CEBM018803

Shop Manual

KOMATSU®

PC400LC-8

HYDRAULIC EXCAVATOR

SERIAL NUMBERS **PC400LC-8** **A88001 - A88545**

ENGINE **SAA6D125E-5**

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SERVICE TOOLS

Testing and adjusting item	Symbol		Part No.	Part name	Q'ty	Remarks
Measuring intake air pressure (boost pressure)	A		799-201-2202	Boost gauge kit	1	-760 - 1,500 mmHg (-14.6 - 29.0 psi)
			799-401-2220	Hose	1	
Measuring exhaust temperature	B		799-101-1502	Digital thermometer	1	-99.9 - 1,299°C (-210.2 - 2370°F)
Measuring exhaust gas color	C	1	799-201-9001	Handy smoke checker	1	Degree of contamination 0 - 70% (with the standard color) (Degree of contamination x 1/10 approximately = Bosch index)
		2	Commercially available	Smoke meter	1	
Adjusting valve clearance	D		Commercially available	Filler gauge	1	Intake: 35 mm (1.37 in), Exhaust: 57 mm (2.24 in)
Measuring compression pressure	E	1	795-502-1590	Compression gauge	1	0 - 70 kg/cm^2 (0 - 1,000.76 psi)
		2	795-471-1420	Adapter	1	For 125E-5 engine
			6217-71-6112	Gasket	1	
Measuring blow-by pressure	F		799-201-1504	Blow-by checker	1	0 - 500 mmH_2O (0 - 0.725 psi)
Measuring engine oil pressure	G	1	799-101-5002	Hydraulic tester	1	Pressure gauge: 25, 60, 400, 600 kg/cm^2 (355, 853, 5689, 8534 psi)
			790-261-1204	Digital hydraulic tester	1	Pressure gauge: 600 kg/cm^2 (8534 psi)
		2	799-401-2320	Hydraulic tester	1	Pressure gauge: 10 kg/cm^2 (142 psi)
Measuring fuel pressure	H	1	799-101-5002	Hydraulic tester	1	Pressure gauge: 25, 60, 400, 600 kg/cm^2 (355, 853, 5689, 8534 psi)
			790-261-1204	Digital hydraulic tester	1	Pressure gauge: 600 kg/cm^2 (8534 psi)
		2	799-401-2320	Hydraulic tester	1	Pressure gauge: 0.98 MPa (10 kg/cm^2)
		3	795-471-1450	Adapter	1	8 x 1.25 mm → R1/8
			07005-00812	O-ring	1	
Measuring fuel return rate and leakage	J	1	6151-51-8490	Spacer	1	Inside diameter: 14 mm
		2	6206-71-1770	Joint	1	Joint inside diameter: 10 mm
		3	Commercially available	Hose	1	ϕ5 mm x 2 - 3 m
		4	Commercially available	Hose	1	ϕ15 mm x 2 - 3 m
		5	Commercially available	Measuring cylinder	1	
		6	Commercially available	Stopwatch	1	
Measuring swing circle bearing clearance	K		Commercially available	Dial gauge	1	With magnet

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CA1625 - EGR Valve Servo Error 2

Action code	Failure code	Trouble	EGR valve servo error 2 (Engine controller system)
E11	CA1625		
Contents of trouble	• There is servo error (level 2) of EGR valve.		
Action of controller	• Limits output and continues operation. • Close EGR and bypass valves. • Turns the centralized warning lamp and alarm buzzer ON.		
Problem that appears on machine	• Engine output lowers.		
Related information	• Method of reproducing failure code: Turn starting switch ON.		

Possible causes and standard value in normal state	Cause	Standard value in normal state/Remarks on troubleshooting
	Carry out troubleshooting for failure code [CA1228].	

