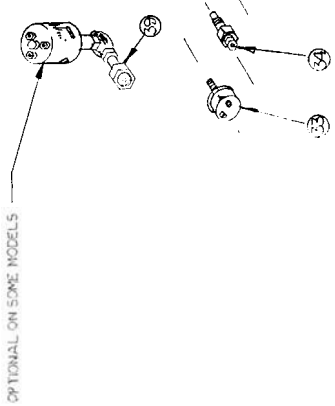
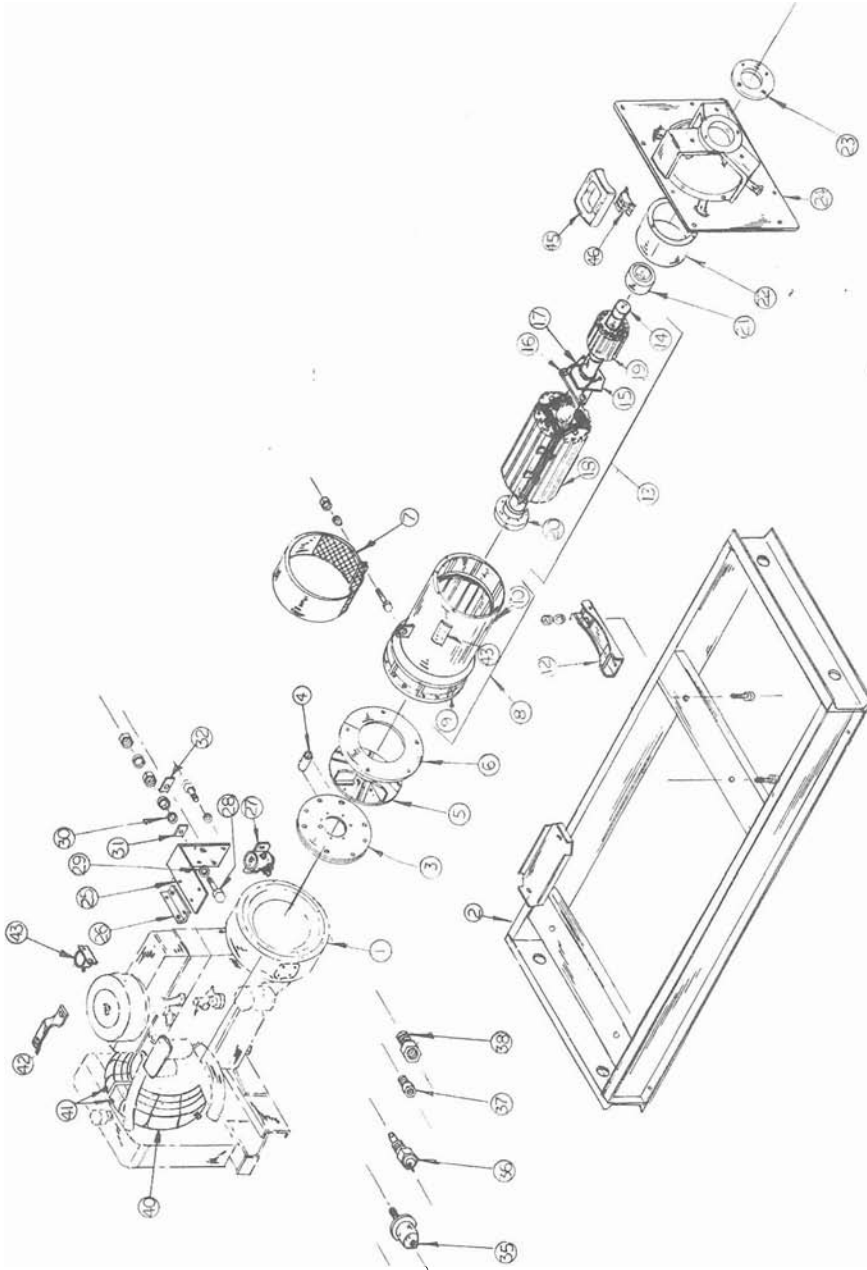




