

## Fault Code Information

\* Applies to 98-N14 and 98-M11 calibrations **only**

FAULT CODE {LAMP}	J1587 PID(P) SID(S) {FMI}	J1939 SPN(S) {FMI}	REASON	EFFECT
111 {Red}	S254 {12}	None {None}	Error internal to the ECM related to memory hardware failures or internal microprocessor communication failures.	Engine might die. Possible no start.
115 {Red}	P190 {2}	None {None}	No engine speed signal detected at both pairs of signal pins 1 and 15 and pins 11 and 14 of sensor harness connector.	Engine will die and <b>not</b> restart.
121 {Yellow}	P190 {10}	None {None}	No engine speed signal detected at one pair of pins, either pins 1 and 15 or pins 11 and 14 of sensor harness connector.	None on performance.
122 {Yellow}	P102 {3}	None {None}	High voltage detected at boost pressure sensor signal pin 26 of sensor harness connector.	Derate in power output of the engine.
123 {Yellow}	P102 {4}	None {None}	Low voltage detected at boost pressure sensor signal pin 26 of sensor harness connector.	Derate in power output of the engine.
131 {Red}	P091 {3}	None {None}	High voltage detected at accelerator position signal pin 11 of the OEM harness connector.	Severe derate (power and speed).
132 {Red}	P091 {4}	None {None}	Low voltage detected at accelerator position signal pin 11 of the OEM harness connector.	Severe derate (power and speed).
135 {Yellow}	P100 {3}	None {None}	High voltage detected at oil pressure signal pin 7 of sensor harness connector.	No engine protection for oil pressure.
141 {Yellow}	P100 {4}	None {None}	Low voltage detected at oil pressure signal pin 7 of sensor harness connector.	No engine protection for oil pressure.
143 {Yellow}	P100 {1}	None {None}	* Low oil pressure detected. Voltage at oil pressure signal pin 7 of the sensor harness connector indicates oil pressure lower than 55 kPa [8 psi] at idle to 800 rpm; 55 to 173 kPa [8 to 25 psi] at 800 to 1200 rpm; 173 to 208 kPa [25 to 30 psi] at 1200 to 2400 rpm for M11; 138 to 208 kPa [20 to 30 psi] at 1200 to 2400 rpm for N14.	Progressive power and speed derate with increasing time after alert. If engine protection shutdown is enabled, engine will shut down 30 seconds after the Engine Protection Lamp or the Red lamp* starts flashing.
144 {Yellow}	P101 {3}	None {None}	High voltage detected at coolant temperature signal pin 17 of sensor harness connector.	Possible white smoke. Fan will stay ON if controlled by the ECM. No engine protection for coolant temperature.
145 {Yellow}	P101 {4}	None {None}	Low voltage detected at coolant temperature signal pin 17 of sensor harness connector.	Possible white smoke. Fan will stay ON if controlled by the ECM. No engine protection for coolant temperature.
151 {Yellow}	P101 {None}	None {None}	* Voltage at coolant temperature signal pin 17 of the sensor harness connector indicates coolant temperature above 104°C [220°F].	Progressive power and speed derate with increasing time after alert. If engine protection shutdown is enabled, engine will shut down 30 seconds after the Engine Protection Lamp or the Red lamp* starts flashing.
153 {Yellow}	P105 {3}	None {None}	High voltage detected at intake manifold temperature signal pin 25 of sensor harness connector.	Possible white smoke. Fan will stay ON if controlled by the ECM. No engine protection for intake manifold temperature.
154 {Yellow}	P105 {None}	None {None}	Low voltage detected at intake manifold temperature signal pin 25 of sensor harness connector.	Possible white smoke. Fan will stay ON if controlled by the ECM. No engine protection for intake manifold temperature.

