CRAWLER EXCAVATOR

SERVICE MANUAL

RD140LC-9V

HYUNDAI

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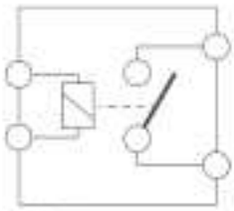
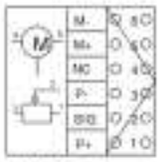
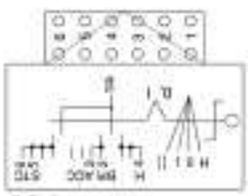
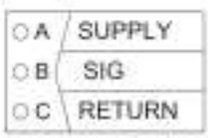
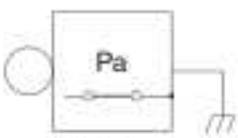
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GROUP 3 ELECTRICAL COMPONENT SPECIFICATION

Part name	Symbol	Specifications	Check
Battery		12V × 80Ah (2EA)	▪ Check specific gravity 1.280 over : Over charged 1.280 – 1.250 : Normal 1.250 below : Recharging
Battery relay	 CR-1	Rated load : 24V 100A (continuity) 1000A (30seconds)	▪ Check coil resistance(M4 to M4) Normal : About 50 Ω ▪ Check contact Normal : ∞ Ω
Accel actuator	 CN-76	-	▪ Check resistance Normal : 1-2 Ω (For terminal 5-6) 0.8-1.2k Ω (For terminal 1-3)
Start key	 CS-2	B-BR : 24V 1A B-ACC : 24V 10A B-ST : 24V 40A	▪ Check contact OFF : ∞ Ω (for each terminal) ON : 0 Ω (for terminal 1-3 and 1-2) START : 0 Ω (for terminal 1-5)
Pressure sensor	 CD-6 CD-7 CD-32 CD-42 CD-43 CD-44	8–30V	▪ Check contact Normal : 0.1 Ω
Pressure switch (For engine oil)	 CD-18	0.5 kgf/cm² (N.C TYPE)	▪ Check resistance Normal : 0 Ω (CLOSE)

