



Owner's Manual and Instructions

Director™ Construction Heater



MODELS	OUTPUT (Btuh)	FUEL
CP100AKI	100,000	Kerosene #1 Diesel/ Fuel Oil
CP300AKI	230,000	

Congratulations!

You have purchased the finest indirect fired construction heater available.

Your new L.B. White heater incorporates the benefits from the most experienced manufacturer of heating products using state-of-the-art technology.

We, at L.B. White, **thank you** for your confidence in our products and welcome any suggestions or comments you may have...call us, toll-free, at (800) 345-7200.

This heater has been designed and developed as a ductable indirect-fired forced air construction heater with application for the temporary heating of buildings under construction, alteration, or repair.

Additionally, this heater can be used for tent heating applications with temporary human occupancy. If you are considering using this heater for any application other than these intended uses, then please contact L.B. White Co. at (800) 345-7200.



Quality heaters you can count on.

W6636 L.B. White Rd., Onalaska, WI 54650 ■ (800) 345-7200 ■ (608) 783-5691 ■ (608) 783-6115, fax ■ info@lbwhite.com

150-24287-A

 **GENERAL HAZARD WARNING**

- **Failure to comply with the precautions and instructions provided with this heater, can result in:**
 - **Death**
 - **Serious bodily injury or burns**
 - **Property damage or loss from fire or explosion**
 - **Electrical shock**
- **Read this Owner's Manual before installing or using this product.**
- **Only properly-trained service people should repair or install this heater.**
- **Save this Owner's Manual for future use and reference.**
- **Owner's Manuals and replacement labels are available at no charge. For assistance, contact L.B. White at 800-345-7200.**

 **WARNING**

Fire and Explosion Hazard

- **Not for home or recreational vehicle use.**
- **Installation of this heater in a home or recreational vehicle may result in a fire or explosion.**
- **Fire or explosions can cause property damage or loss of life.**

FOR YOUR SAFETY

Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

 **WARNING**

Fire and Explosion Hazard

- **Keep solid combustibles a safe distance away from the heater.**
- **Solid combustibles include wood, paper, or plastic products, building materials and dust.**
- **Do not use the heater in spaces which contain or may contain volatile or airborne combustibles.**
- **Volatile or airborne combustibles include gasoline, solvents, paint thinner, dust particles or unknown chemicals.**
- **Failure to follow these instructions may result in a fire or explosion.**
- **Fire or explosions can lead to property damage, personal injury or loss of life.**



Table of Contents

<u>SECTION</u>	<u>PAGE</u>
General Information	3
Heater Specifications	4
Safety Precautions	5
Installation Instructions	6
Operation Instructions	
Theory of Operation	8
Fuels	8
Connecting Thermostat	9
Start-Up Instructions	10
Shut-Down Instructions	10
Re-Start Instructions	10
Cleaning and Storage Instructions	11
Maintenance Instructions	12
Service Instructions	
Igniter Probe Gapping	12
Pump Pressure Check & Adjustment	12
Setting for High Altitude	13
Troubleshooting Information	14
Electrical Connection and Ladder Diagram	15
Parts Identification	
Parts Schematic	16
Parts List	17 & 18
Warranty Policy	19
Replacement Parts and Service	19

General Information

This Owner's Manual includes all options and accessories commonly used on this heater.

When calling for technical service assistance, or for other specific information, always have model number, configuration number and serial number available. This information is contained on the dataplate.

This manual will instruct you in the operation and care of your unit. Have your qualified installer review this manual with you so that you fully understand the heater and how it functions.

The installation, repair and servicing of the heater requires continuing expert training and knowledge of gas heaters and should not be attempted by anyone who is not so qualified. See page 6 for definition of the necessary qualifications.

Contact your local L.B. White distributor or the L.B. White Co., Inc. for assistance, or if you have any questions about the use of the equipment or its application.

The L.B. White Co., Inc. has a policy of continuous product improvement. It reserves the right to change specifications and design without notice.

Heater Specifications

SPECIFICATIONS	Model		
	CP100AKI	CP300AKI	
Fuel Type	Kerosene, #1 Diesel/Fuel Oil		
Max Input (BTUH)	105,000	300,000	
Net Output (BTUH)	100,000	230,000	
Ventilation Air Required to Support Combustion	62 CFM	135 CFM	
Air Flow (Hot)	883 CFM	1941 CFM	
Pump Pressure	145 PSI	174 PSI	
Fuel Consumption per Hour	.77 Gallons	2.16 Gallons	
Motor Characteristics	Ball Bearing		
	.17 H.P. / 3,300 RPM	1 H.P. / 1,700 RPM	
Electrical Supply (Volts/Hz/Phase)	115/60/1		
Amp Draw	STARTING	6.5	30.0
	CONTINUOUS OPERATION	2.0	10.0
Dimensions (Inches) L x W x H	41 x 20 x 46	47 x 27 x 62 1/2	
Minimum Safe Distances From Nearest Combustible Materials	TOP	8 ft.	
	SIDES	8 ft.	
	BACK	8 ft.	
	BLOWER OUTLET	8 ft.	
	BULK FUEL STORAGE CONTAINER	25 ft.	
Net Weight	146	272	
Shipping Weight	175	313	
Minimum Ambient Temperature in Which Heater May Be Used	- 20°F		

Safety Precautions

1. Do not attempt to install, repair, or service this heater unless you have continuing expert training and knowledge of liquid fuel heaters.

Qualifications for service and installation of this equipment are as follows:

To be a qualified liquid fuel heater service person, you must have sufficient training and experience to handle all aspects of indirect fired liquid fuel heater installation, service and repair. This includes the task of installation, troubleshooting, replacement of defective parts and testing of the heater. You must be able to place the heater into a continuing safe and normal operating condition. You must completely familiarize yourself with the heater by reading and complying with the safety instructions, labels, Owner's Manual, etc., that is provided with each heater.

2. All installations and applications of L.B. White heaters must meet all relevant local, state and national codes. Included are electrical and safety codes. Your local fuel supplier, a local licensed electrician, the local fire department or similar government agencies, or your insurance agent can help you determine code requirements.

Refer to the following:

- ANSI/NFPA 70, National Electrical Code.
- ANSI A10.0, 1990 Safety Requirements for Temporary and Portable Space Heating Devices and Equipment Used in Construction Industry.

3. We cannot anticipate every use which maybe made of our heaters. Check with the local fire safety authority if you have questions about applications.
4. For safety, this heater is equipped with fan and high limit switches. Never operate the heater with any safety device that has been bypassed. Do not operate this heater unless these features are fully functioning.
5. Do not locate fuel containers near the blower outlet of the heater.
6. Do not block air intakes or discharge outlets of the heater. Doing so may cause improper combustion or damage to heater components leading to property damage.
7. Check for fuel leaks and proper function upon heater installation, when relocating, and after servicing.
8. This heater should be inspected for proper operation by a qualified service person before each use, not less than once per shift, and at least annually.
9. This heater is equipped with a three-prong (grounding) plug for your protection against shock hazard and must be plugged directly into a properly grounded three-prong receptacle. Failure to use a properly grounded receptacle can result in electrical shock, personal injury, or death.

