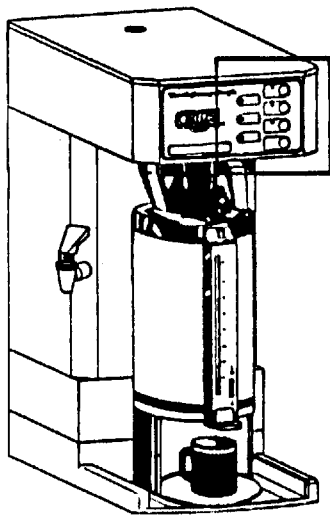

OPERATING & SERVICE MANUAL

"NEXT GENERATION" SERIES
120 V ■ 240 V BREWERS

MODELS		
145-0	180-0	350-0
145-3	180-3	350-3
145-4	180-4	350-4
145-8	180-8	350-8
<i>Patent #5063836 (U.S.) Patent #1299624 (Canada)</i>		

OPERATING DESCRIPTION



The CAFE 98 "NEXT GENERATION" series of brewers incorporates the latest advancements in materials and electronics to provide optimum performance, quality and long service. Brewing begins the instant the cycle is initiated and remains consistent regardless of water pressure variations and hot water faucet operation during the brew cycle. The brewer's state of the art electronic control board controls heater tank water level, water temperature, the amount of water dispensed, monitors draining of the grounds and provides an audible indication when the brew cycle is complete.

FUNCTION INDICATOR LIGHTS:



green LED on: Brewer is ready to brew coffee.
off: Brewer is heating water in tank to proper brewing temperature.



amber LED: Brewer is brewing.



red LED flashing: Brewer is in *AUTO BREW* mode and will automatically start the brew cycle as soon as water in the tank reaches proper brewing temperature; at the same time the green *READY* LED comes on.

NOTE: Erratically flashing red light indicates that brewer is in boiling condition and you must turn temperature down (see page 3).

solid: Brewer is in *WARNING* mode and needs to be serviced. The solid red light indicates that the backup probe in the water tank has taken over because the primary probe is not working due to lime build up or disconnection.

BREWING FUNCTION PADS:

Multi-brew selection mode lets you select brew volume (*REGULAR*, *HALF*, *DOUBLE*) by simply pressing desired brew selector pad.



NOTE: The *DOUBLE BREW* feature is not functional at this time.

The green LED will light on the selector pad you have pressed. The amber *BREWING* LED will also light indicating the brew cycle has been initiated. The green LED on selected brew cycle pad will remain on during the brew cycle. At the end of the brew cycle the green and amber LEDs will turn off.



If the wrong selector pad has been pushed accidentally, the user may stop the brew cycle by pressing the *CANCEL* selector pad.

INSTALLATION INSTRUCTIONS

NOTE: Cost of installation and any subsequent fine turning is the responsibility of buyer.

⚠ WARNING: Read and follow installation instructions before plugging in machine to electrical outlet.

1. Remove machine from shipping carton. It is strongly recommended to perform a visual inspection of the machine inside out checking for loose connections on either control board or for damage to outlet valve that might have been caused by mishandling during shipping. Please keep carton and packing in case the brewer needs to be re-shipped.
2. Plumb in brewer.

PLUMBER'S INSTALLATION INSTRUCTIONS

CAUTION: Power to the brewer must be off before proceeding with installation.

- a) Flush water lines before installing brewer. Brewer should be connected to cold water line for best operation. Check incoming water pressure with pressure gauge.
- b) Water pressure should be at least 20 lbs. For less than a 25 ft. run, use $\frac{1}{4}$ " O.D. (outside diameter) copper tubing and connect to a $\frac{1}{2}$ " or larger water liner. For more than a 25 ft. run, use $\frac{3}{8}$ " O.D. copper tubing from a $\frac{1}{2}$ " or larger water line and provide an adaptor fitting for the connection to the brewer.
- c) If water pressure is more than 50 lbs., we strongly recommend that you install a water regulator and set water pressure below 50 lbs. This will prevent erratic pot levels.
- d) Connect the incoming water line to the incoming main fitting ($\frac{3}{8}$ NPT x $\frac{1}{4}$ flare male) on the back of the brewer.
- e) Provide individual water line to each machine when there is a multiple of machines involved at the same time.

NOTE: A shut off valve should be installed on the incoming water line in a convenient location.

3. Place empty server under brew basket.
4. Plug in to proper voltage circuit and turn power switch to *ON*.
5. Water will automatically begin to fill the tank.

INSTALLATION INSTRUCTIONS

6. Measure water temperature inside tank and adjust it to the recommended brewing temperature for your area according to elevation.

NOTE: Recommended water temperature in tank at sea level is 205 to 206° F. For every 500 ft. above sea level, you should set water temperature inside tank 1° less than 206° F.

WATER TEMPERATURE INSIDE TANK

► MEASURING WATER TEMPERATURE

To measure temperature in the tank, please use the following procedure:

- a) Remove black plastic plug at the rear top of the brewer.
- b) Insert THERMOMETER through the opening and inside the tank through the collapsible plug.
- c) Take temperature reading about 30 seconds after green *READY* LED has come on and heater has turned off. To get the true water temperature in the tank it is important to follow this step accurately.

► ADJUSTING WATER TEMPERATURE

The temperature dial on the control board (see figure 2 page 6) is set at a position and will heat the water in the tank to about 201 - 205° F.

To change temperature, please use the following procedure:

a) Decreasing temperature

Rotate temperature dial marked *TANK TEMP* on control board (see figure 2 page 6) back 2 marks (counterclockwise). Draw about 1 litre of water through spigot. This will cool down the water in the tank. Allow water to heat to new setting. Repeat above step to reach desired temperature.

b) Increasing temperature

Rotate temperature dial marked *TANK TEMP* on control board (see figure 2 page 6) clockwise slowly to increase temperature until you hear the click sound and the green *READY* LED has turned off (this will increase temperature by about 3° F in the tank). If you desire higher temperature, please repeat the above step.

INSTALLATION INSTRUCTIONS

7. Press *REGULAR BREW* selector pad and monitor amount of water dispensed. The brew level will reach about 10 cups.

ADJUSTING BREW LEVEL

IMPORTANT

Water temperature must be at brew *READY* before brew level can be adjusted.

