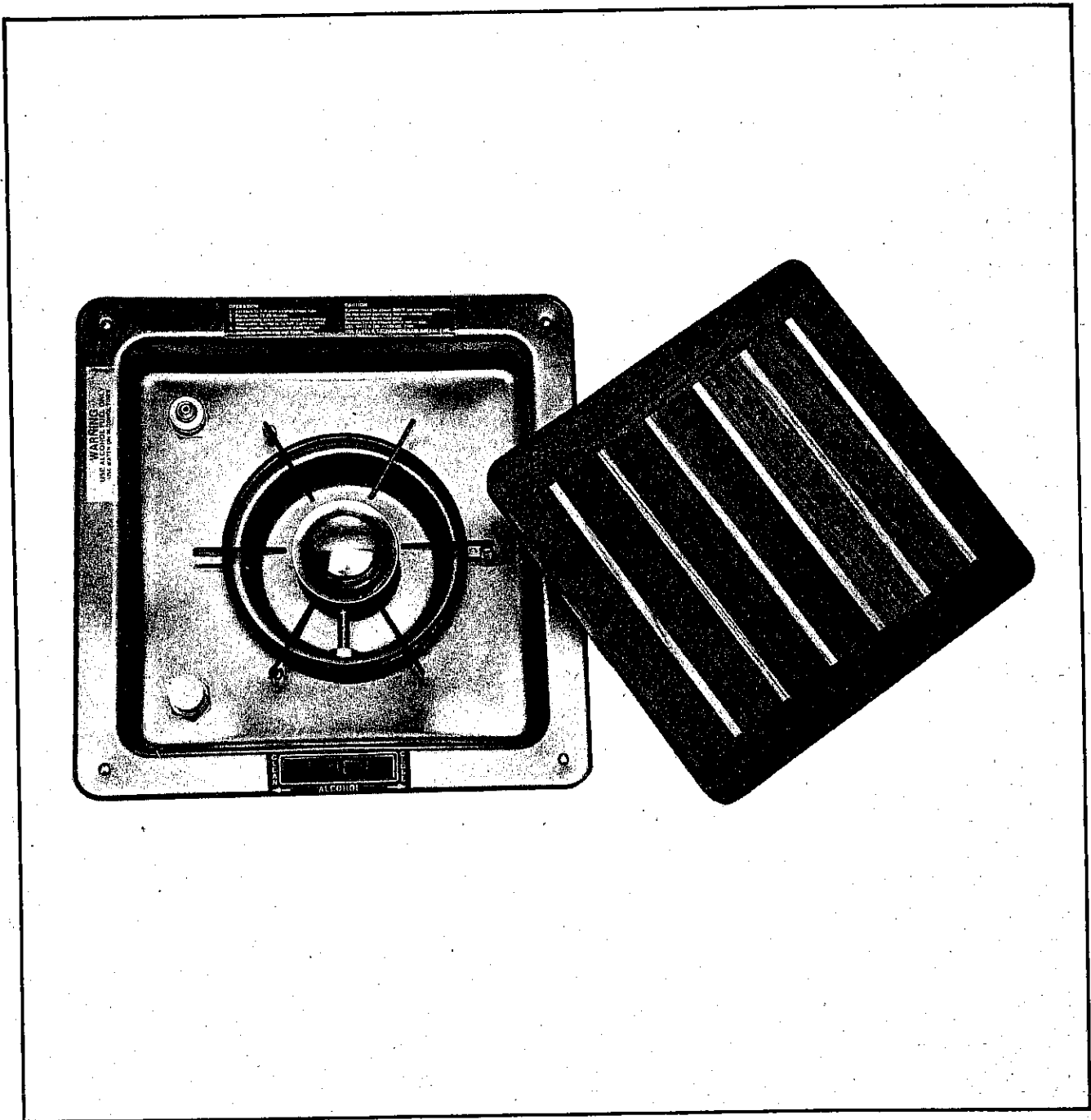


KENYON®

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ALCOHOL STOVE, MODEL 103 OPERATING INSTRUCTIONS and PARTS LIST



PLEASE KEEP THIS MANUAL ABOARD YOUR BOAT

INTRODUCTION

The operation instructions which follow are for the model 103 stoves. The models in this series are the 103 which is the basic counter-top unit, and the 103B which includes a cutting board cover.

Kenyon Marine-Homestrand stoves have been en-

gineered exclusively for marine use. The design considerations and the materials used were dictated by the requirement for a reliable, long life and low maintenance stove, operating in a salt atmosphere.