10. Make certain you read and understand all warnings. Keep this manual for reference. It is your guide to safe and proper operation of this heater.
11. Use only kerosene, #1 diesel/fuel oil to avoid risk of fire or explosion. Never use gasoline, naphtha, paint thinners, alcohol, or other highly flammable fuels.
12. Fueling:
 - a) Personnel involved with fueling shall be qualified and thoroughly familiar with the manufacturer's instructions and applicable regulations regarding the safe fueling of heating units.
 - b) Use only the type of fuel specified on the heater's data plate.
 - c) All flame shall be extinguished and the heater allowed to cool prior to fueling.
 - d) During fueling, all fuel lines and fuel-line connections shall be inspected for leaks. Any leaks shall be repaired prior to returning the heater to service.
 - e) At no time shall more than one day's supply of heater fuel be stored inside a building in the vicinity of the heater. Bulk fuel storage shall be outside the structure.
 - f) All fuel storage shall be located a minimum of 25 feet from heaters, torches, welding equipment, and similar sources of ignition (exception: the fuel reservoir integral with the heater unit).
 - g) Whenever possible, fuel storage shall be confined to areas where floor penetrations do not permit fuel to drip onto or be ignited by a fire at lower elevation.
 - h) Fuel storage shall be in accordance with the authority having jurisdiction.
 - i) Fuel storage shall not be permitted within 10 ft. of floor penetrations used for vertical access unless separated from the penetration by full masonry height walls.
13. Use only in areas free of flammable vapors or high dust content.
14. Locate heater on a stable and level surface while hot or operating.
15. Never start heater if fuel has accumulated in combustion chamber.
16. Heater may start at any time when used with thermostat.
17. When heater is moved or stored, it must be in a level position or fuel spillage may occur.

18. Never move, handle, refuel, or service a hot, operating, or plugged-in heater.
19. Never attach duct work to rear of heater.
20. Never attach heater to external fuel tank.
21. Heaters used in the vicinity of tarpaulins, canvas, or similar enclosure materials shall be located in safe distance from such materials. The recommended minimum safe distance is 10 ft. It is further recommended that these enclosure materials be of a

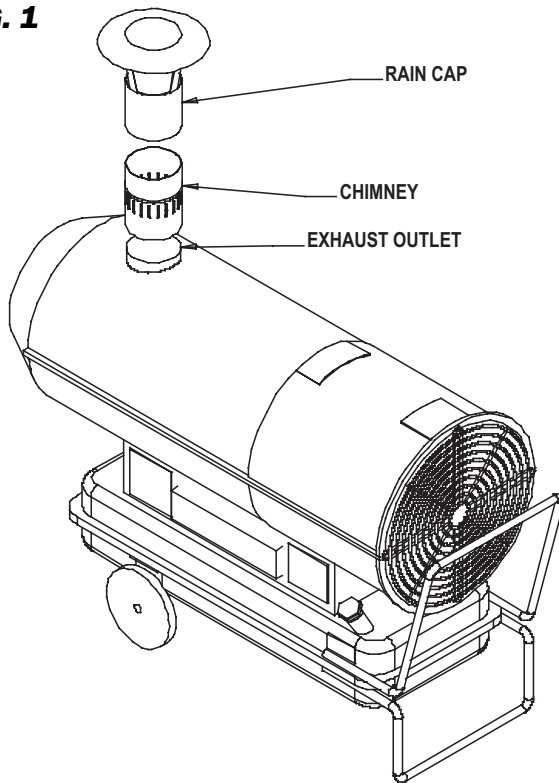
fire retardant nature. These enclosure materials shall be securely fastened to prevent them from igniting or from upsetting the heater due to wind action.

22. Unplug heater when not in use.
23. When the heater is used in an enclosed or partially enclosed permanent or temporary structure, tests for the presence of carbon monoxide shall be made within one hour after the start of each shift, and at least four hours thereafter. Immediate, more frequent testing may be dictated by job conditions.

Installation Instructions

1. Read all safety precautions and follow L. B. White recommendations when installing this heater. If during the installation or relocating of heater, you suspect that a part is damaged or defective, call a qualified service agency for repair or replacement.
2. Install chimney, Part #24311 onto exhaust outlet. Install raincap, Part #24223 (optional accessory) onto chimney to protect against water entry when heater is installed outside. See Fig. 1.

FIG. 1



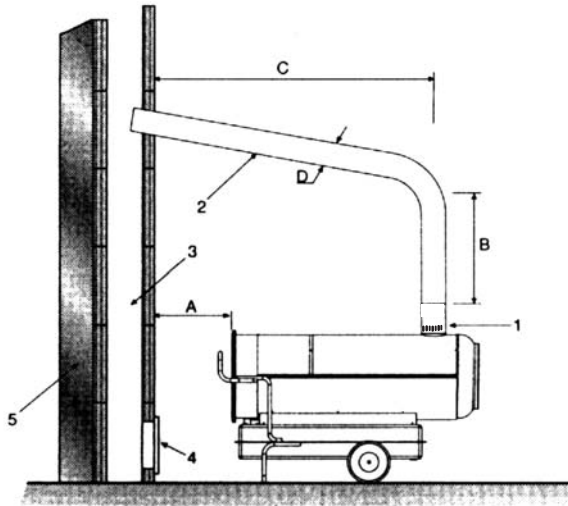
3. This heater may be installed either indoors or outdoors. For indoor installations, the heater must be vented to outside. See Figs. 2 & 3 on page 7 for chimney set-up and installation.
4. The heater may be ducted. Use only 20 ft. flexible duct, Part #24220, and duct adapter, Part #24221. Both parts are optional accessories. Do not use any other length of duct, field fabricated ducts, or adapters, stove pipes, etc. Locate the duct under suitable wind barrier materials for jobsite requirements.

5. When installed indoors, proper ventilation air must be supplied to support the combustion of the heater. Refer to Pg. 4 of this Owner's Manual, or heater's dataplate for ventilation air requirements.
6. Insure all heater accessories have been installed.
7. The heater must be installed so as not to interfere with or obstruct normal exits, emergency exits, doors and walkways.
8. Railing, fencing or suitable substitute materials must be used to keep the heating equipment from any people using and visiting the structure.
9. The unit shall be located so that rain, ice, or snow drainage from the structure does not affect equipment operation. The heater must be mounted above any pooled or standing water. A surrounding trench is recommended to drain any rain, ice or snow away from the unit.
10. The ground and surrounding terrain must be cleared of any combustible vegetation and other combustible materials when the heater is used.
11. Eventually, like all electrical/mechanical devices, the thermostat can fail. Thermostat failure may result in an underheating condition. The thermostat should be tested to make sure it turns the heater on and off within a temperature differential of $\pm 3^{\circ}\text{F}$.
12. Take time to understand how to operate and maintain the heater by using this Owner's Manual. Make sure you know how to shut off the power supply to the heater.
13. Any defects found in performing any of the service or maintenance procedures must be eliminated and defective parts replaced immediately. The heater must be retested by properly qualified service personnel before placing the heater back into use.

