

Fault Code	J1939 SPN	J1939 FMI	Lamp	J1939 SPN Description	Cummins Description
111	629	12	Red	Controller #1	Engine Control Module Critical Internal Failure - Bad intelligent device or component
122	102	3	Amber	Engine Intake Manifold #1 Pressure	Intake Manifold 1 Pressure Sensor Circuit - Voltage above normal, or shorted to high source
123	102	4	Amber	Engine Intake Manifold #1 Pressure	Intake Manifold 1 Pressure Sensor Circuit - Voltage below normal, or shorted to low source
133	974	3	Red	Remote Accelerator Pedal Position	Remote Accelerator Pedal or Lever Position Sensor 1 Circuit - Voltage above normal, or shorted to high source
134	974	4	Red	Remote Accelerator Pedal Position	Remote Accelerator Pedal or Lever Position Sensor 1 Circuit - Voltage below normal, or shorted to low source
135	100	3	Amber	Engine Oil Pressure	Engine Oil Rifle Pressure 1 Sensor Circuit - Voltage above normal, or shorted to high source
141	100	4	Amber	Engine Oil Pressure	Engine Oil Rifle Pressure 1 Sensor Circuit - Voltage below normal, or shorted to low source
143	100	18	Amber	Engine Oil Pressure	Engine Oil Rifle Pressure - Data Valid But Below Normal Operating Range - Moderately Severe Level
144	110	3	Amber	Engine Coolant Temperature	Engine Coolant Temperature 1 Sensor Circuit - Voltage above normal, or shorted to high source
145	110	4	Amber	Engine Coolant Temperature	Engine Coolant Temperature 1 Sensor Circuit - Voltage below normal, or shorted to low source
146	110	16	Amber	Engine Coolant Temperature	Engine Coolant Temperature - Data Valid But Above Normal Operating Range - Moderately Severe Level
147	91	1	Red	Accelerator Pedal Position 1	Accelerator Pedal or Lever Position 1 Sensor Circuit Frequency - Data valid but below normal operating Range
148	91	0	Red	Accelerator Pedal Position 1	Accelerator Pedal or Lever Position Sensor 1 - Data valid but above normal operational range - Most Severe Level
151	110	0	Red	Engine Coolant Temperature	Engine Coolant Temperature - Data valid but above normal operational range - Most Severe Level
153	105	3	Amber	Engine Intake Manifold 1 Temperature	Intake Manifold 1 Temperature Sensor Circuit - Voltage above normal, or shorted to high source
154	105	4	Amber	Engine Intake Manifold 1 Temperature	Intake Manifold 1 Temperature Sensor Circuit - Voltage below normal, or shorted to low source
187	3510	4	Amber	Sensor supply voltage 2	Sensor Supply 2 Circuit - Voltage below normal, or shorted to low source
197	111	18	Amber	Engine Coolant Level	Coolant Level - Data Valid But Below Normal Operating Range - Moderately Severe Level
227	3510	3	Amber	Sensor supply voltage 2	Sensor Supply 2 Circuit - Voltage above normal, or shorted to high source
234	190	0	Red	Engine Speed	Engine Crankshaft Speed/Position - Data valid but above normal operational range - Most Severe Level
235	111	1	Red	Engine Coolant Level	Coolant Level - Data valid but below normal operational range - Most Severe Level
237	644	2	Amber	Engine External Speed Command Input	External Speed Command Input (Multiple Unit Synchronization) - Data erratic, intermittent or incorrect
238	3511	4	Amber	Sensor supply voltage 3	Sensor Supply 3 Circuit - Voltage below normal, or shorted to low source
239	3511	3	Amber	Sensor supply voltage 3	Sensor Supply 3 Circuit - Voltage above normal, or shorted to high source
241	84	2	Amber	Wheel-Based Vehicle Speed	Wheel-Based Vehicle Speed - Data erratic, intermittent or incorrect
242	84	10	Amber	Wheel-Based Vehicle Speed	Wheel-Based Vehicle Speed Sensor Circuit tampering has been detected - Abnormal rate of change
271	1347	4	Amber	Engine Fuel Pump Pressurizing Assembly #1	Engine Fuel Pump Pressurizing Assembly 1 Circuit - Voltage below normal, or shorted to low source
272	1347	3	Amber	Engine Fuel Pump Pressurizing Assembly #1	Engine Fuel Pump Pressurizing Assembly 1 Circuit - Voltage above normal, or shorted to high source
285	639	9	Amber	J1939 Network #1, Primary Vehicle Network (previously SAE J1939 Data Link)	SAE J1939 Multiplexing PGN Timeout Error - Abnormal update rate
286	639	13	Amber	J1939 Network #1, Primary Vehicle Network (previously SAE J1939 Data Link)	SAE J1939 Multiplexing Configuration Error - Out of Calibration
288	974	19	Red	Remote Accelerator Pedal Position	SAE J1939 Multiplexing Remote Accelerator Pedal or Lever Position Sensor System - Received Network Data In Error
293	441	3	Amber	Auxiliary Temperature 1	Auxiliary Temperature Sensor Input 1 Circuit - Voltage above normal, or shorted to high source
294	441	4	Amber	Auxiliary Temperature 1	Auxiliary Temperature Sensor Input 1 Circuit - Voltage below normal, or shorted to low source
297	1388	3	Amber	Auxiliary Pressure #2	Auxiliary Pressure Sensor Input 2 Circuit - Voltage above normal, or shorted to high source
298	1388	4	Amber	Auxiliary Pressure #2	Auxiliary Pressure Sensor Input 2 Circuit - Voltage below normal, or shorted to low source
322	651	5	Amber	Engine Injector Cylinder #01	Injector Solenoid Driver Cylinder 1 Circuit - Current below normal or open circuit
323	655	5	Amber	Engine Injector Cylinder #05	Injector Solenoid Driver Cylinder 5 Circuit - Current below normal or open circuit
324	653	5	Amber	Engine Injector Cylinder #03	Injector Solenoid Driver Cylinder 3 Circuit - Current below normal or open circuit
325	656	5	Amber	Engine Injector Cylinder #06	Injector Solenoid Driver Cylinder 6 Circuit - Current below normal or open circuit

331	652	5	Amber	Engine Injector Cylinder #02	Injector Solenoid Driver Cylinder 2 Circuit - Current below normal or open circuit
332	654	5	Amber	Engine Injector Cylinder #04	Injector Solenoid Driver Cylinder 4 Circuit - Current below normal or open circuit
334	110	2	Amber	Engine Coolant Temperature	Engine Coolant Temperature - Data erratic, intermittent or incorrect
343	629	12	Amber	Controller #1	Engine Control Module Warning Internal Hardware Failure - Bad intelligent device or component
349	191	16	Amber	Transmission Output Shaft Speed	Transmission Output Shaft Speed - Data Valid But Above Normal Operating Range - Moderately Severe Level
