

Master

PORTABLE HEATERS

MODELS

B-99

and

B-120

Spec. Nos.

Spec. Nos.

2811G3

2811G3-1

2811G3-2

2827G3

2827G3-1

OPERATING, MAINTENANCE and SERVICE INSTRUCTIONS with PARTS LIST



MASTER VIBRATOR COMPANY

Division of

MASTER CONSOLIDATED INC.

333 West First Street, Dayton, Ohio 45402

D. SPECIFICATIONS

Characteristic	75,000 BTU Heaters	120,000 BTU Heaters	Characteristic	75,000 BTU Heaters	120,000 BTU Heaters
Output rating (BTU per hour)	75,000	120,000	Fuel tank capacity (U.S. gallons)	9.0	13.5
Air output, approx. (Cu. ft. per minute)	345	450	Fuel consumption, approx. (Gallons per hour)	0.55	0.85
Amperage (During normal run)	4	5.5	Voltage and cycles	As shown on heater instruction plate.	
Weight, approx. (Pounds)	68	90	Motor RPM (115-volt, 60-cycle heaters)	3,450	3,450
Fuel	Kerosene or No. 1 fuel oil only.		(230-volt, 50-cycle heaters)	2,850	2,850
			Duct	No duct recommended.	

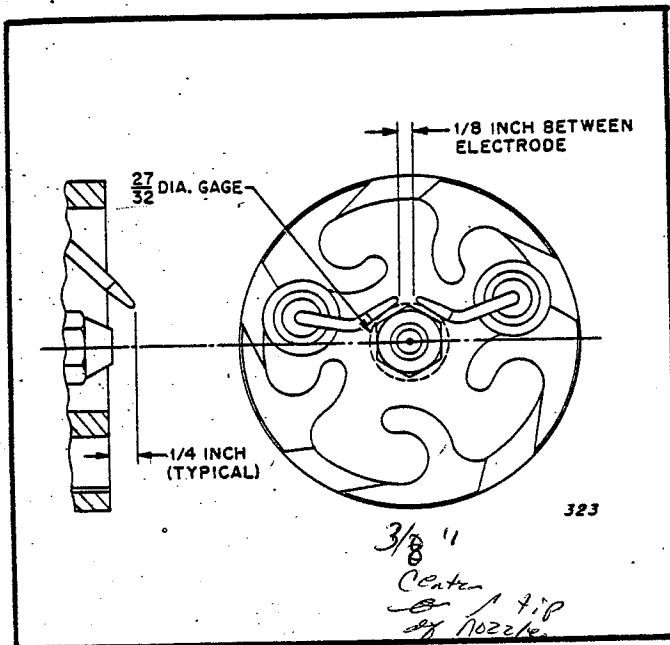


Figure 4. Electrode Setting Diagram

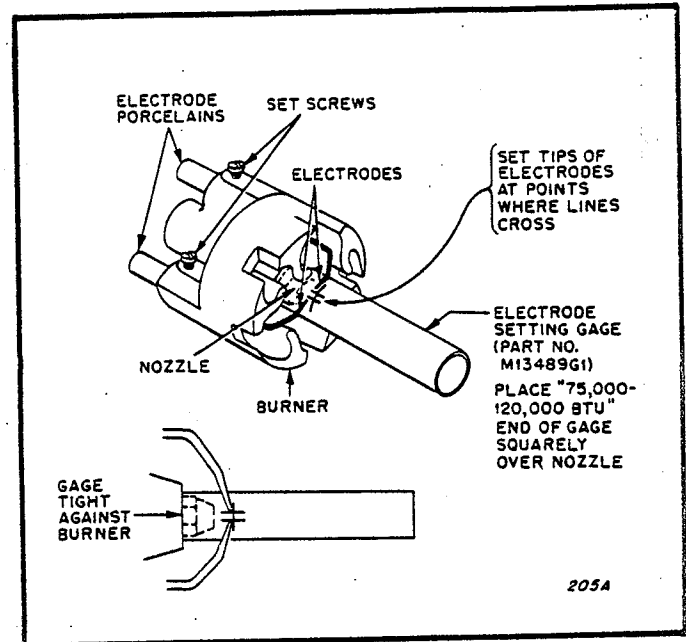


Figure 5. Use of Electrode Setting Gage

6. When reinstalling the burner, be sure it is started straight. The fins on the combustion chamber could be bent if the burner were forced into position at an angle. When the burner is in position, turn it clockwise to lock it, then tighten the screw.

7. Insert the electrode leads until they snap into place, to prevent loosening as the heater is moved.

CAUTION: Do not attempt to repair the nozzle as a part of routine maintenance. If the nozzle needs to be repaired, see Section V of this manual.

