Shop Manual

VEBM949100

PW200-7E0
PW220-7E0

MACHINE MODEL	SERIAL NUMBER
PW200-7E0	H55051 AND UP
PW220-7E0	H65051 AND UP

- This shop manual may contain attachments 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.
- PW200/PW220-7E0 mount the SAA6D107E-1 engine.
- For details of the engine, see the 107 Series Engine Shop Manual.

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Specified capacity:
Total amount of oil including oil for components and oil in piping.

Refill capacity:
Amount of oil needed to refill system during normal inspection and maintenance.

Abbreviations

- ASTM:
  American Society of Testing and Material
- SAE:
  Society of Automotive Engineers
- API:
  American Petroleum Institute

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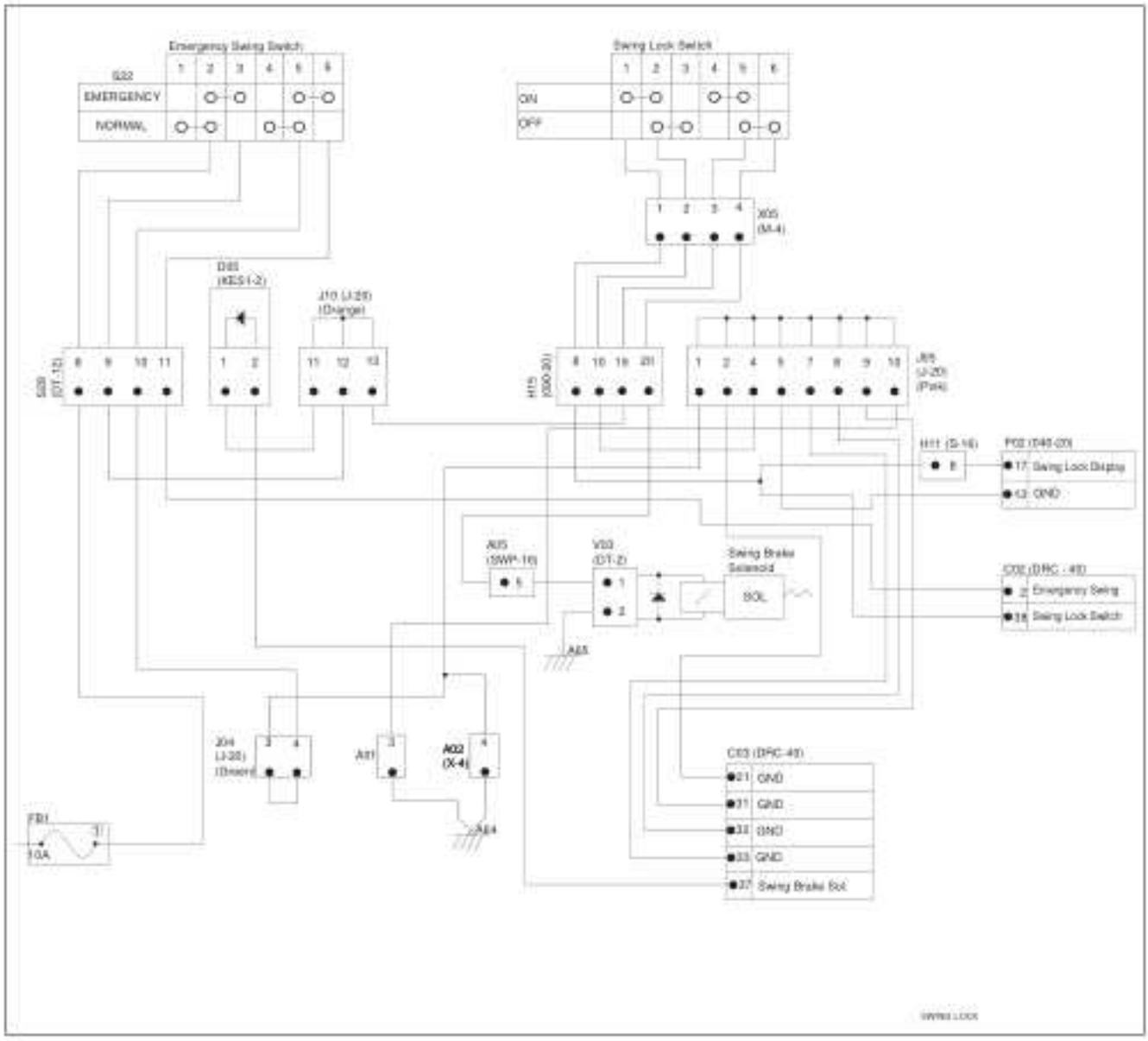
Failure code [DA2RMC] – Pump comm. abnormality

