



TEREX

CEDARAPIDS

Cummins
Engine Fault Codes

TO: RON HOFFMAN
FROM: JOE MUSIL

Cummins/ PowerView Engine Fault Codes

SPN	FMI	Fault Description
-	16	Fuel inlet meter – Data valid, but above normal flow
-	18	Fuel inlet meter – Data valid, but below normal flow
28	3	%Accelerator Position #3 (Throttle 2) Voltage Above Normal or Shorted to High Source
28	4	Percent Accelerator Position #3 (Throttle 2) Voltage Above Normal or Shorted to High
29	3	Percent Accelerator Position #2 (Throttle 1) Voltage Above Normal or Shorted to High
29	4	Percent Accelerator Position #2 (Throttle 1) Voltage Above Normal or Shorted to High
52	0	Coolant Temperature – data valid but above normal operating range, Severe condition
52	3	Coolant Temperature – voltage above normal or shorted to high source
52	4	Coolant Temperature – voltage below normal or shorted to low source
52	16	Coolant Temperature – data valid but above normal operating range
84	2	Vehicle Speed Sensor Circuit - data incorrect
84	10	Vehicle Speed Sensor Circuit - tampering has been detected
91	3	Accelerator Pedal Position (Multi-State Throttle) Voltage Above Normal, or Shorted to
91	4	Accelerator Pedal Position (Multi-State Throttle) Voltage Below Normal or Shorted to
91	8	Accelerator Pedal Position Sensor Circuit - low frequency
91	8	Accelerator Pedal Position Sensor Circuit - high frequency
91	9	Accelerator Pedal Position A valid throttle message is not being received or is late
91	14	Accelerator Pedal Position Throttle signal voltage is or has been out of range
91	19	SAE J1939 Multiplexing Accelerator Pedal Sensor System Error
93	2	OEM Alternate torque validation switch - data incorrect
94	1	Fuel Delivery Pressure above normal
94	2	Fuel Pressure Sensor Circuit - data incorrect
94	3	Fuel Delivery Pressure Fuel Rail Pressure Voltage out of range high
94	3	Fuel Delivery Pressure Fuel Rail Pressure Voltage out of range low
94	10	Fuel Delivery Pressure Pressure dropping too fast
94	13	Fuel Delivery Pressure Out of calibration
94	16	Fuel Delivery Pressure High fuel pressure
94	17	Fuel Delivery Pressure No rail fuel pressure
94	18	Fuel Delivery Pressure below normal
97	0	Water In Fuel Indicator Water In Fuel Detected
97	3	Water In Fuel Indicator Water In Fuel Voltage out of range high
97	4	Water In Fuel Indicator Water In Fuel Voltage out of range low
97	15	Water in Fuel Indicator High – Maintenance
97	16	Water In Fuel Indicator Water In Fuel Detected
97	31	Water In Fuel Indicator Water In Fuel Detected
100	1	Engine Oil Pressure below normal – critical failure
100	2	Engine Oil Pressure Sensor Circuit – data erratic, intermittent, or incorrect
100	3	Engine Oil Pressure Voltage Above Normal or Shorted to High Source
100	4	Engine Oil Pressure Voltage Below Normal or Shorted to Low Source
100	16	Engine Oil Pressure Oil pressure reading incorrect
100	18	Engine Oil Pressure below normal
102	2	Intake Manifold Pressure Sensor Circuit – data erratic, intermittent, or incorrect
102	3	Intake Manifold Pressure Sensor #1 Circuit - shorted high
102	4	Intake Manifold Pressure Sensor #1 Circuit - shorted low
103	10	Turbo Charger #1 Speed – invalid rate of change detected – Abnormal rate of speed change
103	16	Turbo Charger #1 Speed High – Data valid but above normal operating range
103	18	Turbo Charger #1 Speed Low – Data valid but below normal operating range
105	0	Intake Manifold 1 Temperature - High manifold air temperature, Critical failure
105	3	Intake Manifold 1 Temperature - Voltage Above Normal or Shorted to High Source
105	4	Intake Manifold 1 Temperature - Voltage Below Normal or Shorted to Low Source
105	15	Intake Manifold 1 Temperature – data valid, but above normal operating range
105	16	Intake Manifold 1 Temperature - High manifold air temperature
107	0	Air Filter Differential Pressure Plugged air filter condition detected
107	31	Air Filter Differential Pressure Plugged air filter condition detected

