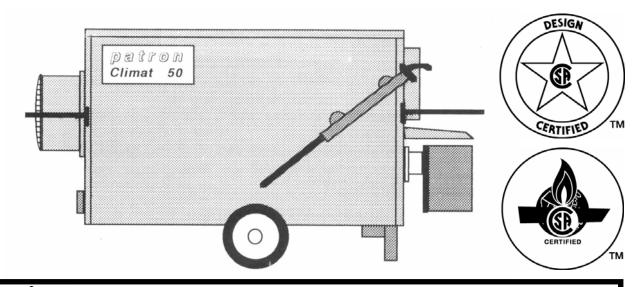
PATRON CLIMAT

OIL FIRED CONSTRUCTION HEATERS MODELS 40, 50 AND 130 OWNER'S MANUAL

HEATER SIZES 135,000 and 195,000 and 570,000 BTU/Hr



GENERAL HAZARD WARNING

FAILURE TO COMPLY WITH THE PRECAUTIONS AND INSTRUCTIONS PROVIDED WITH THIS HEATER, CAN RESULT IN DEATH, SERIOUS BODILY INJURY AND PROPERTY LOSS OR DAMAGE FROM HAZARDS OF FIRE, EXPLOSION, BURN, ASPHYXIATION, CARBON MONOXIDE POISONING, AND/OR ELECTRICAL SHOCK.

ONLY PERSONS WHO CAN UNDERSTAND AND FOLLOW THE INSTRUCTIONS SHOULD USE THIS HEATER.

IF YOU NEED ASSISTANCE OR HEATER INFORMATION SUCH AS AN INSTRUCTIONS MANUAL, LABELS ETC. CONTACT THE DISTRIBUTOR.

WARNING

FIRE, BURN, INHALATION, AND EXPLOSION HAZARD.

KEEP SOLID COMBUSTIBLES, SUCH AS BUILDING MATERIALS, PAPER OR CARDBOARD, A SAFE DISTANCE AWAY FROM THE HEATER AS RECOMMENDED BY THE INSTRUCTIONS.

NEVER USE THE HEATER IN SPACES WHICH DO OR MAY CONTAIN VOLATILE OR AIRBORNE COMBUSTIBLES, OR PRODUCTS SUCH AS GASOLINE, SOLVENTS, PAINT THINNER, DUST PARTICLES OR UNKNOWN CHEMICALS.

PATRON PRODUCTS INC.

USA: 60 Clyde Avenue Suite # 4, Buffalo, NY 14215 Canada: 12-110 Ironside Crescent, Scarborough, Ontario M1X 1M2

SAFETY INFORMATION

IMPORTANT!

Read this manual completely and carefully before assembling, operating or servicing this heater. Improper use can cause serious injury or death from fire, explosion, electrical shock or carbon monoxide poisoning.

KEEP THIS MANUAL FOR FURTHER REFERENCE.

Carbon monoxide poisoning starts with symptoms similar to a common flu, with headache, nausea or dizziness.

If you notice these signs, get fresh air at once!

This may be caused by non-sufficient ventilation to provide combustion air for the burner or the heater may not operate properly. Have heater serviced immediately and provide proper ventilation.

Make sure you read and understand all warnings.

- This heater is intended to be used for temporary heating of buildings, tents, etc.
- The heater can be placed outdoors and the heat ducted in, or the heater may be placed indoors and the exhaust fumes ducted out. Never use heater indoors without exhaust ducting!
- Do not use heater where gasoline, paint thinner or other highly flammable vapors or combustible dust are present
- Check heater for damages before each use. Never use damaged heater
- Do not block air inlet or outlet of heater
- Keep children and animals away from heater
- Use only in well vented areas
- Note: this heater is thermostat controlled. When plugged, heater may start any time
- Never move, handle or service an operating, plugged in or hot heater
- In handling, storing or using fuel, follow all instructions given in this manual and all local and other applicable safety codes
- Only plug heater to a three-hole electric outlet
- Unplug heater when not in use

INSTALLATION OF FUEL SUPPLY

WARNING

USE NO. 1 FUEL OIL OR DIESEL FUEL ONLY. DO NOT USE GASOLINE!

