

SPN	FMI	Malfunction code description	DTC
91	2	Invalid Data Received From Accelerator Pedal Module	U013C
102	2	Turbocharger/Supercharger Boost System Performance	P2263
105	2	Intake Air Temperature Sensor 1 Circuit Range/Performance Bank 1	P0114
108	2	Barometric Pressure Intermittent/Erratic	P0129
110	2	Engine Coolant Flow Low/Performance	P00B7
168	0	System Voltage High – Most Severe level	P0561
168	1	System Voltage Low - Most Severe level	P0562
168	4	System Voltage Low - Most Severe level	P0562
168	3	System Voltage High	P0563
168	16	Manufacturer Controlled DTC	P1003
168	14	Manufacturer Controlled DTC	P1004
168	18	Manufacturer Controlled DTC	P1005
171	0	Ambient Air Temperature Sensor Circuit "A" High – Most Severe Level	P0070
171	2	Ambient Air Temperature Sensor Circuit "A" Data Erratic, Intermittent or Incorrect	P0071
171	4	Ambient Air Temperature Sensor Circuit "A" Low.	P0072
171	3	Ambient Air Temperature Sensor Circuit "A" High	P0073
171	1	Ambient Air Temperature Sensor Circuit "A" Low – Most Severe Level	P0074
174	2	Fuel Temperature Sensor "A" Circuit Range/Performance	P0181
190	2	Engine Speed Sensor Input Circuit Range/Performance	P0321
512	2	SAE Check Error - Driver Demand Torque Intermittent/Erratic	U100D
513	2	SAE Check Error - Actual Engine Torque Intermittent/Erratic	U1006
544	2	SAE Check Error - Reference Engine torque	U1015
1562	14	Not Programmed DCU detected.	P0602
1675	2	SAE Check Error - Engine Starter Mode Intermittent/Erratic	U100E
1683	2	Charging System Voltage	P2502
1761	2	Manufacturer Controlled DTC	P1031
3031	1	Reductant Tank Temperature Sensor Circuit Range High	P1065
3031	1	Reductant Tank Temperature Sensor Circuit Range/Performance	P1066
3031	2	Urea Tank Temperature Sensor – Data Erratic, Intermittent or Incorrect	P1081
3031	15	Reductant Tank Temperature/Fuel Temperature Correlation	P10A0
3031	18	Reductant Tank Temperature/Fuel Temperature Correlation	P10A1
3031	10	Reductant Temperature Sensor Circuit Range/Performance	P2043
3031	6	Reductant Temperature Sensor Circuit Low	P2044
3031	5	Reductant Temperature Sensor Circuit High	P2045
3031	4	Reductant Tank Temperature Sensor Circuit Low	P205C
3031	3	Reductant Tank Temperature Sensor Circuit High	P205D
3031	2	Lost Communication With ECM/PCM "A"	U1035
3217	2	Invalid Data Received From NOx Sensor "A"	U1023
3218	2	Invalid Data Received From NOx Sensor "A"	U1026
3219	2	Invalid Data Received From NOx Sensor "A"	U1027
3220	2	Invalid Data Received From NOx Sensor "A"	U101F
3220	2	Invalid Data Received From NOx Sensor "A"	U1024
3221	2	Invalid Data Received From NOx Sensor "A"	U1025
3226	2	Invalid Data Received From NOx Sensor "B"	U106D
3227	2	Invalid Data Received From NOx Sensor "B"	U1070
3228	2	Invalid Data Received From NOx Sensor "B"	U1073
3229	2	Invalid Data Received From NOx Sensor "B"	U1074
3230	2	Invalid Data Received From NOx Sensor "B"	U1071
3231	2	Invalid Data Received From NOx Sensor "B"	U1072
3236	2	EGR System Performance	P2413
3241	4	Exhaust Gas Temperature Sensor Circuit Low Bank 1 Sensor 2	P2032
3241	3	Exhaust Gas Temperature Sensor Circuit High Bank 1 Sensor 2	P2033
3241	0	SCR NOx Catalyst Inlet Temperature Too High	P214A