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108	2	Barometric Air Pressure Sensor Circuit – data erratic, intermittent, or incorrect
108	3	Barometric Air Pressure Sensor Circuit – shorted to high source
108	4	Barometric Air Pressure Sensor Circuit – shorted to low source
110	0	Engine Coolant Temperature High - Critical failure
110	2	Engine Coolant Temperature – Data erratic, intermittent, or incorrect
110	3	Engine Coolant Temperature - Voltage Above Normal or Shorted to High Source
110	4	Engine Coolant Temperature - Voltage Below Normal or Shorted to Low Source
110	16	Engine Coolant Temperature - High coolant temperature
111	1	Coolant Level Low coolant level
111	2	Engine Coolant Level Sensor Circuit - data erratic, intermittent, or incorrect
111	3	Coolant Level Sensor Circuit – Voltage above normal or shorted to high source
111	4	Coolant Level Sensor Circuit – Voltage below normal or shorted to low source
111	18	Coolant Level – Data valid but below normal operating range
113	2	OEM Alternate Droop Switch Validation - data incorrect
135	3	Fuel Pump Delivery Pressure Sensor Circuit - shorted low
135	4	Fuel Pump Delivery Pressure Sensor Circuit - shorted high
156	3	Fuel Timing Pressure Sensor Circuit - voltage above normal or shorted to high source
156	4	Fuel Timing Pressure Sensor Circuit - voltage below normal or shorted to low source
157	0	Injector Metering Rail #1 Pressure High - Failure
157	1	Injector Metering Rail #1 Pressure High -- data valid, but below normal operating range - critical failure
157	2	Injector Metering Rail #1 Pressure Sensor Circuit – Data erratic, intermittent, or incorrect
157	3	Injector Metering Rail #1 Pressure Sensor Circuit – voltage above normal or shorted to high source
157	4	Injector Metering Rail #1 Pressure Sensor Circuit – voltage below normal or shorted to low source
157	16	Injector Metering Rail #1 Pressure High - Data valid but above normal operating range
157	18	Injector Metering Rail #1 Pressure Low - Data valid but below normal operating range
158	2	Keyswitch Intermittent
158	17	Keyswitch Circuit problem
166	2	Cylinder Power Imbalance between cylinders
167	1	Electrical Charging System Voltage Low - Critical Level
167	16	Electrical Charging System Voltage High - warning level
167	18	Electrical Charging System Voltage Low - Warning Level
168	16	Battery #1 Voltage High - Warning
168	18	Battery #1 Voltage Low - Warning
171	3	Ambient Air Temperature Sensor Circuit – voltage above normal or shorted to high source
171	4	Ambient Air Temperature Sensor Circuit – voltage below normal or shorted to low source
174	0	Fuel Temperature High fuel temperature
174	3	Fuel Temperature - voltage above normal or shorted to high source
174	4	Fuel Temperature - voltage below normal or shorted to low source
174	15	Fuel Temperature High fuel temperature
174	16	Fuel Temperature High fuel temperature
174	31	Fuel Temperature Voltage out of range
175	0	Engine Oil Temperature High – Critical failure
175	2	Engine Oil Temperature data erratic, intermittent, or incorrect
175	3	Engine Oil Temperature Sensor Circuit - voltage above normal or shorted to high source
175	4	Engine Oil Temperature Sensor Circuit - voltage below normal or shorted to low source
189	31	Rated Engine Speed Speed Derate Condition Exists due to fault
190	0	Engine Speed Engine overspeed
190	2	Engine Speed Data Erratic, Intermittent or Incorrect
190	3	Engine Speed Voltage Above Normal or Shorted to High Source
190	4	Engine Speed Voltage Below Normal or Shorted to Low Source
190	5	Engine Speed Circuit is open
190	10	Engine Speed/Position Sensor Circuit - lost one of two signals from the magnetic pickup sensor
190	16	Engine Speed Engine overspeed
191	16	Transmission Output Shaft (Tailshaft) Speed High – Warning