H. ELECTRODE REPLACEMENT AND SETTING

Replace both electrodes if the old ones are cracked or excessively dirty.

NOTE: Remove the electrodes through the nozzle-side of the burner. The tips could be damaged if the electrodes were removed or inserted through the rear of the burner.

1. To remove, loosen the clamping screws.

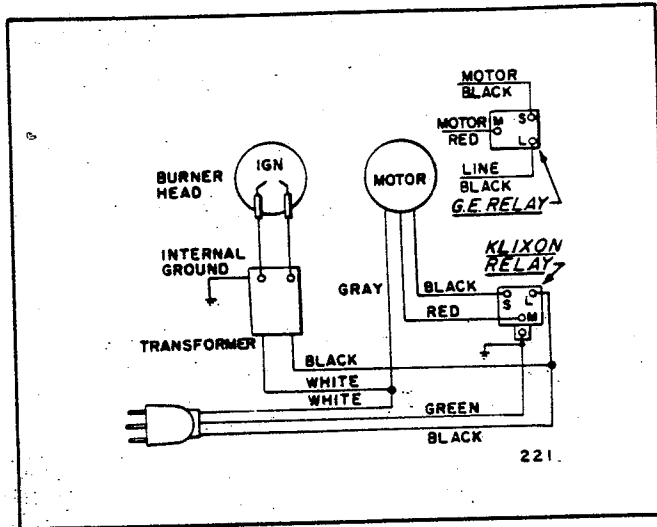
2. When reinstalling the electrodes, place the metal bands directly under the screws, with the slot in the band positioned opposite (180° from) the screw. This will prevent damage to the porcelain when the screws are tightened. If the porcelain is cracked, the electrode will short-out through the burner.

3. Refer to Figure 4 for electrode settings. Figure 5 shows how to use the Electrode Setting Gage, Part No. M13489G1, which is available from your dealer. Use the 75,000 - 120,000 BTU end of the gage when setting the electrodes on these heaters.

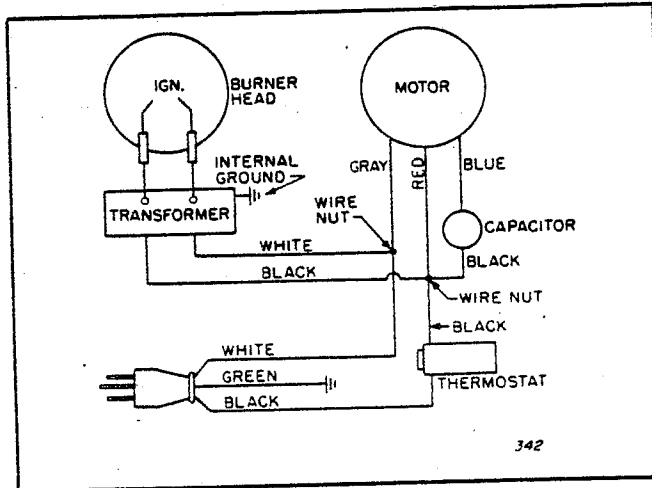
4. When the electrode tips are positioned correctly, tighten the screws enough to prevent the electrodes from shifting, then reinstall the burner head.

I. REASSEMBLY AFTER MAINTENANCE

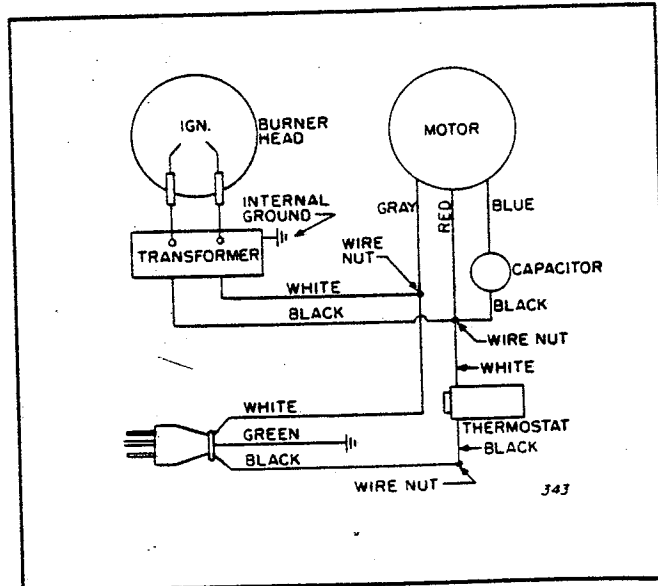
Put the heater back together in the reverse order of disassembly. Be sure all parts are in place and all screws and electrical connections are tight, before attempting to use the heater.



