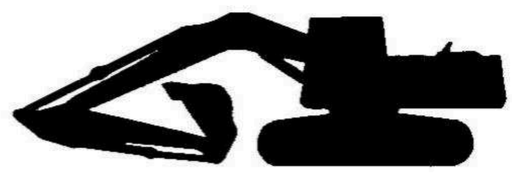
CEBM207077

Shop Manual



PC300/LC-5/LC-5K/HD-5
PC300/LC-5 MIGHTY
PC400/LC/HD-5
PC400/LC-5 MIGHTY
HYDRAULIC EXCAVATOR

SERIAL NUMBERS **VARIOUS**

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WEIGHT TABLE

⚠ This weight table is a guide for use when transporting or handling components.

PC300, 300LC-5

Unit: kg

Machine Model	PC300-5	PC300LC-5
Serial Numbers	20001 and up	20001 and up
Engine assembly	986	986
• Engine	700	700
• Damper	14	14
• Hydraulic pump	272	272
Radiator and oil cooler assembly	152	152
Hydraulic tank assembly (without hydraulic oil)	224	224
Fuel tank (without fuel)	175	175
Revolving frame	2,540	2,540
Operator's cab	238	238
Operator's seat	31.7	31.7
Counterweight	5,420	5,420
Swing machinery	440	440
Control valve assembly	236	236
Swing motor assembly	125.5	125.5
Travel motor assembly	239 x 2	239 x 2
Center swivel joint	43	43
Track frame assembly	6,700	7,230
• Track frame	3,885	4,312
• Swing circle assembly	430	430
• Idler	166	166
• Idler cushion	257 x 2	257 x 2
• Carrier roller	31 x 4	31 x 4
• Track roller	52 x 14	52 x 16
• Final drive	426 x 2	426 x 2

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Unit: kg

Machine Model	PC300-5	PC300LC-5
Serial Numbers	20001 and up	20001 and up
Track shoe assembly		
Triple shoe (600 mm)	3,500	3,730
Triple shoe (700 mm)	3,840	4,090
Wide triple-shoe (750 mm)	4,010	4,270
Wide triple-shoe (800 mm)	4,180	4,455
Wide triple-shoe (850 mm)	4,350	4,635
Flat shoe (500 mm)	3,160	–
Boom assembly	2,357	2,357
Arm assembly	981	981
Bucket assembly (with side cutter)	1,014	1,014
Boom cylinder assembly	293 x 2	293 x 2
Arm cylinder assembly	425	425
Bucket cylinder assembly	263	263
Link assembly	320	320
Boom pin	76 + 15 x 2 + 56 + 17 + 42	76 + 15 x 2 + 56 + 17 + 42
Arm pin	13 + 17	13 + 17
Bucket pin	30 x 2	30 x 2
Link pin	27 x 2	27 x 2

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PC300, 300LC-5 MIGHTY

Unit: kg

Machine Model	PC300-5 MIGHTY	PC300LC-5 MIGHTY
Serial Numbers	21401 and up	21401 and up
Engine assembly	986	986
• Engine	700	700
• Damper	14	14
• Hydraulic pump	272	272
Radiator and oil cooler assembly	152	152
Hydraulic tank assembly (without hydraulic oil)	224	224
Fuel tank (without fuel)	175	175
Revolving frame	2,540	2,540
Operator's cab	238	238
Operator's seat	31.7	31.7
Counterweight	5,420	5,420
Swing machinery	440	440
Control valve assembly	236	236
Swing motor assembly	125.5	125.5
Travel motor assembly	239 x 2	239 x 2
Center swivel joint	43	43
Track frame assembly	6,700	7,550
• Track frame	3,885	4,312
• Swing circle assembly	430	430
• Idler	166	166
• Idler cushion	257 x 2	257 x 2
• Carrier roller	31 x 4	31 x 4
• Track roller	52 x 14	52 x 16
• Final drive	426 x 2	426 x 2
• Roller guard	143 x 2	158 x 2

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METHOD OF USING JUDGEMENT TABLE

This judgement table is a tool to determine if the problem with the machine is caused by an abnormality in the electrical system or by an abnormality in the hydraulic or mechanical system. The symptoms are then used to decide which troubleshooting table (E-□ □, C-□ □, H-□ □) matches the symptoms.
The presence of any self-diagnostic display given in the judgement table indicates which troubleshooting table to use.

