Fault codes for CASE wheel loaders

CODE / DEFINITION

12110 Engine coolant temperature is 110° C (230° F) or greater

12900 Engine coolant temperature sensor short circuit measuring less than 50 ohms.

12901 Engine coolant temperature sensor open circuit measuring greater than 10,000 ohms with hydraulic oil temperature at 40° C (104° F) or more, indicated by a resistance of 1463 ohms or less.

13000 Low engine coolant level - This code will not be generated if the engine coolant temperature is below 20° C (68° F).

21070 Engine oil pressure is measured below 70 kPa (10 psi)

21900 Engine oil pressure sensor short circuit measuring less than 16 ohms and engine coolant temperature is greater than or equal to 70° C (158° F).

21901 Engine oil pressure sensor open circuit measuring more than 270 ohms. 33900 Fuel level sender short circuit measuring less than 16 ohms.

33901 Fuel level sender open circuit measuring more than 270 ohms. 34000 Short circuit in fuel solenoid circuit.

35000 High air filter restriction.

42125 Transmission temperature measured above 125° C (257° F)

45000 High transmission filter restriction when the transmission oil is above 20° C (68° F). 46017 Gear range fault error

46018 Logical error at direction select signal 46020 Logical fault at park brake status 46021 Logical error at FNR switch

46023 Short circuit to ground at ride control 46024 Short circuit to battery voltage at ride control 46025 Open circuit at ride control

46037 Short circuit to battery voltage or open circuit at temperature sensor 46038 Short circuit to ground at temperature sensor

46039 Short circuit to battery voltage or open circuit at converter output temperature sensor 46040 Short circuit to ground at converter output temperature sensor

46049 Short circuit to battery voltage or open circuit at engine speed sensor

46050 Short circuit to ground at engine speed sensor 46051 Logical error at engine speed sensor input

46052 Short circuit to battery voltage or open circuit at turbine speed sensor input 46053 Short circuit to ground at turbine speed sensor input

46054 Logical error at turbine speed sensor input

46055 Short circuit to battery voltage or open circuit at intermediate speed sensor input 46056 Short circuit to ground at intermediate speed input

46057 Logical error at intermediate speed sensor input

46058 Short circuit to battery voltage or open circuit at output speed sensor

46059 Short circuit to ground at output speed sensor 46060 Logical error at output speed sensor 46062 Output speed zero, does not match other speeds.

46064 Invalid gear range restriction (CAN)

46065 Invalid declutch modulation selection (CAN) 46089 Invalid test mode signal (CAN)

46090 Invalid park brake status (CAN) 46091 Invalid shift quality selection (CAN)

46113 Short circuit to battery voltage at clutch K1 46114 Short circuit to ground at clutch K1

46115 Open circuit at clutch K1

46116 Short circuit to battery voltage at clutch K2 46117 Short circuit to ground at clutch K2

46118 Open circuit at clutch K2

46119 Short circuit to battery voltage at clutch K3 46120 Short circuit to ground at clutch K3

46121 Open circuit at clutch K3

46129 Short circuit to battery voltage at clutch K4 46130 Short circuit to ground at clutch K4

46131 Open circuit at clutch K4

46132 Short circuit to battery voltage at clutch KV 46133 Short circuit to ground at clutch KV

46134 Open circuit at clutch KV

46135 Short circuit to battery voltage at clutch KR 46136 Short circuit to ground at clutch KR

46137 Open circuit at clutch KR

46145 Short circuit to ground at backup alarm relay 46146 Short circuit to battery voltage at backup alarm relay

46147 Open circuit at backup alarm relay 46177 Slippage at clutch K1

46178 Slippage at clutch K2 46179 Slippage at clutch K3 46180 Slippage at clutch K4 46181 Slippage at clutch KV 46182 Slippage at clutch KR

46183 Oil temperature at valve body is above limit

46185 Engine speed is measured above 5,000 rpm for 0.2 seconds

46186 TCU sensed a voltage at oil filter maintenance switch out of the allowed range (dirty filter) 46195 Oil temperature at converter output is above limit

46196 Short circuit to ground at transmission enable switch indicator circuit 46197 Short circuit to battery voltage at transmission enable switch indicator circuit

46198 Open circuit at transmission enable switch indicator circuit

46209 Short circuit to battery voltage at power supply for sensors 46210 Short circuit to ground at power supply for sensors

46211 Low voltage at battery 46212 High voltage at battery 46213 Error at switch 1 for solenoid power supply 46214 Error at switch 2 for solenoid power supply

46227 Short circuit to battery voltage at display output

46228 Short circuit to ground at display output 46229 Error at communication on CAN 46230 Undefined VIN request via CAN.

46241 General EEPROM fault 46242 Current ID not set or corrupt

46243 Application error (ZF internal) 46245 Clutch calibration fault 46246 Clutch adjustment data lost 47000 CAN interface failure where no signals are received over one second of time

47001 Engine speed is missing 47002 Output shaft speed is missing 47011 Transmission oil temperature is missing

47012 Transmission filter restriction information is missing

47013 Current VINS is outside of the range 47014 Result code (11)

51000 Low steering pressure has been detected after a normal operating pressure has been reached since start up.

61000 Low brake pressure (1700 PSI / 11721 kPa) has been detected after a normal operating pressure has been reached since start up.