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155 {Yellow}	P105 {None}	None {None}	* Voltage at intake manifold temperature signal pin 25 of the sensor harness connector indicates intake manifold temperature above 93.3°C [200°F].	Progressive power and speed derate with increasing time after alert. If engine protection shutdown is enabled, engine will shut down 30 seconds after the Engine Protection Lamp or the Red lamp* starts flashing.
212 {Yellow}	P175 {3}	None {None}	High voltage detected at oil temperature signal pin 6 of sensor harness connector.	No engine protection for oil temperature.
213 {Yellow}	P175 {4}	None {None}	Low voltage detected at oil temperature signal pin 6 of sensor harness connector.	No engine protection for oil temperature.
214 {Yellow}	P175 {None}	None {None}	* Voltage at oil temperature signal pin 6 of the sensor harness connector indicates oil temperature above 123.9°C [255°F].	Progressive power and speed derate with increasing time after alert. If engine protection shutdown is enabled, engine will shut down 30 seconds after the Engine Protection Lamp or the Red lamp* starts flashing.
221 {Yellow}	P108 {4}	None {None}	High voltage detected at ambient air pressure signal pin 27 of sensor harness connector.	Power derate by 15%.
222 {Yellow}	P108 {4}	None {None}	Low voltage detected at ambient air pressure signal pin 27 of sensor harness connector.	Power derate by 15%.
234 {Red}	P190 {None}	None {None}	Engine speed signal on pins 1 and 15 and/or pins 11 and 14 of sensor harness connector indicates engine speed greater than 2630 rpm.	Fuel shutoff valve closed until engine speed falls to 2000 rpm.
235 {Yellow}	P111 {1}	None {None}	* Voltage on the coolant level low signal pin 9 of sensor harness connector indicates low radiator coolant level.	Progressive power and speed derate with increasing time after alert. If engine protection shutdown is enabled, engine will shut down 30 seconds after the Engine Protection Lamp or the Red lamp* starts flashing.
241 {Yellow}	P084 {2}	None {None}	Lost vehicle speed signal on pins 3 and 7 or pin 7 of OEM harness connector and engine block ground.	Engine speed limited to max. vehicle speed without vehicle speed sensor parameter value. Cruise control, progressive shift, gear down protection, and road speed governor will <b>not</b> work.
242 {Yellow}	P084 {12}	None {None}	Invalid or inappropriate vehicle speed signal detected on pins 3 and 7 or pin 7 of the OEM harness connector and engine block ground. Signal indicates an intermittent connection or possible tampering.	Engine speed limited to max. vehicle speed without vehicle speed sensor parameter value until key switch is OFF for 5 seconds.
243 {Yellow}	P121 {4}	None {None}	Less than 6 volts detected at one of the engine brake driver pins 18 or 19 of actuator harness connector. Indicates a current draw from the ECM greater than 2 amps or faulty ECM power supply.	The engine brake can <b>not</b> be activated.
245 {Yellow}	S033 {4}	None {None}	Less than 6 volts detected at fan clutch supply pins 7 and 17 of actuator harness connector. Indicates a current draw from the ECM greater than 2 amps or faulty ECM power supply.	The fan may <b>not</b> engage. Possible engine overheat, if an ECM controlled fan is in use.
249 {Yellow}	P171 {3}	None {None}	High voltage detected at the ambient air temperature signal pin 24 of the sensor harness.	The idle shutdown ambient air temperature override feature will use the intake manifold temperature sensor value to determine idle shutdown and availability of override. No effect on engine performance.