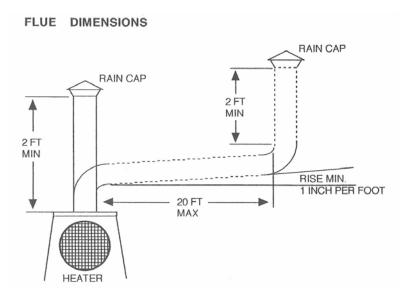
ALL OIL CONNECTION MUST BE CHECKED FOR LEAKS AFTER INSTALLATION OR SERVICING. ALL LEAKS MUST BE CORRECTED AT ONCE.

THE OIL CONTAINER MUST BE LOCATED AT A MINIMUM DISTANCE OF 6 FEET AWAY FROM THE HEATER.

- 1. Provide oil supply. The oil wand supplied is intended for 55 gallon drum, but other containers may also be used. Always use drums in an upright position. Never place oil container so that oil level is above burner pump. Keep drums out of rain. See applicable standards for "Storage and Handling of Fuels"
- 2. Make sure there is no water or other impurities in the fuel
- 3. Open the drum plug and insert the oil wand in drum. Make sure the oil hoses are protected from traffic or other sources of damage

FLUE PIPE

- WHEN USING THE HEATER INDOORS, ALWAYS INSTALL A FLUE TO EXHAUST GASES OUT.
- A MINIMUM TWO-FEET VERTICAL SECTION IS REQUIRED AS TERMINATION OF FLUE. A RAIN CAP IS RECOMMENDED.
- WHEN USED OUTDOORS WITH HEAT DUCTED IN, THE USE OF A MIN. 2 FEET FLUE WITH A RAIN CAP IS HIGHLY RECOMMENDED.
- ISOLATE THE FLUE WELL FROM ALL COMBUSTIBLE MATERIALS.



THE MANUFAC-MENDS A MINI- TURER RECOM-MUM CHIMNEY

VENTILATION

If the heater is located indoors, provide a fresh air opening for the burner combustion air of the following sizes:

- ◆ For Climat 40; min. 1,0 square feet
- ◆ For Climat 50; min. 1,5 square feet
- ◆ For Climat 130; min. 6,5 square feet

WARNING!

FAILURE TO PROVIDE PROPER FRESH AIR VENTILATION CAN RESULT TO SERIOUS MALFUNCTION OF THE BURNER AND LACK OF OXYGEN IN THE WORKING AREA.

PROVIDE VENTILATION BEFORE RUNNING HEATER AND DURING THE WHOLE HEATING PERIOD.

DUCTING

CAUTION!

USE ONLY DUCT MADE OF METAL OR MINERAL MATERIALS NOT SUBJECT
TO DETERIORATION FROM MILDEW OR MOISTURE.

MATERIAL SHALL COMPLY WITH THE REQUIREMENTS OF
UL-STANDARD UL 214.

- Use steel or canvas ducting capable to withstand max. temperatures of 250 °F
- Max. length of duct 25 feet, min. diameter 12 inches
- Avoid sharp bends and corners to allow maximum air flow
- Using insulated duct helps to minimize heat losses in duct

OPERATION

REVIEW AND UNDERSTAND ALL WARNINGS IN THIS MANUAL. THEY ARE ESSENTIAL FOR SAFE USE OF THE HEATER. FOLLOW ALL LOCAL CODES.

WARNING!

DO NOT START HEATER IF EXCESS OIL HAS ACCUMULATED IN THE COMBUSTION CHAMBER.

DO NOT FILL OIL TANK OR SWITCH DRUMS WHILE HEATER IS RUNNING.

DO NOT SHUT OFF HEATER BY DISCONNECTING POWER SUPPLY CORD.

READ SEPARATE BURNER MANUAL FOR BURNER INSTRUCTIONS!

