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MIDI CRAWLER EXCAVATOR

E70

SERVICE MANUAL

87360603 NA

Issued 01-2006

NEW HOLLAND

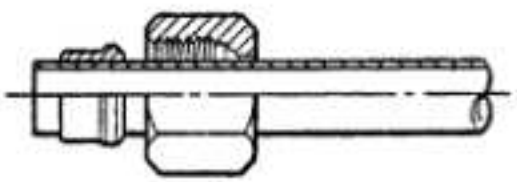
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11.4 TORQUE SPECIFICATIONS FOR SLEEVE TYPE TUBE FITTINGS

11.4.1 SLEEVE TYPE TUBE FITTINGS

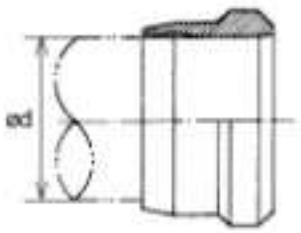
Tube size OD × Thickness (mm)	Spanner size (mm)	Tightening Torque Nm (lb ft)
10 × 1.5	19	44±4.9 (33±4)
15 × 2.0	27	147±20 (110±14)
18 × 2.5	32	177±20 (130±14)
22 × 3.0	36	216±20 (160±14)
28 × 4.0	41	275±29 (200±22)
35 × 5.0	55	441±44 (330±33)



SPW1100020E01

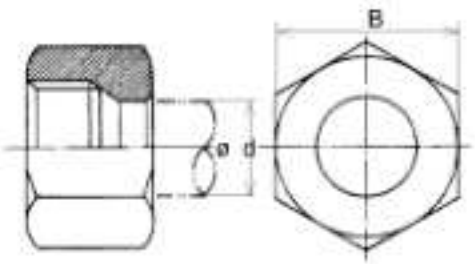
11.4.2 PART NUMBER

SLEEVE



SPW1100004J01

NUT



SPW1100005J01

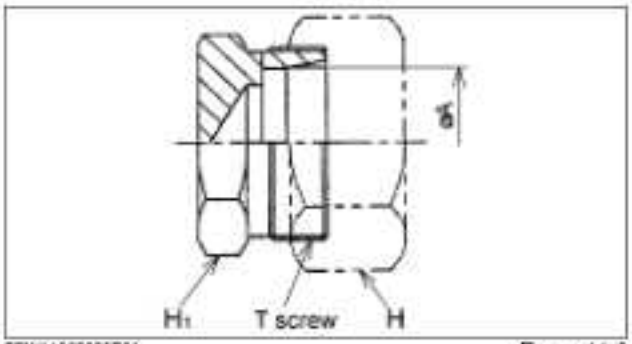
Tube size ød	Part No.		Tube size ød	Opposing flats (HEX) B	Part No.	
	Ihara Koatu	Nippon A.M.C			Ihara Koatu	Nippon A.M.C
6	ZF93S06000	—	6	14	ZF93N06000	—
8	ZF93S08000	—	8	17	ZF93N08000	—
10	ZF93S10000	ZA93S10000	10	19	ZF93N10000	ZA93N10000
12	ZF93S12000	—	12	22	ZF93N12000	—
15	ZF93S15000	ZA93S15000	15	27	ZF93N15000	ZA93N15000
18	ZF93S18000	ZA93S18000	18	32	ZF93N18000	ZA93N18000
22	ZF93S22000	ZA93S22000	22	36	ZF93N22000	ZA93N22000
28	ZF93S28000	ZA93S28000	28	41	ZF93N28000	ZA93N28000
32	ZF93S32000	—	32	50	ZF93N32000	—
35	ZF93S35000	ZA93S35000	35	55	ZF93N35000	ZA93N35000
38	ZF93S38000	—	38	60	ZF93N38000	—

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11.5 PLUGS

11.5.1 PLUG FOR HYDRAULIC PIPE JOINT

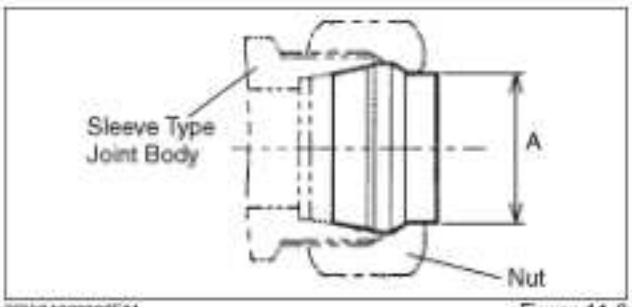
(1) Cap nut (Joint plug)



