1996 2.4L (LD9) J-Car (with Manual 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 DIFFERENCITAL 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 ECT > 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 > 33% AT 1600 RPM TP > 55% AT 2400 RPM TP > 60.4% AT 3200 RPM TP > 79% AT 4000 RPM TP > 75.7% AT 4800 RPM TP > 99.6% AT 5600 RPM	MAP < 37.2 kPa TP SENSOR Δ < 2% NO MAP SENSOR HIGH/LOW DTC'S	50/100 CTS 125mS PER CT CONTINUOUS CHECK	POTIENTIOMETER	DTC TYPE B
TP SENSOR LOW	P0122	ANALOG	NORMAL OPERATING RANGE OF .33V - 4.24V	TP SENSOR < .16V	ENGINE RUNNING	50/200 CTS 125mS PER CT CONTINUOUS CHECK	POTIENTIOMETER	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	POTIENTIOMETER	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	POTIENTIOMETER	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

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O2S 1 LEAN	P0131	ANALOG	NORMAL OPERATING RANGE WHICH VARIES 150mV - 850mV	O2S 1 < 247 mV	ENGINE RUNNING > 25 SEC TP BETWEEN 7.8% & 50.2% A/F RATIO BETWEEN 14.5 AND 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 INJECTOR DTC'S NO MISFIRE DTC'S NO EGR POSITION DTC'S NO EVAP PURGE VALVE LEAKING DTC'S NO IAC VALVE DTC'S	579/580 CTS 125mS PER CT CONTINUOUS CHECK	OXYGEN SENSOR	DTC TYPE A
O2S 1 RICH	P0132	ANALOG	NORMAL OPERATING RANGE WHICH VARIES 150mV - 850mV	O2S 1 >851mV	ENGINE RUNNING > 30SEC TP BETWEEN 7.8% & 50.2% A/F RATIO BETWEEN 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 INJECTOR DTC'S NO MISFIRE DTC'S NO EGR POSITION DTC'S NO EVAP PURGE VALVE LEAKING DTC'S NO IAC VALVE DTC'S	399/400 CTS 125mS PER CT CONTINUOUS CHECK	OXYGEN SENSOR	DTC TYPE A

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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 >3.4 OR <0.4	TP BETWEEN 8% & 20% RPM BETWEEN 1600 & 2600 EVAP > 50% 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 INJECTOR 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
O2S 1 OPEN	P0134	ANALOG	NORMAL OPERATING RANGE WHICH VARIES 150mV - 850mV	O2S 1 > 399mV & < 499mV	ENGINE RUNNING > 30 SEC TP BETWEEN 8% & 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 INJECTOR 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 2 LEAN	P0137	ANALOG	NORMAL OPERATING RANGE WHICH VARIES 150mV - 850mV	O2S 2 < 22mV	ENGINE RUNNING > *25* SEC TP BETWEEN 7.8% & 50.2% A/F RATIO BETWEEN 14.5 & 14.7 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 INJECTOR DTC'S NO MISFIRE DTC'S NO EGR POSITION DTC'S NO EVAP PURGE VALVE LEAKING DTC'S NO IAC VALVE DTC'S	*399/400* CTS 125mS PER CT CONTINUOUS CHECK	OXYGEN SENSOR	DTC TYPE B
O2S 2 RICH	P0138	ANALOG	NORMAL OPERATING RANGE WHICH VARIES 150mV - 850mV	O2S 2 >1042 mV	ENGINE RUNNING > *25* SEC TP BETWEEN 7.8% & 50.2% A/F RATIONBETWEEN 14.5 & 14.7 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 INJECTOR DTC'S NO MISFIRE DTC'S NO EGR POSITION DTC'S NO EVAP PURGE VALVE LEAKING DTC'S NO IAC VALVE DTC'S	*399/400* CTS 125mS PER CT CONTINUOUS CHECK	OXYGEN SENSOR	DTC TYPE B

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O2S 2 OPEN	P0140	ANALOG	NORMAL OPERATING RANGE WHICH VARIES 150mV - 850mV	O2S 2 BETWEEN 425mV & 460mV	ENGINE RUNNING > *30* SEC TP BETWEEN 4% & 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 INJECTOR 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
O2S 2 HEATER CIRCUIT MALFUNCTION	P0141	SOFTWARE CHECK	11.5V - 13.6V	O2S 2 VOLTAGE CHANGES > 150mV FROM MEAN O2S 2 BIAS VOLTAGE	ECT AND IAT < 40°C DIFFERENCE IN ECT & IAT < 7°C TP MUST NOT BE > 20% FOR >3.75 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 INJECTOR 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

