PART NO. TO4FG-E-00

HITACHI

Technical Manual

Operational Principle

ZW

80

90

Wheel Loader

Service Manual consists of the following separate Part No.

Technical Manual (Operational Principle)	: Vol. No.TO4FG-E
Technical Manual (Troubleshooting)	: Vol. No.TT4FG-E
Workshop Manual	: Vol. No.W4FG-E

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SECTION 1
GENERAL

—CONTENTS—

Group 1 Specifications
Specifications T1-1-1

Group 2 Component Layout
Main Component Layout (Overview)..... T1-2-1
Main Component Layout (Body) T1-2-2
Main Component Layout
(Travel System) T1-2-3
Electrical System (Overview)..... T1-2-4
Electrical System (Inside of Cab)..... T1-2-5
Engine T1-2-10
HST Pump / Main Pump T1-2-10
Reduction Gear / HST Motor T1-2-11
Control Valve T1-2-11

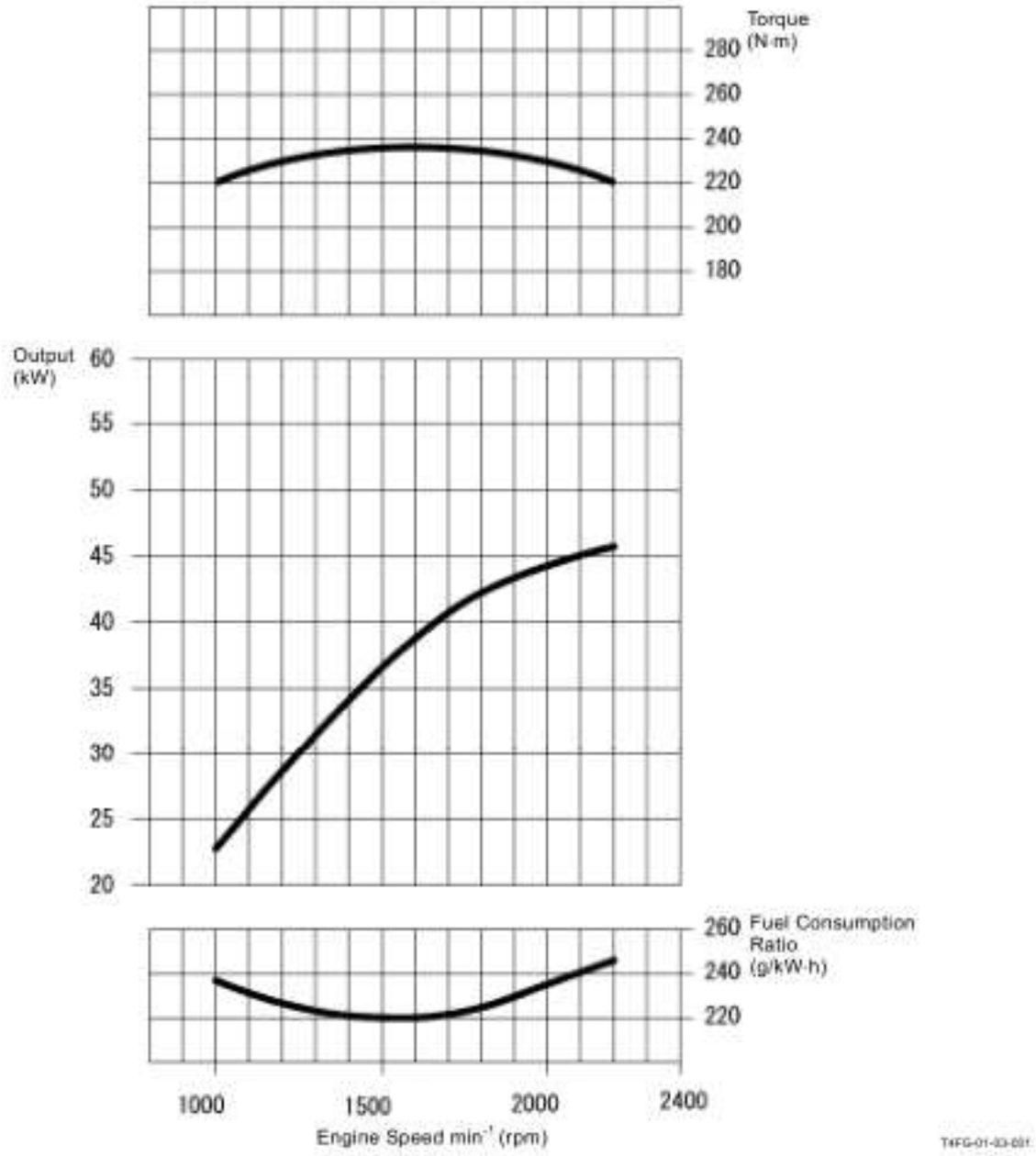
Group 3 Component Specifications
Engine T1-3-1
Engine Accessories T1-3-6
Hydraulic Component T1-3-7
Electrical Component..... T1-3-10

