



Owner's Manual and Instructions

Tradesman Kerosene Heaters



MODELS	OUTPUT (BTUH)	FUEL
CP045DK	45,000	1-K Kerosene
CP075DK	75,000	
CP125EK	125,000	
CP175EK	175,000	
CP210EK	210,000	

Certification by:



SCAN THIS QR CODE

with your smartphone or visit <http://goo.gl/nvneR> to view maintenance videos for L.B.White heaters.*



*Requires an app like QR Droid for Android or QR Reader for iPhone.

Congratulations!

You have purchased the finest kerosene portable forced air 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 or e-mail customerservice@lbwhite.com

ATTENTION ALL USERS

This heater has been tested and evaluated by C.S.A. International in accordance with the requirements of Standard UL733 and ANSI A10.10-1998, CAN/CSA B140.0-03 and CSA B140.8 - 1967 and is listed and approved as a Kerosene forced-air construction heater with application for the temporary heating of buildings under construction, alteration, or repair. If you are considering using this product for any application other than its intended use, then please contact the L.B. White Co., Inc.



Quality heaters you can count on.

411 Mason St., Onalaska, WI 54650 • (800) 345-7200 • (608)783-5691 • (608) 783-6115, fax • info@lbwhite.com

150-28814

 **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
 - Asphyxiation due to lack of adequate air supply or carbon monoxide poisoning
 - 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. See website, or 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.



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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 kerosene heaters and should not be attempted by anyone who is not so qualified.

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

Model

SPECIFICATIONS	CP045DK	CP075DK
Fuel Type	1-K, Kerosene	
Max Input (BTUH)	45,000	75,000
Pump Pressure (psig)	2.8	3.8
Fuel Consumption per Hour (gal)	.35	.57
Motor Characteristics	Ball Bearing	
	1/8 HP, 3,300 RPM	1/8 HP, 3120 RPM
Electrical Supply (Voltz/Hz/Phase)	120/60/1	
Amp Draw	CONTINUOUS OPERATION 1.6	1.6
Dimensions (Inches) Length x width x height	32" x 11.8" x 16.8"	
Minumum Safe Distances From Nearest Combustible Materials	TOP	4 ft.
	SIDES	4 ft.
	BACK	4 ft.
	BLOWER OUTLET	8 ft.
	BULK FUEL STORAGE CONTAINER	25 ft.
Net Weight (Lbs.)	27.6	27.6
Shipping Weight (Lbs.)	32.0	32.0
Minimum Ambient Temperature in Which Heater May Be Used	-20°F	

Heater Specifications

Model

SPECIFICATIONS	CP125EK	CP175EK	CP210EK
Fuel Type	1-K, Kerosene		
Max Input (BTUH)	125,000	175,000	210,000
Pump Pressure (PSIG)	5.5	7.5	8.5
Fuel Consumption per Hour (gal)	.95	1.32	1.6
Motor Characteristics	Ball Bearing		
	1/5HP 3455 RPM	1/4HP 3430 RPM	1/3HP 3380 RPM
Electrical Supply (Voltz/Hz/Phase)	120/60/1		
Amp Draw	CONTINUOUS OPERATION 2.5	3.2	3.7
Length x Width x Height	36.1" x 21.5" x 24.6"	41.8" x 23.1" x 26.1"	
Minumum Safe Distances From Nearest Combustible Materials	Top	4 ft.	
	Sides	4 ft.	
	Back	4 ft.	
	Blower Outlet	8 ft.	
	Bulk Fuel Storage Container	25 ft.	
Net Weight (lbs.)	58.6	65.0	66.6
Shipping Weight (lbs.)	65.9	73.9	75.4
Minimum Ambient Temperature in which Heater may be used	-20°F		

Safety Information

HAZARD DEFINITIONS

 **DANGER**

Indicates an imminently hazardous situation which, if not avoided *WILL* result in death or serious injury.

 **WARNING**

Indicates a potentially hazardous situation which, if not avoided, *COULD* result in death or serious injury.

 **CAUTION**

Indicates a potentially hazardous situation which, if not avoided, *MAY* result in minor or moderate injury.

GENERAL SAFETY INFORMATION

 **WARNING**

Before using this heater, please read this USER'S MANUAL very carefully. This USER'S MANUAL has been designed to instruct you as to the proper manner in which to assemble, maintain, store, and most importantly, how to operate the heater in a safe and efficient manner.

 **WARNING**

Never leave the heater unattended while burning!

 **DANGER**

Improper use of this heater can result in serious injury or death from burns, fire, explosion, electrical shock, and/or carbon monoxide poisoning.

GENERAL SAFETY INFORMATION (cont.)



WARNING

Risk of CO Poisoning!

- **Use this heater only in well ventilated areas. Provide proper ventilation. Proper ventilation air for combustion must be provided in accordance with OSHA 29 CFR 1926.154, Temporary Heating Devices, ANSI A 10.10, Safety Requirements for Temporary and Portable Space Heating Devices, or the Natural Gas and Propane Installation Code, CAN/CSA B149.1 as appropriate.**
- **Never use this heater in living or sleeping areas.**
- **Carbon Monoxide Poisoning: Early signs of carbon monoxide poisoning resemble flu-like symptoms such as headaches, dizziness, and/or nausea. If you have these symptoms, your heater may not be working properly.**
- **Get fresh air at once! Have the heater serviced.**
- **People with breathing problems should consult a physician before using the heater.**



WARNING

Risk of Electric Shock!

- **Use only the electrical power (voltage and frequency) specified on the model plate of the heater. Use only a three prong, grounded outlet and extension cord.**
- **ALWAYS install the heater so that it is not directly exposed to water spray, rain, dripping water, or wind.**
- **ALWAYS unplug the heater when not in use.**

CALIFORNIA RESIDENTS: This heater produces carbon monoxide, which is listed by the State of California as a reproductive toxin under Proposition 65.

MASSACHUSETTS RESIDENTS: Massachusetts state law prohibits the use of this heater in any building which is used in whole or in part for human habitation. Use of this heating device in Massachusetts requires local fire dept. permit (M.E.L.C. 148, Section 10A).

CANADIAN RESIDENTS: Use of this heater shall be in accordance with authorities having jurisdiction and CSA Standard B139.

NEW YORK CITY RESIDENTS: For use only at construction sites in accordance with applicable NYC codes under NYCFD certificate of approval #5034 and 5037



WARNING

Risk of Burns/Fire/Explosion!

- **Keep all combustible materials away from this heater.**
Minimum Clearances
Outlet 8 feet (250 cm)
Sides, Top and Rear 4 feet (125 cm)
- **NEVER use fuels such as gasoline, benzene, paint thinners, or other oil compounds in this heater (RISK OF FIRE OR EXPLOSION).**
- **NEVER use this heater where flammable vapors may be present.**
- **NEVER refill the heater's fuel tank while heater is operating or still hot. This heater is EXTREMELY HOT while in operation.**
- **NEVER block air inlet (rear) or air outlet (front) of heater.**
- **NEVER use duct work in front or at rear of heater.**
- **NEVER move or handle heater while still hot.**
- **NEVER transport heater with fuel in its tank.**
- **When used with optional thermostat or if equipped with a thermostat, the heater may start at any time.**
- **ALWAYS locate heater on a stable and level surface.**
- **Use 1-K kerosene in this heater. #1 fuel oil is a suitable substitute.**
- **Bulk fuel storage should be a minimum of 25 ft. from heaters, torches, portable generators, or other sources of ignition. All fuel storage should be in accordance with federal, state, or local authorities having jurisdiction.**

Installation and Assembly Instructions

HEATER SPECIFICATIONS

Introduction

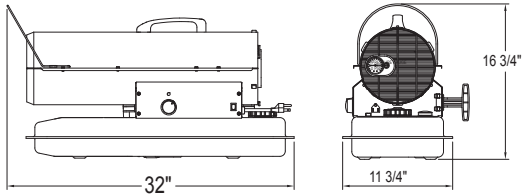
Please read this USER'S MANUAL carefully. It will show you how to assemble, maintain and operate this heater safely and efficiently to obtain the full benefits of its many features.

Consumer: Retain these instructions for future reference.

Unpacking

1. Remove all packing items applied to heater for shipment.
2. Remove all items from carton.
3. Check all items for shipping damage.
If heater is damaged, promptly inform dealer where you purchased heater.

Dimensions



Models CP045DK and CP075DK

Figure 1.1 - Heater Dimensions

Dimensions

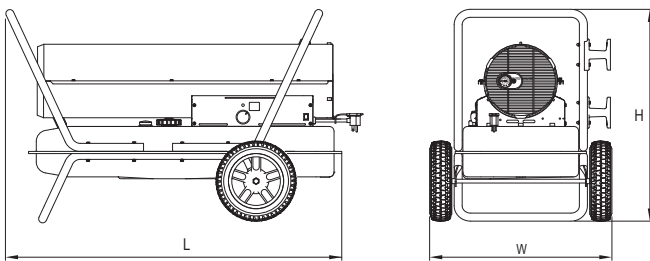


Figure 1.2 - Heater Dimensions

	CP125EK	CP175EK CP210EK
Height	24.6"	26.1"
Length	36.1"	41.8"
Width	21.5"	23.1"

Product Features

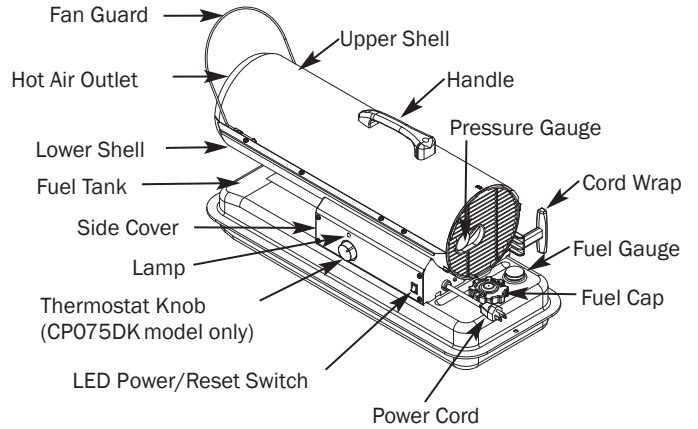


Figure 2.1 - Features

Product Features

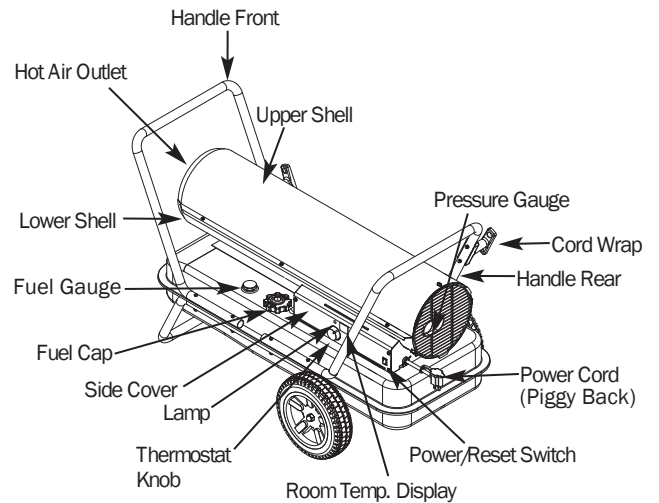


Figure 2.2 - Features

Installation and Assembly Instructions

ASSEMBLY

TOOLS REQUIRED

CP045DK/CP075DK

- Medium Phillips screwdriver.