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SECTION 6 TROUBLESHOOTING

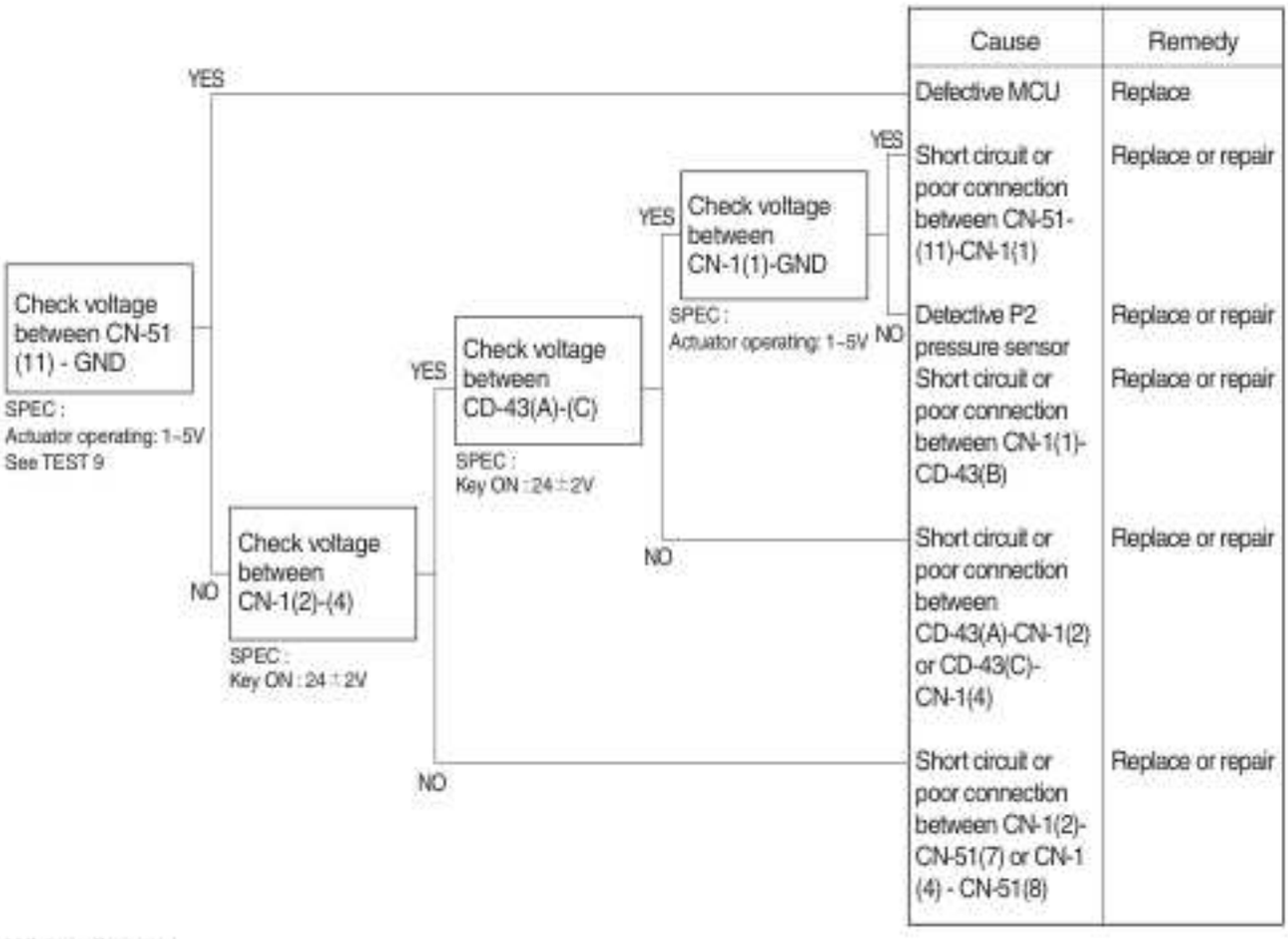
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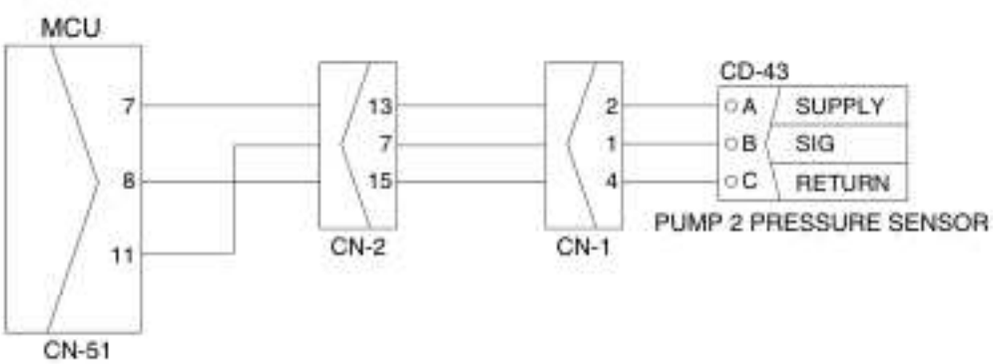
6. MALFUNCTION OF PUMP 2 PRESSURE SENSOR

※ Before carrying out below procedure, check all the related connectors are properly inserted.

1) INSPECTION PROCEDURE



Wiring diagram



140V06M507

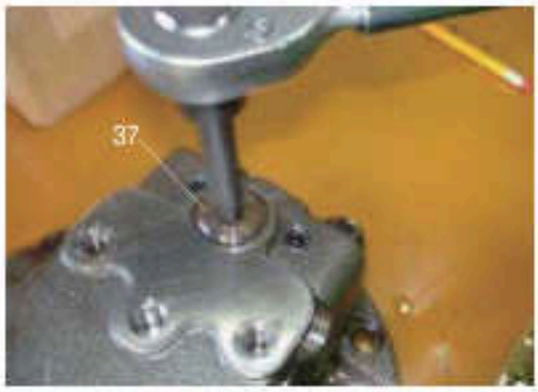
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(11) Put spring (36), two speed control spool (35) into valve casing (25) in regular sequence and assemble plug (37) into valve casing (25) using a torque wrench.