EXTENSION CORD WIRE SIZE REQUIREMENTS FOR DIRECTOR 300

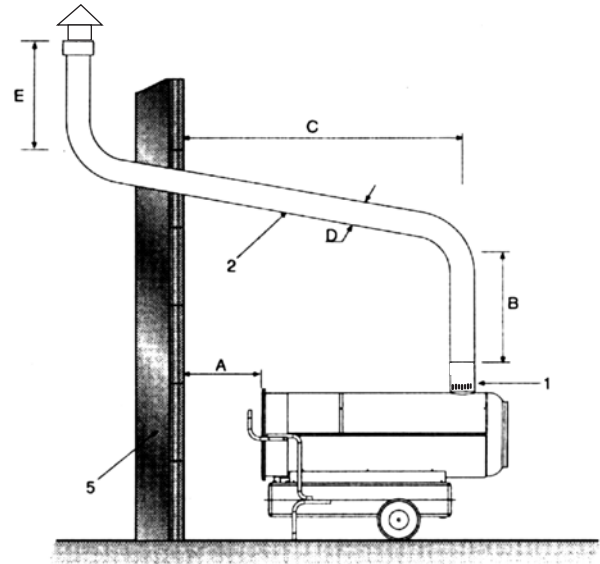
- 6 to 100 ft. long, use 14 AWG rated cord
- 101 to 200 ft. long, use 12 AWG rated cord
- 201 to 300 ft. long, use 10 AWG rated cord

FIG. 2 VENTING TO EXISTING CHIMNEY



- A) Minimal 4 ft.
- B) Minimal 4 ft.
- C) The shortest
- D) The same or bigger than the stacks outlet diameter 4 ft. heater
- E) Minimal 4 ft.

FIG. 3 VENTING TO OUTSIDE THROUGH WALL



- 1) Anti-wind device provided with the heater
- 2) Horizontal crossing with minimal upside angle pitch of 5°
- 3) Chimney 51 in. x 51 in. of minimal inside measure
- 4) Chimney anti-explosion flap door
- 5) External seating wall

Note: The above information is a recommendation only. Have your installation checked by local authority.

Operation Instructions

THEORY OF OPERATION

THE FUEL SYSTEM

The motor turns the fuel pump. The fuel pump pulls fuel from the fuel tank. The fuel pump pushes fuel through a filter and a solenoid valve and out the burner head nozzle. A fine mist of fuel is sprayed into the combustion chamber.

THE AIR SYSTEM

The motor turns the fan. The fan pushes air into and around the combustion chamber. This air is heated and provides a stream of clean, hot air.

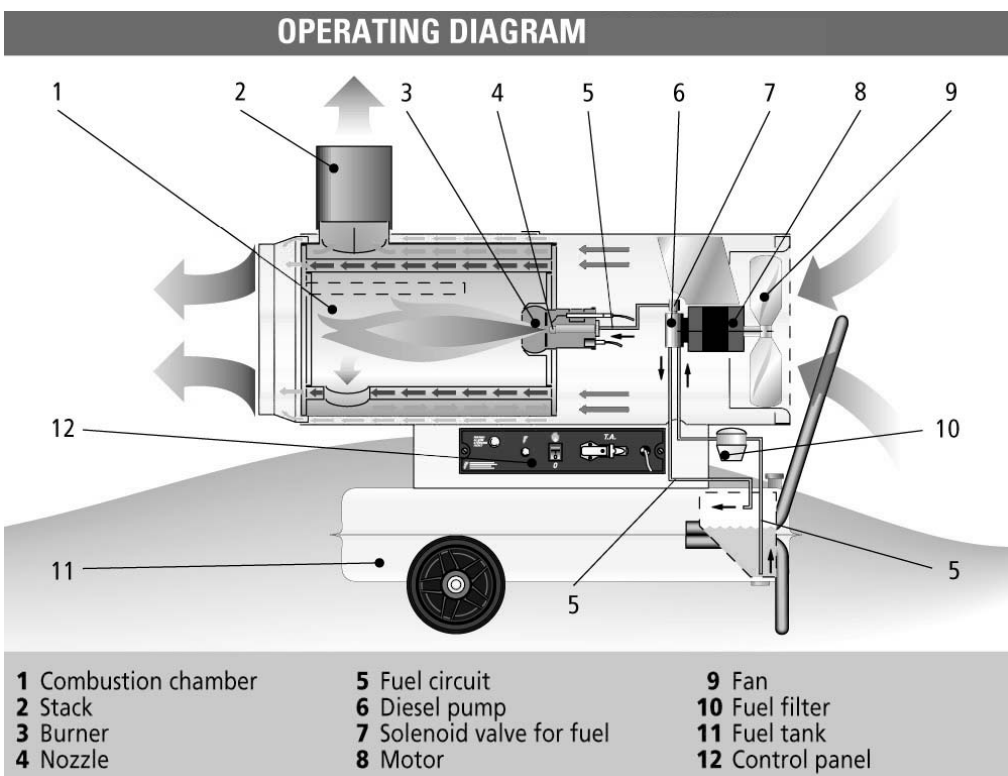
THE IGNITION SYSTEM

The electronic ignitor sends voltage to the spark plug. The spark plug ignites the fuel and air mixture.

THE FLAME-OUT CONTROL SYSTEM

This system causes the heater to shut down if the flame goes out. It also allows the fan to continue running after normal shutdown of heater. This cools the combustion chamber.

FIG. 4



FUELS

Do not use heavy fuels such as #2 fuel oil or #2 diesel. Using heavy fuels will result in:

- Clogged fuel filter and nozzle
- Carbon build-up on spark plug
- The need of non-toxic anti-icer in fuel during very cold weather.

