



MODELS

F-98

Spec. Nos.

2811G2
2811G2-1
2811G2-2

F-120

Spec. Nos.

2827G2
2827G2-1

F-120 DELUXE

Spec. Nos.

2827G10
2827G10-1

OPERATING, MAINTENANCE and SERVICE INSTRUCTIONS with PARTS LIST



Koehring
Master Division

C. MODEL DIFFERENCES

The two sizes of heaters covered by this Operating and Service Manual are basically the same in construction and principle. However, the 120,000 BTU heaters have a built-in thermostat, and the motor starting circuit is slightly different.

The thermostat on the 120,000 BTU heaters is

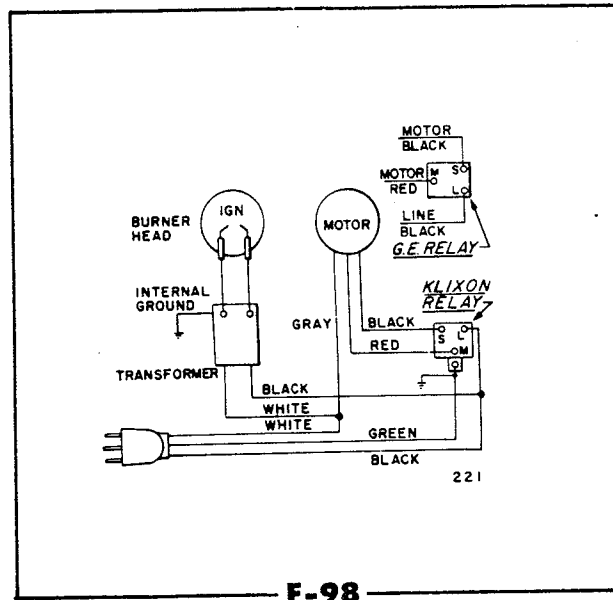
mounted on the left side of the heater. It can be set for any temperature from 30° to 90°F, and cycles the heater on and off to maintain the surrounding air at the desired setting. At its OFF position, it shuts the heater off. At its ON position, it causes the heater to operate continuously.

A separate thermostat is available as an accessory for the 75,000 BTU heaters.

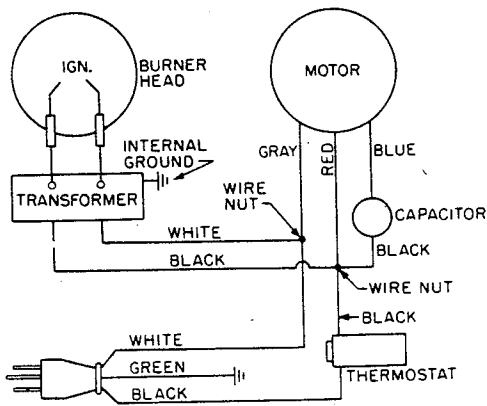
D. SPECIFICATIONS

Characteristic	75,000 BTU Heaters	120,000 BTU Heaters
Output rating (BTU per hour)	75,000	120,000
Air output, approx. (Cu. ft. per minute)	345	450
Amperage (During normal run)	4	5.5
Weight, approx. (Pounds)	68	90

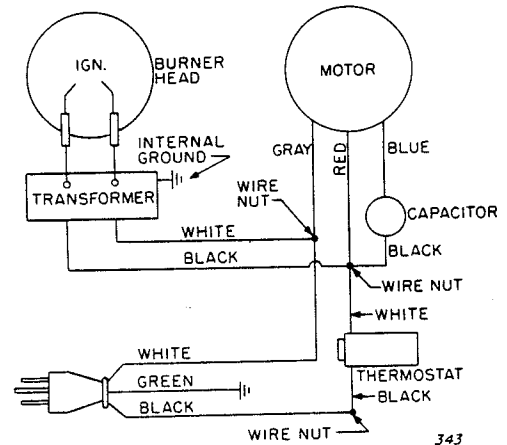
Characteristic	75,000 BTU Heaters	120,000 BTU Heaters
Fuel	Kerosene or No. 1 fuel oil only.	
Fuel tank capacity (U. S. gallons)	9.0	13.5
Fuel consumption, approx. (Gallons per hour)	0.55	0.85
Voltage and cycles	As shown on heater instruction plate.	
Motor RPM (115 volts, 60 cycles)	3,450	3,450
Duct	No duct recommended.	



