

3 Gallon Iced Tea Brewer with Portable Server

ITEM#

PROJECT

DATE



Features

Iced Tea Brewer

- Brews 16.3 to 26.7 gallons (61.7 to 101.1 litres) per hour from real tea leaves.
- Brews directly into any style portable server.
- Meet your volume needs; brew 3 gallons (11.36 litres) of iced tea at a time.
- Quickbrew (Q) models available for shorter brewing cycles.
- SplashGard® funnel deflects hot liquids away from the hand.
- TB3 has adjustable steep time for more control over flavor extraction.
- International electrical configurations available.

Model TB3Q with TDO-4 Dispenser

(TDO-4 sold separately)

Dimensions (29" trunk): 34" H x 11.6" W x 22" D
(86.4cm H x 29.5cm W x 58.4cm D)

Dimensions (25.75" trunk): 31" H x 11.6" W x 22" D
(78.7cm H x 29.5cm W x 58.4cm D)

For current specification sheets and other information, go to www.bunn.com.

Related Products

Easy Clear® EQHP-Tea
Product No. : 39000.0007



Easy Clear® EQHP-TEACRTG
Replacement Cartridge
Product No. : 39000.1007

Single/Dual Filter Pack
Product No. : 20100.0000
Packed per case: 500
Dimensions: 5 1/4" Base x 3 3/4" Sidewall
13.34 cm Base x 9.52 cm Sidewall



TDO-4 – Tea Dispenser
Product No. : 34100.0002
Capacity: 4 gallons
Weight: 13 lbs.
Dimensions:
19" H x 10.7" W x 13.7" D
48.26 cm H x 27.18 cm W x 34.8 cm D



TD4T – Tea Dispenser
Product No. : 03250.0004
Capacity: 4 gallons
Weight: 14 lbs.
Dimensions:
21.9" H x 9" W x 13" D
55.63 cm H x 22.86 cm W x 33.02 cm D



TDS-3.0 – Tea Dispenser
Product No. : 33000.0000
Capacity: 3.0 gallons
Weight: 9.4 lbs.
Dimensions:
19"H x 9.8"W x 12.8"D
48.3cm H x 24.9cm W x 32.5cm D



Translucent Pouchpack Tea Funnel
Quick dispense, TU-3Q
Product No. : 35282.0001
Standard dispense, TU-3
Product No. : 35282.0002



Model

Agency Listing

TB3Q



TB3



Dimensions & Specifications

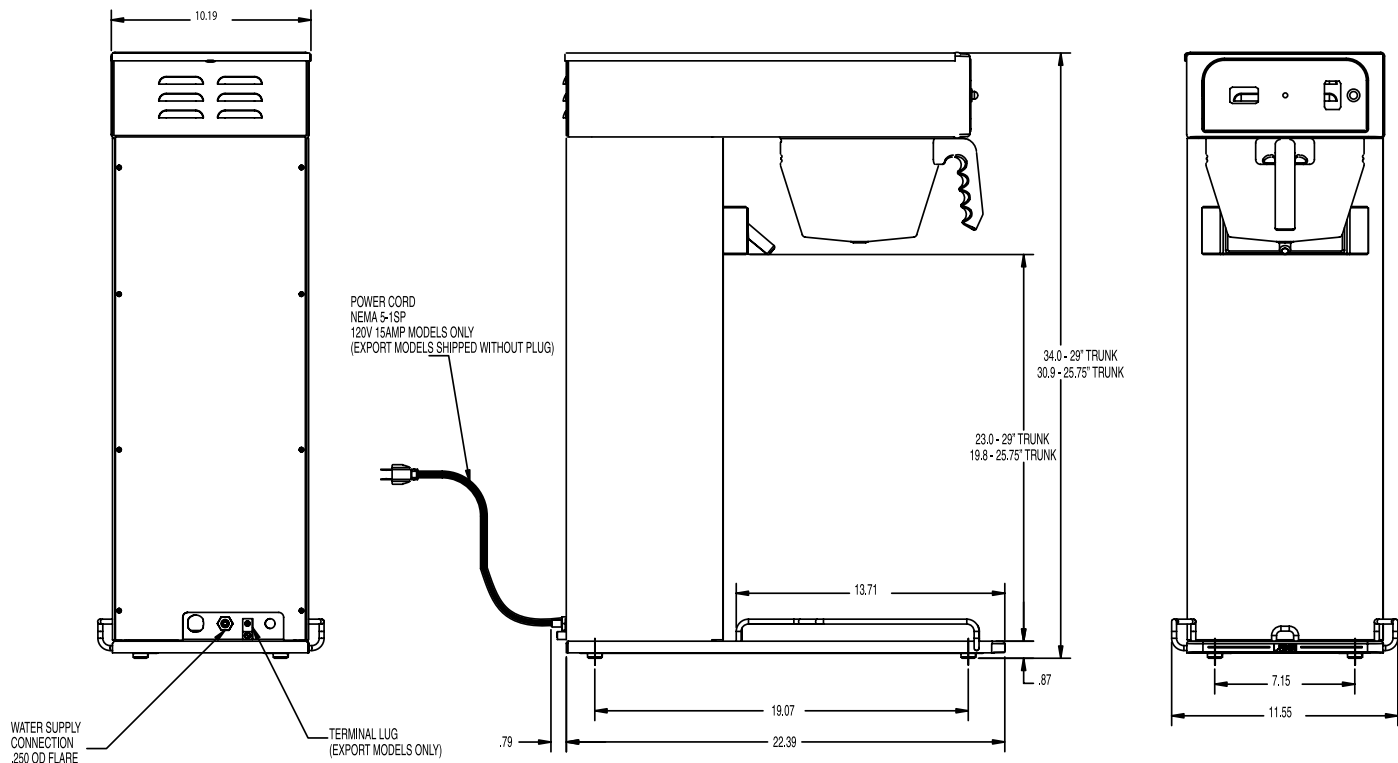
Model	Product #	Volts	Amps	Tank Heater Watts	Total Watts	Brewing Capacity	Cubic Measure	Shipping Weight	Cord Attached
TB3 [†]	36700.0009	120	14.4	1680	1730	16.3 gal./hr.	8.8 ft ³	43 lbs.	Yes [†]
TB3Q [†]	36700.0013	120	14.4	1680	1730	26.7 gal./hr.	8.8 ft ³	42 lbs.	Yes [†]
TB3	36700.0030	120	14.4	1680	1730	16.3 gal./hr.	7.9 ft ³	42 lbs.	Yes [†]
TB3Q [†] w/TD4T	36700.0041	120	14.4	1680	1730	26.7 gal./hr.	10 ft ³	55 lbs.	Yes [†]
TB3 [†] Sweetner	36700.0043	120	14.4	1680	1730	16.3 gal./hr.	8.8 ft ³	44 lbs.	Yes [†]
TB3 [‡]	36700.0055	120	14.4	1680	1730	16.3 gal./hr.	8.8 ft ³	42 lbs.	Yes [†]
TB3Q	36700.0059	120	14.4	1680	1730	26.7 gal./hr.	8.8 ft ³	41 lbs.	Yes [†]
TB3Q [†] *	36700.0076	120	14.4	1680	1730	26.7 gal./hr.	8.8 ft ³	42 lbs.	Yes [†]
TB3Q [†] w/TD4T	36700.0080	120	14.4	1680	1730	26.7 gal./hr.	10 ft ³	55 lbs.	Yes [†]

w/6 foot cord

[†]Quick disconnect. [‡]29" trunk height [‡]Has ready light [†]Power cord (NEMA 5-15P) 15 Amp-120V machine only.

Electrical: Models require 2-wires plus ground service rated at 120V, single phase, 60 Hz.

Plumbing: 20-90 psi (138-621 kPa). Machine supplied with 1/4" OD male flare fitting.



Bunn-O-Matic® Corporation - 1400 Stevenson Drive Springfield, Illinois 62703 • 800-637-8606 • 217-529-6601 • Fax 217-529-6644 • www.bunn.com

BUNN® practices continuous product research and improvement. We reserve the right to change specifications and product design without notice. Such revisions do not entitle the buyer to corresponding changes, improvements, additions or replacements for previously purchased equipment.

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BUNN®

TB3/TB6 Series
Including: TB3; TB3-LP;
TB3Q; TB3Q-LP; TB6; TB6Q
STARTING WITH SERIAL NUMBER: TU00020000



INSTALLATION & OPERATING MANUAL

BUNN-O-MATIC CORPORATION

POST OFFICE BOX 3227
SPRINGFIELD, ILLINOIS 62708-3227
PHONE: (217) 529-6601 FAX: (217) 529-6644

To ensure you have the latest revision of the Operating Manual, or to view the Illustrated Parts Catalog, Programming Manual, or Service Manual, please visit the Bunn-O-Matic website, at www.bunn.com. This is absolutely FREE, and the quickest way to obtain the latest catalog and manual updates. For Technical Service, contact Bunn-O-Matic Corporation at 1-800-286-6070.



BUNN-O-MATIC COMMERCIAL PRODUCT WARRANTY

Bunn-O-Matic Corp. ("BUNN") warrants equipment manufactured by it as follows:

- 1) All equipment other than as specified below: 2 years parts and 1 year labor.
- 2) Electronic circuit and/or control boards: parts and labor for 3 years.
- 3) Compressors on refrigeration equipment: 5 years parts and 1 year labor.
- 4) Grinding burrs on coffee grinding equipment to grind coffee to meet original factory screen sieve analysis: parts and labor for 3 years or 30,000 pounds of coffee, whichever comes first.

These warranty periods run from the date of installation BUNN warrants that the equipment manufactured by it will be commercially free of defects in material and workmanship existing at the time of manufacture and appearing within the applicable warranty period. This warranty does not apply to any equipment, component or part that was not manufactured by BUNN or that, in BUNN's judgment, has been affected by misuse, neglect, alteration, improper installation or operation, improper maintenance or repair, damage or casualty. This warranty is conditioned on the Buyer 1) giving BUNN prompt notice of any claim to be made under this warranty by telephone at (217) 529-6601 or by writing to Post Office Box 3227, Springfield, Illinois 62708-3227; 2) if requested by BUNN, shipping the defective equipment prepaid to an authorized BUNN service location; and 3) receiving prior authorization from BUNN that the defective equipment is under warranty.

THE FOREGOING WARRANTY IS EXCLUSIVE AND IS IN LIEU OF ANY OTHER WARRANTY, WRITTEN OR ORAL, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF EITHER MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. The agents, dealers or employees of BUNN are not authorized to make modifications to this warranty or to make additional warranties that are binding on BUNN. Accordingly, statements by such individuals, whether oral or written, do not constitute warranties and should not be relied upon.

If BUNN determines in its sole discretion that the equipment does not conform to the warranty, BUNN, at its exclusive option while the equipment is under warranty, shall either 1) provide at no charge replacement parts and/or labor (during the applicable parts and labor warranty periods specified above) to repair the defective components, provided that this repair is done by a BUNN Authorized Service Representative; or 2) shall replace the equipment or refund the purchase price for the equipment.

THE BUYER'S REMEDY AGAINST BUNN FOR THE BREACH OF ANY OBLIGATION ARISING OUT OF THE SALE OF THIS EQUIPMENT, WHETHER DERIVED FROM WARRANTY OR OTHERWISE, SHALL BE LIMITED, AT BUNN'S SOLE OPTION AS SPECIFIED HEREIN, TO REPAIR, REPLACEMENT OR REFUND.