(NOTE - *AUTO BREW* can be overridden by holding brew button down for 5 seconds) Disabling the *AUTO BREW* feature by interchanging the blue wire with the red wire at connector (see wiring diagrams on pages 15 and 16). This will allow the service technician to set brew level without waiting for machine to reach brew temperature. (*AUTO BREW* - Override Feature)

When setting the brew level, keep in mind that the yield should not exceed 14 cups to Prevent overflowing of the server.

Factory settings will produce approximately 10 cups of water (*REGULAR BREW*). To change brew level, please use the following procedure:

Brewer is equipped with Auto Cal: Turn dial to maximum setting , monitor the water volume, once recorded slowly rotate dial counter clockwise until dump valve turns off. Volume is set.

Decreasing brew level

Rotate *BREW TIME* dial on front lower control board (see figure 1, page 6) counter-clockwise and align arrow to desired mark.

Increasing brew level

Rotate *BREW TIME* dial on front lower control board (see figure 1, page 6) Clockwise and align arrow to desired mark.

NOTE: Monitor amount of water dispensed three times to make sure adjusted level is constant.

NOTE: Because decaf coffee does not hold as much water as regular coffee, the yield of brewed decaf coffee in server will be higher (approximately 3%). Take this into account when setting brew level.

8. Empty out water from the thermal server. Place filter (large-4 1/2" Dia. X 2 1/2" tall-recommended CF-12 made by ALTRA FILTERS) and proper amount of coffee in the brew basket and slide basket into holder.
9. Press *REGULAR BREW* selector pad to start brew cycle.

INSTALLATION INSTRUCTIONS

10. Adjust visa-brew and run time

ADJUSTING VISA-BREW AND RUN TIME

Visa-Brew continues to flash the brewing light after the fill portion of the brew cycle has stopped alerting the user that the brewed hot coffee has not finished draining from the brew basket. This popular feature has been enhanced with an autocal feature.

Rotate *VISA-BREW* dial on front lower control board (see figure 3, page 6) clockwise all the way up. Start a normal brew cycle and after the coffee has quit dripping from the basket turn the dial down just until the light quits flashing. Visa-Brew is now custom set for your machine.

Power Save feature allows you to automatically save power when the brewer is not in use for a specified length of time. (this feature is turned off from factory)

Rotate *RUN TIME* dial on front lower control board (see figure 4, page 6) and align arrow to desired mark to indicate the number of minutes before system shutdown. This dial will set the timer anywhere from 30 to 240 minutes.

Turning the dial fully counter-clockwise will disable this feature. After the set time has elapsed since the last brew, the temperature will set back to 170 Deg. F. Starting a brew will wake it up from this mode. When in this "power save" mode, the full brew LED will blip every minute.

11. If any time you wish to cancel the brew cycle, simply press on CANCEL pad.

IMPORTANT HINTS

- ▶ If machine indicates red armed *WARNING LED* on front panel, drain some water through hot water spigot. (This is due to expansion of cold water during initial setup.) To turn off *WARNING LED*, hold cancel button down for 5 seconds.
- ▶ Do not transport coffee brewer with water inside the tank.

FUNCTIONS CONTROL AND PROCEDURE

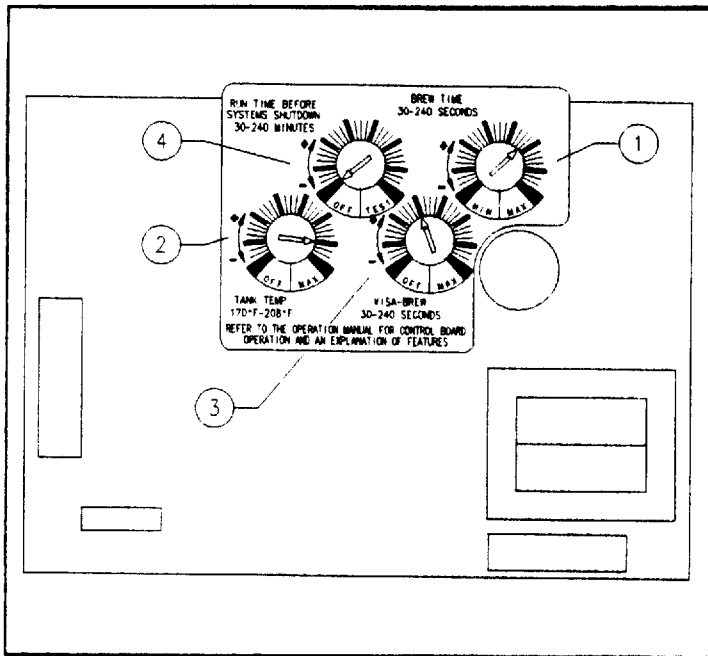


Figure 1, FRONT LOWER CONTROL BOARD

FACTORY SETTINGS FOR FUNCTIONS ON FRONT LOWER CONTROL BOARD

- ① **BREW TIME**
Set as shown to yield approx. 10 cups.
Adjusting brew level see box on page 4.

- ② **TANK TEMP**
Set as shown to get 201 – 205 deg F.
Adjusting water temperature inside tank see Box on page 3.

- ③ **VISA-BREW**
Set as shown.
Adjusting visa-brew see box on page 5.

- ④ **POWER SAVE
RUN TIME BEFORE
SYSTEMS SHUTDOWN**
Set to off position
Adjusting run time see box on page 5

