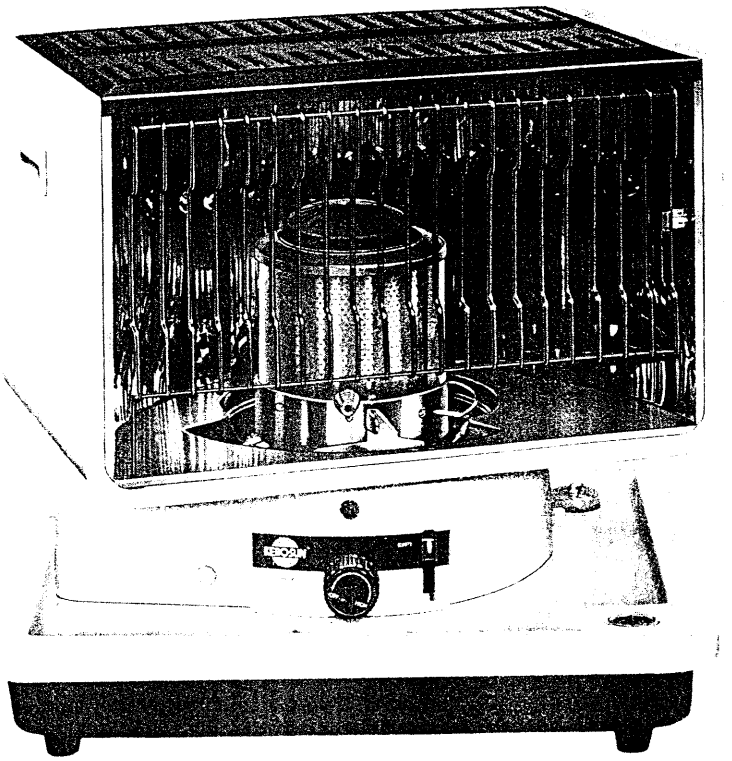
How to Use and Care For Your

Director®

Kerosene Heater



Owner's Guide

KERO-SUN®

QUICK REFERENCE

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Specifications

Model: Director

Heater Rating: 11,700 BTU/hr.

This includes heat produced by the Director, plus heat that would be generated if water of combustion were condensed. This rating and "Heater Output" (below) should be used when making comparisons between heaters of different manufacture.

Heater Output: 11,000 BTU/hr.

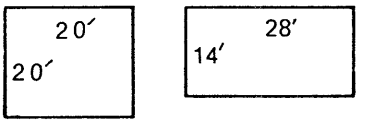
This rating is heat produced by the Director, or the amount of heat delivered to the room. (The wick-fed Kero-Sun Director is more than 99.9% efficient.)

Burning Time: 23-32 hours.

Burning time is a function of the condition of the wick, the setting of the flame regulator knob, fuel quality and atmospheric conditions.

Typical Room Sizes:

or approx. 400 sq.ft.



The area to be heated varies with outside air temperature, insulation R factors and square footage of the windows. The room sizes given above assume the Kero-Sun is the only heat source for the room.

Fuel Type: Kerosene

Fuel Tank Capacity: 1.99 gallons

Batteries: 2 size D cells (included)

Dimensions: Height, 19⅞ in.; width, 21¾ in.; depth, 19⅜ in.

Weight: 35.2 lb., empty

Safety Features

UL Listed

Shut-off Protection: Automatic shut-off extinguishes the flame if heater is jarred.

Wick-feed: Fuel remains below burner and is unpressurized. If flame goes out, fuel flow stops fuel cannot flood burner.

Low Center of Gravity: Weight concentrated in base, reducing chance of tip-over.

Rubber Seals: Burner, wick winder, fuel cap and other joints sealed with oil-proof rubber to prevent leaks if tip-over occurs.

Double-wall Construction: Stainless steel heat shield keeps sides and back of heater cool.

High-efficiency: 99.9% combustion of kerosene eliminates hazard from odor, smoke and other combustion by-products when used according to instructions.

Special Features

Push-button Ignition: No matches required.

Fuel Gauge: Shows remaining fuel at a glance. Avoids unnecessary filling or need to remove filler cap to check level.

Hand-pump Siphon: Provided for spill-free transfer of fuel.

Drip Tray: Protects floors and carpets.

Adjustable Angle Cabinet: Direct the heat where you want it.

Adjustable Feet: Allows heater to be levelled on uneven surface.

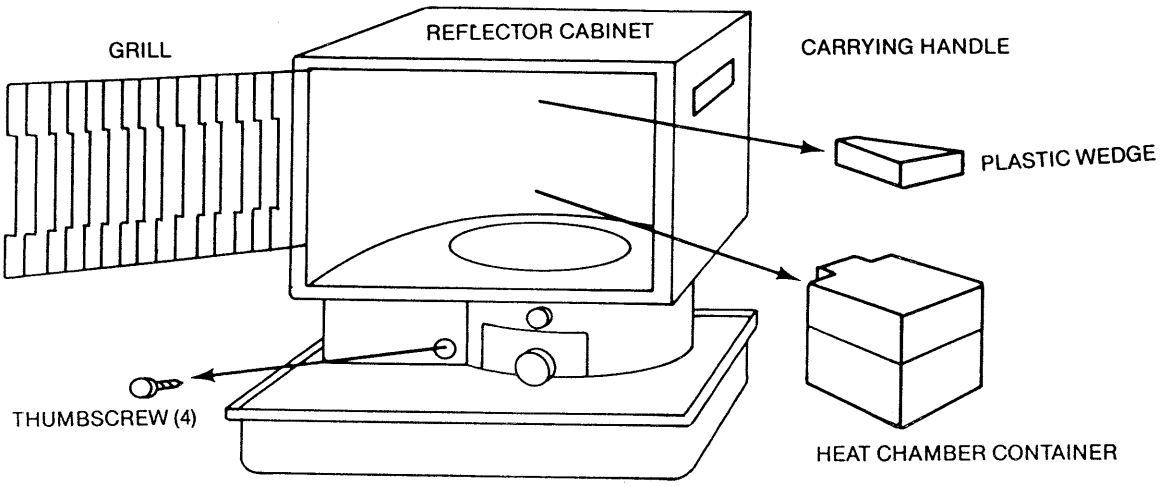
Black Chrome Grill

Provision for Catalytic Element

Unpacking

Before discarding any packing materials, be sure to check the carton for the following items: two batteries, warranty card, siphon, caution notice.

