OPERATION INSTRUCTIONS

To Fill: Unscrew filler cap. Fill tank with good grade water-white kerosene using a funnel. Replace cap. Filler cap is equipped with a safety valve and must not be replaced by any other type cap.

To Start: Pump 20 or more times to pressurize fuel tank. Pump is located at front of stove.

To Operate: Burners must be preheated to produce kerosene vapor. Fill priming cup under burner ¾ full with alcohol stove fuel and ignite. When this alcohol is fully consumed, turn control wheel toward open position and light burner.

DO NOT PUT COOKING UTENSILS ON STOVE UNTIL BURNERS ARE FUNCTIONING PROPERLY.

CAUTION: FLARE-UP may occur during preheating and particularly if burner valve is opened before preheating is completed. Follow starting instructions very carefully. If flare-up occurs, shut off burner and re-start as per instructions “To Operate.”

To Shut off Burner: Turn control wheel to extreme right. Release pressure in tank by loosening filler cap.

To Clean Burner Nozzle: Turn control wheel to extreme left position. This will automatically clean deposits from nozzle. Then return to extreme right.

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

HOW TO LIGHT YOUR HOMESTRAND KEROSENE STOVE

1. FILL TANK
   Fill ¾ full with kerosene. Replace cap.
   - Plastic funnel.

2. PUMP
   Pump 15-20 times to pressurize tank.

3. PREHEAT BURNER
   Fill priming cup ¾ full of alcohol and light.

4. LIGHT BURNER
   When priming alcohol is completely consumed, open valve and light burner.
ALCOHOL BURNER RENEWAL KIT, H-2300

STOVE MODEL
126 and 205
206, 209 and 406

KIT PARTS LIST
2 Valve Spindle Assembly
3 Cleaning Needle
4 Nozzle
5 Inner Cap
6 Outer Cap
7 Filter
8 Washer

BURNER P/N
H-1324
H-1322

H-1123
H-1323
H-1117
H-1128
H-1127
H-1469
H-842 (H-2307)

LIST PRICE $10.00
KENYON MARINE TECHNICAL NOTE

SUBJ: Rebuilding Model 126 and 205 Alcohol Burner (H-1324) Model 206 and 209 Alcohol Burner (H-1322) using H-2300 Renewal Kit

NOTE: Before starting to disassemble the stove, completely empty the fuel tank. In the following discussion, refer to the parts list for item numbers in parentheses.

A. REMOVING THE TANK AND BURNER ASSEMBLY (Models 126, 205)

1. Remove the pin (10) holding the control knob stem (9) to the burner valve spindle (2). (Both burners)
2. Pull the control knob and stem assembly (9) out of the stove frame.
3. Remove the tank fill cap (L)
4. Remove the pump assembly (P) from the tank
5. Remove drip tray (Model 205 only) (E)
6. Remove the nut from the fill nipple (126 only)
7. Turn the stove upside down and remove the four nuts and bolts holding the feed pipe "U" clamps to the shield (205 only)
8. Lift the tank and burner assembly out of the stove frame

B. REMOVING THE BURNER (Models 126, 205)

1. Hold the burner fitting (1) in a vise and unscrew the burner from the burner fitting using a 3/4 inch open end wrench on the burner base.

C. REMOVING THE BURNER (Models 206. 209)

1. Open Lid (L) (or remove in accordance with step 6 if space behind stove permits removing lid while stove is installed).
2. Remove the grates from stove.
3. Relieve any tank pressure by loosening and retightening the filler cap (1). Turn burner control wheels (A) to the right or full closed position.

4. Remove the four screws that hold stove to counter.
5. Hold stove by the burners and slide stove to left or right and lift the opposite end so that the lid stay brackets (K) and the bottom of the stove will clear the end of the counter cut-out, then slide the stove out.
6. Remove the lid from the stove. To do this, open the lid to locked position. Place fingers under the left and right lid stay and gently lift; you can feel the stays snap out of the locking notches; as you lift, tilt lid backwards to remove from stove.
7. Turn the stove upside down and place it on a table with the control wheels towards you and with the front flange extending beyond table edge so the wheels do not rest on table.
8. With the stove in this position, you will notice a pin in the hub of each control wheel. At the same time, notice the position of the wheel with the burner closed as instructed under Step 3. When the control wheel is eventually reinstalled, it should be done in a reasonably similar position, i.e., so that the cross bar at the open wheel segment is approximately in vertical position.
9. Place a 3/32" dia. cylindrical punch on the pin of each control wheel and carefully drive pins out.
10. Grip the control stem (B) with pliers between the nylon guide bushing and the fitting on the burner cup. Turn the wheels on the control stem to the right (clock-wise) until the cross bar at the base of open wheel segment is parallel with the flange, and no portion of wheel protruding through the flange. The purpose of holding the stem with pliers is to prevent it from rotating and possibly overstraining the valve when turning the wheel since there might be burrs from the original drilling for the pin through the wheel hub and control stem.
11. While holding the control stem (B), pull-off the wheel (A).
12. Pull out the control stem (B).

