VEBM395100

SHOP MANUAL

KOMATSU®

PW160-7E0

MACHINE MODEL
PW160-7E0

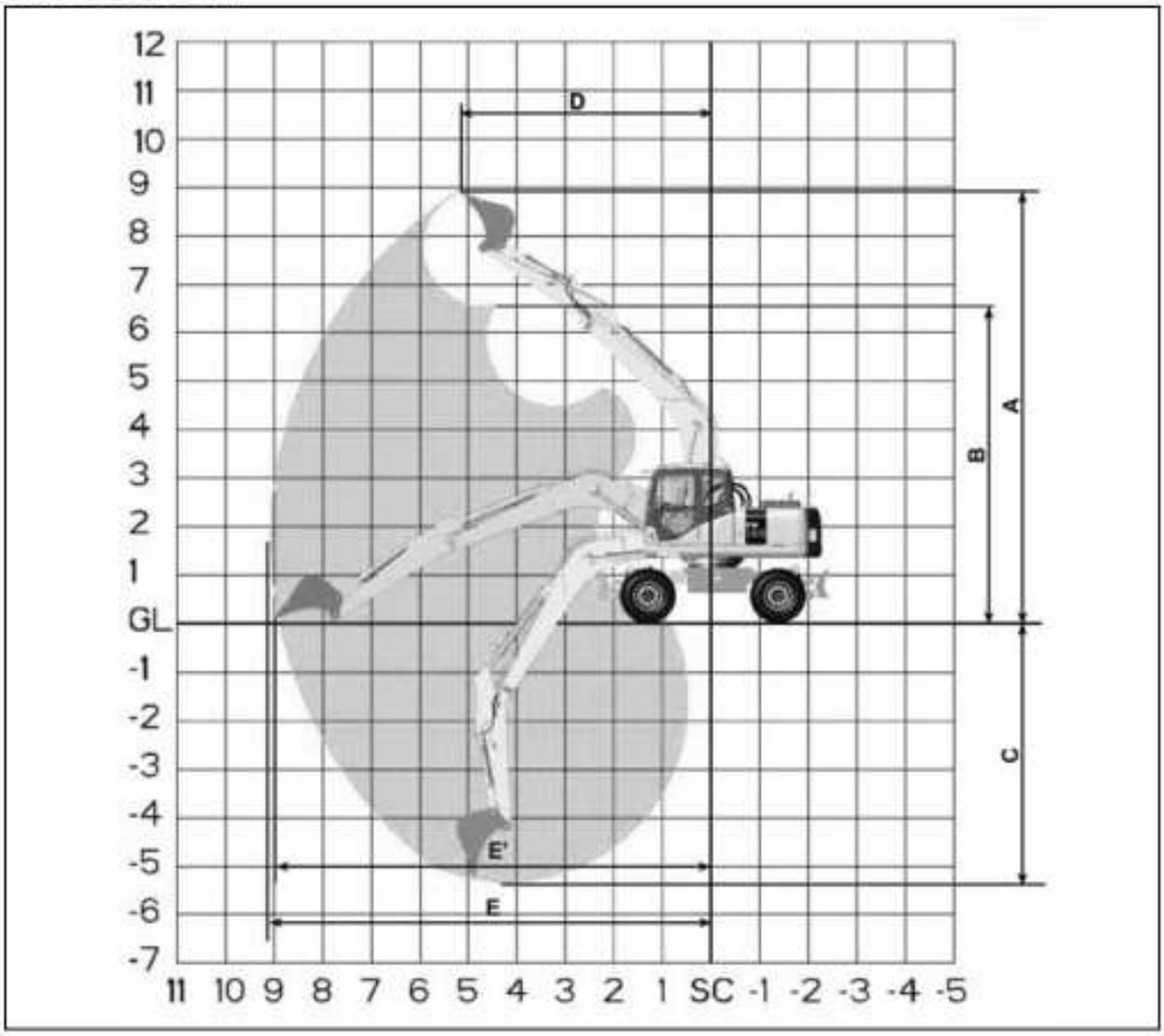
SERIAL NUMBER
H55051 AND UP

- 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.
- PW160-7E0 mount the SAA4D107E-1 engine.
- For details of the engine, see the 107 Series Engine Shop Manual.

