TECHNICIAN MANUAL

GENERAL ELECTRIC

"Select-Top"
Downdraft Cooktops
Model Nos.
JP383 BR1
JP384 R1
JP385 R1
JP386 BR1
JP387 BR1
JP388 R1
JP389 R1

Induction Cooktop
Model Nos.
JP392 R1
JP393 R1
JP692 R1
JP693 R1

REF92
PUB. NO. 31-1451

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"SELECT-TOP" BUILT-IN MODULAR DOWNDRAFT COOKTOPS

SECTION II

INDUCTION COOKTOP

SECTION I

1992 "SELECT-TOP"

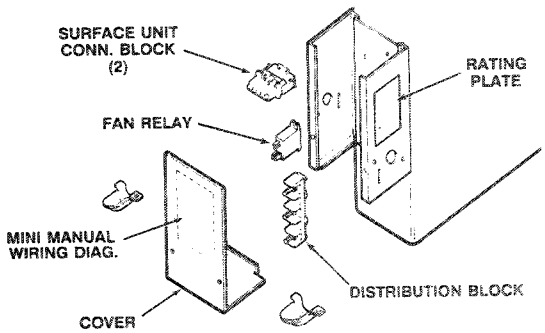
BUILT-IN MODULAR DOWNDRAFT COOKTOPS

A new line of Downdraft Cooktops have been developed that do not require the front edge of the countertop to be cutout. The new line is referred to as "Select-Top" Built-In Modular Cooktops. The models come in 30" width only with a single speed blower and three different finishes (brushed chrome, white porcelain and black porcelain). Two versions of the cooktop exists, one series contains a single plug-in module plus 2 fixed plug-in Calrod elements on right side, the other series has two plug-in modules. A 208 volt model is also available with dual plug-in modules. The following chart lists each model and optional accessories and specifications associated with that model:

MODEL NO.	SPECIFICATIONS			PLUG-IN MODULES			
	FINISH	VOLTAGE /K.W.	NUMBER MODULES	SURFACE UNITS	SOLID DISK UNIT	GRILL	GRIDDLE
JP383BR1	B.C.	240V/8.5 KW	1	JXDC41	JXDS42	JXDL44	JXDD44
JP384R1	BLACK	240V/8.5 KW	1	JXDC43	JXDS43	JXDL44	JXDD44
JP385R1	WHITE	240V/8.5 KW	1	JXDC44	JXDS44	JXDL44	JXDD44
JP386BR1	B.C.	240V/8.5 KW	2	JXDC41	JXDS42	JXDL44	JXDD44
JP387BR1	B.C.	208V/7.6 KW	2	JXDC41	JXDS48	JXDL45	JXDD44
JP388R1	BLACK	240V/8.5 KW	2	JXDC43	JXDS43	JXDL44	JXDD44
JP389R1	WHITE	240V/8.5 KW	2	JXDC44	JXDS44	JXDL44	JXDD44

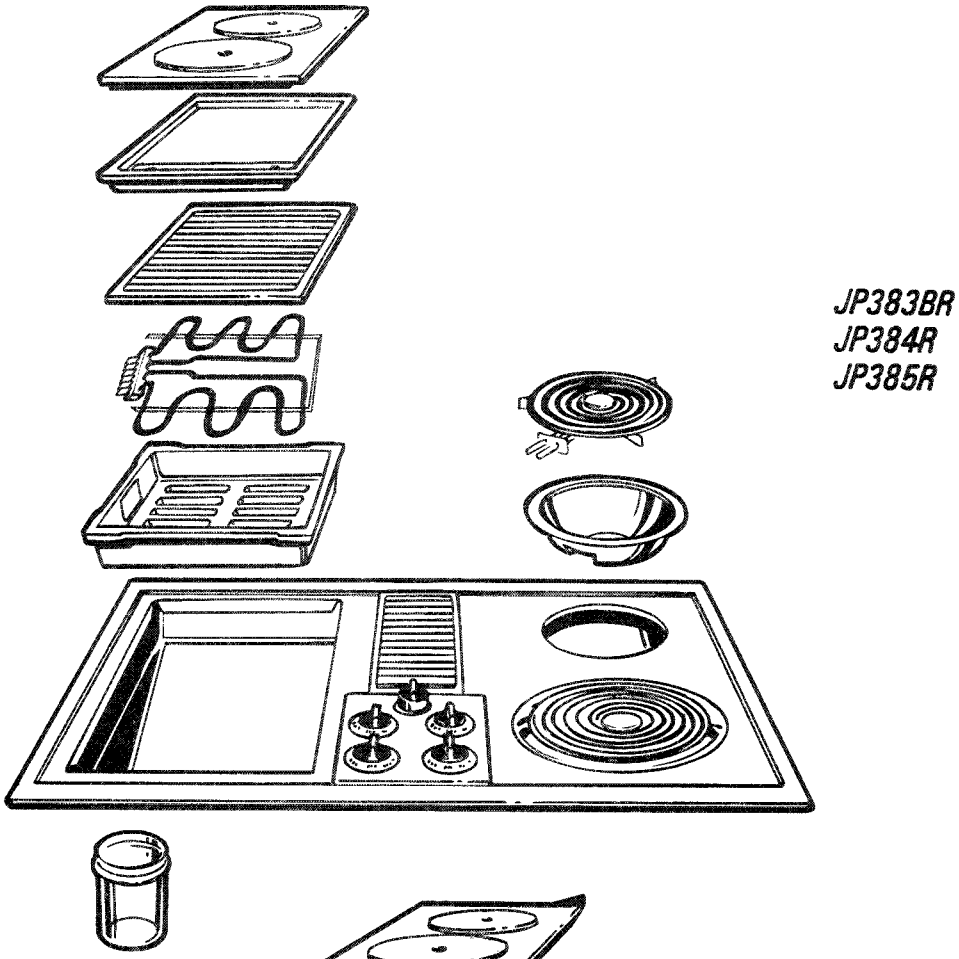
RATING PLATE

Model and Serial No. is located on the right hand side of plenum.

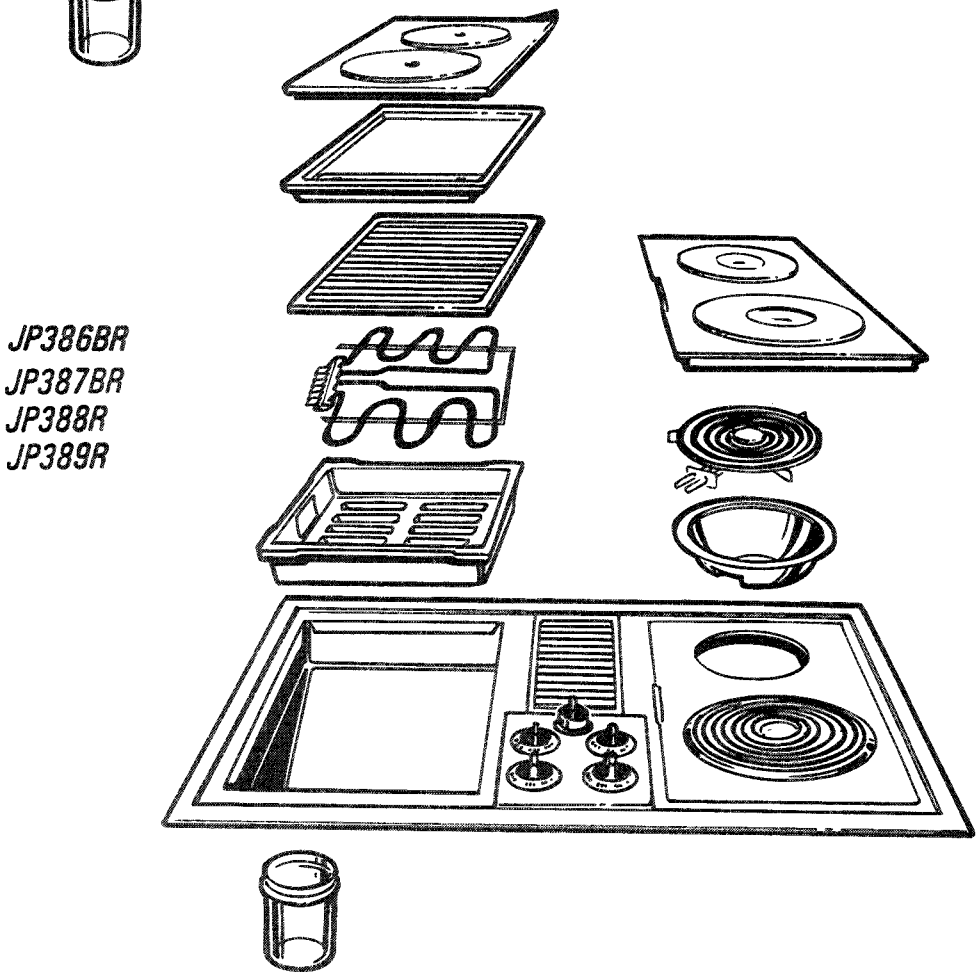


MINI-MANUAL / SCHEMATIC WIRING DIAGRAM

The Mini-Manual / Schematic Wiring Diagram is located on back side of wire compartment cover.



