

Everglow

WARMS THE WORLD



CAUTION

USE ONLY WATER CLEAR No. 1-K KEROSENE IN THIS HEATER. IMPROPER FUEL MAY CAUSE SMOKING AND SOOTING OF THE BURNER.

MAKE SURE THE BURNER SIT PROPERLY ON THE WICK HOLDER ASSEMBLY BY HOLDING THE BURNER HANDLE AND SWING IT GENTLY. IMPROPER SITTING OF THE BURNER WILL CAUSE SMOKE AND ODOR.

Kerosene Heater

INSTRUCTION MANUAL

Model: **PT-E4**

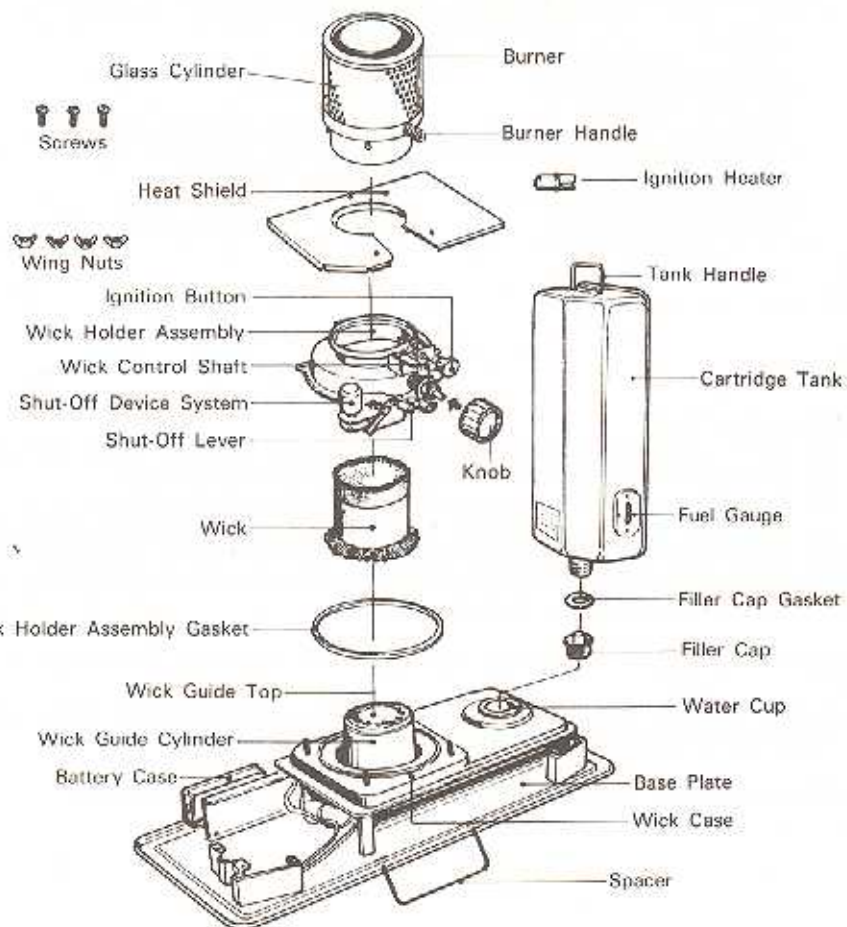
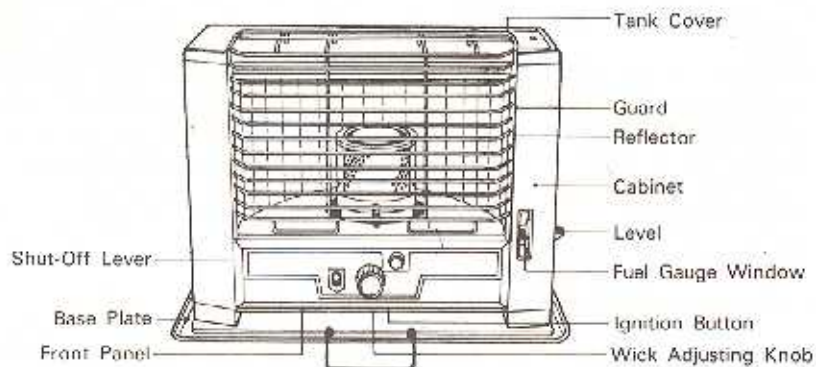
This symbol on the nameplate means the product is Listed by Underwriters Laboratories Inc.