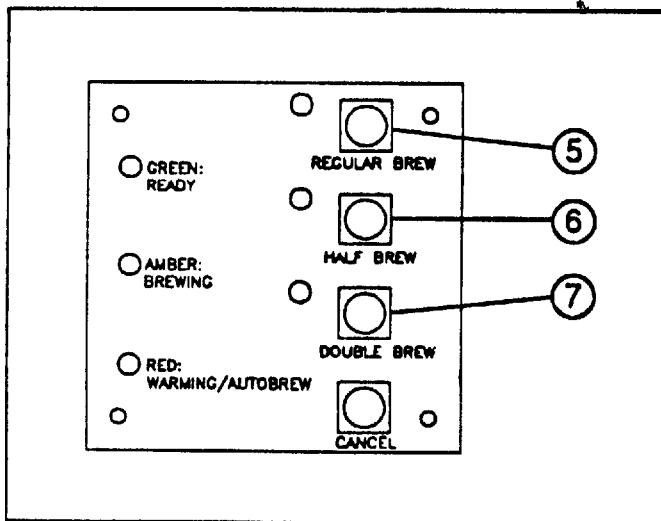


Figure 2, FRONT CONTROL BOARD

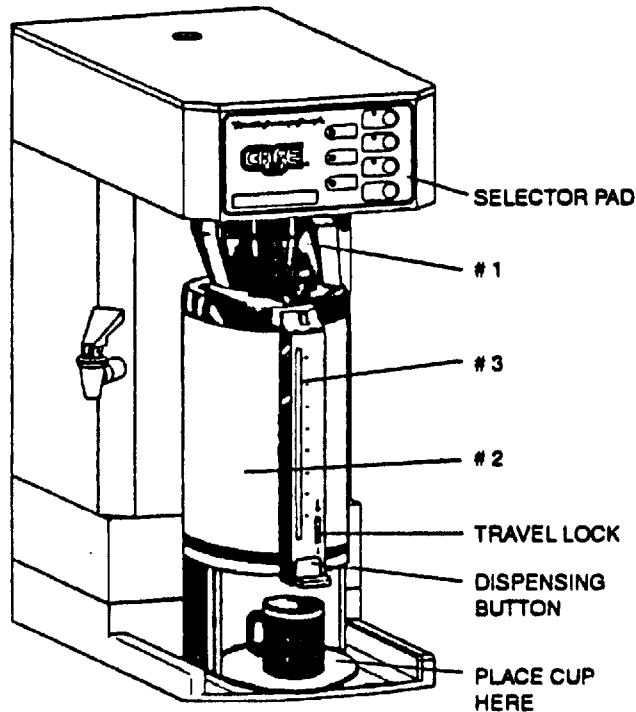
FACTORY SETTINGS FOR SECLECTOR FUNCTIONS ON FRONT CONTROL BOARD

- ⑤ **REGULAR**
connected
- ⑥ **HALF BREW**
connected
- ⑦ **DOUBLE BREW**
disconnected

ELECTRONICS CHANGES

<u>FEATURE</u>	<u>OLD STYLE</u>	<u>NEW STYLE</u>
<u>Tank Heater Protection</u> At fill	NONE Terminal disconnected	YES Tank heater disabled until water hits level probe.
Tank heater run time	NONE	1 min. safety time Temperature must increase 1 deg. per minute or unit goes into error mode. Solid red, Arm Solid green, Ready
Limit safety	YES	YES
<u>Fill Protection</u> Primary probe	No time out	If water does not make contact with probe within 2 minutes system shuts down. Fill error message.
Secondary probe (liming probe)	YES Arm light on Steady on half brew LED	YES Arm light on steady
Dump valve	NONE	Valve will close during brew cycle if water does not make contact with probe for 25 seconds.
Tank heater	NONE	If water does not make contact with probe for 1 minute, element is disabled and error message "heater error".
<u>Error Messages</u>	No heat: Green LED on - Red light -	All errors will turn on Arm LED solid. Fill run on = Brewing LED Heater error = Ready LED Open sensor = Half Brew LED Shorted sensor = Full Brew LED Lime probe = Just Arm LED
Safety float	YES Disabled brew heating and fill. Arm light on	YES Turns power off to fill solenoid, brewer will shut down in 1 minute. Brew LED - On Arm LED - On
Shorted sensor	NONE	Full Brew LED - On Arm LED - On
Open sensor	NONE	Half Brew LED - On Arm LED - On

BREWING / CLEANING INSTRUCTIONS



You now have the Cafe 98 System - a revolution in coffee brewing. Cafe 98 Industries welcomes you to its exclusive club of coffee connoisseurs.

CAFE 98 SYSTEM

- ✓ provides consistently good tasting coffee that is hot, flavourful and aromatic throughout the day. There is virtually no waste.
- ✓ provides a constant supply of hot water for a variety of beverages - tea, soup or hot chocolate.
- ✓ saves time because it's so easy to use.
- ✓ is completely portable - great for those meetings that unexpectedly present themselves.
- ✓ saves coffee because of better extraction.

BREWING

Put filter in and empty one package of coffee into the brew basket (#1).

Insert the brew basket and position the thermal server (#2) underneath. Check the sight gauge (#3) beforehand to make sure the server is empty or you may get an overflow. Do not remove the flow thru lid.

Press on desired brew selector pad. In case of pressing a wrong selector pad, void cycle by simply pressing on *CANCEL PAD*.

When you hear the signal beep, it means ...
Coffee's ready!

Treat yourself to a cup of fresh coffee.

STEP
1

STEP
2

STEP
3

STEP
4

STEP
5

CLEANING

Place fresh filter in brew basket, add 1 tablespoon of *Sanitizer 510* (available from Cafe 98) and place in holder.

Place thermal server under brew basket and initiate brew cycle by pressing on *REGULAR BREW* pad.

Sanitizer cleans whole unit including dispenser and sight glass.

