CEBM005302

Shop Manual

KOMATSU®

avance

PC400LC-6LM
PC400HD-6LM

HYDRAULIC EXCAVATOR

SERIAL NUMBERS

PC400LC-6LM - A85001 and UP

PC400HD-6LM - A85001

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GRADE 5 AND 8 NON-PHOSPHATE COATED HARDWARE

Recommended torque for all standard application nuts and bolts, provided; all thread surfaces are clean and lubricated with SAE-30 engine oil or joints are rigid, that is, no gaskets or compressible materials are used. When reusing nuts or bolts, use minimum torque values.

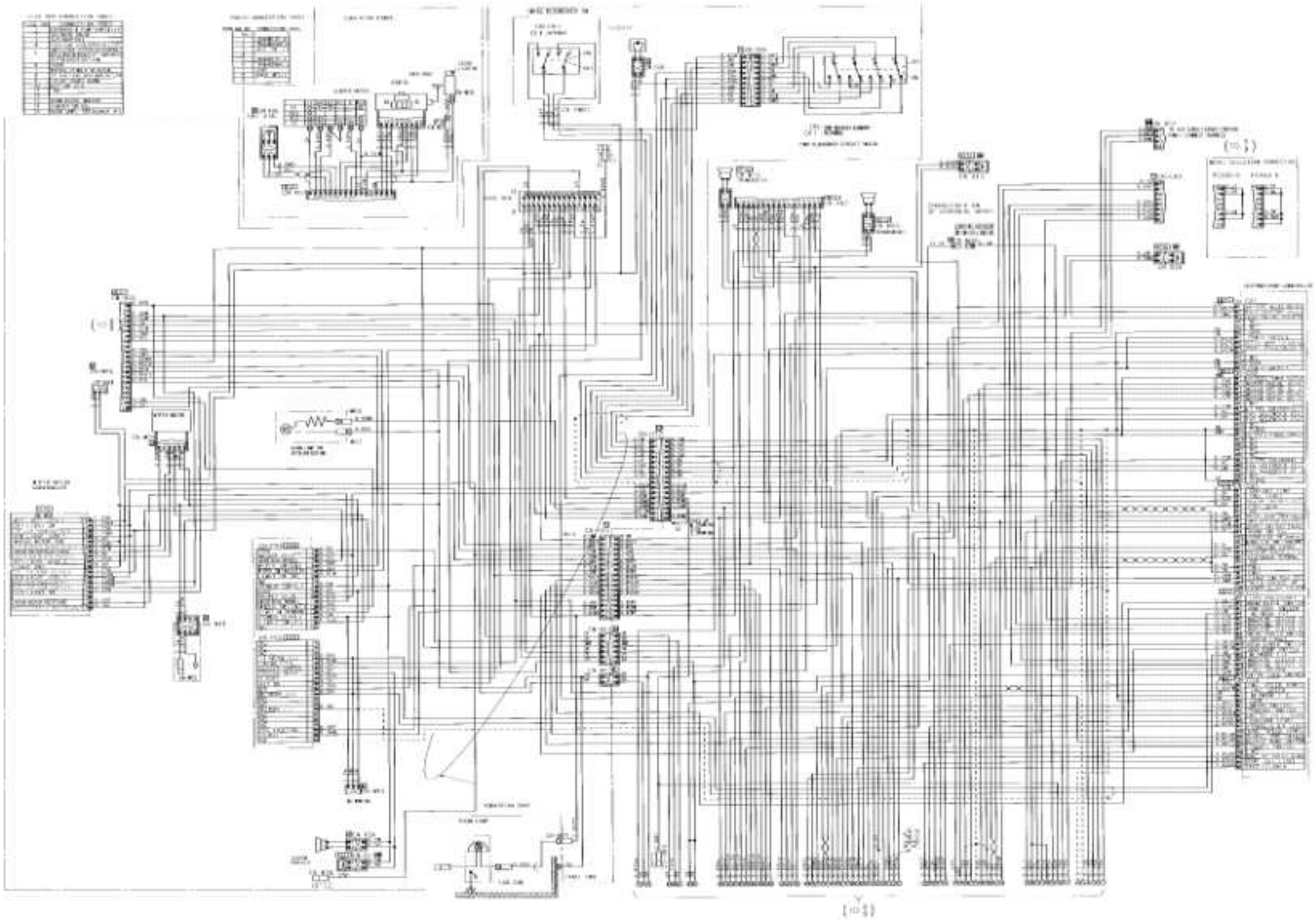
THREAD	GRADE 5	
	N·m	lbf ft
1/4NC	8	6
1/4NF	9	7
5/16NC	18	13
5/16NF	20	15
3/8NC	33	24
3/8NF	37	27
7/16NC	52	38
7/16NF	57	42
1/2NC	79	58
1/2NF	88	65
9/16NC	114	84
9/16NF	126	93
5/8NC	156	115
5/8NF	175	130
3/4NC	278	205
3/4NF	312	240
7/8NC	414	305
7/8NF	454	334
1NC	617	455
1NF	691	510
1-1/8NC	827	610
1-1/8NF	929	685
1-1/4NC	1166	860
1-1/4NF	1295	955
1-3/8NC	1532	1130
1-3/8NF	1749	1290
1-1/2NC	2034	1400
1-1/2NF	2291	1690
1-3/4NC	3213	2370
2NC	4813	3550