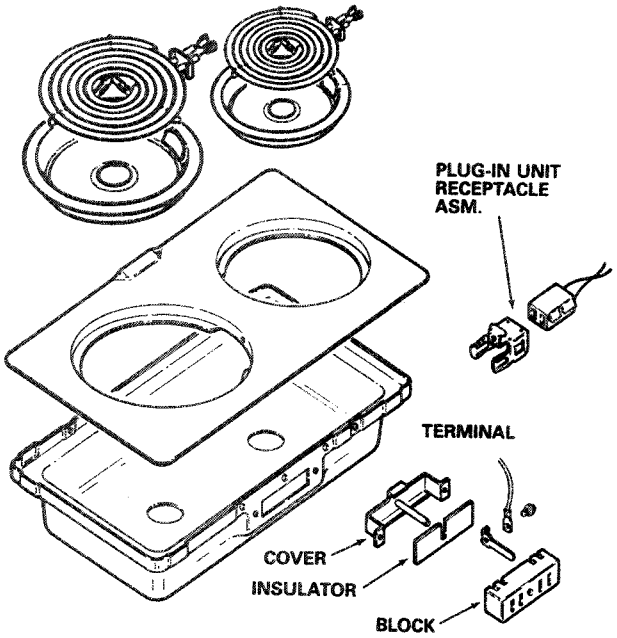
JP383BR
JP384R
JP385R



JP386BR
JP387BR
JP388R
JP389R

PLUG-IN MODULES

All modules can be used in any combination on either the right or left side (Dual Plug-In Models). The modules plug into a receptacle located on the outside walls of the tubs. The round pin on the module is ground and also is used as a guide for inserting the module into the receptacle block.



SURFACE UNIT MODULE

The surface unit module contains two plug-in units with one piece drip pans.

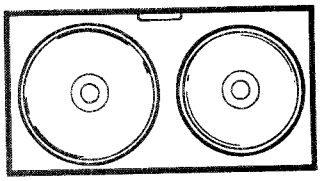
- 6-inch 1325 W. @ 240 V.
  1000 W. @ 208 V.
- 8-inch 2350 W. @ 240 V.
  1765 W. @ 208 V.

The Plug-In Surface Unit Receptacles blocks are serviced by a complete receptacle and lead assembly.

SOLID DISK MODULE

The Solid Disk Heating Elements are made of heavy cast iron with the electrical element encased inside the casting.

- 6-inch 1500 W. @ 240 V.
  1500 W. @ 208 V.
- 8-inch 2000 W. @ 240 V.
  2000 W. @ 208 V.



HARDEN PROTECTIVE COATING BEFORE USING THE SOLID DISK MODULE

The solid elements have a protective coating which MUST be hardened before using for the first time. To harden the coating, operate the elements on high for about 5 minutes without a pan.

FLAT BOTTOM PANS - ABSOLUTE NECESSITY

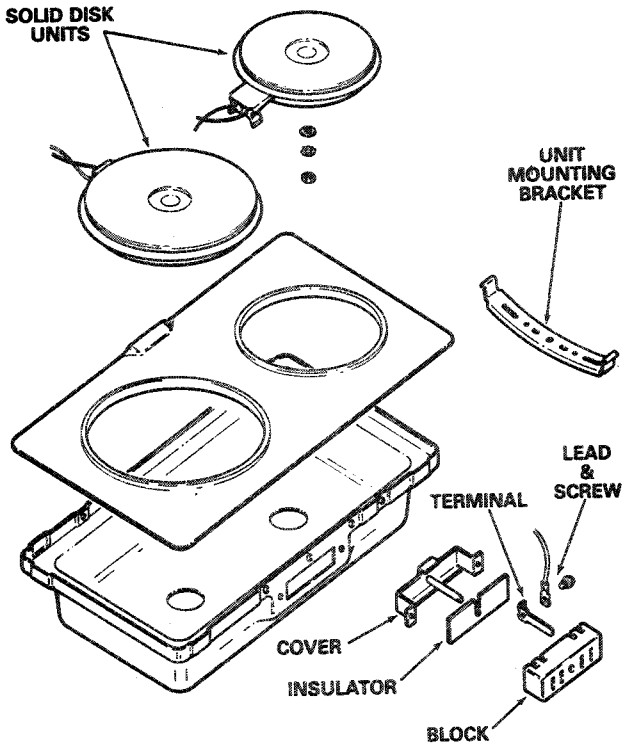
Uneven bottom pans will cause the overtemperature switch inside the element to trip reducing the unit wattage to a low level that will not provide the required heat for cooking.

PLUG-IN MODULES CONTINUED

SERVICING SOLID DISK MODULE

1. Remove six screws around top edge of module along with two screws mounting receptacle block.
2. Separate top plate from bottom pan.
3. Disconnect wires to solid element.
4. Remove nut from center of mounting brace.
5. Lift unit out.

Reinstall in reverse order.



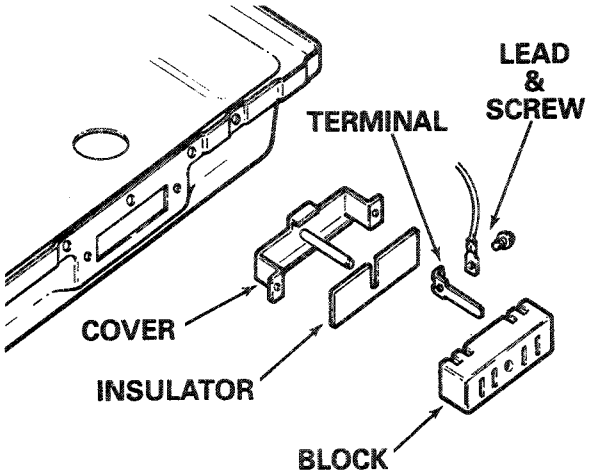
MODULE PLUGS

The plugs for the Solid Disk and Surface Unit Modules are serviced by their blocks and terminals.

To Service Module Plug:

1. Separate top plate from bottom pan.
2. Remove two screws that mounts module block to bottom pan and lift out.

The module terminals are held in the ceramic block by a pin and bracket assembly along with an electrical insulator when mounted to pan bottom.



GRILL MODULE

The grill module consists of the following parts:

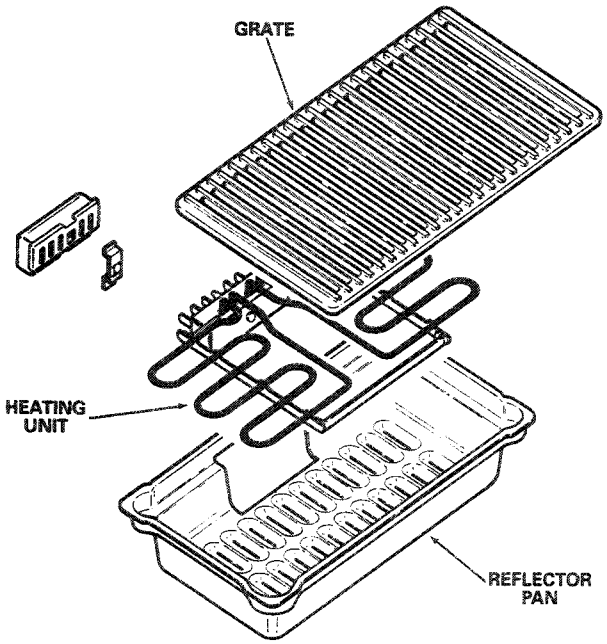
- Grill Grate
- Grill Heating Coils 2-1200W.coils
- Reflector Pan (Porcelain)
- Grease Collector Jar

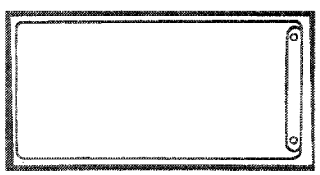
GRIDDLE

Used with Grill Module heating element and reflector pan.

<u>NOTE:</u> The Fan comes on **AUTOMATICALLY** when the Grill / Griddle is Turned On.

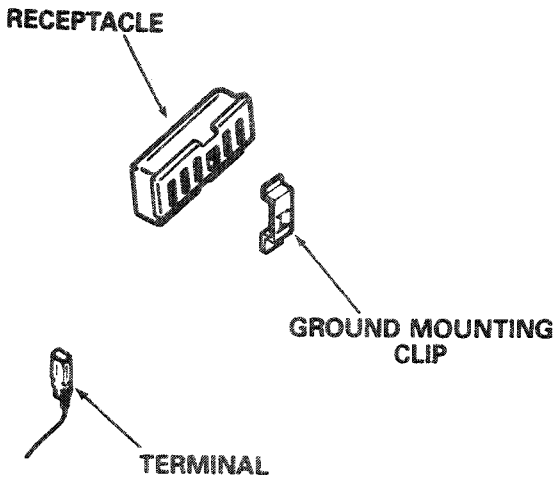
<u>NOTE:</u> Grill and Griddle will be serviced as complete assemblies.





TUB RECEPTACLES

The Tub Receptacles consist of a Ground / Mounting Strap and Screw, Ceramic Block and Lead and Terminal Assemblies.