· Tighten torque : 10 kgf-m (72.3 lbf-ft)



145Z0A8TM70



145Z0A8TM71

(12) Assemble check (30), spring (29), plug (27) into main spool (26) in regular sequence.



145Z0A8TM72



145Z0A8TM73



145Z0A8TM74



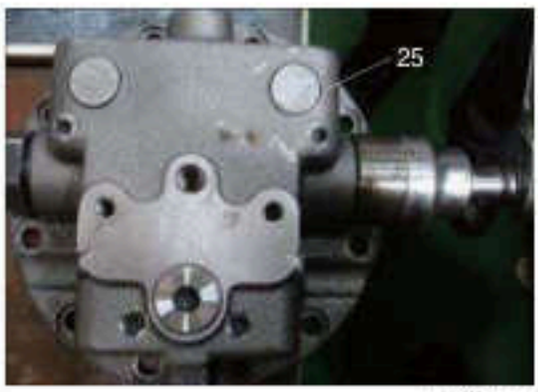
145Z0A8TM75

(13) Put the main spool (26) into valve casing (25) and assemble plate (31), spring (29) into it. Tighten main spool plug (32) using a torque wrench.

· Tighten torque : 45 kgf-m (325.5 lbf-ft)



145Z0A8TM76



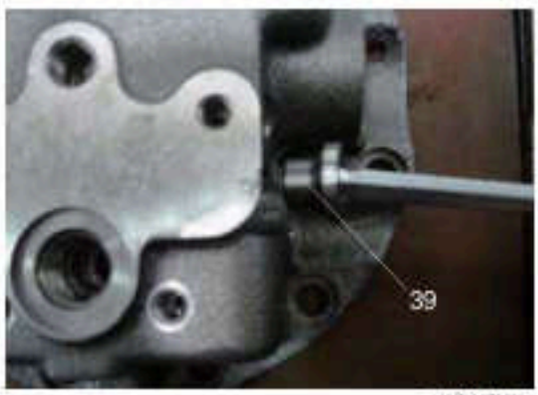
145Z0A8TM77

(14) Put relief valve damping piston (38) into valve casing (25) and assemble plug (39) into valve casing (25).

· Tighten torque : 6 kgf-m (43.4 lbf-ft)



