

1002 - Engine Coolant Temperature Sender - Over Temperature >110° C

- 1004 - Hydraulic Filter Restriction Switch - Hydraulic Filter Restricted
- 1009 - Hydraulic Oil Temperature Sender - Over Temperature >210° F
- 1014 - Cluster Battery Monitor: Over Voltage > 16.5 volts
- 1015 - Cluster Battery Monitor: Under Voltage < 11.5 volts
- 1025 - Throttle Sensor - Out Of Range Short to Power
- 1030 - Throttle Sensor - Out Of Range Short to Ground/ Open Circuit
- 1041 - RPM Monitoring - Over Speed
- 1045 - Fuel Level Sensor Open Circuit
- 1051 - Timeout of CAN message EEC1, 5 seconds without message
- 1053 - Timeout of CAN message CM1BC
- 1054 - Timeout of CAN message engine temperature, 5 seconds without message
- 1056 - Timeout of CAN message DPFC1, 5 seconds without message
- 1058 - Timeout of CAN message EDC2BC, 5 seconds without message
- 1059 - Timeout of CAN message DM1, 5 seconds without message
- 111 - EGR potentiometer valve could not be completely opened
- 112 - EGR potentiometer valve could not be completely closed
- 119 - Engine crank signal present for 300 seconds
- 1201 - Hydraulic Filter Restriction Switch - OC
- 1202 - RPM Monitoring - Over Speed (Max)
- 1203 - RPM Monitoring - Open Circuit/ Short to Ground/ Short to Power
- 1204 - Start Sequence - Key Switch State - Engine Running Plausability Fault
- 1205 - Hydraulic Enable (EH Machines) - Hydraulic Enable Output, Short to Power
- 1206 - CAN Connection: Configuration Response Timeout
- 1207 - Memory Parameters - Invalid Configuration Between IC and UCM
- 1208 - Seat Switch - Plausibility Fault
- 1211 - Calibration Functions - Joystick Calibration Not Complete
- 1212 - Calibration Functions - Ground Drive Calibration Not Complete
- 1213 - Calibration Functions - Loader Valve Calibration Not Complete
- 1214 - Calibration Functions - Throttle Calibration Not Complete

1221 - Health Monitor Functions - UCM - UCM Temperature / Current Draw Over Limit

1222 - Health Monitor Functions - UCM - UCM Sustained Over Temperature Limit

1223 - Health Monitor Functions - UCM - UCM Sustained Over Current Limit

1224 - Health Monitor Functions - UCM - Internal Memory or Core Monitoring Fault

1225 - Health Monitor Functions - UCM - EEPROM Memory Checksum Fault

126 - Battery voltage fault

131 - Coolant temperature sensor fault

134 - Intake air pressure sensor fault

1350 - Hyd Enable Switch - Implausible State (Hardwire vs CAN)