1. Lift front guard for arrow direction and make sure that guard's wedged portion fits into the slit hole on the upper housing.
2. Align the holes in upper housing with two mounting holes on the handle as shown in Figure 4.
3. Secure handle with screws provided.
4. Insert cord wrap into the rectangle holes on the supporter and align the hole on the cord wrap with the mounting hole on the side covers shown in Figure 4.
5. Secure cord wrap with screws provided.

CP125EK/CP175EK/CP210EK

- Medium Phillips screwdriver.

- M5 open, or adjustable wrench.

1. Slide threaded axle through the rear section of the wheel support frame.
2. Slide one axle bushing on to each side of the axle. Slide one wheel on to each side of the axle.
3. Attach one cap nut on to each side of the threaded axle and tighten well.
4. Place heater on wheel support frame. Make sure the air inlet end (rear) of heater is over wheels. Align the holes on fuel tank flange. Insert screws through handles (front and rear), fuel tank flange, and wheel support frame as shown in Figure 5 and attach nut finger tight after each screw is inserted.
5. After all screws are inserted, tighten nuts firmly.
6. Align the hole on the handle (front and rear) with the mounting hole on the cord wrap.
7. Insert screws through cord wrap, handles as shown in Figure 5 and attach nut finger tight after each screw is inserted.
8. After all screws are inserted, tighten nuts firmly.



WARNING

Fire or explosion hazard!

- Do not operate heater without support frame fully assembled to tank.

Model	CP045DK/CP075DK	CP125EK	CP175EK	CP210EK
Wheel Support Frame	No	Yes	Yes	Yes
Wheels	No	Yes	Yes	Yes
Front-Handle	No	Yes	Yes	Yes
Rear-Handle	No	Yes	Yes	Yes
Axle	No	Yes	Yes	Yes
Cord Wrap	Yes	Yes	Yes	Yes
Hardware Kit	Yes	Yes	Yes	Yes
Handle	Yes	No	No	No

CP045DK / CP075DK Models

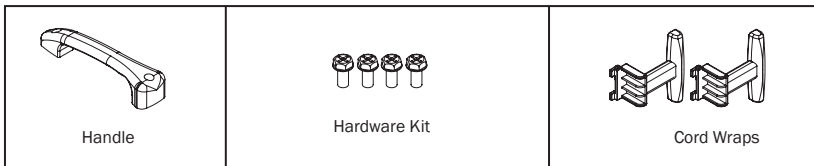


Figure 3.1 - Component Identification

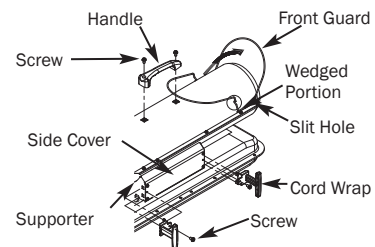


Figure 4 - Handle and Cord Wrap Installation CP045DK and CP075DK

CP125EK / CP175EK / CP210EK

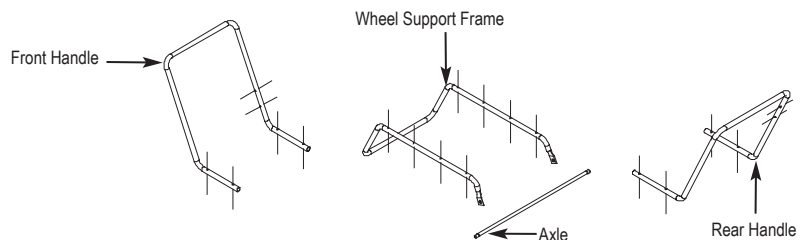
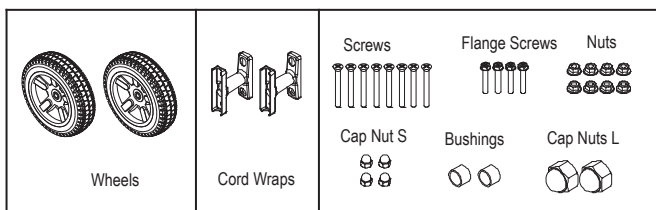


Figure 3.2 Component Identification

Assembly (cont.)

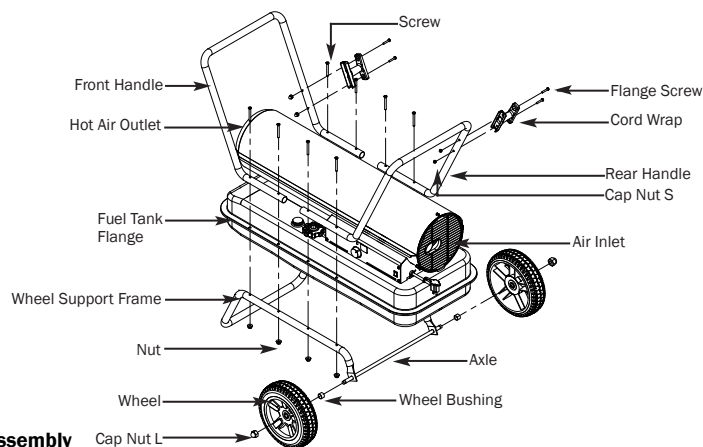


Figure 5 - Assembly

OPERATION

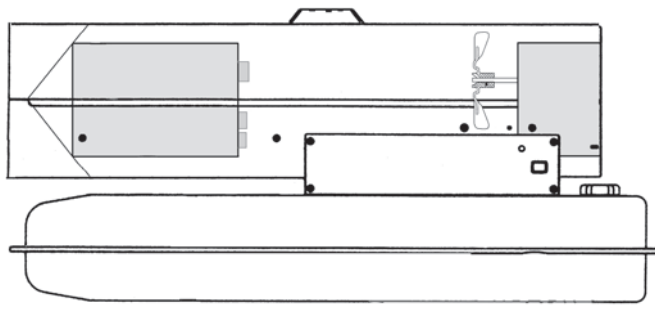


Figure 6 - Overview of Heater Design

OVERVIEW OF HEATER DESIGN

Fuel System: This heater is equipped with an electric air pump that forces air through the air line connected to the fuel intake, and then through a nozzle in the burner head. When air passes in front of the fuel intake, it causes fuel to rise from the tank and into the burner nozzle.

This fuel and air mixture is then sprayed into the combustion chamber in a fine mist.

SureFire Ignition: The electronic ignitor sends voltage to a specially designed spark plug. The spark plug ignites the fuel and air mixture described above.

The Air System: The heavy duty motor turns a fan that forces air into and around the combustion chamber. Here, the air is heated and then forced out the front of the heater.

THE SAFETY SYSTEM

Temperature Limit Control: This heater is equipped with a Temperature Limit Control designed to turn the heater off should the internal temperature rise to an unsafe level. If this device activates and turns your heater off, it may require service.

Once the temperature falls below the reset temperature, you will be able to start your heater.

Model	Internal Shut-off Temp. +/-10 Degrees	Reset Temp. +/-10 Degrees
CP045DK/CP075DK	176 °F/80 °C	122 °F/50 °C
CP125EK	230 °F/110 °C	194 °F/90 °C
CP175EK	158 °F/70 °C	104 °F/40 °C
CP210EK	194 °F/90 °C	140 °F/60 °C

Electrical System Protection: This heater's electrical system is protected by a fuse mounted to the PCB Assembly that protects it and other electrical components from damage. If your heater fails to operate, check this fuse first and replace as needed.

Flame-Out Sensor: Utilizes a photocell to monitor the flame in burn chamber during normal operation. It will cause the heater to shut off should the burner flame extinguish.

FUEL SPECIFICATIONS

KEROSENE (1-K)

For optimal performance of this heater, it is strongly suggested that 1-K kerosene be used. 1-K kerosene has been refined to virtually eliminate contaminants, such as sulfur, which can cause a rotten egg odor during the operation of the heater. However, #1 or #2 fuel oil (diesel fuel) may also be used if 1-K kerosene is not available. **Be advised that these fuels do not burn as clean as 1-K kerosene, and care should be taken to provide more fresh air ventilation to accommodate any added contaminants that may be added to the heated space.**



WARNING

Fire or explosion hazard!

- Kerosene should only be stored in a blue container that is clearly marked "kerosene". Never store kerosene in a red container. Red is associated with gasoline.
- NEVER store kerosene in the living space. Kerosene should be stored in a well ventilated area outside the living area.
- NEVER use fuel such as gasoline, benzene, alcohol, white gas, camp stove fuel, paint thinners, or other oil compounds in this heater (THESE ARE VOLATILE FUELS THAT CAN CAUSE A FIRE OR EXPLOSION).
- NEVER store kerosene in direct sunlight or near a source of heat.
- NEVER use kerosene that has been stored from one season to the next. Kerosene deteriorates over time. **OLD KEROSENE WILL NOT BURN PROPERLY IN THIS HEATER.**
- Use 1-K kerosene in this heater. #1 fuel is a suitable substitute.

FUELING YOUR HEATER

Never fill the heater fuel tank in the living space: fill the tank outdoors.

Do not overfill your heater and be sure heater is level.



WARNING

Fire and explosion hazard!

- Never refill fuel tank when heater is operating or still hot.