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Engine Performance Curve (KUBOTA V3307-DI-T)

Test conditions: 1. In conformity with SAE J1349/JIS D0006-1 (Earth-moving machinery-Engines-Part 1: Test code of net power) under standard atmospheric pressure only.
2. Equipped with the air cleaner, muffler, and fan.

ZW80



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HYDRAULIC CIRCUIT

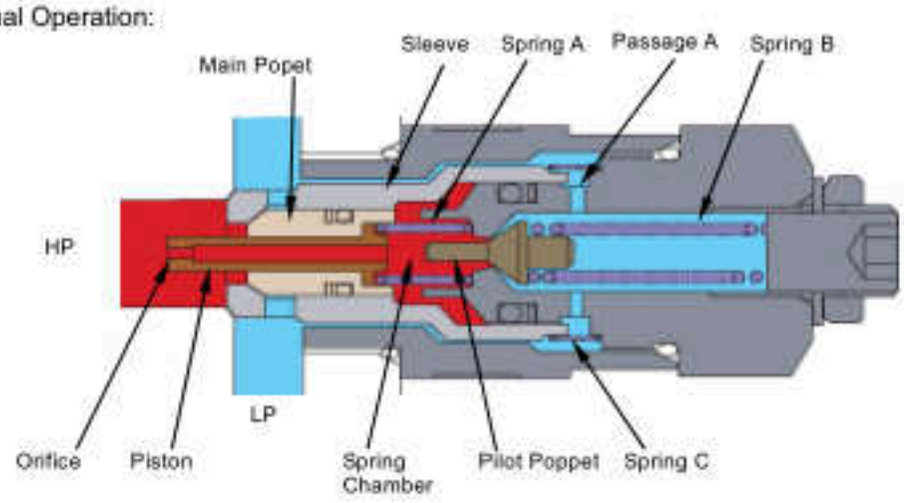
Main Circuit

The main circuit contains a parallel circuit, which enables combined operations.

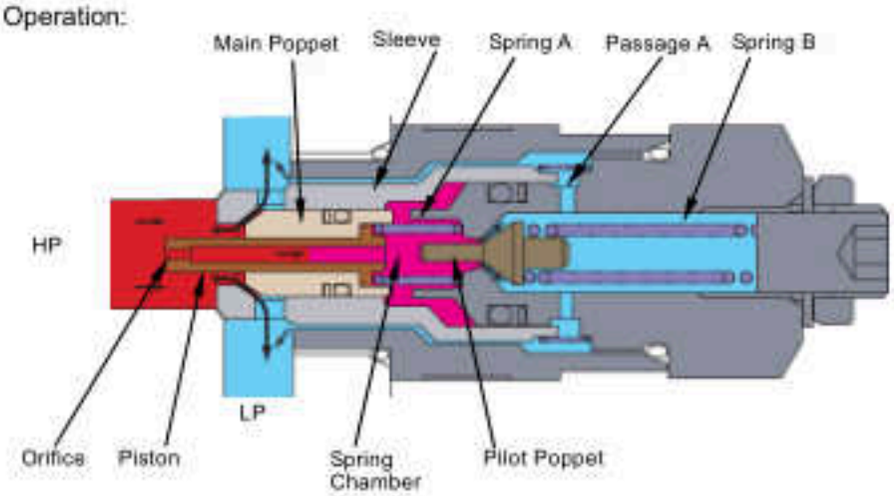
The main circuit (between the pump and the cylinder) is provided with the main relief valve. The main relief valve prevents the pressure in main circuit from increasing over the set pressure when the spool is in operation (or when the control lever is in operation).
The overload relief valves are provided in the bucket circuit (between the control valve and the cylinder). The overload relief valve prevents circuit pressure developed by external loads in the front attachment circuit from increasing over the set pressure when the spool is in neutral (when the control lever is neutral).
The make-up valve is provided in the lift arm lower circuit (between the control valve and the cylinder). When pressure in the lift arm lower circuit decreases, the make-up valve draws oil from the hydraulic oil tank and prevents cavitation.