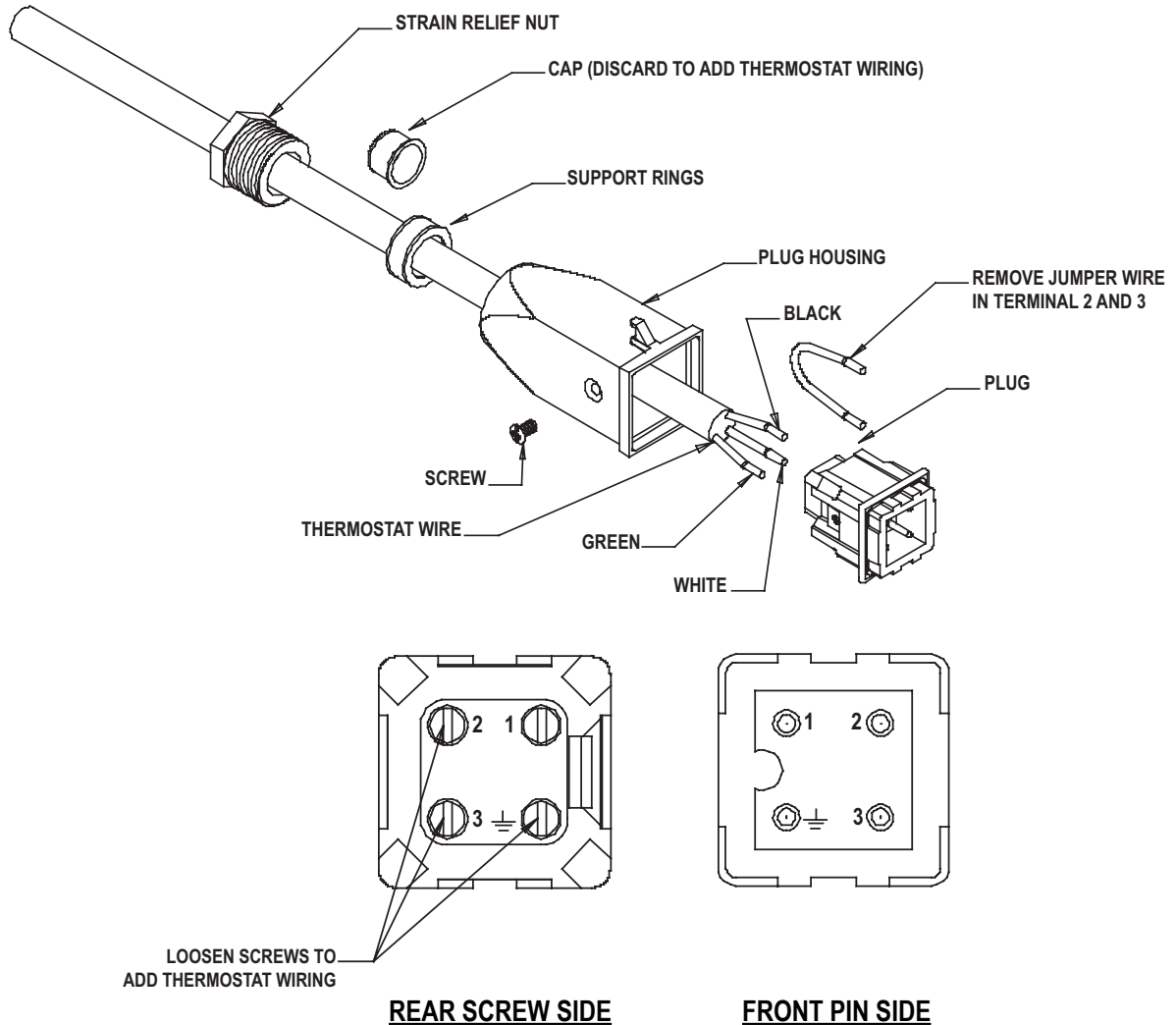
Use a KEROSENE ONLY storage container. Be sure storage container is clean. Foreign matter such as rust, dirt, or water will cause flame-out control to shut down heater. Foreign matter may also require you to clean fuel system often.

CONNECTING THERMOSTAT (Optional Accessory - Part #24219)

To connect a thermostat refer to the following instructions:

- a) Pull latch away from thermostat plug on control panel.
- b) Disassemble the plug.
- c) Remove jumper at terminals 2 and 3. See Fig. 5. (Keep the jumper. The jumper may be reinstalled if manual operation of the heater is desired later.)
- d) Remove plastic cap within strain relief.
- e) Route thermostat cord set through strain relief, support rings, and into plug. Thread strain relief into plug housing.
- f) Connect black and white wires to terminals 2 and 3, and green wire to ground terminal. See Fig. 5.
- g) Assemble thermostat plug and connect to control panel.

FIG. 5



Start-Up Instructions

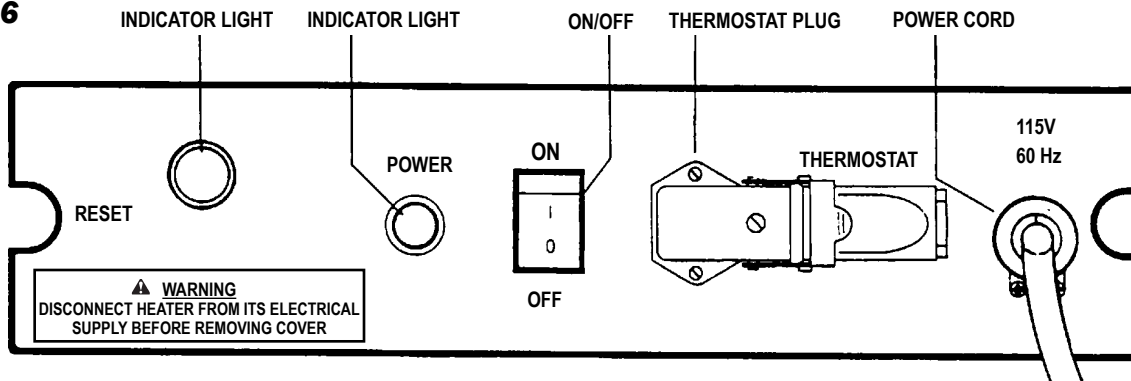
1. Follow all ventilation and safety information.
2. Check that your electrical supply to the heater conforms to the data plate, before heater operation is attempted.
3. Fill tank with kerosene or #1 fuel oil and attach fuel cap.
5. Connect heater to an approved electrical supply.
6. Set thermostat to the desired temperature.
7. Set switch to "ON" position. The motor will start running, immediately followed by ignition.
8. When the unit is started for the first time or is started after the fuel tank has been totally emptied, the flow of fuel may be impaired by air in the circuit. In this case the control box will shut down the heater and it

might be necessary to renew the starting procedure once or twice by depressing the "Reset" button. To facilitate starting, remove the canister bottom from the pump's fuel filter and fill with fuel. Reassemble the filter.

NOTE: The unit is fitted with an electronic flame control box. In case of malfunction this box will cut in and stop the heater, at the same time the indicator light in the control box reset button (1) will light up.

Heaters are also equipped with a high-limit safety cut out which will stop the heater in case of overheating. This thermostat will reset automatically but you will have to depress the button (1) on control box before being able to restart the heater. If starting heater for first time, you may need to restart heater several times before heater ignites. You may also have to do this after taking heater out of storage.

FIG. 6



Shut-Down Instructions

CAUTION

- Never unplug heater while heater is running.
- The heater must go through purge cycle. The purge cycle cools the combustion chamber.
- Damage to heater can occur if combustion chamber is not cooled.
- Do not restart heater until purge cycle is complete.

1. Turn thermostat dial to lowest temperature setting. This will cause heater flame to go out. The motor will continue to run during the purge cycle. This allows the fan to cool the combustion chamber. When the purge cycle is finished, the motor will stop. Do not unplug heater until purge cycle is finished.
2. Unplug extension cord from outlet.
3. To temporarily stop heater, set thermostat at a temperature lower than air around heater. Heater will cycle back on if air temperature around heater matches thermostat setting.

Re-Start Instructions

CAUTION

Do not restart heater until purge cycle is finished. The purge cycle cools the combustion chamber.

