

KENYON®

INSTRUCTION MANUAL

for

Alcohol Burner Renewal Kit B93025

for

Models 126, 205, 206, 209 and 406

7/98

KENYON

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Kenyon Technical Note

Subject: Rebuilding Model 126, 205, 206, 209 and 406 Alcohol Burner 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 parenthesis. Please read entire manual before starting.

A. REMOVING THE TANK AND BURNER ASSEMBLY 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 (I) 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, 406)

1. Relieve any tank pressure by loosening and retightening the filler cap (I). Turn burner control wheels (A) to the right or full closed position.
2. Remove the four screws that hold stove to counter.
3. 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.
4. 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.
5. Remove the grates from the stove.
6. Remove bottom pan assembly (406 only)

7. Turn the stove upside down and place it on a table with the control wheels toward 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 (clockwise) 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. Remove the fuel pipe (C) by loosening the nuts at each end of pipe. Note 2 compression sleeves.
13. Turn the stove to a vertical position resting on its rear flange and hold it by the burner that is to be removed. Use 3/4" wrench to unscrew the burner nut under burner cup.
14. Pull out the control stem (B).

D. REMOVING THE FILTER

1. Hold the burner (1) upside down in a vise by clamping on the burner base.
2. Some models use a rolled screen filter which can be simply pulled out of the burner base using needle nose pliers, then skip to Step 8. Other models use sintered filter requiring Steps 3 through 7 for removal.
3. Obtain a No. 16 or No. 17 or an 11/64 diameter drill
4. Mark the length of the filter (7), 5/8", on the drill by wrapping with masking tape.
5. Drill into the exact center of the sintered bronze filter element. Drill to only 1/2 the depth of the filter element (approximately 5/16 in.). Drill carefully, as the filter element itself will drill easily with a sharp drill.
6. Remove the burner from the vise and attempt to tap the filter element out of the burner base.
7. 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.**
8. 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 Alcohol Models)

1. Make sure the burner is free from foreign matter inside. A compressed air blast is recommended.
2. Push the new rolled screen filter (7) into the burner base. Rolled screen is recommended as replacement for sintered filter.

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 the 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 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 pin 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. 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.

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 clean wire (3) should be seen protruding slightly through 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, 205)

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)

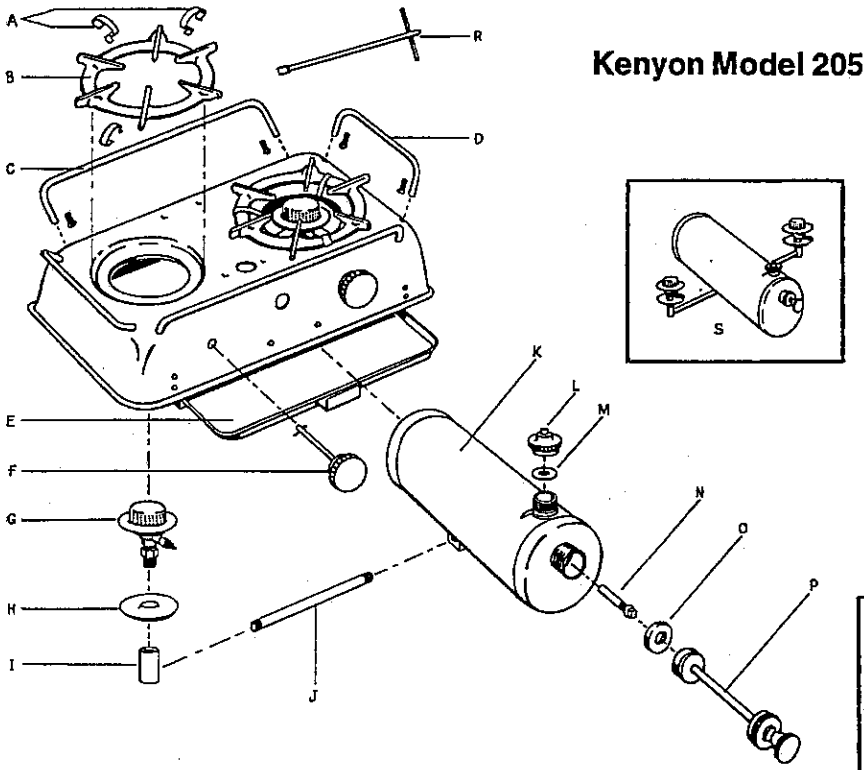
1. With frame upside down, slide tank and burner assembly into place with the fill nipple and pump nipple through the holes in the frame.
2. Install the "U" clamps around the feed pipes (J) and bolt to the shields (205 only).
3. Turn the stove right side up and install the nut on the fill nipple (126 only). Tighten securely.
4. Install the pump (P) into the pump nipple.
5. Install the control knob and stem (F) through 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 through 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. Pressurize the stove and check for leaks.
10. Test burn the burner. After a few minutes of burning, check the valve spindle gland nut (2) for leaking vapors and tighten it gently to provide a positive seal.