141 - Engine speed sensor fault

1511 - Right Brake Lights Open Circuit

1512 - Right Brake Lights Short to Ground

1513 - Right Brake Lights Short to Power

1521 - Left Brake Lights Open Circuit

1522 - Left Brake Lights Short to Ground

1523 - Left Brake Lights Short to Power

1532 - Backup Alarm - Short to Ground

1533 - Backup Alarm - Short to Power

186 - EGR valve position sensor fault

189 - EGR valve position driver fault

1900 - UCM - UCM Ground Fault

1901 - UCM - UCM Supply Voltage High

1902 - UCM - UCM Supply Voltage Low

1903 - UCM - UCM Supply Voltage Below Operational Limit

1904 - UCM - Rail 12VB: 5V Regulators Supply Input Power Off

1905 - UCM - 5VREF1 Sensor Supply Voltage Out of Range

1906 - UCM - 5VREF3 Sensor Supply Voltage Out of Range

1907 - UCM - Rail 12VF1: Aux Retract Input Power Off

1908 - UCM - Rail 12VF2: Bucket Extend Input Power Off

1909 - UCM - Rail 12VF3: Boom Raise/Lower Input Power Off

1910 - UCM - Rail 12VH: Ldr Plt Interlk & Port Lock Input Power Off

1911 - UCM - Rail 12VH1: Left & Right Pump Reverse Input Power Off

1912 - UCM - Rail 12VM: Left & Right Brake Lights & Aux Extend Input Power Off

1913 - UCM - Rail 12VS1: Bucket Curl Input Power Off

1914 - UCM - Rail 12VS2: Backup Alarm Input Power Off

1915 - UCM - Rail 12VT1: Two Speed Input Power Off

1916 - UCM - Rail 12VU1: Right & Left Pumps Forward Input Power Off

1917 - UCM - Rail 12VU2: Park Brake Solenoid Input Power Off

1E5 - Sensor voltage supply fault

2E5 - Sensor ground fault

3000 - Engine Malfunction - ECU Fault - General/Undefined/Air Filter Restriction

3007 - Engine Coolant Temperature Sender - Short to Ground

3008 - Engine Coolant Temperature Sender - Open Circuit

3027 - Oil pressure signal not plausible

3028 - Engine Oil Pressure Switch - Engine Oil Pressure Low

3029 - Engine Oil Pressure Switch - Engine Oil Pressure Switch OC

3088 - Crankshaft sensor lost synchronization

3089 - Crankshaft Sensor - Invalid Signal

3091 - Camshaft Sensor Phase Synchronization Failure

3093 - Offset Between Camshaft And Crankshaft - Outside Boundaries

3095 - Operating With Camshaft Sensor Only - Backup Mode

3154 - Engine Preheat - Glow Plug - STP

3156 - Engine Preheat - Glow Plug - OC

3157 - CAN Engine Timeout SCH Code

3158 - Engine controller configuration error anti-tamper

3401 - Engine Start - Fuel Solenoid - STP

3402 - Engine Start - Fuel Solenoid - OC

3403 - Starter: Starter is cranked > 30s

3404 - Starter - STP

3405 - Starter - STG / OC

3405 - ECU Power stages: Open load temperature error on the Turbocharger PWM output power stage

3406 - ECU Power stages: Over temperature error on the Turbocharger PWM output power stage

3408 - Lambda sensor: Oxygen concentration implausibly high

3409 - Oil pressure too low

3410 - Permanent governor deviation for valve

3411 - Permanent governor deviation for valve

3414 - Short circuit in cylinder 1 glow plug

3415 - Short circuit in cylinder 2 glow plug

3416 - Short circuit in cylinder 3 glow plug

3417 - Short circuit in cylinder 4 glow plug

3418 - ECU Power stages: SCB error on the Turbocharger PWM output power stage

3419 - ECU Power stages: SCG error on the Turbocharger PWM output power stage

3425 - Turbocharger: Over boost deviation at P2 too high in pressure charger regulator

3426 - Low efficiency in DPF filter

3427 - Diesel particulate filter (DPF): Signal range check flow resistance of the particulate filter - low

3428 - Diesel Particulate Filter Pressure sensor: not plausibility error

3429 - Diesel Particulate filter Pressure sensor: hose line plausibility error

3648 - EVGT Boost pressure monitoring for over boost

3657 - Timeout Error of CAN-Receive-Frame CM1BC

3659 - Battery voltage: Power stage diagnosis could be disabled due to high battery voltage

3660 - Battery voltage: Power stage diagnosis could be disabled due to low Battery voltage

3663 - EGR command saturation over higher threshold

3664 - EGR command saturation over lower threshold

3665 - Permanent governor deviation for valve

3666 - Permanent governor deviation for valve

3667 - Open load error for power stage

3668 - Over temperature error for H-bridge

3669 - Short circuit to battery on Out1 error for H-bridge

3670 - Short circuit to battery on Out2 error for H-bridge

3671 - Short circuit to ground on Out1 error for H-bridge

3672 - Short circuit to ground on Out2 error for H-bridge

3673 - Short circuit over load error for H-bridge

3674 - Under voltage error for H-bridge

3675 - DFC for long time valve drift at closed position

3676 - DFC for valve position sensor voltage SRC high

3677 - DFC for valve position sensor voltage SRC low

3689 - Faulty diagnostic data transmission or protocol error

3691 - No load error for low voltage system

3692 - Over temperature error on ECU power stage for glow plug low voltage system

