CRAWLER EXCAVATOR

SERVICE MANUAL

R140LC-7A

HYUNDAI

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8. SPECIFICATIONS FOR MAJOR COMPONENTS

1) ENGINE

Item	Specification
Model	Mitsubishi D04FD-TAA
Type	4-cycle turbocharged charge air cooled diesel engine
Cooling method	Water cooling
Number of cylinders and arrangement	4 cylinders, in-line
Firing order	1-3-4-2
Combustion chamber type	Direct injection type
Cylinder bore × stroke	102 × 130mm
Piston displacement	4249cc(260cu in)
Compression ratio	16.5 : 1
Rated gross horse power(SAE J1995)	119Hp (89kW) at 2000rpm
Maximum torque	45.4kgf · m(328lbf · ft) at 1700rpm
Engine oil quantity	18.5 ℓ (4.9U.S. gal)
Dry weight	420kg(930lb)
High idling speed	2100 ± 50rpm
Low idling speed	850 ± 100rpm
Rated fuel consumption	231 ± 7g/kW.hr(170 ± 5g/ps.hr) at 2000rpm
Starting motor	24V-5.0kW
Alternator	24V-50A
Battery	2 × 12V × 80Ah

2) MAIN PUMP

Item	Specification
Type	Variable displacement tandem axis piston pumps
Capacity	2 × 65cc/rev
Maximum pressure	330kgf/cm² (4690psi)[360kgf/cm² (5120psi)]
Rated oil flow	2 × 130 ℓ /min (34.3U.S. gpm/ 28.6U.K. gpm)
Rated speed	2000rpm