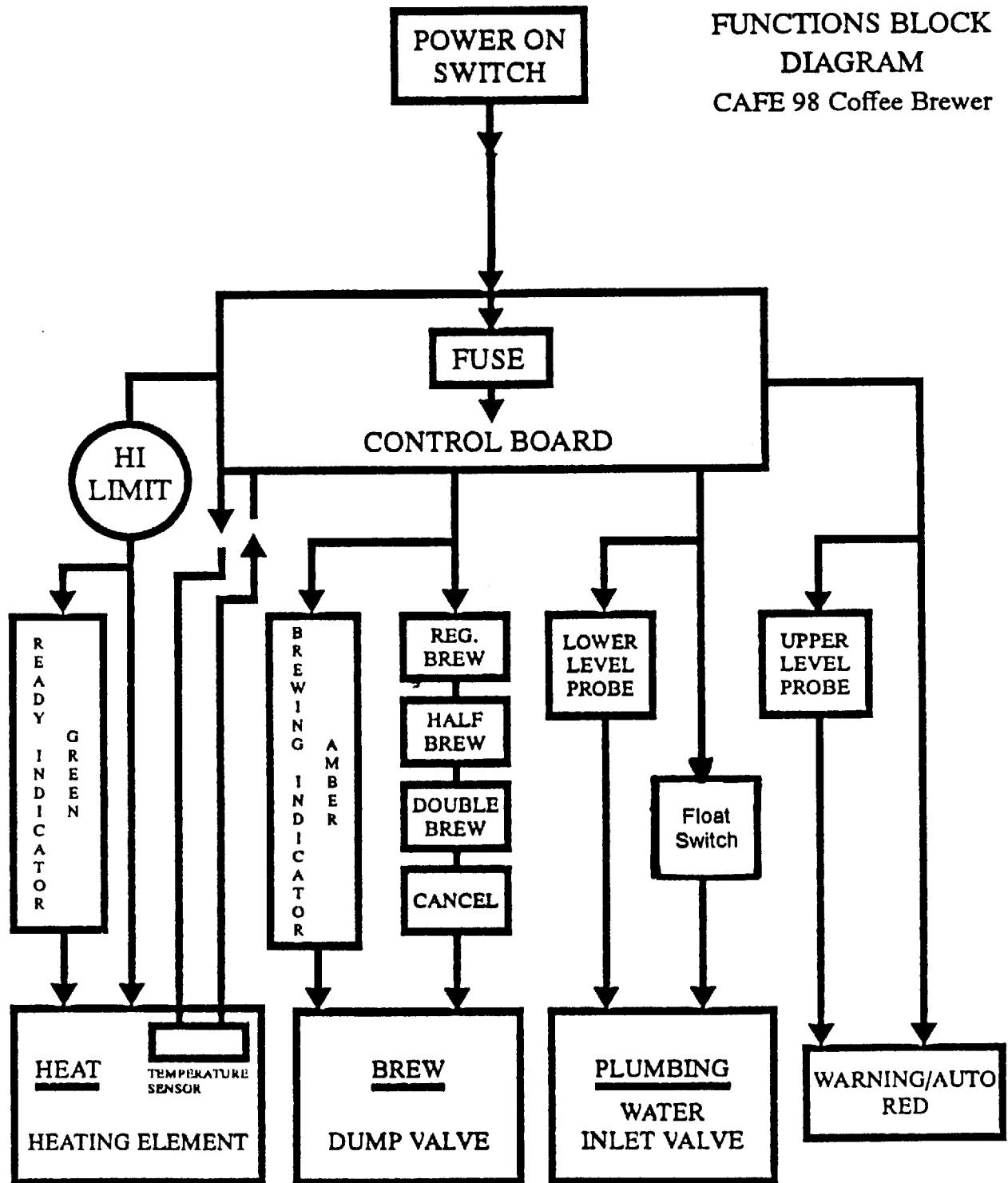
After brew cycle is finished, let solution sit for one minute. Draw cups of cleaner through dispenser.

Rinse brew basket and thermal server with fresh water, draw through dispenser, discard water ... ready to brew coffee!

