



TM-223Z

2015-10

**Processes**



Gas Metal Arc (MIG) Welding  
Gas Metal Arc-Pulsed Welding  
Flux Cored Arc Welding  
Submerged Arc Welding  
(452/652 Only)



Air Carbon Arc Cutting  
and Gouging (452/652 Only)

**Description**



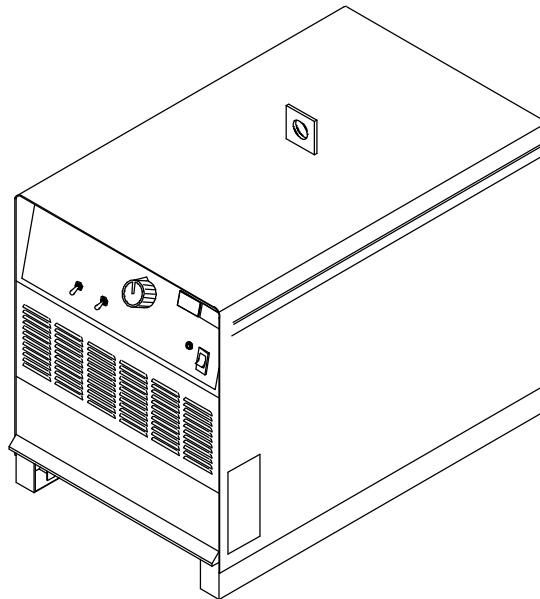
Arc Welding Power Source

# Deltaweld<sup>®</sup> Series CE And Non-CE

## PARTS LIST

Eff w/KF790532 Thru KK129841


For OM-223 (166 538) Thru Revision S



Visit our website at  
[www.MillerWelds.com](http://www.MillerWelds.com)

302, 452, 652 (60 Hz), 402, 602, 852 (50/60 Hz)

# SECTION 10 – PARTS LIST FOR KF790532 Thru KK129841

 Hardware is common and not available unless listed.

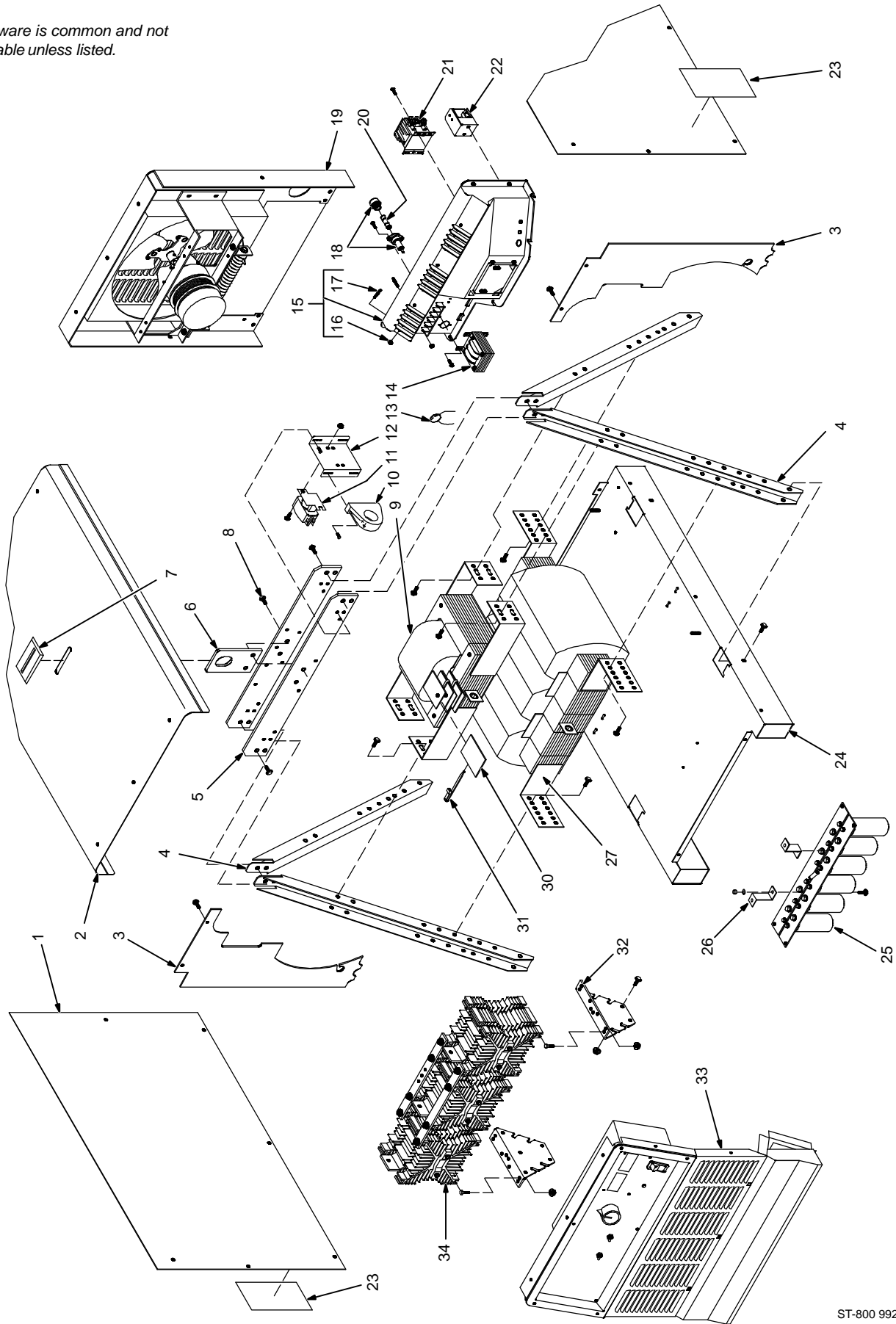


Figure 10-1. Main Assembly (452 Model Illustrated)

ST-800 992-D

# Eff w/KF790532 Thru KK129841

Item No.	Dia. Mkgs.	Part No.	Description	Quantity		
				302	452	652
<b>Figure 10-1. Main Assembly</b>						
...	1	...	+168 792 .. PANEL, side LH (Prior to KG062845) .....	1		
...	1	...	+179 430 .. PANEL, side (Eff w/KG062845) .....	2		
...	1	...	+168 806 .. PANEL, side LH (Prior to KG058597) .....	1	...	1
...	1	...	+179 432 .. PANEL, side (Eff w/KG058597) .....	2	...	2
...		...	+168 792 .. PANEL, side RH (Prior to KG062845) .....	1		
...		...	+168 805 .. PANEL, side RH (Prior to KG062845) .....	1	...	1
...	2	...	162 806 .. COVER, top (Prior to KG062845) .....	1		
...	2	...	179 429 .. COVER, top (Eff w/KG062845) .....	1		
...	2	...	162 803 .. COVER, top (Prior to KG058597) .....	1	...	1
...	2	...	179 431 .. COVER, top (Eff w/KG058597) .....	1	...	1
...	3	...	164 699 .. BAFFLE, air .....	2	...	2
...	3	...	164 700 .. BAFFLE, air .....			2
...	4	...	162 816 .. CHANNEL, upright .....	4	...	4
...	5	...	162 820 .. BAR, mtg lift eye .....	2	...	2
...	6	...	162 830 .. LIFT EYE .....	1	...	1
...	7	...	177 279 .. GASKET, lift eye .....	1	...	1
...	8	...	604 536 .. SCREW, .312-18 x 1.75 hexhd-pln gr 5 .....	2	...	2
...	9	Z1	166 362 .. STABILIZER .....	1		
...	9	Z1	166 364 .. STABILIZER .....		1	
...	9	Z1	166 366 .. STABILIZER, (Prior to KG074230) .....			1
...	9	Z1	180 066 .. STABILIZER, (Eff w/KG074230) .....			1
...		...	164 717 .. BUS BAR, stabilizer .....			1
...	10	HD1	◆◆ 168 829 .. TRANSDUCER, current 1000A (Eff w/KG182737) .....	1	...	1
...	11	CR6	195 370 .. KIT, contactor .....	1	...	1
...	12		173 605 .. BRACKET, mtg contactor .....	1	...	1
...	13	C21-23	163 906 .. CAPACITOR .....	3	...	3
...	13	C21-23	179 904 .. CAPACITOR, 50Hz models only (Eff w/KG058597) .....	3	...	3
...	14	T2	159 042 .. TRANSFORMER, control 50VA 24V 230/460/575 (60Hz) .....	1	...	1
...	14	T2	159 041 .. TRANSFORMER, control 50VA 24V 200/230/460 (60Hz) .....	1		
...	14	T2	159 043 .. TRANSFORMER, control 50A 24V (50Hz) .....	1	...	1
...	15	TE1	159 244 .. PRIMARY BOX, (includes) .....	1	...	1
...	16		601 835 .. NUT, 10-32 brs .....	24	...	24
...	17		038 887 .. STUD, pri bd brs 10-32 x 1.375 .....	24	...	24
...			010 913 .. WASHER, flat .218 ID brs .....	24	...	24
...			601 835 .. NUT, 10-32 brs .....	24	...	24
...			038 618 .. LINK, jumper term bd pri .....	8	...	8
...			175 479 .. LINK, jumper (220 volt-50 Hz primary, factory option) .....	8	...	8
...	18		159 034 .. HOLDER, fuse mintr .....	1	...	1
...	19	Figure 10-5	.. PANEL, rear w/components .....	1	...	1
...	20	F1	*156 065 .. FUSE, crtg .5A 600V time delay .....	1	...	1
...	21	W	160 760 .. CONTACTOR, def prp 40A 3P 24VAC .....	1		
...	21	W	160 793 .. CONTACTOR, def prp 60A 3P 24VAC .....			1
...	21	W	160 794 .. CONTACTOR, def prp 75A 3P 24V .....			1
...	22	CR4	◆ 140 750 .. SWITCH, reed .....	1	...	1
...	23		134 464 .. LABEL, warning general precautionary .....	2	...	2
...	23		176 254 .. LABEL, warning general precautionary (CE models only) .....	2	...	2

# Eff w/KF790532 Thru KK129841

Item No.	Dia. Mkgs.	Part No.	Description	Quantity		
				302	452	652
<b>Figure 10-1. Main Assembly (Continued)</b>						
24		163 533	BASE	1		
24		163 359	BASE		1	1
25	C1	163 244	CAPACITOR ASSEMBLY, (Prior to KG253326) (includes)	1	1	1
		163 535	CAPACITOR, elctlt 16000uf 60VDC	6	6	
		163 534	CAPACITOR, elctlt 16000uf 70VDC			6
	R6	140 002	RESISTOR, WW fxd 10W 500 ohm	1	1	1
		162 817	BUS BAR, capacitor	2	2	2
26		162 799	BRACKET, mtg capacitor	2	2	2
25	C1	182 661	CAPACITOR ASSEMBLY, (Eff w/KG253326) (includes)	1	1	1
		163 535	CAPACITOR, elctlt 16000uf 60VDC	6	6	
		163 534	CAPACITOR, elctlt 16000uf 70VDC (Prior to KJ216105)			6
		163 535	CAPACITOR, elctlt 16000uf 60VDC (Eff w/ KJ216105)			6
	R6	140 002	RESISTOR, WW fxd 10W 500 ohm	1	1	1
		162 817	BUS BAR, capacitor	2	2	2
26		162 799	BRACKET, mtg capacitor (Eff w/KG253326 this bracket is no longer part of the capacitor assembly)	2		
26		182 660	BRACKET, mtg capacitor (Eff w/KG253326 this bracket is no longer part of the capacitor assembly))		4	4
27	T1	166 468	TRANSFORMER, pwr main 200/230/460 (Prior to KJ148959)	1		
27	T1	189 832	TRANSFORMER, pwr main 200/230/460 (Eff w/KJ148959)	1		
27	T1	172 301	TRANSFORMER, pwr main 230/460/575 (Prior to KJ148959)	1		
27	T1	189 833	TRANSFORMER, pwr main 230/460/575 (Eff w/KJ148959)	1		
27	T1	166 469	TRANSFORMER, pwr main 200/230/460 (Prior to KJ148959)		1	
27	T1	189 835	TRANSFORMER, pwr main 200/230/460 (Eff w/KJ148959)		1	
27	T1	172 307	TRANSFORMER, pwr main 230/460/575 (Prior to KJ148959)		1	
27	T1	189 836	TRANSFORMER, pwr main 230/460/575 (Eff w/KJ148959)		1	
27	T1	172 313	TRANSFORMER, pwr main 230/460/575 (Prior to KJ148959)		1	1
27	T1	189 839	TRANSFORMER, pwr main 230/460/575 (Eff w/KJ148959)		1	1
27	T1	172 419	TRANSFORMER, pwr main 380/400/440 (Prior to KJ148959)	1		
27	T1	189 834	TRANSFORMER, pwr main 380/400/440 (Eff w/KJ148959)	1		
27	T1	172 425	TRANSFORMER, pwr main 380/400/440 (Prior to KJ148959)		1	
27	T1	189 837	TRANSFORMER, pwr main 380/400/440 (Eff w/KJ148959)		1	
27	T1	172 431	TRANSFORMER, PWR MAIN 380/400/440 (Prior to KJ148959)		1	1
27	T1	189 838	TRANSFORMER, PWR MAIN 380/400/440 (Eff w/KJ148959)		1	1
	TP1,2	119 581	THERMOSTAT, NC (Included w/T1)	2	2	2
	TP4,5	168 891	THERMOSTAT, NC (Included w/T1)	2	2	2
	PLG13	169 242	CONNECTOR & PINS (Prior to KJ148959)	1	1	1
	PLG13	169 242	CONNECTOR & PINS (Eff w/KJ148959)	1	1	1
30		144 468	STRIP, polyest gl lam .062 x 2.375 x 3.500	3	3	4
31		605 538	CABLE TIE, 0-4.500 bundle	3	3	4
32		161 294	BRACKET, mtg rectifier	2	2	2
33		Figure 10-2	PANEL, front w/components	1	1	1
34	SR1	175 070	RECTIFIER, si diode (Figure 10-3)	1		
34	SR1	196 025	RECTIFIER, SCR main (Figure 10-4)		1	
34	SR1	196 027	RECTIFIER, SCR main (Figure 10-4)			1
	Shunt	166 368	SHUNT, meter 50mV 650A	1	1	1
	PLG14	130 204	CONNECTOR & SOCKETS	1	1	1
	RC14	168 165	CONNECTOR & PINS	1	1	1