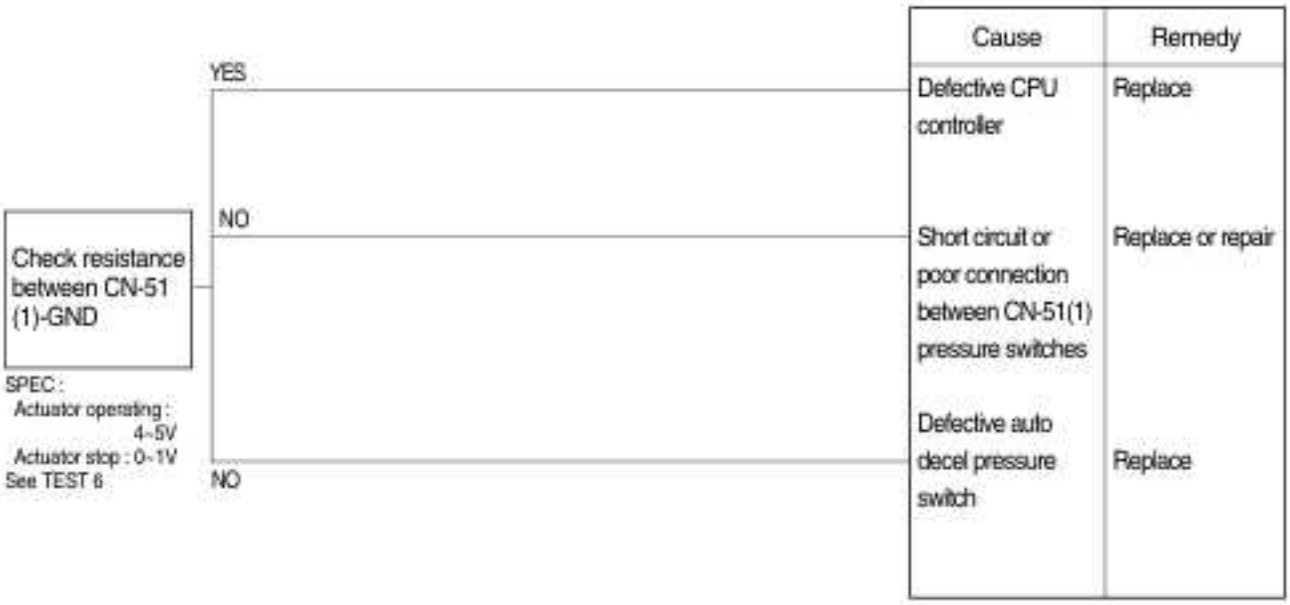
[ ]: Power boost

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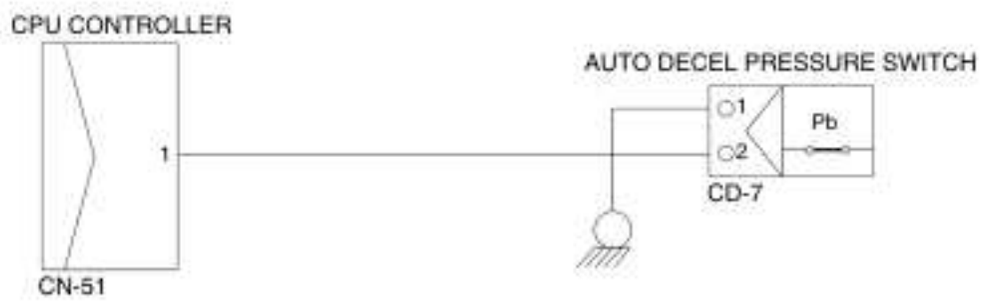
4. AUTO DECEL SYSTEM DOES NOT WORK

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

1) INSPECTION PROCEDURE



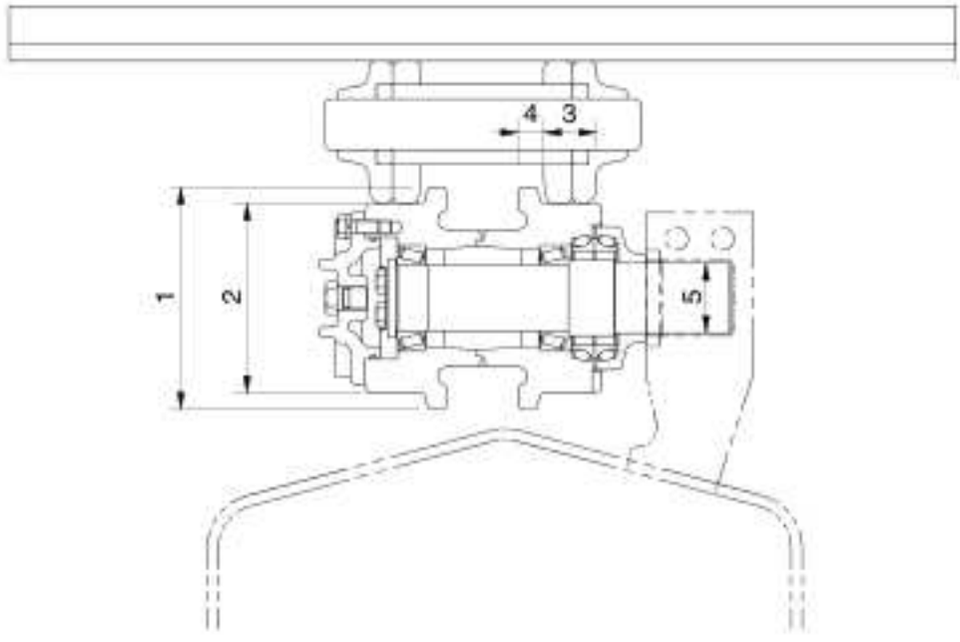
Wiring diagram



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2) CARRIER ROLLER



Unit : mm

No.	Check item	Criteria				Remedy
1	Outside diameter of flange	Standard size		Repair limit		Rebuild or replace
		ø 175		-		
2	Outside diameter of tread	ø 151		ø 141		
3	Width of tread	37.25		42.25		
4	Width of flange	18.25		-		
5	Clearance between shaft and bushing	Standard size & Tolerance		Standard clearance	Clearance limit	Replace bushing
		Shaft	Hole			
		ø 41.27 $^{0}_{+0.05}$	ø 41.5 $^{+0.2}_{-0.1}$	0.13 to 0.48	1.2	