IMPORTANT : REGARDING FIRST IGNITION OF HEATER. The first time you light the heater, it should be done OUTDOORS. This allows the oils, etc., used in manufacturing heater to be burned off outside.

TO START HEATER

1. Fill fuel tank with kerosene or No. 1 fuel oil.
2. Attach fuel cap.
3. Plug power cord into three prong, grounded extension cord. Extension cord must be at least six feet long.
 - Extension Cord Wire Size Requirements:
 - 6 to 100 feet (1.8 to 30.53 meters) long, use 16 AWG conductor.
 - 101 to 200 feet (30.8 to 61 meters) long, use 14 AWG conductor.

NO THERMOSTAT ON 45

4. Turn thermostat control knob to desired setting and push power switch to “ON” position. Power lamp will light and heater will start.

NOTE: Room Temp. display indicates as following:

- When room temp. is less than 0°F: “lo”.
- When room temp. is between 0°F and 99°F: “Temp. is Displayed”
- When room temp is greater than 99°F: “Hi”

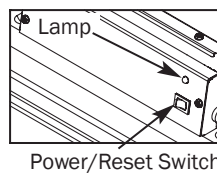
If heater does not start, the thermostat setting may be too low. Turn THERMOSTAT CONTROL KNOB to higher position to start heater. If heater still does not start, turn power switch to “OFF” and then to “ON” position (See Figure 7.1 & 7.2) If heater still does not start, see Troubleshooting on page 18.

NOTE: The major electrical components of this heater are protected by a safety fuse mounted to the PCB board. If your heater fails to start, check this fuse first and replace as necessary. You should also check your power source to insure that proper voltage and frequency are being supplied to the heater.

TO SHUT DOWN HEATER

Turn switch to “OFF” and unplug power cord.

Model CP045DK



Model CP075DK

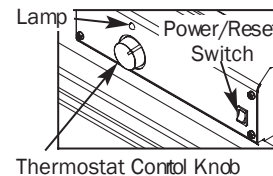


Figure 7.1 - Controls

Model CP125EK, CP175EK, CP210EK

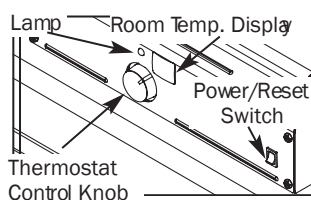


Figure 7.1 - Controls

TO RESTART HEATER

1. Wait 10 seconds after stopping heater.
2. Repeat steps under, “TO START HEATER.”

PIGGYBACK POWER CORD

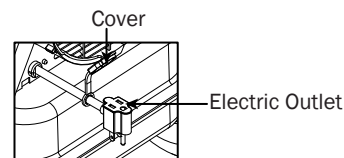


Figure 7.2 - Controls



WARNING

SHOCK HAZARD!

- Always cover electric outlet when not in use. Don't plug and use an appliance of more than 5A current in this outlet.

OPERATION (cont.)

LONG-TERM STORAGE OF YOUR HEATER

FUEL TANK DRAIN CP045DK & CP075DK

1. Drain fuel tank through fuel cap opening.
2. Using a small amount of kerosene, swirl and rinse the inside of the tank.

NEVER MIX WATER WITH KEROSENE, as it will cause rust inside the tank. Pour the kerosene out, making sure that you remove it all.

IMPORTANT: Do not store kerosene over summer for use during next heating season. Using old fuel may damage heater.

3. Reinstall fuel cap. Properly dispose of old and dirty fuel.

- Make sure storage place is free of dust and corrosive fumes.

- Store the heater in the original box with the original packing material and keep USER'S MANUAL with heater.

IMPORTANT: Do not store kerosene over summer for use during next heating season. Using old fuel may damage heater.

3. Tighten drain bolt firmly into the tank, otherwise it will not seal completely.

- Make sure storage place is free of dust and corrosive fumes.

- Store the heater in the original box with the original packing material and keep USER'S MANUAL with heater.

FUEL TANK DRAIN CP125EK & CP175EK & CP210EK

1. Remove drain bolt from bottom of fuel tank . See Figure 9.

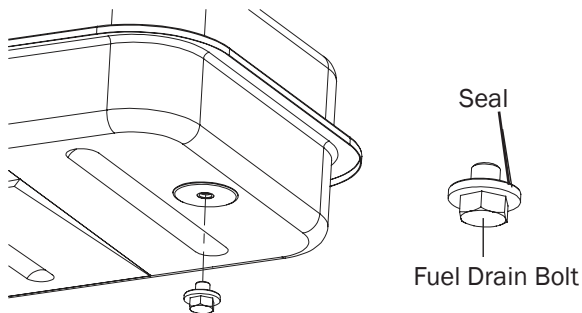


Figure 9 - Drain Plug Removal

1. Using a small amount of kerosene, swirl and rinse the inside of the tank.

NEVER MIX WATER WITH KEROSENE, as it will cause rust inside the tank. Pour the kerosene out, making sure that you remove it all.

USE ORIGINAL EQUIPMENT REPLACEMENT PARTS. Use of third-party or other alternate components will void warranty and may cause unsafe operating conditions.

! WARNING

Fire or explosion hazard!

- Never service heater while it is plugged in or while hot!

FUEL TANK

FLUSH EVERY 200 HOURS OF OPERATION OR AS NEEDED (See Longterm Storage, page 11).

AIR INTAKE FILTER

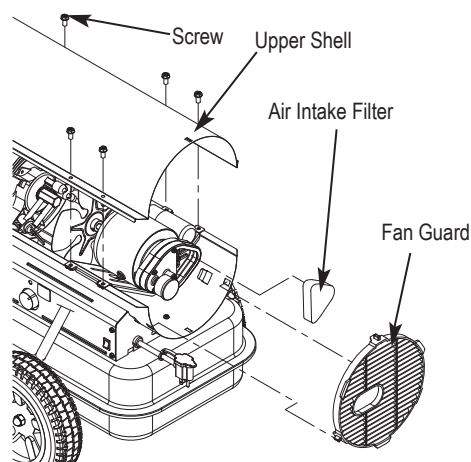


Figure 10 - Air Filter Access

WASH AND DRY WITH SOAP AND WATER EVERY 500 HOURS OF OPERATION, OR AS NEEDED.

- Remove screws along each side of heater using medium Phillips screwdriver.
- Lift off upper shell.
- Remove fan guard.
- Wash or replace air intake filter.
- Reinstall fan guard and upper shell.

AIR OUTPUT FILTER, LINT FILTER

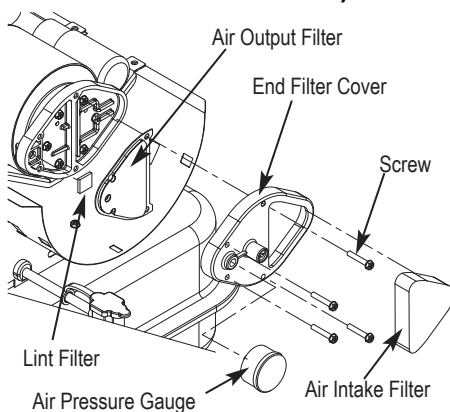


Figure 11 - Filter Assembly

REPLACE EVERY 500 HOURS OF OPERATION OR ONCE A YEAR

- Remove upper shell and fan guard (See Air Intake Filter Figure 10).
- Turn air pressure gauge counter-clockwise and remove.
- Remove end filter cover screws using medium Phillips screwdriver.
- Remove end filter cover.
- Replace air output and lint filter.
- Reinstall end filter cover and air pressure gauge.
- Reinstall fan guard and upper shell.

PUMP SERVICING

•PUMP ROTOR

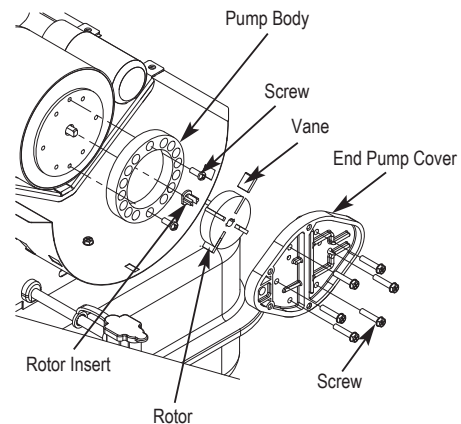


Figure 12 - Rotor Pump Assembly

REPLACE IF CHIPPED, CRACKED OR AS NEEDED

- Remove upper shell and fan guard (See Air Intake Filter Figure 10).
- Turn air pressure gauge counter-clockwise and remove.
- Remove end filter cover screws using medium Phillips Screwdriver (See Air Output Filter, Lint Filter Figure 11).
- Remove air output filter and lint filter.
- Remove end pump cover screws using a 5/16" (8mm) nut driver/socket.
- Replace rotor, all 4 vanes and plastic rotor insert. All of these components must be replaced at the same time.

PUMP SERVICING (cont.)

• ROTOR GAPPING

IMPORTANT: The newly inserted rotor must be gapped properly before you reinstall the end pump cover.

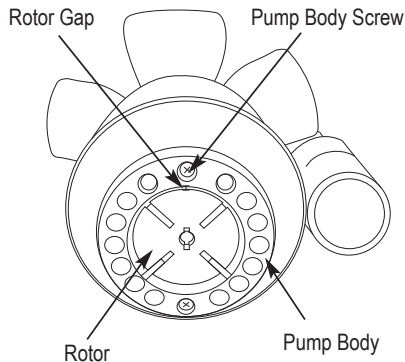


Figure 13 - Rotor Gapping

- Slightly loosen the pump body screws using a medium screw driver.
- Position pump body to set rotor gap to .003”~.004” at top dead center and retighten pump body screws.
- Verify the gap using calipers, a micrometer or a dollar bill.
- Reinstall the end pump cover.
- Reinstall air output filter and lint filter.
- Reinstall end filter cover and air pressure gauge.
- Reinstall fan guard and upper shell.

• AIR LINE (LEAKING)

REPLACE IF SPLIT, CRACKED OR AS NEEDED.

- Remove air line from air line fitting (See Figure 14) and from nozzle adaptor.(See Nozzle, page 14)
- Reinstall Air line to air line fitting and nozzle adaptor.