13. Remove the fuel pipe (C) by loosening the nuts at each end of pipe. Note 2 compression sleeves.

14. Turn the stove to a vertical position resting on its rear flange and hold it by the burner that is to be removed. Use a 3/4" wrench to unscrew the burner nut under burner cup.

D. REMOVING THE FILTER (All Models)

1. Hold the burner (1) upside down in a vise by clamping on the burner base.

2. Obtain a No. 16 or a No. 17 or an 11/64 diameter drill.

3. Mark the length of the filter (7), 5/8", on the drill by wrapping with masking tape

4. Drill into the exact center of the sintered bronze filter element. Drill to only 1/2 the depth of the filter element (approx. 5/16 in.). Drill carefully, as the filter element itself will drill easily with a sharp drill.

5. Remove the burner from the vise and attempt to tap the filter element out of the burner base.

6. If the filter element cannot be removed, clamp the burner in the vise and drill to the full filter depth (5/8 in. as previously marked on the drill). DO NOT GO DEEPER, AS THE BURNER WILL BE DAMAGED.

7. Carefully clean all foreign particles out of the burner base. A blast of compressed air is recommended.

E. DISASSEMBLING THE BURNER (All Models)

1. Remove the outer burner cap (6) by prying up with the corner of a screwdriver.

2. Lift off the inner burner cap (5).

3. Unscrew the burner nozzle (4). A special wrench, H525, is recommended.

4. Remove the cleaning needle (3) by turning the burner valve spindle (2) counterclockwise. This will disengage the cleaning needle gears from the valve spindle and the cleaning needle will drop out when the burner is turned upside down.

5. Unscrew the gland nut (2) from the burner body using a 3/8 in. wrench

6. Turn the burner valve spindle (2) counterclockwise until the threads disengage from the burner body (1) and the spindle can be pulled out. The packing and washers will come out with the valve spindle.

F. INSTALLING THE NEW FILTER (All Models)

1. Make sure the burner is free from foreign matter inside. A compressed air blast is recommended.

2. Push the new filter (7) into the burner base.

Omit Step 3, when installing rolled screen filter. Rolled screen is recommended as replacement for sintered filter.

3. With a center punch, peen inside the burner base in three places around the end of the filter. Only enough metal must be displaced to prevent the filter from falling out of the burner base.

G. INSTALLING THE NEW VALVE SPINDLE (All Models)

1. Insert the new valve spindle assembly (2) into the burner and screw it in as far as it will go. The gear on the valve spindle should show all the way across one side of the hole in the body when looking down from the top.

2. Push in the washers and packing, and install the gland nut.

3. Rotate the control stem back and forth and tighten and gland nut until the packing is seated and a slight but definite resistance can be felt when turning the control stem.

H. INSTALLING THE CLEANING NEEDLE (All Models)

1. Turn the control stem (2) clockwise until the burner is closed and the needle valve is seated.
2. Put the cleaning needle (3) into the burner with the teeth facing the gear of the valve spindle (2). It is convenient to hold the cleaning needle by inserting the wire into the eraser of a pencil.

3. Rotate the control knob counterclockwise slowly while lightly pushing the cleaning needle down into the burner so that the lowest rack tooth rests against the teeth of the valve spindle. As each tooth of gear moves by, a "click" can be heard and felt in the cleaning needle. Stop turning the valve spindle after five "clicks".

4. Now rotate the control stem (2) clockwise slowly so that the cleaning needle and valve spindle teeth engage. As the control stem (2) is rotated further clockwise to the closed position, the cleaning needle (3) will be drawn down into the burner. No increase in resistance should be felt. If the needle jams, remove the needle and try again from Step 1.

5. Note: When the burner valve (2) is fully closed, check that the top tooth of the cleaning needle rack (3) is still above the center of the gear on the valve spindle (2). If the cleaning needle (3) is too deep in the burner; it may bottom out before the needle valve (2) has closed completely. If not sure, repeat the procedure from Step 1, being sure that only five clicks are heard in Step 3.