Item No.	Dia. Mkgs.	Part No.	Description	Quantity		
				Model		
				302	452	652
<b>Figure 10-1. Main Assembly (Continued)</b>						
.....		119 537 ..	BRACKET, mtg shunt .....	1	1	1
.....		010 910 ..	WASHER, flat .406 ID stl .....	1	1	1
.....		602 213 ..	WASHER, lock .380 ID stl split .....	1	1	1
.....		601 965 ..	SCREW, .375-16 x 1.000hexhd .....	1	1	1

◆ Part of Option 043 146 Ground Current Sensor

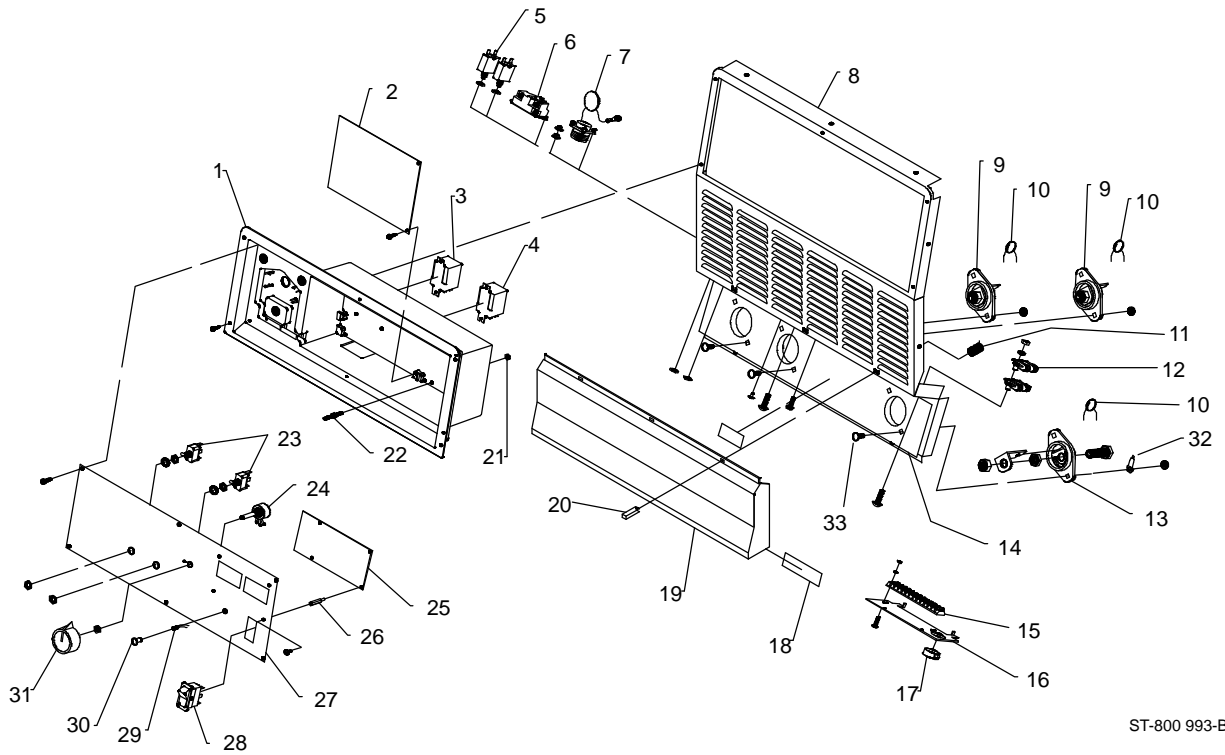
◆◆ Prior to Serial No. KG182737, these models contained a shunt which has been replaced with a LEM replacement kit. To get the correct LEM replacement kit, go to Figure 10-2 and order the correct PC1, by Serial No., for your model (PC1 part numbers include the HD1 LEM replacement kit.) Effective with Serial No. KG182737 and following, you may order just the HD1 transducer Part No. 168 829.

+When ordering a component originally displaying a precautionary label, the label should also be ordered.

\*Recommended Spare Parts.

**BE SURE TO PROVIDE MODEL AND SERIAL NUMBER WHEN ORDERING REPLACEMENT PARTS.**

# Eff w/KF790532 Thru KK129841



ST-800 993-B

**Figure 10-2. Panel, Front w/Components (452 Model Illustrated)**

Item No.	Dia. Mkgs.	Part No.	Description	Quantity		
				302	452	652

**Figure 10-2. Panel, Front w/Components (Figure 10-1 Item 33)**

...	1	159 863	.. ELECTRONICS BOX	1	1	1
.....	PLG6	168 847	.. CONNECTOR & SOCKETS	1	1	1
.....	RC6	168 845	.. CONNECTOR & PINS	1	1	1
.....	PLG7	152 249	.. CONNECTOR & PINS	1	1	1
.....	RC7	168 846	.. CONNECTOR & SOCKETS	1	1	1
...	2	PC1	183 202 .. CIRCUIT CARD, control (60Hz) (Prior to KG182736)	1		
...	2	PC1	183 067 .. CIRCUIT CARD, control (60Hz) (Eff w/KG182737 thru KH537690)	1		
...	2	PC1	185 583 .. CIRCUIT CARD, control (60Hz) (Eff w/KH537691)	1		
...	2	PC1	183 204 .. CIRCUIT CARD, control (60Hz) (Prior to KG182737)	1		
...	2	PC1	183 069 .. CIRCUIT CARD, control (60Hz) (Eff w/KG182737 thru KH537690)	1		
...	2	PC1	186 424 .. CIRCUIT CARD, control (60Hz) (Eff w/KH537691)	1		
...	2	PC1	183 206 .. CIRCUIT CARD, control (60Hz) (Prior to KG182737)	1		
...	2	PC1	183 071 .. CIRCUIT CARD, control (60Hz) (Eff w/KG182737 thru KH537690)	1		
...	2	PC1	186 427 .. CIRCUIT CARD, control (60Hz) (Eff w/KH537691)	1		
...	2	PC1	176 569 .. CIRCUIT CARD, control (50Hz) (Prior to KG182737)	1		
...	2	PC1	183 068 .. CIRCUIT CARD, control (50Hz) (Eff w/KG182737 thru KH537960)	1		
...	2	PC1	186 422 .. CIRCUIT CARD, control (50Hz) (Eff w/KH537691)	1		
...	2	PC1	183 205 .. CIRCUIT CARD, control (50Hz) (Prior to KG182737)	1		
...	2	PC1	183 070 .. CIRCUIT CARD, control (50Hz) (Eff w/KG182737 thru KH537960)	1		
...	2	PC1	186 426 .. CIRCUIT CARD, control (50Hz) (Eff w/KH537961)	1		
...	2	PC1	176 573 .. CIRCUIT CARD, control (50Hz) (Prior to KG182737)	1		

# Eff w/KF790532 Thru KK129841

Item No.	Dia. Mkgs.	Part No.	Description	Quantity			
				Model	302	452	652
<b>Figure 10-2. Panel, Front w/Components (Figure 10-1 Item 33)</b>							
<b>(Continued)</b>							
...	2	PC1	183 072	CIRCUIT CARD, control (50Hz) (Eff w/KG182737 thru KH537960)	1		
...	2	PC1	186 428	CIRCUIT CARD, control (50Hz) (Eff w/KH537961)	1		
...		PLG1	158 720	CONNECTOR & SOCKETS, (see Figure 10-3 & Figure 10-4)			
...		PLG3	169 240	CONNECTOR & SOCKETS	1	1	1
...		PLG4	148 439	CONNECTOR & SOCKETS	1	1	1
...		PLG5	152 249	CONNECTOR & SOCKETS	1	1	1
...	3	CR3	006 393	RELAY, encl 24VAC DPDT	1	1	1
...	4	CR5	◆006 393	RELAY, encl 24VAC DPDT	1	1	1
...	5	CB1,2	093 995	SUPPLEMENTARY PROTECTOR, man reset 1P 15A 250VAC	2	2	2
...	6	RC9	604 176	RECEPTACLE, str dx grd 2P3W 15A 125V	1	1	1
...	7		163 855	CONNECTOR/CAPACITOR, w/leads (includes)	1	1	1
...		RC8	143 976	CONNECTOR & SOCKETS	1	1	1
...			079 534	CONN, cir ms/cpc skt pushin 14-ga .080-.100 insu	14	14	14
...		C3, 6, 13, 14	097 749	CAPACITOR, cer disc .05 uf 500 VDC strip	4	4	4
...	8		162 802	PANEL, front	1	1	1
...	9	POS	039 047	TERMINAL, pwr output red (Prior to KG177710)	2	2	2
...	9	POS	181 245	TERMINAL, pwr output red (Eff w/KG177710)	2	2	2
...	10	C2,4,5	128 750	CAPACITOR, cer disc .1uf 500VDC	3	3	3
...	11		161 303	SPRING, cprsn .600 OD x .072 wire x 1.500 lg	3	3	3
...	12	R4,5	136 076	RESISTOR, WW fxd 30W 200 ohm	2	2	2
...	13	NEG	039 046	TERMINAL, pwr output black (Prior to KG177710)	1	1	1
...	13	NEG	181 246	TERMINAL, pwr output black (Eff w/KG177710)	1	1	1
...	14		162 509	PLATE, control lower (Prior to KF840452)	1		
...	14		162 510	PLATE, control lower (Prior to KF840452)	1		
...	14		162 511	PLATE, control lower (Prior to KF840452)	1		
...	14		174 936	PLATE, control lower (Eff w/KF840452 thru KG058596)	1	1	1
...	14		179 386	PLATE, control lower (Eff w/KG058597)	1	1	1
...	15	1T	159 040	BLOCK, term 20A 12P	1	1	1
...	16		162 828	PANEL, mtg rcpt/terminal strip	1	1	1
...	17		070 371	BLANK, snap-in nyl 1.093/1.125mtg hole	1	1	1
...	18		162 891	LABEL, warning electric shock	1	1	1
...	18		179 563	LABEL, warning electric shock (CE models only)	1	1	1
...	19		+172 587	COVER, stud output	1	1	1
...	20		160 935	CLIP, spring	3	3	3
...	21		601 835	NUT, 10-32 brs	2	2	2
...			010 913	WASHER, flat .218 ID x .460 OD x .031thk brs	1	1	1
...	22		038 887	STUD, pri bd brs 10-32 x 1.375	1	1	1
...	23	S3,4	011 609	SWITCH, tgl SPDT 15A 125VAC	2	2	2
...	24	R1	035 897	POTENTIOMETER, CP std slot 1/T 2W 1K ohm	1	1	1
...		CR1	188 184	RELAY, encl 24/120VAC DPDT (Prior to KH537961)	1	1	1
...	25	PC2	158 791	CIRCUIT CARD, digital meter (Prior to KG141349)	1		
...	25	PC2	226 095	CIRCUIT CARD, digital meter (Eff w/KG141349)	1		
...	25	PC2	158 791	CIRCUIT CARD, digital meter (Prior to KG141349)	1		
...	25	PC2	226 095	CIRCUIT CARD, digital meter (Eff w/KG141349)	1		
...	25	PC2	158 791	CIRCUIT CARD, digital meter (Prior to KG141349)	1		
...	25	PC2	226 095	CIRCUIT CARD, digital meter (Eff w/KG141349)	1		
...		PLG10	153 501	CONNECTOR & SOCKETS	1	1	1
...		PLG11	148 439	CONNECTOR & SOCKETS	1	1	1
...	26		165 316	STAND-OFF, 6-32 x .875 lg (Prior to KJ209453)	4	4	4
...	26		192 174	STAND-OFF (Eff w/KJ209453)	4	4	4
...	27			NAMEPLATE, (order by model and serial number)	1	1	1
...			162 815	PANEL, front upper	1	1	1

# Eff w/KF790532 Thru KK129841

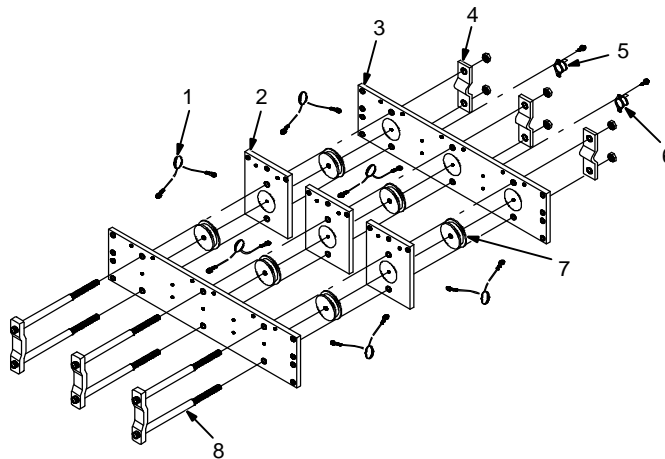
Item No.	Dia. Mkgs.	Part No.	Description	Quantity		
				302	452	652

**Figure 10-2. Panel, Front w/Components (Figure 10-1 Item 33)  
(Continued)**

... 28	... S2	... 159 039	.. SWITCH, rocker SPDT 15A 125VAC	1	1	1
...	... PLG2	... 185 626	.. CONNECTOR, body 56 series	1	1	1
... 29	... PL2	... 159 522	.. LED, yellow	1	1	1
... 30	...	... 159 036	.. LENS, LED clear	1	1	1
... 31	...	... 097 924	.. KNOB, pointer	1	1	1
... 32	...	... 010 381	.. CONNECTOR, rectifier	2	2	2
... 33	...	... 005 107	.. BOLT, crg stl .250-20 x .750 GR5 pld	6	6	6

◆ Part of Option 043 146 Ground Current Sensor

+When ordering a component originally displaying a precautionary label, the label should also be ordered.  
BE SURE TO PROVIDE MODEL AND SERIAL NUMBER WHEN ORDERING REPLACEMENT PARTS.