THREAD	GRADE 8	
	N·m	lbf ft
1/4NC	12	9
1/4NF	15	11
5/16NC	24	18
5/16NF	28	21
3/8NC	46	34
3/8NF	52	38
7/16NC	73	54
7/16NF	81	60
1/2NC	111	82
1/2NF	122	90
9/16NC	163	120
9/16NF	179	132
5/8NC	224	165
5/8NF	251	185
3/4NC	393	290
3/4NF	434	320
7/8NC	617	455
7/8NF	698	515
1NC	942	695
1NF	1064	785
1-1/8NC	1342	990
1-1/8NF	1505	1110
1-1/4NC	1898	1400
1-1/4NF	2102	1550
1-3/8NC	2481	1830
1-3/8NF	2827	2085
1-1/2NC	3295	2430
1-1/2NF	3701	2730
1-3/4NC	5166	3810
2NC	7810	5760

Multiply the standard torque by 0.65 when finished jam nuts are used, 0.7 when molykote, white lead or similar mixture are used as lubricants, 0.75 when parkerized bolts or nuts are used, 0.85 when cadmium plated bolts or nuts and zinc bolts with waxed zinc nuts are used or 0.9 when hardened surfaces are used under the nut or bolt head. The general torque must be used in all cases where special torques are not given. Values listed in this manual are lubricated (wet) threads; values should be increased 1/3 for non lubricated (dry) threads.

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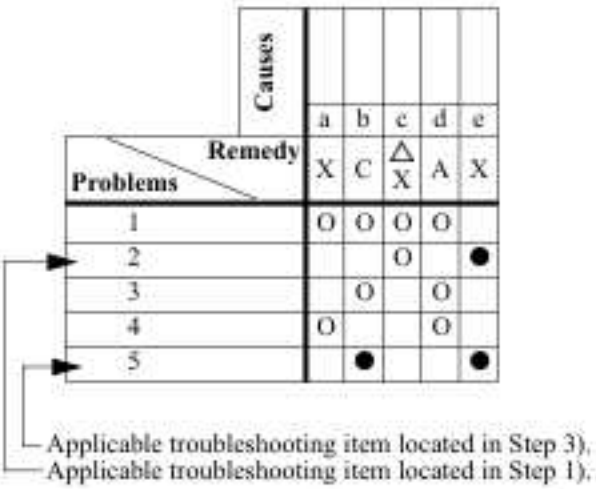
ACTUAL ELECTRICAL WIRING DIAGRAM (2/3)



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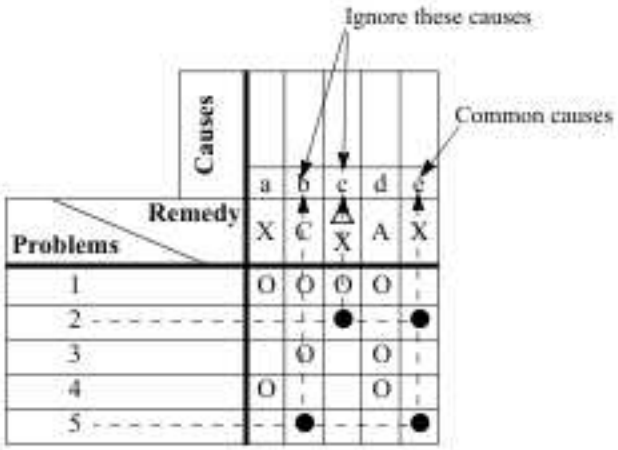
3) Operate the machine and check the troubleshooting items other than those in 1).
Operate the machine and check the items in the same way as in 1) and if the symptom appears, mark that item. (In the chart on the right, the symptom appears again for item 5).

4) Find the appropriate cause from the cause column. In the same way as in Step 2), if the symptom appears, the O marks on that line indicate the possible causes. (For item No.5 in the table on the right, the possible causes are **b** or **e**.)



5) Narrow down the possible causes.
There is one common cause among the causes located in Steps 2) and 4). (One cause marked O, appears on the line for both items.) This cause is common to both the symptoms in troubleshooting Steps 1) and 3).

★ The causes which are not common to both troubleshooting items (items which are not marked O for both symptoms) are unlikely causes, so ignore them. (In the example given on the right, the causes for
Troubleshooting Item 2 are **c** or **e,** and the causes for Troubleshooting Item 5 are **b** or **e,** so cause **e** is common to both.)