WINPOWER CORPORATION

Model DR60H4-L      Type II  
60 KW 75 KVA .8 P.F. 60 HZ  
3 Phase 90.2 Amps 4 Wire  
277/480 Volts 130°C Rise  
Wiring Diagram IF-5216-3  
Released: 1-5-77

<u>REF. NO.</u>	<u>PART NO.</u>	<u>PART DESCRIPTION</u>	<u>REQ'D/UNIT</u>
	EC-17401	Engine, Hercules D-3400	
2	G-6410	Skid Assembly	-
	9268	Screw 5/8-11 x 1-1/2	2
	1189	Washer 5/8 Flt Stl.	2
	4621	Nut 5/8-11 Hx.	2
	1148	Washer 5/8 Lock	2
3	S-5813-1	Coupling Disc	2
	S-6896-1	Screw 3/8-16 x 3/4	8
	1185	Washer 3/8 Flat Steel	8
4	S-6874-4	Fan Spacer	4
	S-6896-5	Screw 3/8-16 x 2-1/4	4
5	G-6064	Fan Assembly	1
6	Not Applicable		
7	G-5826	Fan Guard	1
	3530	Screw 1/4-20 x 1-1/2	1
	5805	Nut 1/4-20	2
8	G-5737-25	Stator & Frame Assembly	1
9	G-5728-1	Frame Assembly	1
10	G-6883	Stator, Electrical	1
11	Not Applicable		
12	G-5506-1	Engine Adapter	1
13	G-6922	Revolving Elec. Assembly	1
14	N-585	Shaft	1
15	G-5710	Heat Sink Assembly	1
16	EE-2123	Diode - Forward	1
17	EE-2122	Diode - Reverse	1
18	G-6909	Rotor Electric Assembly	1
19	G-6935	Exciter Armature	1
20	I-825-2	Coupling Hub	1
	3887	Screw 1/2-13 x 1/2 Soc Hd.	1
21	D-49	Bearing	1
22	G-6948	Exciter Frame Assembly	1
	S-6912	Exciter Frame	1
	3582	Screw 5/16-18 x 1-1/4 Hx Hd	12
	1116	Washer IT	12
	G-5725	Field Pole Assembly	4
	J-587	Insulator	8
	H-1066	Field Coil Assembly	4
23	S-6797	Bearing Retainer	1
	S-6872	Bearing Spacer	1
	3522	Screw 1/4-20 x 1/2	2
	1114	Washer 1/4 Int. T.	2
24	I-879	Bearing Housing	1
	3582.2	Screw 3/8-16 x 1-1/4 Gr 5	6
	1144	Washer, Split Lock	6
25	S-5872-1	Bracket	1
26	S-6076	Bracket	1
27	EE-1201	Start Contactor	1
28	3547.1	Screw 5/16-18 x 1-1/4 Brass	2
29	J-592	Washer, Nylon	1
30	J-593	Washer 5/16 Nylon	1
31	Z-283	Nameplate Positive Battery	1
32	Z-284	Nameplate, Negative Battery	1
	1034	Washer Flat Brass	6
	4710	Nut 5/16-18 Brass	4
	1115	Washer 5/16-18 Brass	6
33	OP-23	Oil Pressure Switch (NCO-15)	1
34	WT-22	Water Temp. Sender 1/4 NPT	1
35	OP-22	Oil Pressure Sender	1
36	WT-23	Water Temp. Switch 1/2 NPT	1
37	EN-18174	Tee 1/8M to 1/8F to 1/8F	1
38	EN-1874	Bushing 1/4M to 1/8F NPT	1
39			
40	OP-24	Oil Pressure Switch (NCO-35)	1