F-98



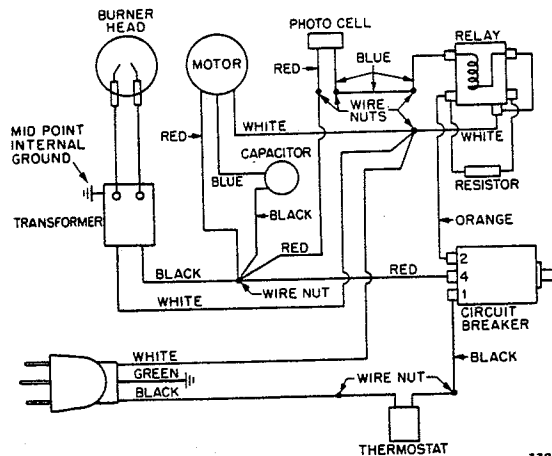
Spec. No. 2827G2



Spec. No. 2827G2-1

F-120

F-120 Deluxe



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Figure 6. Wiring Diagrams

MODELS F-120 and F-120 DELUXE

Index No.	Part Number	Part Name	Quantity per Spec. No.			
			F-120		F-120 Deluxe	
			2827G2-1		2827G10	
			2827G2			2827G10-1
1	M13520G1	Shell, Upper	1	-	1	-
1	M13520G3	Shell, Upper	-	1	-	1
(A)	*M12864G1	Motor Package Assembly	1	1	1	1
2	M12811	Motor	1	1	1	1
3	M8947	End Shield, front	1	1	1	1
(B)	M15442G1	Pump and Filter Parts Package	1	1	1	1
4	M11966-5	. Spring	1	1	1	1
5	M8643-3	. Blade	4	4	4	4
6	M11969	. Rotor	1	1	1	1
7	M8645-3	. Pump Body	1	1	1	1
8	**FHPF3-7C	. Screw, Fil hd, 10-32 x 1/2 in.	2	2	2	2
9	M12233	. End Cover, Pump	1	1	1	1
10	**WLI-3	. Washer	6	6	6	6
11	*M11637	. Filter, Lint	1	1	1	1
12	**M12461-34	. Screw, Hex hd, 10-32 x 1-1/2 in.	6	6	6	6
13	*M12244G1	. Filter Assy	1	1	1	1
14	*M12179	. Intake Filter	1	1	1	1
15	M12234	. End Cover	1	1	1	1
16	M10837	. Pipe Plug	1	1	1	1
(C)	M8943G2	. Pressure Relief Valve Assy	1	1	1	1
17	M10362	. . Connector	1	1	1	1
18	M8940	. . Ball, 1/4 dia	1	1	1	1
19	M8941	. . Spring, Compression	1	1	1	1
20	**M8993	. . Hex Nut, 3/8-24	1	1	1	1
21	M11941	. . Bushing, Pressure adjustment	1	1	1	1
22	M12865	. Male Elbow	1	1	1	1
23	**WLI-3	. Lockwasher, Internal #10	4	4	4	4
24	**M12461-31	. Screw, Hex hd, 10-32 x 1 in.	4	4	4	4
25	M12934G1	Combustion Chamber	1	1	1	1
25A	M15995	Plug Button	1	1	-	-
(D)	*M12947G3	Burner Assy	1	1	1	1
26	M14256	. Elbow	1	1	1	1
27	M12949	. Connector	1	1	1	1
28	**HF3-3C	. Screw, 10-32 x 3/8 in.	3	3	3	3
29	M12952	. Electrode RH	1	1	1	1
30	M12951	. Electrode LH	1	1	1	1
31	**WP-3C	. Washer, Flat	1	1	1	1
32	M14293	. Nozzle, Siphon	1	1	1	1
33	M10659-1	. Washer, Nozzle Seal	2	2	2	2
34	M10809-1	. Spring, Nozzle Seal	1	1	1	1
35	M8882	. Sleeve	1	1	1	1
36	M12948G1	. Burner Head	1	1	1	1
37	M14259G1	Fuel Filter	1	1	1	1
38	No Number	Setscrew, Socket hd, cup pt, 1/4-28	2	2	2	2
39	*M13038	Fan, 9° pitch	1	1	1	1
40	M12830	Fan Housing	1	1	1	1

(*) - Parts recommended for normal service replacement.