Assembly



1. Remove the Heat Chamber

Release the front grill by pushing the retainer clip at the right. Swing out the grill to your left.

Pull out the plastic wedge and heat chamber container.

2. Tighten Thumbscrews

Four thumbscrews at the front, sides and rear of the cabinet should be checked for tightness.

3. Level the Heater

Place the heater on a firm, level surface, preferably the floor. If the surface is uneven, and the heater rocks, turn the adjustable feet to eliminate the problem.

4. Install Batteries

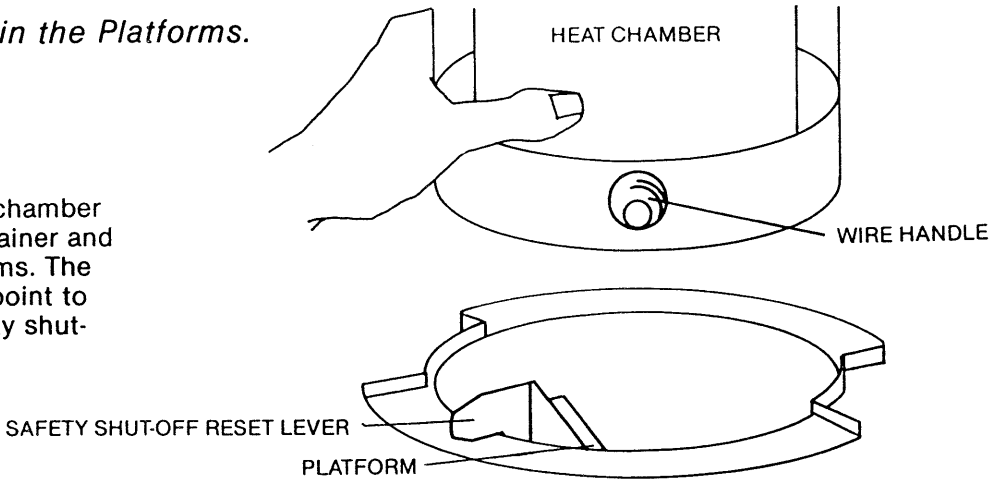
Find the battery compartment at the rear of the heater, then snap out the cover by pressing down on the tab.

Install the batteries with the positive (+) and negative (–) terminals in the positions shown on the cabinet.

Batteries should be replaced when the igniter coil no longer glows brightly.

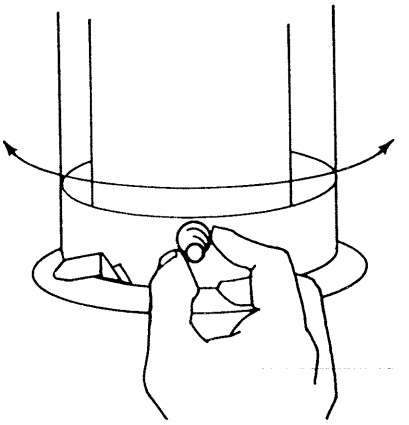
5. Place Heat Chamber in the Platforms.

Remove the heat chamber from its plastic container and seat it in the platforms. The wire handle should point to the right of the safety shut-off reset lever.



6. Move the Heat Chamber Left and Right

After the heat chamber is in place, be *sure* it slides easily left and right. (This assures that the chamber will lie squarely over the wick).



Caution: Misaligning the heat chamber could cause smoke or possible damage to the heater.

A catalytic element is available as an optional accessory to reduce the possibility of odor from kerosene vapor while lighting or extinguishing. The element is easily attached with brackets already provided beneath the top plate of your heater.

7. Register Your Serial Number

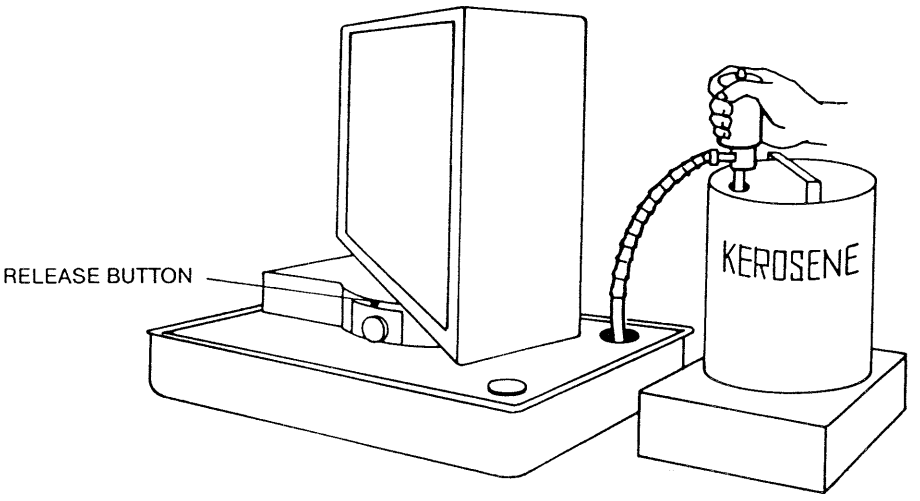
On the outside surface of your heater's fuel tank, you will find a serial number. Be sure to record this number in your owner's manual. If you need replacement parts or service in the future, please refer to this number.

