

*PORTABLE
KEROSENE-HEATER*
“OWNER’S MANUAL”

KERONA[®]

**MODEL:
WKH-100A**

Before the first use of this heater, please read this OWNER'S MANUAL very carefully. This OWNER'S MANUAL has been designed to instruct you as to the proper manner in which to assemble the heater, maintain the heater, store the heater, and most importantly, how to operate the heater in a safe and efficient manner, please keep this manual for future reference.

PASECO

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Warnings

- " Use only paraffin . BS 2869 ; C1 "

PARAFFIN



- Do not fill or carry when alight
- Do not use in an unventilated place or where exposed to draughts.
- When use the heating appliance, do not use a cooker.
- Do not place this appliance where it can be knocked over
- The heater should be used on a horizontal level.
- The heater should not be subjected to drafts.
- The heater should not be used in inflammables.
- The room in which the heater is used should have sufficient ventilation.
Do not use in a narrow space.
- Users are requested to pay special attention to children while the heater is being used.
- Do not put water or other fuels such as petroleum, methylated spirit into fuel container.

In case water or other fuels are inside fuel container, make fuel container empty and then clean by Kerosene (paraffin).

- Do not use the appliance in inadequately ventilation areas which could not prevent satisfactory dispersal of the products of combustion.
- Adequate ventilation: open the window or door minimum 30cm every hour for 10 minutes to replace room air by fresh air.

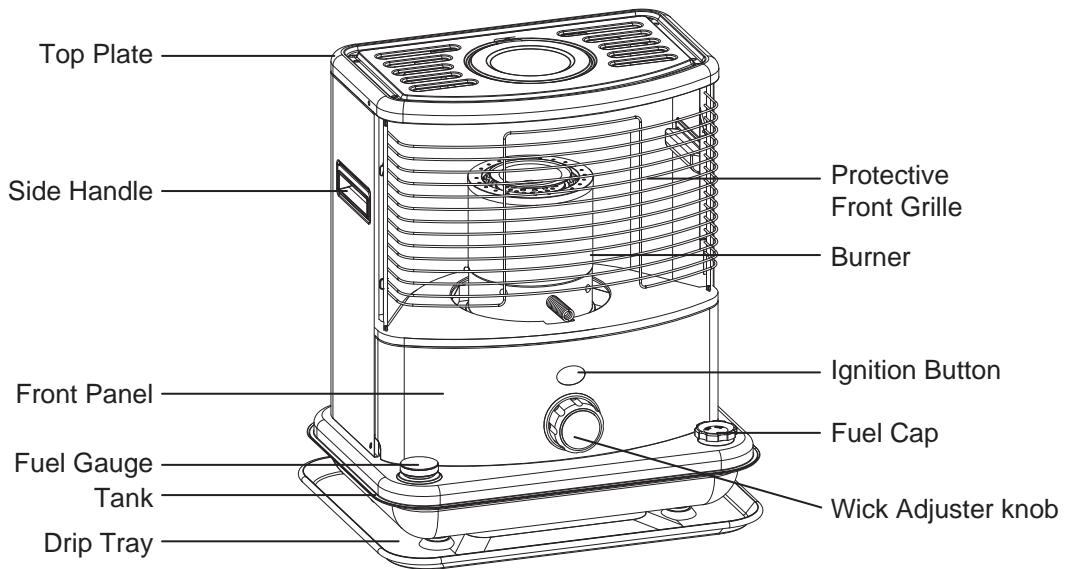
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1 INTRODUCTION

Please read this OWNER'S MANUAL carefully. It will show you how to assemble, maintain, and operate the heater safely and efficiently to obtain full benefit from its many built-in features.

2 FEATURES



(Do not operate this heater unless wall guard is in the down position)

**NEVER LEAVE THE HEATER
UNATTENDED WHILE BURNING!**

3 KEROSENE (1-K Only)

It is **EXTREMELY IMPORTANT** to the operation of this heater that you use the proper grade of kerosene. The proper grade of kerosene is identified as **1-K Kerosene**. **DO NOT OPERATE THIS HEATER WITH ANY FUEL OTHER THAN 1-K KEROSENE!** 1-K Kerosene has been refined to virtually eliminate contaminants such as sulphur, which can cause a rotten egg odor during operation of the heater.

1-K KEROSENE IS COLORLESS AND WATER-CLEAR.

To be sure that you are using good, 1-K kerosene, pour some in a glass to verify that there is no visible yellow tint.

KEROSENE SHOULD ONLY BE STORED IN A BLUE CONTAINER THAT IS CLEARLY MARKED "KEROSENE". NEVER STORE KEROSENE IN A RED CONTAINER. Red containers are associated with gasoline.

NEVER store kerosene in the living space. Kerosene should be stored in a well ventilated place outside the living area.

NEVER use any fuel other than water-clear 1-K kerosene.

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 explosion or uncontrolled flames.

The best way to purchase kerosene is in a pre-packaged, metal or plastic, blue colored container.

The second choice would be to buy it from a dealer who stores it in a 55 gallon drum. The third choice is to buy kerosene from a dealer who stores it in a large underground (or above ground) tank. Kerosene that is contaminated with even a small amount of water will prevent a kerosene heater from functioning properly. As you move from the first choice in purchasing kerosene (pre-packaged container) to the third choice (large storage tank), the likelihood of water being present from condensation increases.

