

Cummins Engine Diagnostic Fault Codes for 2003 and later engines (generally for 2004 and later Alpines; see page 13 for earlier engine diagnostic codes):

Note: This information obtained from internet sources and not verified- use at your own risk!!!!

ISL & ISC Codes 0-100

0001 Exhaust Gas Pressure Sensor Number 1 Circuit - Voltage Above Normal, or Shorted to High Source

0002 Exhaust Gas Pressure Sensor Number 1 Circuit - Voltage Below Normal, or Shorted to Low Source

0003 Exhaust Gas Pressure Sensor Number 1 Circuit - Data Erratic, Intermittent, or Incorrect

0004 Exhaust Gas Temperature Sensor Number 1 Circuit - Data Erratic, Intermittent, or Incorrect

0005 Exhaust Gas Temperature Sensor Number 1 Circuit - Voltage Below Normal, or Shorted to Low Source

0006 Exhaust Gas Temperature Sensor Number 1 Circuit - Voltage Above Normal, or Shorted to High Source

ISL & ISC Codes 100-200

111 Engine Control Module Critical Internal Failure - Bad Intelligent Device or Component

115 Engine Magnetic Crankshaft Speed/Position Lost Both of Two Signals - Data Erratic, Intermittent, or Incorrect

122 Intake Manifold Pressure Sensor Circuit - Voltage Above Normal or Shorted to High Source

123 Intake Manifold Pressure Sensor Circuit - Voltage Below Normal or Shorted to Low Source

124 Intake Manifold One Pressure - Data Valid but Above Normal Operational Range - Moderately Severe Level

131 Accelerator Pedal or Lever Position Sensor Circuit - Shorted High

132 Accelerator Pedal or Lever Position Sensor Circuit - Voltage Below Normal or Shorted to Low Source

133 Remote Accelerator Pedal or Lever Position Sensor 1 Circuit - Voltage Above Normal, or Shorted to High Source

134 Remote Accelerator Pedal or Lever Position Sensor 1 Circuit - Voltage Below Normal, or Shorted to Low Source

135 Oil Pressure Sensor Choice

135auto Oil Pressure Sensor Circuit — Voltage Above Normal or Shorted to High Source

135mar Oil Pressure Sensor Circuit — Voltage Above Normal or Shorted to High Source

141 Oil Pressure Sensor Circuit Choice

141auto Oil Pressure Sensor Circuit - Voltage Below Normal or Shorted to Low Source

141mar Oil Pressure Sensor Circuit - Voltage Below Normal or Shorted to Low Source

143 Oil Pressure Low Choice

143b Oil Pressure Low - Data Valid but Below Normal Operational Range - Moderately Severe Level

143bm Oil Pressure Low - Data Valid but Below Normal Operational Range - Moderately Severe Level

144 Coolant Temperature Sensor Circuit Choice

144b Engine Coolant Temperature 1 Sensor Circuit - Voltage Above Normal or Shorted to High Source

144bm Engine Coolant Temperature 1 Sensor Circuit - Voltage Above Normal or Shorted to High Source

145 Engine Coolant Temperature 1 Sensor Circuit Choice

145b Engine Coolant Temperature 1 Sensor Circuit - Voltage Below Normal or Shorted to Low Source

145bm Engine Coolant Temperature 1 Sensor Circuit - Voltage Below Normal or Shorted to Low Source

146 Engine Coolant Temperature Choice

146b Engine Coolant Temperature - Data Valid but Above Normal Operational Range - Moderately Severe Level

146bm Engine Coolant Temperature - Data Valid but Above Normal Operational Range - Moderately Severe Level

147 Accelerator Pedal or Lever Position 1 Sensor Circuit Frequency - Data Valid but Below Normal Operational Range - Most Severe Level

148 Accelerator Pedal or Lever Position Sensor One - Data Valid but Above Normal Operational Range - Most Severe level

151 Engine Coolant Temperature Choice

151b Engine Coolant Temperature - Data Valid but Above Normal Operational Range - Most Severe Level

151bm Engine Coolant Temperature - Data Valid but Above Normal Operational Range - Most Severe Level

153 Intake Manifold Air Temperature Sensor Circuit - Voltage Above Normal or Shorted to High Source

154 Intake Manifold Air Temperature Sensor Circuit - Voltage Below Normal or Shorted to Low Source

155 Intake Manifold 1 Temperature Choice

155b Intake Manifold 1 Temperature - Data Valid but Above Normal Operational Range - Most Severe Level