3693 - Short circuit to battery error for low voltage system

3694 - Short circuit to ground error for low voltage system

3695 - Failure in glow plug cylinder 1

3696 - Failure in glow plug cylinder 2

3697 - Failure in glow plug cylinder 3

3698 - Failure in glow plug cylinder 4

3702 - Injection control: Detection of failed engine start

3703 - Injection control: check of minimum rail pressure

3704-3706 - Injector adjustment programming: check of missing injector adjustment value programming

3707 - Lambda sensor: Open circuit at the lambda sensor Nernst cell pin

3708 - Lambda sensor: Open circuit at the lambda sensor pump current pin

3709 - Lambda sensor: Open circuit at the lambda sensor virtual ground pin

3710 - Lambda sensor: Fault to indicate dynamics of the sensor signal too small

3711 - SCB error of the LSU Heater Power stage

3712 - Lambda sensor: SCG error of the LSU heater power stage

3713 - Lambda sensor: Open Load error of the LSU Heater Power stage

3714 - Lambda sensor: Fault code to indicate SRC High error for O2 calibration

3715 - Lambda sensor: SRC Low error for O2 calibration

3716 - Lambda sensor: O2 value above the max threshold

3720 - Lambda sensor: Low battery voltage at the SPI chip

3721 - Lambda sensor: Fault check to indicate SPI chip error of lambda sensor

3722 - Lambda sensor: LSU sensor temperature Ri exceeds the maximum limit

3723 - Lambda sensor: LSU sensor temperature Ri is below the minimum limit

3724 - Lambda sensor: Short to battery at IA, IP, UN, VG

3725 - Lambda sensor: Short to ground at IA, IP, UN, VG

3736 - O2 concentration is outside the predefined window during Heater coupling detection

3737 - Lambda sensor: Over temperature error of the LSU Heater Power stage

3766 - Diesel particulate filter pressure sensor: Fault check for the pressure sensor plausibility

3771 - Oxidation Catalyst: Up and down stream temperature sensors in Oxidation catalysts exchanged

3773 - EVGT Turbocharger Control Underboost Pressure failure

3786 - Diesel particulate filter signal range check is high

3787 - Diesel particulate filter (DPF) : Signal range check flow resistance of the particulate filter - very high

3789 - Regeneration duration exceeds maximum allowed duration

3790 - Diesel particulate filter: Signal range check flow resistance of the particulate filter - max

3794 - Intake air pressure sensor: Plausibility check for air pressure at the upstream of intake valve sensor

3795 - Intake air pressure sensor: Plausibility check for air pressure at the upstream of intake valve sensor

3796 - Diesel particulate filter pressure sensor hose line error

3798 - Diesel particulate filter pressure sensor: SRC low for differential pressure sensor

3799 - Pressure Relief valve: pressure relief valve is forced to open, perform pressure shock

3800 - Pressure relief valve: Quantity balance check if a successful PRV opening is ensured

3801 - Turbine upstream pressure sensor: SRC high for turbine upstream pressure sensor

3802 - Turbine upstream pressure sensor: SRC low for turbine upstream pressure sensor

3815 - Low efficiency in DPF filter

3818 - Open load error for power stage

3820 - Over temperature error for H-bridge

3821 - Short circuit to battery on Out1 error for H-bridge

3822 - Short circuit to battery on Out2 error for H-bridge

3823 - Short circuit to ground on Out1 error for H-bridge

3824 - Short circuit to ground on Out2 error for H-bridge

3825 - Short circuit over load error for H-bridge

3826 - Temperature dependent over current error for H-bridge

3827 - Under voltage error for H-bridge

3830 - DFC for valve position sensor physical SRC high

3831 - DFC for valve position sensor physical SRC low

3834 - ECU Power stages: Throttle valve actuator power stage: SRC High

3835 - ECU Power stages: Throttle valve actuator power stage: SRC low

3838 - Oxidation catalyst upstream temperature shorted to high source

3839 - Oxidation catalyst upstream temperature shorted to low source

3840 - Diesel particulate filter upstream temperature sensor shorted to high source