Action code	Failure code	Trouble	Pump communication abnormality (Pump controller system)
E0E	DA2RMC		
Contents of trouble	• Pump controller detected communication error in CAN communication circuit between machine monitor and engine controller.		
Action of controller	• Fix engine output to E-mode, and limit pump absorption torque to about 80%. • If cause of failure disappears, system resets itself.		
Problem that appears on machine	• Output lowers. (Pump absorption torque decreases.) • As the working load increases, engine may stall.		
Related information			

		Cause	Standard value in normal state/Remarks on troubleshooting		
Possible causes and standard value in normal state	1	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 P70 (female) (16) – CE02 (female) (47), – C02 (female) (22)	Resistance	Max. 1 Ω
			Wiring harness between P70 (female) (15) – CE02 (female) (46), – C02 (female) (32)	Resistance	Max. 1 Ω
	2	Ground fault in wiring harness (Short circuit with GND circuit)	★ Prepare with starting switch OFF, then carry out troubleshooting without turning starting switch ON.		
			Wiring harness between P70 (female) (16) – CE02 (female) (47), – C02 (female) (22), – other related circuit and chassis ground	Resistance	Min. 1 MΩ
			Wiring harness between P70 (female) (15) – CE02 (female) (46), – C02 (female) (32), – other related circuit and chassis ground	Resistance	Min. 1 MΩ
	3	Hot short (Short circuit with 24V circuit) in wiring harness	★ Prepare with starting switch OFF, then turn starting switch ON and carry out troubleshooting.		
			Wiring harness between P70 (female) (16) – CE02 (female) (47), – C02 (female) (22), – other related circuit and chassis ground	Voltage	Max. 1 V
			Wiring harness between P70 (female) (15) – CE02 (female) (46), – C02 (female) (32), – other related circuit and chassis ground	Voltage	Max. 1 V
	4	Defective CAN terminal resistance	★ Prepare with starting switch OFF, then carry out troubleshooting without turning starting switch ON.		
			K02 (male), K31 (male)	Resistance	
			Between (A) – (B)	40 – 80 Ω	
	5	Defective machine monitor, engine controller, or pump controller	If causes 1 – 4 are not detected, machine monitor, engine controller, or pump controller may be defective. (Since trouble is in system, troubleshooting cannot be carried out.)		

