SEN06483-04

Shop Manual

HYDRAULIC
EXCAVATOR

PC228USLC-10

SERIAL NUMBERS 1002 and up

KOMATSU®

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Machine model / Serial No.	Unit	PC228USLC-10 / 1002 and up
Engine		
Model	-	SAA6D107E–2
Type	-	4-cycle, water-cooled, in-line, vertical, direct injection, with turbocharger and air-cooled aftercooler
No. of cylinders - bore x stroke	mm	6 - 107 x 124
Total piston displacement	ℓ {cc}	6,69 {6,690}
Performance		
Rated horsepower		
• SAE J1995 (gross)	kW {HP}/min^{-1} {rpm}	123.2 {165}/2,000 {2,000}
• ISO 14396		123.2 {165}/2,000 {2,000}
• ISO 9249/SAE J1349 (net)		116.1 {156}/2,000 {2,000}
Max. torque	Nm/min^{-1} {kgm/rpm}	629/1,500 {64.2/1,500}
Max. speed with no load		
• When mounted on machine (*2)	min^{-1} {rpm}	1,850 ± 50 {1,850 ± 50}
• Basic engine		2,060 ± 50 {2,060 ± 50}
Min. speed with no load	min^{-1} {rpm}	1,050 ± 25 {1,050 ± 25}
Min. fuel consumption ratio	g/kWh {g/HPh}	215 {160}
Starting motor	-	24 V, 5.5 kW
Alternator	-	24 V, 60 A
Battery (*3)	-	12 V, 120 Ah x 2 pieces
Radiator model	-	CF90-4

*2: Indicates when swing is locked.

*3: The battery capacity (Ah) is indicated in the 5-hour rate.

★ The engine rated horsepower is indicated in the net value and gross value. Gross denotes the rated horsepower measured on the basic engine unit. While, net denotes the value measured of an engine under the condition essentially the same as that when it is installed on a machine.

Undercarriage		
Carrier roller	-	2 (each side)
Track roller	-	9 (each side)
Track shoe		
Assembly type triple grouser shoe	-	49 on each side

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Failure code [CA555] Crankcase Press High Error 1 (PC220_10-CA555-400-A-00-A)

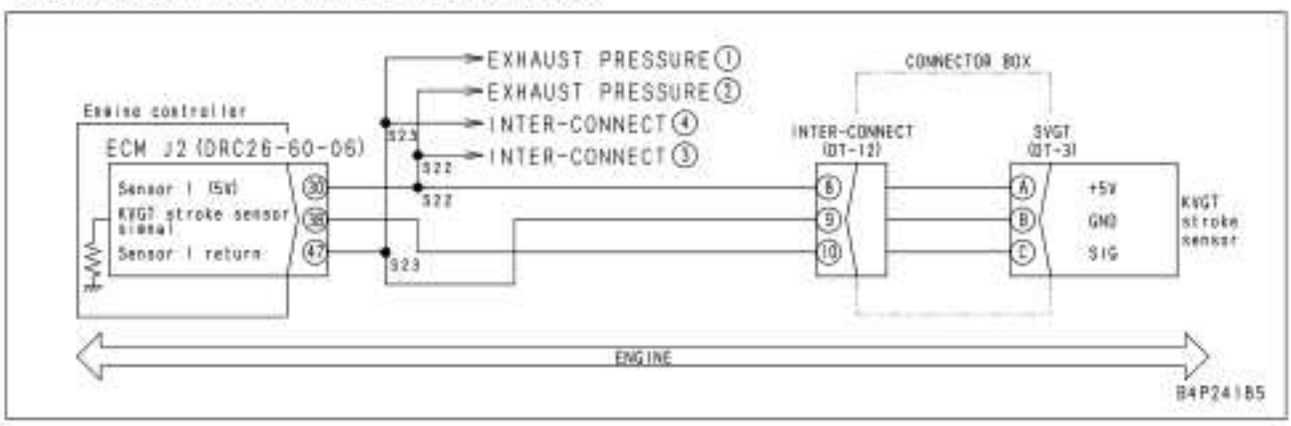
Action level	Failure code	Failure	Crankcase pressure high error 1 (Engine controller system)
L01	CA555		
Details of failure	• Crankcase pressure high error (level 1) is detected.		
Action of controller	• None in particular		
Problem on machine			
Related information	• Signal voltage from crankcase pressure sensor can be checked with monitoring function. (Code: 48401 (V)) • Pressure from crankcase pressure sensor can be checked with monitoring function. (Code: 48400 (MPa)) • Method of reproducing failure code: Turn starting switch to ON position.		

No.	Cause	Procedure, measuring location, criteria and remarks
1	Clogged KCCV filter	Replace KCCV filter.
2	Blocked KCCV gas piping	When KCCV filter is replaced, if this failure code does not disappear and emulsion is recognized inside KCCV, blowby gas piping of KCCV may be clogged with emulsion. Perform troubleshooting for coolant leakage.
3	Defective crankcase pressure sensor	Sensor system may be defective. Perform troubleshooting for failure codes **[CA1843]** and **[CA1844]**.