SPW11000006E01 Figure 11-8

Applicable tube O. D: A	Cap nut parts No.	T screw	Opposing flats	
			H_1	H
6	ZF83H06000	M12 X 1.5	14	14
8	ZF83H08000	M14 X 1.5	17	17
10	ZF83H10000	M16 X 1.5	17	19
12	ZF83H12000	M18 X 1.5	19	22
15	ZF83H15000	M22 X 1.5	24	27
18	ZF83H18000	M26 X 1.5	27	32
22	ZF83H22000	M30 X 1.5	32	36
28	ZF83H28000	M36 X 1.5	38	41

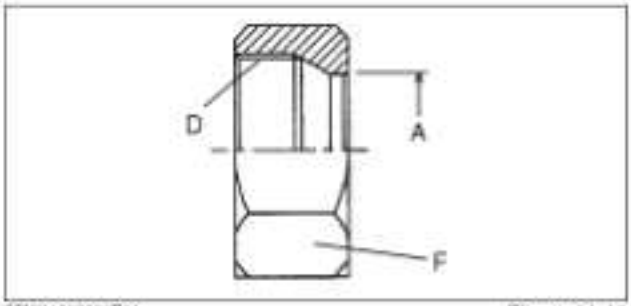
(2) Plug (Tube plug)



SPW11000007E01 Figure 11-9

Applicable tube O. D : A	Plug parts No.
6	ZF83P06000
8	ZF83P08000
10	ZF83P10000
12	ZF83P12000
15	ZF83P15000
18	ZF83P18000
22	ZF83P22000
28	ZF83P28000

(3) Nut

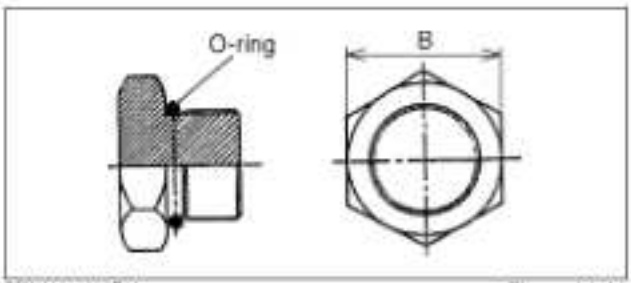


SPW11000008E01 Figure 11-10

Applicable tube O. D: A	Nut parts No.	D screw	Opposing flats
6	ZF93N06000	M12 X 1.5	14
8	ZF93N08000	M14 X 1.5	17
10	ZF93N10000	M16 X 1.5	19
12	ZF93N12000	M18 X 1.5	22
15	ZF93N15000	M22 X 1.5	27
18	ZF93N18000	M26 X 1.5	32
22	ZF93N22000	M30 X 1.5	36
28	ZF93N28000	M36 X 1.5	41
32	ZF93N32000	M42 X 1.5	50
35	ZF93N35000	M45 X 1.5	55
38	ZF93N38000	M48 X 1.5	60

