FRIGIDAIRE SERVICE

Tech-Talk

Quality Products — Backed by Quality Service

Volume XI, No. 9 | APPLIANCE-RANGES | April 1960



82-160-05 Rev. 11/64
(Reprint 3/74)

© 1960, General Motors Corporation (2504)

Litho in U.S.A.

$1.25 Per Single Copy

INDEX

1960 FLAIR RANGES

Models RCDB-630, RCDB-640, RCIB-635, RCIB-645

Item	Vol.	No.	Page
Construction and Features	XI	9	R-168
Base Cabinets	XI	9	R-173
Broil Control Switch, RCIB Models —Testing	XI	9	R-178
Control Panel	XI	9	R-172
Cook-Master	XI	9	R-184
Electrical Distribution to Oven Units —Left-Hand Oven—40" Models	XI	9	R-184
—Thermostat BAKE Position	XI	9	R-184
—Thermostat BROIL Position	XI	9	R-184
Fluorescent Lamp	XI	9	R-173
—Lamp Operation	XI	9	R-189
—Lamp Operating with Starter	XI	9	R-189
—Lamp Operating with Starter and Step-Up Transformer	XI	9	R-191
—Lamp Operation Check	XI	9	R-191
Heat Minder System, RCIB Models	XI	9	R-179
—Diagnosis	XI	9	R-181
—Operation	XI	9	R-180
Housing and Panels	XI	9	R-169
Infinite Heat Surface Unit Switch	XI	9	R-174
—Operating Means	XI	9	R-174
—Sequence of Operation	XI	9	R-174
—Testing	XI	9	R-175
Meat Tender System	XI	9	R-181
—Components	XI	9	R-182
—Operation	XI	9	R-183
—Testing	XI	9	R-184
Ovens	XI	9	R-170
Oven Thermostat	XI	9	R-184
Speed-Heat Surface Unit Switch	XI	9	R-175
—Checking Surface Unit if Switch Failure Occurs	XI	9	R-177
—Operating Means	XI	9	R-175
—Sequence of Operation	XI	9	R-176
Surface Unit Cooking Top Components	XI	9	R-169
Testing Electrical System	XI	9	R-189
—Bake Circuit	XI	9	R-189
—Broil Circuit	XI	9	R-189
Trim	XI	9	R-173
Exploded Views—Flair Ranges Control Panel Components	XI	9	R-196
Cooking Top and Operating Mechanism	XI	9	R-199
Frame, Panels and Housings	XI	9	R-195
Interior Oven Components	XI	9	R-198
Oven Door and Operating Mechanism	XI	9	R-197
Installation Instructions	XI	9	R-192
Installation Dimensions	XI	9	R-194
Introduction and Coding Explanation	XI	9	R-165
Self-Examination	XI	9	R-216
Service Operations Button-Bumper-Catch, Base Cabinet Door—Removal	XI	9	R-211
Buzzer, Meat Tender—Replacement	XI	9	R-201
Cooking Top—Alignment	XI	9	R-210
Cooking Top Assembly—Removal	XI	9	R-207
Cooking Top Cover—Removal	XI	9	R-207
Cook-Master—Replacement	XI	9	R-201
Door Assembly, Base Cabinet—Removal	XI	9	R-211
Door, Oven-Adjustment	XI	9	R-210
Element, Oven Bake and Broil—Replacement	XI	9	R-204
Glass, Control Panel-Replacement	XI	9	R-200
Guide, Base Cabinet Shelf—Replacement	XI	9	R-210
Guide, Oven Shelf-Replacement	XI	9	R-201
Handle, Base Cabinet Door—Replacement	XI	9	R-211
Handle, Cooking Top-Replacement	XI	9	R-208
Indicator, Meat Tender—Replacement	XI	9	R-201
Insulation, Oven-Removal	XI	9	R-205
Lamp, Fluorescent —Ballast Replacement	XI	9	R-207
—Base Replacement	XI	9	R-203
—Holder Replacement	XI	9	R-200
—Housing Glass Replacement	XI	9	R-200
—Lamp Replacement	XI	9	R-200
—Starter Replacement	XI	9	R-203
—Switch Replacement	XI	9	R-201
Lamp, Oven Replacement	XI	9	R-204
Lamp, Oven Thermostat Signal—Replacement	XI	9	R-201
Lamp, Surface Unit Signal-Replacement	XI	9	R-201
Liner, Oven-Replacement	XI	9	R-205
Operating Arm, Disconnect Switch—Replacement	XI	9	R-208
Operating Arm, Oven Door—Replacement and Adjustment	XI	9	R-210
Oven Door Assembly—Removal	XI	9	R-204
Panel, Base Cabinet Lower—Replacement	XI	9	R-211
Panel Cooking Top Front—Replacement	XI	9	R-208
Panel, Side—Replacement	XI	9	R-203
Receptacle, Appliance—Replacement	XI	9	R-205
Receptacle, Bake—Replacement	XI	9	R-205
Receptacle—Meat Tender Probe—Replacement	XI	9	R-204
Receptacle, Oven Lamp—Replacement	XI	9	R-204
Release Mechanism, Cooking Top—Replacement	XI	9	R-210
Sensing Unit, Heat-Minder—Replacement	XI	9	R-207
Strike, Base Cabinet Door—Removal	XI	9	R-211
Switch, Oven—Replacement	XI	9	R-201
Switch, Surface Unit—Replacement	XI	9	R-201
Switch, Surface Unit Disconnect—Replacement	XI	9	R-208
Switch, Broil Control—Replacement	XI	9	R-201
Thermostat, Oven—Replacement	XI	9	R-202
Top, Cooking—Replacement	XI	9	R-210
Transformer, Meat Tender—Replacement	XI	9	R-207
Trim, Base Cabinet Side—Replacement	XI	9	R-211
Tables No. I Specifications	XI	9	R-166
No. II Oven Wattage Data	XI	9	R-168
No. III Surface Unit and Oven Unit Resistance Data	XI	9	R-168
No. IV Service Diagnosis Chart	XI	9	R-194
Wiring Diagrams RCDB-630	XI	9	R-212
RCIB-635	XI	9	R-213
RCDB-640	XI	9	R-214
RCIB-645	XI	9	R-215
Wiring Range For Display	XI	9	R-192
Tools	XI	9	R-217
Home Ec-Talk—Flair Ranges	XI	9	R-219
Customer Contact No. 9	VI	9	R-221

THE FLAIR LINE OF ELECTRIC RANGES

Introduction

The following models comprise the revolutionary new FLAIR line of electric ranges.

Custom DeLuxe 30" Range
RCDB-630, Figure 1
Custom Deluxe 40" Range
RCDB-640, Figure 2
Custom Imperial 30" Range
RCIB-635, Figure 3
Custom Imperial 40" Range
RCIB-645, Figure 4

In addition, two base cabinets are available as optional equipment for use with the ranges. One cabinet, 30" wide, may be used with either 30" range; the other cabinet is 40" wide for use with 40" ranges. These cabinets, Figure 5, are identified as follows:

B-30 = (30" wide)
B-40 = (40" wide)

A rotisserie is available as an accessory for all models.

Coding Explanation

Example: RCIB-645
R = Electric Range
CI = Custom Imperial
B = Design Year
645 = Model
Models with prefix RCDB = Custom DeLuxe Models.

Data

Installation Dimensional Details are in Figure 29.
Specifications are in Table I.
Serial Plate Location—See Specifications.
Oven Wattage Data—Table II.
Wiring Diagrams—Figures 50 through 53.
Surface Unit and Oven Unit Resistances—Table III.
Exploded Views of Product—Figures 30 through 34.

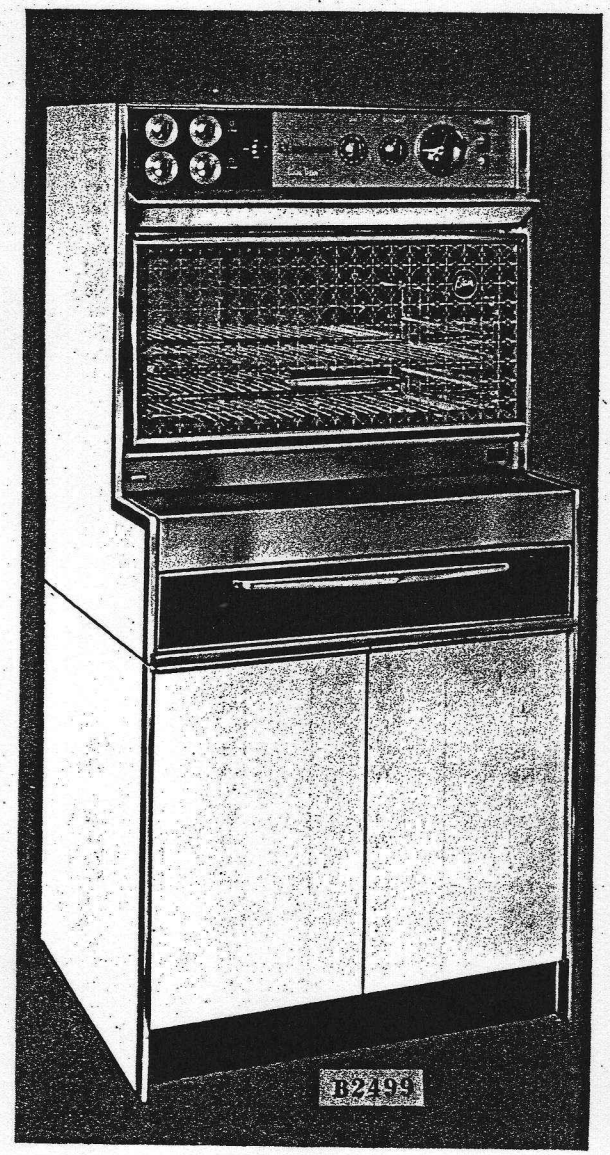


Figure 1
Model RCDB-630 Flair Range and B-30 Base Cabinet

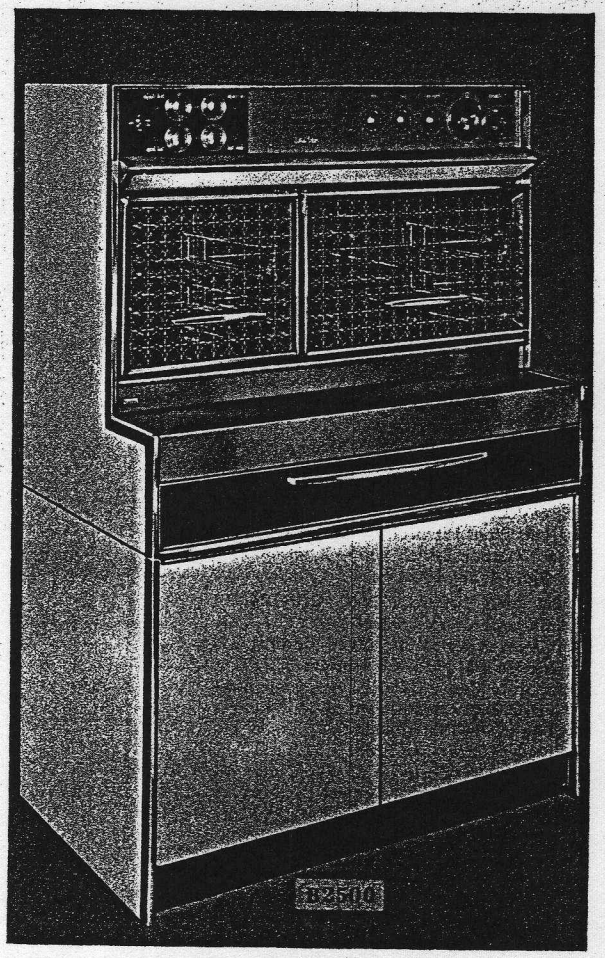


Figure 2
Model RCDB-640 Flair Range and B-40 Base Cabinet

TABLE I

Specifications for the Flair Electric Ranges

	Custom DeLuxe RCDB-630	Custom Imperial RCIB-635	Custom DeLuxe RCDB-640	Custom Imperial RCIB-645
DESIGN AND APPEARANCE FEATURES				
*Exterior Dimensions—(in.):				
Width—Base cabinet also	30	30	40	40
Height—Oven doors closed	62 1/16	62 1/16	62 1/16	62 1/16
Height—Oven doors open	69 13/16	69 13/16	69 13/16	69 13/16
Height—Base cabinet—optional	27	27	27	27
Height—Cooking Top—from floor	32	32	32	32
Height—Cooking Top Cover—from floor	36	36	36	36
Depth—Oven Section—inc. Door Handle	20 1/8	20 1/8	20 1/8	20 1/8
†Depth—Overall—cook top in	25	25	25	25
†Depth—Overall—cook top ½ out	30 1/8	30 1/8	30 1/8	30 1/8
†Depth—Overall—Cook top fully out	36 5/8	36 5/8	36 5/8	36 5/8
Depth—Base cabinet—optional	25	25	25	25
OVEN CONSTRUCTION AND FEATURES				
Type of Oven:				
Single Full Width	Yes	Yes	No	No
Double-Small Oven on Left	No	No	Yes	Yes
Pull 'N Clean	No	No	No	No
Oven Interior Finish—Bright Chrome	Yes	Yes	Both	Both
Large Oven Dimensions—(in.):				
Height—usable	12 1/4	12 1/4	12 1/4	12 1/4
Width	26	26	20 1/2	20 1/2
Depth	15	15	15	15
Small—Left Oven Dimensions—(in.):				
Height—usable	—	—	12 1/4	12 1/4
Width	—	—	12 1/2	12 1/2
Depth	—	—	15	15
One-piece Welded Liner Construction	Yes	Yes	Yes	Yes
Fibrous Glass Insulation—5 sides	Yes	Yes	Yes	Yes
Counter-Balanced Swing-Up Door	1	1	2	2
Cushioned Door Seal—Sides & Bottom	Yes	Yes	Yes	Yes
Radiantube Broil Unit —Upper	Yes	Yes	Both	Both
Removable from Range—by User	No	No	No	No
Broiler Reflector—Aluminum Clad Steel	Yes	Yes	Both	Both
Radiantube Bake Unit—Lower	Yes	Yes	Both	Both
Removable from Oven—by User	Yes	Yes	Yes	Yes
Bake Unit Baffle	Yes	Yes	R.H.	R.H.
Total Number Non-Tipping Adjustable Shelves	2	2	4	4
Bright Nickel Finish	Yes	Yes	Yes	Yes
Bars Front to Back	Yes	Yes	Yes	Yes
Removable Shelf Guides	Yes	Yes	Both	Both
Oven Interior Lamp, 40-watt	Yes	Yes	Both	Both
Pyrex Safety Shield	Yes	Yes	Both	Both
SURFACE UNITS				
Radiantube Units—Total Number	4	4	4	4
Standard 6-inch Units—2 terminals 1450W	2	1	2	1
• Right Rear Location	Yes	Yes	Yes	Yes
• Left Front Location	Yes	No	Yes	No
Standard 8-inch Units—2 terminals 2600W	2	1	2	1
• Left Rear Location	Yes	Yes	Yes	Yes
• Right Front Location	Yes	No	Yes	No
Speed Heat 6-inch Unit—2 terminals 1250W	No	1	No	1
• Left Front Location	No	Yes	No	Yes
Heat-Minder 8-inch Unit—2 terminals 2600W	No	1	No	1
• Right Front Location	No	Yes	No	Yes
OVEN AND SURFACE UNIT CONTROLS				
Oven Temperature Control	1	1	2	2
Cook-Master Automatic Oven Control	Yes	Yes	Yes	Yes
Electric Time Signal—60 minutes	Yes	Yes	Yes	Yes
Separate Control Knob	Yes	Yes	Yes	Yes
Electric Buzzer—insistent	Yes	Yes	Yes	Yes
Meat Tender—Thermometer	No	Yes	No	Yes
Electric Buzzer—insistent	—	Yes	—	Yes
Temperature Scale—130°-190°, plus Meat Settings	—	Yes	—	Yes
Automatic Broiler Grill Control	No	Yes	No	Yes
Surface Unit Controls, as marked—All Infinite Heat:				
Infinite Heat Switches—6 marked settings	4	2	4	2
Infinite Speed Heat Switch—6 marked settings	No	1	No	1
Infinite Heat-Minder Switch—8 marked settings 150° to 475° plus WARM, BOIL and FRY	No	1	No	1
Signal Lamps—Total	5	6	6	8
Oven On Bake or Broil—Bake Intermittent	Yes	No	Both	No
Oven On Bake Only—Bake Intermittent	No	Yes	No	Both
Oven On Broil Only	No	Yes	No	Both
Surface Unit On	4	4	4	4

	Custom DeLuxe RCDB-630	Custom Imperial RCIB-635	Custom DeLuxe RCDB-640	Custom Imperial RCIB-645
CONVENIENCE FEATURES AND ACCESSORIES				
Automatic Appliance Outlet—Cook-Master controlled	Yes	Yes	Yes	Yes
15 amp. Fuse	Yes	Yes	Yes	Yes
Kant-Slide Griddle—Aluminum	Option	Option	Option	Option
Blue Porc. Enamel Broiler Pan.-Alum. Grid	Yes	No	Yes	No
Radiant-Wall Alum. Broiler Pan & Grid	Option	Yes	Option	Yes
Roasting Rack—Chrome Plated Wire	Option	Yes	Option	Yes
Base Cabinet	Option	Option	Option	Option
Meat Tender—Thermometer Plug-in—Left Side	No	Yes	No	R.H.
Rotisserie	Option	Option	Option	Option
White Dulux Enamel Side Panels	Yes	Yes	Yes	Yes
Satin Chrome Cooking Top	Yes	Yes	Yes	Yes
Raised Non-Spill Rim	Yes	Yes	Yes	Yes
Exterior Lamp—Full Width Fluorescent	Yes	Yes	Yes	Yes
Length of Lamp—(in.)	28	28	36	36
Wattage	25	25	30	30
Location of Serial Plate Behind Oven Door on Left Side of Oven (small oven on RCDB-640 & RCIB-645)	Yes	Yes	Yes	Yes
Net Weight—Flair—approx. (lbs.)	230	235	320	325
Shipping Weight—Flair—approx. (lbs.)	265	270	360	365
Net Weight—Base cabinet—approx. (lbs.)	55¾	55¾	74	74
Shipping Weight—Base cabinet—approx. (lbs.)	64	64	84	84
Total Connected Load—KW	12.0	11.8	14.1	13.9

*All height dimensions include the 27" high optional base cabinet.
†Add 1¾" for Cooking Top Handle.

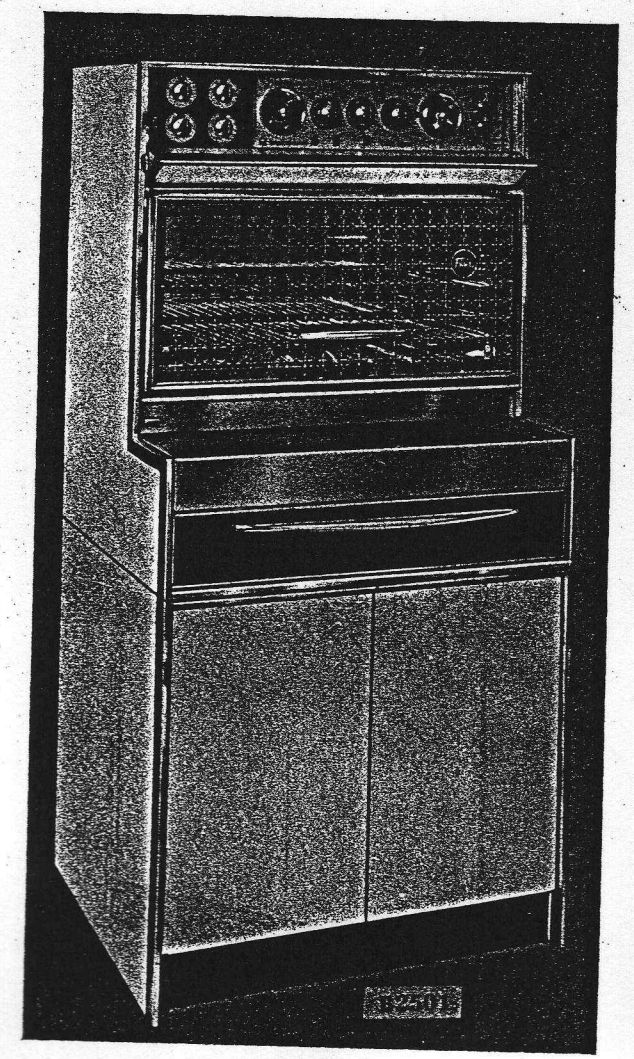


Figure 3
Model RCIB-635 Flair Range and B-30 Base Cabinet

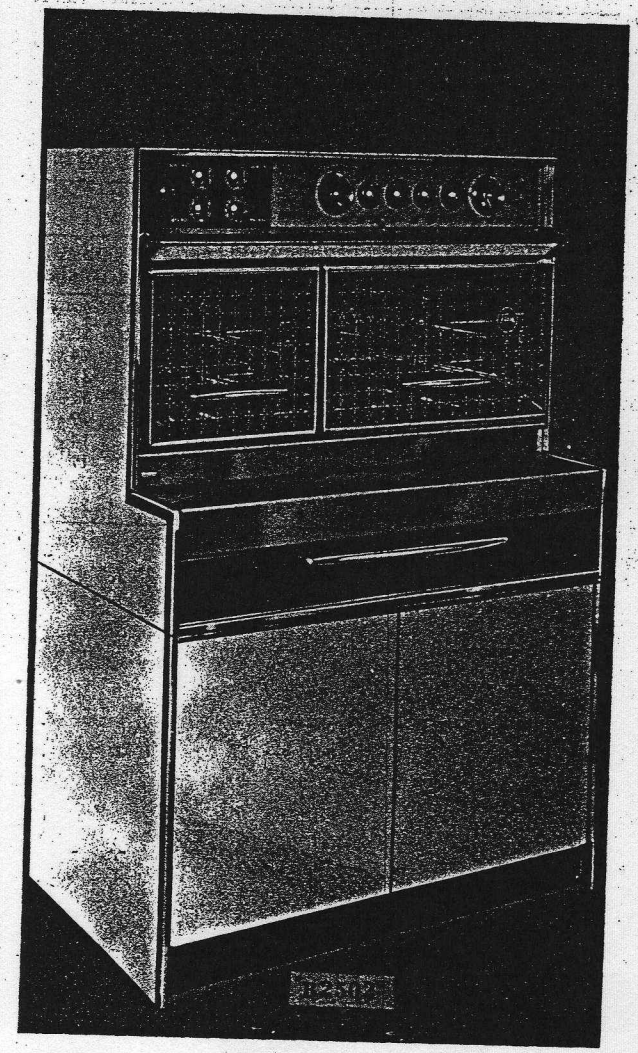


Figure 4
Model RCIB-645 Flair Range and B-40 Base Cabinet

TABLE II

Oven Wattage Data

	RCDB-630	RCIB-635	RCDB-640	RCIB-645	
Right Hand or Entire					
Bake					
Broil Element	800 Watts	800 Watts	800 Watts	800 Watts	
Bake Element	2400 Watts	2400 Watts	2400 Watts	2400 Watts	3200 Watts in Parallel
Broil					
Broil Element	3200 Watts	3200 Watts	3200 Watts	3200 Watts	
Left Hand Only					
Bake					
Broil Element			438 Watts	438 Watts	
Bake Element			1750 Watts	1750 Watts	2188 Watts in Parallel
Broil					
Broil Element			1750 Watts	1750 Watts	

TABLE III

Surface Unit and Oven Unit Resistance Data (All OHMIC Values Cold and ±5%)

Surface Units

Unit Size	Surface Unit Pc. No.	Maximum Watts	Rated Volts	Ohms Resistance
6"	6562901	1450	208	32
6"	6561903	1250	118	10
8"	6562906	2600	208	16
6"	6562156	1450	236	37
8"	6562161	2600	236	21

Oven Units

Oven Unit	Oven Unit Pc. No.	Maximum Watts	Rated Volts	Ohms Resistance
Bake	6564632	2400	236	24
Broil	6564765	3200	236	18
Bake	6564754	2400	236	24
Broil	6564823	1750	236	31
Bake	6564694	1750	236	31
Bake		2400	208	19
Broil		3200	208	14
Bake		2400	208	19
Broil		1750	208	25
Bake		1750	208	25

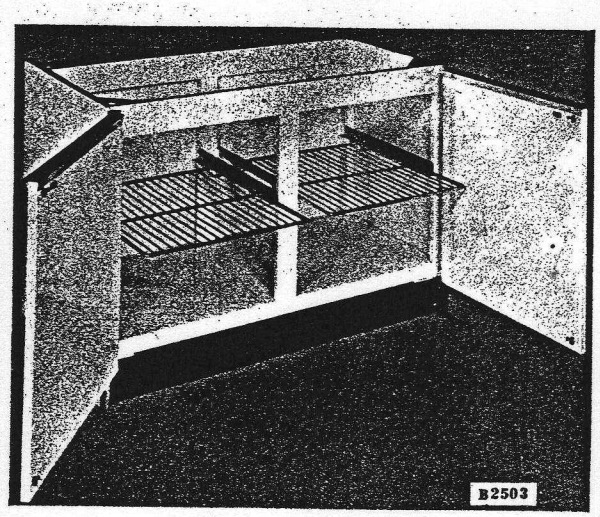


Figure 5
Model B-40 Base Cabinet

Construction and Features

The FLAIR line of electric ranges incorporates the best use features of both free-standing and built-in

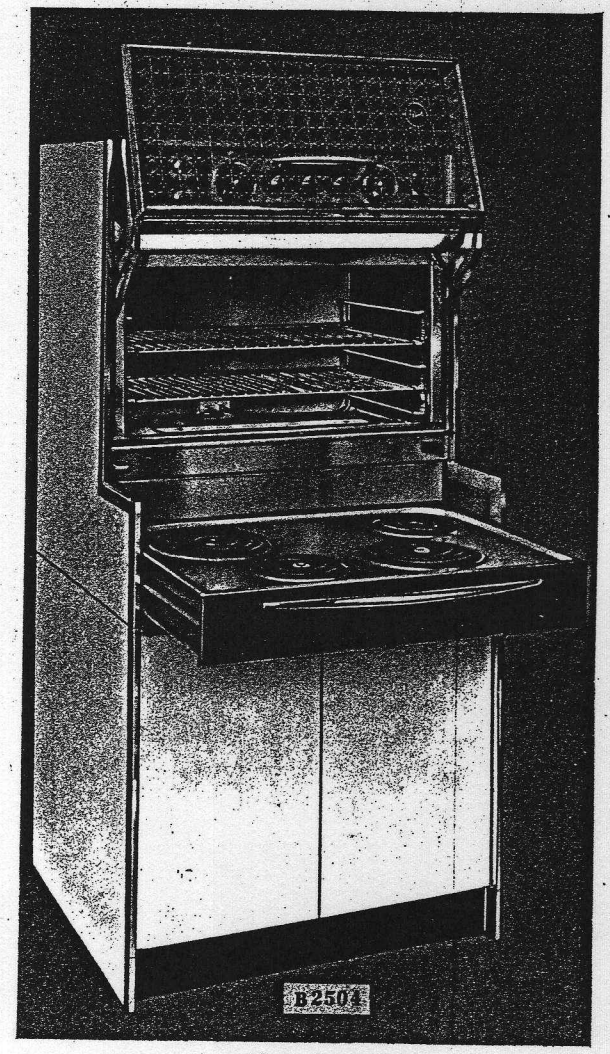


Figure 6
Model RCIB-635 Flair Range—Oven Door Open and Cooking Top Exposed

type Frigidaire cooking appliances. Likewise, all electrical components are similar to those used on the conventional Frigidaire free-standing ranges. An important service feature of the FLAIR range is front serviceability for all major components.

Basically, each model consists of three assemblies; a surface cooking top, above which is located an oven or ovens having glass doors that lift up, and a full width control housing located above the oven, Figures 6 and 7. The surface cooking top, when not in use, can be pushed back smoothly into the range to be concealed by a cooking top cover which rolls forward about 10 inches.

HOUSING AND PANELS: Each of the three basic assemblies are contained within a housing, Figure 8. The zinc plated, steel surface cooking top housing is of welded construction and encloses the cooking top area on both sides and the bottom. The black enameled, steel oven insulation retainer housing is of welded construction and encloses the oven cooking area on both sides and the bottom. The black enameled, steel control housing is of welded construction and encloses the top area on the sides, front and rear. Required openings for other components are present in the front, rear, and bottom of the control housing.

The three individual housings are fastened together with screws and comprise the basic frame or shell. In addition, a black enameled, steel rear cover, Figure 8, mounts with screws to the oven and cooking top housings. White Dulux enamel side panels, one on each side, and a white Dulux enamel top cover panel completely enclose the sides and top of the range, Figures 6 and 7. These panels locate by means of screws, as required, and flanges which mate with adjacent parts. A lead wire cover panel mounts to the product rear with screws.

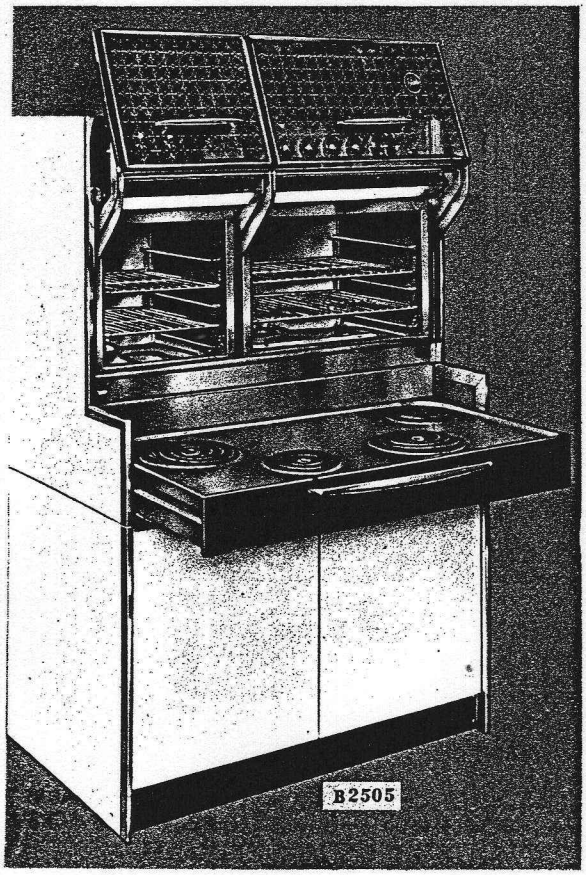


Figure 7
Model RCIB-645 Flair Range—Oven Door Open and Cooking Top Exposed

SURFACE COOKING TOP COMPONENTS: The top and sides of the surface unit cooking top, Figure 9, are formed from one piece of steel and are finished in satin-chrome. Raised edges around the perimeter of the cooking top, and around the openings for the cooking units (there are no trim rings), keep spill-overs on the top surface where they can easily be wiped off. The steel front panel of the cooking top is finished in black baked-on enamel. It has a chrome plated handle. This handle is used to pull the cooking top forward for use, or to push it back into the concealed position. Plastic spacers are used to insulate the handle.

A steel panel, finished in gray enamel, adds rigidity to the cooking top. It is attached with screws to the bottom of the cooking top and acts as a drip plate to catch accidental spill-overs that are not trapped by the raised edges around the cooking units or by the drip bowls. This bottom panel is accessible for cleaning, after the surface units are tilted upward and the drip bowls lifted out.

The cooking top cover, Figure 8, is made of steel and has a satin-chrome finish to match the cooking top. Both the cover and the cooking top attach to a common mechanism, which causes the cover to automatically roll forward as the cooking top is pushed back into the cabinet and vice versa. The cooking top cover and the cooking top assembly roll in and out on plastic rollers for the utmost in smoothness and quietness. A chain drive, Figure 10, similar to that used on a bicycle, is concealed on each side of the cooking top. It is connected to the cooking top and cooking top cover. These chains revolve on nylon sprockets to move the cooking top cover in or out. The cover is adjustable for alignment with the range side panel trim and cooking top. It should be 3/16" to the rear of the side panel trim.

The cooking top mechanism is attached to the welded steel, zinc plated housing previously described. This housing has four T-nuts welded to the base, Figure 10, that are used to attach the range to a base cabinet or countertop. It also contains a three position locking device to hold the cooking top securely in either the closed position, half-way position, or fully out position. This locking device is released by an arm, Figure 8, located at the upper left corner of the cooking top. By pulling the arm forward at each of the three positions, the lock is released from that particular position. If it is desired to move the cooking top from the closed position to the fully open position, or vice versa, without stopping at the half-way position, pull and hold the arm forward while moving the cooking top to the desired position.

As another safety feature, the surface units are inoperative when totally or partially concealed by the movable cooking top cover. For instance, when the cooking top is in the closed position, the units cannot be turned on. If the top is in the half-way position, the two rear units cannot be turned on. This is accomplished electrically by two disconnect switches, Figures 9 and 45, which are mounted at the rear corners of the cooking top. The surface unit signal lamps will glow, however, until the control knobs are turned OFF.

Radiantube surface units are the same as used in other Frigidaire ranges, and built-in cooking tops.

A six-inch unit is located in the left front, and an eight-inch unit in the right front with another eight-inch unit at the left rear and a six-inch unit at the right rear. On the Custom Imperial models, the left front six-inch unit is a Speed-Heat unit, and the right front eight-inch unit is a Heat-Minder unit.

A 15 ampere household type fuse is located inside the cooking top housing and is accessible by tilting up the left rear surface unit and lifting out the drip bowl.

OVENS: The ovens, Figure 11, are one-piece wrap-around type, with a welded back panel and rounded corners. Unlike any other Frigidaire range, all of the interior walls are finished in bright chrome to give the oven a mirror-like appearance.