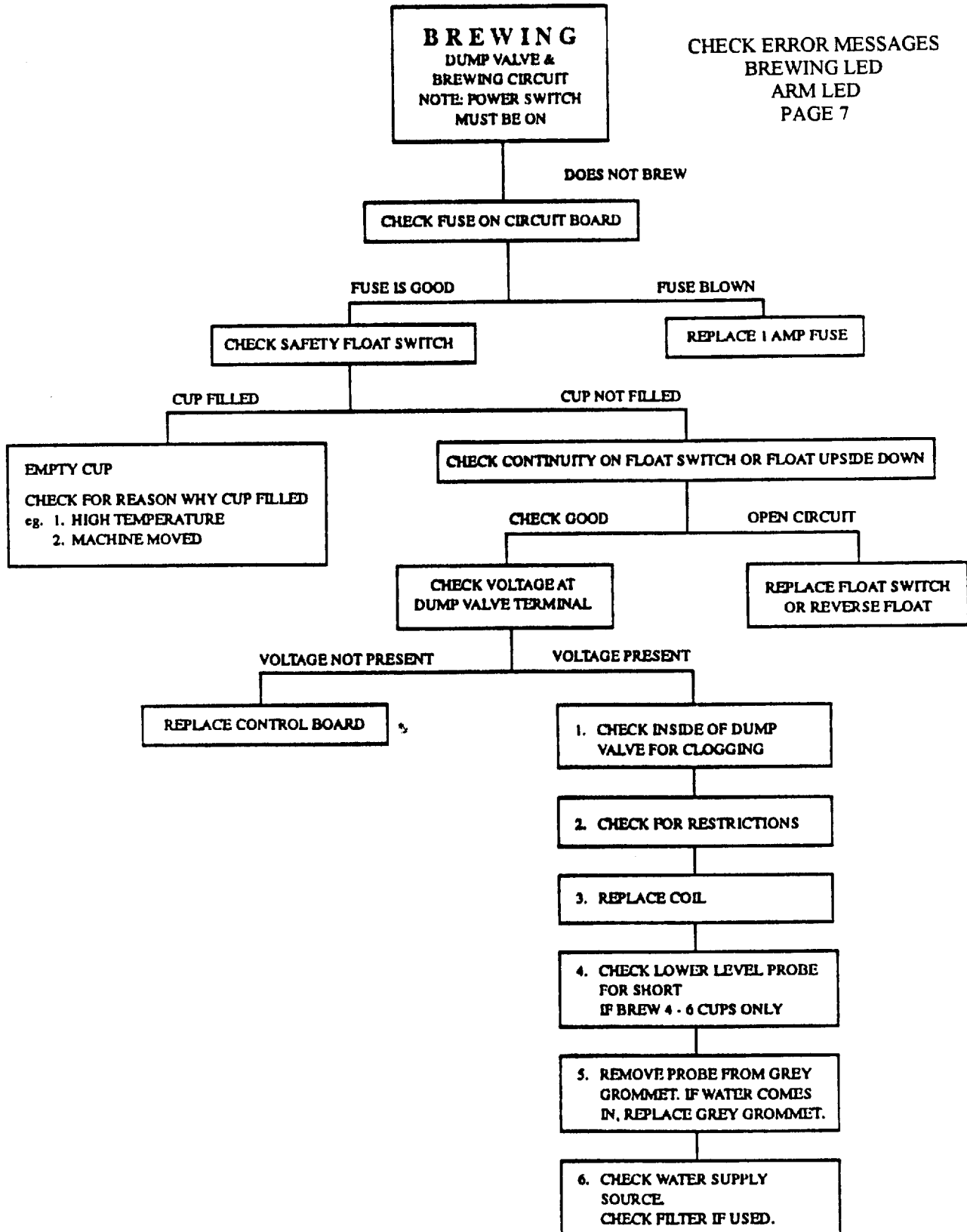
TROUBLE SHOOTING GUIDE

POWER 120 - AC

FUNCTIONS BLOCK
DIAGRAM
CAFE 98 Coffee Brewer



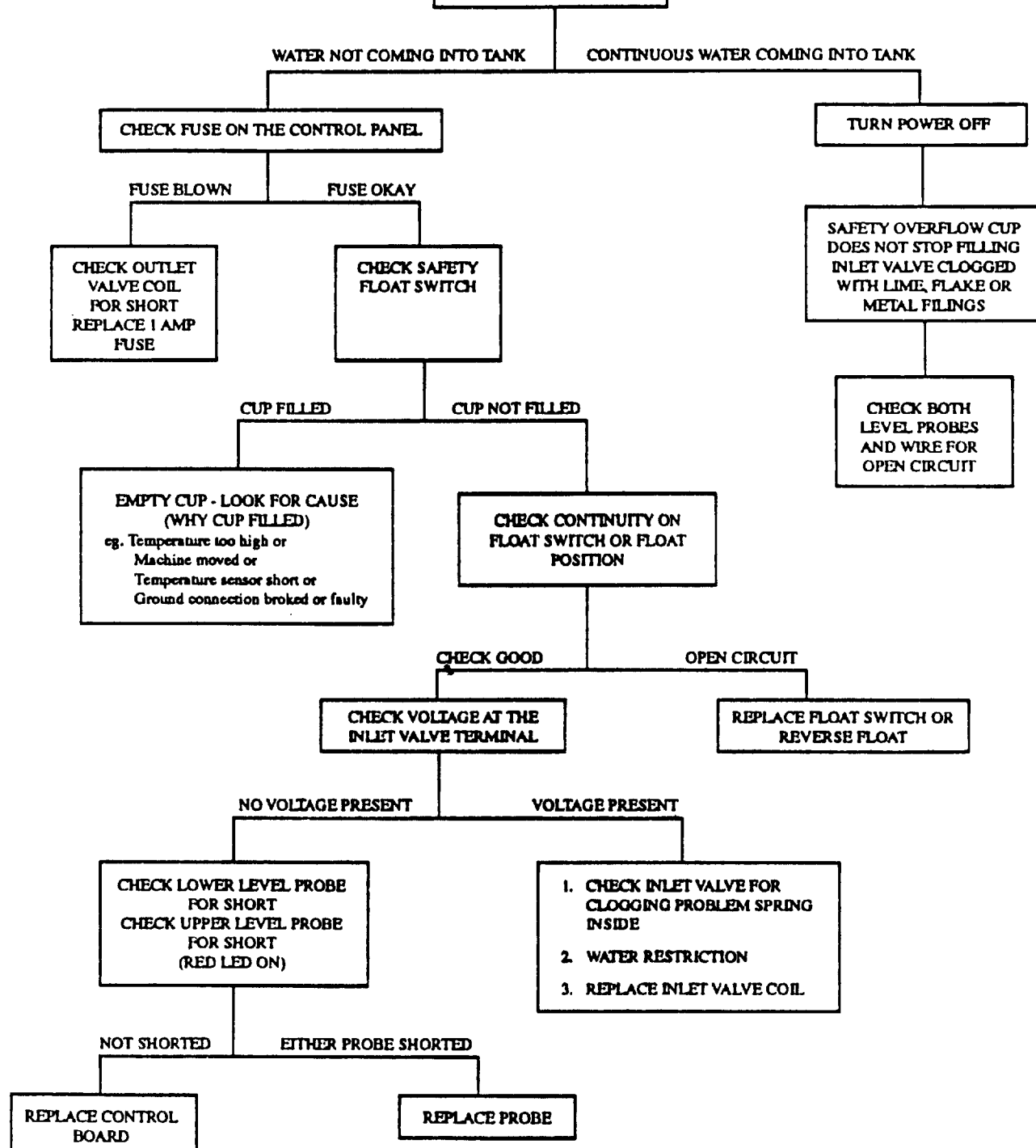
TROUBLE SHOOTING GUIDE



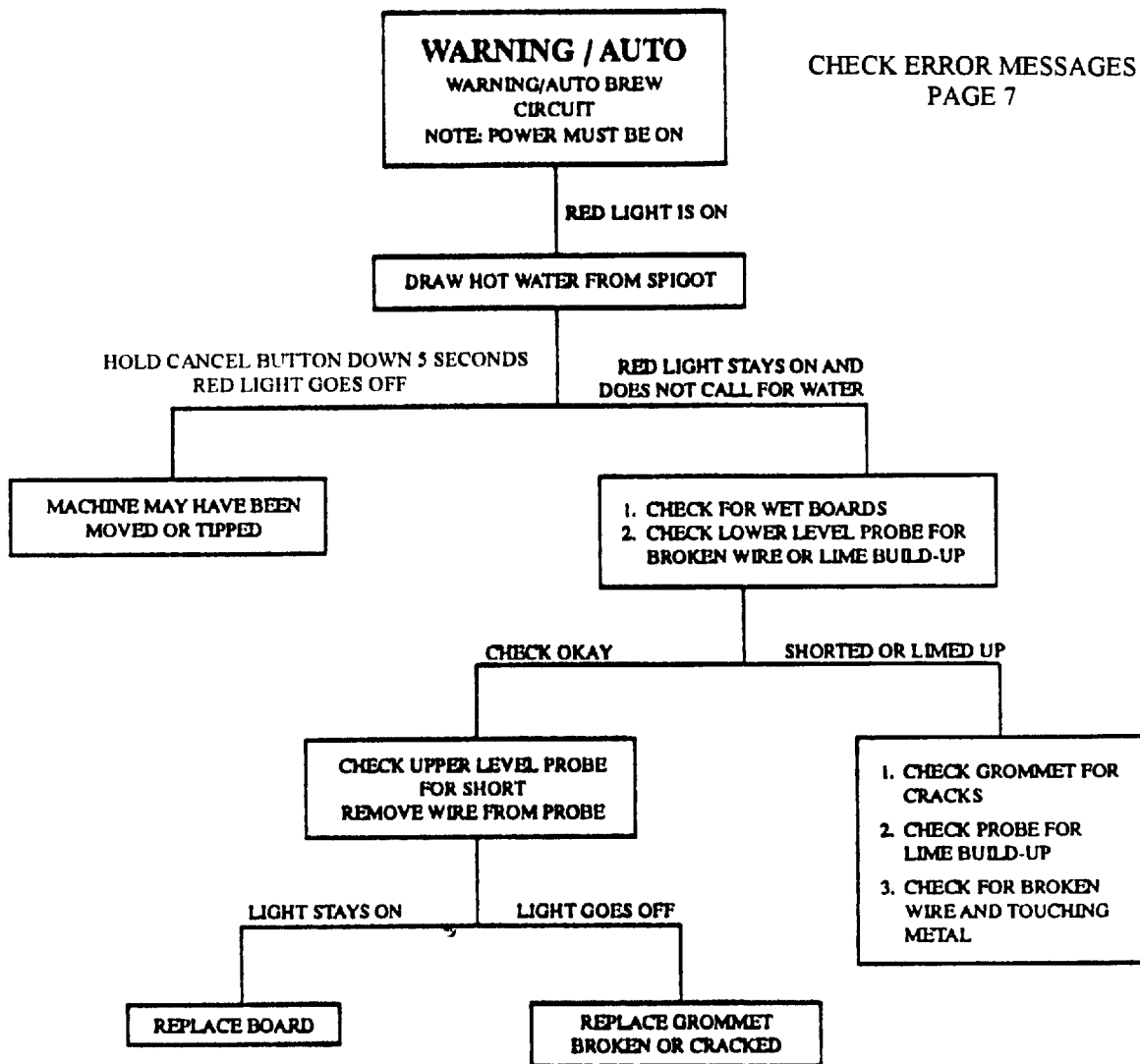
TROUBLE SHOOTING GUIDE

PLUMBING WATER INLET CIRCUIT NOTE: POWER MUST BE ON

CHECK ERROR MESSAGES
PAGE 7



TROUBLE SHOOTING GUIDE



► **NOTE:** CONTINUOUS RED FLASHING LIGHT INDICATES PROBLEM IN THE BOARD OR BAD HEATING ELEMENT.

TROUBLE SHOOTING GUIDE

PROBLEM

SOLUTION

Due to loose ground wires or wires not making proper connection, both water level probes will not work. Water flows into overflow safety cup and machine will shut off.

Empty overflow cup and make sure all ground connectors are tight.

Water level reaches upper level (safety probe), *WARNING AUTO BREW* red LED Indicator will come on caused by:

Make sure lime probe is pointing at 8 o'clock in the tank. This position should be below Over flow tube located in tank.

- a) Water lime probe should be at 7:00 -8:00 o'clock in the tank or
- b) moving the machine or