351	3597	12	Amber	ECU Power Output Supply Voltage #1	Injector Power Supply - Bad intelligent device or component
352	3509	4	Amber	Sensor supply voltage 1	Sensor Supply 1 Circuit - Voltage below normal, or shorted to low source
386	3509	3	Amber	Sensor supply voltage 1	Sensor Supply 1 Circuit - Voltage above normal, or shorted to high source
415	100	1	Red	Engine Oil Pressure	Engine Oil Rifle Pressure - Data valid but below normal operational range - Most Severe Level
418	97	15	Maintenance	Water In Fuel Indicator	Water in Fuel Indicator - Data Valid But Above Normal Operating Range - Least Severe Level
428	97	3	Amber	Water In Fuel Indicator	Water in Fuel Indicator Sensor Circuit - Voltage above normal, or shorted to high source
429	97	4	Amber	Water In Fuel Indicator	Water in Fuel Indicator Sensor Circuit - Voltage below normal, or shorted to low source
431	558	2	Amber	Accelerator Pedal 1 Low Idle Switch	Accelerator Pedal or Lever Idle Validation Switch - Data erratic, intermittent or incorrect
432	558	13	Red	Accelerator Pedal 1 Low Idle Switch	Accelerator Pedal or Lever Idle Validation Switch Circuit - Out of Calibration
435	100	2	Amber	Engine Oil Pressure	Engine Oil Rifle Pressure - Data erratic, intermittent or incorrect
451	157	3	Amber	Engine Injector Metering Rail 1 Pressure	Injector Metering Rail 1 Pressure Sensor Circuit - Voltage above normal, or shorted to high source
452	157	4	Amber	Engine Injector Metering Rail 1 Pressure	Injector Metering Rail 1 Pressure Sensor Circuit - Voltage below normal, or shorted to low source
483	1349	3	Amber	Engine Injector Metering Rail 2 Pressure	Injector Metering Rail 2 Pressure Sensor Circuit - Voltage above normal, or shorted to high source
484	1349	4	Amber	Engine Injector Metering Rail 2 Pressure	Injector Metering Rail 2 Pressure Sensor Circuit - Voltage below normal, or shorted to low source
488	105	16	Amber	Engine Intake Manifold Temperature	Intake Manifold 1 Temperature - Data Valid But Above Normal Operating Range - Moderately Severe Level
489	191	18	Amber	Transmission Output Shaft Speed	Transmission Output Shaft Speed - Data Valid But Below Normal Operating Range - Moderately Severe Level
497	1377	2	Amber	Engine Synchronization Switch	Multiple Unit Synchronization Switch - Data erratic, intermittent or incorrect
515	3514	3	Amber	Sensor supply voltage 6	Sensor Supply 6 Circuit - Voltage above normal, or shorted to high source
516	3514	4	Amber	Sensor supply voltage 6	Sensor Supply 6 Circuit - Voltage below normal, or shorted to low source
527	702	3	Amber	Auxiliary I/O #02	Auxiliary Input/Output 2 Circuit - Voltage above normal, or shorted to high source
529	703	3	Amber	Auxiliary I/O #03	Auxiliary Input/Output 3 Circuit - Voltage above normal, or shorted to high source
553	157	16	Amber	Engine Injector Metering Rail 1 Pressure	Injector Metering Rail 1 Pressure - Data Valid But Above Normal Operating Range - Moderately Severe Level
555	101	16	Amber	Engine Crankcase Pressure	Crankcase Pressure - Data Valid But Above Normal Operating Range - Moderately Severe Level
556	101	0	Red	Engine Crankcase Pressure	Crankcase Pressure - Data valid but above normal operational range - Most Severe Level
559	157	18	Amber	Engine Injector Metering Rail 1 Pressure	Injector Metering Rail 1 Pressure - Data Valid But Below Normal Operating Range - Moderately Severe Level
584	677	3	Amber	Engine Starter Motor Relay	Starter Relay Driver Circuit - Voltage above normal, or shorted to high source
585	677	4	Amber	Engine Starter Motor Relay	Starter Relay Driver Circuit - Voltage below normal, or shorted to low source
595	103	16	Amber	Engine Turbocharger 1 Speed	Turbocharger 1 Speed - Data Valid But Above Normal Operating Range - Moderately Severe Level
599	640	14	Red	Engine External Protection Input	Auxiliary Commanded Dual Output Shutdown - Special Instructions
611	1383	31	None	Engine was Shut Down Hot	Engine Shut Down Hot - Condition Exists
649	1378	31	Maintenance	Engine Oil Change Interval	Engine Oil Change Interval - Condition Exists
687	103	18	Amber	Engine Turbocharger 1 Speed	Turbocharger 1 Speed - Data Valid But Below Normal Operating Range - Moderately Severe Level
689	190	2	Amber	Engine Speed	Engine Crankshaft Speed/Position - Data erratic, intermittent or incorrect
691	1172	3	Amber	Engine Turbocharger 1 Compressor Intake Temperature	Turbocharger 1 Compressor Intake Temperature Circuit - Voltage above normal, or shorted to high source
692	1172	4	Amber	Engine Turbocharger 1 Compressor Intake Temperature	Turbocharger 1 Compressor Intake Temperature Circuit - Voltage below normal, or shorted to low source
693	1172	2	Amber	Engine Turbocharger 1 Compressor Intake Temperature	Turbocharger 1 Compressor Intake Temperature - Data erratic, intermittent or incorrect

731	723	7	Amber	Engine Speed 2	Engine Speed / Position Camshaft and Crankshaft Misalignment - Mechanical system not responding or out of adjustment
741	1176	3	Amber	Engine Turbocharger 1 Compressor Intake Pressure	Turbocharger 1 Compressor Intake Pressure Circuit - Voltage above normal, or shorted to high source
742	1176	4	Amber	Engine Turbocharger 1 Compressor Intake Pressure	Turbocharger 1 Compressor Intake Pressure Circuit - Voltage below normal, or shorted to low source
743	1176	2	Amber	Engine Turbocharger 1 Compressor Intake Pressure	Turbocharger 1 Compressor Intake Pressure - Data erratic, intermittent or incorrect
769	597	3	Amber	Brake Switch	Brake Switch Circuit - Voltage above normal, or shorted to high source
771	597	4	Amber	Brake Switch	Brake Switch Circuit - Voltage below normal, or shorted to low source
778	723	2	Amber	Engine Speed 2	Engine Camshaft Speed / Position Sensor - Data erratic, intermittent or incorrect
1117	3597	2	None	ECU Power Output Supply Voltage #1	Power Supply Lost With Ignition On - Data erratic, intermittent or incorrect
1239	2623	3	Amber	Accelerator Pedal #1 Channel 2	Accelerator Pedal or Lever Position Sensor 2 Circuit - Voltage above normal, or shorted to high source
1241	2623	4	Amber	Accelerator Pedal #1 Channel 2	Accelerator Pedal or Lever Position Sensor 2 Circuit - Voltage below normal, or shorted to low source