3241	1	SCR NOx Catalyst Inlet Temperature Too Low	P22FF

3256	13	NOx Sensor 1/2 Correlation Bank 1	P221A
3275	13	NOx Sensor Circuit Range/Performance Bank 2	P2214
3361	7	Reductant Injection Valve Circuit Range/Performance Bank 1 Unit 1	P201A
3361	12	Reductant Injection Valve Circuit Range/Performance Bank 1 Unit 1	P202E
3361	3	Reductant Injection Valve Circuit Range/Performance Bank 1 Unit 1	P2057
3361	5	Reductant Injection Valve Circuit Range/Performance Bank 1 Unit 1	P2058
3362	4	Reductant Injection Valve Circuit Range/Performance Bank 1 Unit 1	P2047
3510	13	Sensor Reference Voltage "B" Circuit Range/Performance	P06A7
3515	16	Reductant Control Module Internal Temperature Sensor Range/Performance	P06F1
3515	5	Urea Quality Temperature Sensor - Sensor supply below normal or open load	P1077
3515	6	Urea Quality Temperature Sensor - Sensor supply above normal or grounded circuit	P1078
3515	3	Urea Quality Temperature Sensor - Signal Range Check - High	P1079
3515	4	Urea Quality Temperature Sensor - Signal Range Check - Low	P107A
3515	18	Reductant Control Module Internal Temperature Sensor Range/Performance	P107B
3515	2	Reductant Quality Performance	P109B
3515	10	Reductant Quality Performance	P109D
3516	0	Reductant Quality Sensor Circuit Range/Performance	P1071
3516	18	Reductant Quality Sensor Circuit Range/Performance	P1072
3516	10	Reductant Quality Performance	P109A
3521	5	Reductant Quality Sensor Circuit Range/Performance	P1073
3521	6	Urea Quality Sensor - Sensor supply above normal or grounded circuit	P1074
3521	6	Urea Quality Sensor - Signal Range Check - High	P1075
3521	4	Urea Quality Sensor - Signal Range Check - Low	P1076
3521	2	Reductant Quality Performance	P1097
3521	9	Urea Quality Sensor - Not available	P1098
3521	9	Reductant Quality Performance	P1099
3521	10	Reductant Quality Performance	P109C
3521	9	Lost Communication With ECM/PCM "A"	U02A2
3521	12	Invalid Data Received	U030C
3532	2	Urea Tank Level Sensor - Data Erratic, Intermittent or Incorrect	P107E
3532	10	Reductant Level Sensor "A" Circuit Range/Performance	P1080
3532	5	Urea Tank Level Sensor - Sensor supply below normal or open load	P109E
3532	6	Urea Tank Level Sensor - Sensor supply above normal or grounded circuit	P109F
3532	4	Reductant Level Sensor "A" Circuit Low	P203C
3532	3	Reductant Level Sensor "A" Circuit High	P203D
4340	13	Reductant Heater "B" Control Circuit Performance	P106A
4340	12	Reductant Heater "B" Control Circuit Performance	P106C
4340	5	Reductant Heater "B" Control Circuit/Open	P20BD
4340	4	Reductant Heater "B" Control Circuit Low	P20BF
4340	3	Reductant Heater "B" Control Circuit High	P20C0
4340	2	Exhaust After treatment Fuel Injector "B" Control Circuit/Open	P20D1
4342	2	Exhaust After treatment Fuel Injector "B" Control Circuit/Open	P108C
4342	5	Reductant Heater "A" Control Circuit/Open	P20B9
4342	12	Reductant Heater "A" Control Circuit Performance	P20BA
4342	4	Reductant Heater "A" Control Circuit Low	P20BB
4342	3	Reductant Heater "A" Control Circuit High	P20BC
4344	2	Reductant Heater "C" Control Circuit Performance	P108D
4344	5	Reductant Heater "C" Control Circuit/Open	P20C1
4344	12	Reductant Heater "C" Control Circuit Performance	P20C2