11.5.2 PLUG FOR HYDRAULIC EQUIPMENT

(1)PF screw



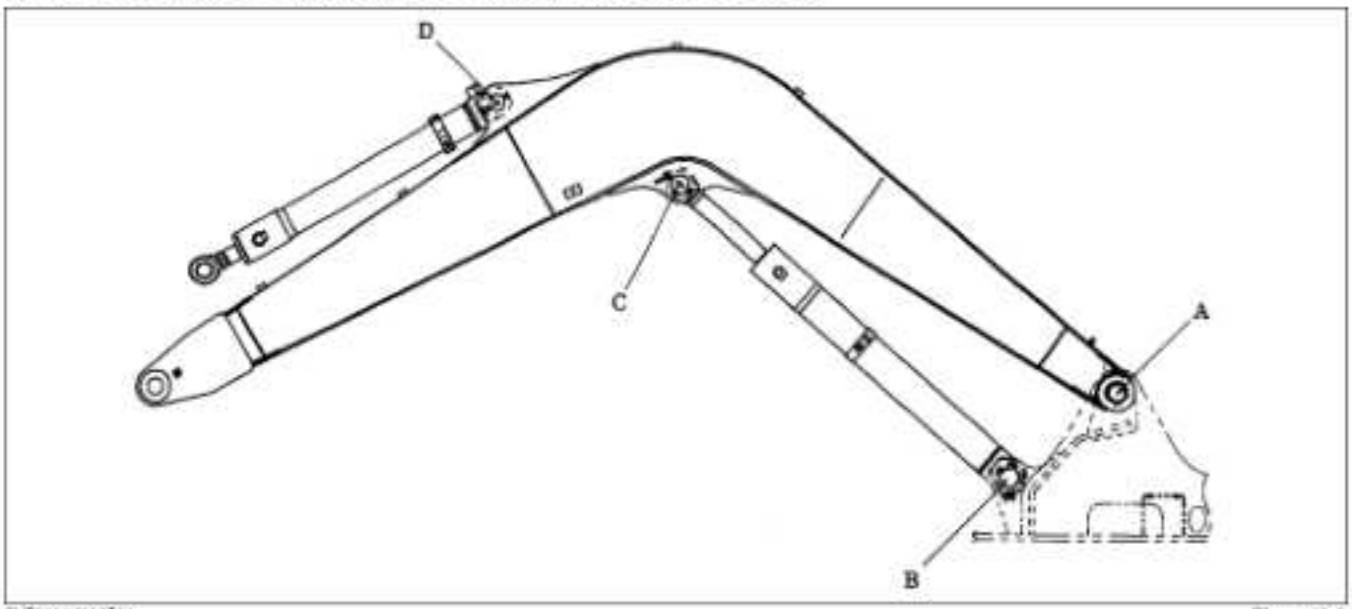
SPW11000009E01 Figure 11-11

PF screw	Plug parts No.	B mm	O-ring parts No.	Nominal O-ring
PF1/4	ZE72X04000	19	ZD12P01100	1B P11
PF3/8	ZE72X06000	22	ZD12P01400	1B P14
PF1/2	ZE72X08000	27	ZD12P01800	1B P18
PF3/4	ZE72X12000	36	ZD12P02400	1B P24
PF1	ZE72X16000	41	ZD12P02900	1B P29

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3.1.2 BOOM MAINTENANCE STANDARD

3.1.2.1 CLEARANCE OF PIN AND BUSHING ON BOOM SECTION



SYT0023002E01

Figure 3-2

FIG. 3-2 CLEARANCE OF PIN AND BUSHING ON BOOM SECTION

CLEARANCE FOR PIN AND BUSHING TABLE

Item		Boom Foot	Boom Cylinder		Arm Cylinder
			Head Side	Rod Side	Head Side
Illustration Reference		A	B	C	D
Pin Part Number		YT02B01014P1	YT02B01006P1	YT02B01005P1	YT02B01009P1
Standard Dimensions	Pin Diameter	Ø 60 mm (2.3622 in)	Ø 75 mm (2.9528 in)	Ø 70 mm (2.7559 in)	Ø 60 mm (2.3622 in)
	Pin Diameter Tolerance	-0.06 mm (-0.0024 in) -0.09 mm (-0.0035 in)	-0.06 mm (-0.0024 in) -0.12 mm (-0.0047 in)		
	Bushing I.D. Tolerance	+0.10 mm (+0.0039 in) +0.03 mm +(0.0012 in)	+0.25 mm (+0.0098 in) +0.05 mm (+0.0020 in)		
Clearance	Standard value	0.09 mm (0.0035) 0.19 mm (0.0075 in)	0.11 mm (0.0043 in) 0.37 mm (0.0146 in)		
	Limit Value for repair	2.0 mm (0.080 in) or more			
	Standard limit value	2.5 mm (0.100 in)			
Remedy		Replace bushing or pin			

