHECK	PRESSURE DIFFERENTIAL SENSOR	DTC TYPE A
MANIFOLD TEMPERATURE TOO HIGH	P0112	ANALOG	NORMAL OPERATING RANGE OF -40°C - 128°C	IAT < 48 CTS (128°C)	VSS > 15 MPH ENGINE RUNNING > 320 SEC	25/100 CTS 125mS PER CT CONTINUOUS CHECK	THERMISTER	DTC TYPE A
MANIFOLD TEMPERATURE TOO LOW	P0113	ANALOG	NORMAL OPERATING RANGE OF -40°C - 128°C	IAT >253 CTS (-57°C)	VSS < 15MPH ENGINE RUNNING > 320 SEC	25/100 CTS 125mS PER CT CONTINUOUS CHECK	THERMISTER	DTC TYPE A
HIGH COOLANT TEMPERATURE	P0117	ANALOG	NORMAL OPERATING RANGE OF -40°C - 142°C	ECT < 4 CTS (HIGH R) (138°C) OR ECT < 36 CTS (LOW R) (142°C)	ENGINE RUNNING > 128 SEC	50/100 CTS 125mS PER CT CONTINUOUS CHECK	THERMISTER	DTC TYPE A
LOW COOLANT TEMPERATURE	P0118	ANALOG	NORMAL OPERATING RANGE OF -40°C - 142°C	ECT > 251 CTS (HIGH R) (-50°C) OR BCT > 252 CTS (LOW R) (-71°C)	ENGINE RUNNING > 60 SEC	50/100 CTS 125mS PER CT CONTINUOUS CHECK	THERMISTER	DTC TYPE A

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TP SENSOR STUCK	P0121	ANALOG	NORMAL OPERATING RANGE OF 0% TO 99.6%	TP VS RPM TABLE TP >52.5% AT 1600 RPM TP > 73% AT 2400 RPM TP > 99% AT 3200 RPM TP > 99.6% AT 4000 RPM	MAP < 37.2 kPa TP SENSOR Δ < 2% NO MAP SENSOR HIGH/LOW DTC'S	50/100 CTS 125ms PER CT CONTINUOUS CHECK	POTENTIOMETER	DTC TYPE B
TP SENSOR LOW	P0122	ANALOG	NORMAL OPERATING RANGE OF .33V - 4.24V	TP SENSOR < .19V	ENGINE RUNNING	50/200 CTS 125ms PER CT CONTINUOUS CHECK	POTENTIOMETER	DTC TYPE A
TP SENSOR HIGH (PART "A")	P0123	ANALOG	NORMAL OPERATING RANGE OF .33V - 4.24V	TP SENSOR > 3.9V	ENGINE RUNNING RPM < 1500 MAP < 65 kPa	110/200 CTS 125ms PER CT CONTINUOUS CHECK	POTENTIOMETER	DTC TYPE A
TP SENSOR HIGH (PART "B")	P0123	ANALOG	NORMAL OPERATING RANGE OF .33V - 4.24V	TP SENSOR > 4.8V	N/A	110/200 CTS 125ms PER CT CONTINUOUS CHECK	POTENTIOMETER	DTC TYPE A
TIME FOR CLOSED LOOP	P0125	ANALOG	ECT NORMAL OPERATING RANGE OF -40°C - 142°C	ECT < 60°C	VSS > 5MPH IAT > 20°C	363 SEC ONCE AN IGNITION CYCLE	THERMISTER	DTC TYPE B
O2S 1 LEAN	P0131	ANALOG	NORMAL OPERATING RANGE WHICH VARIES 150mV - 850mV	O2S 1 < 43 mV	ENGINE RUNNING > 30 SEC TP BETWEEN 4.7% & 50.2% ECT >70°C A/F RATIO BETWEEN 14.5 AND 14.7 ENGINE OPERATING IN "CLOSED LOOP" NO MAP LOW/RATIONALITY DTC'S NO IAT SENSOR DTC'S NO ECT SENSOR HIGH/LOW DTC'S NO TP SENSOR DTC'S NO MISFIRE DTC'S NO EGR POSITION DTC'S NO EVAP PURGE VALVE LEAKING DTC'S NO IAC VALVE DTC'S	999/1000 CTS 125ms PER CT CONTINUOUS CHECK	OXYGEN SENSOR	DTC TYPE A

