

**HEAT WAGON, INC.
342 N. 400 EAST
VALPARAISO IN 46383**

**Model GP400IDF
CONSTRUCTION HEATER**

Installation and Maintenance Manual

Please retain for future reference

FOR YOUR SAFETY

**Do not use this heater in a space
where gasoline or other liquids
having flammable vapors are
stored or used.**

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NOTE: For burner parts & service refer to burner manual

SPECIFICATIONS

MODEL:	GP400IDF
FUEL:	Vapor Propane or Natural Gas
FUEL CONSUMPTION:	Propane 4.4 GPH Nat. Gas 400 CFH
SUPPLY PRESSURE:	Max 14" W.C. Min 9" W.C. Optional Regulator needed for supply pressure above 14" W.C. for both vapor propane and natural gas (part # 40SV06)
FAN:	2100 CFM 1725 RPM (Standard after Aug. 1, 1998) 4100 CFM 3450 RPM
ELECTRICAL:	Standard: 120 Volts, 10, 20 AMPS Optional: 240 Volts, 10, 13 AMPS

Installation Instructions for GP400IDF

- The recommendations of local authorities must be followed
- Place the heater on a firm, non-combustible surface
- Place wedges under wheels to prevent accidental moving
- **Do not** use heater in an enclosed area where exhaust gases may harm people
- **Do not** use heater in areas where vapors or liquid flammable materials may be present

INSTALLATION CLEARANCES:

Top:	3 feet
Sides:	3 feet
Discharge End:	10 feet
Flue Pipe:	2 feet
Floor:	Do not place on combustible floor

FUEL SUPPLY:

- Use Vapor propane or natural gas

FLUE PIPE:

- Ensure that flue pipe is firmly bolted in place
- Ensure that no combustible materials are above or in close proximity to the flue pipe

DUCTING:

- Use steel ducting or fabric ducting capable of withstanding maximum temperature of 250 degrees F
- Maximum length of duct: 50 feet
- Duct diameter: 14 inches
- Avoid sharp bends and corners to ensure maximum air flow

OPERATING INSTRUCTIONS

This heater is shipped as either natural gas fired or vapor propane. Before startup check for proper orifice in burner.

Nat. Gas Orifice = 15/32 - .468

Propane Orifice = Q - .332

See burner manual page 5 item H for details

TO START:

- Turn main switch to "O" position
- Connect the heater to a 120 volt grounded power source
- Turn remote thermostat to desired position
- Turn main switch to position "1=HEAT"
- The heater will now operate automatically, controlled by the remote thermostat

TO STOP:

- Turn main switch to position "O"
- The fans will continue to turn until the heater has cooled down to a safe temperature. Disconnect the power source after fans have stopped.

CAUTION: * DO NOT stop by disconnecting power source - heat accumulated in heater can damage burner or safety equipment

TO USE AS A VENTILATOR:

- Start fans by turning main switch to "2=VENT"
- Stop fans by turning main switch to "O"

TROUBLE SHOOTING

1. Nothing happens when main switch is turned to "HEAT" or "VENT"

- Check power supply cord and fuses
- Push the red overheat reset button on triple thermostat
- Push the burner reset button (red button in burner relay control box)

2. Fan starts when main switch is turned to "VENT" but nothing happens in the "Heat" position

- Check remote thermostat setting
- Check remote thermostat cord
- Push the burner reset button

3. When main switch in position "HEAT", burner fires but stops after a while without fan starting at all

- Push the reset button on fan limit switch
- Clean the flame rod of the burner
- Push the reset button on the fan motor

Refer to separate burner manual for additional troubleshooting instructions.