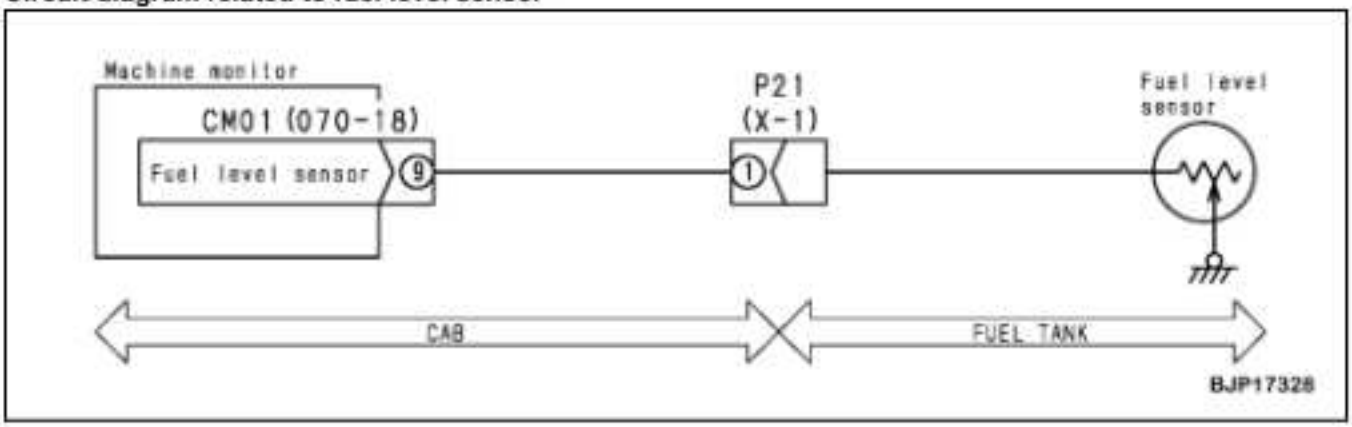
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E-13 Fuel Level Gauge Does Not Indicate Normally

Trouble	• While fuel is added, fuel level gauge does not rise from red range (E). • While fuel level is low, fuel level gauge does not lower from green range (F)
Related information	• Input signal (voltage) from the fuel level sensor can be checked with monitoring function. (Code 04200: Fuel level sensor voltage)

	Cause		Standard value in normal state/Remarks on troubleshooting			
Possible causes and standard value in normal state	1	Defective fuel level sensor (Internal disconnection or short circuit)	★ Prepare with starting switch OFF, then carry out troubleshooting without turning starting switch ON.			
			P21 (male)	Fuel level	Resistance	
			Between (1) – chassis ground	FULL (Upper limit)	Approximately. 12 Ω	
				EMPTY (Lower limit)	85 – 110 Ω	
	2	Disconnection in wiring harness (Disconnection in wiring or defective contact in connector)	★ Prepare with starting switch OFF, then carry out troubleshooting without turning starting switch ON.			
			Wiring harness between CM01 (female) (9) – P21 (female) (1)		Resistance	Max. 1 Ω
	3	Ground fault in wiring harness (Short circuit with GND circuit)	★ Prepare with starting switch OFF, then carry out troubleshooting without turning starting switch ON.			
			Wiring harness between CM01 (female) (9) – P21 (female) (1) and chassis ground		Resistance	Min. 1 MΩ
	4	Hot short (Short circuit with 24V circuit) in wiring harness	★ Prepare with starting switch OFF, then turn starting switch ON and carry out troubleshooting.			
			Wiring harness between CM012 (female) (9) – P21 (female) (1) and chassis ground		Voltage	Max. 1 V
	5	Defective machine monitor	★ Prepare with starting switch OFF, then carry out troubleshooting without turning starting switch ON.			
			CM01	Fuel level	Resistance	
			Between (9) – chassis ground	FULL (Upper limit)	Approximately 12 Ω	
				EMPTY (Lower limit)	85 – 110 Ω	