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PARTS LIST



SPECIFICATIONS:

MODEL	PT-E4
TYPE	RADIANT
IGNITION METHOD	BATTERY IGNITION
FUEL	WATER CLEAR No.1-K KEROSENE
HEAT OUTPUT	10,500 Btu/hr
APPLICATION ROOM SIZE	375 sq. ft.
FUEL CONSUMPTION	0.078 gal/hr
TANK CAPACITY	1.32 gal
CONTINUOUS BURNING TIME	12-15 hrs
WEIGHT	26 lbs
DIMENSIONS H x W x D	20 x 25 x 13 in
WICK	CYLINDRICAL FIBER GLASS WICK
POWER SUPPLY	2 D-CELL BATTERIES
SELF EXTINGUISHER	SAFETY SHUT-OFF DEVICE

WARNING

- (1) Risk of Explosion
 - (a) Never use any fuel other than water clear No.1-K kerosene. Never use gasoline.
 - (b) Never refill heater fuel tank when heater is operating or still hot.
 - (c) Never fill heater fuel tank in living space. Fill heater tank outdoors.
 - (d) Never use heater in areas where flammable vapors or gases may be present.
 - (e) Never store or transport kerosene in other than a metal or plastic container that is (1) acceptable for kerosene, (2) nonred in color, and (3) clearly marked, "kerosene." Never store kerosene in the living space.
- (2) Due to high surface temperatures, keep children, clothing, and furniture away.
- (3) Risk of Indoor Air Pollution - Use heater only in well-ventilated areas. People with breathing problems should consult a physician before using the heater.
- (4) Do not use heater to heat or boil water or use as a cooking appliance.

- (5) In a house of typical construction, that is, one that is not of unusually tight construction due to heavy insulation and tight seals against air infiltration, an adequate supply of air for combustion and ventilation is provided through infiltration. However, if the heater is used in a small room where less than 200 cubic feet (5.7m³) of air space is provided for each 1000 Btu per hour of heater rating (considering the maximum burner adjustment), the door(s) to adjacent room(s) should be kept open or the window to the outside should be opened at least 1 inch (25.4mm) to guard against potential buildup of indoor air pollution. Do not use the heater in a bathroom or any other small room with the door closed.
- (6) Do not use spacer as handle.

UNPACKING

- (1) Take out heater from the packing case and remove the plasticwrap. Open the guard by pushing inward and then downward to disengage the guard from latches. (Fig.1)
- (2) Take Burner out and remove packing material.
- (3) Open tank cover. Take cartridge tank out and remove corrugated cardboard for cap cushion from the bottom.
- (4) Keep the packing case as a storage box for heater. For future use also keep operating instruction manual.

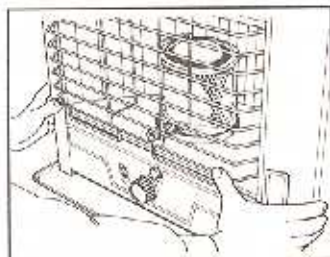


Fig. 1

INSTALLATION OF DRY CELLS

- (1) Use 2 D-cell batteries.
- (2) Battery holder locates at the back of the heater. Check position of + - marks and insert batteries into the battery case. Easy insertion will be obtained by putting battery into the spring side first.

FUEL

- (1) Never use gasoline.
 - (2) Use only water clear No.1-K kerosene (see the Specification for Kerosene, ASTM D3899-82).
 - (3) If kerosene is not clean, or mixed with vegetable oil, animal fat or machine oil, it will cause carbon deposits on the wick and the following troubles may result.
 - Flame spread is slow on ignition.
 - Fumes may result and irritate the eyes.
 - Outer cylinder of burner will not heat to a cherry red after 30 minutes.
 - Small flame and low heat output.
 - Automatic ignition becomes difficult.
 - Carbon accumulates and the wick gets hardened, making it difficult to adjust the up and down movement.
 - Wick does not drop even when the shut-off lever is pressed and fire does not extinguish.
- If any of the above occurs, the dirty kerosene and the contaminated wick should be replaced immediately.
- (4) When buying kerosene, please note the following recommendations
 - Buy a reliable brand.
 - If you use your own container, rinse container thoroughly with clean kerosene 2 to 3 times before filling to remove any foreign material.
 - Do not store kerosene in transparent or translucent plastic container. Ultra-violet ray may change the quality of the kerosene and result in burning problems.