To Service the Tub Receptacles:

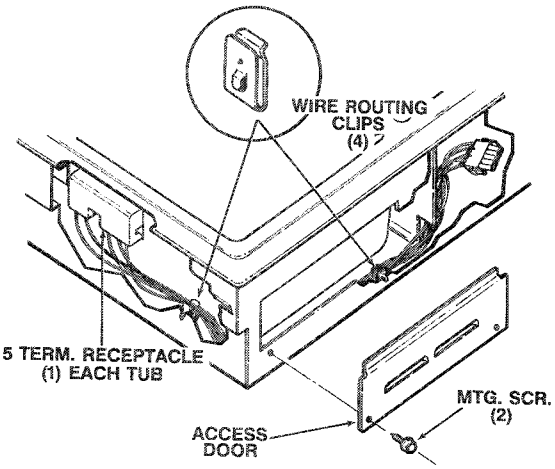
1. **DISCONNECT POWER** and remove ground strap mounting screw.
2. Rotate Ceramic Block into tub.

Terminals snap into the block and can be removed by squeezing the ears on the side of the terminal and pulling out. Terminals are crimped to the wire leads.

NOTE: LABEL WIRES before removing from Ceramic Block. Wire position is critical to Grill / Griddle Operation.

LEAD ASSEMBLY REPLACEMENT:

3. Remove access door on front of case bottom mounted by 2 screws.
   NOTE: Unit may have to be removed from installation to access door.
4. Disconnect plug to surface unit switches located in component compartment (See Component Compartment Access).
5. Remove leads from wire routing clips and pull through tub opening.

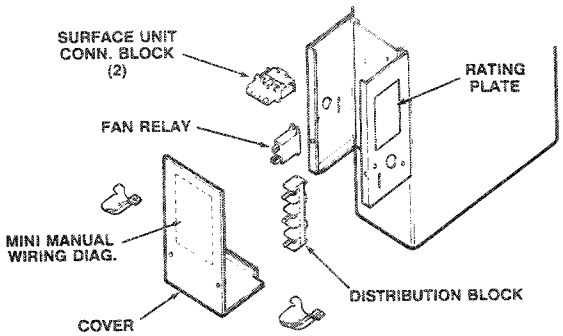


COMPONENT COMPARTMENT

The Component Compartment contains the Vent Blower Relay, (for grill / griddle usage), Distribution Block and Surface Unit Connector Blocks.

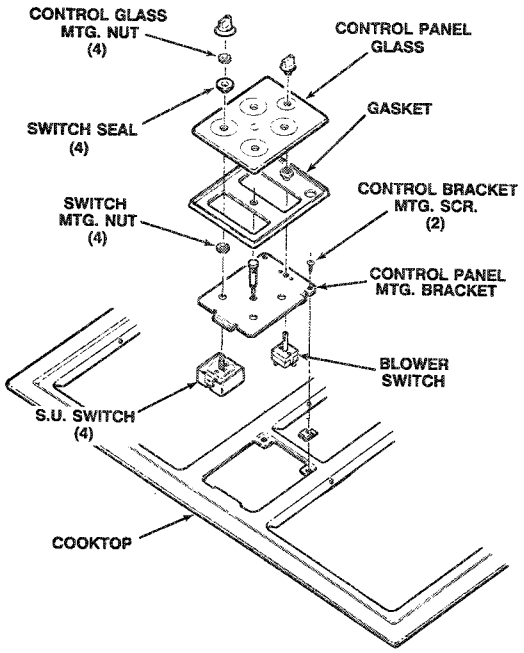
To Access Component Compartment:

1. **DISCONNECT POWER** and remove two wire cover screws.
2. Slide Cover down.
   NOTE: When reinstalling cover, make sure the flange on the cover slides up under the back of the component box.



CONTROL PANEL ASSEMBLY

The control panel assembly contains Surface Unit Switches, Blower Switch and Indicator Light.



To Access Control Panel:

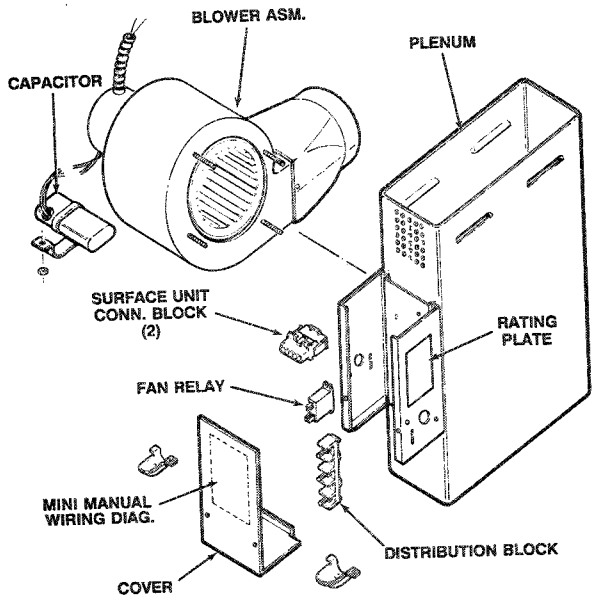
1. DISCONNECT POWER and remove Surface Unit and Blower Switch Knobs.
2. Remove (4) nuts mounting control panel glass and gasket to cooktop.
3. Lift control glass and gasket off and remove 2 screws mounting control bracket.
4. Lift bracket up to provide access to switches and wiring.
5. The (4) Surface Unit Switches are mounted to the bracket by (4) nuts and the Blower Switch by (2) screws. The Indicator light snaps into the mounting bracket.

NOTE: When reinstalling make sure control glass and gasket are properly aligned and switch seals are in place.

VENT BLOWER ASSEMBLY

The Vent Blower Assembly is attached to the side of the plenum. The blower assembly can be rotated for either vertical or horizontal exhaust. The blower will be replaced as a complete assembly.

NOTE: The blower motor contains and internal thermal limiter that will cycle the motor off when its temperature exceeds 135°C ±5°. The limiter will automatically reset once the motor has cooled. If this condition exist try and determine the cause of the motor overheating.



To Remove Blower:

1. **DISCONNECT POWER** and remove vent grille and filter from plenum.
2. Disconnect duct from blower.
3. Remove 4 nuts from inside plenum mounting blower motor.
4. Remove guard wire and disconnect 3 pin disconnect block.
5. Remove terminals from disconnect block or cut leads going to block (leave enough wire for connecting leads from new blower).

VENT BLOWER ASSEMBLY CONTINUED

CAPACITOR

A start run capacitor for the blower motor is mounted to the motor housing by a strap and two nuts.

WARNING
When servicing the capacitor - Always DISCHARGE the CAPACITOR by carefully removing the cap on top of the capacitor and shorting it to ground using and insulated handle screw driver.

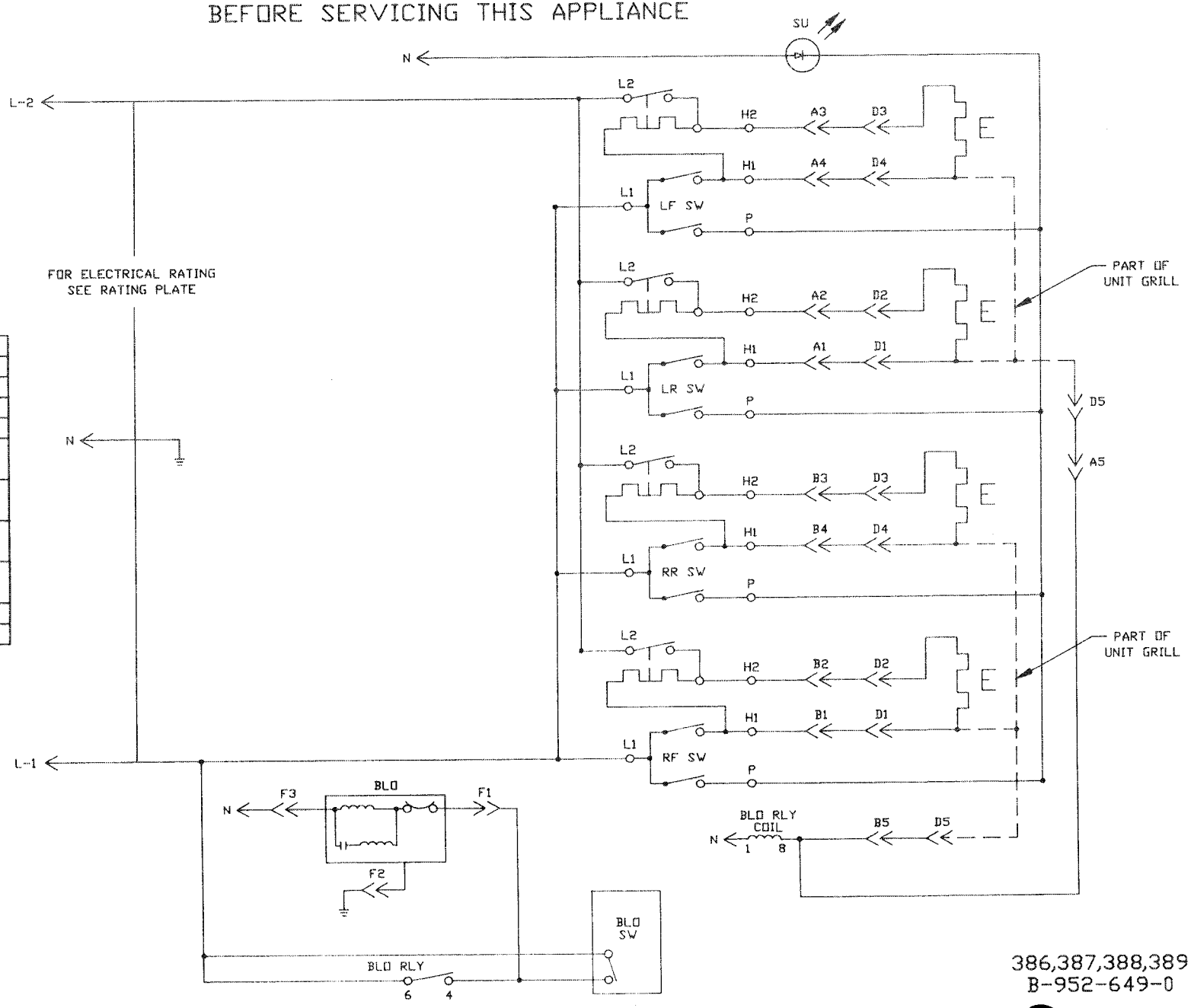
SCHEMATIC WIRING DIAGRAM INDEX

MODEL NO.	DRAWING NO.	PAGE NO.
JP386BR1	PUB NO. 31-1089	8 & 9
JP387BR1	PUB NO. 31-1089	8 & 9
JP388R1	PUB NO. 31-1089	8 & 9
JP389R1	PUB NO. 31-1089	8 & 9
JP383BR1	PUB NO. 31-1090	10 & 11
JP384R1	PUB NO. 31-1090	10 & 11
JP385R1	PUB NO. 31-1090	10 & 11