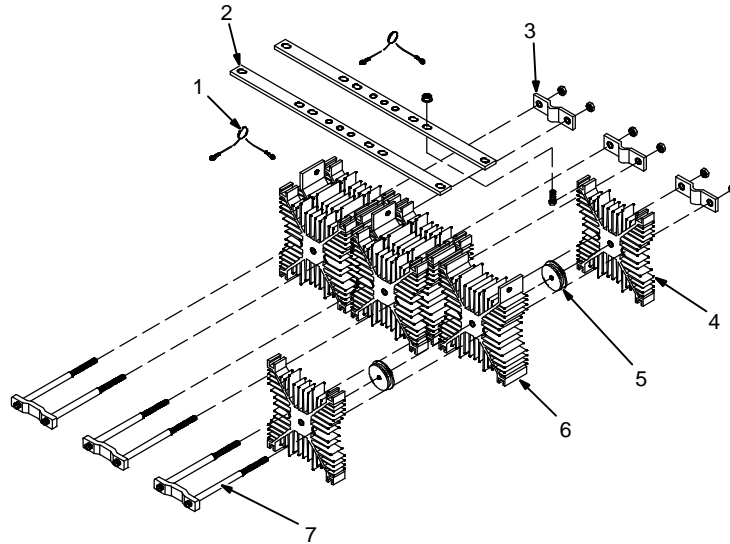
ST-800 697-C

**Figure 10-3. Rectifier, Si Diode SR1 (302 Model)**

Item No.	Dia. Mkgs.	Part No.	Description	Quantity
<b>SR1      175 070      Figure 10-3. Rectifier, Si Diode (302 Model) (Figure 10-1 Item 34)</b>				
... 1	... C7-12	... 031 688	.. CAPACITOR, cer disc .01uf 1000VDC (Prior to KF997417)	6
... 1	... C7-12	... 048 420	.. CAPACITOR, cer disc .01uf 1000VDC (Eff w/KF997417)	6
... 2	...	... 162 826	.. HEAT SINK, rect (Prior to KF997417)	3
... 2	...	... 177 316	.. HEAT SINK, rect (Eff w/KF997417)	3
... 3	...	... 162 825	.. HEAT SINK, rect (Prior to KF997417)	2
... 3	...	... 177 317	.. HEAT SINK, rect (Eff w/KF997417)	2
... 4	...	... 083 884	.. CLAMP, thyristor rectifier (Prior to KF997417)	3
... 4	...	... 188 692	.. CLAMP, thyristor rectifier (Eff w/KF997417)	3
... 5	... TP3	... 181 782	.. THERMOSTAT, NC (Prior to KH544917)	1
... 5	... TP3	... 185 679	.. THERMOSTAT, NC (Eff with KH544917)	1
... 6	... TP6	... 168 898	.. THERMOSTAT, NC (fan control circuit) (Prior to KH544917)	1
... 6	... TP6	... 206 083	.. THERMOSTAT, NC (fan control circuit) (Eff with KH544917)	1
... 7	... SCR1-6	... 161 668	.. THYRISTOR, SCR 300A 300V hockey puck	6
...	...	... 028 516	.. PIN, spring CS .125 x .250 (Prior to KF997417)	3
... 8	...	... 166 667	.. CLAMP, spring thyristor rectifier	3
...	... PLG1	... 158 720	.. CONNECTOR & SOCKETS	1



# Eff w/KF790532 Thru KK129841



ST-800 696-A

**Figure 10-4. Rectifier, SCR Main SR1 (452 & 652 Model)**

Item No.	Dia. Mkgs.	Part No.	Description	Quantity	
<b>SR1</b>			<b>Figure 10-4. Rectifier, SCR Main (452 &amp; 652 Model)</b>	175 071	175 072
			<b>(Figure 10-1 Item 34)</b>		
...	1	C7-12	.. CAPACITOR, cer disc .01uf 1000VDC (Prior to KF970957)	6	6
...	1	C7-12	.. CAPACITOR, cer disc .01uf 1000VDC (Eff w/KF970957)	6	6
...	2	164 634	.. BUS BAR, rectifier (Prior to KF970957)	2	2
...	2	176 168	.. BAR, mtg rectifier (Eff w/KF970957)	2	2
...		161 089	.. BAR, clamp rectifier (Prior to KF970957)	2	2
...	3	082 694	.. CLAMP, thyristor rectifier 5.500 (Prior to KF970957)	3	3
...	3	166 667	.. CLAMP, spring thyristor rectifier (Eff w/KF970957)	3	3
...	4	160 962	.. HEAT SINK, rectifier snowflake .800	6	6
...	5	SCR1-6	.. THYRISTOR, SCR 300A 300V hockey puck	6	
...	5	SCR1-6	.. THYRISTOR, SCR 865A 300V hockey puck	6	
...	6	160 961	.. HEAT SINK, rectifier snowflake 1.600	3	3
...	7	188 691	.. CLAMP, thyristor rectifier (Eff w/KF970957)	3	3
...		PLG1	.. CONNECTOR & SOCKETS	1	1
...		TP3	.. THERMOSTAT, rectifier	1	1
...		TP6	.. THERMOSTAT, rectifier (fan control circuit)	1	1

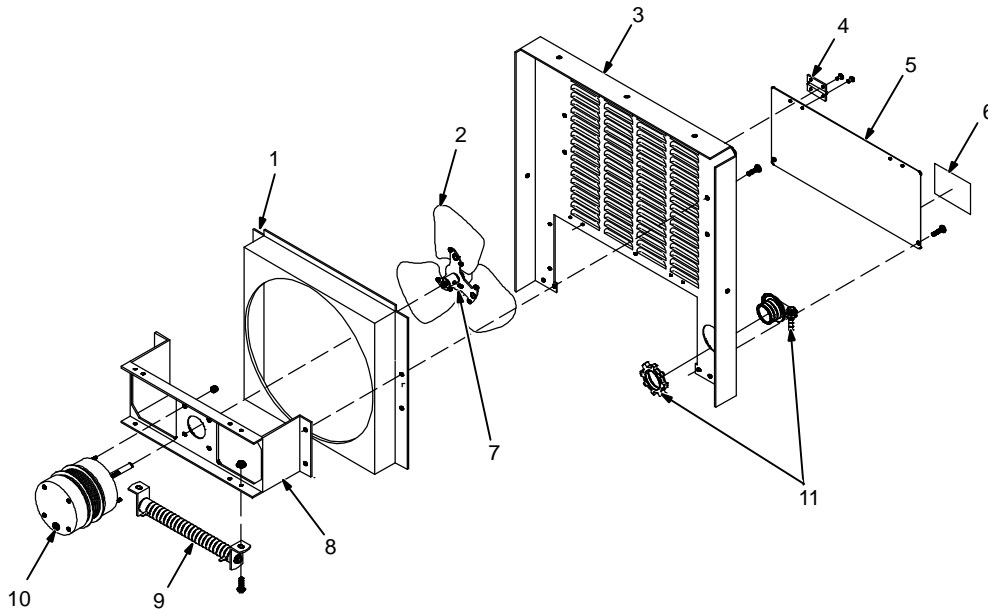
BE SURE TO PROVIDE MODEL AND SERIAL NUMBER WHEN ORDERING REPLACEMENT PARTS.

# Eff w/KF790532 Thru KK129841

Item No.	Dia. Mkgs.	Part No.	Description	Quantity
----------	------------	----------	-------------	----------

**Figure 10-5. Panel, Rear w/Components (Figure 10-1 Item 19)**

...	1	124 275	.. CHAMBER, plenum 14 in (Prior to KF969677)	1
...	1	173 283	.. CHAMBER, plenum 14 in (Eff w/KF969677)	1
...	2	180 165	.. BLADE, fan 14 in 3wg 23deg .375 bore CCW	1
...	3	162 807	.. PANEL, rear	1
...	4	168 343	.. HINGE, door primary	2
...	5	+162 818	.. DOOR, access primary	1
...	6	217 733	.. LABEL, warning electric shock & input power (EN/FR)	1
...	6	179 290	.. LABEL, warning electric shock (CE models only))	1
...	7	602 177	.. SCREW, set .250-20 x .250knrlpt sch stl	2
...	8	124 274	.. BRACKET, mtg fan motor (Eff w/KF969677)	1
...	9	R3	.. RESISTOR, WW fxd 375W 5 ohm	1
...	10	FM	.. MOTOR, 1/12HP 230V 1550RPM 50/60Hz .83A	1
...	11	010 467	.. CONNECTOR, clamp cable 1.250	1



**Figure 10-5. Panel, Rear w/Components**

ST-800 707-A

+When ordering a component originally displaying a precautionary label, the label should also be ordered.  
**BE SURE TO PROVIDE MODEL AND SERIAL NUMBER WHEN ORDERING REPLACEMENT PARTS.**



TM-223Z

2015-10

**Processes**



Gas Metal Arc (MIG) Welding  
Gas Metal Arc-Pulsed Welding  
Flux Cored Arc Welding  
Submerged Arc Welding  
(452/652 Only)



Air Carbon Arc Cutting  
and Gouging (452/652 Only)

**Description**



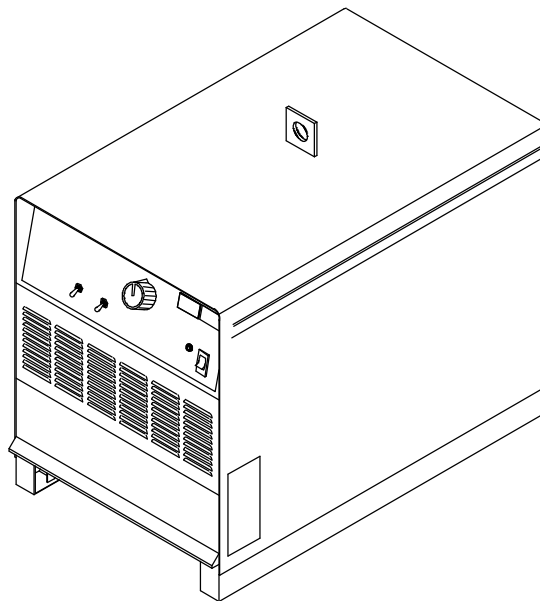
Arc Welding Power Source

# Deltaweld<sup>®</sup> Series CE And Non-CE

## PARTS LIST

**Eff w/KK129842 And Following**


For OM-223 (166 538) Revision T And Following



Visit our website at  
[www.MillerWelds.com](http://www.MillerWelds.com)

**302, 452, 652 (60 Hz), 402, 602, 852 (50/60 Hz)**

# SECTION 11 – PARTS LIST FOR KK129842 And Following

 Hardware is common and not available unless listed.