If you purchase kerosene in bulk, know your dealer.

It is normal for a kerosene heater to give off a slight odor upon start-up and shut-down.

After 5-10 minutes of operation, the heater should have reached its normal operating temperature and any odor should be very slight.

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.**

A variety of problems can result from using poor quality kerosene --- smoke, odor, low flame, difficult ignition, difficult shut-down, flame flickers and dies, excessive burning down of the wick, reduced wick life, wick adjuster sticking, excessive deposits on the wick, etc.. If you encounter any of the problems listed above, check your kerosene. If you discover that the kerosene is the problem, get a fresh supply of **WATER-CLEAR 1-K KEROSENE** before using your heater again.

4 UNPACKING AND ASSEMBLING THE HEATER

1. REMOVE THE HEATER AND ALL PACKING MATERIALS FROM THE BOX.(Fig. 2)

NOTE: Save the shipping carton and packing materials for future storage.

2. Open the grille from the right hand side. Remove the protective packing materials from the burner.

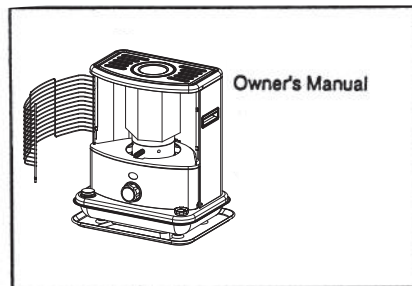


Fig. 2

NEVER LEAVE THE HEATER UNATTENDED WHILE BURNING!

3. Keep all packing materials in the carton box.

4. INSTALLING BATTERIES (Fig. 3)

- The battery holder is located on the back of the heater.
- Insert two (2) "D" cell batteries (supplied with this heater) according to the plus (+) and minus (-) markings inside of the holder.
- Remove dead batteries at once and dispose of them properly. Remove batteries when not in use or when heater is being stored.

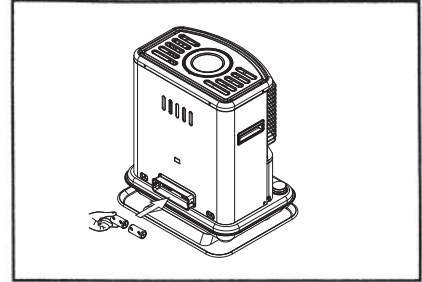


Fig. 3

5. POSITION THE BURNER (Fig. 4)

- Position the burner on the wick adjuster.
- To confirm proper placement of the burner, grab the burner knob and rotate the burner back and forth three or four times until burner sets properly on the wick adjuster.

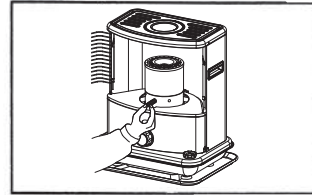


Fig. 4

5 FUELING YOUR HEATER

NOTE : See section 3, page 3 on **KEROSENE** for instructions on the proper grade of kerosene to use with this heater.

- ⚠ WARNING :** To prevent accidental fires:
- a) Use only water-clear ASTM No.1- grade kerosene.
 - b) Never use gasoline or other flammable fuel.
 - c) Fuel heater outside the living area.
 - d) Extinguish heater and allow to cool before refueling.

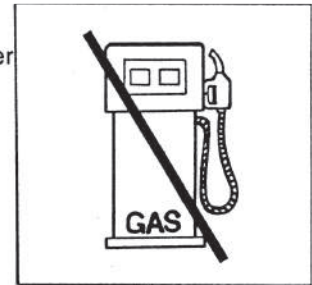


Fig. 5

1. Insert the straight tube of the manual fuel siphon into the kerosene container. Remove the fuel tank cap on the heater, and insert the siphon's flexible hose into the fuel tank opening.
2. Turn the air vent knob on the top of the siphon clockwise to close the air vent.
3. To start the flow of kerosene, squeeze the bulb of the siphon vigorously six or seven times. Once the flow begins, it is no longer necessary to squeeze the bulb. To avoid overfilling the tank, watch the fuel gauge. As the indicator enters the red zone, stop the flow by turning the air vent counterclockwise.

NOTE : Be especially careful to avoid overfilling the tank with very cold kerosene; otherwise overflow might occur when the fuel warms up.

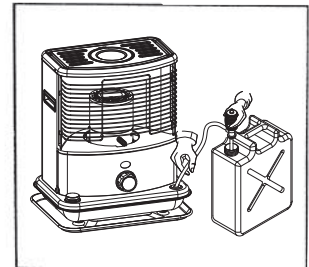


Fig. 6

4. Remove the siphon carefully, allowing the excess kerosene to drain from the tube back into container. Replace the fuel tank cap and tighten it securely. Be sure to wipe away any spilled kerosene from tank or other heater parts.

6 AUTOMATIC IGNITION SYSTEM

NOTE : PRIOR TO IGNITION, CHECK THE LEVEL INDICATOR LOCATED ON THE RIGHT HAND SIDE OF THE CABINET TO CONFIRM THAT THE HEATER IS IN A LEVEL POSITION. FAILURE TO OPERATE THE HEATER IN A LEVEL POSITION CAN RESULT IN IMPROPER COMBUSTION AND THE UNINTENTIONAL ACTIVATION OF THE AUTOMATIC TIP-OVER DEVICE.

