SEBM036301

SHOP MANUAL

KOMATSU®

PC130-7

MACHINE MODEL

PC130-7

SERIAL NUMBER

70001 and up

- This shop manual may contain attachiments and optional equipment that are not available in your area. Please consult your local Komatsu distributor for those items you may require.
  Materials and specifications are subject to change without notice.

- PC130-7 mounts the SAA4D95LE-3 engine.
  For details of the engine, see the 95-3 Series Engine Shop Manual.

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TOOLS FOR TESTING, ADJUSTING, AND TROUBLESHOOTING

Testing and adjusting item	Symbol		Part No.	Part name	Q'ty	Remarks
Measuring exhaust gas color	A	1	799-203-9000	Handy smoke checker	1	Pollution level: 0 – 70% (With standard color) (Pollution level x 1/10 ≒ Bosch index)
		2	Commercially available	Smoke meter	1	
Adjusting valve clearance	B		Commercially available	Feeler gauge	1	(Air intake side: 0.35 mm, Exhaust side: 0.50 mm)
Measuring compression pressure	C		795-502-1205	Compression gauge	1	0 – 6.9MPa {0 – 70kg/cm^2}
			795-502-1370	Adapter	1	For 95E-3 engine
			6204-11-3880	Gasket	1	
Measuring blow-by pressure	D		799-201-1504	Blow-by checker	1	—
Measuring engine oil pressure	E	1	799-101-5002	Hydraulic tester	1	Pressure gauge: 2.5,5.9,39.2,58.8MPa {25,60,400,600kg/cm^2}
			790-261-1203	Digital hydraulic tester	1	Pressure gauge: 58.8MPa {600kg/cm^2}
		2	799-401-2320	Hydraulic tester	1	Pressure gauge: 0.98MPa {10kg/cm^2}
		3	799-401-3500	Adapter	1	Size: 06
		4	799-101-5220	Nipple	1	Size: 10 x 1.25mm
			07002-11023	O-ring	1	
Measuring fuel injection timing	F	1	795-102-2103	Spring pusher	1	For delivery valve method
		2	Commercially available	Dial gauge	1	
Measuring clearance of swing circle bearing	G		Commercially available	Dial gauge	1	—
Testing and adjusting oil pressure in work equipment, swing, and travel circuits	H	1	799-101-5002	Hydraulic tester	1	* Same as E1
			790-261-1203	Digital hydraulic tester	1	
		2	799-101-5220	Nipple	1	* Same as E4
			07002-11023	O-ring	1	
Measuring control circuit basic pressure	J	1	799-101-5002	Hydraulic tester	1	* Same as E1
			790-261-1203	Digital hydraulic tester	1	
		2	799-101-5230	Nipple	1	Size: 14 x 1.5mm
			07002-11423	O-ring	1	
Testing and adjusting oil pressure in pump PC control circuit	K	1	799-101-5002	Hydraulic tester	1	* Same as H (Only quantity is different)
			790-261-1203	Digital hydraulic tester	1	
		2	799-101-5230	Nipple	2	
			07002-11423	O-ring	2	

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Error code [301] (Engine low idling speed out of standard range)

User code	Error code	Trouble	Engine low idling speed out of standard range (Governor and pump controller system)
–	301		
Contents of trouble	• Engine speed below 500 rpm is sensed for continuous 10 seconds while the engine is running.		
Action of controller	• None in particular. • If the cause of the failure disappears, the system resets itself.		
Problem that appears on machine	• If the machine is operated as it is, the engine may be damaged.		
Related information	• The input state (rpm) from the engine speed sensor can be checked with the monitoring function. (Code: 010, by 10 rpm)		

		Cause	Standard value in normal state/Remarks on troubleshooting
Possible causes and standard value in normal state	1	Abnormality in mechanical system of engine	Check for external and internal factors that have lowered the engine low idling speed, and then carry out troubleshooting for the mechanical system of the engine.
	2	Defective governor and pump controller	Troubleshooting cannot be carried out since the defect is in the governor and pump controller. (If there is not any visible trouble in the machine, the controller may be used as it is.)