MAINTENANCE

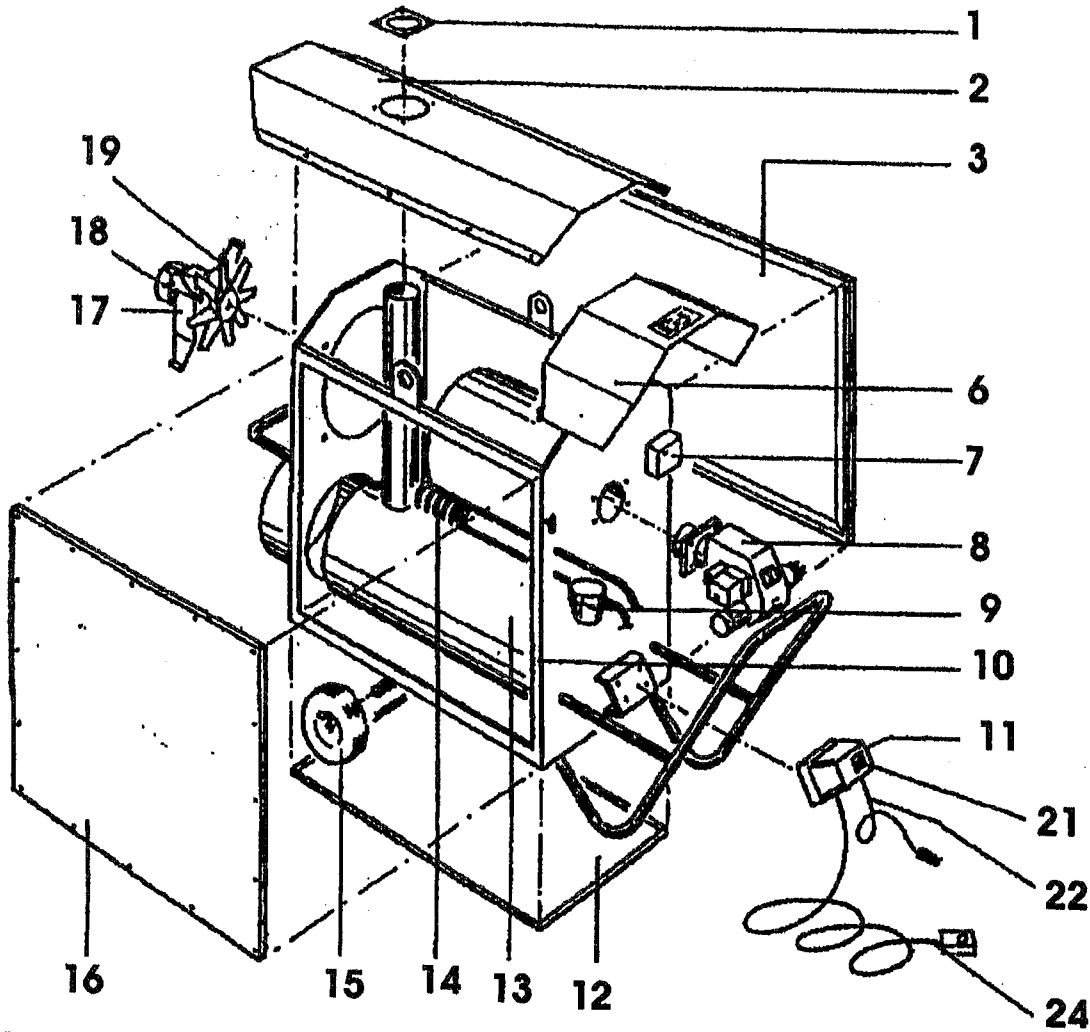
1. Refer to separate burner manual for adjustment of burner

2. To clean the heater (once a season)

- Open all side panels
- Open the cleaning flanges of burner chamber and heat exchanger
- Clean burner chamber and exchanger tubes with brush
- Vacuum clean all loose ash and soot
- Close all cleaning flanges carefully to avoid damage to gasket material
- Tighten all bolts carefully
- Close side panels