SCHEMATIC DIAGRAM

WARNING

POWER MUST BE DISCONNECTED
BEFORE SERVICING THIS APPLIANCE



MODULE	E
6' CALROD 240V	1325W 43 Ω
8' CALROD 240V	2350W 25 Ω
6' CALROD 208V	1000W 43 Ω
8' CALROD 208V	1765W 25 Ω
GRILL 240V	1200W 48 Ω EACH COIL
GRILL 208V	1200W 36 Ω EACH COIL
6' SOLID DISK 240V	1500W 48 Ω
6' SOLID DISK 208V	1125W 48 Ω
8' SOLID DISK 240V	2000W 29 Ω
8' SOLID DISK 208V	1500W 29 Ω
6' SOLID DISK 208V	1500W 29 Ω
8' SOLID DISK 208V	2000W 22 Ω

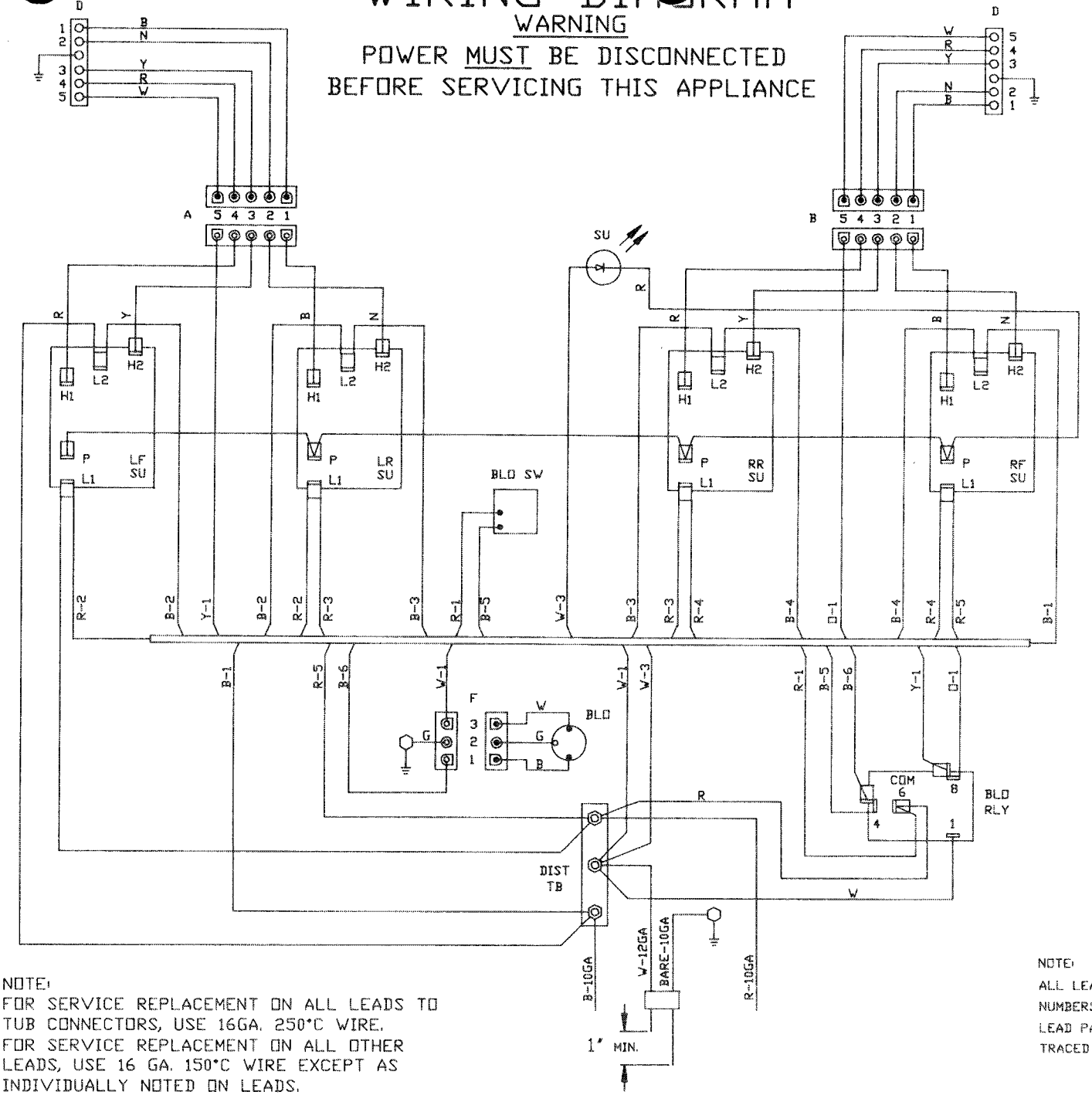
164D2331P145
PUB. NO. 31-1089
577

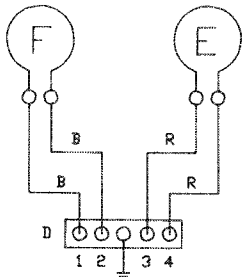
386,387,388,389
B-952-649-0

WIRING DIAGRAM

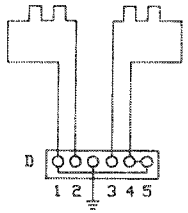
WARNING

POWER MUST BE DISCONNECTED
BEFORE SERVICING THIS APPLIANCE





SU & DISK



GRILL

MODULE	E	F
SURFACE UNIT	240V-1325W 208V-1000W	240V-2350W 208V-1725W
DISK	240V-1500W 208V-1125W	240V-2000W 208V-1500W
DISK	208V-1500W	208V-2000W
GRILL	240V-2400W	
	208V-2400W	

COLOR	CODE
RED	R
WHITE	W
BLACK	B
GREEN	G
BROWN	C
ORANGE	O
YELLOW	Y
BLUE	N
GRAY	S

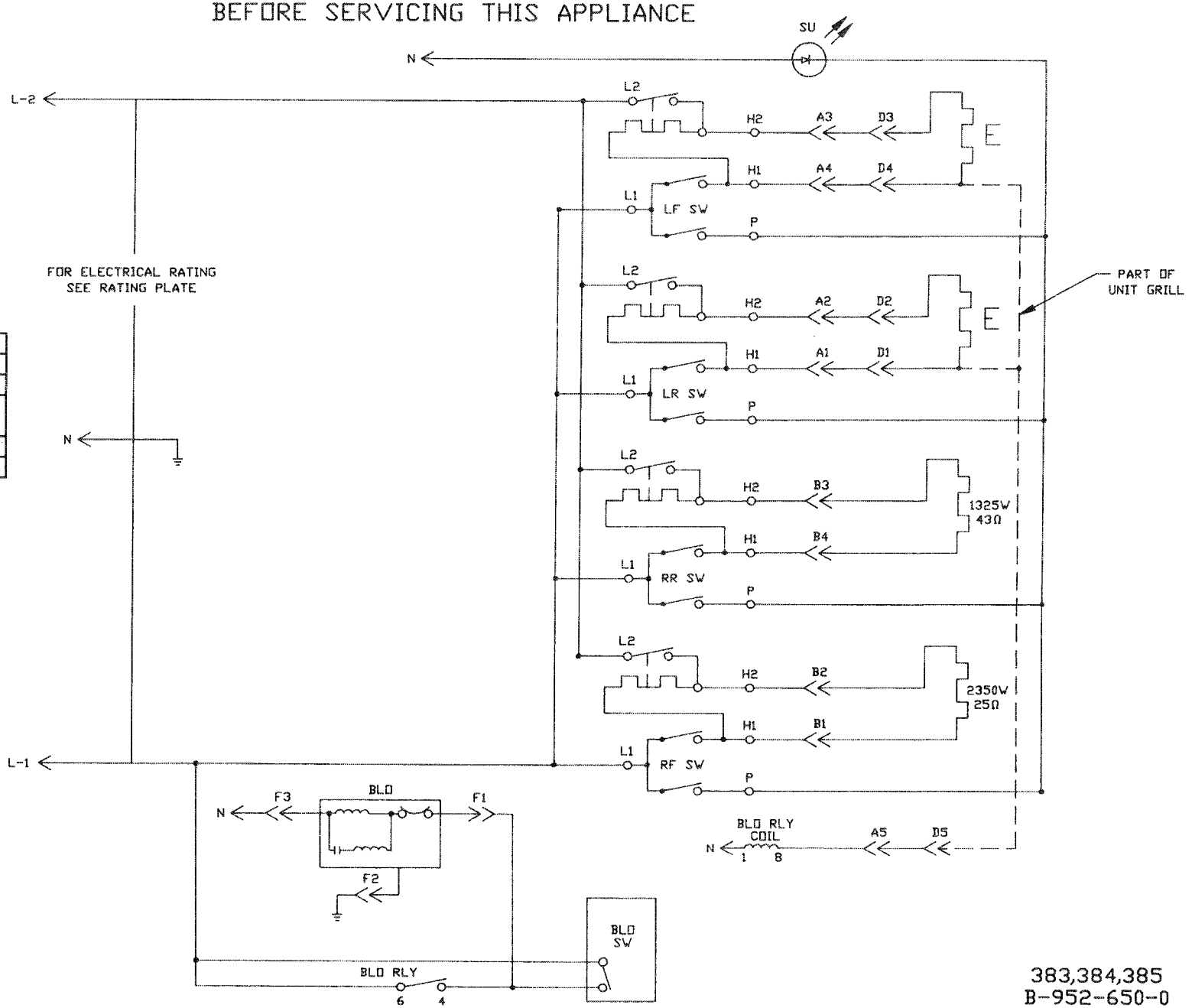
NOTE:
FOR SERVICE REPLACEMENT ON ALL LEADS TO TUB CONNECTORS, USE 16GA. 250°C WIRE.
FOR SERVICE REPLACEMENT ON ALL OTHER LEADS, USE 16 GA. 150°C WIRE EXCEPT AS INDIVIDUALLY NOTED ON LEADS.