In no event shall BUNN 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.

AutoPOD, AXIOM, BrewLOGIC, BrewMETER, Brew Better Not Bitter, BrewWISE, BrewWIZARD, BUNN Espresso, BUNN Family Gourmet, BUNN Gourmet, BUNN Pour-O-Matic, BUNN, BUNN with the stylized red line, BUNNlink, Bunn-O-Matic, Bunn-O-Matic, BUNNserve, BUNNSERVE with the stylized wrench design, Cool Froth, DBC, Dr. Brew stylized Dr. design, Dual, Easy Pour, EasyClear, EasyGard, FlavorGard, Gourmet Ice, Gourmet Juice, High Intensity, iMIX, Infusion Series, Intellisteam, My Café, PowerLogic, Quality Beverage Equipment Worldwide, Safety-Fresh, savemycoffee.com, Scale-Pro, Silver Series, Single, Smart Funnel, Smart Hopper, SmartWAVE, Soft Heat, SplashGard, The Mark of Quality in Beverage Equipment Worldwide, ThermoFresh, 392, Beverage Bar Creator, Beverage Profit Calculator, BUNNSource, Coffee At Its Best, Digital Brewer Control, Nothing Brews Like a BUNN, Pouring Profits, Respect Earth, Respect Earth with the stylized leaf and coffee cherry design, Signature Series, Tea At Its Best, The Horizontal Red Line, Titan, Ultra are either trademarks or registered trademarks of Bunn-O-Matic Corporation.

INTRODUCTION

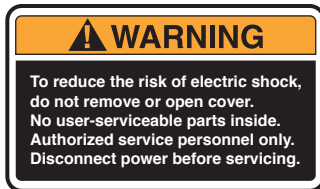
This equipment will brew a three-gallon batch of fresh tea into an awaiting dispenser. The tea will be dispensed at approximately room temperature. The brewer is only for indoor use on a sturdy counter or shelf.

CONTENTS

Warranty	2
Introduction	3
User Notices	3
Electrical Requirements	4
Plumbing Requirements	5
Initial Set-Up (TB3Q).....	6
Initial Set-Up (TB3)	7
Auto Sweetener Set-up	8
Adjusting Brew Volumes	9
Operating Controls.....	10
Tea Brewing	10
Cleaning.....	11

USER NOTICES

Carefully read and follow all notices on the equipment and in this manual. They were written for your protection. All notices on the equipment should be kept in good condition. Replace any unreadable or damaged labels.



#37881.0000

This equipment must be installed to comply with the International Plumbing Code of the International Code Council and the Food Code Manual of the Food and Drug Administration (FDA). For models installed outside the U.S.A., comply with the applicable Plumbing /Sanitation Code.

#00656.0000



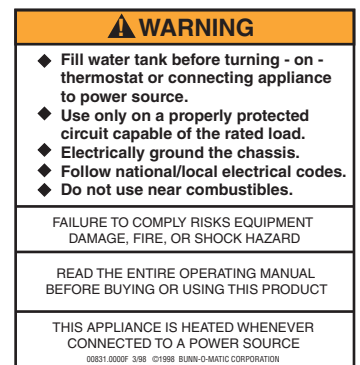
#06064.0000



#03408.0000



#00658.0000



#00831.0000



#03409.0000



#41995.0000

ELECTRICAL REQUIREMENTS

CAUTION - The brewer must be disconnected from the power source until specified in *Initial Set-Up*.

120V model brewers require 2-wire, grounded service rated 120 volts ac, 15 amp, single phase, 60 Hz.

"A" model brewers require 2-wire, grounded service rated 230 volts ac, 10 amp, single phase, 50 Hz.

"B" model brewers require 2-wire, grounded service rated 100 volts ac, 15 amp, single phase, 60 Hz.

WARNING - If the power cord is ever damaged, it must be replaced by the manufacturer or its service agent with a special cord available from the manufacturer or its service agent in order to avoid a hazard.

Electrical Hook-Up

CAUTION – Improper electrical installation will damage electronic components.

1. An electrician must provide electrical service as specified.
2. Using a voltmeter, check the voltage and color coding of each conductor at the electrical source.
3. Remove top cover from the brewer.
4. Rotate the control thermostat knob fully counterclockwise to the "OFF" position and replace the top cover.
5. Connect the brewer to the power source.
6. If plumbing is to be hooked up later be sure the brewer is disconnected from the power source. If plumbing has been hooked up, the brewer is ready for *Initial Set-Up*.

CE REQUIREMENTS

- This appliance must be installed in locations where it can be overseen by trained personnel.
- For proper operation, this appliance must be installed where the temperature is between 5°C to 35°C.
- Appliance shall not be tilted more than 10° for safe operation.
- An electrician must provide electrical service as specified in conformance with all local and national codes.
- This appliance must not be cleaned by water jet.
- This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given instructions concerning use of this appliance by a person responsible for its safety.
- Children should be supervised to ensure they do not play with the appliance.
- If the power cord is ever damaged, it must be replaced by the manufacturer or authorized service personnel with a special cord available from the manufacturer or its authorized service personnel in order to avoid a hazard.
- Machine must not be immersed for cleaning.

PLUMBING REQUIREMENTS

This equipment must be installed to comply with the International Plumbing Code of the International Code Council and the Food Code Manual of the Food and Drug Administration (FDA). For models installed outside the U.S.A., comply with the applicable Plumbing /Sanitation Code.

120V MODELS

These brewers must be connected to a cold water system with a minimum 1.0 gpm flow rate, and operating pressure between 20 and 90 psi (138 and 620 kPa) from a ½" or larger supply line. A shut-off valve should be installed in the line before the brewer. Install a regulator in the line when pressure is greater than 90 psi (620 kPa) to reduce it to 50 psi (345 kPa). The water inlet fitting is .75-11.5 NH (HOSE THREAD). For convenience an elbow adaptor is provided to convert to a ¼" flare fitting. Bunn-O-Matic does not recommend the use of a reverse-osmosis or deionized water supply to this equipment.

NOTE - Bunn-O-Matic recommends ¼" copper tubing for installations of less than 25 feet and ⅜" for more than 25 feet from the ½" water supply line. A tight coil of tubing in the water line will facilitate moving the brewer to clean the countertop. Bunn-O-Matic does not recommend the use of a saddle valve to install the brewer. The size and shape of the hole made in the supply line by this type of device may restrict water flow.

Plumbing Hook-Up

1. Flush the water line.
2. **TB3:** Securely attach the adaptor elbow assembly to the ¼" water supply line.
TB6: Securely attach the tube assembly (supplied in parts box) to the ¼" water supply line.
3. **TB3:** Securely attach adaptor elbow assembly to the the .75-11.5 NH (HOSE THREAD) fitting at the rear of the brewer.
TB6: Securely attach the two elbow assemblies to the .75-11.5 NH (HOSE THREAD) fittings at the rear of the brewer. Connect the tube assembly to the elbows.
4. Turn on the water supply.

NOTE: The Flow Control/Strainer assembly is internal, located inside the inlet solenoid.

LP & "A/B" MODELS

These brewers must be connected to a cold water system with operating pressure between 20 (138) and 90 psi (620 kPa) from a ½" or larger supply line. A shut-off valve should be installed in the line before the brewer. Install a regulator in the line when pressure is greater than 90 psi (620 kPa) to reduce it to 50 psi (345 kPa). The water inlet fitting is ¼" flare.

NOTE - Bunn-O-Matic recommends ¼" copper tubing for installations of less than 25 feet and ⅜" for more than 25 feet from the ½" water supply line. A tight coil of copper tubing in the water line will facilitate moving the brewer to clean the countertop. Bunn-O-Matic does not recommend the use of a saddle valve to install the brewer. The size and shape of the hole made in the supply line by this type of device may restrict water flow.

NOTE - If a backflow preventer is required by code, a shock arrestor should be installed between backflow preventer and brewer. Installing the shock arrestor as close to brewer as possible will provide best results.

Plumbing Hook-Up

1. Remove the shipping cap from the bulkhead fitting on the rear of the brewer.
2. Flush the water line and securely attach it to the bulkhead fitting on the rear of the brewer.
3. Turn on the water supply.

NOTE: The Flow Control/Strainer assembly is internal, located inside the back panel.

INITIAL SET-UP (TB3Q/TB3Q-LP/TB6Q ONLY)

CAUTION - The brewer must be disconnected from the power source throughout the Initial Set-Up, except when specified in the instructions.

1. Remove the top cover from the brewer.
2. Rotate the control thermostat knob fully counterclockwise to the "OFF" position and replace the top lid.
3. Insert an empty funnel into the funnel rails. On TB6Q models, rotate the funnel handle left or right to align the funnel discharge over the reservoir.
4. Place an empty dispenser on the brewer base. Be prepared to empty the dispenser during these initial steps. Be sure funnel discharge is directly above the dispenser.
5. Plug in the brewer, place the ON/OFF switch in the "ON" position ("SWEET" or "UNSWEET" position for models with a sweetener option) (LEFT or RIGHT on TB6Q), and momentarily press the START switch. Water will flow into the tank and dispenser for three and one-half minutes. Empty the dispenser when this first cycle stops and press the START switch again. Empty the dispenser when the second cycle stops and press the START switch once more. During the third cycle, the tank will fill to its capacity and the excess will flow from the funnel into the dispenser. Empty the dispenser when this third cycle stops.
6. Begin another brew cycle and measure the total water volume from the dispenser. It should be approximately 3 gallons and 12 ounces. (396 ounces). **CONCENTRATE MACHINES WILL YIELD ONLY 76 OZ.**
7. If not, adjust the timer as required. See Adjusting Brew Volumes.
8. Unplug the brewer, remove the top lid, rotate the control thermostat knob fully clockwise to the "ON" position and replace the top lid.
9. Empty the dispenser.
10. Plug in the brewer and wait for the water in the tank to heat to brewing temperature (approximately 20 minutes). Some water will drip from the funnel during this time; this is due to expansion and should not occur thereafter.
11. Begin another brew cycle. Empty the reservoir after water has stopped flowing from the funnel.
12. Allow the water in the tank to heat to the proper temperature.
13. The brewer is now ready to brew approximately 3 gallons of freshly brewed room temperature tea from three to five ounces of loose leaves.

Brew water temperature is factory set at 205° F (96.1° C) Areas of high altitude will require lowering this temperature to prevent boiling. This chart should be used as a guide when readjusting the brew water temperature.

Altitude (Feet)	Boiling point of water		Recommended water temperature	
	° F	° C	° F	° C
-1000	213.8	101.0	200	93.3
-500	212.9	100.5	200	93.3
0	212.0	100.0	200	93.3
500	211.1	99.5	200	93.3
1000	210.2	99.0	200	93.3
1500	209.3	98.5	200	93.3
2000	208.4	98.0	200	93.3
2500	207.4	97.4	200	93.3
3000	206.5	96.9	199	92.8
3500	205.6	96.4	198	92.2
4000	204.7	95.9	197	91.7
4500	203.8	95.4	196	91.1
5000	202.9	94.9	195	90.6
5500	201.9	94.4	195	90.6
6000	201.0	93.9	194	90.0
6500	200.1	93.4	193	89.4
7000	199.2	92.9	192	88.9
7500	198.3	92.4	191	88.3
8000	197.4	91.9	190	87.8
8500	196.5	91.4	189	87.2
9000	195.5	90.8	188	86.7
9500	194.6	90.3	187	86.1
10000	193.7	89.8	186	85.6

INITIAL SET-UP (TB3/TB3-LP/TB6 ONLY)

CAUTION - The brewer must be disconnected from the power source throughout the initial set-up, except when specified in the instructions.