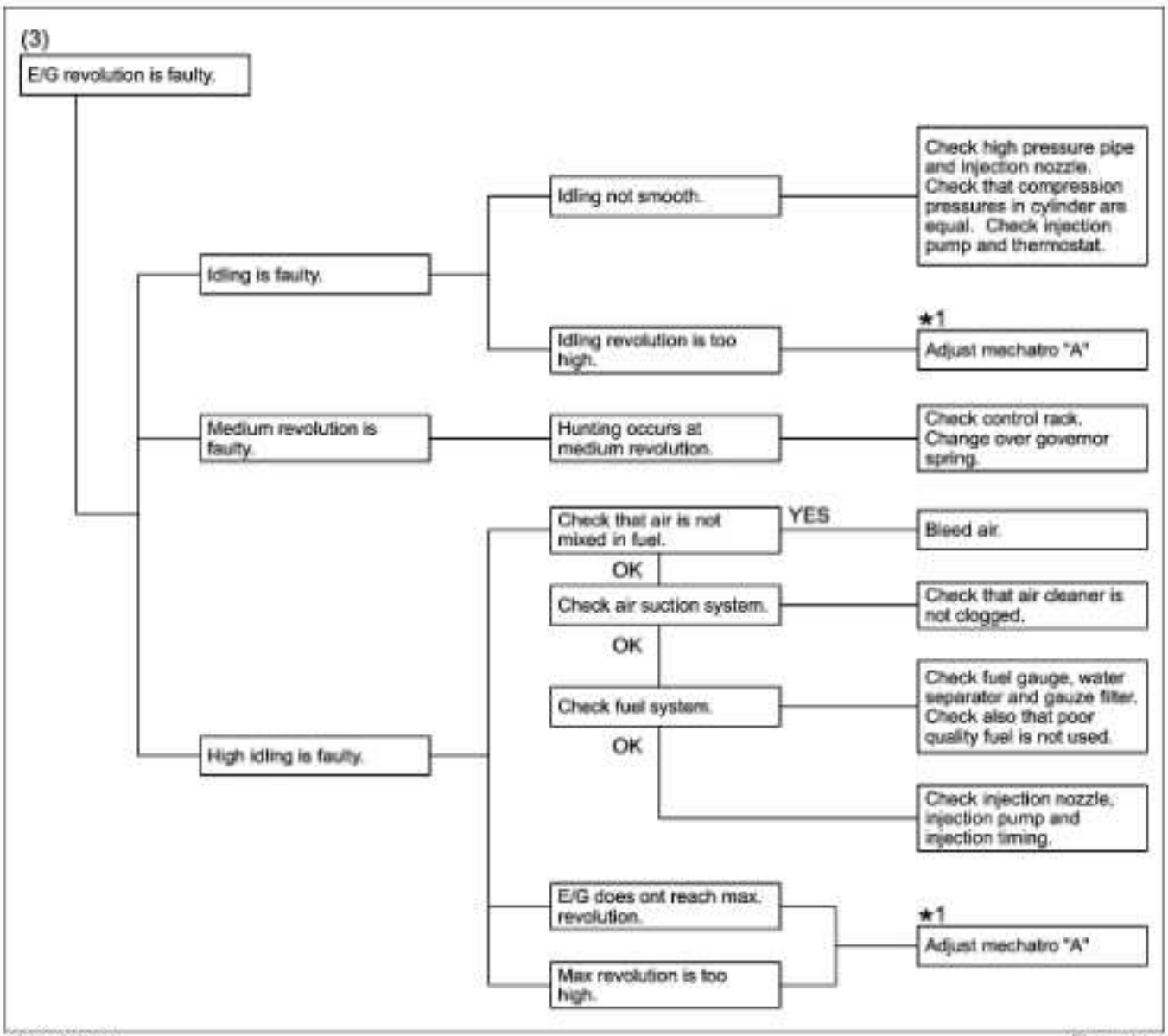
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22.2 HYDRAULIC CIRCUITS AND COMPONENT MODELS

