KOBELCO

SERVICE MANUAL

HYDRAULIC EXCAVATOR

SK170LC-6E

S5YM0101E 01

APPLICABLE:
YM03-00501~
YM04-00583~

Issued: December, 2003

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TOOLS

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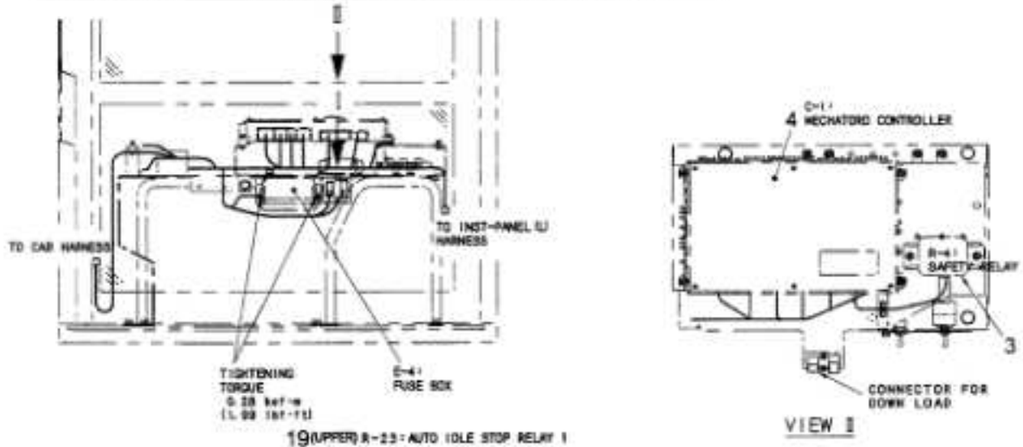
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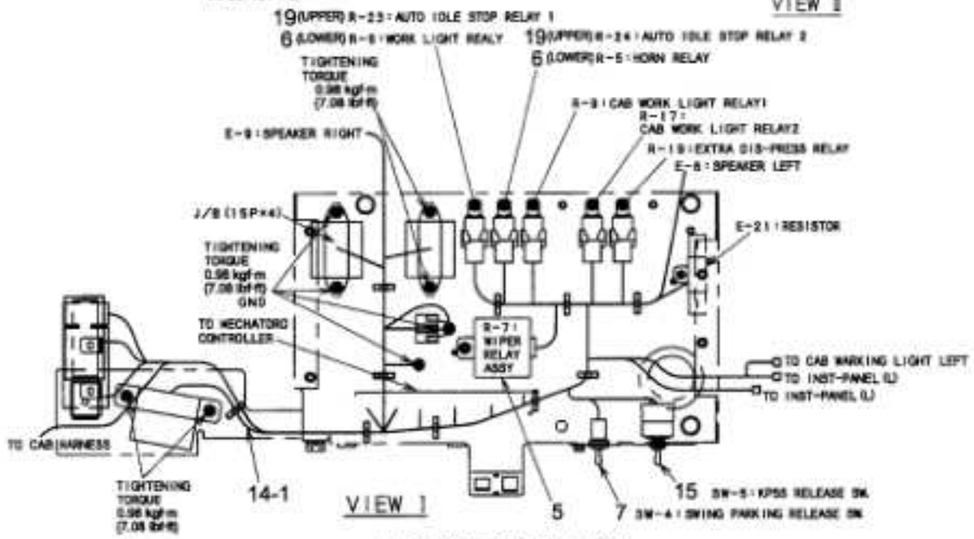
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3.4 CONTROLLER ASSY

CONTROLLER ASSY		YM22E00015F1			After modification
CONTROLLER ASSY		YM22E00011F1			Before modification
ITEM	PART NAME	PART No.	Q'TY		REMARKS
3	SAFETY RELAY	ME077148	1	1	
4	CONTROLLER	YM22E00010F1	1	-	
4A	CONTROLLER	YM22E00010F2	-	1	Wiper & washer
5	RELAY	YT24E00001F1	1	1	
6	RELAY	EN24S00008P1	5	5	
7	SWITCH	YX50E00002F1	1	1	P/B Release
14	CAB HARNESS ASSY	YM14E00004F1	1	-	Not shown
14A	CAB HARNESS ASSY	YM14E00007F1	-	1	Not shown
14-1	HARNESS	YM14E01004P1	1	-	
14A-1	HARNESS	YM14E01013P1	-	1	
15	SWITCH	YN50S01003P1	1	1	KPSS Release
19	RELAY	LC24S00001P1	-	2	Auto idle stop relay 1,2