For safety and convenience, this heater features an automatic ignition system.

2 "D" cell batteries, included with the heater, provide the power for the igniter which lights the wick once it has been raised to its maximum height.

When the heater is fueled for the first time, allow a **minimum of 30 minutes** after filling the heater before you attempt to light the heater. Also, the first time you light the heater, it should be done **outdoors** to allow the oils, etc. Used in manufacturing the heater to burn off outside, rather than in your home.

To use the automatic ignition system :

- Make sure the batteries have been installed.
- Turn the wick adjuster knob clockwise until the wick has been raised to its maximum height.
- Push the ignition knob to bring the glowing igniter into contact with the wick. This will cause ignition to occur.
- As soon as you see that the wick has been lit, release the ignition knob. This will automatically lower the burn chamber back down over the wick.
- Rotate the burner knob from side to side a few times to make sure that the burner is positioned properly on the wick adjuster.
- Then begin following the steps outlined in "Adjusting the wick" (page. 6)

IGNITION VIA MATCH

If you encounter a problem with the ignition mechanism, or if you have dead batteries, it is possible to light the heater with a match (Fig. 7).

The procedure is as follows

- Turn the wick adjuster knob clockwise until the wick has been raised to its maximum height.
- Lift the burn chamber by using the burner knob.
- Touch a lighted match to the exposed top edge of the wick.
- Once you see that the wick has been lit, lower the burn chamber back down over the wick.
- Rotate the burner knob from side to side a few times to make sure that the burner is positioned properly on the wick adjuster.
- Then begin following the steps outlined in "Adjusting the wick" (page. 6)

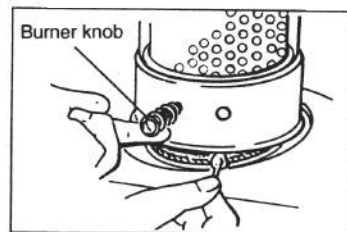


Fig. 7

CAUTION : Make sure that you do not leave the match, or any portion of it (match head, etc.) in the burner area. Debris left from the match can cause an uneven alignment of the burner and may result in smoke, incomplete combustion, odor, or fire.

NOTE : Once you have extinguished the heater, wait at least 10 minutes before reigniting the wick. Failure to do this will result in a very strong odor and/or smoke being produced.

NOTE : Do not use excessive force when pushing the ignition knob. This can cause the igniter to catch on the wick and may prevent ignition from occurring. Pushing too lightly on the ignition button can

prevent ignition from occurring by keeping the igniter too far from the wick. As figure __ shoes, the optimal distance between the igniter and the wick is 1/64--1/32 inch (0.5 to 1mm). If it is difficult to ignite the heater, the filament on the igniter might be bent, broken or misshaped.

7 ADJUSTING THE WICK

After lighting the heater, it is important to check the heater flame within the first 5-7 minutes of operation. After 5-7 minutes of operation, you should use the wick adjuster knob to obtain the proper flame height (see fig 8). **IF THE FLAME IS TOO YELLOW, TURN THE WICK ADJUSTER KNOB DOWN SLIGHTLY UNTIL YOU GET BLUE FLAME INDICATED IN FIG.8. IF THERE IS NO FLAME, OR A VERY LOW FLAME, TURN THE WICK ADJUSTER KNOB UP SLIGHTLY UNTIL YOU GET THE BLUE FLAME INDICATED IN FIG.8.**

VERY FINE ADJUSTMENTS TO THE FLAME CAN BE MADE BY GRABBING THE BURNER KNOB AND MOVING THE BURNER FROM SIDE TO SIDE UNTIL THE BLUE FLAME IS EVENLY DISTRIBUTED.

CAUTION : Do not grab the burner knob once the heater has reached normal operating temperature and the flame has stabilized. The burner knob is very hot during operation.

As you continue to operate the heater, the temperature of the heater and the temperature of the room will continue to change. As the heater warms up, the kerosene in the tank will vaporize faster, and this could require adjusting the wick adjuster down in order to maintain the proper flame. **THE FLAME MAY NEED TO BE ADJUSTED DURING THE TIME THE HEATER IS BEING OPERATED.** Therefore, it is necessary to continue to monitor the flame , and to make adjustments using the wick adjuster knob to keep the proper flame height. It is recommended that the heater be checked every 30 minutes in order to keep the proper adjustment because periodic adjustment is required. **FAILURE TO KEEP THE WICK ADJUSTED PROPERLY WILL RESULT IN SMOKE, ODOR, IMPROPER COMBUSTION, CARBON BUILD-UP, AND A SHORTER WICK LIFE.**

NOTE : Occasionally during normal operation you will hear the sound of fuel draining from the cartridge tank to fill the fuel reservoir area. This is normal for a cartridge tank kerosene heater

WARNING : **NEVER** turn the wick adjuster knob lower than the "LOW" setting of the wick adjustment. If you operate the heater below the position where the wick stop engages (the "LOW" setting), smoke, odor, excess emissions, CO (carbon monoxide), and flare-ups can result.