155bm Engine Coolant Temperature 1 Sensor Circuit — Voltage Above Normal or Shorted to High Source

187 Sensor Supply Voltage Number 2 Circuit Choice

187b Sensor Supply Voltage Number 2 Circuit - Voltage Below Normal or Shorted to Low Source

187bm Sensor Supply 2 Circuit - Voltage Below Normal, or Shorted to Low Source
195 Coolant Level Sensor 1 Circuit - Choice
195-2wire Coolant Level Sensor 1 Circuit - Voltage Above Normal or Shorted to High Source
195-3wire Coolant Level Sensor 1 Circuit - Voltage Above Normal or Shorted to High Source
196 Coolant Level Sensor 1 Circuit - Choice
196-2wire Coolant Level Sensor 1 Circuit - Voltage Below Normal or Shorted to Low Source
196-3wire Coolant Level Sensor 1 Circuit - Voltage Below Normal or Shorted to Low Source
197 Coolant Level Low - Data Valid but Below Normal Operational Range - Moderately Severe Level

ISL & ISC Codes 200-300

221 Barometric Pressure Sensor Circuit - Voltage Above Normal or Shorted to High Source
222 Barometric Pressure Sensor Circuit - Voltage Below Normal or Shorted to Low Source
227 Sensor Supply Voltage Number 2 Circuit Choice
227b Sensor Supply Voltage Number 2 Circuit - Voltage Above Normal or Shorted to High Source
227bm Sensor Supply 2 Circuit - Voltage Above Normal or Shorted to High Source
234 Engine Crankshaft Speed/Position Choice
234b Engine Crankshaft Speed/Position — Data Valid but Above Normal Operational Range - Most Severe Level
234bm Engine Crankshaft Speed/Position — Data Valid but Above Normal Operational Range - Most Severe Level
235 Coolant Level Low - Data Valid but Below Normal Operational Range - Most Severe Level
237 External Speed Command Input (Multiple Unit Synchronization - Data Erratic, Intermittent, or Incorrect
238 Sensor Supply 3 Circuit - Voltage Below Normal, or Shorted to Low Source
241 Vehicle Speed Sensor Circuit - Data Erratic, Intermittent, or Incorrect
242 Vehicle Speed Sensor Circuit Tampering Has Been Detected - Abnormal Rate of Change
245 Fan Control Circuit - Voltage Below Normal or Shorted to Low Source
253 Engine Oil Level - Data Valid But Below Normal Operational Range - Most Severe Level
268 Injector Metering Rail 1 Pressure - Data Erratic, Intermittent, or Incorrect
269 Antitheft Password Valid Indicator - Data Erratic, Intermittent, or Incorrect
271 High Fuel Pressure Solenoid Valve Circuit Choice
271b High Fuel Pressure Solenoid Valve Circuit - Voltage Below Normal or Shorted to Low Source
271cl High Fuel Pressure Solenoid Valve Circuit - Voltage Below Normal or Shorted to Low Source
272 High Fuel Pressure Solenoid Valve Circuit Choice
272b High Fuel Pressure Solenoid Valve Circuit - Voltage Above Normal or Shorted to High Source
272cl High Fuel Pressure Solenoid Valve Circuit - Voltage Above Normal or Shorted to High Source