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O2S 1 RICH	P0132	ANALOG	NORMAL OPERATING RANGE WHICH VARIES 150mV - 850mV	O2S 1 >1042mV	ENGINE RUNNING > 30 SEC TP BETWEEN 4.7% & 50.2% A/F RATIO 14.5 & 14.7 ECT >70°C ENGINE OPERATING IN "CLOSED LOOP" NO MAP LOW/RATIONALITY DTC'S NO IAT SENSOR DTC'S NO ECT SENSOR HIGH/LOW DTC'S NO TP SENSOR DTC'S NO MISFIRE DTC'S NO EGR POSITION DTC'S NO EVAP PURGE VALVE LEAKING DTC'S NO IAC VALVE DTC'S	599/600 CTS 125mS PER CT CONTINUOUS CHECK	OXYGEN SENSOR	DTC TYPE A
O2S 1 SLOW RESPONSE	P0133	ANALOG	NORMAL OPERATING RANGE WHICH VARIES 150mV - 850mV THIS DTC DETERMINES IF THE O2S 1 IS FUNCTIONING PROPERLY BY CHECKING ITS RESPONSE TIME	AVG O2S 1 RESPONSE TIMES: R/L > 249mS L/R > 249mS RATIO OF L/R TO R/L IS >3.5 OR < 0.8	TP BETWEEN 8% & 20% RPM BETWEEN 1600 & 2600 EVAP > 60% PWM PLM > 191 NO MAP LOW/RATIONALITY DTC'S NO IAT SENSOR DTC'S NO ECT SENSOR HIGH/LOW DTC'S NO TP SENSOR DTC'S NO MISFIRE DTC'S NO EGR POSITION DTC'S NO EVAP PURGE VALVE LEAKING DTC'S NO IAC VALVE DTC'S	100 SEC ONCE AN IGNITION CYCLE	OXYGEN SENSOR	DTC TYPE B

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O2S 1 OPEN	P0134	ANALOG	NORMAL OPERATING RANGE WHICH VARIES 150mV - 850mV	O2S 1 > 407mV & < 509mV	ENGINE RUNNING > 30 SEC TP BETWEEN 10% & 55% ECT > 70°C NO MAP LOW/RATIONALITY DTC'S NO IAT SENSOR DTC'S NO ECT SENSOR HIGH/LOW DTC'S NO TP SENSOR DTC'S NO MISFIRE DTC'S NO EGR POSITION DTC'S NO EVAP PURGE VALVE LEAKING DTC'S NO IAC VALVE DTC'S	1199/1200 CTS 125mS PER CT CONTINUOUS CHECK	OXYGEN SENSOR	DTC TYPE A
O2S 2 LEAN	P0137	ANALOG	NORMAL OPERATING RANGE WHICH VARIES 150mV - 850mV	O2S 2 < 22mV	ENGINE RUNNING > 30 SEC TP BETWEEN 4.7% & 50.2% ECT > 40°C A/F RATIO BETWEEN 14.5 & 14.7 NO MAP LOW/RATIONALITY DTC'S NO IAT SENSOR DTC'S NO ECT SENSOR HIGH/LOW DTC'S NO TP SENSOR DTC'S NO MISFIRE DTC'S NO EGR POSITION DTC'S NO EVAP PURGE VALVE LEAKING DTC'S NO IAC VALVE DTC'S	899/900 CTS 125mS PER CT CONTINUOUS CHECK	OXYGEN SENSOR	DTC TYPE B

