

Diagnostic Trouble Codes (DTCs) — Listing

Not all of these codes are used in all engine applications.

Not all DTCs are listed below. See your application technical manual for more information.

There are several possible combinations of SPN and FMI codes. To use the table below, first write down the SPN and FMI codes you received from the engine diagnostic gauge. Locate each SPN and its associated definition. In the same way, locate the FMI and its associated definition.

FMI Code	FMI Name
0	Extremely High
1	Extremely Low
2	Invalid
3	Out of Range High
4	Out of Range Low
5	High Resistance
6	Low Resistance
7	Mismatch
8	Signal Missing
9	Loss of Communication
10	Change Abnormal
11	Activated
12	Error
13	Fault
14	Incorrect Message
15	Slightly High
16	Moderately High
17	Slightly Low
18	Moderately Low
19	Communication Error
31	Condition Exists

SPN Code	SPN Name
27	EGR Valve Position Signal
28	Digital Throttle Signal
29	Secondary Analog Throttle Signal
51	Air Throttle Actuator Position Signal
54	Throttle Signal
91	Primary Analog Throttle Signal
94	Low Pressure Fuel Pressure Signal
97	Water-in-fuel Signal
100	Engine Oil Pressure Signal
102	Manifold Air Pressure Signal
103	VGT Speed Signal
105	Manifold Air Temperature Signal
107	Air Filter Pressure Differential

108	Barometric Pressure Signal
109	Engine Coolant Pressure Signal
110	Engine Coolant Temperature Signal
111	Engine Coolant Level Alarm Switch
157	Fuel Rail Pressure Signal
158	ECU Power Down
160	Primary Shaft Speed Invalid
168	Unswitched Battery Voltage
174	Fuel Temperature Signal
189	Engine Speed Derate
190	Engine Speed
237	VIN Security Data
412	EGR Temperature Signal
611	Injector Drive #1
612	Injector Drive #2
613	Fuel Pressure Control Valve Drive
629	ECU EEPROM
636	Camshaft Position Signal
637	Crankshaft Position Signal
640	External Engine Protection
641	VGT Actuator
647	Engine Fan Drive Circuit
651	Injector #1
652	Injector #2
653	Injector #3
654	Injector #4
655	Injector #5
656	Injector #6
695	Unapproved Engine Speed Request
876	A-C System Drive Circuit
970	External Shutdown Switch
971	External Derate Switch
974	Remote Throttle Signal
1069	Calculated Tier Size
1075	Low Pressure Fuel Pump Data
1136	ECU Temperature Signal
1172	Intake Air Temperature
1176	Intake Air Pressure
1180	Calculated VGT Turbine Inlet Temp
1209	Exhaust Manifold Pressure Signal
1321	Engine Starter
1347	Fuel Pump Pressure Control Valve 1
1348	Fuel Pump Pressure Control Valve 2
1321	Engine Starter Control Circuit
1569	Engine Power Derate
1639	Fan Speed Signal

1761	DEF Tank Fuel Level Signal
2002-2253	Source Address 2-253
2629	Fixed Turbo Comp Outlet Temp Signal
2630	Charge Air Cooler Outlet Temp Signal
2659	EGR Flow Signal
2790	Fixed Turbocharger Comp Outlet Temp
2791	EGR Valve Drive Circuit
2795	VGT Calibration Version
2797	Injector High Voltage Supply #1
2798	Injector High Voltage Supply #2
3031	DEF Tank Fluid Temp Signal
3216	DPF Outlet NOx
3226	SCR Outlet NOx
3246	DPF Outlet Temperature
3251	DPF Differential Pressure Signal
3361	DEF Dosing Injector Signal
3464	Air Throttle Actuator Drive Circuit
3471	Fuel Dosing Control Valve Signal
3480	Fuel Dosing Inlet Pressure Signal
3482	Fuel Dosing Shutoff Valve Signal
3509	Sensor Supply #1 Voltage
3510	Sensor Supply #2 Voltage
3511	Sensor Supply #3 Voltage
3512	Sensor Supply #4 Voltage
3513	Sensor Supply #5 Voltage
3514	Sensor Supply #6 Voltage
3516	Aftertreatment DEF Concentration
3517	DEF Tank Fluid Level
3556	Fuel Dosing Nozzle
3597	Injector Power Supply Voltage
3719	Calculated Soot Level
3720	Calculated Ash Level
3936	DPF Fault Occurrences
4077	Fuel Dosing Outlet Pressure Signal
4334	DEF Dosing Unit Outlet Pressure
4341	DEF Dosing Unit Pressure line Heater
4343	DEF Dosing Unit Supply Line Heater
4345	DEF Dosing Unit Return Line Heater
4360	SCR Inlet Temperature
4363	SCR Outlet Temperature
4364	SCR Catalyst Conversion Efficiency
4366	DEF Tank Heater Coolant Valve
4376	Reversing Valve
4490	Intake Air Humidity
4765	DOC Inlet Temp
4766	DOC Outlet Temp

4795	DPF Missing
5018	DOC Fault Occurrences
5125	Sensor Supply #7 Voltage
5126	Sensor Supply #8 Voltage
5127	Sensor Supply #9 Voltage
5298	DOC Efficiency
5435	DEF Dosing Unit Pump
5456	Fuel Dosing Inlet Temp Signal
5571	HPCR Pressure Relief Valve
5743	SCR Temperature Module
5745	DEF Dosing Unit Heater
522494	Intake Air Sensor Communication
522495	Exhaust Filter Temp Module

Diagnostic gauge on instrument panel may also display text for communication faults, such as “CAN Bus FAILURE”. Contact your servicing dealer.

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