

DIAGNOSTIC TROUBLE CODES

SPN	FMI	COMPONENT	CONDITION	MIL	CODE
29	3	Accelerator Position 2	Voltage Too High	ON	P1228
	4		Voltage Too Low	ON	P1227
51	3	Throttle Position Sensor 1	Voltage Too High	ON	P0123
	4		Voltage Too Low	ON	P0122
84	0	Vehicle Speed Signal	Vehicle Speed Too High	ON	C1057
	2		Data Erratic or Intermittent (or Missing)	ON	C1058
	9		Abnormal Update Rate	ON	P160A
	19		Received Vehicle Speed has error	ON	C1069
				ON	P106B
91	3	Accelerator Position 1	Voltage Too High	ON	P0228
	4		Voltage Too Low	ON	P0227
96	3	Fuel Level Signal	Voltage Too High	OFF	P0463
	4		Voltage Too Low	OFF	P0462
100	3	Engine Oil Pressure Sensor	Pressure Too High	ON	P0523
	4		Pressure Too Low	ON	P0522
102	3	Manifold Absolute Pressure Sensor	Voltage Too High	ON	P0108
	4		Voltage Too Low	ON	P0107
105	3	Intake Air Temperature Sensor	Voltage Too High	ON	P0113
	4		Voltage Too Low	ON	P0112
110	3	Engine Temperature Sensor	Voltage Too High	ON	P0118
	4		Voltage Too Low	ON	P0117
	16		Temperature Too High	OFF	P0217
	0		Engine Overheat Shutdown	OFF	P1217
	15		Temperature Above Normal Range	OFF	P1116
168	3	System Power (Battery Potential / Power Input)	Voltage Too High	OFF	P0563
			ON	C1063	
	4		Voltage Too Low	OFF	P0562
			ON	C1064	
	1		Voltage Below Critical Level	OFF	P1563
190	0	Engine Speed	Engine Speed Too High	OFF	C1059
	1		Engine Speed Too Low	OFF	C1060
	2		Data Erratic or Intermittent (or Missing)	OFF	C1061
	31		Error in Engine Speed Computation	ON	P121C
	19		Received Engine Speed has Error	OFF	C1066
523	3	Gear Sensor Signal	Voltage Too High	ON	P0917
	4		Voltage Too Low	ON	P0916
	11		Signal Fault	ON	P0915
598	2	Clutch Switch Signal	Signal Fault	OFF	P0704
628	12	ECU Memory	EEPROM Read / Write Failure	ON	P1602
636	2	Crankshaft Position Sensor	Plausibility Fault	ON	P0335
651	5	Injector 1 (Front)	Driver Circuit Open/Grounded	ON	P0261
	3		Driver Circuit Short to B+	ON	P0262
	4		Driver Circuit Grounded	ON	P1262
652	5	Injector 2 (Rear)	Driver Circuit Open/Grounded	ON	P0264
	3		Driver Circuit Short to B+	ON	P0265
	4		Driver Circuit Grounded	ON	P1265
677	5	Starter Solenoid Driver Circuit	Driver Circuit Open/Grounded	OFF	P0615
	3		Driver Circuit Short to B+	OFF	P0617
	4		Driver Circuit Grounded	OFF	P0616
731	4	Knock Sensor 1	Voltage Too Low	ON	P0327