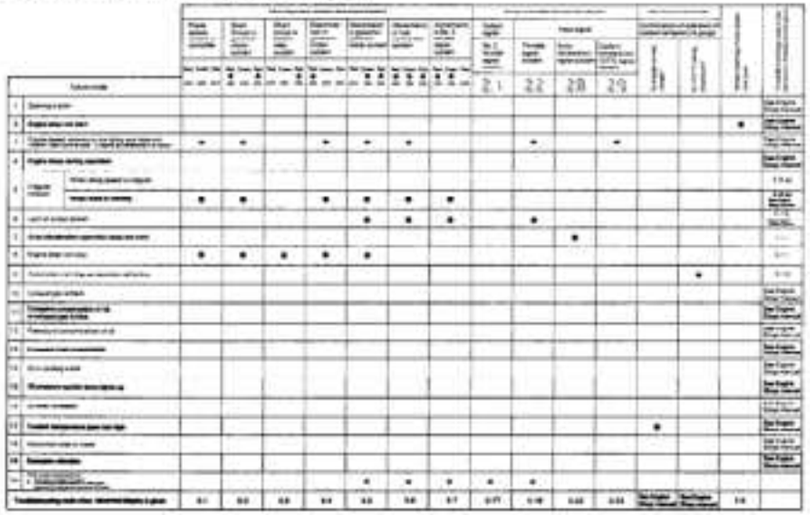
★ The abnormality display (warning) given by the monitor panel leads directly to troubleshooting of the vehicle monitor (P-□ □).
(See the contents for troubleshooting of the vehicle monitor system)

1. Judgement table for engine throttle controller, engine related parts

- If the self-diagnostic display gives an abnormal display, go to the troubleshooting code (E-□) given on the bottom line of the judgement table.
(There is a ● given in the column where the failure mode and self-diagnostic display, go to the troubleshooting code (E-□ or engine shop manual) given in the column on the right of the judgement table for that failure mode.

< Example > Failure mode "Engine does not start"

[Procedure]
Check the three LEDs on the side face of the controller to see if their ON/OFF combination gives an abnormal display for the self-diagnostic display.



[Judgement]
If there is an abnormal display (for example, [● ●]) on the self-diagnostic display:
Go to troubleshooting E-2 of the electrical system

If there is no abnormal display on the self-diagnostic display:

- Check that the starting motor rotates
  - Starting motor rotates: ..... Go to troubleshooting of mechanical system (see engine shop manual)
  - Starting motor does not rotate: ..... Go to troubleshooting of electrical system F1, 2, or 6

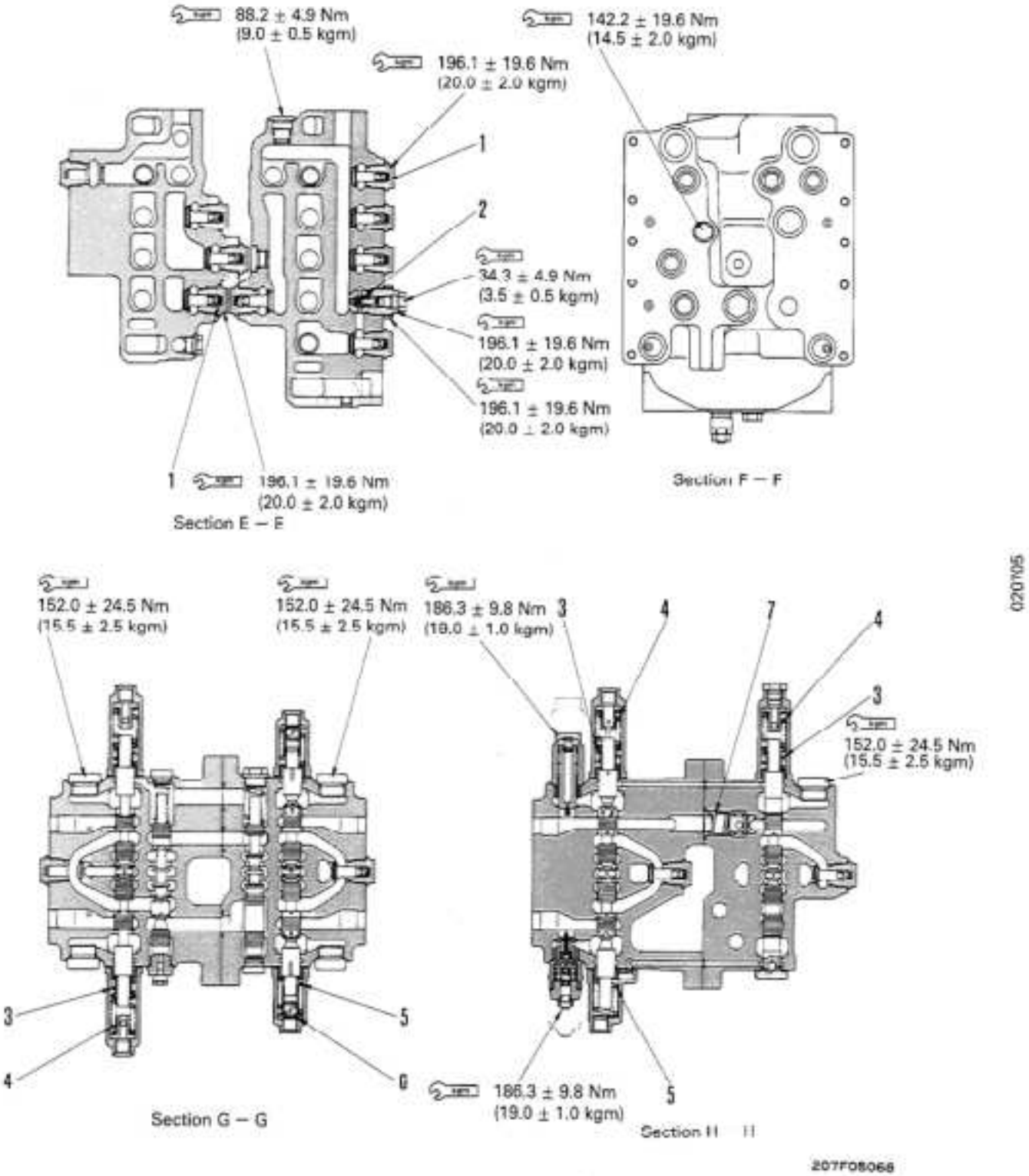
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Cause	Remedy
Defective pump controller	Replace
Already reset	——
Defective contact, or disconnection in wiring harness between C3 (female) (2) – C7 (female) (1)	Repair or replace
Defective rear pump pressure sensor	Replace
Defective contact, or disconnection in wiring harness between C3 (female) (3) – C7 (female) (2)	Repair or replace
Short circuit in wiring harness between C3 (female) (7), (2) – C7 · C8 (female) (3), (1), or contact with ground	Repair or replace

