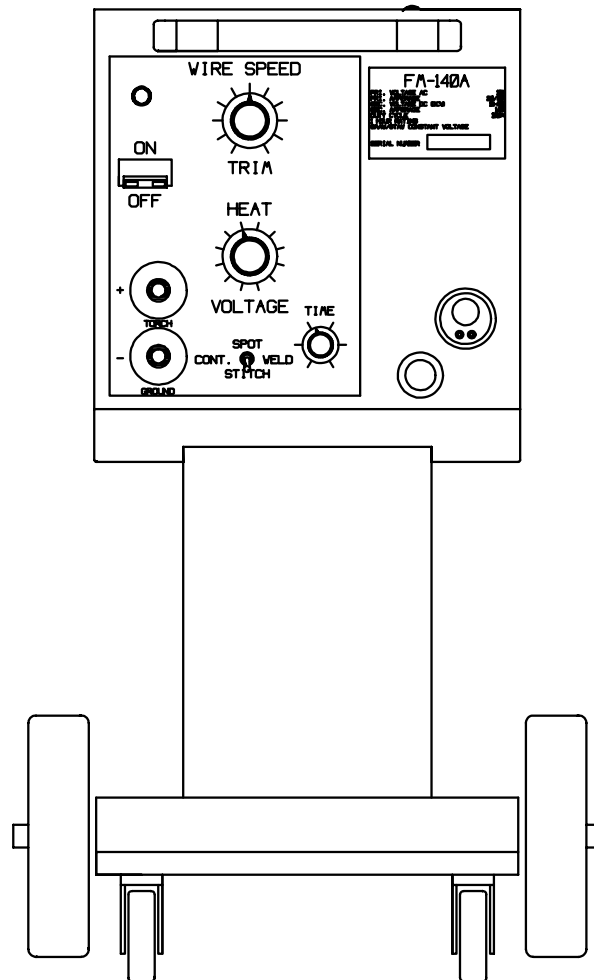


Snap-on[®]

FM140A



SERVICE MANUAL

FOR
SERIAL NUMBERS 840-15411 AND LATER

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FIGURE 1 - SCHEMATIC DIAGRAM