(**) - Standard hardware, obtainable locally.

PARTS LIST CONTINUED

MODELS F-120 and F-120 DELUXE

Index No.	Part Number	Part Name	Quantity per Spec. No.			
			F-120		F-120 Deluxe	
			2827G2-1 2827G2		2827G10 2827G10-1	
40	M12830	Fan Housing	1	1	1	1
41	**NPC-4C	Nut	2	2	2	2
42	**WLM-4	Lockwasher, 1/4 in.	2	2	2	2
43	M10964-1	Clamp, Motor	4	4	4	4
44	M13620	Spacer	2	2	2	2
45	**HC4-10C	Screw, 1/4-20 x 1-1/4	2	2	2	2
46	M14245	Air Line	1	-	1	-
46	M15970	Air Line	-	1	-	1
46A	1000577	Grommet	-	1	-	1
47	M12828	Bracket, Shell Support	1	1	1	1
48	1000577	Grommet	2	2	2	2
49	M12829	Bracket, Motor Support	1	1	1	1
50	**M10908-51	Screw, 10-24 x 1/2, Type "S"	1	1	1	1
51	M12651	Clamp, Tinnerman	1	1	1	1
52	M12650-1	Capacitor	1	1	1	1
52A	M15809	Plug	-	1	-	-
52A	1000576	Grommet (Photocell leads)	-	-	2	2
53	M11271-6	Nut, Tinnerman	6	6	6	6
54	**M11084-27	Screw, 10-12 x 1/2 in., Type "A"	6	6	6	6
55	**M11084-27	Screw, 10-12 x 1/2 in., Type "A"	8	8	8	8
56	**M11084-29	Screw, 10-12 x 3/4 in., Type "A"	4	4	4	4
57	M5890	Grommet	1	-	1	-
58	**M13942-4	Connector	2	2	2	2
	**M13942-2	Connector	-	1	-	1
59	M10813G20	Extension Cord Assy	1	-	1	-
59	M10813G1	Extension Cord Assy	-	1	-	1
61	M12826	Shell, Lower	1	-	1	-
61	M15810	Shell, Lower	-	1	-	1
62	**NTC-4C	Nut, Hex 1/4-20, Torque Lock	2	2	2	2
63	**WP-4C	Washer, 1/4 in.	2	2	2	2
64	M11084-27	Screw, 10-12 x 1/2, Type "A"	4	-	4	-
65	M12841G1	Mounting Bracket	1	-	1	-
66	M6087	Grommet	1	-	1	-
67	M3259-4	Transformer (Note: When installing replacement, shorten leads as needed to fit inside housing.)	1	-	1	-
67	M15425	Transformer	-	1	-	1
68	M14985G1	Cover, Transformer	1	-	1	-
69	M12611	Thermostat	1	-	1	-
69A	M16121G1	Thermostat Assy	-	1	-	1
69B	M15814	Bracket, Thermostat	-	1	-	1
69C	**ST1-2B	Screw, Rd. hd., No. 6-32 x 1/4	-	4	-	4
70	**FHF3-3C	Screw, Fil hd, 10-24 x 3/8 in.	4	-	4	-
71	M11143-1	Bushing, Strain Relief	1	-	1	-
71	M11954	Bushing, Strain Relief	-	3	-	3
72	M10816G20	Lead, Electrode	2	-	2	2
72	M10816G12	Lead, Electrode	2	2	-	-