Circuit diagram related to fuel level sensor

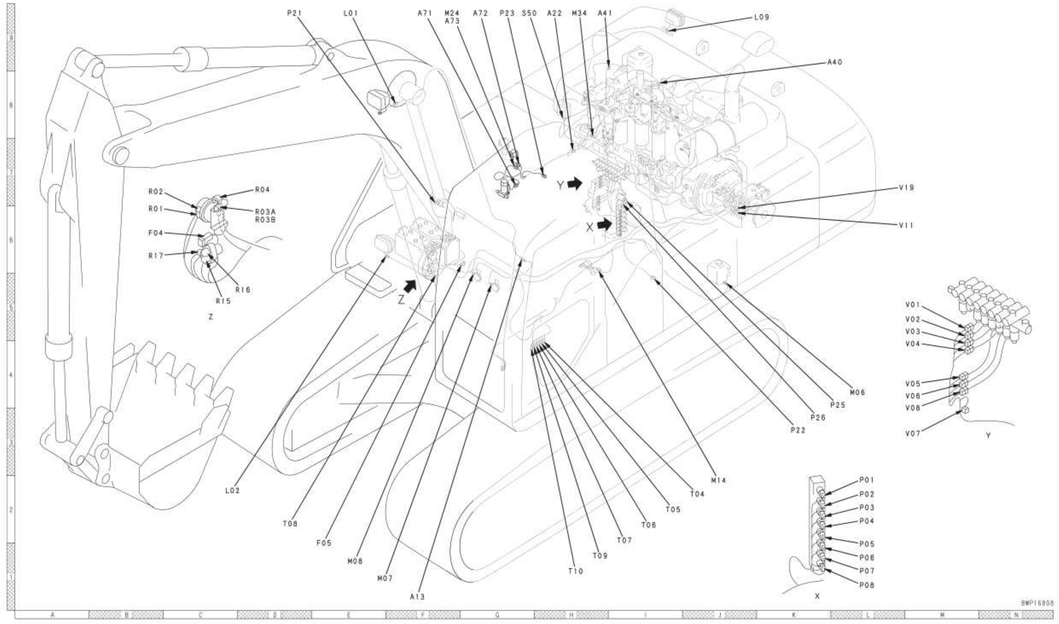


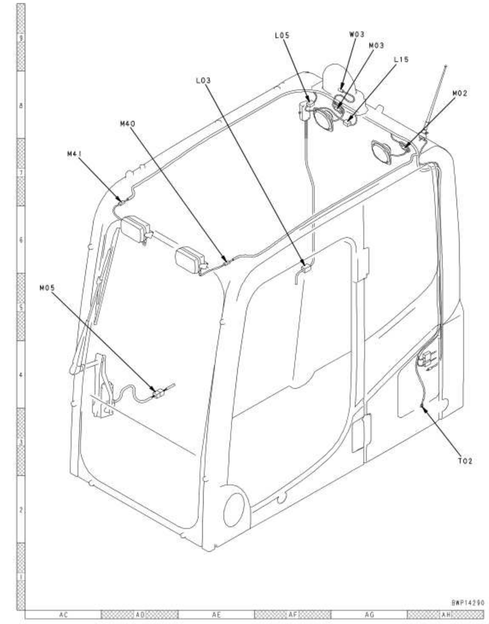
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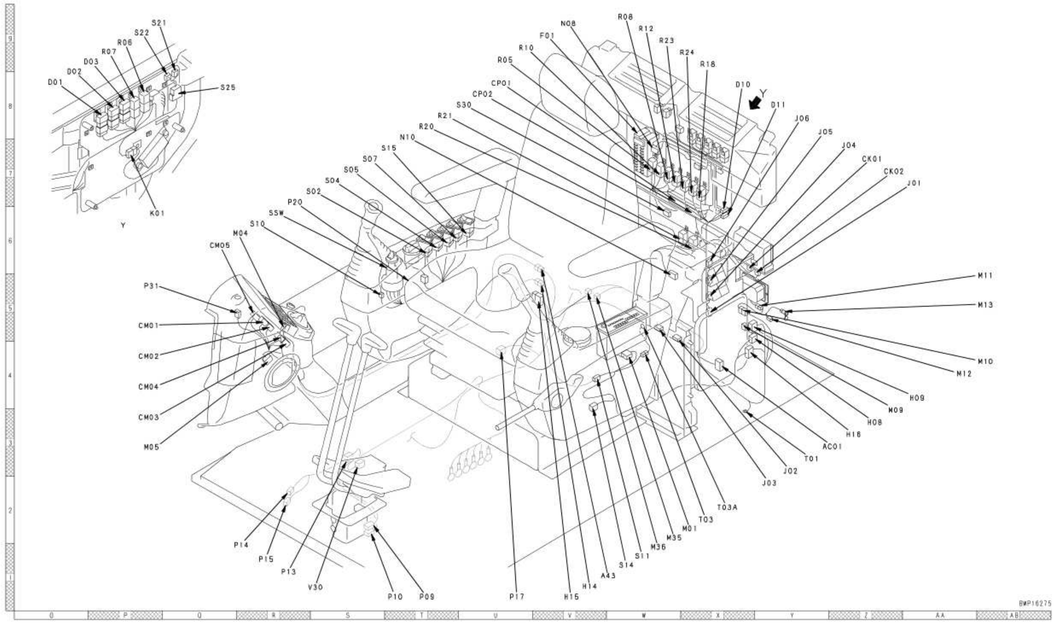
Connector list and stereogram PC400, 400LC-8, PC450, 450LC-8

