

Kenyon

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HOMESTRAND ALCOHOL STOVE, MODEL 500 505

Instructions and Parts List

The Kenyon Homestrand Model 500 Series stoves are compact gimbal mounted alcohol fueled stoves with integral oven, using the famous Homestrand alcohol burner throughout. The Model 500 stove has two top burners, while the Model 505 has three. The stoves are designed to operate from an external source of alcohol fuel such as the Model H-1000 fuel tank. Standard equipment includes all mounting hardware, flexible fuel connecting hose, two utensil grips, and oven thermometer. The cook top is entirely surrounded by a strong sea rail to help keep cooking utensils secure. The oven door includes a small window with guard.

SPECIFICATIONS

FUEL: Denatured 95% ethyl alcohol stove fuel or 91% iso-propyl alcohol stove fuel containing less than 0.003% by weight non-volatile matter.

FUEL SUPPLY PRESSURE: 10 psig nominal, 35 psig maximum.

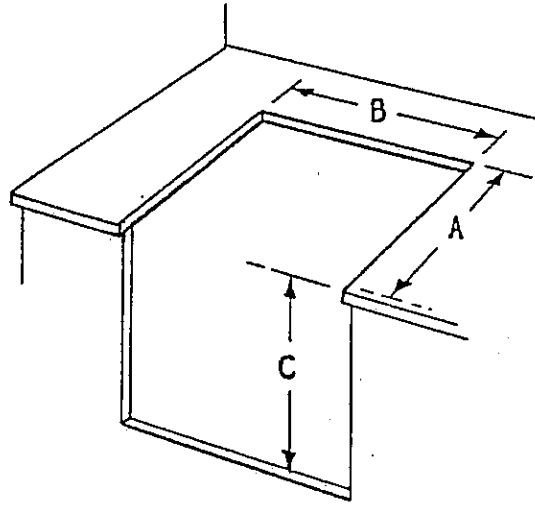
BURNER OUTPUT: 2800 BTU/hr. (Ethyl Alcohol)
3000 BTU/hr. (Iso-propyl Alcohol)

	<u>H500</u>	<u>H505</u>	
TOP AREA:	12 1/4	15 1/2	Deep
	20 1/2	20 1/2	Wide
OVEN CAPACITY:	11 1/4	14 3/4	Deep
	15	15	Wide
	9 1/2	9 1/2	High
RANGE OUTLINE:	16 1/2	19 1/2	Deep
	21 1/2	21 1/2	Wide
	21 1/2	21 1/2	High
SHIPPING WEIGHT:	60	65	lb.
	7.5	7.5	cu. ft.

INSTALLATION

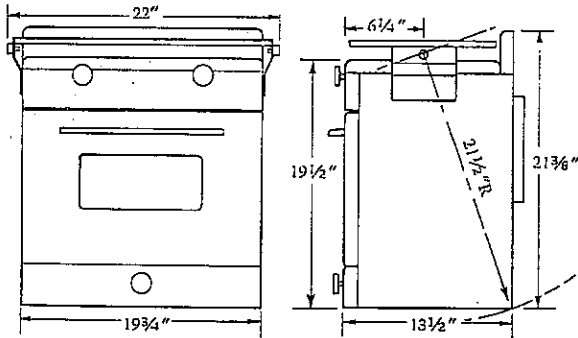
Select a location for your Model 500 stove which permits adequate ventilation and yet which is sheltered from excessive exposure to wind or rough handling. The ranges are normally mounted facing athwartships in a counter recess. Installation should be in accordance with applicable sections of NFPA Code, No. 302 which are reproduced elsewhere. Copies of the code may be obtained from - National Fire Protection Association, 470 Atlantic Avenue, Boston, Massachusetts, 02210 at \$2.00 each. The stove must be permanently and securely fastened, and surrounding materials must be protected from fire.

CUTOUT Prepare the counter as shown in the Figure. The dimensions shown in the accompanying table are determined from the dimensions of the range with an allowance for a 45° swing either side of vertical. Note that at 45°, the rear edge of the stove extends back 12 inches from the vertical position and the forward edge extends 13 inches forward of the vertical position. The cutout must be sheathed with fireproof material for safety, ease of cleaning, and to prevent pressure differentials from communicating through cabinetry into the stove.