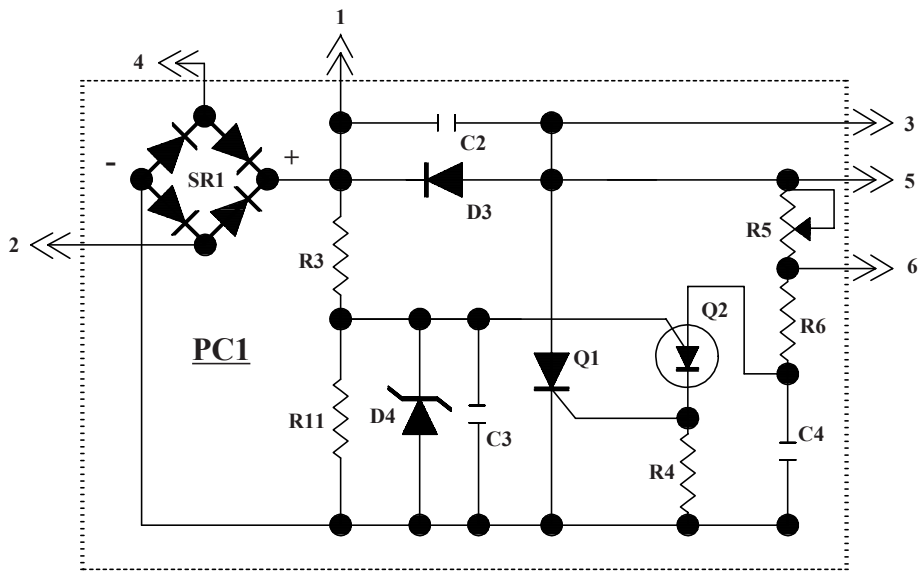


FIGURE 1A - SCHEMATIC, WIRE FEED CIRCUIT BOARD

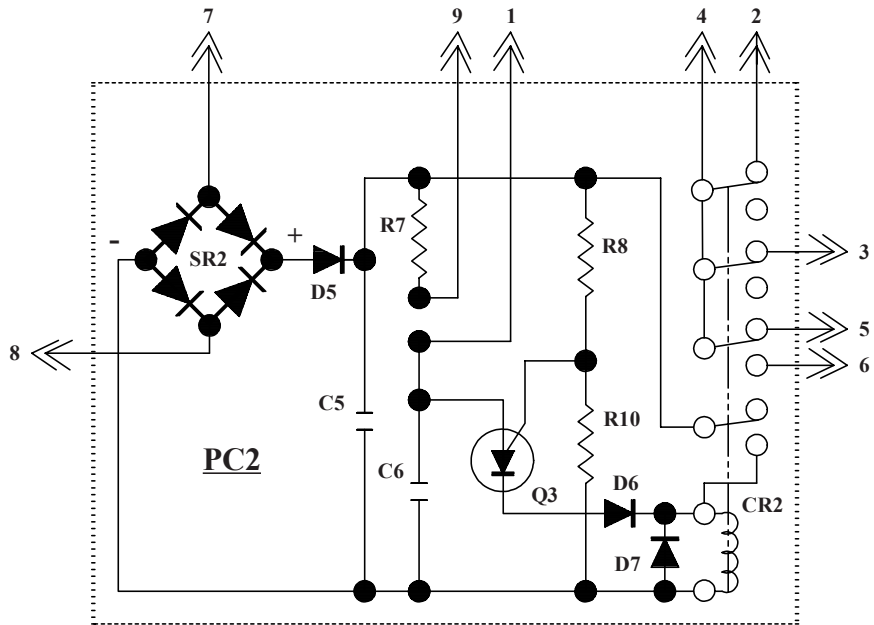


FIGURE 1B - SCHEMATIC, SPOT TIME CIRCUIT BOARD

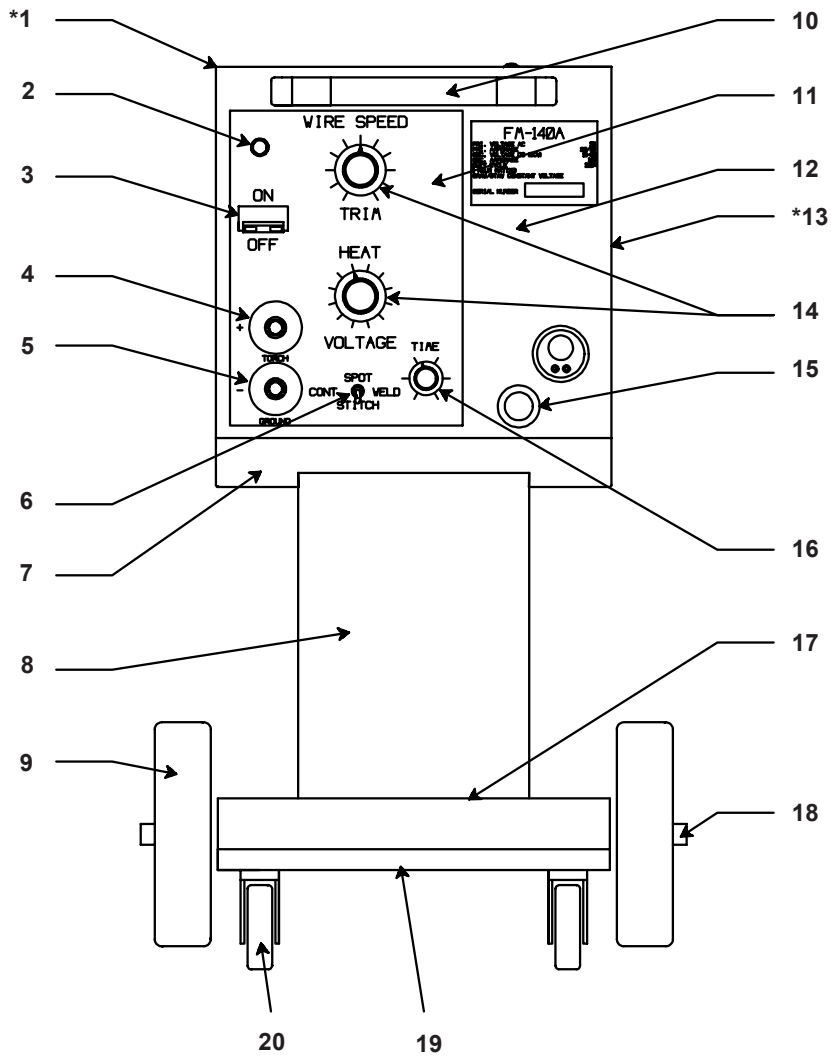


FIGURE A - FRONT ASSEMBLY

FIGURE A

ITEM NO.	DIA. MKGS.	PART NO.	DESCRIPTION	QTY.
*1		SN-417L	COVER, LEFT *(MUST BE PURCHASED AS A COMPLETE ASSY)	1
*		SN-447	COVER & ACCESS DOOR ASSEMBLY, COMPLETE	1
2	L	SN-184	INDICATOR LAMP	1
3	CB1	SN-482	CIRCUIT BREAKER, 35 AMP	1
		SN-955	BREAKER BRACKET	1
4	+	SN-146C	WELD CONNECTOR W/GAS HOLE	1
5	-	SN-146	WELD CONNECTOR	1
		SN-72	NUT, WELD CONNECTOR	2
		SN-178	GROUND CABLE ASSEMBLY, 15' (NOT SHOWN)	1
		SN-165	CLAMP, GROUND (NOT SHOWN)	1
6	S3	SN-245	SWITCH, MODE	1
7		SN-412D	BASE	1
8		SN-433B	PEDESTAL	1
9		SN-124-8	REAR WHEEL, 8"	2
10		SN-05	HANDLE	1
11		SN-1050	LABEL, CONTROL	1
12		SN-418	FRONT	1
*13		SN-417R	ACCESS DOOR *(MUST BE PURCHASED AS COMPLETE ASSY)	1
14		SN-330A	KNOB, HEAT & TRIM	2
15		SN-71	BUSHING	1
16		SN-67	KNOB, SPOT TIME	1
17		SN-432D	BASE, PEDESTAL	1
18		SN-171	AXLE	1
		SN-171C	AXLE, CAPS	2
19		SN-213	CASTER BRACKET	2
20		SN-121-3	CASTER, FRONT 3"	2