1. Wait until purge cycle is finished after stopping heater.
2. Repeat Start-Up Instructions.

Cleaning and Storage Instructions



WARNING

Fire, Burn, and Explosion Hazard

- This heater contains electrical and mechanical components in the fuel management, and safety systems.
- Such components may become inoperative or fail due to dust, dirt, wear and aging.
- Periodic cleaning and inspection as well as proper maintenance are essential to avoid serious injury or property damage.

INITIAL PREPARATION

- Disconnect electrical supply.

CLEANING

The heater should have dirt or dust removed periodically:

- a. Before each use give the heater a general cleaning using compressed air or a soft brush or dry rag on its case and internal components. At this time, dust off the motor case to prevent the motor from over-heating.
- b. At least once a year, give the heater a thorough cleaning. At this time, remove the fan and motor assembly and brush or blow off the fan blade assembly. Additionally, make sure the burner air venturi port is free of dust accumulation.

STORAGE

1. Drain all fuel from fuel filters, fuel lines, and pump.
2. Clean and flush fuel filter and canister attached to fuel pump.
3. Remove drain plug and drain fuel tank. Replace drain plug.
4. If any debris is noted in old fuel, add 1 or 2 quarts of clean kerosene to tank, stir, and drain again. This will prevent excess debris from clogging filters during future use.
5. Replace fuel cap or drain plug. Properly dispose of old and dirty fuel. Check with local automotive service stations that recycle oil.



WARNING

Do not use a pressure washer, water, or liquid cleaning solution on any heater controls. Use of a pressure washer, water, or liquid cleaning solution on the control components can cause severe personal injury or property damage due to water and/or liquids:

- In electrical components, and wires causing electrical shock or equipment failure.
- On fuel pump and hose connections causing corrosion which can result in fuel leaks and fire or explosion from the leak.

Clean all components of the heater with pressurized air, a dry brush, or a dry cloth.

6. Add 2 gallons of kerosene or #1 fuel oil to fuel tank. Replace fuel cap.
7. Operate heater for 5 minutes (See Operation Instructions). Stop heater and let cool completely.
8. Remove drain plug and drain fuel tank. Replace drain plug.
9. Properly dispose of old and dirty fuel.
10. Store heater in a dry location. Make sure storage place is free of dust and corrosive fumes.

IMPORTANT

Do not store kerosene over summer months for use during next heating season. Using old fuel could damage heater.

Maintenance Instructions

1. The area surrounding the heater shall be kept clear and free from combustible materials, gasoline, and other flammable vapors and liquids.
2. Check all wiring associated terminals and electrical components within the heater for corrosion, frayed or cut insulation, tight connections, etc. Repair or replace as necessary.
3. Review all heater markings (i.e. wiring diagram, warnings, start-up, shut-down, etc.) at the time of maintenance for legibility. Make sure none are cut, torn, or otherwise damaged. Any damaged markings must be replaced immediately by contacting the L.B. White Co., Inc. Dataplates, start-up and shut-down instructions and warnings are available at no cost. A nominal charge will be applied for wiring diagrams.
4. Inspect all fuel supply lines for cracks, abrasions, or ruptures. Replace if needed.
5. The heater should be tagged and removed from service if it shows evidence of damage that is a safety

or health hazard.

6. Refer to the following preventative maintenance schedule:

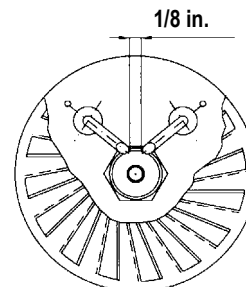
<u>Item</u>	<u>Maintenance Schedule</u>
Fuel tank	Flush every 50 hours of operation or as needed
Fuel filter assembly (Fuel tank)	Clean twice a heating season or replace as needed
Fuel filter lines	Check and tighten loose connections before each use
Spark plug	Clean and regap every 300 hours of operation or replace as needed
Fan blades and air deflectors	Clean each season or as needed
Air passages around burner head	Check each season for dirt and debris. Remove debris with a clean, soft cloth.

Service Instructions

IGNITER PROBE GAPPING

Ensure that gapping between spark electrodes is as shown in Fig. 7.

FIG. 7

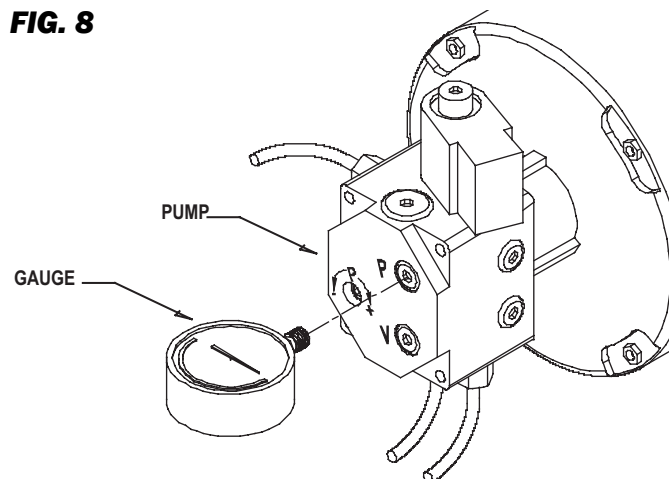


PUMP PRESSURE CHECK & ADJUSTMENT

1. Remove pressure gauge plug from fuel pump port marked "P" located in the upper right hand corner of the pump. This requires a 4 mm allen wrench.
2. Install a pressure gauge that has 1/8-28 BSP (British Straight Pipe) threads to the fuel port marked "P".
3. Start heater (See Start-Up). Allow motor to reach full speed. Pump pressure must be that given on dataplate or Pg. 4 of Owner's Manual.
4. To adjust pressure use 4mm allen wrench in the port marked "P" located between the "-" and the "+" at lower left area of the pump. Turn the allen head clockwise towards the "+" to increase the pressure. Turn counter clockwise towards the "-" to decrease pressure.
5. Stop heater (See Shut-Down).

6. Remove pressure gauge. Replace pressure gauge plug in fuel pump port marked "P" located in the upper right hand corner of the pump body.

FIG. 8

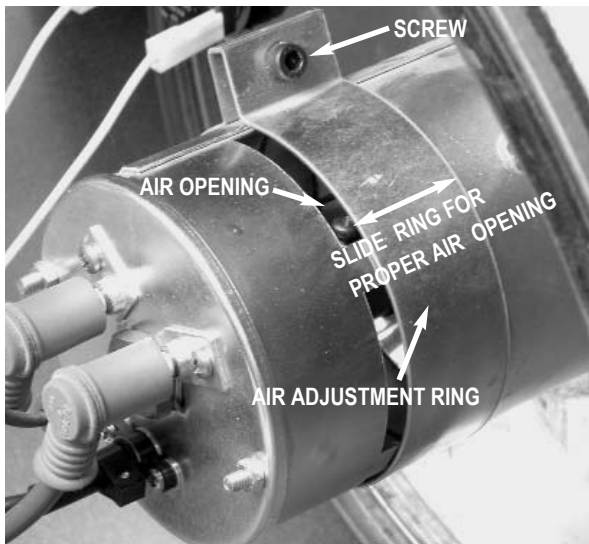


Setting for High Altitude

The heater may be operated at different altitudes. Although there are not any parts that need to be changed, you must set the air adjustment ring at the burner to compensate for the change in altitude.