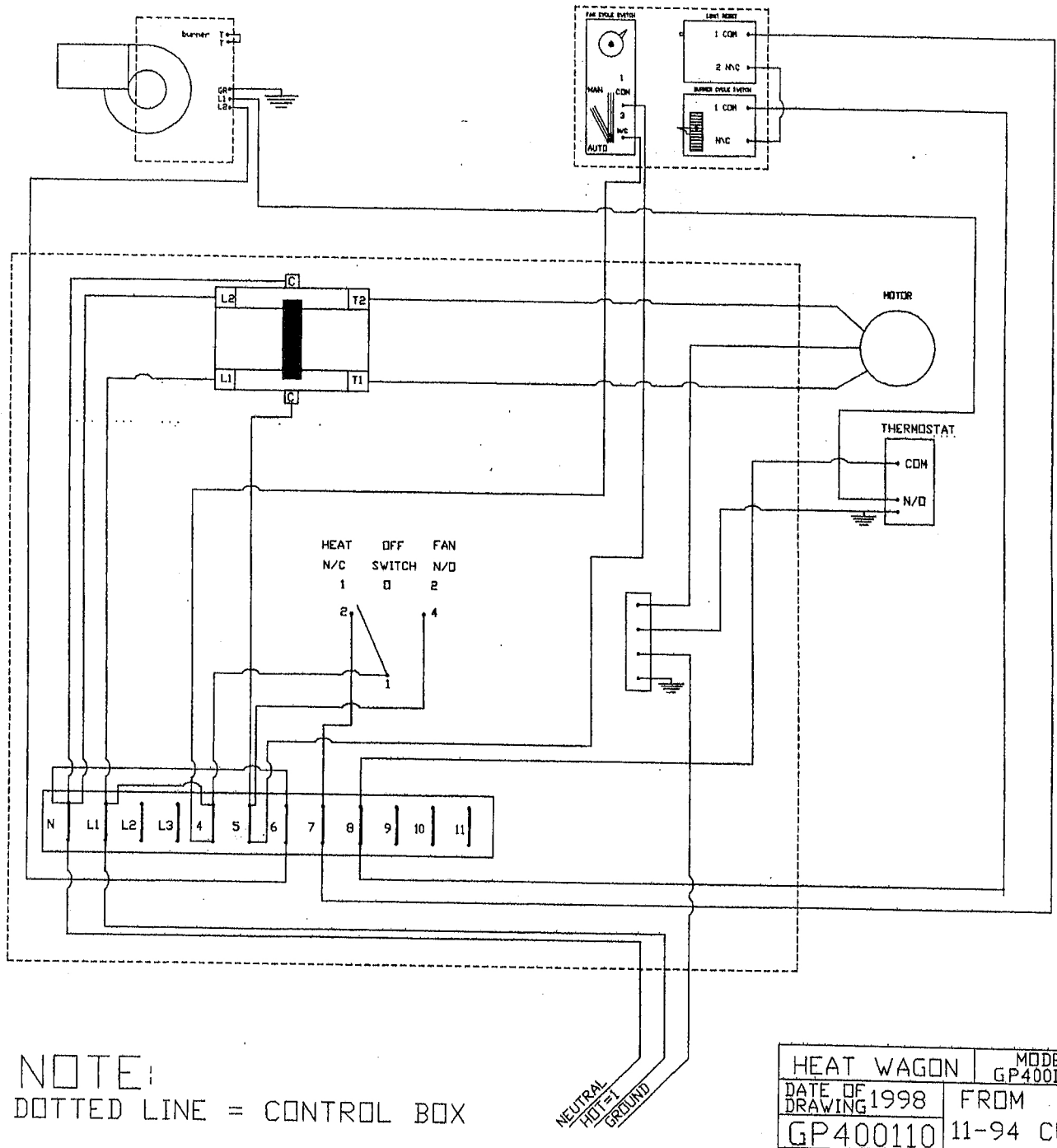
WARNING: * DO NOT tamper with heater – have a competent serviceman make necessary adjustments.

HEAT WAGON GP400IDF PARTS LIST



ITEM	PART #	DESCRIPTION	ITEM	PART #	DESCRIPTION
1	PB120001	Flue Collar	15	HW1065	Wheel
2	PB120002	Top Cover	16	PB120003	Side Panel, Left
3	PB120003	Side Panel, Right	17	PM120017	Fan Motor Bracket
6	PB120006	Burner Cover	18	PM120018	Fan Motor (Specify RPM)
7	PC120007	Triple Thermostat	19	PM120019	Fan Blade
8	PW120008B	Gas Burner	21	PC120021	Main Switch
10	PB120010	Heater Frame	22	HC1020	Power Cord
11	PC120011	Electric Control Box	24	SC40SC21	Remote Thermostat
*	SC11SC15	Fan Motor Relay (Not shown)			
12	PB120012	Bottom Plate			
13	PB120013	Burner Chamber Assy			
14	PB120014	Oil Preheat Coil			