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191	18	Transmission Output Shaft (Tailshaft) Speed Low – Warning
251	2	Real Time Clock - Power Interrupt or data erratic or intermittent
558	2	Idle Validation Circuit – data erratic, intermittent, or incorrect
558	4	Idle Validation Circuit - shorted low
558	13	Idle Validation Circuit - out of calibration
609	2	Engine Control Module Identification Input State Error
611	3	Injector Wiring Shorted to battery – Sensor supply voltage #4 above normal
611	4	Injector Wiring Shorted to ground – sensor supply voltage #4 below normal
612	2	Engine Speed/Position Sensor lost both of two magnetic pickup sensor signals
620	3	Sensor Supply Voltage 1 (+5V DC) Voltage Above Normal or Shorted to High Source
620	4	Sensor Supply Voltage 1 (+5V DC) Voltage Below Normal or Shorted to Low Source
620	18	OEM Sensor Supply Voltage Low - Warning
626	11	Intake Air Heater (Relay Enable) #1 Circuit - data incorrect
626	11	Intake Air Heater (Relay Enable) #2 Circuit - data incorrect
627	1	Power Supply Low voltage to injectors
627	2	Power Lost with Ignition Off
627	4	Power Supply Power interruption
629	12	Engine Control Module –Critical internal failure/ hardware failure
629	13	Reprogram Controller ECU problem
629	19	ECU to Pump Communications Error ECU not receiving messages from Pump
630	2	Engine Control Module – data lost, erratic or intermittent
630	13	Engine Control Module – engine code incompatibility or out of calibration
630	31	Engine Control Module - ECM program memory (RAM) corruption
632	2	Fuel Shutoff Valve Fuel Shutoff Error Detected
632	3	Fuel Shutoff Valve Circuit - shorted high
632	4	Fuel Shutoff Valve Circuit - shorted high
632	5	Fuel Shutoff Valve Fuel Shutoff Non-Functiona
632	11	Fuel Shutoff Valve Fuel Shutoff Solenoid circuit is open or shorted
633	3	Fuel Injection Control Valve Circuit - shorted high
633	7	Fuel Injection Control Valve - mechanically stuck
633	4	Fuel Injection Control Valve Circuit - shorted low
633	11	Injector Control Valve Electronic Filter (Transorb) Error
636	2	Engine Position Sensor Timing signal error
636	8	Engine Position Sensor Timing signal erro
636	10	Engine Position Sensor Timing signal error
637	2	Timing (Crank) Sensor Timing signal error
637	7	Timing (Crank) Sensor Timing signal error
637	8	Timing (Crank) Sensor Timing signal error
637	10	Timing (Crank) Sensor Timing signal error
639	2	SAE J1939 datalink - cannot transmit
639	9	SAE J1939 Multiplexing PGN Timeout Error
639	13	CAN Bus The CAN bus failure
640	14	OEM Commanded Dual Output Shutdown
641	3	Variable Geometry Turbocharger – VGT actuator driver circuit voltage above normal or shorted to high source
641	4	Variable Geometry Turbocharger – VGT actuator driver circuit voltage below normal or shorted to low source
647	3	Fan Clutch Circuit – voltage above normal or shorted to high source
647	4	Fan Clutch Circuit – voltage below normal or shorted to low source
647	11	Fan Clutch Circuit Error
651	5	Injector Cylinder #1 The current to the injector is less than expected
651	6	Injector Cylinder #1 The current to the injector increases too rapidly
651	7	Injector Cylinder #1 The injector fuel flow is lower than expected
652	5	Injector Cylinder #2 The current to the injector is less than expected
652	6	Injector Cylinder #2 The current to the injector increases too rapidly
652	7	Injector Cylinder #2 The injector fuel flow is lower than expected