275 Fuel Pumping Element Number 1 (Front - Mechanical System Not Responding Properly or Out of Adjustment)

281 Fault Pump Pressurizing Assembly 1 - Mechanical System Not Responding Properly or Out of Adjustment

284 Engine Speed/Position Sensor (Crankshaft Supply Voltage Circuit - Voltage Below Normal or Shorted to Low Source)

285 SAE J1939 Multiplexing PGN Timeout Error - Abnormal Update Rate

286 SAE J1939 Multiplexing Configuration Error - Out of Calibration

287 SAE J1939 Multiplexing Accelerator Pedal or Lever Sensor System Error - Received Network Data Error

288 SAE J1939 Multiplexing Remote Accelerator Pedal or Lever Data Error - Received Network Data Error

291 Proprietary Datalink Error (OEM/Vehicle Datalink - Abnormal Update Rate)

292 Auxiliary Temperature Sensor Input 1 - Special Instructions

293 Auxiliary Temperature Sensor Input 1 - Voltage Above Normal, or Shorted to High Source

294 Auxiliary Temperature Sensor Input 1 Circuit - Voltage Below Normal, or Shorted to Low Source

295 Barometric Pressure - Data Erratic, Intermittent, or Incorrect

296 Auxiliary Pressure Sensor Input 1 - Special Instructions

296a Auxiliary Pressure Sensor Input 1 - Special Instructions

296lrv Crankcase Pressure - Data Above Normal Operational Range - Severe Level

297 Auxiliary Pressure Sensor Input 1 Circuit - Voltage Above Normal, or Shorted to High Source

298 Auxiliary Pressure Sensor Input 1 Circuit - Voltage Below Normal, or Shorted to Low Source

ISL & ISC Codes 300-400

319 Real Time Clock Power Interrupt - Data Erratic, Intermittent, or Incorrect

322 Injector Solenoid Driver Cylinder 1 Circuit - Current Below Normal, or Open Circuit

323 Injector Solenoid Driver Cylinder 5 Circuit - Current Below Normal, or Open Circuit

324 Injector Solenoid Driver Cylinder 3 Circuit - Current Below Normal, or Open Circuit

325 Injector Solenoid Driver Cylinder 6 Circuit - Current Below Normal, or Open Circuit

331 Injector Solenoid Cylinder Number 2 Circuit - Current Below Normal or Open Circuit

332 Injector Solenoid Cylinder Number 4 Circuit - Current Below Normal or Open Circuit

334 Engine Coolant Temperature - Data Erratic, Intermittent, or Incorrect

341 Engine Control Module Data Lost - Data Erratic, Intermittent, or Incorrect

342 Electronic Calibration Code Incompatibility - Out of Calibration

343 Engine Control Module Warning Internal Hardware Failure - Bad Intelligent Device or Component

351 Injector Power Supply — Bad Intelligent Device or Component

352 Sensor Supply Voltage Number 1 Circuit - Voltage Below Normal or Shorted to Low Source

386 Sensor Supply Voltage Number 1 Circuit - Voltage Above Normal or Shorted to High Source

387 Accelerator Pedal or Lever Position Sensor Supply Voltage Circuit - Voltage Above Normal or Shorted to High Source

ISL & ISC Codes 400-500

412 SAE J1587/J1922 Data Link - Can Not Transmit

415 Engine Oil Rifle Pressure Choice

415sn Engine Oil Rifle Pressure - Data Valid but Below Normal Operational Range - Most Severe Level

415sw Engine Oil Rifle Pressure - Data Valid but Below Normal Operational Range - Most Severe Level

418 Water-In-Fuel Indicator - Data Valid but Above Normal Operational Range - Least Severe Level

426 SAE J1939 Data Link - Cannot Transmit

427 SAE J1939 Datalink - Abnormal Update Rate

428 Water-In-Fuel Sensor Circuit - Voltage Above Normal or Shorted to High Source

429 Water-In-Fuel Sensor Circuit - Voltage Below Normal or Shorted to Low Source

431 Idle Validation Switch Circuit Choice

431iss Accelerator Pedal or Lever Idle Validation Circuit - Data Erratic, Intermittent, or Incorrect

431niss Accelerator Pedal or Lever Idle Validation Circuit - Data Erratic, Intermittent, or Incorrect

431sss Accelerator Pedal or Lever Idle Validation Circuit - Data Erratic, Intermittent, or Incorrect

432 Accelerator Pedal or Lever Idle Validation Circuit - Out of Calibration

433 Intake Manifold Pressure Sensor Circuit - Data Incorrect

434 Power Supply Lost With Ignition On - Data Erratic, Intermittent or Incorrect

435 Oil Pressure Switch Sensor Circuit - Data Erratic, Intermittent or Incorrect

436 Intake Manifold 1 Temperature - Data Erratic, Intermittent, or Incorrect

441 Battery 1 Voltage - Data Valid but Below Normal Operational Range - Moderately Severe Level

442 Battery 1 Voltage - Data Valid but Below Normal Operational Range - Moderately Severe Level

443 Accelerator Pedal or Lever Position Sensor Supply Voltage Circuit — Voltage Below Normal or Shorted to Low Source

449 Fuel Pressure High Choice

449b Injector Metering Rail Number 1 Pressure - Data Valid But Above Normal Operating Range - Most Severe Level

449cl Injector Metering Rail Number 1 Pressure - Data Valid But Above Normal Operating Range - Most Severe Level