TO START HEATING

- 1. Make sure you have read, understood and followed all installation, ventilation and safety instructions in this manual
- Place the heater on a stable and level surface. Make sure that no explosive or combustible fumes or dust are present. Protect heater from strong drafts or wind. See that the heater is not exposed to water spray, rain or dripping water

MINIMUM CLEARANCES FROM COMBUSTIBLE MATERIALS:		
OUTLET = 36 in. SIDES = 36 in.		
TOP = 12 in.	FRONT / REAR = 36 in.	
FLOOR = COMBUSTIBLE		

- Connect power cord of heater into a three-hole, grounded 110-120 V / 60 Hz outlet. See paragraph "Technical specifications" in this manual for correct amperage rating. If an extension cord is used, it must be a listed type. Up to 50 feet long, the extension cord must be rated 14 AWG (130A; 12 AWG), 50 to 100 feet long 12 AWG (130A; 10 AWG)
- 4. Plug the remote thermostat cable into the thermostat socket under the electric control box of the heater
- 5. Set the remote thermostat to a temperature above the ambient room temperature by turning the knob. Note! The heater will start only if the thermostat "calls for heat" meaning that it is set to higher than prevailing ambient temperature. If an remote thermostat is not used, set the thermostat bypass switch to position "Continuous Heat"
- 6. Set the main switch into position I = "HEAT". The burner fan will now start to provide pre-purge air. After approx. 10 seconds, the burner will ignite and start heating. NOTE! If the burner fails to ignite, push the red lighted reset button on the burner (this is liable to happen when starting the heater after a longer storage period, because the hoses are empty and it takes them a few seconds to fill)
- 7. After the heater has warmed up enough, the main fan will start automatically
- 8. The heater will now operate automatically, controlled by the ambient thermostat. Make sure there is enough oil in the tank for continuous use.

TO STOP HEATING

1. Turn the main switch into 0 = "OFF" position

ALLOW FAN TO RUN UNTIL IT STOPS AUTOMATICALLY – DO NOT UNPLUG THE HEATER!

2. Disconnect the power supply plug after the fan has stopped cooling the heater

TO STOP HEATING WITH INTENT TO MOVE THE HEATER

- 1. Lift the wand above the oil level inside drum. Allow oil hose to drain into the drum
- 2. Wait until the burner stops after using all oil left in supply hose
- 3. Turn the main switch into 0 = "OFF" position

ALLOW FAN TO RUN UNTIL IT STOPS AUTOMATICALLY – DO NOT UNPLUG THE HEATER!

4. Disconnect the power supply plug after the fan has stopped cooling the heater

TO USE AS A VENTILATOR ONLY

- 1. Do not connect to oil supply
- 2. Plug heater to 110-120 V / 60 Hz mains
- 3. Turn the main switch into "FAN ONLY" position
- 4. Unplug heater after use

TECHNICAL SPECIFICATIONS

HEATER MODEL		CLIMAT 40A	CLIMAT 50A	CLIMAT 130A
Output	BTU/hr	135,000	195,000	570,000
	Watts	41,000	58,000	167,000
Air flow	cu.f/min	1120	2230	4700
	cu.m/hr	1800	3600	7590
Oil consumption	Gal/hr	1	1 ½	4
	Lit/hr	4	6	16
Voltage	Volts	110/120	110/120	110/120
Fuse size	Amps	15	15	25
Measures (W x L x H)	Inches	28" × 52" × 34"	31" × 66" × 40"	40" × 75" × 53"
Weight	lbs	176	330	650
Burner nozzle		0.85 / 60° / SS	1.10 / 60° / SS	4.00 / 60° / SS

STORAGE

Close drum plug and coil the oil hoses.

Place oil wand in it's holder on the side of the heater

Store heater in a dry, clean and safe place out of reach of children and unqualified persons.

MAINTENANCE

WARNING!

NEVER SERVICE THE HEATER WHILE IT IS PLUGGED IN, CONNECTED TO OIL SUPPLY, RUNNING OR HOT. SEVERE BODILY INJURE OR ELECTRIC SHOCK MAY OCCUR.

ONLY QUALIFIED PERSONS ARE ALLOWED TO OPEN HEATER FOR SERVICE AND PROVIDE OIL BURNER MAINTENANCE AND REPAIRS.