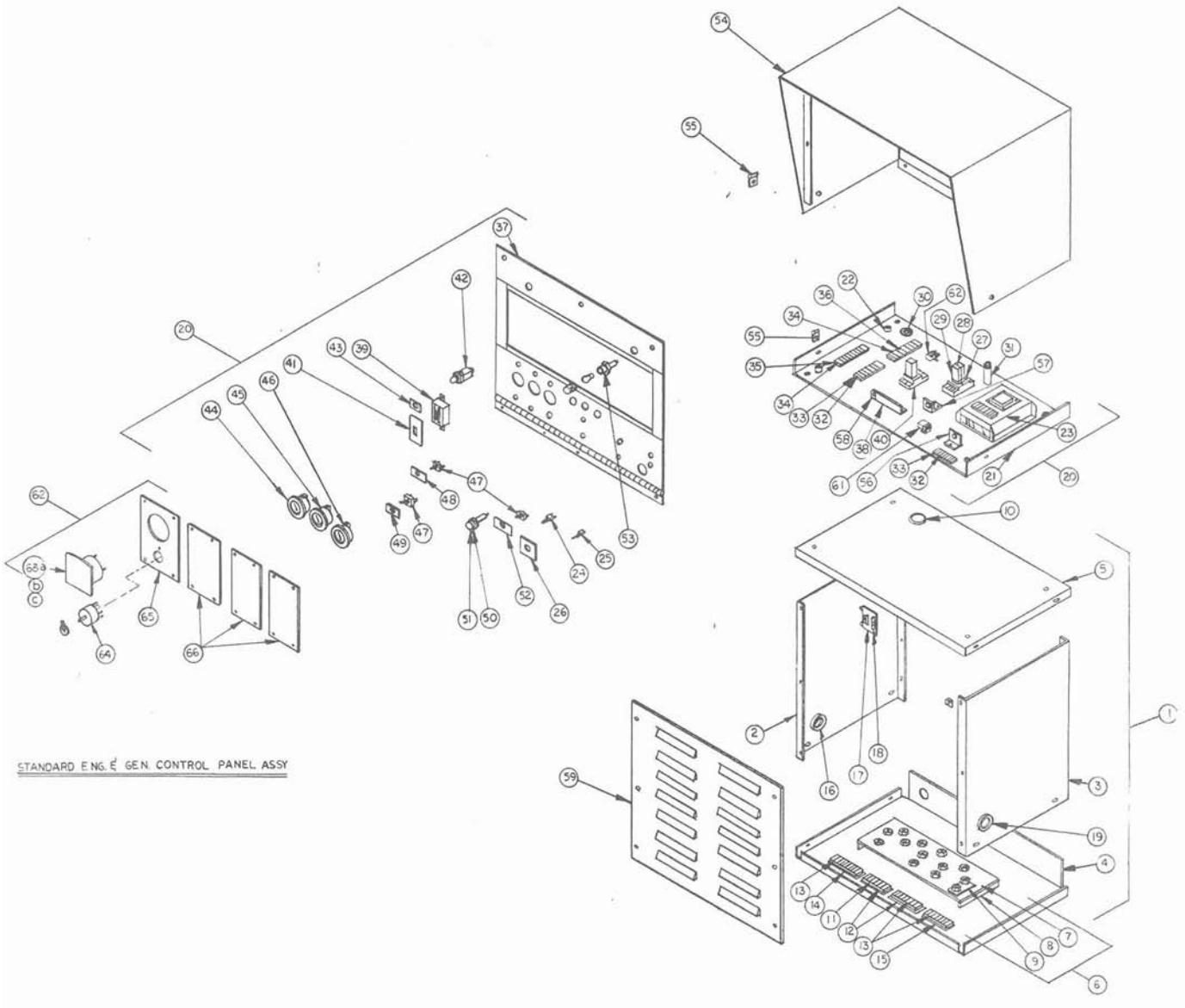


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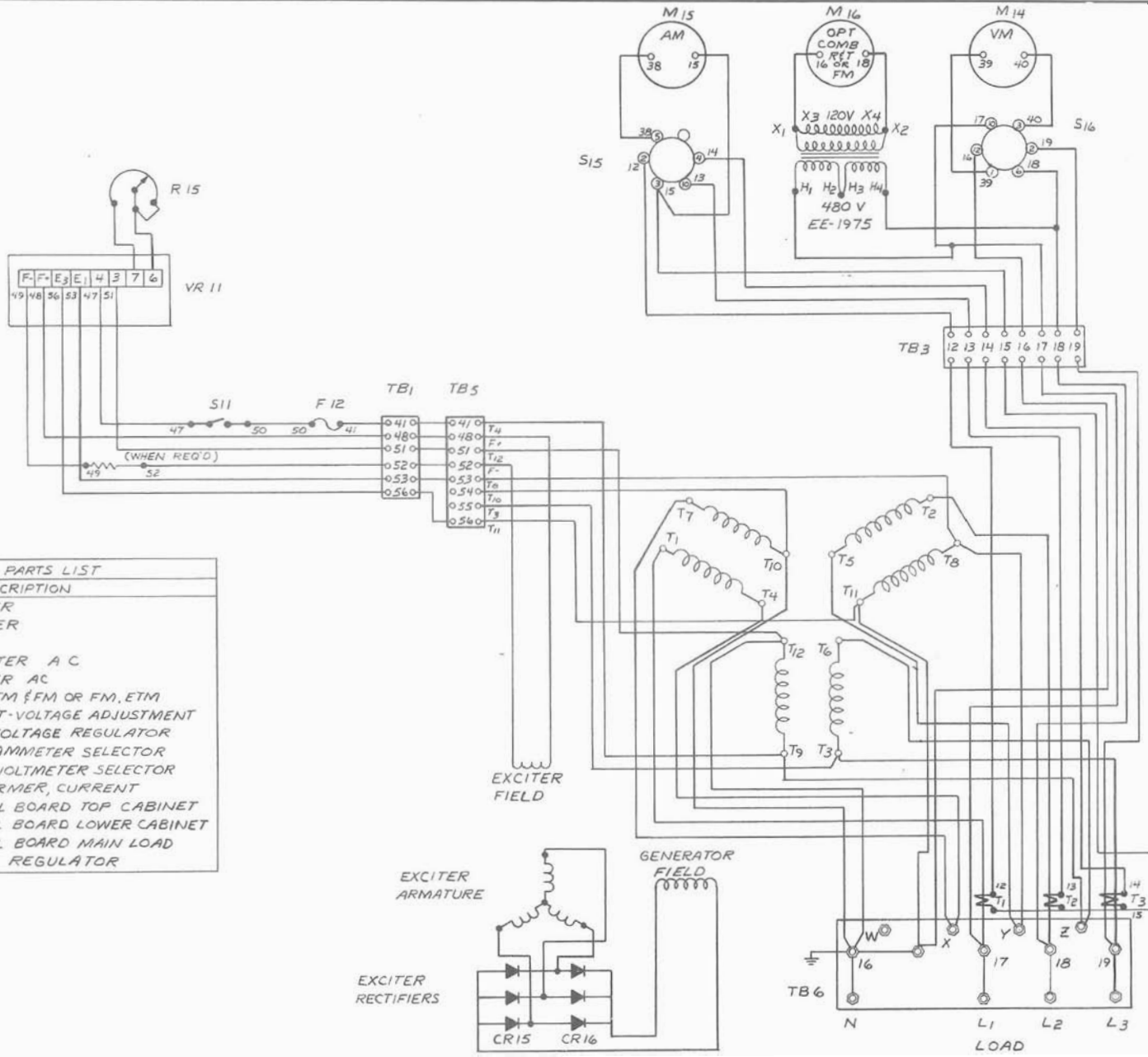
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REF. NO.	PART DESCRIPTION	REQ'D/UNIT
1	G-6864 Panel Assy. Complete 20 in. Lam.	
2	G-5739-3 Panel Cabinet Assembly	
3	S-6854 Panel Side - Left	
4	S-6856 Panel Side - Right	
5	S-6857 Panel Bottom	
	S-6853 Panel Top	
	3522 Screw 1/4-20 x 1/2 H.H.	
	1114 Washer 1/4 Int.	
	5805 Nut 1/4-20 H.H.	
6	G-5722-3 Terminal Board Assembly	
7	J-578 Terminal Board	
	3526 Screw 1/4-20 x 1 H.H.	4
	1114 Washer 1/4	4
	5805 Nut 1/4-20	4
8	S-6850 Bracket - Mounting	2
9	B-718 Link	1C
	3670-1 Screw 1/2-13 x 2 Hex Brass	13
	1118 Washer 1/2 Int. T.T.	39
	1031 Washer 1/2 Flat Brass	39
	4716 Nut 1/2-13 Hex Brass	26
10	6100 Grommet	1
11	EE-646-1 Terminal Board 6-Pole	1
12	EE-646-2 Insulator	2
	2045 Screw #8-32	2
	5802 Nut #8-32	2
13	EE-653 Terminal Board 8-Pole	3
14	EE-653-8 Insulator	1
15	EE-653-2 Insulator	2
	2045 Screw #8-32	
	5802 Nut #8-32	
16	6221 Plug Button	
17	EE-2214 Auto. Exciter Field Flasher	