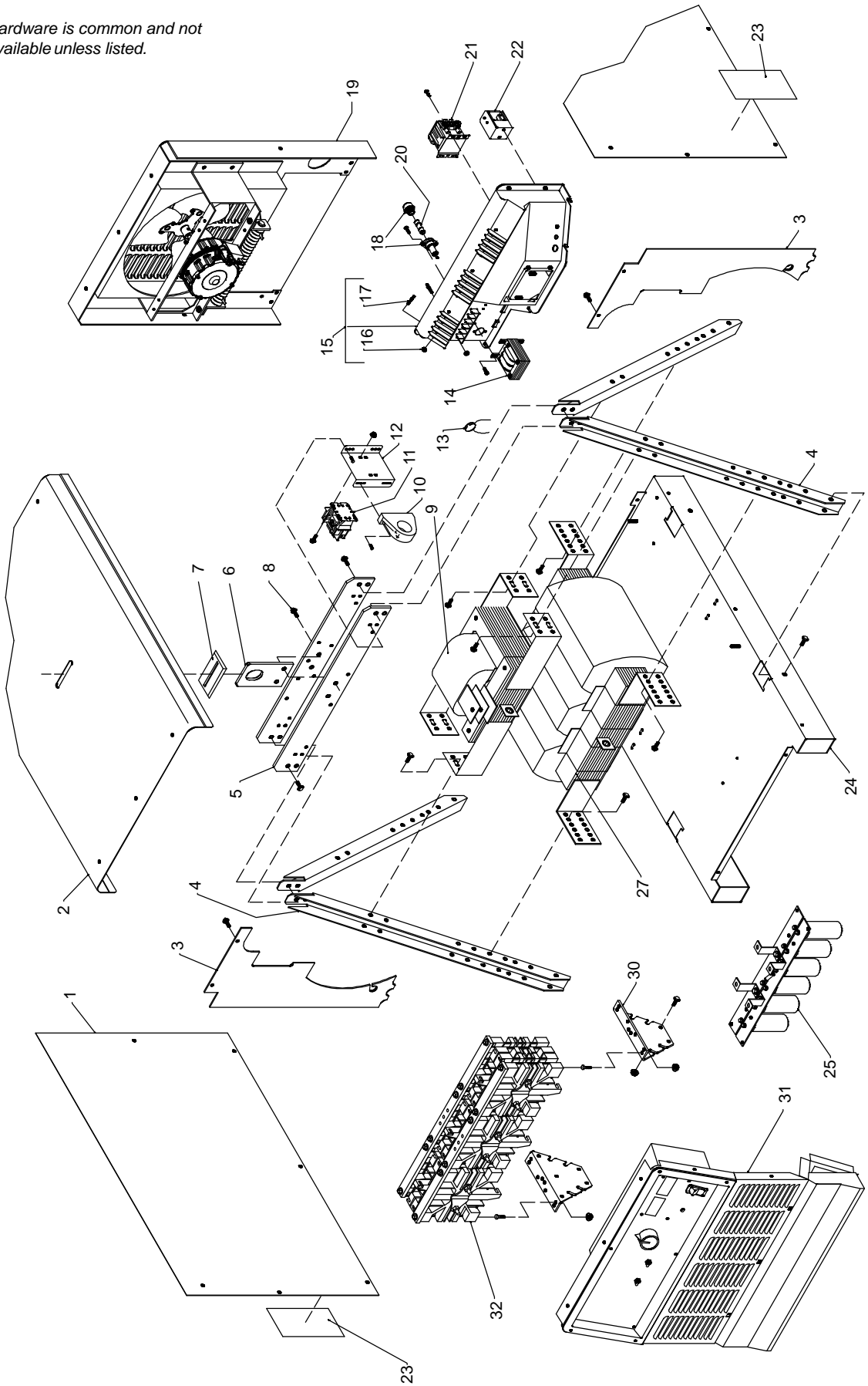


Figure 11-1 Main Assembly (452 60 Hz Model Illustrated)

800 992-K

# Eff w/KK129842 And Following

Item No.	Dia. Mkgs.	Part No.	Description	Quantity		
				Model	302	452
<b>Figure 11-1 Main Assembly (302, 452, And 652 60 Hz Models)</b>						
1		+179430	PANEL, side		2	
1		+179432	PANEL, side	2		2
2		179429	COVER, top	1		
2		179431	COVER, top	1		1
3		164699	BAFFLE, air	2	2	
3		164700	BAFFLE, air			2
4		162816	CHANNEL, upright	4	4	4
5		162820	BAR, mtg lift eye	2	2	2
6		162830	LIFT EYE	1	1	1
7		177279	GASKET, lift eye	1	1	1
8		604536	SCREW, .312-18 x 1.75 hexhd-pln gr 5	2	2	2
9	Z1	166362	STABILIZER	1		
9	Z1	166364	STABILIZER		1	
9	Z1	180066	STABILIZER			1
		164717	BUS BAR, stabilizer			1
10	HD1	168829	TRANSDUCER, current 1000A	1	1	1
	PLG14	115094	HOUSING PLUG+SKTS, (service kit)	1	1	1
11	CR6	195370	KIT, contactor	1	1	1
12		173605	BRACKET, mtg contactor	1	1	1
13	C21-23	163906	CAPACITOR, 50 and 60Hz	3	3	3
14	T2	159041	TRANSFORMER, control 50VA 24V 200/230/460 (60Hz)	1	1	
14	T2	159042	TRANSFORMER, control 50VA 24V 230/460/575 (60Hz)			
			(Prior to MC240046C)	1	1	1
14	T2	159042	TRANSFORMER, control 50VA 24V 230/460/575 (60Hz)			
			(Eff w/ MC240046C)	1	1	
14	T2	226704	TRANSFORMER, control 110VA 24V 230/460/575 (60Hz)			
			(Eff w/ MC240046C thru MD080005C)			1
14	T2	159042	TRANSFORMER, control 50VA 24V 230/460/575			
			(Eff w/MD080006C)	1	1	1
15	TE1	159244	PRIMARY BOX, (includes)	1	1	1
16		601835	NUT, 10-32 brs	24	24	24
17		038887	STUD, pri bd brs 10-32 x 1.375	24	24	24
		010913	WASHER, flat .218 ID brs	24	24	24
		601835	NUT, 10-32 brs	24	24	24
		038618	LINK, jumper term bd pri	8	8	8
18		159034	HOLDER, fuse mintr	1	1	1
19		Figure 11-5	PANEL, rear w/components	1	1	1
20	F1	*156065	FUSE, crtg .5A 600V time delay	1	1	1
21	W	160760	CONTACTOR, def prp 40A 3P 24VAC (Prior to MC280026C)	1		
21	W	180270	CONTACTOR, def prp 40A 3P 24VAC coil w/boxlug			
			Eff w/MC280026C)	1		
21	W	160793	CONTACTOR, def prp 60A 3P 24VAC (prior to MC280026C)		1	
21	W	254598	CONTACTOR, def prp 60A 3P 24VAC coil w/boxlug			
			(Eff w/MC280026C)		1	
21	W	160794	CONTACTOR, def prp 75A 3P 24V (Prior to MC280026C)			1
21	W	258661	CONTACTOR, def prp 75A 3P 24VAC coil w/boxlug			
			(Eff w/MC280026C)			1
22	CR4	◆140750	SWITCH, reed	1	1	1
23		217136	LABEL, warning electric shock	2	2	2
24		163533	BASE	1		
24		163359	BASE		1	1
25	C1	182661	CAPACITOR ASSEMBLY, (includes) (Prior to LE299354)	1		
		163535	CAPACITOR, elctlt 16000uf 60VDC	6		
	R6	140002	RESISTOR, WW fxd 10W 500 ohm	1		
		162817	BUS BAR, capacitor	2		
		162799	BRACKET, mtg capacitor	2		

# Eff w/KK129842 And Following

Item No.	Dia. Mkgs.	Part No.	Description	Quantity		
				302	452	652
<b>Figure 11-1 Main Assembly (302, 452 And 652 60 Hz Models) (continued)</b>						
...	25	C1	230732 .. CAPACITOR ASSEMBLY, Neg (includes) (Eff w/LE299354)	1		
			163535 .. CAPACITOR, elctlt 16000uf 60VDC	6		
		R6	230730 .. RESISTOR ASSY, WW fxd 10W 500 ohm	1		
			162817 .. BUS BAR, capacitor	2		
			182660 .. BRACKET, mtg capacitor	2		
...	25	C1	182661 .. CAPACITOR ASSEMBLY, (includes) (Prior to LE312226)	1	1	1
			163535 .. CAPACITOR, elctlt 16000uf 60VDC	6	6	6
		R6	140002 .. RESISTOR, WW fxd 10W 500 ohm	1	1	1
			162817 .. BUS BAR, capacitor	2	2	2
			182660 .. BRACKET, mtg capacitor	4	4	4
...	25	C1	230756 .. CAPACITOR ASSY, Pos/Neg (includes) (Eff w/LE312226)	1	1	1
			163535 .. CAPACITOR, elctlt 16000uf 60VDC	6	6	6
		R6	230730 .. RESISTOR ASSY, WW fxd 10W 500 ohm	1	1	1
			162817 .. BUS BAR, capacitor	2	2	2
			182660 .. BRACKET, mtg capacitor	4	4	4
...	27	T1	189832 .. TRANSFORMER, pwr main 200/230/460 (Prior to LE273534)	1		
...	27	T1	218380 .. TRANSFORMER, pwr main 200/230/460 (Eff w/LE273534 thru MD10075C)	1		
...	27	T1	262177 .. TRANSFORMER, pwr main 200/230/460 (Eff w/MD210076C)	1		
...	27	T1	189833 .. TRANSFORMER, pwr main 230/460/575 (Prior to LE273407)	1		
...	27	T1	218381 .. TRANSFORMER, pwr main 230/460/575 (Eff w/LE273407 thru MD230132C)	1		
...	27	T1	262188 .. TRANSFORMER, pwr main 230/460/575 (Eff w/MD230133C)	1		
...	27	T1	189835 .. TRANSFORMER, pwr main 200/230/460 (Prior to LE300606)	1		
...	27	T1	218384 .. TRANSFORMER, pwr main 200/230/460 (Eff w/LE300606 thru MD320060C)	1		
...	27	T1	262195 .. TRANSFORMER, pwr main 200/230/460 (Eff w/MD320061C)	1		
...	27	T1	189836 .. TRANSFORMER, pwr main 230/460/575 (Prior to LE300548)	1		
...	27	T1	218385 .. TRANSFORMER, pwr main 230/460/575 (Eff w/LE300548 thru MD330147C)	1		
...	27	T1	262201 .. TRANSFORMER, pwr main 230/460/575 (Eff w/MD330148C)	1		
...	27	T1	189839 .. TRANSFORMER, pwr main 230/460/575 (Prior to LE309428)	1		
...	27	T1	218389 .. TRANSFORMER, pwr main 230/460/575 (Eff w/LE309428 thru MD340160C)	1		
...	27	T1	262209 .. TRANSFORMER, pwr main 230/460/575 (Eff w/MD340161C)	1		
		TP1,2	175405 .. THERMOSTAT, NC (Included w/T1)	2	2	2
		TP4,5	168891 .. THERMOSTAT, NC (Included w/T1) (fan control circuit)	2	2	2
		PLG13	189873 .. HOUSING, plug pin/skt (service kit) (Prior to LE273407)	1	1	1
		PLG13	218413 .. HOUSING, plug pin/skt (service kit) (Eff w/LE273407)	1	1	1
		RC13	189874 .. HOUSING, plug pin/skt (service kit) (Prior to LE273407)	1	1	1
		RC13	218408 .. HOUSING, plug pin/skt (service kit) (Eff w/LE273407)	1	1	1
...	30		161294 .. BRACKET, mtg rectifier	2	2	2
...	31		Figure 11-2 .. PANEL, front w/components	1	1	1
...	32	SR1	175070 .. RECTIFIER, si diode (Figures 11-3)	1		
...	32	SR1	192672 .. RECTIFIER, SCR main (Figure 11-4)	1		
...	32	SR1	192671 .. RECTIFIER, SCR main (Figure 11-4)	1		

◆ Prior to Serial No. LC026702, Ground Current Sense Kit 043 146 consisted of both relay CR5 (006 393) and reed relay CR4 (140 750). Effective with Serial No. LC026702, Ground Current Sense Kit 043 146 changed to Part No. 195 048, and no longer contains relay CR5 (006 393), as CR5 is now standard in the machine.

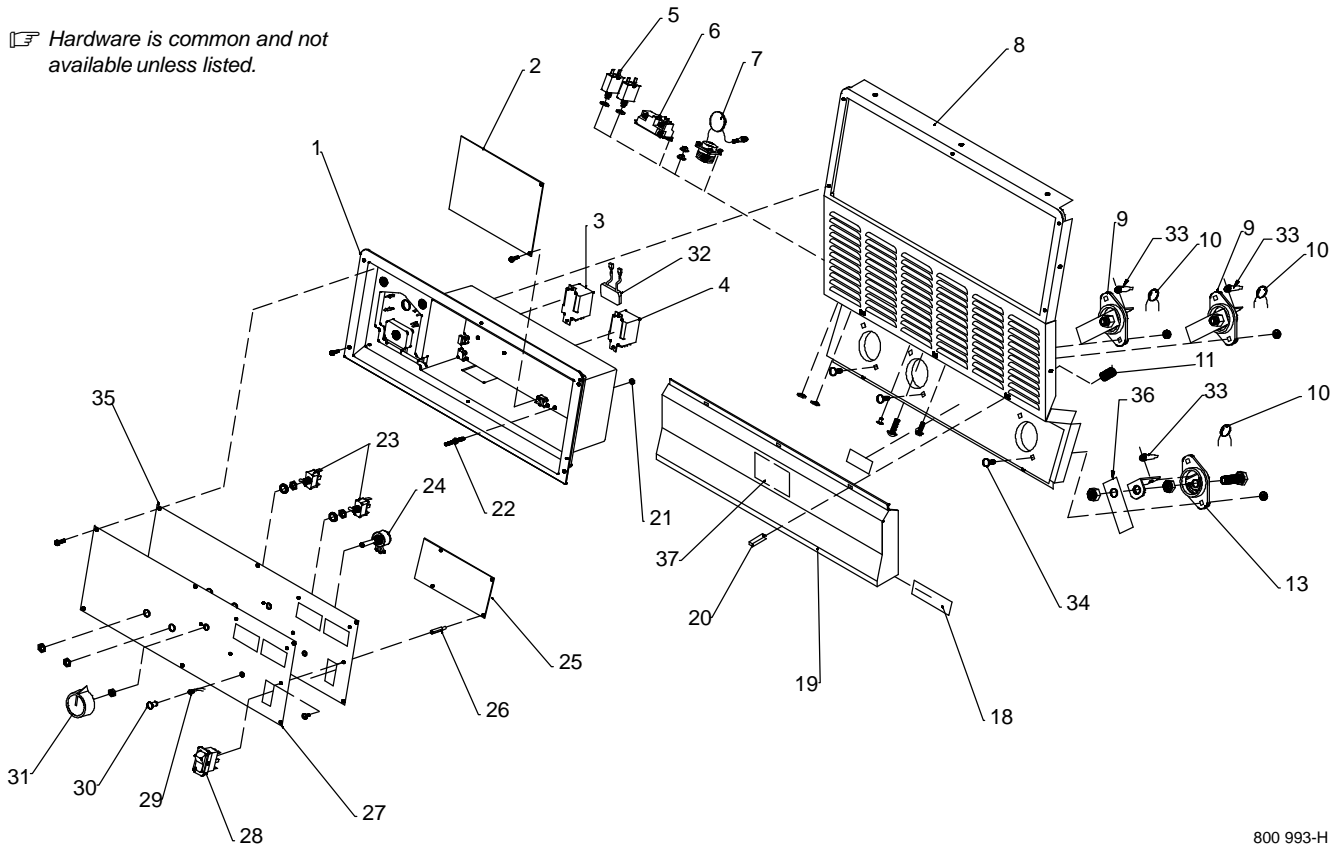
+When ordering a component originally displaying a precautionary label, the label should also be ordered.