- Keep heater clean. Use pressurized air to blow fan blades clean. Note! Use moderate pressure to avoid damage to fan blades
- Inspect heater before and after each use
- The fan motor is sealed and has permanently lubricated bearings. No additional lubrication is needed
- Check hose/wand assembly before each use. Replace worn or damaged hose immediately. Replace with original PATRON CLIMAT hose assembly only
- Have the oil burner inspected yearly by a qualified service person
- Always use original spare parts obtained from your local PATRON dealer

CLEANING THE COMBUSTION CHAMBER & HEAT EXCHANGER

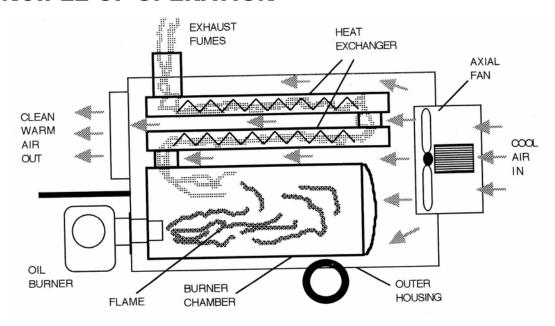
- 1. Remove the warm air outlet and the end covers of the heat exchanger boxes. Pull out baffle plates. Clean boxes and plates with a stiff brush
- 2. Remove the oil burner. Clean the combustion chamber through the burner opening with a stiff brush. Use vacuum cleaner to remove soot
- 3. Replace baffles, exchanger end covers and air outlet
- 4. Replace burner

HAVE THE BURNER CHECKED REGULARLY TO AVOID SMOKE AND SOOT BUILD-UP IN EXCHANGER AREAS!

NOTE!

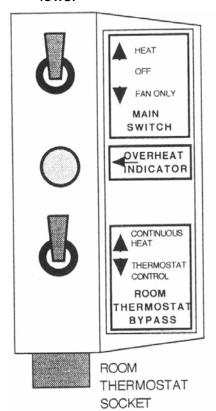
IT IS RECOMMENDED THAT AT THE FINAL JOBSITE LOCATION A BURNER COMBUSTION CHECK BE MADE WITH A SMOKE SAMPLER TESTER TO ENSURE PROPER ATMOSPHERIC AND DRAFT PERFORMANCE OF THE HEATER.

PRINCIPLE OF OPERATION



SEQUENCE OF OPERATION

After the main switch has been turned to position "HEAT", and if the ambient thermostat is set to a temperature higher than ambient, the heater will operate automatically as follows:



- 1. The burner starts. After a short pre-purge period, the flame will ignite and start heating the combustion chamber
- 2. When sufficient amount of heat has accumulated in the heater, the fan will start by automatic thermostat control and clean warm air will be blown out. If the incoming air is cool enough, the burner will stay on continuously, but with higher ambient temperatures, the burner will shut off occasionally to allow the fan to cool the heater, avoiding overheating
- 3. When the ambient temperature set by the ambient thermostat has been reached, the burner will stop, and the fan will run to cool down the heater
- 4. After the room has cooled down below the set temperature, the cycle begins again from "1"
- 5. The heater is shut off by setting the main switch to position "OFF". Note that the fan will run until the heater has cooled down to avoid damage to burner

THE HEATER IS PROTECTED BY AN OVERHEAT LIMIT SWITCH. THIS WILL CAUSE THE WHOLE HEATER TO SHUT DOWN, INCLUDING THE FAN, IN CASE OF OVERHEATING (IN MODELS 40A & 50A). THE HEATER WILL REQUIRE A PERIOD OF APPROX. 20 MIN TO COOL DOWN ENOUGH FOR A RE-START.

MODEL 130A WILL IN CASE OF OVERHEATING TO COOLDOWN THE HEATER AUTOMATICALLY.

CHECK AND REMOVE CAUSE FOR OVERHEATING BEFORE RE-STARTING!

TROUBLESHOOTING

⇒ NOTHING HAPPENS WHEN MAIN SWITCH IS TURNED TO "HEAT" OR "VENT"

- Check power supply cord and fuses
- Push the burner reset button (red button on burner relay control box)
- Push the reset button on fan motor

⇒ FAN STARTS WHEN MAIN SWITCH IS TURNED TO "VENT" BUT NOTHING HAPPENS IN POSITION "HEAT"

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

⇒ WITH MAIN SWITCH IN POSITION "HEAT", BURNER FIRES BUT STOPS AFTER A WHILE WITHOUT FAN MOTOR STARTING

Push the reset button on fan motor.