4344	4	Reductant Heater "C" Control Circuit Low	P20C3
4344	3	Reductant Heater "C" Control Circuit High	P20C4
4353	5	Reductant Metering Unit Heater Control Circuit/Open	P20B5
4353	12	Reductant Metering Unit Heater Control Circuit Performance	P20B6
4353	3	Reductant Metering Unit Heater Control Circuit High	P20B8
4357	5	Reductant Heater "A" Control Circuit/Open	P1083

4357	4	Reductant Heater "A" Control Circuit Low	P1084
4357	5	Reductant Heater "A" Control Circuit/Open	P1086
4357	4	Reductant Heater "A" Control Circuit Low	P1087
4374	4	Reductant Pressure Sensor Circuit Low	P1082
4374	3	Reductant Pressure Sensor Circuit High	P204D
4440	2	Reductant Pump "A" Control Circuit/Open	P1092
4440	16	Reductant Pump "A" Control Performance/Stuck Off	P1093
4440	0	Reductant Pump "A" Control Performance/Stuck Off	P1094
4440	5	Reductant Pump "A" Control Circuit/Open	P208A
4440	12	Reductant Pump "A" Control Performance/Stuck Off	P208B
4440	4	Reductant Pump "A" Control Circuit Low	P208C
4440	3	Reductant Pump "A" Control Circuit High	P208D
5026	0	NOx Sensor Circuit High Bank 1 Sensor 1	P103D
5026	1	NOx Sensor Circuit Low Bank 1 Sensor 1	P2202
5027	2	Invalid Data Received From NOx Sensor "A"	U101B
5028	2	Invalid Data Received From NOx Sensor "A"	U101C
5029	2	Invalid Data Received From NOx Sensor "A"	U101E
5030	2	Invalid Data Received From NH3 Sensor	U02A4
5031	2	NOx Sensor Heater Sense Circuit Bank 1 Sensor 1	P2208
5031	12	NOx Sensor Heater Sense Circuit Range/Performance Bank 1 Sensor 1	P2209
5034	2	Invalid Data Received From NOx Sensor "B"	U1069
5035	2	Invalid Data Received From NOx Sensor "B"	U106A
5036	2	Invalid Data Received From NOx Sensor "B"	U106C
5037	2	Invalid Data Received From NH3 Sensor	U05A5
5045	2	NOx Sensor Heater Control Circuit Range/Performance Bank 1 Sensor 2	P2221
5045	12	NOx Sensor Heater Control Circuit Range/Performance Bank 1 Sensor 2	P2222
5137	5	Reductant Tank Heater Control Circuit/Open	P202A
5137	4	Reductant Tank Heater Control Circuit Low	P202B
5137	3	Reductant Tank Heater Control Circuit High	P202C
5137	12	Reductant Tank Heater Control Circuit Performance	P209F
5461	31	Manufacturer Controlled DTC	P3011
5461	31	Manufacturer Controlled DTC	P3012
5491	4	Actuator Supply Voltage "B" Circuit Low	P2670
5491	3	Actuator Supply Voltage "B" Circuit High	P2671
5713	2	NOx Sensor Circuit Bank 1 Sensor 1	P104D
5713	2	Invalid Data Received From NOx Sensor "B"	U106F
5714	2	Invalid Data Received From NOx Sensor "A"	U1022
5716	2	NOx Sensor Circuit Bank 1 Sensor 2	P1051
5717	6	NOx Sensor Circuit Bank 1 Sensor 1	P104C
5717	5	NOx Sensor Circuit Bank 1 Sensor 1	P2200
5717	2	Invalid Data Received From NOx Sensor "B"	U106E
5718	2	Invalid Data Received From NOx Sensor "A"	U1021
5720	6	NOx Sensor Circuit Bank 1 Sensor 2	P1050
5720	5	NOx Sensor Circuit Range/Performance Bank 1 Sensor 1	P229E
6875	10	Reductant Pressure Sensor Circuit Range/Performance	P1061
6875	1	Reductant Pressure Too Low	P20E8
6875	0	Reductant Pressure Too High	P20E9
6875	13	Reductant Pressure Too High	P20FE
6876	1	Reductant Pressure Sensor Circuit Low	P204C
7069	4	Actuator Supply Voltage "C" Circuit Low	P2685
7069	3	Actuator Supply Voltage "C" Circuit High	P2686
7540	4	Actuator Supply Voltage "D" Circuit Low	P26E8