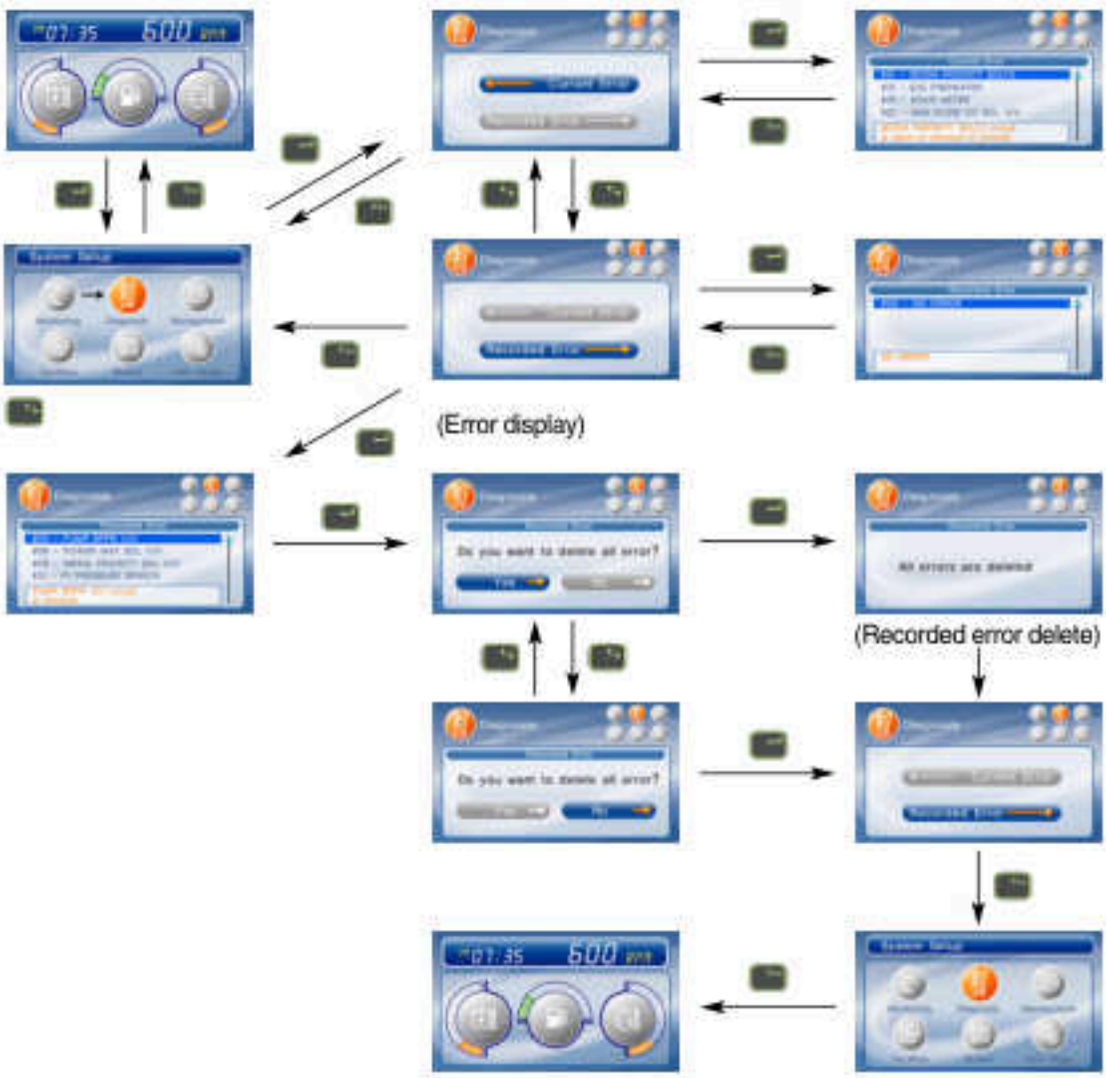
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GROUP 9 SELF-DIAGNOSTIC SYSTEM