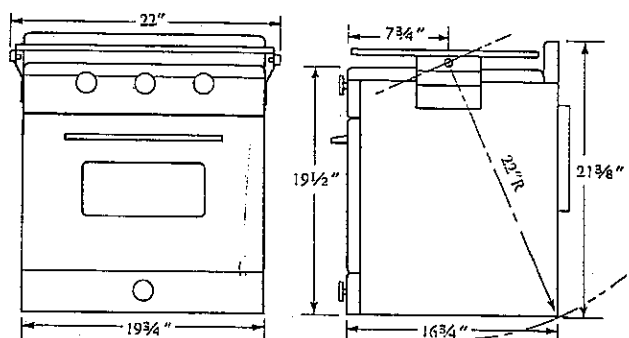


	A	B	C
H500	20"	22"	22"
H505	24"	22"	23"

MODEL 500



MODEL 505



MOUNTING Determine the location of the gimbal pins and mount them on either side of the cutout with the screws in a horizontal plane. Dismount one pin and temporarily tape it to the gimbal bracket with the pin through the center hole. Before mounting the stove it is usually easier to attach the flexible hose as described below. Position the stove on the mounted gimbal pin and remount the other pin through the 2 access holes provided in the gimbal bracket.

FUELING Connect one end of the flexible fuel hose to the distribution block at the rear left top corner of the stove. Experimentally determine the mounting position for the other end which allows free swing of the stove without binding or abrasion. Connection to the remote alcohol supply may be direct, or through 1/4" OD tube using 45° SAE flare fittings. Secure the flexible hose with a suitable clamp to prevent fatigue damage to the copper tubing if used.

**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 be 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.

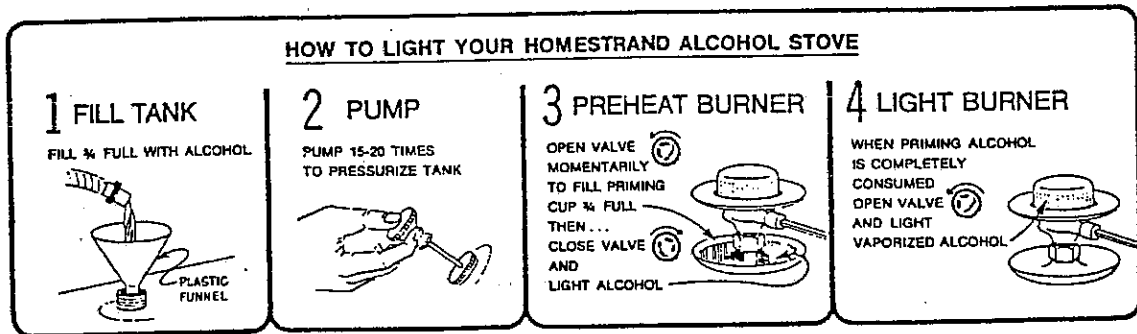
OPERATION

PREPARATION

Alcohol for the Model 500 Series stoves is supplied from a remote pressurized tank. Before operating the stove, check that all top burners and oven burner are closed (fully clockwise). Close the alcohol vent cap and pressurize the tank to approximately 10 pounds.

TO LIGHT A BURNER

The burner must be primed (heated) to operating temperature before use. After hot it operates like a regular gas burner. If allowed to cool, the burner must be re-primed.



CAUTIONS

1. Do not put utensils over the burner until it is operating.
2. Do not try to fill the burner flange. The priming cup is located at the bottom of the burner.
3. If too much priming alcohol is used, the flame will flare up. If too little is used, the burner will not get hot enough.

TO SHUT OFF A BURNER

Turn control wheel all the way to the clockwise position. The burner may be used again without priming if hot enough. Otherwise it will have to be primed.

TO CLEAN A BURNER

The burner orifice may be cleaned by rotating the burner control to the extreme counter-clockwise position, and then returning to the clockwise position.

OVEN OPERATION

The oven heat is generated by an alcohol burner located under the baffle plates at the bottom of the oven. Operation of this burner is the same as described above, except that the baffles must be raised to prime the burner. Temperature control is by manual adjustment of the burner flame with the control under the oven door.

CAUTION

Care should be taken not to let the burner go out while adjusting because of the difficulty of relighting it.

IN CASE OF FIRE

USE WATER TO PUT OUT ALCOHOL FIRES.

SMOTHER GREASE FIRES OR USE BAKING SODA
OR A CLASS B FIRE EXTINGUISHER.

THEORY OF OPERATION

Model 500 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.