FUELING

- (1) Shut off the heater. Do not refuel while burning.
- (2) Remove the cartridge tank and refuel. (Fig.2)
- (3) Use either a siphon or a funnel to fill the tank.
- (4) Watch the fuel gauge when fueling.
- (5) Stop filling when the fuel level reaches the center of the fuel gauge. (Fig.3)
- (6) Tighten the filler cap firmly.
- (7) Reset the cartridge tank in the heater. Improper seating will not allow the tank cover to close.
- (8) Wipe off any kerosene overflow.

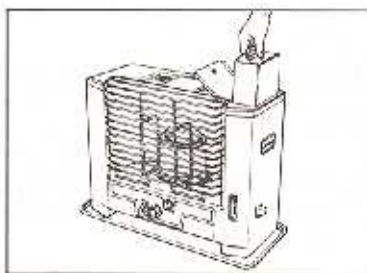


Fig. 2

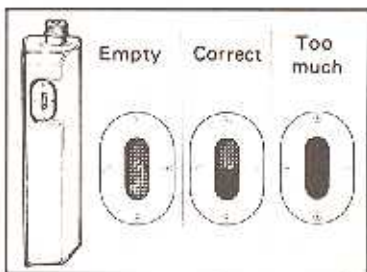


Fig. 3

PREPARATION FOR IGNITION

(1) Checking of fuel level

The fuel level can be checked by looking at the fuel gauge window.

- The color portion (as shown in Fig.4) shows the remaining kerosene.

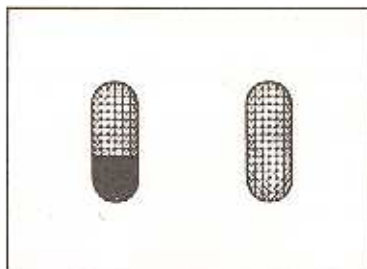


Fig.4

(2) Levelling

Make sure the heater is level by checking the level attached to the side of the heater (Fig.5).

Shut-off device will not work if heater is not level.

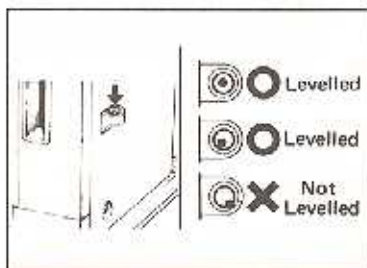


Fig.5

POSITIONING OF BURNER

The Inner Cylinder of Burner shall seat on the shoulder of Wick Guide Top and the Outer Cylinder of Burner shall seat on the flange of Wick Holder Housing (Fig.6).

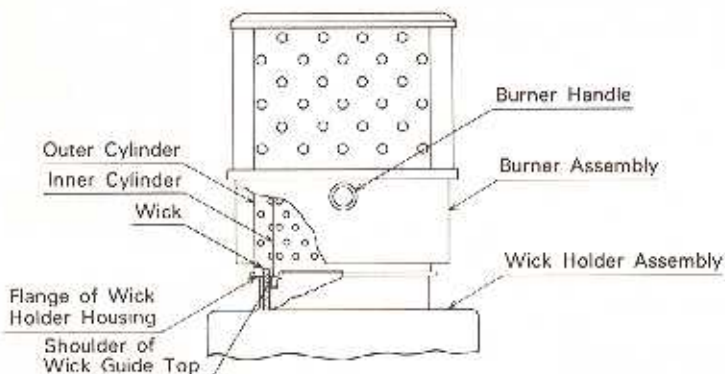


Fig.6 Positioning of Burner

Make sure the Burner seats properly and does not tilt. If the Burner seat at an angle, hold the burner handle and swing the burner until it is centered with the Wick Holder Assembly. If the Burner seats improperly it will cause smoke and odor.

AUTOMATIC IGNITION

• Do not move or carry the heater when it is burning.

(1) Wait 30 minutes after initial fueling, to allow wick to become fully saturated before lighting. If wick is not fully saturated when lighted, heater will not burn properly and will cause smoke and odor.

(2) Raise the wick to its full height by turning the wick adjustment knob clockwise till it stops (Fig.7). This fully raises the wick and also sets the shut-off device (clicking will stop when shut-off device is set).

(3) Push in ignition button and hold until wick is lit about 2 - 5 seconds (Fig.8).

(4) Use Burner Handle to seat the Burner for 2 to 3 times to make sure that Burner is properly seated after lighting (see POSITIONING OF BURNER and Fig.9).