\*Recommended Spare Parts.

**To maintain the factory original performance of your equipment, use only Manufacturer's Suggested Replacement Parts. Model and serial number required when ordering parts from your local distributor.**

# Eff w/KK129842 And Following

Hardware is common and not available unless listed.



800 993-H

**Figure 11-2 Panel, Front w/Components (Figure 11-1 Item 31)**

Item No.	Dia. Mkgs.	Part No.	Description	Quantity		
				302	452	652

**Figure 11-2 Panel, Front w/Components (302, 452 And 652 60 Hz Models)**

1		159863	ELECTRONICS BOX	1	1	1
		PLG6 ♦♦168847	HOUSING PLUG PINS+SKTS, (service kit) (<♦♦1)	1	1	1
		RC6 ♦♦168845	HOUSING RCPT PINS+SKTS, (service kit) (<♦♦1)	1	1	1
		PLG6/RC6 ♦♦268852	HOUSING RCPT PINS+SKTS, (service kit) (<♦♦2)	1	1	1
		PLG7 ♦♦152249	HOUSING PLUG PINS+SKTS, (service kit) (<♦♦1)	1	1	1
		RC7 ♦♦168846	HOUSING RCPT PINS+SKTS, (service kit) (<♦♦1)	1	1	1
		PLG7/RC7 ♦♦267728	HOUSING RCPT PINS+SKTS, (service kit) (<♦♦2)	1	1	1
2	PC1	185583	CIRCUIT CARD, control (60Hz) 200/230/460 (Prior to LC026702)	1		
			230/460/575 (Prior to LC078929)	1		
2	PC1	208769	CIRCUIT CARD, control (60Hz) 200/230/460 (Eff w/LC026702 thru MF210031C)	1		
			230/460/575 (Eff w/LC078929 thru MF210031C)	1		
2	PC1	267652	CIRCUIT CARD, control (Eff w/MF210032C)	1		
2	PC1	186424	CIRCUIT CARD, control (60Hz) 200/230/460 (Prior to LC076281)	1		
			230/460/575 (Prior to LC091813)	1		
2	PC1	208197	CIRCUIT CARD, control (60Hz) 200/230/460 (Eff w/LC076281 thru MF240058C)	1		
			230/460/575 (Eff w/LC091813 thru MF240058C)	1		
2	PC1	267644	CIRCUIT CARD, control (Eff w/MF240059C)	1		
2	PC1	186427	CIRCUIT CARD, control (Prior to LC121996)			1
2	PC1	208772	CIRCUIT CARD, control (Eff w/LC121996 thru MF350033C)			1
2	PC1	267655	CIRCUIT CARD, control (Eff w/MF350034C)			1
		PLG1	158720	HOUSING PLUG+SKTS, (service kit) (see Figures 11-3 And 11-4)		

# Eff w/KK129842 And Following

Item No.	Dia. Mkgs.	Part No.	Description	Quantity		
				302	452	652
<b>Figure 11-2 Panel, Front w/Components (302, 452 And 652 60 Hz Models) (continued)</b>						
.....	PLG3	◆◆169240	.. HOUSING PLUG PINS+SKTS, (service kit) (◆◆1)	1	1	1
.....	PLG3	◆◆162382	.. HOUSING PLUG PINS+SKTS, (service kit) (◆◆2)	1	1	1
.....	PLG4	◆◆148439	.. HOUSING PLUG PINS+SKTS, (service kit) (◆◆1)	1	1	1
.....	PLG4	◆◆115091	.. HOUSING PLUG PINS+SKTS, (service kit) (◆◆2)	1	1	1
.....	PLG5	◆◆152249	.. HOUSING PLUG PINS+SKTS, (service kit) (◆◆1)	1	1	1
.....	PLG5	◆◆131052	.. HOUSING PLUG PINS+SKTS, (service kit) (◆◆2)	1	1	1
... 3	CR3	006393	.. RELAY, encl 24VAC DPDT (Prior to KK271635)	1	1	1
... 3	CR3	052964	.. RELAY, encl 24VDC DPDT (Eff w/KK271635)	1	1	1
... 4	CR5	006393	.. RELAY, encl 24VAC DPDT (◆Optional prior to LC026702)	1	1	1
... 5	CB1,2	093995	.. SUPPLEMENTARY PROTECTOR, man reset			
			1P 15A 250VAC	2	2	2
... 6	RC9	604176	.. RECEPTACLE, str dx grd 2P3W 15A 125V	1	1	1
... 7		163855	.. CONNECTOR/CAPACITOR, w/leads (includes)			
			(Prior to LB129247)	1	1	1
	RC8	143976	.. RCPT W/SKTS, (service kit)	1	1	1
		079534	.. CONN, cir ms/cpc skt pushin 14-ga .080-.100 insu	14	14	14
... C3, 6, 13, 14		097749	.. CAPACITOR, cer disc .05 uf 500 VDC strip	4	4	4
... 7		203778	.. CONNECTOR/CAPACITOR, w/leads (includes)			
			(eff w/LB129247)	1	1	1
	RC8	143976	.. RCPT w/SCKTS (service kit)	1	1	1
... C3, 6, 13, 14		097749	.. CAPACITOR, cer disc .05 uf 500 VDC strip	4	4	4
... 8		162802	.. PANEL, front (Prior to LB129247)	1	1	1
... 8		204143	.. PANEL, front (Eff w/LB129247)	1	1	1
... 9	POS	181245	.. TERMINAL, pwr output red	2	2	2
... 10	C2,4,5	128750	.. CAPACITOR, cer disc .1uf 500VDC	3	3	3
... 11		161303	.. SPRING, cprsn .600 OD x .072 wire x 1.500 lg	3	3	3
	R4,5	136076	.. RESISTOR, WW fxd 30W 200 ohm (Prior to LC026702)	2	2	2
... 13	NEG	181246	.. TERMINAL, pwr output black	1	1	1
... 14			.. PLATE, control lower (Order By Model And Serial Number)	1	1	1
	1T	159040	.. BLOCK, term 20A 12P (Prior to LB129247)	1	1	1
		162828	.. PANEL, mtg rcpt/terminal strip (Prior to LB129247)	1	1	1
		070371	.. BLANK, snap-in nyl 1.093/1.125mtg hole (Prior to LB129247)	1	1	1
... 18		217865	.. LABEL,warning electric shock and reduced air	1	1	1
... 19		+172587	.. COVER, stud output	1	1	1
... 20		160935	.. CLIP, spring	3	3	3
... 21		601835	.. NUT, 10-32 brs	2	2	2
		010913	.. WASHER, flat .218 ID x .460 OD x .031thk brs	1	1	1
... 22		038887	.. STUD, pri bd brs 10-32 x 1.375	1	1	1
... 23	S3,4	011609	.. SWITCH, tgl SPDT 15A 125VAC	2	2	2
... 24	R1	035897	.. POTENTIOMETER, CP std slot 1/T 2W 1K ohm			
			(Prior to LC026702)	1	1	1
... 24	R1	198087	.. POTENTIOMETER, CP std slot 1/T 2W 1K ohm			
			(Eff w/LC026702)	1	1	1
... 25	PC2	◆◆231149	.. CIRCUIT CARD, digital meter (◆◆1)	1	1	1
... 25	PC2	◆◆271009	.. CIRCUIT CARD, digital meter (◆◆2)	1	1	1
.....	PLG10	◆◆153501	.. HOUSING PLUG PINS+SKTS, (service kit) (◆◆1)	1	1	1
.....	PLG10	◆◆115093	.. HOUSING PLUG + SOCKETS, (service kit) (◆◆2)	1	1	1
.....	PLG11	◆◆148439	.. HOUSING PLUG PINS+SKTS, (service kit) (◆◆1)	1	1	1
.....	PLG11	◆◆115091	.. HOUSING PLUG + SOCKETS, (service kit) (◆◆2)	1	1	1
... 26		192174	.. STAND-OFF	4	4	4
... 27			.. NAMEPLATE, (order by model and serial number)	1	1	1
... 28	S2	159039	.. SWITCH, rocker SPDT 15A 125VAC (Prior to MD400078C)	1	1	1
... 28	S2	261608	.. SWITCH, rocker SPDT 10A 24VDC (Eff w/MD400078C)	1	1	1
.....	PLG2	185626	.. CONNECTOR, body 56 series (Prior to MD400078C)	1	1	1
.....	PLG2	262501	.. CONNECTOR, body 12 pos (Eff w/MD400078C)	1	1	1



Item No.	Dia. Mkgs.	Part No.	Description	Quantity		
				Model		
				302	452	652

**Figure 11-2 Panel, Front w/Components (302, 452 And 652 60 Hz Models) (continued)**

... 29	PL2	159522	.. LED, yellow	1	1	1
... 30		159036	.. LENS, LED clear	1	1	1
... 31		097924	.. KNOB, pointer	1	1	1
... 32	SN1	230908	.. SNUBBER, assy (Eff w/KK271635)	1	1	1
... 33		010381	.. CONNECTOR, rectifier	2	2	2
... 34		005107	.. BOLT, crg stl .250-20 x .750 GR5 pld	6	6	6
... 35		162815	.. PANEL, front upper	1	1	1
... 36		228672	.. LABEL, weld cable lug	3	3	3
... 37		227980	.. LABEL, caution output terminal connection	1	1	1

◆ Prior to Serial No. LC026702, Ground Current Sense Kit 043 146 consisted of both relay CR5 (006 393) and reed relay CR4 (140 750). Effective with Serial No. LC026702, Ground Current Sense Kit 043 146 changed to Part No. 195 048, and no longer contains relay CR5 (006 393), as CR5 is now standard in the machine.

+When ordering a component originally displaying a precautionary label, the label should also be ordered.

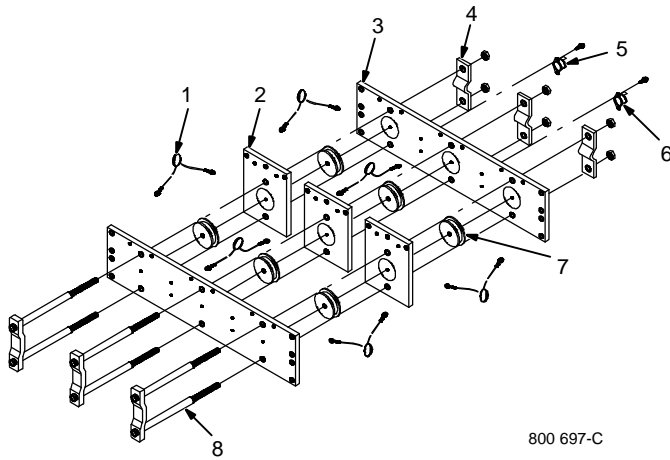
◆◆ 1 – 302 Models Prior To MF210032C  
 452 Models Prior To MF240059C  
 652 Models Prior To MF350034C

◆◆ 2 – 302 Models Eff w/MF210032C And Following  
 452 Models Eff w/MF240059C And Following  
 652 Models Eff w/MF350034C And Following

**To maintain the factory original performance of your equipment, use only Manufacturer's Suggested Replacement Parts. Model and serial number required when ordering parts from your local distributor.**

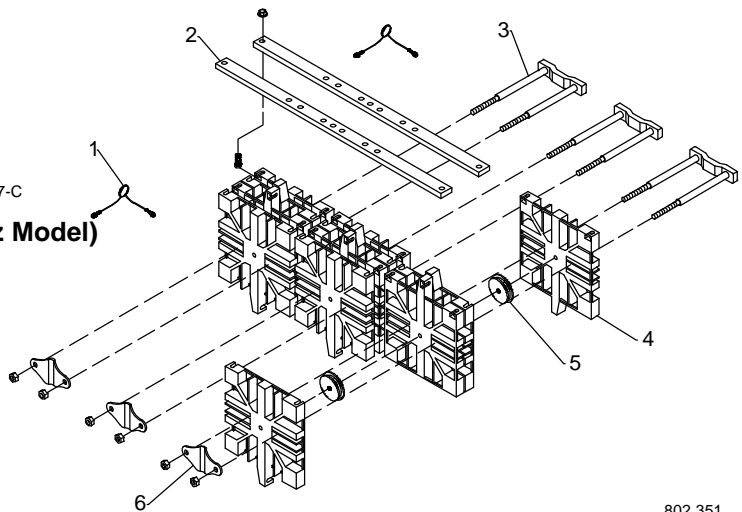
# Eff w/KK129842 And Following

Item No.	Dia. Mkgs.	Part No.	Description	Quantity
<b>SR1 175 070 Figure 11-3 Rectifier, Si Diode (302 60 Hz Models) (Fig 11-1 Item 32)</b>				
1	C7-12	048420	CAPACITOR, cer disc .01uf 1000VDC	6
2		177316	HEAT SINK, rect	3
3		177317	HEAT SINK, rect	2
4		166667	CLAMP, thyristor rect	3
5	TP3	242651	THERMOSTAT, NC open 211F close 186F flange faston	1
6	TP6	206083	THERMOSTAT, NC (fan control circuit)	1
7	SCR1-6	161668	THYRISTOR, SCR 300A 300V hockey puck	6
	PLG1	158720	HOUSING PLUG+SKTS, (service kit)	1
8		188692	CLAMP, thyristor rectifier 4.250	3



**Figure 11-3 Rectifier, Si Diode SR1 (302 60 Hz Model)**

☐ Hardware is common and not available unless listed.



