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406 MODEL

COMBINATION ALCOHOL/ELECTRIC

TWO BURNER STOVE

OPERATING INSTRUCTIONS and PARTS LIST



MODEL 406

PLEASE KEEP THIS MANUAL ABOARD YOUR BOAT

OPERATING INSTRUCTIONS

Safety Interlock and lidswitch are operated by the 3/4 inch button rear right on stove frame.

LIDSWITCH SAFETY SHUT OFF automatically pushes Safety Interlock Button to DOWN position when lid is closed, thus breaking the electric circuit.

CONTROLS are in rim of frame: for alcohol burners in front; for electric elements in the ends.

FOR ELECTRIC OPERATION Safety Interlock Button must be in UP position; this completes the circuit to the electric element controls and at the same time relieves pressure in the tank and causes alcohol burners to be inoperative.

Operation of Electric Elements: Lift Safety Interlock Button to UP position. Turn Electric Control in either direction to HIGH, LOW or any intermediate position for exact heat desired. A Pilot Light, one for each element, stays ON until control is turned to OFF position. When finished cooking, make sure both pilot lights are out and that electric controls are in OFF position.

FOR ALCOHOL OPERATION Safety Interlock Button must be in DOWN position; this breaks the electrical circuit and causes electric elements to be inoperative. It also closes tank vent, permitting pressure to build up.

TO FILL:

Turn all burners OFF. Allow stove to cool. Eliminate any potential source of ignition for alcohol vapor or liquid anywhere in boat. Slowly loosen fill cap 1/2-1 turn. Allow pressure to escape, then remove the fill cap. Fill the tank 3/4 full of approved stove alcohol fuel. Tank holds 4/5 quart. Never fill directly from large container.

Replace the fill cap. DO NOT use any other type cap, as cap includes a pressure relief valve. Wipe up any spills and wash wiper in water to remove alco-

hol. Check that burner controls are OFF (As far RIGHT AS THEY WILL GO).

TO OPERATE:

Pressurize tank by pumping 15 to 20 full strokes with tank air pump at center front of stove.

BURNERS MUST BE PREHEATED before they can be lighted. Fold up electric element. Carefully open one burner. Allow alcohol to flow into priming groove under burner until 3/4 full; about 1 fl. oz. Close burner and light priming alcohol with a match. When priming alcohol is burned up, turn control towards OPEN (to the left) and light burner with a match. When burner is operating properly, turn electric element back down onto grate ring.

CAUTION: FLARE-UP may occur during preheating, particularly if burner valve is opened before preheating is completed. If flare-up occurs, shut off burner and re-start per instructions.

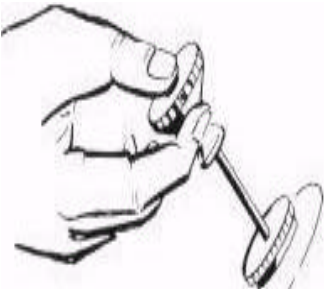
BURNER IS CONTROLLED by control wheel in front of each burner. Increase flame by turning left. Decrease flame by turning right. After use, vent tank. See "TO FILL" Instructions.

TO CLEAN BURNER NOZZLE, turn wheel all the way left, which removes deposits in nozzle. Flame may go out but this is NOT the closed position. Turn wheel again towards right, at the same time re-lighting burner with a match.

Before cleaning, push Safety Interlock Button to DOWN position, thus breaking the electrical circuit. If, stove does not operate properly, return stove to your dealer or the factory for servicing