Standard Specification			
No.	Name	PART No.	MODEL No.
1	PUMP ASSY (WITH GEAR PUMP)	YT10V00008F1	K3SP36B-101R-1002
2	CONTROL VALVE	YT30V00001F4	BCV75-A1–1
3	SWING MOTOR UNIT	YT15V00001F3	SG025E-096
4	TRAVEL MOTOR	YT15V00008F1	GM09VN
5	BOOM CYLINDER	YT01V00017F1	110–70–916
6	ARM CYLINDER	YT01V00002F1	95–65–813
7	BUCKET CYLINDER	YT01V00019F1	80–55–735
8	SWIVEL JOINT	24100J12125F2	
9	PILOT VALVE (ATT)	PX30V00043F2	PV48M1086
10	PILOT VALVE (TRAVEL)	YN30V00070F1	PVD6PC4017A
11	SOLENOID VALVE	YT35V00017F1	2KWE5G-30/G12WS-249A
12	RETURN FILTER	YR52V01001F1	(EU, KCMA)
		YR52V01001F2	(FK)
13	CHECK VALVE	2436R576F3	Y-2389
14	SUCTION STRAINER	YT50V00001F1	Y-497500
15	INLINE FILTER	YN50V00007F1	YTD9986
16	AIR BREATHER	2446U260F1	Y-382000
17	CONNECTOR	HH25X04004G3	
18	CONNECTOR	2444Z3541	
19	CHECK VALVE (SLOW RETURN)	YT21V00002P1	
20	CONTROL VALVE	YN30V00090F3	(**ASIA, OCE** OPT.)
	CONTROL VALVE	YY30V00019F2	(**KCMA** OPT.)
21	HYDRAULIC VALVE ASSY	YT20V00002F1	**KCME** only
22	CHECK VALVE (SLOW RETURN)	PF21V00004P1	**KCME** only
23	CHECK VALVE (SLOW RETURN)	YY21V00002F3	**ASIA, OCE, KCMA** only

NOTE: *The part numbers and serial numbers of machine may be changed due to modification, so use only the numbers for reference.*

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SYT00440005E01

Figure 44-4

Checking condition: E/G water temperature is more than 50° C (122° F).

*1; Refer to Electric Troubleshooting.

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SECTION 2 - SYSTEMS
CHAPTER 23 - ELECTRICAL SYSTEM

23.2.3A-19-7-1 INSTRUMENT PANEL HARNESS: YT14E01068P1 KCMA (3/3)

WIRE NO	WIRE COLOR	WIRE SIZE	FROM	CONNECTION	TO
1	RY	AVSS1.25sq	CN-14M		CN-4F
2A	WY	AVSS0.75sq	CN-14M		CN-29F
2B	WY	AVSS0.75sq	CN-26F		CN-29F
2C	WY	AVSS0.75sq	CN-35F		CN-29F
2D	WY	AVSS0.75sq	CN-38F		CN-29F
3	RL	AVSS0.75sq	CN-14M		CN-40M
4A	OL	AVSS0.75sq	CN-14M		CN-29F
4B	OL	AVSS0.75sq	CN-40M		CN-29F
4C	OL	AVSS0.75sq	CN-3M		CN-29F
5A	WG	AVSS0.75sq	CN-14M		CN-36F
5B	WG	AVSS0.75sq	CN-33F		CN-36F
5C	WG	AVSS0.75sq	CN-23F		CN-36F
6	WY	AVSS1.25sq	CN-14M		CN-10F
9A	YB	AVSS0.75sq	CN-14M		CN-29F
9B	YB	AVSS0.75sq	CN-40M		CN-29F
9C	YB	AVSS0.75sq	CN-42F		CN-29F
9D	YB	AVSS0.75sq	CN-10F		CN-29F
9E	YB	AVSS0.75sq	CN-3M		CN-29F
10	WV	AVSS1.25sq	CN-14M		CN-4M
11	O	AVSS0.75sq	CN-14M		CN-36F
13A	W	AVSS0.75sq	CN-14M		CN-29F
13B	W	AV30.5sq	CN-40M		CN-29F
13C	W	AVSS0.75sq	CN-4M		CN-29F
14A	RB	AVSS1.25sq	CN-14M		CN-29F
14B	RB	AVSS1.25sq	CN-26F		CN-29F
14C	RB	AVSS0.75sq	CN-25F		CN-29F
14E	RB	AVSS0.75sq	CN-29F		CN-29F
14F	RB	AVSS0.75sq	CN-29F		CN-21F
14H	RB	AVSS0.75sq	CN-29F		CN-40M
14J	RB	AVSS0.75sq	CN-29F		CN-41F
15A	WB	AVSS0.75sq	CN-14M		CN-29F
15B	WB	AVSS0.75sq	CN-3M		CN-29F
15C	WB	AVSS0.75sq	CN-66F		CN-29F
15D	WB	AVSS0.75sq	CN-66F		CN-29F
15E	WB	AVSS0.75sq	CN-64F		CN-29F
18A	RW	AVSS1.25sq	CN-14M		CN-29F
18B	RW	AVSS1.25sq	CN-24F		CN-29F
18C	RW	AVSS0.75sq	CN-24F		CN-29F
17	WL	AVSS1.25sq	CN-14M		CN-34F
18	WG	AVSS1.25sq	CN-14M		CN-3M
19	RL	AVSS0.75sq	CN-14M		CN-3M
20A	WR	AVSS1.25sq	CN-14M		CN-36F
20B	WR	AVSS0.75sq	CN-65F		CN-36F
20C	WR	AVSS1.25sq	CN-31F		CN-36F
50	L	AVSS1.25sq	CN-14M		CN-4M
51	W	MVVS1.25sq 2 CORES SHIELD	CN-10F		CN-14M
E	B		CN-10F		CN-4F
SH2	Gr		CN-10F		UNCONNECTED
52	R	AVS5sq	CN-14M		CN-11M
53	Y	AVS5sq	CN-14M		CN-11M
60A	GrL	AVSS0.75sq	CN-1F		CN-29F
60B	GrL	AVSS0.75sq	CN-4M		CN-29F
60C	GrL	AVSS0.75sq	CN-33F		CN-29F
60D	GrL	AVSS0.75sq	CN-32F		CN-29F
61A	BrY	AVS0.5sq	CN-40M		CN-29F
61B	BrY	AVSS0.75sq	CN-32F		CN-29F
61C	BrY	AVSS0.75sq	CN-33F		CN-29F
61D	BrY	AVSS0.75sq	CN-4M		CN-29F