INSTALLATION INSTRUCTIONS

Model 103 and 103B

Note: Installation should comply with ABYC Standard A-3, Recommended Practices and Standards Covering Galley Stoves and/or the "Fire Protection Standards for Motor Craft, NFPA, #302." Be sure to provide adequate ventilation, permanent and secure fastening of the stove and protection for all surrounding woodwork.

Cutout: A cutout with dimensions shown below is required. Make sure that no obstructions beneath countertop within two inches behind edge of cutout where rear of stove is to be located. Draw two lines as indicated on sketch to help center stove in cutout.

Insulation: Nail insulation to edge of wood in cutout. (See sketch below.) The entire cutout must be lined. A 4 ft. length of insulation is supplied with stove.

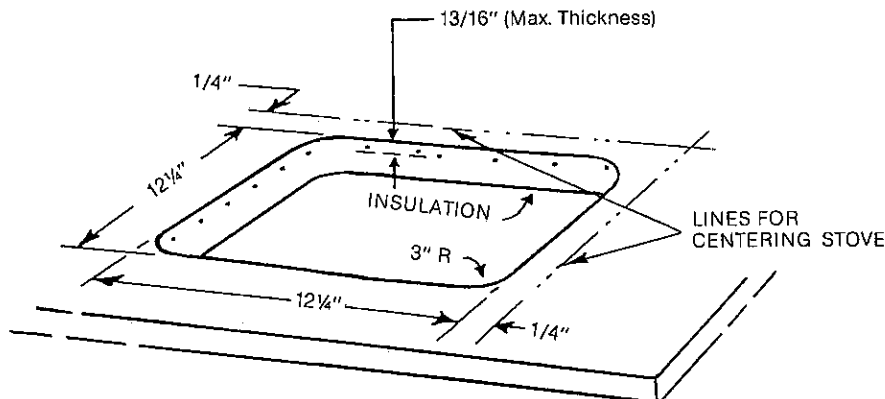
Stove Installation: Bring stove to either end of cutout. Raise stove end furthest from cutout so that stove is slanting, and slide lower end into cutout. Care should be exercised so as not to damage control wheel.

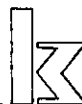
Center stove with help of lines already drawn on countertop. Mark centers of four fastening holes. Remove stove in same manner as inserted. Drill four holes with $\frac{3}{16}$ (.093) drill diameter. Reinstall stove and secure in each corner with #6 x $\frac{3}{4}$ " oval head wood screws.

Note: Before stove is secured a slight bowing may be noticeable on flanges. This is an intentional design feature to provide a tight seal around flange once stove has been tightly secured in each corner.

Clearance: The stove extends 6" below upper surface of counter. It is essential that the part of stove that is below counter be free of any objects that may come in contact with piping or bottom of stove since these parts are hot when stove is in operation.

Unless the construction of cabinet is such that no objects such as rags, papers or other combustible materials can come in contact with bottom of stove, a protective wire mesh basket or perforated metal enclosure must be installed. Wire mesh having adequate rigidity should be used to allow circulation of air. Solid metal should not be used.





OPERATING INSTRUCTIONS

Before attempting to operate stove, please read these instructions carefully and become thoroughly

familiar with the various parts of the stove and how they operate.

THEORY OF OPERATION

The burners use alcohol vapor for fuel. This gaseous fuel is produced by boiling liquid alcohol in the base of the burner by diverting some of the heat from the flame through the burner body.

In order to start a cold burner, it must first be heated above 180°F in order to produce the required vapor. This is usually done by burning a small amount (about ¼ oz.) of liquid alcohol in a special priming cup under the base of the burner. As the burner heats up, the liquid alcohol trapped in the burner boils, causing a flame to appear at the burner cap. If the priming cup is too full, the rising temperature also causes the priming alcohol to boil which produces a relatively high flame around the burner before it boils away. These conditions, usually termed "flare-up" are a natural consequence of the priming process and are usually not serious. A little

practice will show the correct amount of alcohol necessary to produce the required temperature. Too much alcohol will produce "flare-up" and too little will not bring the burner to a high enough temperature. A hot burner will produce a hissing sound when turned on. A cold burner will be silent or produce a squirting sound, and liquid alcohol will flow down into the priming cup. After priming, the burner must be lit before it cools off, or re-priming will be necessary.

Fuel: The burners are designed to use 95% **denatured ethyl alcohol**, which is commercially available as alcohol stove fuel. Caution: Do not use wood alcohol (methanol) or rubbing alcohol as they will not burn satisfactorily and burners will become clogged.

OPERATING COMPONENTS

The **fuel fill nipple** is located at the rear center of the stove. Note that it has a special cap which includes a pressure relief valve which effectively prevents excessive pressure buildup in the tank. This cap must never be replaced by any other type.