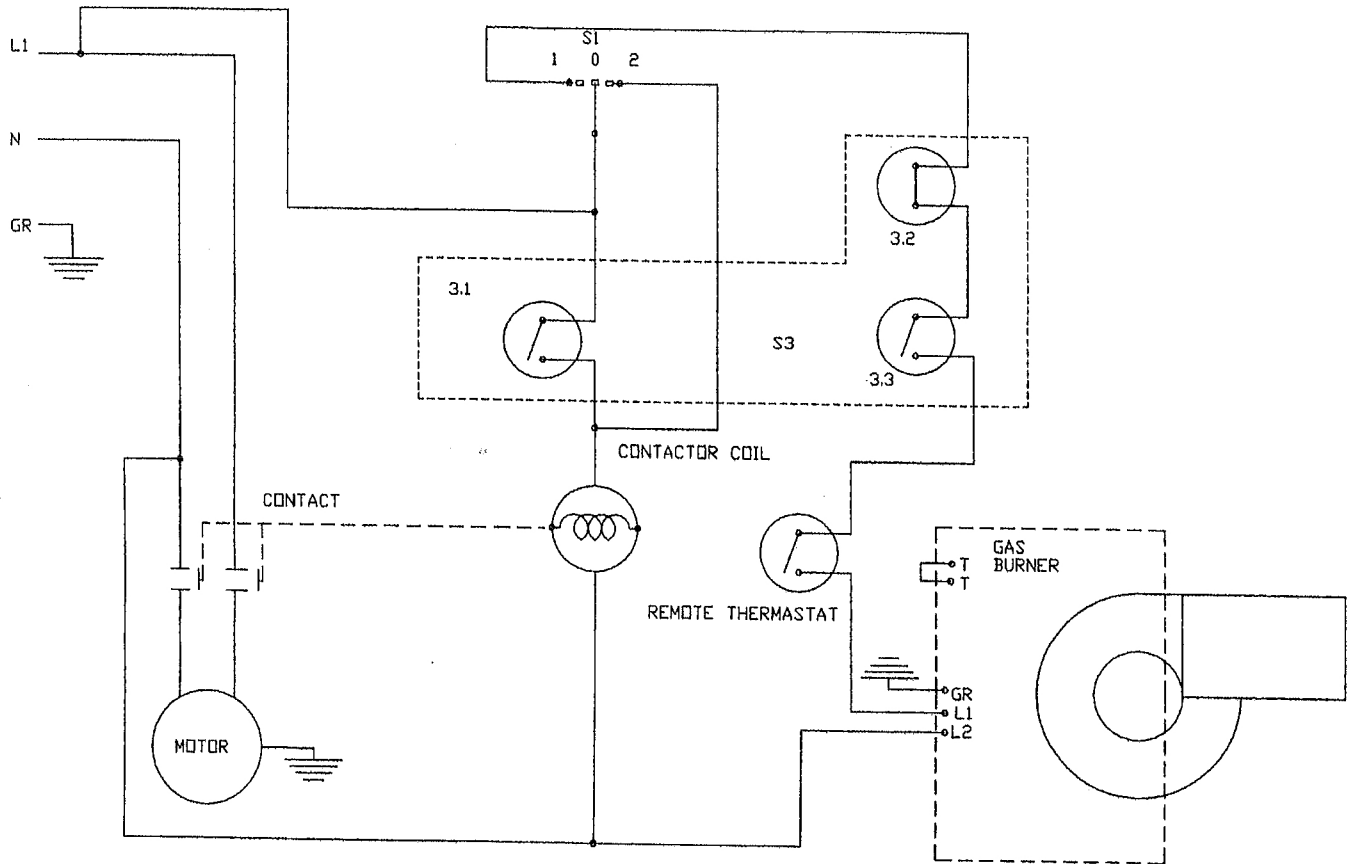
120 VOLT 1PH.