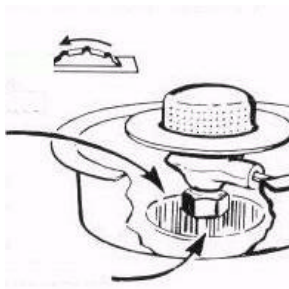
1 PUMP

PUMP 15-20 TIMES TO PRESSURIZE TANK



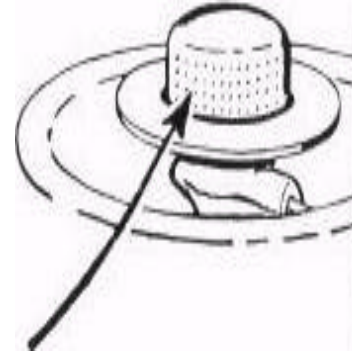
2 PREHEAT BURNER

OPEN VALVE MOMENTARILY TO FILL PRIMING CUP 3/4 FULL THEN...CLOSE VALVE AND LIGHT ALCOHOL



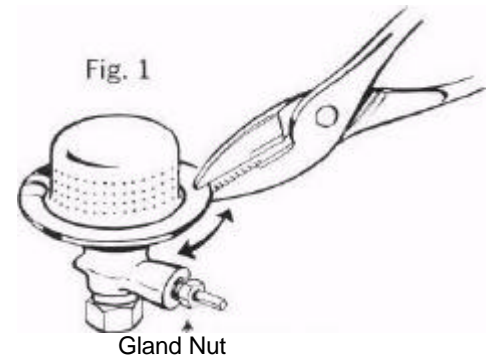
3 LIGHT BURNER

WHEN PRIMING ALCOHOL IS COMPLETELY CONSUMED OPEN VALVE AND LIGHT VAPORIZED ALCOHOL



HELPFUL HINTS FOR OPERATION AND MAINTENANCE OF YOUR 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% iso-propyl alcohol stove fuel (not rubbing alcohol) containing less than .003% by weight non-volatile matter. The majority of stoves returned to us for burner services 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 2 1/2 qt.(6 1/2 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 at the base of the pump (13B) is defective and should be replaced. Order Part No. H-1332.
6. If you pump, and get little or no pressure in the tank, the pump U-cup needs to be replaced. Order Part No. H-1233.
7. If the burner lights properly, but goes out after a short time, you did not pump enough, or your filler cap leaks.
8. If no alcohol comes through the burner when you attempt to prime, you have no pressure in the tank, or a filter clogged by dirty alcohol. The filter seldom clogs but when it does your stove must be serviced by trained personnel.



CHAPTER 4. COOKING, HEATING AND AUXILIARY APPLIANCES

40. Open flame devices are more liable to promiscuous, unskilled or ignorant operation than any other boat equipment involving fire risk. It is therefore imperative that such items are selected and installed with the aim of minimizing personal and physical hazards.

41. Cooking Equipment.

411. Galley stoves shall be manufactured, approved and labeled for marine use. Printed instructions for proper installation, operation and maintenance shall be furnished by the manufacturer. A durable and permanently legible instruction sign covering safe operation and maintenance shall be provided by the manufacturer and installed on or adjacent to the consuming appliance, where it may be readily read.

(a) Stoves shall be installed in adequately ventilated areas to comply with Paragraph 113.

(b) Stoves shall be securely fastened when in use and when stored.

(c) Any burner system that may affect safety, by reason of motion of the boat shall not be used.

(d) All woodwork or other combustible materials above stove tops and all woodwork or combustibles immediately surrounding stoves shall be effectively insulated with noncombustible materials or sheathing.

413. Alcohol, Fuel Oil and Kerosene Stoves.

(a) Either pressure or gravity fed burners are permissible.

(b) Fuel supply tanks shall be constructed of corrosion resistant metal with welded or brazed joints and fittings.

(1) Pressure tanks integrally installed with stoves shall withstand a test pressure of at least 200 pounds per square inch gage.

(2) Pressure tanks integrally installed with stoves shall be effectively protected from the heat of the burners.

(3) Pressure tanks for remote installation shall be approved and be able to withstand a test pressure of at least 100 pounds per square inch gage.

(4) Pressure tanks remotely installed shall be rigidly secured in an accessible location permitting convenient filling and pump operation.

(5) Gravity tanks shall be substantially secured and should be remote from stoves. In any event, they shall be so located or shielded that under continuous operation at maximum output, the temperature of contained fuel will not be substantially raised by heat from burners.

(6) No gravity tank shall have a capacity exceeding 2 gallons. Tanks of larger capacity shall be in accordance with Section 31.

(7) Gravity tanks should have provision for filling and venting outside galley space.

(c) When fuel tanks are remotely located, as is preferred for gravity feed systems, approved stop valves shall be installed close to tanks and fuel lines shall be installed with as few fittings as practicable between valves and stove connections.

(d) If solidified fuel is used, the containers shall be properly secured on a fixed base to prevent sliding or overturning in a sudden roll of the vessel.