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PARTS LIST CONTINUED

MODELS F-120 and F-120 DELUXE

Index No.	Part Number	Part Name	Quantity per Spec. No.			
			F-120		F-120 Deluxe	
			2827G2-1		2827G10	
			2827G2		2827G10-1	
73	M3353	Cap, Fuel Tank	1	1	1	1
74	M14260	Bushing, Rubber	1	1	1	1
75	M12820G4	Fuel Tank	1	1	1	1
76	M13990	Plug	1	1	1	1
77	**M11084-27	Screw, 10-12 x 1/2 in., Type "A"	8	8	8	8
78	M14243	Handle, Rear	1	1	1	1
78A	M14244	Handle, Front	1	1	1	1
79	**M12345-33	Screw, Mach, oval hd, 10-24 x 1-3/4 in.	8	8	8	8
80	M12831	Frame, Wheel Support	1	1	1	1
81	**NTC-3C	Nut, 10-24	8	8	8	8
82	M12867	Axle	1	1	1	1
83	M14261-2	Wheel	2	2	2	2
84	**WP-8C	Washer	2	2	2	2
85	**C4-7	Cotter Pin	2	2	2	2
86	M12336	Sleeve, Alignment	2	2	2	2
87	M14262	Hub Cap	2	2	2	2

CONTROL AND ELECTRICAL PARTS

88	**NTC-1C	Locknut	-	-	2	2
89	M13962	Tubing, Photocell	-	-	1	1
90	M14456G1	Photocell and Bushing Assy	-	-	1	1
91	M13963	Clamp, Tubing	-	-	1	1
92	M13961	Bracket, Photocell	-	-	1	1
93	**M12461-2	Screw, Hex hd, 6-32 x 3/8	-	-	2	2
94	**M10908-1	Screw, Hex hd, No. 6-32 x 1/4, Type "S"	-	-	2	2
95	**ST2-2AC	Screw, Rd hd, No. 8 x 1/4	-	-	1	1
96	**M12461-2	Screw, No. 6-32 x 3/8	-	-	1	1
97	M14800	Bracket, Relay	-	-	1	1
98	M14378G4	Relay Assy	-	-	1	1
99	M14360	Circuit Breaker	-	-	1	1
100	**M10908-14	Screw, No. 8-32 x 3/8, Type "S"	-	-	1	1
101	M14802	Bracket, Circuit Breaker	-	-	1	1
	M9900G38	Wire Assy, Red, to circuit breaker	-	-	1	1
	M9900G53	Wire Assy, Black, to circuit breaker	-	-	1	-
	M9900G37	Wire Assy, Black, to circuit breaker	-	-	-	1
	M9900G51	Wire Assy, Black, to capacitor	-	1	1	1
	M9900G10	Wire Assy, Black	1	-	-	-
	M9900G30	Wire Assy, Black	1	-	-	-
	M16615G1	Wire Harness Assy, to photocell	-	-	1	1
	**M13942-2	Wire Connector	-	-	3	4

DECALS AND PAINT

M14283	Decal, Trade name	2	2	2	2
M14326	Decal, Nameplate	1	-	-	-
M16099	Decal, Nameplate	-	1	-	-
M16067	Decal, Nameplate	-	-	1	-
M16067-2	Decal, Nameplate	-	-	-	1

(*) - Parts recommended for normal service replacement.
 (**) - Standard hardware, obtainable locally.

MODELS F-120 and F-120 DELUXE

Index No.	Part Number	Part Name	Quantity per Spec. No.			
			F-120		F-120 Deluxe	
			2827G2-1 2827G2		2827G10 2827G10-1	
	M14678	Decal, Wiring diagram	1	-	-	-
	M16614	Decal, Wiring diagram	-	1	-	-
	M16613	Decal, Wiring diagram	-	-	1	1
	M12649	Decal, Operating instructions	1	-	1	-
	M15938	Decal, Operating instructions	-	1	-	1
	M16070	Decal, No-Fire Control	-	-	1	1
	M15407	Decal, AtoMaster	-	1	1	1
	M12647	Decal, Air Filter	1	1	1	1
	M16262	Decal, Caution	1	1	1	1
	M16069	Decal, Flame Safe	-	-	1	1
	M13125	Decal, Cover Removal	1	-	-	-
	M13386-3	Touch-Up Paint, Aerosol can (Green)	x	x	x	x
	M13386-4	Touch-Up Paint, Aerosol can (Yellow)	x	x	x	x
	M13386-8	Touch-Up Paint, Aerosol can (Black)	x	x	x	x

(*) - Parts recommended for normal service replacement.

(**) - Standard hardware, obtainable locally.