⇒ OIL BURNER STARTS, BUT THERE IS NO FLAME

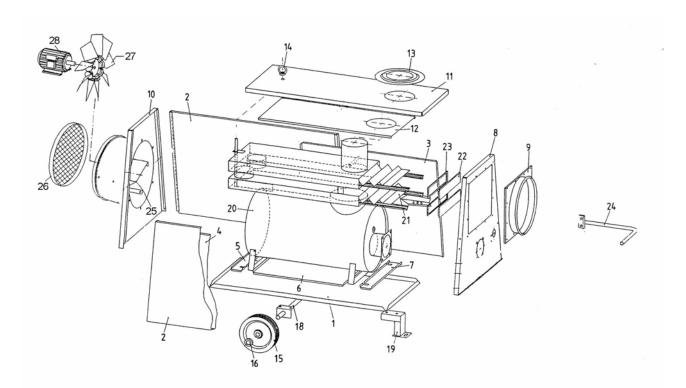
- Check oil level in drum / tank
- Check for possible water in oil
- Check for leaks in oil hoses or couplings
- Check that the burner igniter tips give spark when turned on
- · Clean the photocell sensor of burner

CAUTION! FOLLOW INSTRUCTIONS IN BURNER MANUAL WHEN CHECKING BURNER

Refer to burner manual for additional troubleshooting instructions.

WARNING! DO NOT TAMPER WITH BURNER ADJUSTMENT OR SAFETY EQUIPMENT. IF IN TROUBLE, CALL A COMPETENT OIL BURNER SERVICEMAN.

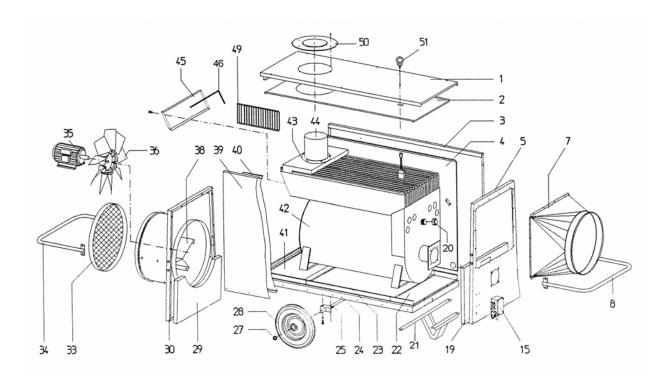
PART LIST OF PATRON CLIMAT 40A & 50A



Item	Part no	Part no	Description
	Climat	Climat	
	40A	50A	
1	14001	15001	bottom plate
2	14002	15002	side plate, left & right
3	14003	15003	shield, right
4	14004	15004	shield, left
5	14005	15005	shield, bottom rear
6	14006	15006	shield, bottom middle
7	14007	15007	shield, bottom front
8	14008	15008	front panel
9	14009	15009	air outlet adapter
10	14010	15010	fan panel
11	14011	15011	cover plate
12	14012	15012	shield, top
13	14013	15013	flue collar
14	14014	15014	hoist eye
15	14015	15015	wheel (2 ea.)
16	14016	15016	locking washer (2 ea.)
18	14018	15018	wheel shaft Ø20 mm
19	14019	15019	support leg
20	14020	15020	burner chamber assem-
21	14021	15021	bly
21	14021	15021	baffle, heat exchanger (2 ea.)
22	14022	15022	lid, heat exchanger (2 ea.)
23	14022	15000	
23	14023	15023	gasket, heat exchanger (2 ea.)