• Even a slight unseating of the Burner will cause flame flare-up or smell.

(5) When re-ignition is performed immediately after extinguishing, crude fuel can cause an intense smell. Wait 5 minutes for cooling the Burner before re-ignition.

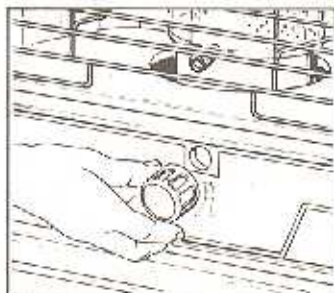


Fig. 7

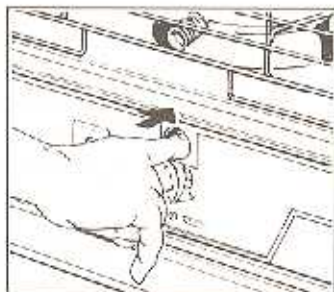


Fig. 8

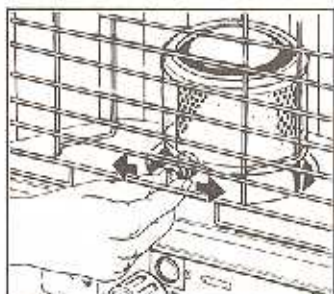


Fig. 9

MATCH IGNITION

(In case of battery failure)

Lift the wick, open guard, tilt the Burner and light the wick with a match. (Fig.10)

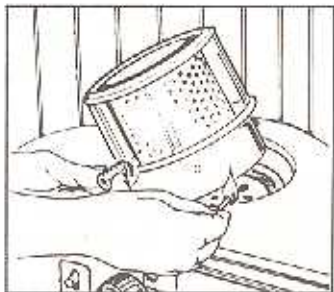


Fig. 10

FLAME ADJUSTMENT

After heater is lit, it takes about 5 minutes to obtain a stable flame. Adjust the flame to proper intensity as shown in Fig.11.

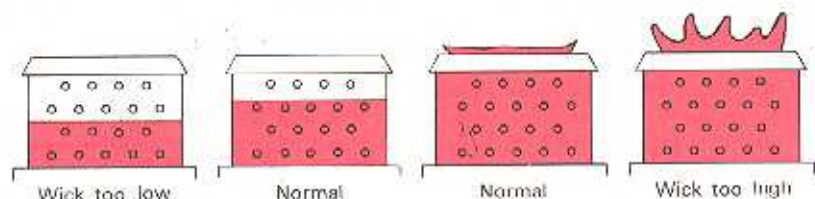
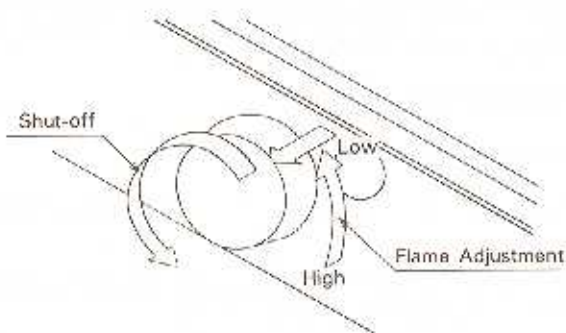


Fig.11

- (1) If flame flares too high above Burner (Fig.11), first check if Burner seats properly by holding the Burner Handle to swing the Burner for 2 to 3 times (see POSITIONING OF BURNER) and see whether the flame becomes stable. If flame continues to flare up, adjust by turning wick adjusting knob counter-clockwise slowly.
- (2) Always use at normal flame. Only manipulate the wick adjusting knob inbetween the 'HIGH' and 'LOW' markings for flame adjustment. This heater has a wick stop mechanism and wick cannot be turned down directly when the 'LOW' mark is reached. Operate the heater beyond the 'LOW' mark will cause carbon deposits on wick and does not allow perfect combustion.

EXTINGUISHING

Turn the wick down as show below or press the shut off lever down to extinguish the heater.



ATTENTION:

- Always turn off the heater before going out or going to bed.
- Never abuse shut-off device by kicking the heater to extinguish flame. Constant abuse will result in damage to the extinguisher.

DAILY CHECK AND MAINTENANCE

Always clean the heater and the area around it. Spilled kerosene in base plate may cause an accident. Lack of maintenance can shorten life of heater.