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O2S 2 RICH	P0138	ANALOG	NORMAL OPERATING RANGE WHICH VARIES 150mV - 850mV	O2S 2 >1042 mV	ENGINE RUNNING > 30 SEC TP BETWEEN 4.7% & 50.2% ECT >40°C A/F RATION BETWEEN 14.5 & 14.7 NO MAP LOW/RATIONALITY DTC'S NO IAT SENSOR DTC'S NO ECT SENSOR HIGH/LOW DTC'S NO TP SENSOR DTC'S NO MISFIRE DTC'S NO EGR POSITION DTC'S NO EVAP PURGE VALVE LEAKING DTC'S NO IAC VALVE DTC'S	599/600 CTS 125mS PER CT CONTINUOUS CHECK	OXYGEN SENSOR	DTC TYPE B
O2S 2 OPEN	P0140	ANALOG	NORMAL OPERATING RANGE WHICH VARIES 150mV - 850mV	O2S 2 BETWEEN 425mV & 456mV	ENGINE RUNNING > 30 SEC TP BETWEEN 5% & 55% ECT >40°C NO MAP LOW/RATIONALITY DTC'S NO IAT SENSOR DTC'S NO ECT SENSOR HIGH/LOW DTC'S NO TP SENSOR DTC'S NO MISFIRE DTC'S NO EGR POSITION DTC'S NO EVAP PURGE VALVE LEAKING DTC'S NO IAC VALVE DTC'S	999/1000 CTS 125mS PER CT CONTINUOUS CHECK	OXYGEN SENSOR	DTC TYPE B

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O2S 2 HEATER CIRCUIT MALFUNCTION	P0141	SOFTWARE CHECK	11.5V - 13.6V	O2S 2 VOLTAGE CHANGES > 148mV FROM MEAN O2S 2 BIAS VOLTAGE	ECT AND IAT < 40°C DIFFERENCE IN ECT & IAT < 7°C TP MUST NOT BE > 18% FOR >5 SEC. NO MAP LOW/RATIONALITY DTC'S NO IAT SENSOR DTC'S NO ECT SENSOR HIGH/LOW DTC'S NO TP SENSOR DTC'S NO MISFIRE DTC'S NO EGR POSITION DTC'S NO EVAP PURGE VALVE LEAKING DTC'S NO IAC VALVE DTC'S	TIME DETERMINED BY TABLE ONCE AN IGNITION CYCLE	SOFTWARE CHECK	DTC TYPE B
FUEL TRIM LEAN	P0171	SOFTWARE CHECK	FUEL TRIM INDEX BETWEEN 110 AND 145	FUEL TRIM INDEX > 165	BARO > 70 kPa ECT > 60°C & < 115°C MAT > -25°C & < 115 °C MAP > 28kPa RPM BETWEEN 750 & 3400 VSS < 70MPH NO MAP SENSOR DTC'S NO IAT SENSOR DTC'S NO ECT SENSOR DTC'S NO TP SENSOR DTC'S NO O2S 1 DTC'S NO MISFIRE DTC'S NO KS DTC'S NO CKP SENSOR DTC'S NO CMP SENSOR DTC'S NO EGR DTC'S NO EVAP PURGE VALVE DTC'S NO VSS DTC'S NO IAC VALVE DTC'S NO FLASH MEMORY ERROR DTC'S	4 SEC CONTINUOUS CHECK	SOFTWARE CHECK	DTC TYPE B

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FUEL TRIM RICH	P0172	SOFTWARE CHECK	FUEL TRIM INDEX BETWEEN 110 AND 145	FUEL TRIM INDEX < 70	BARO > 70 kPa ECT > 60°C & < 115°C MAT > -25°C & < 115 °C MAP > 28kPa RPM BETWEEN 750 & 3400 VSS < 70MPH NO MAP SENSOR DTC'S NO IAT SENSOR DTC'S NO ECT SENSOR DTC'S NO TP SENSOR DTC'S NO O2S 1 DTC'S NO MISFIRE DTC'S NO KS DTC'S NO CKP SENSOR DTC'S NO CMP SENSOR DTC'S NO EGR DTC'S NO EVAP PURGE VALVE DTC'S NO VSS DTC'S NO IAC VALVE DTC'S NO FLASH MEMORY ERROR DTC'S	16 SEC ONCE EVERY 250 SECONDS	SOFTWARE CHECK	DTC TYPE B
RANDOM MISFIRE CYLINDER 1 MISFIRE CYLINDER 2 MISFIRE CYLINDER 3 MISFIRE CYLINDER 4 MISFIRE	P0300 P0301 P0302 P0303 P0304	DIGITAL	MISFIRE TOTAL (MTOT) = 0	MTOT > 12 CTS	RPM BETWEEN 469 & 4000 ECT > -7°C & < 123°C NO MAP SENSOR LOW/RATIONALITY DTC'S NO IAT SENSOR DTC'S NO ECT SENSOR DTC'S NO TP SENSOR DTC'S NO O2S 1 DTC'S NO FUEL TRIM DTC'S NO KS DTC'S NO CKP SENSOR DTC'S NO CMP SENSOR DTC'S NO EGR DTC'S NO VSS DTC'S NO IAC VALVE DTC'S	200 CRANKSHAFT REVOLUTIONS CONTINUOUS CHECK	CKP SENSOR FOR MISFIRE DETECTION CMP SENSOR FOR CYLINDER IDENTIFICATION	DTC TYPE B