Fill out and mail the warranty card.

Fueling

Warning

Do not refuel your heater while it is hot. First extinguish the flame and allow the cabinet to cool. Use only pure kerosene. Never use gasoline, white gas, camp fuel or other flammable liquids. Use of such fuels can result in an explosive fire and cause severe injury.



Adjusting the Reflector Cabinet

Before fueling, press the release button and turn the reflector cabinet to your left. This makes the fuel port more accessible and enables you to stand to the right of the heater and watch the fuel gauge while the tank fills.

Using the Siphon

To operate the siphon provided with your heater, insert the straight tube into the kerosene container. Insert the siphon's flexible hose into the heater fuel tank. (Be sure to push this hose over the clip inside the tank. The clip holds the hose to reduce possibility of a spill.)

For good siphoning, raise the kerosene container slightly higher than the level of the heater fuel tank.

Note the knob at the top of the siphon; it controls an air vent. Before siphoning, close the vent by turning the knob clockwise. Squeeze the knob vigorously six or seven times, pausing to allow the bulb to expand after each squeeze. (Once the kerosene flows it's not necessary to squeeze the bulb.)

To stop the flow, open the air vent by turning the knob counterclockwise. Remove the siphon slowly to allow excess kerosene to drain back into the container.

For added convenience, a five-gallon Kero-Sun fuel container is available from your dealer. The siphon provided with your heater fits snugly over the opening of this container for easier siphoning.

Ventilation

Before you light your heater, check for a source of air. It may be a half-inch opening of a door to an adjoining room, or a window opened one-half inch.

Be sure to provide a source of air whenever the heater operates in tightly confined areas, such as a bathroom or camper.

Avoid drafty areas or locations where the opening of a door might create a gust of air.

Safety Reminders

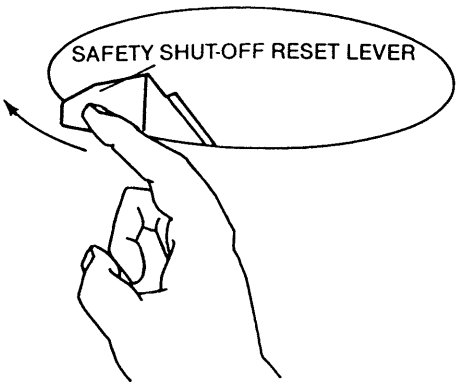
Before You Light Your Heater.

1. Use only water-clear, fresh, pure kerosene. Yellow or colored kerosene will smoke, smell and burn inefficiently.
2. BURN ONLY KEROSENE in this heater. NEVER use gasoline, white gas, camp stove or any other fuel. These fuels are extremely dangerous if used in kerosene heaters.
3. Store fuel far away from any heat source, in a can clearly marked KEROSENE. (A suitable Kero-Sun container is available from your dealer.)
4. Keep heater away from all burnable materials such as clothes, curtains, woods, etc.
5. Heater surfaces become hot. Keep children away.
6. Do not move, service or refill heater while it is burning or hot. Extinguish flame first and let heater cool.
7. Refuel heater outside when the cabinet is cool. Use the Kero-Sun siphon to prevent any spillage.
8. Provide adequate ventilation. The heater needs oxygen just as you do. Leaving a door ajar to an adjacent room normally provides sufficient ventilation. In small, tightly sealed areas, open a window slightly.
9. When turning heater off, make sure the flame is completely extinguished, using flame regulator knob.
10. Keep outside of heater free of dust or spilled kerosene.
11. Follow maintenance instructions for optimum performance.
12. Keep heater level.
13. Keep cap on fuel port tightly secured.
14. Avoid drafts.

Lighting

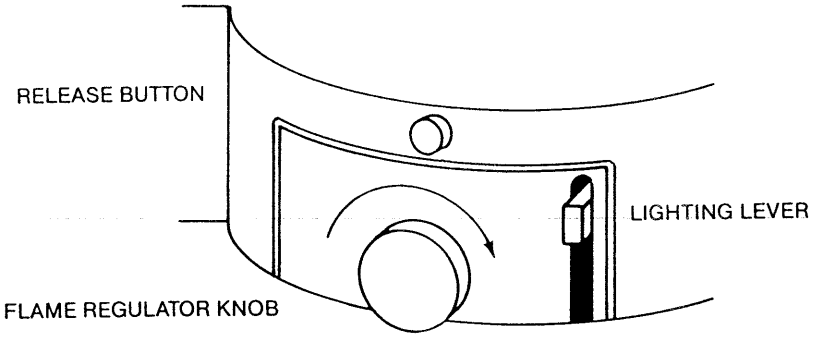
If the fuel tank has been empty for some time, or the wick is new, wait about 30 minutes for the wick to saturate.

1. Engage the Safety Shut-Off Reset Lever



Push the lever to the left until it locks. If your heater ever is jarred or tips, the shutter automatically snaps over the wick to extinguish the flame.