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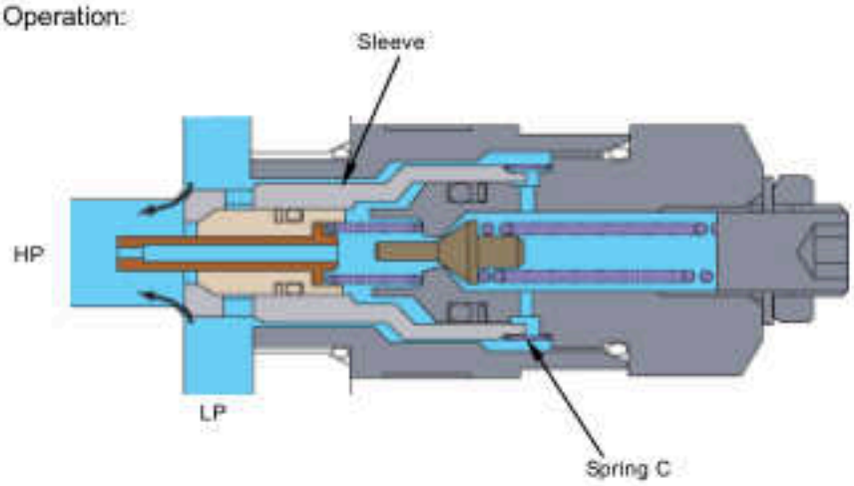
During Normal Operation:



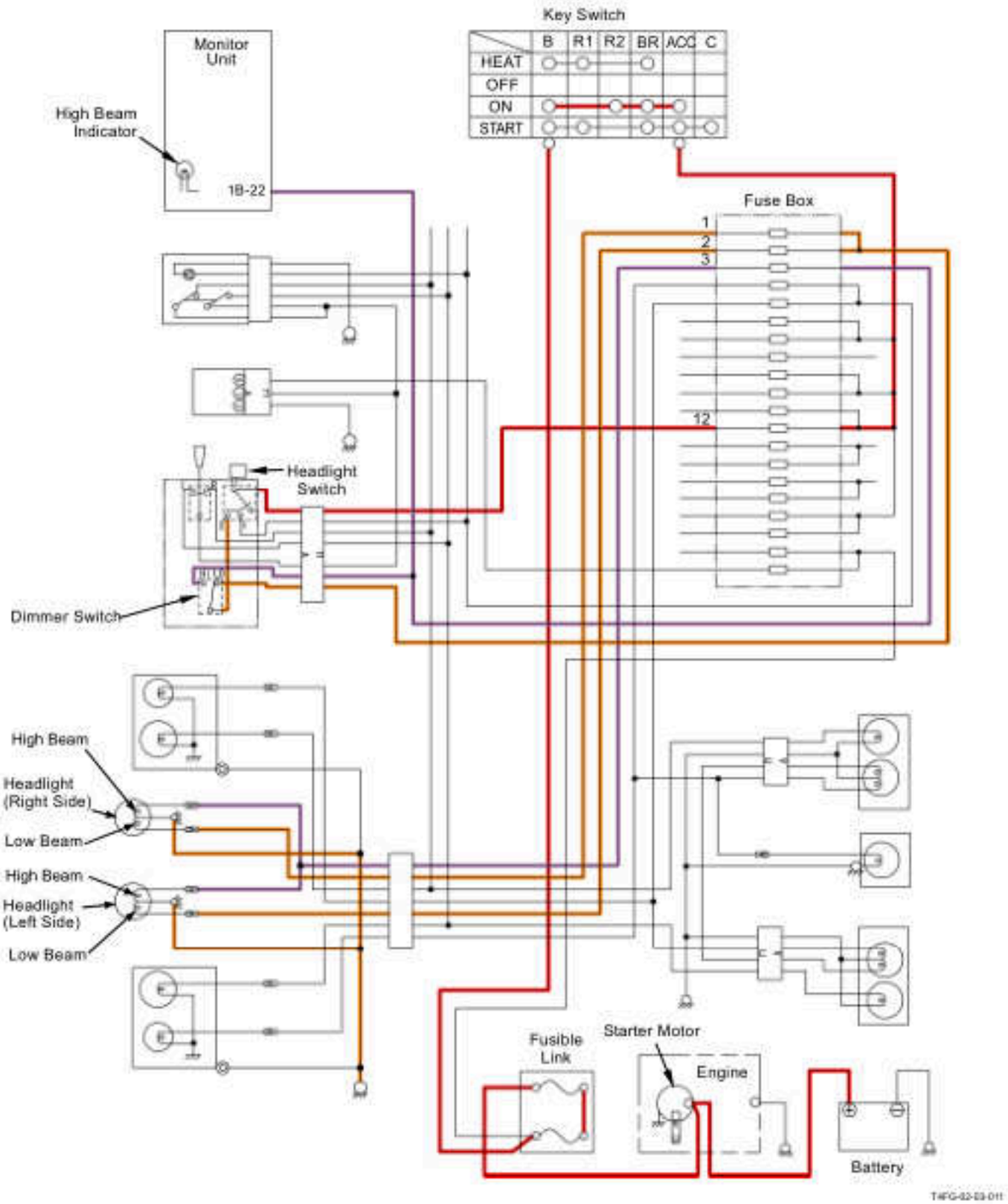
During Relief Operation:



During Make-Up Operation:



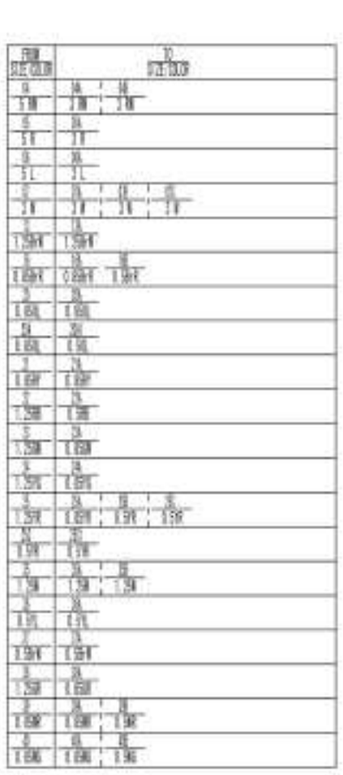
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Attach to Part No.TT4FG-E-00

ZW80 REAR HARNESS 3





607	FUSE (30A)	283GZ-44411	1	
606	FUSE (15A)	28192-42431	6	
605	FUSE (10A)	28192-42421	9	
604	FUSE (5A)	28192-42411	3	
603	PULLER	28192-42451	1	
602	COVER	361887-3543 (283GZ-47311)	1	
601	FUSE BOX (20P)	361881-0533	1	
501	DIODE	Y321-9835-30	1	
402	GUM CAP (BLACK)		1	
401	GUM CAP (BLACK)		3	
312	TERMINAL	LA210	3	
311	TERMINAL	LA304	1	
310	TERMINAL	M8 FOR ROUND HOLE TERMINAL	1	
309	TERMINAL	LA305	3	
308	TERMINAL	LA106	2	
307	TERMINAL	M6 FOR ROUND HOLE TERMINAL	3	
306	TERMINAL	LA104	2	
305	TERMINAL	LA105	3	
304	TERMINAL	LA205	1	
303	TERMINAL	LA305	2	
302	TERMINAL	150211-10400 (DB004)	7	
301	TERMINAL	150218-10400 (DA004)	5	
230	CONNECTOR COVER	1393454-7	1	
229	CONNECTOR	1393450-3	1	
228	CONNECTOR	7222-7780-40	1	
227	CONNECTOR	7123-7780-40	1	
226	CONNECTOR	282188-1	1	
225	CONNECTOR	7183-4000	1	
222	CONNECTOR	7123-8235	1	
221	CONNECTOR	6195-0003	1	
220	CONNECTOR	7223-8224-40	1	
219	CONNECTOR	7123-2249	3	
218	CONNECTOR	7123-3010	2	
217	CONNECTOR	172320-2	1	
216	CONNECTOR	7123-2228-90	1	
215	CONNECTOR	7122-2228	1	
214	CONNECTOR	7283-8732-40	1	
213	CONNECTOR	7123-2189	1	
212	CONNECTOR	6020-6161	5	
211	CONNECTOR	7123-2237	1	
210	CONNECTOR	7222-4220-30	1	
209	CONNECTOR	7123-4220-30	1	
208	CONNECTOR	DT06-28	3	
207	CONNECTOR	7123-7730-40	1	
206	CONNECTOR	7123-2215	6	
205	CONNECTOR	7123-2128	2	
203	CONNECTOR	7123-1424-40	1	
202	CONNECTOR	6189-0715	2	
201	CONNECTOR	6189-0718	1	
97	CABLE	AVSS 0.85GL	1	
96	CABLE	AVSS 0.5LgR	1	
95D	CABLE	AVSS 0.85B	1	
95C	CABLE	AVSS 0.5B	1	
95B	CABLE	AVSS 1.25B	1	
95A	CABLE	AVSS 1.25B	1	
95	CABLE	AVSS 2.0B	1	