1242	91	2	Red	Accelerator Pedal Position 1	Accelerator Pedal or Lever Position Sensor 1 - Data erratic, intermittent or incorrect
1358	91	3	Amber	Accelerator Pedal Position 1	Accelerator Pedal or Lever Position Sensor 1 Circuit - Voltage above normal, or shorted to high source
1359	91	4	Amber	Accelerator Pedal Position 1	Accelerator Pedal or Lever Position Sensor 1 Circuit - Voltage below normal, or shorted to low source
1515	91	19	Red	Accelerator Pedal Position 1	SAE J1939 Multiplexed Accelerator Pedal or Lever Sensor System - Received Network Data In Error
1539	1387	3	Amber	Auxiliary Pressure #1	Auxiliary Pressure Sensor Input 1 Circuit - Voltage above normal, or shorted to high source
1621	1387	4	Amber	Auxiliary Pressure #1	Auxiliary Pressure Sensor Input 1 Circuit - Voltage below normal, or shorted to low source
1668	1761	4	Amber	Aftertreatment 1 Diesel Exhaust Fluid Tank Level	Aftertreatment 1 Diesel Exhaust Fluid Tank Level Sensor Circuit - Voltage below normal, or shorted to low source
1669	1761	3	Amber	Aftertreatment 1 Diesel Exhaust Fluid Tank Level	Aftertreatment 1 Diesel Exhaust Fluid Tank Level Sensor Circuit - Voltage above normal, or shorted to high source
1673	1761	1	Amber	Aftertreatment 1 Diesel Exhaust Fluid Tank Level	Aftertreatment 1 Diesel Exhaust Fluid Tank Level - Data valid but below normal operational range -Most Severe Level
1677	3031	4	Amber	Aftertreatment 1 Diesel Exhaust Fluid Tank Temperature	Aftertreatment 1 Diesel Exhaust Fluid Tank Temperature Sensor - Voltage below normal, or shorted to low source
1678	3031	3	Amber	Aftertreatment 1 Diesel Exhaust Fluid Tank Temperature	Aftertreatment 1 Diesel Exhaust Fluid Tank Temperature Sensor - Voltage above normal, or shorted to high source
1679	3031	2	Amber	Aftertreatment 1 Diesel Exhaust Fluid Tank Temperature	Aftertreatment 1 Diesel Exhaust Fluid Tank Temperature - Data erratic, intermittent or incorrect
1682	3362	31	Amber	Aftertreatment 1 Diesel Exhaust Fluid Dosing Unit Input Lines	Aftertreatment 1 Diesel Exhaust Fluid Dosing Unit Input Lines - Condition Exists
1685	3364	4	Amber	Aftertreatment 1 Diesel Exhaust Fluid Tank 1 Quality	Aftertreatment Diesel Exhaust Fluid Quality Sensor Circuit - Voltage below normal, or shorted to low source
1686	3364	3	Amber	Aftertreatment 1 Diesel Exhaust Fluid Tank 1 Quality	Aftertreatment Diesel Exhaust Fluid Quality Sensor Circuit - Voltage above normal, or shorted to high source
1695	3513	3	Amber	Sensor supply voltage 5	Sensor Supply 5 - Voltage above normal, or shorted to high source
1696	3513	4	Amber	Sensor supply voltage 5	Sensor Supply 5 - Voltage below normal, or shorted to low source
1713	3363	16	Amber	Aftertreatment 1 Diesel Exhaust Fluid Tank 1 Heater	Aftertreatment 1 Diesel Exhaust Fluid Tank Heater - Data Valid But Above Normal Operating Range - Moderately Severe Level
1714	3364	13	Amber	Aftertreatment 1 Diesel Exhaust Fluid Tank 1 Quality	Aftertreatment Diesel Exhaust Fluid Quality - Out of Calibration
1715	3364	11	Amber	Aftertreatment 1 Diesel Exhaust Fluid Tank 1 Quality	Aftertreatment Diesel Exhaust Fluid Quality - Root Cause Not Known
1843	101	3	Amber	Engine Crankcase Pressure	Crankcase Pressure Circuit - Voltage above normal, or shorted to high source
1844	101	4	Amber	Engine Crankcase Pressure	Crankcase Pressure Circuit - Voltage below normal, or shorted to low source
1852	97	16	Amber	Water In Fuel Indicator	Water in Fuel Indicator - Data Valid But Above Normal Operating Range - Moderately Severe Level
1879	3251	3	Amber	Aftertreatment 1 Diesel Particulate Filter Differential Pressure	Aftertreatment Diesel Particulate Filter Differential Pressure Sensor Circuit - Voltage above normal
1881	3251	4	Amber	Aftertreatment 1 Diesel Particulate Filter Differential Pressure	Aftertreatment Diesel Particulate Filter Differential Pressure Sensor Circuit - Voltage below normal
1883	3251	2	Amber	Aftertreatment 1 Diesel Particulate Filter Differential Pressure	Aftertreatment Diesel Particulate Filter Differential Pressure Sensor - Data erratic, intermittent or incorrect
1885	3216	4	Amber	Aftertreatment 1 Intake NOx	Aftertreatment 1 Intake NOx Sensor Circuit - Voltage below normal, or shorted to low source
1887	3226	4	Amber	Aftertreatment 1 Outlet NOx	Aftertreatment 1 Outlet NOx Sensor Circuit - Voltage below normal, or shorted to low source
1898	641	13	Amber	Engine Variable Geometry Turbocharger Actuator #1	VGT Actuator Controller - Out of Calibration

1921	3251	16	Amber	Aftertreatment 1 Diesel Particulate Filter Differential Pressure	Aftertreatment Diesel Particulate Filter Differential Pressure - Data Valid But Above Normal Operating Range
1922	3251	0	Red	Aftertreatment 1 Diesel Particulate Filter Differential Pressure	Aftertreatment Diesel Particulate Filter Differential Pressure - Data valid but above normal Operating Range
1976	641	15	None	Engine Variable Geometry Turbocharger Actuator #1	VGT Actuator Driver Over Temperature (Calculated) - Data Valid But Above Normal Operating Range - Least Severe Level
1993	4795	31	Amber	Aftertreatment 1 Diesel Particulate Filter Missing	Aftertreatment 1 Diesel Particulate Filter Missing - Condition Exists
2185	3512	3	Amber	Sensor supply voltage 4	Sensor Supply 4 Circuit - Voltage above normal, or shorted to high source
2186	3512	4	Amber	Sensor supply voltage 4	Sensor Supply 4 Circuit - Voltage below normal, or shorted to low source
2198	641	11	Amber	Engine Variable Geometry Turbocharger Actuator #1	VGT Actuator Driver Circuit - Root Cause Not Known
2311	633	31	Amber	Engine Fuel Actuator 1 Control Command	Electronic Fuel Injection Control Valve Circuit - Condition Exists
2321	190	2	None	Engine Speed	Engine Crankshaft Speed/Position - Data erratic, intermittent or incorrect
2322	723	2	None	Engine Speed 2	Engine Camshaft Speed / Position Sensor - Data erratic, intermittent or incorrect
2373	1209	3	Amber	Engine Exhaust Gas Pressure 1	Exhaust Gas Pressure Sensor 1 Circuit - Voltage above normal, or shorted to high source