WIRE NO	WIRE COLOR	WIRE SIZE	FROM	CONNECTION	TO
62A	GrB	AVSS0.75sq	CN-33F		CN-29F
62B	GrB	AVSS0.75sq	CN-4M		CN-29F
62C	GrB	AVSS0.75sq	CN-10F		CN-29F
63	WY	AVSS0.75sq	CN-10F		CN-4M
64	GW	AVSS0.75sq	CN-29F		CN-10F
70A	G	AVSS0.75sq	CN-33F		CN-36F
70B	G	AVSS0.75sq	CN-28F		CN-36F
70C	G	AVSS0.75sq	CN-10F		CN-36F
80	LY	AVSS0.75sq	CN-21F		CN-26F
81	BrB	AVSS0.75sq	CN-21F		CN-26F
82	GO	AVSS0.75sq	CN-10F		CN-25F
83	WL	AVSS0.75sq	CN-10F		CN-23F
84A	WB	AVSS0.75sq	CN-4M		CN-29F
84B	WB	AVSS0.75sq	CN-3M		CN-29F
84C	WB	AVSS0.75sq	CN-33F		CN-29F
85A	WB	AVS0.5sq	CN-40M		CN-29F
85B	WB	AVSS1.25sq	CN-24F		CN-29F
85C	WB	AVSS1.25sq	CN-10F		CN-29F
85D	WB	AVSS0.75sq	CN-4M		CN-29F
85E	WB	AVSS0.75sq	CN-3M		CN-29F
86A	DW	AVSS0.75sq	CN-91F	DOUBLE SPLICE	CN-251M
86B	DW	AVSS0.75sq	CN-91F		CN-44F
87A	WL	AVSS0.75sq	CN-31F	DOUBLE SPLICE	CN-3M
87B	WL	AVSS0.75sq	CN-91F		CN-4F
92	BP	AVSS0.75sq	CN-3M		CN-10F
94	G	AVSS0.75sq	CN-251M		CN-32F
95	WG	AVSS0.75sq	CN-40M		CN-3M
97	YV	AVSS0.75sq	CN-40M		CN-3M
98	LB	AVSS0.75sq	CN-40M		CN-41F
99	LW	AVSS0.75sq	CN-40M		CN-41F
100	LY	AVSS0.75sq	CN-3M		CN-251M
101	LW	AVSS0.75sq	CN-3M		CN-28F
102	Br	AVSS0.75sq	CN-3M		CN-28F
103	LR	AVSS0.75sq	CN-19F		CN-3M
104	DB	AVSS0.75sq	CN-19F		CN-3M
179	L	AVSS1.25sq	CN-34F		F-4
180	DL	AVSS0.75sq	CN-28F		CN-43M
181	R	MVVS0.5sq	CN-3M		CN-3M
182	G	4 CORES SHIELD	CN-3M		CN-3M
183	W		CN-3M		CN-3M
184	B		CN-3M		CN-3M
SH4	Gr		CN-3M		CN-3M
188	PG	AVSS0.75sq	CN-38F		CN-10F
500	LeR	AVSS0.75sq	CN-10F		CN-2F
501	LeW	AVSS0.75sq	CN-10F		CN-3F
502	LeY	AVSS0.75sq	CN-10F		CN-2F
503	LO	AVSS0.75sq	CN-10F		CN-2F
504	PG	AVSS0.75sq	CN-10F		CN-2F
505	PL	AVSS0.75sq	CN-10F		CN-2F
507	VG	AVSS0.75sq	CN-10F		CN-3F
508	VY	AVSS0.75sq	CN-251M		CN-3F
509	Sb	AVSS0.75sq	CN-251M		CN-4F
515	PL	AVSS0.75sq	CN-10F		CN-3F
530	P	AVSS0.75sq	CN-4M		CN-4F
531	Le	AVSS0.75sq	CN-65F		CN-10F
534	B	MVVS0.5sq 2 CORES SHIELD	CN-10F		CN-4F
535	W		CN-10F		CN-4F
SH3	Gr		CN-10F		CN-4F