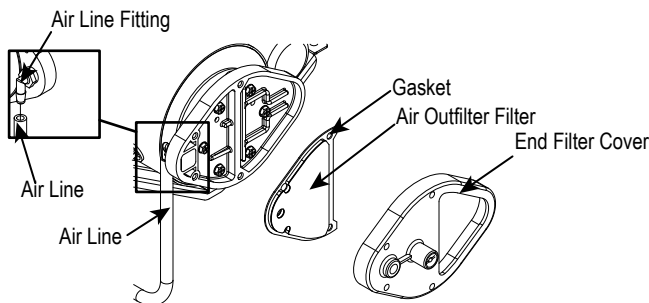


Figure 14 - Check Air leaks around Pump.

• END FILTER COVER & GASKET(LEAKING)

REPLACE IF SPLIT, CRACKED OR AS NEEDED.

- Replace End filter cover.(See Air output filter,page 12)
- Replace Air ouput filter.(See Air output filter,page 12)

FAN BLADES

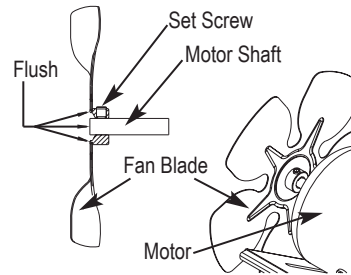


Figure 15 - Fan Assembly

CLEAN EVERY SEASON OR AS NEEDED

- Remove upper shell (See Air Intake Filter Figure 10).
- Use M6 Allen wrench to loosen set screw which holds fan blade to motor shaft.
- Slip fan blade off motor shaft.
- Clean fan blade using soft cloth moistened with kerosene or solvent.
- Dry fan blade thoroughly.
- Reinstall fan blade to motor shaft.
- Place fan blade hub flush with end of motor shaft.
- Place set screw on flat of shaft.
- Tighten screw firmly (40-50 inch-pounds/4.5-5.6 N-m).
- Reinstall upper shell.

MAINTENANCE (cont.)

NOZZLE

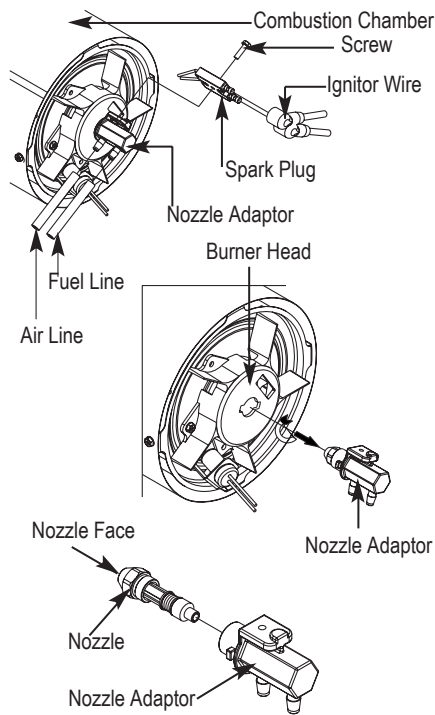


Figure 16 – Nozzle Replacement For Models CP045DK-CP175EK

CLEAN NOZZLE AS NEEDED

(For Models CP045DK - CP175EK only)

- Remove upper shell (See Air Intake Filter, page 12).
- Remove fan blade (See Fan Blades).
- Remove fuel and air line hoses from nozzle adaptor.
- Remove ignitor wire from spark plug.
- Remove spark plug from nozzle adaptor using medium phillips screwdriver.
- Turn nozzle adaptor 1/9 turn(40°) to counter clock wise and pull toward motor to remove. (See Figure 16)
- Place plastic hex-body into vise and lightly tighten.
- Carefully remove nozzle from burner head using 5/8" socket wrench.
- Blow compressed air through face of nozzle.
(this will remove any dirty in nozzle)
- Reinstall nozzle into nozzle adaptor until nozzle seats. Tighten 1/3 turn more using 5/8" socket wrench. (40~45 inch-pounds)
- Reinstall nozzle adaptor to burner head.
- Reinstall spark plug to nozzle adaptor.
- Attach ignitor wire to spark plug.
- Attach fuel and air line hoses to nozzle adaptor.
- Reinstall fan blade and upper shell.

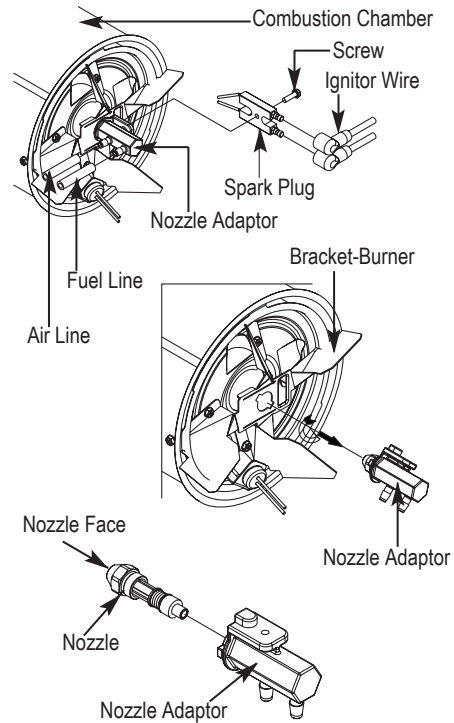


Figure 17 – Nozzle Replacement CP210EK

(For Model CP210EK Only)

- Remove upper shell (See Air Intake Filter, page 12).
- Remove fan blade (See Fan Blades, page 13).
- Remove fuel and air line hoses from nozzle adaptor.
- Remove ignitor wire from spark plug.
- Remove spark plug from nozzle adaptor using medium phillips screwdriver.
- Turn nozzle adaptor 1/8 turn (45°) to counter clock wise and pull toward motor to remove. (See Figure 17)
- Place plastic hex-body into vise and lightly tighten.
- Carefully remove nozzle from adaptor-nozzle using 5/8" socket wrench.
- Blow compressed air through face of nozzle.
(this will remove any dirt in nozzle)
- Reinstall nozzle into nozzle adaptor until nozzle seats Tighten 1/3 turn more using 5/8" socket wrench (40~45 inch-pounds)
- Reinstall nozzle adaptor to burner bracket
- Reinstall spark plug to nozzle adaptor.
- Attach ignitor wire to spark plug.
- Attach fuel and air line hoses to nozzle adaptor.
- Reinstall fan blade and upper shell.

SPARK PLUG

CLEAN AND REGAP EVERY 600 HOURS OF OPERATION OR REPLACE AS NEEDED.

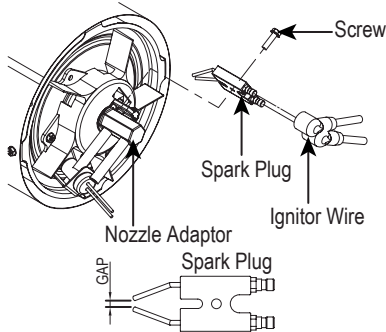


Figure 18 – Spark Plug Replacement

(For Models CP045DK-CP175EK)

- Remove upper shell (See Air Intake Filter, page 12).
- Remove fan (See Fan Blades, page 13).
- Remove ignitor wire from spark plug.
- Remove spark plug from nozzle adaptor using medium phillips screwdriver.
- Clean and regap spark plug electrodes to 3.5mm gap.
- Reinstall spark plug to nozzle adaptor.
- Attach ignitor wire to spark plug.
- Reinstall fan and upper shell.

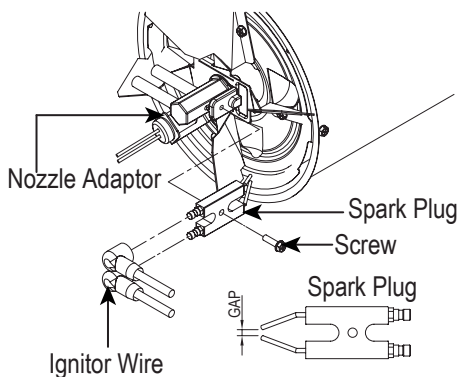


Figure 19 – Spark Plug Replacement

(For Model CP210EK only)

- Remove upper shell (See Air Intake Filter, page 12).
- Remove fan (See Fan Blades, page 13).
- Remove ignitor wire from spark plug.
- Remove spark plug from nozzle adaptor using medium phillips screwdriver.
- Clean and regap spark plug electrodes to 3.5mm gap.
- Reinstall spark plug to nozzle adaptor.
- Attach ignitor wire to spark plug.
- Reinstall fan and upper shell.

PHOTOCELL

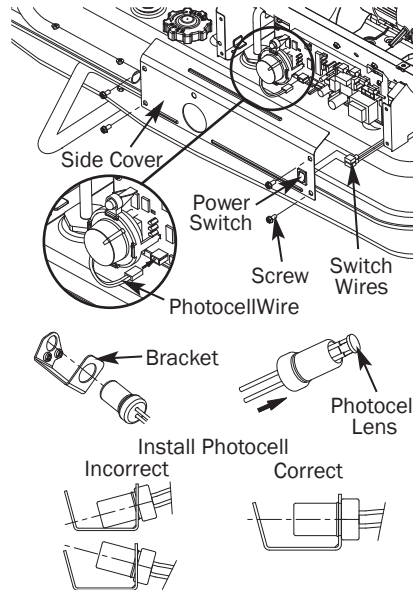


Figure 20 – Photocell Replacement

CLEAN PHOTOCELL ANNUALLY OR AS NEEDED.

- Remove upper shell (See Air Intake Filter, page 12)
- Remove fan (See Fan Blades, page 13)
- Remove photocell from its mounting bracket.
- Clean photocell lens with cotton swab.
- TO REPLACE: Remove side cover near power switch.
- Disconnect wires from power switch and remove side cover.
- Disconnect wires from circuit board and remove photocell.
- Install new photocell and attach wires to circuit board
- Replace switch wires to power switch and side cover.
- Replace fan and upper shell.

MAINTENANCE (cont.)

FUEL FILTER

CLEAN OR REPLACE TWICE PER HEATING SEASON OR AS NEEDED.