1. Remove the upper shell at the fan end of the heater.
2. Using a 5 mm. allen key, loosen the locking screw at the ring. Slide the ring along the burner to open or reduce the air opening for the specific altitude. See Fig. 9. and refer to the following table for settings.

FIG. 9



AIR OPENING SETTING		ALTITUDE (FEET)
DIRECTOR 100	DIRECTOR 300	
1/2 in.	1/4 in.	Up to 2,000
9/16 in.	5/16 in.	2,000 - 4,000
5/8 in.	3/8 in.	4,000 - 6,000
11/16 in.	7/16 in.	6,000 - 10,000
3/4 in.	1/2 in.	10,000 - 12,000

Troubleshooting Information

READ THIS ENTIRE SECTION BEFORE BEGINNING TO TROUBLESHOOT PROBLEMS.

WARNING

- This heater can start at any time.
- Troubleshooting this system may require operating the heater with line voltage present. Use caution when working on the heater.
- Failure to follow this warning may result in property damage, personal injury or death.

This guide is intended for use by a QUALIFIED HEATER SERVICE PERSON. **DO NOT ATTEMPT TO SERVICE THESE HEATERS UNLESS YOU HAVE BEEN PROPERLY TRAINED.**

TEST EQUIPMENT REQUIRED

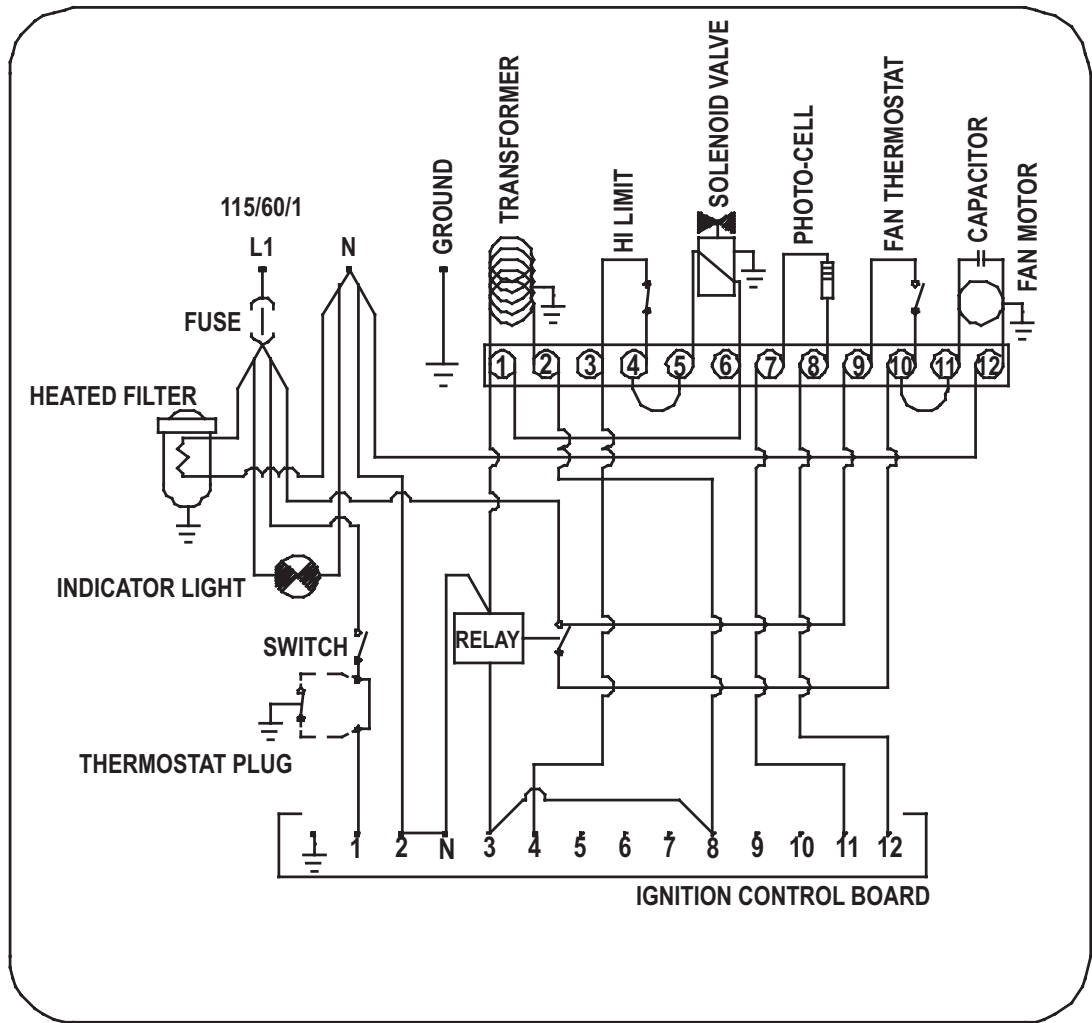
The following pieces of test equipment will be required to troubleshoot this system with minimal time and effort.

- **Digital Multimeter** - for measuring AC voltage and resistance.
- **High Pressure Gauge** - for checking pressures at the fuel pump against dataplate rating.
 - Visually inspect equipment for apparent damage.
 - Check all wiring for loose connections and worn insulation.

Components should be replaced only after each step has been completed and replacement is suggested in the flow chart. Refer to the Servicing sections as necessary to obtain information on disassembly and replacement procedures of the component once the problem is identified by the flow chart.