The **pump** is located at the front of the stove, and is used to pressurize the fuel tank. Satisfactory operation of the alcohol burners is obtained with the fuel supplied at a pressure 8 to 15 psig. An average of 15 to 20 strokes of the pump are required to obtain sufficient pressure, but this varies depending on the amount of fuel in the tank and more strokes may provide better burner operation.

The **burner control wheel** is located in the front flange of the stove. The control is moved to the ex-

treme right is the "off" position. The extreme left position, which is about six pushes of the control wheel, is the "clean" position. In this position, the internal mechanism of the burner causes a small wire to be pushed thru the burner nozzle, thereby removing any dirt which may have lodged there. The full "on" position of the control is about half way between the off and clean positions, or about 3 pushes of the control wheel. The burner may be operated at lower heats by moving the control to the right toward close. Cleaning the nozzle is normally performed while the burner is operating. Move the control to the extreme left then back to the center operating position. Be prepared to re-light the burner as the cleaning will often extinguish the flame.

BURNER OPERATION

Fill tank approximately ¾ full with denatured ethyl alcohol, using a funnel. Replace cap and tighten snugly.

Pump 15 to 20 times to pressurize tank.

To operate, burners must be preheated. Open the burner by moving the control three pushes to the left. This will allow liquid alcohol to flow from the burner. Close the burner after about three seconds by pushing the control back to the extreme left. About two Tbsp. of alcohol will have flowed from the burner and run down into the indentation in the cup at the base of the burner.

With the burner still off, ignite the alcohol in the priming cup.

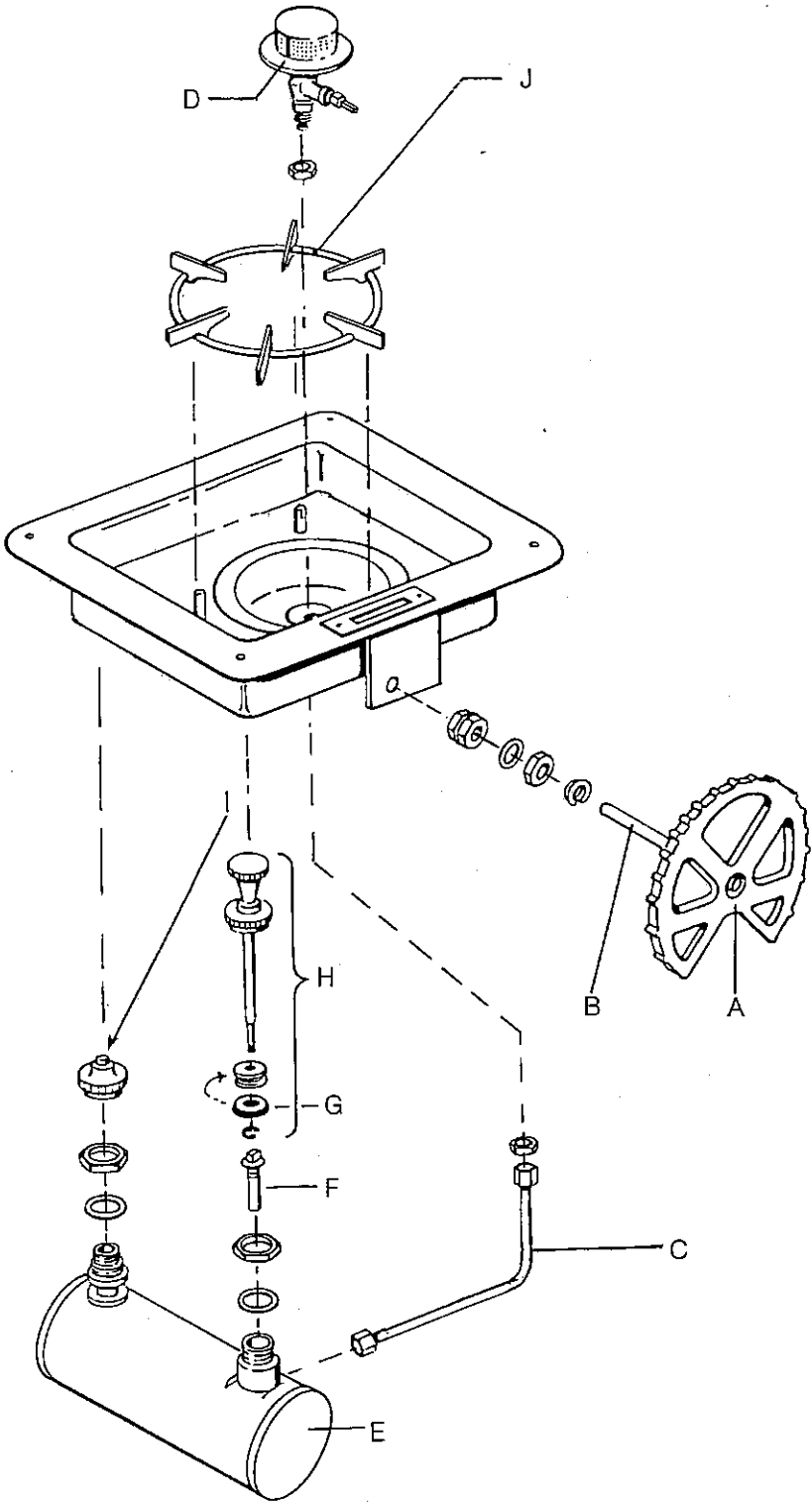
When the priming alcohol is completely consumed, open the burner control and light the vaporized alcohol at the burner cap.