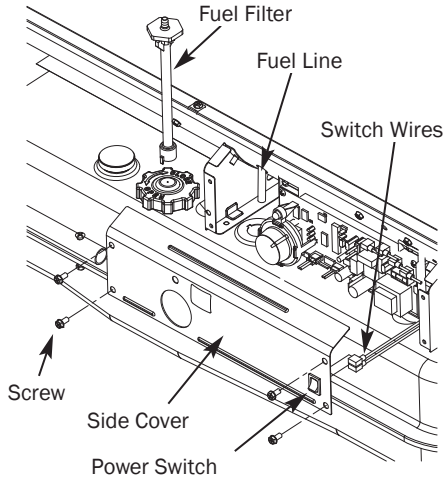


Figure 21 – Fuel Filter Replacement

- Remove side cover screws using medium Phillips screwdriver.
- Disconnect switch wires from power switch and remove side cover.
- Pull fuel line off fuel filter neck.
- Turn fuel filter clockwise 90 degrees and pull to remove.
- Wash fuel filter with clean fuel and replace in tank.
- Attach fuel line to fuel filter neck.
- Reinstall side cover.

PUMP PRESSURE ADJUSTMENT

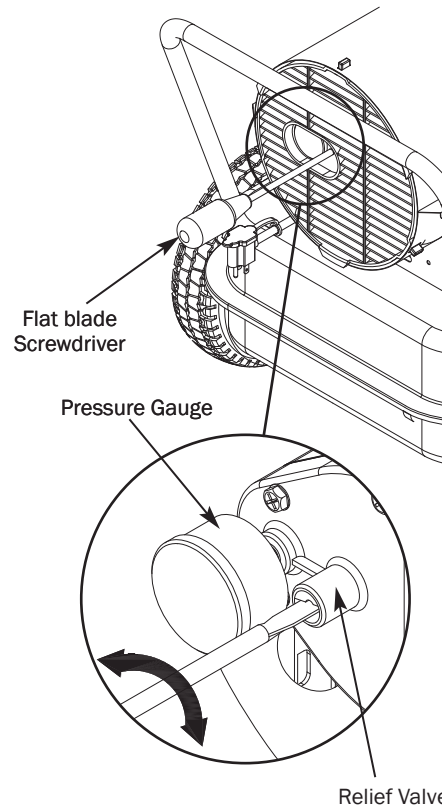


Figure 22 – Adjusting Pump Pressure

- Start heater (See “Operation”, page 9).
- Allow motor to reach full speed.
- Adjust pressure (using flat blade screwdriver).
- Turn relief valve clockwise to increase pressure.
- Turn relief valve counterclockwise to decrease pressure.
- Set pump pressure to correct pressure for each model.
- Stop heater (see “Operation”, page 9).

Model	Pump Pressure
CP045DK	2.8 PSI
CP075DK	3.8 PSI
CP125EK	5.5 PSI
CP175EK	7.5 PSI
CP210EK	8.5 PSI

NOTE: USE ONLY ORIGINAL EQUIPMENT REPLACEMENT PARTS. Use of alternate or third party components will void warranty and may cause an unsafe operating condition.

REPLACING FUSE

NOTE: The heater is fuse protected. If your heater fails to ignite, DO NOT RETURN YOUR HEATER TO THE STORE.

Please follow the simple instructions below to inspect and change the fuse.

- Unplug heater.
- Remove side cover screws using medium Phillips screwdriver.

! WARNING

Burn hazard!

• **SHOCK HAZARD.** To prevent personal injury, unplug the power cord before replacing fuse.

- Remove fuse from fuse holder (See Figure 23).
- Replace fuse with enclosed fuse.
- Replace switch wires to power switch.
- Replace side cover.