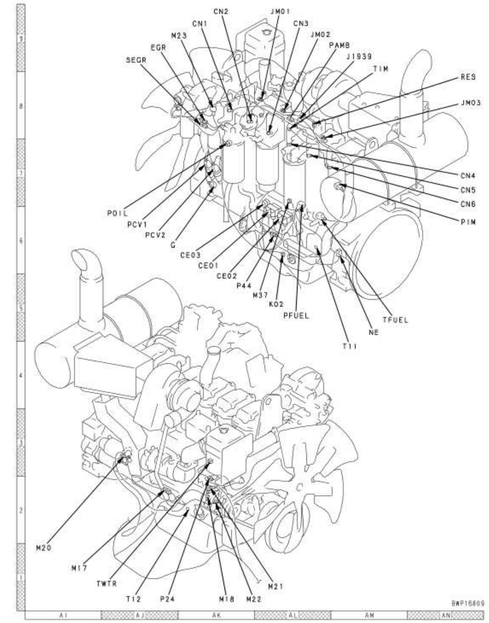
Connector No.	Type	Number of pins	Component name	Arrangement drawing
A13	DT	2	Intermediate connector (Working lamp wiring harness)	F-1
A22	DT	2	Intermediate connector	H-9
A40	DT	4	Rear camera 1	K-9
A41	DT	4	Camera 2	H-9
A42	DT	4	Camera 3	
A43	S	8	Monitor cable	V-1
A71	D	2	Fuel supply pump	F-9
A72	D	2	Switch box	G-9
A73	D	2	Intermediate connector (pair with M24)	F-9
AC01	—	8	A/C unit	Y-3
CE01	DRC	60	Engine controller	AK-6
CE02	DRC26-50S40	50	Engine controller	AK-5
CE03	DTP	4	Engine controller	AK-6
CK01	070	14	KOMTRAX terminal	Z-7
CK02	070	10	KOMTRAX terminal	Z-7
CM01	070	18	Machine monitor	P-5
CM02	070	12	Machine monitor	P-4
CM03	070	18	Machine monitor	P-3
CM04	070	12	Machine monitor (disconnection)	P-4
CM05	070	8	Machine monitor (for connection of camera)	Q-6
CN1	DT	2	Injector #1	AK-9
CN2	DT	2	Injector #2	AK-9
CN3	DT	2	Injector #3	AL-9
CN4	DT	2	Injector #4	AN-7
CN5	DT	2	Injector #5	AN-7
CN6	DT	2	Injector #6	AN-7
CP01	AMP	81	Work equipment controller	U-8
CP02	AMP	40	Work equipment controller	U-8
D01	SWP	8	Assembled-type diode	O-8
D02	SWP	8	Assembled-type diode	O-8
D03	SWP	8	Assembled-type diode	P-9
D10	M	2	Diode	X-8
D11	M	2	Diode	Y-8
EGR	—	2	EGR valve	AJ-9
F01	—	—	Fuse box	V-9
F04	L	2	Fusible link	B-6
F05	M	2	Fusible link	E-2
G	SUMITOMO	3	G sensor	AJ-6
H08	M	4	Intermediate connector	Z-3
H09	M	8	Intermediate connector	AA-4
H14	M	4	Intermediate connector	V-1
H15	S090	22	Intermediate connector	V-1
H16	S	12	Intermediate connector	Z-3
J01	J	20	Junction connector (Black)	AA-7
J02	J	20	Junction connector (Black)	Y-3
J03	J	20	Junction connector (Green)	Y-2
J04	J	20	Junction connector (Green)	Z-7
J05	J	20	Junction connector (Pink)	Y-8
J06	J	20	Junction connector (Orange)	Y-8
J1939	D	3	CAN	AM-9
JM01	Terminal	9	Junction connector	AL-9
JM02	Terminal	9	Junction connector	AL-9
JM03	Terminal	9	Junction connector	AN-8