4. Place the inner cap (5) in position on the burner.

5. Place the outer cap (6) in position and snap it into place. A slight tap with a wood block or screwdriver handle may be required to seat the cap.

I. INSTALLING NOZZLE AND CAPS (All Models)

1. Screw the new nozzle (4) in place and tighten firmly. The use of wrench H-525 is recommended.

2. Turn the valve spindle (2) to the closed position.

3. Turn the valve spindle (2) counterclockwise until it stops. This should be just over 1/2 turn of the valve spindle. If less than 1/2 turn is found from fully closed to "clean" position, the cleaning needle has not been properly installed, and that assembly should be performed again. In the "clean" position, full counterclockwise, the cleaning wire (3) should be seen protruding slightly thru the nozzle hole.

4. Place the inner cap (5) in position on the burner.

5. Place the outer cap (6) in position and snap it into place. A slight tap with a wood block or screwdriver handle may be required to seat the cap.

J. ASSEMBLING THE BURNER TO TANK (Models 126, 206)

1. Hold the tank assembly in a vise by clamping to the burner fitting (1).

2. Install the new washer (8) on the burner base (G).

3. Place the priming cup (H) onto the burner base (G).

4. Screw the burner (G) into the burner fitting (1) as far as it will go by hand. Check that the priming cup (H) is still in proper position. Tighten the burner (G) with a 3/4 in. wrench until the copper washer (8) just begins to be compressed. From this point on, the burner must be turned at least 1/2 turn to make a tight seal, and then
further until the valve spindle (2) is pointing toward the pump end of the tank and is parallel with the tank.

K. ASSEMBLING TANK AND BURNER TO FRAME (Models 126, 205)

1. With frame upside down, slide tank and burner assembly into place with the fill nipple and pump nipple thru the holes in the frame.
2. Install the “U” clamps around the feed pipes (J) and bolt to the shields (205 only)
3. Turn the stove right side up and install the nut on the fill nipple (126 only). Tighten securely.
4. Install the pump (P) into the pump nipple.
5. Install the control knob and stem (F) thru the stove frame and over the square end of the valve spindle (2).
6. Turn the control knob (F) so that the label on the knob is right side up. Holding the control stem (F) firmly, drill a hole thru the valve spindle (2) using the holes in the control stem as a pilot. Use a No. 51 (.067) drill.
7. Install the control stem lock pin (10)
8. Refill the tank with alcohol and replace the fill cap (L)
9. Test burn the burner. After a few minutes of burning, check the valve spindle g&and nut (2) for leaking vapors and tighten it gently to provide a positive seal.

L. INSTALLING THE BURNER IN STOVE FRAME (Models 206, 209)

1. Place stove on a table on its rear flange while facing end of stove, with top of stove to your left, support it against something to keep it there.
2. Pick up a burner and make sure the burner valve (2) is closed. 
Closed position is extreme right (clockwise) position of the burner valve. Check this carefully by placing pliers on the square of the burner valve; do not over tighten. Place the copper washer (8) on the 9/16” thread at base of burner.
3. Insert the burner through the burner hole and install the 9/16” burner nut with 3/4 hex, then hand tighten only.
4. Pick up control stem (B) and dip the square hold end in oil.
5. Push the control stem (B) through the nylon bushing and through the fitting in the burner cap while at the same time rotating it to ease installation. Engage the square on the burner valve shaft (2).
6. Position the control wheel (A) on the stem (B) with open wheel segment facing slot in flange: push control wheel on stem and rotate wheel right (clockwise) 90° or until cross bar at base of open wheel segment is approximately at right angle to flange (see Part “A” step 10 preceding).
7. Now, while holding the 11/16” hex nut on the control stem (B) inside burner cup, loosen the nut with 5/8” hex outside burner cup slightly, using open end wrench, so the control fitting can slide sideways. Now turn the burner (D) slightly and you will see that the control wheel (A) changes angle in the slot. Line up the control wheel parallel in the slot and tighten the 3/4” hex burner nut, making sure that in so doing the burner is not further twisted and that the control wheel remains parallel in the slot.
8. Retighten the 5/8” hex control fitting nut outside the burner cup.
9. Turn stove upside down again as described in Step 7, Part “A”, describing removal of the wheel and at the same time make sure that it is against inside edge of the slot in the flange. This is important for when the burner is open, the control wheel moves outward. Hold the wheel to prevent it from rotating, drill a hole for a new pin with No. 39 drill and install the pin.
10. Reinstall fuel pipe. Place 2 nuts and 2 compression sleeves on each end of pipe.
11. Install grates on grate studs.
12. Install the lid by placing lid stays in slots and rotating lid closed.