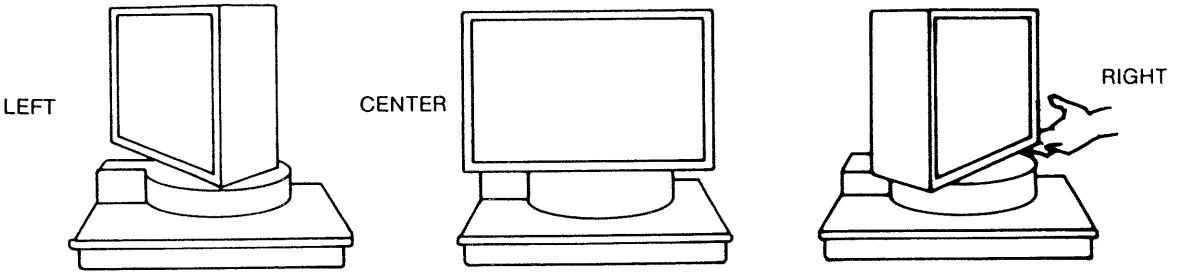
2. Raise the Wick



Turn the flame regulator knob clockwise until it stops. (This raises the wick to a maximum height of 0.24 in., or 6 mm.)

3. Adjust the Reflector Cabinet

You can aim your heater to the left or right by pressing the release button and turning the reflector cabinet to the desired angle. (The release button locks the reflector cabinet only in the forward position.)



Under no circumstances should the reflector cabinet be moved beyond a 30-degree maximum in either direction.

Do not touch the top plate and grill while the heater is in operation; it could cause minor burns. Always grasp the cabinet near the bottom, as shown, for the coolest, most comfortable grip.

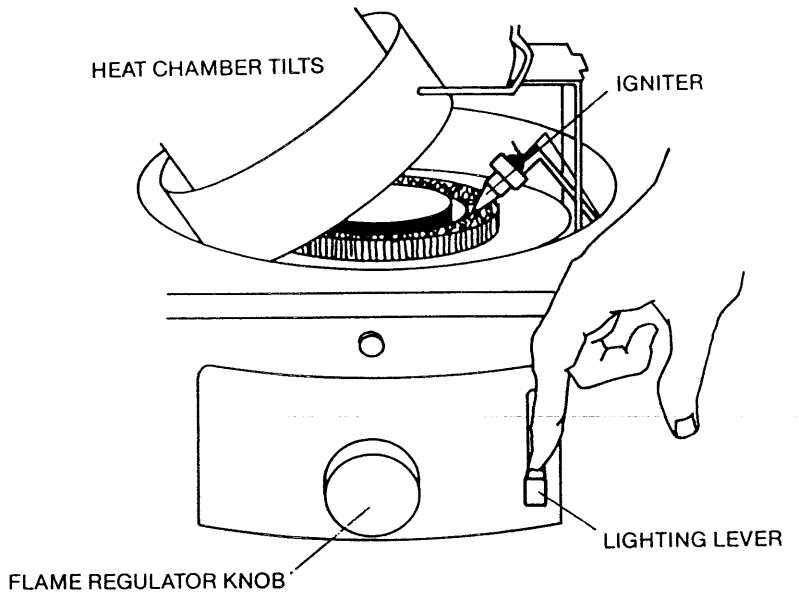
4. Automatic Lighting

Before lighting, be sure the heat chamber is properly seated. (It should slide easily left and right.) A misaligned chamber can cause smoke and damage to your heater.

A slight odor and occasionally some smoke after lighting a new heater is normal and is caused by a preservative oil on metal parts. Odor and smoke should disappear in a few minutes. For this reason, you may want to light your heater for the first time in a well-ventilated area, such as a porch.

Push the lighting lever—gently. Note how the heat chamber tilts, exposing the wick.

An igniter coil should glow and touch the wick. After a flame appears above the wick, release the lever.



The igniter coil should brush against the top *(not side) of the wick. If necessary, wick height may be readjusted for this position, as described later. Finally, check once more to make sure heat chamber is properly seated.*

5. Lighting With a Match

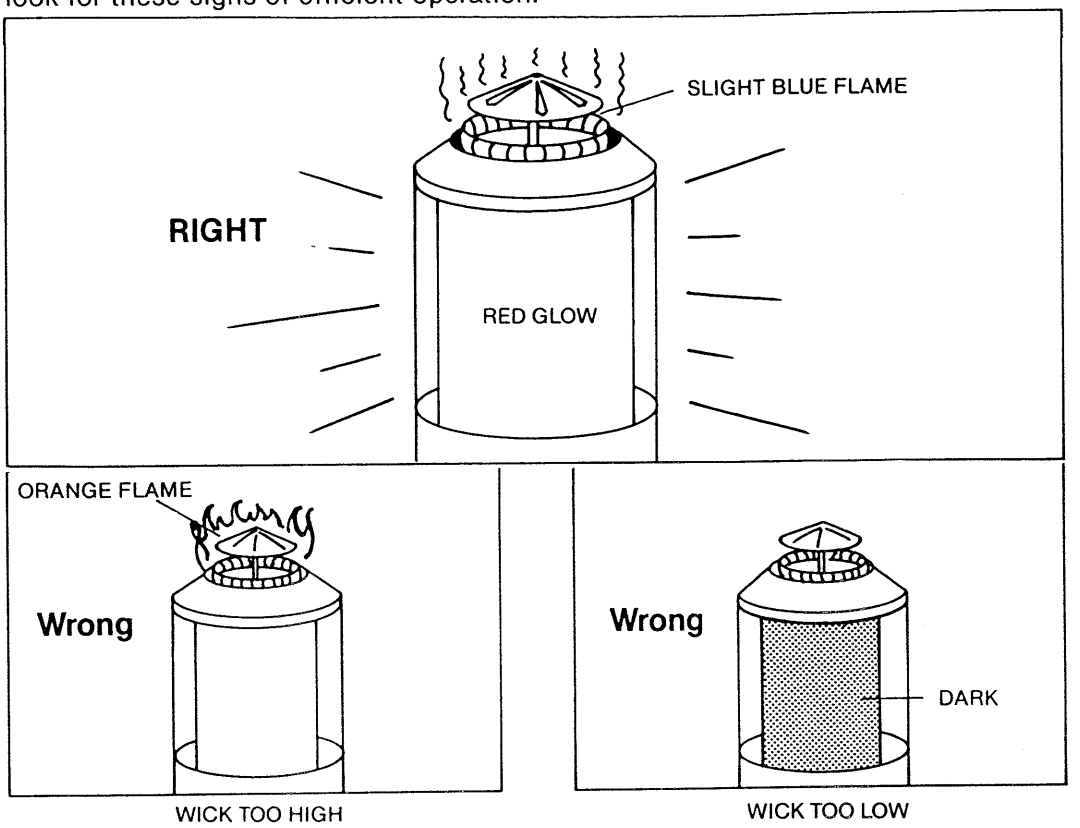
You should not have to light the heater with a match, but should it become necessary, press the lighting lever to expose the wick. Touch the match to the wick. When lighting in this manner, don't allow burned parts of the match to fall or remain on the wick.