Item	Part no Climat 40A	Part no Climat 50A	Description
24	14024	15024	front handle
25	14025	15025	bracket, fan motor
26	14026	15026	fan guard
27	14027	15027	fan blade
28	14028	15028	fan motor
_	14029	14029	bracket, control box
_	14030	14030	control box, empty
*) SM	14031	14031	main switch
S1	14032	14032	bypass switch
TB	14033TB	14033TB	thermostat, burner &
TO	14033TO	14033TO	overheat
TF	14034	14034	thermostat, fan control
H1	14035	14035	indicator light
TRS	14036	14036	room thermostat socket
TR	14037	14037	remote room thermo- stat with cable & plug
_	14038	15038	power cord & plug
_	14039	15039	burner cover
	14040	14040	glass eye + gasket (flame detection)
_	14041	14041	oil wand
_	14042	14042	oil hose (2 ea.)
_	14043	14043	oil wand holder
_	14044	14044	fan motor box
*) LETTER	RS REFER TO	ELECTRIC C	CONNECTION DIAGRAMS

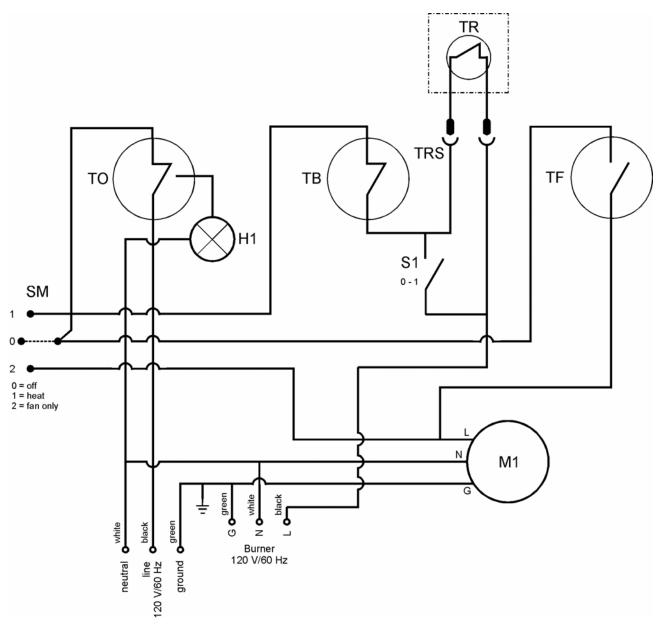
PART LIST OF PATRON CLIMAT 130A



Item	Part no Climat 130A	Description
1	16001	cover plate
2	16001	shield, top
3	16002	side plate, right
4	16003	shield, right
5	16004	front panel
	16006	latch (2 ea.), outlet adapter
7	16007	air outlet adapter
8	16007	front handle
	16009	burner cover (incl. knob, latch)
	10000	Barrier cover (mor. knob, laterr)
15	14030	control box, empty
_	14029	bracket, control box
*) SM	14031	main switch
S1	14032	bypass switch
TB	14033TB	thermostat, burner
TF	14034	thermostat, fan control
TO	14033TO	thermostat, overheat
H1	14035	indicator light
TRS	14036	room thermostat socket
TR	14037	remote room thermostat with
		cable & plug
С	22950	contactor
_	16018	power cord & plug
19	16019	shield, front
20	16020	flame cap
21	16021	support leg
22	16022	shield, bottom front
23	16023	shield, bottom middle
*)	16024	bottom plate ELECTRIC CONNECTION DIAGRAMS

	_	T
Item	Part no	Description
	Climat	
0.5	130A	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
25	16025	wheel shaft Ø20 mm
	4000=	
27	16027	locking pin + washer (2 ea.)
28	16028	wheel (2 ea.)
29	16029	shield, rear
30	16030	fan panel
33	16033	fan guard
34	16034	rear handle
35	16035	fan motor
36	16036	fan blade
38	16038	bracket, fan motor
39	16039	side plate, left
40	16040	shield, left
41	16041	shield, bottom rear
42	16042	burner chamber assembly
43	16043	gasket, flue pipe
44	16044	flue pipe
45	16045	lid, heat exchanger
46	16046	gasket, heat exchanger
49	16049	baffle, heat exchanger (15 ea.)
50	16050	flue collar
51	16051	hoist eye
_	14041	oil wand
_	14042	oil hose, L = 4 m (2 ea.)
	14043	oil wand holder

