KOBELCO

SERVICE MANUAL

HYDRAULIC EXCAVATOR

SK70SR

S5YT0101E

APPLICABLE:
YT00101~

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TOOLS

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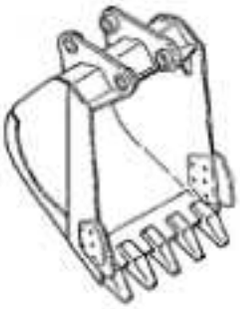
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10. TYPE OF BUCKET

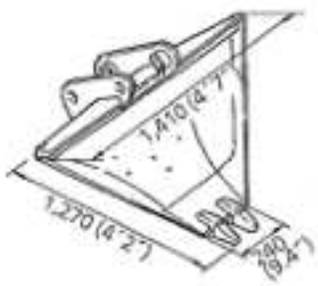
Hoe bucket



Heaped capacity m^3(cu·yd)	Struck m^3(cu·yd)	Outer width mm (ft-in) With side cutter	Outer width mm (ft-in) Without side cutter	Number of tooth	W or W/O side cutter	Availability of face shovel	Weight kg (lbs)
0.11 (0.14)	0.09 (0.12)	———	400 (1'4")	3	No	Yes	150 (330)
0.14 (0.18)	0.12 (0.16)	450 (1'6")	———	3	Yes (welded)	Yes	150 (330)
0.18 (0.24)	0.14 (0.18)	550 (1'10")	480 (1'7")	3	Yes	Yes	170 (380)
0.22 (0.29)	0.18 (0.24)	650 (2'2")	580 (1'11")	4	Yes	Yes	190 (420)
STD 0.28 (0.37)	0.22 (0.29)	750 (2'6")	680 (2'3")	4	Yes	Yes	200 (440)
0.35 (0.46)	0.26 (0.34)	850 (2'9")	780 (2'7")	4	Yes	Yes	220 (640)