K01	M	2	Pump (PC) resistor	P-6
K02	DT	3	CAN terminal resistance	AL-5
L01	DT	2	Working lamp (Boom)	E-9
L02	DT	2	Right head lamp	C-2
L03	M	2	Room lamp	AE-8
L05	SWP	2	Rotary lamp [Rotary lamp specification/Arm crane specification]	AF-9
L09	DT	2	Rear working lamp	K-9
L15	DT	2	Rotary lamp [Rotary lamp specification/Arm crane specification]	AG-9
M01	DA	9	Radio	X-1
M02	M	2	Speaker (Left)	AH-8
M03	M	2	Speaker (Right)	AG-9
M04		2	Cigarette lighter	R-6
M05	M	6	Wiper motor	P-3, AC-5
M06	KES	2	Window washer tank	L-4
M07	X	2	Horn (High tone)	F-1
M08	X	2	Horn (Low tone)	E-1
M09	M	2	Optional power supply connector (1)	Z-3
M10	M	2	Optional power supply connector (2)	AB-4
M11	M	4	DC/DC converter	AB-5
M12	M	2	Optional power supply connector (12 V)	AA-4
M13	M	2	12-V socket	AB-5
M14	DT	2	Travel alarm	J-2
M17	DT	2	Starting motor (terminal S and terminal R circuits)	AI-1
M18	Terminal	1	Alternator (R)	AK-1
M20	Terminal	1	Starting motor (B)	AI-1
M21	Terminal	1	Alternator (B)	AL-1
M22	Terminal	1	Alternator (E)	AK-1
M23	Terminal	1	Electrical intake air heater	AK-9
M24	X	2	Intermediate connector (pair with A73)	F-9
M34	X	1	A/C compressor	H-9
M35	DT	2	Heated seat	W-2
M36	DT	2	Air suspension seat	W-1
M37	DT	2	Electrical priming pump	AL-5
M40	X	2	Front lamp (left) (if equipped)	AD-8
M41	X	2	Front lamp (right) (if equipped)	AC-7
N08	DT	12	Service connector	V-9
N10		4	A/C unit	T-8
NE	SUMITOMO	3	NE sensor	AM-5
P01	AMP	3	Bucket curl PPC pressure sensor	L-2

Connector No.	Type	Number of pins	Component name	Arrangement drawing
P02	X	2	Boom lower PPC oil pressure switch	L-2
P03	X	2	Right swing switch	L-2
P04	AMP	3	Arm in PPC pressure sensor	L-2
P05	X	2	Bucket dump PPC pressure sensor	L-1
P06	X	2	Boom raise PPC pressure sensor	L-1
P07	X	2	Left swing switch	L-1
P08	X	2	Arm out PPC oil pressure switch	L-1
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