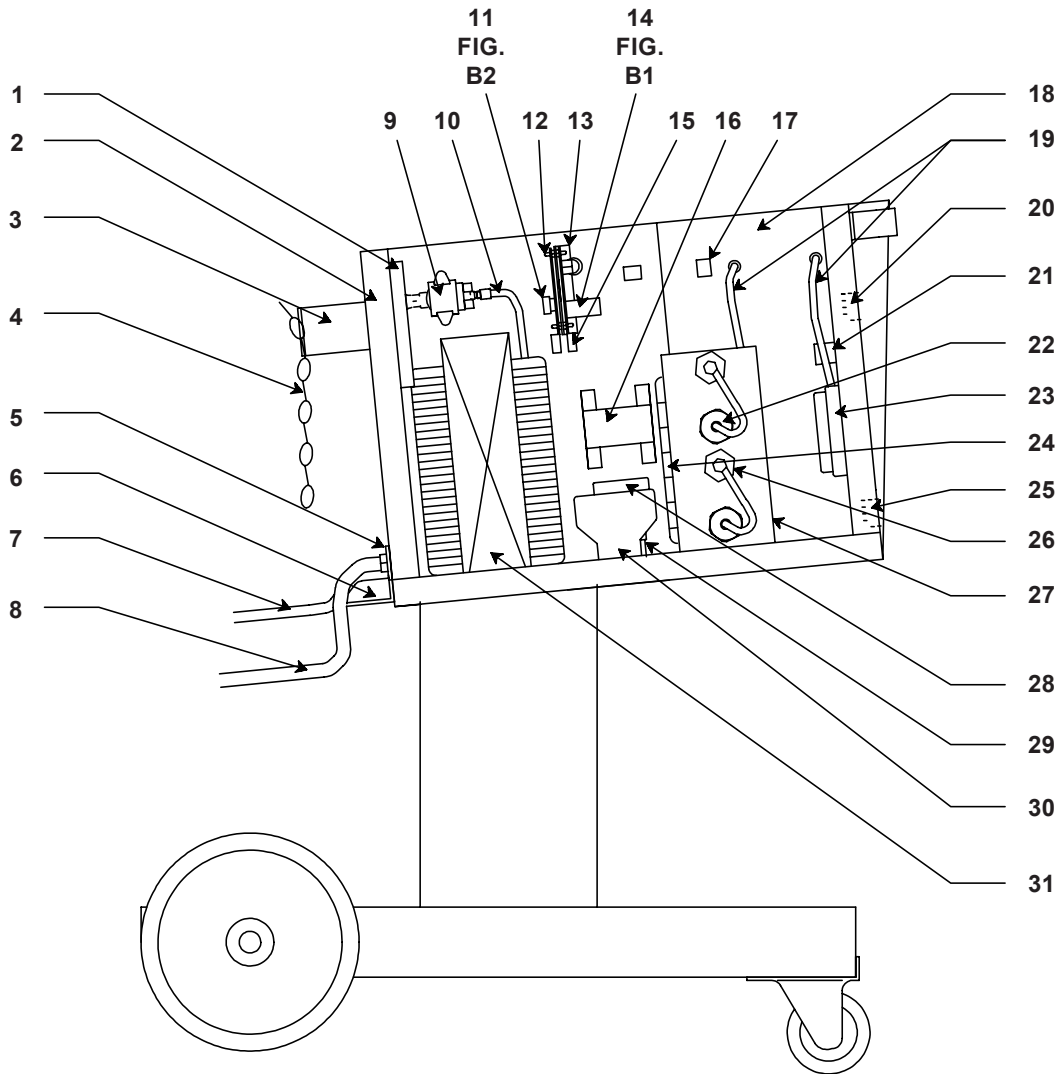


FIGURE B - LEFT SIDE VIEW & INTERNAL COMPONENTS

FIGURE B

ITEM NO.	DIA. MKGS.	PART NO.	DESCRIPTION	QTY.
1	F	SN-517	FAN, 4"	1
2		SN-413	BACK	1
3		SN-311	CYLINDER BRACKET	1
4		SN-211C	CYLINDER CHAIN	1
5		SN-220	STRAIN RELIEF	1
		SN-220N	NUT, STRAIN RELIEF	1
6		SN-313	CYLINDER SUPPORT	1
7		SN-253A	GAS HOSE, PRIMARY	1
8	PLG1	20CP-140A	POWER INPUT CABLE W/PLUG, 20'	1
		SN-339	SUPPLY PLUG, 115V	1
9	GS	SN-126	SOLENOID ASSEMBLY, 24VAC	1
10		SN-353S	GAS HOSE, SELECTOR	1
11	PC2	SN-529U	SPOT TIME BOARD (FIGURE B2)	1
12		SN-601	STAND OFF, NYLON BOARD	8
13		SN-6421U	BRACKET, CONTROL (U-BOARD)	1
14	PC1	SN-774U	WIRE FEED CONTROL BOARD (FIGURE B1)	1
15		SN-685	TERMINAL HOUSING, HARNESS	2
		SN-685P	PIN, EDGE CONNECTOR	15
16	T2	SN-287M	CONTROL TRANSFORMER, 115V-28V	1
		AD-16	ADAPTER, VOLTAGE	1
17	RC2	SN-861C	RECEPTACLE, FUNCTION	1
18		SN-445E	BAFFLE (REVISED)	1
19		SN-353D	HOSE, BULKHEAD REAR	2
20	R1	SN-35U	POTENTIOMETER, 75K OHM	1
21		SN-236	SOCKET, RELAY 8 PIN	1
22	D1,2	SN-260	DIODE	2
23	S2	SN-163-12	HEAT SWITCH, 12 POSITION	1
24	Z	SN-188C	CHOKE (BEHIND)	1
25	R9	SN-222	POTENTIOMETER, 35K OHM, SPOT TIME	1
26		SN-247	STAND-OFF INSULATOR	2
27		SN-437GA	HEAT SINK ASSEMBLY, COMPLETE	1
		SN-437G	PLATE ONLY, HEAT SINK	1
		SN-239	INSULATOR, HEAT SINK	1
28	R2	SN-162	RESISTOR, 100 OHM 25W	1
29	C1	SN-125S	CAPACITOR, 12,000UF 50V (BEHIND)	4
30	W	SN-153	CONTACTOR, 24VAC	1
31	T1	SN-86C	TRANSFORMER, POWER	1
	TP1	SN-654	THERMAL SWITCH (N.C.)	1

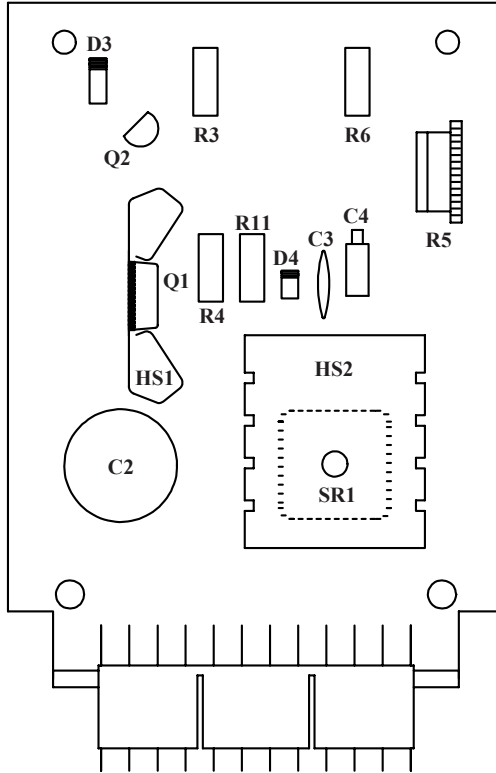


FIGURE B1 - PRINTED CIRCUIT BOARD (SN-774U)