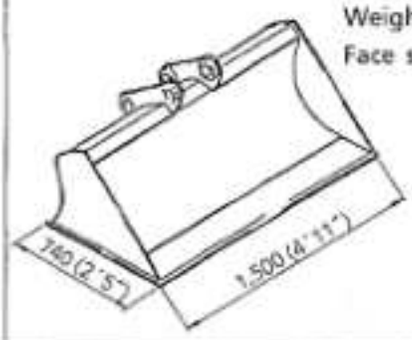
V-shape bucket

Capacity : 0.24m^3 (0.31cu·yd)
Weight : 180kg (400 lbs)
Face shovel unavailable



Slope finishing bucket

Capacity : 0.26m^3 (0.34cu·yd)
Weight : 300kg (660 lbs)
Face shovel unavailable



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3. HARNESS

3.1 HARNESS & CABLE LIST

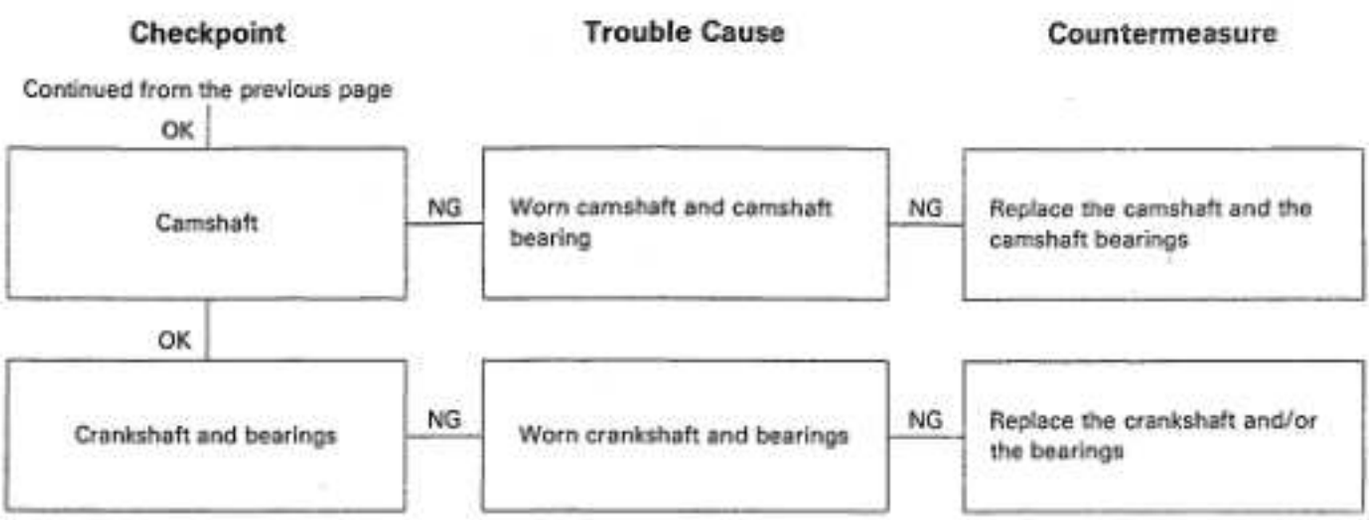
Table 2

Index No.		EXPORT	KAI	EU		DWG. No.		HARNESS				
Device	Item					NAME	Assy No.	No.	NAME	Part No. EXPORT	Part No. AMERICA(KAI)	Part No. EU
Upper frame	3.3	◎	◎	●		Controller group	YT22E00003F1 YT22E00007F2 YT22E00007F1	6 6-6	Cab harness Harness	YT14E00005F1 YT14E00016P2	YT14E00007F1 YT14E01019P1	← (NOT SHOWN) ←
	3.4	◎	◎	●		Instrument panel assy	YT17M00001F1 YT17M00003F2 YT17M00003F1	22	Antenna code	2486R99	–	–
	3.5	◎	◎	●		Upper electric assy	YT03E00003F1 YT03E00003F3 YT03E00003F2	13	Harness	–	–	YT13E01033P2
	3.6	◎	●	●		Upper harness assy	YT13E00005F1 YT13E00009F1	1 2 3 4 5 6 8	Starter cable Battery cable Battery cable Battery ground cable Right guard harness Main harness Frame ground cable	YT13E01026D2 2486R89D4 YN13E01053D2 2486R87D1 YT13E01023P1 YT13E01024P2 LE13E01006P1	← ← ← ← YT13E01031P1 ← ←	← ← ← ← ← ← ←
	3.7	●	●	●		E/G Harness	YT16E00003F1	1	E/G Sub harness	YT16E01006P3	←	←
	3.8	●	●	●		Floor plate harness assy	YT13E00006F1 YT13E00010F1	1 3	Harness Cable	YT13E01025P1 LE13E01005P1	YT13E01032P1 ←	← ←
Cab	3.9	●	●	●		Cab harness assy	YT14E00006F1 YT14E00008F1	1 2 3	Left instrument panel harness Right instrument panel harness Cab right front harness	YT14E01011P2 YT14E01012P1 YT14E01013P1	YT14E01020P1 YT14E01021P1 YT14E01022P1	← ← ←
	3.10	●	●	●		Battery	2484U179 2411U25					
	3.11	●	●	●		Cab	YT02C00001F1 YT02C00001F9	2 2-37 61 64 65 189	Front window assy Wiper harness Curl code harness Cab harness Antenna Room lump harness	YT50C00001F1 YT02C01106P1 YT02C01104P1 YT02C01216P2 YT54S00001P1 YT02C01308P1	← ← ← ← ← ←	← ← ← ← ← ←
	3.12	●	●	●		Mounting cab	YT02C00002F1					
Light	3.13	●	●	●		Mounting deck light	YT80E00001F1					
	3.14	●	●	●		Mounting boom work light	LE80E00002F1	2	Harness	YN15E01005D5	←	←
	3.15	–	–	●		Mounting cab work light	YT80E00002F3	7 8 9 12 14	Two light harness One light harness Cab light harness Cab light harness Three light harness	– – –	– – –	YT11E01001P1 YT11E01002P1 YT14E01017P1 YT14E01018P1 YT02C01422P2
A/C	3-16	●	●	●		A/C conditioner	YT02M00008F1	1 1-2	Air conditioner Harness	YT20M00009F1 YT20M00004S002	← ←	← ←