61900 1700 PSI (11,721 kPa) Brake pressure switch has not cycled within 50 hours of operation time.

61901 900 PSI (6250 kPa) Redundant brake pressure switch has not cycled within 100 hours of operation time.

64000 Park brake solenoid output short circuit. 66900 Park brake switch has not cycled within 50 hours of operation time.

66901 Service brake foot switch has not cycled within 50 hours of operation. 72110 Hydraulic oil temperature is 110° C (230° F) or greater.

72900 Hydraulic oil temperature sensor short circuit measuring less than 50 ohms.

72901 Hydraulic oil temperature sensor open circuit measuring greater than 10,000 ohms with the engine coolant temperature at 90° C (194° F) or more, indicated by a resistance of 243 ohms or less.

74000 Pilot pressure solenoid output short circuit.

75000 High hydraulic filter restriction when the hydraulic oil is above 20° C (68° F). 84018 System voltage is below 18 volts.

84032 System voltage is above 32 volts. 86010 Corrupt engine hours, data lost

86020 Corrupt tire calibration numbers, data lost – The calibration number will default back to the number used at cluster shipment

86040 Information Center program memory error 86050 Information Center RAM failure

86060 Information Center Reset – This code is generated if the Information Center Program “goes astray”. The Information Center is reset. This code will also be generated if there is a brief intermittent open between the time the engine is shut off and the Information Center shuts off.

86070 Open range setting 86071 Brightness setting

86072 Machine ID

86073 Machine info 86075 Cluster date code 86076 Cluster reserved

86077 Calibration number

86078 Shift quality

86079 Requested Gmin

86080 Requested Gmax

86081 Declutch modulation

86082 Creep setting

86083 Service hours

86084 Diagnostics stack pointer (internal to software) 86085 Diagnostics stack contents

86086 Digital input states (internal to software) 86087 Engine hour time stamps for digital input states (internal to software)

91000 Air Conditioning high or low pressure indication

ENGINE FAULT CODE CHART

BLINK CODE	DEFINITION	LAMP STATUS
1.2	Multiple State Switch	Off
1.4	Accelerator Pedal Signal	On
1.8	Diagnostic Lamp	Off
2.1	Coolant Temperature Signal	On
2.2	Boost Temperature Signal	Off
2.3	Fuel Temperature Signal	Off
2.4	Boost Pressure Signal	On
2.5	Atmospheric Pressure Signal	Off
2.6	Oil Pressure Signal	On
2.7	Oil Temperature Signal	On
2.8	Power Stage Fuel Filter Heater	Off
3.7	Battery Voltage Signal	On
3.8	Ls Power Stage Cold Start Lamp	Off
3.9	Cold Start Heater Monitoring	Off
5.1	Injector Solenoid Valve Cylinder 1	On
5.2	Injector Solenoid Valve Cylinder 2	On
5.3	Injector Solenoid Valve Cylinder 3	On
5.4	Injector Solenoid Valve Cylinder 4	On
5.5	Injector Solenoid Valve Cylinder 5	On
5.6	Injector Solenoid Valve Cylinder 6	On
5.7	Injector Booster Voltage C1	On

5.8	Injector Booster Voltage C2	On
6.1	Increment Speed Signal	On
6.2	Segment Speed Signal	On
6.3	Engine Speed Sensing	On
6.4	Engine Overspeed	Flashing
6.5	Hs Power Stage 8 For Starter Control	Off
8.1	Fuel Pressure Monitoring Cp3	Flashing
8.2	Fuel Pressure Signal	Flashing
8.3	CC HS Power Stage 1 Fuel Pressure Control	Flashing
8.4	Monitoring Of Rail Pressure Relief Valve	Flashing
8.5	Fuel Pressure Monitoring CP3 (High)	Flashing
9.4	Main Relay Defect	On
9.6	ECU Self Test Shutoff Paths	On
9.7	Power Supply For Sensors	On

Note 1 - System Degradation:

1 = 0% Derate

2 = Moderate Derate

3 = Significant Derate

4 = Engine Stop