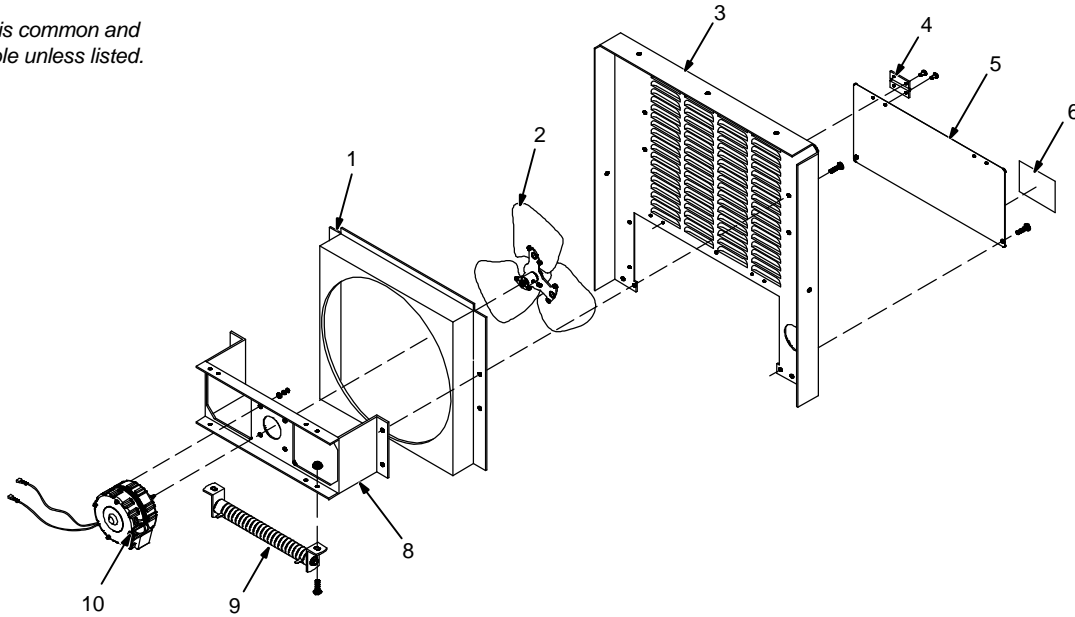
**Figure 11-4 Rectifier, SCR Main SR1 (452 & 652 60 Hz Model)**

Item No.	Dia. Mkgs.	Part No.	Description	Quantity
<b>SR1 Figure 11-4 Rectifier, SCR Main (452 &amp; 652 60 Hz Models) (Fig 11-1 Item 32)</b>				
				192 672   192 671
1	C7-12	048420	CAPACITOR, cer disc .01uf 1000VDC	6
2		191989	BAR, mtg rectifier	2
3		188691	CLAMP, thyristor rectifier 5.375	3
4		188839	HEAT SINK, rectifier snowflake .800	12
5	SCR1-6	161668	THYRISTOR, SCR 300A 300V hockey puck	6
5	SCR1-6	148091	THYRISTOR, SCR 865A 300V hockey puck	6
6		166667	CLAMP, spring thyristor rectifier 5.500	3
	PLG1	158720	HOUSING PLUG+SKTS, (service kit)	1
	TP3	192673	THERMOSTAT, rectifier	1
	TP6	192674	THERMOSTAT, rectifier (fan control circuit)	1

**To maintain the factory original performance of your equipment, use only Manufacturer's Suggested Replacement Parts. Model and serial number required when ordering parts from your local distributor.**

# Eff w/KK129842 And Following

☞ Hardware is common and not available unless listed.



800 707-F

**Figure 11-5 Panel, Rear w/Components**

Item No.	Dia. Mkgs.	Part No.	Description	Quantity
<b>Figure 11-5 Panel, Rear w/Components (302, 452 And 652 60 Hz Models)</b>				
...	1	173283	.. CHAMBER, plenum 14 in	1
...	2	180165	.. BLADE, fan 14 in 3wg 28deg .375 bore CCW	1
...	3	162807	.. PANEL, rear	1
...	4	168343	.. HINGE, door primary	2
...	5	+162818	.. DOOR, access primary	1
...	6	217733	.. LABEL,warning electric shock & input power (EN/FR)	1
...	8	124274	.. BRACKET, mtg fan motor	1
...	9	R3 114808	.. RESISTOR, WW fxd 375W 5 ohm	1
...	9	R7 ♦♦ 114808	.. RESISTOR, WW fxd 375W 5 ohm	1
...	10	FM 237398	.. MOTOR, 1/12HP 230V 1550RPM 50/60Hz .83A	1
...	11	010467	.. CONNECTOR, clamp cable 1.250 (Prior to MC330001U)	1

♦♦ Part of Option 043 286 Additional Resistor

+When ordering a component originally displaying a precautionary label, the label should also be ordered.

**To maintain the factory original performance of your equipment, use only Manufacturer's Suggested Replacement Parts. Model and serial number required when ordering parts from your local distributor.**

☐ Hardware is common and not available unless listed.

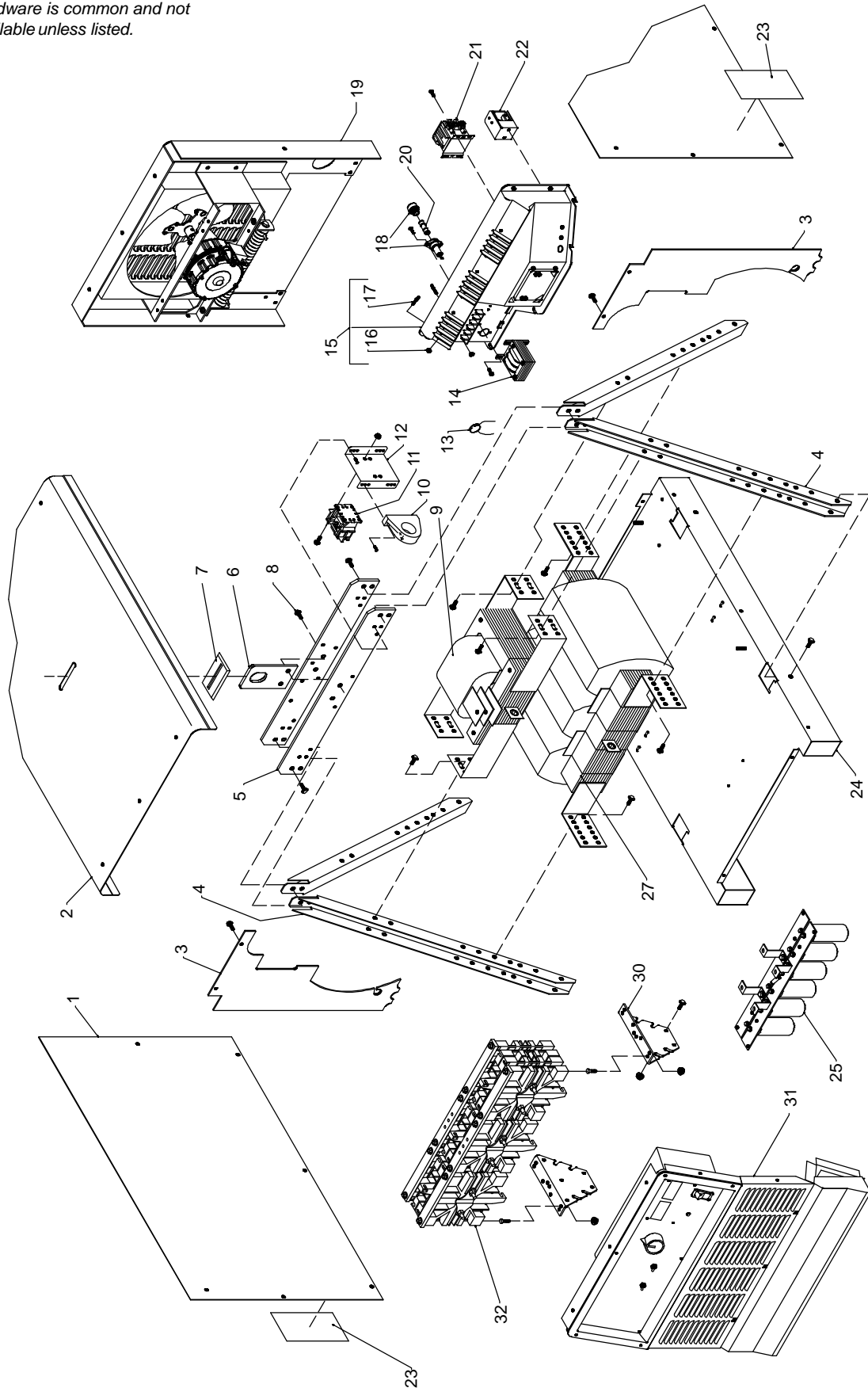


Figure 11-6 Main Assembly (602 50 Hz Model Illustrated)

# Eff w/KK129842 And Following

Item No.	Dia. Mkgs.	Part No.	Description	Quantity		
				402	602	852
<b>Figure 11-6 Main Assembly (402, 602 And 852 50 Hz Models)</b>						
1		+179430	PANEL, side	2		
1		+179432	PANEL, side	2	2	2
2		179429	COVER, top	1		
2		179431	COVER, top		1	1
3		164699	BAFFLE, air	2	2	
3		164700	BAFFLE, air			2
4		162816	CHANNEL, upright	4	4	4
5		162820	BAR, mtg lift eye	2	2	2
6		162830	LIFT EYE	1	1	1
7		177279	GASKET, lift eye	1	1	1
8		604536	SCREW, .312-18 x 1.75 hexhd-pln gr 5	2	2	2
9	Z1	166362	STABILIZER	1		
9	Z1	166364	STABILIZER		1	
9	Z1	180066	STABILIZER			1
		164717	BUS BAR, stabilizer			1
10	HD1	168829	TRANSDUCER, current 1000A	1	1	1
	PLG14	115094	HOUSING PLUG+SKTS, (service kit)	1	1	1
11	CR6	195370	KIT, contactor	1	1	1
12		173605	BRACKET, mtg contactor	1	1	1
13	C21-23	163906	CAPACITOR	3	3	3
13	C21-23	230733	CAPACITOR, (CE)	3	3	3
14	T2	159043	TRANSFORMER, control 50A 24V (Prior to MC240046C)	1	1	1
14	T2	159043	TRANSFORMER, control 50A 24V Eff w/MC240046C	1	1	
14	T2	229264	TRANSFORMER, control 110VA 24V220/380/400-415/440 pri (50Hz) Eff w/MC240046C thru MC080005C			1
14	T2	159043	TRANSFORMER, control 50A 24V (Eff w/MC080006C)	1	1	1
15	TE1	159244	PRIMARY BOX, (includes)	1	1	1
16		601835	NUT, 10-32 brs	24	24	24
17		038887	STUD, pri bd brs 10-32 x 1.375	24	24	24
		010913	WASHER, flat .218 ID brs	24	24	24
		601835	NUT, 10-32 brs	24	24	24
		038618	LINK, jumper term bd pri	8	8	8
18		159034	HOLDER, fuse mintr	1	1	1
19		Figure 11-10	PANEL, rear w/components	1	1	1
20	F1	*156065	FUSE, crtg .5A 600V time delay	1	1	1
21	W	160760	CONTACTOR, def prp 40A 3P 24VAC (Prior to MC240046C)	1		
21	W	180270	CONTACTOR, def prp 40A 3P 24VAC coil w/boxlug (Eff w/MC240046C)	1		
21	W	160793	CONTACTOR, def prp 60A 3P 24VAC (Prior to MC240046C)		1	
21	W	254598	CONTACTOR, def prp 60A 3P 24VAC coil w/boxlug (Eff w/MC240046C)		1	
21	W	160794	CONTACTOR, def prp 75A 3P 24V (Prior to MC240046C)			1
21	W	258661	CONTACTOR, def prp 75A 3P 24VAC coil w/boxlug (Eff w/MC240046C)			1
22	CR4	◆140750	SWITCH, reed	1	1	1
23		176254	LABEL, general precautionary wordless, intl	2	2	2
24		163533	BASE	1		
24		163359	BASE		1	1
25	C1	182661	CAPACITOR ASSEMBLY, (includes) (Prior to LE299354)	1		
		163535	CAPACITOR, elcltt 16000uf 60VDC	6		
	R6	140002	RESISTOR, WW fxd 10W 500 ohm	1		
		162817	BUS BAR, capacitor	2		
		162799	BRACKET, mtg capacitor	2		