2374	1209	4	Amber	Engine Exhaust Gas Pressure 1	Exhaust Gas Pressure Sensor 1 Circuit - Voltage below normal, or shorted to low source
2387	641	7	Amber	Engine Variable Geometry Turbocharger Actuator #1	VGT Actuator Driver Circuit (Motor) - Mechanical system not responding or out of adjustment
2448	111	17	Maintenance	Engine Coolant Level	Coolant Level - Data Valid But Below Normal Operating Range - Least Severe Level
2468	190	16	Amber	Engine Speed	Engine Crankshaft Speed/Position - Data Valid But Above Normal Operating Range - Moderately Severe Level
2554	1209	2	Amber	Engine Exhaust Gas Pressure 1	Exhaust Gas Pressure 1 - Data erratic, intermittent or incorrect
2557	697	3	Amber	Auxiliary PWM Driver #1	Auxiliary PWM Driver 1 Circuit - Voltage above normal, or shorted to high source
2558	697	4	Amber	Auxiliary PWM Driver #1	Auxiliary PWM Driver 1 Circuit - Voltage below normal, or shorted to low source
2571	2630	3	Amber	Engine Charge Air Cooler 1 Outlet Temperature	Engine Charge Air Cooler Outlet Temperature - Voltage above normal, or shorted to high source
2572	2630	4	Amber	Engine Charge Air Cooler 1 Outlet Temperature	Engine Charge Air Cooler Outlet Temperature - Voltage below normal, or shorted to low source
2634	641	12	Red	Engine Variable Geometry Turbocharger Actuator #1	VGT Actuator Controller - Bad intelligent device or component
2636	641	9	Red	Engine Variable Geometry Turbocharger Actuator #1	VGT Actuator Driver Circuit - Abnormal update rate
2638	5298	17	None	Aftertreatment 1 Diesel Oxidation Catalyst Conversion Efficiency	Aftertreatment 1 Diesel Oxidation Catalyst Conversion Efficiency - Data Valid But Below Normal Operating Range - Moderately Severe Level
2639	3251	15	None	Aftertreatment 1 Diesel Particulate Filter Differential Pressure	Aftertreatment Diesel Particulate Filter Differential Pressure - Data valid but above normal Operating Range
2771	3226	9	Amber	Aftertreatment 1 Outlet NOx	Aftertreatment 1 Outlet NOx Sensor - Abnormal update rate
2778	3481	16	Amber	Aftertreatment 1 Fuel Rate	Aftertreatment Fuel Rate - Data Valid But Above Normal Operating Range - Moderately Severe Level
2973	102	2	Amber	Engine Intake Manifold #1 Pressure	Intake Manifold 1 Pressure - Data erratic, intermittent or incorrect
3133	3610	3	Amber	Aftertreatment Diesel Particulate Filter Outlet Pressure	Aftertreatment 1 Diesel Particulate Filter Outlet Pressure Sensor Circuit - Voltage above normal, or shorted to high source
3134	3610	4	Amber	Aftertreatment Diesel Particulate Filter Outlet Pressure	Aftertreatment 1 Diesel Particulate Filter Outlet Pressure Sensor Circuit - Voltage below normal, or shorted to low source
3135	3610	2	Amber	Aftertreatment Diesel Particulate Filter Outlet Pressure	Aftertreatment 1 Diesel Particulate Filter Outlet Pressure - Data erratic, intermittent or incorrect
3139	3667	3	Amber	Engine Air Shutoff Status	Engine Air Shutoff Circuit - Voltage above normal, or shorted to high source
3141	3667	4	Amber	Engine Air Shutoff Status	Engine Air Shutoff Circuit - Voltage below normal, or shorted to low source
3142	4360	3	Amber	Aftertreatment 1 SCR Catalyst Intake Gas Temperature	Aftertreatment 1 SCR Intake Temperature Sensor Circuit - Voltage above normal, or shorted to high source
3144	4360	2	Amber	Aftertreatment 1 SCR Catalyst Intake Gas Temperature	Aftertreatment 1 SCR Intake Temperature Sensor - Data erratic, intermittent or incorrect
3146	4363	3	Amber	Aftertreatment 1 SCR Catalyst Outlet Gas Temperature	Aftertreatment 1 SCR Outlet Temperature Sensor Circuit - Voltage above normal, or shorted to high source
3147	4363	4	Amber	Aftertreatment 1 SCR Catalyst Outlet Gas Temperature	Aftertreatment 1 SCR Outlet Temperature Sensor Circuit - Voltage below normal, or shorted to low source
3148	4363	2	Amber	Aftertreatment 1 SCR Catalyst Outlet Gas Temperature	Aftertreatment 1 SCR Outlet Temperature Sensor - Data erratic, intermittent or incorrect
3151	4794	31	Amber	Aftertreatment 1 SCR Catalyst System	Aftertreatment 1 SCR Catalyst System Missing - Condition Exists
3165	4363	0	Red	Aftertreatment 1 SCR Catalyst Outlet Gas Temperature	Aftertreatment 1 SCR Outlet Temperature - Data valid but above normal operational range - Most Severe

3232	3216	9	Amber	Aftertreatment 1 Intake NOx	Aftertreatment 1 Intake NOx Sensor - Abnormal update rate
3235	4363	16	Red	Aftertreatment 1 SCR Catalyst Outlet Gas Temperature	Aftertreatment 1 SCR Outlet Temperature - Data Valid But Above Normal Operating Range - Moderately Severe Level
3251	4765	16	Red	Aftertreatment Diesel Oxidation Catalyst Intake Temperature	Aftertreatment 1 Diesel Oxidation Catalyst Intake Temperature - Data Valid But Above Normal Operating Range
3253	3242	16	Red	Aftertreatment 1 Diesel Particulate Filter Intake Gas Temperature	Aftertreatment 1 Diesel Particulate Filter Intake Temperature - Data Valid But Above Normal Operating Range
3255	3246	16	Red	Aftertreatment 1 Diesel Particulate Filter Outlet Gas Temperature	Aftertreatment 1 Diesel Particulate Filter Outlet Temperature - Data Valid But Above Normal Operating Range
3311	3242	0	Red	Aftertreatment 1 Diesel Particulate Filter Intake Gas Temperature	Aftertreatment 1 Diesel Particulate Filter Intake Temperature - Data valid but above normal operation
3312	3246	0	Red	Aftertreatment 1 Diesel Particulate Filter Outlet Gas Temperature	Aftertreatment 1 Diesel Particulate Filter Outlet Temperature - Data valid but above normal operation
3313	4765	4	Amber	Aftertreatment Diesel Oxidation Catalyst Intake Temperature	Aftertreatment 1 Diesel Oxidation Catalyst Intake Temperature Sensor Circuit - Voltage below normal, or shorted to low source
3314	4765	3	Amber	Aftertreatment Diesel Oxidation Catalyst Intake Temperature	Aftertreatment 1 Diesel Oxidation Catalyst Intake Temperature Sensor Circuit - Voltage above normal, or shorted to high source
3315	4765	2	Amber	Aftertreatment Diesel Oxidation Catalyst Intake Temperature	Aftertreatment 1 Diesel Oxidation Catalyst Intake Temperature - Data erratic, intermittent or incorrect