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WORKING RANGES

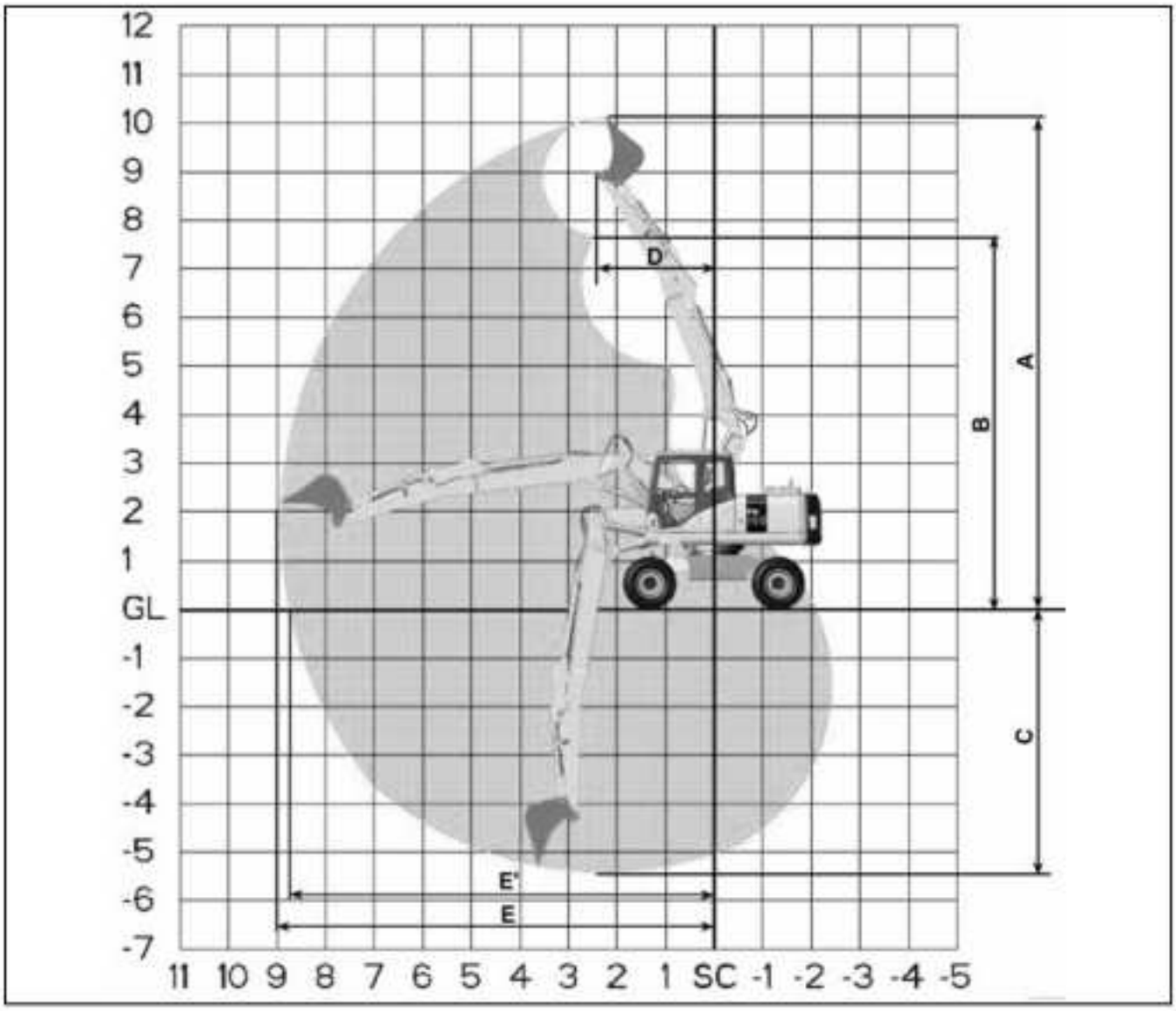
1 PIECE BOOM



Arm length mm (Tt/In)		2100	2500	3000
A	Max. digging height	8730	8930	9285
B	Max. dumping height	6335	6555	6911
C	Max. digging depth	4925	5320	5600
D	Min. swing radius	3205	3160	3180
E'	Max. digging reach ay GL	8620	8885	9315
E	Max. digging reach	8640	9070	9485