# Eff w/KK129842 And Following

Item No.	Dia. Mkgs.	Part No.	Description	Quantity		
				402	602	852
<b>Figure 11-6 Main Assembly (402, 602 And 852 50 Hz Models) (continued)</b>						
... 25	C1	182661	CAPACITOR ASSEMBLY, (includes) (Prior to LE312226)	1		1
		163535	CAPACITOR, elctlt 16000uf 60VDC	6		6
	R6	140002	RESISTOR, WW fxd 10W 500 ohm	1		1
		162817	BUS BAR, capacitor	2		2
		182660	BRACKET, mtg capacitor	4		4
... 25	C1	230732	CAPACITOR ASSEMBLY, Neg (includes) (Eff w/LE299354)	1		
		163535	CAPACITOR, elctlt 16000uf 60VDC (Eff w/LE299354)	6		
	R6	230730	RESISTOR ASSY, (Eff w/LE299354)	1		
		162817	BUS BAR, capacitor (Eff w/LE299354)	2		
		182660	BRACKET, mtg capacitor (Eff w/LE299354)	4		
... 25	C1	230756	CAPACITOR ASSY, Pos/Neg (includes) (Eff w/LE312226)	1		1
		163535	CAPACITOR, elctlt 16000uf 60VDC (Eff w/LE312226)	6		6
	R6	230730	RESISTOR ASSY, (Eff w/LE312226)	1		1
		162817	BUS BAR, capacitor (Eff w/LE312226)	2		2
		182660	BRACKET, mtg capacitor (Eff w/LE312226)	4		4
... 27	T1	189834	TRANSFORMER, pwr main 380/400/440 (Prior to LE299319)	1		
... 27	T1	218382	TRANSFORMER, pwr main 380/400/440 (Eff w/LE299319 thru MD390137C)	1		
... 27	T1	262292	TRANSFORMER, pwr main 380/400/440 (Eff w/MD390138C)	1		
... 27	T1	189837	TRANSFORMER, pwr main 380/400/440 (Prior to LE312190)	1		
... 27	T1	218387	TRANSFORMER, pwr main 380/400/440 (Eff w/LE312190 thru MD390136C)	1		
... 27	T1	262306	TRANSFORMER, pwr main 380/400/440 (Eff w/ MD390137C)	1		
... 27	T1	189838	TRANSFORMER, pwr main 380/400/440 (Prior to LE289048)	1		
... 27	T1	218388	TRANSFORMER, pwr main 380/400/440 (Eff w/LE289048 thru MD320204C)	1		
... 27	T1	262310	TRANSFORMER, pwr main 380/400/440 (Eff w/MD320205C)	1		
	TP1,2	175405	THERMOSTAT, NC (Included w/T1)	2	2	2
	TP4,5	168891	THERMOSTAT, NC (Included w/T1) (fan control circuit)	2	2	2
	PLG13	189873	HOUSING, plug pin/skt (service kit) (Prior to LE273407)	1	1	1
	PLG13	218413	HOUSING, plug pin/skt (service kit) (Eff w/LE273407)	1	1	1
	RC13	189874	HOUSING, plug pin/skt (service kit) (Prior to LE273407)	1	1	1
	RC13	218408	HOUSING, plug pin/skt (service kit) (Eff w/LE273407)	1	1	1
... 30		161294	BRACKET, mtg rectifier	2	2	2
... 31		Figure 11-7	PANEL, front w/components	1	1	1
... 32	SR1	175070	RECTIFIER, si diode (Figures 11-8)	1		
... 32	SR1	192672	RECTIFIER, SCR main (Figure 11-4)	1		
... 32	SR1	192671	RECTIFIER, SCR main (Figure 11-4)	1		

◆ Prior to Serial No. LC026702, Ground Current Sense Kit 043 146 consisted of both relay CR5 (006 393) and reed relay CR4 (140 750). Effective with Serial No. LC026702, Ground Current Sense Kit 043 146 changed to Part No. 195 048, and no longer contains relay CR5 (006 393), as CR5 is now standard in the machine.

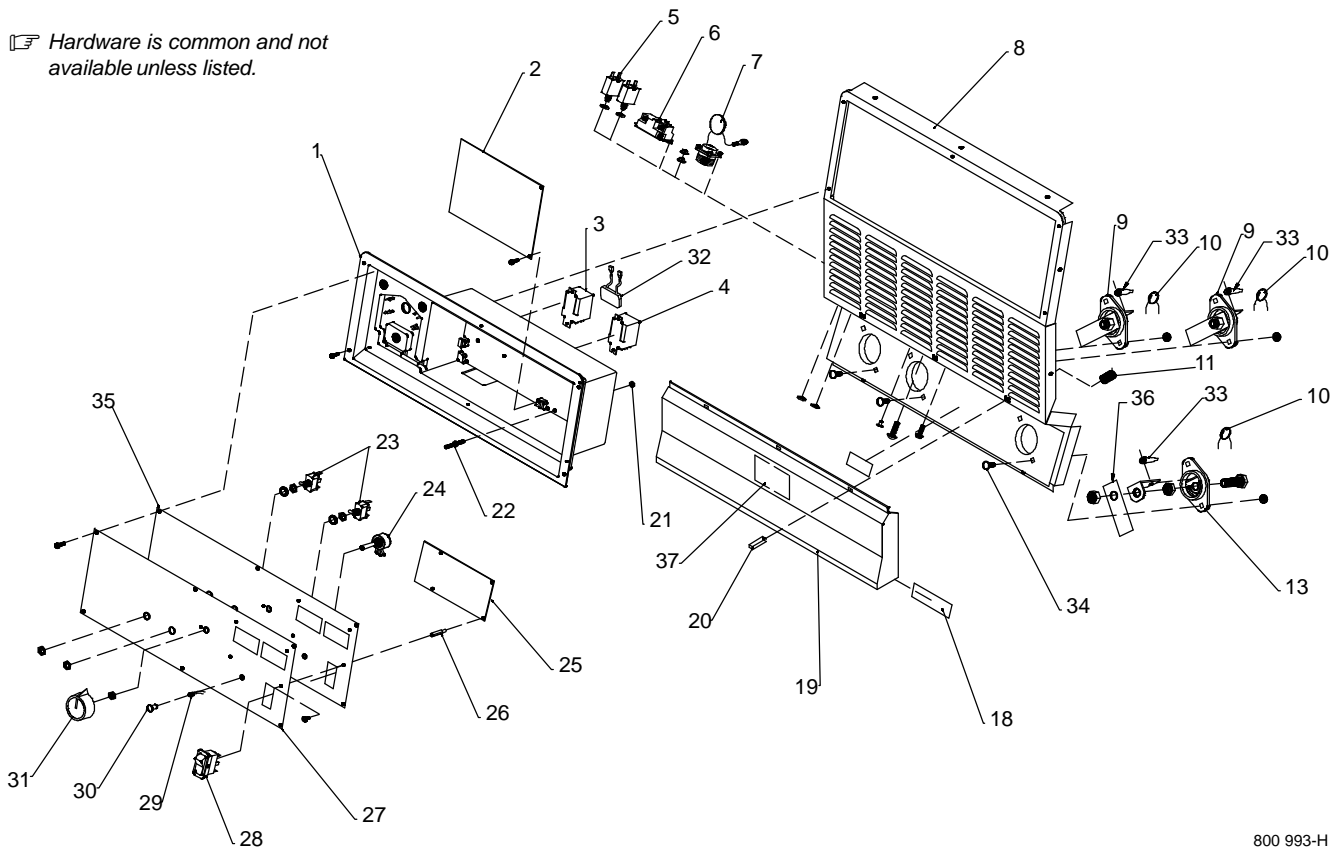
+When ordering a component originally displaying a precautionary label, the label should also be ordered.

\*Recommended Spare Parts.

**To maintain the factory original performance of your equipment, use only Manufacturer's Suggested Replacement Parts. Model and serial number required when ordering parts from your local distributor.**

# Eff w/KK129842 And Following

Hardware is common and not available unless listed.



800 993-H

**Figure 11-7 Panel, Front w/Components (Figure 11-6 Item 31)**

Item No.	Dia. Mkgs.	Part No.	Description	Quantity		
				402	602	852

**Figure 11-7 Panel, Front w/Components (402, 602 And 852 50 Hz Models)**

1		159863	ELECTRONICS BOX	1	1	1
		PLG6 ♦♦168847	HOUSING PLUG PINS+SKTS, (service kit) (<♦♦1)	1	1	1
		RC6 ♦♦168845	HOUSING RCPT PINS+SKTS, (service kit) (<♦♦1)	1	1	1
		PLG6/RC6 ♦♦268852	HOUSING RCPT PINS + SKTS, (service kit) (<♦♦2)	1	1	1
		PLG7 ♦♦152249	HOUSING PLUG PINS+SKTS, (service kit) (<♦♦1)	1	1	1
		RC7 ♦♦168846	HOUSING RCPT PINS+SKTS, (service kit) (<♦♦1)	1	1	1
		PLG7/RC7 ♦♦267728	HOUSING RCPT PINS + SKTS, (service kit) (<♦♦2)	1	1	1
2	PC1	186422	CIRCUIT CARD, control (Prior to LC062170)	1		
2	PC1	231166	CIRCUIT CARD, control (Eff w/LC062170 thru MF190049C)	1		
2	PC1	267669	CIRCUIT CARD, control (Eff w/MF190050C)	1		
2	PC1	186426	CIRCUIT CARD, control (Prior to LC078992)	1		
2	PC1	231160	CIRCUIT CARD, control (Eff w/LC078992 thru MF100096C)	1		
2	PC1	267658	CIRCUIT CARD, control (Eff w/MF100097C)	1		
2	PC1	186428	CIRCUIT CARD, control (Prior to LC147866)	1		
2	PC1	231170	CIRCUIT CARD, control (Eff w/LC147866 thru MF210000C)	1		
2	PC1	264845	CIRCUIT CARD, control (Eff w/MF210001C)	1		
		PLG1	HOUSING PLUG+SKTS, (service kit) (see Figures 11-8 And 11-9)			
		PLG3 ♦♦169240	HOUSING PLUG PINS+SKTS, (service kit) (<♦♦1)	1	1	1
		PLG4 ♦♦148439	HOUSING PLUG PINS+SKTS, (service kit) (<♦♦1)	1	1	1
		PLG5 ♦♦152249	HOUSING PLUG PINS+SKTS, (service kit) (<♦♦1)	1	1	1

# Eff w/KK129842 And Following

Item No.	Dia. Mkgs.	Part No.	Description	Quantity		
				402	602	852
<b>Figure 11-7 Panel, Front w/Components (402, 602 And 852 Models) (continued)</b>						
.....	PLG3	◆◆162383	.. HOUSING PLUG PINS+SKTS, (service kit) <◆◆2> .....	1	1	1
.....	PLG4	◆◆115091	.. HOUSING PLUG PINS+SKTS, (service kit) <◆◆2> .....	1	1	1
.....	PLG5	◆◆131052	.. HOUSING PLUG PINS+SKTS, (service kit) <◆◆2> .....	1	1	1
... 3	CR3	006393	.. RELAY, encl 24VAC DPDT (Prior to KK271635) .....	1	1	1
... 3	CR3	052964	.. RELAY, encl 24VDC DPDT (Eff w/KK271635) .....	1	1	1
... 4	CR5	006393	.. RELAY, encl 24VAC DPDT (◆Optional prior to LC026702) ..	1	1	1
... 5	CB1,2	093995	.. SUPPLEMENTARY PROTECTOR, man reset			
.....			1P 15A 250VAC .....	2	2	2
... 6	RC9	604176	.. RECEPTACLE, str dx grd 2P3W 15A 125V .....	1	1	1
... 7		163855	.. CONNECTOR/CAPACITOR, w/leads (includes)			
.....			(Prior to LB129247) .....	1	1	1
.....	RC8	143976	.. RCPT W/SKTS, (service kit) .....	1	1	1
.....		079534	.. CONN, cir ms/cpc skt pushin 14-ga .080-.100 insu .....	14	14	14
.....	C3, 6, 13, 14	097749	.. CAPACITOR, cer disc .05 uf 500 VDC strip .....	4	4	4
... 7		203778	.. CONNECTOR/CAPACITOR, w/leads (includes)			
.....			(eff w/LB129247) .....	1	1	1
.....	RC8	143976	.. RCPT w/SCKTS (service kit) .....	1	1	1
.....	C3, 6, 13, 14	097749	.. CAPACITOR, cer disc .05 uf 500 VDC strip .....	4	4	4
... 7		230866	.. CONNECTOR/CAPACITOR, w/leads (includes)			
.....			(eff w/LH210001C) (CE) .....	1	1	1
.....	RC8	230898	.. RCPT w/SCKTS (service kit) (Eff w/LH210001C) (CE) ....	1	1	1
.....	C3, 6, 13, 14	230695	.. CAPACITOR, cer disc .05 uf 500 VDC strip			
.....			(Eff w/LH210001C) (CE) .....	4	4	4
... 8		162802	.. PANEL, front (Prior to LB129247) .....	1	1	1
... 8		204143	.. PANEL, front (Eff w/LB129247) .....	1	1	1
... 9	POS	181245	.. TERMINAL, pwr output red .....	2	2	2
... 10	C2,4,5	128750	.. CAPACITOR, cer disc .1uf 500VDC .....	3	3	3
... 11		161303	.. SPRING, cprsn .600 OD x .072 wire x 1.500 lg .....	3	3	3
.....	R4,5	136076	.. RESISTOR, WW fxd 30W 200 ohm (Prior to LC026702) ....	2	2	2
... 13	NEG	181246	.. TERMINAL, pwr output black .....	1	1	1
... 14			.. PLATE, control lower (order by model and serial no.) .....	1	1	1
.....	1T	159040	.. BLOCK, term 20A 12P (Prior to LB129247) .....	1	1	1
.....		162828	.. PANEL, mtg rcpt/terminal strip (Prior to LB129247) .....	1	1	1
.....		070371	.. BLANK, snap-in nyl 1.093/1.125mtg hole (Prior to LB129247)			
... 18		179563	.. LABEL, electric shock/reduce air flow .....	1	1	1
... 19		+172587	.. COVER, stud output .....	1	1	1
... 20		160935	.. CLIP, spring .....	3	3	3
... 21		601835	.. NUT, 10-32 brs .....	2	2	2
.....		010913	.. WASHER, flat .218 ID x .460 OD x .031thk brs .....	1	1	1
... 22		038887	.. STUD, pri bd brs 10-32 x 1.375 .....	1	1	1
... 23	S3,4	011609	.. SWITCH, tgl SPDT 15A 125VAC .....	2	2	2
... 24	R1	035897	.. POTENTIOMETER, CP std slot 1/T 2W 1K ohm			
.....			(Prior to LC026702) .....	1	1	1
... 24	R1	198087	.. POTENTIOMETER, CP std slot 1/T 2W 1K ohm			
.....			(Eff w/LC026702) .....	1	1	1
... 25	PC2	◆◆231149	.. CIRCUIT CARD ASSY, display w/program <◆◆1> .....	1	1	1
... 25	PC2	◆◆271009	.. CIRCUIT CARD ASSY, display w/program <◆◆2> .....	1	1	1
.....	PLG10	◆◆115093	.. HOUSING PLUG + SKTS, (service kit) <◆◆2> .....	1	1	1
.....	PLG11	◆◆115091	.. HOUSING PLUG + SKTS, (service kit) <◆◆2> .....	1	1	1