94	CABLE	AVSS 0.5YW	1	
93	CABLE	AVSS 0.5WL	1	
92	CABLE	AVSS 0.5LgW	1	
91	CABLE	AVSS 0.5BrY	1	
90	CABLE	AVSS 0.5LG	1	
89	CABLE	AVSS 0.5GY	1	
88	CABLE	AVSS 0.5RP	1	
87	CABLE	AVSS 0.85GY	1	
86	CABLE	AVSS 0.85OR	1	
82	CABLE	AVSS 0.5PL	1	
81	CABLE	AVSS 0.5Y	1	
80	CABLE	AVSS 0.5BrL	1	
79	CABLE	AVSSCS 0.5GyL	1	
78	CABLE	AVSSCS 0.5Gy	1	
77	CABLE	AVSS 0.5BrG	1	
76	CABLE	AVSSCS 0.5B	1	
75A	CABLE	AVSSCS 0.5W	1	
75	CABLE	AVSSCS 0.5W	1	
74	CABLE	AVSSCS 0.5L	1	
73A	CABLE	AVSSCS 0.5G	1	
73	CABLE	AVSSCS 0.5G	1	
71	CABLE	AVSS 0.5GyG	1	
70	CABLE	AVSS 0.5YPu	1	
68E	CABLE	AVSS 0.5LY	1	
68D	CABLE	AVSS 0.5LY	1	
68C	CABLE	AVSS 0.85LY	1	
68B	CABLE	AVSS 0.85LY	1	
68A	CABLE	AVSS 1.25LY	1	
68	CABLE	AVSS 1.25LY	1	
67	CABLE	AVSS 0.5LO	1	
66J	CABLE	AVSS 0.5B	1	
66H	CABLE	AVSS 0.85B	1	
66G	CABLE	AVSS 0.85B	1	
66F	CABLE	AVSS 1.25B	1	
66D	CABLE	AVSS 0.5B	1	
66C	CABLE	AVSS 0.5B	1	
66B	CABLE	AVSS 0.85B	1	
66A	CABLE	AVSS 1.25B	1	
66	CABLE	AVSS 2.0B	1	
65R	CABLE	AVSS 0.85B	1	
65J	CABLE	AVSS 0.5B	1	
65H	CABLE	AVSS 0.5B	1	
65G	CABLE	AVSS 0.5B	1	
65F	CABLE	AVSS 0.85B	1	
65E4	CABLE	AVSS 0.5B	1	
65E3	CABLE	AVSS 0.5B	1	
65E2	CABLE	AVSS 0.5B	1	
65E1	CABLE	AVSS 0.5B	1	
65E	CABLE	AVSS 1.25B	1	
65D	CABLE	AVSS 0.85B	1	
65C	CABLE	AVSS 0.85B	1	
65B	CABLE	AVSS 0.85B	1	
65A	CABLE	AVSS 0.85B	1	
65	CABLE	AVSS 2.0B	1	
64	CABLE	AVSS 0.5GW	1	
63	CABLE	AVSS 0.5PW	1	
62A	CABLE	AVSS 0.5BY	1	
62	CABLE	AVS 5.0BY	1	
61	CABLE	AVSS 0.5YG	1	
60	CABLE	AVSS 0.5RW	1	
59	CABLE	AVSS 0.85BO	1	
58A	CABLE	AVS 2.0WB	1	
58	CABLE	AVS 3.0WB	1	
57	CABLE	AVSS 0.85BW	1	
56	CABLE	AVSS 0.85GB	1	
55	CABLE	AVSS 0.85WG	1	
54	CABLE	AVSS 0.5YR	1	
53	CABLE	AVSS 0.5BW	1	
52	CABLE	AVSS 0.5WY	1	
51	CABLE	AVSS 0.5RG	1	
50	CABLE	AVSS 0.5YB	1	
49A	CABLE	AVSS 0.5Br	1	
49	CABLE	AVSS 0.5Br	1	
48	CABLE	AVSS 0.5LY	1	
47	CABLE	AVSS 0.5GW	1	