1. Remove the top lid from the brewer.
2. Rotate the control thermostat knob fully counterclockwise to the "OFF" position and replace the top lid.
3. Set the delay dial on the timer at three minutes and set the dilution dial at three to four minutes.
4. Remove the metal discharge tip from the funnel to speed up the set-up procedure. Insert the empty funnel into the funnel rails. On TB6 models, rotate the funnel handle left or right to align the funnel to the reservoir.
5. Place an empty dispenser on the brewer base. Be sure the funnel discharge is directly above the hole in the dispenser top lid.
6. Plug in the brewer and place the ON/OFF switch in the "ON" position ("SWEET" or "UNSWEET" position for models with a sweetener option) (LEFT or RIGHT on TB6). Momentarily press the start switch. Water will flow into the tank. When the fill valve shuts off, place ON/OFF switch to "OFF" position, then back ON. Press the start switch again. During the second period, the tank will fill up and the excess will flow from the funnel into the dispenser.
7. Place the ON/OFF switch in the "OFF" position.
8. Disconnect the brewer from the power source and remove the top lid.
9. Rotate the control thermostat knob fully clockwise to the "ON" position and replace the top lid.
10. Plug in the brewer and wait for the water in the tank to heat to the set temperature (approx. 20 minutes). Some water will drip from the funnel during this time; this is due to expansion and should not occur thereafter.
11. Place the ON/OFF switch in the "ON" position and press the start switch. Empty the dispenser after water has stopped flowing from the funnel.
12. Allow the water in the tank to reheat to the proper temperature.
13. Place the ON/OFF switch in the "ON" position (LEFT or RIGHT on TB6) and press the start switch.
14. Place the ON/OFF switch in the "OFF" position immediately after water stops flowing from the funnel. Check the water volume in the dispenser. It should be seventy-six ounces.
15. If not, adjust the digital timer as required. See *Adjusting Brew Volumes*, and measure another brew cycle.
16. Repeat steps 12-15 until the proper water volume is achieved. Empty the dispenser.
17. Place the ON/OFF switch in the "ON" position (LEFT or RIGHT on TB6), momentarily press the start switch, and allow both the concentrate and dilution cycles to finish.
18. When all water stops flowing, check the water volume in the dispenser. It should be 396 ounces.
19. If not, unplug the brewer and remove the top lid. Adjust the dilution dial on the timer as required.
20. Replace the top lid, plug in the brewer, start, and measure another brew cycle.
21. Repeat steps 17-20 until the proper water volume is achieved.
22. Return the delay dial on the timer to eight minutes. Replace the top lid and plug in the brewer.
23. Reinstall the metal discharge tip into the funnel.
24. Load the funnel with a BUNN® paper filter and approximately four ounces of loose tea leaves.
25. Place the ON/OFF switch in the "ON" position, momentarily press the start switch, and allow both the concentrate and dilution cycles to occur. Observe the funnel discharge and the dilution streams near the end of the brew cycle. The dilution stream should stop approx. 30 seconds after the funnel discharge has stopped.
26. If not, unplug the brewer and remove the top lid.
27. Adjust the delay dial on the timer as required. Replace the top lid and plug in the brewer.
28. Repeat steps 24-27 until the proper dilution timing is achieved.

AUTO SWEETENER SET-UP

CAUTION - The brewer must be disconnected from the power source throughout the Initial Set-Up, except when specified in the instructions.

1. Remove the top lid and both rear panels.
 2. Make sure the brewer water supply is off.
 3. Connect sweetener hose from the bag in a box delivery system to the rear fitting marked "Sweetener" .
- IMPORTANT** - System delivery pressure must be regulated between 30-40 psi. System also needs to deliver product for at least 4 minutes without shutting off. Some pump systems shut off after a few minutes of continuous running.

(TB3Q/TB3Q-LP ONLY)

4. Plug brewer into the power source.
5. Place an empty reservoir under the dilution nozzle of the brewer.
6. Close the adjustment valve on the rear of the brewer fully (clockwise), then open (counterclockwise) 1/2 turn.
7. Set the selector switch to the "Sweetened" side and press the "Start" switch momentarily. (The sweetener will come out immediately.)
8. Run sweetener for 1 minute, then set selector switch to the "Off" position. The flow will stop.
9. Measure the amount of sweetener dispensed and calculate if the volume needs to be increased or decreased (Dilution cycle is usually between 3 to 3 1/2 minutes).
10. If adjustment is needed, turning the adjustment valve clockwise decreases the amount of sweetener dispensed and turning the adjustment valve counterclockwise increases the amount of sweetener dispensed.
11. After the desired volume has been set, turn the water supply on.
12. Reinstall the top lid and rear panels. The brewer may now be returned to service.

(TB3/TB3-LP ONLY)

4. Set the "Delay knob on the dilution timer to the 3 minute setting. (The minimum delay setting)
5. Plug brewer into the power source.
6. Place an empty reservoir under the dilution nozzle of the brewer.
7. Close the adjustment valve on the rear of the brewer fully (clockwise), then open (counterclockwise) 1/2 turn.
8. Set the selector switch to the "Sweetened" side and press the "Start" switch momentarily. (After approximately 3 minutes the sweetener will come out of the dilution nozzle.)
9. Run sweetener for 1 minute, then set selector switch to the "Off" position. The flow will stop.
10. Measure the amount of sweetener dispensed and calculate if the volume needs to be increased or decreased (Dilution cycle is usually between 3 to 3 1/2 minutes).
11. If adjustment is needed, turning the adjustment valve clockwise decreases the amount of sweetener dispensed and turning the adjustment valve counterclockwise increases the amount of sweetener dispensed.
12. Set the "Delay" knob on the dilution timer back to the 6 to 7 minute setting.
13. After the desired volume has been set, turn the water supply on.
14. Reinstall the top lid and rear panel. The brewer may now be returned to service.

ADJUSTING BREW VOLUMES

NOTE: Check that the brewer is connected to water supply, the tank is properly filled, and a funnel and server are in place, prior to setting or modifying batch sizes.

1. To adjust concentrate volume on TB3/TB6 models, and dilution volume on TB3Q/TB6Q models:

Modifying batch sizes. To modify a batch volume, first check that the SET/LOCK switch is in the “SET” position on the circuit board. If the brewer has a batch selector switch, position it to the size to be changed.

To increase a batch size, Press and hold the START or BREW switch until three clicks are heard. Release the switch (Failure to release the switch within two seconds after the third click causes the volume setting to be aborted and previous volume setting will remain in memory) and press it again one or more times. Each time the switch is pressed, two seconds are added to the brew time period. Allow the brew cycle to finish in order to verify that the desired volume has been achieved.

To decrease a batch size, Press and release the START or BREW switch once for every two-second interval to be removed from the total brew time period; then immediately press and hold down the START or BREW switch until three clicks are heard. Release the switch. (Failure to release the switch within two seconds after the third click causes the volume setting to be aborted and previous volume setting will remain in memory). Allow the brew cycle to finish in order to verify that the desired volume has been achieved.

To save the new setting: To set a batch volume, first check that the SET/LOCK switch is in the “SET” position on the circuit board. Press and hold the START or BREW switch until three distinct clicks are heard (this will take approximately ten seconds), and then release the switch. (Failure to release the switch within two seconds after the third click causes the volume setting to be aborted and previous volume setting will remain in memory). View the level of the liquid being dispensed. When the desired level is reached, turn the ON/OFF switch to “OFF”. The brewer remembers this volume and will continue to brew batches of this size until the volume setting procedure is repeated. Empty server, flip selector switch to position that has yet to be set, and repeat batch setting procedure until both batch sizes are set.

2. To adjust concentrate volume on TB3Q/TB6Q models:

Remove front access panel, adjust the needle valve counterclockwise to increase, clockwise to decrease.

NOTE: When brewing tea, batch volumes will decrease due to absorption by the tea leaves.

NOTE: For TB6/TB6-Q models, volume settings will be the same for left and right sides.

3. To set dilution volumes on TB3/TB6 models,

disconnect brewer from the power source, remove the top cover, adjust the lower (dilution minutes) dial on the timer board.

4. Setting programming disable feature.

If it becomes necessary to prevent anyone from changing brew times once programmed, disconnect brewer from the power source, remove the top cover, slide the SET/LOCK switch to the “LOCK” position. This will prevent any programming to be done.

NOTE: If the clicks can not be heard, lightly grip the incoming water line to feel when the valve cycles on and off.

OPERATING CONTROLS

A. ON/OFF Switch

ON - Placing the switch in the left position allows the start switch to activate a timed brew cycle for three gallons of tea.

OFF - Placing the switch in the right position stops the brew cycle. Stopping a brew cycle after it has been started will not stop the flow of water into the funnel until the tank siphons down to its proper level. **The switch should always be placed in this position after a brew cycle and whenever the brewer is unattended.**

B. UNSWEET/OFF/SWEET Selector Switch (Models with Sweetener Only)

UNSWEET - Placing the switch in the left positional allows the start switch to activate a timed brew cycle for three gallons of tea without sweetener.

OFF - Placing the switch in the middle position stops the brew cycle. Stopping a brew cycle after it has been started will not stop the flow of water into the funnel until the tank siphons down to its proper level. **The switch should always be placed in this position after a brew cycle and whenever the brewer is unattended.**

SWEET - Placing the switch in the right position allows the start switch to activate a timed brew cycle for three gallons of tea with sweetener.

C. LEFT/OFF/RIGHT Selector Switch (TB6/TB6Q Models Only)

LEFT - Placing the switch in the left position allows the start switch to activate a timed brew cycle for three gallons of tea for the left side dispenser.

OFF - Placing the switch in the middle position stops the brew cycle. Stopping a brew cycle after it has been started will not stop the flow of water into the funnel until the tank siphons down to its proper level. **The switch should always be placed in this position after a brew cycle and whenever the brewer is unattended.**

RIGHT - Placing the switch in the right position allows the start switch to activate a timed brew cycle for three gallons of tea for the right side dispenser.

CAUTION - Make sure the switch, funnel and dispenser are in the correct positions before starting brew cycle.

D. Start Switch

Starts a brew cycle when the ON/OFF switch is in the "ON" position.

TEA BREWING

1. Begin each brew cycle with a clean empty brew funnel and server. (Be sure the server lid doesn't interfere with the flow of dilution water.)
2. Insert a BUNN® filter into the funnel.
3. Pour the packet of loose fresh tea leaves into the filter. Approximately three to five ounces is recommended for three gallons of beverage.
4. Level the bed of tea leaves by gently shaking.
5. Slide the funnel into the funnel rails until it stops. On TB6/TB6Q models, rotate the funnel handle left or right to align the funnel discharge over the reservoir.
6. Place the ON/OFF switch in the "ON" position. (For brewers with a sweetener, place the UNSWEET/OFF/SWEET switch in the "SWEET" or "UNSWEET" position)(LEFT or RIGHT on TB6/TB6Q)
7. Momentarily press the START switch.
8. After brew cycle has finished and tea no longer drips from the funnel tip, carefully remove the brew funnel and discard the used filter.

CAUTION - The funnel contains hot liquids. Remove funnel slowly.