Error code [302] (Engine high idling speed out of standard range)

User code	Error code	Trouble	Engine high idling speed out of standard range (Governor and pump controller system)
–	302		
Contents of trouble	• Engine speed above 2,600 rpm is sensed for continuous 10 seconds while the engine is running.		
Action of controller	• None in particular. • If the cause of the failure disappears, the system resets itself.		
Problem that appears on machine	• If the machine is operated as it is, the engine may be damaged.		
Related information	• The input state (rpm) from the engine speed sensor can be checked with the monitoring function. (Code: 010, by 10 rpm)		

		Cause	Standard value in normal state/Remarks on troubleshooting
Possible causes and standard value in normal state	1	Abnormality in mechanical system of engine	Check for external and internal factors that have heightened the engine high idling speed, and then carry out troubleshooting for the mechanical system of the engine.
	2	Defective governor and pump controller	Troubleshooting cannot be carried out since the defect is in the governor and pump controller. (If there is not any visible trouble in the machine, the controller may be used as it is.)

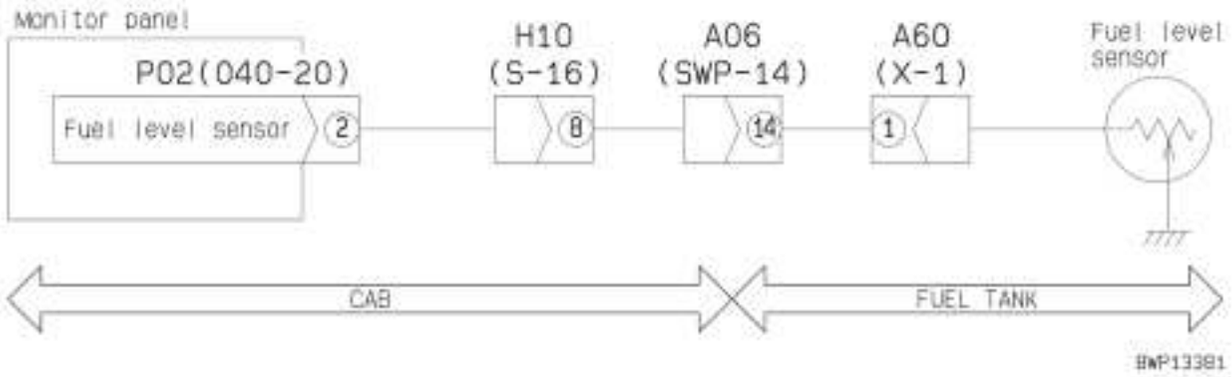
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E-17 Fuel level gauge is abnormal

Trouble	(1) While fuel level is high, gauge does not rise from red range (E). (2) While fuel level is low, gauge does not lower from green range (F).
Related information	• The input state (ON/OFF) from the fuel level sensor can be checked with the monitoring function. (Code: 042, by 10 mV)

	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.			
			A60 (male)	Fuel level	Resistance	
			Between (1) and chassis ground	FULL (Upper limit)	Approx. 12 Ω	
				EMPTY (Lower limit)	85 – 120 Ω	
	2	Disconnection in wiring harness (Disconnection in wiring harness or defective contact in connector)	★Prepare with starting switch OFF, then carry out troubleshooting without turning starting switch.			
			Wiring harness between P02 (female) (2) and A60 (female) (1)		Resistance	Max. 1 Ω
	3	Short circuit with chassis ground in wiring harness (Contact with ground circuit)	★Prepare with starting switch OFF, then carry out troubleshooting without turning starting switch.			
			Between P02 (female) (2) – A60 (female) (1) wiring harness and chassis ground		Resistance	Min. 1 MΩ
	4	Short circuit with power source in wiring harness (Contact with 24-V circuit)	★Prepare with starting switch OFF, then turn starting switch ON and carry out troubleshooting.			
			Between P02 (female) (2) – A60 (female) (1) wiring harness and chassis ground		Voltage	Max. 1 V
	6	Defective monitor panel	★Prepare with starting switch OFF, then carry out troubleshooting without turning starting switch.			
			P02	Fuel level	Resistance	
			Between (2) and chassis ground	FULL (Upper limit)	Approx. 12 Ω	
				EMPTY (Lower limit)	85 – 120 Ω	

Circuit diagram related to fuel level sensor



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