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ESC SENSOR OUTPUT LOW (PART "A")	P0325	ANALOG	.04V - .14V AND VARIES WITH ENGINE SPEED	KNOCK PRESENT > 2.3 SECONDS	ENGINE RUNNING	6 SEC CONTINUOUS CHECK	SOFTWARE CHECK	DTC TYPE A
ESC SENSOR NOT PRESENT (PART "B")	P0325	ANALOG	.04V - .14V AND VARIES WITH ENGINE SPEED	ESC < .19V OR > 4.99V	RPM BETWEEN 2200 & 6375 TP > 5% NO TP SENSOR HIGH/LOW DTC'S NO ECT SENSOR HIGH/LOW DTC'S	5 SEC CONTINUOUS CHECK	ESC INPUT VOLTAGE	DTC TYPE A
CKP SENSOR POSITION RESYNC	P0335	DIGITAL	7X RESYNC COUNTER = 0 COUNTS	7X RESYNC COUNTER > 15 COUNTS	ENGINE RUNNING NO CMP SENSOR DTC'S	256 SEC CONTINUOUS CHECK	SOFTWARE CHECK	DTC TYPE A
CMP SENSOR POSITION RESYNC	P0341	DIGITAL	CAM RESYNC COUNTER = 0 COUNTS	CAM RESYNC COUNTER > 15 COUNTS	ENGINE RUNNING	256 SECONDS CONTINUOUS CHECK	SOFTWARE CHECK	DTC TYPE A
CMP SENSOR MISSING	P0342	DIGITAL	0 - 255 COUNTS	NO CHANGE IN CAM ACTIVITY > 16 CYCLES	ENGINE RUNNING	CONTINUOUS CHECK	SOFTWARE CHECK	DTC TYPE A
EGR FLOW INSUFFICIENT	P0401	SOFTWARE CHECK	OPERATES WHEN EGR IS USED EGR ENABLES WITH IAT > 5°C EGR DISABLES WITH IAT < 3°C MAP Δ > MAP CAL UNDER DECEL CONDITIONS	MAP Δ < MAP CAL UNDER DECEL CONDITIONS	RPM BETWEEN 1000 & 2200 VEHICLE SPEED > 20 MPH NO MAP SENSOR DTC'S NO IAT SENSOR DTC'S NO ECT SENSOR DTC'S NO TP SENSOR DTC'S NO MISFIRE DTC'S NO CKP SENSOR DTC'S NO EVAP LEAK DTC'S NO VSS DTC'S NO INTERNAL PCM COMMUNICATION ERROR DTC'S	15 TESTS PER TRIP AFTER NVM RESET OTHERWISE ONCE PER IGNITION CYCLE	PRESSURE DIFFERENTIAL SENSOR	DTC TYPE A