L. INSTALLING THE BURNER IN STOVE FRAME (Models 206, 209, 406)

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 cup 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 wrenches 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 1 nut and 1 compression sleeve 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.

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Kenyon Model 205

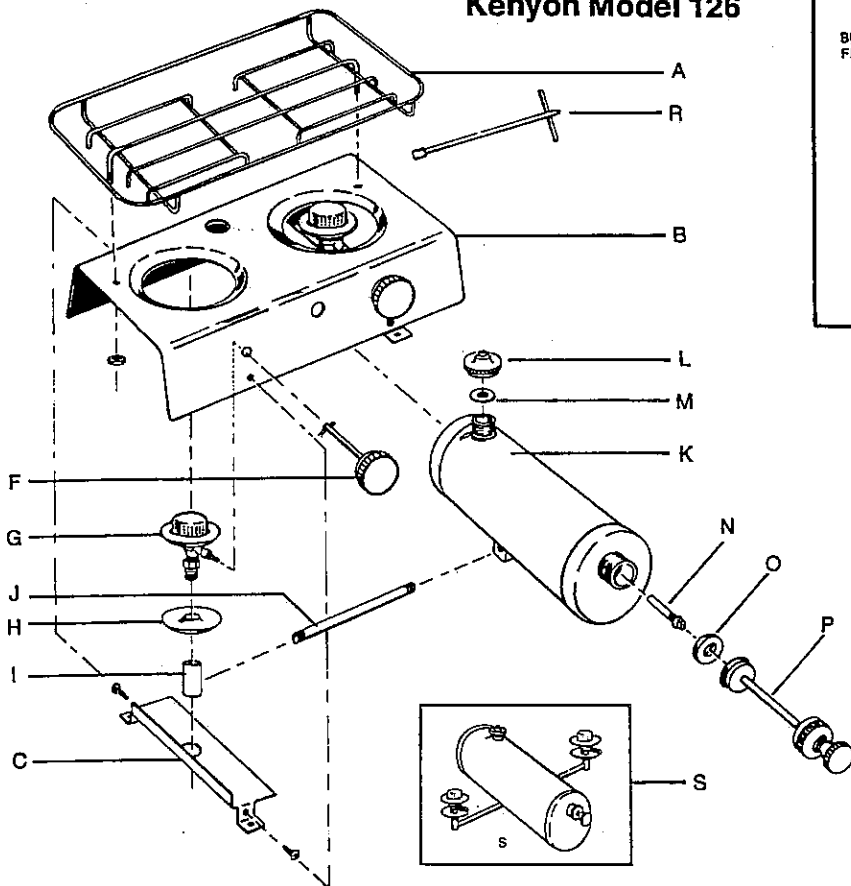
ITEM	PART NO.	PART NAME
A	2176	Clip, Grate
B	2162	Grate
C	1012-1	Long Guard Rail with Screws
D	1012-2	Short Guard Rail with Screws
E	2304	Drip Tray
F	1656	Control Knob & Shaft
G	1324	Alcohol Burner
H	1673	Priming Cup
I	1282	Burner Fitting
J	1018-1	Feed Pipe
K	1335	Tank Body Assembly
L	1333	Filler Cap w/Relief Valve & Packing
M	1221	Packing, Filler Cap
N	1332	Pump Check Valve, Complete
O	1233	Pump "U" Cup
P	1231	Pump, Complete w/"U" Cup
R	525	Wrench, Nozzle & Check Valve
S	1979	Tank Burner Unit, Complete

H-1324 Burner

Assemble burner in numerical sequence by item number.