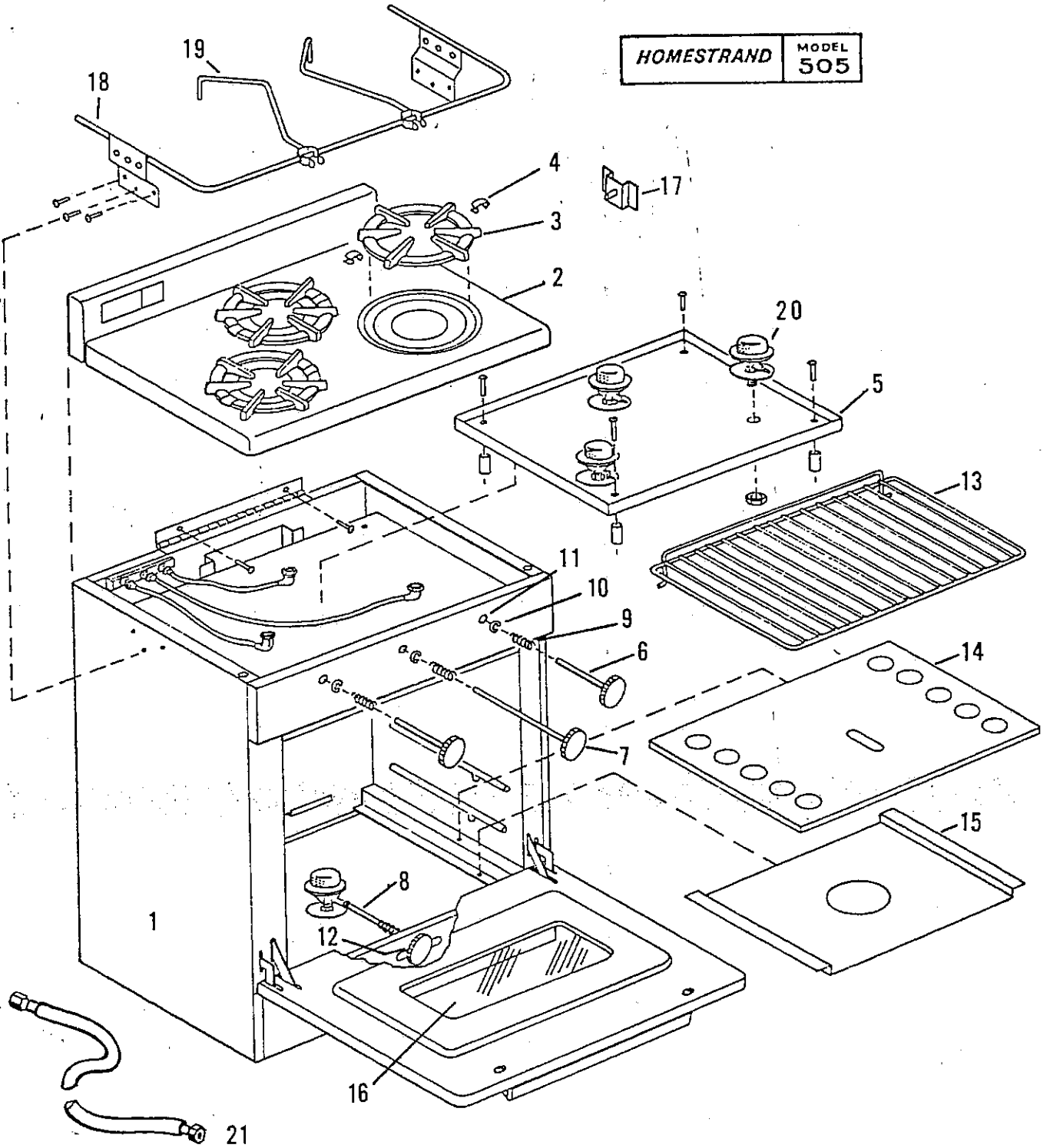
In order to start a cold burner, it must first be heated above 180°F in order to produce the required vapor. This is usually done by burning a small amount (about 1/4 oz.) of liquid alcohol in a special priming cup under the base of the burner. As the burner heats up, the liquid alcohol trapped in the 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.

When operating, liquid alcohol is delivered under pressure from the supply tank to the burner base. The liquid makes contact with the hot strainer (7), and boils, producing alcohol vapor, which travels through the body (1), through the metering valve (2), and through the orifice (4). Air is drawn up through the air holes in the flange, mixes with the vapor and passes through the outer cap (6), where it burns. As the metering valve opens, a cleaning rack (3) moves up toward the orifice (4). The arrangement is such that about 1/2 turn after opening, the clearing needle passes through the orifice, clearing out the hole.