NOTE: Specified fuse rating: AC 125/8A, part number 572447

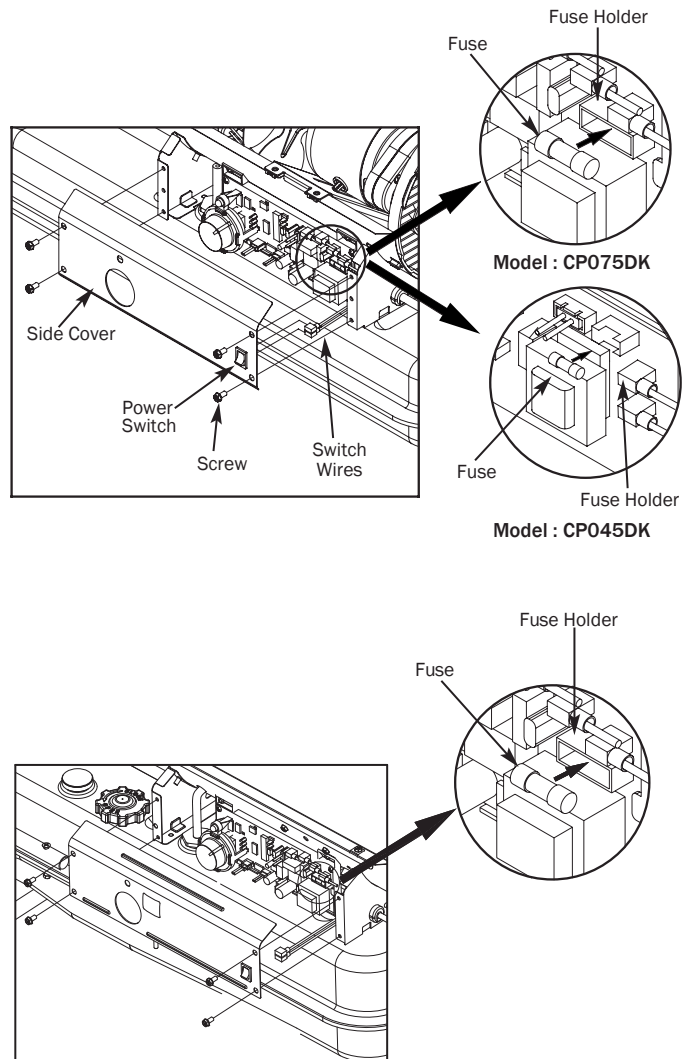


Figure 23 – Replacing Fuse

WIRING DIAGRAM

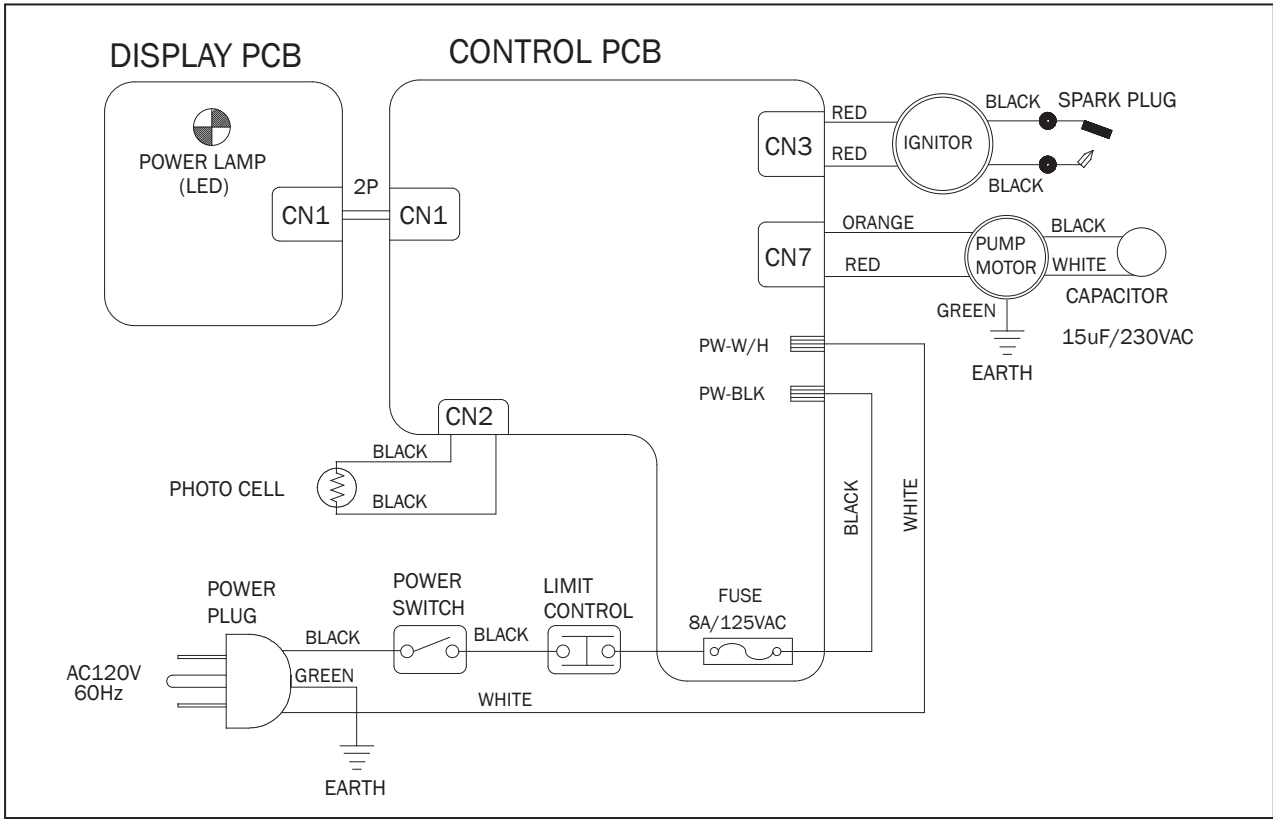


Figure 24 - Wiring Diagram Model CP045DK

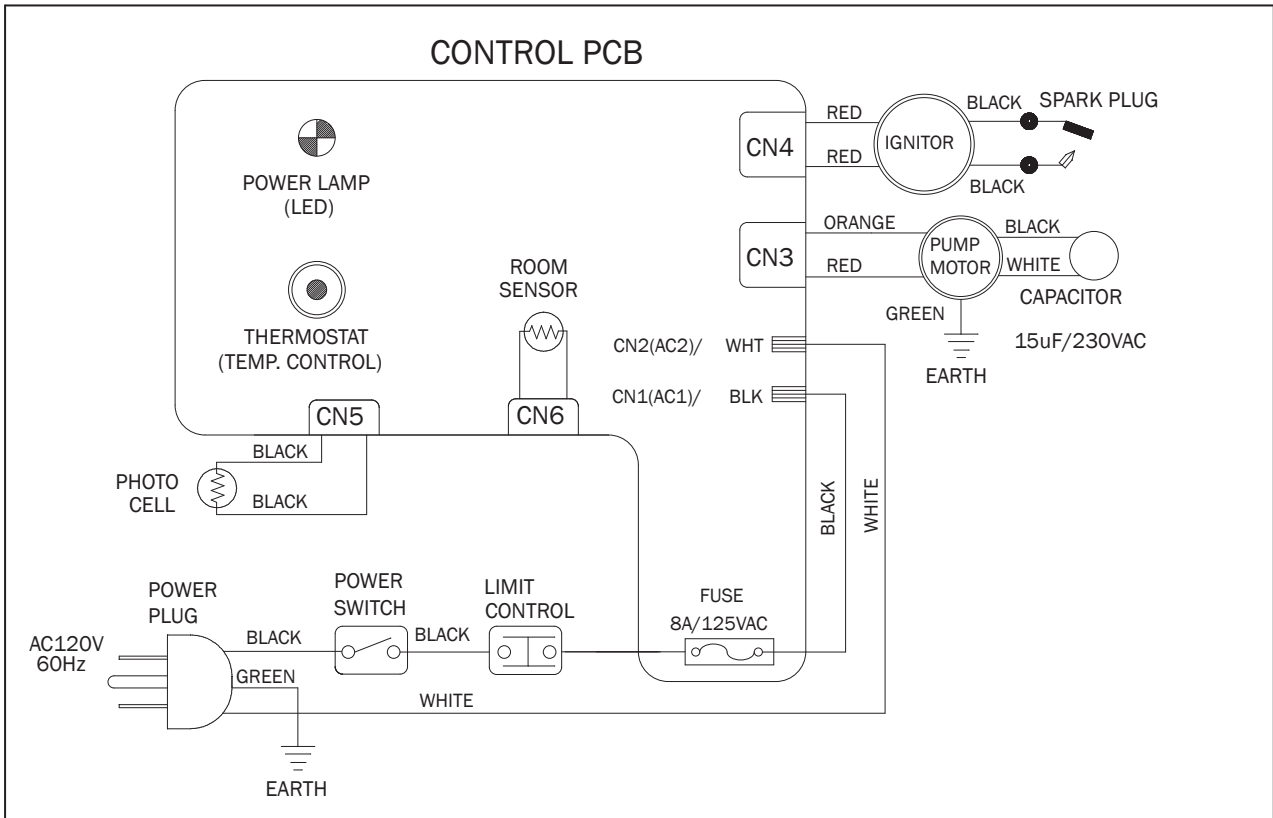


Figure 25 - Wiring Diagram Model CP075DK

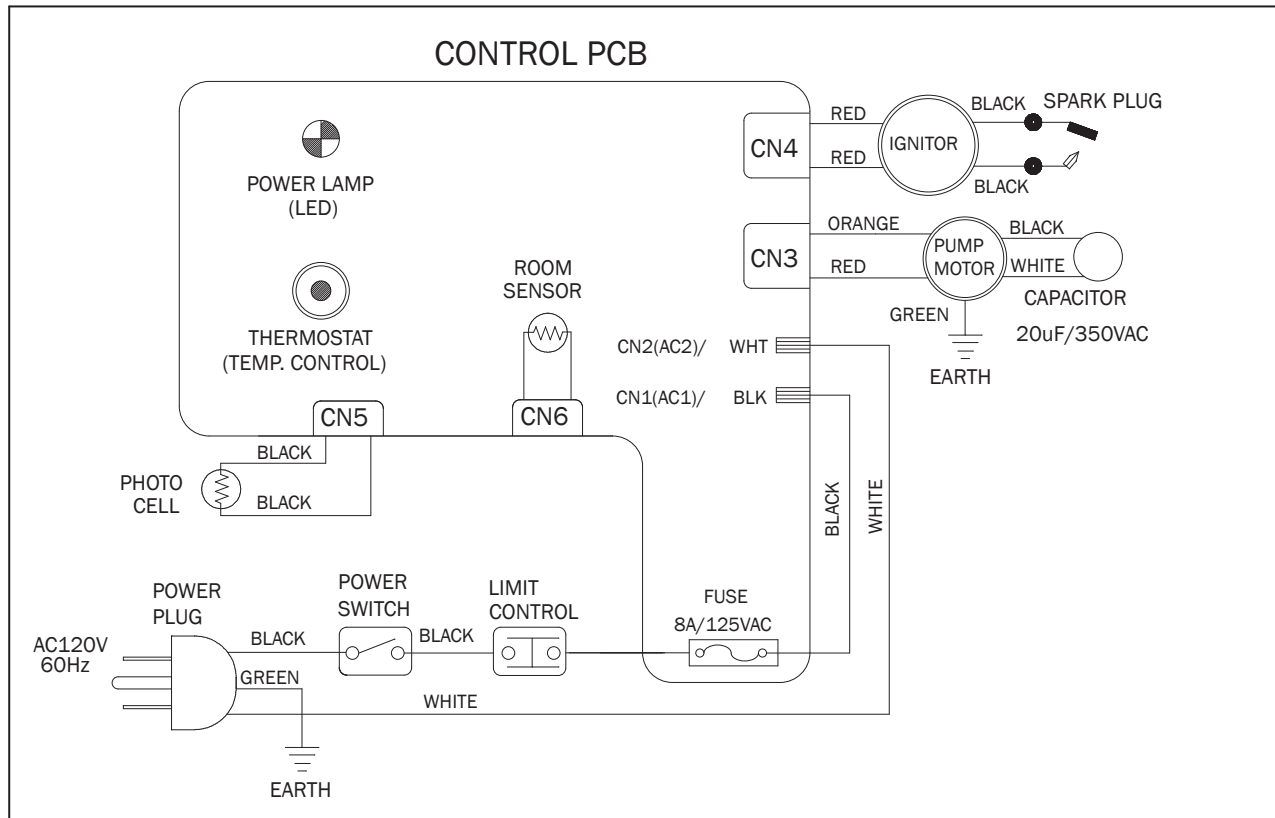


Figure 26 – Wiring Diagram Models CP125EK, CP175EK, CP210EK

Troubleshooting

Symptom	Possible (Cause(s))	Corrective Action
Heater ignites but MAIN PCB assembly shuts heater off after a short period of time. (Indicator Lamp is flickering and room temp. display indicates "E1")	<ol style="list-style-type: none"> 1. Wrong pump pressure 2. Dirty air output, air Intake or lint filter 3. Dirty fuel filter 4. Dirt in nozzle 5. Dirty photocell lens 6. Photocell assembly not properly installed (not seeing the flame) 7. Bad electrical connection between photocell and MAIN PCB assembly. 8. Defective photocell 9. Cracks in end filter cover. 10. Defective rotor& vane. 11. Splits/cracks on air line. 12. Air leaks around the pump area. 	<ol style="list-style-type: none"> 1. See Pump Pressure Adjustment, page 16 2. See Air Output, Air Intake and Lint Filters, page 13 3. See Fuel Filter, page 16 4. See Nozzle, page 14 5. Clean Photocell Lens, page 15 6. Make sure photocell boot is properly seated in bracket, Page 15 7. Check electrical components. See Wiring Diagrams, page 18 8. Replace Photocell, page 15 9. Check for cracks in end filter cover. Replace if cracked,page 13 10. Check rotor & vane condition. Replace if chipped,cracked,page 12 11. Check air line for splits/cracks. Replace if splited,cracked,page 13 12. Check air leaks around the pump area,page 13
Heater will not ignite but motor runs for a short period of time. (Indicator Lamp is flickering and room temp. display indicates "E1")	<ol style="list-style-type: none"> 1. No fuel in tank 2. Wrong pump pressure 3. Carbon deposits on spark plug and/or improper gap 4. Dirty fuel filter 5. Dirt in nozzle 6. Water in fuel tank 7. Bad electrical connection between igniter and MAIN PCB Assembly 8. Igniter wire is not attached to spark plug 	<ol style="list-style-type: none"> 1. Fill tank with kerosene 2. See Pump Pressure Adjustment, page 16 3. See Spark Plug, page 15 4. See Fuel Filter, page 16 5. See Nozzle, page 14 6. Flush fuel tank with clean kerosene, page 12 7. Check electrical components. See Wiring Diagram, page 18 8. Attach igniter to spark plug. See Spark Plug, page 15
Fan does not turn when heater is plugged in and power switch was in the "ON" position. (Indicator Lamp is on or flickering)	<ol style="list-style-type: none"> 1. Thermostat setting is too low 2. Bad electrical connection between motor and MAIN PCB Assembly 3. Jammed/shattered rotor 	<ol style="list-style-type: none"> 1. Turn thermostat control knob to a higher setting 2. Check electrical connections. See Wiring Diagram, page 18 3. See Servicing Pump, page 12.
(Indicator Lamp is flickering and room temp. display indicates "E2") (Indicator Lamp is flickering and room temp. display indicates "E3")	<ol style="list-style-type: none"> 1. Sensor failure 	<ol style="list-style-type: none"> 1. Replace sensor. See Wiring Diagram, page 18
Heater will not turn-on (Indicator Lamp is off)	<ol style="list-style-type: none"> 1. Thermostat switch failure 2. Temperature limit safety device is overheated 3. No electrical power 4. Blown fuse 5. Bad electrical connection between temperature limit safety device and PCB board 	<ol style="list-style-type: none"> 1. Replace MAIN PCB 2. Turn power switch to "OFF" and allow to cool (about 10 min.) 3. Check to insure heater cord and extension cord are plugged in. Check power supply 4. Replace safety fuse in PCB board. See Replacing Fuse, page 17 5. Check electrical connections. See Wiring Diagrams page 18

Parts Identification

PARTS SCHEMATIC (CP045DK, CP075DK)

**For Repair Parts,
call 1-800-345-7200**

Please provide following information:

- Model number
- Serial number (if any)
- Part description and number as shown in parts list