FIGURE B1

ITEM NO.	DIA. MKGS.	PART NO.	DESCRIPTION	QTY.
C2	MI-623		CAPACITOR, 1000UF 50V	1
C3	HG-578		CAPACITOR, .02UF 100V	1
C4	MI-626		CAPACITOR, .68UF 50DC	1
D3	HG-579		DIODE, 2A	1
D4	HG-196		DIODE, ZENER 7.5V	1
HS1	CB-251		HEAT SINK, SCR	1
HS2	CB-250		HEAT SINK, BRIDGE RECTIFIER	1
Q1	HG-194A		SCR, 10A	1
Q2	MI-627		TRANSISTOR, PUT	1
R3,6	CB-043		RESISTOR, 1K OHM 1/2W	2
R4	MI-127		RESISTOR, 100 OHM 1/2W	1
R5	MI-135A		RESISTOR, TRIM 1 MEG OHM	1
R11	MI-159		RESISTOR, 330 OHM 1/2W	1
SR1	CB-048		RECTIFIER, BRIDGE	1

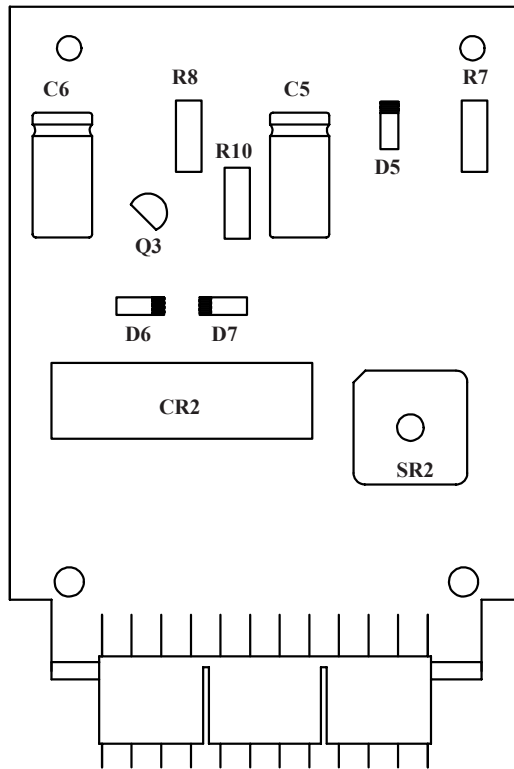


FIGURE B2 - PRINTED CIRCUIT BOARD (SN-529U)

FIGURE B2

ITEM NO.	DIA. MKGS.	PART NO.	DESCRIPTION	QTY.
C5,6	MI-143		CAPACITOR, 47uFD 50V	2
CR2	HG-576		RELAY, 24VDC 4PDT	1
D5,6,7	HG-579		DIODE, 2A	3
Q3	MI-627		TRANSISTOR, PUT	1
R7	MI-125		RESISTOR, 4.7K OHM 1/2W	1
R8	MI-148		RESISTOR, 1.2K OHM 1/2W	1
R10	MI-126		RESISTOR, 3.3K OHM 1/2W	1
SR2	CB-048		RECTIFIER, BRIDGE	1