7540	3	Actuator Supply Voltage "D" Circuit High	P26E9
7561	5	Reductant Heater "B" Control Circuit/Open	P1088
7561	4	Reductant Heater "B" Control Circuit Low	P1089

7562	5	Reductant Heater "C" Control Circuit/Open	P108A
7562	4	Reductant Heater "C" Control Circuit Low	P108B
7563	3	Reductant Heater "B" Control Circuit Performance	P106B
7597	2	Lost Communication With Fuel Injector Control Module	U0105
7606	31	Reductant Level Too Low	P203F
7607	0	Reductant Tank Temperature Sensor Circuit Range/Performance	P205B
516096	12	Ambient Air Temperature Sensor Circuit "A"	U1075
516096	9	Ambient Air Temperature Sensor Circuit "A"	U1076
516097	9	Invalid Data Received From NOx Sensor "A"	U029D
516097	12	Invalid Data Received From NOx Sensor "A"	U030D
516100	9	Invalid Data Received From NOx Sensor "A"	U029D
516101	9	Invalid Data Received From NOx Sensor "B"	U029E
516101	12	Invalid Data Received From NOx Sensor "B"	U030E
516103	9	Invalid Data Received From NOx Sensor "B"	U029E
516104	12	Vehicle Communication Bus A Performance	U0028
516104	12	Vehicle Communication Bus A Performance	U0029
516105	12	Vehicle Communication Bus B Performance	U0037
516105	12	Vehicle Communication Bus B Performance	U0038
516106	2	CAN Communication Error - DM19 Acknowledge - Downstream Nox Sensor - Intermittent/Erratic	U100B
516107	9	Lost Communication With ECM/PCM "A"	U1036
516108	9	Lost Communication With ECM/PCM "A"	U1037
516109	9	Lost Communication With ECM/PCM "A"	U1038
516110	9	Lost Communication With ECM/PCM "A"	U1039
516111	2	CAN Communication Error - DM19 Acknowledge - Upstream Nox Sensor – Intermittent/Erratic	U100C
516112	9	Lost Communication With ECM/PCM "A"	U103A
516113	9	Lost Communication With ECM/PCM "A"	U103B
516114	9	Lost Communication With ECM/PCM "A"	U103C
516115	9	Lost Communication With ECM/PCM "A"	U103D
516116	9	Lost Communication With ECM/PCM "A"	U103E
516117	9	Lost Communication With ECM/PCM "A"	U103F
516123	9	Lost Communication With ECM/PCM "A"	U1040
516124	9	Lost Communication With ECM/PCM "A"	U1041
516125	9	Lost Communication With ECM/PCM "A"	U1042
516126	9	Lost Communication With ECM/PCM "A"	U1043
516127	12	Lost Communication With ECM/PCM "A"	U1055
516128	9	Lost Communication With ECM/PCM "A"	U1056
516129	12	Lost Communication With ECM/PCM "A"	U1057
516131	12	Lost Communication With ECM/PCM "A"	U1058
516132	9	Lost Communication With ECM/PCM "A"	U1045
516133	12	Invalid Data Received From ECM/PCM "A"	U1059
516134	9	Lost Communication With ECM/PCM "A"	U1046
516137	12	Invalid Data Received From ECM/PCM "A"	U105B
516138	9	Lost Communication With ECM/PCM "A"	U1048
516141	12	Invalid Data Received From ECM/PCM "A"	U105C
516142	9	Lost Communication With ECM/PCM "A"	U1049
516144	9	Lost Communication With NOx Sensor "A"	U1020
516155	12	Invalid Data Received From ECM/PCM "A"	U1063
516156	9	Lost Communication With ECM/PCM "A"	U104F
516159	12	Invalid Data Received From ECM/PCM "A"	U1064
516160	9	Lost Communication With ECM/PCM "A"	U1050
516165	9	Lost Communication With ECM/PCM "A"	U1053
516167	14	Internal Control Module EEPROM Error	P0605
516168	14	Internal Control Module EEPROM Error	P062F
516190	12	NOx Sensor Circuit Bank 1 Sensor 1	P104E