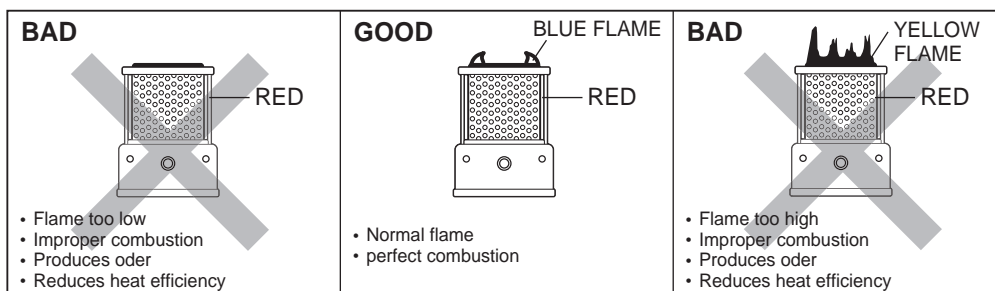


Fig.8

**NEVER LEAVE THE HEATER
UNATTENDED WHILE BURNING!**

⑧ EXTINGUISHING THE HEATER

Turn the wick adjuster knob counterclockwise until it stops.

CAUTION : After extinguishing the heater, **allow at least 10 minutes before reigniting the heater.** This allows the heater time to cool off and return to a normal temperature. Failure to allow the 10 minute cooling off period before reigniting the heater will result in the creation of a strong odor and possible flare-up.

WARNING : Carbon and tar can build up on the wick after the heater has been in use for a while. This can interfere with the ability of the wick to be lowered into the body of heater, and can result in the flame not extinguishing completely. It is the responsibility of the owner to inspect the wick, to maintain proper maintenance of the wick, and to replace the wick when necessary in order to prevent the build up of carbon and tar from creating a dangerous situation where the heater does not fully extinguish.

DAILY CHECK AND MAINTENANCE PROCEDURE

It is important to perform the following check and maintenance procedure on a daily basis during the heating season.

WARNING : In performing the check and maintenance procedure,
NEVER ATTEMPT TO REPAIR THE FOLLOWING PARTS :

- Automatic safety shut-off Device - Do not adjust or attempt to disassemble this important safety device.
Do not spill kerosene on the device. This is the principal safety mechanism of the heater.
- Fuel Gauge - Do not remove or unfasten the screws that attach the fuel gauge to the tank.
Do not disassemble the fuel gauge.

● Inspect wick adjuster and wick guide cylinder

Check daily to look for carbon accumulation. If carbon is present, lower the wick and remove the carbon using a flat edge screwdriver. Be careful not to allow any carbon deposits to drop into the heater.

● Inspect the igniter

If the automatic ignition system does not work, check the filament on the igniter (see fig. 9) to see if it is broken or misshapen. A small distortion can be fixed with a match stick. If the filament is stretched or broken, replace the igniter with a new one. **NOTE : Remove the batteries before replacing the igniter.** Refer to section "CHECKING THE IGNITION SYSTEM" on page 12 for instructions on how to replace the igniter.

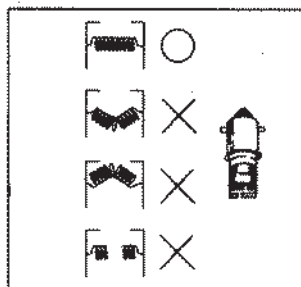
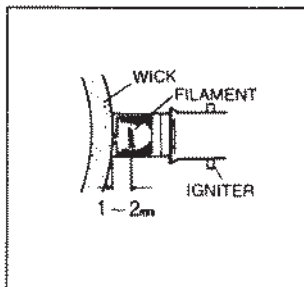
● Inspect the batteries

If the igniter filament does not get hot enough to ignite the wick and the igniter filament appears to be normal, replace the batteries.

● Inspect the wick

Inspect the wick before each use to see if carbon has accumulated on the wick. If it has, perform the Carbon Removal procedure described on page 8.

Check the height of the wick as described on page 6.



(Fig. 9.)

9 WICK MAINTENANCE

Carbon and tar will build up on the top of wick after the heater has been in use for a while. It is very important that the carbon and tar build up be removed in order for the heater to burn properly, and in order for the heater to properly extinguish. After every 2-3 tankfuls of fuel, check the top of the wick. If it feels hard and brittle, there is a build up of carbon on the wick. You might even observe a coating of black carbon on the top of the wick. A wick that is in good condition will feel soft.

There are other checks you can perform to determine if there is a build up of carbon on the wick. If it is difficult to turn the wick adjuster knob, if it is hard to ignite the heater, if it is difficult to obtain the proper wick height, these are signs that there may be a build up of carbon on the top of the wick. To eliminate the carbon build up from the top of the wick, perform the "Carbon Removal / Dry Burning" procedure outlined in the next section.

10 CARBON REMOVAL / DRY BURNING

The "Carbon Removal / Dry Burning " procedure creates a strong odor. Therefore, this procedure should always be performed outdoors on a windless day. You can consider using a porch or other well ventilated area, but keep in mind the fact that a strong odor is produced.

Carbon Removal Procedure :

- As the fuel level in the heater approaches empty, continue to burn the heater without refilling. Once the tank becomes empty and the flame starts to burn out, raise the wick to its maximum height and leave it burning until it burns out completely. After it has burned out, wait 30 minutes, reignite the wick (use a match, if necessary), and allow it to burn out again. Once it has cooled off, use a small brush or an old toothbrush to remove any ash that remains.