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2 PIECE BOOM



Arm length mm (Tt/In)		2100	2500	3000
A	Max.digging height	9745	10118	10575
B	Max.dumping height	7285	7655	8117
C	Max digging depth	4960	5465	5770
D	Min. swing radius	2215	2385	2590
E'	Max. digging reach ay GL	8310	8745	9225
E	Max. digging reach	8505	8930	9410

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SPECIFICATIONS

Machine model				PW160-7E0
Serial Number				H55051 and up
Bucket capacity		Arm size (m)	m^3	0.55
Operating weight			kg	15,800*
Performance	Max. digging force (using power max. function)	2.1	kN {kg}	102.0 {10,400}
		2.5		
		3.0		
	Swing speed		rpm	11.5
	Swing max. slope angle		deg.	21.5
	Travel speed		km/h	Cr : 0-2.5 Lo : 0-10 Hi : 10-35 (Germany :10-20)
	Gradeability		deg. kPa {kg cm^2}	35 36.3 {0.37}
	Standard Tyre Width		mm	10.00 - 20

* Weight will vary depending on specification.

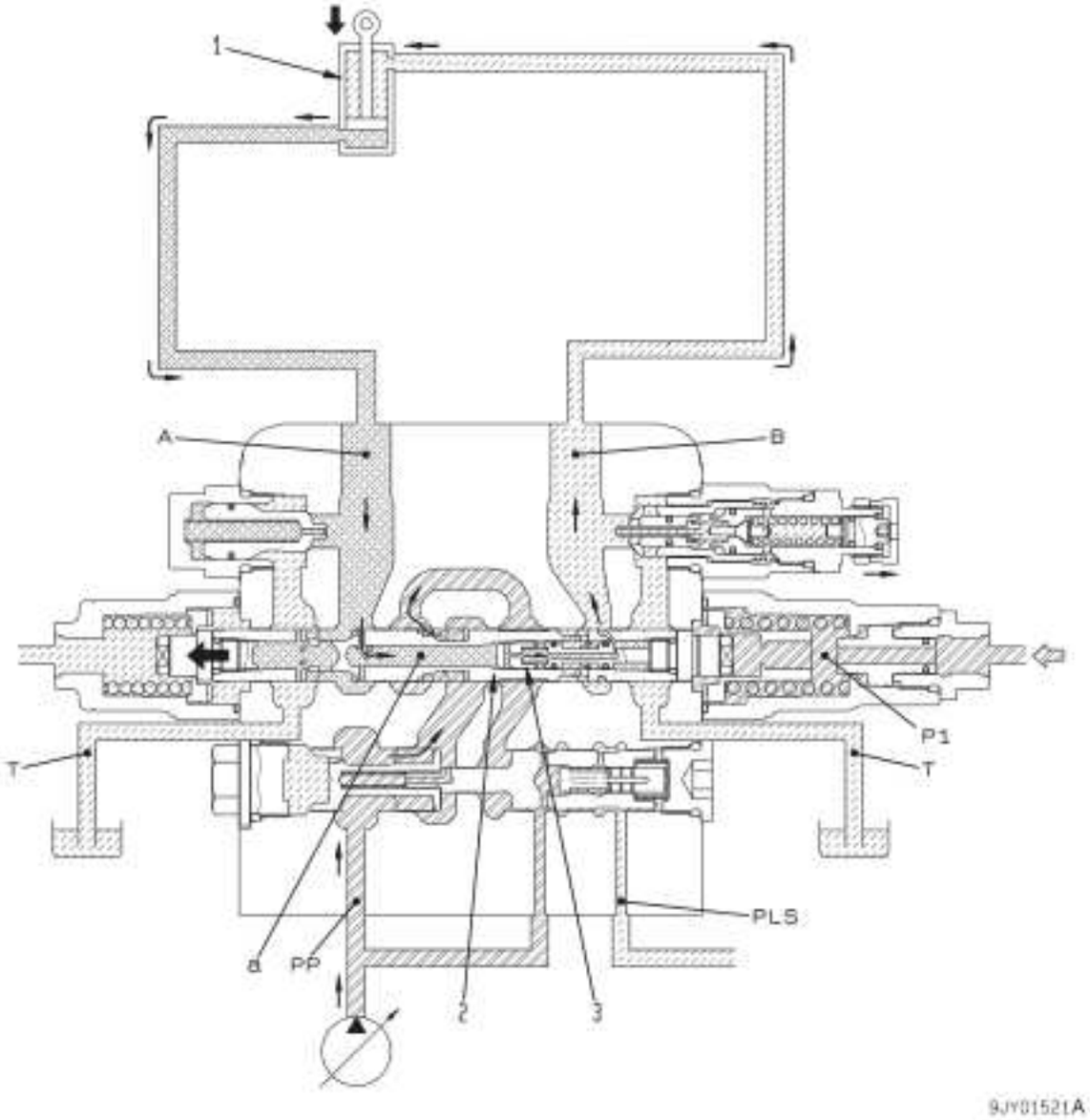
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5. Boom regeneration circuit