NOTE:
DOTTED LINE = CONTROL BOX

HEAT WAGON	MODEL
	GP400IDF
DATE OF DRAWING 1998	FROM TO
GP400110	11-94 CURR

120 VOLT 1PH.

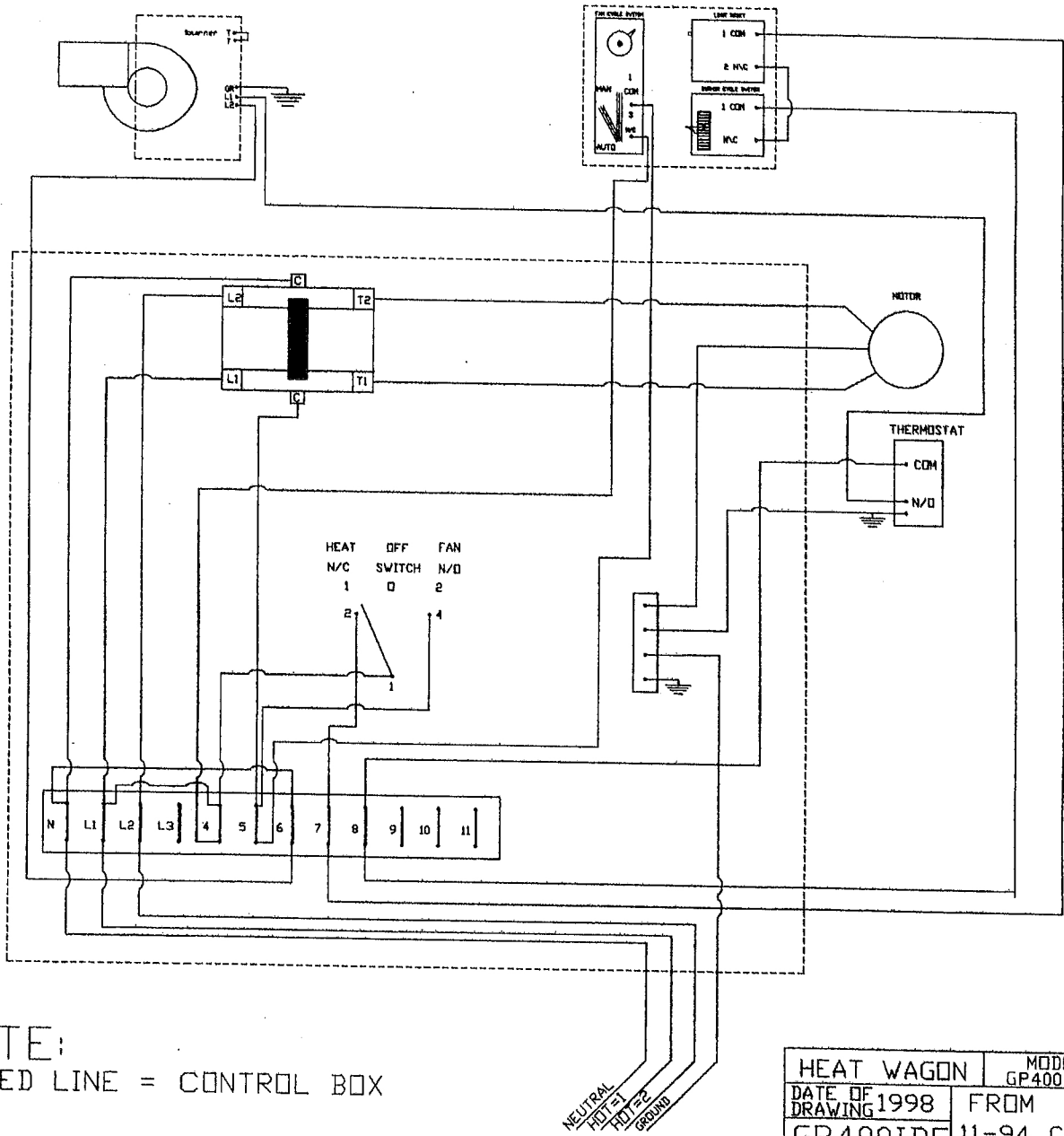


S3 = TRIPLE THERMOSTAT
 3.1 = FAN THERMOSTAT
 3.2 = OVERHEAT THERM.
 3.3 = BURNER CONTROL THERM.