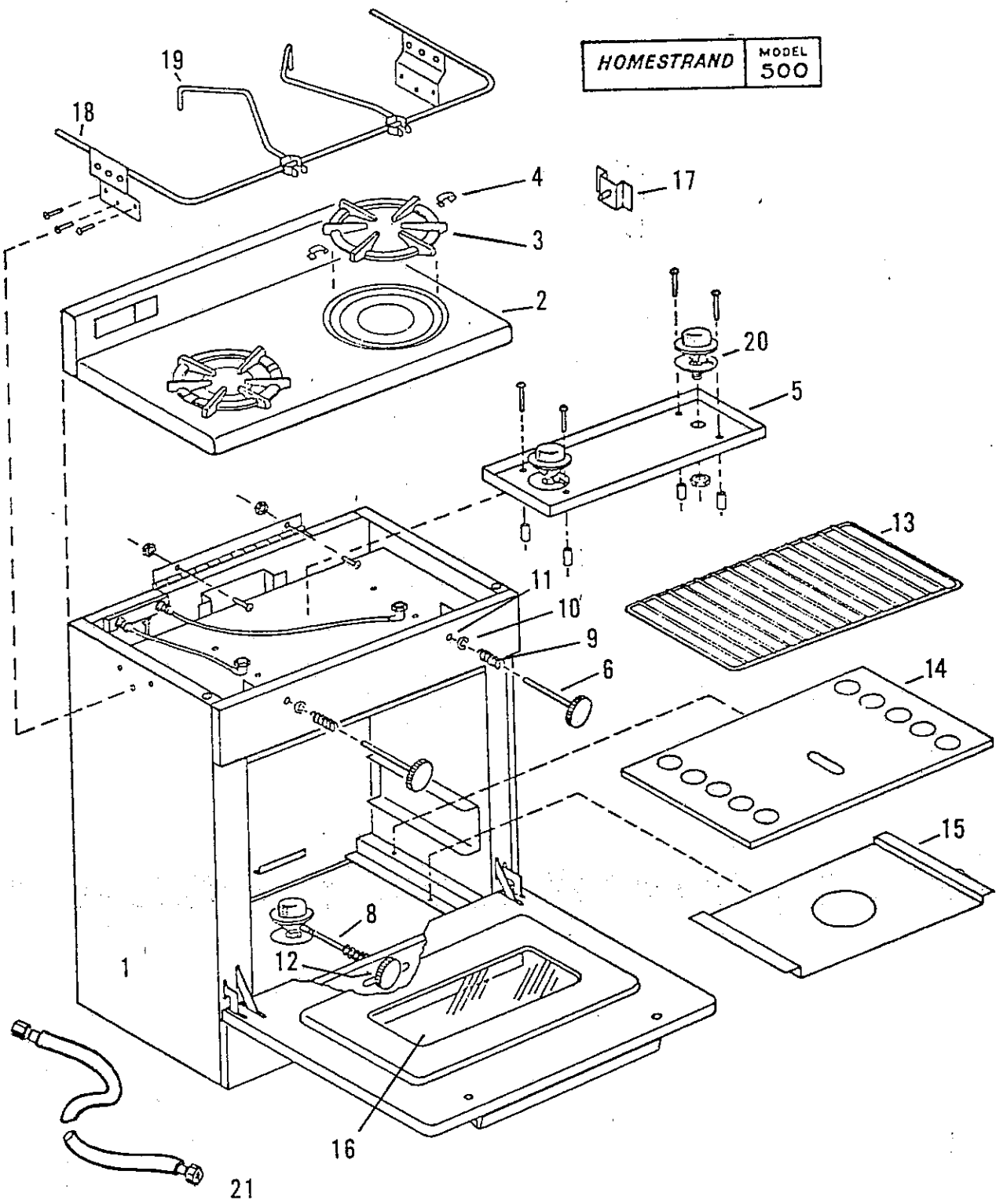
STOVE PARTS LIST

ITEM	DESCRIPTION	MODEL 500		MODEL 505	
		Qty	Part #	Qty	Part #
1	Left Side Panel	1	H2312-1	1	H2313-1
	Right " "	1	H2312-2	1	H2313-2
2	Top	1	H2314	1	H2315
	Backsplash Panel	1	H2316	1	H2316
3	Grate	2	H2162	3	H2162
4	Grate Clip	6	H1018-4	9	H1018-4
5	Drip Pan	1	H2011	1	H2005
6	Knob, Front Burner	2	H2020	2	H2020
7	Knob, Rear Burner	-	-	1	H2021
8	Knob, Oven	1	H2022	1	H2023
9	Spring	3	H2017	4	H2017
10	Retainer	3	H2016	4	H2016
11	Liner	2	H1699	3	H1699
12	Washer	1	H2049	1	H2049
13	Oven Shelf	1	H2118	1	H2120
14	Oven Burner Cover	1	H2119	1	H2121
15	Oven Air Baffle	1	H2097	1	H2098
16	Oven Window	1	H2160	1	H2160
	Oven Window Guard	1	H2052	1	H2052
17	Gimbal Pin	2	H1994	2	H1994
18	Sea Rail	1	H2007	1	H1987
19	Left Utensil Holder	1	H2009	1	H2009
	Right " "	1	H2026	1	H2026
20	Burner	3	H2000	4	H2000
21	Hose	1	H2047-1	1	H2047-1

HOMESTRAND MODEL 505



HOMESTRAND MODEL 500



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H2298 Orig.