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CATALYST MONITOR	P0420	DIGITAL	NORMAL OPERATING RANGE WHICH VARIES 150mV - 850mV	O2S 2 VARIES > 339mV	RPM BETWEEN 1700 & 3700 FLOW BETWEEN 12 - 29 GPS VEHICLE SPEED BETWEEN 30 - 80 MPH NOT IN SERVICE MODE NO MAP SENSOR DTC'S NO IAT SENSOR DTC'S NO ECT SENSOR DTC'S NO TP SENSOR DTC'S NO O2 SENSOR DTC'S NO INJECTOR DTC'S NO MISFIRE DTC'S NO EGR PINTLE POSITION DTC'S NO EVAP PURGE VALVE LEAKING DTC'S NO VSS DTC'S NO IAC VALVE DTC'S	5 TESTS PER TRIP AFTER NVM RESET OTHERWISE ONCE PER IGNITION CYCLE	OXYGEN SENSOR	DTC TYPE A
EVAP SYSTEM LARGE LEAK	P0440	ANALOG	0.5 TO 4.5 V	VAC < 3.0 V	BARO >70kPa ECT BETWEEN 4°C & 30°C AT STARTUP IAT BETWEEN 4°C & 30°C AT STARTUP ECT AND IAT WITHIN 4°OF EACHOTHER TP SENSOR BETWEEN 9% & 35% ENGINE RUN TIME > 120 SEC EVAP SOLENOID ENABLED NO MAP SENSOR DTC'S NO IAT SENSOR DTC'S NO ECT SENSOR DTC'S NO TP SENSOR DTC'S NO O2S 1 DTC'S	50SEC ONCE PER IGNITION CYCLE	TANK VACUUM SENSOR	DTC TYPE A

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EVAP SMALL LEAK DETECTED	P0442	ANALOG	0.5 TO 4.5 V	0.024 - 0.10 V PER SEC DECAY VARIES WITH FUEL LEVEL	BARO >70kPa ECT BETWEEN 4°C & 30°C AT STARTUP IAT BETWEEN 4°C & 30°C AT STARTUP ECT AND IAT WITHIN 4°OF EACHOTHER TP SENSOR BETWEEN 9% & 35% EVAP SOLENOID ENABLED <i>NO MAP SENSOR DTC'S</i> <i>NO IAT SENSOR DTC'S</i> <i>NO ECT SENSOR DTC'S</i> <i>NO TP SENSOR DTC'S</i> <i>NO O2S I DTC'S</i>	15 SEC ONCE PER IGNITION CYCLE	TANK VACUUM SENSOR	DTC TYPE A
EVAP CANISTER VENT BLOCKED	P0446	ANALOG	0.5 TO 4.5 V	VAC > 4.2V	BARO >70kPa ECT BETWEEN 4°C & 30°C AT STARTUP IAT BETWEEN 4°C & 30°C AT STARTUP ECT AND IAT WITHIN 4°OF EACHOTHER TP SENSOR BETWEEN 9% & 35% ENGINE RUN TIME > 120 SEC EVAP SOLENOID ENABLED <i>NO MAP SENSOR DTC'S</i> <i>NO IAT SENSOR DTC'S</i> <i>NO ECT SENSOR DTC'S</i> <i>NO TP SENSOR DTC'S</i> <i>NO O2S I DTC'S</i>	300 SEC ONCE PER IGNITION CYCLE	TANK VACUUM SENSOR	DTC TYPE A

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PCM INTERNAL COMMUNICATION CHECK	P0600	SOFTWARE CHECK	N/A	N/A	N/A	250mS CONTINUOUS CHECK	SOFTWARE CHECK	DTC TYPE A
PCM HAS EEPROM FLASH ERROR	P0601	SOFTWARE CHECK	CORRECT CHECKSUM	CHECKSUM DETECTION INCORRECT > 3 TIMES	N/A	IMMEDIATE	SOFTWARE CHECK	DTC TYPE A
O2S 1 NOT ENOUGH SWITCHES	P1133	ANALOG	NORMAL OPERATION WHICH VARIES FROM 150mV - 850mV	O2S 1 SWITCH NUMBERS L/R < 15 CTS R/L < 10 CTS	1600 - 2600 RPM EVAP > 59.8% PWM PLM > 191 TP BETWEEN 8% & 20 % NO MAP LOW/RATIONALITY DTC'S NO IAT SENSOR DTC'S NO ECT SENSOR HIGH/LOW DTC'S NO TP SENSOR DTC'S NO MISFIRE DTC'S NO EGR POSITION DTC'S NO EVAP PURGE VALVE LEAKING DTC'S NO IAC VALVE DTC'S	100 SEC ONCE AN IGNITION CYCLE	OXYGEN SENSOR	DTC TYPE B
EGR PINTLE POSITION (PART A)	PI406	SOFTWARE CHECK	ACTUAL EGR CLOSED POSITION > 6 CTS	ACTUAL EGR CLOSED POSITION < 6 CTS	EGR ENABLED NO MAP SENSOR DTC'S NO IAT SENSOR DTC'S NO ECT SENSOR DTC'S NO TP SENSOR DTC'S NO MISFIRE DTC'S NO CKP SENSOR DTC'S NO EVAP LEAK DTC'S NO VSS DTC'S NO INTERNAL PCM COMMUNICATION ERROR DTC'S	25 SEC CONTINUOUS CHECK	SOFTWARE CHECK	DTC TYPE B