451 Injector Metering Rail Number 1 Pressure Sensor Circuit - Voltage Above Normal or Shorted to High Source

452 Injector Metering Rail Number 1 Pressure Sensor Circuit - Voltage Below Normal or Shorted to

Low Source

471 Engine Oil Level - Data Valid But Below Normal Operational Range - Least Severe Level

488 Intake Manifold 1 Temperature - Data Valid but Above Normal Operational Range - Moderately Severe Level

497 Multiple Unit Synchronization Switch - Data Erratic, Intermittent, or Incorrect

498 Engine Oil Level Sensor Circuit - Voltage Above Normal, or Shorted to High Source

499 Engine Oil Level Sensor Circuit - Voltage Below Normal, or Shorted to Low Source

ISL & ISC Codes 500-600

523 Auxiliary Intermediate (PTO Speed Switch Validation - Data Erratic, Intermittent, or Incorrect

527 Auxiliary Input/Out Two Circuit Voltage Above Normal or Shorted to High Source

528 Auxiliary Alternate Torque Validation Switch - Data Erratic, Intermittent, or Incorrect

529 Auxiliary Input/Output Three Circuit - Voltage Above Normal, or Shorted to High Source

545 Turbocharger 1 Wastegate Control - Mechanical System Not Responding Properly or Out of Adjustment

551 Idle Validation Switch Circuit Choice

551iss Accelerator Pedal or Lever Idle Validation Circuit - Voltage Below Normal or Shorted to Low Source

551niss Accelerator Pedal or Lever Idle Validation Circuit - Voltage Below Normal or Shorted to Low Source

551ss Accelerator Pedal or Lever Idle Validation Circuit - Voltage Below Normal or Shorted to Low Source

553 Injector Metering Rail One Pressure - Data Valid but Above Normal Operational Range - Moderately Severe Level

554 Injector Metering Rail 1 Pressure - Data Erratic, Intermittent, or Incorrect

559 Fuel Pump Delivery Pressure Low Choice

559b Fuel Pump Delivery Pressure Low - Data Valid but Below Normal Operational Range - Moderately Severe Level

559cl Injector Metering Rail 1 Pressure - Data Valid but Below Normal Operational Range - Moderately Severe Level

584 Starter Relay Circuit - Voltage Above Normal or Shorted to High Source

585 Starter Relay Circuit - Voltage Below Normal or Shorted to Low Source

595 Turbocharger Number 1 Speed High Choice

595b Turbocharger Number 1 Speed High - Warning Level

595cl Turbocharger Number 1 Speed High - Data Valid but Above Normal Operational Range - Moderately Severe Level

596 Electrical Charging System Voltage High - Data Valid but Above Normal Operational Range - Moderately Severe Level

597 Electrical Charging System Voltage Low - Data Valid but Below Normal Operational Range - Moderately Severe Level

598 Electrical Charging System Voltage Low - Data Valid but Below Normal Operational Range - Most Severe Level

599 Auxiliary Commanded Dual Output Shutdown - Special Instructions

ISL & ISC Codes 600-700

649 Change Lubricating Oil and Filter - Condition Exists

687 Turbocharger Speed Sensor Choice

687b Turbocharger Speed Sensor - Below Normal Operating Range

687cl Turbocharger Number 1 Speed Low - Data Valid but Below Normal Operating Range - Moderately Severe Level

688 Engine Oil Level - Data Valid But Above Normal Operational Range - Most Severe Level

689 Engine Crankshaft Speed/Position - Data Erratic, Intermittent, or Incorrect

691 Turbocharger Number 1 Compressor Inlet Temperature Sensor Circuit - Voltage Above Normal or Shorted to High Source

692 Turbocharger Number 1 Compressor Inlet Temperature Sensor Circuit - Voltage Below Normal or Shorted to Low Source

ISL & ISC Codes 700-900

731 Engine Speed/Position Sensors Choice

731b Engine Speed Sensor/Position Camshaft and Crankshaft Misalignment - Mechanical System Not Responding Properly or Out of Adjustment

731bm Engine Speed Sensor/Position Camshaft and Crankshaft Misalignment - Mechanical System Not Responding Properly or Out of Adjustment

757 Electronic Control Module Data Lost - Condition Exists

778 Engine Speed Sensor (Camshaft Error - Data Erratic, Intermittent or Incorrect

779 Auxiliary Equipment Sensor Input Number 3 (OEM Switch - Root Cause Not Known

784 Adaptive Cruise Control - Error

ISL & ISC Codes 900-1200

951 Cylinder Power Imbalance Detected

957 EGR Valve Position - Data Erratic, Intermittent, or Incorrect

958 VGT Position Sensor - Data Erratic, Intermittent, or Incorrect

1117 Power Lost Without Ignition Off Choice

1117auto Power Lost Without Ignition Off - Data Erratic, Intermittent or Incorrect