3841 - Diesel particulate filter upstream temperature sensor shorted to low source

3852 - Lambda sensor: The maximum allowed time for blow out is exceeded

4043 - Hydraulic Oil Temperature Sender Short To Ground

4044 - Hydraulic Oil Temperature Sender Open Circuit

4055 - Park Brake Valve (On/Off) - Solenoid Supply Open Circuit

4056 - Park Brake Valve (On/Off) - Solenoid Supply Short to Ground

4057 - Park Brake Valve (On/Off) - Solenoid Supply Short to Power

4061 - Forward Pump Control Valves (Directional) - Solenoid Right (A) Supply Open Circuit

4062 - Forward Pump Control Valves (Directional) - Solenoid Right (A) Supply Short to Ground

4071 - Forward Pump Control Valves (Directional) - Solenoid Left (B) Supply Open Circuit

4072 - Forward Pump Control Valves (Directional) - Solenoid Left (B) Supply Short to Ground

4081 - Forward Pump Control Valves (Directional) - Common Solenoid Return Short to Power

4082 - Forward Pump Control Valves (Directional) - Pumps Forward Solenoids Short to Ground

4083 - Forward Pump Control Valves (Directional) - Common Solenoid Return Open Circuit

4309 - Park Brake Button - Park Brake Button Timeout (30 sec)

4361 - Reverse Pump Control Valves (Directional) - Solenoid Right (A) Supply Open Circuit

4362 - Reverse Pump Control Valves (Directional) - Solenoid Right (A) Supply Short to Ground

4371 - Reverse Pump Control Valves (Directional) - Solenoid Left (B) Supply Open Circuit

4372 - Reverse Pump Control Valves (Directional) - Solenoid Left (B) Supply Short to Ground

4381 - Reverse Pump Control Valves (Directional) - Common Solenoid Return Short to Power

4382 - Reverse Pump Control Valves (Directional) - Pumps Reverse Solenoids Short to Ground

4383 - Reverse Pump Control Valves (Directional) - Common Solenoid Return Open Circuit

4401 - Park Brake (Mechanical Machines) - Park Brake Solenoid - Open Circuit

4402 - Park Brake (Mechanical Machines) - Park Brake Solenoid - Short to Power

4431 - Park Brake Pressure Switch - Pressure Switch (Plausibility Check With Solenoid Valve)

4731 - Right Swash Plate Sensor - Pin A Short to Ground/ Open Circuit

4732 - Right Swash Plate Sensor - Pin A Short to Power

4734 - Right Swash Plate Angle Sensor - Pin B Short to Ground/ Open Circuit

4735 - Right Swash Plate Angle Sensor - Pin B Short to Power

4737 - Right Swash Plate Angle Sensor - In Range Fault

4741 - Left Swash Plate Angle Sensor - Pin A Short to Ground/ Open Circuit

4742 - Left Swash Plate Angle Sensor - Pin A Short to Power

4744 - Left Swash Plate Angle Sensor - Pin B Short to Ground/ Open Circuit

4745 - Left Swash Plate Angle Sensor - Pin B Short to Power

4747 - Left Swash Plate Angle Sensor - In Range Fault

4752 - Left Swash Plate Angle Sensor - Implausible Command, Command Does Not Match With Swash Plate Angle

4754 - Right Swash Plate Angle Sensor - Implausible Command, Command Does Not Match With Swash Plate Angle

4781 - Solenoid Valve - Solenoid Supply Open Circuit

4782 - Solenoid Valve - Solenoid Supply Short to Ground

4783 - Solenoid Valve - Solenoid Supply Short to Power

4951 - Hydraulic Enable (Mechanical Machines) - Hydraulic Interlock Solenoid, Short to Power