- c) simple expansion of cold water when heated.

Draw hot water from spigot until brewer calls for water and stops at lower level probe.

NOTE: If machine has been accidentally set in *AUTO BREW* mode before attending the problem, both LED will flash until green *READY* LED comes on. The brewer will start brewing on selected brew. Due to the higher water level in the tank, about 2 to 3 oz. more coffee will be yielded which may cause the server to overflow.

There are no LED displays other than in heating mode, the green *READY* light will be off and overflow safety cup is filled caused by

Empty safety overflow and replace thermistor.

- a) boiling over or
- b) moving machine with water in tank or
- c) short circuit in temperature sensor.

Connecting harness of rear or front control board is loose and machine will run continuously.

Make sure harness is tight on both ends and connects properly.

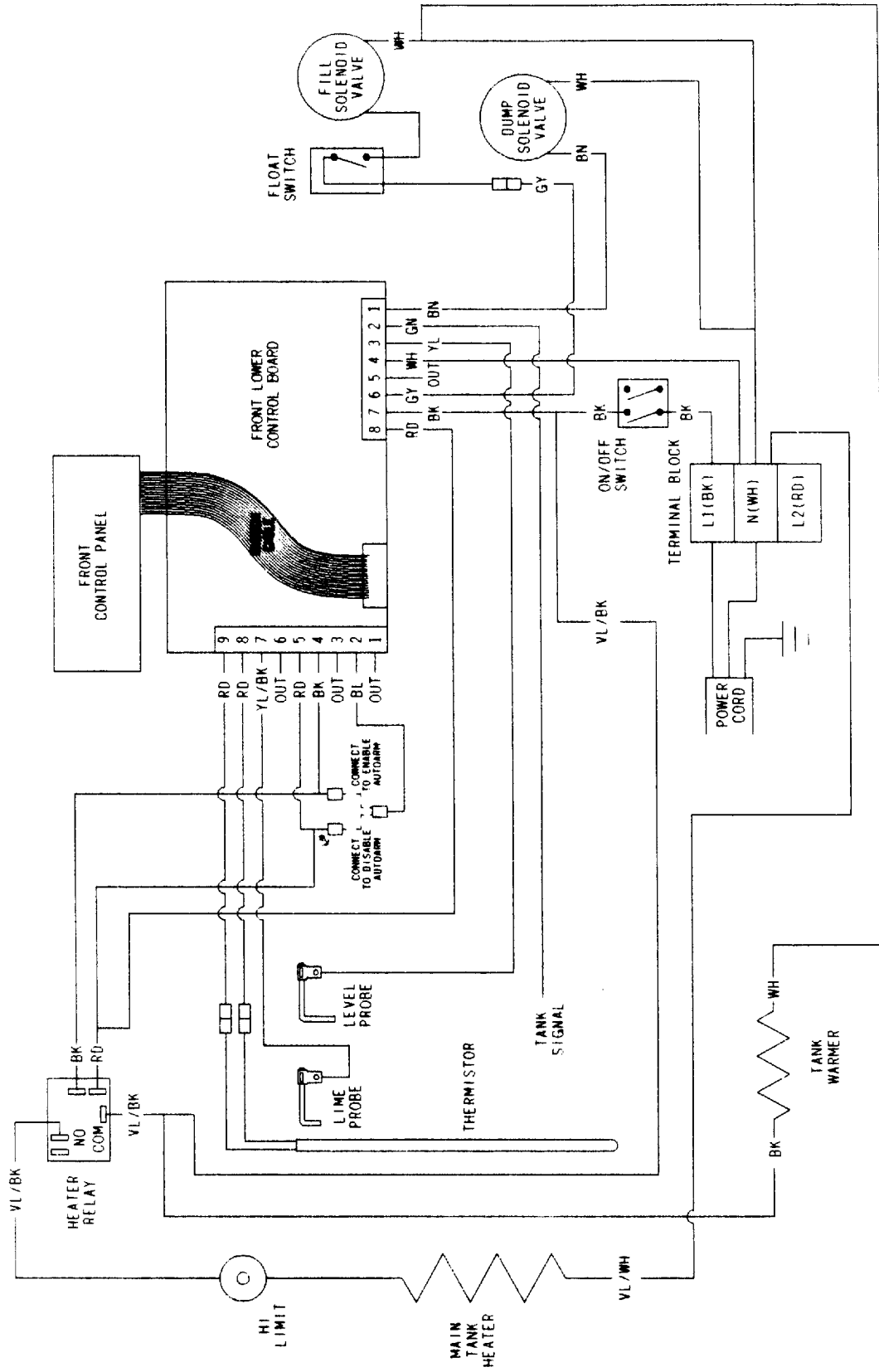
Green *READY* LED will be on, but no power to heater caused by open thermistor. Result: brewing function works, but coffee will be cold.