INSTALLATION INSTRUCTIONS

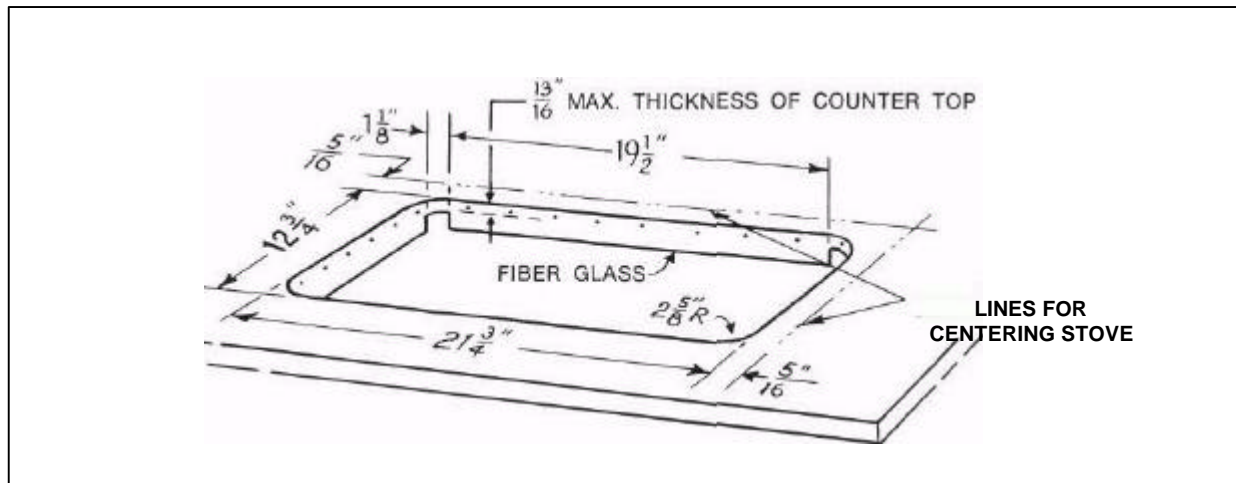
Model 406 Combination Alcohol/Electric Stove

WARNING: Installation should comply with applicable standards of the ABYC 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 in sketch is required. Make sure there are no obstructions beneath the countertop within 2 inches behind the edge of cutout where rear of stove is to be

located. Also check that total countertop thickness does not exceed 13/16". Draw two lines as indicated on sketch to help center stove in cutout.



FIBERGLASS LINING: Nail fiberglass to edge of wood in cutout. See sketch. The entire cutout must be lined. A 5 1/2 ft. length of fiber glass tape is supplied. Cut out lining at both rear corners as shown, up to lower edge of countertop wood. This is required to provide proper clearance for lid stays when lid is closed.

STOVE INSTALLATION: Open stove lid to locked position, swing the electric elements up and to the right, lift stove by alcohol burners and lower into cutout. Care should be exercised so as not to damage the control wheels.

Center stove with help of the lines already drawn on the countertop. Mark centers of the four fastening holes. Remove stove in same manner as inserted. Drill four holes with 3/32" (.093) drill diameter. Reinstall stove and secure in each corner with #6 x 3/4" oval head wood screws after power cable has been connected.