9. Place the ON/OFF (UNSWEET/OFF/SWEET) (LEFT/OFF/RIGHT) switch in the "OFF" position to prevent a false start.
10. Fresh tea is available at the server faucet.

CLEANING

CAUTION - CLEAN AND SANITIZE YOUR ICED TEA BREWER DAILY

DAILY:

1. Remove, disassemble and thoroughly clean and sanitize the entire brew funnel. The funnel tip and screen must be free from any tea particles or residue. Reassemble the funnel.
2. Place the ON/OFF switch in the "OFF" position. Remove and thoroughly rinse the sprayhead. The holes must be open and clear of any mineral deposits. Wipe the sprayhead panel clean with a damp cloth.
3. Insert the delimiting spring into the sprayhead fitting until no more than two inches is visible and move it in and out 5 or 6 times. Reattach the sprayhead.
4. Wash the entire outside surface of the brewer (including the sprayhead panel) with a clean damp cloth.

CAUTION - DO NOT KEEP BREWED ICED TEA OVERNIGHT. THE SERVER MUST BE CLEANED DAILY.

WEEKLY:

1. Remove and thoroughly rinse the sprayhead. The holes must be open and clear of any mineral deposits. Reattach the sprayhead.

NOTE: Refer to the "Care and Cleaning" card (37244.0000) at <http://www.bunnomatic.com/pdfs/commercial/careclean/37244.0000.pdf> for detailed instructions on cleaning and sanitizing the brewer and dispensers.

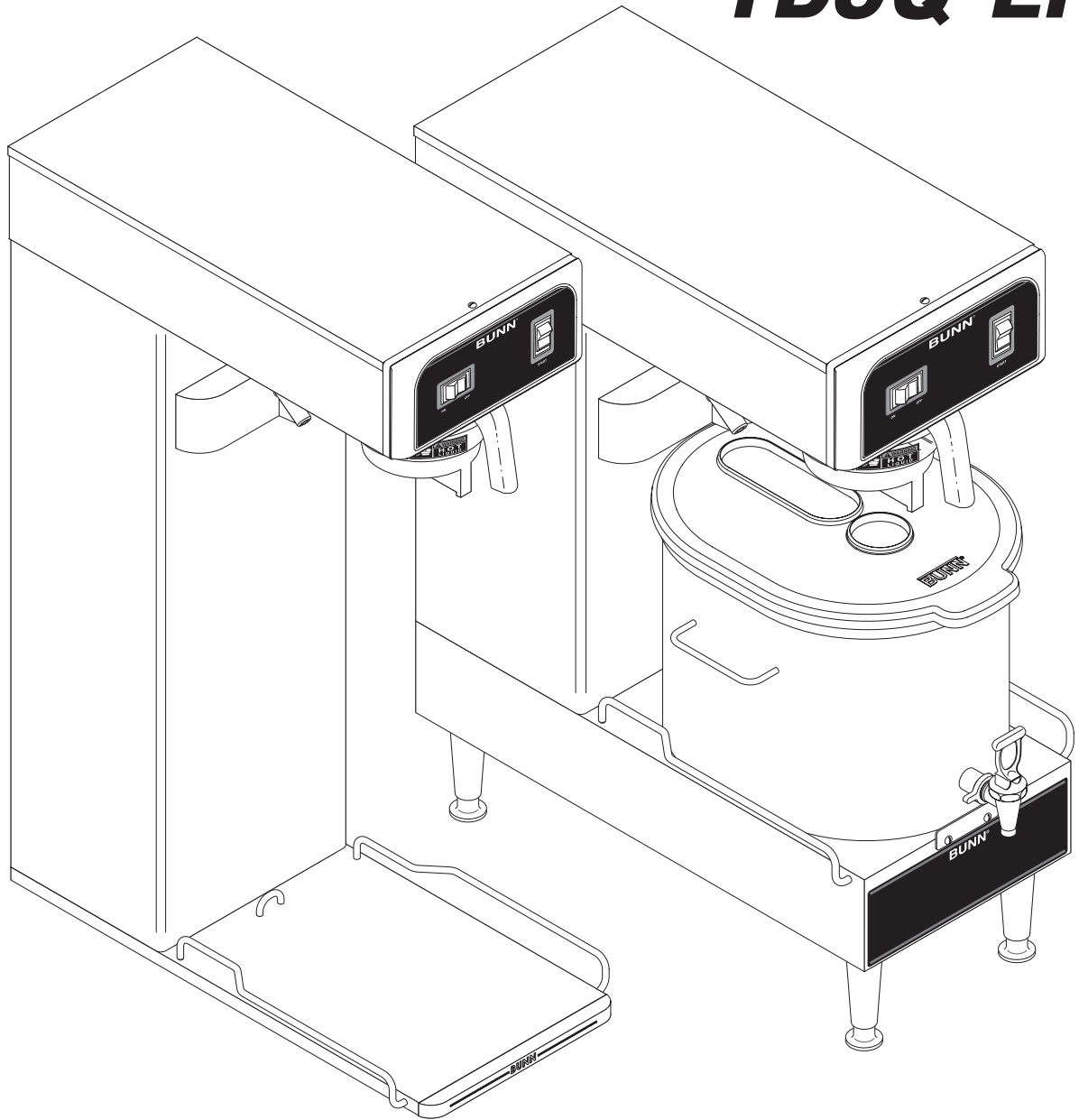
AUTO SWEETENER CLEANING

1. Remove the connector off of the bag in a box.
2. Place the end in a bucket of hot water (120°-130°F)
3. Place an empty reservoir on the base under the dilution nozzle.
4. Set the selector switch to the "Sweetened" setting.
5. Press and release the "Start" switch.
6. Run three brew cycles in a row, emptying the reservoir after each cycle.
7. When the three cycles have been completed, hook the connector back up to the bag in a box system. (This will keep buildup from occurring in the system.)

This procedure should be performed weekly or as needed to keep the system clear.

BUNN®

TB3Q ***TB3Q-LP***



OPERATING & SERVICE MANUAL

BUNN-O-MATIC CORPORATION

POST OFFICE BOX 3227

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CONTENTS

User Notices	3
Electrical & Plumbing Requirements	4
Initial Set-Up	5
Auto Sweetener Set-Up	6
Adjusting Brew Volumes	7
Operating Controls	8
Cleaning	8
Auto Sweetener Cleaning	8
Tea Brewing	9
Troubleshooting	10
Service	15
Wiring Diagrams	26

INTRODUCTION

This equipment will brew a three gallon batch of fresh tea into an awaiting dispenser. The tea will be dispensed at approximately room temperature to conserve ice. The brewer is only for indoor use on a sturdy counter or shelf.

BUNN-O-MATIC COMMERCIAL PRODUCT WARRANTY

Bunn-O-Matic Corp. (“BUNN”) warrants equipment manufactured by it as follows:

- 1) All equipment other than as specified below: 2 years parts and 1 year labor.
- 2) Electronic circuit and/or control boards: parts and labor for 3 years.
- 3) Compressors on refrigeration equipment: 5 years parts and 1 year labor.
- 4) Grinding burrs on coffee grinding equipment to grind coffee to meet original factory screen sieve analysis: parts and labor for 3 years or 30,000 pounds of coffee, whichever comes first.

These warranty periods run from the date of installation BUNN warrants that the equipment manufactured by it will be commercially free of defects in material and workmanship existing at the time of manufacture and appearing within the applicable warranty period. This warranty does not apply to any equipment, component or part that was not manufactured by BUNN or that, in BUNN’s judgment, has been affected by misuse, neglect, alteration, improper installation or operation, improper maintenance or repair, damage or casualty. This warranty is conditioned on the Buyer 1) giving BUNN prompt notice of any claim to be made under this warranty by telephone at (217) 529-6601 or by writing to Post Office Box 3227, Springfield, Illinois 62708-3227; 2) if requested by BUNN, shipping the defective equipment prepaid to an authorized BUNN service location; and 3) receiving prior authorization from BUNN that the defective equipment is under warranty.

THE FOREGOING WARRANTY IS EXCLUSIVE AND IS IN LIEU OF ANY OTHER WARRANTY, WRITTEN OR ORAL, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF EITHER MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. The agents, dealers or employees of BUNN are not authorized to make modifications to this warranty or to make additional warranties that are binding on BUNN. Accordingly, statements by such individuals, whether oral or written, do not constitute warranties and should not be relied upon.

If BUNN determines in its sole discretion that the equipment does not conform to the warranty, BUNN, at its exclusive option while the equipment is under warranty, shall either 1) provide at no charge replacement parts and/or labor (during the applicable parts and labor warranty periods specified above) to repair the defective components, provided that this repair is done by a BUNN Authorized Service Representative; or 2) shall replace the equipment or refund the purchase price for the equipment.

THE BUYER’S REMEDY AGAINST BUNN FOR THE BREACH OF ANY OBLIGATION ARISING OUT OF THE SALE OF THIS EQUIPMENT, WHETHER DERIVED FROM WARRANTY OR OTHERWISE, SHALL BE LIMITED, AT BUNN’S SOLE OPTION AS SPECIFIED HEREIN, TO REPAIR, REPLACEMENT OR REFUND.

In no event shall BUNN 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.

USER NOTICES

Carefully read and follow all notices on the equipment and in this manual. They were written for your protection. All notices on the equipment should be kept in good condition. Replace any unreadable or damaged labels.

#00831.0000

⚠ WARNING
<ul style="list-style-type: none"> ◆ Fill water tank before turning - on - thermostat or connecting appliance to power source. ◆ Use only on a properly protected circuit capable of the rated load. ◆ Electrically ground the chassis. ◆ Follow national/local electrical codes. ◆ Do not use near combustibles.
<small>FAILURE TO COMPLY RISKS EQUIPMENT DAMAGE, FIRE, OR SHOCK HAZARD</small>
<small>READ THE ENTIRE OPERATING MANUAL BEFORE BUYING OR USING THIS PRODUCT</small>
<small>THIS APPLIANCE IS HEATED WHENEVER CONNECTED TO A POWER SOURCE</small>
<small>00831.0000F 3/98 ©1998 BUNN-O-MATIC CORPORATION</small>

#37881.0000

⚠ WARNING

To reduce the risk of electric shock, do not remove or open cover. No user-serviceable parts inside. Authorized service personnel only. Disconnect power before servicing.

#06064.0000

WARNING

- FILL WATER TANK BEFORE ENERGIZING
- DO NOT OVERLOAD CIRCUIT
- KEEP AWAY FROM COMBUSTIBLES
- DO NOT DEFORM PLUG OR CORD

SEE INSTRUCTIONS

- FAILURE TO COMPLY RISKS EQUIPMENT DAMAGE, FIRE OR SHOCK
- BREWER ENERGIZED UNLESS UNPLUGGED

#03408.0000

	<div style="background-color: #FFA500; color: white; padding: 2px; text-align: center;">⚠ WARNING</div> <div style="background-color: black; color: white; padding: 5px; text-align: center; font-weight: bold; font-size: 1.2em;"> REMOVE FUNNEL SLOWLY </div>
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#03409.0000

	<div style="background-color: #FFA500; color: white; padding: 2px; text-align: center;">⚠ WARNING</div> <div style="background-color: black; color: white; padding: 5px; text-align: center; font-weight: bold; font-size: 1.5em;"> HOT LIQUID </div>
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#00656.0000

This equipment is to be installed to comply with the Basic Plumbing Code of the Building Officials and Code Administrators International, Inc. (BOCA) and the Food Service Sanitation Manual of the Food and Drug Administration (FDA).