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FUEL DELIVERY / EFI

SPN	FMI	COMPONENT	CONDITION	MIL	CODE
904	5	Wheel Speed Sensor (Front)	Open / Short	ON	C1030
	2		Input Abnormal / Signal Failure	ON	C1031
907	2	Wheel Speed Sensor (Rear)	Plausibility Fault	ON	C103D
	3		Short to B+	ON	C113D
	4		Open/Short to GND	ON	C123D
	5		Open/Short	ON	C1036
	8		Abnormal Frequency	ON	C133D
	14		Incorrect Sensor / Improper Mounting	ON	C143D
1023	5	Trip Sudden Decelerations	Open / Short	ON	C1045
1071	5	Fan Relay Driver	Driver Circuit Open/Grounded	OFF	P1481
	3		Driver Circuit Short to B+	OFF	P1482
	4		Driver Circuit Grounded	OFF	P1483
1268	3	Ignition Coil Primary Driver 1	Driver Circuit Short to B+	ON	P1353
1269	3	Ignition Coil Primary Driver 2	Driver Circuit Short to B+	ON	P1354
	4		Driver Circuit Grounded	ON	P1362
1347	5	Fuel Pump Driver Circuit	Driver Circuit Open/Grounded	OFF	P0230
	3		Driver Circuit Short to B+	OFF	P0232
	4		Driver Circuit Grounded	OFF	P0231
3056	3	Oxygen Sensor 1 (Front)	Voltage High	ON	P0132
	4		Voltage Low	ON	P0131
3597	3	ECU Output Supply Voltage 1	Voltage Too High	OFF	P16A2
	4		Voltage Too Low	OFF	P16A1
3598	3	ECU Output Supply Voltage 2	Voltage Too High	OFF	P16A9
	4		Voltage Too Low	OFF	P16A8
3599	3	ECU Output Supply Voltage 3	Voltage Too High	OFF	P17AA
	4		Voltage Too Low	OFF	P17AB
65613	2	ETC Accelerator Position Sensor Outputs 1 & 2 Correlation	Correlation Fault	ON	P1135
65590	7	Cylinder Not Identified	Misfire Confirmed	ON	P0314
65591	7	Cylinder 1	Misfire Detected	ON	P0301
65592	7	Cylinder 2	Misfire Detected	ON	P0302
520198	3	Throttle Position Sensor 2	Voltage Too High	ON	P0223
	4		Voltage Too Low	ON	P0222
520200	2	Tipover Sensor	Signal Fault	OFF	P1501
	3		Voltage High	OFF	P1503
	4		Voltage Low	OFF	P1502
	14		Condition Exists (tip over condition detected)	OFF	P1504
	5		Open Circuit	OFF	P1512
520202	5	Canister Purge Valve	Driver Circuit Open/Grounded	ON	P0444
	3		Driver Circuit Short to B+	ON	P0443
	4		Driver Circuit Grounded	ON	P0445
520208	5	Chassis/Acc Relay	Driver Circuit Open/Grounded	OFF	P1611
	3		Driver Circuit Short to B+	OFF	P1614
	4		Driver Circuit Grounded	OFF	P1613
520209	5	Oxygen Sensor Heater 1 (pre) (front)	Driver Circuit Open/Grounded	ON	P0030
	3		Driver Circuit Short to B+	ON	P0032
	4		Driver Circuit Grounded	ON	P0031
520210	5	Oxygen Sensor Heater 2 (post) (rear)	Driver Circuit Open/Grounded	ON	P0036
	3		Driver Circuit Short to B+	ON	P0038
	4		Driver Circuit Grounded	ON	P0037
520250	7	ABS Pulsar (front)	COG Chip	ON	C1022

