SEN00420-13

Shop Manual

HYDRAULIC
EXCAVATOR

PC270 -8
PC270LC-8

SERIAL NUMBERS PC270- 20001 and up
PC270LC- 20001

ecot3

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Composition of shop manual

The contents of this shop manual are shown together with Form No. in a list.

Note 1: Always keep the latest version of this manual in accordance with this list and utilize accordingly.
The marks shown to the right of Form No. denote the following:
○: New issue (to be filed additionally) ●: Revision (to be replaced for each Form No.)

Note 2: This shop manual can be supplied for each Form No.

Note 3: To file this shop manual in the special binder for management, handle it as follows:
- Place a divider on the top of each section in the file after matching the Tub No. with No. indicated next to each Section Name shown in the table below:
- File overview and other materials in sections in the order shown below and utilize them accordingly.

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Specifications

Machine model				PC270-8	PC270LC-8
Serial number				20001 and up	
Bucket capacity			m^3	1.26	1.26
Operating weight			kg	27,220	28,720
Performance	Working range	Max. digging depth	mm	6,460	6,460
		Max. vertical wall digging depth	mm	5,650	5,650
		Max. digging radius	mm	10,100	10,100
		Max. reach at ground level	mm	9,990	9,990
		Max. digging height	mm	10,000	10,000
		Max. dumping height	mm	7,035	7,035
	Max. digging force (when power max. function is turned on)		kN {kg}	184 {18,800} (198 {20,200})	184 {18,800} (198 {20,200})
	Swing speed		rpm	10.5	10.5
	Swing operation max. slope angle		degree	20	20
	Travel speed		km/h	Lo: 3.0 Mi: 4.1 Hi: 5.5 (* Lo: 2.8 Mi: 3.3 Hi: 4.5)	Lo: 3.0 Mi: 4.1 Hi: 5.5 (* Lo: 2.8 Mi: 3.3 Hi: 5.5)
	Gradability		degree	35	35
	Ground pressure (Standard shoe)		kPa {kg/cm^2}	54.9 {0.56}	46.1 {0.47}
Dimensions	Overall length		mm	9,860	9,860
	Overall width		mm	3,190	3,290
	Overall crawler width		mm	3,190	3,290
	Overall height (During transportation) (*)		mm	3,200 *1	3,205 *2
	Machine body overall height (*)		mm	3,175 *1	3,180 *2
	Ground clearance of upper structure bottom		mm	1,215	1,215
	Min. ground clearance		mm	498	498
	Tail swing radius		mm	2,940	2,940
	Work equipment min. swing radius		mm	3,430	3,430
	Top height at min. swing radius of work equipment		mm	8,150	8,150
	Length of track on ground		mm	3,700	4,030
	Track gauge		mm	2,590	2,590
	Cab height		mm	3,145	3,145
	Width of standard shoe		mm	600	700

*1: Grouser height (30 mm) included.
*2: Grouser height (36 mm) included.
*: With optional heavy duty travel motor.

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Failure code [B@BAZG] Eng Oil Press. Low

User code	Failure code	Trouble	Engine oil pressure low (Engine controller system)
—	B@BAZG		
Contents of trouble	• While engine was running, signal circuit of engine oil pressure switch detected low engine oil pressure (sensor contact opened).		
Action of controller	• Displays engine oil pressure monitor on machine monitor. • If cause of failure disappears, system resets itself.		
Problem that appears on machine	• If machine is operated as it is, engine may be damaged.		
Related information	• Engine oil pressure switch signal is input to engine controller and then transmitted to machine monitor. • Method of reproducing failure code: Start engine.		

		Cause	Standard value in normal state/Remarks on troubleshooting
Possible causes and standard value in normal state	1	Lowering of engine oil pressure (when system is normal)	Engine oil pressure may be low. Check it and remove cause if it is low.
	2	Defective engine oil pressure monitor system	If cause 1 is not detected, engine oil pressure monitor system may be defective. Carry out troubleshooting for "E-8 Emergency stop item lights up while engine is running" in E-mode.

Failure code [B@BAZK] Eng Oil Level Low

User code	Failure code	Trouble	Engine oil level low (Machine monitor system)
—	B@BAZK		
Contents of trouble	• When starting switch is turned ON (but engine is not started), signal circuit of engine oil level switch detected low engine oil level (sensor contact opened).		
Action of machine monitor	• Displays engine oil level monitor on machine monitor. • Even if cause of failure disappears, system does not reset itself until starting switch is turned OFF.		
Problem that appears on machine	• If machine is operated as it is, engine may be damaged.		
Related information	• Engine oil level switch signal can be checked with monitoring function. (Code: 04501 Monitor input 2) • Method of reproducing failure code: Turn starting switch ON.		