MODEL B-99



MODEL B-120
(Spec. No. 2827G3)



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Figure 6. Wiring Diagrams

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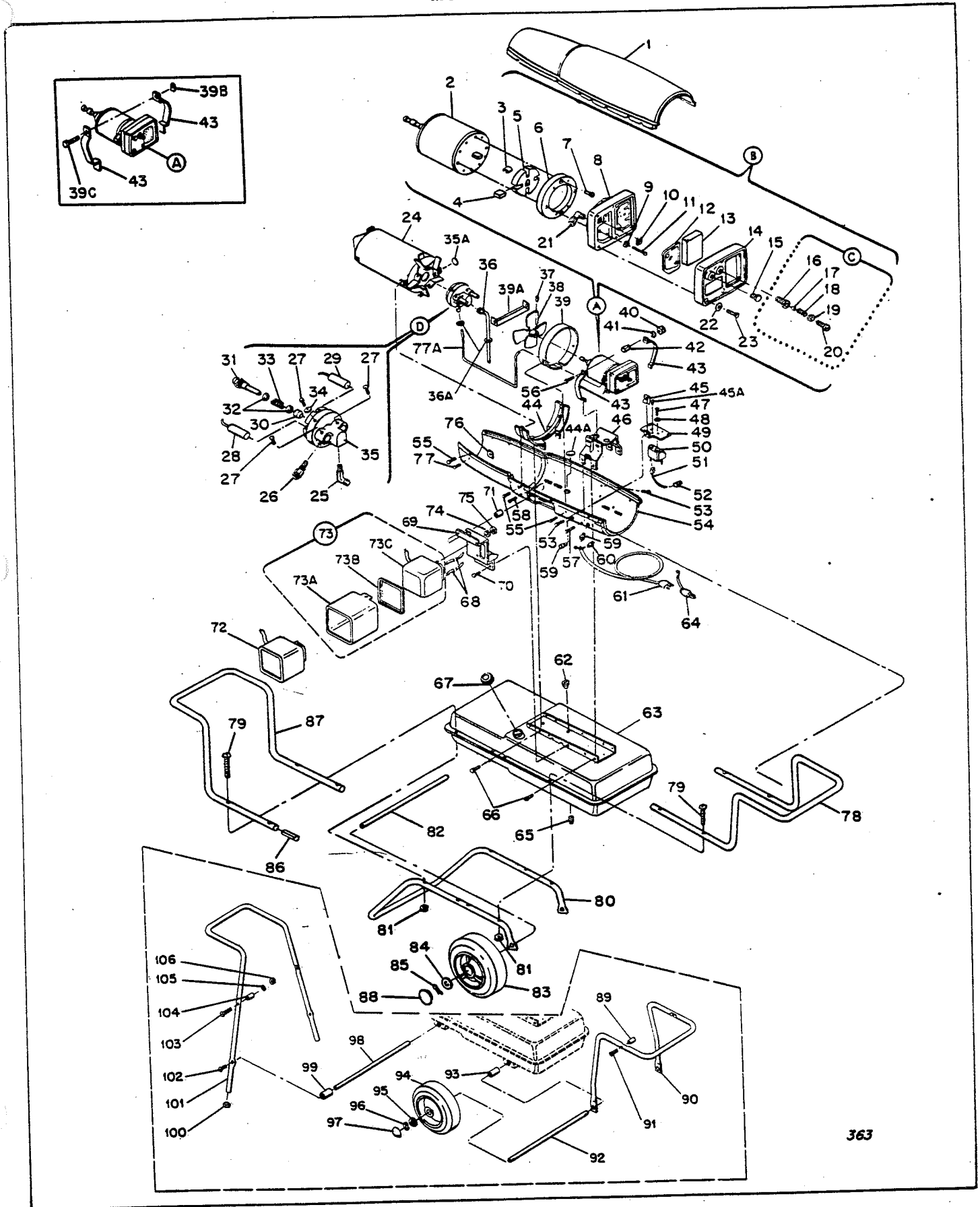


Figure 10. Model B-99 Portable Heater, Exploded View

SECTION VI ILLUSTRATED PARTS LIST

This section contains a list of all replaceable parts used in the heater covered by this manual. The only parts that are recommended for replacement by the heater's owner or user are indicated by the symbol (*). Parts indicated by the symbol (**) are standard hardware items, and may be obtained locally, if needed.

Check the nameplate decal for the correct model number and Spec. No. of the heater. **INCLUDE THE MODEL AND SPEC. NUMBER WHEN ORDERING PARTS.** Order parts by part name and part number only. Do not use the index numbers from the illustration when ordering parts.