Also, new are the *removable* shelf guides, Figure 11, finished in bright chrome, that lift out to leave the oven walls free and unobstructed for smooth, easy cleaning. The shelf guides, one on each side of the oven, have rods attached for five shelf positions. The guides are attached to the oven walls at the front by two key-shaped holes that lock over two pegs, Figure 11, mounted to the oven liner. The guides are supported at the rear by two rods that extend through extruded holes which are located in the back wall of the oven liner. The guides are removed from the oven by lifting the front of the guides off of the pegs and pulling forward.

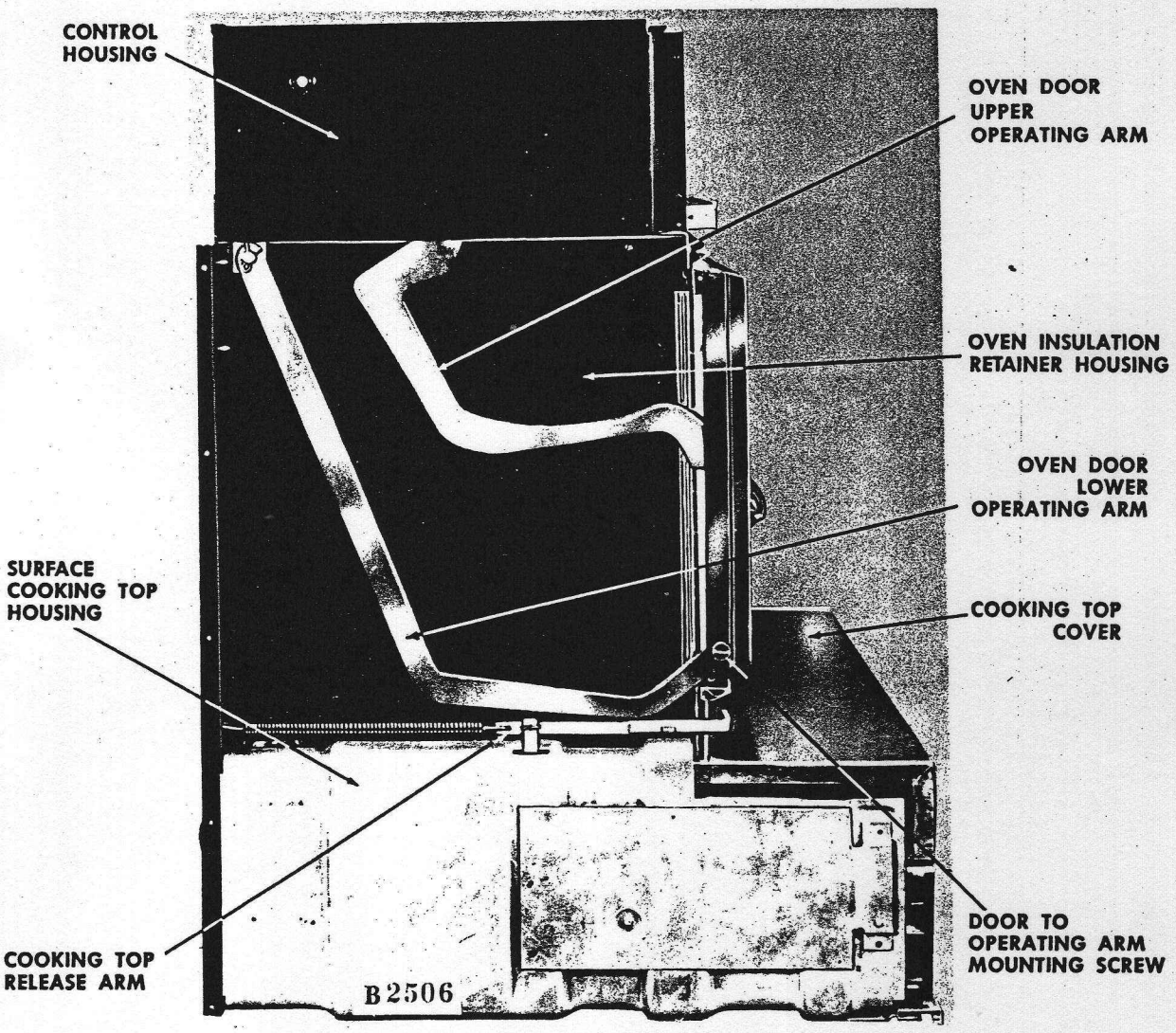


Figure 8
Side Panel Removed Showing Flair Range Housing Construction

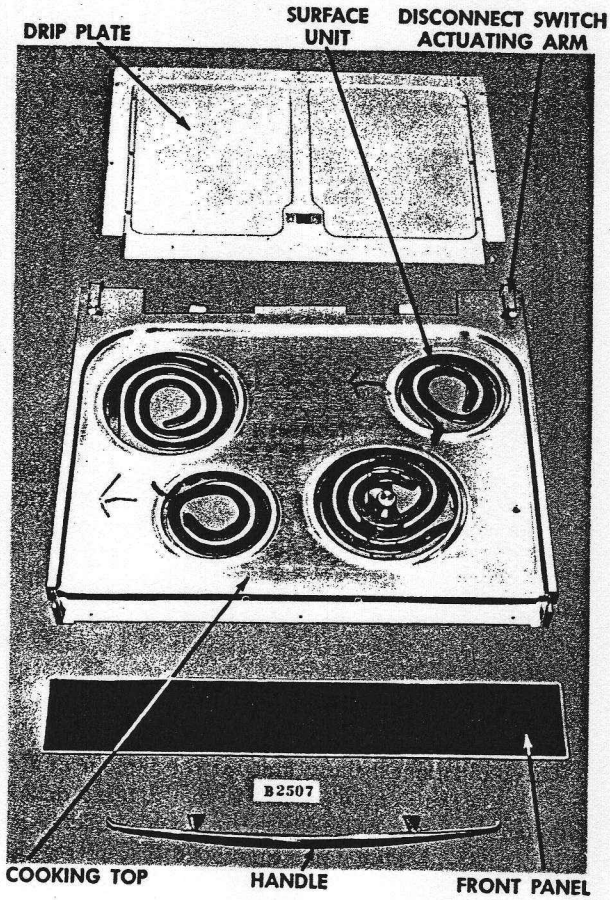


Figure 9
Surface Cooking Top Detail

The oven shelves are nickel plated steel, the same as used on other Frigidaire ranges and wall ovens.

Fibrous glass insulation surrounds the oven on the sides, bottom and back. Double thickness is used across the top, Figure 12. This means greater cooking efficiency and operating economy. The insulation is held in place by steel retainers.

The ovens are mounted at the top with screws to a heavy steel mounting angle, Figure 12, that extends across the top front of the ovens and which mounts with screws to the control housing. The lower front of the ovens is secured to the steel insulation retainers.

Oven doors, Figures 13 and 42, are constructed with two panes of heat tempered glass, enclosed in a die-cast, bright chrome outer frame—a bright chrome inner frame—an inner glass retainer and a gray silicone rubber door seal on the back that extends along the sides and bottom. The seal does not extend across the top of the doors as the ovens are vented at this location. The outer glass pane has a white filigree design, screened on the inner surface.

An attractive die cast horizontal handle, Figure 13, finished in chrome, is centered on each door, near the bottom, at a convenient location. The handle is insulated from the door by spacers.

Attached to each side of each door are two operating arms, Figure 8, that swing out and up to raise the doors in the open position. The doors are counterbalanced, permitting them to be opened and closed with slight effort. This ease of opening is accomplished by the spring mechanism, Figure 37, located above the ovens in the control panel housing. Two heavy coil springs are mounted horizontally above each oven. The springs are connected with a cable to the upper operating arm

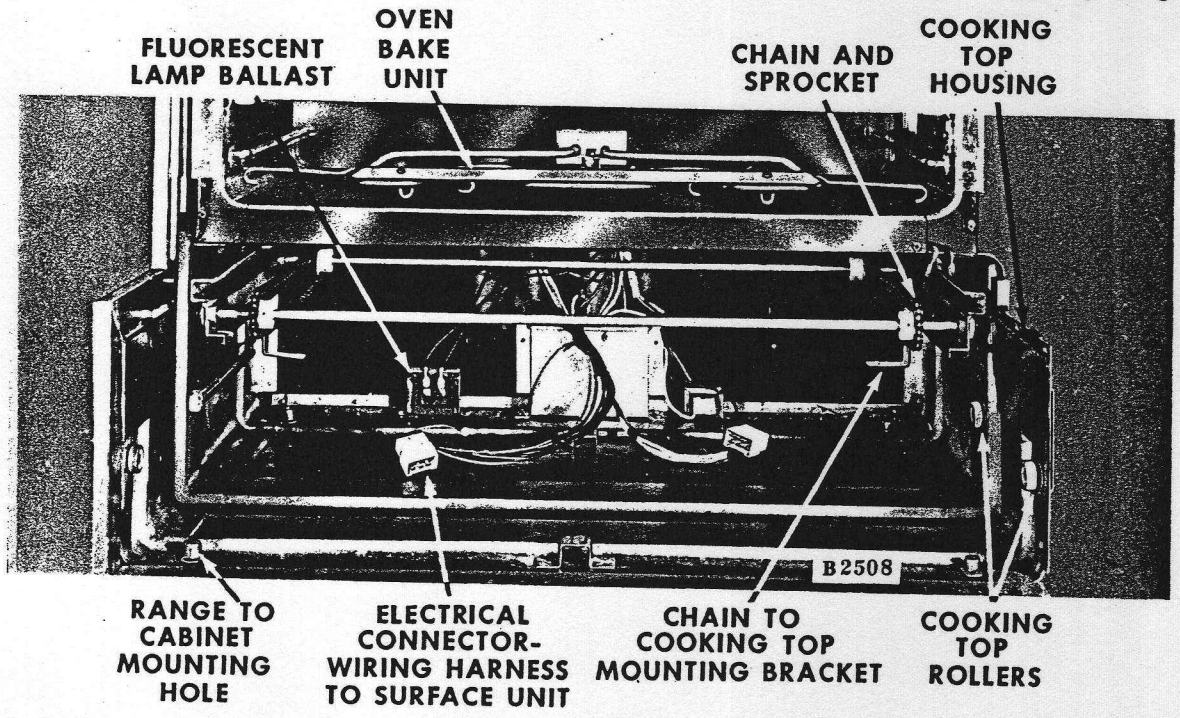


Figure 10
Surface Cooking Top Removed, Showing Chain Drive Mechanism

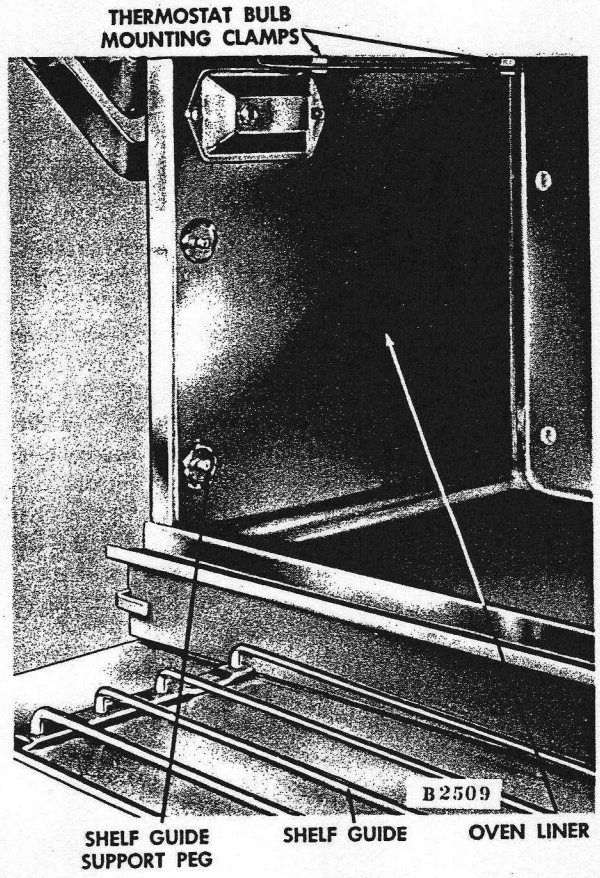


Figure 11
Oven Interior—Shelf Guide Removed

attached to the door. As the door is opened or closed, the cables move on nylon rollers to actuate the springs, which in turn help open or close the doors. The upper operating arms are attached to a steel shaft that extends across the top of the ovens. To provide quiet, smooth operation, this rod is supported at each end with nylon pillow blocks (bushings).

For broiling, the oven doors have a STOP position that holds the door open slightly. When in this position, the top edge of the doors is in line with the bottom of the control panel.

Two release buttons, Figure 13, located at the top corners of each door, can be depressed to allow the top edge of the door to tilt forward. This permits accessibility to the inside glass windows for cleaning.

The Radiantube broil unit at the top of the ovens is similar to those used on the free-standing ranges. However, the terminals are formed upward at a 90° angle to permit electrical connection through the top of the oven, rather than through the back of the oven. The broil unit is not removable by the customer. A steel aluminum clad reflector is located above the broil unit to reflect heat evenly down across the oven. There is an opening near the center of the reflector for the oven lamp.

A 40-watt oven lamp is located at the top of each oven, near the center and is covered by a Pyrex shield. An aluminum clad steel trim for the lamp shield is riveted to the broil unit reflector. It is sloped toward

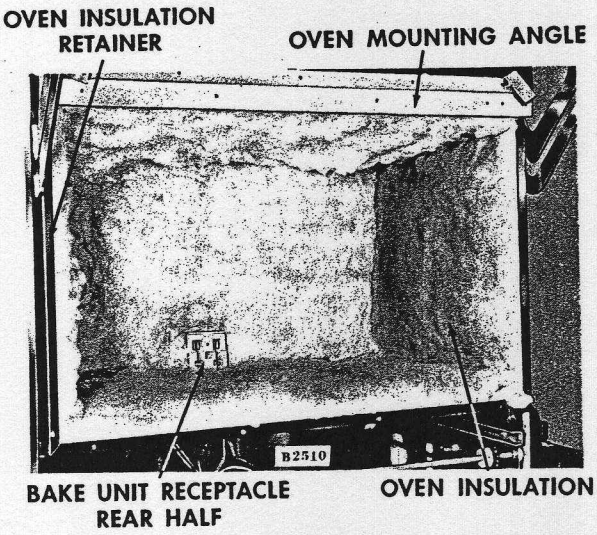


Figure 12
Oven Liner Removed

the rear to accommodate the shield. An opening at the front of the trim allows the shield to slide in—or out—for lamp replacement without the use of tools.

The Radiantube baking unit, at the bottom of the oven is the pull-out type and is the same as on all Frigidaire ranges. A chrome plated steel baffle is attached to the baking unit, Figure 40, except on the left-hand ovens on models RCDB-64Q and RCIB-645. This baffle assures more uniform heat near the center of the oven. Two openings for the optional rotisserie are located at the back of the oven. The Custom Imperial models also have a receptacle for the Meat-Tender thermometer, located on the left wall of the right-hand oven.

An automatic appliance receptacle, Figure 13, is located in the right-hand side of the panel below the oven on all models.

CONTROL PANEL: The control panel section, Figure 13, is located across the top of the FLAIR ranges. This section consists of an internal steel housing, all of the cooking controls, an internal front panel, a full-width outer glass panel, and a steel top panel which is finished in white Dulux enamel. The controls for surface cooking and the lamp switch on 40" models are grouped at the left of the control panel.

All oven controls are grouped to the right of the surface unit controls. All controls are plainly identified and easy to use. This very obvious grouping of the controls provides the same simplicity in selecting the proper control for any type of cooking, as is now being employed on other 1960 Frigidaire ranges.

To provide added strength to the top of the FLAIR ranges, two reinforcing angles, Figures 35 and 36, are welded across the inner surface of the control panel top. The control housing is vented through a concealed opening located beneath the front edge of the control panel top. This venting allows proper cooling of the electrical controls.

FULL-WIDTH FLUORESCENT LAMP: Located below the control panel, a full width exterior fluorescent lamp, Figure 13, floods the entire cooking top and also reflects light to the control panel above. The lamp housing extends across the top of the lamp and is finished in satin chrome. The lamp housings, at each end of the lamp, are die cast and chrome plated. The lamp for the 30-inch models is 25 watts and 28 inches long; the 40-inch models have a 30-watt lamp which is 36 inches long. The lamp can easily be replaced by removing one screw from each end of the lamp housing cover and lifting off the cover. The use of a small screwdriver will assist lamp removal on 40" models.

A four-way lamp switch permits the user to select any lighting desired—LAMP, exterior; OVEN and LAMP; OVEN; and OFF.

The top front surface of the fluorescent lamp housing is insulated with a strip of black Bakelite that extends across the entire width of the lamp housing. This insulator protects the hands from heat, in the event this area is touched, while turning the control knobs located above.

TRIM: The entire front perimeter of the FLAIR ranges is accentuated by a brushed aluminum trim. Separate trim pieces mount to each side panel and across the top of the control panel.

BASE CABINETS: The optional base cabinets, Figure 5, have been styled and designed to match the FLAIR ranges. They are built of steel and finished in white enamel. If desired, they may be painted by the dealer to match adjacent cabinets. The base panel is finished in black enamel.

The aluminum handles on both doors match the trim on the range. Also, the trim on the front, outer edges of the cabinets extends from the floor up to the bottom of the vertical trim on the range panels to give the appearance of one continuous strip of matching aluminum trim.

On the interior, there are two sliding shelves made of steel. The shelves have "stops," similar to those used in the range, to prevent the shelves from accidentally being pulled all the way out. For service accessibility, either of the two back panels can be removed from the front, to gain access to the plug-in electrical cord, which may be located either on a back wall or on the floor.

There is adequate space between the back panel and the wall for the electrical cord. The back panels can be removed at any time to plug or unplug the range without moving the range or base cabinet.

Four holes are provided in the top of the base cabinet for alignment with threaded nuts which are welded to the bottom of the FLAIR. The two units can thus be securely joined with the bolts supplied with the base cabinet—no drilling required.

Leveling buttons are provided at the front corners of the base cabinet. See Installation Instructions for leveling details.

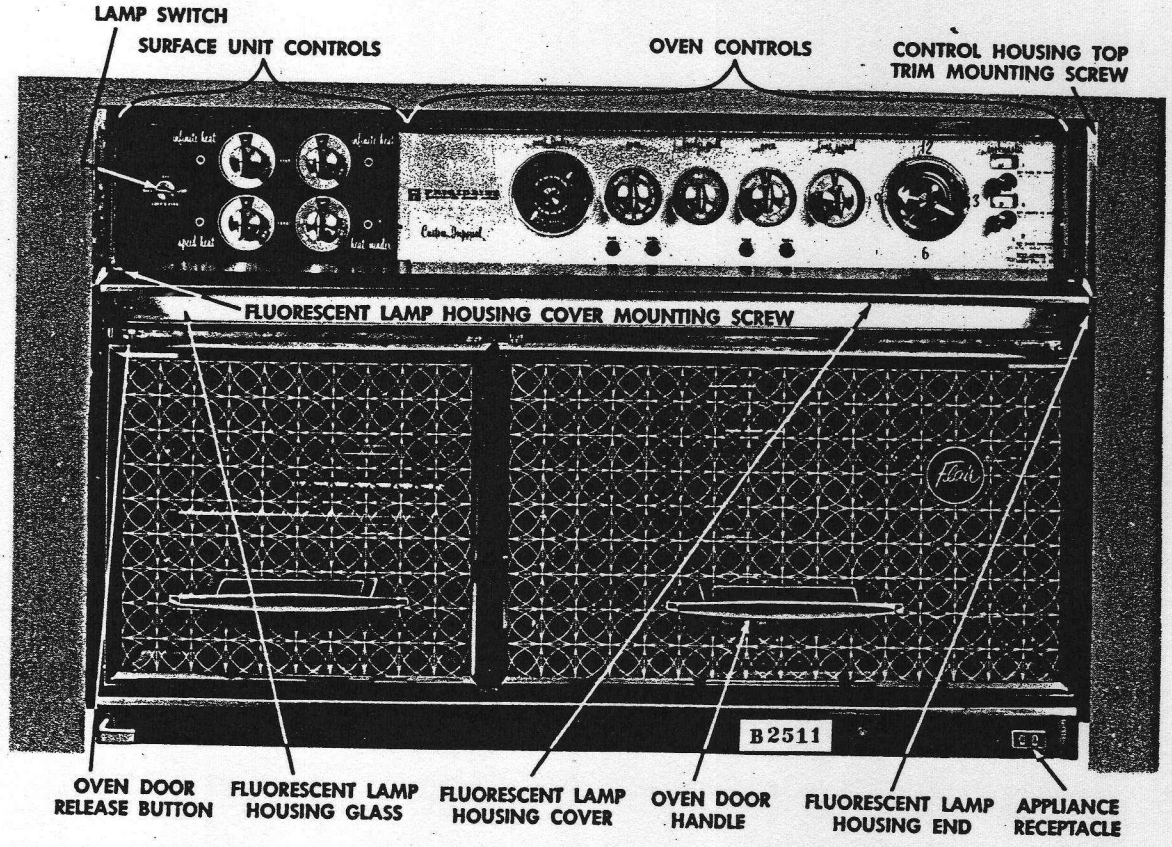


Figure 13
Model RCIB-645 Flair Range—Front View Close-Up

INFINITE HEAT SURFACE UNIT SWITCH: Infinite heat surface unit switches are incorporated on all models, as noted in Table I.

The control indicator dial is marked for five heats, HIGH, MED.-HIGH, MED.-LOW, LOW and SIMMER, however, the indicator dial can be adjusted to any intermediate position.

OPERATING MEANS OF THE INFINITE HEAT SWITCH—FIGURE 14.

1. A user's knob to permit selection of the desired average watts input to the surface unit for the infinite heat control.
2. Two internal cams, responding to user's knob selection, which individually:
   a. Close the contacts to the surface unit and the signal lamp through terminals Nos. 1 and 2 respectively when the knob is turned to any ON position.
   b. Apply the necessary mechanical pressure to the bimetal cycler contacts thus regulating the length of time per cycle that the surface unit is energized.

SEQUENCE OF OPERATION OF THE INFINITE HEAT SWITCH—FIGURE 15.

As the knob is rotated from the OFF position.

1. All contacts within the switch close.
2. Current at 236 volts is now being supplied to the surface unit and current at 118 volts is being supplied to the signal lamp.
3. After a time interval, depending upon the user's knob setting, the bimetal cycler is sufficiently heated by its heater to cause the bimetal to warp and open the circuit through the surface unit.
4. As the bimetal cools it returns to its normal shape, thus reclosing the contacts completing the circuit through the surface unit.

   Note: The original lamp circuit remains closed at all times when the knob is turned to any ON position.

In operation, this switch cycles the full wattage of the surface unit to obtain various degrees of heat except on HIGH where the unit operates continuously.

The input percentages of surface unit operation corresponding to various switch settings are shown in Figure 15.

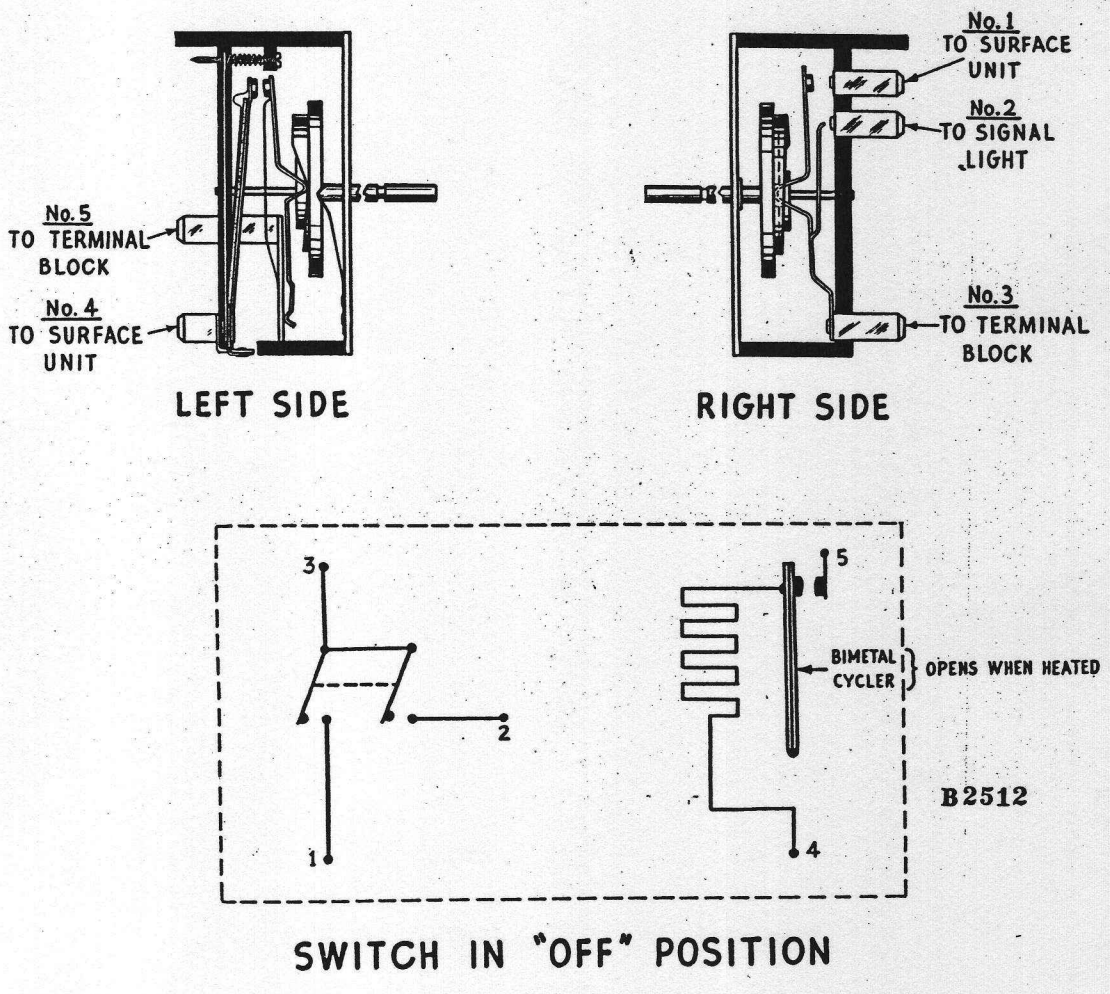
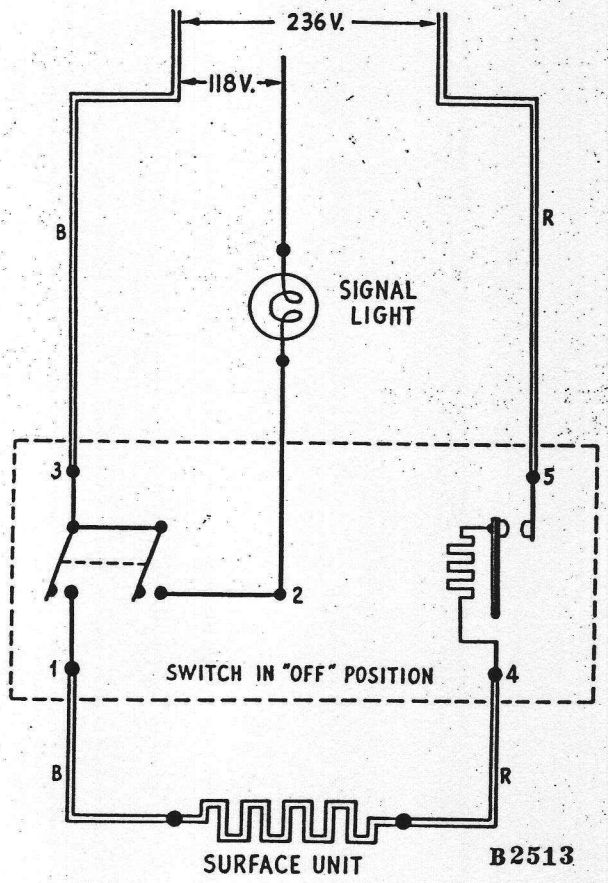


Figure 14
Infinite Heat Switch



INPUT PERCENTAGE

1450 W. UNIT	CONTINUOUS
HIGH	
WARM	5 - 10 %
SIMMER	7.5 - 11.5 %
LOW	11 - 17 %
M. LOW	26 - 36 %
M. HIGH	44 - 56 %

2600 W. UNIT	CONTINUOUS
HIGH	
WARM	2.5 - 7.5 %
SIMMER	5 9 %
LOW	8 14 %
M. LOW	23 33 %
M. HIGH	39 51 %

Figure 15
Infinite Heat Switch Circuit

TESTING THE INFINITE HEAT SWITCH: The infinite heat switch can be tested by using a timing device and a continuity test cord as follows:

1. Connect a continuity test lamp directly to the two terminals of the surface unit.
2. Turn the switch to an ON position and allow it to stabilize for ten minutes.
3. With a stopwatch or sweep-second hand, begin measuring when the test light comes on. Note the length of ON time.
4. Measure the length of time the test light is off.
5. The Total period for one cycle is the total of the length of time the light is on plus the time the light is off.
6. To find the input percentage, divide the ON time by the Total time.
7. Check this against the table shown in Figure 15 for proper switch operation.

SPEED HEAT SURFACE UNIT AND SWITCH

Custom Imperial Models Only:

This is a 1250 watt, 118 volt, 6" radiantube unit which is controlled by a Speed Heat switch to provide extremely fast initial heating. The switch automatically connects the unit to 236 volt current supply, input 5,000 watts, for the initial heating period which is determined by the heat-setting. The unit is flashed as the switch is turned from the OFF position to any ON setting, but at the end of the flash time, contacts within the switch automatically restore the unit to 118 volt operation for the remainder of the cooking period. The length of the flash time varies with various settings as shown in Figure 16.

OPERATING MEANS OF THE SPEED-HEAT SWITCH —FIGURE 16:

1. A user's knob to permit selection of the desired average watts input to the surface unit for infinite heat control.
2. Three internal cams, responding to user's knob selection, which individually:
   a. Operate line contacts No. 4 and pilot lamp contacts P.
   b. Hold sets of contacts Nos. 5 and 6 closed at HIGH setting.
   c. Apply the necessary mechanical pressure to the cycler contacts, No. 7 to regulate the length of time in each cycle that the surface unit is energized, and in the OFF position, complete a reset of the latch to ready for the next Flash heating period.
3. A set of transfer contacts, No. 3, to change the surface unit voltage from 236 to 118 after the initial heating period.

4. A cycler for infinite heat control which consists of a bimetal cycler, a strip heater, and its set of contacts, No. 7.
5. A latch bimetal, heated by the passage of current, which in all settings except HIGH mechanically permits contacts Nos. 3, 5, and 6 to terminate the initial heating period.
6. A strip resistor which diverts a portion of the current, at certain times, from the cycler strip heater. This is necessary to reduce heat storage in the cycler assembly and thus permit its prompt return to a cycling action. This is especially important at low settings immediately preceded by a FLASH period in the HIGH setting.