- This procedure should remove the carbon from the top of the wick. The wick should feel softer. If some parts of the wick still feel stiff, pinch these sections with a pair of small pliers. This will break up any remaining carbon into small pieces. Once you have done this, add a small amount of kerosene to the tank and repeat the "Carbon Removal" process again. After completing the "Carbon Removal" procedure, refill the tank and wait at least 30 minutes reigniting the heater.

You should perform the "Carbon Removal" procedure within 7 days of your first use of the heater. After that, the "Carbon Removal" procedure should be performed whenever the build up of carbon causes the wick to become stiff. "CARBON REMOVAL" SHOULD BE DONE EVERY WEEK DURING THE HEATING SEASON. IT MAY BE NECESSARY TO DO IT MORE OFTEN DEPENDING UPON THE CARBON BUILD UP ON THE WICK. CHECK THE WICK FREQUENTLY TO DETERMINE WHEN TO DO THE "CARBON REMOVAL" PROCEDURE.

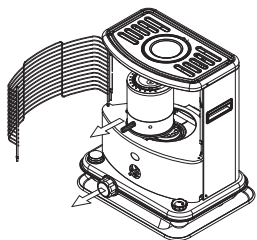
**NEVER LEAVE THE HEATER
UNATTENDED WHILE BURNING!**

I WICK REPLACEMENT

Wick replacement should be performed on a completely cool heater after the cartridge tank has been removed and the remainder of the kerosene in the heater has been off.

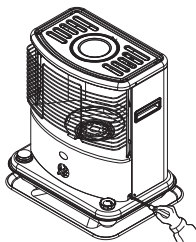
Use only genuine replacement wick.
Replacement wick number : Glowick 200-B.

Remove the batteries to prevent possible burns. Open the front grille and remove the wick adjusting knob by pulling straight out.



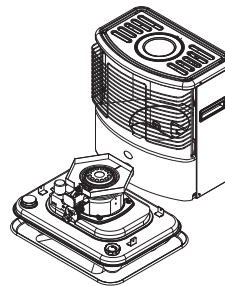
Step 1

Unscrew 4 screws, one from the back and one from each side of the cabinet.



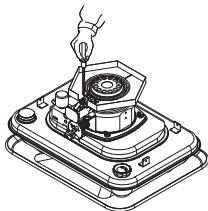
Step 2

Remove the cabinet.



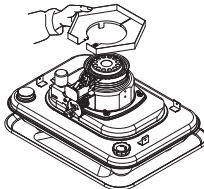
Step 3

Unscrew the screw on the wind cover.



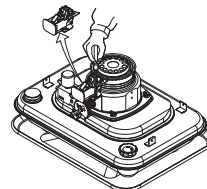
Step 4

Remove the wind cover.



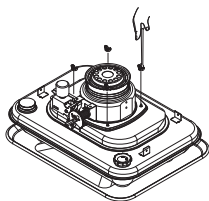
Step 5

Remove the automatic ignition Assembly by unscrewing 2 screws.



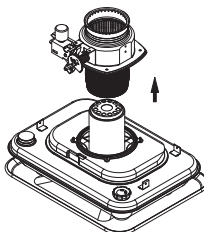
Step 6

Unscrew 4 wing nuts.



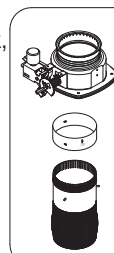
Step 7

Remove the wick adjuster assembly.



Step 8

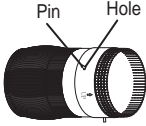
Press the pin of wick which assembled in wick case ass'y inside and disassemble wick, wick holder, wick case ass'y separately.



Step 9

NEVER LEAVE THE HEATER UNATTENDED WHILE BURNING!

Install the new wick and insert the 3 pins on a new wick into the 3 holes on the wick sleeve in the upward direction. (See the arrow marked "up" on the wick sleeve)



Step 10

Push the new wick into the retainer teeth of the wick sleeve so that the wick adheres tightly around the inside of the wick sleeve, smoothing out any wrinkles.



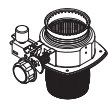
Step 11

Line up the pins with the slotted holes inside the wick adjuster. Then lightly press each of the three pins of the wick (now attached to the wick sleeve) toward the inside insert the three pins into the slanted grooves of the wick adjuster. Press on each of the three pins, inserting them securely in the holes.



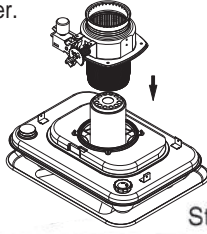
Step 12

Turn the wick adjustment knob and check to be sure that the wick moves up and down freely.



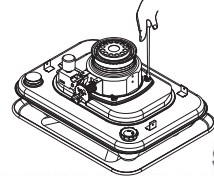
Step 13

Slide the wick adjuster assembly down the draft tube. Position the adjuster shaft to the front of the heater.



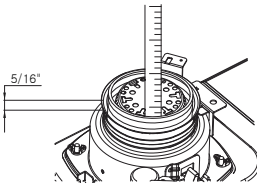
Step 14

Snug 4 wing nuts on the mounting stud but do not tighten. Raise the wick to the full up position, and evenly tighten wing nuts in several steps.



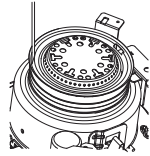
Step 15

Check height of wick. It should be 5/16" above collar.



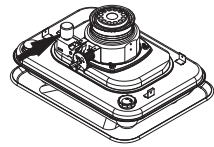
Step 16

Check for correct clearance between wick holder and draft tube. It should be the same all around.