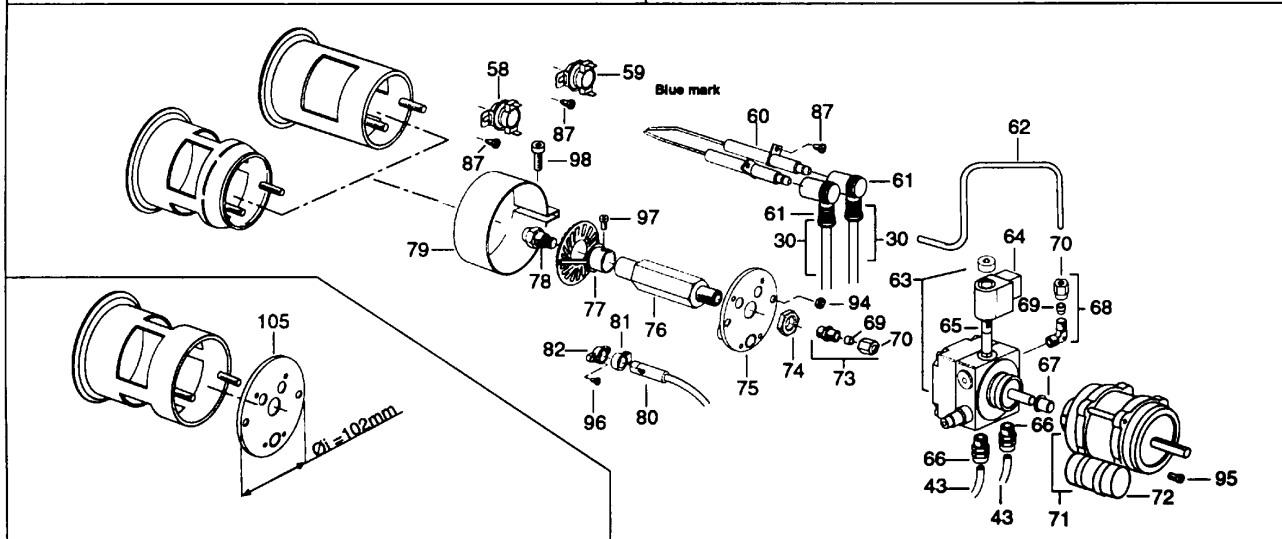
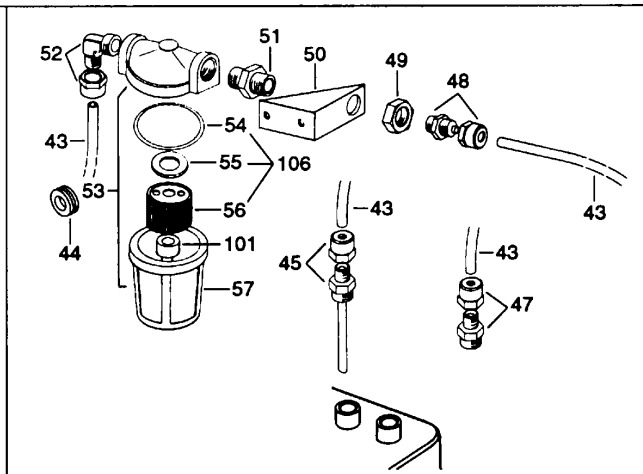
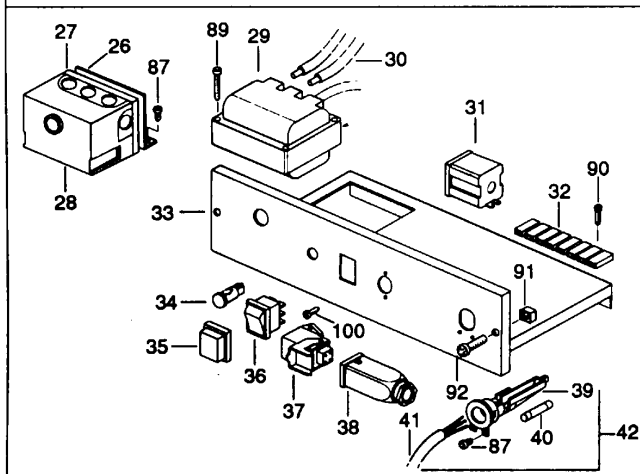
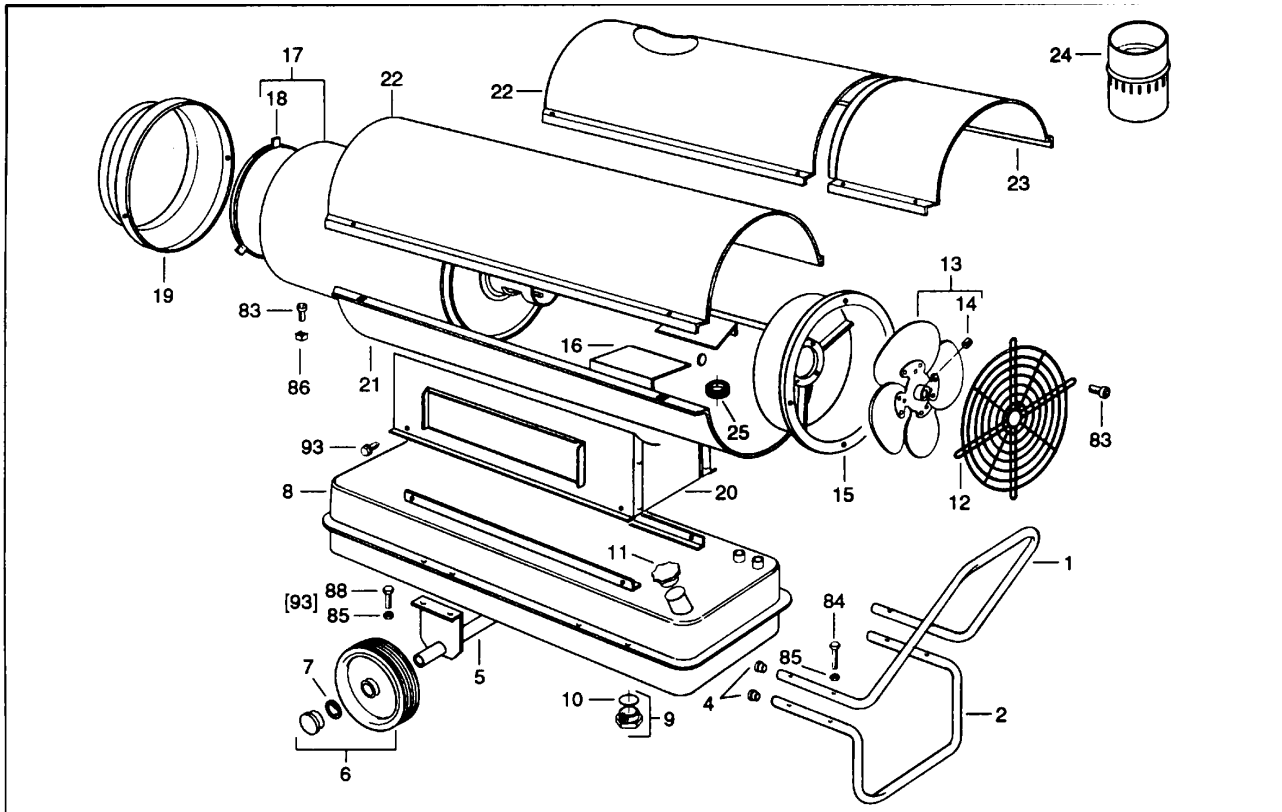
Problem	Possible Cause	Remedy
Motor does not start, no ignition	No power	- Check power supply (should be 115-120V /1/ 60 Hz) - Check proper positioning and functioning of switch - Check fuse
	Wrong setting of room thermostat or other control	- Check correct setting of heater control. If thermostat is used make sure selected temperature is higher than room temperature
	Thermostat or other control defective	- Replace control device
	Motor defective	- Replace motor
	Motor bearings defective	- Replace motor
Motor starts, no ignition or cuts out	Capacitor defective	- Replace capacitor
	Igniter defective	- Check connection of spark igniter cable to electrodes and transformer - Check electrodes setting - Check electrodes for cleanliness - Replace H.T. transformer
	Flame control box defective	- Replace control box
	Photocell defective	- Clean or replace photocell
	Not enough or no fuel at burner	- Check state of motor-pump plastic coupling - Check fuel line system, including fuel filter, for possible leaks - Clean or replace oil nozzle
	Solenoid defective	- Check electrical connection - Check thermostat LI - Clean or replace solenoid
	Motor starts, heater emits smoke	Not enough combustion air
Too much combustion air		- Check setting of combustion air flap
Fuel contaminated or contains water		- Drain fuel in tank, replace with clean fuel - Clean oil filter
Air leaks in fuel circuit		- Check fuel line and filter for possible leaks
Not enough fuel at burner		- Check pump pressure - Clean or replace fuel nozzle
Too much fuel at burner		- Check pump pressure - Replace nozzle
Heater does not stop		Solenoid defective
Motor does not stop	Thermostat defective	- Replace thermostat