#03537.0000

USE QUICK BREW FUNNEL

#26371.0000

WATER
INLET

#26371.0001

SWEETENER
INLET

#32540.0000

BREWERS TIMER SETTING

CAUTION – Disconnect the power source from the brewer prior to the removal of any panel for the replacement or adjustment of any component.

NOTE: Check that the brewer is connected to water supply, the tank is properly filled, and a funnel and server are in place, prior to setting or modifying batch sizes.

1. **Modifying batch sizes.** To modify a batch volume, first check that the SET/LOCK switch is in the "SET" position on the circuit board. If the brewer has a batch selector switch, position it to the size to be changed.

To increase a batch size, Press and hold the START or BREW switch until three clicks are heard. Release the switch and then press it again one or more times. Each time the switch is pressed, two seconds are added to the brew time period. Allow the brew cycle to finish in order to verify that the desired volume has been achieved.

To decrease a batch size, Press and release the START or BREW switch once for every two-second interval to be removed from the total brew time period; then immediately press and hold down the START or BREW switch until three clicks are heard. Release the switch. Allow the brew cycle to finish in order to verify that the desired volume has been achieved.

2. **Setting batch sizes.** To set a batch volume, first check that the SET/LOCK switch is in the "SET" position on the circuit board. Press and hold the START or BREW switch until three distinct clicks are heard (this will take approximately ten seconds), and then release the switch. (Failure to release the switch within two seconds from the third click causes the volume setting to be aborted). View the level of the liquid being dispensed. When the desired level is reached, turn the ON/OFF switch to "OFF". The brewer remembers this volume and will continue to brew batches of this size until the volume setting procedure is repeated. Empty server(s), turn selector switch to positions that have yet to be set, and repeat batch setting procedure until all batch sizes are set.

NOTE: When brewing coffee, batch volumes will decrease due to absorption by the coffee grounds.

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ELECTRICAL REQUIREMENTS

CAUTION - The brewer must be disconnected from the power source until specified in *Initial Set-Up*.

120V model brewers require 2-wire, grounded service rated 120 volts ac, 15 amp, single phase, 60 Hz.

"A" model brewers require 2-wire, grounded service rated 230 volts ac, 10 amp, single phase, 50 Hz.

"B" model brewers require 2-wire, grounded service rated 100 volts ac, 15 amp, single phase, 60 Hz.

WARNING - If the power cord is ever damaged, it must be replaced by the manufacturer or its service agent with a special cord available from the manufacturer or its service agent in order to avoid a hazard.

Proceed as follows:

Electrical Hook-Up

CAUTION - Improper electrical installation will damage electronic components.

1. An electrician must provide electrical service as specified.
2. Using a voltmeter, check the voltage and color coding of each conductor at the electrical source.
3. Remove top cover from the brewer.
4. Rotate the control thermostat knob fully counterclockwise to the "OFF" position and replace the top cover.
5. Connect the brewer to the power source.
6. If plumbing is to be hooked up later be sure the brewer is disconnected from the power source. If plumbing has been hooked up, the brewer is ready for Initial Set-Up.

PLUMBING REQUIREMENTS

These brewers must be connected to a cold water system with operating pressure between 20 and 90 psi (138 and 621 kPa) from a ½" or larger supply line. A shut-off valve should be installed in the line before the brewer. Install a regulator in the line when pressure is greater than 90 psi (621kPa) to reduce it to 50 psi (345 kPa). The water inlet fitting is ¼" flare.

NOTE: Bunn-O-Matic recommends ¼" copper tubing for installations of less than 25 feet and ⅜" for more than 25 feet from the ½" water supply line. A tight coil of copper tubing in the water line will facilitate moving the brewer to clean the countertop. Bunn-O-Matic does not recommend the use of a saddle valve to install the brewer. The size and shape of the hole made in the supply line by this type of device may restrict water flow.

**This equipment must be installed to comply with the Basic Plumbing Code of the
Building Officials and Code Administrators International, Inc. (BOCA)
and the Food Service Sanitation Manual of the Food and Drug Administration (FDA).**

1. Remove the shipping cap from the bulkhead fitting on the rear of the brewer.
2. Flush the water line and securely attach it to the bulkhead fitting on the rear of the brewer.
3. Turn on the water supply.

NOTE: TheFlow Control/Strainer assembly is internal, located inside the back panel.

INITIAL SET-UP

CAUTION - The brewer must be disconnected from the power source throughout the Initial Set-Up, except when specified in the instructions.

1. Remove the top lid from the brewer.
2. Rotate the control thermostat knob fully counterclockwise to the "OFF" position and replace the top lid.
3. Insert an empty funnel into the funnel rails.
4. Place an empty dispenser on the brewer base. Be prepared to empty the dispenser during these initial steps.
5. Plug in the brewer, place the ON/OFF switch in the "ON" position ("SWEET" or "UNSWEET" position for brewers with a sweetener option), and momentarily press the START switch. Water will flow into the tank and dispenser for three and one-half minutes. Empty the dispenser when this first cycle stops and press the START switch again. Empty the dispenser when the second cycle stops and press the START switch once more. During the third cycle, the tank will fill to its capacity and the excess will flow from the funnel into the dispenser. Empty the dispenser when this third cycle stops.
6. Begin another brew cycle and measure the total water volume from the dispenser. It should be approximately 3 gallons and 12 ounces. (396 ounces). **CONCENTRATE MACHINES WILL YIELD ONLY 76 OZ.**
7. If not, adjust the timer as required. See Adjusting Brew Volumes.
8. Start, and measure another cycle.
9. Repeat steps 6-8 until the recommended total water volume is achieved.
10. The concentrate valve is pre-adjusted to deliver the correct ratio of brew water to dilution water.
11. Unplug the brewer, remove the top lid, rotate the control thermostat knob fully clockwise to the "ON" position and replace the top lid.
12. Empty the dispenser.
13. Plug in the brewer and wait for the water in the tank to heat to brewing temperature (approximately 20 minutes). Some water will drip from the funnel during this time; this is due to expansion and should not occur thereafter.
14. Begin another brew cycle. Empty the reservoir after water has stopped flowing from the funnel.
15. Allow the water in the tank to heat to the proper temperature.
16. The brewer is now ready to brew approximately 3 gallons of freshly brewed room temperature tea from three to five ounces of loose leaves.

Brew water temperature is factory set at 200° F (93.3° C). Areas of high altitude will require lowering this temperature to prevent boiling. This chart should be used as a guide when readjusting the brew water temperature.

Altitude (Feet)	Boiling point of water		Recommended water temperature	
	° F	° C	° F	° C
-1000	213.8	101.0	200	93.3
-500	212.9	100.5	200	93.3
0	212.0	100.0	200	93.3
500	211.1	99.5	200	93.3
1000	210.2	99.0	200	93.3
1500	209.3	98.5	200	93.3
2000	208.4	98.0	200	93.3
2500	207.4	97.4	200	93.3
3000	206.5	96.9	199	92.8
3500	205.6	96.4	198	92.2
4000	204.7	95.9	197	91.7
4500	203.8	95.4	196	91.1
5000	202.9	94.9	195	90.6
5500	201.9	94.4	195	90.6
6000	201.0	93.9	194	90.0
6500	200.1	93.4	193	89.4
7000	199.2	92.9	192	88.9
7500	198.3	92.4	191	88.3
8000	197.4	91.9	190	87.8
8500	196.5	91.4	189	87.2
9000	195.5	90.8	188	86.7
9500	194.6	90.3	187	86.1
10000	193.7	89.8	186	85.6

AUTO SWEETENER SET-UP

CAUTION - The brewer must be disconnected from the power source throughout the Initial Set-Up, except when specified in the instructions.

1. Remove the top lid and both rear panels.
 2. Make sure the brewer water supply is off.
 3. Connect sweetener hose from the bag in a box delivery system to the rear fitting marked "Sweetener".
- IMPORTANT** - System delivery pressure must be regulated between 30-40 psi. System also needs to deliver product for at least 4 minutes without shutting off. Some pump systems shut off after a few minutes of continuous running.
4. Plug brewer into the power source.
 5. Place an empty reservoir under the dilution nozzle of the brewer.
 6. Close the adjustment valve on the rear of the brewer fully (clockwise), then open (counterclockwise) 1/2 turn.
 7. Set the selector switch to the "Sweetened" side and press the "Start" switch momentarily. (The sweetener will come out immediately.)
 8. Run sweetener for 1 minute, then set selector switch to the "Off" position. The flow will stop.
 9. Measure the amount of sweetener dispensed and calculate if the volume needs to be increased or decreased (Dilution cycle is usually between 3 to 3 1/2 minutes).
 10. If adjustment is needed, turning the adjustment valve clockwise decreases the amount of sweetener dispensed and turning the adjustment valve counterclockwise increases the amount of sweetener dispensed.
 11. After the desired volume has been set, turn the water supply on.
 12. Reinstall the top lid, lower and upper rear panels.

The brewer may now be returned to service.

ADJUSTING BREW VOLUMES

CAUTION - Disconnect the power source from the brewer prior to the removal of any panel for the replacement or adjustment of any component.

NOTE: Prior to setting or modifying batch sizes, check that the brewer is connected to water supply, the tank is properly filled, and a funnel and server are in place.

1. Modifying batch sizes. To modify a batch volume, first check that the SET/LOCK switch is in the “SET” position on the circuit board.

To increase a batch size. Press and hold the START or BREW switch until three clicks are heard. Release the switch (Failure to release the switch within two seconds after the third click causes the volume setting to be aborted and previous volume setting will remain in memory) and press it again one or more times. Each time the switch is pressed, two seconds are added to the brew time period. Allow the brew cycle to finish in order to verify that the desired volume has been achieved.

To decrease a batch size. Press and release the START or BREW switch once for every two-second interval to be removed from the total brew time period; then immediately press and hold down the START or BREW switch until three clicks are heard. Release the switch. (Failure to release the switch within two seconds after the third click causes the volume setting to be aborted and previous volume setting will remain in memory). Allow the brew cycle to finish in order to verify that the desired volume has been achieved.

2. Setting batch sizes. To set a batch volume, first check that the SET/LOCK switch is in the “SET” position on the circuit board. Press and hold the START or BREW switch until three distinct clicks are heard, and then release the switch. (Failure to release the switch within two seconds after the third click causes the volume setting to be aborted and previous volume setting will remain in memory). View the level of the liquid being dispensed. When the desired level is reached, turn the ON/OFF (UNSWEET/OFF/SWEET) switch to “OFF” . The brewer remembers this volume and will continue to brew batches of this size until the volume setting procedure is repeated.

NOTE: When brewing tea, batch volumes will decrease due to absorption by the tea leaves.

3. Setting programming disable feature. If it becomes necessary to prevent anyone from changing brew times once programmed, you can set the SET/LOCK switch to the “LOCK” position. This will prevent any programming to be done until switch is once again placed in the “SET” position.

OPERATING CONTROLS

A. ON/OFF Switch

ON - Placing the switch in the left position allows the start switch to activate a timed brew cycle for three gallons of tea.

OFF - Placing the switch in the right position stops the brew cycle. Stopping a brew cycle after it has been started will not stop the flow of water into the funnel until the tank syphons down to its proper level. **The switch should always be placed in this position after a brew cycle and whenever the brewer is unattended.**

B. Start Switch

Starts a brew cycle when the ON/OFF switch is in the "ON" position.

