

21	620-03	262-03	5 Volt Sensor DC Power Supply short to +batt
	1079-03		
	620-04	262-04	5 Volt Sensor DC Power Supply short to ground
	1079-04		
24	100-03	100-03	Engine Oil Pressure open/short to +batt
	100-04	100-04	Engine Oil Pressure short to ground
	100-10	100-10	Engine Oil Pressure abnormal rate of change
25	102-03	102-03	Boost Pressure Sensor short to +batt
	102-04	102-04	Boost Pressure Sensor short to ground
	102-10	102-10	Boost Pressure Sensor abnormal rate of change
	102-03	1785-03	Intake Manifold Pressure Sensor voltage above normal
	102-04	1785-04	Intake Manifold Pressure Sensor voltage below normal
	102-10	1785-10	Intake Manifold Pressure Sensor abnormal rate of change
26	108-03	274-03	Atmospheric Pressure open/short to +batt
	108-04	274-04	Atmospheric Pressure short to ground
27	110-03	110-03	Engine Coolant Temperature open/short to +batt
	110-04	110-04	Engine Coolant Temperature short to ground
28	91-13	91-13	Throttle Position calibration required
32	91-08	91-08	Throttle Position signal abnormal
34	190-08	190-08	Engine Speed signal abnormal
	723-08	342-08	Secondary Engine Speed signal abnormal
35	190-15	E362 (1)	Engine Overspeed Warning
	190-00	E362 (3)	Engine Overspeed Shutdown
37	94-03	94-03	Fuel Pressure open/short to +batt
	94-04	94-04	Fuel Pressure short to ground
38	105-03	172-03	Intake Manifold Air Temp open/short to +batt

FINNING

CAT Service Information System Shutdown

Previous Screen

Product: INDUSTRIAL ENGINE
 Model: C9 INDUSTRIAL ENGINE MBD
 Configuration: C9 Industrial MBD00001-UP

Troubleshooting

C7 and C9 Industrial Engines and C7 Petroleum Engine

Media Number -REN2418-06

Publication Date -01/11/2008

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i02608405

Diagnostic Code Cross Reference

SMCS - 1900

Problems with the electronic control system are reported via these types of codes: flash codes, SPN/FMI codes, diagnostic codes and event codes.

For information on flash codes, refer to Troubleshooting, "Flash Codes".

For information on SPN/FMI codes, refer to Troubleshooting, "Diagnostic Codes".

For information on diagnostic codes, refer to Troubleshooting, "Diagnostic Codes".

For information on event codes, refer to Troubleshooting, "Event Codes".

Use Table 1 as a cross-reference between the various types of codes.

Table 1

Cross Reference for Diagnostic Codes			
Flash Code	SPN ⁽¹⁾/FMI Code	Diagnostic Code or Event Code	Description of Code
14	1074-05	1248-05	Retarder Solenoid current below normal
	1074-06	1248-06	Retarder Solenoid current above normal
16	626-05	2417-05	Ether Injection Control Solenoid open/short to +batt
	626-06	2417-06	Ether Injection Control Solenoid short to ground
	678-03	41-03	8 Volt DC Supply short to +batt
	678-04	41-04	8 Volt DC Supply short to ground

Crushers with 32 Way Receiver Fault Codes: (Format Cxxx)

Code	Fault
C0001	ESTOP
C0002	Remote Stop activated by handset
C0003	Communication problem - Engine Interface unit not receiving messages from rest of crusher electronics
C0004	Communication problem - Engine Interface unit not receiving messages from CAT engine
C0005	Communication problem - Crusher electronics is not receiving any messages from 32way receiver
C0006	Communication problem - Crusher electronics is not receiving any messages from analog sensor box
C0007	Communication problem - Crusher electronics is not receiving any messages from daisy chain box
C0009	Communication problem - Crusher electronics is not receiving any messages from track led box
C0010	Communication problem - Crusher electronics is not receiving any messages from motorised valve unit
C0011	
C0012	
C0013	Impactor, conveyor sensor is picking up problem, disabled feeder
C0014	Impactor, Box switch is open, all services but track are disabled
C0015	Crusher electronics is performing SKF vibration analysis test (duration 60 seconds)
C0016	Crusher electronics is seeing a problem with switch matrix- stuck button / shorted wires
C0017	C10+/C12+ Trying to start jaw but receiving bent toggle plate signal, check toggle plate switch
C0018	Crusher electronics has picked up excessive vibration during test. Shutdown crusher and check bearing
C0019	Crusher electronics is destructing hydraulic pump to relieve excess pressure.
C0020	Crusher electronics has stopped crusher unit due to excessive pressure, pump already destroyed.
C0021	C12+ crusher electronics is picking up low grease signal from vogel unit.
C0022	C10+/C12+ 100 Bar pressure switch is open
C0023	Motorised valve unit is not connected to motor
C0024	Motorised valve unit is not seeing motor turning, possibly jammed motor, faulty wiring.