Electrical Connection and Ladder Diagram



Parts Identification

PARTS SCHEMATIC



PARTS LIST

Item	Description	Part Number	
		Director 100	Director 300
1	Handle	24712	24290
2	Leg, Support Frame	24713	24291
3	Plug		24292
5	Axle	24714	24293
6	Wheel	24602	24294
7	Wheel Holder	24603	24295
8	Fuel Tank	24604	24296
9	Drain Plug w/ Seal		24251
10	Drain Plug Seal		24298
11	Fuel Cap		24252
12	Fan Guard	24606	24300
13	Fan	24607	24253
14	Set Screw		24302
15	Motor Flange	24715	24303
16	Air Flap	24716	24304
17	Combustion Chamber	24718	24305
19	Outlet Cone	24719	24306
20	Base	24720	24307
21	Lower Shell	24721	24308
22	Upper Shell, Exhaust End	24722	24309
23	Upper Shell, Fan End	24723	24310
24	Chimney, Ø 150MM		24311
25	Bushing, Ø 35MM		23412
26	Bracket, Control Box		23413
27	Base, Control Box		24255
28	Control Box		24254
29	Transformer		24256
30	Ignition Cable		24257
31	Relay Finder		24258
32	Terminal Strip		24314
33	Electrical Components Drawer		24315
34	Pilot Lamp		24259
35	Switch		24260
36	Switch		24261
37	Thermostat Receptacle		25514
38	Receptable Cover		25515
39	Wire/Fuse Holder		24318
40	Fuse , 20 amp		24263
	Fuse, 10 amp	24608	
41	Power Cord		24319
42	Power Cord w/ Holder		24320
43	Fuel Line, Ø 6mm		24321
44	Bushing		24322
45	Hose, Compression Fitting, 1/4" Mx6		24323
47	Transition Fitting, 1/4" Mx6		24324
48	Transition Fitting, 1/8" Mx6		24325
49	Hose Nut, 3/8"x5		24326
50	Filter Support		24327
51	Male Pipe Fitting		24328
52	Transition Fitting, 90°, 3/8" Mx6	24609	24329
53	Oil Filter, Complete w/ Housing		24264

* **Item Numbers Indicate Immediate Parts Availability.**

PARTS LIST (cont.)

Item	Description	Part Number	
		Director 100	Director 300
54	Seal, Filter, Housing		24330
55	Seal, Filter, Upper		24331
56	Oil Filter		24265
57	Filter Housing		24266
58	Fan Switch, Thermostat	24724	24267
59	Limit Switch		24268
60	Electrode		24269
61	Ignition Boot		24332
62	Oil Supply Line, Ø 4mm	24610	24333
63	Pump	24725	24270
64	Solenoid Spool, BFP 11/21		24271
65	Solenoid Valve		24272
66	Straight Fitting, 1/4" Mx6		24273
67	Coupling	24629	24274
68	Transition Fitting, 90°, 1/8" Mx4		24275
69	Sleeve, Compression, 4mm		24276
70	Nut, Compression, 4mm		24277
71	Motor, with Capacitor	24630	24278
72	Capacitor	24631	24334
73	Straight Fitting, 1/8" Mx6		24632
74	Nut, M14		24336
75	Burner Flange	24727	24337
76	Orifice Holder		24338
77	Turbo Disc		24339
78	Orifice	24633	24279
79	Air Adjustment Ring	24634	24340
80	Photocell		24280
81	Clamp		24281
82	Flange, Photocell		24341
83	Screw, M5x16		24342
84	Screw, M6x55		24343
85	Nut, M6		24344
86	Nut, M5		24345
87	Screw, 8x3/8"		24346
88	Screw, M6x16		24347
89	Screw, 8x1 1/2"		24348
90	Screw, 4x1/2"		24349
91	Nut, M6		24350
92	Screw, M6x20		24351
93	Screw, 14x1/2"		24352
94	Nut, M5		24353
95	Screw, M5x35	24726	24354
96	Screw, 6x12"		24355
97	Screw, M4x8		24356
98	Screw, M6x25		24357
100	Screw, 4x3/8"		24358
101	Seal, Filter, Lower		24359
105	Burner Flange, Ø 102mm		24360
106	Oil Filter Cartridge w/ Seals		24282

Warranty Policy

EQUIPMENT

L.B. White Co., Inc. warrants that the component parts of its heater are free from defects in material and workmanship, when properly installed, operated, and maintained in accordance with the Owner's Manual safety guides and labels contained with each unit. If, **within 12 months from the date of purchase by the end user**, any component is found to be defective, L.B. White Co., Inc. will at its option, repair or replace the defective part or heater, with a new part or heater, F.O.B., Onalaska, Wisconsin.

A warranty card on file at L.B. White will automatically qualify the heater and its component parts for warranty consideration. If a warranty card is not on file, a copy of the bill of sale will be required to establish warranty qualification. If neither is available, the warranty period will be 12 months from date of shipment from L.B. White.

PARTS

L.B. White Co., Inc. warrants that replacement parts purchased from the company and used on the appropriate L.B. White heater are free from defects both in material and workmanship for **12 months from the date of purchase by the end user**. Warranty is automatic if a component is found defective within 12 months of the date code marked on the part. If the defect occurs more than 12 months later than the date code but within 12 months from the date of purchase by the end user, a copy of a bill of sale will be required to establish warranty qualification.

duration to the duration of the applicable warranty stated above. The remedies set forth above are the sole and exclusive remedies available hereunder. L.B. White will not be liable for any incidental or consequential damages directly or indirectly related to the sale, handling or use of the heater, and in any event L.B. White's liability in connection with the heater, including for claims based on negligence or strict liability, is limited to the purchase price.

The warranty set forth above is the exclusive warranty provided by L.B. White, and all other warranties, including any implied warranties or merchantability or fitness for a particular purpose, are expressly disclaimed. In the event any implied warranty is not hereby effectively disclaimed due to operation of law, such implied warranty is limited in

Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Replacement Parts and Service

Contact your local L.B. White dealer for replacement parts and service or call the L.B. White Co., Inc. at (800) 345-7200 for assistance. Be sure that you have your heater model number and configuration number when calling.