SEQUENCE OF OPERATION OF THE SPEED-HEAT SWITCH—As the knob is rotated from the OFF Position:

1. Line contacts No. 4 and pilot lamp contacts P close.
2. The cycler contacts, No. 7, close.
3. The Flash heating operation starts immediately at 236 volts. The current flows through terminal L1, contacts Nos. 4 and 3, terminal B, the surface unit, terminal R, and then through two parallel paths to terminal L2:

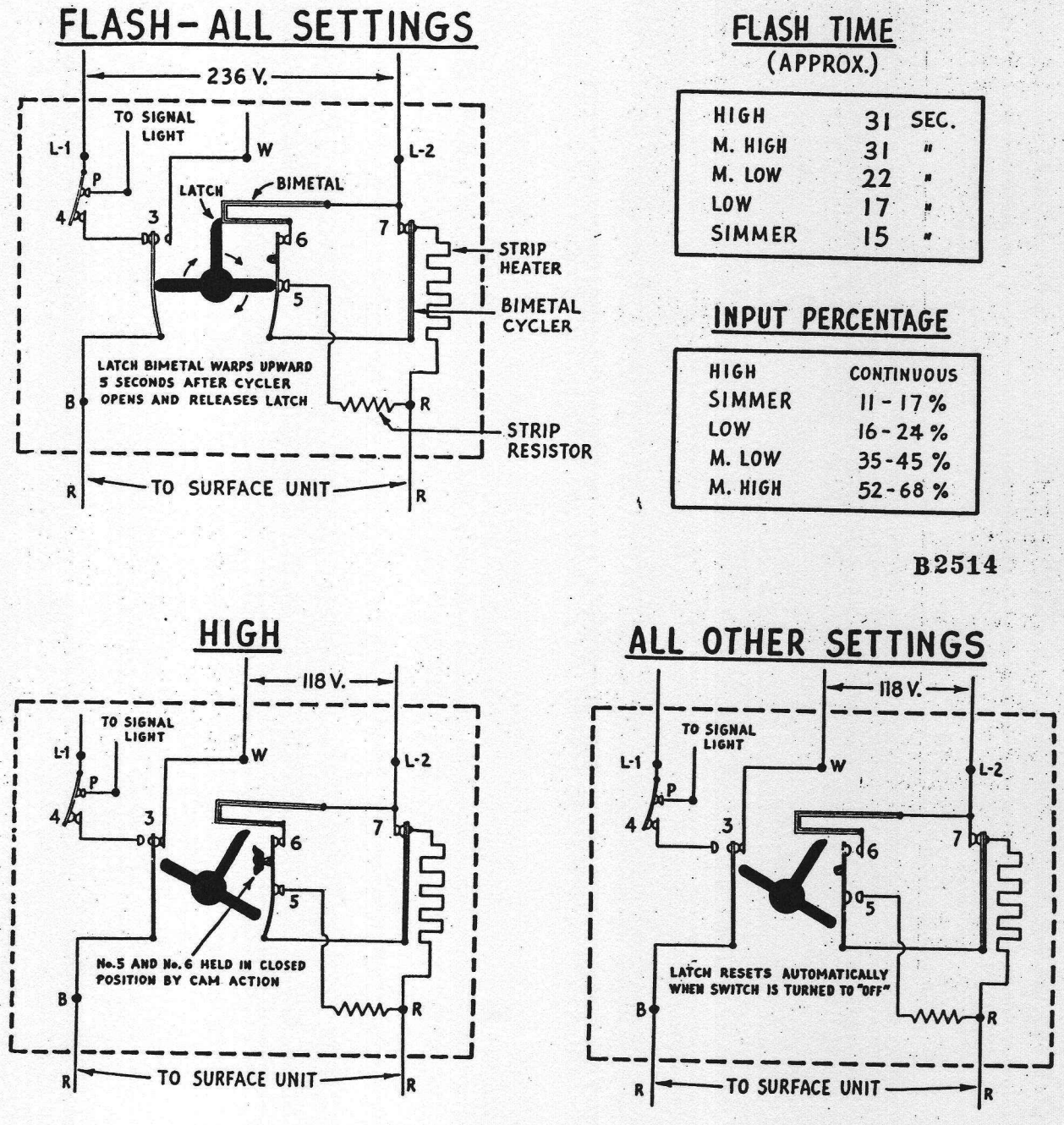


Figure 16
Speed-Heat Switch and Circuits

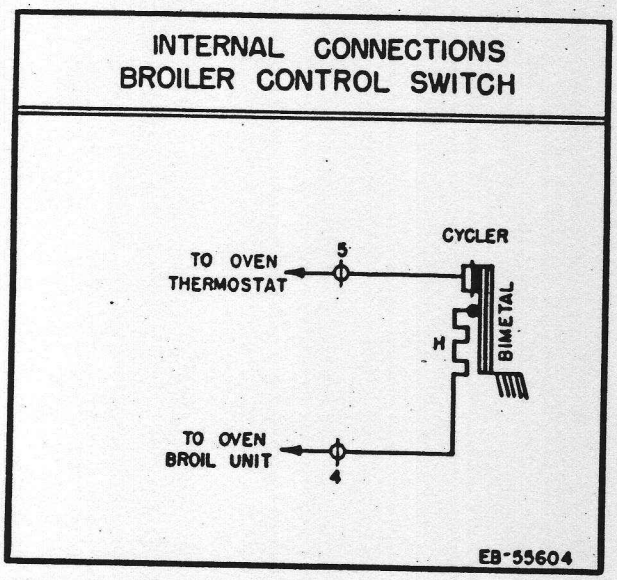
a. Through the cycler strip heater and contacts No. 7.

b. Through the strip resistor contacts No. 5, the cycler bimetal, and contacts No. 7. The current flow through closed contact No. 6 and the latch bimetal is insignificant at this point.

4. After a time interval, the cycler bimetal moves to open contacts No. 7, to end the Flash cycle. As an example, the interval is about 26 seconds for HIGH setting. At other settings, the timing is reduced proportionately.
5. When contacts No. 7 open, two parallel circuits permit current to pass through contacts Nos. 5 and 6 and the latch bimetal to terminal L-2. The current heats the bimetal. These parallel circuits are:
   a. From terminal R, through the strip resistor, to contacts No. 5.
   b. From terminal R, through the strip heater, the bimetal cycler, to contacts No. 5.
6. In approximately five seconds the heated latch bimetal warps upward and releases the latch, permitting contacts No. 5 and 6 to open. At the same time, contacts No. 3 transfer to 118 volt operation through terminal W.
7. At HIGH setting, contacts Nos. 5 and 6 remain closed as shown in Figure 16. They are held closed by a cam at this setting only. As a result, the surface unit operates continuously.
8. At settings other than HIGH, these contacts are not held shut by a cam, and open during Step 6 above. The bimetal cycler now operates in the usual manner of an infinite heat control. All current flow is through the strip heater and contacts No. 7. These contacts open and close to regulate the length of time the surface unit is energized on each of the settings of MED.-HIGH, MED.-LOW, LOW, and SIMMER as listed in Figure 16.
9. When the user turns the control to OFF, a cam resets the latch, ready for the next flash operation.

CHECKING THE SPEED-HEAT SURFACE UNIT IF SWITCH FAILURE OCCURS: If failure occurs in the control switch for the Speed-Heat unit, it is possible for the unit to become damaged at the same time that the switch failure occurs. Consequently, it is necessary to check the unit thoroughly before making a switch replacement.

1. Testing with an Ohmmeter—Tool No. 12145. An Ohmmeter reading of approximately 10 ohms indicates a good unit. Any large variance under 10 ohms would indicate fused heater wires or a short circuit. A high or infinite resistance would indicate an open unit.



SWITCH POSITION	INPUT PERCENTAGES NOM.	MAX.	MIN.
RARE	ON CONTINUOUSLY		
2	85	92	78
MEDIUM	75	81	69
4	62	67	57
WELL DONE	50	56	44
6	40	47	33

B759

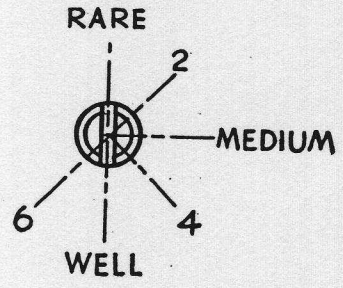


Figure 17
Broil Control Switch Circuit

2. Testing with a Three-Wire Test Cord—Tool No. 12131. Using the three-wire test cord, connect the RED and WHITE leads of the test cord to the terminals of the Speed-Heat unit. Place a 15 ampere standard fuse in the socket of the test cord—do not use a Fusetron or time-delay type fuse. Plug in the test cord and press the spring-loaded switch. If the Speed-Heat unit is defective, grounded, or shorted, it will blow the 15 ampere fuse. If the unit is satisfactory, it will heat. If the unit is open, no heating will be observed nor will the 15-ampere fuse be blown.

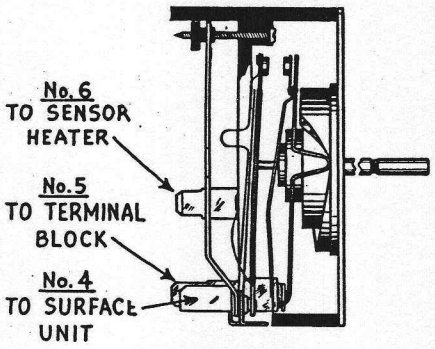
This method of testing is accurate and permits using equipment which is readily available from your Frigidaire Distributor.

BROIL CONTROL SWITCH — CUSTOM IMPERIAL MODELS ONLY: The broil control switch is an infinite heat switch connected in series with the 236 volt supply to the broil element as illustrated in Figure 17. The contacts of the cycler open only when actuated by current through heater H; thus the switch is in operation only when the oven thermostat is set to BROIL. The broil control switch cycles the broil element except on the RARE setting at which time the element is energized continuously. The input percentages of the broil element operation, corresponding to various broil control switch settings, are shown in Figure 17.

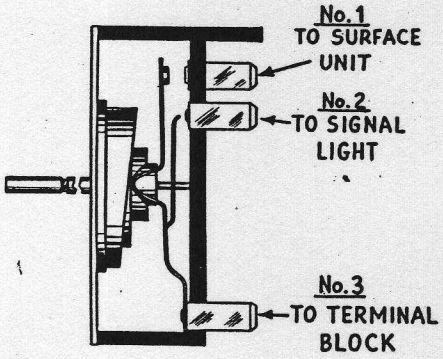
Using the Broil Control Switch, broiling of meat can be accomplished by the use of one shelf position regardless of the amount of cooking from RARE to WELL DONE. This enables the user to broil meat to various conditions without moving the broiler pan to alternate shelf positions.

TESTING THE BROIL CONTROL SWITCH: The broil control switch can be tested by using a timing device and a continuity test cord as follows:

1. Connect a continuity test lamp directly to the two terminals of the broil unit.
2. Turn the oven thermostat to the BROIL position and allow it to stabilize for ten minutes.
3. With a stopwatch or sweep-second hand, begin measuring when the test light comes on. Note the length of ON time.
4. Measure the length of time the test light is off.
5. The total period for one cycle is the total of the

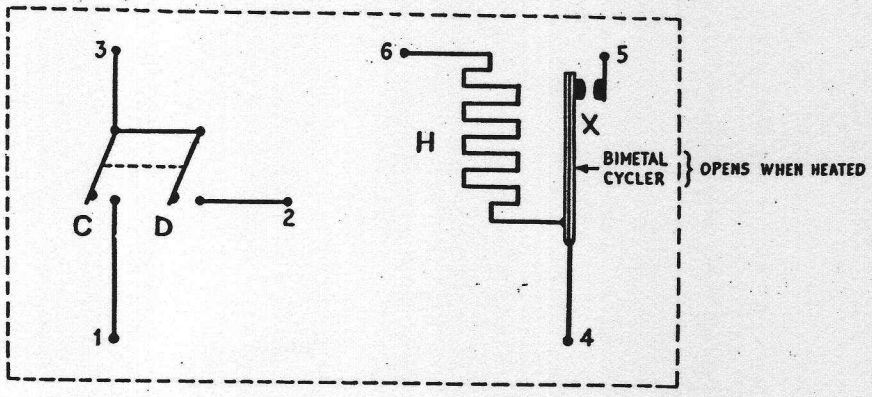


LEFT SIDE



RIGHT SIDE

B2515



SWITCH IN "OFF" POSITION

Figure 18
Heat-Minder Switch

length of time the light is on plus the time the light is off.

6. To find the input percentage, divide the ON time by the Total time.
7. Check this against the table shown in Figure 17 for proper switch operation.

HEAT-MINDER SYSTEM—8" SURFACE UNIT COMPONENTS—CUSTOM IMPERIAL MODELS ONLY: The Heat-Minder control system is a bimetal actuated type with two basic parts, a switch assembly and a sensing unit.

These parts may be replaced independently if damaged or if failure of either part occurs. The temperature sensing circuit operates on 118 volts. The contacts of the switch cycle the full 2600 watts of the surface unit at 236 volts.

The switch assembly, Figure 18, mounted in the control panel area, permits selection of temperatures independent of the sensing unit. It is an infinite heat switch basically the same as the standard infinite heat switch previously described except for an additional terminal No. 6 necessary for electrical connection to the sensing unit.

It contains two pairs of contacts, C and D, a set of contacts X, and a bimetal cycler consisting of a bimetal strip having a heater H wound around it. Contact pair X closes when the switch is turned ON.

The switch heater H, of 600 ohms resistance, is energized intermittently with the cycling of the sensing unit contacts Z. The current is .105 amperes at normal line voltage of 118. Actual voltage drop across the heater is 63 volts.

The sensing unit, Figure 19, is a control device mounted in the center of the surface unit. The cylindrical container has a spring-mounted cap which is self-aligning with the bottom of a cooking utensil. The unit senses actual utensil temperature and acts as a thermostat by opening and closing a set of bimetal actuated contacts.

It contains two bimetals A and B which operate a single pair of contacts Z, through a toggle mechanism. Bimetal A is welded to the cap of the sensing unit and, therefore, its movement is predominantly controlled by the utensil temperature. A second bimetal B is isolated

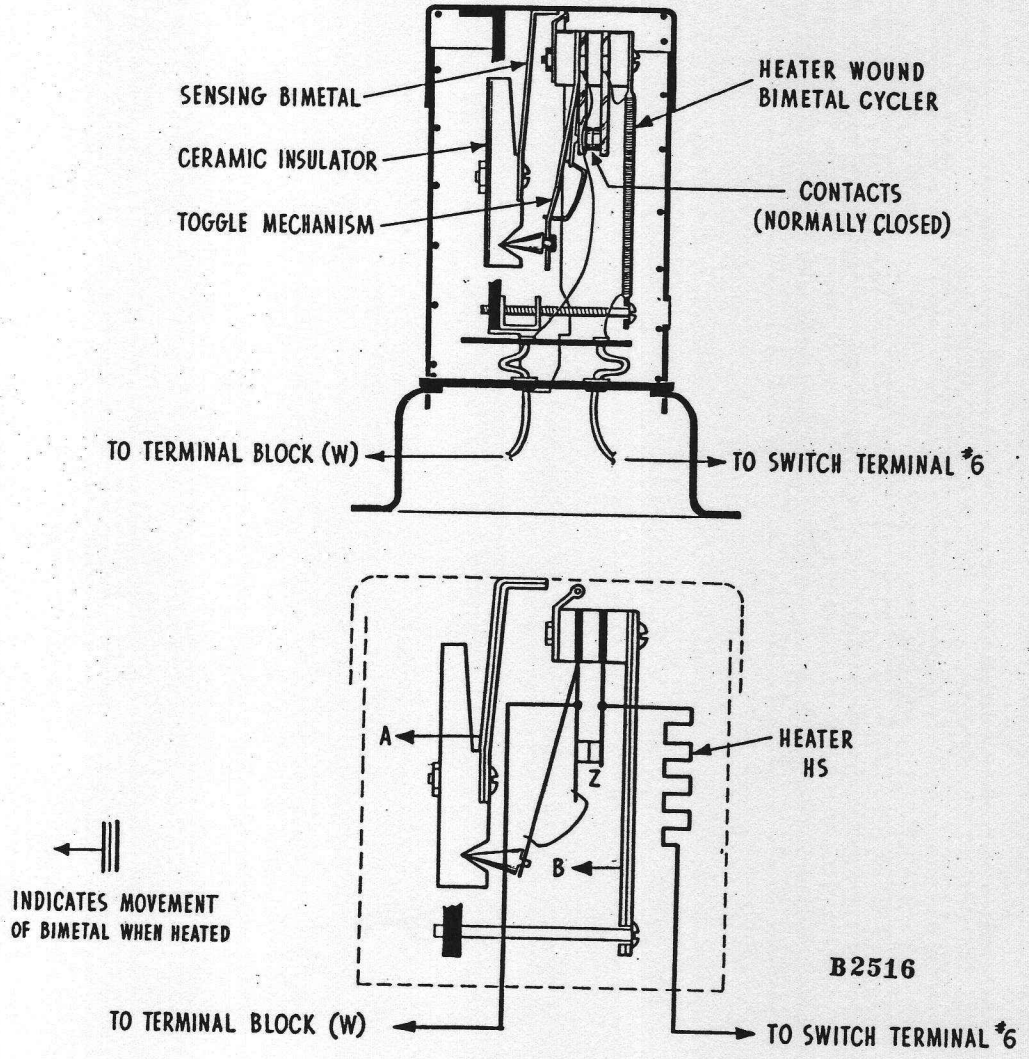


Figure 19
Heat-Minder Sensing Unit

from the cap and has a heater HS wound around it. Heater HS is connected electrically in series with switch heater H by means of terminal No. 6 and with the sensing unit contacts Z.

The sensing unit heater HS has a resistance of 525 ohms. The current is .105 amperes at normal line voltage of 118. Actual voltage drop across the heater HS is 55 volts.

DETAILED DESCRIPTION OF OPERATION—FIGURES 18, 19, AND 20: When a utensil is placed on the Heat-Minder surface unit and the switch knob is turned ON to any desired temperature on the indicator dial, the switch contacts C, D, tnd X are closed. The surface unit draws full wattage at 236 volts. As the temperature of the utensil increases, the sensing unit bimetal A feels this increase. Bimetal A then moves in the direction indicated by the arrow, Figure 19, which, in turn, causes the toggle mechanism to tend to hold the sensing unit contacts Z in the closed position.

Completion of the circuit through contacts Z, energizes heaters H and HS. Heater H causes the bimetal cycler within the switch to move, permitting contacts X in this switch to open. This virtually stops the flow of current to the surface unit. Likewise, heat from heater HS moves the sensing unit bimetal B in the direction indicated by the arrow in Figure 19.

In effect, two opposing forces, by means of toggle action, are tending to hold contacts Z open and to hold contacts Z closed. Eventually the force created by the movement of bimetal B overcomes the force created by bimetal A and the contacts Z open.

With sensing unit contacts Z open, heaters H and HS are no longer energized. This permits the switch bimetal cycler to return to its normal shape, closing contacts X, and again permitting flow of current to the surface unit.

A continuous cycling action occurs to give a balancing or compensating effect at the sensing unit thus providing a close control of utensil temperature. Bimetal B also compensates for increased temperature in the area around the surface unit.

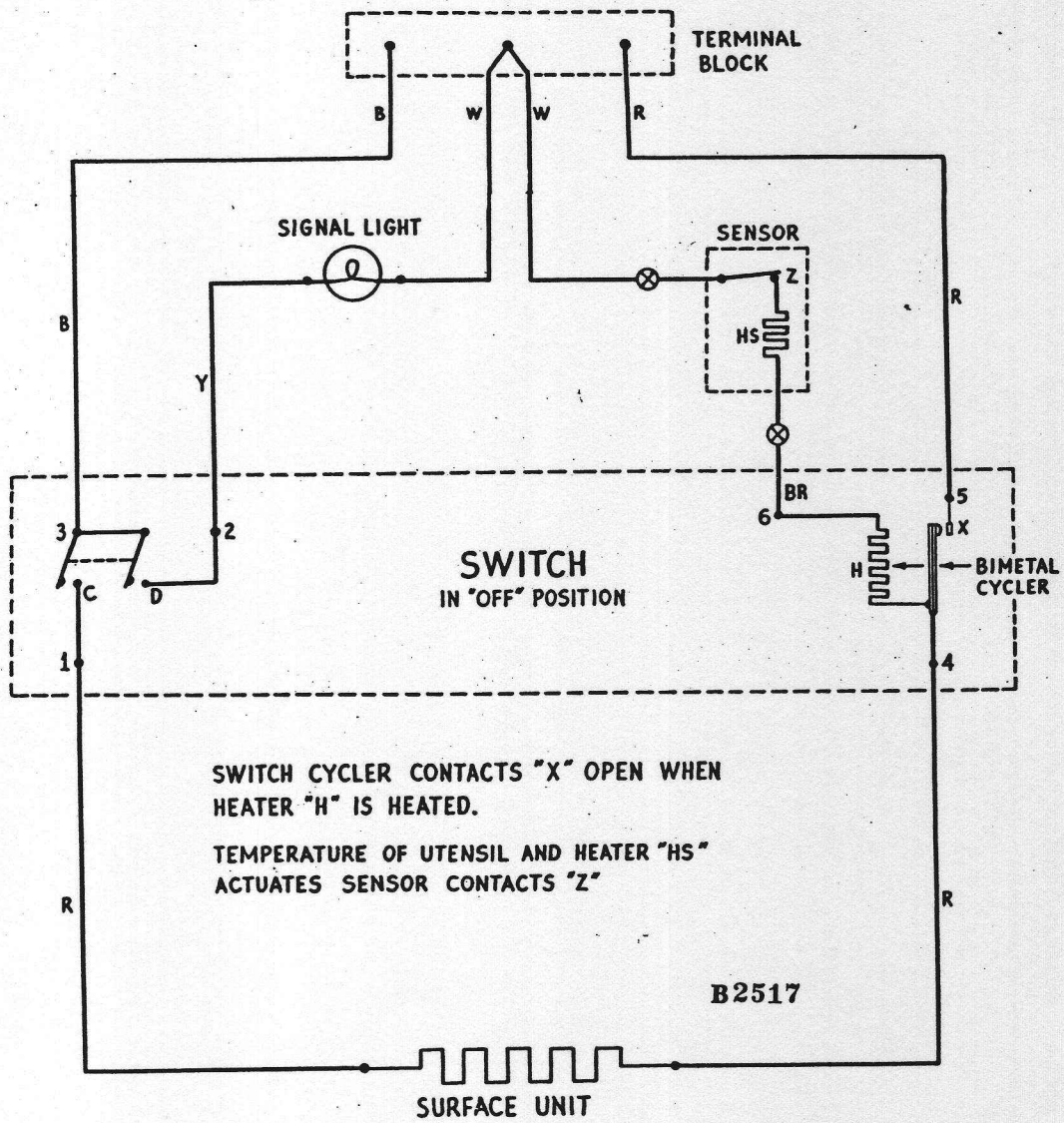


Figure 20
Heat-Minder System Circuit

When a heated utensil and load are replaced by a cold load, fast recovery is possible since the sensing unit contacts Z open when the cap is chilled and the switch contacts X close shortly thereafter because heater H is no longer energized. Note that contacts X are normally closed when heater H is not energized. Thus, 2600 watts of energy are supplied intermittently and for appropriately longer intervals to the surface unit until the temperature adjustment is satisfied.

Caution: The unit will not operate properly with glass utensils and operates but poorly with cast iron or thin aluminum. All utensils must be flat bottomed for best results. The sensing unit must be free from burnt material and the cap must move freely on its spring mounting. The surface unit must be level and the sheath must not be warped nor distorted.

HEAT-MINDER DIAGNOSIS:

Q. *Are the contacts in the sensing unit of the snap acting type?*

A. Yes. Snap action is accomplished by means of a mechanical toggle action within the unit.

Q. *Will vibration or shock at the sensing unit cause erratic operation?*

A. No. The snap action of the sensing unit contacts provides positive operation.

Q. *Must care be exercised when handling a sensing unit or control switch?*

A. Definitely yes. These are calibrated instruments and must be handled accordingly. At all times avoid careless handling of either part.

Q. *What affect does low supply voltage have on the operation of the Heat-Minder system?*

A. Utensil temperature will not be affected materially; however, the cycling rate of the system will be changed.

Q. *What is the voltage drop across each of the cyclers at 118 line volts and what, if any, precautions are to be observed when checking voltage across these coils?*

A. The voltage drop across switch heater H is 63 volts. The voltage drop across the sensing unit heater is 55 volts. The use of ordinary volt-meters is entirely unsatisfactory. If used, they would disturb the normal operation of the system and would not accurately read the voltage. The individual parts must never be placed on a 118 volt circuit.

Q. *Is the cycling action of the Heat-Minder switch dependent upon the cycling action of the sensing unit?*

A. No. It is possible for either the sensing unit cycler or the switch cycler to function independently of each other.

Q. *If the surface unit fails to heat when the Heat-Minder switch is ON, what is indicated?*

A.

1. A faulty surface unit.
2. A faulty control switch.
3. Loose connections at the surface unit.
4. The continuous flow of current to the temperature sensing circuit.

Q. *If the surface unit operates at full heat continuously, what is indicated?*

A. This condition indicates that current is never flowing through the temperature sensing circuit, including the Heater H. As a result, contacts X within the switch will not open. This permits current to flow continuously to the surface unit. A defective sensing unit, switch or faulty wiring is indicated.

Q. *Does the input power, wattage, vary from the low to high temperature setting of the switch?*

A. No wattage variation occurs, however, the percent ON time does vary to produce the desired temperature.

Q. *How is it possible to check the control temperature calibration?*

A. Control temperatures up to the boiling point of water, 212°F., can be checked in a manner comparable to that used on 1959 Range Heat-Minder systems, see TECH-TALK, Volume IX, No. 8A, Page R-32.

Q. *Can the calibration of the units be adjusted in the field, if necessary, since temperature settings are now indicated on the control dial?*

A. Yes. A screw adjustment is provided in the front of the switch for field adjustment. Although sealed at the factory, the seal is easily broken. Turning the screw makes a change of approximately 8°F. across the entire range for a 90° turn of the screw, either way; that is, clockwise increases the temperature and counterclockwise decreases the temperature. The change will be approximately the same across the entire range of settings, therefore it is assumed that such correction would be referred to the critical BOIL range rather than to any other segment of the range.

Q. *What test instruments should be used for checking operation of the sensing unit and control switch?*

A. Test instruments required for checking switch operation are the same as for any infinite heat switch. The test procedure for an infinite heat switch may be found on Page R-175.

A two-wire test lamp, pictured in the tool section, is recommended for checking operation of the sensing unit. The test lamp should be connected in series with one side of the sensing unit; either lead connection to the unit may be used. The use of the lamp affords a means for observing the cycling operation of the temperature sensing circuit and also determines if continuity exists in this important circuit. Should the test lamp not be available, operation can be checked by de-energizing the electrical circuits and measuring the resistance of the two heaters, H and HS independently.

MEAT TENDER SYSTEM — CUSTOM IMPERIAL MODELS ONLY: This system consists of a transformer, meat temperature indicator, probe assembly, probe receptacle, and an alarm buzzer.

The indicator and buzzer locate in the control panel area, the transformer is mounted at the rear of the sur-

face cooking top housing and the probe receptacle is mounted to the upper left side wall of the oven liner. The probe assembly requires no permanent location.

The purpose of the control device is to automatically determine when meat is oven cooked to a predetermined degree of doneness by indicating the internal meat temperature independently of the oven temperature.

COMPONENTS—FIGURE 21: A transformer, of the step-down type, provides current to all components at approximately 12 volts A.C. The low voltage is desirable to permit the use of fewer lead wires, lead wires of smaller gage, and electrical contacts of smaller size.

The meat temperature indicator consists of:

1. Indicator scale calibrated in ten degrees increments ranging from 130°F. to 190°F. An OFF position is indicated adjacent to the 190° marking. Type of

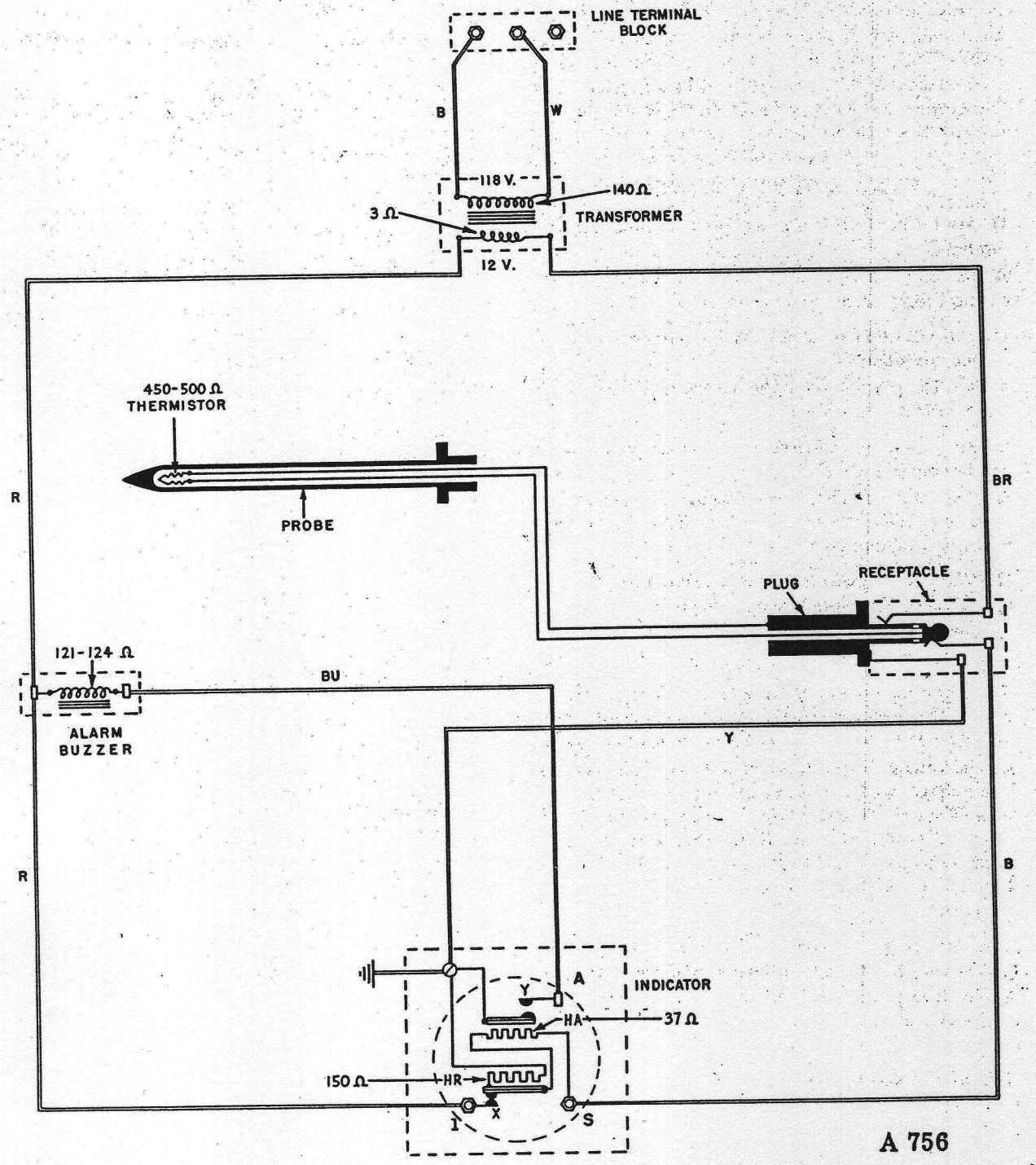


Figure 21
Meat-Tender Circuit

meat markings also appear on the indicator.

2. Two indicator arms, one white and one red. The white arm points to both the temperature scale and the meat scale; the red arm points only to the temperature scale.
3. A knob for user adjustment.
4. Two sets of electrical contacts; contact X to supply current to the circuit and contact Y to energize the alarm buzzer.
5. Two strips of bimetal; one causes the red indicator arm to move and the other serves as a cycler to provide an intermittent current flow through the circuit to maintain gradual and accurate movement of the red indicator arm.
6. Two heaters; heater HR of 150 ohms resistance is located adjacent to the regulator bimetal and provides the necessary heat to allow the bimetal to perform its function. Heater HA of 37 ohms resistance is located adjacent to the actuator bimetal and provides the necessary heat to cause the bimetal to move the red indicator arm.

The probe assembly consists of three major components, a jack type plug, a pointed probe, and a connecting flexible cable. The pointed probe contains a compact semi-conductor material called a thermistor which has the unique characteristic of offering high resistance to current flow when cold. As its temperature increases, its ability to resist current flow decreases proportionately.

The probe receptacle accommodates the probe assembly jack type plug.

The alarm buzzer is an electro-magnetic type having an iron core with a coil of wire wrapped around it. When energized, a strip of metal vibrates to sound the alarm.

DESCRIPTION OF OPERATION, FIGURE 21: Operation of the meat tender system begins only after the user performs these preliminary actions:

1. The point of the probe is inserted into the center of the meat which is to be cooked.
2. The probe jack is plugged into its receptacle.
3. The temperature indicator arm is set to the desired temperature by means of the knob.
4. The oven thermostat is properly set by means of its control knob.

At this time, current is supplied to the meat tender system at 12 volts. The indicator contacts X being closed, permit current flow, through parallel circuits, to both heaters. One heater circuit supplies current through indicator terminals to the probe thermistor and then back to the transformer. As the temperature of the thermistor increases, the flow of current increases. The actuator bimetal heater HA produces sufficient heat to cause the bimetal to warp and thus move the red indicator arm. The arm continues to move until it aligns with the preset white indicator arm. During the period of red indicator arm movement, the regulator bimetal heater HR produces sufficient heat to warp its bimetal and open contacts X. The intermittent heating and cooling of heater HR produces a cycling action.

At the time the two indicator arms align, the indicator contacts Y close to complete a circuit through the alarm buzzer. A continuing buzzer signal occurs until the user turns the control knob to OFF.

The following questions and answers may help you in the analysis of Meat Tender system difficulties.

Q. What is the advantage of the probe?

A. A piece of meat of any appreciable size will have differences in temperature between the outside of the meat and the inside of the meat near the center. The probe permits an accurate exploration of the internal temperatures to make certain that the center portion of the meat is cooked to the desired doneness. This is more accurate than a time and temperature setting of the oven thermostat for control of the cooking.

Q. What happens if the probe is not in position in the receptacle?

A. The 12 volt output of the transformer is open circuited, no current flows in the indicator circuits, and the indicator remains at the low temperature end of the scale.

Q. What would happen if two wires in the probe assembly become short-circuited internally?

A. Excessive current flows in the 37 ohm actuator heater HA which would then burn out the heater.

Q. If an ohmmeter is connected between the tip of the probe assembly plug and the body of the plug, what resistance value should be found for a normal assembly?

A. 450 to 500 ohms at room temperature. If the ohmmeter readings show an open circuit or a short-circuit condition, the probe assembly must be replaced.

Q. Can the serviceman repair the probe assembly?

A. No. If an attempt is made to disassemble the plug. almost invariably a short-circuit will occur where the probe cable wires enter the plug. If this probe assembly is then plugged into a normal indicator circuit receptacle, the meat temperature indicator will be burned out as described above.

Q. If the buzzer fails to operate when the temperature pointer and the set pointer coincide, what should be examined for correction?

A. Use a screwdriver to short between terminal A on the indicator and the indicator case. If the probe is inserted properly into the probe receptacle, the buzzer should sound. If not, replace the buzzer. If the buzzer does sound, replace the meat temperature indicator. If the buzzer operates continuously regardless of temperature indication, a faulty meat temperature indicator may be suspected.

Q. If the 150 ohm regulator heater HR burns out, what happens?

A. The regulator contacts X will remain closed at all times, an excessive voltage will be placed on the indicator circuits, and the 37 ohm actuator heater HA may be caused to burn out. The same failure would result if the set of regulator contacts X became fused together.

Q. *If the temperature pointer hand swings to a maximum position shortly after the probe is inserted into the probe receptacle, what is defective?*

A. Assuming that the probe assembly is not faulty and that the plug is inserted all the way into the probe receptacle, a faulty meat temperature indicator is probable. The regulator heater HR may be burned out or the regulator contacts X may be fused together.