Handwritten notes:
 REMOTE STOP ON BUT
 HANDSET NOT ACTIVATED
 OR PRESENT
 SWITCH OFF RECEIVER BOX
 36 SWITCH
 ACTION SHOULD
 REMOVE

Code	Fault	Machine Type
C0025	Electrical problem with COB output0 dependent on machine.	X44
C0026	Electrical problem with COB output1 dependent on machine.	
C0027	Electrical problem with COB output2 dependent on machine.	C12+
C0028	Electrical problem with COB output3 dependent on machine.	Vibration warning lamp
C0029	Electrical problem with COB output4 dependent on machine.	Feeder Slower lamp
C0030	Electrical problem with COB output5 dependent on machine.	Feeder Faster lamp
C0031	Electrical problem with COB output6 dependent on machine.	
C0032	Electrical problem with COB output7 dependent on machine.	Jaw block permanent feed, White Tape
C0033	Electrical problem with COB output8 dependent on machine.	Engine Stop
C0034	Electrical problem with COB output9 dependent on machine.	Engine Stop
C0035	Electrical problem with COB output10 dependent on machine.	Engine Stop
C0036	Electrical problem with COB output11 dependent on machine.	Engine Stop
C0037	Electrical problem with COB output12 dependent on machine.	Engine Stop
C0038	Electrical problem with COB output13 dependent on machine.	Engine Stop
C0039	Electrical problem with COB output14 dependent on machine.	Engine Stop
C0040	Electrical problem with COB output15 dependent on machine.	Engine Stop
C0041	Electrical problem with COB output16 dependent on machine.	Engine Stop
C0042	Electrical problem with COB output17 dependent on machine.	Engine Stop
C0043	Electrical problem with COB output18 dependent on machine.	Engine Stop
C0044	Electrical problem with COB output19 dependent on machine.	Engine Stop
C0045	Electrical problem with COB output20 dependent on machine.	Engine Stop
C0046	Electrical problem with COB output21 dependent on machine.	Engine Stop
C0047	Electrical problem with COB output22 dependent on machine.	Engine Stop
C0048	Electrical problem with COB output23 dependent on machine.	Engine Stop
C0049	Electrical problem with COB output24 dependent on machine.	Engine Stop
C0050	Electrical problem with COB output25 dependent on machine.	Engine Stop
C0051	Electrical problem with COB output26 dependent on machine.	Engine Stop
C0052	Electrical problem with COB output27 dependent on machine.	Engine Stop
C0053	Electrical problem with COB output28 dependent on machine.	Engine Stop
C0054	Electrical problem with COB output29 dependent on machine.	Engine Stop
C0055	Electrical problem with COB output30 dependent on machine.	Engine Stop
C0056	Electrical problem with COB output31 dependent on machine.	Engine Stop
C0057	Electrical problem with COB output32 dependent on machine.	Engine Stop
C0058	Electrical problem with COB output33 dependent on machine.	Engine Stop
C0059	Electrical problem with COB output34 dependent on machine.	Engine Stop
C0060	Electrical problem with COB output35 dependent on machine.	Engine Stop
C0061	Electrical problem with COB output36 dependent on machine.	Engine Stop
C0062	Electrical problem with COB output37 dependent on machine.	Engine Stop
C0063	Electrical problem with COB output38 dependent on machine.	Engine Stop
C0064	Electrical problem with COB output39 dependent on machine.	Engine Stop
C0065	Electrical problem with COB output40 dependent on machine.	Engine Stop
C0066	Electrical problem with COB output41 dependent on machine.	Engine Stop
C0067	Electrical problem with COB output42 dependent on machine.	Engine Stop
C0068	Electrical problem with COB output43 dependent on machine.	Engine Stop
C0069	Electrical problem with COB output44 dependent on machine.	Engine Stop
C0070	Electrical problem with COB output45 dependent on machine.	Engine Stop
C0071	Electrical problem with COB output46 dependent on machine.	Engine Stop
C0072	Electrical problem with COB output47 dependent on machine.	Engine Stop
C0073	Electrical problem with COB output48 dependent on machine.	Engine Stop