MODEL B-99

Index No.	Part Number	Part Name	Quan. per Spec. No.		
			2811G3	2811G3-1	2811G3-2
1	ϕM13134G1	Shell, Upper	1	1	-
1	ϕM13134G3	Shell, Upper	-	-	1
(A)	*M11937G1	Motor Package Assy	1	1	1
2	M11938	Motor <i>M31316</i>	1	1	1
(B)	*M13614G1	<u>Pump and Filter Parts Package</u>	1	1	1
3	M11966-5	Spring	1	1	1
4	M8643	Blade	4	4	4
5	M11959	Rotor	1	1	1
6	M8645	Pump Body	1	1	1
7	**FHPP3-4C	Screw, Fil hd, 10-32 x 1-1/8 in.	2	2	2
8	M12233	End Cover, Pump	1	1	1
9	WLI-3C	Washer	6	6	6
10	*M11637	Filter, Lint	1	1	1
11	**M12461-32	Screw, Hex hd, 10-32 x 1-1/8 in.	6	6	6
12	*M12244G1	Filter Assy	1	1	1
13	*M12179	Intake Filter	1	1	1
14	M12234	End Cover	1	1	1
15	M10837	Pipe Plug	1	1	1
(C)	M8943G2	<u>Pressure Relief Valve Assy</u>	1	1	1
16	M10362	Connector	1	1	1
17	M8940	Ball, 1/4 dia.	1	1	1
18	M8941	Spring, Compression	1	1	1
19	**M8993	Hex, Nut, 3/8-24	1	1	1
20	M11941	Bushing, Pressure adjustment	1	1	1
21	69248	Male Elbow	1	1	1
22	**WLI-3C	Lockwasher, Internal #10	4	4	4
23	**M12461-31	Screw, Hex hd, 10-32 x 1 in.	4	4	4
24	M11920G1	Combustion Chamber	1	1	-
24	M11920G2	Combustion Chamber	-	-	1
(D)	*M11929G1	<u>Burner Assy</u>	1	1	1
25	M11931	Elbow, Male, 45°	1	1	1
26	M5976	Connector, Male	1	1	1
27	**HF3-3C	Screw, Hex hd, 10-32 x 3/8 in.	3	3	3

Index No.	Part Number	Part Name	Quan. per Spec. No.		
			2811G3	2811G3-1	2811G3-2
28	*M8989	Electrode, LH	1	1	1
29	*M8990	Electrode, RH	1	1	1
30	M8882	Sleeve	1	1	1
31	M8667	Nozzle <i>M18048</i>	1	1	1
32	M10659-1	Washer, Nozzle Seal	2	2	2
33	M10809-1	Spring, Nozzle Seal	1	1	1
34	WP-3C	Washer, Flat	1	1	1
35	M8716G2	Burner Head	1	1	1
35A	M15995	Plug Button	-	-	1
36	M11932G1	Fuel Filter Assy	1	-	-
36	M13846G1	Fuel Filter Assy	-	1	1
36A	1000577	Grommet (Air line and Fuel Filter)	-	-	2
37	No Number	Setscrew, Socket hd, cup pt, 1/4-28	2	2	2
38	M8697	Fan	1	-	-
38	M14529	Fan, 16° Pitch	-	1	1
39	M12331	Housing, Fan	1	1	-
39A	M15807	Strap, Retainer	-	-	1
39B	M11271-2	Nut, Tinnerman (Superseded by NPC-4C)	2	-	-
39C	**M12461-55	Screw, 10-24 x 1 in. (Superseded by HC4-10C)	2	-	-
40	**NPC-4C	Nut, Hex, 1/4-20	2	2	2
41	**WLM-4	Washer, Lock, 1/4	-	2	2
42	M13620	Spacer	-	2	2
43	M10964-1	Clamp, Motor	4	4	4
44	ϕM12330	Bracket, Shell Support	1	1	1
44A	M15809	Plug	-	-	1
45	M11271-6	Nut, Tinnerman	1	1	1
45A	**ST2-2AC	Screw, Rd hd, No. 8 x 1/4	1	1	1
46	ϕM11942	Bracket, Motor Support	1	1	1
47	**RC-2-3C	Screw, Rd hd, 8-32 x 3/8 in.	2	2	2
48	**WLI-2C	Washer, Lock #8	2	2	2
49	M11952	Bracket, Relay Mounting	1	1	1
50	M11951	Relay	1	-	-
50	M12462-2	Relay	-	-	1
51	M9946G4	Wire Assy	1	1	1

(*) - Parts recommended for normal service replacement.
 (**) - Standard hardware, obtainable locally.
 (ϕ) - Specify color when ordering painted parts.