(1) Checking of cartridge tank

Examine for fuel leakage during refueling. Make sure filler cap is tight.

(2) Checking of wick and wick guide cylinder

Take off the Burner and examine wick for carbon and also on upper end of the wick holder assembly and the wick guide cylinder. If there are carbon deposits, remove them with a screwdriver after lowering the wick.

(3) Checking of ignition plug

When the glow plug does not heat or when the heater is difficult to ignite, examine for breakdown or deformation of the heater coil (Fig.12). Slight deformation of the heater coil can be corrected by match stick or pencil. In case wire is broken, replace the glow plug with a new one.

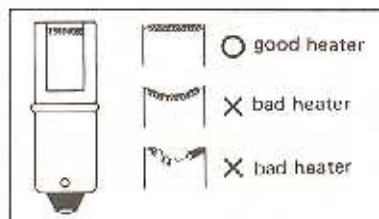


Fig. 12

(4) Checking and changing of D-cell batteries.

If the glow plug glows weak in spite of the normal heater coil, this is caused by weak dry cells. Replace the dry cells with new ones.

(5) Checking and maintenance of wick

The wick used in this heater is made of heat resisting fiber glass which does not burn and should last for a long time. To keep the wick in good condition, you should burn the wick off every other month to remove the carbon deposits accumulated on the wick.

If carbon accumulates on the wick and causes difficulty in the up and down movement of the wick, or if the Burner is not heated to normal glow, and the fire is difficult to be ignited by the dry cell ignition, burn the wick without fuel for cleaning according to the following procedures to remove the carbon.

Procedures for Cleaning the Wick

- Perform the wick cleaning outdoors without wind.
- Remove the cartridge tank. Re-ignite after cooling the Burner and allow the heater to burn.
- When the red heat of the Burner becomes weak, raise the wick fully and leave it till the fire is naturally extinguished (in about 1 hour).
- By this wick cleaning method, the carbon is removed and the wick becomes soft. Reset the cartridge tank after checking its fuel level and wait 30 minutes for the wick to become fully saturated before lighting the heater again.

NOTE: Carbon is gradually accumulated on a wick used over a long period of time and a wick used over 2 - 3 seasons may not be improved even when wick cleaning is performed. Replace such a wick with a new one.

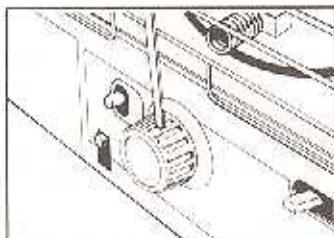
CHANGE PARTS

CHANGING THE WICK

Use "Everglow" Brand, Part Number S02-04 replacement wick.

- (1) Remove cartridge tank and burner from heater.
- (2) Press shut-off lever to retract the wick.
- (3) Loosen the screw which fixes the wick adjusting knob and remove the knob from heater (see illustration).

Note: Do not remove the knob insert from shaft.



- (4) Remove 3 set screws from sides and rear of the body (Fig.13).

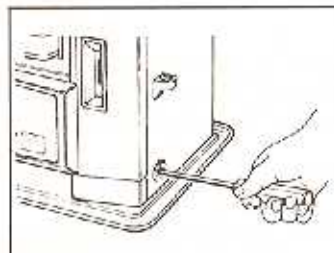


Fig. 13

- (5) Slant the body forward and lift upward to clear the wick control shaft through the hole in the panel (Fig. 14).

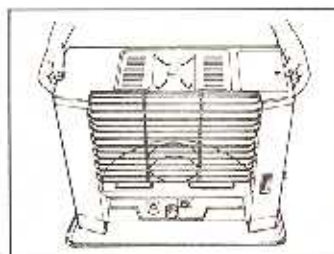


Fig. 14

- (6) Remove 3 screws holding the heat shield (Fig.15).

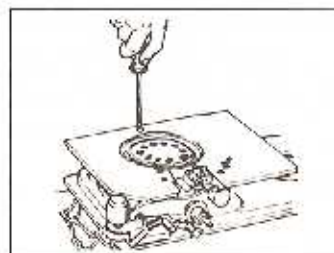


Fig. 15

- (7) Remove 4 wing nuts and 1 screw holding the wick holder assembly and lead wires from ignition device (Fig.16).

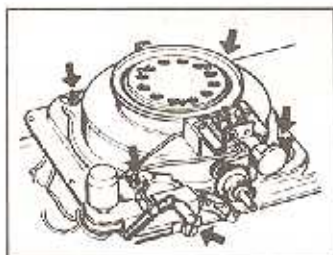


Fig. 16

- (8) Remove the wick holder assembly (Fig.17).