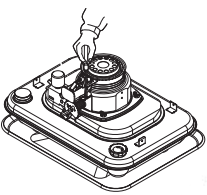
Step 17

Check the function of safety shut-off mechanism by pushing the extinguish button to upset the pendulum.



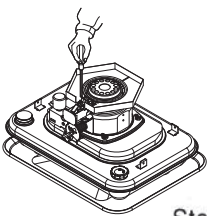
Step 18

Reinstall the automatic ignition assembly.



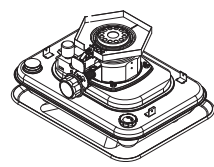
Step 19

Reinstall the wind cover.



Step 20

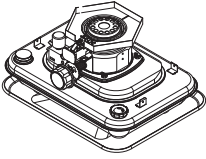
Turn the knob clockwise and counter-clockwise a few times to make sure the wick travels up and down smoothly.



Step 21

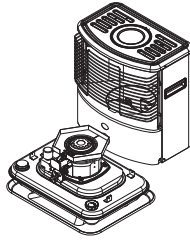
**NEVER LEAVE THE HEATER
UNATTENDED WHILE BURNING!**

Remove the wick adjusting knob once again, if it was reinstalled before.



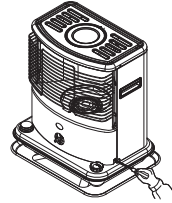
Step 22

Reinstall the cabinet.



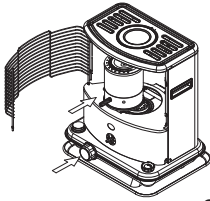
Step 23

Tighten 4 screws on the cabinet.



Step 24

Reinstall the wick adjusting knob. Close the front grille.



Step 25

12 CHECKING THE IGNITION SYSTEM

If the automatic ignition system fails to operate properly, perform the following checks:

- **BATTERIES** - 2 "D" cell batteries are located at the rear of the heater. Replace with new batteries.
- **IGNITER PLUG** - If the automatic ignition system still doesn't work after replacing the batteries, check the igniter plug. If the glow coil filament is broken, bent, or doesn't glow when engaged via the ignition lever, it must be replaced. **CAUTION: Be sure igniter plug is 2.5V DC, 1A only.**

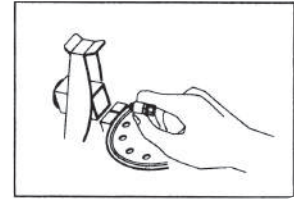


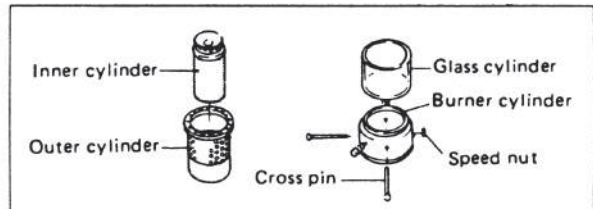
Fig. 10

To replace the igniter plug (Fig. 10) ;

- Remove the batteries.
- Remove the 2 cabinet screws and lift off the cabinet and grille assembly.
- Pull the ignition lever to raise the igniter plug. Push the igniter plug in and turn in a **clockwise** direction to remove.
- Install a new igniter plug (2.5V DC, 1A only) by pushing it in and turning it in a **counter-clockwise** direction.
- Reassemble the heater and replace the batteries.

GLASS CYLINDER REPLACEMENT

Remove speed nuts holding cross pins. Then pull out cross pins. Replace glass cylinder. In reassembling, make sure that inner and outer cylinders are set in their proper places.



13 WICK ADJUSTER MECHANISM

Turning the wick adjuster knob in a clockwise direction lifts the wick to the top of the wick holder assembly. As the wick is dialed up, the torsion spring located on the wick control shaft is compressed. Raising the wick to the full up position allows the wick to come into contact with the igniter when the ignition knob is depressed. Pressing the extinguish button causes the torsion spring to rapidly lower the wick. You can slow the speed at which the wick is lowered by holding the wick adjuster knob when pressing the manual extinguish button. By slowly releasing the wick adjuster knob, you can slow the speed at which the wick is lowered and reduce the chance of encountering a kerosene odor when extinguishing the heater.

14 AUTOMATIC SAFETY SHUT-OFF DEVICE

This heater is equipped with an automatic safety shut-off device. The purpose of this device is to quickly and efficiently shut off the heater should the heater be jarred or tipped over while in operation. This is the main safety system that is built into the heater, and it functions to prevent the flame from spreading if the heater is knocked over.

The automatic safety shut-off device is built into the mechanism that raises and lowers the wick. It has been designed so that if the pendulum is jarred by a shock of some sort, it retracts a latch from the wick control shaft ratchet, and a torsion spring reacts to drop the wick to its fully lowered position. This rapid lowering of the wick extinguishes the flame.

IMPORTANT NOTICE : For the safety shut-off device to function properly, the wick must be free of carbon and tar deposits. Regularly performing the "Carbon Removal / Dry burning" procedure described in the "Wick Maintenance" and "Carbon Removal / Dry Burning" sections on page 6 is very important to the proper functioning of this important safety device.