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Index No.	Part Number	Part Name	Quan. per Spec. No.		
			2811G3	2811G3-1	2811G3-2
52	**M13942-4	Connector, Wire	-	1	1
52	69321-61	Connector, Wire	1	-	-
53	**M10908-51	Screw, 10-24 x 1/2	4	4	-
53	**M11084-27	Screw, 10-12 x 1/2, Type A	1	1	4
54	ϕM12328	Shell, Lower	-	-	1
54	ϕM15805	Shell, Lower	-	-	1
55	**M11084-27	Screw, 10-12 x 1/2, Type A	7	7	7
56	**HC4-10C	Screw, 1/4-20 x 1-1/4	2	2	2
57	**M10908-51	Screw, 10-24 x 1/2 in.	2	2	-
57	**M11084-27	Screw, 10-12 x 1/2, Type A	-	-	2
58	**M10908-53	Screw, 10-24 x 3/4	4	4	-
58	**M11084-29	Screw, 10-24 x 3/4, Type A	-	-	4
59	M11954	Bushing, Strain Relief	2	2	2
60	**M13942-4	Connector, Wire	-	1	1
60	69321-61	Connector, Wire	2	-	-
61	M10813G11	Extension (Service) Cord Assy	1	-	-
61	M10813G26	Service Cord Assy	-	1	-
61	M10813G1	Service Cord Assy	-	1	1
62	M10990-3	Bushing	1	-	-
62	M10990-1	Bushing	-	1	1
63	NA ϕM12321G1	Fuel Tank Assy	1	-	-
63	ϕM12377G1	Fuel Tank Assy	-	1	1
65	M13990	Plug	1	-	-
65	MS257	Plug	1	-	-
66	**M10908-51	Screw, 10-24 x 1/2	8	8	-
66	**M11084-27	Screw, 10-12 x 1/2, Type A	-	-	8
67	M3353	Cap, Fuel Tank	1	1	1
68	M10816G11	Lead Assy, Electrode	2	2	2
69	ϕM12332G1	Mounting Bracket	1	1	-
70	**M10908-51	Screw, 10-24 x 1/2 in.	4	4	-
71	M13042	Spacer	-	2	-
72	*M15425	Transformer	-	-	1
73	M12509G1	Transformer Assy	1	1	-
73A	ϕM12510	Cover, Transformer	1	1	-
73B	ϕM12511	End, Transformer cover	1	1	-
73C	M3269-4	Transformer	1	1	-
74	**WP-4C	Washer, 1/4 in.	2	2	2
75	**NTC-4C	Nut, Hex, 1/4-20, Torque-Lock	2	2	2
76	M11271-6	Nut, Tinnerman	-	6	6
76	M11271-4	Nut, Tinnerman	6	-	-
77	**M10908-51	Screw, 10-24 x 1/2	2	2	-
77	**M11084-27	Screw, 10-12 x 1/2, Type A	-	-	2
77A	*M11943	Air Line	1	1	1
78	ϕM13830	Handle, Rear	-	1	1
79	**M12345-34	Screw, 10-24 x 1-3/4, Oval hd	-	8	8
80	ϕM12342	Frame, Wheel Support	-	1	1
81	**NTC-3C	Nut, 10-24	-	8	8
82	M11957	Axle	-	1	1
83	ϕM14261-2	Wheel	-	2	2
84	**WP-8C	Washer	-	2	2
85	**C4-7	Cotter Pin	-	2	2

Index No.	Part Number	Part Name	Quan. per Spec. No.		
			2811G3	2811G3-1	2811G3-2
86	M12336	Sleeve, Alignment	-	2	2
87	ϕM13831	Handle, Front	-	1	1
88	M14262	Hub Cap	-	2	2
89	ϕM12508-2	Spacer, Leg	2	-	-
90	ϕM12388	Leg, Rear	1	-	-
91	M12345-51	Screw, Mach, oval hd, 10-24 x 2-3/4 in.	2	-	-
92	M12390	Axle	1	-	-
93	M12391	Spacer, Rear	2	-	-
94	ϕM12664	Wheel	2	-	-
95	WP-8	Washer	2	-	-
96	M13280	Cotter Pin	2	-	-
97		Hub Cap	2	-	-
98	M12386	Rod, Tie	1	-	-
99	ϕM12387	Spacer, Front	2	-	-
100	M8704	Plug Button	2	-	-
101	ϕM12383	Leg, Front	1	-	-
102	M12619-23	Screw, 10-24 x 1 in.	2	-	-
103	M12345-50	Screw, Mach, oval hd, 10-24 x 2-1/2 in.	2	-	-
104	ϕM12508-1	Spacer, Leg	2	-	-
105	WP-3	Washer, #10	2	-	-
106	NEC-3C	Nut, Hex, 10-24	2	-	-
	M12646	Decal, Wiring	1	1	1
	M12802	Decal, Trade Name	1	2	2
	M12803	Decal, Nameplate	1	-	-
	M12803-2	Decal, Nameplate	-	1	-
	M12803-3	Decal, Nameplate	-	-	1
	M12804	Decal, Operating Instructions	1	1	-
	M15944	Decal, Operating Instructions	-	-	1
	M8603	Decal, Filter	1	-	1
	M16262	Decal, Caution	-	1	-
	M15407	Decal, AtoMaster	-	1	1
	M12806	Decal, Caution	1	1	1
	M8987	Decal, Fuel Tank Drain	1	-	1
	M15943	Decal, Cover Removal	-	-	1
	M13141	Decal, Cover Removal	1	-	-
	M13386-4	Aerosol Can, Touch Up Paint (Yellow)	x	x	x
	M13386-8	Aerosol Can, Touch Up Paint (Black)	x	x	x