145Z0A8TM78

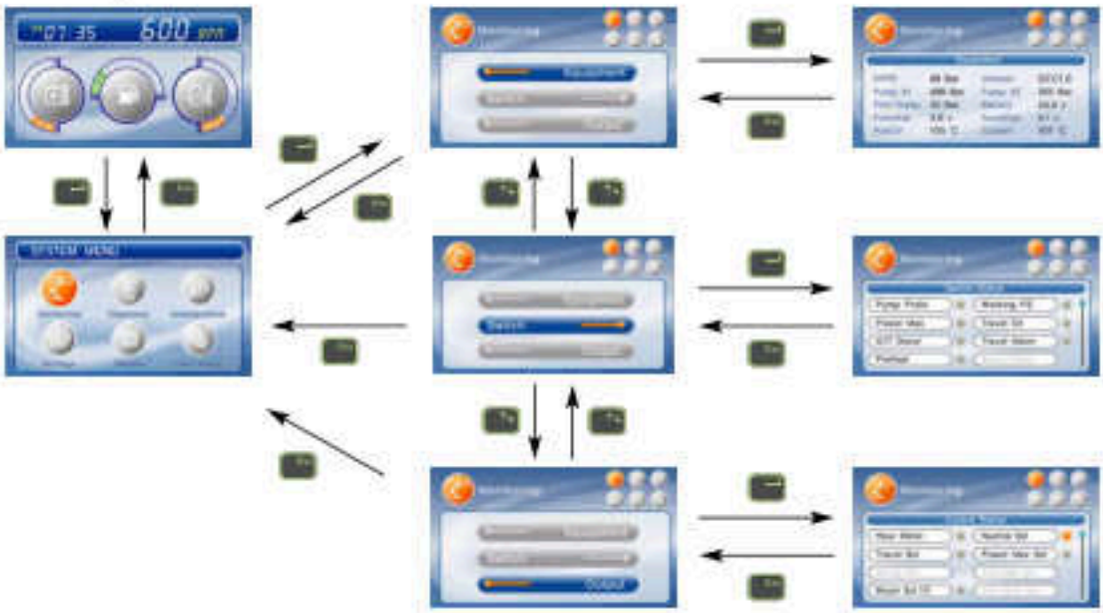


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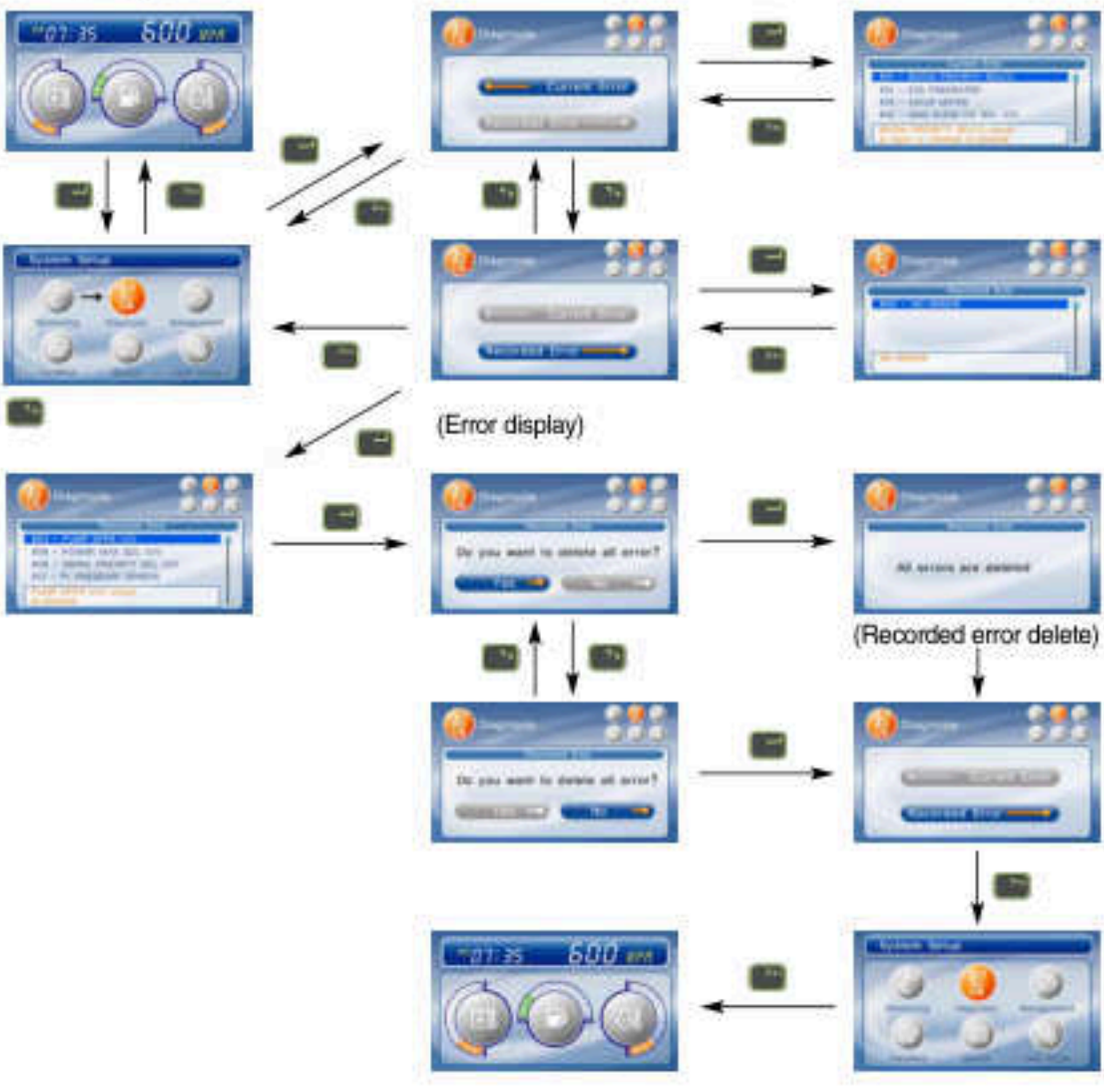
(2) Display map