TESTING THE MEAT TENDER SYSTEM:

1. The White indicator arm should be at the 190°F. position.
2. Insert a special test plug, Tool No. 12205, available from your Frigidaire Distributor, into the probe receptacle. The fixed resistance, 57.5 ohms, of this test plug should cause the Red indicator arm to move and finally indicate approximately 150°F. on the meat indicator scale. A variance greater than plus or minus 5°F. would indicate a defective meat temperature indicator which must be replaced.
3. With the test plug remaining in position, move the White indicator arm until it matches with the Red indicator arm to determine if the buzzer is operative. If the buzzer does not operate, use a screwdriver to short between terminal A, Figure 21, and the meat temperature indicator case. This removes the alarm contacts from the circuit, and the buzzer should be energized.
4. To test the probe assembly without using an ohmmeter, remove the test plug from the probe receptacle, and insert the probe in its receptacle in the oven. Set the White indicator arm to 150°F. Submerge the probe 3½ inches, plus or minus ½ inch, into a pan of water heated to approximately 165°F. Temperature measured by a thermocouple or a high heat thermometer adjacent to the tip of the probe, should read 165°F., plus or minus 8°F., when the buzzer is energized. If the temperature reading is not within acceptable limits, replace the probe assembly.

COOK-MASTER:

The Cook-Master assembly, mounted in the control panel, is similar to those used on Frigidaire free-standing ranges, except for dials and styling. The assembly consists of three major parts, a time keeping mechanism or clock, a time signal mechanism for timing individual cooking operations, and a switch mechanism to provide automatic control of oven cooking or control of the appliance receptacle. The time signal mechanism incorporates a buzzer to signal the end of the selected cooking time.

OVEN THERMOSTAT:

The thermostat assembly consists of a switch mechanism mounted to the control panel and a charged capillary line and bulb assembly mounted in an upper corner of the oven. Two thermostats are used on double oven models. All thermostats incorporate center shaft adjustment, the same as used on Frigidaire free-standing

Thermostat adjustment procedures are listed on Page R-202.

SURFACE COOKING—OPERATIONAL AND TESTING DATA:

Improper operation of surface cooking components can be determined by a systematic check of the electrical circuits, Figures 22 and 23. Also refer to previous detailed descriptions of controls.

ELECTRICAL DISTRIBUTION TO OVEN UNITS

Figures 24 and 25

Single Oven Models and R.H. Oven on 40" Models

Thermostat Broil Position

(236 Volt Operation): With the Cook-Master set in the MANUAL or ON position, current is supplied from the connector block to Cook-Master terminal No. 4 through a Red lead. It passes through the Cook-Master contacts and from Cook-Master terminal No. 3 to the thermostat terminal L-2. After passing through the thermostat contacts, it leaves the thermostat at terminal No. 7 and passes through a Brown lead to and through the broil unit.

The circuit is then completed through the Yellow lead wire to thermostat terminal No. B-3, through the thermostat contacts to terminal L-1, through a Black lead to Cook-Master terminal No. 2, through the Cook-Master contacts to terminal No. 1, and finally through a Black lead to the connector block.

The Cook-Master motor is energized through Cook-Master terminals No. 1 and W and through a White lead to the connector block for all operations.

The thermostat will cycle during a broil operation if sufficient temperature is reached.

Thermostat Bake Position

(236 Volt and 118 Volt Operation): For baking operations, 118 volt current is supplied to the broil unit from the connector block through a White lead to thermostat terminal No. 8. After passing through the thermostat contacts, it leaves the thermostat at terminal No. 7. The broil circuit is then completed in same manner as described for "Thermostat Broil Position."

At the same time, 236 volt current is supplied to the bake unit from the connector block through a Red lead to Cook-Master terminal No. 4, through the Cook-Master contacts to the terminal No. 3, from terminal No. 3 through a Red lead to thermostat terminal L-2, through the thermostat contacts to terminal No. 5, from terminal No. 5 through a Blue lead to and through the unit.

Current leaves the bake unit through a Blue jumper wire to the broil unit; the circuit is then completed in the same manner as described for "Thermostat Broil Position."

Left-Hand Oven on 40" Models:

The oven circuits for the small oven are the same as for other ovens except that the Cook-Master is not present.

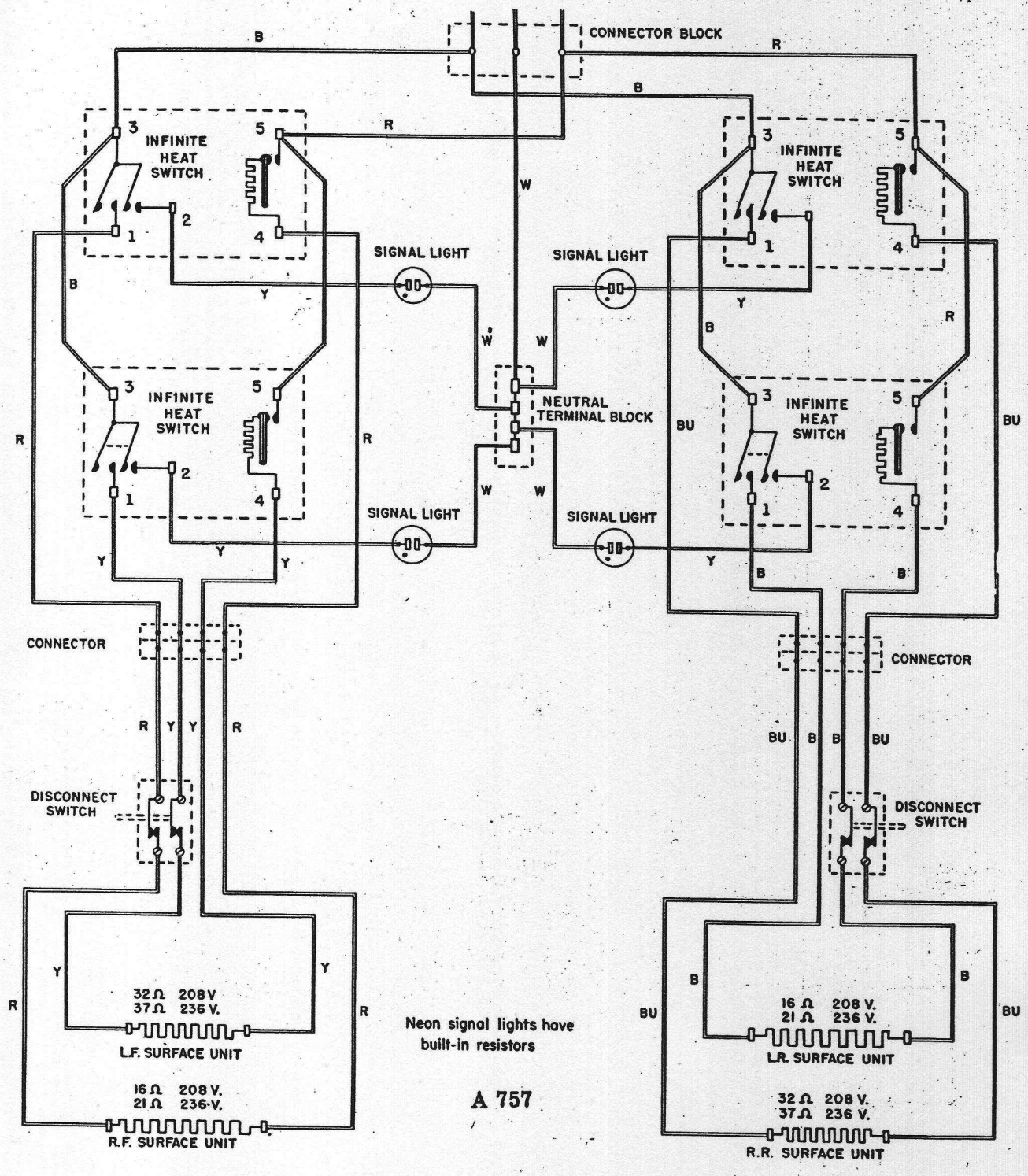


Figure 22
Surface Cooking Circuits—Models RCDB-630 and 640

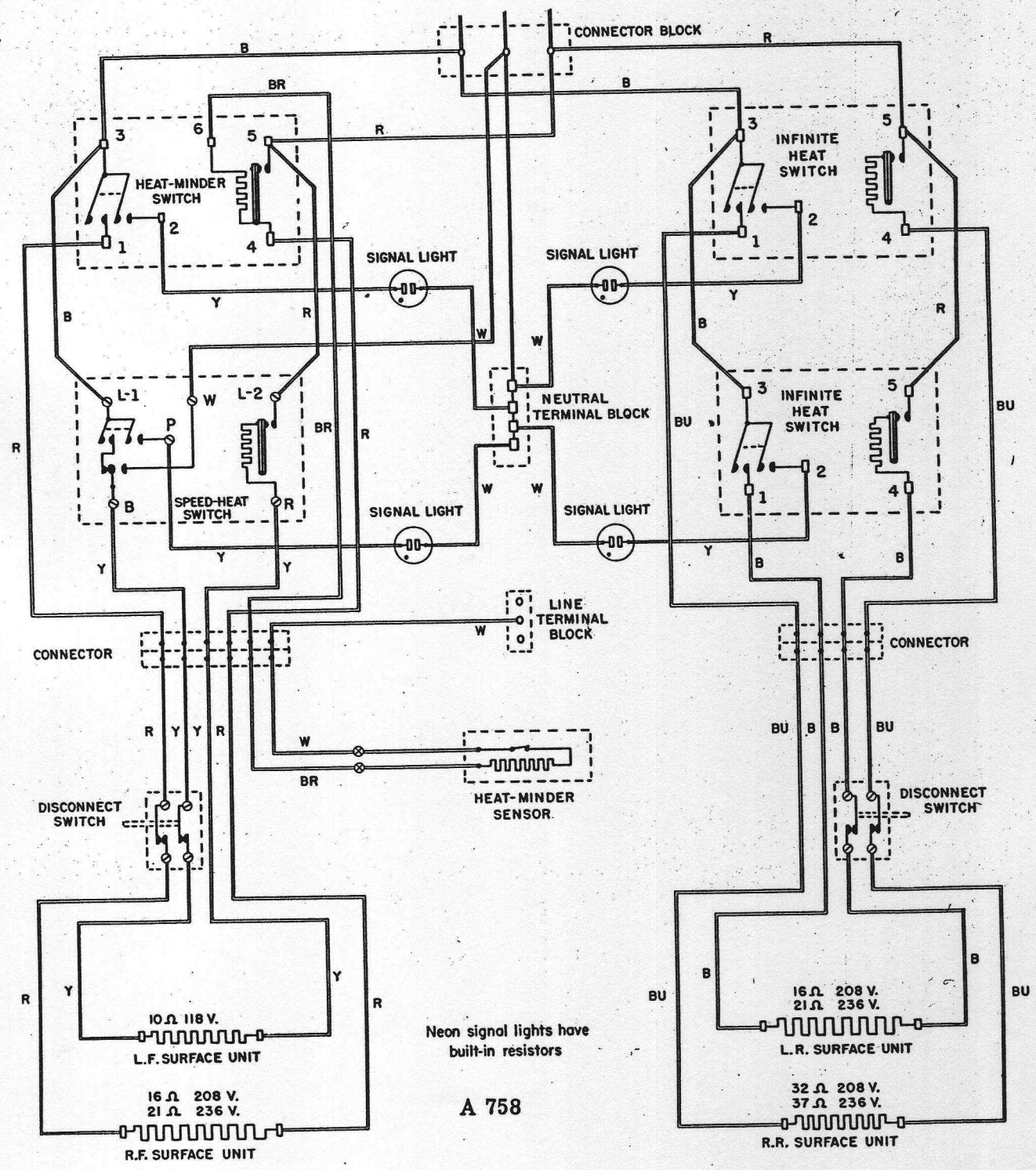
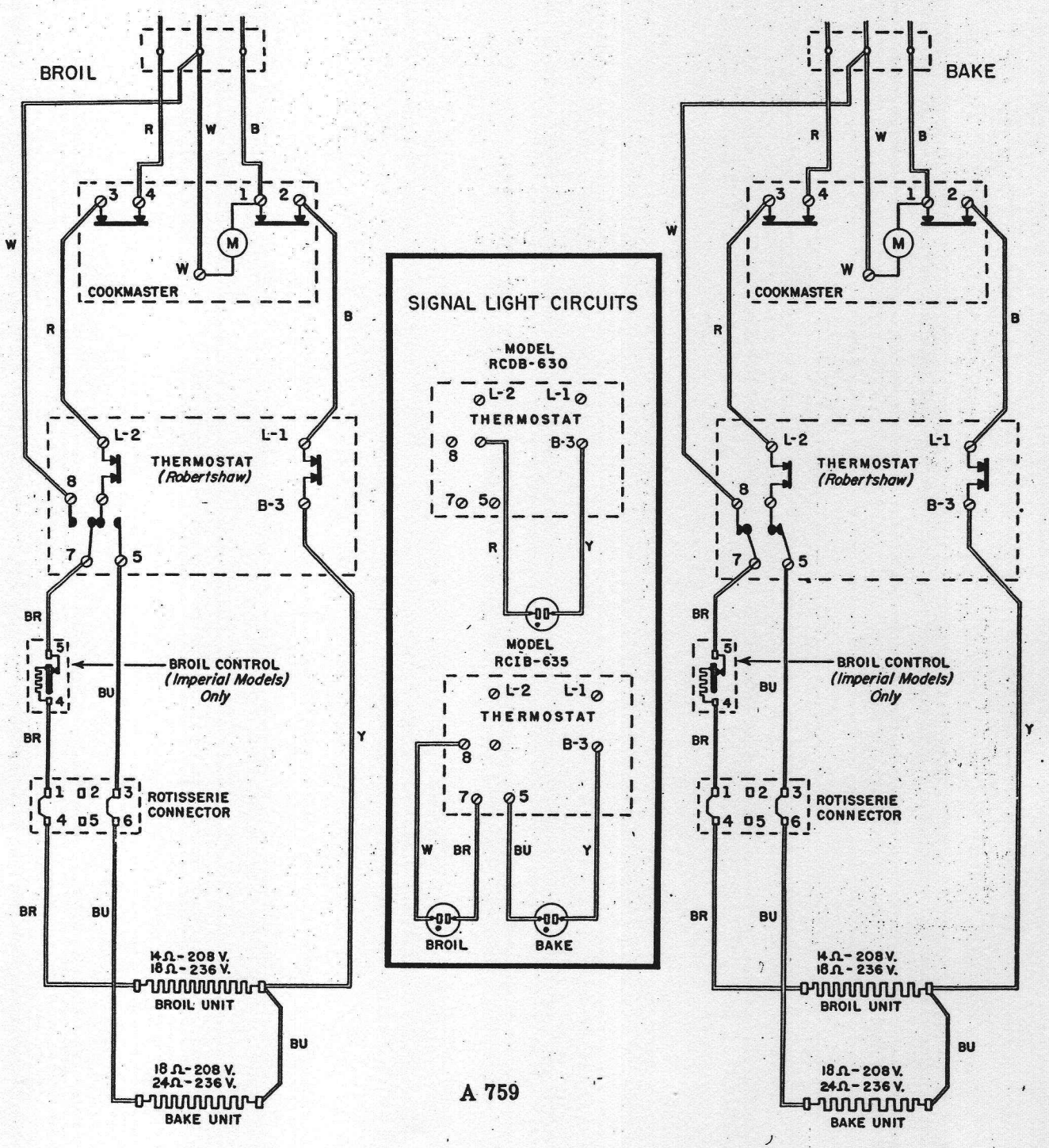


Figure 23
Surface Cooking Circuits—Models RCIB-635 and 645



A 759

Figure 24
Oven Cooking Circuits—Models RCDB-630 and RCIB-635

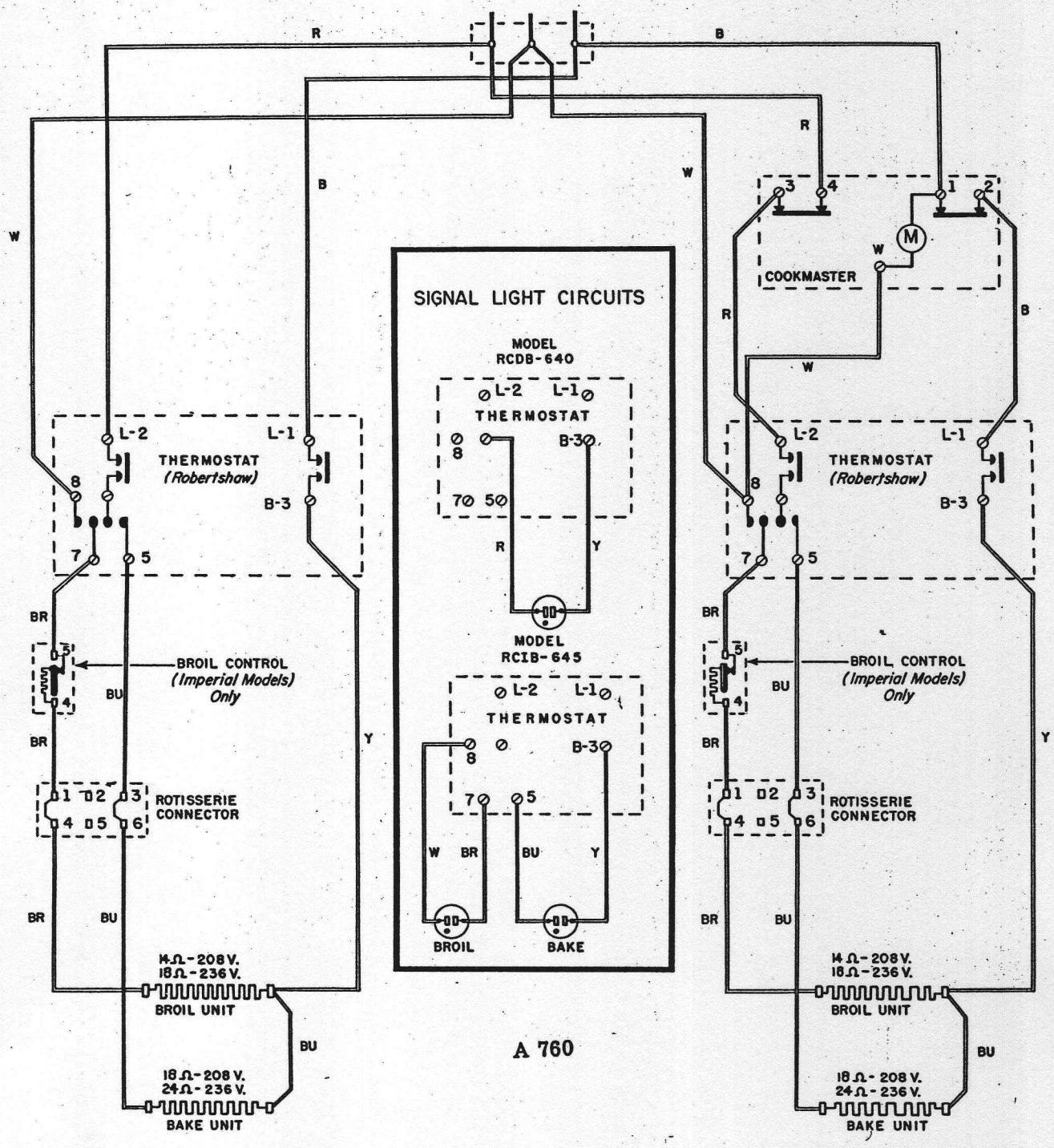


Figure 25
Oven Cooking Circuits—Models RCDB-640 and RCIB-645

TESTING THE ELECTRICAL SYSTEM:

With few exceptions, the cause for improper oven operation can be determined by a systematic check of the electrical circuits. Mechanical service operations are confined to the structural parts of the oven and to the mounting of electrical components. Refer to Service Operations. Testing across the No. 5 and B-3 terminals of the thermostat, when set to BAKE, shows energy to the bake unit through the thermostat. Testing across the No. 7 and B-3 terminals on the thermostat, the 236 volt test lamp should show bright on BROIL and dim on BAKE.

TESTING THE BAKE CIRCUIT:

If the oven bake element will not heat, test as follows, using a continuity test cord equipped with a 236 volt lamp, Tool No. 12167.

Note: Make sure the Cook-Master set lever is in the MANUAL position.

1. Remove the bake element, set the thermostat at 350°F. and test across the outside openings in the bake terminal receptacle. If the test lamp shows a bright light, the bake element or contact between the element and receptacle is defective. Repair or replace as necessary to correct and then retest.
2. If the lamp does not light during Step 1, place the test cord tips on the L-1 and L-2 incoming terminals of the oven thermostat. If the lamp does not light at this point, correct the power supply through the line terminal and connector blocks and through the Cook-Master to the oven thermostat.
3. If a light is obtained in Step 2, test across the No. 5 terminal and B-3 terminal on the thermostat. If the lamp does not light during this test, the thermostat is defective and must be replaced.

TESTING THE BROIL CIRCUIT:

Note: Make sure the Cook-Master set lever is in the MANUAL position. Make sure the Broil Control Switch, if oven is so equipped, is in the RARE position.

Turn the Oven Thermostat to the BROIL Position:

1. Place the test cord tips on the L-1 and L-2 incoming terminals of the oven thermostat. If the lamp does not light, correct the power supply through the line terminal and connector blocks or through the Cook-Master to the oven thermostat.
2. If the lamp does light in Step 1, test across the No. 5 and B-3 terminals of the oven thermostat. If no light is obtained, the oven thermostat is defective and must be replaced.
3. If the lamp does light in Step 2, test across the thermostat terminal B-3 and the No. 4 terminal of the Broil Control Switch. If no light is obtained, the Broil Control Switch is defective and must be replaced.

   Note: Step 3 may be deleted on models not equipped with a Broil Control Switch.
4. If the lamp does light in Step 3, remove the broil element and test across the outer terminals of the broil receptacle. If a light is obtained, the broil element or contact between the element and receptacle is inoperative. Repair or replace as necessary to correct and then retest.

Fluorescent Lamp Operation

The components required for fluorescent lamp operation are as follows:

LAMP:

The lamp consists of an internally phosphor coated tube filled with mercury vapor, and contains a filament at each of the ends. Light is produced when the gas is ionized (conducts current). Ultraviolet radiation is produced by the passage of current through the gas between the two filaments. The phosphor coating is activated by the ultraviolet radiation and in turn re-radiates visible light.

When the gas becomes ionized its resistance decreases as current passes through it. If current is allowed to continue to flow unchecked the lamp will burn out. The ballast is placed in series with the lamp to limit the current flow.

Starter—The starter consists of switch contacts mounted on bi-metal strips enclosed in a glass bulb filled with gas. The gas ionizes at approximately 75 to 80 volts. Most starters also contain a small capacitor to eliminate radio interference. The starter is used to automatically break the circuit between the fluorescent lamp filaments after the filaments become heated.

Ballast—The ballast is an inductive load which performs two functions:

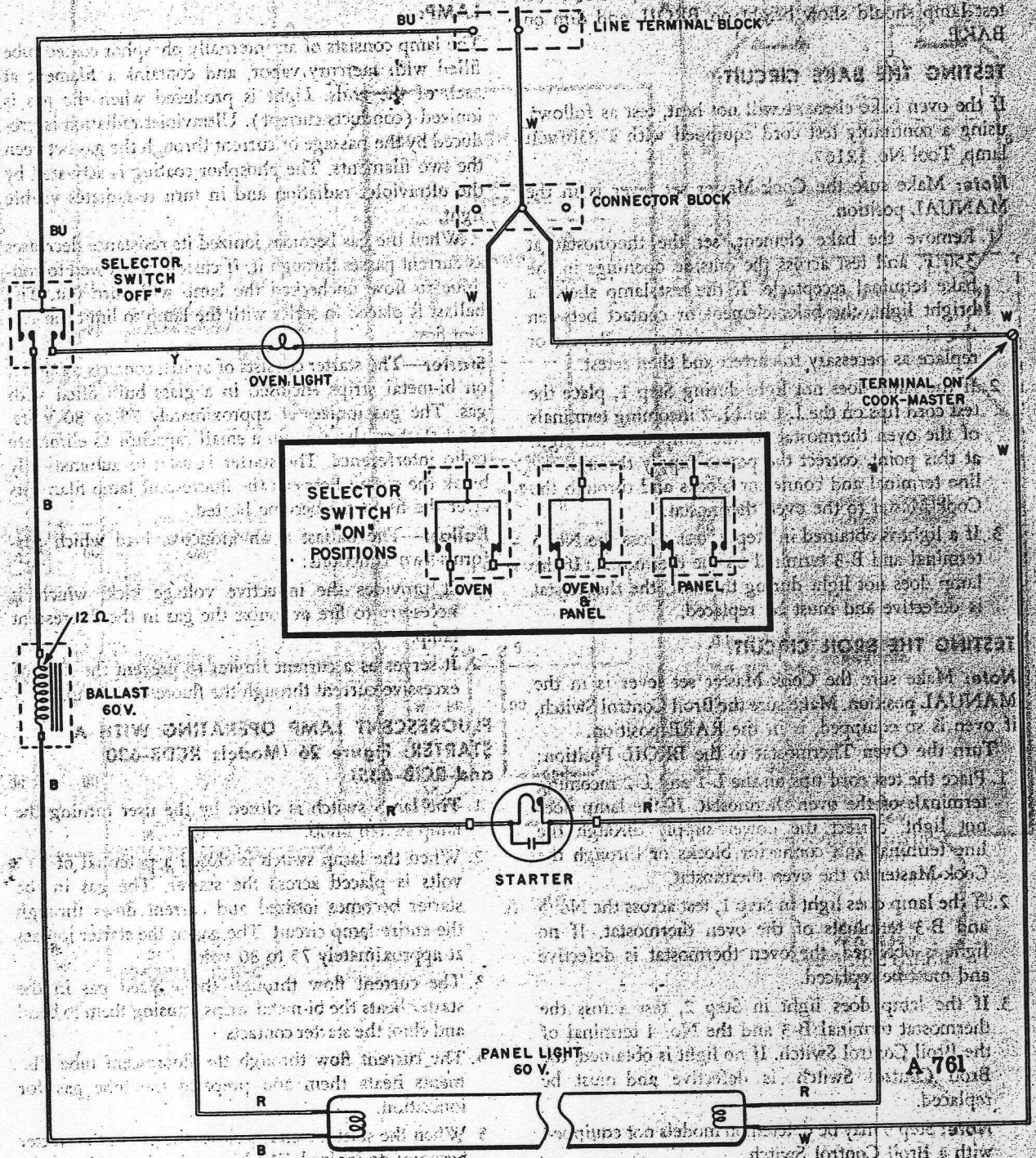
1. It provides the inductive voltage kick, which is necessary to fire or ionize the gas in the fluorescent lamp.
2. It serves as a current limiter to prevent the flow of excessive current through the fluorescent lamp.

FLUORESCENT LAMP OPERATING WITH A STARTER: Figure 26 (Models RCDB-630 and RCIB-635)

1. The lamp switch is closed by the user turning the lamp switch knob.
2. When the lamp switch is closed a potential of 115 volts is placed across the starter. The gas in the starter becomes ionized and current flows through the entire lamp circuit. The gas in the starter ionizes at approximately 75 to 80 volts.
3. The current flow through the ionized gas in the starter heats the bi-metal strips, causing them to bend and close the starter contacts.
4. The current flow through the fluorescent tube filaments heats them and prepares the tube gas for ionization.
5. When the starter contacts close, the gas in the starter becomes de-ionized. The bi-metal strips cool and the starter contacts open.
6. When the starter contacts open the current through

the ballast is cut off, giving an inductive kick. The inductive kick is produced by the collapse of the magnetic field around the ballast. This voltage kick added to the 115 volt line voltages, is applied across the fluorescent tube.

7. The gas in the fluorescent tube, having been heated by the filaments, is ionized by the line voltage plus the ballast voltage kick. The voltage drop across the lit fluorescent tube is approximately 60 volts.
8. The starter is designed so that the gas will not become ionized at a voltage of less than 70 volts so that it will not operate or become ionized while the fluorescent tube is lit.
9. The ballast serves as a current limiter to prevent the flow of excessive current through the fluorescent lamp.



A 761

Figure 26
Fluorescent Lamp Circuits—Models RCDB-630 and RCIB-635

Fluorescent Lamp Operating With a Starter and Step-Up Transformer: Figure 27 (Models RCDB-640 and RCIB-645)

Fluorescent lamp operation on 40 inch range models is basically the same as that previously described. The additional product width, however, requires a longer lamp rated for higher wattage. As a general rule, the voltage surge, or kick, needed to force the starting arc of electricity across the lamp, increases as the lamp gets longer and/or the diameter of the lamp becomes smaller. This requires the usual 118 volts to be raised to approximately 220 volts to provide positive starting and is accomplished by the addition of a step-up transformer winding to the basic ballast circuit.

Procedure for Checking Inoperative Lamp

When lamp does not attempt to start:

1. Check the lamp to be properly mounted in its sockets.

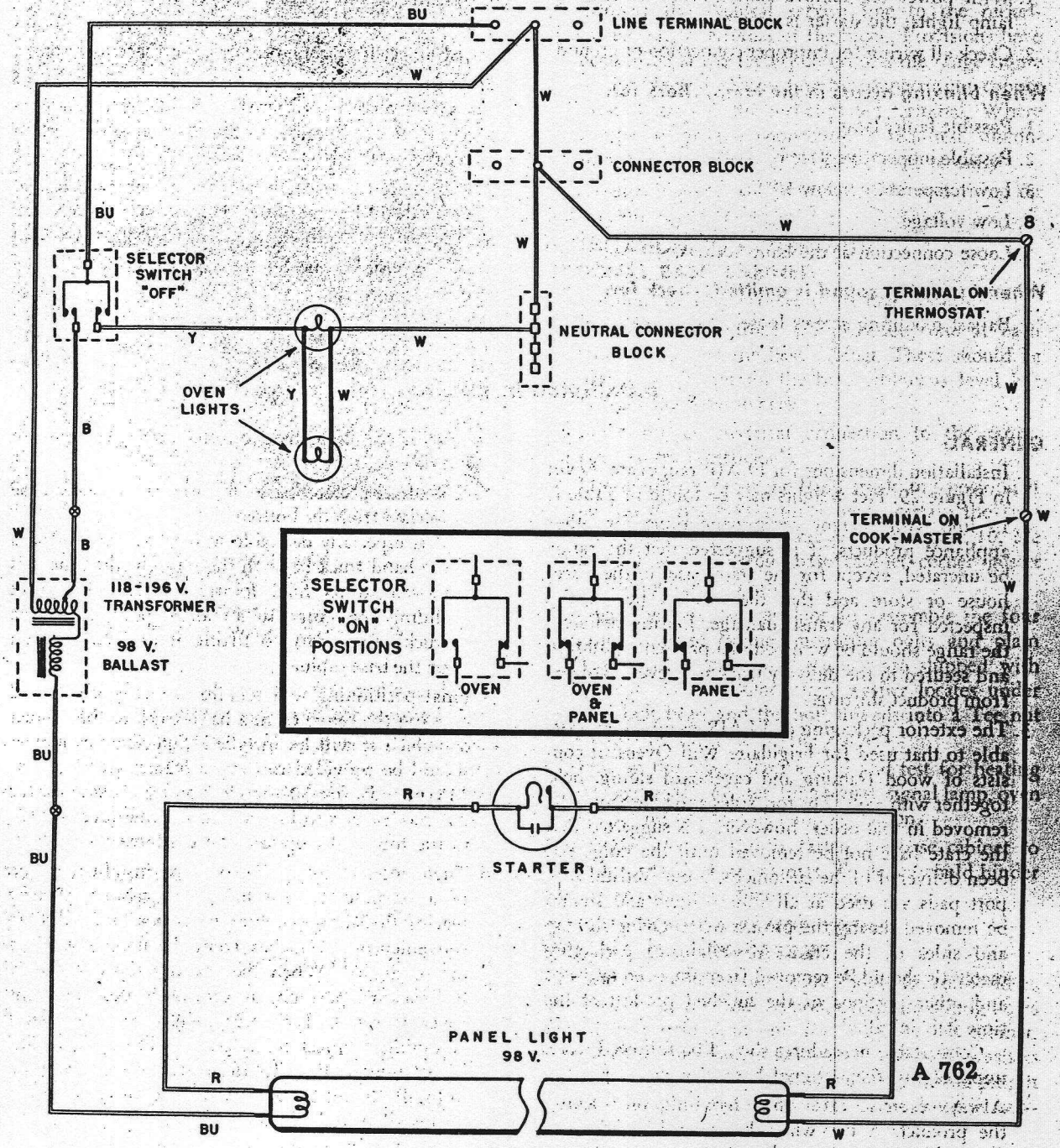


Figure 27
Fluorescent Lamp Circuits—Models RCDB-640 and RCIB-645

2. Check to insure that the lamp pins are not bent, and that they are clean. (Free of corrosion.)
3. Replace the lamp with one that is known to be good.
4. Replace the starter with one that is known to be good.
5. Check for continuity of the ballast and all wiring.
6. When the inoperative part is found, replace the test parts with the original good parts.

When ends of lamp light, but lamp will not light fully:

1. With power on, remove starter from its base. If lamp lights, the starter is defective.
2. Check all wiring for improper connection or ground.

When blinking occurs in the lamp, check for:

1. Possible faulty lamp.
2. Possible inoperative starter.
3. Low temperature below 50°F.
4. Low voltage.
5. Loose connection at the lamp sockets.

When humming sound is emitted, check for:

1. Ballast mounting screws loose.
2. Ballast overheated. Overheating can result from:
   a. Prolonged blinking.
   b. A short in the starter condenser.
   c. A short in the leads to the ballast.