OPTIONAL EQUIPMENT

M9044-3	Thermostat Kit	x	x	x
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- (*) - Parts recommended for normal service replacement.
- (**) - Standard hardware, obtainable locally.
- (ϕ) - Specify color when ordering painted parts.

Model B-120

Index No.	Part Number	Part Name	Quan. per Spec. No. 2827G3-1 2827G3.
1	ϕM13520G1	Shell, Upper	1 -
1	ϕM13520G3	Shell, Upper	- 1
(A)	*M12864G1	Motor Package Assembly	1 1
2	M12811	Motor	1 1
3	M8947	End Shield, front	1 1
(B)	M15442G1	Pump and Filter Parts Package	1 1
4	M11966-5	Spring	1 1
5	M8643-3	Blade	4 4
6	M11969	Rotor	1 1
7	M8645-3	Pump Body	1 1
8	**FHPF3-7C	Screw, Fil hd, 10-32 x 1/2 in.	2 2
9	M12233	End Cover, Pump	1 1
10	**WLI-3	Washer	6 6
11	*M11637	Filter, Lint	1 1
12	**M12461-34	Screw, Hex hd, 10-32 x 1-1/2 in.	6 6
13	*M12244G1	Filter Assy	1 1
14	*M12179	Intake Filter	1 1
15	M12234	End Cover	1 1
16	M10837	Pipe Plug	1 1
(C)	M8943G2	Pressure Relief Valve Assy	1 1
17	M10362	Connector	1 1
18	M8940	Ball, 1/4 dia.	1 1
19	M8941	Spring, Compression	1 1
20	**M8993	Hex Nut, 3/8-24	1 1
21	M11941	Bushing, Pressure adjustment	1 1
22	M12865	Male Elbow	1 1
23	**WLI-3	Lockwasher, Internal #10	4 4
24	**M12461-31	Screw, Hex hd, 10-32 x 1 in.	4 4
25	M12934G1	Combustion Chamber	1 1
25A	M15995	Plug Button	1 1
(D)	*M12947G3	Burner Assy	1 1
26	M14256	Elbow	1 1
27	M12949	Connector	1 1
28	**HF3-3C	Screw, 10-32 x 3/8 in.	3 3
29	M12952	Electrode RH	1 1
30	M12951	Electrode LH	1 1
31	**WP-3C	Washer, Flat	1 1
32	M14293	Nozzle, Siphon	1 1
33	M10659-1	Washer, Nozzle Seal	2 2
34	M10809-1	Spring, Nozzle Seal	1 1
35	M8882	Sleeve	1 1
36	M12948G1	Burner Head	1 1
37	M14259G1	Fuel Filter	1 1
38	No Number	Setscrew, Soc. hd, cup pt., 1/4-28	2 2
39	*M13038	Fan, 9° pitch	1 1
40	M12830	Fan Housing	1 1
41	**NPC-4C	Nut	2 2
42	**WLM-4	Lockwasher, 1/4 in.	2 2
43	M10964-1	Clamp, Motor	4 4
44	M13620	Spacer	2 2
45	**HC4-10C	Screw, 1/4-20 x 1-1/4	2 2
46	M14245	Air Line	1 -