IMPORTANT NOTICE : PLEASE CHECK THE SAFETY SHUT-OFF DEVICE ONCE A WEEK DURING THE HEATING SEASON TO INSURE THAT IT IS FUNCTIONING PROPERLY.

IMPORTANT NOTICE: EVERY TIME THE WICK IS REMOVED OR REPLACED, THE SAFETY SHUT-OFF DEVICE MUST BE TESTED TO INSURE THAT IT IS FUNCTIONING PROPERLY.

**NEVER LEAVE THE HEATER
UNATTENDED WHILE BURNING!**

TESTING THE SAFETY SHUT-OFF DEVICE : At least once a week during the heating season, it is important to test the safety shut- off device to be sure that it is operating properly. **WITH THE HEATER TURNED OFF**, raise the wick using the wick adjuster knob to the fully raised position. Grabbing the protective grille, give the heater a firm shake. If the safety shut-off device is working properly, you will hear a loud noise as the ratchet is disengaged and the torsion spring drops the wick into the body of the heater. To verify that the wick has been completely lowered, turn the wick adjuster knob in a counterclockwise direction. If the safety shut-off device is functioning properly, the wick will have been completely lowered. If you are able to lower the wick further using the wick adjuster knob, this means that it is time to perform the "Carbon Removal Dry Burning" procedure described.

15 LONG TERM STORAGE OF YOUR HEATER

Carefully following the instructions for storage given below will insure that your heater will operate efficiently and safely next season (Fig. 11 / Fig. 12).

Using a small amount of kerosene, swirl and rinse the inside of the tank. **NEVER** mix water with the kerosene as it will cause rust inside the tank. Pour the kerosene out making sure that you remove it all.

- With the fuel tank empty, ignite the heater. With the wick at its maximum height, keep the wick burning until it burns out completely (about 1 hour). It is a good idea to do this outside or in an extremely well- ventilated area.
- Remove the burner assembly. Then, remove the wick adjuster from the fuel reservoir. Dry the inside of the fuel reservoir completely. If carbon has accumulated on the wick adjuster, remove it. Remove any carbon or soot that is present on the burner assembly.
- Remove the batteries. Remove the burner. Remove the wick adjuster from the fuel reservoir. Thoroughly dry the inside of the fuel tank. Using a screwdriver and/or a brush, remove any carbon, tar or soot that might have accumulated on the wick adjuster, wick guide or burner.
- After a through cleaning, reassemble the heater. It is important when reassembling the wick adjuster to be sure to maintain an equal gap between the wick adjuster and the wick guide cylinder all around. See "Wick Replacement" on page9 for reference.

Remove the batteries from the battery case before storing the heater to prevent leakage and corrosion

- Store the heater in the original box with the original packing material and keep the **OWNER'S MANUAL** with the heater. Store in an area that is well- ventilated.