WIRING THE FLAIR RANGE FOR DISPLAY—Figure 28:

The following procedure is recommended for wiring ranges and connecting to 118 volts A.C. for display purposes. All electrical components can then be energized with the exception of the heating elements and oven signal lamps.

1. Remove the back cover panels from the range and disconnect the ground strap from the range frame.
2. At the rear of the control housing, remove one of the two plug type jumpers from the rotisserie connector block. The one to remove makes connection between the two brown wires.
3. Pull apart the two surface unit connectors, one at each side of the rear of the range cooking surface top.
4. Connect a two-wire supply cord to the Black and White posts on the line terminal block.
5. Replace the back cover panels. Plug in the supply cord.

Installation Instructions

GENERAL:

1. Installation dimensions for FLAIR ranges are shown in Figure 29. Net weights may be found in Table I.
2. In line with current recommendations for other appliance products, it is suggested that the range be uncrated, except for the crate base, in the warehouse or store and that the product be visually inspected for any transit damage. During delivery, the range should be wrapped in a protective padding and secured to the delivery truck to prevent damage from product shifting.
3. The exterior packaging of FLAIR ranges is comparable to that used for Frigidaire Wall Ovens. It consists of wood framing and cardboard siding, held together with nails. The top, sides and base should be removed in that order; however, it is suggested that the crate base not be removed until the range has been delivered to the customer's home. Vertical support pads are used at all four corners and should be removed during the process of removing the top and sides of the crate. Miscellaneous packaging materials should be removed from the oven or ovens and other portions of the finished product at the time it is installed.

   Comparable procedures should be followed when unpackaging the optional base cabinets.
4. Always exercise care when handling or trucking the product. A two-wheel hand truck is adequate for moving purposes and must be used in one of two ways:
   a. With the crate base on the range, truck from either end.
   b. With the crate base off, the range should be trucked from the bottom.

   It is especially desirable to have the base off and the hand truck beneath the range at the time it is moved to its final location. This will permit sliding the range to an angle position on the truck preparatory to lifting it to final position on the base cabinet.
5. Final positioning will require manually lifting and carrying the range from a hand truck to the cabinet on which it will be installed. Sufficient manpower should be provided to carry a maximum weight of 235 pounds for 30" models and 325 pounds for 40" models and to lift the range a minimum of 27" to the top of the optional base cabinet.
6. These models are designed to be installed on top of a separate 27-inch high base cabinet, thereby placing the surface cooking units at a "new high" in convenience—32 inches from the floor instead of the usual 36". When the cooking top cover is in the forward position, as previously described, the cover is standard counter height, 36", to match adjoining cabinets for a clean built-in effect. The installation of the FLAIR models is not restricted to the B-30 and B-40 optional base cabinets but can be installed and bolted down on built-in cabinets at any height to suit the owner.
7. The FLAIR ranges are automatically vented

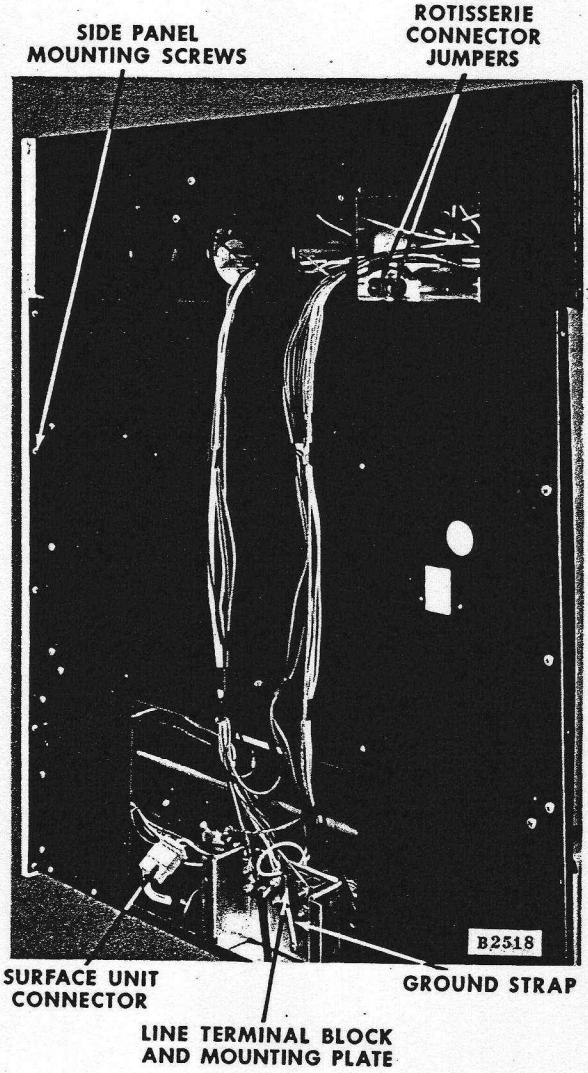


Figure 28
Model RCIB-635 Flair Range—Rear View

through the oven doors. Special openings or provisions for exterior venting are not required.

8. The ranges are UL approved for installation with no clearance at the top; however, for future service to components in the top housing area, a two inch clearance is recommended. This space may be concealed by a removable trim strip.

TO THE ELECTRICIAN:

Model	Connected Load K.W.	Electrical Data
RCDB-630	12.0	Wired for 115/230, 120/240 volt, 3 wire, single phase, 60 cyc. A.C.
RCIB-635	11.8	
RCDB-640	14.1	
RCIB-645	13.9	

SPECIAL: The range supply cable and receptacle can be conveniently located behind the product and optional base cabinet. There is adequate space behind the base cabinet back panel and an adjacent wall for the cable and receptacle. Base cabinet back panels are removable from the front.

1. Frigidaire ranges are equipped with three-wire load balancing switches. Connect only to a single-phase, three-wire circuit with voltage as stamped on the range serial plate. Connections can be made by removing the lead cover at the rear of the range.
2. The terminal plate, Figure 28, has an opening for ¾" conduit plus a knockout to provide a larger opening for 1" conduit, if needed. The ¾" opening will accommodate armored cable, flexible conduit, or rubber covered range cord. When installing the range cord, be sure to use a suitable connector for strain relief.
3. Connect the Neutral service line to the nickel-plated center terminal of the block. Provisions have been made at the factory to ground the range frame to the Neutral service line by connecting a copper ground strap to the nickel-plated terminal. Where a separate ground connection is required, disconnect the strap from the nickel-plated terminal.

Important: Tighten all connections before turning on the current.

INSTALLATION OF RANGE WITH OPTIONAL BASE CABINET:

1. Position the base cabinet in its final location.
2. Two leveling buttons are provided, one at each front corner, on the base cabinet. These should be used to make certain the base cabinet is level left to right and front to back.
3. Make proper electrical connection to the range. See "To the Electrician".
4. Lift the range from the hand truck and position it on top of the base cabinet being certain the four mounting holes on the range base, Figure 10, are aligned with the four base cabinet corner gusset mounting holes, Figure 48.
5. Open the base cabinet door and assemble the four range to base cabinet mounting bolts and plain washers. The bolts and washers are shipped with the base cabinet. One plain washer locates under each bolt head and the bolt threads into a Tee nut located on the base of the range.
6. Plug in the range service cord and test for heating element, Cook-Master, time signal, signal lamp, oven lamp, and fluorescent lamp operation.

CAUTION: Do not rigidly fasten the base cabinet to adjacent walls, floor or cabinets. To do so would hinder moving the range at time of service.

INSTALLATION OF RANGE WITH SUITABLE BUILT-IN CABINET:

The same installation procedure should be followed as indicated in the previous section, except mounting holes should be provided to bolt the range to the cabinet. Such installation requires the use of four plain washers and four ⅜" x 16 bolts having sufficient thread length to pass through support members of the built-in cabinet provided.

CAUTION: ALWAYS BOLT THE RANGE TO ANY CABINET FOR SAFETY PURPOSES.

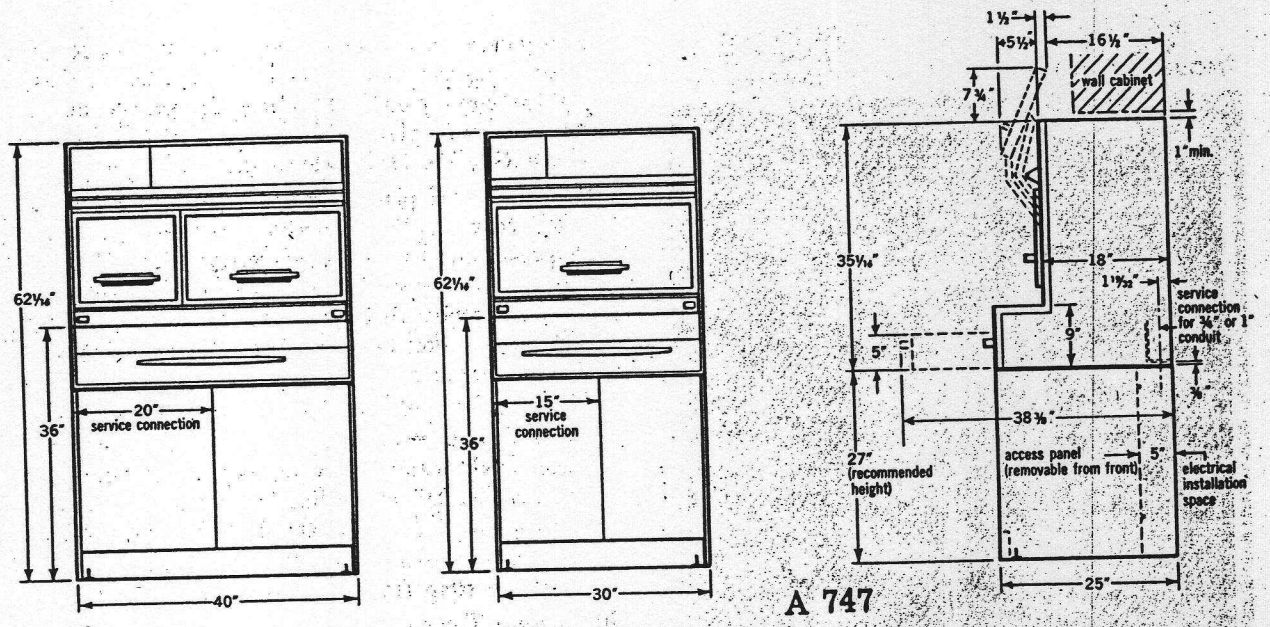


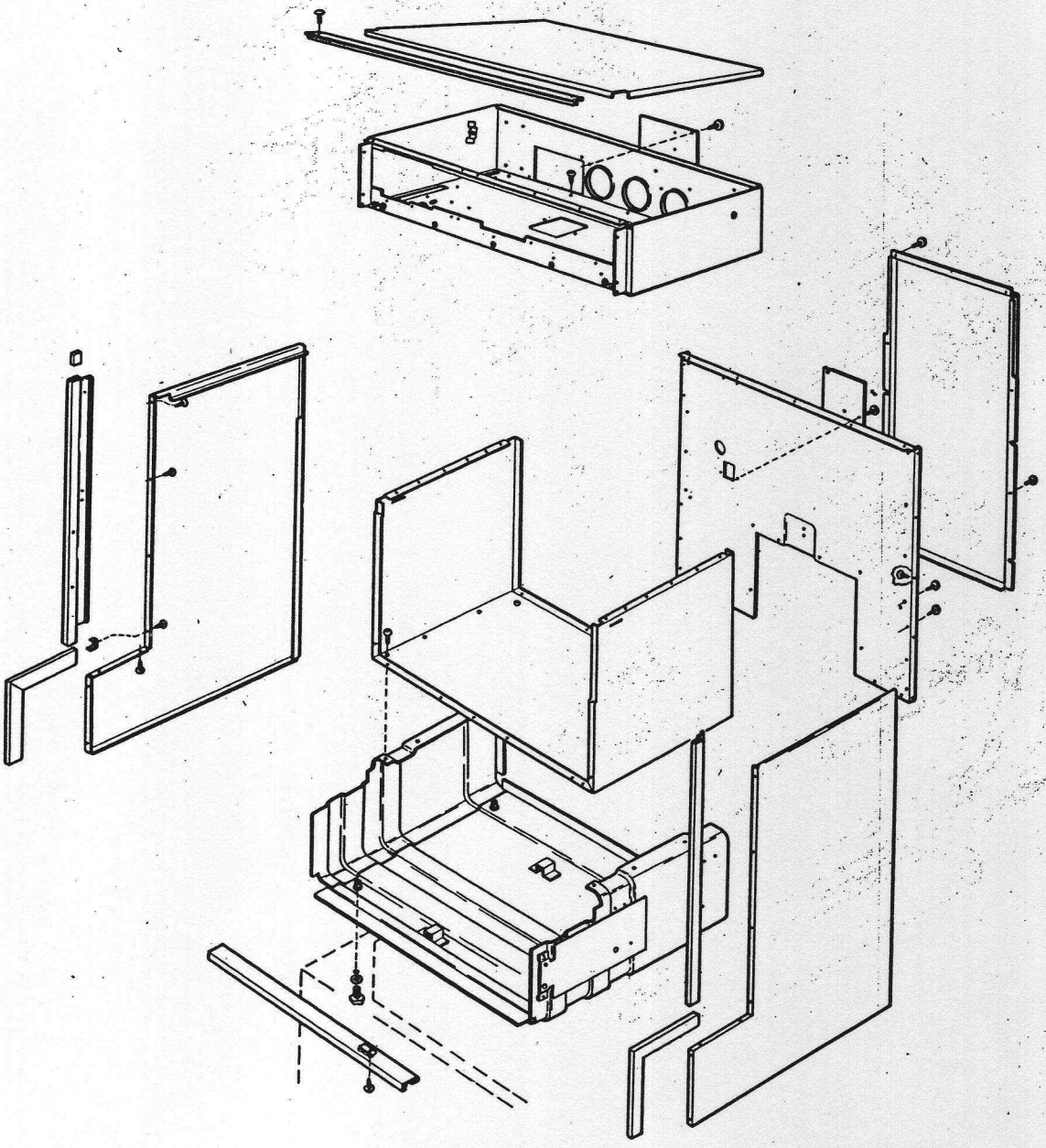
Figure 29
Flair Range Installation Dimensions

TABLE IV
Service Diagnosis

PROBLEM:	CHECK FOR:
SURFACE COOKING	
Surface Unit Fails to Heat Properly.	Faulty unit, inoperative switch, faulty disconnect switch or operating mechanism, broken leads, lead loose at terminals (partial heating—one line fuse blown).
Heat-Minder Unit Not Functioning Properly (Custom Imperial Models Only).	Faulty sensing unit, utensil bottom not touching sensing unit, sensing unit jammed, inoperative switch, faulty heating unit, faulty disconnect switch or operating mechanism, improper type of cooking utensils, see recommendations in Owner's Manual, broken or loose electrical leads.
Speed-Heat Unit Not Functioning Properly (Custom Imperial Models Only).	Inoperative Speed-Heat switch, faulty heating unit, faulty disconnect switch or operating mechanism, broken or loose electrical leads.
Signal Lamps Will Not Light.	Loose or burned out lamp assembly, broken or loose leads, faulty contact within surface unit switch.
OVEN COOKING	
Bake or Broil Units Fail to Heat Properly.	Inoperative oven units, inoperative thermostat, broken or loose leads, terminal blades not making contact. Cook-Master not in manual control position, inoperative broil control switch on ovens so equipped.
Cook-Master Inoperative.	Inoperative Cook-Master motor, contacts not opening or closing in contact block, loose or broken leads, clock mechanism binding.
Time Signal Inoperative.	Binding mechanism or inoperative motor, dial dragging on control panel, broken or loose electrical leads.
Signal Lamps Will Not Light.	Loose or burned out lamp assembly, loose or broken leads, inoperative oven thermostat switch.

PROBLEM:	CHECK FOR:
Oven Interior Lamp Will Not Light.	Burned out bulb, inoperative switch, loose or broken leads, bulb loose in socket.
Improper Baking Results.	Check to see that all units are functioning properly. Consult Owner's Manual for proper shelf positions.
Inoperative Meat Tender Temperature Indicator (Custom Imperial Models Only).	Broken or loose electrical leads, faulty probe, inoperative temperature indicator, faulty probe receptacle, faulty transformer.

Note: Improper mechanical operation of oven doors and/or the surface cooking top cover can be diagnosed and corrected in accordance with Service Operations, Procedures L, M, and N.



E156

Figure 30
Frame, Panels, and Housings—Exploded View

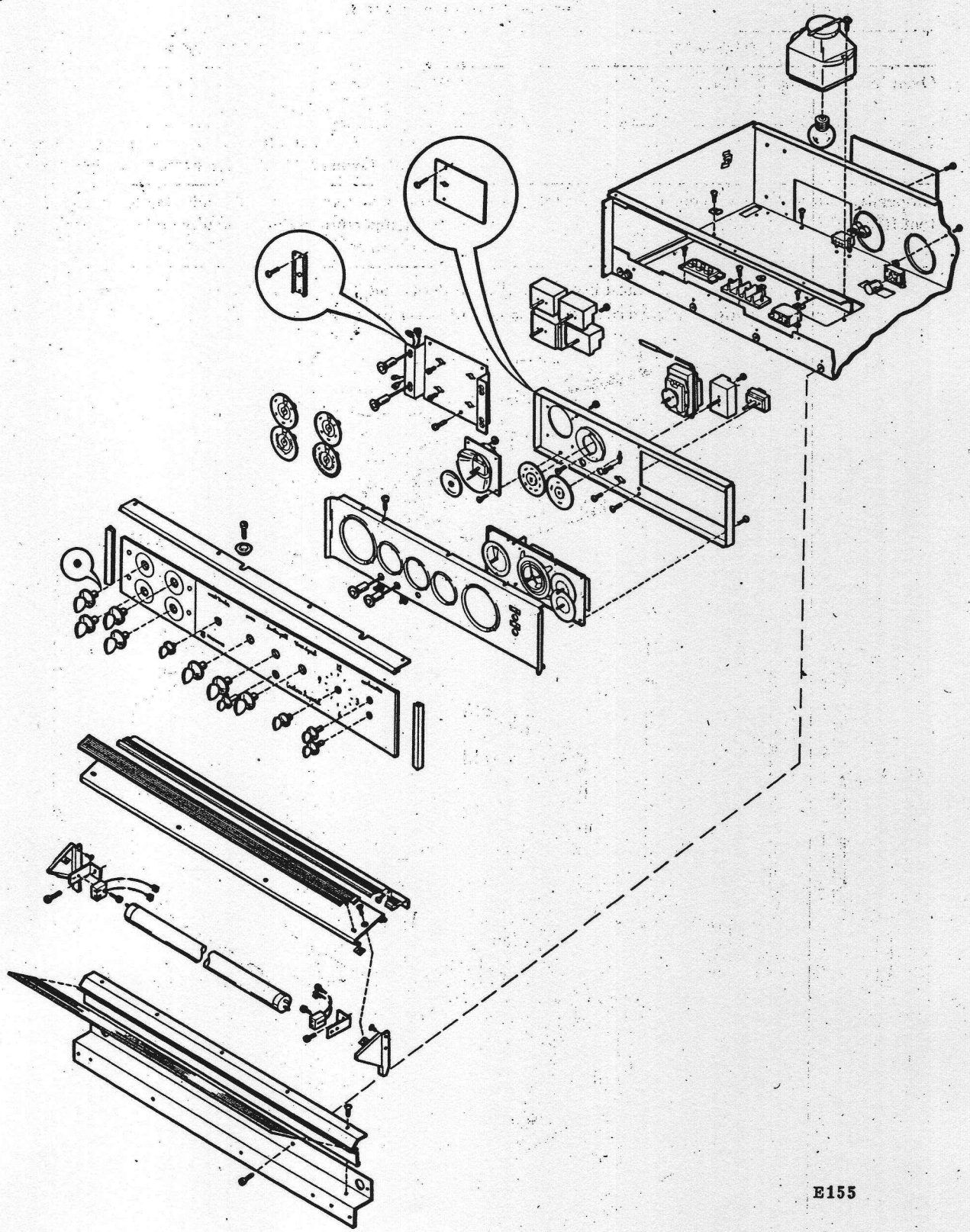


Figure 31
Control Panel Components—Exploded View

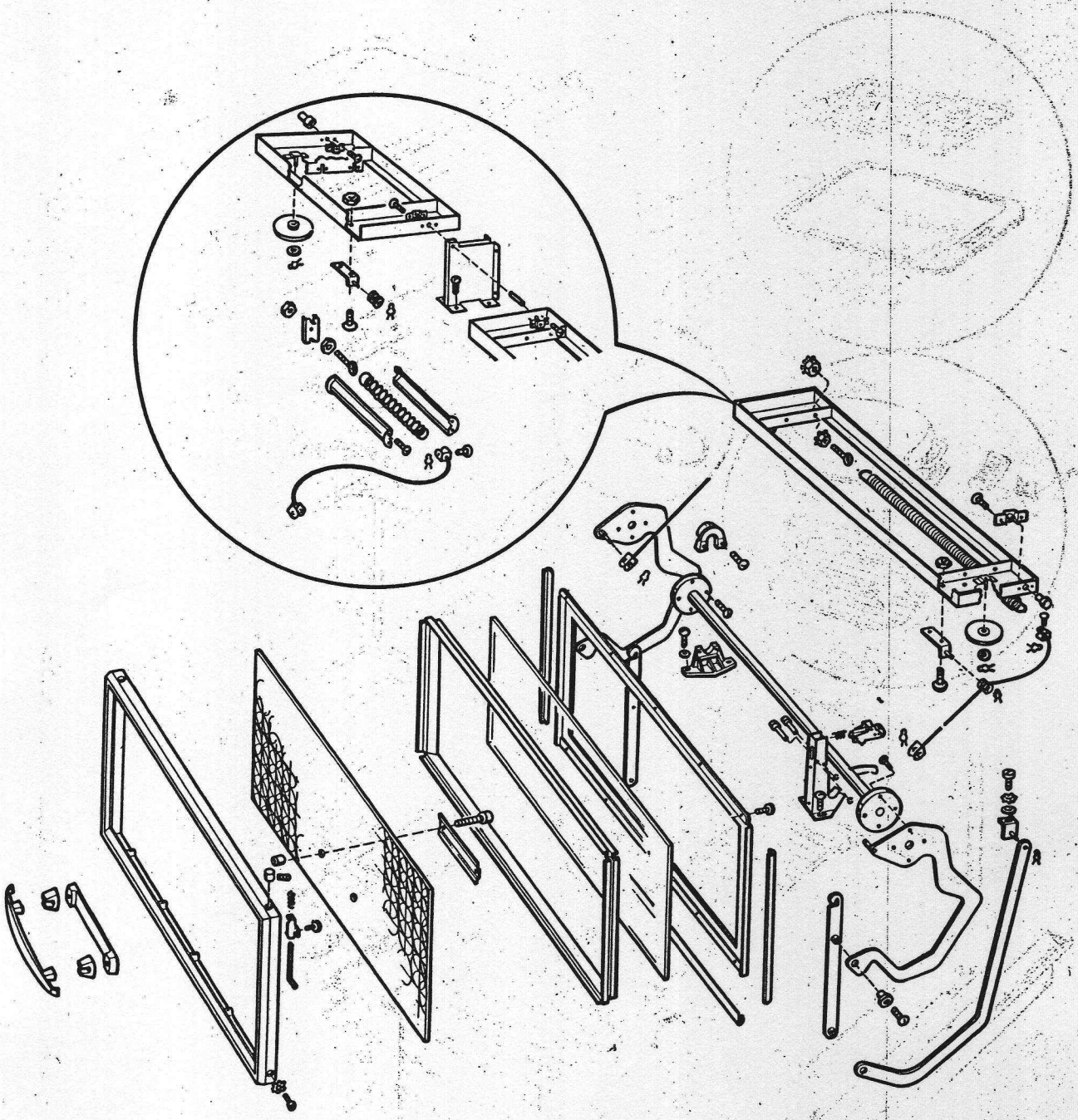


Figure 32
Oven Door and Operating Mechanism—Exploded View

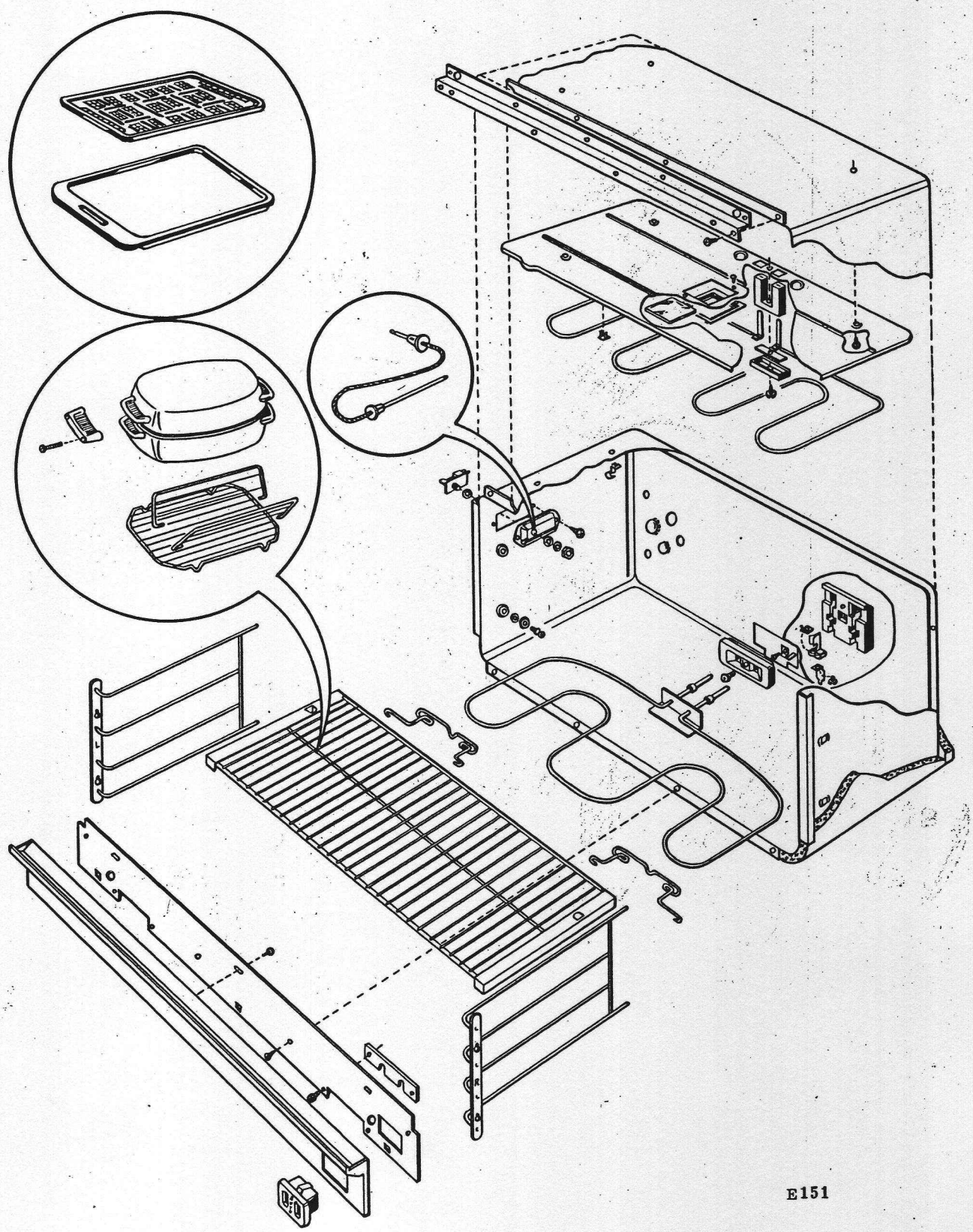


Figure 33
Interior Oven Components—Exploded View

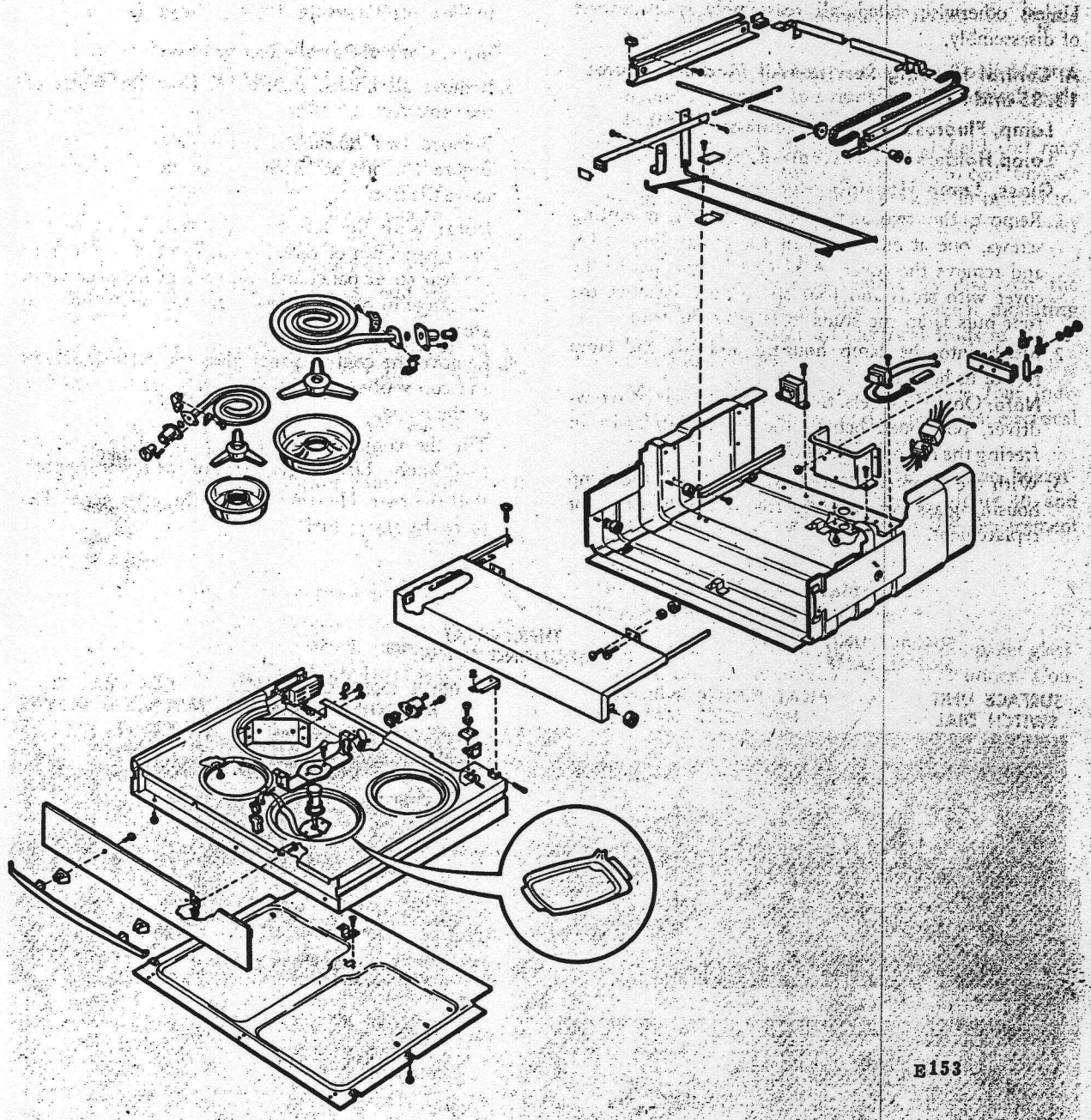


Figure 34
Surface Cooking Top and Operating Mechanism—Exploded View

To provide safety and to avoid repetition of this caution throughout the service operations, ALWAYS BREAK THE SOURCE OF ELECTRICAL SUPPLY before attempting to service an electrical component of the range. Always follow color coding when rewiring or when connecting leads to electrical components. Unless otherwise stated, all reassembly is in reverse of disassembly.

A. Control Housing Service—All Models, Figures 13, 35 and 36:

Lamp, Fluorescent—Replacement:

Lamp Holders, Fluorescent—Replacement:

Glass, Lamp Housing—Replacement:

1. Remove the two lamp housing cover mounting screws, one at either end of the cover, Figure 13, and remove the cover. A black trim mounts to the cover with studs and four speed nuts. Remove the four nuts from the studs to remove the trim.
2. Reach into the lamp housing and lift the lamp free of its holders.
   Note: On 40" models, the use of a flat bladed screwdriver, positioned behind the lamp, will assist in freeing the lamp from its holders.
3. With the lamp cover and lamp removed, the lamp housing glass can be lifted free of the housing for replacement.
4. Removal of the lamp housing glass permits access to the lamp housing ends and the lamp holder brackets. Removal of the necessary mounting screws permits replacement, Figure 36.
5. The lamp holders can be replaced by removing the mounting screw and disconnecting electrical leads in the control housing area.

Glass, Control Panel—Replacement:

6. Remove all knobs, Figure 13, from the shafts of the controls.
7. Remove two housing top trim mounting screws, Figure 13, one at either end of the trim and remove the trim.
   Note: With the top trim removed, the range top cover panel can be raised at the front to free it from the rear cover panel and slid back or removed from the range to permit access to the top of the housing area.
8. Remove the control panel glass top retainer screws and cup washers and slide the retainer forward free of the range.
9. Tilt the control panel glass forward to clear all shaft knobs. Lift the glass free of the lower support.
10. Pull the two side trims free of the glass panel. Replace the glass panel.