14. CAB HARNESS ASSY
(YM14E00004F1, YM14E00007F1)

Fig. 4 Controller assy

CONTROLLER INSTALL		YN22E00145F2		
ITEM	PART NAME	PART No.	Q'TY	REMARKS
4	TIMER RELAY	YN25S00001P1	1	Safety lock
10	RELAY ASSY	YN24E00005F2	1	
10-4	FLASHER RELAY	YY24S00001P1	1	
10-5	CONVERTER	YT77S00001P1	1	DC-DC

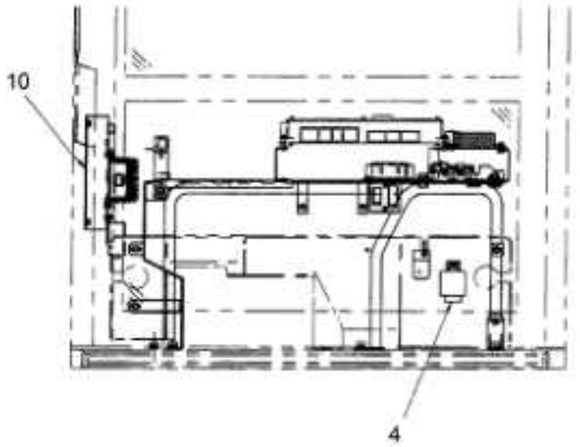
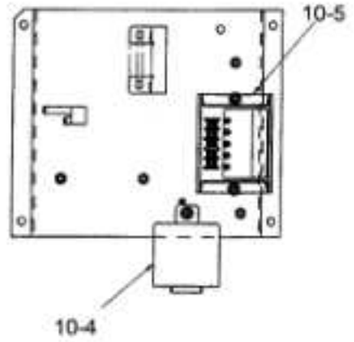


Fig. 5 Controller install

10. RELAY ASSY DETAIL



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1.1.2 DISASSEMBLY AND ASSEMBLY OF MAIN PUMP

(1) Tools

The following list shows the tools required for remove and install.

Table 1-3

Tool name	Dimension
Allen wrench	Opposing flats 4,5,6,8,14mm
Eye wrench Socket wrench Wrench with double heads (single head)	Opposing flats 19, 27mm
Adjust wrench	Medium size 1pc.
Screw driver	Flat-bladed screw driver 1pc.
Hammer	Plastic hammer 1pc.
Plier	For snap ring
Steel bar	Steel bar for key Approx. 10 X 8 X 200mm (0.40" X 0.31" X 0.79")
Torque wrench	One that may be fastened to specified torque

(2) Disassembling procedure

1) Selecting a place for disassembly.

- Choose a clean place.
- Spread rubber sheet or cloth on work bench to protect parts from damaging.

2) Cleaning

Remove dust and rust, etc. on pump surface with wash oil.

3) Drain oil

Drain out the oil in the pump casing by removing drain port plug (467), (468).

: 27 mm

- Drain out the oil from the plug of the front pump and the rear pump.

4) Removing regulator and PTO gear casing

Remove the socket bolts [415 (See Fig.1-20), 435 (See Fig.1-34.)]. Then remove the regulator and the PTO gear casing.

: 6 mm, 8 mm

- Regarding the disassembly of the regulator, refer to article of Regulator.
- Regarding the disassembly of the PTO gear casing, refer to article of PTO Gear Casing.