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TABLE OF FAILURE MODES AND CAUSES

	Failure mode \ Parts causing failure		Pump						TVC		Control valve									Jet sensor					Solenoid					Swing motor					Travel motor									
			CO · NC valve	Servo valve	Pump proper	Charging pump	Strainer	Damper	Solenoid	Spool	Spool	Main relief valve	Safety valve	Suction valve	Straight-travel valve	Arm throttle valve	Swing priority valve	Valve proper	Travel shuttle valve	Relief valve	Orifice	PPC valve	PPC shuttle valve	Swivel joint	2-stage relief	Travel speed	CU cancel	Arm half flow	Swing brake	Brake	Internal leakage	Safety valve	Suction valve	Motor proper	Safety valve	Motor porper	Internal leakage	Brake	Travel speed selector servo	Swing machinery	Final drive	Hydraulic cylinder	Boom holding valve	Lift check valve	Engine system	Troubleshooting code
Work equipment, travel, swing systems	Speeds of work equipment, travel, swing are all slow				○	○				○		○																															○	H-1
	There is excessive drop in engine speed, or engine stalls		○							○																																○	H-2
	Work equipment, travel, swing all do not move					○		○																																				H-3
	Speed is extremely slow (If it is greatly outside permissible range)					○				○																																		
	Work equipment, travel, swing lack power		○									○													○		○																		H-4
	Power set does not switch								○	○																																			H-5
	Abnormal noise generated				○		○																																						H-6
	Auto-deceleration does not work																		○				○																							H-7
Work equipment system	Boom, arm speeds are extremely slow														○				○																										H-8
	Boom speed is slow										○		○	○								○																					○	○		H-9
	Arm speed is slow										○		○	○								○						○															○			
	Bucket speed is slow										○		○	○								○																					○			
	When boom and arm are operated simultaneously, boom speed is slow															○																													H-10
	Work equipment (boom, arm, bucket) lacks power										○		○	○								○			○		○	○															○	◉		H-11
	Excessive hydraulic drift										○		○	○																													○	◉		H-12
	Excessive time lag													○																																H-13
	Does not enter H.O mode (Half flow function)																											○																		H-14
	When arm and swing are operated simultaneously, arm speed is slow																○																												H-15
Travel system	Travel deviation: Deviates in same direction both in forward and reverse		○	○	○						○						○		○	○		○													○	○	○		○					H-16 (a)
	Travel deviation: Deviates in different direction in forward and reverse																				○	○												○										H-16 (b)
	Travel deviation: Excessive deviation during compound operations														○				○			○																						H-17
	Travel deviation: Excessive deviation when starting		○	○													○		○	○		○													○	○	○							H-18
	Travel lacks power (or speed is slow)		○									○														○																		H-19
	Travel speed does not switch																										○																		H-20
	Machine does not move (one side only)																																		○	○		○				○			H-21
Swing system	Does not swing	Both left and right									○																	○	○			○								○				H-22
		One direction only																				○							○															
	Swing speed is slow or acceleration is poor	Both left and right	○								○																		○	○														H-23
		One direction only																				○								○														
	Excessive overrun when stopping swing	Both left and right																													○													H-24
		One direction only																													○													
	Excessive shock when stopping swing	Both left and right																											○	○											○			H-25
		One direction only																													○													
	Excessive abnormal noise when stopping swing																														○	○								○			○	H-26
	Excessive hydraulic drift of swing																												○	○														H-27
	When operated simultaneously with arm, swing speed is slow																○																												H-28

◉ Boom only

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