1117mar Power Lost Without Ignition Off - Data Erratic, Intermittent or Incorrect

1139 Injector Solenoid Driver Cylinder 1 - Mechanical System Not Responding Properly or Out of Adjustment

1141 Injector Solenoid Driver Cylinder 2 - Mechanical System Not Responding Properly or Out of Adjustment

1142 Injector Solenoid Driver Cylinder 3 - Mechanical System Not Responding Properly or Out of Adjustment

1143 Injector Solenoid Driver Cylinder 4 - Mechanical System Not Responding Properly or Out of Adjustment

1144 Injector Solenoid Driver Cylinder 5 - Mechanical System Not Responding Properly or Out of Adjustment

1145 Injector Solenoid Driver Cylinder 6 - Mechanical System Not Responding Properly or Out of Adjustment

ISL & ISC Codes 1200-1600

1228 EGR Valve Position - Data Erratic, Intermittent, or Incorrect

1229 VGT Position Sensor - Data Erratic, Intermittent, or Incorrect

1239 Accelerator Pedal or Lever Position Sensor 2 Circuit - Voltage Above Normal or Shorted to High Source

1241 Accelerator Pedal or Lever Position Sensor 2 Circuit - Voltage Below Normal or Shorted to Low Source

1242 Accelerator Pedal or Lever Position Sensor 1 and 2 - Data Erratic, Intermittent, or Incorrect

ISL & ISC Codes 1600-1700

1633 Komnet Datalink Cannot Transmit - Data Erratic, Intermittent, or Incorrect

1639 Auxiliary Equipment Sensor Input Number 3 (OEM Switch - Root Cause Not Known

1654 Engine Misfire Cylinder 1 - Condition Exists

1655 Engine Misfire Cylinder 2 - Condition Exists

1656 Engine Misfire Cylinder 3 - Condition Exists

1657 Engine Misfire Cylinder 4 - Condition Exists

1658 Engine Misfire Cylinder 5 - Condition Exists

1659 Engine Misfire Cylinder 6 - Condition Exists

1663 Catalyst Inlet Temperature Sensor Swapped with Outlet - Condition Exists

1664 Catalyst Missing - Condition Exists

1665 Exhaust Gas Temperature 1 Circuit - Voltage Below Normal, or Shorted to Low Source

1666 Exhaust Gas Temperature Circuit 1 - Voltage Above Normal, or Shorted to Low Source

1667 Exhaust Gas Temperature 1 - Data Erratic, Intermittent, or Incorrect

1668 Catalyst Tank Level Sensor Circuit - Voltage Below Normal, or Shorted to Low Source

1669 Catalyst Tank Level Sensor Circuit - Voltage Above Normal, or Shorted to High Source

1671 Catalyst Tank Level - Data Valid but Below Normal Operational Range - Moderately Severe Level.

1673 Catalyst Tank Level - Data Erratic, Intermittent, or Incorrect
1674 Exhaust Gas Temperature 2 Circuit - Voltage Below Normal, or Shorted to Low Source
1675 Exhaust Gas Temperature 2 Circuit - Voltage Above Normal, or Shorted to Low Source
1676 Exhaust Gas Temperature 2 - Data Erratic, Intermittent, or Incorrect
1677 Catalyst Tank Temperature - Voltage Below Normal, or Shorted to Low Source
1678 Catalyst Tank Temperature - Voltage Above Normal, or Shorted to High Source
1679 Catalyst Tank Temperature - Data Erratic, Intermittent, or Incorrect
1681 Dosing Control Unit - Bad Intelligent Device or Component
1682 Catalyst Reagent Dosing Unit Input Lines - Condition Exists
1683 Catalyst Tank Heater Circuit - Voltage Above Normal, or Shorted to High Source
1684 Catalyst Tank Heater Circuit - Voltage Above Normal, or Shorted to High Source
1687 Catalyst Over Temperature - Data Valid but Above Normal Operational Range - Most Severe Level
1689 Real-Time Clock Power Interrupt - Data Erratic, Intermittent or Incorrect
1692 Aftertreatment Outlet NOx Sensor - Voltage Below Normal or Shorted to Low Source
1694 Aftertreatment Outlet NOx Sensor - Data Erratic, Intermittent, or Incorrect
1697 Aftertreatment #1 Air Enable Actuator - Voltage Above Normal, or Shorted to High Source
1698 Aftertreatment #1 Air Enable Actuator - Voltage Below Normal, or Shorted to Low Source
1699 Catalyst Tank Level Sensor - Data Erratic, Intermittent, or Incorrect