4952 - Hydraulic Enable (Mechanical Machines) - Hydraulic Interlock Solenoid Open Circuit

5051 - Loader Pilot Interlock Valve (On/Off) - Solenoid Supply Open Circuit

5052 - Loader Pilot Interlock Valve (On/Off) - Solenoid Supply Short to Ground

5053 - Loader Pilot Interlock Valve (On/Off) - Solenoid Supply Short to Power

5061 - Port Lock Valve (On/Off) - Solenoid Supply Open Circuit

5062 - Port Lock Valve (On/Off) - Solenoid Supply Short to Ground

5063 - Port Lock Valve (On/Off) - Solenoid Supply Short to Power

5121 - Right Joystick F-B Axis - Pin A Short to Power/ Short to Ground/ Open Circuit

5122 - Right Joystick F-B Axis - Pin B Short to Power/ Short to Ground/ Open Circuit

5124 - Right Joystick F-B Axis - In Range Fault

5131 - Right Joystick R-L Axis (ISO/H Pattern) - Pin A Short to Ground/ Open Circuit

5132 - Right Joystick R-L Axis (ISO/H Pattern) - Pin A Short to Power

5134 - Right Joystick R-L Axis (ISO/H Pattern) - Pin B Short to Ground/ Open Circuit

5135 - Right Joystick R-L Axis (ISO/H Pattern) - Pin B Short to Power

5137 - Right Joystick R-L Axis (ISO/H Pattern) - In Range Fault

5141 - Aux Thumbwheel Axis - Pin A Short to Ground/ Open Circuit

5142 - Aux Thumbwheel Axis - Pin A Short to Power

5144 - Aux Thumbwheel Axis - Pin A Short to Ground/ Open Circuit

5145 - Aux Thumbwheel Axis - Pin A Short to Power

5147 - Aux Thumbwheel Axis - In Range Fault

5201 - Left Joystick L-R Axis - Pin A Short to Power/ Short to Ground/ Open Circuit

5202 - Left Joystick L-R Axis - Pin B Short to Power/ Short to Ground/ Open Circuit

5204 - Left Joystick L-R Axis - In Range Fault

5211 - Left Joystick F-B Axis - Pin A Short to Ground/ Open Circuit

5212 - Left Joystick F-B Axis - Pin A Short to Power

5214 - Left Joystick F-B Axis - Pin B Short to Ground/ Open Circuit

5215 - Left Joystick F-B Axis - Pin B Short to Power

5217 - Left Joystick F-B Axis - In Range Fault

5221 - Loader Arm Valve (Directional) - Solenoid Raise A Supply Open Circuit

5222 - Loader Arm Valve (Directional) - Solenoid Raise A Supply Short to Ground

5231 - Loader Arm Valve (Directional) - Solenoid Lower B Supply Open Circuit

5232 - Loader Arm Valve (Directional) - Solenoid Lower B Supply Short to Ground

5241 - Boom Valve (Directional) - Common Solenoid (C) Return Short to Power

5242 - Loader Arm Valve (Directional) - Loader Arm Solenoids Short to Ground

5243 - Boom Valve (Directional) - Common Solenoid (C) Return Open Circuit

5251 - Loader Bucket Valve (Directional) - Solenoid Rollback (A) Supply Open Circuit

5252 - Loader Bucket Valve (Directional) - Solenoid Rollback (A) Supply Short to Ground

5261 - Bucket Valve (Directional) - Solenoid Dump (B) Supply Open Circuit

5262 - Bucket Valve (Directional) - Solenoid Dump (B) Supply Short to Ground

5271 - Bucket Valve (Directional) - Common Solenoid (C) Return Short to Power

5272 - Loader Bucket Valve (Directional) - Loader Bucket Solenoids Short to Ground