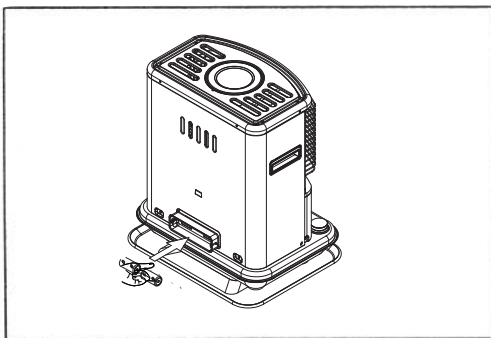


Fig. 11

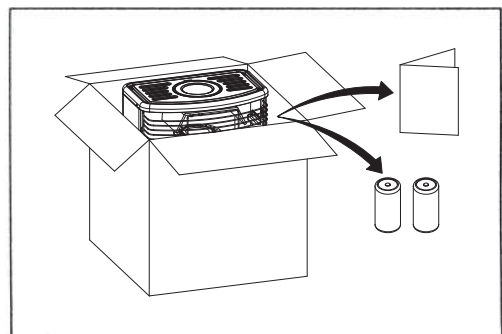


Fig. 12

16 TROUBLE SHOOTING GUIDE

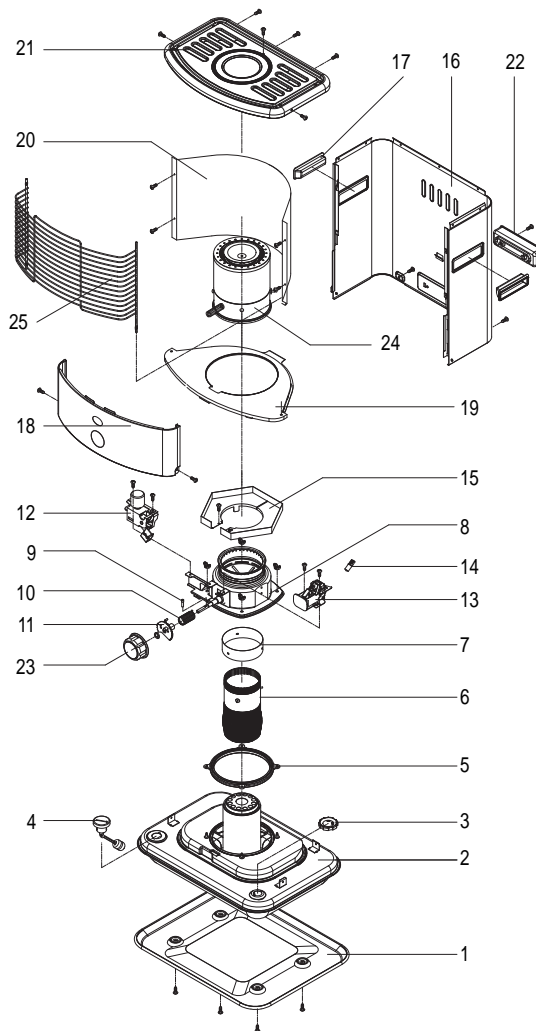
TROUBLES	CORRECTIVE ACTION
<p><u>Heater Will Not Light ;</u></p> <ol style="list-style-type: none"> 1. Fuel tank is empty 2. Water present in kerosene 3. Igniter plug Fails to Glow 4. Igniter plug makes contact with side of wick 	<ol style="list-style-type: none"> 1. Fill tank with water-clear 1-K kerosene. 2. Drain tank. Remove wick assembly & replace wick. Reinstall wick assembly. Fill tank with water-clear 1-K kerosene. 3. Replace batteries. Replace igniter plug. Check for broken or disconnected wire. 4. Lower wick using wick adjuster knob until igniter plug makes contact with top of wick.
<p><u>Heater Produces Smoke or Odor ;</u></p> <ol style="list-style-type: none"> 1. Flame is too high 2. Heater is in an air draft 3. Burner is not level 4. Carbon or tar built up on wick 5. Contaminated kerosene 	<ol style="list-style-type: none"> 1. Using wick adjuster knob, lower wick to desired 1/2" flame. 2. Move heater out of air draft. 3. Using burner knob, rotate burner from side to side until it seats properly over wick. 4. Perform "Carbon Removal / Dry Burning" procedure. Replace wick if necessary. 5. Drain tank. Remove wick assembly & replace wick. Reinstall wick assembly. Fill tank with water-clear 1-K kerosene.
<p><u>Flame Flickers or Dies ;</u></p> <ol style="list-style-type: none"> 1. Water present in kerosene 2. Carbon or tar built up on wick 	<ol style="list-style-type: none"> 1. Drain tank. Remove wick assembly & replace wick. Reinstall wick assembly. Fill tank with water-clear 1-K kerosene. 2. Perform "Carbon Removal / Dry Burning" procedure. Replace wick if necessary.
<p><u>Wick Burning Down Excessively ;</u></p> <ol style="list-style-type: none"> 1. Dangerous, volatile fuel mixed with kerosene (gasoline, benzene, alcohol, white gas, paint thinner, camp, stove fuel, oil compound) 	<ol style="list-style-type: none"> 1. Drain and clean tank <ul style="list-style-type: none"> — Remove and replace wick — Fill tank with water-clear 1-K kerosene.
<p><u>Wick Adjuster Sticks ;</u></p> <ol style="list-style-type: none"> 1. Water present in kerosene 2. Carbon or tar built up 	<ol style="list-style-type: none"> 1. Drain tank. Remove wick assembly & replace wick. Reinstall wick assembly. Fill tank with water-clear 1-K kerosene. 2. Perform "Carbon Removal / Dry Burning" procedure. Replace wick if necessary.
<p><u>Heater is enveloped in flames ;</u></p>	<ul style="list-style-type: none"> — Call Fire Department. — Smother flames with fire extinguisher or sand. Otherwise smother flames with blankets and then throw water on blankets. Do not throw water directly on the heater itself.

**NEVER LEAVE THE HEATER
UNATTENDED WHILE BURNING!**

17 PARTS LIST

DRAWING NUMBER	DESCRIPTION	PART NUMBER
1	DRIP TRAY	WS-1001
2	TANK ASS'Y	2121-0006-00
3	FUEL CAP	WS-1003
4	FUEL INDICATOR	WS-1004
5	GASKET WICK HOLDER	3321-0036-00(K)
6	WICK ASS'Y	2124-0016-00
7	WICK HOLDER	3121-0519-00(K)
8	WICK CASE ASS'Y	2123-0043-00
9	SPRING-RATCHET GEAR	3431-0045-00(K)
10	GEAR-RATCHET ASS'Y	2125-0010-01(K)
11	SCREW-STOPPER	4319-0017-00
12	SAFETY SHUTOFF ASS'Y	2126-0040-00
13	IGNITION ASS'Y	WS-1007
14	IGNITION COIL	WS-10010
15	WIND COVER	WS-10013
16	CABINET	3111-0073-00
17	HANDLE CABINET	WS-10022
18	FRONT PANEL	3111-0074-00
19	INSULATOR BOTTOM	WS-10014
20	REFLECTOR VERTICAL	3111-0076-00
21	TOP PLATE	3111-0077-00
22	BATTERY CASE	WS-10024
23	WICK ADJUSTER	WS-10015
24	BURNER ASS'Y	WS-10019
25	GRILLE	3561-0122-01

18 EXPLODED PARTS DRAWING



19 SPECIFICATIONS

Model No.		WKH-100A
Type of Heater		Radiant Reflection
Heat Output		Max. 10,000 BTU/hr
Fuel Tank		Integral
Tank Capacity		4.0 L
Continuous Combustion Time		Approx. 11-14 hr.
Ignition Method		Battery-D Cell ×2
Weight(empty)		Approx. 8kg
Dimensions	Height	475 mm
	Width	405 mm
	Depth	320 mm
Max. Wick Height		8mm