ITEM	PART NO.	PART NAME
1	1415	Burner Body Assembly
2	1123	Valve w/Washer, Packing & Nut
3	1029	Cleaning Needle 240149
4	1117	Nozzle
5	1128	Inner Cap
6	1127	Outer Cap
7	141-107	Filter
8	2307	Copper Washer
9	1656	Control Knob & Shaft
10	2302	Pin, Control Shaft

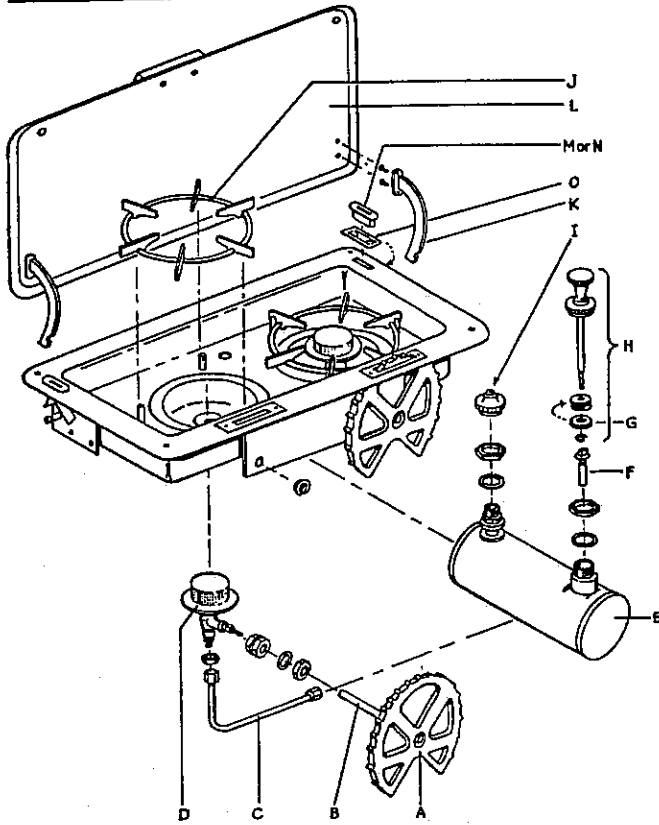
Kenyon Model 126



ITEM	PART NO.	DESCRIPTION
A	H-1665	Grate
R	H-525	Tee Wrench
B	H-1664	Frame
S	H-2457	Tank Burner Assembly
L	H-1333	Fill Cap
M	H-1221	Packing (Fill Cap)
N	H-1332	Check Valve
O	H-1233	"U" Cup
P	H-1231	Pump Comp. w/"U" Cup
K	240-126	Tank
F	H-1658	Control Knob w/Stem
J	H-1667	Feed Pipe
G	H-1324	Burner
H	H-1673	Priming Cup
I	H-1282	Burner Fitting
C	H-1595	Leg

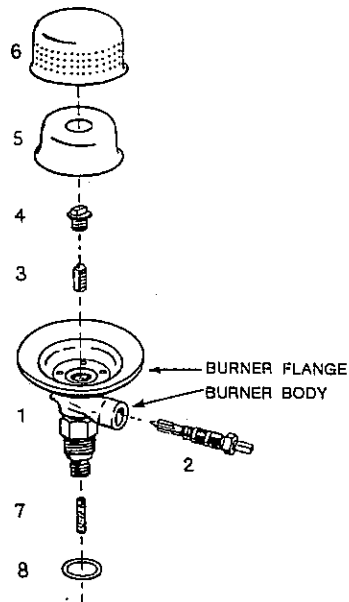
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Kenyon Models 206 and 209



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
K	X	—	H-1057	Lid Stay
L	X	—	H-1276	Lid Complete
M	X	—	H-1064	Bushing
N	—	X	H-1743	Hole Cover
O	X	—	H-1193	Spring Lock

H-1322 Burner



ITEM	PART NO.	PART NAME
1	1414	Burner Body Assembly
2	1123	Valve w/Washer, Packing & Nut
3	1323	Cleaning Needle
4	1117	Nozzle
5	1128	Inner Cap
6	1127	Outer Cap
7	141-107	Filter
8	2307	Copper Washer
2300		Burner renewal kit consists of items 2-8 above and complete instructions.