① Monitoring

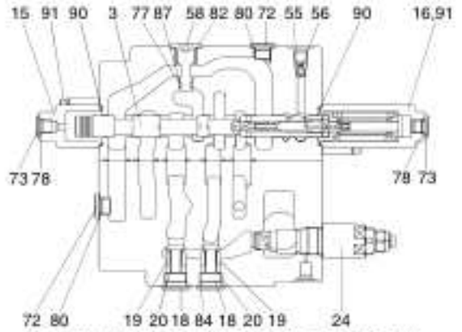


② Diagnosis

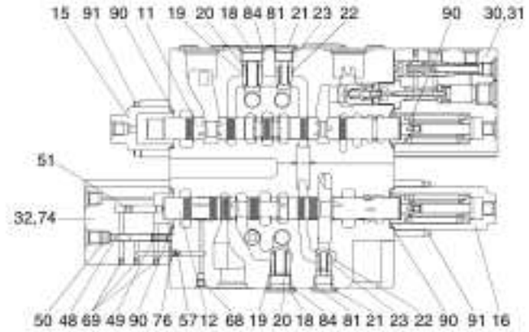
a. Protocol type 1



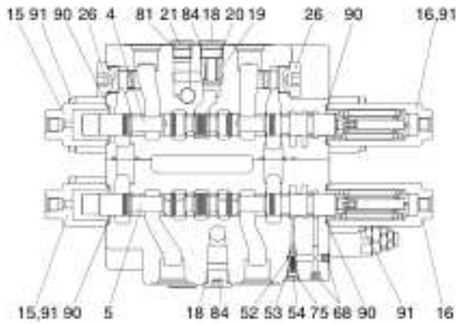
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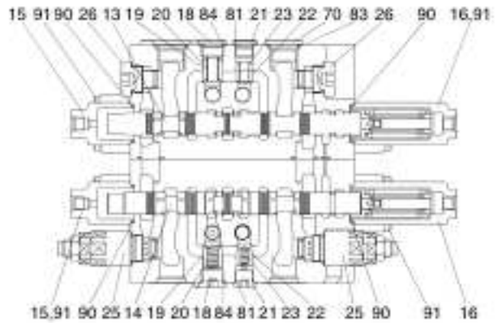
A - A (STRAIGHT-TRAVEL & SUPPLY)



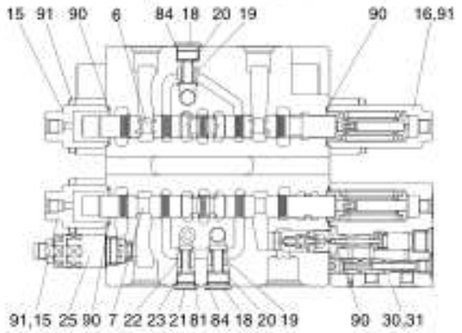
E - E (ARM & ARM REGENERATION /BREAKER)



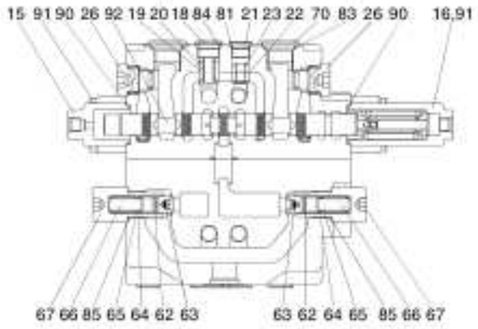
B - B (TRAVEL RIGHT & LEFT)



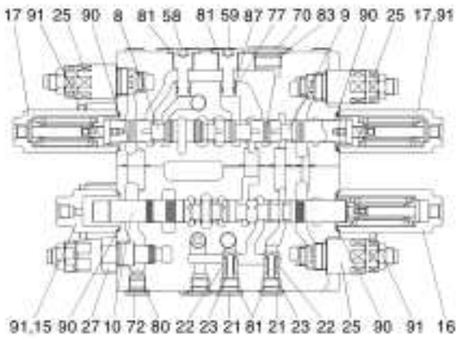
F - F (OPTION & BUCKET)