NOTE:
ALL LEADS WITH DESTINATION NUMBERS THAT ENTER COMMON LEAD PATH (——) MUST BE TRACED TO THEIR TERMINATIONS.

SCHEMATIC DIAGRAM

WARNING

POWER MUST BE DISCONNECTED
BEFORE SERVICING THIS APPLIANCE



MODULE	E
6" CALROD 240V	1325W 43Ω
8" CALROD 240V	2350W 25Ω
GRILL 240V	1200W 48Ω EACH COIL
6" SOLID DISK 240V	1500W 48Ω
8" SOLID DISK 240V	2000W 29Ω

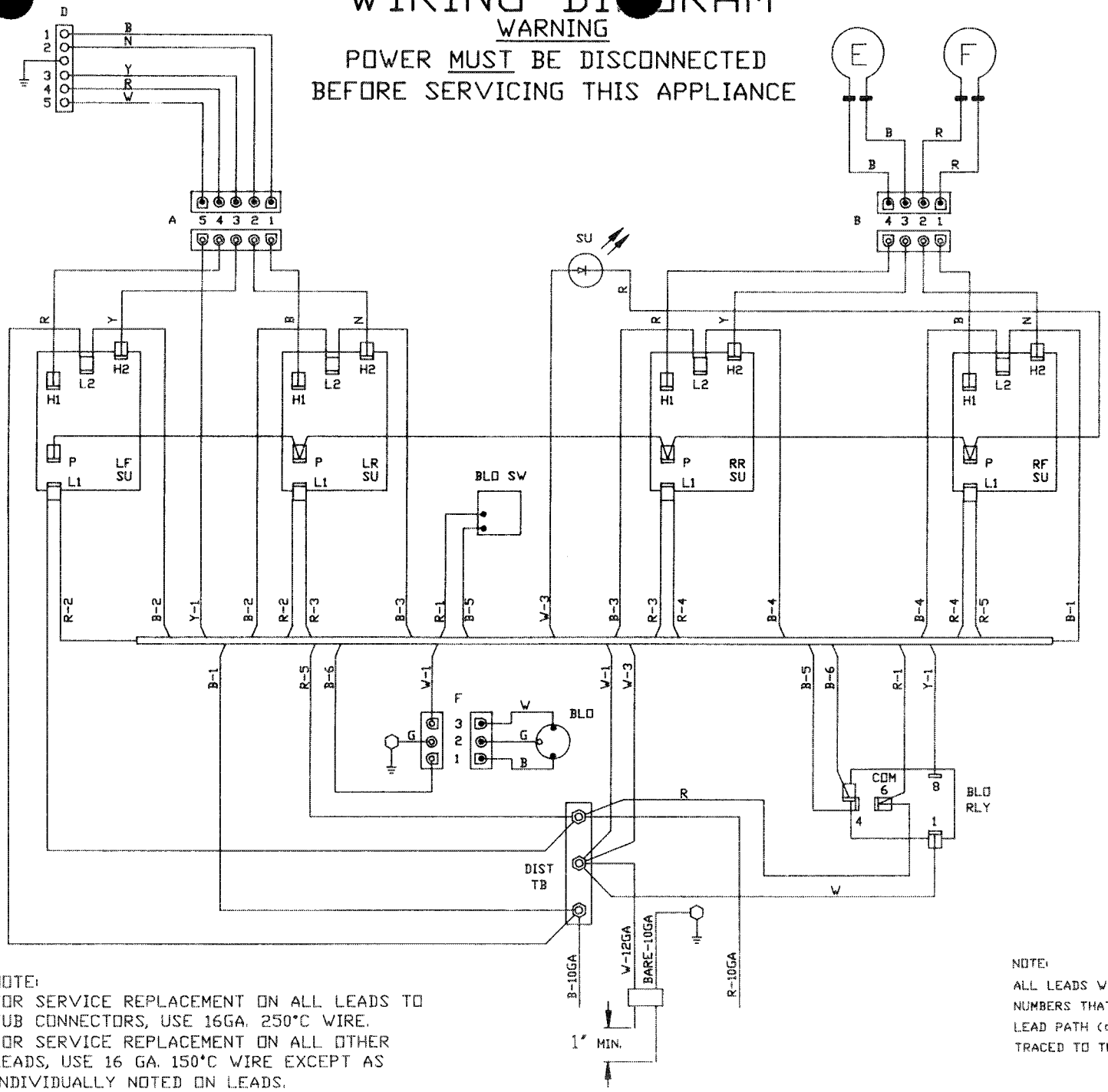
164D2331P146
PUB. NO. 31-1090
578

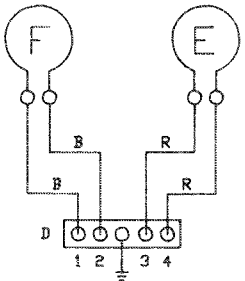
383,384,385
B-952-650-0

WIRING DIAGRAM

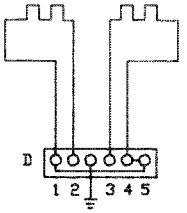
WARNING

POWER MUST BE DISCONNECTED
BEFORE SERVICING THIS APPLIANCE





SU & DISK



GRILL

MODULE	E	F
SURFACE UNIT	240V-1325W	240V-2350W
DISK	240V-1500W	240V-2000W
GRILL	240V-2400W	

COLOR	CODE
RED	R
WHITE	W
BLACK	B
GREEN	G
BROWN	C
ORANGE	O
YELLOW	Y
BLUE	N
GRAY	S

NOTE:
FOR SERVICE REPLACEMENT ON ALL LEADS TO TUB CONNECTORS, USE 16GA. 250°C WIRE.
FOR SERVICE REPLACEMENT ON ALL OTHER LEADS, USE 16 GA. 150°C WIRE EXCEPT AS INDIVIDUALLY NOTED ON LEADS.

NOTE:
ALL LEADS WITH DESTINATION NUMBERS THAT ENTER COMMON LEAD PATH (⟷) MUST BE TRACED TO THEIR TERMINATIONS.

NOTES

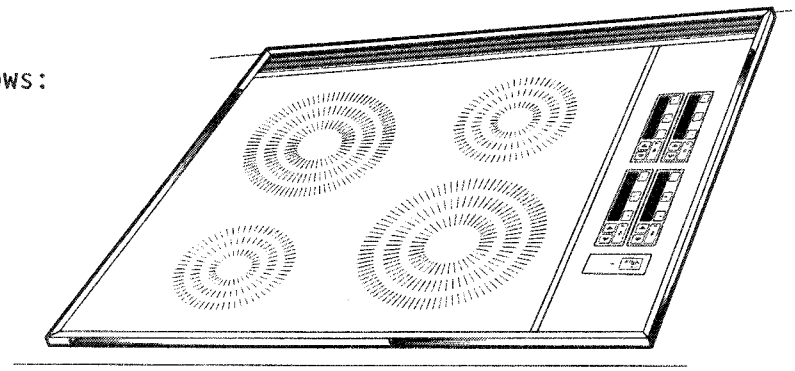
SECTION II

1992 INDUCTION COOKTOPS

A new line of Induction Cooktops will be introduced in the Fall of 1992. The models will be available in black or white and come in 30 and 36" widths. Each model will contain two 6" coils along with one 8" and one 9" coil.