C0074	Electrical problem with COB output49 dependent on machine.	Engine Stop
C0075	Electrical problem with COB output50 dependent on machine.	Engine Stop
C0076	Electrical problem with COB output51 dependent on machine.	Engine Stop
C0077	Electrical problem with COB output52 dependent on machine.	Engine Stop
C0078	Electrical problem with COB output53 dependent on machine.	Engine Stop
C0079	Electrical problem with COB output54 dependent on machine.	Engine Stop
C0080	Electrical problem with COB output55 dependent on machine.	Engine Stop
C0081	Electrical problem with COB output56 dependent on machine.	Engine Stop
C0082	Electrical problem with COB output57 dependent on machine.	Engine Stop
C0083	Electrical problem with COB output58 dependent on machine.	Engine Stop
C0084	Electrical problem with COB output59 dependent on machine.	Engine Stop
C0085	Electrical problem with COB output60 dependent on machine.	Engine Stop
C0086	Electrical problem with COB output61 dependent on machine.	Engine Stop
C0087	Electrical problem with COB output62 dependent on machine.	Engine Stop
C0088	Electrical problem with COB output63 dependent on machine.	Engine Stop
C0089	Electrical problem with COB output64 dependent on machine.	Engine Stop
C0090	Electrical problem with COB output65 dependent on machine.	Engine Stop
C0091	Electrical problem with COB output66 dependent on machine.	Engine Stop
C0092	Electrical problem with COB output67 dependent on machine.	Engine Stop
C0093	Electrical problem with COB output68 dependent on machine.	Engine Stop
C0094	Electrical problem with COB output69 dependent on machine.	Engine Stop
C0095	Electrical problem with COB output70 dependent on machine.	Engine Stop
C0096	Electrical problem with COB output71 dependent on machine.	Engine Stop
C0097	Electrical problem with COB output72 dependent on machine.	Engine Stop
C0098	Electrical problem with COB output73 dependent on machine.	Engine Stop
C0099	Electrical problem with COB output74 dependent on machine.	Engine Stop
C0100	Electrical problem with COB output75 dependent on machine.	Engine Stop
C0101	Electrical problem with COB output76 dependent on machine.	Engine Stop
C0102	Electrical problem with COB output77 dependent on machine.	Engine Stop
C0103	Electrical problem with COB output78 dependent on machine.	Engine Stop
C0104	Electrical problem with COB output79 dependent on machine.	Engine Stop
C0105	Electrical problem with COB output80 dependent on machine.	Engine Stop
C0106	Electrical problem with COB output81 dependent on machine.	Engine Stop
C0107	Electrical problem with COB output82 dependent on machine.	Engine Stop
C0108	Electrical problem with COB output83 dependent on machine.	Engine Stop
C0109	Electrical problem with COB output84 dependent on machine.	Engine Stop
C0110	Electrical problem with COB output85 dependent on machine.	Engine Stop
C0111	Electrical problem with COB output86 dependent on machine.	Engine Stop
C0112	Electrical problem with COB output87 dependent on machine.	Engine Stop
C0113	Electrical problem with COB output88 dependent on machine.	Engine Stop
C0114	Electrical problem with COB output89 dependent on machine.	Engine Stop
C0115	Electrical problem with COB output90 dependent on machine.	Engine Stop
C0116	Electrical problem with COB output91 dependent on machine.	Engine Stop
C0117	Electrical problem with COB output92 dependent on machine.	Engine Stop
C0118	Electrical problem with COB output93 dependent on machine.	Engine Stop
C0119	Electrical problem with COB output94 dependent on machine.	Engine Stop
C0120	Electrical problem with COB output95 dependent on machine.	Engine Stop
C0121	Electrical problem with COB output96 dependent on machine.	Engine Stop
C0122	Electrical problem with COB output97 dependent on machine.	Engine Stop
C0123	Electrical problem with COB output98 dependent on machine.	Engine Stop
C0124	Electrical problem with COB output99 dependent on machine.	Engine Stop
C0125	Electrical problem with COB output100 dependent on machine.	Engine Stop