Starts a brew cycle when the UNSWEET/OFF/SWEET switch is in either the "UNSWEET" or "SWEET" position. (Models with Sweetener Only)

C. OFF/SELECTOR Switch (Models with Sweetener Only)

UNSWEET - Placing the switch in the left positional allows the start switch to activate a timed brew cycle for three gallons of tea without sweetener.

OFF - Placing the switch in the middle position stops the brew cycle. Stopping a brew cycle after it has been started will not stop the flow of water into the funnel until the tank syphons down to its proper level. **The switch should always be placed in this position after a brew cycle and whenever the brewer is unattended.**

SWEET - Placing the switch in the right positional allows the start switch to activate a timed brew cycle for three gallons of tea with sweetener.

CLEANING

CAUTION - CLEAN AND SANITIZE YOUR ICED TEA BREWER **DAILY**

1. Remove and thoroughly clean the entire brew funnel. The funnel tip and screen must be free from any tea particles or residue. Reassemble the funnel.
2. Unplug the brewer. Remove and thoroughly rinse the sprayhead. The holes must be open and clear of any mineral deposits. Wipe the sprayhead panel clean with a damp cloth.
3. Insert the delimiting spring into the sprayhead fitting until no more than one inch is visible and move it in and out 5 or 6 times. Reattach the sprayhead.
4. Wash the entire outside surface of the brewer with a clean damp cloth.

CAUTION - DO NOT KEEP BREWED ICED TEA OVERNIGHT. THE SERVER MUST BE CLEANED DAILY.

AUTO SWEETENER CLEANING

1. Remove the connector off of the bag in a box.
2. Place the end in a bucket of hot water (120°-130°F)
3. Place an empty reservoir on the base under the dilution nozzle.
4. Set the selector switch to the "Sweetened" setting.
5. Press and release the "Start" switch.
6. Run three brew cycles in a row, emptying the reservoir after each cycle.
7. When the three cycles have been completed, hook the connector back up to the bag in a box system. (This will keep buildup from occurring in the system.)

This procedure should be performed weekly or as needed to keep the system clear.

TEA BREWING

1. Begin each brew cycle with a clean empty brew funnel and server. (Be sure the server lid doesn't interfere with the flow of dilution water.)
 2. Insert a BUNN® filter into the funnel.
 3. Pour the packet of loose fresh tea leaves into the filter. Approximately three to five ounces is recommended for three gallons of beverage.
 4. Level the bed of tea leaves by gently shaking.
 5. Slide the funnel into the funnel rails until it stops.
 6. Place the ON/OFF switch in the "ON" position. (For brewers with a sweetener, place the UNSWEET/OFF/SWEET switch in the "SWEET" or "UNSWEET" position.)
 7. Momentarily press the START switch.
- CAUTION** - The funnel contains hot liquids. Remove funnel slowly.
8. Carefully remove the brew funnel and discard the used filter when tea no longer drips from the funnel tip.
 9. Place the ON/OFF (UNSWEET/OFF/SWEET) switch in the "OFF" position to prevent a false start.
 10. Fresh tea is available at the faucet.

TROUBLESHOOTING

A troubleshooting guide is provided to suggest probable causes and remedies for the most likely problems encountered. If the problem remains after exhausting the troubleshooting steps, contact the Bunn-O-Matic Technical Service Department.

- Inspection, testing, and repair of electrical equipment should be performed only by qualified service personnel.
- All electronic components have 120-240 volt ac and low voltage dc potential on their terminals. Shorting of terminals or the application of external voltages may result in board failure.
- Intermittent operation of electronic circuit boards is unlikely. Board failure will normally be permanent. If an intermittent condition is encountered, the cause will likely be a switch contact or a loose connection at a terminal or crimp.
- Solenoid removal requires interrupting the water supply to the valve. Damage may result if solenoids are energized for more than ten minutes without a supply of water.
- The use of two wrenches is recommended whenever plumbing fittings are tightened or loosened. This will help to avoid twists and kinks in the tubing.
- Make certain that all plumbing connections are sealed and electrical connections tight and isolated.
- This brewer is heated at all times. Keep away from combustibles.

WARNING –

- Exercise extreme caution when servicing electrical equipment.
- Unplug the brewer when servicing, except when electrical tests are specified.
- Follow recommended service procedures
- Replace all protective shields or safety notices

Problem	Probable Cause	Remedy
Brew cycle will not start	1. No water	Water lines and valves to the brewer must be open.
	2. No power or incorrect voltage to the brewer	Check circuit breakers or fuses.
	3. Strainer/Flow Control (.750 GPM)	(A) Direction of flow arrow must be pointing upwards in the brewer. (B) Remove the strainer/flow control and check for obstructions. Clear or replace.
	4. ON/OFF	Refer to <i>Service</i> - ON/OFF Switch for testing. See page 21.
	5. Start Switch	Refer to <i>Service</i> - Start Switch for testing procedures. See page 22.

TROUBLESHOOTING (cont.)

PROBLEM

PROBABLE CAUSE

REMEDY

Brew cycle will not start (cont.)

6. Brew Timer

Refer to *Service* - Brew Timer for testing procedures. See page 17

7. Brew Solenoid Valve

Refer to *Service* - Brew Solenoid Valve for testing procedures. See page 16

Water is not hot

1. Limit Thermostat

CAUTION - Do not eliminate or bypass limit thermostat or thermal cut-off. Use only BOM replacement part #29329.0001

Refer to *Service* - Limit Thermostat for testing procedures. See page 20.

2. Control Thermostat

Refer to *Service* - Control Thermostat for testing procedures. See page 19

3. Tank Heater

Refer to *Service* - Tank Heater for testing procedures. See page 25

Dilution cycle will not start

1. ON/OFF

Refer to *Service* - ON/OFF Switch for testing. See page 21

2. Start Switch

Refer to *Service* - Start Switch for testing procedures. See page 22.

Inconsistent beverage level in dispenser

1. Syphon System

The brewer must be level or slightly lower in front to syphon properly

2. Lime Build-up

CAUTION - Tank and tank components should be delimed regularly depending on local water conditions. Excessive mineral build-up on stainless steel surfaces can initiate corrosive reactions resulting in serious leaks.

Inspect the tank assembly for excessive lime deposits. Delime as required.

3. Water Pressure

The water pressure to the brewer must be at least 20 psi (138 kPa).

TROUBLESHOOTING (cont.)

PROBLEM

Consistently high or low beverage level in the dispenser

PROBABLE CAUSE

1. Strainer/Flow Control (.750GPM)

REMEDY

(A) Direction of flow arrow must be pointing upwards in the brewer.

(B) Remove the strainer/flow control and check for obstructions. Clear or replace.

Spitting or excessive steaming

1. Lime Build-up

CAUTION - Tank and tank components should be delimed regularly depending on local water conditions. Excessive mineral build-up on stainless steel surfaces can initiate corrosive reactions resulting in serious leaks.

Inspect tank assembly for excessive lime deposits. Delime as required.

2. Control Thermostat

Refer to *Service* - Control Thermostat for testing procedures. See page 19

Drip-out time too long

1. Funnel Tip

The brew funnel should be cleaned thoroughly before each brew cycle to lessen the chance of tea leaf particles clogging the drip-out tip.

Sweetener is not working

1. Sweetener box is empty

Check the Sweetener box to make sure it is not out of product.

2. Flow Adjustment screw is closed

Check the Flow Adjustment screw to make sure the valve has not closed.

3. Solenoid is defective

Refer to *Service* -Sweetener Solenoid Valve for testing procedures. See page 24.

4. The Pump is defective

Check the manufacturers warranty for additional information on testing and replacement of a defective pump.

TROUBLESHOOTING (cont.)

PROBLEM

Dripping from sprayhead

PROBABLE CAUSE

1. Syphon System

REMEDY

The brewer must be level or slightly lower in front to syphon properly.

2. Lime Build-up

CAUTION - Tank and tank components should be delimed regularly depending on local water conditions. Excessive mineral build-up on stainless steel surfaces can initiate corrosive reactions resulting in serious leaks.

Inspect the tank assembly for excessive lime deposits. Delime as required.

3. Brew Solenoid Valve

Refer to *Service* - Brew Solenoid Valve for testing procedures. See page 16

Water flows into tank continuously (ON/OFF Switch "ON") (UNSWEET/OFF/SWEET Switch in "UNSWEET" or "SWEET" position)

1. Brew Timer

Refer to *Service* - Brew Timer for testing procedures. See page 17

Water flows into tank continuously (ON/OFF Switch "OFF") (UNSWEET/OFF/SWEET Switch in "OFF" position.

1. Brew Solenoid Valve

Refer to *Service* - Brew Solenoid Valve for testing procedures. See page 16 Or 24

Beverage overflows dispenser

1. Dispenser

The dispenser must be completely empty before starting a brew cycle.

2. Brew Timer

Refer to *Service* - Brew Timer for testing procedures. See page 17

3. Brew Solenoid Valve

Remove the Brew Solenoid Valve and clean any obstruction. Rebuild or replace the valve if necessary. See page 16

Weak beverage

1. Filter Type

BUNN® paper filters must be used for proper extraction.

2. Tea

A sufficient quantity of fresh, loose tea leaves should be used for proper extraction.

3. Sprayhead

A clean stainless steel sprayhead must be used for proper extraction.

TROUBLESHOOTING (cont.)

PROBLEM

PROBABLE CAUSE

REMEDY

Weak beverage (cont.)

4. Funnel Loading

The BUNN® paper filter must be centered in the funnel and the bed of tea leaves leveled by gentle shaking.

5. Water Temperature

Place an empty funnel on an empty dispenser beneath the sprayhead. Initiate a brew cycle and check the water temperature immediately below the sprayhead with a thermometer. The reading should not be less than 200°F (93°C). Adjust the control thermostat to increase the water temperature. Replace if necessary.

6. Low Brew Water Volume

Adjust needle valve to achieve 76 oz. water from the sprayhead. To increase volume, turn counterclockwise. To decrease volume, turn clockwise.

Dry tea leaves remain in the funnel

1. Funnel Loading

The BUNN® paper filter must be centered in the funnel and the bed of tea leaves leveled by gently shaking.

Brewer is making unusual noises

1. Solenoid(s)

The nut on the solenoid(s) must be tight or it will vibrate during operation.

2. Plumbing Lines

Plumbing lines should not be resting on the counter top.

3. Water Supply

(A) The brewer must be connected to a cold water line.

(B) Water pressure to the brewer must not exceed 90 psi (621 kPa). Install a regulator if necessary to lower the working pressure to approximately 50 psi (345 kPa).

4. Tank Heater

Remove and clean lime off the tank heater. See page 25

SERVICE

This section provides procedures for testing and replacing various major components used in this brewer should service become necessary. Refer to *Troubleshooting* for assistance in determining the cause of any problem.

WARNING - Inspection, testing, and repair of electrical equipment should be performed only by qualified service personnel. The brewer should be disconnected from the power source when servicing, except when electrical tests are required and the test procedure specifically states to plug-in the brewer.

COMPONENT ACCESS

WARNING - Disconnect the brewer from the power source before the removal of any panel or the replacement of any component.