SPN	FMI	COMPONENT	CONDITION	MIL	CODE
520251	7	ABS Pulsar (rear)	COG Chip	ON	C1023
520252	5	ABS Solenoid (RRI)	Open / Short	ON	C1024
520253	5	ABS Solenoid (RRO)	Open / Short	ON	C1025
520254	5	ABS Solenoid (FFI)	Open/Short	ON	C1026
520255	5	ABS Solenoid (FFO)	Open/Short	ON	C1027
520256	5	ABS Solenoid (RFI)	Open/Short	ON	C1028
520257	5	ABS Solenoid (RFO)	Open/Short	ON	C1029
520258	11	ABS Actuator (front)	Wheel Lock (or VSS failure) ABS On	ON	C1032
520259	11	ABS Actuator (rear)	Wheel Lock (or VSS failure) ABS On	ON	C1033
520260	8	ABS Motor	Motor Lock	ON	C0020
	3		Off Stick	ON	C1020
	4		On Stick	ON	C1021
520314	11	ABS Actuator (rear)	Wheel Lock (or VSS failure) ABS Off	ON	C103B
520261	7	ABS Fail Safe Relay	On/Off Stick	ON	C1034
520262	4	ABS Source Voltage	Drop	ON	C1038
	3		Raise	ON	C1039
520263	31	ABS Tire	Irregular Tire Size	ON	C1040
520264	12	ABS ECU	ECU Error	ON	C1041
520265	7	ABS Module	Incomplete Evacuation and Fill	ON	C1042
520267	31	Side-Stand Switch	Condition Exists (engine disabled due to extended side-stand)	OFF	P181C
520276	12	Throttle Position Sensor (1 or 2 Indeterminable)	Neither Position Sensor Passed Test	ON	P150B
	2		Position Sensor Correlation Fault (One okay, one failed)	ON	P150C
520277	3	Throttle Body Control - Power Stage	Maximum	ON	P150D
	4		Minimum	ON	P150E
	2		Not Plausible	ON	P151A
	8		Signal Error	ON	P151B
520279	31	Throttle Body Control - Adaption Aborted	Condition Exists	ON	P151D
520280	31	Throttle Body Control - Limp Home Position Check Failed	Condition Exists	ON	P151E
520281	31	Throttle Body Control - Mechanical Stop Adaptation Failure	Condition Exists	ON	P152A
520282	31	Throttle Body Control	Condition Exists	ON	P152B
520283	3	Throttle Body Control	Maximum	ON	P152C
	4		Minimum	ON	P152D
520284	31	Throttle Body Control - Position Deviation Fault	Condition Exists	ON	P152E
520286	31	ECU Monitoring Error	Condition Exists	ON	P1540
520287	31	ECU Monitoring Error (Level 3)	Condition Exists	ON	P1541
520288	31	ECU Monitoring of Injection Cut Off(Level 1)	Condition Exists	ON	P1542
520289	31	ECU Monitoring of Injection Cut Off(Level 2)	Condition Exists	ON	P1543
520305	31	Throttle Body Control - requested throttle angle not plausible	Condition Exists	ON	P1530
520311	31	ECU Fault – Hardware Disruption	Condition Exists	ON	P1537
520313	11	ABS Actuator (front)	Wheel Lock (or VSS failure) ABS Off	ON	C103A
520320	5	Brake Light	Open Circuit	OFF	P1593
	3		Shorted to Battery	OFF	P1594
	4		Shorted to Ground	OFF	P1595
520323	3	Rear Brake Switch	Voltage Too High	ON	P159C
520329	9	Operator Switch Status (pOSS1)	Abnormal Update Rate	ON	P1063
520331	3	Knock Sensor Positive Line	Voltage Too High	ON	P1327
	4		Voltage Too Low	ON	P1328

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FUEL DELIVERY / EFI

SPN	FMI	COMPONENT	CONDITION	MIL	CODE
520332	3	Knock Sensor Negative Line	Voltage Too High	ON	P132A
	4		Voltage Too Low	ON	P132B
520333	3	Oxygen Sensor (Pre) (BANK 2)	Voltage High	ON	P1137
	4		Voltage Low	ON	P1138
520344	15	Adaptive Fuel Correction Bank 1	Data Valid But Above Normal Operating Range - Least Severe Level (System Too Rich)	ON	P0170
	17		Data Valid But Below Normal Operating Range - Least Severe Level (System Too Lean)	ON	P1170
520345	15	Adaptive Fuel Correction Bank 2	Data Valid But Below Normal Operating Range - Least Severe Level (System Too Rich)	ON	P0173
	17		Data Valid But Below Normal Operating Range - Least Severe Level (System Too Lean)	ON	P1173
524046	9	Start Button	Abnormal Update Rate	OFF	U1FFD
524079	31	Cruise Control Input Checksum	Checksum does not match	ON	U0405
524080	31	Cruise Control Input Message Counter	Counter not incremented	ON	U1405

ABS Trouble Codes

SPN	FMI	COMPONENT	CONDITION	ABS LAMP ON (YES / NO)	TRACTION CONTROL LAMP ON (YES / NO)	CODE	SERVICE ACTION
520140	12	ABS ECU	Bad Intelligent Device	Yes	Yes	C2437	Replace Module
520131	12	ABS Valve Relay	Condition Exists	Yes	Yes	C2420	Replace Module
520254	31	ABS Solenoid (Front In)	Condition Exists	Yes	Yes	C1326	Replace Module
520255	31	ABS Solenoid (Front Out)	Condition Exists	Yes	Yes	C1327	Replace Module
520252	31	ABS Solenoid (Rear In)	Condition Exists	Yes	Yes	C1330	Replace Module
520253	31	ABS Solenoid (Rear Out)	Condition Exists	Yes	Yes	C1332	Replace Module
520262	0	ABS Controller Source Voltage	Data valid but above normal operational range	Yes	Yes	C2422	Check Battery Voltage
	1		Data valid but above below operational range	Yes	Yes	2421	
	3		Voltage above normal	No	Yes	1039	
	4		Voltage below normal	No	Yes	1038	
520132	31	ABS Pressure Sensor	ABS internal pressure sensor supply voltage faulty	Yes	Yes	C2423	Replace ABS Module
520133	12	ABS Internal Pressure Sensor	Bad Intelligent Device	Yes	Yes	C2424	Replace ABS Module
	2		Data Erratic, intermittent, or incorrect	Yes	Yes	C2439	Cycle Key 3-4 times. Replace module if unsuccessful
520260	12	ABS Motor	Bad Intelligent Device	Yes	Yes	C101C	Replace ABS Module
520134	31	ABS Motor Supply Failure	Condition Exists	Yes	Yes	C2425	Check Motor Supply Voltage. Check Fuses
904	2	Front Wheel Speed Sensor	Data Erratic, Intermittent, or Incorrect	Yes	Yes	C1031	Check Tone Ring for any abnormalities, Check for Bad Airgap and wheel vibrations
	3		Voltage Above Normal	Yes	Yes	C2426	Check Signal Line Voltage
	4		Voltage Below Normal	Yes	Yes	C2427	Check Supply/Signal Line Voltage
907	2	Rear Wheel Speed Sensor	Data Erratic, Intermittent, or Incorrect	Yes	Yes	C103D	Check Tone Ring for any abnormalities, Check for Bad Airgap and wheel vibrations
	3		Voltage Above Normal	Yes	Yes	C113D	Check Signal Line Voltage