ISL & ISC Codes 1700-1800

1711 Dosing Control Unit Datalink - Abnormal Update Rate
1712 Catalyst Tank Heater Circuit - Data Valid But Below Normal Operating Range - Moderately Severe Level
1713 Catalyst Tank Heater Circuit - Data Valid But Above Normal Operating Range - Moderately Severe Level
1716 Auxiliary Temperature Sensor Input 1 Circuit - Root Cause Not Known
1717 Exhaust Gas Temperature 1 - Data Valid but Above Normal Operational Range - Least Severe Level
1718 Engine Misfire for Multiple Cylinders - Condition Exists

ISL & ISC Codes 1800-2000

1848 Intake Manifold 1 Temperature - Abnormal Rate of Change
1849 Exhaust Gas Temperature 1 - Abnormal Rate of Change
1851 Exhaust Gas Temperature 2 - Abnormal Rate of Change
1892 Wheel-Based Vehicle Speed - Data Valid but Below Normal Operational Range - Moderately Severe Level

1911 Injector Metering Rail 1 Pressure - Data Valid but Above Normal Operational Range - Most Severe Level

ISL & ISC Codes 2000-2200 2183 Engine Brake Actuator Driver 1 Circuit - Voltage Below Normal, or Shorted to Low Source

2185 Sensor Supply Voltage 4 Circuit - Voltage Above Normal or Shorted to High Source

2186 Sensor Supply Voltage 4 Circuit - Voltage Below Normal or Shorted to Low Source

ISL & ISC Codes 2200-2300

2215 Fuel Pump Delivery Pressure Low Choice

2215b Fuel Pump Delivery Pressure Low - Data Valid but Below Normal Operational Range - Moderately Severe Level

2215cl Fuel Pump Delivery Pressure Low - Data Valid but Below Normal Operational Range - Moderately Severe Level

2216 Fuel Pump Delivery Pressure High Choice

2216b Fuel Pump Delivery Pressure High - Data Valid but Above Normal Operational Range - Moderately Severe Level

2216cl Fuel Pump Delivery Pressure High - Data Valid but Above Normal Operational Range - Moderately Severe Level

2217 Engine Control Module Calibration Program Memory (RAM Corruption - Condition Exists

2249 Injector Metering Rail 1 Pressure - Data Valid but Below Normal Operational Range - Most Severe Level

2265 Electric Lift Pump for Engine Fuel Supply Circuit - Voltage Above Normal or Shorted to High Source

2266 Electric Lift Pump for Engine Fuel Supply Circuit - Voltage Below Normal or Shorted to Low Source

2271 EGR Valve Position Sensor Circuit - Voltage Above Normal or shorted to High Source

2272 EGR Valve Position Sensor Circuit - Voltage Below normal or Shorted to Low Source

2273 EGR Valve Differential Pressure Sensor Circuit - Shorted High

2274 EGR Valve Differential Pressure Sensor Circuit - Shorted Low

2292 Fuel Inlet Meter Device - Data Valid but Above Normal Operational Range - Moderately Severe Level

2293 Fuel Inlet Meter Device Flow Demand Lower Than Expected - Data Valid but Below Normal Operational Range - Moderately Severe Level

ISL & ISC Codes 2300-2500

2311 Fueling Actuator Number 1 Circuit Error Conditions Exists

2321 Engine Crankshaft Speed/Position - Data Erratic, Intermittent, or Incorrect

2322 Backup Engine Speed/Position Sensor Number 2 - Data Erratic, Intermittent, or Incorrect

2345 Turbocharger Speed Choice

2345b Turbocharger Speed - Invalid Rate of Change Detected

2345cl Turbocharger Speed Invalid Rate of Change detected - Abnormal Rate of Change

2346 Exhaust Gas Temperature Choice

2346b Exhaust Gas Temperature - Data Above Normal

2346cl Turbocharger Turbine Inlet Temperature (Calculated - Data Valid but Above Normal Operational Range - Least Severe Level

2347 Turbocharger Compressor Outlet Temperature Choice

2347b Turbocharger Compressor Outlet Temperature - Data Above Normal

2347cl Turbocharger Compressor Outlet Air Temperature (Calculated - Data Valid but Above Normal Range