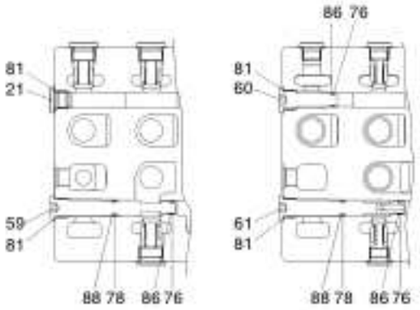
C - C (SWING & BOOM1)

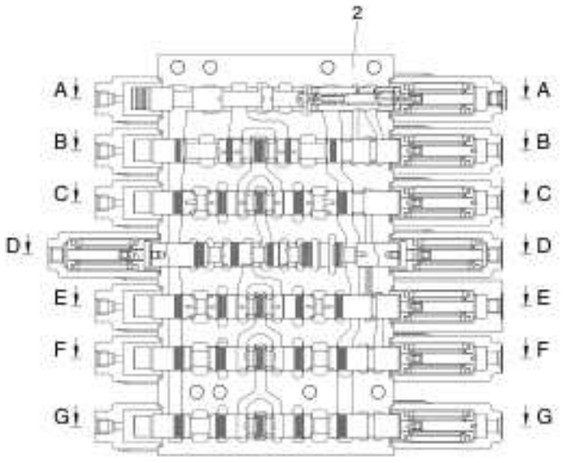


G - G (OPTION & NEGATIVE CONTROL)

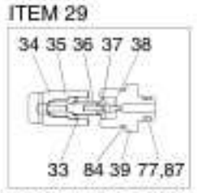


D - D (SWING PRIORITY & BOOM2 & ARM)



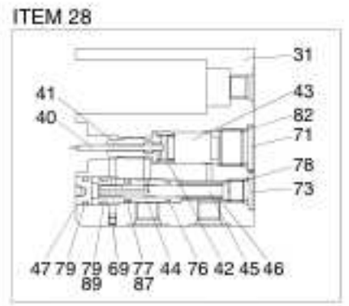


ITEM 29



LOCK VALVE - B KIT (BOOM & ARM)

ITEM 28



LOCK VALVE - A KIT(BOOM & ARM)

1407A2MC02A

1	Housing-P2	47	Stopper-lock valve
2	Housing-P1	48	Spool-regen selector
3	Spool-straight travel	49	Spring-regeneration
4	Spool-travel 1-RH	50	Stopper-regeneration
5	Spool-travel 2-LH	51	Piston-cut off
6	Spool-swing	52	Poppet-signal
7	Spool-boom1	53	Spring-signal
8	Spool-swing priority	54	Plug
9	Spool-boom2	55	Orifice-signal
10	Spool-arm 2	56	Coin type filter
11	Spool-arm 1	57	Orifice-plug
12	Spool-arm regeneration & breaker	58	Plug
		59	Plug
13	Spool-option	60	Plug
14	Spool-bucket	61	Plug-orifice
15	Cover-pilot A	62	Poppet-negative control
16	Cover-pilot B1	63	Coin type filter
17	Cover-Pilot B2	64	Spring seat
18	Plug	65	Spring-negative control
19	Poppet1-check valve	66	Piston-negative control
20	Spring-check valve	67	Socket-negative control
21	Plug	68	Plug
22	Poppet2-check valve	69	Plug
23	Spring-check valve	70	Plug
24	Main relief valve	71	Plug
25	Over load relief valve	72	Plug
26	Plug	73	Plug
27	Plug	74	Socket head bolt
28	Lock valve kit A	75	O-ring
29	Lock valve kit B	76	O-ring
30	Socket-head bolt	77	O-ring
31	Block-holding	78	O-ring
32	Block-regeneration	79	O-ring
33	O-ring	80	O-ring
34	Poppet-lock valve	81	O-ring
35	Restrictor-lock valve	82	O-ring
36	Spring-lock valve pilot	83	O-ring
37	Guide-poppet	84	O-ring
38	Poppet pilot	85	O-ring
39	Seat poppet	86	Back-up ring
40	Piston 1	87	Back-up ring
41	Guide-piston	88	Back-up ring
42	Spring 1-lock valve	89	Back-up ring
43	Piston 2	90	O-ring
44	Sleeve	91	Bolt with washer
45	Spool-lock valve	92	Socket head bolt
46	Spring-lock valve		

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