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FUEL DELIVERY / EFI

SPN	FMI	COMPONENT	CONDITION	ABS LAMP ON (YES / NO)	TRACTION CONTROL LAMP ON (YES / NO)	CODE	SERVICE ACTION
	4		Voltage Below Normal	Yes	Yes	C123D	Check Supply/Signal Line Voltage
520135	31	Wheel Speed Sensor	Wheel Speed Sensor Signal Error	Yes	Yes	C2430	Check Tone Wheel Alignment /Airgap.
65559	31	CAN1 Bus Hardware	CAN Controller Failure	Yes	Yes	C1130	Replace the ABS Module if multiple key cycles do not recover module.
520141	31	CAN1 Bus Wiring	CAN Wiring Issue	Yes	Yes	C2438	Check the CAN wiring going into the module
520136	7	IMU (Inertial Measurement Unit)	Mechanical System Failure or Out of Adjustment	No	No	C2431	Verify IMU Installation and Connections for abnormalities.
	2		Data Erratic or Incorrect or Intermittent	No	No	C2432	Verify IMU Installation and Connections for abnormalities.
	9		Abnormal Update Rate	No	No	U0132	Verify IMU Installation and Connections for abnormalities.
	22		Counter Fault	No	No	U0133	Verify IMU Installation and Connections for abnormalities.
	23		Checksum Fault	No	No	U0134	Verify IMU Installation and Connections for abnormalities.
520137	31	ABS Manually Disabled	Condition Exists	Yes	No	C2433	No Service Action Required
520138	31	TC Manually Disabled	Condition Exists	No	Yes	C2434	No Service Action Required
520265	7	ABS Module	Un-Filled Component	Yes (Flashing)	Yes	C1042	—
524077	2	pDrive Mode Commanded	Data Invalid or Intermittent or Incorrect	No	No	C2435	Check Wiring and Connection to ECM and ABS
	9		Abnormal Update Rate	No	No	U0135	
520139	9	pTSCF1	Abnormal Update Rate	No	Yes	U0136	Check wiring and connection to ECM and ABS
	22		Counter Fault	No	Yes	U0137	
	23		Checksum Fault	No	Yes	U0138	
513118	9	65314 Timing	Abnormal Update Rate	No	Yes	U1109	Check wiring and connection to ECM and ABS
516121	9	61445 Timing Gear Position	Abnormal Update Rate	No	Yes	U1111	Check wiring and connection to ECM and ABS

SPN	FMI	COMPONENT	CONDITION	ABS LAMP ON (YES / NO)	TRACTION CONTROL LAMP ON (YES / NO)	CODE	SERVICE ACTION
516136	31	PGN 61441 Missing EBC1-Lamp Info	Condition Exists	No	No	U1112	Check wiring and connection to Gauge and ABS
516120	9	PGN 65265 Missing CCVS - Clutch Status	Abnormal Update Rate	No	Yes	U1106	Check wiring and connections for Hand Controls and ABS
520319	31	Variant Invalid	Condition Exists	Yes	Yes	C1082	Follow Variant Write Procedure within DW.
	14		Data not Read Properly	Yes	Yes	C2436	Verify the ABS Variant Procedure was successful