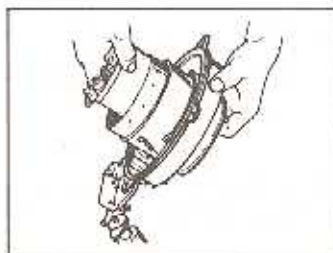


Fig. 17

- (9) Remove the old wick from wick holder assembly.

- (10) The upper part of the wick is made of glass fiber and does not burn. Other portion of the wick is made of cotton. The orange tape is for fixing the wick to the wick holder and the black line marked on the tape is for positioning (Fig.18).

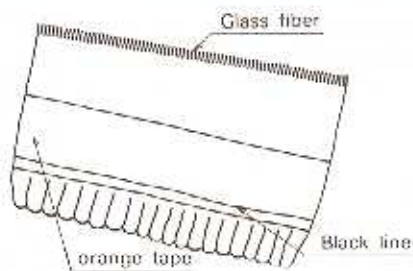


Fig. 18

- (11) Fold the new wick and puts it into the wick holder with the glass fiber portion pointing up. Align the black line marked on the tape with the bottom of the wick holder. Smooth the wick in the holder over the wick holding pawls (Fig.19)

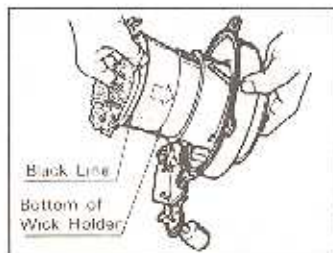


Fig. 19

- (12) Insert the wick holder assembly with the new wick into the wick guide cylinder so that the wick control shaft points to front.
- (13) Tighten each two diagonal wing nuts simultaneously so that the gap for up and down movement of the wick is even throughout (Fig.20). Connect the lead wire for the glow plug.

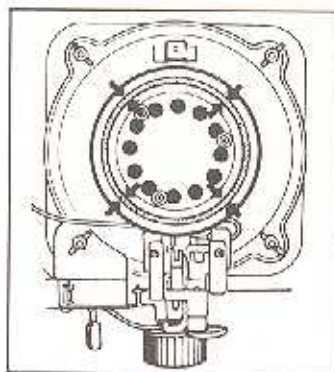


Fig.20

- (14) If either the wick cannot be adjusted up and down smoothly or the wick does not drop when the pendulum of the auto shut-off device is tilted, repeat step (11) to smooth any wrinkles or bulges.
- (15) Rechecking of wick height
Wick height is measured from the horizontal shoulder of the wick guide top to wick (Fig.21). When the wick is fully raised by turning the shaft, the maximum wick height of the heater is 0.27 inch or 7 mm. Reset the wick again if the wick height is different from specification.

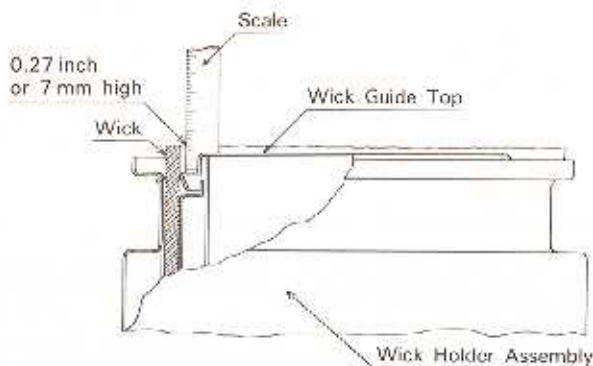


Fig. 21

- (16) After checking the wick height, replace the knob and body by reversing the procedures from steps (13) to (6).
- (17) After adding full cartridge, wait 30 minutes for the wick to become saturate before ignition.

NOTES:

- The wick holder assembly gasket attached to the bottom of the wick holder housing should never be removed.
- After assembling the heater, test it in a safe place before you use it.

CHANGING THE IGNITOR

- (1) Remove the body following the exchange procedures of wick steps (1) to (5).
- (2) Take out the glow plug by pushing the ignition button with the right hand. Use left hand to turn glow plug to left while pushing in slightly to remove it. (Fig.22)

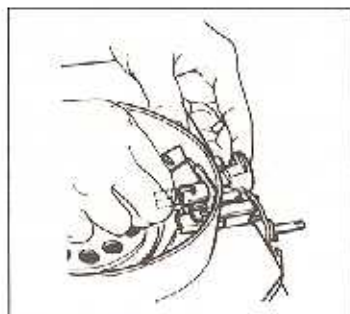


Fig. 22.