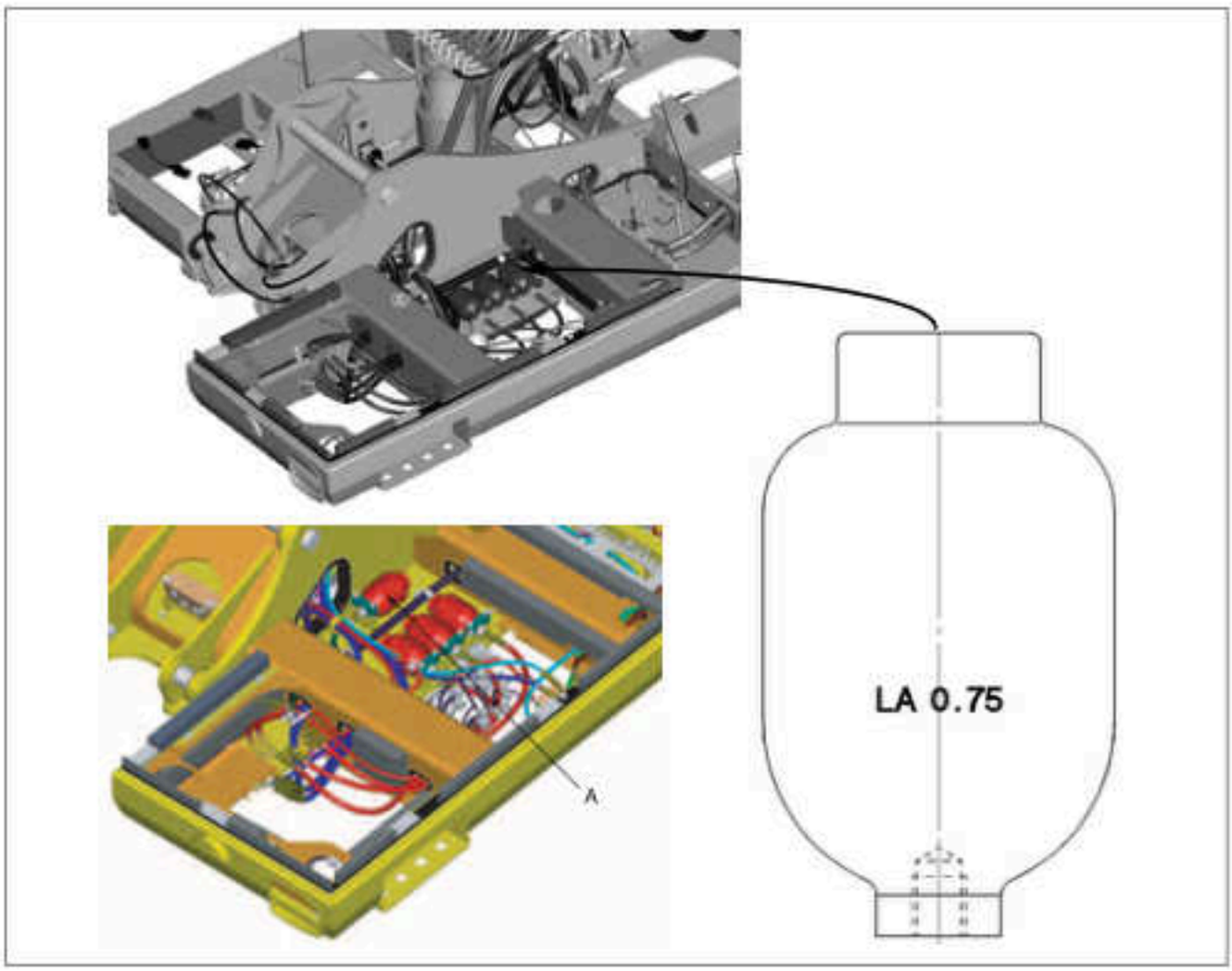
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Circuit diagram for swing lock



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Accumulator for brake system



Specifications

1.	Nominal capacity	0.75L
2.	Max working pressure	210 bar
3.	Max p dynamic	175 bar
4.	Working temperature	- 30° to 125° C
5.	Diaphragm	NBR
6.	Fluid	Mineral oil
7.	Body	Forged steel
8.	Surface finish	Rust preventative coating
9.	Pre-charge gas	Nitrogen
10.	Pre-charge pressure	50 bar

Structure and function

- The accumulators are installed below the operators cab accessible from the undercover.
- Installed into the brake circuit the accumulators provide pressure to the brakes in the event of a power failure ensuring the machine is stopped safely.

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4. Run the engine at high idle and measure the oil pressure with the control switch in neutral and moved to the max position.

   ★ If the output pressure is as follows, the PPC valve is normal.

Operation of lever	Output pressure
Neutral	0 MPa (0 kg/cm^2)
Max Position	Almost same as control circuit basic pressure (See standard values table)

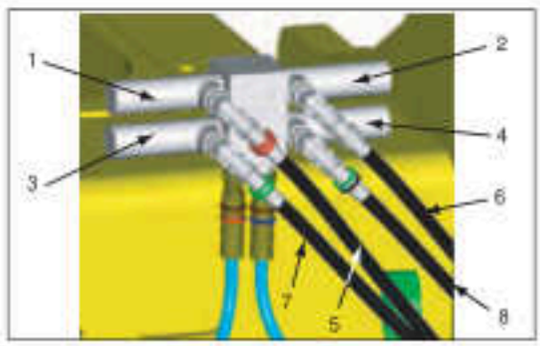


5. After finishing measurement, remove the measuring tools and return the removed parts.

Checking Proportional Control PPC Circuit

1. Disconnect the hose of the Proportional Control PPC circuit to be measured.
2. Install adapter **P2** and connect the disconnected hose again.
3. Install nipple of hydraulic tester **M1** into adaptor **P2** and connect it to oil pressure gauge [2].

   • Use the oil pressure gauge of 5.9 MPa {60 kg/cm²}.



1. LH 1 Att EPC Valve
2. RH 1 Att EPC Valve
3. LH 2 Att EPC Valve
4. RH 2 Att EPC Valve
5. 1 Att 1st Service Spool
6. 1 Att 2nd Service Spool
7. 2 Att 1st Service Spool
8. 2 Att 2nd Service Spool

4. Start the engine and set the working mode in the power mode (P).
5. Run the engine at high idle and measure the oil pressure with the control switch in neutral and moved to the max position.