WIRE NO	WIRE COLOR	WIRE SIZE	FROM	CONNECTION	TO
536	BrR	AVS0.5sq	CN-10F		CN-40M
537	YR	AVS0.5sq	CN-10F		CN-40M
550A	O	AVSS0.75sq	CN-1F		CN-29F
550B	O	AVS0.5sq	CN-40M		CN-29F
550C	O	AVSS0.75sq	CN-10F		CN-29F
551	BrL	AVS0.5sq	CN-10F		CN-40M
552	GB	AVS0.5sq	CN-10F		CN-40M
553	BrB	AVS0.5sq	CN-10F		CN-40M
556A	LO	AVSS0.75sq	CN-32F		CN-38F
556B	LO	AVSS0.75sq	CN-4M		CN-38F
556C	LO	AVSS0.75sq	CN-2F		CN-38F
557	GrB	AVS0.5sq	CN-4M		CN-40M
558	PL	AVSS0.75sq	CN-251M		CN-64F
560	V	AVSS0.75sq	CN-10F		CN-4F
561	Le	AVS0.5sq	CN-40M		CN-27F
563	O	AVSS0.75sq	CN-4M		CN-251M
570	Sb	AVSS0.75sq	CN-65F		CN-4M
603	LgR	AVSS0.75sq	CN-4M		CN-1F
604	LG	AVSS0.75sq	CN-4M		CN-1F
605	VG	AVSS0.75sq	CN-4M		CN-1F
606	BrW	AVSS0.75sq	CN-4M		CN-1F
607	GW	AVSS0.75sq	CN-4M		CN-1F
651A	WR	AVSS0.75sq	CN-10F		CN-38F
651B	WR	AVS0.5sq	CN-40M		CN-38F
651C	WR	AVSS0.75sq	CN-40M		CN-38F
700	V	AVSS0.75sq	CN-27F		CN-1F
701	PB	AVSS0.75sq	CN-251M		CN-27F
702A	LeB	AVSS0.75sq	CN-251M		CN-29F
702B	LeB	AVS0.5sq	CN-40M		CN-29F
702C	LeB	AVSS0.75sq	CN-65F		CN-29F
704	RL	AVSS0.75sq	CN-1F		CN-251M
705	O	AVSS0.75sq	CN-4F		CN-10F
717	BP	AVSS0.75sq	CN-38F		CN-1F
751	BO	AVSS0.75sq	CN-251M		CN-1F
752	GrR	AVSS0.75sq	CN-251M		CN-1F
753	GB	AVSS0.75sq	CN-251M		CN-1F
754	GrB	AVSS0.75sq	CN-251M		CN-1F
755	BP	AVSS0.75sq	CN-251M		CN-1F
756	PW	AVSS0.75sq	CN-251M		CN-1F
760	LeR	AVSS0.75sq	CN-65F		CN-64F
800	GB	AVSS0.75sq	CN-1F		CN-43M
801	GrL	AVSS0.75sq	CN-1F		CN-25F
802	BrY	AVSS0.75sq	CN-1F		CN-24F
851	O	MVVS0.75sq 4 CORES SHIELD	CN-10F		CN-4F
852	B		CN-10F		CN-4F
853	R		CN-10F		CN-4F
854	W		CN-10F		CN-4F
SH1	Gr		CN-10F		UNCONNECTED
857	WG	AVSS0.75sq	CN-10F		CN-1F
858	G	AVS0.5sq	CN-40M		CN-1F
860	Br	AVS0.5sq	CN-1F		CN-40M
861	LO	AVS0.5sq	CN-40M		CN-4F
862	L	AVS0.5sq	CN-40M		CN-4F
900	RB	AVSS0.75sq	CN-10F		CN-2F
901	RL	AVSS0.75sq	CN-10F		CN-3F
902	W	AVSS0.75sq	CN-10F		CN-2F
903	OB	AVSS0.75sq	CN-10F		CN-2F
904	OL	AVSS0.75sq	CN-10F		CN-3F