18	EE-471-2 Fuse 1 Amp.	
	2005 Screw #6 x 1/2 lg.	
	5801 Nut #6-32 H.H.	
19	6905 Bushing	
20	G-6865 Engine & Generator Sub. Assembly	
21	S-6871 Panel Bottom	
22	W-166-2 Shockmounts	4
23	EE-1750 Voltage Regulator	1
	2087 Screw 10-24 x 3/4 RHMS	4
	5803 Nut #10-24	8
24	EE-233 Push Button Switch	1
25	EE-181 Toggle Switch on-off-on	1
26	Z-1123 Nameplate - Adjust Volts	1
27	EE-1207-1 Socket - Relay	1
	2011 Screw #6-32 x 1-1/4 RHMS	2
	5801 Nut #6-32	2
28	EE-1207-2 Hold Down Clamp	1
29	EE-1220 Relay	1
	EE-1219 Socket	1
30	6100 Grommet	1
31	R-171 Resistor	1
32	EE-646-1 Terminal Block 6-Pole	2
33	EE-646-2 Insulator	2
34	EE-653 Terminal Block 8-Pole	2
35	EE-653-2 Insulator	1
36	EE-653-8 Insulator	
	2045 Screw #8-32 x 1/2	
	5802 Nut #8-32	
37	G-5724 Front Panel Assembly	
	2085 Screw #10-24 x 1/2 lg.	
	5803 Nut #10-24	
38	S-6870 Brace	
	2085 Screw #10-24 x 1/2 lg.	
	1019 Washer	
39	EE-1811 Eng. Safety Circuit Breaker	
	EE-1812-5 Circuit Breaker Heater	
40	EE-1233 Relay-Latching	
	EE-1233-1 Relay Socket	
41	Z-1671 Nameplate-Engine Safety	
42	EE-937-1 Failure Light	