2348 EGR Valve Failed Automatic Calibration Procedure

2349 EGR Valve Control Circuit - Current Below Normal or Open Circuit

2351 EGR Valve Control Circuit - Voltage Below Normal or Shorted to Low Source

2352 EGR Valve Control Circuit - Voltage Above Normal or Shorted to High Source

2353 EGR Valve Control Circuit - Current Above Normal or Grounded Circuit

2357 EGR Valve Control - Mechanical System Not Responding Properly or Out of Adjustment

2359 EGR Differential Pressure Sensor - Data Valid But Above Normal Operating Range - Moderately Severe Level

2362 Engine Brake Actuator Circuit Number 1 - Voltage Below Normal or Shorted to Low Source

2363 Engine Brake Actuator Circuit Number 2 - Voltage Below Normal or Shorted to Low Source

2366 Engine Brake Actuator Circuit Number 1 - Voltage Above Normal or Shorted to High Source

2367 Engine Brake Actuator Circuit Number 2 - Voltage Above Normal or Shorted to High Source

2373 Exhaust Gas Pressure Sensor Circuit - Shorted High

2374 Exhaust Gas Pressure Sensor Circuit - Shorted Low

2375 Exhaust Gas Recirculation (EGR Temperature Sensor Circuit - Voltage Above Normal or Shorted to High Source

2376 Recirculation Exhaust Gas Temperature Sensor Circuit - Voltage Below Normal or Shorted to Low Source

2377 Fan Control Circuit - Voltage Above Normal or Shorted to High Source

2381 Turbocharger Position Sensor Circuit - Shorted High

2382 Turbocharger Position Sensor Circuit - Shorted Low

2383 Variable Geometry Turbocharger Actuator Circuit - Current Below Normal, or Open Circuit

2384 VGT Actuator Choice

2384b VGT Actuator - Voltage Below Normal or Shorted to Low Source

2384cl VGT Actuator Driver Circuit - Voltage Below Normal, or Shorted to Low Source

2385 VGT Actuator Choice

2385b VGT Actuator - Voltage Above Normal or Shorted to High Source

2385cl VGT Actuator Driver Circuit - Voltage Above Normal, or Shorted to High Source

2386 Turbocharger Actuator Motor Circuit - Current Above Normal

2387 Turbocharger Actuator Motor - Mechanical System Not Responding Properly

2388 Variable Geometry Turbocharger Actuator Position Failed Automatic Calibration Procedure - Out of Calibration

ISL & ISC Codes 2500-2800

2554 Exhaust Pressure Sensor Circuit - Data Erratic, Intermittent, or Incorrect

2555 Intake Air Heater Number 1 Circuit - Voltage Above Normal or Shorted to High Source

2556 Intake Air Heater Number 1 Circuit - Voltage Below Normal or Shorted to Low Source

2557 Auxiliary PWM Driver Number 1 - Voltage Above Normal or Shorted to High Source

2558 Auxiliary PWM Driver Number 1 - Voltage Below Normal or Shorted to Low Source

2659 Engine Coolant Temperature - Condition Exists

2771 Aftertreatment Outlet NOx Sensor - Abnormal Update Rate

2772 Aftertreatment Outlet NOx - Data Valid but Above Normal Operational Range - Least Severe Level

2773 Aftertreatment Outlet NOx - Data Valid but Above Normal Operational Range - Most Severe Level

ISL & ISC Codes 2800-3000

2961 EGR Temperature - Data Valid But Above Normal Operating Range, Least Severe Level

2962 EGR Temperature - Data Valid But Above Normal Operating Range, Moderately Severe Level

2963 Engine Coolant Temperature High - Data Valid but Above Normal Operational Range - Least Severe Level

2964 Intake Manifold Temperature High - Data Valid but Above Normal Operational Range - Least Severe Level

2973 Intake Manifold Pressure Sensor Circuit - Data Erratic, Intermittent or Incorrect

2976 Dosing Control Unit Temperature - Data Erratic, Intermittent, or Incorrect

ISL & ISC Codes 9000-9122

9121 EGR Valve Actuator Over Temperature (Calculated - Data Above Normal Range)

9122 Variable Geometry Turbocharger Actuator Over Temperature

See Below for 2002 and earlier engines (2003 & earlier Alpines) using CAPS fuel system.