3316	3242	4	Amber	Aftertreatment 1 Diesel Particulate Filter Intake Gas Temperature	Aftertreatment 1 Diesel Particulate Filter Intake Temperature Sensor Circuit - Voltage below normal, or shorted to low source
3317	3242	3	Amber	Aftertreatment 1 Diesel Particulate Filter Intake Gas Temperature	Aftertreatment 1 Diesel Particulate Filter Intake Temperature Sensor Circuit - Voltage above normal, or shorted to high source
3318	3242	2	Amber	Aftertreatment 1 Diesel Particulate Filter Intake Gas Temperature	Aftertreatment 1 Diesel Particulate Filter Intake Temperature - Data erratic, intermittent or incorrect
3319	3246	3	Amber	Aftertreatment 1 Diesel Particulate Filter Outlet Gas Temperature	Aftertreatment 1 Diesel Particulate Filter Outlet Temperature Sensor Circuit - Voltage above normal, or shorted to high source
3321	3246	4	Amber	Aftertreatment 1 Diesel Particulate Filter Outlet Gas Temperature	Aftertreatment 1 Diesel Particulate Filter Outlet Temperature Sensor Circuit - Voltage below normal, or shorted to low source
3322	3246	2	Amber	Aftertreatment 1 Diesel Particulate Filter Outlet Gas Temperature	Aftertreatment 1 Diesel Particulate Filter Outlet Temperature - Data erratic, intermittent or incorrect
3326	91	9	Red	Accelerator Pedal Position 1	SAE J1939 Multiplexed Accelerator Pedal or Lever Sensor System - Abnormal update rate
3341	107	16	Amber	Engine Air Filter 1 Differential Pressure	Engine Air Filter Differential Pressure - Data Valid But Above Normal Operating Range - Moderately Severe Level
3375	5397	31	Amber	Aftertreatment 1 Diesel Particulate Filter Regeneration too Frequent	Aftertreatment Diesel Particulate Filter Regeneration too Frequent - Condition Exists
3376	5319	31	Amber	Aftertreatment 1 Diesel Particulate Filter Incomplete Regeneration	Aftertreatment Diesel Particulate Filter Incomplete Regeneration - Condition Exists
3419	5125	3	Amber	Sensor supply voltage 7	Sensor Supply 7 Circuit - Voltage above normal, or shorted to high source
3421	5125	4	Amber	Sensor supply voltage 7	Sensor Supply 7 Circuit - Voltage below normal, or shorted to low source
3497	1761	17	Maintenance	Aftertreatment 1 Diesel Exhaust Fluid Tank Level	Aftertreatment 1 Diesel Exhaust Fluid Tank Level - Data Valid But Below Normal Operating Range - Least Severe Level
3498	1761	18	Maintenance	Aftertreatment 1 Diesel Exhaust Fluid Tank Level	Aftertreatment 1 Diesel Exhaust Fluid Tank Level - Data Valid But Below Normal Operating Range - Moderately Severe Level
3527	558	19	Red	Accelerator Pedal 1 Low Idle Switch	Accelerator Pedal or Lever Idle Validation Switch - Received Network Data In Error
3528	558	9	Red	Accelerator Pedal 1 Low Idle Switch	Accelerator Pedal or Lever Idle Validation Switch - Abnormal update rate
3542	51	2	Amber	Engine Throttle Valve 1 Position 1	Engine Intake Throttle Actuator Position Sensor - Data Erratic, Intermittent, or Incorrect
3545	3226	10	Amber	Aftertreatment 1 Outlet NOx	Aftertreatment 1 Outlet NOx Sensor - Abnormal rate of change
3547	4096	31	Amber	NOx limits exceeded due to Empty Diesel Exhaust Fluid Tank	Aftertreatment Diesel Exhaust Fluid Tank Empty - Condition Exists
3558	3361	3	Amber	Aftertreatment 1 Diesel Exhaust Fluid Dosing Unit	Aftertreatment 1 Diesel Exhaust Fluid Dosing Unit - Voltage above normal, or shorted to high source
3559	3361	4	Amber	Aftertreatment 1 Diesel Exhaust Fluid Dosing Unit	Aftertreatment 1 Diesel Exhaust Fluid Dosing Unit - Voltage below normal, or shorted to low source
3565	5394	3	Amber	Aftertreatment 1 Diesel Exhaust Fluid Dosing Valve	Aftertreatment 1 Diesel Exhaust Fluid Dosing Valve 1 Circuit - Voltage Above Normal or Shorted to High Source
3567	5394	5	Amber	Aftertreatment Diesel Exhaust Fluid Dosing Valve	Aftertreatment Diesel Exhaust Fluid Dosing Valve - Current below normal or open circuit
3568	5394	7	Amber	Aftertreatment Diesel Exhaust Fluid Dosing Valve	Aftertreatment Diesel Exhaust Fluid Dosing Valve - Mechanical system not responding or out of adjustment
3571	4334	3	Amber	Aftertreatment 1 Diesel Exhaust Fluid Doser Absolute Pressure	Aftertreatment 1 Diesel Exhaust Fluid Pressure Sensor - Voltage above normal, or shorted to high source

3572	4334	4	Amber	Aftertreatment 1 Diesel Exhaust Fluid Doser Absolute Pressure	Aftertreatment 1 Diesel Exhaust Fluid Pressure Sensor - Voltage below normal, or shorted to low source
3574	4334	18	Amber	Aftertreatment 1 Diesel Exhaust Fluid Doser Absolute Pressure	Aftertreatment 1 Diesel Exhaust Fluid Pressure Sensor - Data Valid But Below Normal Operating Range
3575	4334	16	Amber	Aftertreatment 1 Diesel Exhaust Fluid Doser Absolute Pressure	Aftertreatment 1 Diesel Exhaust Fluid Pressure Sensor - Data Valid But Above Normal Operating Range
3583	5031	10	Amber	Aftertreatment 1 Outlet Gas NOx Sensor Heater Ratio	Aftertreatment 1 Outlet NOx Sensor Heater - Abnormal rate of change
3596	4334	2	Amber	Aftertreatment 1 Diesel Exhaust Fluid Doser Absolute Pressure	Aftertreatment 1 Diesel Exhaust Fluid Pressure Sensor - Data erratic, intermittent or incorrect
3641	748	9	Amber	Transmission Output Retarder	Transmission Output Retarder - Abnormal update rate
3649	5024	10	Amber	Aftertreatment 1 Intake Gas NOx Sensor Heater Ratio	Aftertreatment 1 Intake NOx Sensor Heater - Abnormal rate of change
3681	3228	2	Amber	Aftertreatment 1 Outlet Gas Sensor Power Status	Aftertreatment 1 Outlet NOx Sensor Power Supply - Data erratic, intermittent or incorrect
3682	3218	2	Amber	Aftertreatment 1 Intake Gas Sensor Power Status	Aftertreatment 1 Intake NOx Sensor Power Supply - Data erratic, intermittent or incorrect
3697	630	12	Red	Engine Control Module Calibration Memory	Engine Control Module Calibration Memory - Bad intelligent device or component
3712	5246	0	Red	Aftertreatment SCR Operator Inducement Severity	Aftertreatment SCR Operator Inducement - Data valid but above normal operational range - Most Severe level
3714	1569	31	Amber	Engine Protection Torque Derate	Engine Protection Torque Derate - Condition Exists
3725	3216	10	Amber	Aftertreatment 1 Intake NOx	Aftertreatment 1 Intake NOx Sensor - Abnormal rate of change