43	Z-2092 Nameplate Engine Shutdown	
44	AM-12 Ammeter	
45	OP-21 Oil Pressure Gauge	
46	WT-21 Water Temperature	1
47	EE-151 Switch	3
48	Z-2093 Nameplate Stop Run	1
49	Z-920-1 Nameplate Off-On	1
50	EE-425 Fuse Holder	1
51	EE-445-2 Fuse Amp	1
52	Z-2116 Nameplate - Regulator	1
53	EE-924-1 Panel Lamp Holder	2
	EE-940-1 Lamp 12 Volt	2
54	G-5723 Panel Top Assembly	1
	2085 Screw #10-24 x 1/2	3
	5803 Nut #10-24	3
55	4957 Tinnerman	7
	2325 Screw 1/4-20 x 1/2 Truss Head	
56	G-5819 Diode Assembly Blocking	1
	J-546 Shoulder Washer - Nylon	2
	J-583 Washer - Flat - Nylon	2
	2087 Screw #10-24 x 3/4	2
	5803 Nut #10-24	2
57	G-5183-3 Diode Assembly Blocking	1
58	4956 Tinnerman	1
	6224 Plug Button 23/32 Dia.	3
	6223 Plug Button 1" Dia.	3
	6218 Plug Button 1/2" Dia.	2
59	G-5724 Panel Front Assembly	1
	4957 Tinnerman	6
	3522 Screw 1/4-20 H.H.	6
	1183 Washer 1/4 Flat. Stl.	6
60	EE-1203 Relay	1
61	EE-1054 Time Delay Relay	1
62	G-6533-1 Voltmeter & Sel. Switch Assy.	1
63	VM-69-1 Voltmeter 0-300 Volt	1
64	EE-275-1 Selector Switch	
65	S-6822-1 Meter Panel	
66	S-6832 Basic Panel	