**Cummins Engine Diagnostic Fault Codes for 2002 and earlier CAPS fuel system engines
(generally 2003 and earlier model year Alpines):**

ISC Fault Codes # 111-500

111 Electronic Control Module (ECM Microprocessor)

- 115 Engine Speed Sensor (ESS Circuit
- 121 Engine Position Sensor Circuit
- 122 Intake Manifold Pressure Sensor Circuit
- 123 Intake Manifold Pressure Sensor Circuit
- 124 Intake Manifold Pressure - Engine Protection
- 131 Accelerator Position Sensor Circuit
- 132 Accelerator Position Sensor Circuit
- 133 Remote Throttle Position Sensor
- 134 Remote Throttle Position Sensor
- 135 Oil Pressure Sensor Circuit
- 141 Oil Pressure Sensor/Switch Circuit Choice
- 141sn Oil Pressure Sensor Circuit
- 141sw Oil Pressure Switch Circuit
- 143 Oil Pressure Sensor/Switch Circuit Choice
- 143sn Oil Pressure Sensor Circuit
- 143sw Oil Pressure Switch Circuit
- 144 Coolant Temperature Sensor Circuit
- 145 Coolant Temperature Sensor Circuit
- 146 Coolant Temperature - Engine Protection
- 147 Frequency Throttle Circuit
- 148 Frequency Throttle Circuit
- 151 Coolant Temperature - Engine Protection
- 153 Intake Manifold Air Temperature Sensor Circuit
- 154 Intake Manifold Air Temperature Sensor Circuit
- 184 OEM Pressure - Engine Protection
- 191 Air Conditioner Clutch Supply Circuit
- 221 Ambient Air Pressure Sensor Circuit
- 222 Ambient Air Pressure Sensor Circuit
- 234 Engine Overspeed Circuit

235 Engine Coolant Level - Engine Protection
241 Vehicle Speed Sensor Circuit
242 Vehicle Speed Sensor (VSS Circuit
243 Engine Brake Supply Choice
243isc Engine Brake Supply Circuit
243isl Engine Brake Supply Circuit
245 Engine Fan Clutch Supply Circuit
263 Fuel Temperature Sensor Circuit
265 Fuel Temperature Sensor Circuit
268 Fuel Pressure Sensor Circuit
271 Front Pumping Valve Circuit
272 Front Pumping Valve Circuit
273 Rear Pumping Valve Circuit
274 Rear Pumping Valve Circuit
275 Front Pumping Element
276 Injection Control Valve Stator Circuit
277 Injection Control Valve Stator Circuit
278 Lift Pump Circuit
279 Injection Control Valve Stator Circuit
281 Pumping Element
282 Pumping Element
283 Engine Speed Sensor
284 Engine Speed Sensor
285 J1939 Datalink Multiplexing
286 J1939 Datalink Multiplexing
296 OEM Pressure - Engine Protection
297 OEM Pressure Sensor Circuit
298 OEM Pressure Sensor Circuit
328 Rear Pumping Element
329 Fuel Injection Pump
349 Auxiliary Speed or Auxiliary Pressure Input Error
352 Sensor Supply Circuit
381 Intake Air Heater Relay Circuit
382 Intake Air Heater Relay Circuit

385 Remote Accelerator Control Circuit
387 Accelerator Position Sensor Circuit
415 Oil Pressure Sensor/Switch Circuit Choice
415sn Oil Pressure Sensor Circuit
415sw Oil Pressure Switch Circuit
418 Water-In-Fuel (WIF Sensor Circuit
422 Coolant Level Sensor Circuit
429 Water-In-Fuel (WIF Sensor Circuit
431 Idle Validation Switch (IVS Circuit
432 Accelerator Pedal Circuit (ISS
433 Intake Manifold Pressure Sensor Circuit
434 Unswitched Battery Supply Circuit
441 Unswitched Battery Supply Circuit
442 Unswitched Battery Supply Circuit
443 Accelerator Position Sensor Circuit
444 Remote Accelerator Control Circuit
449 Fuel Pressure Sensor Circuit
451 Fuel Pressure Sensor Circuit
452 Fuel Pressure Sensor Circuit
456 Fuel Pressure Sensor Circuit
488 Intake Manifold Air Temperature Sensor - Engine Protection Circuit
489 Auxiliary Speed or Auxiliary Pressure Input Error
493 Injection Control Valve Identifier Circuit
497 Primary/Secondary ECM Identification Error

ISC Fault Codes #515-2195

515 Coolant Level Sensor Circuit
516 Coolant Level Sensor Circuit
524 Switched Droop Selection Circuit
527 Dual Output Driver A
528 Alternate (Switched Torque Curve Switch Circuit
529 Dual Output Driver B
539 Transient Suppressor Circuit
768 Output Device Driver (Transmission Shift Modulator
779 OEM Input - Engine Protection

2194 Multiple Unit Synchronization Switch Error

2195 OEM Switch - Engine Protection