To restore your heater to automatic ignition, check for worn-out batteries or a defective igniter, as described later under "Troubleshooting."

Adjusting the Flame

1. Wait for the Heat Chamber to Reach Operating Temperature

Several minutes after lighting, heat will spread through the heat chamber. Then look for these signs of efficient operation.



2. Signs of Correct Heating

About one minute after lighting, the flame should spread evenly around the entire heat chamber. In another two or three minutes the circular coil at the top will glow. After about five minutes, the entire chamber should be glowing red.

3. Wick Height Adjustment

If flames rise more than an inch above the top of the heat chamber, turn the flame regulator knob slightly counterclockwise.

The best wick setting causes the entire heat chamber to glow red, with a slight blue flame appearing at the top.

Raise or lower the wick to produce that ideal condition.

To Extinguish Flame

1. Turn the flame regulator knob counterclockwise until it stops. (This requires about one half of a turn.)

2. Then, *pull* the flame regulator knob, and continue turning counterclockwise until it stops. (This takes about 3 turns of the knob.)

NOTE:
Do not use the safety shut-off reset lever to extinguish the flame. Automatic shut-off should occur only when the heater is jarred or tipped.

Troubleshooting

Here are common symptoms which may appear during operation of your heater. Most are easily corrected, as shown below.

Symptom	Cause	Cure	Page
Smoke or odor.	Heat chamber tilted, and not sitting evenly above wick.	Move wire handle until heat chamber seats, and moves smoothly back and forth.	4
	Flame too high.	Reduce wick height.	9
	Dirty wick.	Clean or trim wick.	11
	Drafts.	Relocate heater.	6
	Contaminated fuel.	Drain tank, dry wick and replace with fresh, clean kerosene.	-
Flickering or dying flame.	Wick coated with tar or carbon.	Clean or trim wick.	11
	Water in kerosene.	Empty tank, refill with clean fuel. Remove wick, dry out on a sheet of newspaper. Re-install wick.	-
Wick won't ignite.	Out of fuel.	Check fuel gauge, add fuel.	5
	Igniter won't glow.	Replace batteries. Replace igniter coil.	3 14
	Igniter coil touches side of wick.	Lower wick by turning flame regulator knob until igniter touches *top* of wick.	8
	Water in kerosene.	Empty tank. Remove wick, dry out on sheet of newspaper. Re-install wick. Refill with clean fuel.	-
Flame regulator jams.	Excess tar on wick.	Clean wick.	11
	Water in kerosene.	Empty tank, remove wick, dry out on sheet of newspaper. Re-install wick. Refill with clean fuel.	-
Wick burns down too fast.	Kerosene contaminated with gasoline, paint thinner, denatured alcohol or other volatile substance.	Drain tank and replace fuel with fresh, clean kerosene. Replace wick.	-

Cleaning the Wick

Wick Life

With proper attention, the wick should last at least one heating season.

Maximum wick life occurs if you allow the wick to "burn dry" after every three or four tankfuls of heater operation, as described below.

Wick Contamination

Signs that a wick needs attention are: tars accumulating on the top edges; the flame regulator binds or jams; a flickering or dying flame.

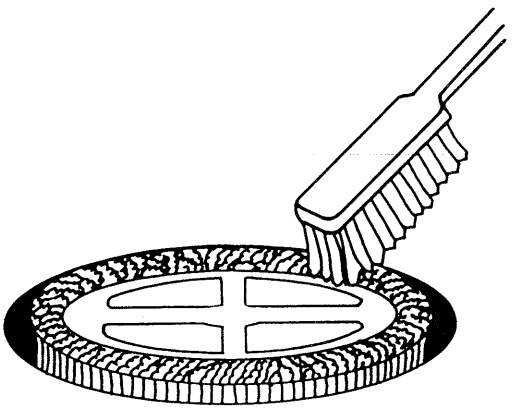
"Burning Dry"

When the fuel gauge indicates empty, raise the wick to its highest position and allow the flame to consume the fuel remaining in the tank. This burns the tars and restores the wick to good condition. To avoid odor, the heater may be allowed to burn dry in a well-ventilated or outdoor area.

Burning a wick dry does not harm the wick material.

Remove Ash, Cinders, Soot

After the wick cools, remove any residue with a small brush (an old tooth-brush, for example). Cinders or soot in the burner area around the wick may be vacuumed away.