Model No. size and color are as follows:

Model No.	Width	Color
JP392R1	30"	BLACK
JP393R1	30"	WHITE
JP692R1	36"	BLACK
JP693R1	36"	WHITE



DEMO MODE

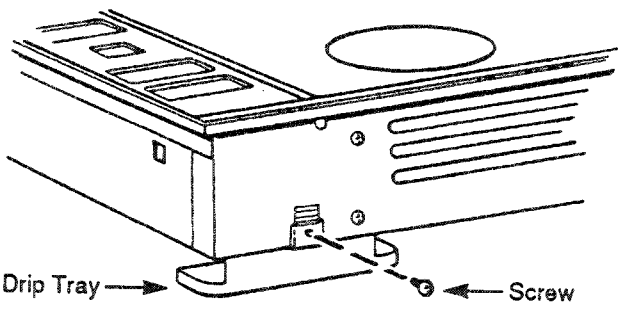
The cooktop is automatically in Demo Mode when "L1" (Red), "N" (White), and Ground are connected to a supply circuit. "L2" (Black) is not connected. In the Demo Mode only the left front unit will heat. The display will operate for all other units.

AIR FLOW

A grill across the rear of the cooktop allows proper air flow for cooling the electrical components. Air intake is at the left and right corners and exhausts out the center of the grill. Forced air fans located on the bottom of the cooktop provides the air flow.

DRIP TRAYS

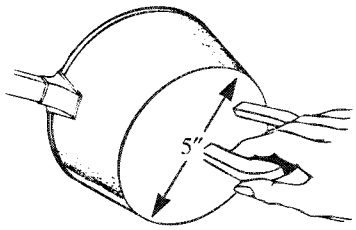
Two drip trays are located on the bottom of the cooktop below air intake grill. As air is pulled in through the intake it wipes across the trays and accumulates any grease or moisture in the air prior to entering the component compartment.



RATING PLATE

The rating plate is located on the bottom of the cooktop.

COOKWARE



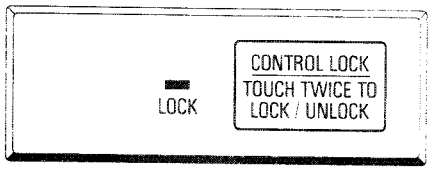
Induction cooking requires the use of cookware made of ferrous metals (materials to which magnets will stick) such as steel or iron. Pans must be at least 5" across the bottom for the cooktop to work.

CONTROL OPERATION

The touch control for each unit has 10 discrete power settings - 3 major power pads, and up/down slew pads for 7 additional power levels between the major settings.

The power settings 1-10 light up in a vertical bar on the Control Display. Each touch of a slew pad changes the setting one increment. If the slew pad is touched continuously, the bar segments continue to change.

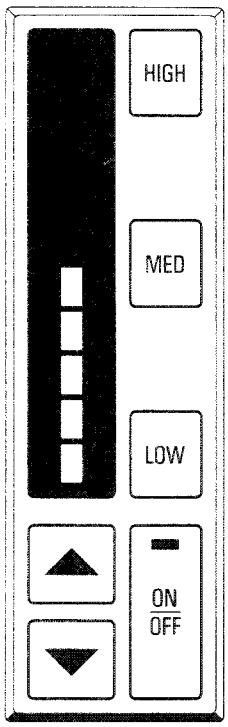
CONTROL LOCK PAD



A provision for preventing the operation of the cooktop has been designed into the control. To activate the Lock Feature touch the Control Lock Pad twice within 3 seconds. A small green light above the word "lock" lights up. No Functions will not Operate while the unit is in the lock mode. To unlock the control panel touch the Control Lock Pad twice within 3 seconds.

NOTE: THE UNIT WILL BE LOCKED AT INITIAL POWER UP OR AFTER A POWER FAILURE.

UNIT OPERATION



The control requires a two step set-up to turn a unit "ON" with a utensil in place.

1. Touch "ON/OFF" Pad - The control "BEEPS" LED above "ON/OFF" Pad lights and fan comes on.
2. Touch "POWER" Pad (Major or Slew) - Display bar will light for the power level selected. If a utensil is not in place the bar will beep & flash and unit will not turn "ON".

   NOTE: If a power pad is not touched within 15 seconds after touching the "ON" pad the control will automatically turn "OFF".

CONTROL OPERATION CONTINUED

POWER SETTINGS

The display contains 10 separate LED'S for the power setting selected. The chart below gives the % of 100% power for each setting. The numbers under setting represent the number of LED'S lit for the power level chosen. Settings between the major pads (Low, Med & High) is obtained by use of the slew pads.

SETTING	Percentage of 100% Power
1 - LOW	3
2	8
3	14
4	21
5 - MED	29
6	39
7	51
8	65
9	81
10 - HIGH	100

COOKTOP SERVICE POSITION

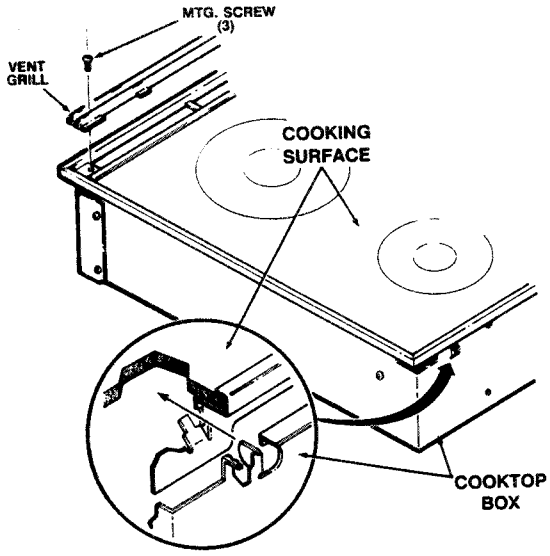
The cooktop can be raised for service.

WARNING

DISCONNECT all POWER before opening Cooktop for service. The components on the power modules are electrically hot when power is connected.

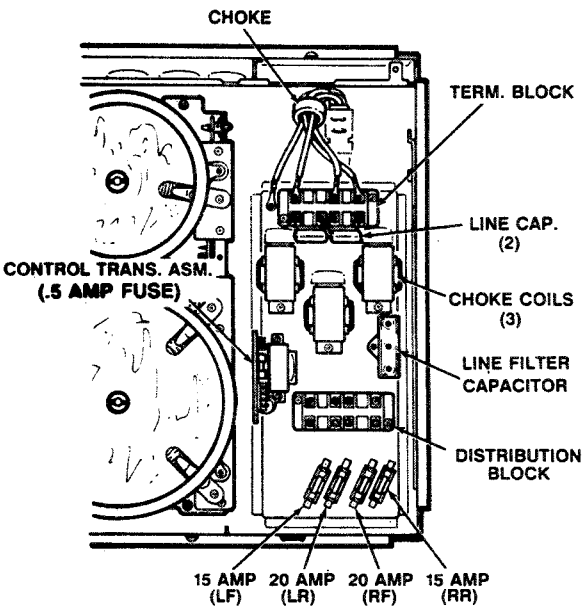
TO RAISE COOKTOP:

1. **DISCONNECT POWER**
2. Remove rear vent grill (Snapped in place)
3. Remove 3 screws from rear of Cooktop trim
4. Lift Cooktop at rear and move towards rear to unhook tabs at front.
5. Rest rear edge of Cooktop against rear of cooktop box and raise support arms.



INPUT POWER COMPONENTS

All input power components are mounted on the cooktop box bottom right side. The components consist of Terminal Block, Line Capacitors, Choke Coils, Line Filter Capacitor, Distribution Block, Control Transformer Assembly and 15 and 20 Amp module fuses.



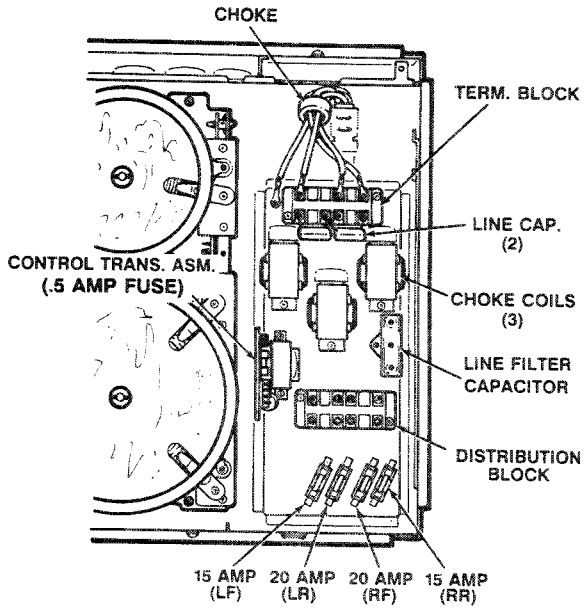
MODULE FUSES

The module power leads each contain either a 15 Amp (for 6" units) or a 20 Amp (for 8" or 9" units) fuse. The four fuses or labeled and located on the case bottom near the distribution block.

The nominal wattage and current for each of the units are as follows:

Left Front - 1300W. @ 120V. and 11A.
Left Rear - 1800W. @ 120V. and 15A.
Right Front - 2200W. @ 120V. and 18A.
Right Rear - 1300W. @ 120V. and 11A.

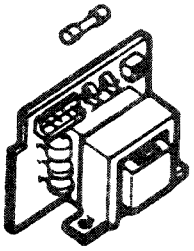
NOTE: Current can vary by +10% or -35% depending type of load used when checking current.