65	174-16	E363 (2)	High Fuel Temperature Derate
	174-00	E363 (3)	High Fuel Temperature Shutdown
67	0441-15	E445 (1)	High Auxiliary Temperature Warning
	0441-16	E445 (2)	High Auxiliary Temperature Derate
	0441-00	E445 (3)	High Auxiliary Temperature Shutdown
	1836-03	1836-03	Auxiliary Temperature Sensor open/short to +batt
	1836-04	1836-04	Auxiliary Temperature Sensor short to ground
68	1387-15	E443 (1)	High Auxiliary Pressure Warning
	1387-16	E443 (2)	High Auxiliary Pressure Derate
	1387-00	E443 (3)	High Auxiliary Pressure Shutdown
	1835-03	1835-03	Auxiliary Pressure Sensor open/short to +batt
	1835-04	1835-04	Auxiliary Pressure Sensor short to ground
71	651-05	001-05	Cylinder #1 Injector open circuit
	651-06	001-06	Cylinder #1 Injector short
72	652-05	002-05	Cylinder #2 Injector open circuit
	652-06	002-06	Cylinder #2 Injector short
73	653-05	003-05	Cylinder #3 Injector open circuit
	653-06	003-06	Cylinder #3 Injector short
74	654-05	004-05	Cylinder #4 Injector open circuit
	654-06	004-06	Cylinder #4 Injector short
75	655-05	005-05	Cylinder #5 Injector open circuit
	655-06	005-06	Cylinder #5 Injector short
76	656-05	006-05	Cylinder #6 Injector open circuit
	656-06	006-06	Cylinder #6 Injector short

(1) Suspect Parameter Number

	105-04	172-04	Intake Manifold Air Temp short to ground
39	164-02	164-02	Injector Actuation Pressure signal erratic
	164-03	164-03	Injector Actuation Pressure voltage high
	164-04	164-04	Injector Actuation Pressure voltage low
	164-11	164-11	Injector Actuation Pressure system fault
42	637-13	261-13	Engine Timing calibration required
46	100-17	E360 (1)	Low Engine Oil Pressure Warning
	100-18	E360 (2)	Low Engine Oil Pressure Derate
	100-01	E360 (3)	Low Engine Oil Pressure Shutdown
49	729-05	617-05	Air Inlet Heater Relay open/current below normal
	729-06	617-06	Air Inlet Heater Relay grounded/current above norm
51	168-00	168-00	System Voltage high
	168-01	168-01	System Voltage low
	168-02	168-02	System Voltage intermittent/erratic
56	630-02	268-02	Check Programmable Parameters
58	639-09	247-09	J1939 Data Link communications
61	110-15	E361 (1)	High Engine Coolant Temperature Warning
	110-16	E361 (2)	High Engine Coolant Temperature Derate
	110-00	E361 (3)	High Engine Coolant Temperature Shutdown
62	111-17	E2143 (1)	Low Engine Coolant Level Warning
	111-18	E2143 (2)	Low Engine Coolant Level Derate
	111-01	E2143 (3)	Low Engine Coolant Level Shutdown
63	94-15	E096 (1)	High Fuel Pressure Warning
	94-17	E198 (1)	Low Fuel Pressure Warning
	94-18	E198 (2)	Low Fuel Pressure Shutdown
64	1636-15	E539 (1)	High Inlet Air Temperature Warning
	1636-00	E539 (3)	High Inlet Air Temperature Shutdown
	174-15	E363 (1)	High Fuel Temperature Warning