3727	5571	7	None	High Pressure Common Rail Fuel Pressure Relief Valve	High Pressure Common Rail Fuel Pressure Relief Valve - Mechanical system not responding or out of adjustment
3737	1675	31	None	Engine Starter Mode	Engine Starter Mode Overcrank Protection - Condition Exists
3741	5571	0	Amber	High Pressure Common Rail Fuel Pressure Relief Valve	High Pressure Common Rail Fuel Pressure Relief Valve - Data valid but above normal operational range
3748	3216	20	Amber	Aftertreatment 1 Intake NOx	Aftertreatment 1 Intake NOx Sensor - Data not Rational - Drifted High
3765	442	3	Amber	Auxiliary Temperature 2	Auxiliary Temperature Sensor Input 2 Circuit - Voltage above normal, or shorted to high source
3766	442	4	Amber	Auxiliary Temperature 2	Auxiliary Temperature Sensor Input 2 Circuit - Voltage below normal, or shorted to low source
3838	2978	9	Amber	Estimated Engine Parasitic Losses - Percent Torque	Estimated Engine Parasitic Losses - Percent Torque - Abnormal update rate
3841	596	2	Amber	Cruise Control Enable Switch	Cruise Control Enable Switch - Data erratic, intermittent or incorrect
3843	5603	9	None	Cruise Control Disable Command	Cruise Control Disable Command - Abnormal update rate
3845	5603	31	None	Cruise Control Disable Command	Cruise Control Disable Command - Condition Exists
3866	3364	1	Amber	Aftertreatment 1 Diesel Exhaust Fluid Tank 1 Quality	Aftertreatment Diesel Exhaust Fluid Quality - Data valid but below normal operational range - Most Severe Level
3868	3364	9	Amber	Aftertreatment 1 Diesel Exhaust Fluid Tank 1 Quality	Aftertreatment Diesel Exhaust Fluid Quality - Abnormal update rate
3878	3364	2	Amber	Aftertreatment 1 Diesel Exhaust Fluid Tank 1 Quality	Aftertreatment Diesel Exhaust Fluid Quality - Data erratic, intermittent or incorrect
4151	5742	9	Amber	Aftertreatment Diesel Particulate Filter Temperature Sensor Module	Aftertreatment Diesel Particulate Filter Temperature Sensor Module - Abnormal update rate
4152	5743	9	Amber	Aftertreatment Selective Catalytic Reduction Temperature Sensor Module	Aftertreatment Selective Catalytic Reduction Temperature Sensor Module - Abnormal update rate
4158	5742	12	Amber	Aftertreatment Diesel Particulate Filter Temperature Sensor Module	Aftertreatment Diesel Particulate Filter Temperature Sensor Module - Bad intelligent device or component
4159	5743	12	Amber	Aftertreatment Selective Catalytic Reduction Temperature Sensor Module	Aftertreatment Selective Catalytic Reduction Temperature Sensor Module - Bad intelligent device or component
4161	5742	3	Amber	Aftertreatment Diesel Particulate Filter Temperature Sensor Module	Aftertreatment Diesel Particulate Filter Temperature Sensor Module - Voltage Above Normal, or Shorted to high source
4162	5742	4	Amber	Aftertreatment Diesel Particulate Filter Temperature Sensor Module	Aftertreatment Diesel Particulate Filter Temperature Sensor Module - Voltage below normal, or shorted to low source
4163	5742	16	Amber	Aftertreatment Diesel Particulate Filter Temperature Sensor Module	Aftertreatment Diesel Particulate Filter Temperature Sensor Module- Data Valid But Above Normal Operating Range
4164	5743	3	Amber	Aftertreatment Selective Catalytic Reduction Temperature Sensor Module	Aftertreatment Selective Catalytic Reduction Temperature Sensor Module - Voltage Above Normal, or Shorted to high source
4165	5743	4	Amber	Aftertreatment Selective Catalytic Reduction Temperature Sensor Module	Aftertreatment Selective Catalytic Reduction Temperature Sensor Module - Voltage below normal, or Shorted to low source
4166	5743	16	Amber	Aftertreatment Selective Catalytic Reduction Temperature Sensor Module	Aftertreatment Selective Catalytic Reduction Temperature Sensor Module - Data Valid But Above Normal
4259	5742	11	Amber	Aftertreatment Diesel Particulate Filter Temperature Sensor Module	Aftertreatment Diesel Particulate Filter Temperature Sensor Module - Root Cause Not Known
4261	5743	11	Amber	Aftertreatment Selective Catalytic Reduction Temperature Sensor Module	Aftertreatment Selective Catalytic Reduction Temperature Sensor Module - Root Cause Not Known
4262	5571	3	Amber	High Pressure Common Rail Fuel Pressure Relief Valve	High Pressure Common Rail Fuel Pressure Relief Valve - Voltage Above Normal, or Shorted to High Source
4263	5571	4	Amber	High Pressure Common Rail Fuel Pressure Relief Valve	High Pressure Common Rail Fuel Pressure Relief Valve - Voltage below normal, or shorted to low source

4265	5571	11	Amber	High Pressure Common Rail Fuel Pressure Relief Valve	High Pressure Common Rail Fuel Pressure Relief Valve - Root Cause Not Known
4277	3364	10	Amber	Aftertreatment 1 Diesel Exhaust Fluid Tank 1 Quality	Aftertreatment Diesel Exhaust Fluid Quality - Abnormal Rate of Change
4284	5793	9	Amber	Desired Engine Fueling State	Desired Engine Fueling State - Abnormal Update Rate
4452	3226	7	Amber	Aftertreatment 1 Outlet NOx Sensor Closed Loop Operation	Aftertreatment 1 Outlet NOx Sensor Closed Loop Operation - Condition Exists
4484	3667	7	Red	Engine Air Shutoff	Engine Air Shutoff - Mechanical System Not Responding or Out of Adjustment
4526	521	2	Amber	Brake Pedal Position	Brake Pedal Position - Data erratic, intermittent or incorrect
4572	3031	9	Amber	Aftertreatment 1 Diesel Exhaust Fluid Tank Temperature	Aftertreatment 1 Diesel Exhaust Fluid Tank Temperature - Abnormal Update Rate
4584	3936	14	Red	Aftertreatment Diesel Particulate Filter System	Aftertreatment Diesel Particulate Filter System - Special Instructions
4585	4792	14	Red	Aftertreatment 1 SCR Catalyst System	Aftertreatment 1 SCR Catalyst System - Special Instructions
4677	1761	9	Amber	Aftertreatment 1 Diesel Exhaust Fluid Tank Level	SAE J1939 Multiplexing PGN Timeout Error - Abnormal update rate
4724	702	5	Amber	Auxiliary I/O #02	Auxiliary Input/Output 2 Circuit - Current below normal or open circuit
4725	702	6	Amber	Auxiliary I/O #02	Auxiliary Input/Output 2 Circuit - Current above normal or grounded circuit
4731	3031	13	Amber	Aftertreatment 1 Diesel Exhaust Fluid Tank Temperature	Aftertreatment 1 Diesel Exhaust Fluid Tank Temperature Sensor - Out of Calibration