Index No.	Part Number	Part Name	Quan. per Spec. No. 2827G3-1 2827G3
46	M15970	Air Line	- 1
46A	1000577	Grommet	- 1
47	ϕM12828	Bracket, Shell Support	1 1
48	1000577	Grommet	2 2
49	ϕM12829	Bracket, Motor Support	1 1
50	**M10908-51	Screw, 10-24 x 1/2, Type S	1 1
51	M12651	Clamp, Tinnerman	1 1
52	M12650-1	Capacitor	1 1
52A	M15809	Plug	- 1
53	M11271-6	Nut, Tinnerman	6 6
54	**M11084-27	Screw, 10-12 x 1/2 in., Type A	6 6
55	**M11084-27	Screw, 10-12 x 1/2 in., Type A	8 8
56	**M11084-29	Screw, 10-12 x 3/4 in., Type A	4 4
57	M5890	Grommet	1 -
58	**M13942-4	Connector	2 2
	**M13942-2	Connector	- 1
59	M10813G28	Extension Cord Assy	1 -
59	M10813G24	Extension Cord Assy	- 1
61	ϕM12826	Shell, Lower	1 -
61	ϕM15810	Shell, Lower	- 1
62	**NTC-4C	Nut, Hex 1/4-20, Torque Lock	2 2
63	**WP-4C	Washer, 1/4 in.	2 2
64	M11084-27	Screw, 10-12 x 1/2, Type A	4 -
65	ϕM12841G1	Mounting Bracket	1 -
66	M6087	Grommet	1 -
67	M3259-4	Transformer (Note: When installing replacement, shorten leads as needed to fit inside housing.)	1 -
67A	M15425	Transformer	- 1
68	ϕM14985G1	Cover, Transformer	1 -
69	M12611	Thermostat <i>N/A</i>	1 -
69A	M16121G1	Thermostat Assy <i>N/A</i>	- 1
69B	ϕM15814	Bracket, Thermostat	- 1
69C	*ST1-2B	Screw, Rd. hd., No. 6-32 x 1/4	- 4
70	**FHF3-3C	Screw, Fil hd, 10-24 x 3/8 in.	4 -
71	M11143-1	Bushing, Strain Relief	1 -
71	M11954	Bushing, Strain Relief	- 3
72	M10816G20	Lead, Electrode	2 -
72	M10816G12	Lead, Electrode	2 -
73	M3353	Cap, Fuel Tank	1 1
74	M14260	Bushing, Rubber	1 1
75	ϕM12820G4	Fuel Tank	1 1
76	M13990	Plug	1 1
77	**M11084-27	Screw, 10-12 x 1/2 in., Type A	8 8
78	ϕM14243	Handle, Rear	1 1
78A	ϕM14244	Handle, Front	1 1
79	**M12345-33	Screw, Mach, oval hd, 10-24 x 1-3/4 in.	8 8
80	ϕM12831	Frame, Wheel Support	1 1

- (*) - Parts recommended for normal service replacement.
- (**) - Standard hardware, obtainable locally.
- (ϕ) - Specify color when ordering painted parts.

PARTS LIST CONTINUED

Model B-120

Index No.	Part Number	Part Name	Quan. per Spec. No. 2827G3-1 2827G3
81	**NTC-3C	Nut, 10-24	8 8
82	M12867	Axle	1 1
83	ϕM14261-2	Wheel	2 2
84	**WP-8C	Washer	2 2
85	**C4-7	Cotter Pin	2 2
86	M12336	Sleeve, Alignment	2 2
87	M14262	Hub Cap	2 2
CONTROL AND ELECTRICAL PARTS			
	M9900G51	Wire Assy, Black, to capacitor	- 1
	M9900G37	Wire Assy, Black	1 -
	M9900G54	Wire Assy, Black	1 -