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PCM INTERNAL COMMUNICATION CHECK	P0600	SOFTWARE CHECK	N/A	N/A	N/A	250ms CONTINUOUS CHECK	SOFTWARE CHECK	DTC TYPE A
PCM HAS EEPROM FLASH ERROR	P0601	SOFTWARE CHECK	CORRECT CHECKSUM	CHECKSUM DETECTION INCORRECT > 3 TIMES	N/A	IMMEDIATE	SOFTWARE CHECK	DTC TYPE A
O2S 1 NOT ENOUGH SWITCHES	P1133	ANALOG	NORMAL OPERATION WHICH VARIES FROM 150mV - 850mV	O2S 1 SWITCH NUMBERS L/R < 15 CTS R/L < 10 CTS	TP BETWEEN 8% & 20% RPM BETWEEN 1600 & 2600 EVAP > 60% PWM PLM > 191 NO MAP LOW/RATIONALITY DTC'S NO IAT SENSOR DTC'S NO ECT SENSOR HIGH/LOW DTC'S NO TP SENSOR DTC'S NO MISFIRE DTC'S NO EGR POSITION DTC'S NO EVAP PURGE VALVE LEAKING DTC'S NO IAC VALVE DTC'S	100 SEC ONCE AN IGNITION CYCLE	OXYGEN SENSOR	DTC TYPE B
EGR PINTLE POSITION (PART A)	P1406	SOFTWARE CHECK	ACTUAL EGR CLOSED POSITION > 6 CTS	ACTUAL EGR CLOSED POSITION < 6 CTS	EGR ENABLED NO MAP SENSOR DTC'S NO IAT SENSOR DTC'S NO ECT SENSOR DTC'S NO TP SENSOR DTC'S NO MISFIRE DTC'S NO CKP SENSOR DTC'S NO EVAP LEAK DTC'S NO VSS DTC'S NO INTERNAL PCM COMMUNICATION ERROR DTC'S	25 SEC CONTINUOUS CHECK	SOFTWARE CHECK	DTC TYPE B

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EGR PINTLE POSITION (PART B)	P1406	SOFTWARE CHECK	ACTUAL CLOSED EGR VS DESIRED CLOSED EGR <15 CTS	ACTUAL CLOSED EGR VS DESIRED CLOSED EGR >15 CTS	EGR ENABLED NO MAP SENSOR DTC'S NO IAT SENSOR DTC'S NO ECT SENSOR DTC'S NO TP SENSOR DTC'S NO MISFIRE DTC'S NO CKP SENSOR DTC'S NO EVAP LEAK DTC'S NO VSS DTC'S NO INTERNAL PCM COMMUNICATION ERROR DTC'S	20 SEC CONTINUOUS CHECK	SOFTWARE CHECK	DTC TYPE B
EGR PINTLE POSITION (PART C)	P1406	SOFTWARE CHECK	DESIRED EGR POS VS ACTUAL EGR POS < 9%	DESIRED EGR POS VS ACTUAL EGR POS > 9%	EGR ENABLED NO MAP SENSOR DTC'S NO IAT SENSOR DTC'S NO ECT SENSOR DTC'S NO TP SENSOR DTC'S NO MISFIRE DTC'S NO CKP SENSOR DTC'S NO EVAP LEAK DTC'S NO VSS DTC'S NO INTERNAL PCM COMMUNICATION ERROR DTC'S	20 SEC CONTINUOUS CHECK	SOFTWARE CHECK	DTC TYPE B
PURGE VALVE STUCK OPEN	P1441	ANALOG	0.5 TO 4.5 V	VAC > 2.0 V	ENGINE RUNNING <i>NO MAP SENSOR DTC'S</i> <i>NO IAT SENSOR DTC'S</i> <i>NO ECT SENSOR DTC'S</i> <i>NO TP SENSOR DTC'S</i> <i>NO O2S 1 DTC'S</i>	60 SEC ONCE PER IGNITION CYCLE	TANK VACUUM SENSOR	DTC TYPE A
P/N DIAGNOSTIC	P1520	DIGITAL	P/N SWITCH INDICATES R-DL WHILE DRIVING	P/N SWITCH INDICATES P/N WHILE DRIVING	RPM BETWEEN 1600 & 2800 TP SENSOR BETWEEN 6.6% & 26% VSS > 40 MPH NO TP SENSOR DTC'S NO CKP SENSOR DTC'S NO VSS DTC'S	26/27 SEC CONTINUOUS CHECK	SOFTWARE CHECK	DTC TYPE B