S1 = MAIN SWITCH
 1 = HEAT
 2 = FAN ONLY
 0 = OFF

HEAT WAGON		MODEL GP4001DC	
DATE OF DRAWING	1998	FROM	TO
GP401101		11-94	CURR

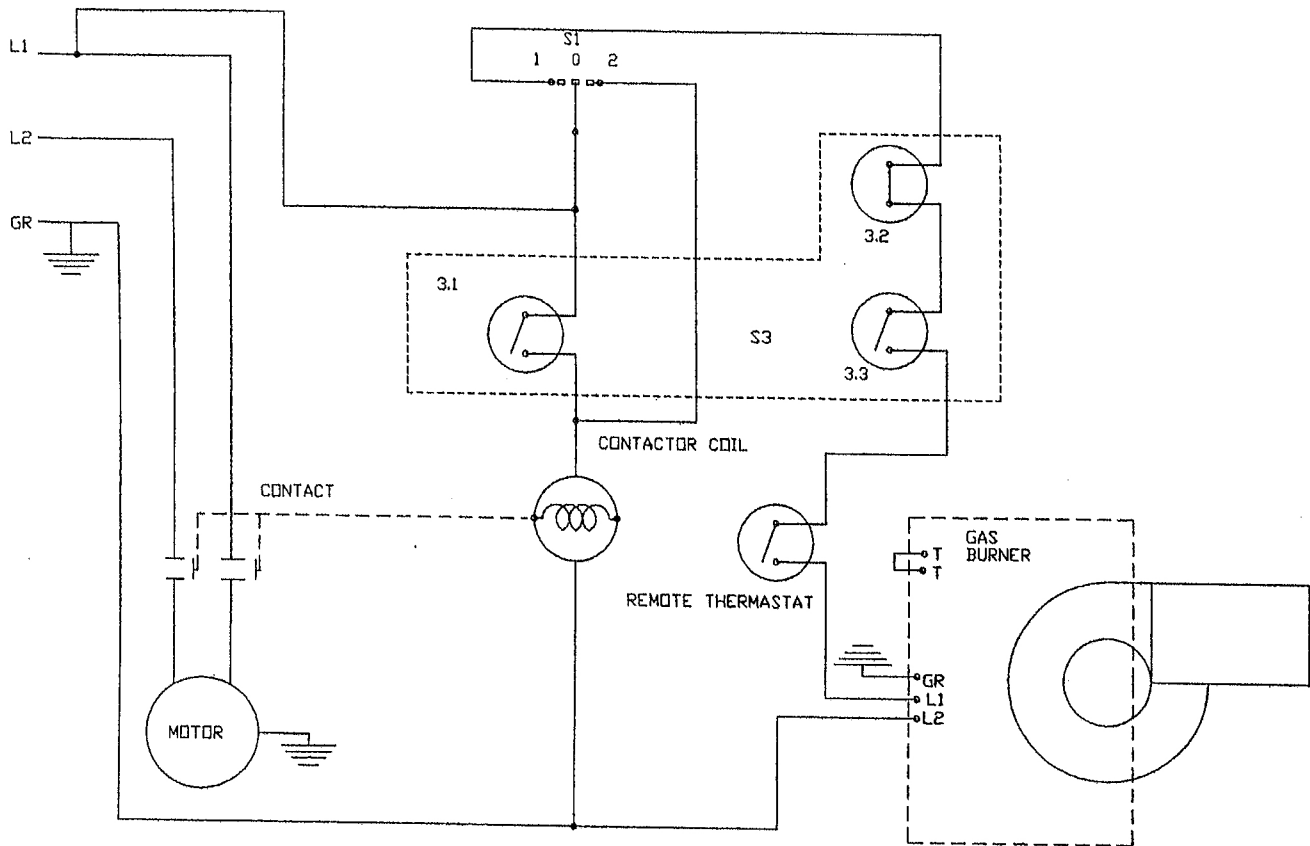
240 VOLTS 1PH.