1. OUTLINE

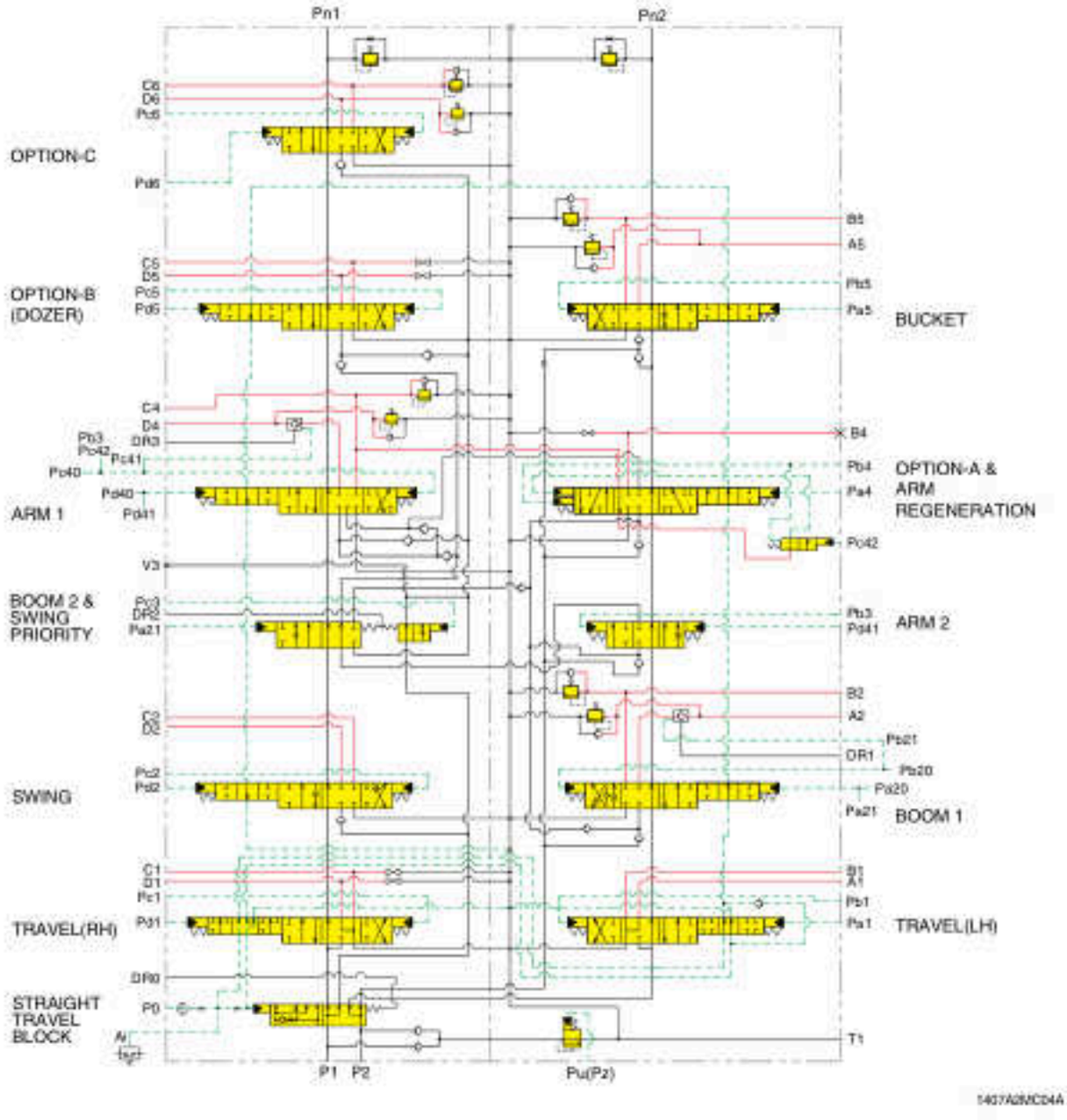
When any abnormality occurs in the NEW CAPO system caused by electric parts malfunction and by open or short circuit, the CPU controller diagnoses the problem and sends the error codes to the cluster and also stores them in the memory.

2. CURRENT ERROR DISPLAY

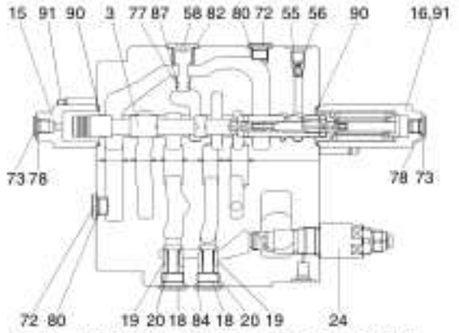


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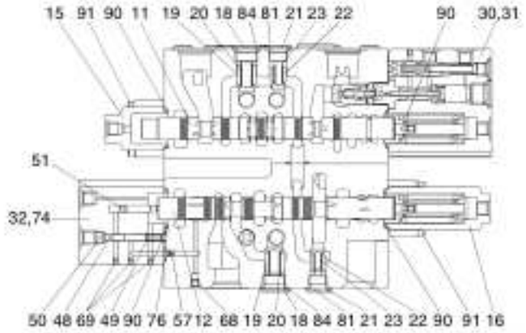
2. HYDRAULIC CIRCUIT



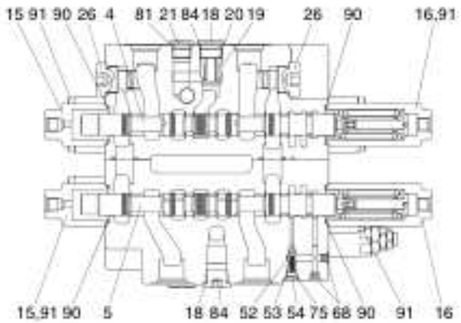
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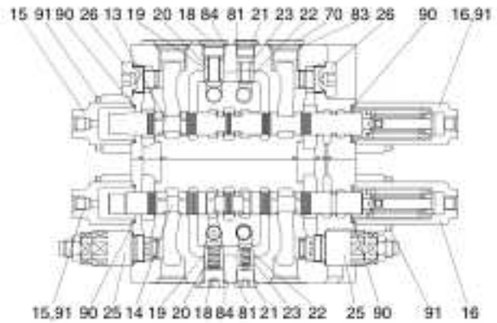
A - A (STRAIGHT-TRAVEL & SUPPLY)