1. At boom lower and own weight fall

Function

- When the boom is lowered and falls due to its own weight because the bottom pressure **A** in the cylinder (1) is higher than the head pressure **B**, this circuit brings the return flow on the bottom side to the head side to increase the cylinder speed.
- This increases the boom lower speed.



Operation

- When the boom is lowered and falls due to its own weight, the bottom side pressure **A** in the boom cylinder (1) will rise above the head side pressure **B**.
- At the time, part of the return flow on the bottom side passes through the regeneration passage **a** of the boom spool (2), pushes the check valve (3) to open it and flows to the head side.

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Failure code [CA1633] KOMNET Datalink Timeout Error

User code	Failure code	Trouble	KOMNET Datalink timeout error (Engine controller system)
E0E	CA1633		
Contents of trouble	• Engine controller detected communication error in KOMNET communication circuit between pump controller and machine monitor.		
Action of controller	• Continues operation in default mode. • If cause of failure disappears, system resets itself.		
Problem that appears on machine	• Information may not transmitted normally by KOMNET communication and machine may not operate normally. (Trouble phenomenon depends on failed section.)		
Related information	• 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	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 K31 (female) (A)– C02 (female) (32), – CE02 (female) (46), – K02 (female) (A)	Resistance	Max. 1 Ω
			Wiring harness between K31 (female) (B)– C02 (female) (22), – CE02 (female) (47), – K02 (female) (B)	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 K31 (female) (A) – C02 (female) (32), – CE02 (female) (46), – K02 (female) (A), – N08 (male) (3)	Resistance	Min. 1 MΩ
			Wiring harness between K31 (female) (B) – C02 (female) (22), – CE02 (female) (47), – K02 (female) (B), – N08 (male) (10)	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 K31 (female) (A) – C02 (female) (32), – CE02 (female) (46), – K02 (female) (A), – N08 (male) (3)	Voltage	Max. 5.5 V
			Wiring harness between K31 (female) (B) – C02 (female) (22), – CE02 (female) (47), – K02 (female) (B), – N08 (male) (10)	Voltage	Max. 5.5 V
	4	Defective CAN terminal resistance (Internal short circuit or disconnection)	★ Prepare with starting switch OFF, then carry out troubleshooting without turning starting switch ON.		
			K02 (male)	Resistance	
			Between (A) – (B)	120 ± 12 Ω	
	5	Defective pump controller	If causes 1 – 4 are not detected, engine controller may be defective. (Since trouble is in system, troubleshooting cannot be carried out.)		