Replace thermistor.
Replace relay.
Replace limit thermostat.

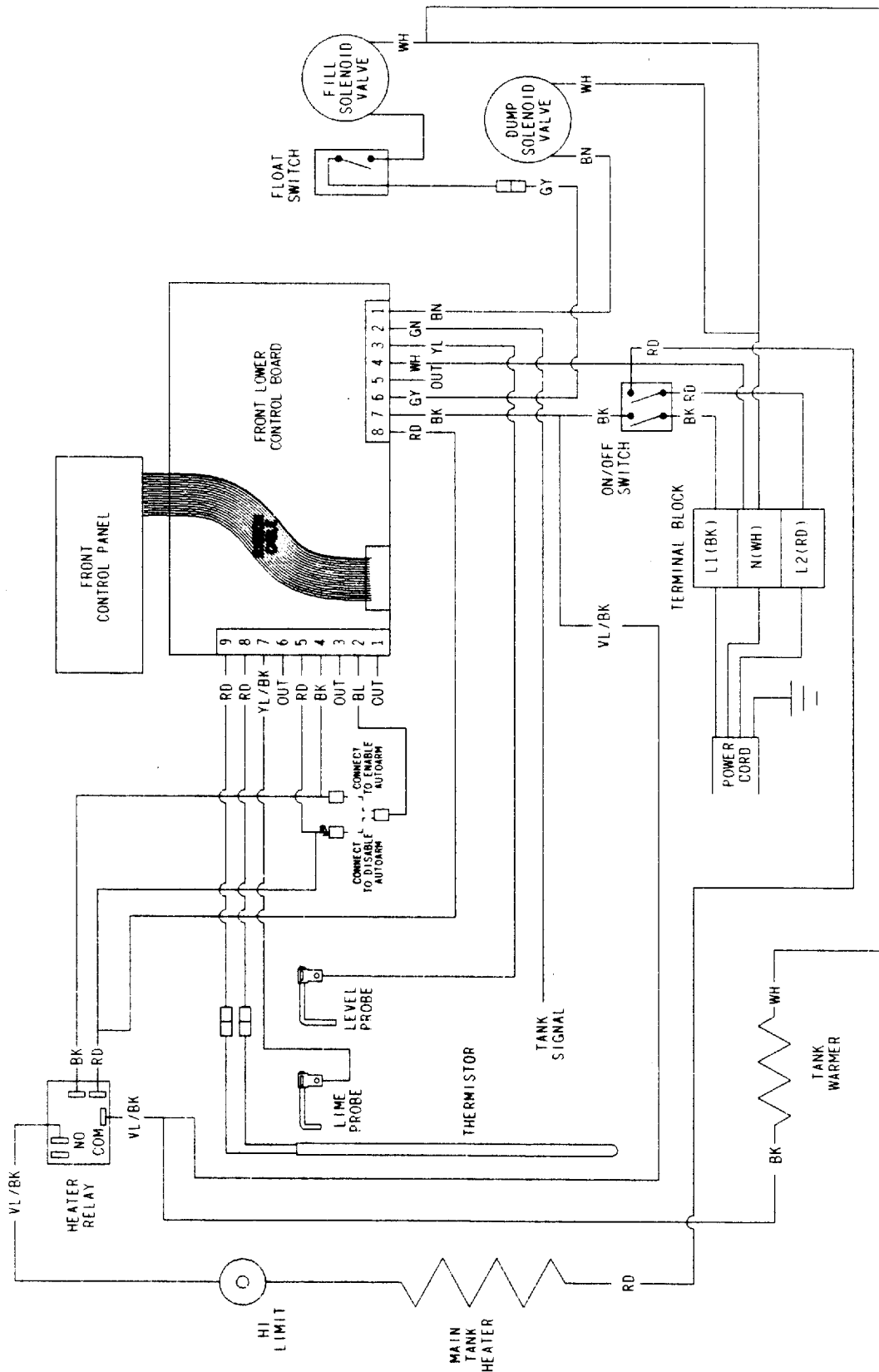
Machine will bring water continuously into tank until overflow safety cup is filled caused by short circuit in thermistor. Then power to the machine will be shut down.

Empty safety overflow and replace thermistor.