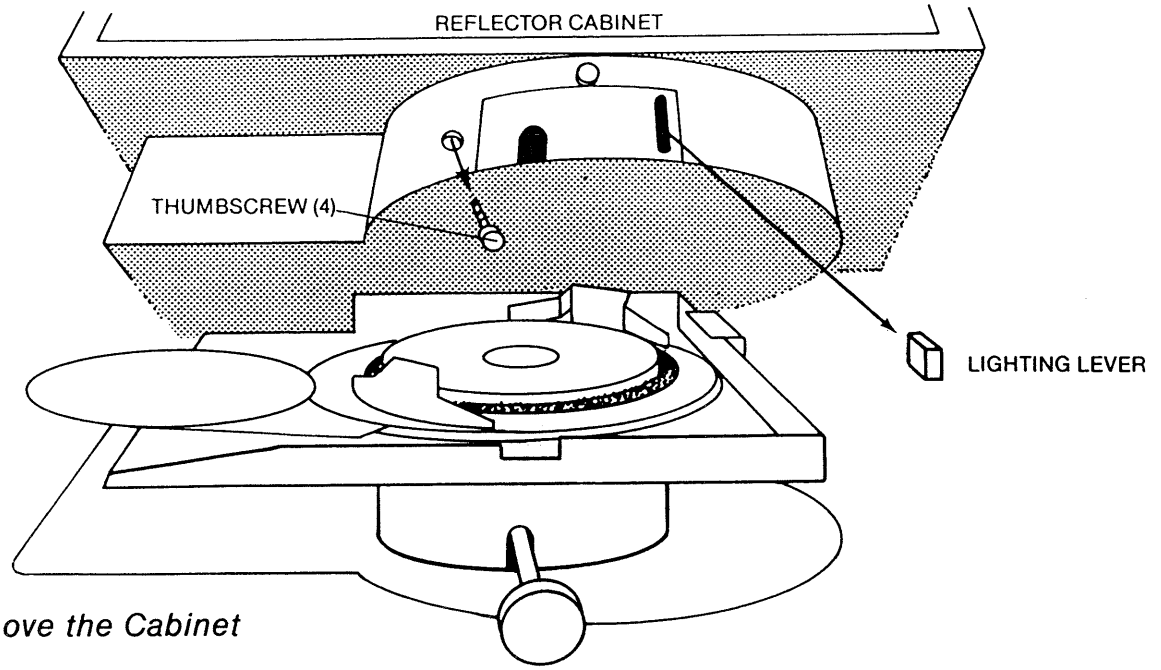


TO REPLACE THE WICK

Before disassembly of your heater, allow it to cool completely.

1. Release the Automatic Shutter

The shutter is released by gripping the corner of the tank near the fuel gauge and shaking the tank.



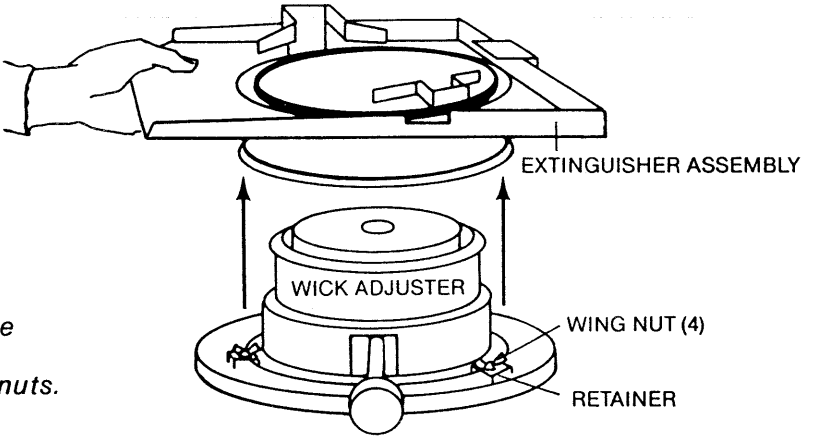
2. Remove the Cabinet

Snap the front grill from its retainer clip and remove the heat chamber.
Remove the lighting lever knob by pulling it toward you.
Remove four thumbscrews from the front, sides and rear of the cabinet.
Tilt the top of the cabinet toward you to free it from the lighting lever. Lift the cabinet and put it aside.

3. Remove the Extinguisher Assembly

The extinguisher assembly is held by four wing nuts and retainers. Loosen the wing nuts until you can rotate the retainers and free the extinguisher assembly. (Don't remove the retainers, just loosen them.)

Later, when you re-install the extinguisher assembly, turn the retainers back to their original position and tighten the wing nuts.



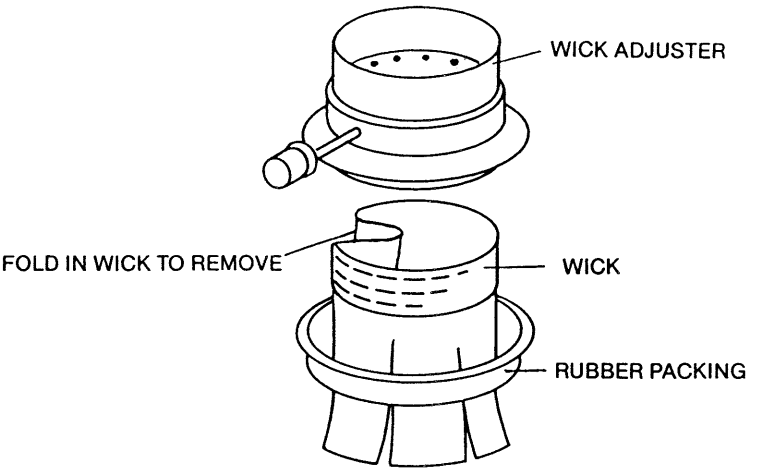
4. Remove the Wick Adjuster

(The same retainers hold both the extinguisher assembly and wick adjuster.)

5. Remove the Old Wick

Slide the rubber packing off the wick.