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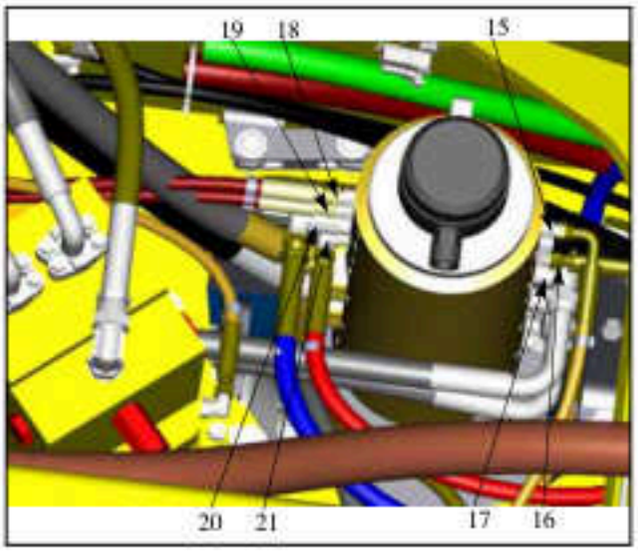
E-30 Air Conditioner does not work

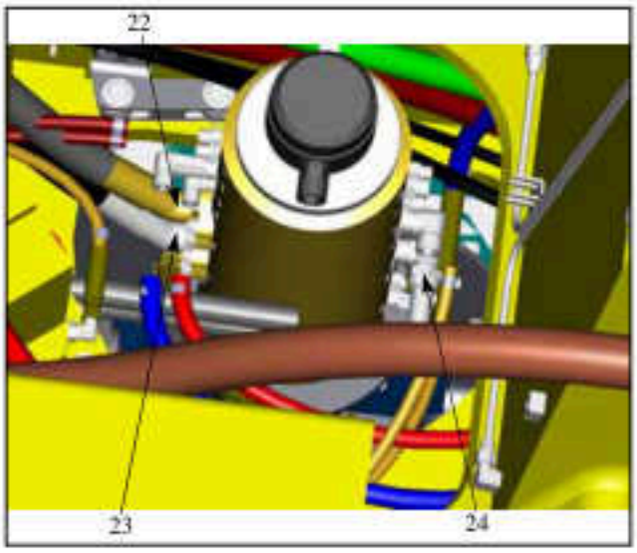
Failure information	• The air conditioner does not work.
Relative information	• For the electrical circuit diagram inside the air conditioner unit, refer to the section of STRUCTURE AND FUNCTION - Air Conditioner in this manual.

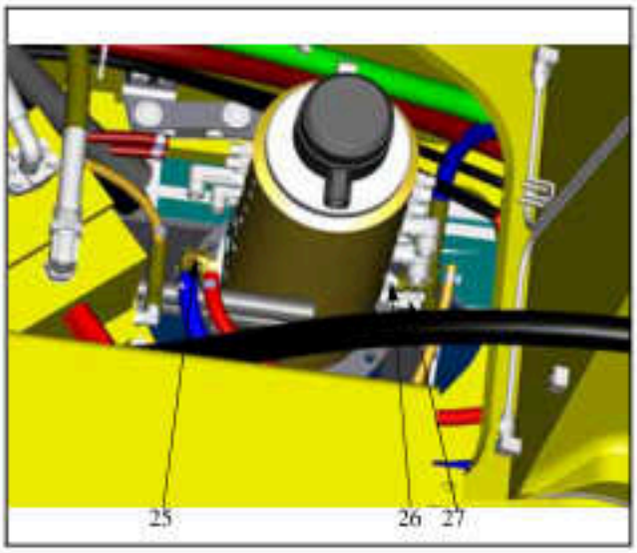
Presumed cause and standard value in normal	Cause		Standard value in normal and references for troubleshooting		
	1	Fuse No. 11 fault	When the fuse is blown, there is a big possibility that grounding fault occurred in the circuit.		
	2	Disconnection of wiring harness (Disconnection or defective contact with connector)	• Turn the engine starting switch OFF for the preparations, and hold it in the OFF position during the troubleshooting.		
			Wiring harness between FB1⑪ outlet and M26 (male) ⑤	Resistance value	Below 1 Ω
			Wiring harness between M26 (male) ⑧ and grounding	Resistance value	Below 1 Ω
	3	Grounding fault of wiring harness (Contact with grounding (GND) circuit)	• Turn the engine starting switch OFF for the preparations, and hold it in the OFF position during the troubleshooting.		
			Between wiring harness between FB1⑪ outlet and M26 (male) ⑤ and grounding	Voltage	Above 1 MΩ
	4	Air conditioner unit defective	• Turn the engine starting switch OFF for the preparations, and hold it in the ON position during the troubleshooting.		
			M26	Voltage	
			Between ⑤ and ⑲	20 – 30 V	