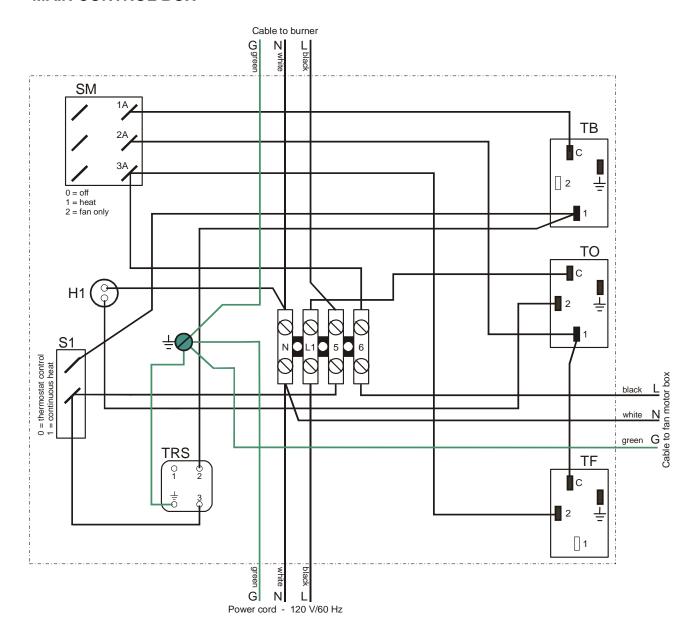
LADDER WIRING DIAGRAM — 40A & 50A



LEGENI	D:
H1	Overheat indicator light
M1	Fan motor
S 1	room thermostat bypass switch, lever type
SM	main switch (0 = off, 1 = heat, 2 = fan only), lever type
ТВ	thermostat, burner control
TF	thermostat, fan control
то	thermostat, overheating control
TR	remote thermostat with plug & cable, room ambient
TRS	room thermostat socket (female)

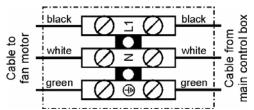
CONNECTION DIAGRAM — 40A & 50A

MAIN CONTROL BOX



FAN MOTOR BOX

(only in 40A & 50A)

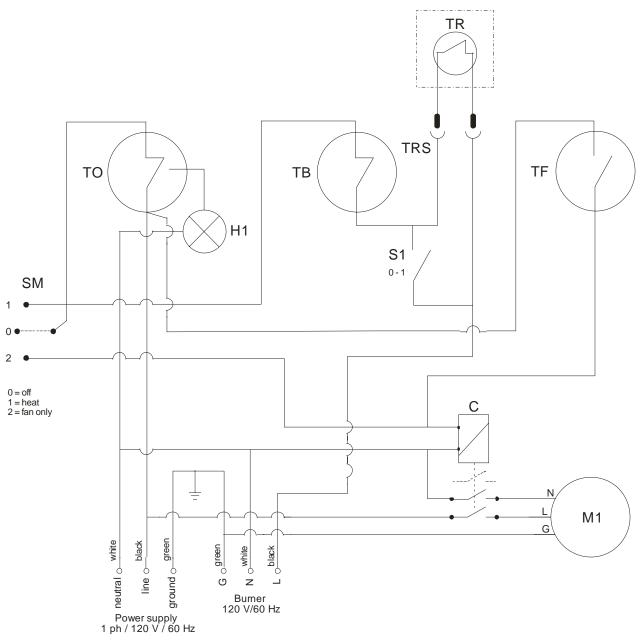


WARNING!

RISK OF ELECTRIC SHOCK!

DO NOT TAMPER WITH ELECTRIC WIRING! — HAVE A QUALIFIED ELECTRICIAN MAKE AND TEST ALL ELECTRIC WIRINGS BEFORE USING OR STARTING HEATER

