CEBM024902

Shop Manual

KOMATSU®

PC240LC-10

HYDRAULIC EXCAVATOR

SERIAL NUMBERS **PC240LC-10 A20001 and up**

ENGINE **6D107E-2**

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Mark	Page	Rev
	50-239	①
	50-240	①
	50-241	①
	50-242	①
	50-243	①
	50-244	①
	50-245	①
	50-246	①
	50-247	①
	50-248	①
	50-249	①
	50-250	①
	50-251	①
	50-252	①
	50-253	①
	50-254	①
	50-255	①
	50-256	①
	50-257	①
	50-258	①
	50-259	①
	50-260	①
	50-261	①
	50-262	①
	50-263	①
	50-264	①
	50-265	①
	50-266	①
	50-267	①
	50-268	①
	50-269	①
	50-270	①
	50-271	①

Mark	Page	Rev
	50-272	①
	50-273	①
	50-274	①
	50-275	①
	50-276	①
	50-277	①
	50-278	①
	50-279	①
	50-280	①
	50-281	①
	50-282	①
	50-283	①
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	50-297	①
	50-298	①
	50-299	①
	50-300	①
	50-301	①
	50-302	①
	50-303	①
	50-304	①

Mark	Page	Rev
	50-305	①
	50-306	①
	50-307	①
	50-308	①
	50-309	①
	50-310	①
	50-311	①
	50-312	①
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	50-317	①
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	50-321	①
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	50-323	①
	50-324	①
	50-325	①
	50-326	①
	50-327	①
	50-328	①
	50-329	①
●	50-330	②
	50-331	①
	50-332	①
	50-333	①
	50-334	①
	50-335	①
	50-336	①

Mark	Page	Rev
	60-1	
	60-2	
	60-3	
	60-4	
	60-5	
	60-6	
	60-7	
	60-8	
	60-9	
	60-10	
	60-11	
	60-12	
	60-13	
	60-14	
	60-15	
	60-16	
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	60-22	
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	60-25	
	60-26	
	60-27	
	60-28	
	60-29	
	60-30	
	60-31	
	60-32	
	60-33	

MidWestTech | Komatsu PC240LC-10 with 6D107E-2 Engine Hydraulic Excavator Service M... Order the manual at mid-west-tech.com >

Mark	Page	Rev
	60-34	
	60-35	
	60-36	
	60-37	
	60-38	
	60-39	
	60-40	
	60-41	
	60-42	
	60-43	
	60-44	
	60-45	
	60-46	
	60-47	
	60-48	
	60-49	
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	60-54	
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	60-56	
	60-57	
	60-58	
	60-59	
	60-60	
	60-61	
	60-62	
	60-63	
	60-64	
	60-65	
	60-66	

Mark	Page	Rev
	60-67	
	60-68	
	60-69	
	60-70	
	60-71	
	60-72	
	60-73	
	60-74	
	60-75	
	60-76	
	60-77	
	60-78	
	60-79	
	60-80	
●	80-1	②
●	80-2	②
●	80-3	②
●	80-4	②
●	80-5	②
●	80-6	②
●	80-7	②
●	80-8	②
●	80-9	②
●	80-10	②
●	80-11	②
●	80-12	②
●	80-13	②
●	80-14	②
●	80-15	②
●	80-16	②
●	80-17	②
●	80-18	②

Mark	Page	Rev
●	80-19	①
●	80-20	①
●	80-21	①
●	80-22	①
●	80-23	①
●	80-24	①
●	80-25	①
●	80-26	①
●	80-27	①
●	80-28	①
●	80-29	①
●	80-30	①
●	80-31	①
●	80-32	①
●	80-33	①
●	80-34	①
●	80-35	①
●	80-36	①
●	80-37	①
●	80-38	①
●	80-39	①
●	80-40	①
●	80-41	①
●	80-42	①
●	80-43	①
●	80-44	①
●	80-45	①
●	80-46	①
●	80-47	①
●	80-48	①
●	80-49	①
●	80-50	①
●	80-51	①

Mark	Page	Rev
●	80-52	②
●	80-53	②
●	80-54	②
●	80-55	②
●	80-56	②
●	80-57	②
●	80-58	②
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●	80-76	②
●	80-77	②
●	80-78	②
●	80-79	②
●	80-80	②
●	80-81	②
●	80-82	②
●	80-83	②
●	80-84	②

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Function

Travel speed selector function

1. Travel speed "Manual" change
   - Switching the travel speed selector switch to "Hi", "Mi" or "Lo" changes the motor capacity, which changes the machine travel speed.