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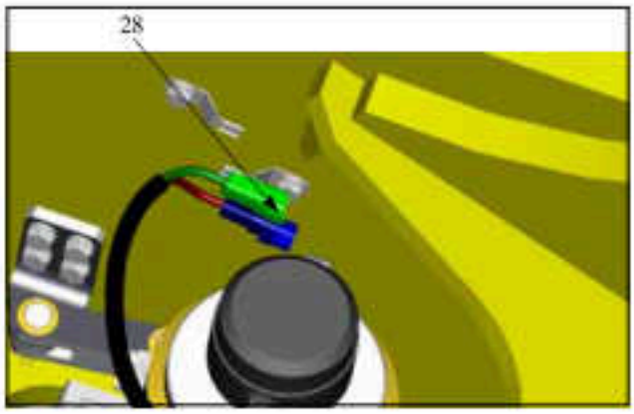
- (27): Steer left



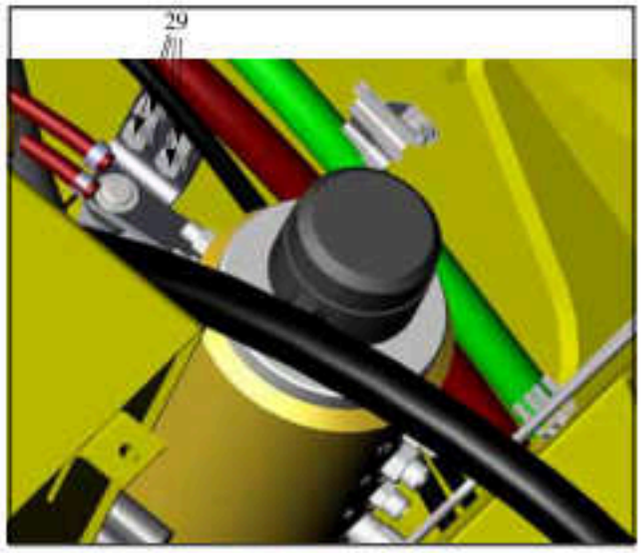




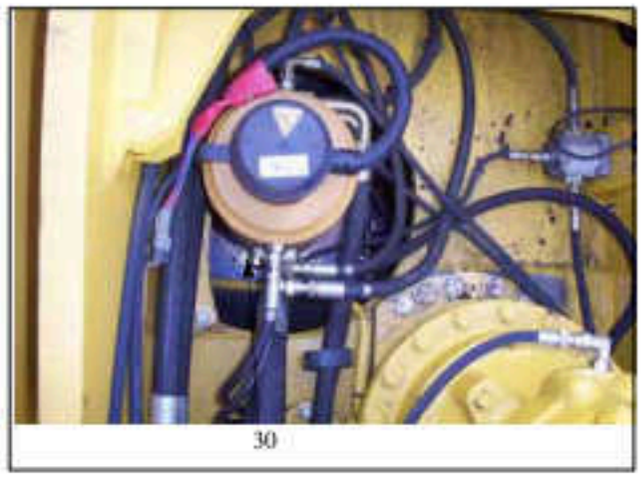
5. Disconnect connector (28).