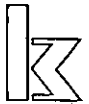
CAUTION: FLARE UP may occur during preheating and particularly if burner valve is opened before preheating is completed, and burner is not hot enough. Follow starting instructions carefully. If flare up occurs, shut off burner, allow flame to go out, then preheat again following instructions above.

Do not put cooking utensils on stove until burners are functioning properly.

When finished cooking, turn off burners and release pressure in tank by loosening filler cap.

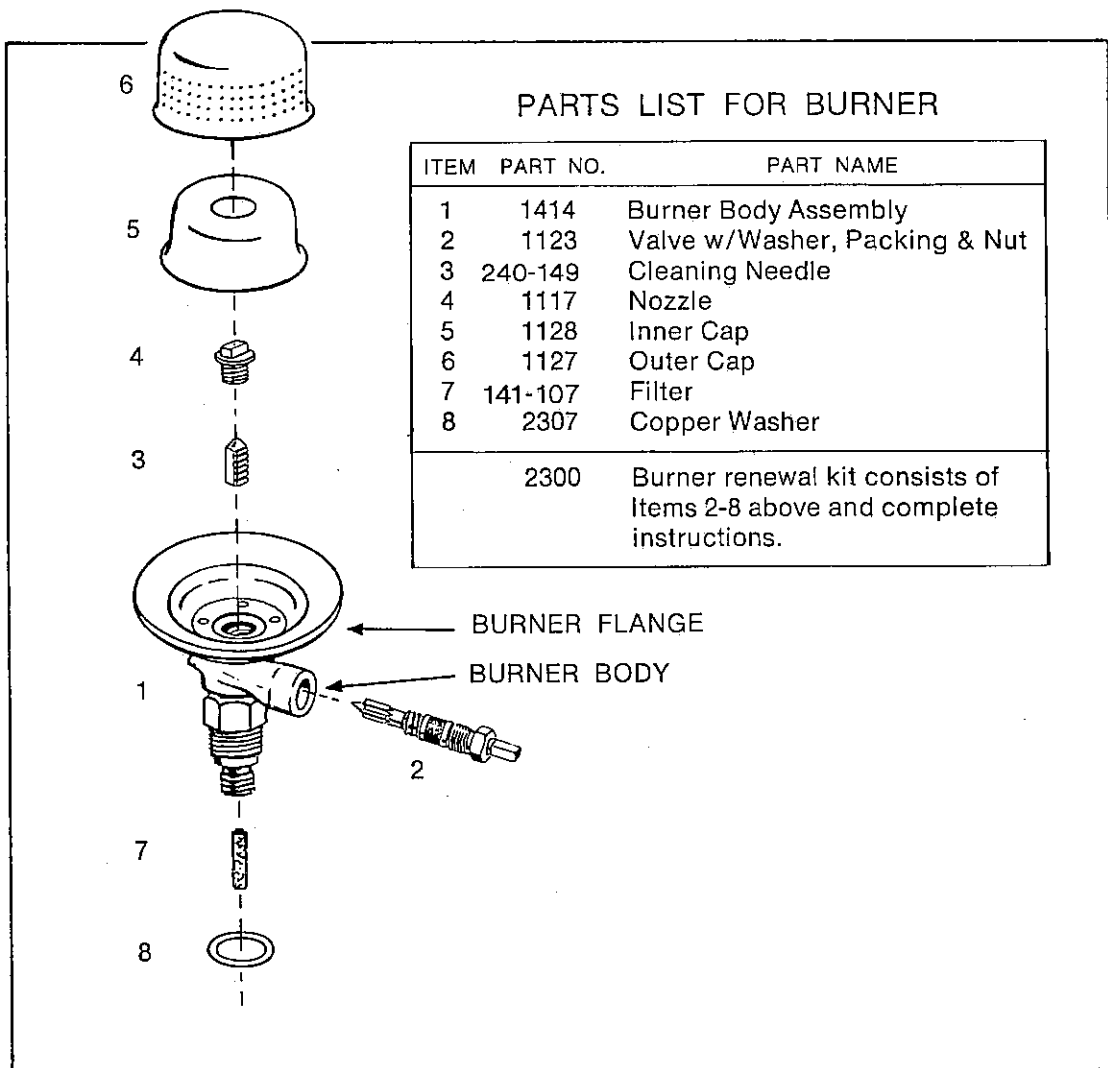
**IN CASE OF FIRE — USE WATER TO PUT OUT ALCOHOL FIRES.
SMOTHER GREASE FIRES OR USE A CLASS B FIRE EXTINGUISHER.**