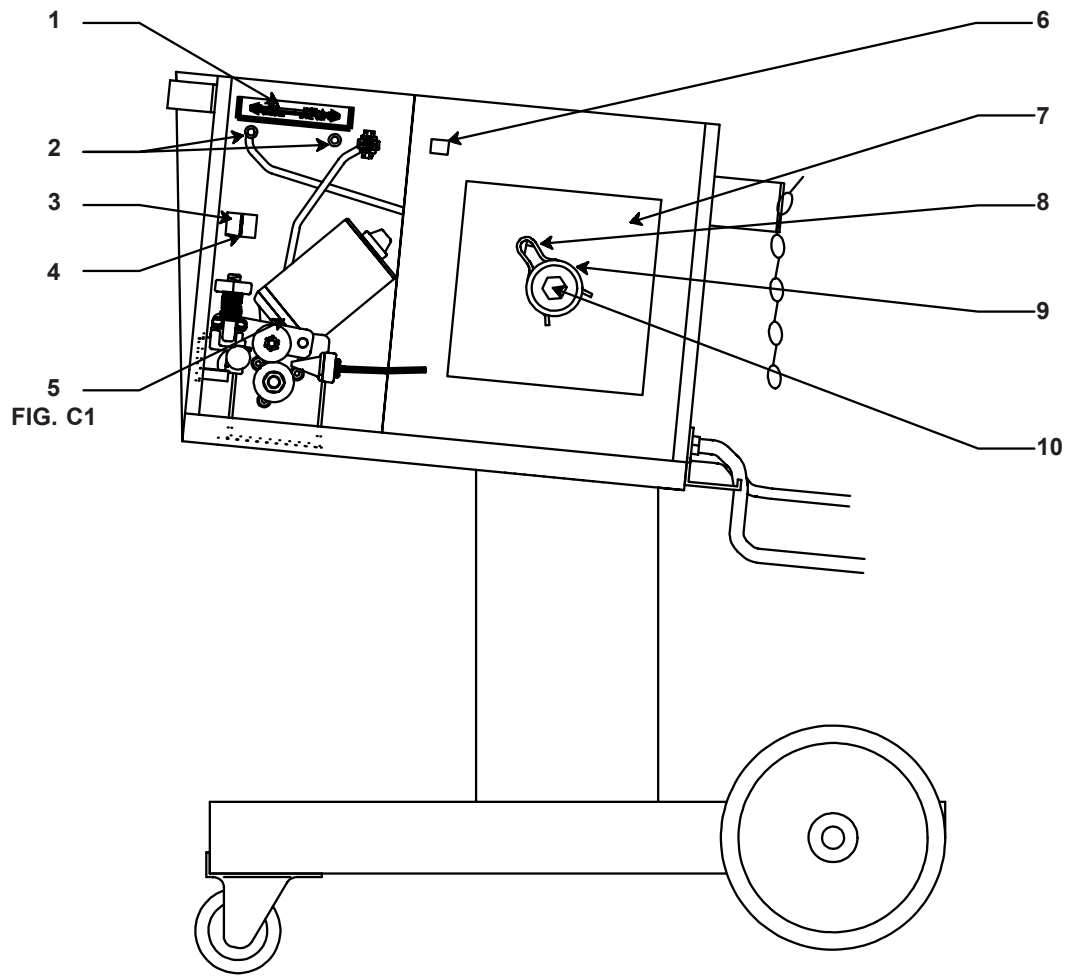


FIGURE C - WIRE FEED COMPARTMENT

FIGURE C

ITEM NO.	DIA. MKGS.	PART NO.	DESCRIPTION	QTY.
1		SN-1055	LABEL, MIG-MHG5-A	1
2		SN-500A	BULKHEAD ASSEMBLY, FEMALE	2
		SN-501	BULKHEAD, MALE	2
		SN-501K	BULKHEAD KIT, COMPLETE	2
		SN-880	COVER, THREAD	1
3	CR1	SN-276S	RELAY, 8 PIN 24VAC	1
4		SN-276CL	RELAY CLIP, 8 PIN	1
5		SN-138C24A	WIRE DRIVE ASSEMBLY (FIGURE C1)	1
6	CB2	SN-519	BREAKER, MINI 5A	1
7		SN-314I	INSULATOR CARD, SPOOL HUB	1
8		SN-22	SPOOL CLIP	1
9		SN-314	SPOOL HUB	1
10		SN-450N	BOLT, NYLON SPOOL HUB	1
		SN-451	NUT, SPOOL HUB	1
		SN-19	WASHER, SPOOL HUB	2