   • If the output pressure is as follows, the PPC valve is normal.

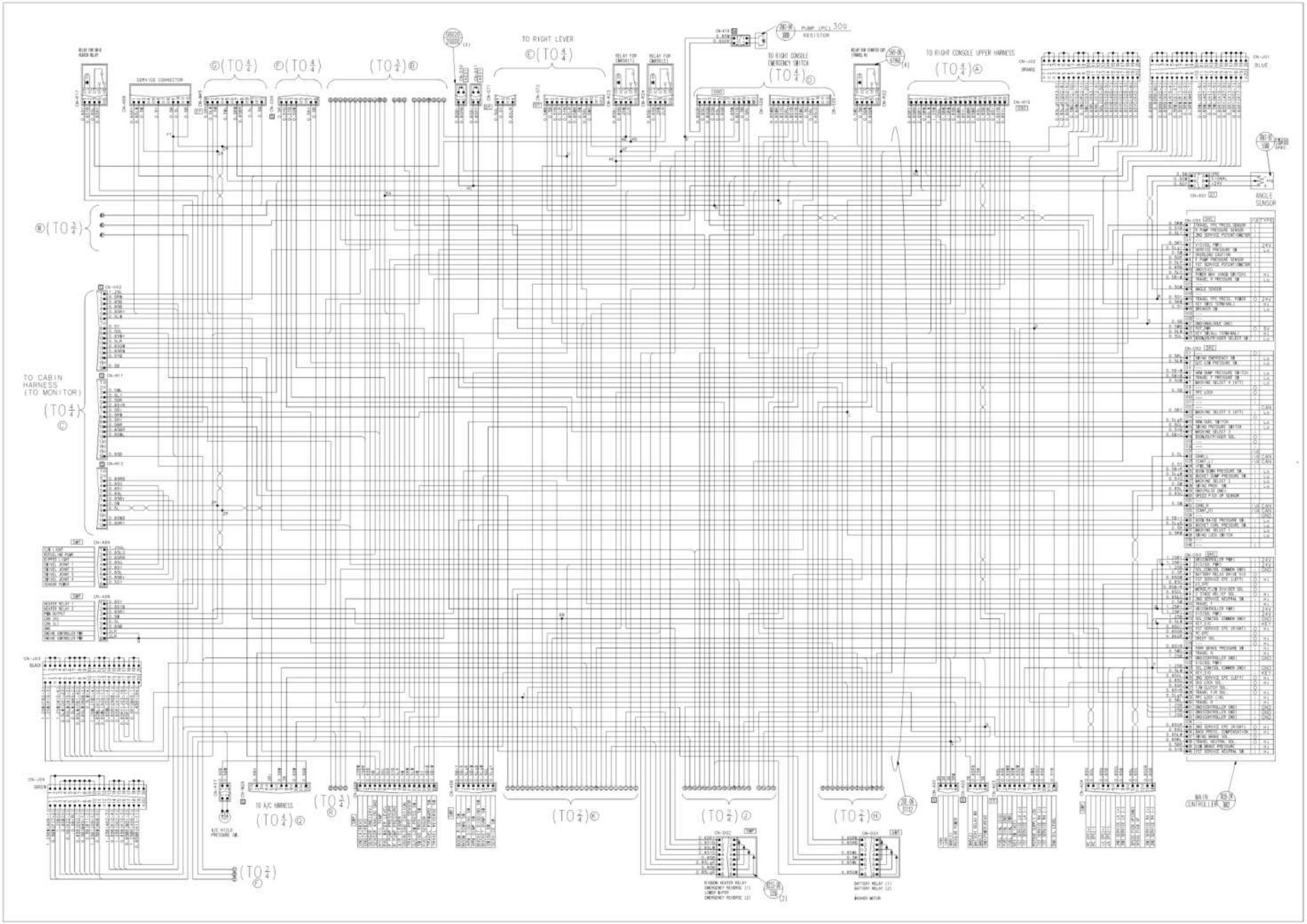
Operation of lever	Output pressure
Neutral	0 MPa (0 kg/cm^2)
Max Position	Almost same as control circuit basic pressure (See standard values table)



6. After finishing measurement, remove the measuring tools and return the removed parts.

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Electrical circuit diagram (4/7)



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