CONTROL TRANSFORMER ASSEMBLY

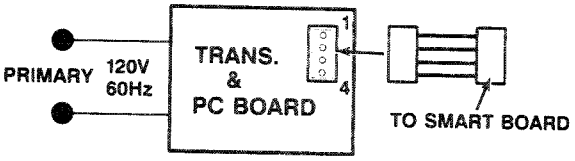
The Control Transformer and PC Board Assembly is mounted to the case bottom. Approximate voltages are:

Connector Pin No.	Nominal Voltage
1 - 2	11.0V AC
3 - 4	4.5V AC



CONTROL TRANS. ASM.
(.5 AMP FUSE)

TO TEST
Disconnect the connector from control transformer board. Connect appliance power and check output voltage.



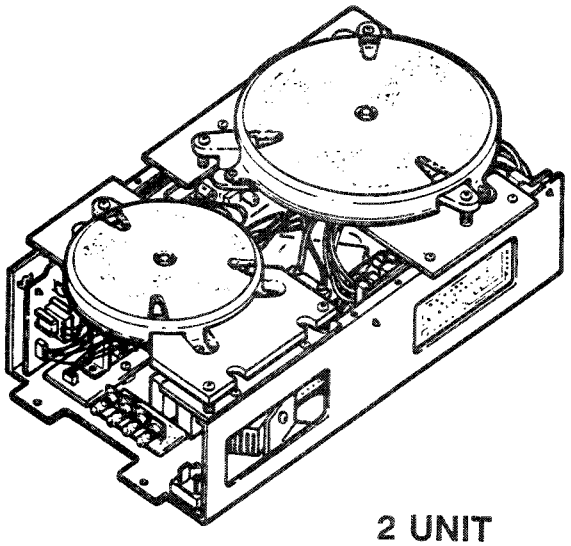
POWER MODULES

The power modules are located inside the Cooktop case. The left module contains one 6" and one 8" heating coil, and the right contains one 6" and one 9" heating coil along with all of the electronic components associated with the module.

Each heating unit has its own smart board, filter coil, capacitors, and power transistor. The modules also contain a low voltage transformer, fan, and other miscellaneous parts.

EACH MODULE will be serviced as a COMPLETE ASSEMBLY.

NOTE: Left and Right power modules appear to be identical. (Left module contains one 8" and one 6" coil, right module contains one 9" and one 6" coil).



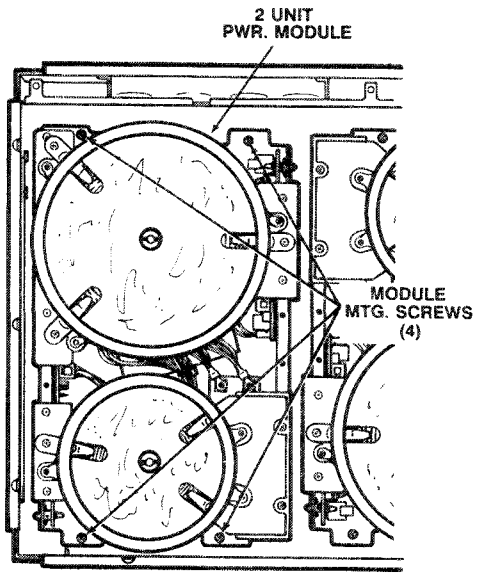
2 UNIT
PWR. MODULE

POWER MODULES CONTINUED

TO REMOVE POWER MODULE:
Each module is mounted inside the cooktop case by four screws.

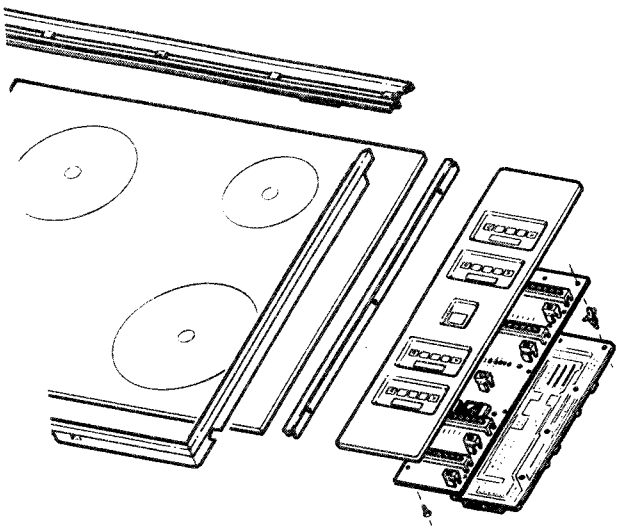
WARNING
DISCONNECT POWER before opening Cooktop for service. Components are electrically hot when power is connected.

TO REMOVE
1. **DISCONNECT POWER** to cooktop.
2. Raise top assembly and disconnect plugs to control assembly.
3. Lift top assembly off.
4. Disconnect leads to power module.
   a. Red or Black lead from fuse.
   b. Neutral (White) from distribution block.
5. Remove 4 screws that secure module to case bottom.
6. Lift power module out.



COOKTOP ASSEMBLY

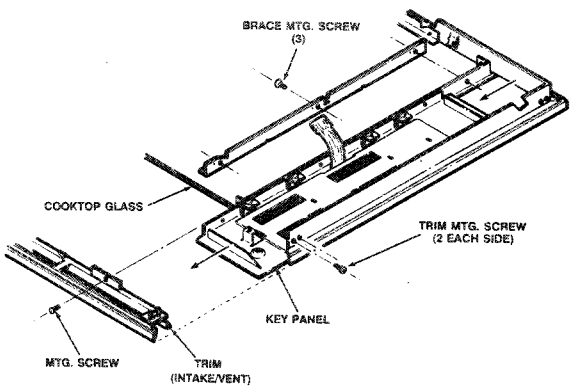
The ceramic glass top and control panel assembly make up the cooktop assembly. A frame around the outer edge hold the assembly together.



CONTROL PANEL ASSEMBLY

The control panel assembly consists of:
- Key Panel Assembly (replaced as complete assembly).
- Control Board (Smart Board).
- LED Board

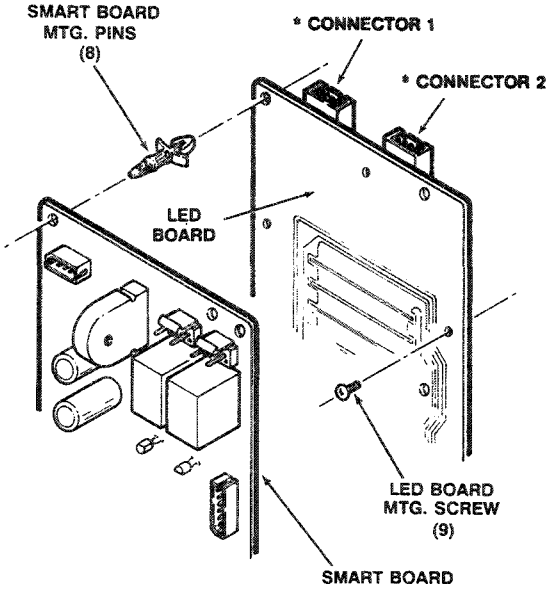
TO REMOVE CONTROL PANEL ASSEMBLY:
1. **DISCONNECT POWER** to unit and raise cooktop.
2. Remove connectors from cooktop, lift cooktop off and lay face down on flat surface.
   NOTE: Cover surface to prevent possible damage to cooktop or surface.
3. Remove 5 mounting screws securing intake / vent trim (2 screws on each side and one on top).
4. Remove 3 screws mounting center brace.
5. Flex side trim out slightly from control panel assembly and pull straight up. Care must be taken not to deform or damage trim.
   NOTE: Foam tape around perimeter of control may stick to trim making it difficult to remove.



CONTROL PANEL ASSEMBLY CONTINUED

TO DISASSEMBLY CONTROL PANEL:

1. **DISCONNECT POWER** and remove cooktop assembly.
2. Remove Control Board by:
   - Disconnecting Smart Board to LED Board connectors and Ribbon Connector.
     NOTE: To release ribbon connector squeeze tabs on each end of connector and lift up.
   - Control Board (held to LED board by plastic stand-off's) is removed by depressing spring finger on each of the stand-off's.
     NOTE: Care must be taken not to damage board when removing.
3. LED Board is mounted to Key Panel by 9 screws.