- (3) Insert the new glow plug in a manner so that the guard of the glow plug is at the lower side. (Fig.23)

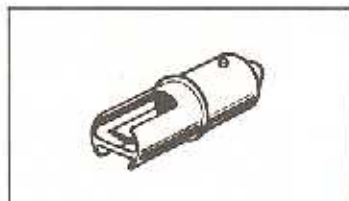


Fig. 23.

STORAGE

To store heater for the next season, follow these directions.

- (1) Remove the cartridge tank and shake it to rinse inside out. Drain all kerosene and allow the tank to air dry by hanging with the cap off.
- (2) Burn the wick after removing the tank. When the red heat of the burner becomes weak, raise the wick fully and leave it till the fire is naturally extinguished. Perform the nofuel wick cleaning outdoors without wind.
- (3) After cleaning the wick, remove the body following the changing procedures of wick steps (1) to (5). Remove the wick holder assembly and dry the inside of the wick case. Clean carbon off the wick holder assembly and the Burner. Clean dust and stain off the base plate and body.
- (4) Remove the dry cells. Use new dry cells in next season.
- (5) After cleaning, assemble as it was before.
- (6) Cover the heater with a polyvinyl bag. Store it in the packing case and keep in a well-ventilated place with low humidity.

TROUBLE SHOOTING GUIDE

PROBLEM	CAUSES											PROBLEM	REPAIR		
	Fails to light	Low flame	Soot	Fails to extinguish	Self-extinguisher will not set	Fumes	Uneven flame	Cannot set; Wick too low	Burner will not glow red	Cannot control wick height	Slow heating			Weak flame	Uneven flame; too high or low
Wick too low	*	*							*		*				Adjust wick height
Water in fuel		*				*			*	*	*				Change fuel & dry wick
Contaminated fuel	*	*				*			*	*	*				Change fuel & wick
Carbon on wick									*	*	*				Burn off carbon
Out of fuel		*							*		*				Refill tank
Wick too high			*												Lower wick
Wick control malfunction				*			*								Repair or replace
Wick not fitted right										*					Re-fit wick in holder
Fuel spilled						*									Wipe off excess
Burner not seated			*			*							*		Re-seat Burner by moving handle
Water on wick	*	*				*			*	*	*	*			Remove wick & dry
Wire net dented								*							Remove & reshape
Heater not levelled				*		*						*			Level heater
Wick not adjusted	*	*	*	*		*		*		*					Adjust wick
Lack of air			*			*									Ventilate
Wick has not absorbed fuel											*				Wait 30 minutes for fuel to saturate
Wind or draft						*									Remove from draft
Exhaustion of dry cell or broken heater circuit	*														Replace dry cell or heater and repair broken circuit

NOTICE

CAUSES FOR ODOR FROM KEROSENE HEATERS

- (1) For the first time use the heater, it may give off an odor. This is due to a vapor resulting from the initial burning of the protective rustproof coating. This odor will disappear in subsequent use.
- (2) Kerosene must be pure clear in color. # 1 fuel oil is yellow-do not use.
- (3) Never tilt the burner to check the flame when starting or shutting off since this release excessive kerosene contaminated air.
- (4) Never leave liquid or dust on the base of the heater. This area supplies air to the combustion chamber and will cause abnormal combustion problems.
- (5) Tar buildup on the wick or a damaged wick can cause odor.
- (6) Fill the tank outdoors to avoid spilling kerosene that will cause odor.
- (7) Burner must be seated properly.

CAUTION

USE ONLY WATER CLEAR No. 1-K KEROSENE IN THIS HEATER. IMPROPER FUEL MAY CAUSE SMOKING AND SOOTING OF THE BURNER.

MAKE SURE THE BURNER SIT PROPERLY ON THE WICK HOLDER ASSEMBLY BY HOLDING THE BURNER HANDLE AND SWING IT GENTLY. IMPROPER SITTING OF THE BURNER WILL CAUSE SMOKE AND ODOR.

For additional information, Call (800) 327-7247 except State of Georgia
State of Georgia, Call (800) 282 3105
The time for toll free number service is eastern time.

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