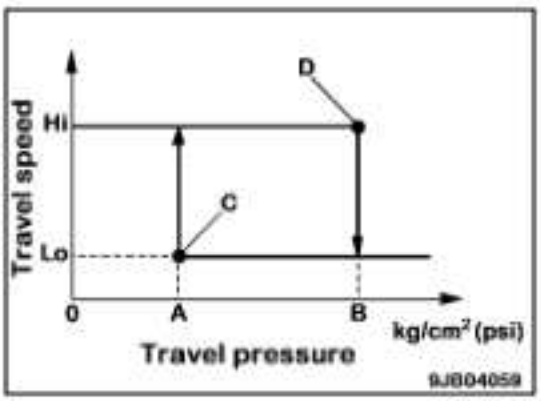
Travel speed selector switch	Lo (low speed)	Mi (medium speed)	Hi (high speed)
Motor flow rate (%)	75	75	100
Motor capacity	(Max.)	(Min.)	(Min.)
Travel speed	3.0 km/h {2 mph}	4.1 km/h {3 mph}	5.5 km/h {4 mph}

2. Travel speed "Automatic" change

   A. Automatic change corresponding to engine speed
      - If you adjust the engine speed to 1,500 rpm or less with the fuel control dial, the travel speed does not switch to "Hi" when the machine is traveling in "Mi", and automatically changes to "Mi" when the machine is traveling in "Hi".

   B. Automatic change according to pump delivery pressure
      - If the travel circuit oil pressure increases on an uphill with the travel speed selector switch in "Hi", and the travel circuit oil pressure of 33.3 MPa (340 kg/cm²) {4,830 psi} or above continues for 0.5 seconds or more, the travel motor capacity is switched to that for medium speed travel (equivalent to "Mi") automatically (the travel speed switch position remains in "Hi").
      - If the travel circuit oil pressure decreases on a level ground or downhill during low speed travel caused by the automatic speed change due to increase in the load on the travel circuit, and the travel circuit oil pressure of 19.6 MPa (200 kg/cm²) {2,843 psi} or below continues for 0.5 seconds or more, the travel motor capacity is switched back to that for speed of "Hi" automatically.

A: 19.6 MPa (200 kg/cm²) {2,843 psi}
B: 33.3 MPa (340 kg/cm²) {4,830 psi}
C: Min. 0.5 sec.
D: Min. 0.5 sec.



Pump control function when travelling

★ For details, see "Engine and Pump Combined Control Function" on page 10-166.