Item No.	Dia. Mkgs.	Part No.	Description	Quantity		
				402	602	852

**Figure 11-7 Panel, Front w/Components (402, 602 And 852 Models) (continued)**

... 26		192174	.. STAND-OFF	4	4	4
... 27			.. NAMEPLATE, (order by model and serial number)	1	1	1
... 28	S2	159039	.. SWITCH, rocker SPDT 15A 125VAC (Prior to MD400078C)	1	1	1
... 28	S2	26108	.. SWITCH, rocker SPDT 10A 24VDC (Eff w/MD400078C)	1	1	1
	PLG2	185626	.. CONNECTOR, body 56 series (Prior to MD400078C)	1	1	1
	PLG2	262501	.. CONNECTOR, body 12 pos (Eff w/MD400078C)	1	1	1
... 29	PL2	159522	.. LED, yellow	1	1	1
... 30		159036	.. LENS, LED clear	1	1	1
... 31		097924	.. KNOB, pointer	1	1	1
... 32	SN1	230908	.. SNUBBER, assy	1	1	1
... 33		010381	.. CONNECTOR, rectifier	2	2	2
... 34		005107	.. BOLT, crg stl .250-20 x .750 GR5 pld	6	6	6
... 35		162815	.. PANEL, front upper	1	1	1
... 36		228672	.. LABEL, weld cable lug	3	3	3
... 37		227980	.. LABEL, caution output terminal connection	1	1	1

◆ Prior to Serial No. LC026702, Ground Current Sense Kit 043 146 consisted of both relay CR5 (006 393) and reed relay CR4 (140 750). Effective with Serial No. LC026702, Ground Current Sense Kit 043 146 changed to Part No. 195 048, and no longer contains relay CR5 (006 393), as CR5 is now standard in the machine.

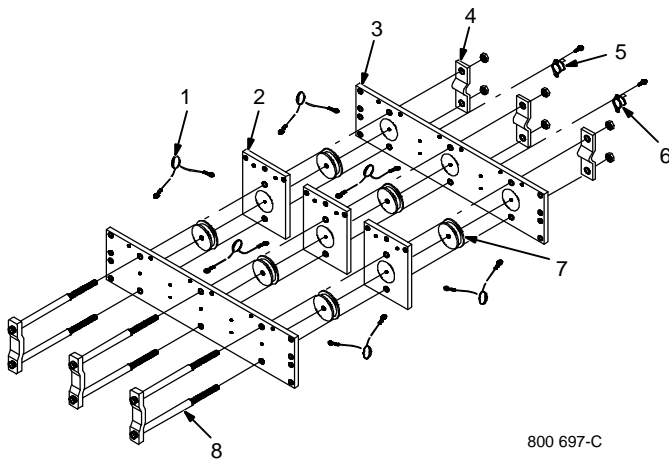
- ◆◆ 1 – 602 Models Prior To MF100097C
  - 402 Models Prior To MF190050C
  - 852 Models Prior To MF210001C
- ◆◆ 2 – 602 Models Eff w/MF100097C
  - 402 Models Eff w/MF190050C
  - 852 Models Eff w/MF210001C

+When ordering a component originally displaying a precautionary label, the label should also be ordered.

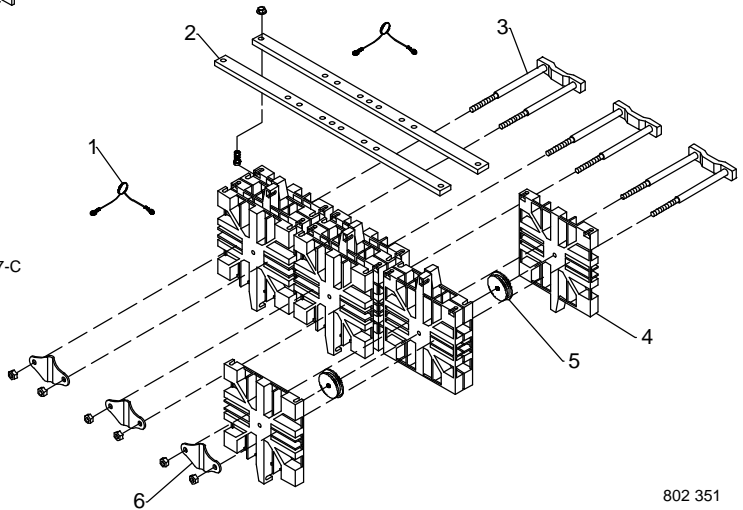
**To maintain the factory original performance of your equipment, use only Manufacturer's Suggested Replacement Parts. Model and serial number required when ordering parts from your local distributor.**

# Eff w/KK129842 And Following

Item No.	Dia. Mkgs.	Part No.	Description	Quantity
<b>SR1 175 070 Figure 11-8 Rectifier, Si Diode (402 50 Hz Models)</b>				
1	C7-12	048420	CAPACITOR, cer disc .01uf 1000VDC	6
2		177316	HEAT SINK, rect	3
3		177317	HEAT SINK, rect	2
4		166667	CLAMP, thyristor rect	3
5	TP3	242651	THERMOSTAT, NC open 211F close 186F flange faston	1
6	TP6	206083	THERMOSTAT, NC (fan control circuit)	1
7	SCR1-6	161668	THYRISTOR, SCR 300A 300V hockey puck	6
	PLG1	158720	HOUSING PLUG+SKTS, (service kit)	1
	PLG1	233303	HOUSING PLUG+SKTS, (service kit) (Eff w/LH210001C) (CE)	1
8		188692	CLAMP, thyristor rectifier 4.250	3



**Figure 11-8 Rectifier, Si Diode SR1 (Fig 11-6 Item 32)**



**Figure 11-9 Rectifier, SCR Main SR1 (Fig 11-6 Item 32)**

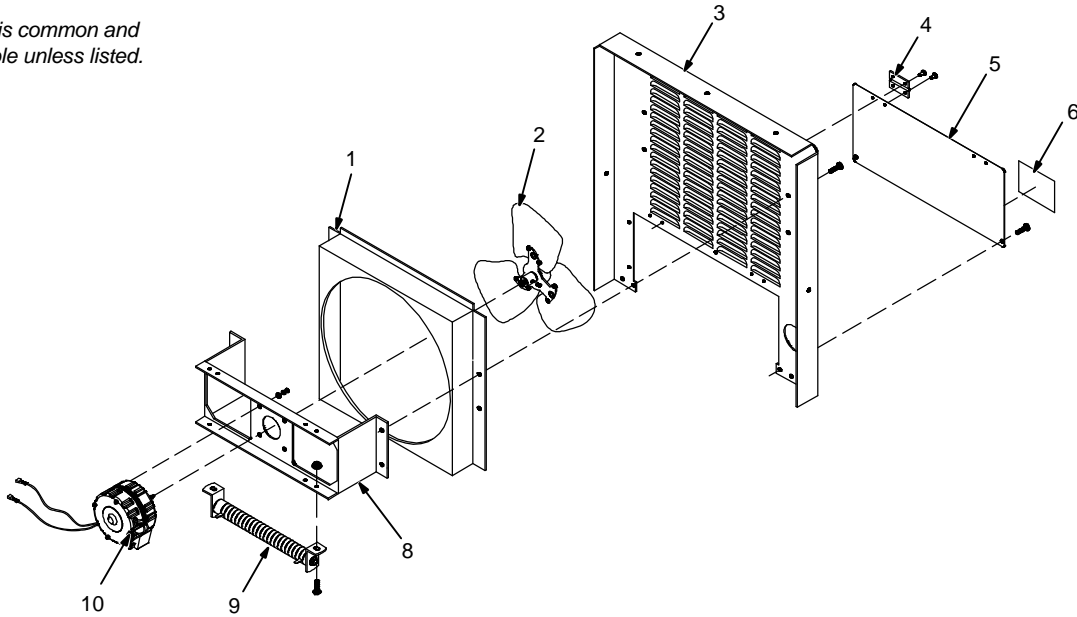
☞ Hardware is common and not available unless listed.

Item No.	Dia. Mkgs.	Part No.	Description	Quantity
<b>SR1 192 672 Figure 11-9 Rectifier, SCR Main (602 And 852 50 Hz Models)</b>				
1	C7-12	048420	CAPACITOR, cer disc .01uf 1000VDC	6
2		191989	BAR, mtg rectifier	2
3		188691	CLAMP, thyristor rectifier 5.375	3
4		188839	HEAT SINK, rectifier snowflake .800	12
5	SCR1-6	161668	THYRISTOR, SCR 300A 300V hockey puck	6
5	SCR1-6	148091	THYRISTOR, SCR 865A 300V hockey puck	6
6		166667	CLAMP, spring thyristor rectifier 5.500	3
	PLG1	158720	HOUSING PLUG+SKTS, (service kit)	1
	PLG1	233303	HOUSING PLUG+SKTS, (service kit) (Eff w/LH210021C) (CE)	1
	TP3	192673	THERMOSTAT, rectifier	1
	TP6	192674	THERMOSTAT, rectifier (fan control circuit)	1

**To maintain the factory original performance of your equipment, use only Manufacturer's Suggested Replacement Parts. Model and serial number required when ordering parts from your local distributor.**

# Eff w/KK129842 And Following

☞ Hardware is common and not available unless listed.



800 707-F

Figure 11-10 Panel, Rear w/Components (Fig 11-6 Item 19)

Item No.	Dia. Mkgs.	Part No.	Description	Quantity
<b>Figure 11-10 Panel, Rear w/Components (402, 602 And 852 50 Hz Models)</b>				
...	1	173283	.. CHAMBER, plenum 14 in	1
...	2	180165	.. BLADE, fan 14 in 3wg 28deg .375 bore ccw	1
...	2	230755	.. BLADE, fan 14 in 3wg 28deg .375 bore ccw alum (Eff w/LH210001C) (CE)	1
...	3	162807	.. PANEL, rear	1
...	4	168343	.. HINGE, door primary	2
...	5	+162818	.. DOOR, access primary	1
...	6	179290	.. LABEL, warning electric shock input connection	1
...	8	124274	.. BRACKET, mtg fan motor	1
...	9	R3	.. RESISTOR, WW fxd 375W 5 ohm	1
...	9	R7	.. RESISTOR, WW fxd 375W 5 ohm	1
...	10	FM	.. MOTOR, 1/12HP 230V 1550RPM 50/60Hz .83A	1
...	11	010467	.. CONNECTOR, clamp cable 1.250 (Prior to MC330001U)	1

◆◆Part of Option 043 286 Additional Resistor

+When ordering a component originally displaying a precautionary label, the label should also be ordered.  
**To maintain the factory original performance of your equipment, use only Manufacturer's Suggested Replacement Parts. Model and serial number required when ordering parts from your local distributor.**

**Miller Electric Mfg. Co.**

An Illinois Tool Works Company  
1635 West Spencer Street  
Appleton, WI 54914 USA

**International Headquarters—USA**

USA Phone: 920-735-4505 Auto-Attended  
USA & Canada FAX: 920-735-4134  
International FAX: 920-735-4125

For International Locations Visit  
[www.MillerWelds.com](http://www.MillerWelds.com)