WIRE NO	WIRE COLOR	WIRE SIZE	FROM	CONNECTION	TO
905	OW	AVSS0.75sq	CN-10F		CN-2F
907	YG	AVSS0.75sq	CN-10F		CN-3F
908	YL	AVSS0.75sq	CN-251M		CN-3F
909	YR	AVSS0.75sq	CN-251M		CN-4F
915	YL	AVSS0.75sq	CN-10F		CN-3F
930	WR	AVS30.75sq	CN-4M		CN-4F
931	RY	AVSS0.75sq	CN-65F		CN-10F
940	G	AVSS0.75sq	CN-4M		CN-1F
950	BrR	AVSS0.75sq	CN-10F		CN-2F
951	BL	AVSS0.75sq	CN-10F		CN-3F
952	BR	AVSS0.75sq	CN-10F		CN-2F
953	BrW	AVSS0.75sq	CN-10F		CN-2F
954	BrY	AVSS0.75sq	CN-10F		CN-2F
955	Gr	AVSS0.75sq	CN-10F		CN-2F
957	Br	AVSS0.75sq	CN-10F		CN-3F
958	BY	AVSS0.75sq	CN-251M		CN-3F
959	BG	AVSS0.75sq	CN-251M		CN-4F
965	BrB	AVSS0.75sq	CN-10F		CN-3F
970	BW	AVSS0.75sq	CN-4M		CN-4F
971	BY	AVSS0.75sq	CN-65F		CN-10F
E1	B	AVS5sq	CN-11M	DOUBLE SPLICE	P-1
E2	B	AVS2sq	CN-42F		P-1
E3	B	AVSS1.25sq	CN-31F	DOUBLE SPLICE	CN-30F
E20	B	AVSS1.25sq	CN-31F		CN-44F
E4	B	AVSS0.75sq	CN-21F		CN-30F
E5	B	AVSS0.75sq	CN-4M		CN-30F
E9	B	AVSS0.75sq	CN-4M		CN-30F
E10	B	AVS0.5sq	CN-40M		CN-30F
E14	B	AVSS1.25sq	CN-3M		CN-30F
E16	B	AVSS1.25sq	CN-40M		CN-30F
E17	B	AVSS0.75sq	CN-41F		CN-30F
E18	B	AVSS0.75sq	CN-34F		CN-30F
E19	B	AVSS0.75sq	CN-3M		CN-30F
E15	B	AVSS1.25sq	CN-36F		CN-30F
E7	B	AVSS0.75sq	CN-91F	DOUBLE SPLICE	CN-40M
E8	B	AVSS0.75sq	CN-91F		CN-36F
E21	B	AVSS0.75sq	CN-64F		CN-36F
E22	B	AVSS0.75sq	CN-66F		CN-38F
E11	B	AVSS0.75sq	CN-3M		CN-10F

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Figure 23-12

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