6. Remove 4 bolts attached to revolving frame (29).



7. Remove 4 of the 6 mounting bolts (30).



8. Sling centre swivel joint then remove 2 remaining mounting bolts (30) and remove.

kg Centre swivel joint assembly: **95 kg**

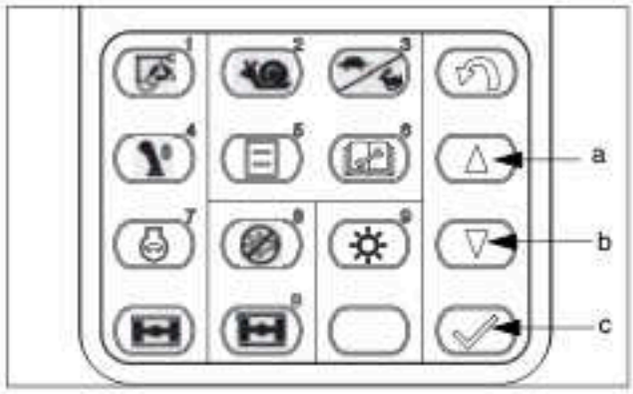
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9. Function for adjusting breaker and attachment flow rate (For machines equipped with breaker attachment)

When a breaker or other attachments are used, hydraulic pump flow rate can be adjusted by operating the select switch.

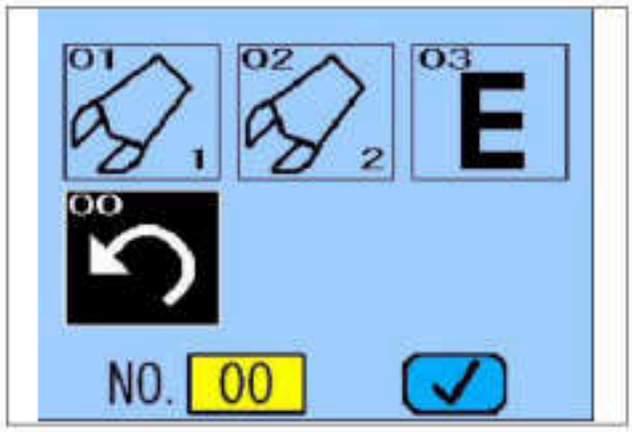
- Note that the symbol mark and contents of display partially differ between the breaker

Select switch (5) is used to select the hydraulic flow setting in each of the working modes P, E and B.

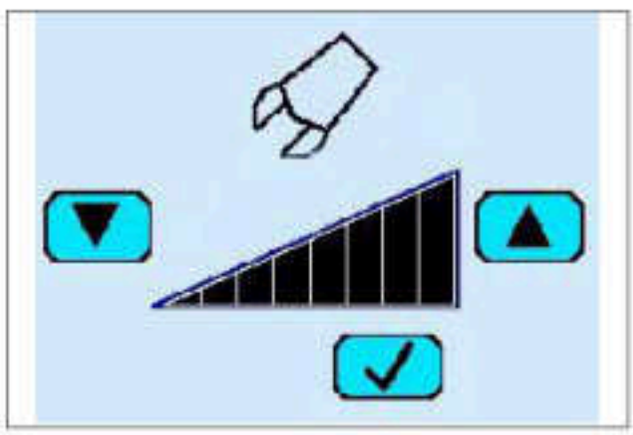


9.1. When the working mode is P or E

9.1.1 Press switch (5) and normal screen on monitor display changes to the screen shown in the diagram on the right



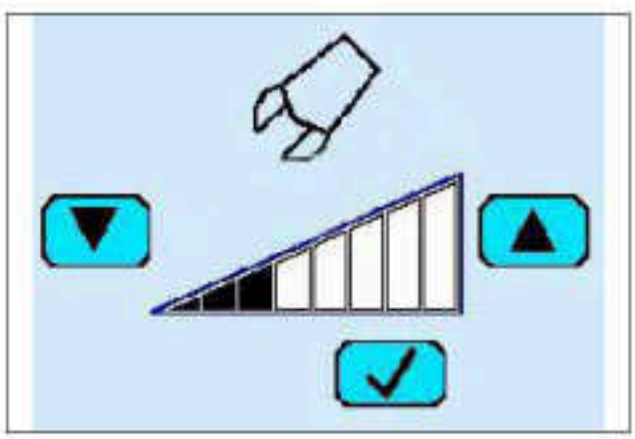
9.1.2 Select 01 from the screen and the monitor display changes to the flow setting screen shown on the right (Full Flow). By pressing down switch (b) the flow can be reduced.



OR

Select 02 from screen and the monitor display changes to the flow setting. Press up switch (a) or down switch (b) to adjust to the desired flow.