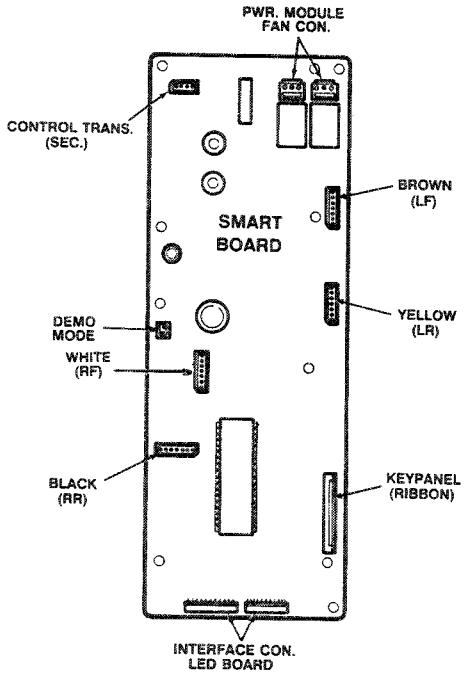
* LED BOARD CONNECTORS (SEE SCHEMATIC WIRING DIAGRAM)

CONTROL BOARD (SMART BOARD)

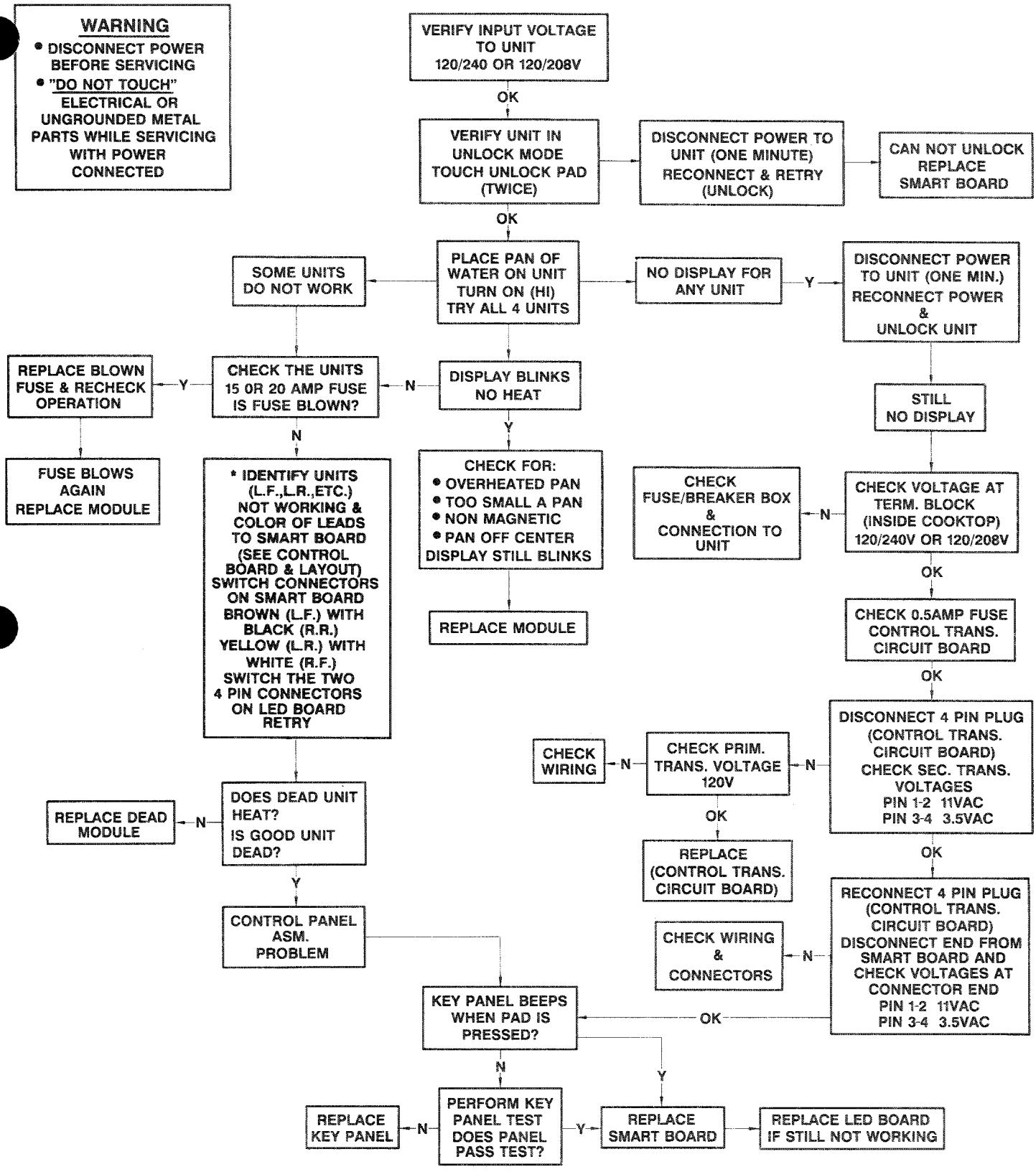
The control board contains the following connectors:

- Control Transformer Secondary.
- Left and Right Module Fan Motor Connectors.
- Color Coded Module Heating Unit Connectors:
  - Left Front - Brown
  - Left Rear - Yellow
  - Right Front - White
  - Right Rear - Black
- Demo Connector
- Key Panel Ribbon Connector
- LED Board Connectors

NOTE: For proper unit operation and to avoid damage to unit Connectors must be properly aligned and completely pushed on.



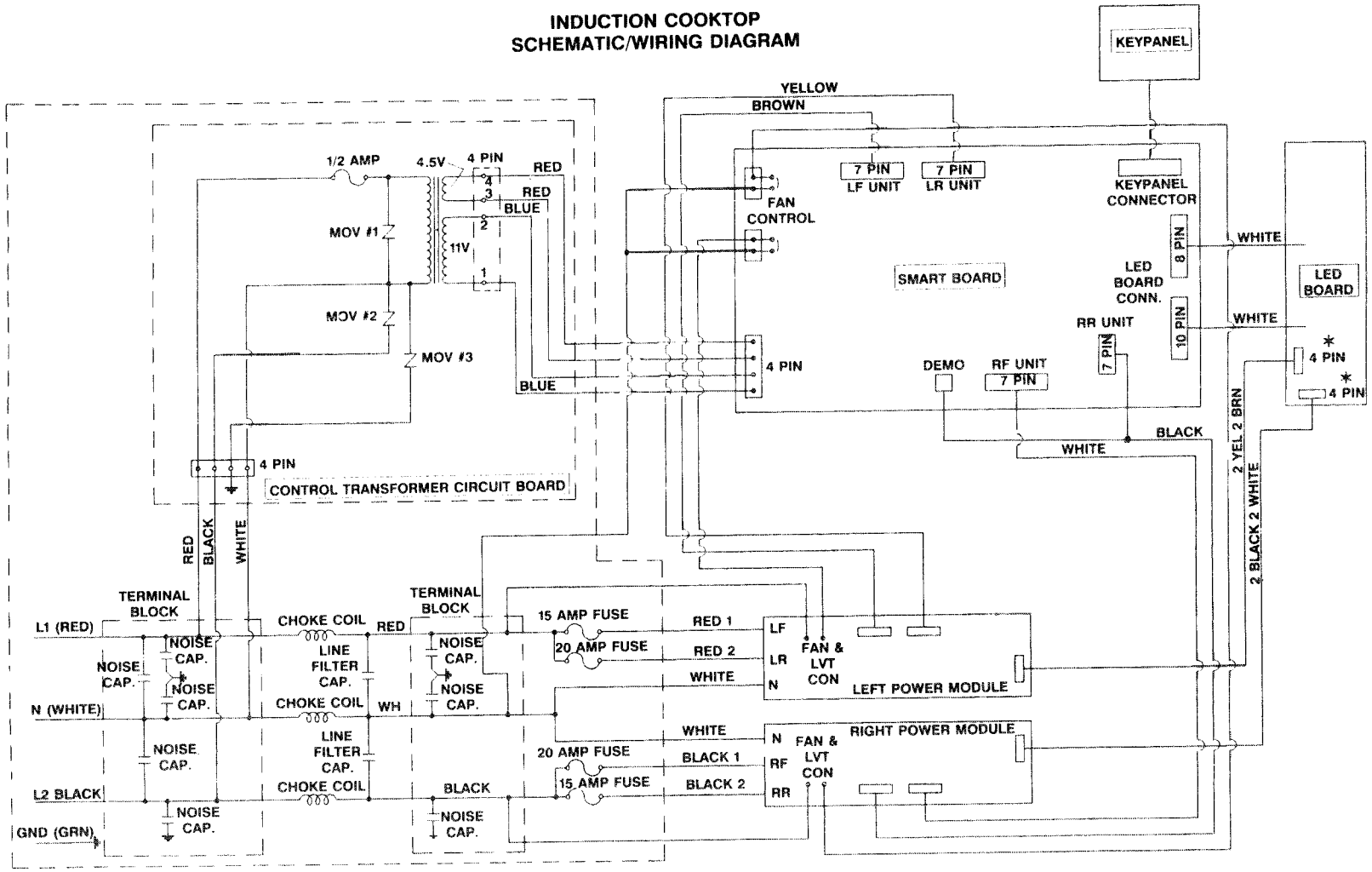
SERVICE DIAGNOSTIC FLOW CHART



(WB1841)

*NOTE: WHEN CONNECTORS ON SMART BOARD & LED BOARD ARE SWITCHED, CONTROL WILL OPERATE OPPOSITE DIAGONAL UNIT.
(EXAMPLE)
RIGHT FRONT KEY PADS WILL CONTROL LEFT REAR UNIT.

INDUCTION COOKTOP
SCHEMATIC/WIRING DIAGRAM



* LED BOARD CONNECTORS
1 & 2 LEAD COLORS

MODEL SERIES	LED 4 PIN CONNECTOR BLOCKS	
	CONNECTOR 1	CONNECTOR 2
JP SERIES	BLACK & WHITE LEADS	YELLOW & BROWN LEADS
429/439 SERIES	YELLOW & BROWN LEADS	BLACK & WHITE LEADS