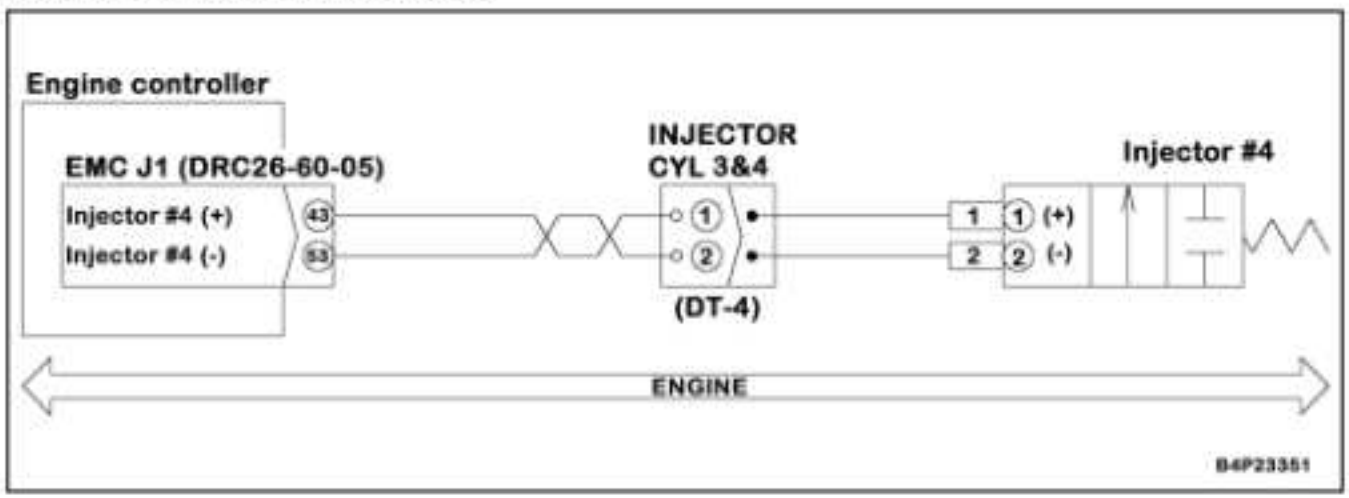
Travel junction function

- The controller detects the pilot pressure when travel control lever is operated, and judges the operator's intention, the straight travel or turning operation.
- For straight-travel, a signal is sent to the travel junction solenoid valve, controlling the pump flow rate between the right and left to be equal, to prevent travel deviation and improve straight-travel ability.
- For turning operation, the signal to the travel junction solenoid valve is shut off. This separates the pump flow rate to the right and left travel motors from each other and improves the traction while turning.

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5	Ground fault in wiring harness (contact with GND circuit)	★ If no failure is found by check on cause 3, this check is not required. 1. Turn starting switch to OFF position. 2. Disconnect connectors ECM J1 and INJECTOR CYL 3 & 4, and connect T-adapter to either female side.		
		Resistance	Between ground and ECM J1 (female) (43) or INJECTOR CYL 3 & 4 (female) (2)	Min. 100 kΩ
6	Short circuit in wiring harness	1. Turn starting switch to OFF position. 2. Disconnect connectors ECM J1 and INJECTOR CYL 3 & 4, and connect T-adapter to female side of ECM J1. ★ Check by using multi-meter in continuity mode.		
		Continuity	Between ECM J1 (female) (43) and each pin other than (43)	No continuity (no sound is heard.)
			Between ECM J1 (female) (53) and each pin other than (53)	No continuity (no sound is heard.)
7	Defective injector of other cylinder	If failure code for other injector is also displayed, perform troubleshooting for it first.		
8	Defective injector harness of other cylinder	If failure code for other injector is also displayed, perform troubleshooting for it first.		
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.)		