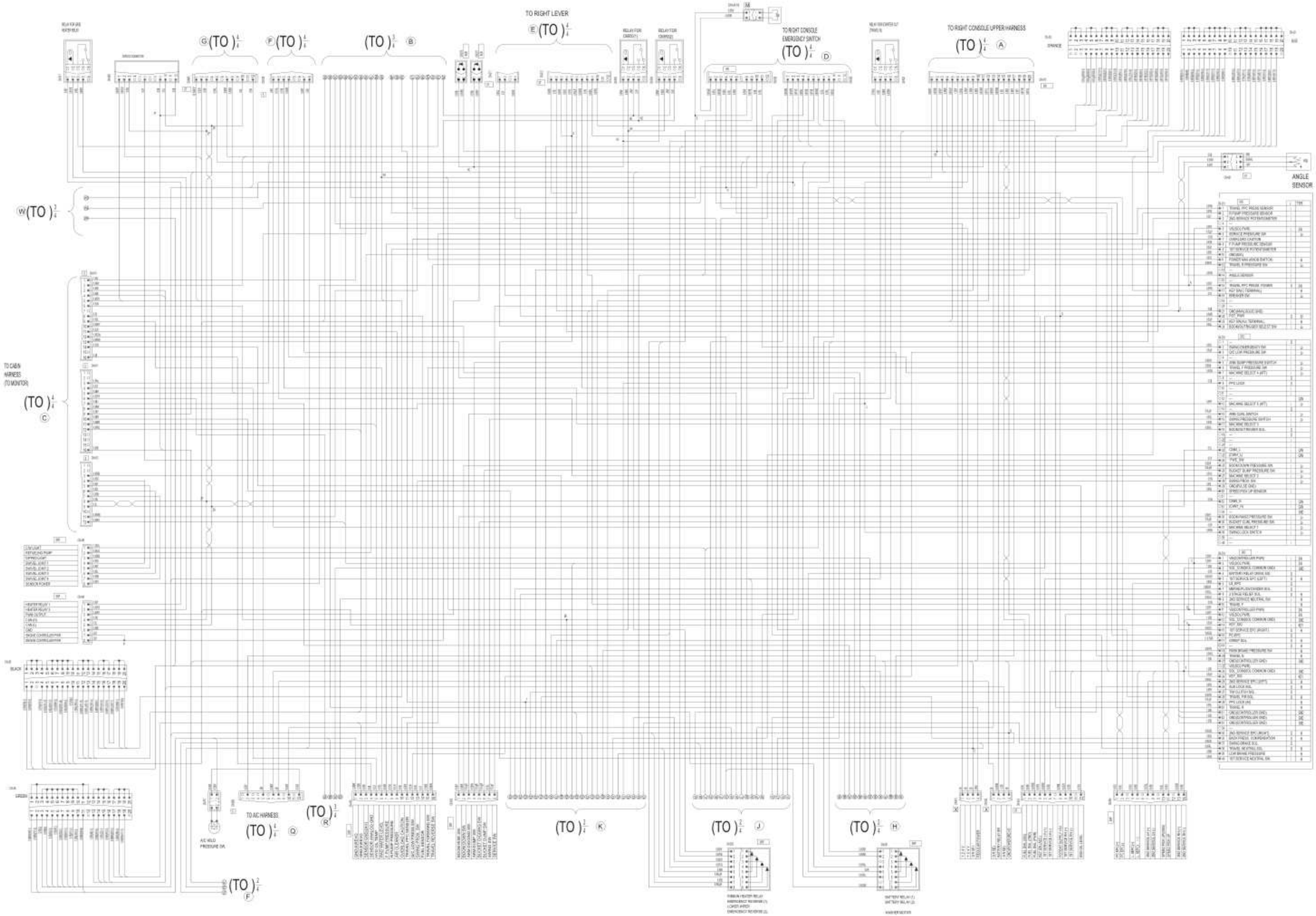
9.1.3 After completing the flow setting, press input confirmation switch (c).
The monitor display will return to the normal screen.



The flow can be adjusted for the attachment installed.

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ELECTRICAL CIRCUIT DIAGRAM 1/7



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