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No.	Cause	Procedure, measuring location, criteria and remarks			
7	Short circuit in wiring harness (Short circuit between wiring harnesses)	1. Turn starting switch to OFF position. 2. Disconnect connectors ECM J2 and INTER-CONNECT, and connect T-adapters to either female side.			
		Resis-tance	Between ECM J2 (female) (30) and (38) or between INTER-CONNECT (female) (8) and (10)		Min. 100 kΩ
8	Hot short circuit in wiring harness	1. Turn starting switch to OFF position. 2. Disconnect connector SVGT and connect T-adapters to female side. 3. Turn starting switch to ON position.			
		Voltage	Between SVGT (female) (C) and (B)		Max. 1 V
9	Defective engine controller	If no failure is found by above checks, engine controller is defective. (Since this is an internal defect, troubleshooting cannot be performed.)			
		• Reference 1. Turn starting switch to OFF position. 2. Insert T-adapters into connector ECM J2. 3. Turn starting switch to ON position.			
		Voltage	Between ECM J2 (38) and (47)	Sensor output	1.0 to 4.0 V

Circuit diagram related to KVGT position sensor

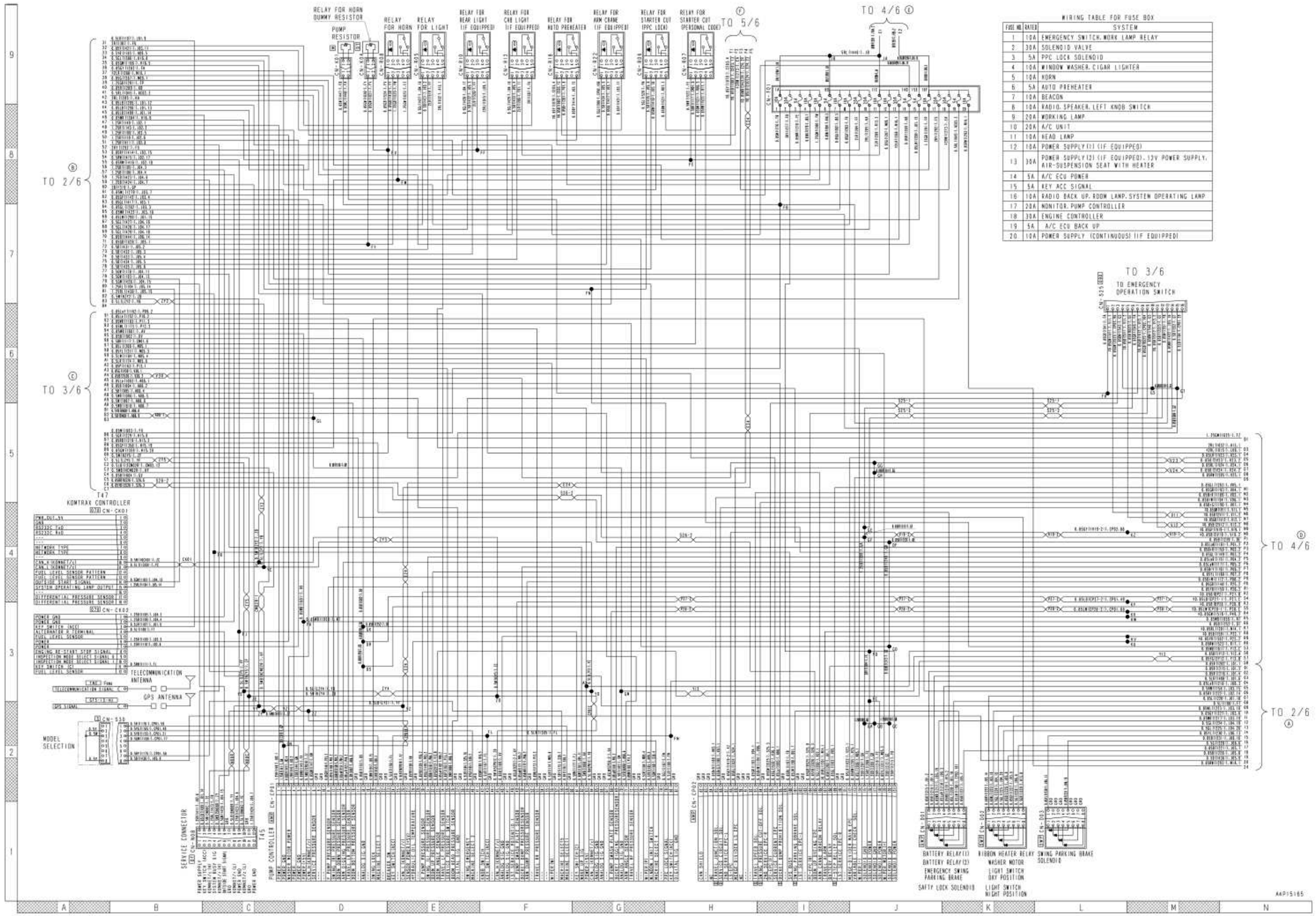


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Electrical circuit diagram (1/6)

PC228USLC-10

★ This figure covers the equipment and devices that are unavailable as optional items in some areas.



WIRING TABLE FOR FUSE BOX

FUSE NO.	RATED	SYSTEM
1	10A	EMERGENCY SWITCH, WORK LAMP RELAY
2	30A	SOLENOID VALVE
3	5A	PPC LOCK SOLENOID
4	10A	WINDOW WASHER, CIGAR LIGHTER
5	10A	HORN
6	5A	AUTO PREHEATER
7	10A	BEACON
8	10A	RADIO, SPEAKER, LEFT KNOB SWITCH
9	20A	WORKING LAMP
10	20A	A/C UNIT
11	10A	HEAD LAMP
12	10A	POWER SUPPLY (1) (IF EQUIPPED)
13	30A	POWER SUPPLY (2) (IF EQUIPPED), 12V POWER SUPPLY, AIR-SUSPENSION SEAT WITH HEATER
14	5A	A/C ECU POWER
15	5A	KEY ACC SIGNAL
16	10A	RADIO BACK UP, ROOM LAMP, SYSTEM OPERATING LAMP
17	20A	MONITOR, PUMP CONTROLLER
18	30A	ENGINE CONTROLLER
19	5A	A/C ECU BACK UP
20	10A	POWER SUPPLY (CONTINUOUS) (IF EQUIPPED)

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