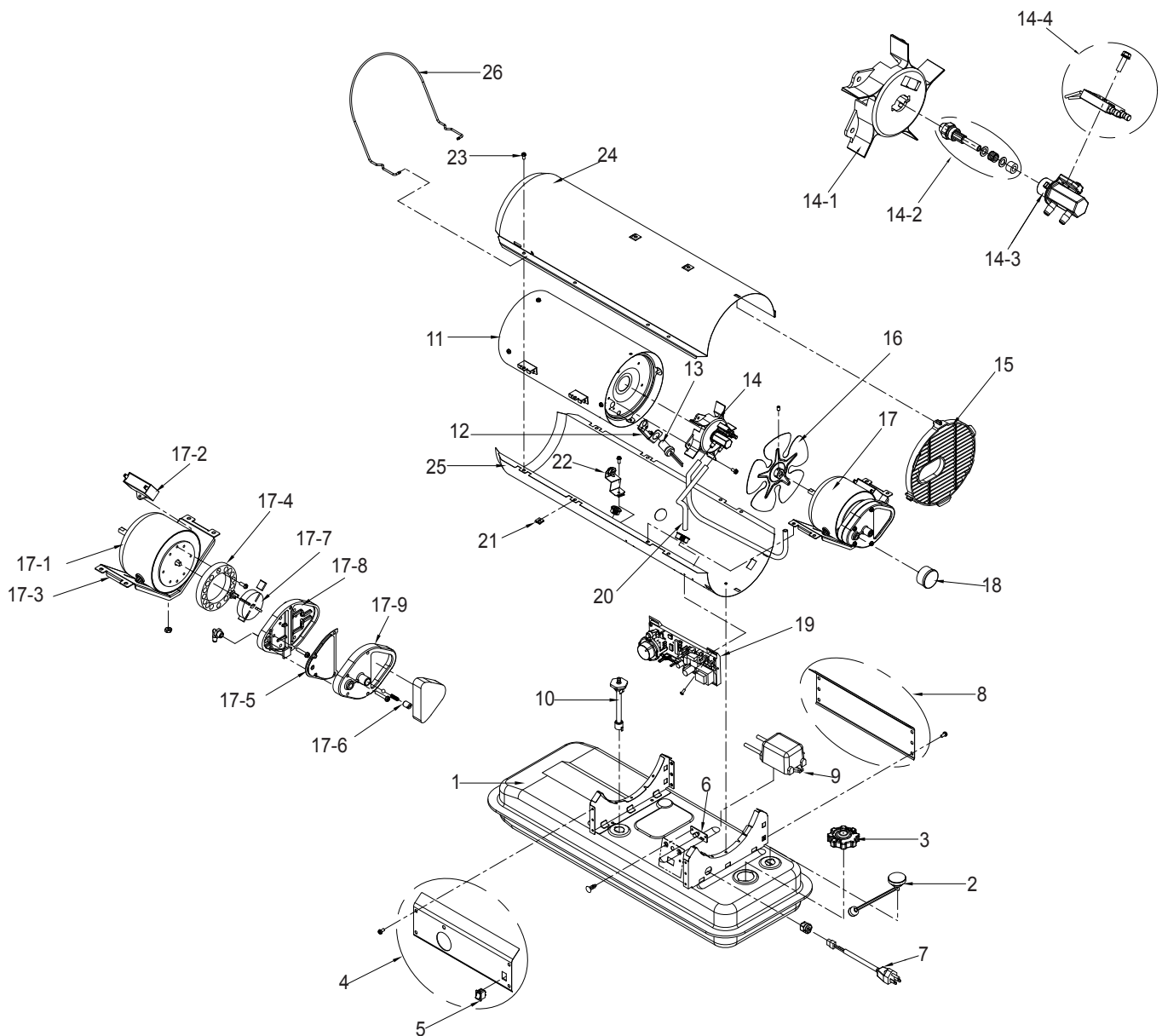


Figure 27 – Repair Parts Illustration for Portable Oil-Fired Heaters Models CP045DK, CP075DK

Parts List (CP045DK, CP075DK)

Reference Number	Description	Part Number for Models:	
		CP045DK	CP075DK
1	Fuel Tank Assembly	572701	572700
2	Fuel Gauge	572453	572454
3	Fuel Cap	-----573414-----	
4	Panel Right Side Assembly	572920	572919
5	Power Switch	-----572251-----	
6	Display P.C.B. Assembly	572162	---
7	Power Cord	----- 572159-----	
8	Panel Left Side Assembly	572254	572257
9	Ignition Transformer	-----573399-----	
10	Fuel Filter	-----572154-----	
11	Combustion Chamber	572698	572699
12	Photocell Bracket	572184	572185
13	Photocell Assembly	-----572186-----	
14	Burner Head Assembly	572901	572903
14-1	Burner Head	-----572692-----	
14-2	Nozzle Assembly	572192	572193
14-3	Nozzle Adaptor	-----572652-----	
14-4	Spark Plug Assembly	-----572200-----	
15	Fan Guard	-----572265-----	
16	Fan Assembly	572232	572233
17	Motor and Pump Assembly	-----572651-----	
17-1	Motor	-----572694-----	
17-2	Capacitor	-----572650-----	
17-3	Motor Support	-----572695-----	
17-4	Pump Body	-----572223-----	
17-5	Filter Kit*	-----572227-----	
17-6	Pump Adjustment Kit***	-----572230-----	
17-7	Rotor Kit**	-----572225-----	
17-8	Pump Cover	-----572696-----	
17-9	Filter Cover	-----572229-----	
18	Pressure Gauge	-----572231-----	
19	Main P.C.B. Assembly	572653	573403
20	Air/Fuel Lines	-----572691-----	
21	Clip Nut (8-Pack)	-----572284-----	
22	Temperature Limit Assembly	-----572726-----	
23	Screw (12-Pack)	-----572282-----	
24	Upper Shell	-----572697-----	
25	Lower Shell	-----572693-----	
26	Front Guard	-----572270-----	
	Fuse	-----572447-----	
	Hardware Kit	-----572324-----	
	Pump/Filter Cover Screws (10-Pack)	-----572283-----	
	Filter Kit* - Includes Intake, Outlet, and Lint Filter		
	Rotor Kit** - Include Rotor, Blades, and Insert		
	Pump Adjustment Kit*** - Includes Ball Spring and Adjusting Screw		

PARTS SCHEMATIC (CP125EK & CP175EK)

**For Repair Parts,
call 1-800-345-7200**

Please provide following information:

- Model number
- Serial number (if any)
- Part description and number as shown in parts list

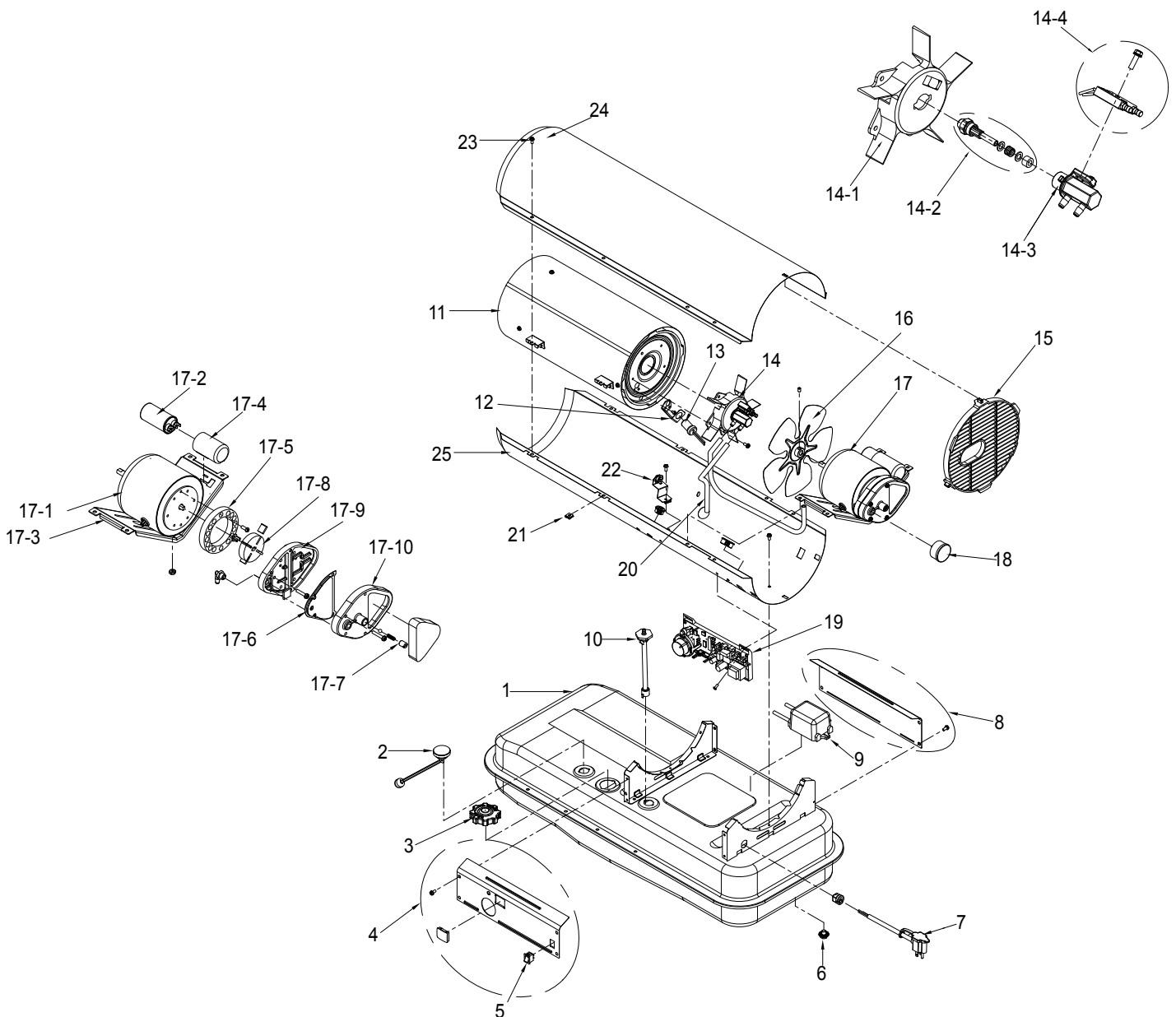


Figure 28– Repair Parts Illustration for Portable Oil-Fired Heaters Models CP125EK, CP175EK

PARTS LIST (CP125EK & CP175EK)