		Cause	Standard value in normal state/Remarks on troubleshooting
Possible causes and standard value in normal state	1	Lowering of engine oil level (when system is normal)	Engine oil level may be low. Check it and add new oil if it is low.
	2	Defective engine oil level monitor system	If cause 1 is not detected, engine oil level monitor system may be defective. Carry out troubleshooting for "E-2 Basic check item lights up when starting switch is turned ON (but engine is not started)" in E-mode.

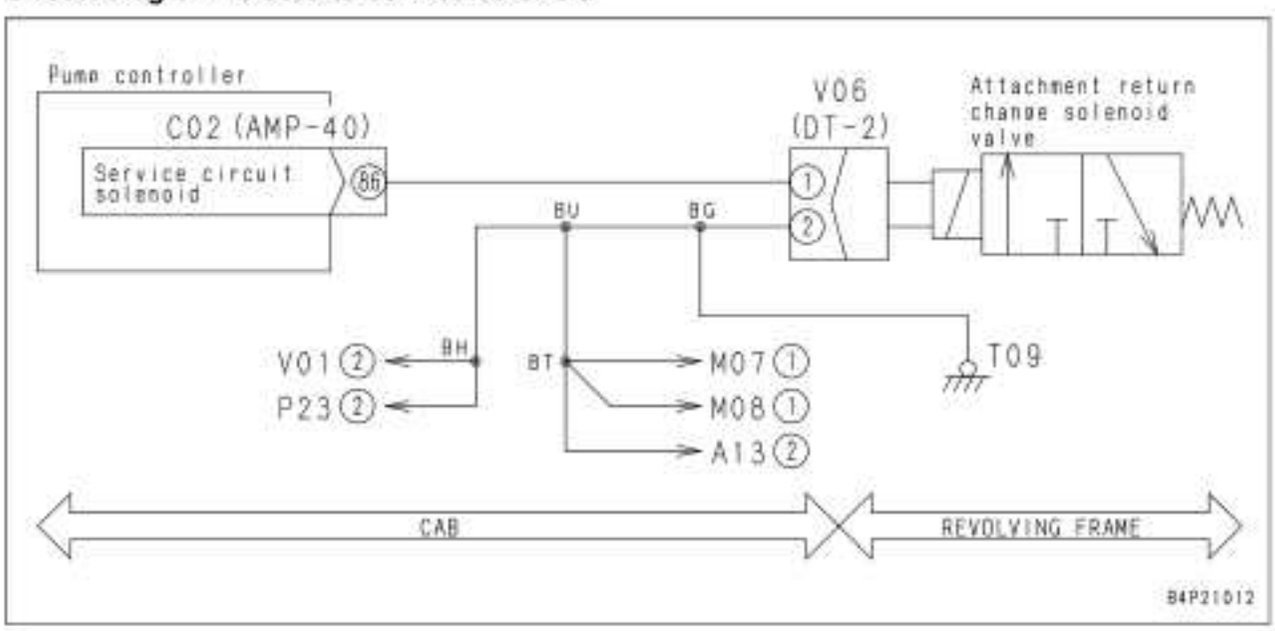
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Failure code [DWA2KA] Service Sol Discon

User code	Failure code	Trouble	Service solenoid disconnection (Pump controller system)
—	DWA2KA		
Contents of trouble	• When output to service solenoid is turned OFF, disconnection was detected in circuit.		
Action of controller	• None in particular. (Since no current flows, solenoid does not operate.) • If cause of failure disappears, system resets itself.		
Problem that appears on machine	• Hydraulic circuit for attachment does not change to single operation circuit.		
Related information	• Operating condition of service solenoid can be checked with monitoring function. (Code: 02301 Solenoid 2) • Method of reproducing failure code: Turn starting switch ON → Set machine in mode other than breaker mode (B).		