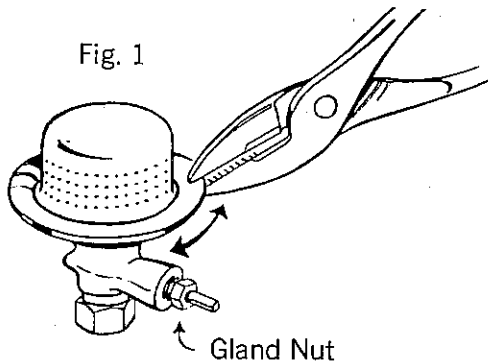
PARTS LIST

Item	Model 206	Model 209	Part Number	Part Name
A	X	X	H-1150	Control Wheel
B	X	X	H-1273	Stem
C	X	X	H-1152	Feed pipe
D	X	X	H-1322	Burner Assembly
E	X	X	H-1336	Tank Assembly
F	X	X	H-1332	Check Valve
G	X	X	H-1233	U-cup
H	X	X	H-1231	Pump Complete
I	X	X	H-1333	Cap
J	X	X	H-2162	Grate



HELPFUL HINTS FOR OPERATION AND MAINTENANCE OF YOUR MODEL 103 ALCOHOL STOVE

1. To obtain maximum performance from your new stove, it is extremely important that you use a quality grade denatured (ethyl) alcohol free from impurities or 91% isopropyl alcohol stove fuel (not rubbing alcohol) containing less than .003% by weight non-volatile matter. The majority of stoves returned to us for burner service are clogged from impure alcohol.
2. A properly operating burner will have a blue flame, with several rows of little flame tips. There should not be a yellow tip on the flame. The air-fuel ratio of the burner may be adjusted for most efficient operation. With burners lit, hold burner flange with a pair of pliers and rotate flange until the yellow flame tip is eliminated, see Figure 1.
3. A burner operating properly will boil two cups of water in a 2½ qt. (6½ inch), uncovered saucepan in seven to nine minutes.
4. If you notice a small flame where the control stem enters the burner, tighten the gland nut slightly until the flame no longer appears. This adjustment may have to be made after a few hours of burner operation, but then should require very little attention, see Figure 1.
5. If the pump bounces back when you try to pump, or if the pump handle is pushed all the way back out after a pump stroke, the check valve (F) at the base of the pump is defective and should be replaced. (A special H-525 wrench is required to replace check valve).



6. If you pump, and get little or no pressure in the tank, the pump U-cup (G) needs to be replaced.
7. If the burner lights properly, but goes out after a short time, you did not pump enough, or your filler cap leaks. Replace rubber gasket or relief valve assembly (I).
8. If no alcohol comes thru the burner when you attempt to prime, you have no pressure in the tank, or a filter clogged by dirty alcohol.

DO NOT ATTEMPT TO FILL BURNER FLANGE — PRIMING CUP IS BELOW BURNER BODY

HOW TO LIGHT YOUR KENYON ALCOHOL STOVE

<p>1 FILL TANK FILL ¾ FULL WITH ALCOHOL</p> <p>PLASTIC FUNNEL</p>	<p>2 PUMP PUMP 15-20 TIMES TO PRESSURIZE TANK</p>	<p>3 PREHEAT BURNER OPEN VALVE MOMENTARILY TO FILL PRIMING CUP ¾ FULL THEN ... CLOSE VALVE AND LIGHT ALCOHOL</p>	<p>4 LIGHT BURNER WHEN PRIMING ALCOHOL IS COMPLETELY CONSUMED OPEN VALVE AND LIGHT VAPORIZED ALCOHOL</p>
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KENYON™ STOVES

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