WIRING DIAGRAM 120V



WIRING DIAGRAM 240 V



SPECIFICATIONS

MODEL	DIMENSIONS									
	HEIGHT	WIDTH	LENGTH	WEIGHT	VOLT	AMP	WATT	U.S./CANADIAN		
145-3	21"	9 1/2"	18"	31 lbs.	120	15	1400	Canadian		
145-4	22"	9 1/2"	18"	34 lbs.	120	15	1400	Canadian		
145-8	26 1/4"	9 1/2"	18"	34 lbs.	120	15	1400	Canadian		
145-0	18"	9 1/2"	18"	31 lbs.	120	15	1400	Canadian		
180-3	21"	9 1/2"	18"	31 lbs.	120	15	1750	U.S.		
180-4	22"	9 1/2"	18"	34 lbs.	120	15	1750	U.S.		
180-8	26 1/4"	9 1/2"	18"	34 lbs.	120	15	1750	U.S.		
180-0	18"	9 1/2"	18"	31 lbs.	120	15	1750	U.S.		
350-3	21"	9 1/2"	18"	31 lbs.	240	20	3500	U.S. or Canadian		
350-4	22"	9 1/2"	18"	34 lbs.	240	20	3500	U.S. or Canadian		
350-8	26 1/4"	9 1/2"	18"	34 lbs.	240	20	3500	U.S. or Canadian		
350-0	18"	9 1/2"	18"	31 lbs.	240	20	3500	U.S. or Canadian		

MISCELLANEOUS PARTS

REPLACEMENT PARTS LIST

PART NO	DESCRIPTION	PART NO	DESCRIPTION
151770	Solenoid Valve Assy, Inlet	151800	Thermister Assy
105095	Solenoid Valve, Outlet	100633	Thermostat, Limit, Red Button
102770	Faucet Assy	100174	Thermostat, Limit
101835	Tube Assy, Sprayhead	151309	Control Board, Lower Front
152405	Sprayhead, Plastic	151310	Control Board, Upper Front
100025	Gasket, Sprayhead	100085	Power Switch, Lighted SPST
151740	Tank Assy, 1400W/120V	110626	Power Switch, DPST
151745	Tank Assy, 1750W/120V	G210216	Cup Assy, Overflow
151755	Tank Assy, 3500W/240V	C98231	Brew Basket Assy, W/Soaker
151733	Lid Assy, Tank	C98200	Brew Basket & Handle Assy
102580	Tank Element, 1400W/120V	C98216	Brew Basket
100071	Tank Element, 1750W/120V	C98201	Handle, Brew Basket
102850	Tank Element, 3500W/240V	C98232	Soaker Assy, Brew Basket
100642	Element, 100W/220V	C98202	Lid, Brew Basket
100132	Gasket, Tank Lid		

NEI Production 7/99

WARRANTY

does not come into effect until warranty card (on face of brewer) has been completed and returned to Cafe 98 Industries Ltd.

CAFE 98 Coffee Brewers have been manufactured to the highest quality standards. Following are the terms and conditions of warranty applicable:

1. Defects in workmanship and materials under normal use - parts and labour: 90 days from date of purchase
2. Defective parts and electronic board: 12 months from date of purchase

Prompt disposition will be made if item proves to be defective, within warranty. NO ITEMS OR PARTS WILL BE ACCEPTED WITHOUT PRIOR AUTHORIZATION. Items must be shipped freight prepaid and will be returned freight collect.

PROCEDURE TO RETURN DEFECTIVE PARTS UNDER WARRANTY

1. Phone Cafe 98 (1-888-822-3398) for RETURN AUTHORIZATION NO. (RAN) and provide brewer serial no. that part has been removed from, also description of part.
2. RAN form will be faxed to you with RA No. on it.
3. Include this form with parcel and quote RA No. on face of parcel.
4. Cafe 98 will repair or replace defective part at no charge, and return to you promptly.

Liability in all events is limited to the purchase price and liability under the aforesaid warranty is limited to replacing or repairing any part or parts which are defective in material or workmanship, and are to be returned to our factory, shipping cost prepaid. No warranty expressed or implied, by any other party, other than the aforesaid is made or authorized by CAFE 98 INDUSTRIES LTD.

THE BUYER'S REMEDY AGAINST CAFE 98 FOR THE BREACH OF ANY OBLIGATION ARISING OUT OF THE SALE OF THIS EQUIPMENT, WHETHER DERIVED FROM WARRANTY OR OTHERWISE, SHALL BE LIMITED, AS SPECIFIED HEREIN, TO REPAIR, OR AT CAFE 98'S SOLE OPTION, REPLACEMENT. Cafe 98 shall not be liable for any other damage or loss, including, but not limited to lost profits, lost sales, loss of use of equipment, claims of Buyer's customers, cost of capital, cost of down time, cost of substitute equipment, facilities or services, or any other special, incidental or consequential damages.

WARRANTY OPTION: Extended Warranty and Preventative Maintenance Program is available at additional cost (ONLY AVAILABLE IN CERTAIN AREAS). Contact Cafe 98 (1-888-822-3398) for details.

The WARRANTY does not apply under the following conditions:

- ★ installation or repairs made by unqualified person
- ★ variation in equipment operation due to excessive lime and local water condition
- ★ variation in equipment operation caused by extreme water pressure (high or low)
- ★ adjustment of Brewtimer, temperature and resetting safety devices
- ★ extreme lime conditions
- ★ neglect or abuse of brewer, damaged in transit
- ★ improper installation of brewer
- ★ improper or inconsistent maintenance and cleaning of brewer
- ★ using any chemicals for cleaning or deliming that cause damage to brewer
- ★ mishandling of server
- ★ travel mileage is limited to 30 miles (50 Km) from an Authorized Service Agency or one of it's sub-service agencies
- ★ all labour shall be performed during regular working hours. Overtime premium will be the responsibility of buyer
- ★ no warranty applies on thermal servers

CAFE 98 Industries Ltd. reserves the right to discontinue any model, change and modify any design at any time without incurring further obligation.

Restocking and Replacement Policy

10 % charge if within 30 days of invoice date

25 % charge if beyond 30 days of invoice date

No credit will be issued after 120 days of invoice date.

All equipment returned to CAFE 98 must be packaged in original carton.

Brewers damaged in transit

IMPORTANT! All cartons should be opened and brewers inspected on arrival of shipment. If damage has occurred, immediately advise the transportation company who will send its representative to inspect and open a claim file. Failure to follow this procedure could result in your not being able to make a claim against the transportation company. Please understand it is the responsibility of the purchaser to institute claims for goods damaged in transit.