Circuit diagram related to No. 4 injector



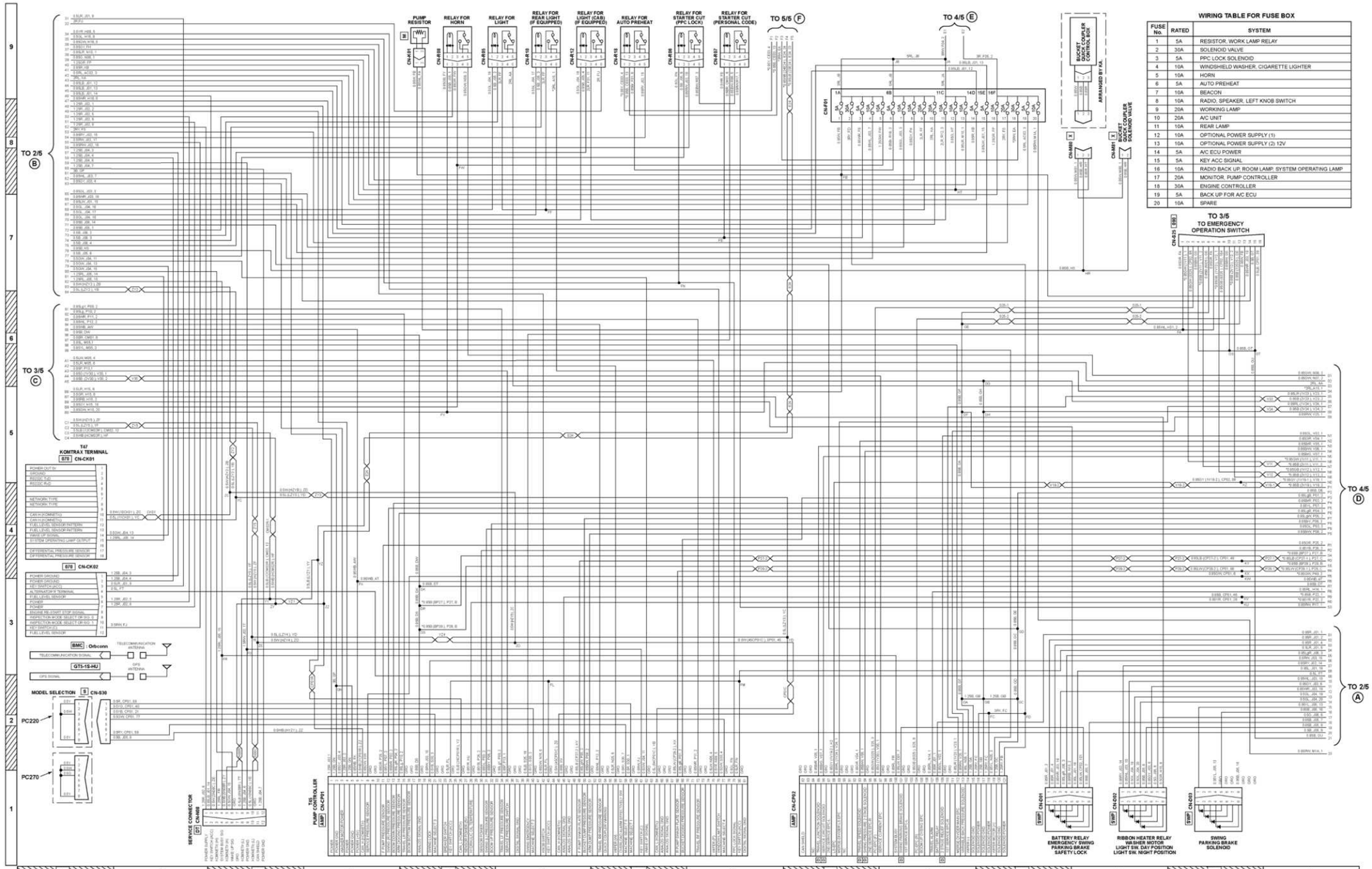
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Failure Code [CA3311] KDOC Outlet Temp High Error 2

Action level	Failure code	Failure	KDOC outlet temperature high error 2 (Engine controller system)
L03	**CA3311**		
Details of failure	• The KDOC outlet temperature compared to the KDOC inlet temperature is continuously extremely high.		
Action of controller	• Closes EGR valve. • Limits engine output and allows engine to run • Disables KDPF of its regeneration control.		
Problem on machine	• Engine output lowers.		
Related information	**WARNING!** Temperature of the KDPF and KDOC will become higher than 500°C {932°F}, take care not to get burn injury. **[Clearing failure codes]** • Start the engine and run at low idle for approximately 10 minutes.		

No.	Cause	Procedure, measuring location, criteria and remarks
1	KDOC system error	Carry out troubleshooting for failure code [CA3254].

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WIRING TABLE FOR FUSE BOX

FUSE No.	RATED	SYSTEM
1	5A	RESISTOR, WORK LAMP RELAY
2	30A	SOLENOID VALVE
3	5A	PPC LOCK SOLENOID
4	10A	WINDSHIELD WASHER, CIGARETTE LIGHTER
5	10A	HORN
6	5A	AUTO PREHEAT
7	10A	BEACON
8	10A	RADIO, SPEAKER, LEFT KNOB SWITCH
9	20A	WORKING LAMP
10	20A	A/C UNIT
11	10A	REAR LAMP
12	10A	OPTIONAL POWER SUPPLY (1)
13	10A	OPTIONAL POWER SUPPLY (2) 12V
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	BACK UP FOR A/C ECU
20	10A	SPARE

A4P11186
Sheet 1 of 5

MidWestTech | Komatsu PC240LC-10 with 6D107E-2 Engine Hydraulic Excavator Service Manual | Publication CEBM024902

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