Reference Number	Description	Part Number for Models:	
		CP125EK	CP175EK
1	Fuel Tank Assembly	572707	572714
2	Fuel Gauge	572455	572456
3	Fuel Cap	-----573414-----	
4	Panel Right Side Assembly	572925	572924
5	Power Switch	-----572251-----	
6	Drain Plug	-----572450-----	
7	Power Cord	-----573404-----	
8	Panel Left Side Assembly	573406	573407
9	Ignition Transformer	-----573399-----	
10	Fuel Filter	-----572155-----	
11	Combustion Chamber	572706	572713
12	Photocell Bracket	-----572185-----	
13	Photocell Assembly	-----572186-----	
14	Burner Head Assembly	572897	572898
14-1	Burner Head	572705	572711
14-2	Nozzle Assembly	572194	572195
14-3	Nozzle Adaptor	-----572658-----	
14-4	Spark Plug Assembly	-----572201-----	
15	Fan Guard	572266	572907
16	Fan Assembly	572234	572235
17	Motor and Pump Assembly	572659	572660
17-1	Motor	572709	572716
17-2	Capacitor	-----572655-----	
17-3	Motor Support	-----572703-----	
17-4	Capacitor Holder	-----572702-----	
17-5	Pump Body	-----572223-----	
17-6	Filter Kit*	-----572227-----	
17-7	Pump Adjustment Kit***	-----572230-----	
17-8	Rotor Kit**	-----572225-----	
17-9	Pump Cover	-----572696-----	
17-10	Filter Cover	-----572229-----	
18	Pressure Gauge	-----572231-----	
19	Main P.C.B. Assembly	-----573402-----	
20	Air/Fuel Lines	572704	572712
21	Clip Nut (8-Pack)	-----572284-----	
22	Temperature Limit Assembly	572727	572933
23	Screw (12-Pack)	-----572282-----	
24	Upper Shell	572710	572717
25	Lower Shell	572708	572715
	Fuse	-----572447-----	
	Hardware Kit	-----572928-----	
	Pump/Filter Cover Screws (10-Pack)	-----572283-----	
	Filter Kit* - Includes Intake, Outlet, and Lint Filter		
	Rotor Kit** - Include Rotor, Blades, and Insert		
	Pump Adjustment Kit*** - Includes Ball Spring and Adjusting Screw		

Parts Identification

PARTS SCHEMATIC (CP210EK)

**For Repair Parts,
call 1-800-345-7200**

Please provide following information:

- Model number
- Serial number (if any)
- Part description and number as shown in parts list

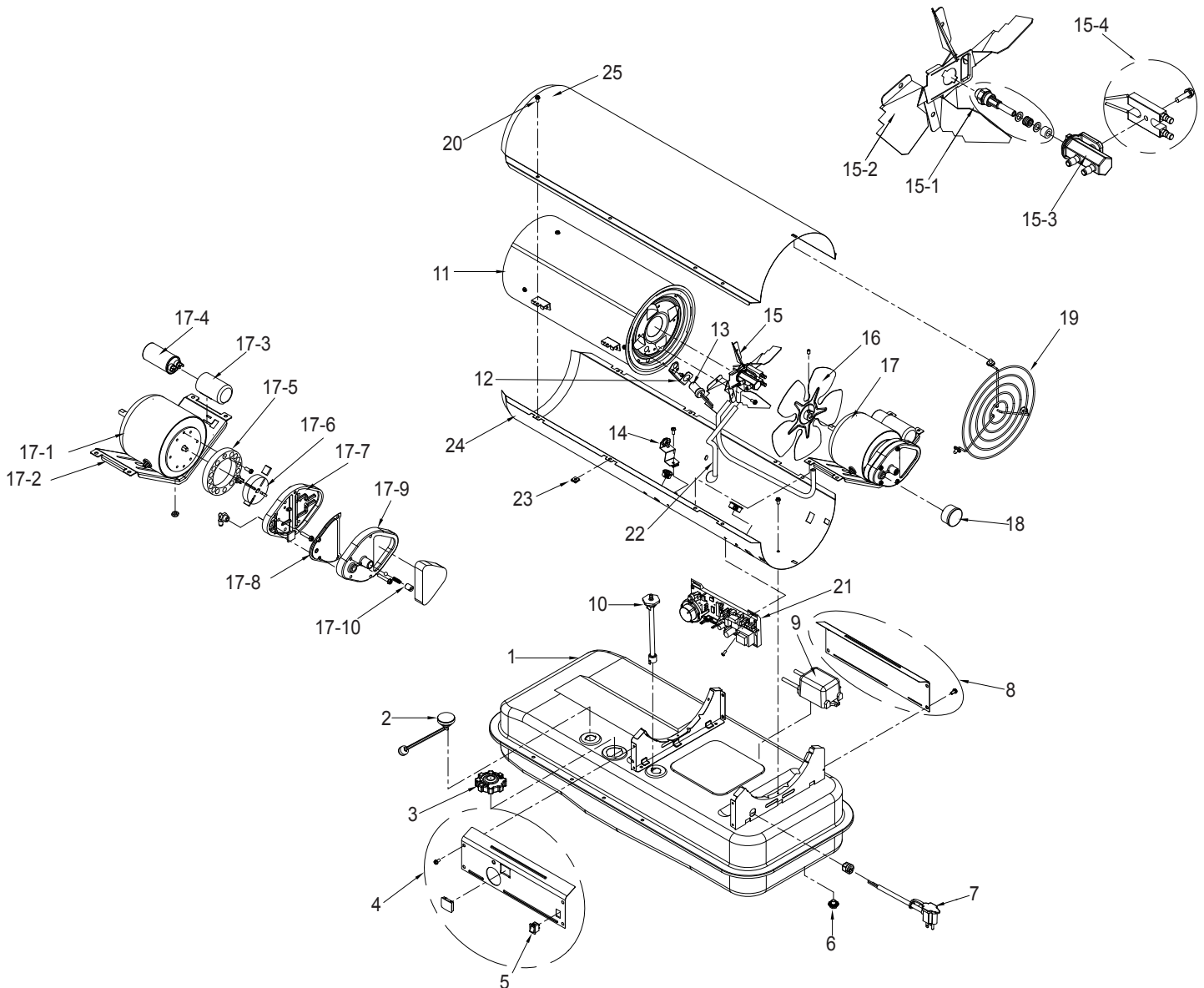


Figure 29 – Repair Parts Illustration for Portable Oil-Fired Heater (Model CP210EK)

PARTS LIST (CP210EK)

Reference Number	Description	Part Number for Models: CP210EK
1	Fuel Tank Assembly	572721
2	Fuel Gauge	572457
3	Fuel Cap	573414
4	Panel Right Side Assembly	572923
5	Power Switch	572251
6	Drain Plug	572450
7	Power Cord	573404
8	Panel Left Side Assembly	573407
9	Ignition Transformer	573399
10	Fuel Filter Assembly	572155
11	Combustion Chamber	572720
12	Photocell Bracket	572185
13	Photocell Assembly	572186
14	Temperature Limit Assembly	572725
15	Burner Assembly	572899
15-1	Nozzle Assembly	572196
15-2	Bracket Burner	572719
15-3	Nozzle Adapter	572662
15-4	Spark Plug Assembly	572202
16	Fan Assembly	572235
17	Motor and Pump Assembly	572661
17-1	Motor	572723
17-2	Motor Support	572703
17-3	Capacitor Holder	572702
17-4	Capacitor	572655
17-5	Pump Body	572224
17-6	Rotor Kit**	572226
17-7	Pump Cover	572696
17-8	Filter Kit*	572227
17-9	Filter Cover	572229
17-10	Pump Adjustment Kit***	572230
18	Pressure Gauge	572231
19	Fan Guard	572267
20	Screw (12-Pack)	572282
21	Main P.C.B. Assembly	573402
22	Air/Fuel Lines	572718
23	Clip Nut (8-Pack)	572284
24	Lower Shell	572722
25	Upper Shell	572724
	Hardware Kit	572928
	Fuse	572447
	Pump/Filter Cover Screws (10-Pack)	572283
	Filter Kit* - Includes Intake, Outlet, and Lint Filter	
	Rotor Kit** - Include Rotor, Blades, and Insert	
	Pump Adjustment Kit*** - Includes Ball Spring and Adjusting Screw	

Parts Identification

PARTS SCHEMATIC HANDLES & WHEELS

**For Repair Parts,
call 1-800-345-7200**

Please provide following information:

- Model number
- Serial number (if any)
- Part description and number as shown in parts list

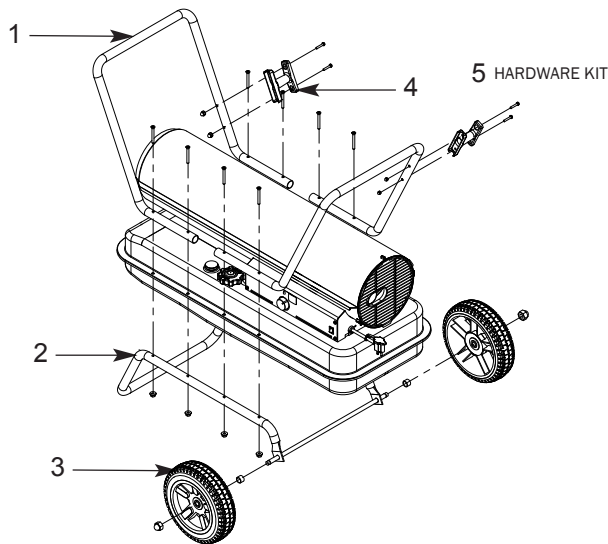


Figure 30- Repair Parts Illustration for Models CP125EK, CP175EK, CP210EK

Replacement Parts List for Models CP125EK, CP175EK, CP210EK

Ref. No.	Description	Part No. for Models:	
		CP125EK	CP175EK & CP210EK
1	Upper Handle Kit	572927	572926
2	Wheel Support/Axle Kit	572273	572277
3	Wheels Kit	576416	
4	Cordwarp Kit	572275	
5	Hardware Kit	572928	

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 24 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, USA.

Registering your product online with L.B. White will automatically qualify a unit and its component parts for warranty consideration. If a product has not been registered with L.B.White, a copy of the bill of sale will be required to establish warranty qualification. If neither is available, the warranty period will be 24 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 **24 months from the date of purchase by the end user**. Warranty is automatic if a component is found defective within 24 months of the date code marked on the part. If the defect occurs more than 24 months later than the date code but within 24 months from the date of purchase by the end user, a copy of a bill of sale will be required to establish warranty qualification.

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

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.

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.

To register your product and ensure full warranty, go to <http://www.lbwhite.com/product-registration>. Please have the serial number(s) and model(s) handy for the products you are registering.

Replacement Parts and Service

Contact your local L.B. White dealer for replacement parts and service. You may also call L.B White Co., Inc. at (800)345-7200 for assistance or email to customerservice@lbwhite.com. Be sure that you have heater model number and configuration number when calling.