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FUEL TRIM LEAN	P0171	SOFTWARE CHECK	FUEL TRIM INDEX BETWEEN 110 AND 145	FUEL TRIM INDEX > 165	BARO > *73.8* kPa ECT > 60°C & < 115°C MAT >-25°C & < 115 °C MAP > *27* kPa RPM BETWEEN *850* & 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 INJECTOR 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 LEAKING 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 > *73.8* kPa ECT > 60°C & < 115°C MAT >-25°C & < 115 °C MAP >*27*kPa RPM BETWEEN *550* & 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 INJECTOR 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 LEAKING 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
INJECTOR CIRCUIT PROBLEM	P0200	DIGITAL	BPW 1 - 4 mS (AT IDLE)	INJECTOR CURRENT < 4 AMPS	N/A	10 SEC CONTINUOUS CHECK	INJECTOR CURRENT TO F.M.D.	DTC TYPE A

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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 & 3400 ECT > -7°C & <123°C 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 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 NO FLASH MEMORY ERROR 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 > 4.5 SECONDS	ENGINE RUNNING	5 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	10 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 & 1700 VEHICLE SPEED >25MPH NO MAP SENSOR DTC'S NO IAT SENSOR DTC'S NO ECT SENSOR DTC'S NO TP SENSOR DTC'S NO FUEL TRIM RICH DTC'S NO INJECTOR DTC'S NO CAM RESYNC DTC'S NO PCM INTERNAL COMMUNICATION CHECK 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 > 250mV	RPM BETWEEN 1800 *& 3200* FLOW BETWEEN *10-31* GPS VEHICLE SPEED BETWEEN 35 - *75*MPH NOT IN SERVICE MODE NO MAP SENSOR DTC'S NO IAT SENSOR DTC'S NO ECT SENSOR HIGH/LOW 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 NO FLASH MEMORY ERROR DTC'S	4 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***	50 SEC 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 *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*	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 *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*	300 SEC ONCE PER IGNITION CYCLE	TANK VACUUM SENSOR	DTC TYPE A

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IDLE SPEED LOW	P0506	SOFTWARE CHECK	30 - 72 STEPS AT IDLE	IAC > 150 STEPS	ENGINE RUN TIME > 20 SEC BARO > 72kPa ECT > 40°C IDLE SPEED > 60 RPM OF DESIRED IDLE STABILIZED FOR 5 SEC 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 INJECTOR DTC'S NO CKP SENSOR DTC'S NO CMP SENSOR DTC'S NO EGR DTC'S NO EVAP FLOW OR LEAKING DTC'S NO EVAP VENT BLOCKED DTC'S NO VSS DTC'S	12.5 SEC CONTINUOUS CHECK	SOFTWARE CHECK	DTC TYPE B
IDLE SPEED HIGH	P0507	SOFTWARE CHECK	30 - 72 STEPS AT IDLE	IAC < 2 STEPS	ENGINE RUN TIME > 20 SEC BARO > 72kPa ECT > 40°C IDLE SPEED > 60 RPM OF DESIRED IDLE STABILIZED FOR 5 SEC 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 INJECTOR DTC'S NO CKP SENSOR DTC'S NO CMP SENSOR DTC'S NO EGR DTC'S NO EVAP FLOW OR LEAKING DTC'S NO EVAP VENT BLOCKED DTC'S NO VSS DTC'S	12.5 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 > 50% 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 INJECTOR 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 > 6CTS	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 FUEL TRIM RICH DTC'S NO INJECTOR DTC'S NO MISFIRE DTC'S NO CAM RESYNC DTC'S NO EVAP LEAK DTC'S NO VSS DTC'S NO PCM INTERNAL COMMUNICATION CHECK DTC'S	25 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
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 FUEL TRIM RICH DTC'S NO INJECTOR DTC'S NO MISFIRE DTC'S NO CAM RESYNC DTC'S NO EVAP LEAK DTC'S NO VSS DTC'S NO PCM INTERNAL COMMUNICATION CHECK DTC'S	20 SEC CONTINUOUS CHECK	SOFTWARE CHECK	DTC TYPE B
EGR PINTLE POSITION (PART C)	P1406	SOFTWARE CHECK	ACTUAL WIDE OPEN EGR VS DESIRED < 20% OR DESIRED EGR POS VS ACTUAL EGR POS < 9%	ACTUAL WIDE OPEN EGR VS DESIRED > 20% OR 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 FUEL TRIM RICH DTC'S NO INJECTOR DTC'S NO MISFIRE DTC'S NO CAM RESYNC DTC'S NO EVAP LEAK DTC'S NO VSS DTC'S NO PCM INTERNAL COMMUNICATION CHECK DTC'S	18 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 *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*	60 SEC ONCE PER IGNITION CYCLE	TANK VACUUM SENSOR	DTC TYPE A

1996 2.4L (LD9) J-Car (with Manual 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
VEHICLE SPEED SENSOR - LOW INPUT	P0502	BUFFERED ANALOG	0-255 MPH	VSS < 2MPH	RPM BETWEEN 1700 & 3600 TP BETWEEN 0% & 1% VACUUM BETWEEN 70kPa & 80kPa	5 SEC CONTINUOUS CHECK	AC VOLTAGE GENERATOR WITH BUFFER	DTC TYPE A