46A	CABLE	AVSS 0.5LR	1	
46	CABLE	AVSS 0.85LR	1	
45A	CABLE	AVSS 0.85GL	1	
45	CABLE	AVSS 0.85GL	1	
44A	CABLE	AVSS 0.85G	1	
44	CABLE	AVSS 0.85G	1	
43A	CABLE	AVSS 0.85BrW	1	
43	CABLE	AVSS 0.85BrW	1	
41B	CABLE	AVSS 0.5YL	1	
41A	CABLE	AVSS 0.85YL	1	
41	CABLE	AVSS 0.85YL	1	
40B	CABLE	AVSS 0.5WG	1	
40A	CABLE	AVSS 0.85WG	1	
40	CABLE	AVSS 0.85WG	1	
39B	CABLE	AVSS 0.5WR	1	
39A	CABLE	AVSS 0.85WR	1	
39	CABLE	AVSS 0.85WR	1	
38A	CABLE	AVSS 0.85OR	1	
38	CABLE	AVSS 1.25GR	1	
37A	CABLE	AVSS 0.5BrW	1	
37	CABLE	AVSS 0.5BrW	1	
36A	CABLE	AVSS 0.5YL	1	
36	CABLE	AVSS 0.5YL	1	
35B	CABLE	AVSS 1.25W	1	
35A	CABLE	AVSS 1.25W	1	
35	CABLE	AVSS 1.25W	1	
34	CABLE	AVSS 0.85OR	1	
33	CABLE	AVSS 0.85BrY	1	
32	CABLE	AVSS 1.25LY	1	
30	CABLE	AVSS 1.25G	1	
29	CABLE	AVSS 2.0L	1	
28	CABLE	AVSS 2.0G	1	
27	CABLE	AVSS 0.5RG	1	
26	CABLE	AVSS 0.85LG	1	
25C1	CABLE	AVSS 0.5YR	1	
25C	CABLE	AVSS 0.5YR	1	
25B	CABLE	AVSS 0.5YR	1	
25A	CABLE	AVSS 0.85YR	1	
25	CABLE	AVSS 1.25YR	1	
24A	CABLE	AVSS 0.85YG	1	
24	CABLE	AVSS 1.25YG	1	
23A	CABLE	AVSS 0.85OW	1	
23	CABLE	AVSS 1.25GW	1	
22A	CABLE	AVSS 0.5RB	1	
22	CABLE	AVSS 1.25RB	1	
21A	CABLE	AVSS 0.85RY	1	
21	CABLE	AVSS 0.85RY	1	
20A1	CABLE	AVSS 0.5OL	1	
20A	CABLE	AVSS 0.85OL	1	
20	CABLE	AVSS 0.85OL	1	
19	CABLE	AVSS 1.25RL	1	
18	CABLE	AVSS 0.85PL	1	
17	CABLE	AVSS 0.85PyG	1	
16B	CABLE	AVSS 0.5BrR	1	
16A	CABLE	AVSS 0.85BrR	1	
16	CABLE	AVSS 0.85BrR	1	
15	CABLE	AVSS 1.25RY	1	
14	CABLE	AVSS 1.25GY	1	
13A	CABLE	AVSS 1.25BrW	1	
13	CABLE	AVSS 1.25BrW	1	
12	CABLE	AVSS 2.0R	1	
11	CABLE	AVSS 0.5WL	1	
10	CABLE	AVSS 1.25YB	1	
09	CABLE	AVSS 0.85GR	1	
08	CABLE	AVSS 0.85BrW	1	
07C	CABLE	AVSS 3.0W	1	
07B	CABLE	AVSS 3.0W	1	
07A	CABLE	AVSS 3.0W	1	
07	CABLE	AVS 3.0W	1	
06A	CABLE	AVS 3.0L	1	
06	CABLE	AVS 5.0L	1	
05A	CABLE	AVS 3.0R	1	
05	CABLE	AVS 5.0R	1	
04B	CABLE	AVS 3.0RW	1	
04A	CABLE	AVS 3.0RW	1	
04	CABLE	AVS 5.0RW	1	
03	CABLE	AV 8.0RW	1	
02	CABLE	AV 20.0R	1	
01	CABLE	AV 20.0W	1	

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