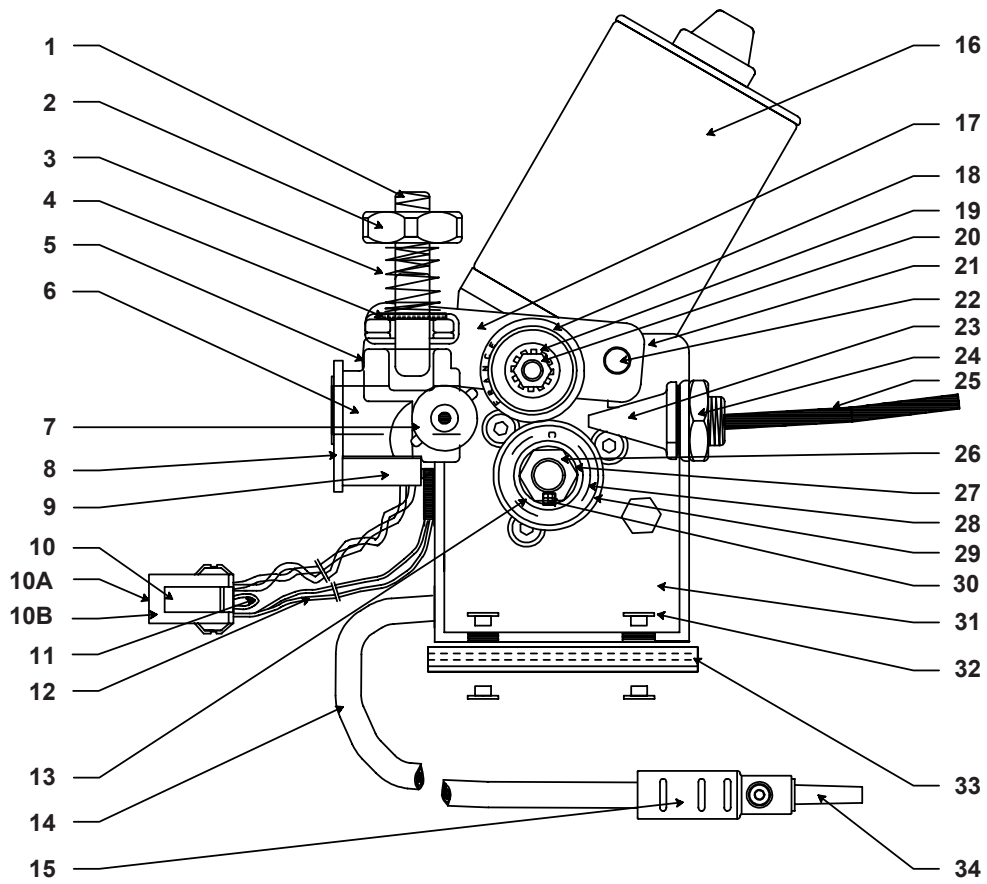


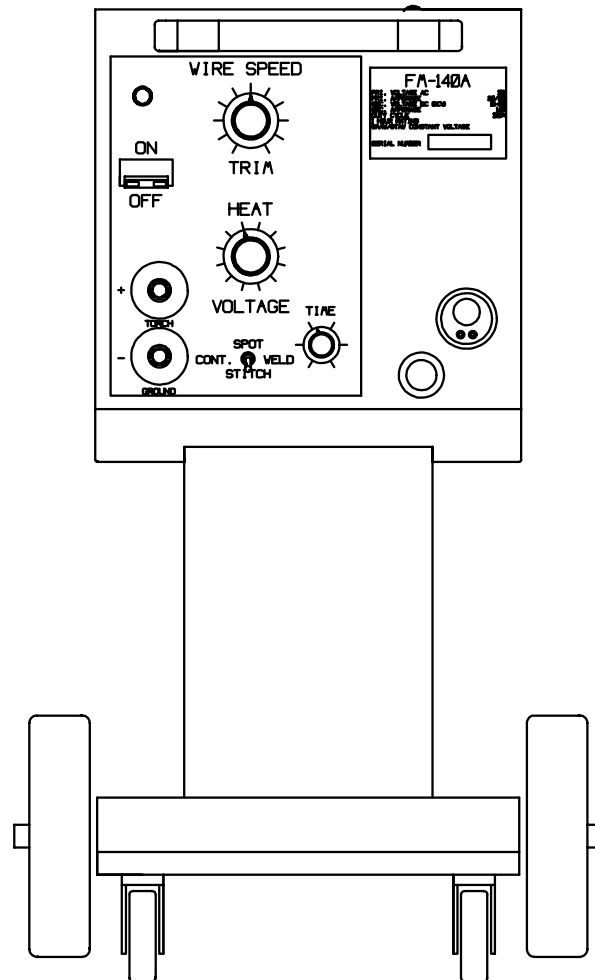
FIGURE C1 - WIRE DRIVE ASSEMBLY (SN-138C24A)

FIGURE C1

ITEM NO.	DIA. MKGS.	PART NO.	DESCRIPTION	QTY.
1		SN-48	PRESSURE ROLL TENSION BOLT	1
2		SN-51	TENSION NUT	1
3		SN-50F	PRESSURE SPRING	1
4		SN-49	TENSION BOLT WASHER	1
5		SN-47	TENSION BOLT PIN	1
6		SN-24	GAS FITTING, BRASS	1
7		M3-906	THUMB SCREW	1
8		M3-900C	TORCH PANEL MOUNT (HG-525)	1
9		SN-604	WIRE CONNECTOR, 90 DEG.	2
10	RC1	SN-860C	FUNCTION PLUG ASSEMBLY	1
10A		SN-860	PIN HOUSING	1
10B		SN-860M	MALE PIN CONNECTOR	6
11	J1	AD-10	BLUE JUMPER	1
12		SN-237	CONTROL WIRE ASSEMBLY	2
13		SN-62	DRIVE ROLL WASHER	1
14		SN-278C	TORCH SELECTOR CABLE ASSEMBLY	1
15		SN-169A	TERMINAL INSULATOR	1
16	M	SN-138C24	24VDC MOTOR	1
17		SN-53F	ROCKER ARM	1
18		SN-158	PRESSURE ROLL	1
19		SN-55F	BEARING SPACER	1
20			1/4-20 KEP NUT	1
21		SN-89	SPRING WASHER	1
22		SN-52	SHOULDER BOLT	1
23		SN-33F	INLET GUIDE	1
24		SN-34	NUT, INLET GUIDE	1
		HW-58ILW	LOCK WASHER, INTERNAL	1
25		SN-136C	INLET GUIDE TUBE	1
26		SN-64	DRIVE ROLL NUT	1
27		SN-65	DRIVE ROLL LOCK WASHER	1
28		SN-603	ADJUSTING COLLAR (BEHIND)	1
29		SN-63	DRIVE ROLL (1 3/8" DIA.)	1
30		SN-61C	1/2 WOODRUFF DRIVE KEY	1
31		SN-131E	MOTOR BRACKET, ADJUSTABLE	1
32		SN-40	INSULATING WASHER	4
33		SN-139	MOTOR BASE INSULATOR	1
34		SN-168A	CABLE TERMINAL	1
		SN-170A	CABLE TERMINAL ASSEMBLY, COMPLETE	1