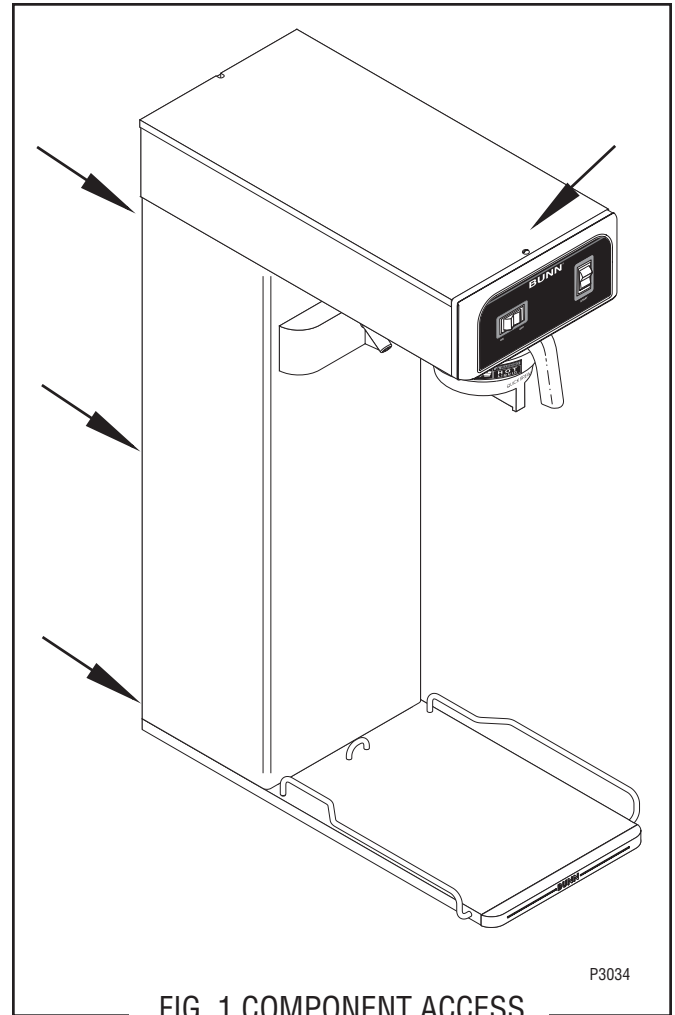
All components are accessible by the removal of the top cover and rear inspection panel.

The top cover is attached with one #6-32 screw. Removal of the top cover will allow access to ON/OFF (UNSWEET/OFF/SWEET) switch, START switch, brew timer, brew solenoid, control thermostat, limit thermostat and tank heater.

The rear inspection panel is attached with six #8-32 screws. Removal of the rear panel will allow access to the .750 GPM flow control valve.

Contents

Brew Solenoid Valve	16
Digital Brew Timer	17
Control Thermostat	19
Limit Thermostat	20
ON/OFF Switch	21
Start Switch	22
UNSWEET/OFF/SWEET Switch	23
UNSWEET/OFF/SWEET Solenoid	24
Tank Heater	25
Wiring Diagrams	26



SERVICE (cont.)
BREW SOLENOID VALVE

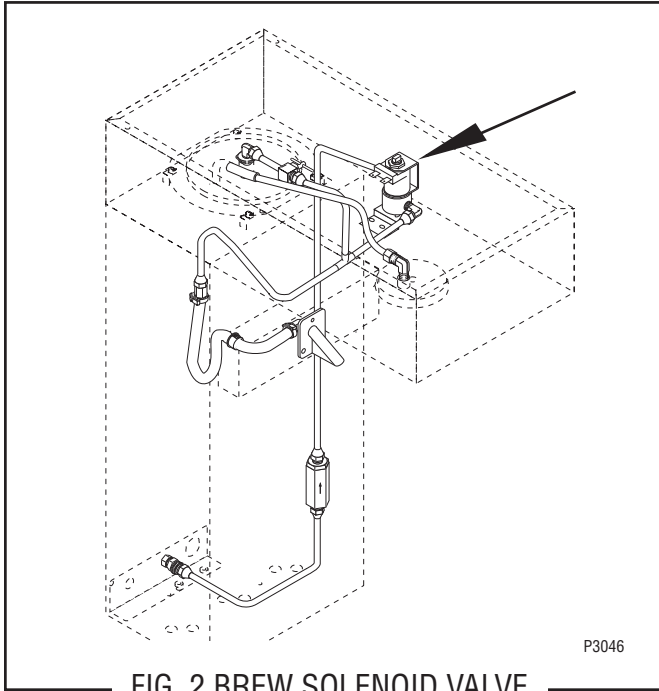


FIG. 2 BREW SOLENOID VALVE

Location:

Viewing the brewer from the top, the brew solenoid valve is mounted on the right side of the brewer.

Test Procedures:

1. Disconnect the brewer from the power source.
2. Disconnect the white/violet and white/green wires from the solenoid valve. With the ON/OFF switch in the "ON" position ("UNSWEET" or "SWEET" position for brewers with sweetener option), press the start switch.
3. With a voltmeter, check the voltage across the white/violet and white/green wires. Connect the brewer to the power source. The indication must be:
 - a) 120 volts ac for two wire 120 volt models.
 - b) 230 volts ac for two wire 230 volt models.
 - c) 100 volts ac for two wire 100 volt models.
4. Disconnect the brewer from the power source,

If voltage is present as described, proceed to #5
 If voltage is not present as described, refer to *Wiring Diagrams* and check brewer wiring harness.

5. Check for continuity across the solenoid valve coil terminals.

If continuity is present as described, reconnect the white/violet from the brew timer and white/green wire from the brew timer.

If continuity is not present as described, replace the solenoid valve.

6. Check the solenoid valve for coil action. Connect the brewer to the power source. With ON/OFF switch in the "ON" position ("UNSWEET" position for brewers with sweetener option), press START switch and listen carefully in the vicinity of the solenoid valve for a "clicking" sound as the coil magnet attracts.
7. Disconnect the brewer from the power source.

If the sound is heard as described and water will not pass through the solenoid valve, there may be a blockage in the water line before the solenoid valve or, the solenoid valve may require inspection for wear, and removal of waterborne particles.

If the sound is not heard as described, replace the solenoid valve.

Removal and Replacement:

1. Remove all wires from solenoid valve.
2. Turn off the water supply to the brewer.
3. Disconnect the water lines to and from the solenoid valve.
4. Remove the two #8-32 keps nuts holding the mounting bracket to the hood.
5. Lift out the bracket.
6. Remove the two #10-32 slotted-head screws holding the solenoid valve to the mounting bracket.
7. Securely install the new solenoid valve to the mounting bracket.
8. Attach the mounting bracket to the hood.
9. Securely fasten the water lines to and from the solenoid valve.
10. Refer to the Fig. 3 when reconnecting the wires

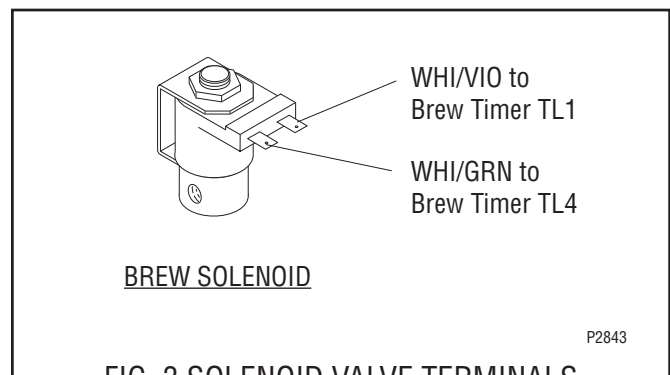


FIG. 3 SOLENOID VALVE TERMINALS

SERVICE (cont.)

DIGITAL BREW TIMER

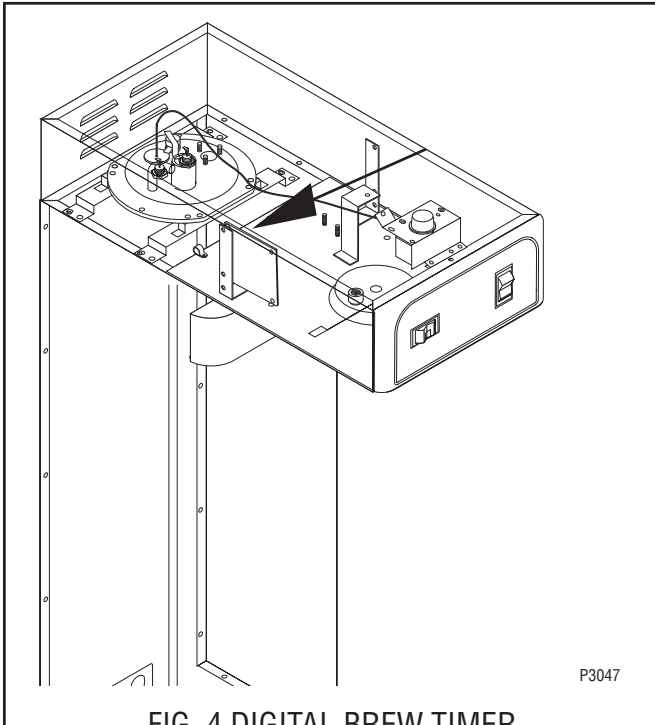


FIG. 4 DIGITAL BREW TIMER

Location:

The timer is located inside the hood, on the left side.

Test Procedure.

NOTE: Do not remove or install wires while timer board is installed. Pressure applied to one side may cause damage to the board.

1. Disconnect the brewer from the power source and remove the top cover.
2. Remove the two #8-32 screws securing circuit board to the mounting bracket.
3. Remove circuit board and spacers (as required).
4. With a voltmeter, check the voltage across terminals TL1 and TL2 when the "ON/OFF" switch is in the "ON" position. Connect the brewer to the power source. The indication must be:
 - a) 120 volts ac for two wire 120 volt models
 - b) 230 volts ac for two wire 230 volt models.
 - c) 100 volts ac for two wire 100 volt models.
5. Disconnect the brewer from the power source.

If voltage is present as described, proceed to #6.
If voltage is not present as described, refer to the Wiring Diagrams and check the brewer wiring harness.

6. With a voltmeter, check the voltage across terminals TL1 and TL4 when the "ON/OFF" switch is in the "ON" position. Connect the brewer to the power source. The indication must be 0 volts.

If voltage is as described, proceed to #7.

If voltage is not as described, disconnect the brewer from the power source and replace the timer.

7. With a voltmeter, check the voltage across terminals TL1 and TL4 when the "ON/OFF" switch is in the "ON" position. Connect the brewer to the power source and press the "START" switch. The indication must be as follows:
 - a) 120 volts ac for two wire 120 volt models.
 - b) 230 volts ac on two wire 230 volt models.
 - c) 100 volts ac for two wire 100 volt models.

If voltage is present as described, the brew timer is operating properly. Reset the timer as required, to obtain the desired brew volume.

If voltage is not present as described, disconnect the brewer from the power source and replace the timer.

Removal and Replacement:

1. Remove the two #8-32 screws securing circuit board to the mounting bracket.
2. Remove circuit board and spacers (as required).
3. Remove all wires from the timer.
4. Attach all wires to the replacement timer board prior to installation to the component mounting bracket. Refer to FIG. 5 when reconnecting the wires.
5. Install new circuit board with spacers (as required) to the hood.
6. Adjust the timer as described below.

Timer Setting:

NOTE: Prior to setting or modifying volumes, check that the brewer is connected to water supply, the tank is properly filled, and a funnel and server are in place.

NOTE: All volume settings must be done with the sprayhead installed.