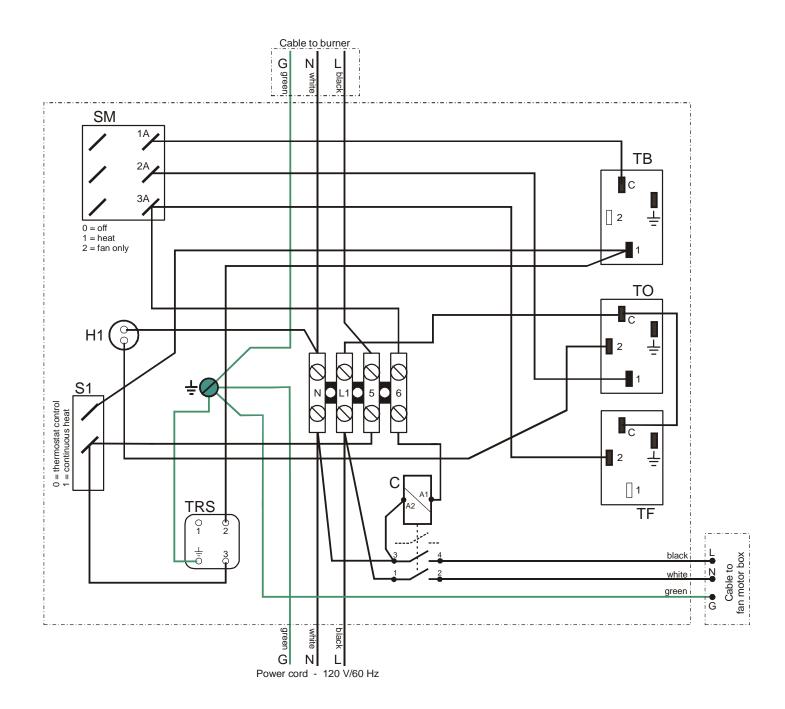
LADDER WIRING DIAGRAM — 130A



LEGENI):
С	Contactor
H1	Overheat indicator light
M1	Fan motor
S 1	room thermostat bypass switch, lever type
SM	main switch (0 = off, 1 = heat, 2 = fan only), lever type
ТВ	thermostat, burner control
TF	thermostat, fan control
то	thermostat, overheating control
TR	remote thermostat with plug & cable, room ambient
TRS	room thermostat socket (female)

CONNECTION DIAGRAM — 130A

MAIN CONTROL BOX



WARNING!

RISK OF ELECTRIC SHOCK!

DO NOT TAMPER WITH ELECTRIC WIRING! — HAVE A QUALIFIED ELECTRICIAN MAKE AND TEST ALL ELECTRIC WIRINGS BEFORE USING OR STARTING HEATER

PATRON CLIMAT HEATERS - LIMITED WARRANTY

PATRON CLIMAT heater products are professional construction heaters. They are warranted for twelve (12) months from original date of purchase. The warranty does not cover products modified outside our factory, damage or failure caused by acts of God, abuse, misuse, use on other than rated voltage, abnormal usage, faulty or improper installation, failure to provide recommended maintenance or any repairs other than those provided by a professional licensed service person or facility to the oil burner and electrical systems of the heater.

THERE ARE NO OBLIGATIONS OR LIABILITIES ON THE PART OF PATRON PRODUCTS INC. FOR CONSEQUENTIAL DAMAGES ARISING OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THE PRODUCT OR OTHER INDIRECT DAMAGES WITH RESPECT TO LOSS OF PROPERTY, REVENUES, OR PROFIT, OR COST OF REMOVAL, INSTALLATION OR REINSTALLATION.

THIS WARRANTY CONSTITUTES THE EXCLUSIVE REMEDY OF ANY PURCHASER OF EQUIPMENT SOLD BY THE MANUFACTURER AND ITS DEALERS AND DISTRIBUTORS AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED.

During the warranty period, Patron Products Inc. will, at its sole option, repair or replace any defective parts or products returned, freight prepaid, to Patron Products Inc. or such other location as Patron Products Inc. may designate.

Returned products must be packaged carefully, and Patron Products Inc. shall not be responsible for damage in transit. When returning parts, the owner must provide the model number of the product and the nature of difficulty being experienced. This warranty does not oblige Patron Products Inc. to bear the cost of labour in replacing any assembly, unit or component or part thereof, nor does the company assume any liability for secondary charges, expenses of removal or installing, freight or damages. There will be charges rendered for product repair after our warranty period has expired.

Proof of purchase, including date, must accompany request for in-warranty service.

All specifications in this manual are subject to change. We are not responsible for errors or omissions in this manual

PATRON PRODUCTS (USA) INC. PATRON PRODUCTS INC.

USA: 60 Clyde Avenue Suite # 4, Buffalo, NY 14215 Canada: 12-110 Ironside Crescent, Scarborough, Ontario M1X 1M2

16