IF-5188



CONTROL CABINET PARTS LIST		
REF	PART NO	DESCRIPTION
CR15	EE-2122	RECTIFIER
CR16	EE-2123	RECTIFIER
F12	EE-445-2	FUSE
M14	VM-35	VOLTMETER A C
M15	—	AMMETER A C
M16	—	COMB ETM & FM OR FM, ETM
R15	R-91	RHEOSTAT-VOLTAGE ADJUSTMENT
S11	EE-151	SWITCH-VOLTAGE REGULATOR
S15	EE-276-1	SWITCH-AMMETER SELECTOR
S16	EE-275-1	SWITCH-VOLTMETER SELECTOR
T1,2,3	—	TRANSFORMER, CURRENT
TB1,3	—	TERMINAL BOARD TOP CABINET
TB5	—	TERMINAL BOARD LOWER CABINET
TB6	—	TERMINAL BOARD MAIN LOAD
VR11	EE-1750	VOLTAGE REGULATOR

240/416 TO 277/480 VOLT, 60 HZ  
 230/400 TO 266/460 VOLT, 50 HZ

SCHEMATIC DIAGRAM  
 GENERATOR; REGULATOR  
 INSTRUMENTATION

SCALE: 2-8-77  
 DATE: KH  
 MODEL NO. PART NO. 1F-5216-3  
 CHECKED:

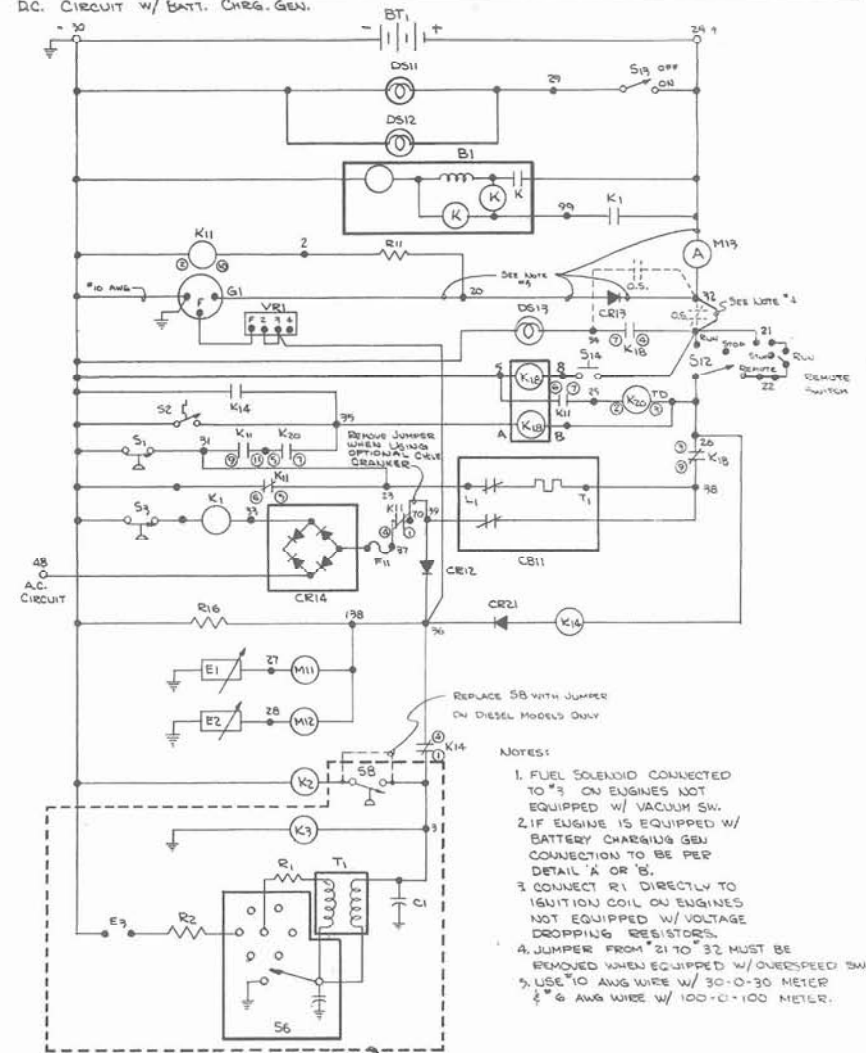
WINPOWER CORPORATION  
 NEWTON, IOWA 50208