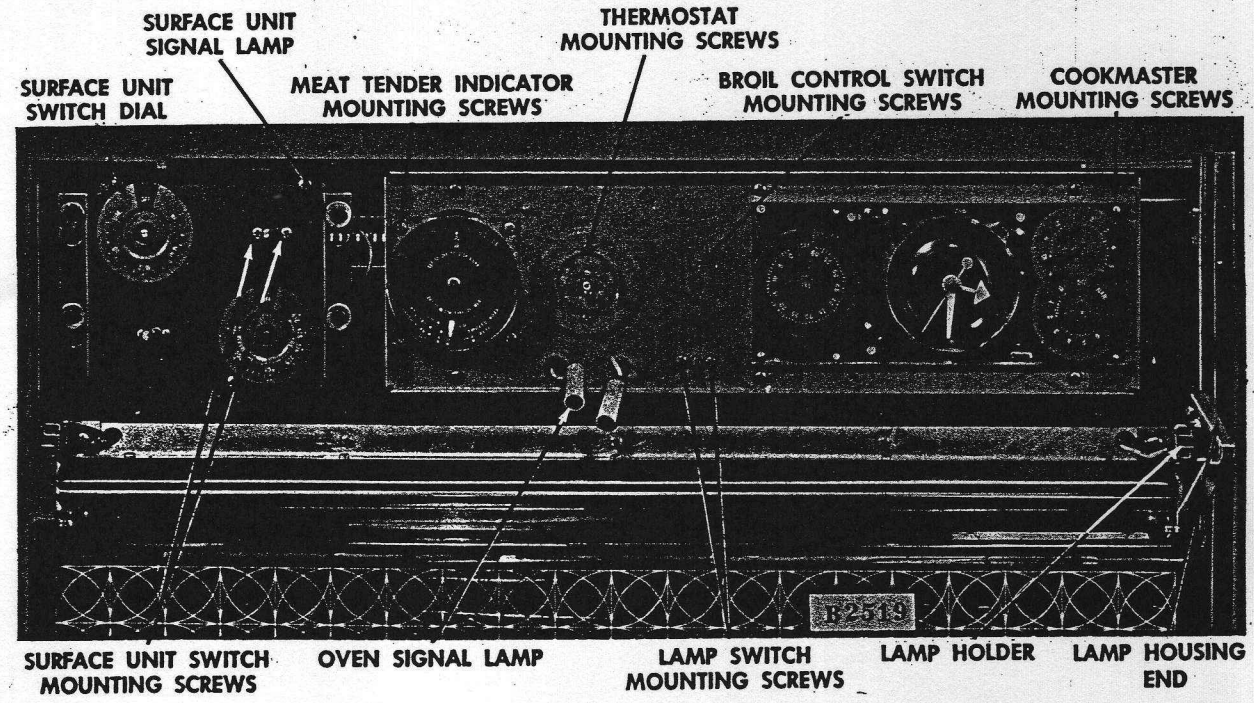


Figure 35
Model RCIB-635 Flair Range—Control Panel and Components

Switch, Surface Unit—Replacement:
Cook-Master—Replacement:

Switch, Oven and Fluorescent Lamp—Replacement:

Lamp, Surface Unit Signal—Replacement:

Lamp, Oven Thermostat Signal—Replacement:

Switch, Broil Control—Replacement:
(Models RCIB-635 & RCIB-645)

Indicator, Meat Tender—Replacement:
(Models RCIB-635 & RCIB 645)

Buzzer, Meat Tender—Replacement:
(Models RCIB-635 & RCIB 645)

1. With the control panel glass removed, access is gained to all surface cooking controls, mounted to the left panel, and to the lamp switch on 40" models. Oven cooking controls, mounted to the right panel, are covered by an escutcheon which should be pulled free of the panel and laid forward as shown in Figure 36.
2. Remove either or both control panels as an assembly and lay them forward to gain access to the component to be replaced.
   a. The lamp switch bracket, on 40" models only, mounts with two screws, Figure 36.
   b. The surface cooking control panel mounts with three screws.
   c. The oven cooking control panel mounts with six screws.
3. Remove and replace any of the following:
   a. Surface unit switch—remove the dial from the switch shaft, remove two switch mounting screws, Figure 35, and transfer all electrical leads to the replacement switch.
   b. Surface unit signal lamp—remove the two electrical leads at the switch and push the lamp forward free of its retaining ears.
   c. Lamp switch—remove the two switch mounting screws, Figures 35 and 36, and transfer electrical leads to the replacement switch.
   d. Oven signal lamp—remove the two electrical leads at the thermostat and push the lamp forward free of the escutcheon retaining ears, Figure 35.
   e. Cook-Master—remove the four Cook-Master mounting screws and transfer all electrical leads to the replacement Cook-Master.

   Note: The Cook-Master rotor and field coil may be replaced by loosening the coil-to-coil bracket mounting screws, removing the two coil bracket-to-post mounting screws and unsoldering the lead wires from the terminal plates.
   f. Broil Control Switch—remove the dial from the switch shaft, remove the two switch mounting screws and transfer all electrical leads to the replacement switch.
   g. Meat Tender Indicator—remove the four indicator mounting screws and transfer the electrical leads to the replacement indicator.
   h. Meat Tender Buzzer—remove the two buzzer-to-housing base mounting screws, Figure 38, and transfer the electrical leads to the replacement buzzer.

Guide, Oven Shelf—Replacement:
Thermostat, Oven—Replacement:

1. Remove the fluorescent lamp and control panel glass. Follow procedures previously described under "Control Housing Service."

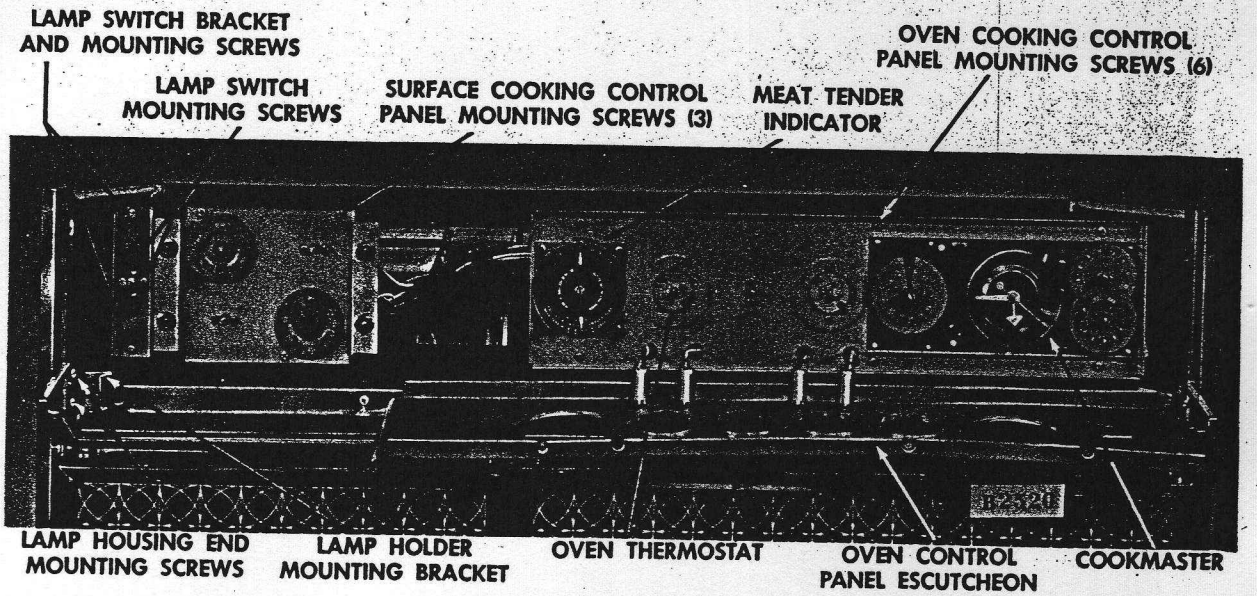


Figure 36
Model RCIB-645 Flair Range—Control Panel and Components

2. Open the oven door and remove the oven shelves.
3. Remove the left-hand oven shelf guide by lifting it free of the two support pegs at the front, Figure 11, and the two locating holes at the rear.

   Note: The right-hand shelf guide can be removed in the same manner.
4. Remove the thermostat bulb from the two support clamps. On 30" models and the left-hand oven on 40" models, the bulb locates in the upper left-hand corner. It locates in the upper right-hand corner of the 40" right-hand oven.
5. Form the thermostat bulb and capillary line to permit it to be removed from the oven through the hole provided in the top of the liner, near the front.
6. Feed the thermostat capillary line up through the liner and into the control housing area. Close the oven door.
7. Free the capillary line from its hold-down clamps in the control housing area.
8. Pull the thermostat dial from its shaft and remove the oven control panel escutcheon.
9. Remove the two thermostat mounting screws, Figure 35, and all electrical leads from the defective thermostat.
10. Remove and replace the thermostat.

Oven Thermostat—Adjustment:

The oven control thermostat can be tested for accuracy by the use of an oven temperature tester which is available from your Frigidaire Distributor as Tools No. 12102 or 12110. All thermostats incorporate the center-of-shaft adjustment feature.

1. Suspend a thermocouple in the air near the center of the oven.
2. With the dial at 350°F., allow the oven to come to temperature.
3. Observe the maximum and minimum temperature of the cycle—ignore the first and second cycles.
4. Determine the average temperature from maximum and minimum observed in Step 3.
5. The following steps should be taken quickly while the oven temperature measurement matches the average temperature determined in Step 4, so that the setting can be made before the oven can change a significant amount.

   a. If the average temperature from Step 4 is lower

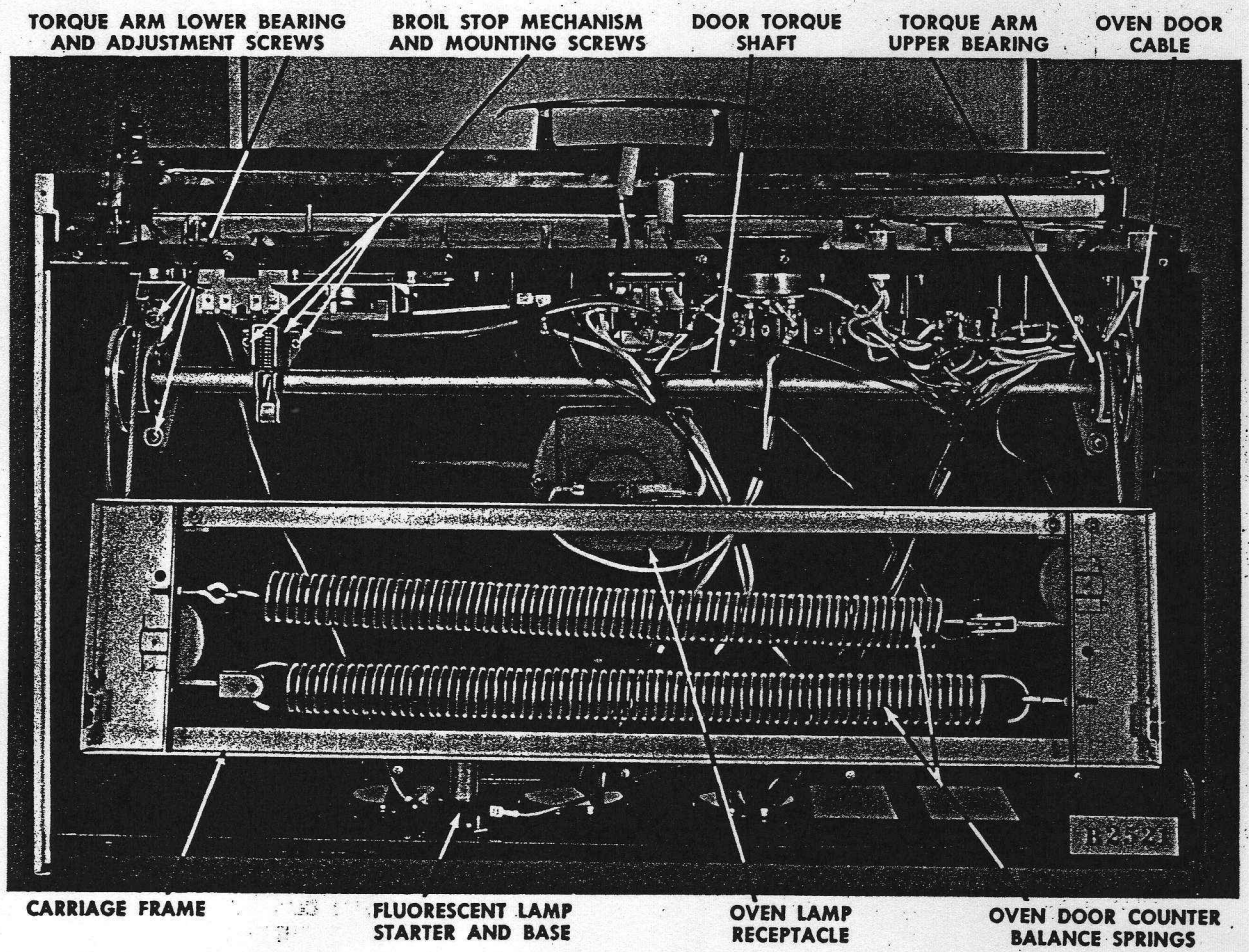


Figure 37
Model RCIB-635 Flair Range—Top Cover Removed

than 350°F., turn the dial counterclockwise until it is at the average temperature, as determined in Step 4. Carefully remove the dial.

Turn the calibration set screw as follows:

Counterclockwise to circuit "make"
Clockwise to circuit "break"
Counterclockwise to the half-way point—average temperature

b. If the average temperature from Step 4 is greater than 350°F. turn the dial clockwise until it is at the average temperature, as determined in Step 4. Carefully remove the dial.

Turn the calibration set screw as follows:

Clockwise to circuit "break"
Counterclockwise to circuit "make"
Clockwise to the half-way point—average temperature

Note: Rotation of the calibration set screw adjusts the calibration as follows when applied to the standard oven control dial scale:

90° clockwise lowers calibration 35°F.
90° counterclockwise raises calibration 35°F.

Starter, Fluorescent Lamp—Replacement:
Base, Fluorescent Lamp Starter—Replacement:

1. Gain access to both components by removing the range top cover panel—Step No. 7 under "Glass, Control Panel—Replacement."
2. Remove the starter, Figure 37, by twisting free of its base.
3. Disconnect the two electrical leads, remove the two mounting screws and remove the base, Figure 37.

Note: Access to both components can also be gained by reaching through the control panel area after removing both the surface cooking and oven cooking control panels. See Steps No. 6 through 9, "Glass, Control Panel—Replacement" and Steps No. 1 through 3, "Switch, Surface Unit—Replacement."

B. Panel, Side—Replacement:

1. Remove the fluorescent lamp housing top cover, the lamp and the housing glass, Procedure A.
2. Remove the two lamp housing end mounting screws, Figure 36, and remove the end.
3. Remove the two control housing top trim mounting screws, one at either end of the trim and remove the trim.
4. Raise the range top cover panel at the front and free it from the rear cover panel. Remove the cover panel from the range.
5. At the rear of the range, remove the five side panel to rear cover mounting screws, Figure 28.
6. With the rear flange of the side panel free of the rear cover, slide the panel forward free of the range.
7. Remove the panel trim mounting screws, Figure 39, remove the trim and transfer it to the replacement panel.
8. Replace the panel.

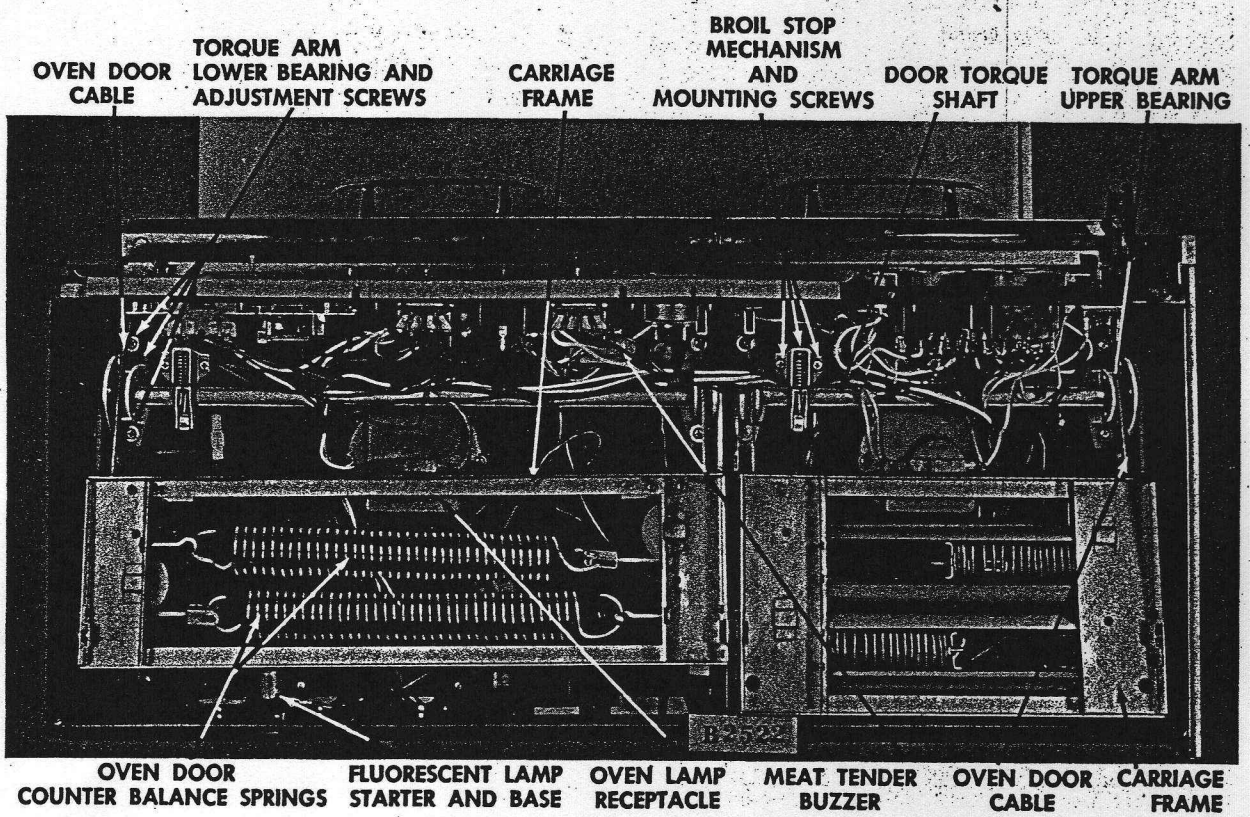


Figure 38
Model RCIB-645 Flair Range—Top Cover Removed

C. Lamp, Oven—Replacement:

Receptacle, Oven Lamp—Replacement:

Element, Oven Bake and Broil—Replacement:

1. Open the oven door to gain access to the interior. Remove all oven shelves.
2. Pull the oven bake unit, Figures 10 and 40, free of the receptacle at the rear of the liner. Remove the baffle mounting screws and transfer the baffle and unit supports to the replacement unit.
3. Slide forward and remove the oven lamp glass, Figure 41, located in the center of the broil unit reflector panel, Figure 40.
4. Unscrew and remove the oven lamp.

   Note: The oven lamp receptacle, Figures 37 and 38, mounts from the top housing base by two screws. Gain access to the control housing area, remove the two mounting screws, and transfer the electrical leads to the replacement receptacle.
5. Remove the four broil unit to retainer mounting screws and permit the unit to drop down sufficiently to disconnect the two electrical leads at the unit terminals.
6. Remove the electrical leads and remove the unit assembly from the oven.
7. Remove the broil unit receptacle mounting screw and disassemble the receptacle, retainer, and insulator, Figure 40.
8. Remove the element from the reflector by bending the holding tabs, Figure 40. Transfer all components to the replacement element.

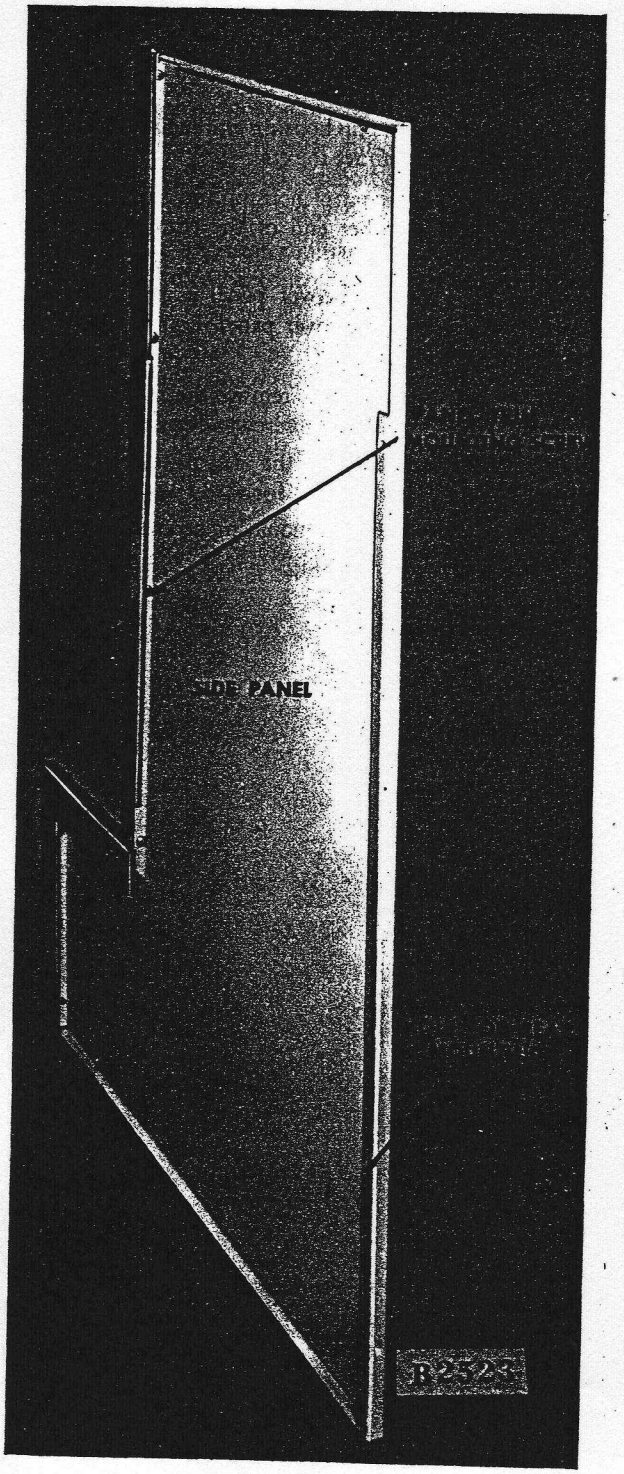


Figure 39
Side Panel Detail

D. Receptacle, Meat Tender Probe—Replacement:
Models RCIB-635 and RCIB-645

1. Open the oven door and remove all oven shelves and the shelf guide on the left side of the oven.
2. Remove the two Meat Tender receptacle cover mounting screws, Figure 41, and pull the assembly away from the liner.
3. Remove the receptacle-to-cover mounting hex nut, Figure 41, lock washer and two plain washers; remove the cover.
4. Transfer the electrical leads from the defective to the replacement receptacle.

E. Oven Door Assembly—Removal:

1. Depress the two door release buttons at the top of the door, Figure 13, and tilt the door forward.
2. Remove the two door-to-operating arm mounting screws, Figure 8, one at either side of the door, and lift the door assembly free of the operating arms.

Door Disassembly: Figure 42:

1. Remove the inside door panel-to-door frame mounting screws and remove the panel.
2. Remove the three door seals, one at the bottom and one at either side of the door.
3. Lift out the inner glass panel.
4. Remove the glass panel retainer and remove the outer glass panel.
5. On the back side of the outer glass panel, remove the two door handle bracket-to-handle base mounting screws.
6. Remove the two handle gaskets, the handle mounting bracket, the handle base, the two handle supports, and the handle.

7. On each side of the door frame, remove the oven door latch bracket mounting screw from the door frame. Remove the two latch assemblies.
8. Remove the set screw from the latch assembly, release the button and replace any of the following as necessary:
   a. Door Release Button
   b. Door Release Rod
   c. Door Latch Mounting Bracket
   d. Door Latch Spring

Reassembly Note: The door seals should be positioned as far towards the top of the door as possible.

F. Receptacle, Bake—Replacement:
Receptacle, Appliance—Replacement:
Liner, Oven—Replacement:
Insulation, Oven—Removal:

1. Remove the top cover, the fluorescent lamp, lamp housing glass, lamp housing ends, and control panel glass—Procedure A. Do not remove the fluorescent lamp holders and brackets.
2. Open the oven door and remove all oven shelves and shelf guides.
3. Remove the oven bake and broil elements as assemblies and remove the oven lamp—Procedure C.
4. At the rear of the oven liner, remove the screw that mounts the front half of the bake unit receptacle. Remove this portion of the receptacle.

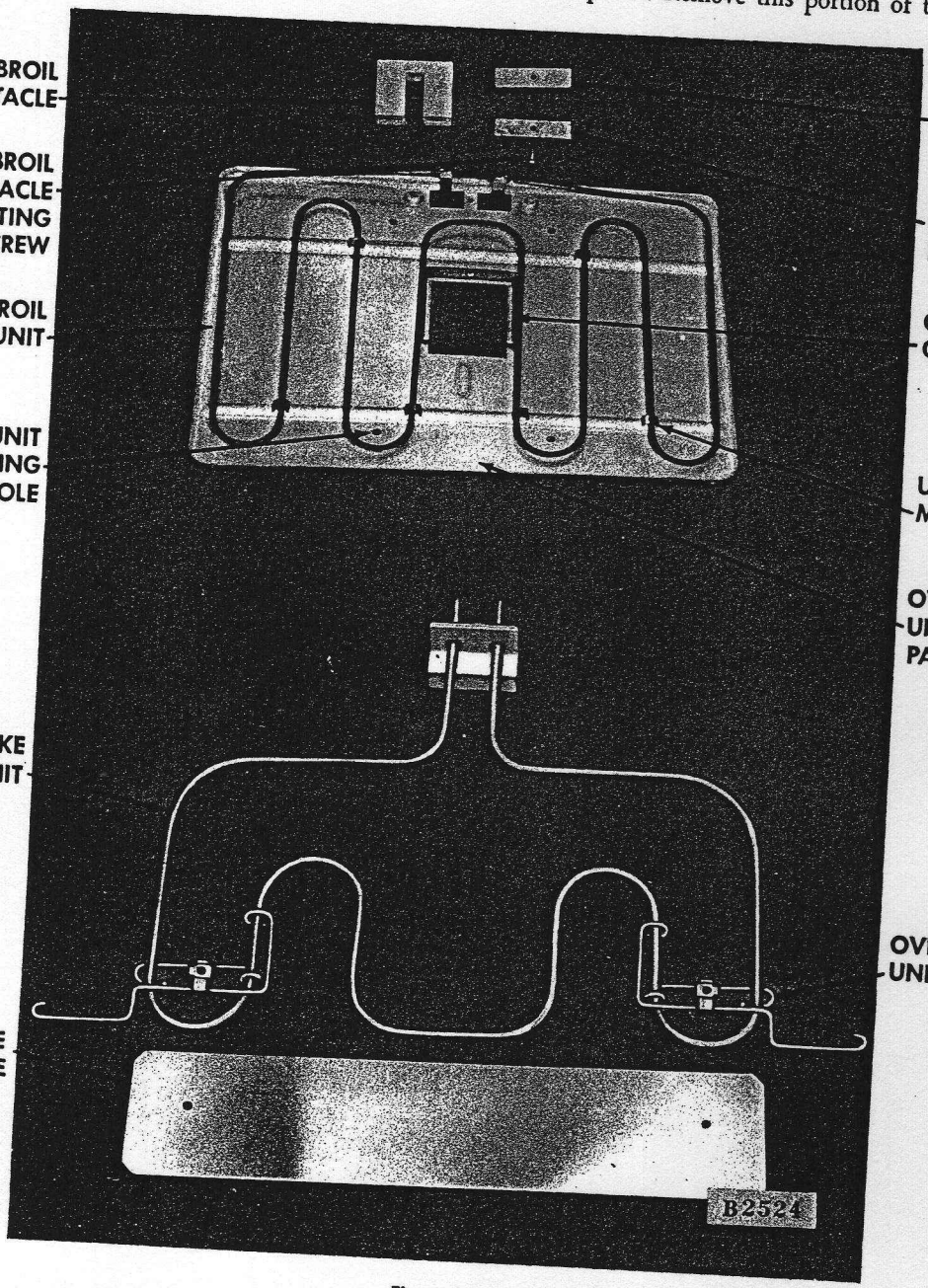


Figure 40
Oven Cooking Unit Detail

Note: Removal of the front half of the bake receptacle permits access to the mounting screw for the rear half, Figure 12. With the cooking top cover removed, Procedure I, remove the mounting screw to permit the rear half of the receptacle to drop down free of its mounting position. Disconnect the electrical leads and replace the receptacle.

5. Free the thermostat capillary line and bulb from its mounting clamps and remove the thermostat line from the oven—See Procedure A, "Thermostat, Oven—Replacement," Steps 5, 6 and 7.
6. On models so equipped, remove the Meat Tender probe receptacle, Procedure D.
7. At the top front of the oven, remove all mounting screws from the oven mounting angle and permit the angle to hang, retained only by the fluorescent lamp holders and their mounting brackets, as shown in Figure 43.
8. At the bottom front of the oven, remove the condensation trim mounting screws and the trim, Figure 44. The trim mounting screws are located on the back side of the trim just inside the lower front edge of the oven.

   Note: As the trim is removed, disconnect the two electrical leads to the appliance receptacle and remove the receptacle from the trim.
9. Remove the mounting screws from the condensation trim mounting plate and remove the plate. Do not remove the two surface cooking top cover stops or their mounting screws.
10. Remove the oven liner mounting screws from the bottom front flange of the oven liner.
11. Pull out the liner and replace it.

    Note: Insulation surrounds the liner completely, Figures 12 and 43. A wrap-around piece covers the sides and bottom, one piece locates at the oven rear, and two pieces, double thickness, locate at the top. Replace as necessary, using bulk insulation.

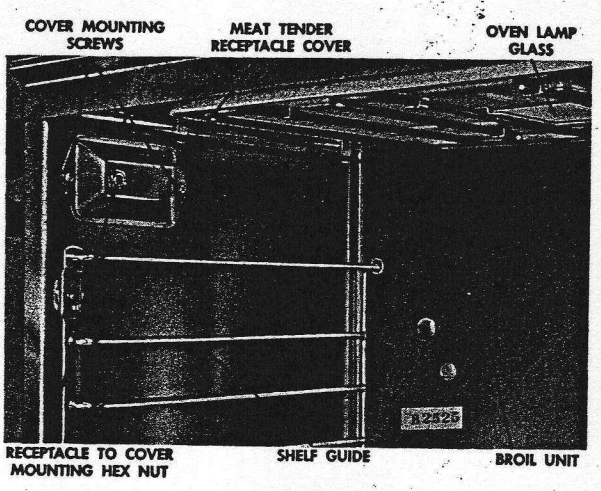


Figure 41
Top of Oven Interior

G. Unit, Surface—Replacement:

1. Pull the surface cooking top release lever forward and pull the top forward to the full open position.
2. Remove the unit support and drip bowl.
3. From the underneath side of the cooking top, remove the drip plate mounting screws. Remove the drip plate, Figure 9.
4. Remove the two surface unit mounting bracket

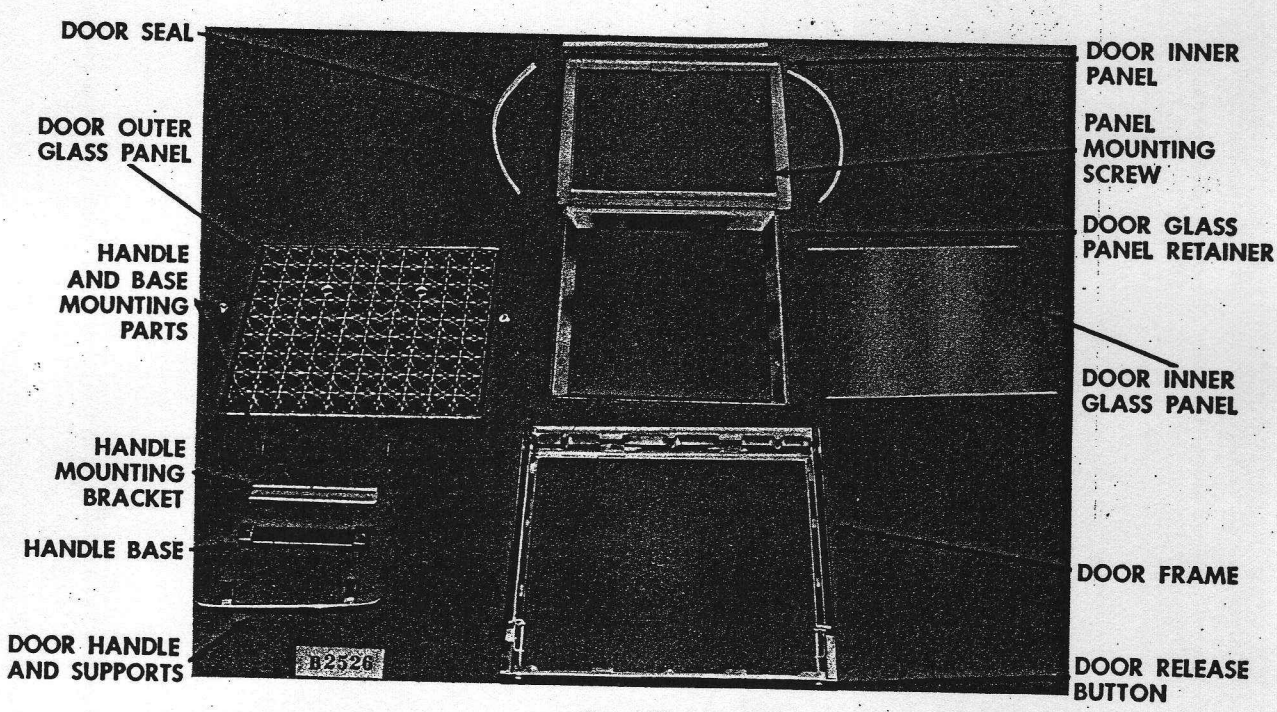


Figure 42
Oven Door Components

screws, Figure 45, which mount the unit to the underside of the cooking top.