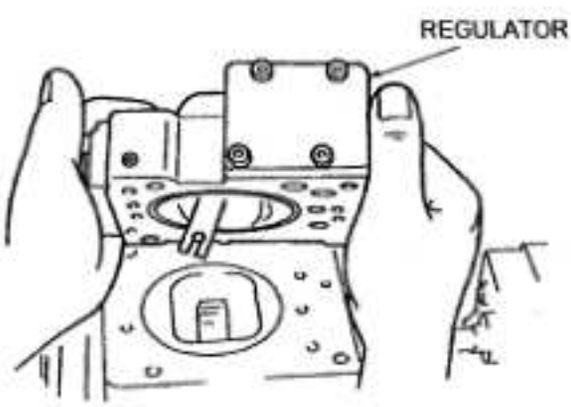


Fig. 1-3 Remove regulator

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5.5 TROUBLESHOOTING

5.5.1 SWING MOTOR

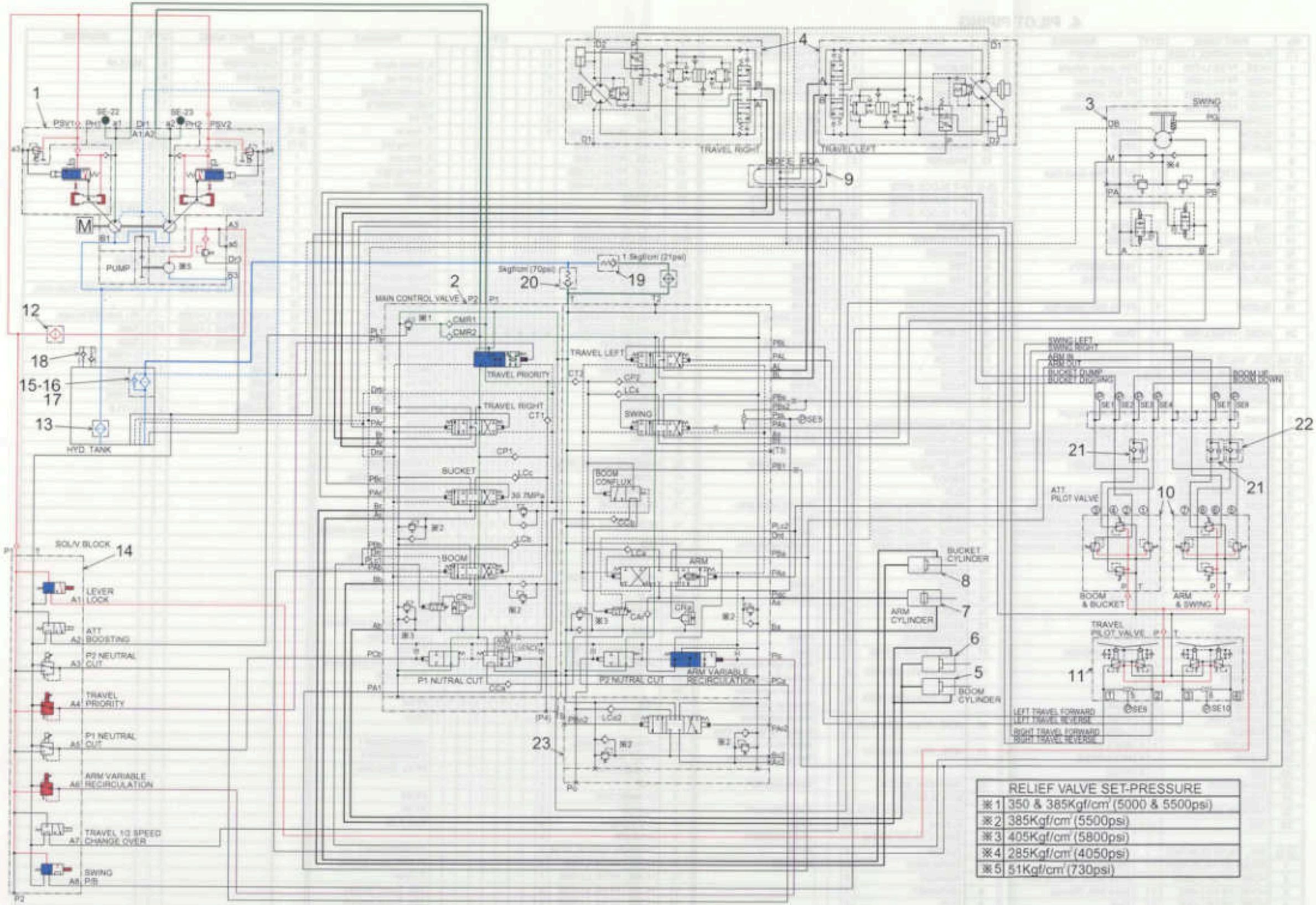
(1) Hydraulic motor does not rotate.

Trouble	Cause	Remedy
Pressure does not rise.	1. Relief valve pressure in circuit is not adjusted correctly. 2. Malfunction of relief valve. 2-1. Sticking plunger. 2-2. Orifice on plunger is clogged. 3. Plunger seat is faulty. 4. Anti-reaction valve seat is faulty.	1. Set to correct value. 2. 2-1. Correct the stuck areas or replace the plunger. 2-2. Disassemble and clean. 3. Check the seat surface and replace the plunger if scored. 4. Replace the anti-reaction valve cartridge or block.
Pressure rises.	1. Overload. 2. Moving parts are seized. 3. Brake release pressure is not working on the motor 4. Brake piston is stuck. 5. Friction plate is seized.	1. Eliminate overload. 2. Inspect and repair piston, shoe and cylinder valve plate. 3. Check circuit and correct it. 4. Disassemble and check. 5. Disassemble, check and repair. Replace one that is seized.

(2) Rotating direction is opposite.

Trouble	Cause	Remedy
Rotating direction is opposite.	1. Motor's assembling direction is reversed. 2. Piping inlets and outlets are reversed.	1. Assemble correctly. 2. Pipe correctly.

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RELIEF VALVE SET-PRESSURE	
※1	350 & 385Kgf/cm² (5000 & 5500psi)
※2	385Kgf/cm² (5500psi)
※3	405Kgf/cm² (5800psi)
※4	285Kgf/cm² (4050psi)
※5	51Kgf/cm² (730psi)

PRESSURE DRAIN (RELEASE) CIRCUIT

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