CHANGE	WAR ORIGINALLY	DATE	CHK'D	CHK. REQUEST	NO. REQ'D	MICROFILM DATA
TOLERANCE ON DIMENSIONS NOT OTHERWISE SPECIFIED				DECIMAL ± FRACTIONAL ± ANGULAR ±	REMOVE ALL BURRS BREAK ALL SHARP MACHINED EDGES	MATERIAL

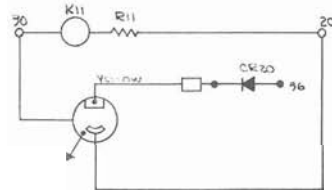
ENGINE PARTS LIST		
REF.	PART NO.	DESCRIPTION
B1	SEE ENG. MAN.	START MOTOR W/ SOLENOID SWITCH
BT1	VARIOUS	BATTERY
C1	SEE ENG. MAN.	CAPACITOR (SPARK IGNITED ENGINES ONLY)
E1	OP-22	SENDER - OIL PRESSURE
E2	WT-22	SENDER - WATER TEMP.
E3	SEE ENG. MAN.	SPARK PLUG (SPARK IGNITED ENGINES)
G1	SEE NOTE #2	ALTERNATOR OR GENERATOR (BATT. CHARGE)
K1	EE-1201	RELAY, STARTER MOTOR
K2	SEE ENG. MAN.	SOLENOID - FUEL
K3	SEE ENG. MAN.	CHOKE (GASOLINE ONLY)
R1	SEE ENG. MAN.	RESISTOR COIL (OPTIONAL - SPARK IGNITED ENG. ONLY)
R2	SEE ENG. MAN.	RESISTORS - SPARK PLUGS
S1	OP-23	SWITCH - LOW OIL PRESSURE (CLOSED 0-15 PSI)
S2	WT-23	SWITCH - HIGH WATER TEMPERATURE
S3	OP-24	SWITCH - STARTER MOTOR SAFETY (CLOSED 0-35 PSI)
S4	VARIOUS	SWITCH - OVERSPEED (OPTIONAL)
S6	SEE ENG. MAN.	DISTRIBUTOR ASSY. (SPARK IGNITED ENG. ONLY)
S8	SEE ENG. MAN.	SWITCH - VACUUM (GASEOUS FUELS ONLY)
T1	SEE ENG. MAN.	COIL IGNITION (SPARK IGNITED ENG. ONLY)
VR1	SEE ENG. MAN.	VOLTAGE REGULATOR - BATTERY CHARGING