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653	5	Injector Cylinder #3 The current to the injector is less than expected
653	6	Injector Cylinder #3 The current to the injector increases too rapidly
653	7	Injector Cylinder #3 The injector fuel flow is lower than expected
654	5	Injector Cylinder #4 The current to the injector is less than expected
654	6	Injector Cylinder #4 The current to the injector increases too rapidly
654	7	Injector Cylinder #4 The injector fuel flow is lower than expected
655	5	Injector Cylinder #5 The current to the injector is less than expected
655	6	Injector Cylinder #5 The current to the injector increases too rapidly
655	7	Injector Cylinder #5 The injector fuel flow is lower than expected
656	5	Injector Cylinder #6 The current to the injector is less than expected
656	6	Injector Cylinder #6 The current to the injector increases too rapidly
656	7	Injector Cylinder #6 The injector fuel is lower then expected
676	3	Glow Plug Relay Stuck On
676	5	Glow Plug Relay Will Not Turn On
677	3	Starter Relay Circuit – voltage above normal or shorted to high source
677	4	Starter Relay Circuit – voltage below normal or shorted to low source
697	3	Auxiliary PWM Driver #1 – voltage above normal or shorted to high source
697	4	Auxiliary PWM Driver #1 – voltage below normal or shorted to low source
702	3	Auxiliary Input/Output #2 Circuit - shorted high
703	3	Auxiliary Input/Output #3 Circuit - shorted high
703	11	Auxiliary Equipment Sensor Input # 3 (OEM Switch)
703	14	Auxiliary Equipment Sensor Input # 3 (OEM Switch) Engine Protection - Critical
723	2	Engine Speed/ Position Sensor #2 Camshaft Sync Error - data erratic, intermittent, or incorrect
723	7	Engine Speed/ Position Sensor #2 – Mechanical Misalignment between camshaft and crankshaft sensors
729	3	Inlet Air Heater Driver #1- voltage above normal or shorted to high source
729	4	Inlet Air Heater Driver #1- voltage below normal or shorted to low source
729	5	Inlet Air Heater Driver #1 - Inlet air heater will not turn on
833	2	Rack Position Sensor Error
833	3	Rack Position Sensor Rack Position Voltage above normal
833	4	Rack Position Sensor Rack Position Voltage below normal
834	2	Rack Actuator Rack Error
834	3	Rack Actuator Rack Actuator Circuit voltage above normal
834	5	Rack Actuator Rack Actuator Circuit open
834	6	Rack Actuator Rack Actuator Circuit grounded
834	7	Rack Actuator Rack Position Error
923	11	Output Device Driver (VGT or Transmission shift PWM signal)
970	2	Auxiliary Engine Shutdown Switch External Engine Shutdown Switch intermittent
970	11	External Engine Protection Shutdown External Engine Protection Shutdown active
970	31	Auxiliary Engine Shutdown Switch External Engine Protection Shutdown active
971	31	Engine Derate Switch External Derate input has been activated
974	3	Remote Accelerator Pedal Position Sensor Circuit - shorted high
974	4	Remote Accelerator Pedal Position Sensor Circuit - shorted low
974	19	SAE J1939 Multiplexing Remote Throttle Data Error
1041	2	Start Signal Indicator Start Signal Missing
1041	3	Start Signal Indicator Start Signal Always Active
1043	3	Engine Speed/Position Sensor #1 (Crankshaft) Supply Voltage Circuit - shorted high
1043	4	Engine Speed/Position Sensor #1 (Crankshaft) Supply Voltage Circuit - shorted low
1075	3	Fuel Priming Pump Control Circuit – voltage above normal or shorted to high source
1075	4	Fuel Priming Pump Control Circuit – voltage below normal or shorted to low source
1076	13	Fuel Injection Pump Calibration Trim Circuit Error
1077	14	Fuel System Leak error
1079	3	Sensor Supply Voltage 1 (+5V DC) Voltage Above Normal or Shorted to High Source
1079	4	Sensor Supply Voltage 1 (+5V DC) Voltage Below Normal or Shorted to Low Source
1080	3	Sensor Supply Voltage 2 (+5V DC) Voltage Above Normal or Shorted to High Source