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

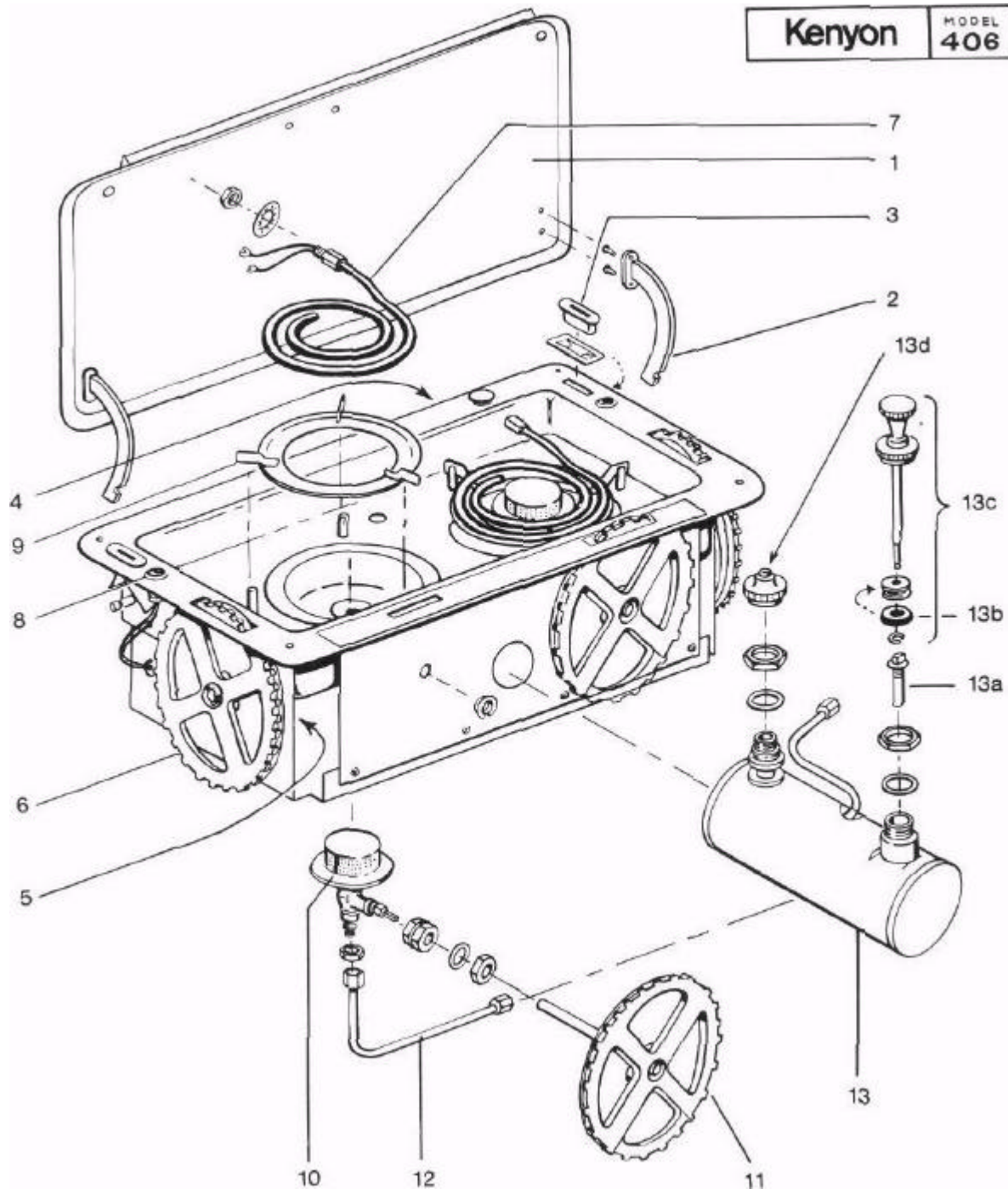
CLEARANCE: The stove extends 6" below upper surface of counter. It is essential that the part below counter does not come in contact with any objects, since it is warm when the stove is in operation.

ELECTRICAL DATA: 120 V AC, 20 amp max.
Power consumption:
2200 watts total
Supply wire #12

Use #12 3-wire Type SO rubber-insulated cable to connect the boat's shore power electrical circuit or 115 V AC alternator to terminal board in back of stove.

Remove back cover, push cable up through 1" hole below terminal board, using black plastic grommet to protect cable. Connect the ungrounded current-carrying conductor to terminal marked L₁; the neutral current-carrying conductor to terminal marked L₂, and connect ground wire (green) to the left terminal marked G. A cable clamp is provided to secure cable. Replace back cover after all connections have been made.

It is recommended that the supply conductors be protected with a double pole simultaneous trip circuit breaker rated at 20 amperes.



PARTS LIST — KENYON MODEL 406

Item	Part Number	Part Name
1	H-1276	Lid Complete
2	H-1057	Lid Stays
3	H-1064	Grommet and H-1193 Retainer
4	H-1928	Micro switch
5	H-1759	Control Switch - 120 volt
	H-1760	Control Switch - 220 volt
6	H-1947-1	Wheel Assembly left
	H-1947-2	Wheel Assembly right
7	240-360	Element Assembly - 120 volt
	H-2003-1	Element Assembly - 220 volt
8	H-1950	Pilot Light- 120 volt
	H-1814	Pilot Light-220 volt

Item	Part Number	Part Name
9	H-1911 M	Grate Assembly
10	H-1322	Burner Assembly
11	H-1150	Wheel
12	H-1152	Feed Pipe Assembly
13	H-1939-01	Tank Assembly
13a	H-1332	Check Valve
13b	H-1233	Pump U-Cup
13c	H-1231	Pump Complete
13d	H-1333	Fill Cap