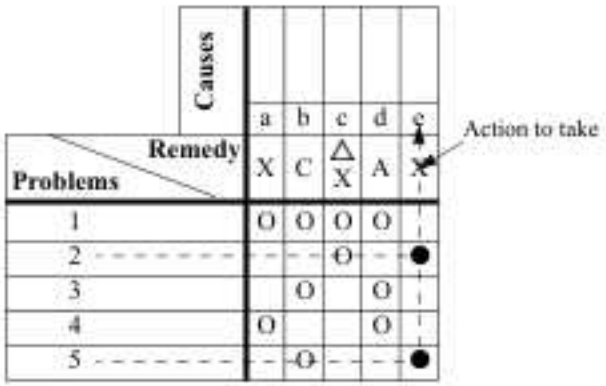


6) Repeat the operations in Steps 3), 4) and 5) until one cause (one common cause) remains.

★ If the causes cannot be narrowed down to one cause, narrow the causes down as far as possible.

7) Remedy
If the causes are narrowed down to one common cause, take the action given in the remedy column.
The symbols given in the remedy column indicate the following:

X: Replace
△: Repair
A: Adjust
C: Clean

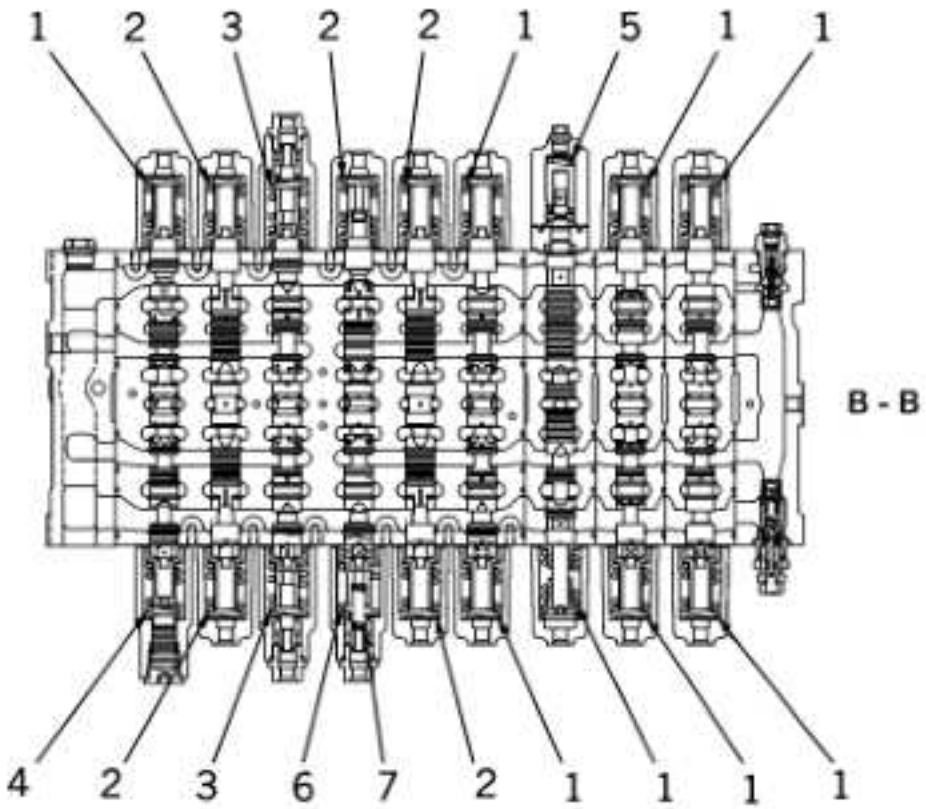


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★ For details of the 8 or 7 spool valves, see 9 SPOOLVALVE.

★ When tightening bolts marked, always use two washers on top of each other.

2 OF 6



SWP05038

Unit - mm

No.	Check item	Criteria					Remedy
		Standard size			Repair limit		
		Free length x OD	Installed length	Installed load	Free length	Installed load	
1	Spool return spring	54.5 x 34.8	51.2	42.5 kg	---	32.1 kg	Replace spring if there is damage or deformation
2	Spool return spring	54.2 x 34.8	51.2	42.5 kg	---	34.5 kg	
3	Spool return spring	52.6 x 34.8	49.2	44.0 kg	---	35.2 kg	
4	Spool return spring	54.4 x 34.8	51.2	42.0 kg	---	34.0 kg	
5	Spool return spring	54.9 x 24.2	51.2	25.6 kg	---	20.5 kg	
6	Spool return spring	53.3 x 37.1	49.5	36.6 kg	---	29.3 kg	
7	Spool return spring	40.0 x 12.3	38	5.1 kg	---	4.1 kg	

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JUDGEMENT TABLE FOR GOVERNOR, PUMP CONTROLLER (PUMP CONTROL SYSTEM) AND HYDRAULIC RELATED PARTS

○ This shows applicable item for service code, simultaneous abnormality at front and rear
◉ This shows applicable item for service code
△ This shows item that needs only checking with monitor
● This shows item to check with monitoring or machine monitor

| Failure mode | | | Abnormality in controller source | Governor, pump controller -E2:XX system- Self diagnostic display | | | | | | | | | | | | | | | | | | | | | | | | Check items in monitoring mode | | | | | | | | | | | | | | | | | | |