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SENSED PARAMETER	FAULT CODE	SENSOR SIGNAL TYPE	ACCEPTABLE OPERATING RANGE AND RATIONALITY	PRIMARY MALF DETECTION PARAMETER	SECONDARY MONITORING PARAMETERS AND CONDITIONS	MONITORING TIME LENGTH AND FREQUENCY OF CHECK	MONITORING METHOD	FAULT CODE STORAGE AND MIL ILLUMINATION
Vehicle Speed Sensor - Low input	P0502	Analog	0 RPM to 6000 RPM This DTC detects a low vehicle speed when the vehicle has a large engine speed in a drive gear range.	Output Speed < 250 RPM	Gear Range is not Park/Neutral No PSA sensor DTC's set No TP high or low sensor DTC's set Throttle Position > 17% No Map Sensor High or Low DTC's set 50KPA > VAC < 80KPA 0ftlbs < Engine Torque < 65535ftlbs 3000rpm > Engine Speed < 5500 RPM	3 seconds Continuous	AC Voltage generating Vehicle Speed Sensor	DTC Type A
Trans Fluid Temp Sensor Circuit - Low input	P0712	Analog	.24V to 5.0V The DTC detects a continuous short to ground in the TTS signal circuit or the TTS sensor	Raw TTS < .196 volts	No DTC 0560 Ignition "on"	10 sec Continuous	Thermister	DTC Type B
Trans Fluid Temp. Sensor Circuit - High Input	P0713	Analog	.24V to 5.0V The DTC detects a continuous open or short to high in the TTS signal circuit or the TTS sensor	Raw TTS > 4.94 Volts	No DTC 0560 Ignition "on"	60 second Continuous	Thermister	DTC Type B

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Brake Switch Circuit Low	P0719	Digital	.0V to 12.0V This DTC detects an open brake switch during accelerations.	Accel counts > 7 and brake is on for 900 sec without going off for 2 sec	No VSS DTC's Brake Switch Off is not passed Increment Accel counter when Brake Switch is On and Vehicle Speed < 5 MPH then 5 MPH < Vehicle Speed < 20 MPH for 6 sec then Vehicle Speed > 20 MPH for 4 sec	7 test failures within 7 test samples Continuous	Switch	DTC Type A
TCC System Stuck ON	P0742	Software	This DTC detects low torque converter slip when the TCC is commanded off.	-20rpm < TCC Slip < 20rpm	20kpa < VAC < 37kpa 0ftlbs < Eng Torque < 65535ftlbs Commanded Gear is not 1st Gear Range is D4, D3 or D2 No PSA sensor DTC's set No TP high or low sensor DTC's set 25% < Throttle Position < 100% Engine Running > 450 rpm for > 2 sec .6 < Spd Ratio < 1.5 7 mph < Vehicle Spd < 65 mph 500rpm < Engine Speed < 3000rpm TCC is commanded off No VSS Low or Intermittent DTC's set -20rpm < TCC Slip < 20rpm for > 4.25sec No TCC Enable Sol. DTC's set No TCC Control Sol. DTC's set	4.25 seconds on the 3rd occurrence Continuous	1X Engine Speed Signal and the Vehicle Speed Sensor	DTC Type B