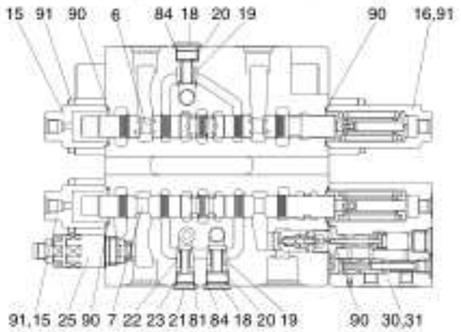
E - E (ARM & ARM REGENERATION /BREAKER)



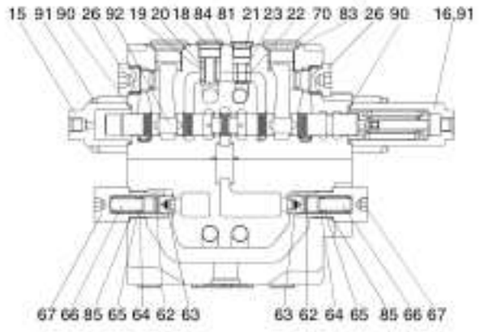
B - B (TRAVEL RIGHT & LEFT)



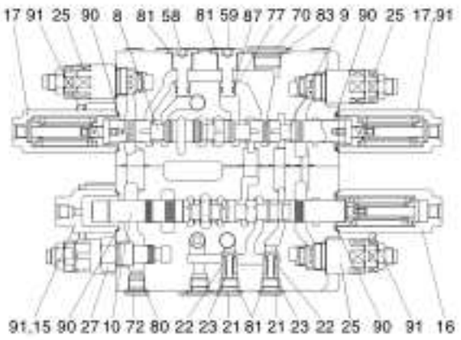
F - F (OPTION & BUCKET)



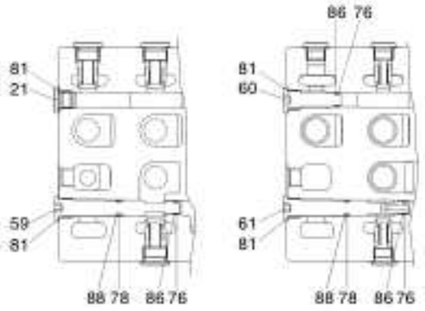
C - C (SWING & BOOM1)

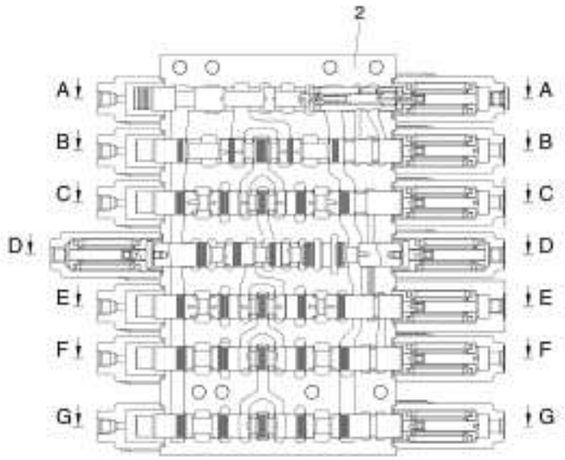


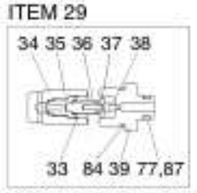
G - G (OPTION & NEGATIVE CONTROL)



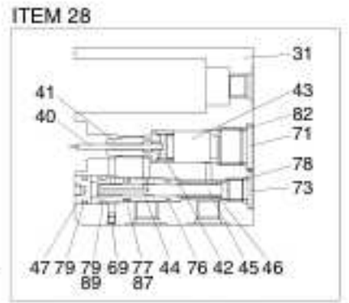
D - D (SWING PRIORITY & BOOM2 & ARM)







LOCK VALVE - B KIT (BOOM & ARM)



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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