NOTE:
DOTTED LINE = CONTROL BOX

HEAT WAGON	MODEL GP400IDF
DATE OF DRAWING 1998	FROM TO
GP400IDF	11-94 CURR

240 VOLT 1PH.



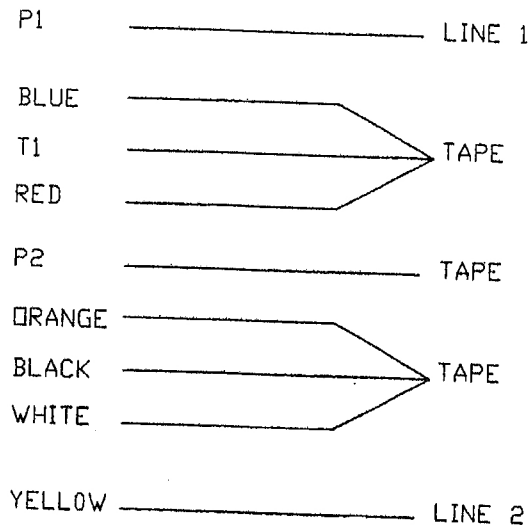
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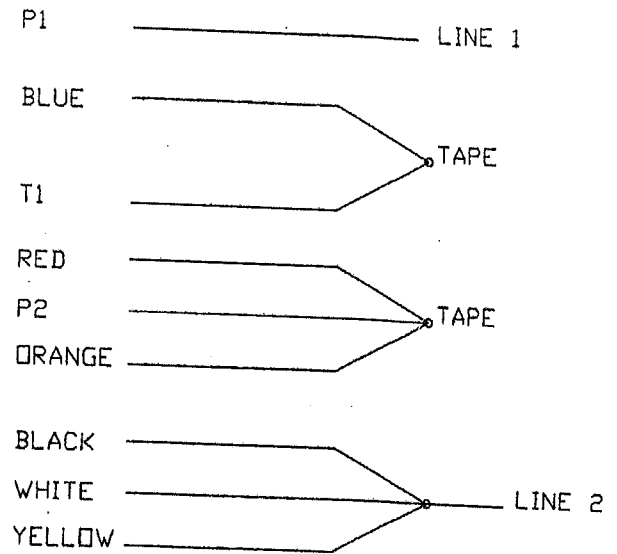
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DATE OF 1998	GP43401
DRAWING	FROM TO
GP43401	11-94 CURR

MARATHON

240 1PH MOTOR

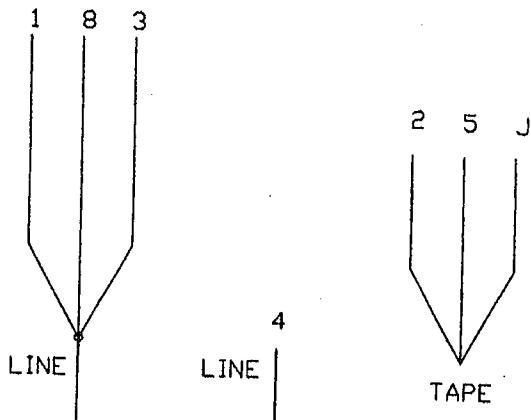


120 1PH MOTOR

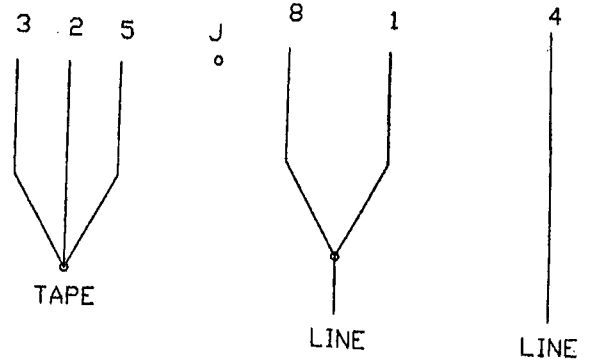


BALDOR

120 1PH MOTOR



240 1PH MOTOR

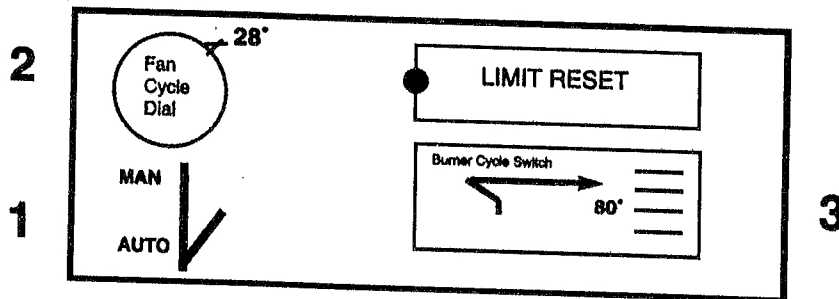


Triple Thermostat

The triple thermostat (item S3 on wiring diagram) is located above and to the right of the burner. It can be identified by the manual reset button.