4734	701	14	Red	Auxiliary I/O #01	Auxiliary Input/Output 1 - Special Instructions
4737	3031	11	Amber	Aftertreatment 1 Diesel Exhaust Fluid Tank Temperature	Aftertreatment 1 Diesel Exhaust Fluid Tank Temperature - Root Cause Not Known
4739	1761	11	Amber	Aftertreatment 1 Diesel Exhaust Fluid Tank Level	Aftertreatment 1 Diesel Exhaust Fluid Tank Level Sensor - Root Cause Not Known
4747	3217	20	Amber	Aftertreatment 1 Intake Percent Oxygen 1	Aftertreatment Intake Oxygen Sensor - Data Not Rational - Drifted High
4748	3217	21	Amber	Aftertreatment 1 Intake Percent Oxygen 1	Aftertreatment Intake Oxygen Sensor - Data Not Rational - Drifted Low
4749	3227	20	Amber	Aftertreatment 1 Outlet Percent Oxygen 1	Aftertreatment Outlet Oxygen - Data Not Rational - Drifted High
4751	3227	21	Amber	Aftertreatment 1 Outlet Percent Oxygen 1	Aftertreatment Outlet Oxygen - Data Not Rational - Drifted Low
4768	3521	11	Amber	Aftertreatment 1 Diesel Exhaust Fluid Property	Aftertreatment 1 Diesel Exhaust Fluid Property - Root Cause Not Known
4769	1761	10	Amber	Aftertreatment 1 Diesel Exhaust Fluid Tank Level	Aftertreatment 1 Diesel Exhaust Fluid Tank Level Sensor - Abnormal Rate of Change
4842	3364	15	None	Aftertreatment Diesel Exhaust Fluid Quality	Aftertreatment Diesel Exhaust Fluid Quality - Data Valid But Above Normal Operating Range - Least Severe Level
4863	5245	31	Amber	Aftertreatment Selective Catalytic Reduction Operator Inducement Active	Aftertreatment Diesel Exhaust Fluid Tank Low Level Indicator
4867	5571	31	Amber	High Pressure Common Rail Fuel Pressure Relief Valve	High Pressure Common Rail Fuel Pressure Relief Valve - Condition Exists
4953	3353	3	Amber	Alternator 1 Status	Alternator 1 Status - Voltage Above Normal, or Shorted to High Source
4954	3353	4	Amber	Alternator 1 Status	Alternator 1 Status - Voltage Below Normal, or Shorted to Low Source
4956	6713	13	Red	Variable Geometry Turbocharger Actuator	Variable Geometry Turbocharger Actuator Software - Out of Calibration
4957	6713	31	Red	Variable Geometry Turbocharger Actuator	Variable Geometry Turbocharger Actuator Software - Condition Exists
5177	6713	9	Amber	VGT Actuator Driver Circuit	VGT Actuator Driver Circuit - Abnormal update rate
5248	1623	13	Amber	Tachograph Output Shaft Speed	Tachograph Output Shaft Speed - Out of Calibration
5292	520809	31	Amber	Excessive Time Since Last Engine Air Shutoff Maintenance Test	Excessive Time Since Last Engine Air Shutoff Maintenance Test - Condition Exists
5383	3720	15	Maintenance	Aftertreatment 1 Diesel Particulate Filter Ash Load Percent	Aftertreatment 1 Diesel Particulate Filter Ash Load Percent - Data Valid But Above Normal Operating Range - Least Severe Level
5576	107	15	Maintenance	Engine Air Filter 1 Differential Pressure	Engine Air Filter Differential Pressure - Data Valid But Above Normal Operating Range - Least Severe Level
5632	6918	31	Maintenance	SCR System Cleaning Inhibited Due to Inhibit Switch	SCR System Cleaning Inhibited Due to Inhibit Switch - Condition Exists
5652	1209	15	Amber	Engine Exhaust Pressure 1	Exhaust Pressure 1 - Data Valid But Above Normal Operating Range - Least Severe Level
5653	6881	9	Amber	SCR Operator Inducement Override Switch	SCR Operator Inducement Override Switch - Abnormal Update Rate
5654	6881	13	Amber	SCR Operator Inducement Override Switch	SCR Operator Inducement Override Switch - Out of Calibration
5655	4364	31	Amber	Aftertreatment 1 SCR Conversion Efficiency	Aftertreatment 1 SCR Conversion Efficiency - Condition Exists
5689	3226	11	Amber	Aftertreatment 1 Outlet NOx Sensor	Aftertreatment 1 Outlet NOx Sensor - Root Cause Not Known
5715	3251	10	Amber	Aftertreatment 1 Diesel Particulate Filter Differential Pressure	Aftertreatment 1 Diesel Particulate Filter Differential Pressure - Abnormal Rate of Change
5716	3610	10	Amber	Aftertreatment 1 Diesel Particulate Filter Outlet Pressure	Aftertreatment 1 Diesel Particulate Filter Outlet Pressure - Abnormal Rate of Change

5864	4375	3	Amber	Aftertreatment 1 Diesel Exhaust Fluid Pump Drive Percentage	Aftertreatment 1 Diesel Exhaust Fluid Pump Command Circuit - Voltage Above Normal or Shorted to High Source
5865	4375	4	Amber	Aftertreatment 1 Diesel Exhaust Fluid Pump Drive Percentage	Aftertreatment 1 Diesel Exhaust Fluid Pump Command Circuit - Voltage Below Normal or Shorted to Low Source
5866	520953	3	Amber		Aftertreatment Diesel Exhaust Fluid Dosing Unit Relay Feedback - Voltage Above Normal or Shorted to High Source
5867	520953	4	Amber		Aftertreatment Diesel Exhaust Fluid Dosing Unit Relay Feedback Voltage Below Normal or Shorted to Low Source.
5868	4339	7	Amber	Aftertreatment 1 SCR Feedback Control Status	Aftertreatment 1 SCR Feedback Control Status - Mechanical System Not Responding or Out of Adjustment
5879	3464	3	Amber	Engine Throttle Actuator 1 Control Command	Electronic Throttle Control Actuator Driver Circuit - Voltage Above Normal or Shorted to High Source
5881	3464	4	Amber	Engine Throttle Actuator 1 Control Command	Electronic Throttle Control Actuator Driver Circuit - Voltage Below Normal or Shorted to Low Source
5935	4334	7	Amber	Aftertreatment 1 Diesel Exhaust Fluid Doser 1 Absolute Pressure	Aftertreatment 1 Diesel Exhaust Fluid Pressure - Mechanical System Not Responding or Out of Adjustment
5936	4334	15	Amber	Aftertreatment 1 Diesel Exhaust Fluid Doser 1 Absolute Pressure	Aftertreatment 1 Diesel Exhaust Fluid Pressure - Data Valid But Above Normal Operating Range - Least Severe Level
5938	3750	14	Amber	Aftertreatment 1 Diesel Particulate Filter Conditions Not Met for Active Regeneration	Aftertreatment 1 Diesel Particulate Filter Conditions Not Met for Active Regeneration - Special Instructions
5939	520968	9	Amber		Machine Constrained Operation- Abnormal Update Rate. No Communication or an invalid data transfer rate has been detected on the J1939 data link between the ECM and the machine electronic control unit.
5941	520968	19	None		Machine Constrained Operation- Received Network Data in Error. The received J1939 datalink message was not valid.