5. Remove the unit from the opening in the cooking top and unplug the terminal blocks.
6. Transfer the unit hinge clamp and mounting bracket to the replacement unit.
7. Plug in the terminal blocks and reassemble the unit and bracket to the cooking top.

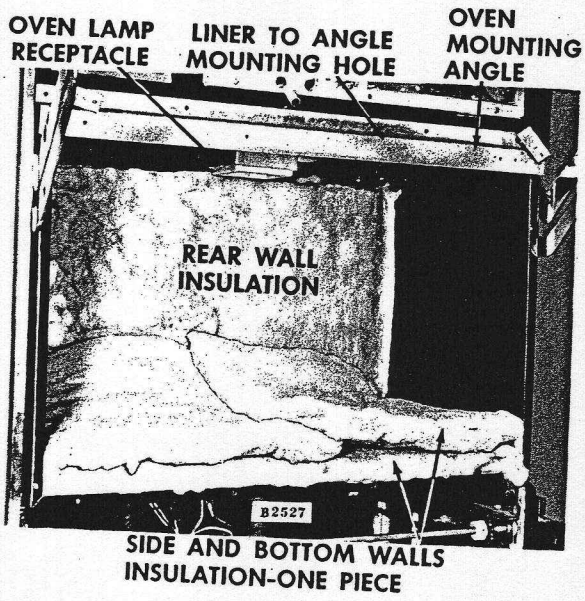


Figure 43
Oven Liner Removed—Interior Detail

H. Sensing Unit, Heat Minder—Replacement: *Models RCIB-635 and RCIB-645*

1. Remove the unit support and drip bowl.
2. Remove the two screws which mount the sensing unit to its support and retainer plate, Figure 45.
3. Pull the sensing unit and leads assembly through the opening in the support; disconnect the leads quick connectors.

Note: On reassembly, make sure the locking tab on the base of the unit is inserted into the locking tab opening in the unit retainer plate.

I. Surface Cooking Top Cover—Removal:

Surface Cooking Top Assembly—Removal:

Ballast, Fluorescent Lamp—Replacement:

Transformer, Meat Tender—Replacement—*Models RCIB-635 and RCIB-645:*

1. Pull the surface cooking top release lever forward and pull the cooking top forward to the half open position.
2. At the bottom front of the oven, remove the condensation trim and its mounting plate, Procedure F-8 and F-9.
3. Grasp the underneath front flange of the cooking surface top cover, and pull it forward as shown in Figure 46.
4. Continue to hold the cover with one hand and reach into the open area behind the cover with the other hand.

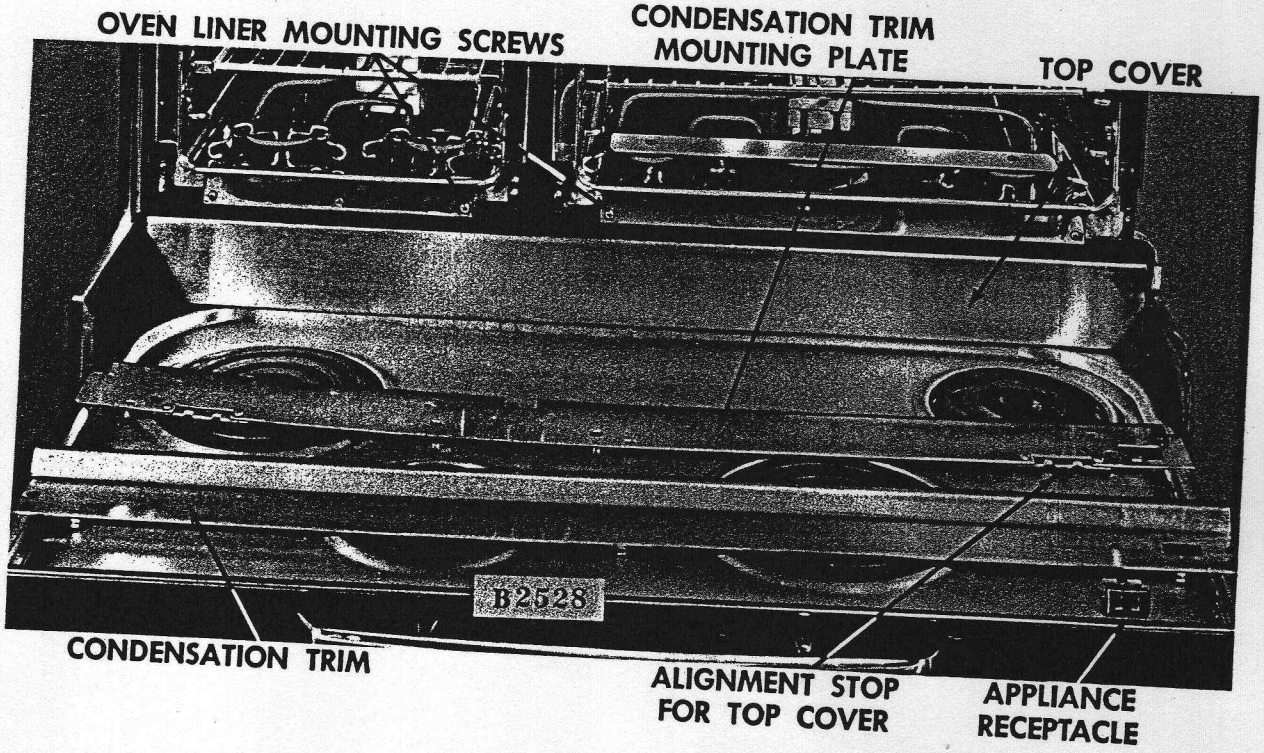


Figure 44
Oven Liner Lower Mounting Detail

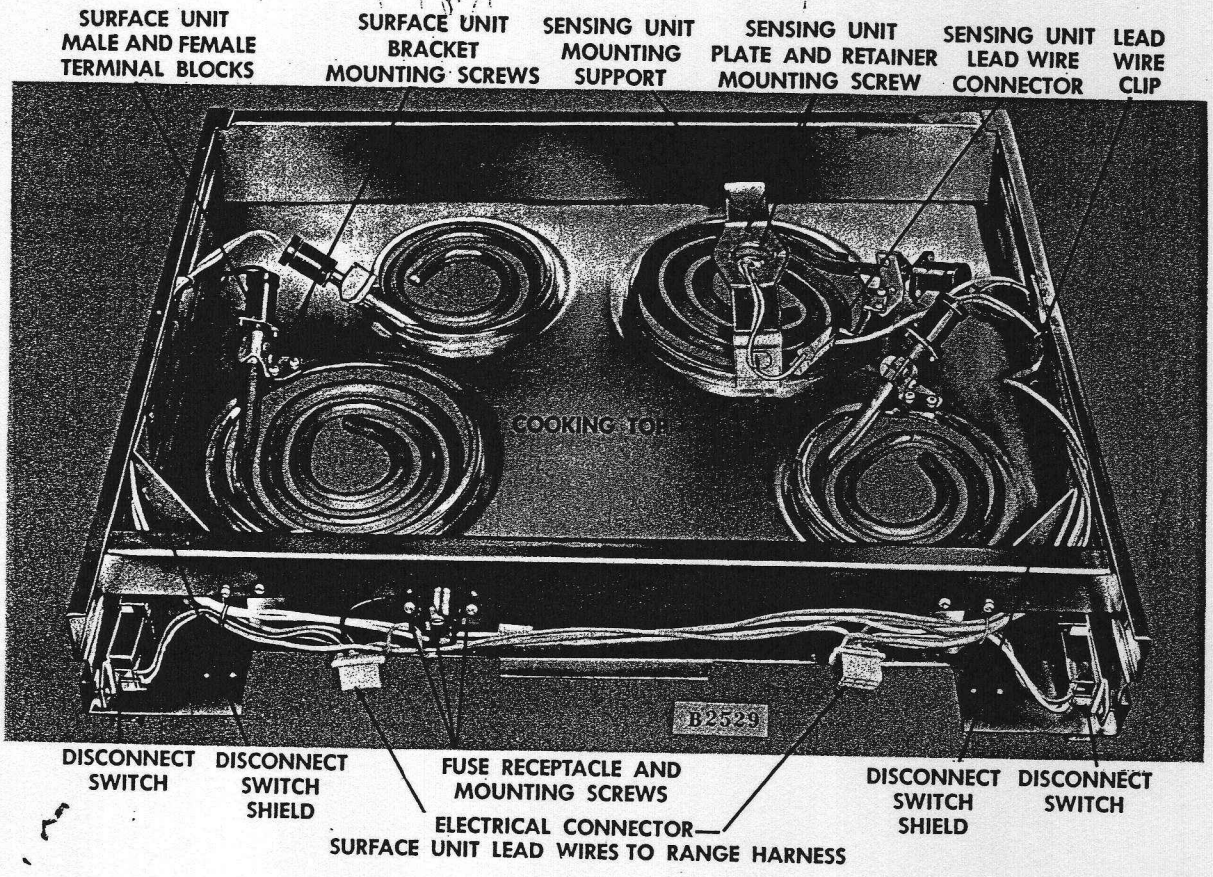


Figure 45
Surface Cooking Top Assembly—Bottom View

5. Unhook the two cover retaining springs and remove the top cover.
6. With the surface cooking top cover removed from the product, access is gained to the rear of the housing. The fluorescent lamp ballast and Meat Tender transformer are mounted in this area with two screws each. Remove the mounting screws and transfer the electrical leads to the replacement component.
7. Release the cooking top and pull forward to the full open position.
8. On the underneath side of the surface cooking top, remove the drip plate—Procedure G-3.
9. Reach into the area behind the cooking top and remove four screws, washer plates, tapping plates and lock washers which attach the top assembly to the two brackets, one on each drive chain, Figure 10. Disconnect the two surface unit lead wire connectors.
10. Lift the cooking top assembly free of its housing and the product.
11. With the surface cooking top assembly removed from the product, access is gained to the housing area permitting removal or replacement of all chain drive components; such as the two chains, four sprockets, two sprocket mounting channels, two top stabilizers and all rollers. See Figure 47. Access also is gained to the cooking top stop assembly.

J. Handle, Surface Cooking Top—Replacement: Panel, Surface Cooking Top Front—Replacement:

Switch, Surface Unit Disconnect—Replacement:

Operating Arm, Surface Unit Disconnect Switch—Replacement:

1. Follow Procedures G-1 through G-3.
2. Remove the two handle and panel to cooking top mounting screws and remove the handle, the two handle supports, and the front panel, Figure 9. Transfer the two speed nuts from the defective to the replacement front panel.
3. Remove the cooking top cover, Procedure I, Steps 1 through 5.
4. Remove the switch operating arm pivot pin and remove the arm, Figure 9.
5. Remove the disconnect switch mounting screws. Transfer electrical leads to the replacement switch.

   Note: The switch rear mounting screw is accessible by reaching over and behind the cooking top. The front screw is accessible by reaching up and under the cooking top, removing the switch shield mounting screws and the shield.

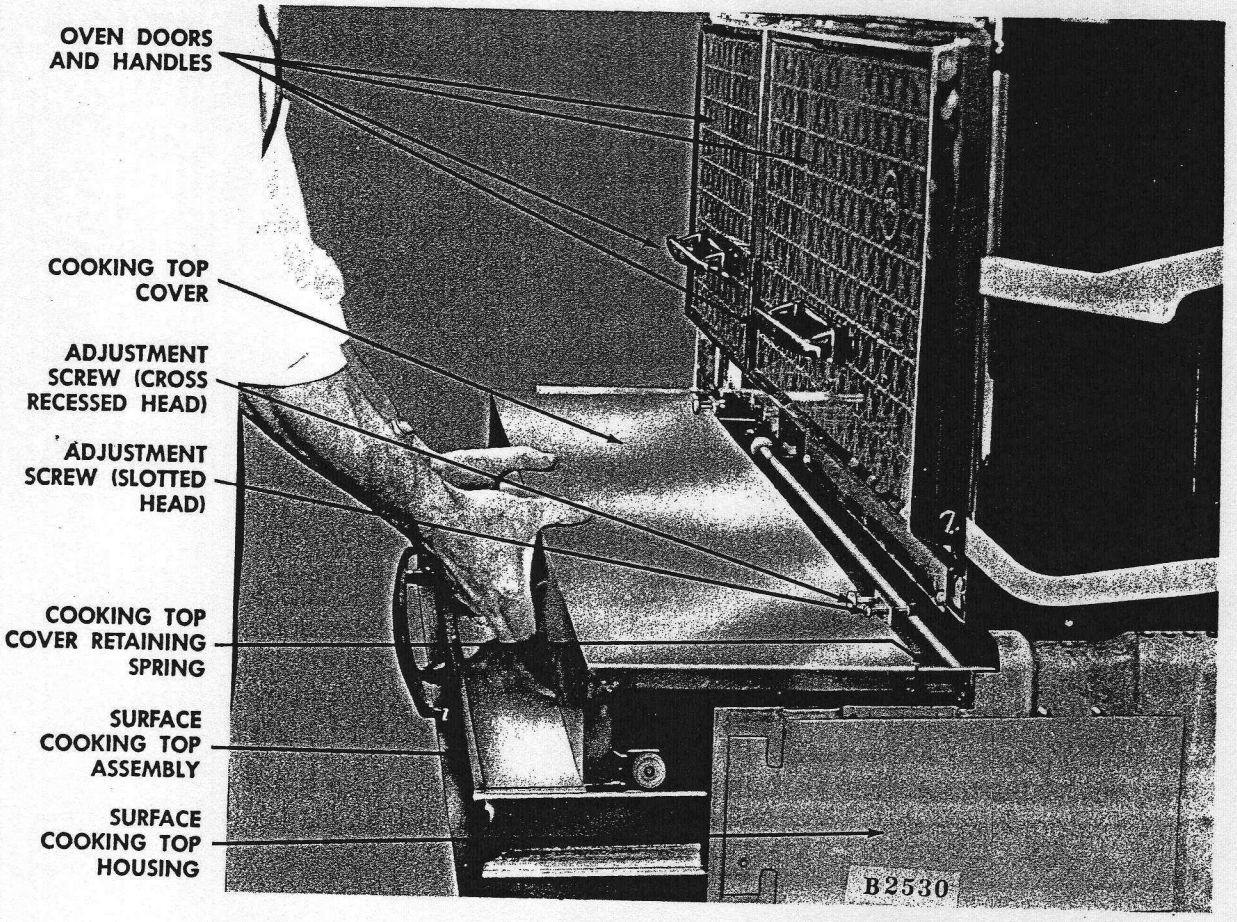


Figure 46
Removing Cooking Top Cover

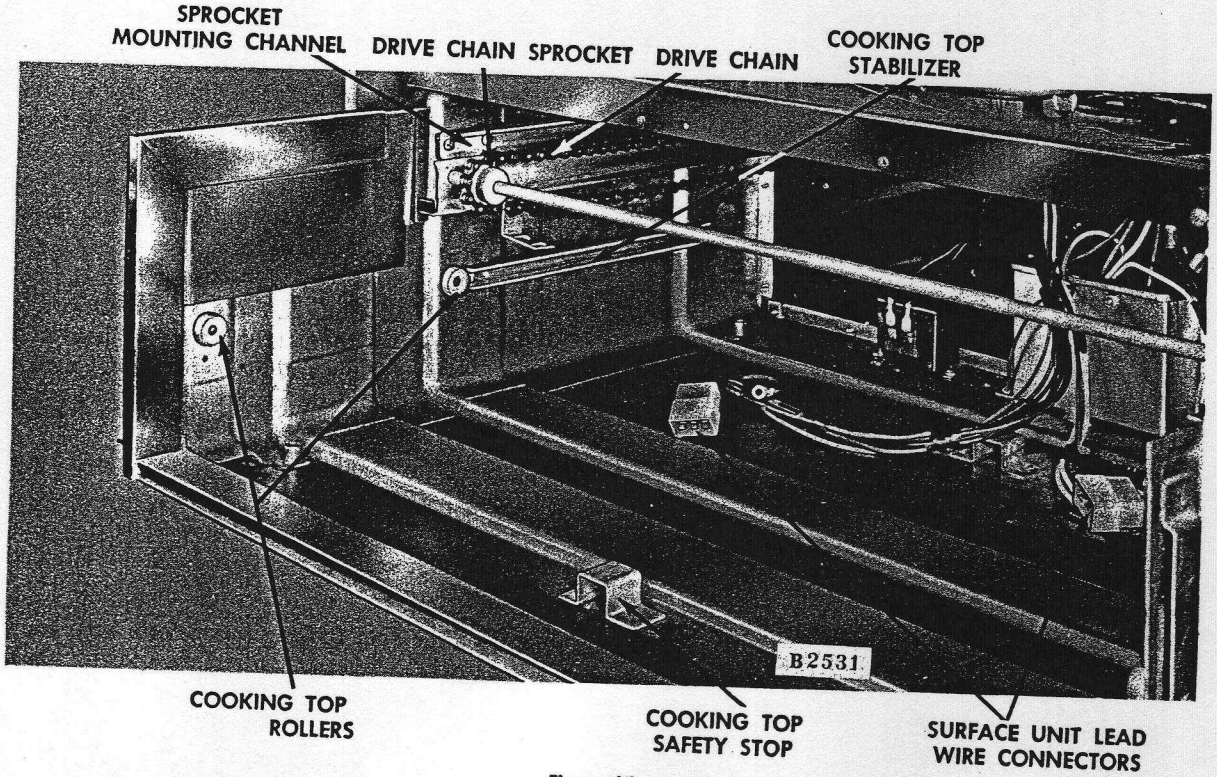


Figure 47
Surface Cooking Top Housing with Top and Cover Removed

K. Top, Cooking—Replacement:

Note: With the cooking top assembly completely removed from the product, and wherever necessary laid over, as shown in Figure 45, it can be completely disassembled. Procedure I describes top assembly removal.

1. Remove all surface units—Procedure G.
2. Remove the front panel and handle—Procedure J.
3. Remove the sensing unit and its support, on models so equipped—Procedure H.
4. Remove the mounting screws for the two disconnect switches at the rear of the top, two on either side.
5. Remove the switch operating arm pivot pin and remove the operating arm, Figure 9.
6. Remove the two fuse receptacle mounting screws, at the rear of the top and remove the fuse and fuse receptacle.
7. Remove the two disconnect switch shields, one at each corner of the top, by removing four mounting screws for each shield.
8. Transfer all components, including lead wires and lead wire locating clips from the defective to the replacement cooking top.

L. Oven Door Adjustment:

Oven Door Operating Mechanism—Replacement and Adjustment:

1. Remove the product side panel or panels, Procedure B, as necessary to gain access to the upper and lower oven door operating arms, Figure 8.
2. Remove the product top panel, Procedure A, to gain access to the oven door operating and spring loaded counterbalance mechanism. Complete accessibility is now gained to all components to permit replacement if necessary.
   Caution: Always have the door oven in a full open position before attempting removal of the counterbalance springs from the carriage assembly, Figures 37 and 38.
3. To accomplish positive closure of the oven door assembly, loosen six screws, three on each side, in the control housing area, which hold the door operating arms in a fixed position. Four of the screws, Figures 37 and 38, mount the upper arm torque bearings to the housing base, two on each side, and the remaining two screws mount each lower arm to its bracket.
4. Loosen the two broil stop mechanism mounting screws, Figure 37.
5. Slide the complete door operating mechanism backward or forward as necessary and retighten all screws. Permit the stop mechanism to float while making adjustment.
6. Horizontal alignment in the closed position of oven doors on 40" models requires the use of shims under the two upper arm torque bearings for a door that is too low.

M. Surfacing Cooking Top Release Mechanism—Replacement:

1. Remove the product left side panel—Procedure B.
   Note: This permits access to be gained to the release arm, the retaining spring and its connection by means of a cotter pin to the stop assembly.
2. Remove the surface cooking top assembly from the product—Procedure I.
   Note: This permits access to be gained to the stop assembly located in the bottom of the cooking top assembly housing.

N. Surface Cooking Top Alignment—Adjusted:

Proper alignment and resultant positive operation of the surface cooking top and its top cover is possible by means of four screws, Figure 46, provided for top cover adjustment and the four screws provided for attaching the surface cooking top to the chain drive brackets, Figure 10.

Before making adjustments, determine if cooking top and top cover alignment, with the top in the closed position, is in accordance with the following standard:

1. The vertical front surface of the top cover should be in line with the front vertical surface of the side panel trim.
2. The vertical front surface of the surface cooking top assembly should locate 3/16" behind the front surface of the top cover.

Adjustments for top cover alignment may be made as follows with the cooking top closed:

1. Remove the condensation trim located just above the top cover, Figure 44, Procedure I. Four adjustment screws are now accessible through openings in the condensation trim plate.
2. Grasp the front of the spring loaded top cover with the fingers and pull forward until in proper alignment with the product front trim.
3. With a straight blade screwdriver, turn the heads of the two adjusting screws clockwise, one on each side of the product, until the screw is snug.
4. Using a cross recessed screwdriver, turn the heads of the two adjusting screws counterclockwise, one on each side of the product, until the head of the screw presses firmly against the plastic stop mounted to the rear side of the condensation trim mounting plate, Figure 44.

Adjustment for cooking top alignment can be made as follows:

1. Determine by measurement how far the top must be moved forward or backward for proper alignment.
2. Remove the cooking top cover—Procedure I.
3. Loosen the four cooking top-to-chain drive mounting bracket screws and adjust the cooking top forward or backward as necessary.
4. Retighten the four mounting screws.

O. Guide, Base Cabinet Shelf—Replacement:

1. Open the cabinet door and remove the shelf.

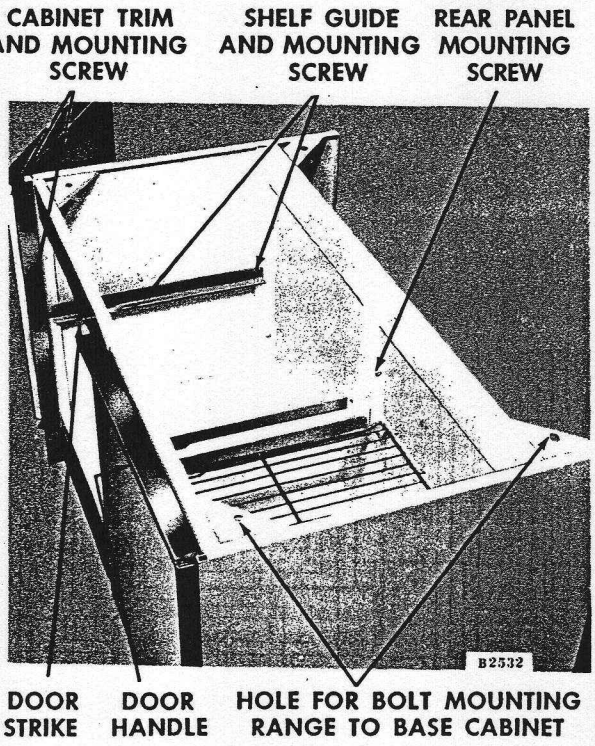


Figure 48
Model B-40 Base Cabinet—Top View

2. Remove two shelf guide mounting screws and remove the guide, Figure 48.

P. Trim, Base Cabinet Side—Replacement:

1. Open the cabinet door at least 180°.
2. Remove the trim mounting screws, Figure 48, and pull the trim free of the bracket. Four screws mount the upper trim and two screws mount the lower trim.

Q. Handle, Base Cabinet Door—Replacement:

1. Open the cabinet door.
2. Remove the three handle mounting screws from the inside of the door, Figure 49.
3. Remove and replace the handle, Figure 48.

R. Catch, Base Cabinet Door Spring—Removal:

Button, Base Cabinet Door Plug—Removal:

Bumper, Base Cabinet Door Plug—Removal:

All three parts simply press into place in holes in the inner door panel. They can be pulled free of the panel, if necessary.

S. Strike, Base Cabinet Door—Removal:

1. Open the cabinet door.
2. Reach into the cabinet and remove the strike mounting nut and lock washer.

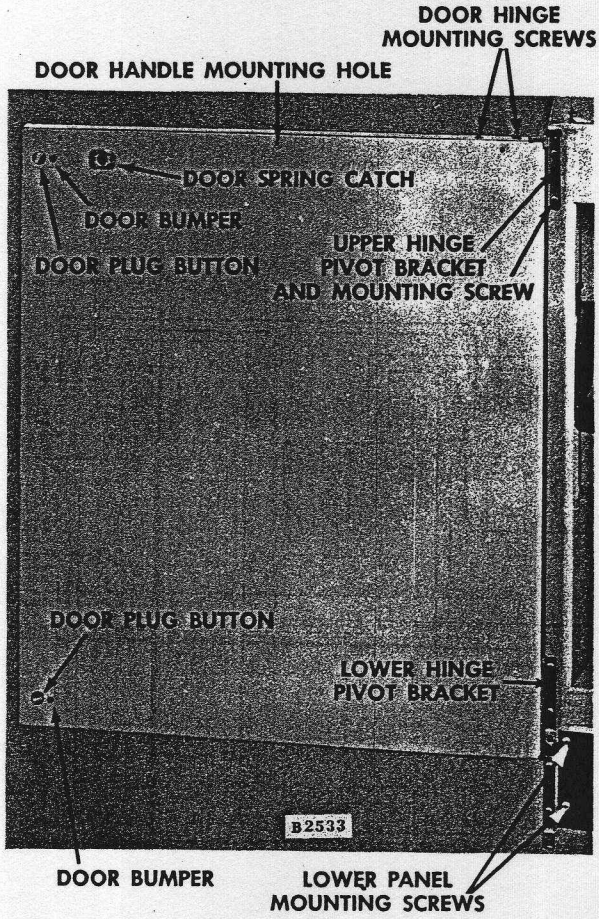


Figure 49
Base Cabinet Door and Door Mounting Detail

3. Pull the strike free of its locating hole in the cabinet. A gasket washer locates between the strike shoulder and the front face of the cabinet, Figure 48.

T. Door Assembly, Base Cabinet—Removal:

1. Remove the side trim, Procedure P.
2. Remove the two upper hinge pivot bracket to cabinet mounting screws, Figure 49, and remove the bracket from both the cabinet and the pivot pin.
3. Lift the door assembly free of the lower pivot pin, Figure 49.
   Note: The door hinge can be removed if necessary by removing the two mounting screws.

U. Panel, Base Cabinet Lower—Replacement:

1. The lower panel can be replaced by removing the four mounting screws, two at each end of the panel, Figure 49.

IT'S WHAT YOU LEARN AFTER YOU KNOW IT ALL THAT COUNTS.