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254 {Red}	S017 {4}	None {None}	Low voltage detected at fuel shutoff driver pin 16 of actuator harness connector. Indicates a current draw from the ECM greater than 2 amps or faulty ECM power supply.	The ECM turns off fuel shutoff valve supply voltage. The engine dies.
255 {Yellow}	S026 {3}	None {None}	Externally supplied voltage detected at one of the following driver pins; Fuel shutoff valve pin 16, fan clutch pins 7 or 17, or engine brake pins 18 or 19 of actuator harness connector.	Fuel shutoff valve will <b>not</b> close ... OR ... fan will run all the time ... OR ... engine brake will activate.
256 {Yellow}	P171 {4}	None {None}	Low voltage detected at the ambient air temperature signal pin 24 of the sensor harness.	The idle shutdown ambient air temperature override feature will use the intake manifold temperature sensor value to determine idle shutdown and availability of override. No effect on engine performance.
267 {Yellow}	P171 {2}	None {None}	Voltage signal at the ambient air temperature sensor signal pin 24 of the sensor harness indicates the ambient air temperature above 54.4°C [130°F].	The idle shutdown ambient air temperature override feature will use the intake manifold temperature sensor value to determine idle shutdown and availability of override. No effect on engine performance.
269 {Red}	S152 {14}	None {None}	Engine rpm detected when vehicle anti-theft is active.	Engine will not start.
289 {Yellow}	S040 {11}	None {None}	Externally supplied voltage detected going into the ECM vehicle accessory shut-off supply pin 24 in the actuator harness ... OR ... the ECM has failed.	The vehicle accessory shutdown will not function properly. No effect on engine performance.
311 {Yellow}	S001 {6}	None {None}	Current detected at Number 1 injector return pin 10 of actuator harness connector when voltage supply pin 1 of actuator harness connector is OFF.	Speed derate to 1400 to 1600 rpm. Current to injector is shut off.
312 {Yellow}	S050 {6}	None {None}	Current detected at Number 5 injector return pin 2 of actuator harness connector when voltage supply pin 11 of actuator harness connector is OFF.	Speed derate to 1400 to 1600 rpm. Current to injector is shut off.
313 {Yellow}	S030 {6}	None {None}	Current detected at Number 3 injector return pin 12 of actuator harness connector when voltage supply pin 3 of actuator harness connector is OFF.	Speed derate to 1400 to 1600 rpm. Current to injector is shut off.
314 {Yellow}	S060 {6}	None {None}	Current detected at Number 6 injector return pin 4 of actuator harness connector when voltage supply pin 13 of actuator harness connector is OFF.	Speed derate to 1400 to 1600 rpm. Current to injector is shut off.
315 {Yellow}	S020 {6}	None {None}	Current detected at Number 2 injector return pin 14 of actuator harness connector when voltage supply pin 5 of actuator harness connector is OFF.	Speed derate to 1400 to 1600 rpm. Current to injector is shut off.
321 {Yellow}	S040 {6}	None {None}	Current detected at Number 4 injector return pin 6 of actuator harness connector when voltage supply pin 15 of actuator harness connector is OFF.	Speed derate to 1400 to 1600 rpm. Current to injector is shut off.
322 {Yellow}	S001 {5}	None {None}	No current detected at Number 1 injector return pin 10 of actuator harness connector when voltage supply pin 1 of actuator harness connector is ON.	Speed derate to 1400 to 1600 rpm. Current to injector is shut off.
323 {Yellow}	S030 {5}	None {None}	No current detected at Number 5 injector return pin 2 of actuator harness connector when voltage supply pin 11 of actuator harness connector is ON.	Speed derate to 1400 to 1600 rpm. Current to injector is shut off.