5273 - Bucket Valve (Directional) - Common Solenoid (C) Return Open Circuit

5281 - Aux Valve (Directional) - Solenoid Forward (A) Supply Open Circuit

5282 - Aux Valve (Directional) - Solenoid Forward (A) Supply Short to Ground

5291 - Aux Valve (Directional) - Solenoid Reverse (B) Supply Open Circuit

5292 - Aux Valve (Directional) - Solenoid Reverse (B) Supply Short to Ground

5309 - Float Button - Float Button Timeout (30 sec)

5313 - EHF Enable Switch - STP

5323 - EHF Fwd / Rev Switch - STP

5371 - EHF Pump Control PRV's (Directional) - Forward Solenoid (A) Supply Open Circuit

5372 - EHF Pump Control PRV's (Directional) - Forward Solenoid (A) Supply Short to Ground

5381 - EHF Pump Control PRV's (Directional) - Reverse Solenoid (B) Supply Open Circuit

5382 - EHF Pump Control PRV's (Directional) - Reverse Solenoid (B) Supply Short to Ground

5391 - EHF Pump Control PRV's (Directional) - Solenoids Return Open Circuit

5392 - EHF Pump Control PRV's (Directional) - EHF Pumps Solenoids Short to Ground

5393 - EHF Pump Control PRV's (Directional) - EHF Pumps Solenoids Short to Power

5409 - CAN Message Error - Aux Override Disabled Due To Aux Override Button Timeout (30 sec)

5501 - Loader Arm Spool Sensor - Sensor Short to Ground/ Open Circuit

5502 - Loader Arm Spool Sensor - Sensor Short to Power

5503 - Hydraulic Enable (Mechanical Machines) - EH AUX Output, Short to Power

5504 - Bucket Valve Spool Sensor - Sensor Short to Ground/ Open Circuit

5505 - Bucket Valve Spool Sensor - Sensor Short to Power

5507 - Auxiliary Valve Spool Sensor - Sensor Short to Ground/ Open Circuit

5508 - Auxiliary Valve Spool Sensor - Sensor Short to Power

5511 - Loader Arm Spool Sensor - Implausible State Sensor vs. Loader Arm Command, Stuck Spool/ PRV

5512 - Bucket Valve Spool Sensor - Implausible State Sensor vs. Loader Bucket Command

5513 - Auxiliary Valve Spool Sensor - Implausible State Sensor vs. Auxiliary Command

5601 - Aux Valve (Directional) - Common Solenoid Return Short to Power

5602 - Loader Auxiliary Valve (Directional) - Loader Auxiliary Solenoids Short to Ground

5603 - Loader Auxiliary Valve Solenoid Return Open Circuit

5701 - Pattern Switch - Short to Ground/ Open Circuit

5703 - Pattern Switch - Short to Power

5811 - Loader Lockout Switch - Implausible State

9003 - CAN - J1939 Receive Buffer - Buffer Overflow

9004 - Memory Error - Triple Redundant: Hour Meter - Location 1 Corrupt

9005 - Memory Error - Triple Redundant: Hour Meter - Location 2 Corrupt

9006 - Memory Error - Triple Redundant: Hour Meter - Location 3 Corrupt

9151 - CAN Connection: CAN Communication Timed Out After 5 Seconds

9152 - CAN Connection - CAN Communication Timed Out After 5 Seconds

9153 - CAN Connection - EEC1 Message Timed Out

9154 - CAN Connection - TSC1 Message Timed Out

9158 - H-Pattern Indicator Short to Ground

9159 - ISO-Pattern Indicator Short to Ground

9160 - H-Pattern Indicator Short to Power

9161 - ISO-Pattern Indicator Short to Power

9401 - Memory Error - Double Redundant: Memory Corruption Detected and Repaired

9403 - Memory Error - Double Redundant: Unrecoverable Memory Corruption Operable

9404 - Memory Error - Triple Redundant: Hour Meter - Hour Meter Failure

9405 - CAN - DM1 (EH Machines): Loss Of DM1 Message From UCM

9406 - CAN - Can Communication Lost (EH Machines): Loss Of All CAN Communication From UCM

9407 - Memory Error - ID Errors: Unrecoverable Hardware ID

9408 - Memory Error - ID Errors: Unrecoverable Panel ID