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SPN	FMI	Fault Description
1080	4	Sensor Supply Voltage 2 (+5V DC) Voltage Below Normal or Shorted to Low Source
1083	3	Auxiliary Temperature Sensor Input # 1 Circuit – voltage above normal or shorted to high source
1083	4	Auxiliary Temperature Sensor Input # 1 Circuit – voltage below normal or shorted to low source
1084	3	Auxiliary Pressure Sensor Input # 2 Circuit – voltage above normal or shorted to high source
1084	4	Auxiliary Pressure Sensor Input # 2 Circuit – voltage below normal or shorted to low source
1109	31	Engine Protection System Approaching Shutdown Approaching Shutdown
1110	31	Engine Protection System Engine has been shutdown
1136	3	ECM Internal Temperature Sensor Circuit - voltage above normal or shorted to high source
1136	4	ECM Internal Temperature Sensor Circuit - voltage below normal or shorted to low source
1172	3	Turbocharger #1 Compressor Inlet Temperature Circuit – voltage above normal or shorted to high source
1172	4	Turbocharger #1 Compressor Inlet Temperature Circuit – voltage below normal or shorted to low source
1265	4	Engine Oil Burn Valve Solenoid Circuit – voltage below normal or shorted to low source
1347	3	High Fuel Pressure Solenoid Valve #1 Circuit - voltage above normal or shorted to high source
1347	4	High Fuel Pressure Solenoid Valve #1 Circuit - voltage below normal or shorted to low source
1347	5	Fuel Pump Assembly #1 The circuit is open, shorted to ground, or overloaded
1347	7	Fuel Pump Assembly #1 Rail pressure control mismatch – mechanical system not responding
1347	10	Fuel Pump Assembly #1 Low fuel flow
1348	3	High Fuel Pressure Solenoid Valve #2 Circuit - voltage above normal or shorted to high source
1348	4	High Fuel Pressure Solenoid Valve #2 Circuit - voltage below normal or shorted to low source
1348	5	Fuel Pump Assembly #2 The circuit is open, shorted to ground, or overloaded
1348	7	High Fuel Pressure Solenoid Valve #2 - mechanically stuck
1348	7	Fuel Pumping Element #2 (Rear) - mechanically stuck
1348	10	Fuel Pump Assembly #2 Low fuel flow
1377	2	Multiple Unit Synchronization Switch Circuit – data erratic, intermittent, or incorrect
1380	17	Low Oil Level in the Centinel makeup oil tank
1381	3	Fuel Supply Pump Inlet Pressure Sensor Circuit - voltage above normal or shorted to high source
1381	4	Fuel Supply Pump Inlet Pressure Sensor Circuit – voltage below normal or shorted to low source
1381	18	Fuel Supply Pump Inlet Pressure Low - warning level
1383	31	Engine Hot Shutdown
1384	31	Engine Shutdown Commanded by J1939
1387	3	Auxiliary Pressure Sensor Input # 2 Circuit – voltage above normal or shorted to high source
1387	4	Auxiliary Pressure Sensor Input # 2 Circuit – voltage below normal or shorted to low source
1387	11	Auxiliary Equipment Sensor Input # 2 (OEM Pressure Sensor) Engine Protection – Warning
1387	14	Auxiliary Pressure Sensor Input # 2 Engine Protection - Critical
1387	11	Auxiliary Equipment Sensor Input # 2 (OEM Pressure Sensor) Engine Protection – Warning
1484	31	Additional OEM/Vehicle Diagnostic Codes have been logged. Check other ECM's for DTC's.
1485	2	ECU Main Relay Pump power relay fault
1563	2	Control Module Identification Input State Error – Data erratic, intermittent, or incorrect
1569	31	Engine Protection Torque Derate Fuel derate limit condition exists
2000	6	Fuel Injection Pump Fuel Control Valve Error
2000	13	Security Violation The proper controller has not been installed
2629	15	System Diagnostic Code #1 – Turbocharger compressor Outlet Temp – data valid, but above normal range
2789	15	System Diagnostic Code #1 – Turbocharger Inlet Temperature – data valid, but above normal range
2981	3	Coolant Pressure - voltage above normal or shorted to high source
2981	4	Coolant Pressure - voltage below normal or shorted to low source
2981	18	Coolant Pressure – data valid, but below normal operating range