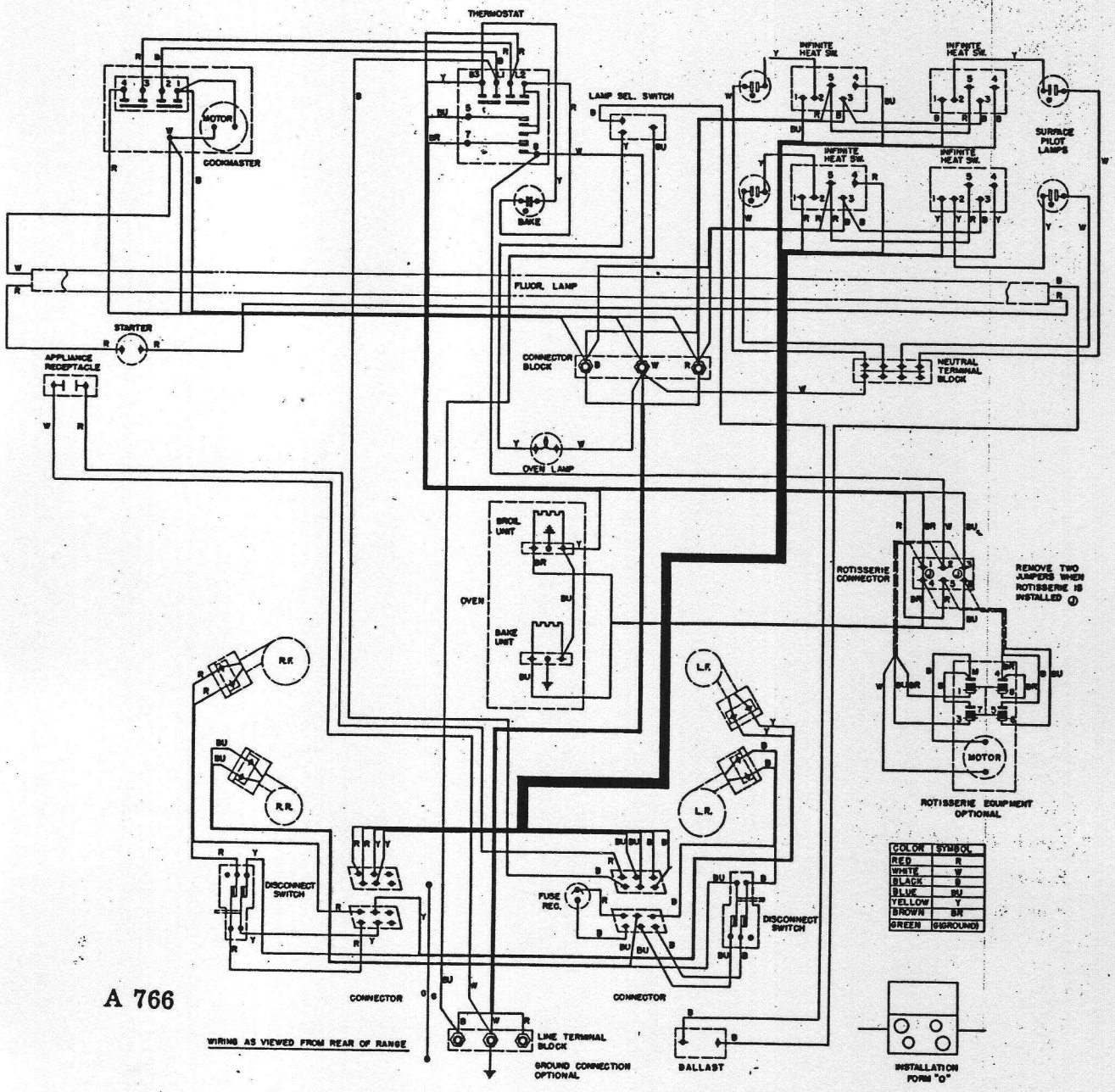


Figure 50
Wiring Diagram—Model RCDB-630 Flair Range

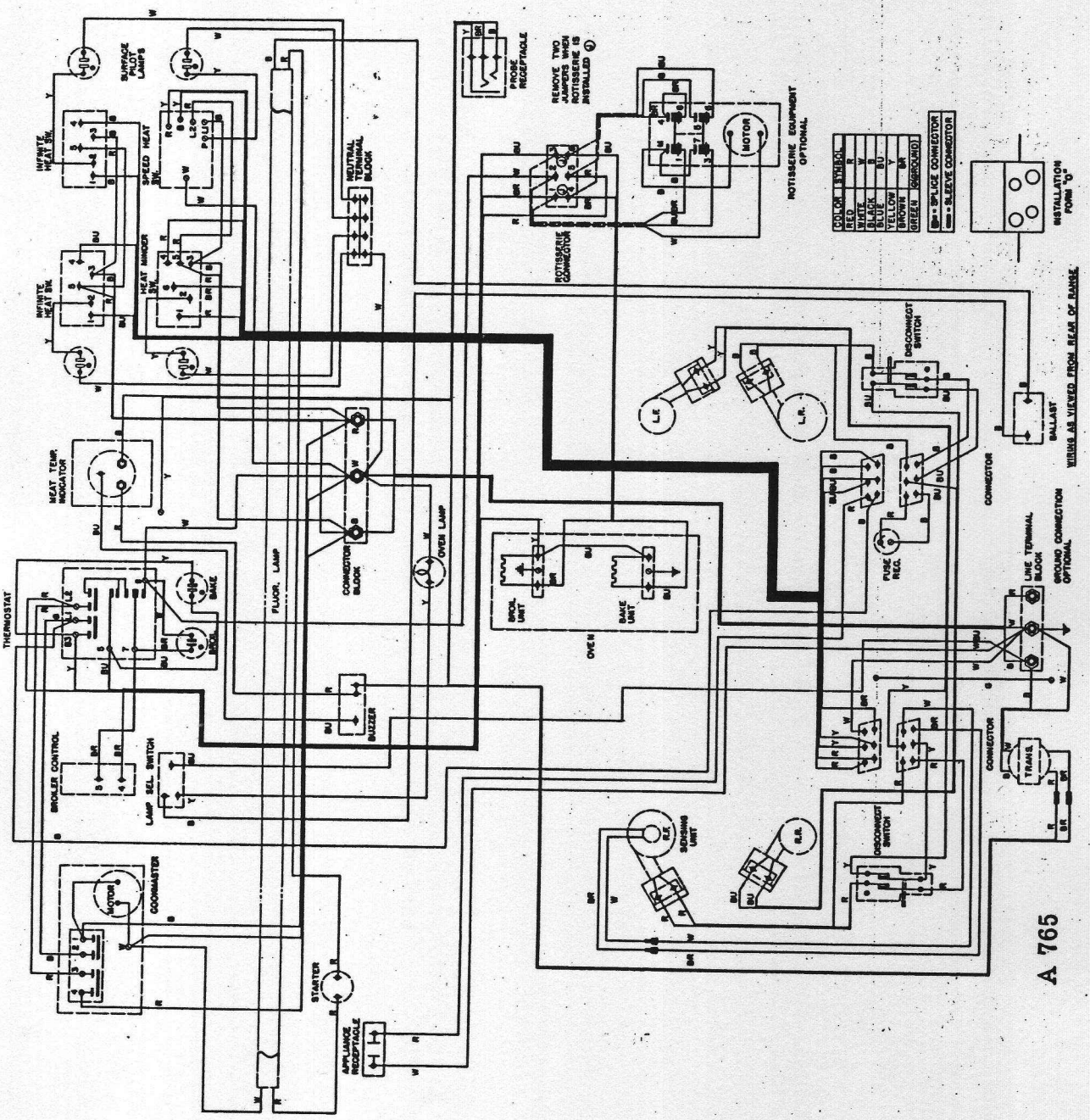


Figure 51
Wiring Diagram—Model RCIB-635 Flair Range

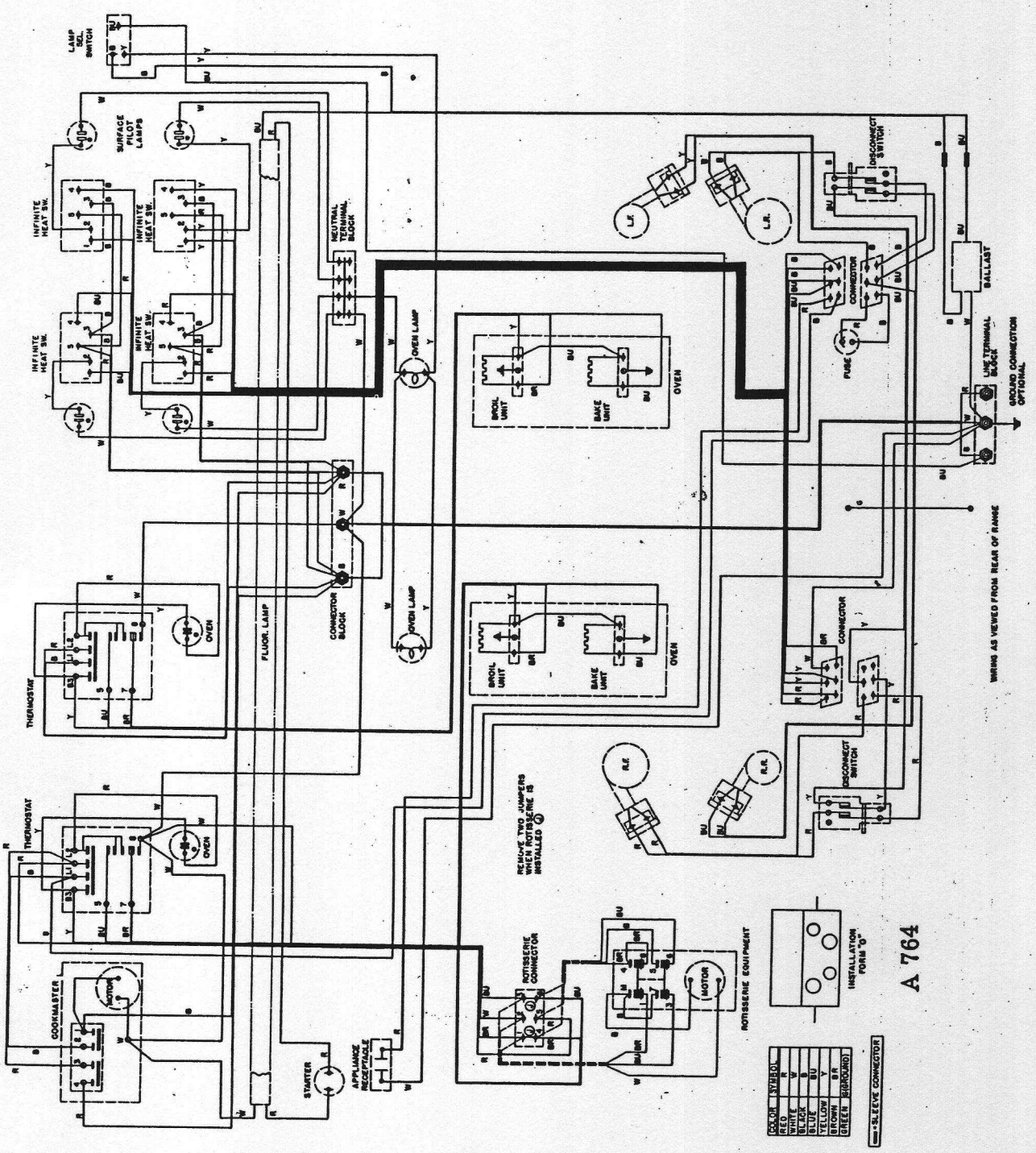


Figure 52
Wiring Diagram—Model RCDB-640 Flair Range

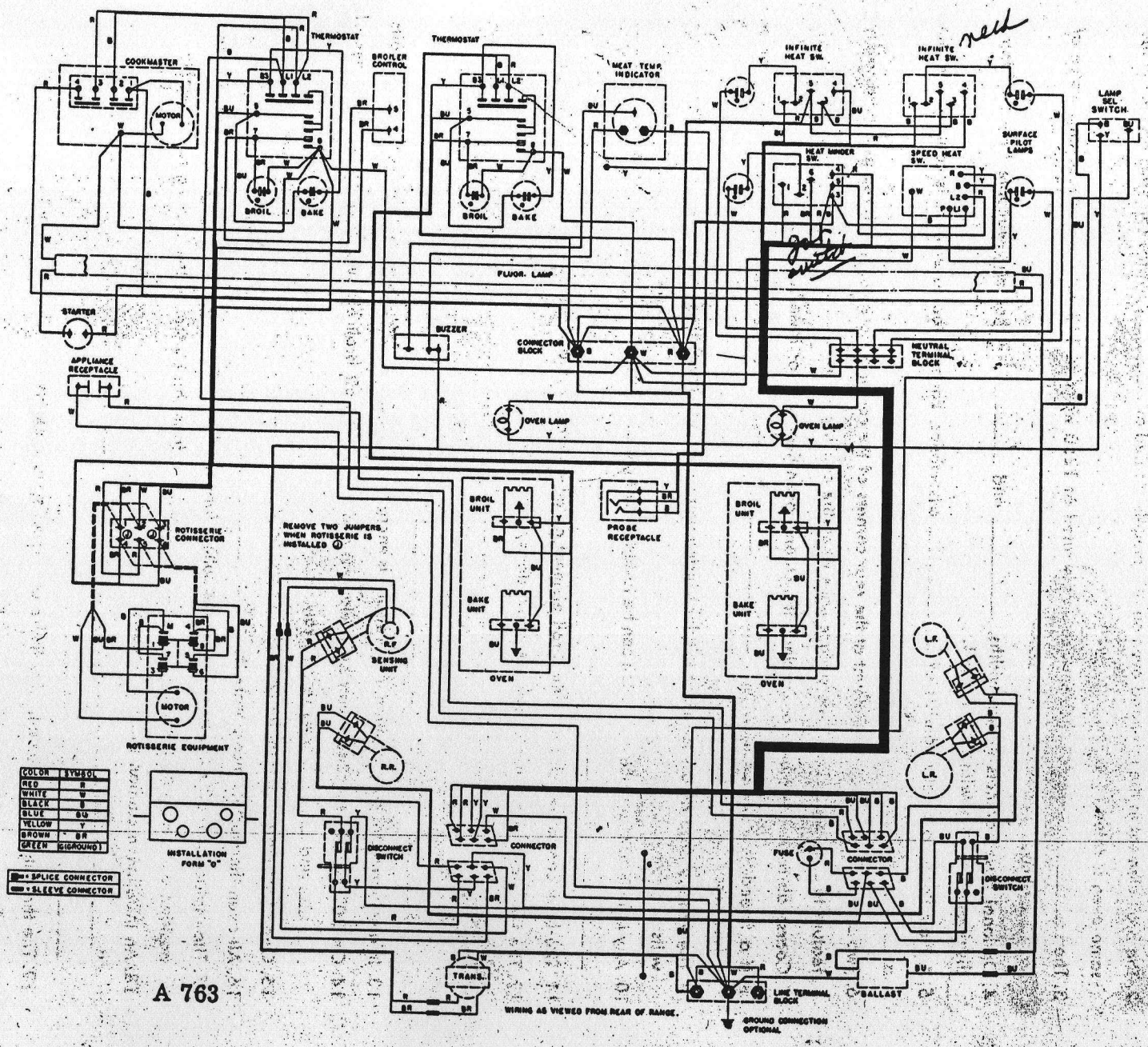


Figure 53
Wiring Diagram—Model RCIB-645 Flair Range

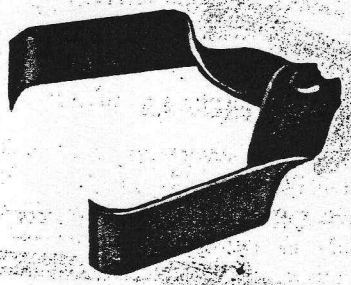
SELF-EXAMINATION

To determine if you have remembered some of the important points regarding Flair Ranges, see if you can complete or answer correctly the following statements. All answers can be found in this Tech-Talk issue. Each question has a value of 5 points—grade yourself.

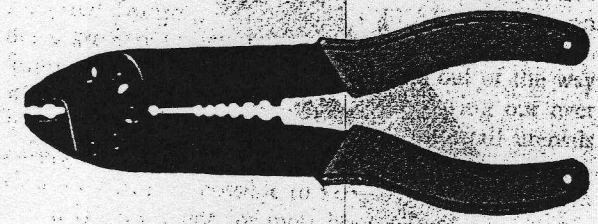
1. All surface unit switches on FLAIR Ranges are of the _____ _____ type.
2. The broil element in the left-hand oven on 40" models is rated at _____ watts. The bake element in the same oven is rated at _____ watts.
3. The _____ _____ surface unit is rated at 1250 watts at 118 volts. It has resistance value of _____ ohms.
4. Optional base cabinets in two widths, _____ and _____ inches are available from Frigidaire distributors for use with Flair Ranges.
5. A Flair Range basically consists of _____ assemblies. Each of the assemblies is contained within a _____.
6. Two _____ _____ mount at the rear corners of the cooking top assembly. These provide a safety feature to _____ the surface units when the cooking top is _____.
7. Coarse abrasives may be used to clean the chrome oven liner, true or false? _____
8. If a Speed-Heat Switch fails, the _____ _____ should also be tested by using an ohmmeter or a test cord.
9. The voltage drop across the Heat-Minder sensing unit cycler and the switch cycler is _____ and _____ volts respectively.
10. Any infinite heat surface unit switch can be tested by using a _____ _____ and a _____ _____ _____.
11. The broil control switch cycles the broil element on all settings, true or false? _____
12. The five major components of the Meat-Tender system are:
    1. _____
    2. _____
    3. _____
    4. _____
    5. _____
13. In any thermostat bake position, the broil unit is energized at _____ volts and the bake unit at _____ volts.
14. On 30" models, the 2400 watt bake element and the 3200 watt broil element have resistance values of _____ and _____ ohms respectively.
15. One of the most important features of Flair Ranges is _____ _____ for all major components.
16. All oven thermostats incorporate the _____ _____ _____ adjustment feature.
17. The replacement of a surface unit requires pulling forward the _____ _____ to the full open position and removing the _____ _____ from the bottom of the cooking top assembly.
18. An installation caution states as follows:
    "_____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____."
19. The three major components of a fluorescent lamp system, exclusive of the switch, are:
    1. _____
    2. _____
    3. _____
20. If blinking of the lamp is a problem, either the _____ or the _____ may be defective.

TOOLS

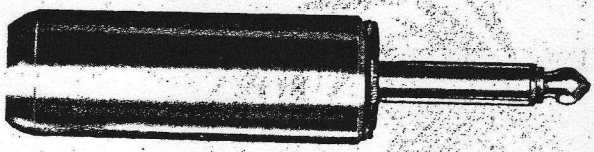
Tools recommended for servicing the 1960 Electric Ranges, in addition to regular hand tools, include the following:



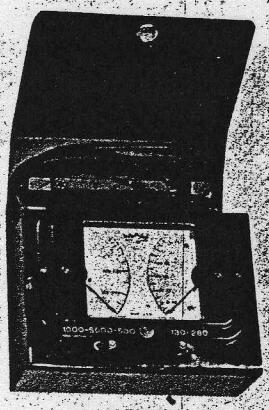
12095—Switch Knob Remover



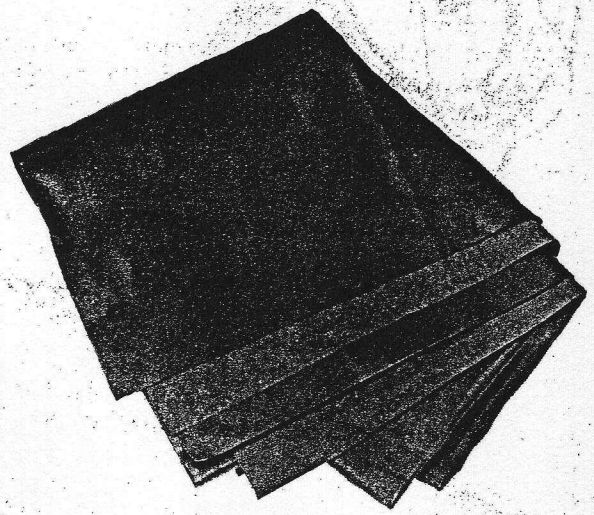
12147—Terminal Crimping Tool



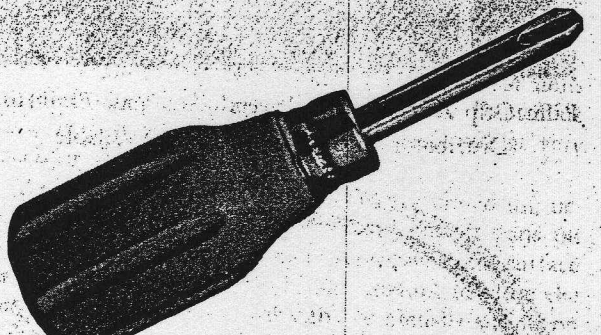
12205—Meat-Tender Indicator Tester



12087—Volt-Wattmeter



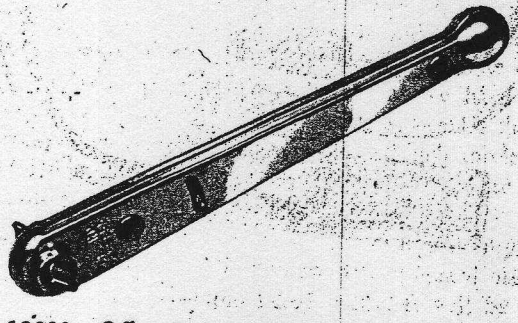
12003—Protective Cloth



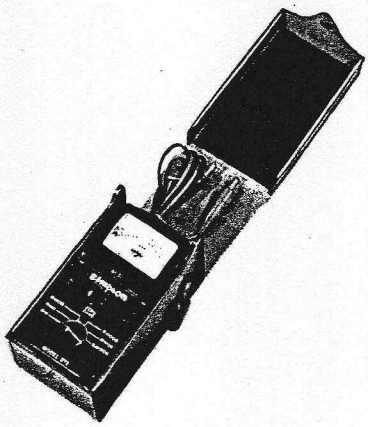
12190—Stubby Cross Recess Screwdriver



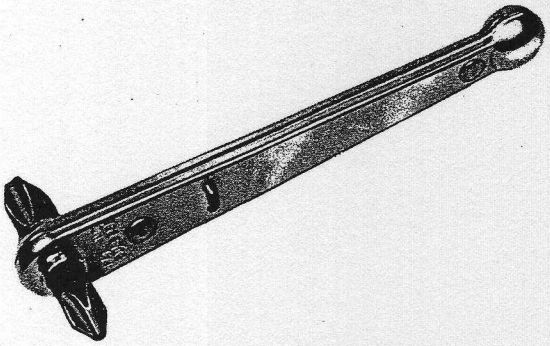
12102 or 12110—Oven Tester



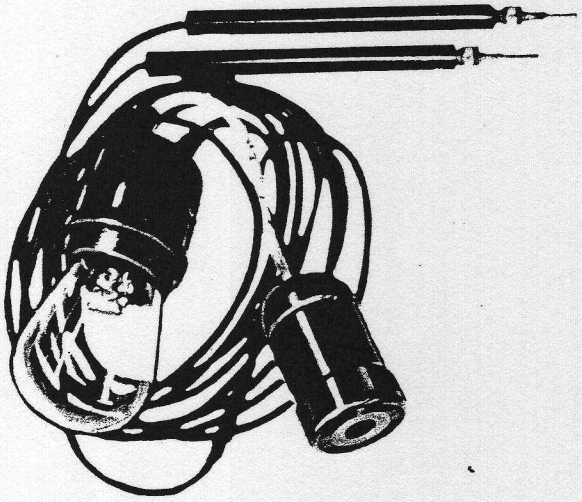
12233—Offset Ratchet Straight Blade Screwdriver



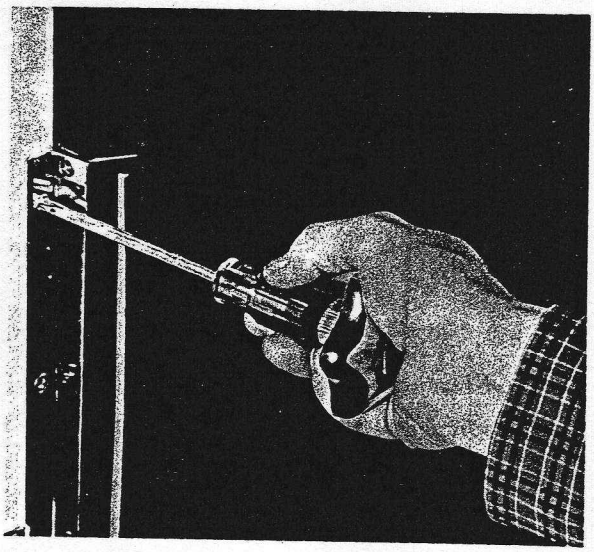
12145—Ohmmeter



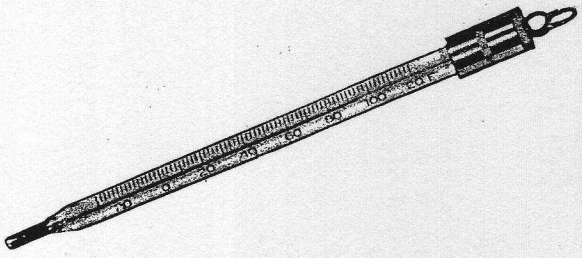
12232—Offset Ratchet Cross Recess Screwdriver



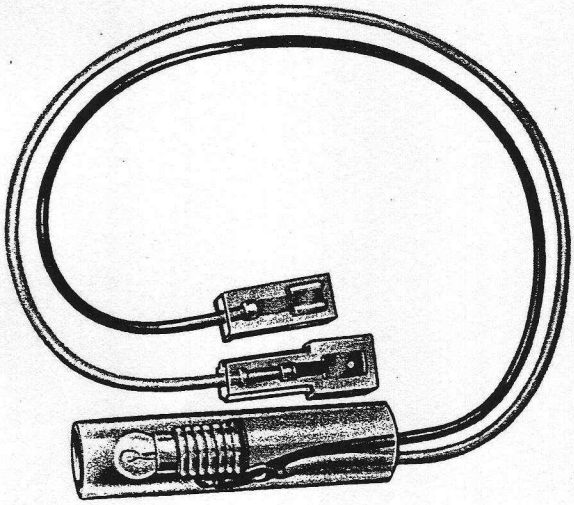
12167—Test Lamp



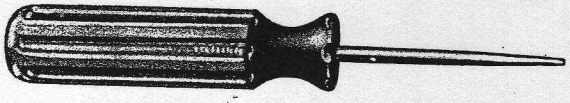
Palm Grip Ratchet Screwdrivers—See Your Frigidaire Distributor for the Various Types Available



12084—Pocket Thermometer (0° to 220° F.)



12481—Test Lamp—
Sensing Unit



12480—Screw Driver—Thermostat Adjustment
Center of Shaft



Home Ec-Talk

The Ladies look at it this way

Mary E. Huck

FLAIR RANGES

Now it's possible for every woman to cook with a flair and to decorate her kitchen with a flair! FLAIR, Frigidaire's revolutionary new concept in cooking convenience provides the perfect answer. Regardless of which of the four models best fits the homemaker's space or pocketbook, she will find that FLAIR offers a skillful blending of superb styling and useful features—all designed to make her feel like a queen!

The styling—so modern, so decorative, so functional—is the first thing about FLAIR that draws instant customer reaction. Our test panel homemakers were unanimous in their feeling that FLAIR was beautiful, smart, advanced-looking, and well-designed. They very definitely felt that it would "dress up their kitchens."

In this era of built-ins, it's no wonder that a simultaneous reaction was that FLAIR offered families the opportunity to get a modern, up-to-date looking kitchen without expensive remodeling or cabinet costs and with a minimum of fuss and bother. Now it's possible for a homemaker to simply slip out her old stove and slip in a new FLAIR. She then gets a built-in look with an ultra-modern free standing appliance. The base cabinet, of course, can be adapted to her individual preferences—she may use the optional Flair cabinet which is available with the range as is, she can paint it the color of her choice, she can buy a wooden cabinet or she can have her husband build one to match her existing cupboards.

Another very favorable reaction to FLAIR came as the result of the See-Level Ovens with glass doors. (Incidentally, women like the filigree trim on the door because it adds a nice decorative touch as well as cuts down on interior visibility when the light is out. We women like to be able to store a dirty skillet in the oven now and then! Women like to see what's happening in the oven—they're tired of bending, stooping, and stretching to get to foods in the oven.

The height of the controls was another feature which women felt was most desirable. The controls are easy to reach and easy to read.

You'll notice that the surface unit height is slightly lower than what we've been accustomed to on free standing ranges. This has many advantages which women have been quick to note. For cooking operations involving stirring, mashing, beating, lifting and turning, this 32-inch height is much more efficient than the conventional 36-inch height. The homemaker's arms can remain in a natural position—they don't have a tiring unnatural lifting at the elbow.

Another advantage of FLAIR is its Put-Away-Ability. When the meal is cooked, the surface units can be closed and the whole appliance takes on an air of tidiness and organization. Again, our test panel members especially liked this ability to shove everything out of sight—they felt it would keep their kitchens neater looking.

As our panel of homemakers used FLAIR they had nothing but praise for the oven door operation. An exclusive feature of Frigidaire's FLAIR, these oven doors are easy to use, easy to clean, permit greater flexibility of use with surface units and are out of the way when open. Because the doors do not swing out over surface unit utensils, it is possible to use tall utensils on either the front or rear units. Also, by going up instead of out, it is possible to keep the oven at a height which is convenient for most homemakers.

It's only as you use FLAIR that you appreciate the drama of being able to see foods cook—to watch angel food cakes rise, to watch pies turn into mouth-watering delicacies. With use, too, you discover many uses for the surface units in the half-way out position. Many meals can be prepared with only two units—for these it is especially nice to have only the front units exposed.

So much for the features which were rated as most outstanding by women. Now, what about use? How does FLAIR compare with our conventional ranges in this important area? Fundamentally, the use will be exactly the same. Many features are found on FLAIR which are common with our current free-standing and built-in ranges.

Frigidaire Radiantube Units are used on FLAIR so their use is identical with what we've known for years. Infinite heats, the Speed Heat Unit and the Heat-Minder are likewise identical. All controls for surface units are grouped together and are positively identified so the homemaker will know exactly which control operates each unit. On FLAIR—as on all Frigidaire ranges, the homemaker has two 8-inch and two 6-inch units for maximum flexibility and capacity. The Kant-Slide Griddle is available as an accessory and will fit very nicely on the front 8-inch unit.

Because FLAIR is designed to give a closed up, organized look, the homemaker should not set pans on the front ledge of the cooking top cover when the surface units are closed—nor should she attempt to close the surface units when she has pans or utensils sitting on the units. As a safety factor, the units automatically shut off when the cooking top is pushed in.

While oven features such as the Meat Tender, the Cook-Master and the Broiler Grill Control are identical to what we now know, you will find the operation of the ovens in FLAIR slightly different. The ovens do not have quite as much height as we have been accustomed to but, of course, the large oven in the 40-inch models and the oven in the 30-inch model are wider than the ovens in corresponding Frigidaire free-standing ranges.

The small oven in the 40 inch models is a delightful size and because it will accommodate standard utensils will have many uses. In many homes it will be used much more than the larger oven for casseroles, cakes, pies, small roasts and even some oven meals. And,

although there is no broiler pan for this oven, it is equipped with a broil unit so the homemaker can use a small broiler pan if she so desires.

As in our conventional ovens, it is possible to bake with the shelves in any of the 5 shelf positions. If only one shelf is needed, then it should be placed near the center or slightly below—depending on the height of the food being baked. When two shelves are needed, the second and fourth shelf positions from the oven bottom can be used, or, if preferred, the first and fourth.

One point of use which is quite different from conventional ovens is in the usable shelf area. Because the oven shelves do not touch the sides, back or front of the oven, it is possible to put pans all the way to the edge of the shelf. As with all ovens, it is quite important that the shelf be placed in the oven properly —making sure that both sides of the shelf are fitted over the shelf guides.

The Radiant Wall Broiler Grill and Broiler Grill Control on the Custom Imperial models are used exactly like on other Frigidaire ranges. Because of the glass oven door however, we're sure that the homemaker will appreciate even more the spatter free qualities of this Frigidaire exclusive feature. In Custom DeLuxe models you will note some difference in broiling times. Because the oven is not quite as high, some foods such as poultry or well-done meats are broiled slightly closer to the unit than we suggest in other models.

Rotisserie cooking is especially fun with FLAIR because you can watch the foods turn a beautiful golden brown right before your eyes. Detailed instructions on its use are included with the rotisserie package.

Much thought has been given to make FLAIR as easy to clean as possible. The recessed cooking top as well as the removable drip bowls will do much to facilitate surface unit cleaning. In the case of major boilovers, the homemaker will find the area under the units completely finished and easy to wipe out.

The satin chrome finish of the surface unit top can be cleaned with mild sudsy water, Frigidaire Plastic Cleaner, a paste made of water and a mild abrasive cleaner or Nu-Steel Liquid Polish. Steel wool, of course, should never be used.

The glass door in the oven is easily tilted down to make the interior of the door completely accessible for cleaning. The removable shelf guides also contribute to easier cleaning because they leave the oven interior free of hard-to-clean obstructions.

The chrome interior can be cleaned, too, with a damp sudsy cloth. Stubborn stains can be removed with silver polish or oven cleaners on the market which can be used on chrome. However, the user should be cautioned to follow the instructions on the package. When practical, fat spatters should be wiped off the oven walls with a dry paper towel while the oven is still warm. Metal wool, steel brushes or coarse abrasive scouring powder should not be used on any chrome finish.

Those of us who have worked with FLAIR during its development have found it a fascinating appliance. Thats why we're confident that homemakers will find FLAIR doing wonderful and exciting things for them—that it will really give both their cooking and their kitchens new convenience, new beauty and new flair.

LUCK IS GENERALLY GOOD PLANNING CAREFULLY CARRIED OUT.

CUSTOMER CONTACT SITUATION NO. 9

SPECIAL CUSTOMERS

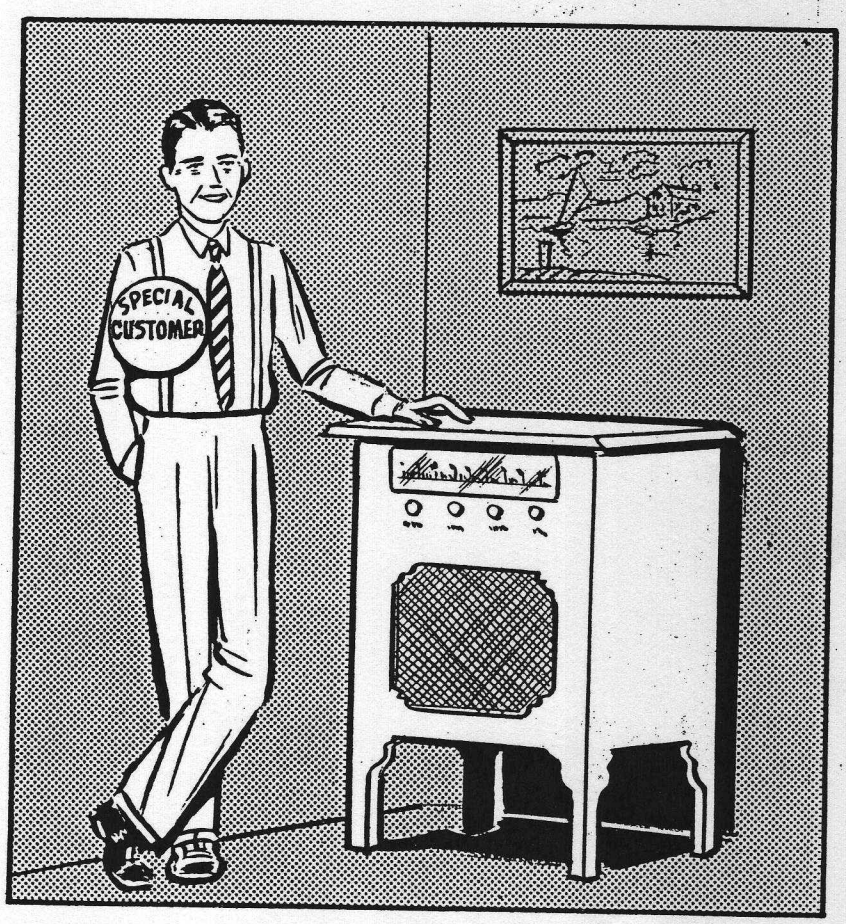
Cy Young likes to tell of the custom built radio set his Father-in-law bought and his reactions to being considered a special customer of the radio builder. Back in the days when short wave was just reaching comfortably to England, Italy and Germany, this radio was advertised through a direct mail campaign to selected persons in different locals of the country. The buyer had his choice of sets and a choice of cabinets. Because of the Special Customer appeal of the letter and because Cy's Father-in-law liked the best in whatever he bought, he investigated and found that the radio was all that it was claimed to be and about the finest of the time.

After buying and installing the set, Cy's Father-in-law received personal letters from the builder requesting reports on the performance of the radio. To letters sent to the builder, personal replies were received. There is no doubt but that all customers of the concern were likewise made to feel they were special customers and, although all were on the same plane, each felt good because of the implication that he was a special customer.

Cy says that this taught him a lesson which has helped immeasurably in his success as a serviceman. He never tries to convey the impression that he is on the premises to do a good job and then hurry on to the next call. In some manner he tries to make each customer feel that he or she is a special customer and that he is in some kind of alliance with them to make the product perform just a little bit better than customary.

In so doing, Cy found that he became the personal friend of many of his service customers who often called him by his nickname and requested his service. Cy says that it's pretty hard to find a belligerent customer among your clientele when you have them believing they are your friends and that you want to do something special for them. When this customer-serviceman relationship exists, service problems melt into thin air and servicework is more enjoyable.

Customers don't generally mind small bills, larger bills they believe are honest ones or bills where they are getting a little extra for their money. One of Cy's secrets is giving the impression that he has performed just a little more service than shows on the bill. It may be just a quick check of another product, a suggestion concerning a product's use or a small adjustment of another product at the request of the customer. Cy repeatedly stresses cleaning of the product after service is completed. All these are fine, says Cy, but you have to get on the same wavelength with the customer, tune in on his or her troubles and repair the product so that nothing but sweet operating music emerges.



A 696



R. J. Pflepsen says:

"TAKE IT FROM ME...

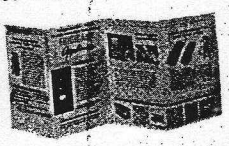
Frigidaire supplies missing parts fast - even for appliance 'old timers'!"

"Here's another place where Frigidaire excels . . . service to the serviceman! For example, if a thermostatic switch is needed for a 1939 Frigidaire Refrigerator, we can usually assure the customer of next-day service—and the customer can be sure it will fit and work right! Over 90% of our parts requirements are handled by our nearby Frigidaire District Office and the rest are just a day away in Dayton, Ohio. More than 32,000 parts and accessories in stock mean *no orphans* for Frigidaire Appliance owners! Satisfactory service on an appliance of any age makes a customer think kindly of us when she becomes a prospect for a replacement or additional appliance. We've built our reputation on this premise .... and our reputation continues to build us!"

Robert J. Pflepsen

Pflepsen Refrigeration Co., Inc.
St. Cloud, Minnesota

HERE'S A CALLING CARD THAT ASKS FOR ORDERS!



The new, attractive Accessories Envelope Stuffer (SER-936) does double-duty. It works well in mailings and enclosed with bills, but it does its best selling job when handed to a customer by a serviceman on a home call. Picture a woman who can resist reading a folder that promises less work or better appliance performance.

FOR MORE ACCESSORIES SALES, MAKE SURE YOUR SERVICEMEN CAN ANSWER QUESTIONS ON ALL FRIGIDAIRE ACCESSORIES.

FRIGIDAIRE
PRODUCT OF GENERAL MOTORS

Frigidaire Service Department,
Dayton 1, Ohio

FRIGIDAIRE goes all the way

TO BUILD SALES THROUGH SERVICE LEADERSHIP!