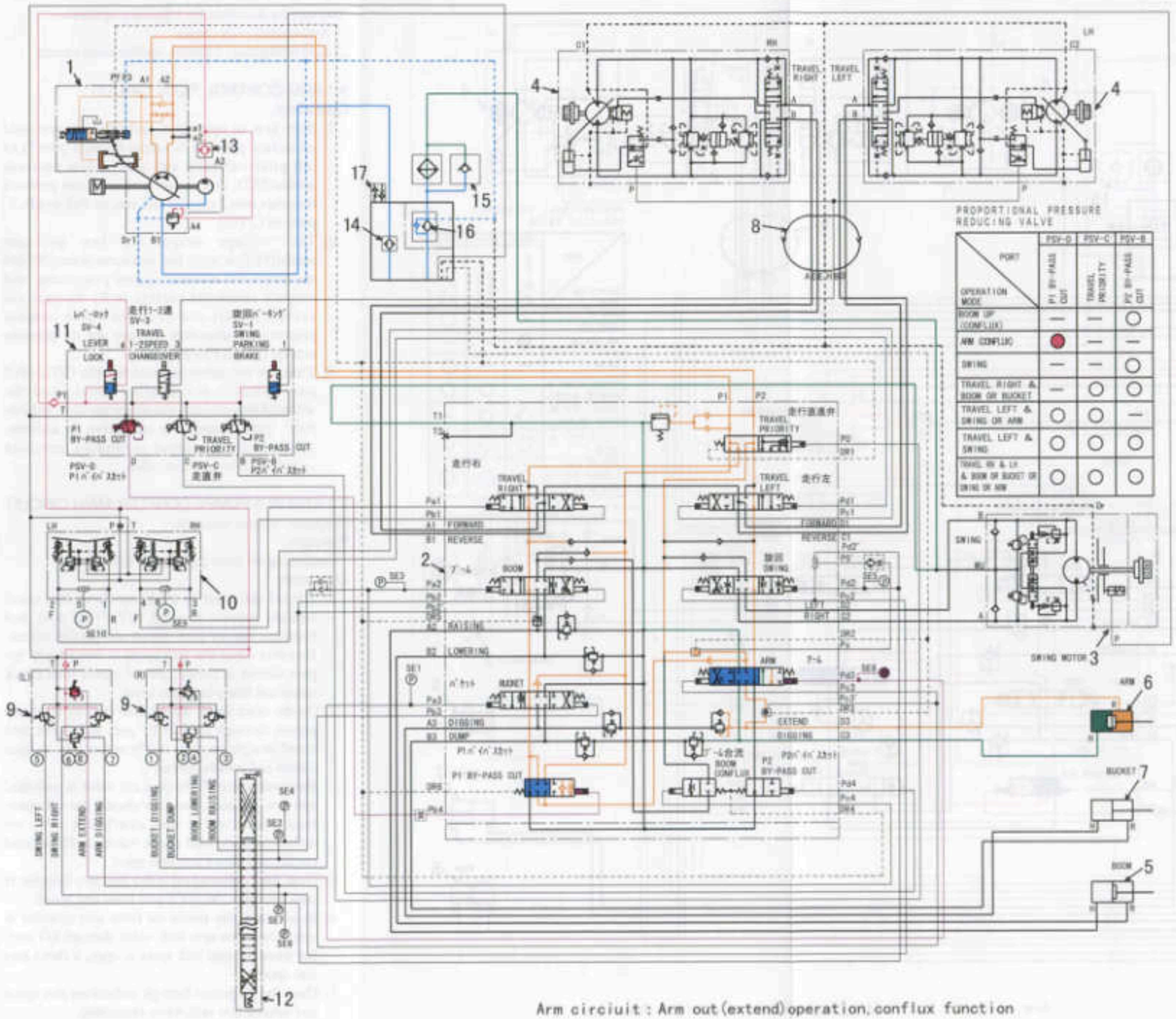
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9. OIL PRESSURE DOES NOT RISE



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Arm circiuit : Arm out (extend) operation, conflux function

This section describes the following operations.
1) Arm out pilot circuit
2) Arm out 2 pumps conflux main cicuit
3) Natural drop protection with arm lock valve

9.3 ARM OUT PILOT CIRCUIT

Operation:

1) Start arm out operation, and the pilot proportional secondary pressure is output through port(8) of left pilot valve(9), and acts on low pressure senson(SE8), at the same time acts on C/V(2) Pd3 port.
2) The voltage output by low pressure sensor(SE8) is processed by mechatro controller, and outputs command current to P1 cut valve, and the solenoid valve outputs secondary pressure and acts on C/V Pb4 port.
3) Then, the proportional secondary pressure fed into C/V(2) Pd3 port switches arm spool. And the proportional secondary pressure flown into Pb4 port switches P1 by-pass cut valve.

9.4 ARM OUT 2 PUMPS CONFLUX MAIN CIRCUIT

Purpose: Arm out operation speed up

Operation:

1) The oil delivered by P1 and P2 pumps flows in the same way until the oil reaches to arm spool.
2) Then, the oil passes through arm spool opens arm lock valve with free flow and flows into arm cylinder R side through C/V(2) D3 port.
3) And, the return oil from arm cylinder H side flows into C3 port, passes through orifices on arm spool, and returns into tank circuit.

9.5 NATURAL DROP PROTECTION WITH ARM LOCK VALVE

Operation:

<When arm out operation pressure is indicated;>

1) The control secondary pressure flown into relief port Pc3' of arm lock valve pushes needle valve on the rear side of lock valve seat, and the back pressure of lock valve flows into tank circuit through drain port DR3 making the opening of valve easier.
2) The return oil from arm cylinder R side opens lock valve, and flows into arm spool.

<When arm out operation pressure is not indicated;>

1) Where the pilot pressure in arm lock valve relief port Pc3' is exhausted, the above needle valve is pushed back by the force of spring, and the pressure of lock valve becomes equal to the return pressure due to back pressure of lock valve.
2) The area on back pressure side of lock valve is larger, the lock valve is completely seated, and the oil in arm cylinder R side is stopped from returning, protecting the arm from natural drop.

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