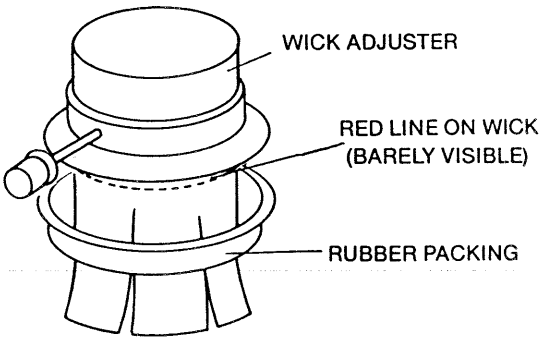
Fold in the wick to free it from the wick adjuster. Remove the wick.



6. Install the New Wick

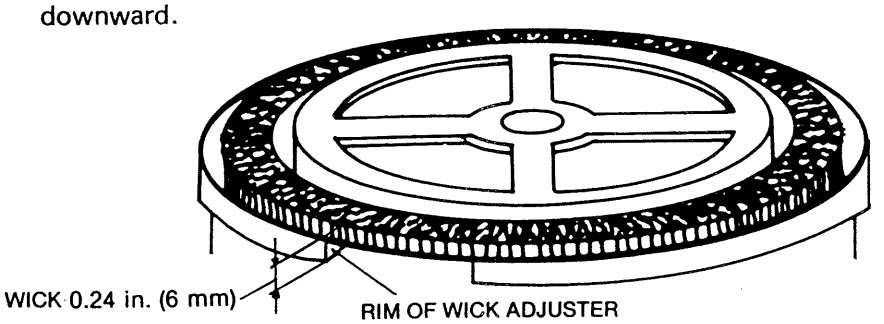
Turn the wick adjuster counterclockwise (so wick will be at its lowest position).

Fold the new wick and insert it into the wick adjuster. Note the red line on the outside of the wick; it should be aligned with the bottom edge of the adjuster, as shown.



Allow the top of the wick to protrude 0.24 in. (6 mm) above the rim of the adjuster. When the wick is in this position, press it against the teeth inside the adjuster.

Push the rubber packing over the wick, being sure the tails of the wick extend downward.



Lower the wick adjuster into the fuel tank, guiding the wick so it fits evenly in place. Point the flame regulator knob to the front of the heater.

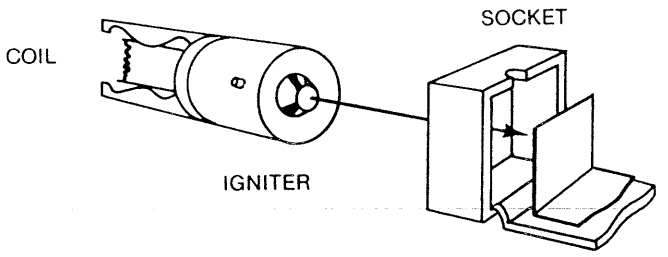
Operate the flame regulator knob to be sure the wick moves smoothly up and down. If any ragged edges appear at the top of the wick, trim them with a scissor.

7. Reassemble the Heater

Fasten the automatic extinguisher assembly with its four thumbscrews.
Lower the cabinet on the fuel tank, tilting the top of the cabinet toward you so it clears the lighting lever.
Install the four cabinet thumbscrews. Replace the lighting lever knob.
Install the heat chamber, and insert the front grill into its retainer.
Before lighting a new wick for the first time, allow 30 minutes for the material to saturate completely with kerosene.

REPLACING THE IGNITER

When the igniter no longer glows sufficiently to light the wick, check the batteries. If replacement doesn't restore the glow, the igniter coil may be burned out. Change the igniter by releasing the front grill from its retaining clips, then lifting out the heat chamber. At the rear of the cabinet, remove the batteries.



Press the lighting lever to bring the igniter into view. Note how the igniter fits into a bayonet socket which resembles a flashlight lamp and holder. To remove the igniter, push in and twist (either direction) to release it from the socket. At the same time, support the socket with your other hand.