516193	12	Internal Control Module Main Processor Performance	P1056

516194	12	Internal Control Module Main Processor Performance	P1057
516195	12	Internal Control Module Monitoring Processor Performance	P060A
516196	12	Reductant Control Module Power Relay De-Energized Performance - Too Early	P20EA
516197	13	Reductant Control Module Power Relay De-Energized Performance - Too Late	P20EB
516214	12	Control Module Processor	P0606
516218	0	NOx Exceedance - Root Cause Unknown (Engine problem - refer to Fault codes TCR)	P2BA9
516218	1	NOx Exceedance - Root Cause Unknown (Engine problem - refer to Fault codes TCR)	P2BAA
516224	2	Reductant Pressure Sensor Circuit Range/Performance	P105E
516225	2	Reductant Pressure Sensor Circuit Range/Performance	P105F
516226	2	Reductant Pressure Sensor Circuit Range/Performance	P1060
516227	0	Reductant System Performance Bank 1	P204F
516228	0	Reductant System Performance Bank 1	P1064
516229	2	Manufacturer Controlled DTC	P1029
516230	2	Reductant Pressure Sensor Circuit Range/Performance	P1062
516231	0	Reductant Pressure Sensor Circuit High	P204A
516231	1	Reductant Pressure Sensor Circuit Low	P204E
516232	10	Reductant Heater "B" Control Circuit Performance	P05F8
516233	10	Reductant Heater "B" Control Circuit Performance	P1068
516234	2	Reductant Heater "B" Control Circuit Performance	P1069
516235	10	Reductant Metering Unit Temperature Sensor Circuit Range/Performance	P106D
516236	2	Reductant Metering Unit Temperature Sensor Circuit Range/Performance	P106E
516237	10	Reductant Tank Temperature Sensor Circuit Intermittent/Erratic	P205E
516241	14	Internal Control Module Main Processor Performance	P1058
516242	14	Internal Control Module Main Processor Performance	P1059
516243	14	Internal Control Module Main Processor Performance	P105A
516244	4	Ignition Coil Primary/Secondary Circuit/Open	P0350
516245	5	Reductant Heater "D" Control Circuit/Open	P20C5
516245	12	Reductant Heater "D" Control Circuit Performance	P20C6
516245	3	Reductant Heater "D" Control Circuit Low	P20C7
516245	4	Reductant Heater "D" Control Circuit High	P20C8
516246	5	Reductant Purge Control Valve "A" Circuit /Open	P20A0
516246	12	Reductant Purge Control Valve "A" Performance	P20A1
516246	4	Reductant Purge Control Valve "A" Circuit Low	P20A2
516246	3	Reductant Purge Control Valve "A" Circuit High	P20A3
516247	12	NOx Sensor Circuit Range/Performance Bank 1 Sensor 1	P2201
516253	0	Reductant Metering Unit Heater Control Circuit Performance	P108E
516253	1	Reductant Metering Unit Heater Control Circuit Performance	P108F
516254	0	Reductant Metering Unit Heater Control Circuit Performance	P1090
516254	1	Reductant Metering Unit Heater Control Circuit Performance	P1091
516255	0	Reductant Pump "A" Control Performance/Stuck Off	P1095
516255	1	Reductant Pump "A" Control Performance/Stuck Off	P1096
516256	0	Reductant Metering Unit Temperature Sensor Circuit Range/Performance	P106F
516256	1	Reductant Metering Unit Temperature Sensor Circuit Range/Performance	P1070
516259	12	CAN Communication Error - Urea quality temperature sensor frame -Data length check	U1009
516260	9	Lost Communication With ECM/PCM "A"	U05A3
516261	0	Manufacturer Controlled DTC	P1033