Normal Settings

- 1) Auto/Manual Lever – **Always** set at Auto
- 2) Fan Cycle Dial – 28° c or 10° c above ambient
- 3) Burner Cycle Switch – Set Between 75° c and 80° c



Gas Burner

PARTS LIST — MODEL HSG 200/400

Item	Part No.	Description
1.	62421-001	Burner Housing
2.	62576-003	Air Tube - HSG200 6"
	62576-004	Air Tube - HSG400 6 1/4"
	62576-015	Air Tube - HSG200/400 9"
	62576-027	Air Tube - HSG200/400 12"
3.	62393-001	Air Cone - (HSG200 Only)
4.	21724-001	Adjustable Flange Assembly
5.	100428	Flange Gasket
6.	21664	Blower Wheel HSG200 5 1/4" OD
	21642	Blower Wheel HSG400 5 1/2" OD
7.	62386-001	Blower Wheel Bushing (Used with 62355-001 Motor Only)
8.	62405-001	Side Plate (Used with 62355-001 Motor Only)
	21658	Side Plate (Used with 20627 Motor Only)
9.	62355-001	Motor Shaded Pole 1/12 HP 3200 RPM 115V/60
	20627	Motor Split Phase 1/7 or 1/8 HP 3450 RPM 115V/60
10.	100373-002	Combustion Air Inlet Damper
11.	62793-001	Control Box
12.	62388-001	30 Sec Prepurge Timer Used with Primary Safety Control P/N's 62758-001 H'Well S89E-1033
	62530-001	Resistor Wire Assy. 62910-001 Fenwal 05-319000-051 (Special Limit Applications Only)
13.	60186	24 Volt Transformer
14.	62406-001	Motor Relay
15.	62759-001	Primary Safety Control H'Well S89-F1007 w/ 30 Sec Prepurge
	62911-001	Primary Safety Control Fenwal 05-319000-251 w/ 30 Sec Prepurge
	62758-001	Primary Safety Control H'Well S89E-1033 w/o 30 Sec Prepurge (Special Limit Applications Only)
	62910-001	Primary Safety Control Fenwal 05-319000-051 w/o 30 Sec Prepurge (Special Limit Applications Only)
	62912-001	Primary Safety Control Mounting Plate Fenwal Primary Only
16.	100377	Damper Indicator Pointer
17.	62382-002	Air Proving Switch, Only
18.	62474-002	Air Proving Switch/Mounting Plate Slot Cover Assembly
19.	60178	Thermostat Terminal Strip
20.	100372	Adjustment Arm Off-Cycle Damper
21.	100371	Off-Cycle Damper Plate
22.	100378	Mounting Bracket Off-Cycle Damper
23.	21319	Junction Box
24.	62407-001	Ignition Transformer 7500V
25.	62391-002	Electrode Assembly
26.	62390-002	Sensor Probe Assembly
27.	62387-001	Insulator Bushing
28.	62575-002	Chamber/Manifold - HSG200 6"
	62575-001	Chamber/Manifold - HSG400 6 1/4"
	62575-014	Chamber/Manifold - HSG200 9"
	62575-002	Chamber/Manifold - HSG400 9"
	62575-026	Chamber/Manifold - HSG200 12"
	62575-024	Chamber/Manifold - HSG400 12"
29.	62419-001	Clip, Electrode Bracket
30.	61951-001	Electrode Bracket Support (Includes Items 27, 29 and Set Screws)
31.	62411-028	11" Sensor Wire - 6", 6 1/4" Burner
	62411-030	14" Sensor Wire - 9" Burner
	62411-031	17" Sensor Wire - 12" Burner
32.	62909-001	8" Ignition Wire - 6", 6 1/4" Burner
	62909-002	11" Ignition Wire - 9" Burner
	62909-003	14" Ignition Wire - 12" Burner
33.	62426-001	Baffle Plate (not used on HSG 6" and 6 1/4")
34.	62404-002	Top Plate/Housing Cover
35.	62697-001	Strain Relief Bushing/Sensor Wire
36.	62304	Strain Relief Bushing/Ignition Wire
37.	62402-001	Orifice Housing
38.	62410-001	Orifice Spring
39.	62401-001	Orifice Gasket
40.	62385-001	Orifice Cap
41.	62374-001	Gas Valve Robertshaw 7000BDER - HSG200
	62374-001	Gas Valve Honeywell VR8450M - HSG200
	62375-001	Gas Valve Robertshaw 7000DERHC - HSG400
	62375-001	Gas Valve Honeywell VR845M-5006, HSG400 NOTE: Not to be used with Fenwal primary safety controls 05-319000-051 & 05-319000-251
42.	62459-001	Orifice Package - HSG200
	62459-002	Orifice Package - HSG400
43.	21760-001	Optional Pedestal Mounting (not shown)

Gas Burner