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324 {Yellow}	S030 {5}	None {None}	No current detected at Number 3 injector return pin 12 of actuator harness connector when voltage supply pin 3 of actuator harness connector is ON.	Speed derate to 1400 to 1600 rpm. Current to injector is shut off.
325 {Yellow}	S060 {5}	None {None}	No current detected at Number 6 injector return pin 4 of actuator harness connector when voltage supply pin 13 of actuator harness connector is ON.	Speed derate to 1400 to 1600 rpm. Current to injector is shut off.
331 {Yellow}	S020 {5}	None {None}	No current detected at Number 2 injector return pin 14 of actuator harness connector when voltage supply pin 5 of actuator harness connector is ON.	Speed derate to 1400 to 1600 rpm. Current to injector is shut off.
332 {Yellow}	S040 {5}	None {None}	No current detected at Number 4 injector return pin 6 of actuator harness connector when voltage supply pin 15 of actuator harness connector is ON.	Speed derate to 1400 to 1600 rpm. Current to injector is shut off.
343 {Yellow}	S254 {12}	None {None}	Communication error with the FPC OR engine position sensor cam sync error.	Possible none on performance. Possible engine may die or stu
352 {Yellow}	S232 {4}	None {None}	Low voltage detected at sensor supply pins 2 and 12 of sensor harness connector. Indicates a current draw from the ECM greater than 0.3 amps or faulty ECM power supply.	Engine derates to no air fueling and simultaneous logging of Fault Codes 123, 141, 145, 154, 213, 222, and 422.
415 {Red}	P100 {1}	None {None}	* Voltage signal at oil pressure signal pin 7 of sensor harness connector indicates oil pressure lower than 55 kPa [8 psi] at idle to 800 rpm; 55 to 172 kPa [8 to 25 psi] at 800 to 2400 rpm.	Progressive power and speed derate with increasing time after alert. If engine protection shutdown is enabled, engine will shut down 30 seconds after the Engine Protection Lamp or the Red lamp* starts flashing.
422 {Yellow}	P111 {2}	None {None}	Voltage detected simultaneously on both the coolant level high and low signal pins 9 and 18 of sensor harness connector ... OR ... no voltage detected on both pins.	No engine protection for coolant level.
431 {Yellow}	P091 {3}	None {None}	Voltage detected simultaneously on both the idle validation off-idle and on-idle signal pins 6 and 9 of OEM harness connector.	None on performance.
432 {Red}	P091 {13}	None {None}	No voltage detected at idle validation on-idle signal pin 6 of OEM harness connector when voltage at accelerator position signal pin 11 of OEM harness connector indicates pedal is <b>not</b> at idle ... OR ... no voltage detected at idle validation off-idle signal pin 9 of OEM harness connector when voltage at accelerator position signal pin 11 of OEM harness connector indicate pedal is at rest.	Engine will only idle.
433 {Yellow}	P102 {2}	None {None}	Voltage signal at boost pressure signal pin 26 of sensor harness connector indicates high boost pressure but other engine characteristics indicate boost pressure must be low.	Derate to no-air setting.
434 {Yellow}	S251 {4}	None {None}	Battery voltage at pin 20, 21, 22, and 23 of actuator harness connector (relative to return pins 9, 25, and 27 of actuator harness connector) fell below 6.2 volts for a fraction of a second ... OR ... ECM was <b>not</b> allowed to power down correctly (retain battery supply voltage for 3 seconds after key OFF).	Possible no noticeable performance effects ... OR ... possibility of engine dying ... OR ... difficulty in starting engine.

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441 {Yellow}	P168 {1}	None {None}	Battery voltage below normal operating level.	Battery voltage below normal operating level.
442 {Yellow}	P168 {None}	None {None}	Battery voltage above normal operating level.	None on performance.
474 {Yellow}	S052 {2}	None {None}	Either low voltage detected when 12 volts are commanded or voltage detected when no voltage is commanded.	Either the engine will <b>not</b> have starter lockout protection or the engine will not start.
536 {Yellow}	S040 {11}	None {None}	Either low voltage detected when 12 volts are commanded or voltage detected when no voltage is commanded.	Top2 lockout solenoid will <b>not</b> function properly. Transmission will not shift properly.
537 {Yellow}	S051 {11}	None {None}	Either low voltage detected when 12 volts are commanded or voltage detected when no voltage is commanded.	Top2 shift solenoid will <b>not</b> function properly. Transmission will not shift properly.
544 {Yellow}	S191 {7}	None {None}	Autoshift failure; missed three shift attempts.	Top2 transmission will <b>not</b> be controlled correctly. Transmission remains in manual mode.
551 {Red}	P091 {4}	None {None}	No voltage detected simultaneously on both the idle validation off-idle and on-idle signal pins 6 and 9 of OEM harness connector.	Engine will only idle.

Bulletin No. 3666146-04

To repair CELECT™ Plus engine harness, use Wiring Repair Kit, Part Number 3822926, which is a collection of connectors, seals, wires, test leads, tools, and miscellaneous accessories. To order, contact your local Cummins Authorized Distributor.