6256	168	15	None	Battery Potential / Power Input 1	Battery 1 Voltage - Data Valid But Above Normal Operating Range - Moderately Severe Level
6257	168	17	None	Battery Potential / Power Input 1	Battery 1 Voltage - Data Valid But Below Normal Operating Range - Moderately Severe Level
6263	647	3	None	Engine Fan Clutch 1 Output Device Driver	Fan Control Circuit - Voltage above normal, or shorted to high source
6264	647	4	None	Engine Fan Clutch 1 Output Device Driver	Fan Control Circuit - Voltage below normal, or shorted to low source
6456	5484	3	None	Engine Fan Clutch 2 Output Device Driver	Engine Fan Clutch 2 Control Circuit - Voltage above normal, or shorted to high source
6457	5484	4	None	Engine Fan Clutch 2 Output Device Driver	Engine Fan Clutch 2 Control Circuit - Voltage below normal, or shorted to low source
6467	1639	15	None	Fan Speed	Fan Speed - Data Valid but Above Normal Operational Range - Most Severe Level
6468	1639	17	None	Fan Speed	Fan Speed - Data Valid but Below Normal Operational Range - Most Severe Level
6471	6799	3	None	Engine Fan Blade Pitch	Fan Blade Pitch Position Sensor Circuit - Voltage Above Normal, or Shorted to High Source
6472	6799	4	None	Engine Fan Blade Pitch	Fan Blade Pitch Position Sensor Circuit - Voltage Below Normal, or Shorted to Low Source
6475	3363	7	None	Aftertreatment 1 Diesel Exhaust Fluid Tank 1 Heater	Aftertreatment 1 Diesel Exhaust Fluid Tank Heater - Mechanical system not responding or out of adjustment
6476	3363	18	None	Aftertreatment 1 Diesel Exhaust Fluid Tank 1 Heater	Aftertreatment 1 Diesel Exhaust Fluid Tank Heater - Data Valid But Below Normal Operating Range - Moderately Severe Level
6477	5491	3	None	Aftertreatment 1 Diesel Exhaust Fluid Line Heater Relay	Aftertreatment Diesel Exhaust Fluid Line Heater Relay - Voltage above normal, or shorted to high source
6478	5491	4	None	Aftertreatment 1 Diesel Exhaust Fluid Line Heater Relay	Aftertreatment Diesel Exhaust Fluid Line Heater Relay - Voltage below normal, or shorted to low source
6479	3363	3	None	Aftertreatment 1 Diesel Exhaust Fluid Tank 1 Heater	Aftertreatment 1 Diesel Exhaust Fluid Tank Heater - Voltage above normal, or shorted to high source
6481	3363	4	None	Aftertreatment 1 Diesel Exhaust Fluid Tank 1 Heater	Aftertreatment 1 Diesel Exhaust Fluid Tank Heater - Voltage below normal, or shorted to low source
6497	51	3	None	Engine Intake Throttle Actuator Position Sensor Circuit	Engine Intake Throttle Actuator Position Sensor Circuit- Voltage above normal, or shorted to high source
6498	51	4	None	Engine Intake Throttle Actuator Position Sensor Circuit	Engine Intake Throttle Actuator Position Sensor Circuit- Voltage above normal, or shorted to low source
6499	3597	17	None	ECU Power Output Supply Voltage #1	ECU Power Output Supply Voltage 1 - Data Valid But Below Normal Operating Range - Moderately Severe Level
6511	6655	3	None	ECU Power Lamp	Maintain ECU Power Lamp - Voltage Above Normal, or Shorted to High Source
6512	6655	4	None	ECU Power Lamp	Maintain ECU Power Lamp - Voltage Below Normal, or Shorted to Low Source
6522	111	3	None	Engine Coolant Level	Coolant Level Sensor 1 Circuit - Voltage above normal, or shorted to high source
6523	111	4	None	Engine Coolant Level	Coolant Level Sensor 1 Circuit - Voltage below normal, or shorted to low source
6526	1761	13	None	Aftertreatment 1 Diesel Exhaust Fluid Tank Temperature	Aftertreatment 1 Diesel Exhaust Fluid Tank Level Sensor - Out of Calibration
6531	4340	3	None	Aftertreatment 1 Diesel Exhaust Fluid Line Heater 1 State	Aftertreatment 1 Diesel Exhaust Fluid Line Heater 1 Circuit - Voltage above normal, or shorted to high source

6532	4340	4	None	Aftertreatment 1 Diesel Exhaust Fluid Line Heater 1 State	Aftertreatment 1 Diesel Exhaust Fluid Line Heater 1 Circuit - Voltage below normal, or shorted to low source
6533	4342	3	None	Aftertreatment 1 Diesel Exhaust Fluid Line Heater 2 State	Aftertreatment 1 Diesel Exhaust Fluid Line Heater 2 Circuit - Voltage above normal, or shorted to high source
6534	4342	4	None	Aftertreatment 1 Diesel Exhaust Fluid Line Heater 2 State	Aftertreatment 1 Diesel Exhaust Fluid Line Heater 2 Circuit - Voltage below normal, or shorted to low source
6535	4344	3	None	Aftertreatment 1 Diesel Exhaust Fluid Line Heater 3 State	Aftertreatment Diesel Exhaust Fluid Line Heater 3 Circuit - Voltage above normal, or shorted to high source
6536	4344	4	None	Aftertreatment 1 Diesel Exhaust Fluid Line Heater 3 State	Aftertreatment Diesel Exhaust Fluid Line Heater 3 Circuit - Voltage below normal, or shorted to low source
6556	729	3	None	Engine Intake Air Heater Driver #1	Engine Intake Air Heater 1 Circuit - Voltage above normal, or shorted to high source
6557	729	4	None	Engine Intake Air Heater Driver #1	Engine Intake Air Heater 1 Circuit - Voltage below normal, or shorted to low source
6563	976	2	None	PTO Governor State	Auxiliary Intermediate (PTO) Speed Switch Validation - Data erratic, intermittent or incorrect
6568	3695	2	None	Aftertreatment Regeneration Inhibit Switch	Aftertreatment Regeneration Inhibit Switch - Data erratic, intermittent or incorrect
6583	441	14	Amber	Auxiliary Temperature 1	Auxiliary Temperature Sensor Input 1 - Special Instructions
6584	1388	14	Amber	Auxiliary Pressure #2	Auxiliary Pressure Sensor Input 2 - Special Instructions
6595	190	11	None	Engine Speed	Engine Speed - Root Cause Not Known
6596	3713	31	Amber	Diesel Particulate Filter Active Regeneration Inhibited Due to System Timeout	Diesel Particulate Filter Active Regeneration Inhibited Due to System Timeout - Condition Exists
6611	6385	3	Amber	Engine Starter Motor Relay Control	Engine Starter Motor Relay Control Circuit - Voltage Above Normal or Shorted to High Source
6612	6385	4	Amber	Engine Starter Motor Relay Control	Engine Starter Motor Relay Control Circuit - Voltage Below Normal or Shorted to Low Source
6613	5842	14	Amber	SCR Monitoring System Malfunction	SCR Monitoring System Malfunction - Special Instructions
6618	70	2	None	Parking Brake Switch	Parking Brake Switch - Data Erratic, Intermittent, or Incorrect
6619	3515	10	None	Aftertreatment 1 Diesel Exhaust Fluid Temperature 2	Aftertreatment 1 Diesel Exhaust Fluid Temperature 2 - Abnormal Rate of Change
6726	4796	31	None	Aftertreatment 1 Diesel Oxidation Catalyst Missing	Aftertreatment 1 Diesel Oxidation Catalyst Missing - Condition Exists
6752	3364	18	None	Aftertreatment 1 Diesel Exhaust Fluid Tank Quality	Aftertreatment Diesel Exhaust Fluid Quality - Data Valid But Below Normal Operating Range - Moderately Severe Level
6771	521032	14	Red	Aftertreatment System Assembly	Aftertreatment System Assembly - Special Instructions
6938	5793	9	None	Desired Engine Fueling State	Desired Engine Fueling State - Abnormal Update Rate
6939	7745	9	None	Engine Start Request	Engine Start Request - Abnormal Update Rate
7133	7745	13	Amber	Engine Start Request	Engine Start Request - Out of Calibration
7134	7746	13	Amber		Engine Start Consent - Out of Calibration
7135	103	15	Amber	Engine Turbocharger 1 Speed	Engine Turbocharger Speed - Data Valid But Above Normal Operating Range - Least Severe Level
7285	1569	14	Amber	Engine Protection Torque Derate	Engine Protection Torque Derate - Special Instructions
7393	7745	9	Amber	Engine Start Request	Engine Start Request - Abnormal Update Rate
7453	3242	15	None	Aftertreatment 1 Diesel Particulate Filter Intake Gas Temperature	Aftertreatment 1 Diesel Particulate Filter Intake Temperature - Data Valid But Above Normal Operating Range - Least Severe Level
7454	3246	15	None	Aftertreatment 1 Diesel Particulate Filter Outlet Gas Temperature	Aftertreatment 1 Diesel Particulate Filter Outlet Temperature - Data Valid But Above Normal Operating Range - Least Severe Level