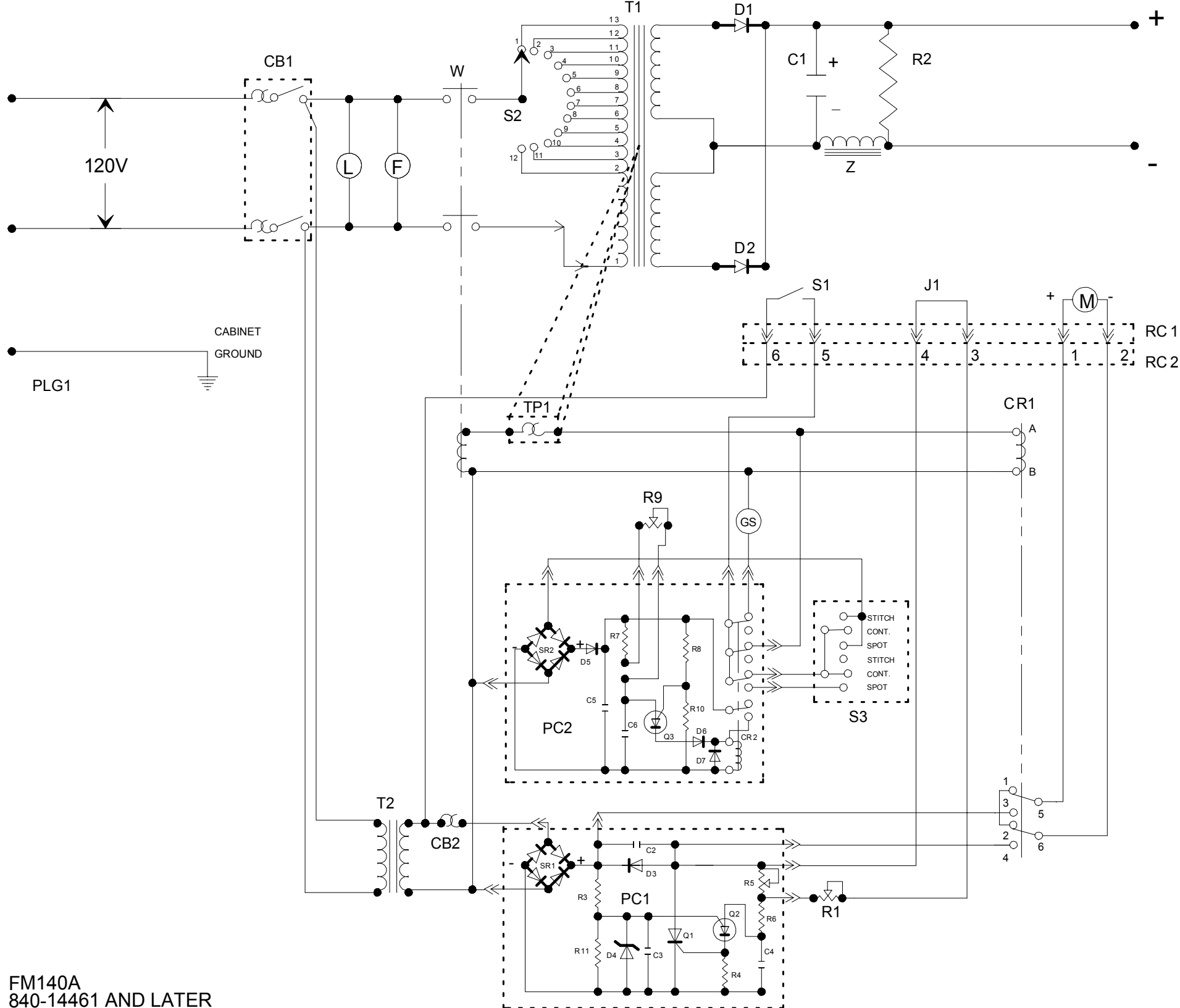
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SUPPLEMENT

FOR
SERIAL NUMBERS 840-15411 AND LATER



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