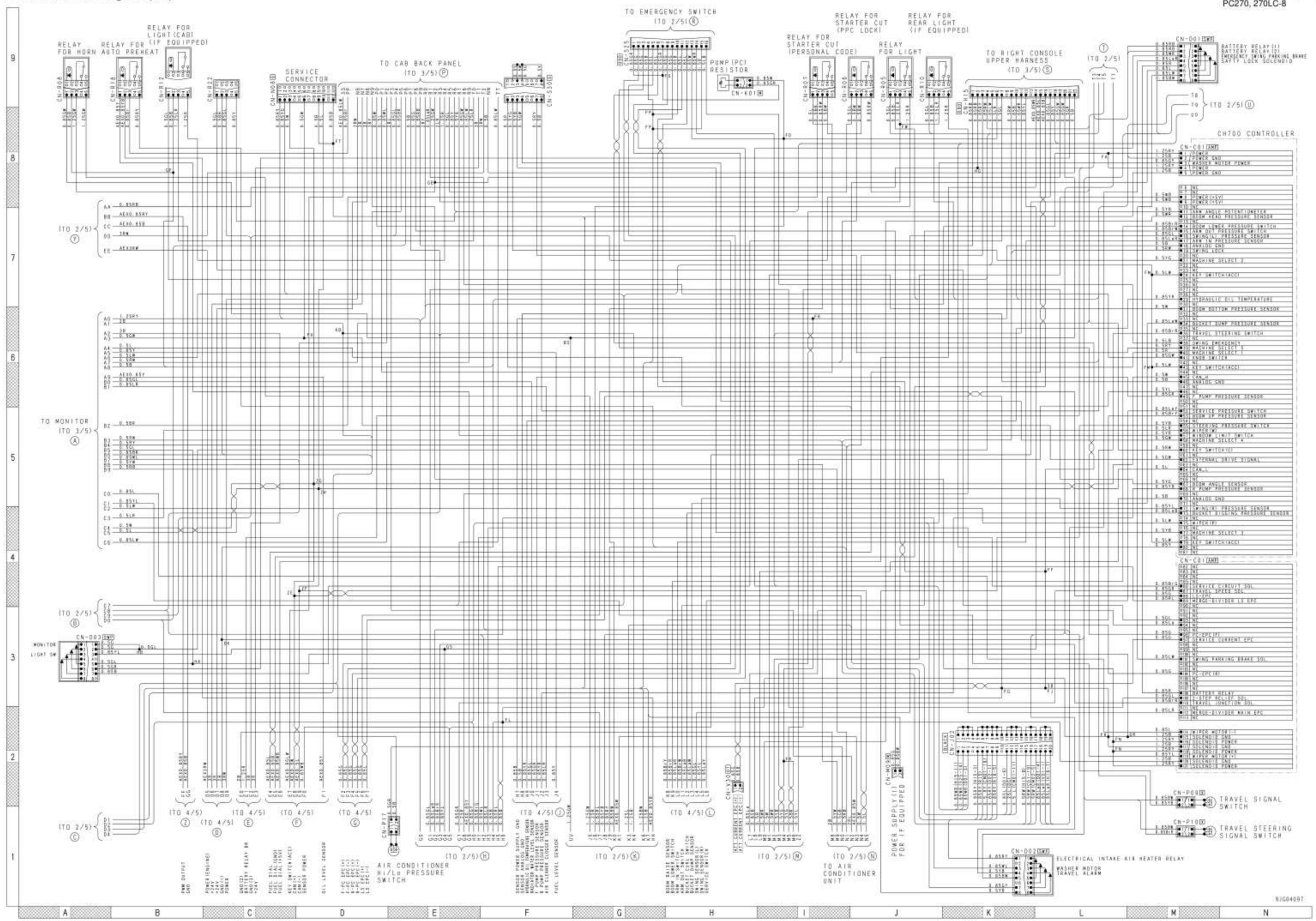
	Cause		Standard value in normal state/Remarks on troubleshooting		
Possible causes and standard value in normal state	1	Defective service solenoid (Internal disconnection)	★ Prepare with starting switch OFF, then carry out troubleshooting without turning starting switch ON.		
			V06 (male)	Resistance	
			Between (1) – (2)	20 – 60 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 C02 (female) (86) – V06 (female) (1)	Resistance	Max. 1 Ω
			Wiring harness between V06 (female) (2) – chassis ground (T09)	Resistance	Max. 1 Ω
	3	Defective pump controller	★ Prepare with starting switch OFF, then carry out troubleshooting without turning starting switch ON.		
			C02 (female)	Resistance	
			Between (86) – chassis ground	20 – 60 Ω	

Circuit diagram related to service solenoid



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Electrical circuit diagram (1/5)



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