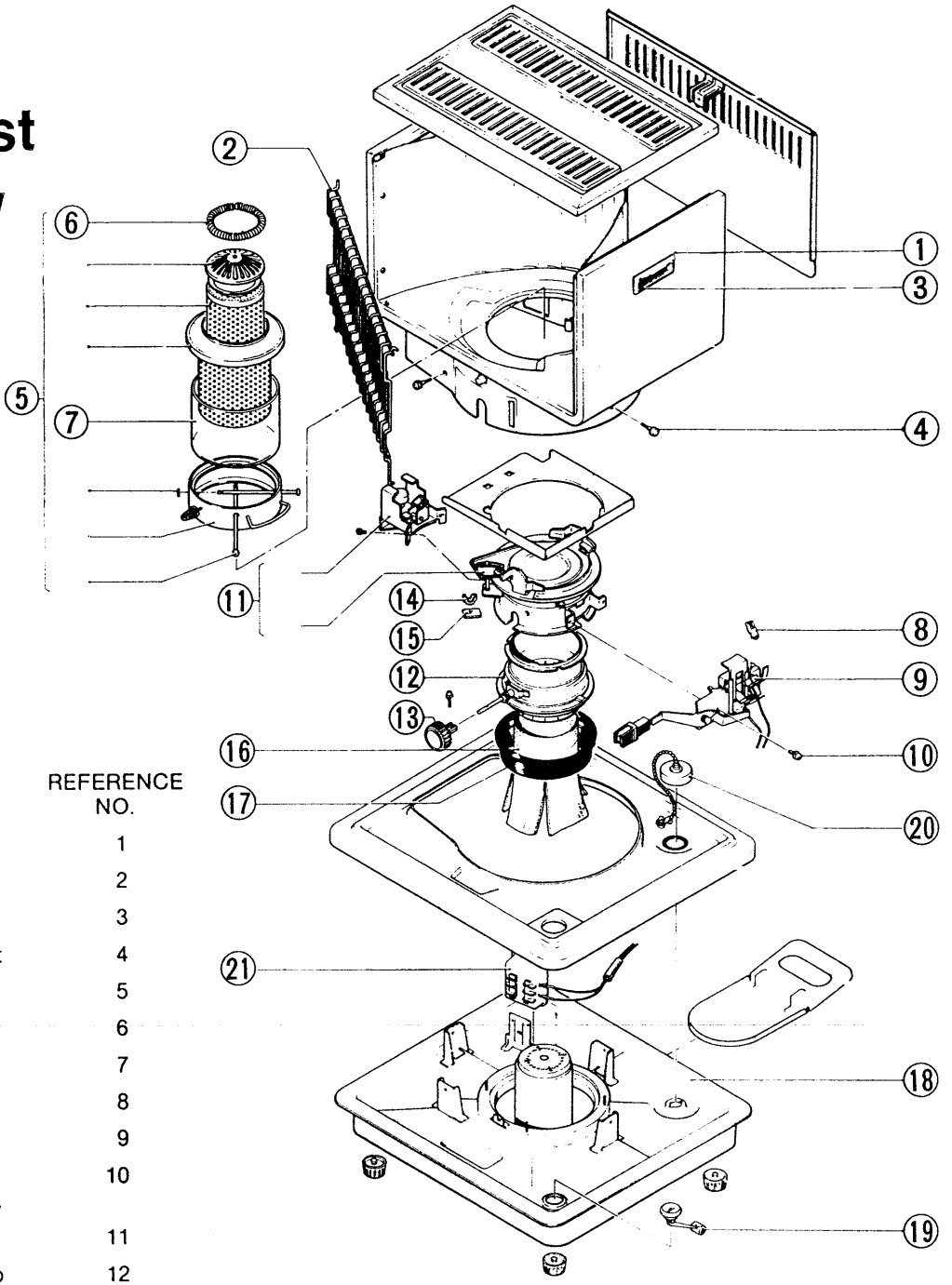
After the igniter is renewed, replace the heat chamber, fasten the front grill and install the batteries.

Parts and Service

For parts and service, see your authorized KERO-SUN dealer. If additional assistance is needed, send a brief letter stating the nature of the problem, the name and address of your KERO-SUN dealer, and your own address and telephone number to:

Customer Service
KERO-SUN, Inc.
Kent, CT 06757

Director Parts List & Exploded View



PART NUMBER	PART NAME	REFERENCE NO.
010002	Cabinet/turret complete	1
010003	Grill	2
000926	Carrying handle	3
000924	Thumbscrew for cabinet	4
010010	Heat chamber complete	5
010009	Heating coil	6
010012	Glass cylinder	7
000919	Igniter coil	8
010018	Igniter unit	9
000920	Screw for igniter unit	10
010066	Automatic extinguisher/ pendulum assembly	11
010024	Wick adjuster with knob	12
010025	Flame regulator knob with screw	13
000922	Wing nut	14
000921	Retainer	15
008076	Wick	16
008026	Rubber packing	17
000024	Fuel tank complete	18
010031	Fuel gauge	19
010015	Fuel filler cap with chain	20
010030	Battery holder	21

KERO-SUN, INC.

Limited Warranty

KERO-SUN, Inc. warrants each heater sold by it to be free from defects in material and workmanship, under normal use and service, for one year after the date of original retail purchase, subject to the terms and conditions stated below:

1. WARRANTOR. This Warranty is granted by KERO-SUN, Inc., Kent, Connecticut 06757.
2. PARTIES TO WHOM WARRANTY IS EXTENDED. This Warranty shall be extended only to the original retail purchaser.
3. PARTS COVERED. All products and parts manufactured by or for KERO-SUN, Inc., except as provided for herein.
4. PARTS NOT COVERED. The following parts are not covered by this Warranty:
   Normal wear and tear items, such as, but not limited to, wicks, batteries, igniter coils, and siphons.
5. REMEDY. If, within the applicable warranty period, any product or part included in this Warranty proves to be defective in material and/or workmanship, then KERO-SUN, Inc, shall, at its option, repair or replace the defective product or part.
6. PROCEDURE FOR OBTAINING PERFORMANCE UNDER THIS WARRANTY. In order to obtain performance of the obligations under this Warranty, the original purchaser must promptly [in no event later than thirty (30) days after discovery of the defect] notify any authorized KERO-SUN, Inc. dealer in the United States or Canada of the defect and return the defective part or product to an authorized KERO-SUN dealer. All transportation costs to and from the authorized KERO-SUN, Inc. dealer will be at the expense of the original retail purchaser.

If the instrument of any part thereof is returned for any cause not covered by this Warranty, a charge will be made for testing, handling, packing and/or any repairs made.

KERO-SUN, Inc. accepts no responsibility for any damage that occurs to the product or part during transit to or from the original retail purchaser.

ANY CLAIM MADE UNDER THIS WARRANTY MUST BE ACCOMPANIED BY PROOF OF ORIGINAL PURCHASE DATE—SALES INVOICE OR CANCELLED CHECK IS SATISFACTORY EVIDENCE.

7. SOLE REMEDY. The remedy and liability for any breach of warranty, express or implied, set forth above is the sole and exclusive remedy and the limit of liability for any such breach.
8. DESIGN CHANGES. KERO-SUN, Inc. reserves the right to make changes in the design or material of the heater without incurring any obligations to incorporate such changes in any product previously manufactured or advertised.
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