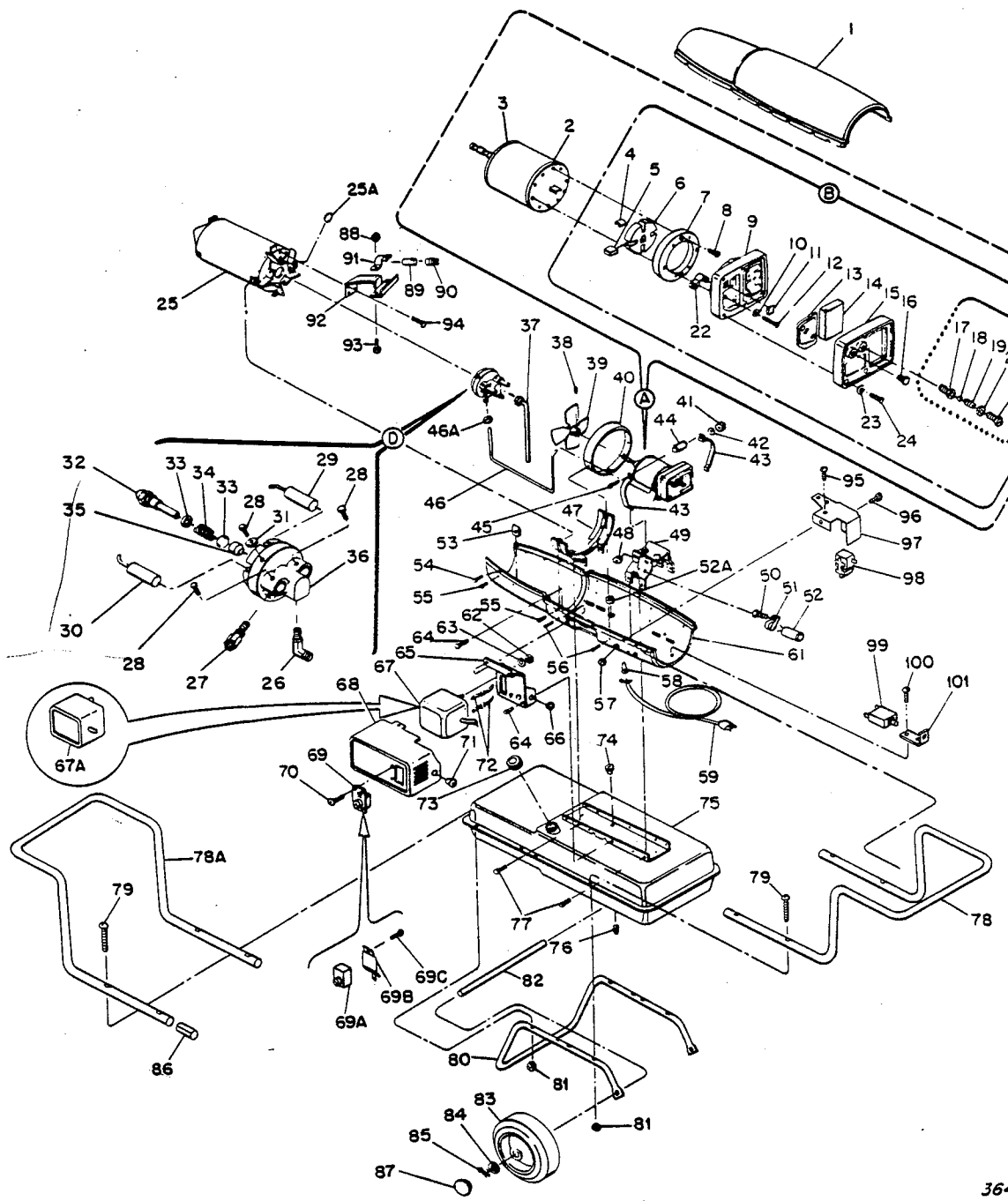
Index No.	Part Number	Part Name	Quan. per Spec. No. 2827G3-1 2827G3
DECALS AND PAINT			
	M14679	Decal, Trade Name	2 2
	M14680	Decal, Nameplate	1 -
	M14680-2	Decal, Nameplate	- 1
	M14678	Decal, Wiring diagram	1 -
	M16614	Decal, Wiring diagram	- 1
	M12804	Decal, Operating instructions	1 -
	M15944	Decal, Operating instructions	- 1
	M15407	Decal, AtoMaster	- 1
	M12806	Decal, Caution	1 1
	M16262	Decal, Caution	1 1
	M13125	Decal, Cover Removal	1 -
	M13386-4	Touch-Up Paint, Aerosol can (Yellow)	x x
	M13386-8	Touch-Up Paint, Aerosol can (Black)	x x

- (*) - Parts recommended for normal service replacement.
- (**) - Standard hardware, obtainable locally.
- (ϕ) - Specify color when ordering painted parts.

Warranty

The Company warrants its equipment to be free from defects in material or workmanship, under normal and proper use in accordance with instructions of the Company for a period of ninety days from date of delivery to the buyer, but the liability on such warranty shall be limited to the repair or replacement by the Company (f.o.b. factory) of any of its equipment which may be returned by the buyer to the factory, transportation charges and handling fees prepaid, within said ninety day period and which is found by the Company to have been thus defective in material or workmanship. The foregoing is the full extent of the responsibility of the Company. Except as expressly stated above, we make no warranty of merchantability and no warranty of fitness for any particular purpose nor do we make any warranty, express or implied, of any nature whatsoever with respect to our equipment or the use thereof, and in no event shall the Company be liable for delay caused by defects, for consequential damages, or for any charges or expenses of any nature incurred without its written consent. This warranty will not apply to any product which has been repaired or altered outside of our factory, in any respect which, in our judgment, affects its condition or operation.

MODEL B-120



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NOTE: Items 88 through 101 are not used in Model B-120 Heaters.

Figure 11. Model B-120 Portable Heater, Exploded View