CONTROL CABINET PARTS LIST		
REF.	PART NO.	DESCRIPTION
CR1	EE-1811	CIRCUIT BREAKER - SAFETY SHUTDOWN
CR17	G-5183-3	RECTIFIER - BLOCKING
CR19	G-5819	RECTIFIER - BLOCKING
CR14	EE-2171-4 or EE-2169	RECTIFIER - FIELD FLASHER
CR20	G-5819	RECTIFIER - BLOCKING
CR21	EE-2167	RECTIFIER - BLOCKING
DS11,12	EE-940	LAMP - PANEL
DS13	EE-940	LAMP - FAILURE
F11	EE-445-2	FUSE - FIELD FLASHER
K11	EE-1220	RELAY - CRANKING CONTROL
K18	EE-1233	LATCHING RELAY
K14	EE-1203	RELAY
K20	EE-1054	TIME DELAY RELAY
M11	OP-21	GAUGE - OIL PRESSURE
M12	WT-21	GAUGE - WATER TEMPERATURE
M19	AM-12	GAUGE - AMMETER - CHARGE 30-0-30 OR 100-0-100
R11	R-171	RESISTOR - 33 OHM, 10 WATT
R16	R-157	RESISTOR - 100 OHM, 10 WATT
R20	EE-181	RESISTOR - 125 OHM, 10 WATT
S12	EE-151	SWITCH - ENGINE RUN, STOP, REMOTE
S13	EE-151	SWITCH - PANEL LAMP
S14	EE-233	DE-ENERGIZATION SWITCH - SAFETY SHUTDOWN

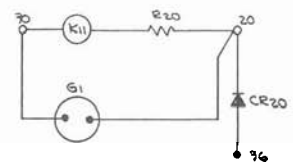
DC. CIRCUIT W/ BATT. CHRG. GEN.



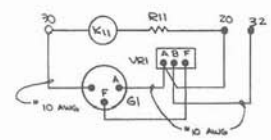
- NOTES:
1. FUEL SOLENOID CONNECTED TO \*3 ON ENGINES NOT EQUIPPED W/ VACUUM SW.
  2. IF ENGINE IS EQUIPPED W/ BATTERY CHARGING GEN CONNECTION TO BE PER DETAIL 'A' OR 'B'.
  3. CONNECT R1 DIRECTLY TO IGNITION COIL ON ENGINES NOT EQUIPPED W/ VOLTAGE DROPPING RESISTORS.
  4. JUMPER FROM \*21 TO \*32 MUST BE REMOVED WHEN EQUIPPED W/ OVERSPEED SW.
  5. USE \*10 AWG WIRE W/ 30-0-30 METER & \*6 AWG WIRE W/ 100-0-100 METER.



DETAIL 'A' ALTERNATOR-MOTOROLA NO. RAR2N-4510 W/ REGULATOR NO. R3-1  
NOTE:  
ADD CR20 RECTIFIER



DETAIL 'C' - DELCO REMM #1102764  
77, 3G25 12 NEG.  
NOTE - ADD RECTIFIER CR20  
REMOVE R11 & REPLACE W/ R20



DETAIL 'B' - (GENERATOR - DELCO-REMM)  
NOTE: REMOVE CR13 & LEADS FROM 20 TO 21  
NO CONNECTION FROM \*36 TO VR1

USED ON GAS & GASEOUS FUEL MODELS ONLY.

CLASS	DESIGNER	DATE	CHK'D	CHK. REASON	NO. REV'D	MICROFILM DATA

TOLERANCE ON DIMENSIONS NOT OTHERWISE SPECIFIED

DECIMAL ±  
FRACTIONAL ±  
ANGULAR ±

REMOVE ALL BURRS  
BREAK ALL SHARP  
MACHINED EDGES

MATERIAL

12 VOLT ENGINE ELEC. CIRCUIT  
SCHEMATIC DIAGRAM  
SCALE: SWF MODEL NO.  
DATE: 10/5/76 PART NO.  
SWF CHRGD: Reddy  
WINPOWER CORPORATION  
NEWTON, IOWA 50203