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Shift Solenoid A Performance	P0751	Analog	This DTC detects 2-2-3-3 or a 1-1-4-4 shift pattern	Fail Counter >2 . The fail counter is incremented if fail cases (1,2,3, & 4) or (1,2,3, & 5) are true	<p>General</p> <p>Engine running No TP high or low DTC's set No Vss low or intermittent DTC's set No PSA DTC's set Gear range is D4 Vehicle speed >7 mph 20C<TTS<130C No Sol electrical DTC's No DTC 742 Traction Control Not Active Previous shift time > 0sec</p> <p>Fail Case 1 Commanded 1-2 shift 18%<TPS<42% TPS constant within +/- 3% 5mph<VSS<35mph In 2.5 seconds, engine speed in 2nd gear must be 150rpm > last speed in 1st gear</p> <p>Fail Case 2 Commanded 2-3 shift 18%<TPS<42% TPS constant within +/- 3% 12.5 mph<VSS<45 mph In 2.5 sec, engine speed in 3rd gear must be 100 rpm < last speed in 2nd gear</p> <p>Fail Case 3 Commanded 3-4 shift 13%<TPS<42% TPS constant within +/- 3% 20mph<VSS<65mph In 3 seconds, engine speed in 4th gear must be 20 rpm > last speed in 3rd gear</p> <p>Fail Case 4 Commanded 4th gear TCC on 13%<TPS<26% .85<Speed Ratio<1.2 300<TCC Slip<2000 for > 4sec</p> <p>Fail Case 5 Commanded 4th gear TCC on 13%<TPS<26% .5<Speed Ratio<.788 -20rpm<TCC Slip<20 rpm for >4sec</p>	Continuous	Shift Solenoid	DTC Type B
Shift Solenoid A Electrical	P0753	Analog	0V to 12V This DTC detects a continuous open or short to ground in the SSA circuit or the SSA sensor	Fail Counter >43 Counts out of 50 Total Counts	No System Voltage DTC's Ign On	Continuous	Shift Solenoid	DTC Type A

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Shift Solenoid B Electrical	P0758	Analog	0V to 12V This DTC detects a continuous open or short to ground in the SSB circuit or the SSB sensor	Fail Counter >43 Counts out of 50 Total Counts	No System Voltage DTC's Ign On	Continuous	Shift Solenoid	DTC Type A
PSA Circuit Malfunction	P1810	Digital	0V to 12V This DTC detects an invalid state of the PSA sensor or the PSA circuit by deciphering the PSA inputs.	This DTC will fail if any of the following fail cases are true: Fail Case 1 Illegal Trans Pressure Switch State Fail Case 2 Gear range is D2, D4, Rev Fail Case 3 Gear range is P/N	Fail Case 1 Enging Running No Sys Volt DTC's Fail Case 2 No Sys Volt DTC's No VSS DTC's Engine Speed < 100rpm for >.2 sec then 100rpm<Eng Spd < 600rpm for > .03 sec then Eng Spd > 600 rpm for > 4sec Vehicle Speed < 5mph Fail Case 3 4th gear .39<Speed Ratio<.8 35kpa<VAC<70kpa 0ftlbs<Eng Torque<65535ftlbs TCC Locked On No VSS DTC's Eng Speed<2000rpm	Fail Case 1 5seconds Fail Case 2 4 Seconds Fail Case 3 5 seconds Continuous	Pressure Switch Assembly	DTC Type B
TCC PWM Solenoid Electrical	P1860	Analog	0V to 12V This DTC detects a continuous open or short to ground in the TCC PWM circuit or the TCC PWM sensor	Fail Counter >43 Counts out of 50 Total Counts	No System Voltage DTC's Ign On gear = 1st No SSA DTC's No SSB DTC's Runs only during intrusive test: TCC=100% for > .14sec TCC =0% for > 6sec 1 time per key cycle	Continuous	TCC PWM Solenoid	DTC Type A

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TCC Solenoid Electrical	P1864	Analog	0V to 12V This DTC detects a continuous open or short to ground in the TCC circuit or the TCC sensor	Fail Counter >43 Counts out of 50 Total Counts	No System Voltage DTC's Ign On	Continuous	TCC Solenoid	DTC Type A
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