1. Modifying brew volumes. To modify a brew volume, first check that the SET/LOCK switch is in the "SET" position on the circuit board.

SERVICE (cont.)

DIGITAL BREW TIMER (cont.)

To increase a brew volume, place the ON/OFF switch in the “ON” position, press and hold the START switch until three clicks are heard. Release the switch and press it again one or more times. (Failure to release the switch within two seconds after the third click causes the volume setting to be aborted and previous volume setting will remain in memory.) Each time the switch is pressed, two seconds are added to the brew time period. Allow the brew cycle to finish in order to verify that the desired volume has been achieved.

To decrease a brew volume, place the ON/OFF switch in the “ON” position, press and release the START switch once for every two-second interval to be removed from the total brew time period; then immediately press and hold down the START switch until three clicks are heard. Release the switch. (Failure to release the switch within two seconds after the third click causes the volume setting to be aborted and previous volume setting will remain in memory.) Allow the brew cycle to finish in order to verify that the desired volume has been achieved.

2. Setting brew volumes. To set a brew volume, first check that the SET/LOCK switch is in the “SET” position on the circuit board. Place the ON/OFF switch in the “ON” position, press and hold the START switch until three distinct clicks are heard and then release the switch. (Failure to release the switch within two seconds after the third click causes the volume setting to be aborted and previous volume setting will remain in memory.)

View the level of the liquid being dispensed. When the desired level is reached, turn the ON/OFF switch to “OFF”.

NOTE: Several ounces of water will continue to syphon from the tank after turning the switch “OFF”. The brewer remembers this volume and will continue to brew batches of this size until the volume setting procedure is repeated.

NOTE: When brewing tea, volume will decrease due to absorption by the tea leaves.

3. Setting programming disable feature. If it becomes necessary to prevent anyone from changing brew time once programmed, you can set the SET/LOCK switch to the “LOCK” position. This will prevent any further programming until switch is once again put into the “SET” position.

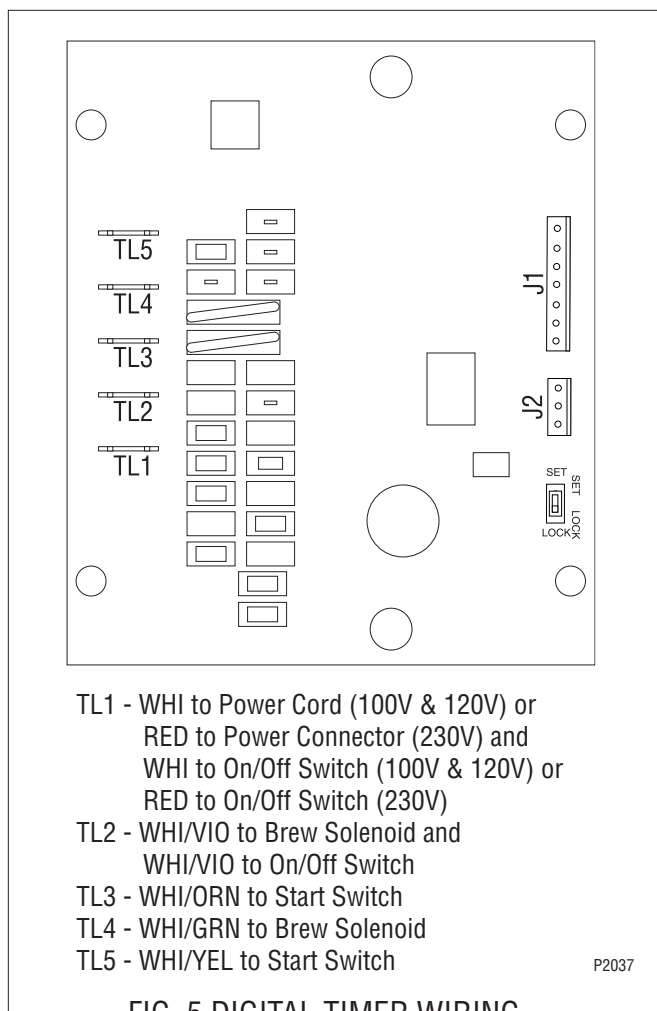


FIG. 5 DIGITAL TIMER WIRING

SERVICE (cont.)

CONTROL THERMOSTAT

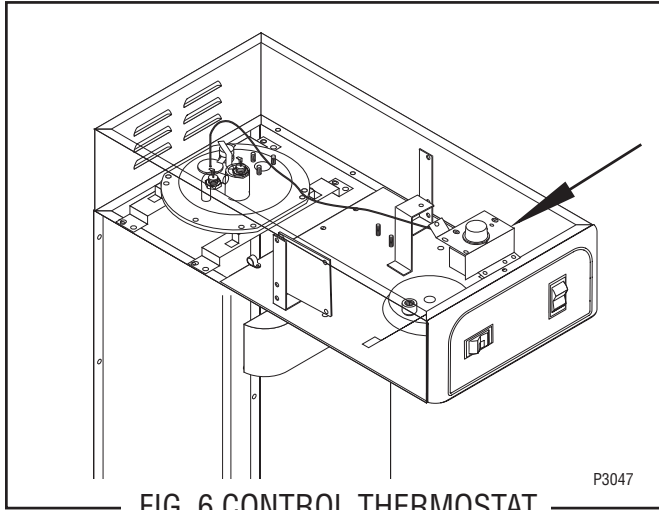


FIG. 6 CONTROL THERMOSTAT

Location:

The control thermostat is located inside hood on the right side.

Test Procedures:

1. Disconnect the brewer from the power source.
2. Locate the blue/black wire on the control thermostat.
3. With a voltmeter, check the voltage across the blue/black wire on the control thermostat and the white wire on the tank heater for 100 volt and 120 volt two wire models or red wire on the tank heater for 230 volt two wire models. Connect the brewer to the power source. The indication must be:
 - a) 120 volts ac for two wire 120 volt models.
 - b) 230 volts ac for two wire 230 volt models.
 - c) 100 volts ac for two wire 100 volt models.
4. Disconnect the brewer from the power source.

If voltage is present as described, proceed to #5.

If voltage is not present as described, refer to the wiring diagrams and check the brewer wiring harness.

5. Locate the black wire on the control thermostat.
6. Gently remove the capillary bulb and grommet from the tank.
7. With a voltmeter, check the voltage across the black wire of the control thermostat and the white wire on the tank heater for 100 volt and 120 volt two wire models or red wire on the tank heater for 230 volt two wire models when the control thermostat is turned fully clockwise. Connect the

brewer to the power source. The indication must be:

- a) 120 volts ac for two wire 120 volt models.
- b) 230 volts ac for two wire 230 volt models.
- c) 100 volts ac for two wire 100 volt models.

8. Disconnect the brewer from the power source.

If voltage is present as described, reinstall the capillary tube into the tank to the line 5.5" above the bulb, the control thermostat is operating properly.

If voltage is not present as described, replace the thermostat.

Removal and Replacement:

1. Remove both wires from the control thermostat terminals.
2. Remove the thermostat capillary bulb by firmly pulling up on the capillary tube at the tank lid. This will disengage the grommet from the tank lid.
3. Remove the #8-32 screw holding the control thermostat to its bracket.
4. Slide the grommet to the line 5.5" above the bulb on the new capillary tube.
5. Insert the capillary bulb through the hole in the tank lid and press the grommet firmly and evenly so that the groove in the grommet fits into the tank lid.
6. Carefully bend the capillary tube so that the tube and bulb inside the tank are in a vertical position.

NOTE: The capillary tube must be clear of any electrical termination and not kinked.

7. Fasten the new control thermostat to its bracket.
8. Refer to Fig. 7 when reconnecting the wires.
9. Adjust the control thermostat as required.

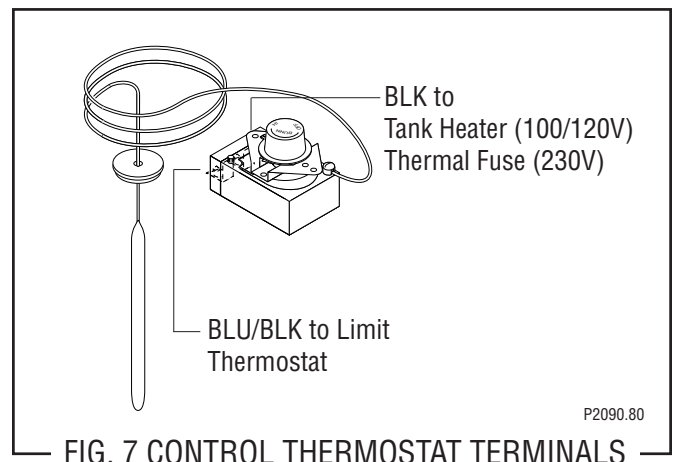


FIG. 7 CONTROL THERMOSTAT TERMINALS

SERVICE (cont.)

LIMIT THERMOSTAT

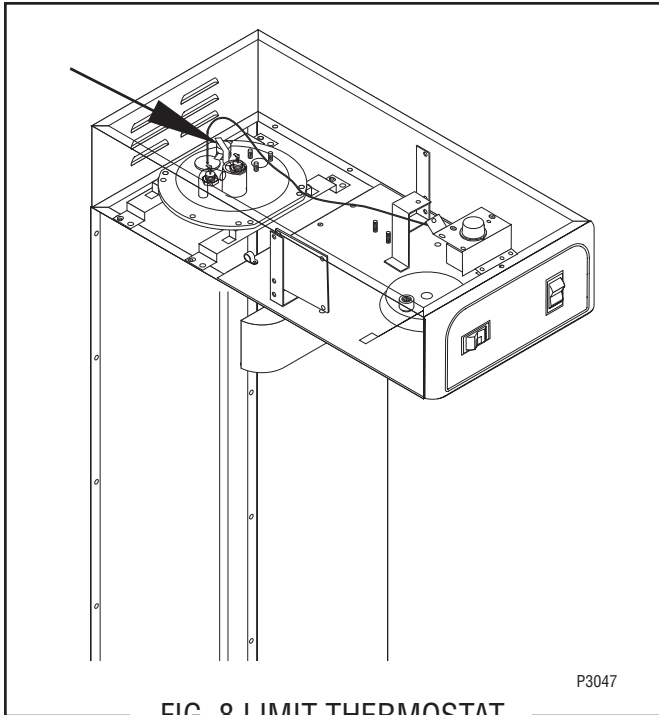


FIG. 8 LIMIT THERMOSTAT

Location:

The limit thermostat is located inside the hood on the tank lid.

Test Procedure:

1. Disconnect the brewer from the power source and remove the black wire from the limit thermostat.
2. With a voltmeter, check the voltage across the black wire removed from the limit thermostat and the white wire or red wire on the tank heater terminal. Connect the brewer to the power source. The indication must be:
 - a) 120 volts ac for two wire 120 volt models.
 - b) 230 volts ac for two wire 230 volt models.
 - c) 100 volts ac for two wire 100 volt models.
3. Disconnect the brewer from the power source.

If voltage is present as described, reconnect the black wire and proceed to #4.

If voltage is not present as described, refer to the Wiring Diagrams and check the wiring harness.

4. Remove the blue/black wire from the limit thermostat.

5. With a voltmeter, check the voltage across the exposed terminal of the limit thermostat and the white wire from the power cord or the red wire from the power connector. Connect the brewer to the power source. The indication must be:
 - a) 120 volts ac for two wire 120 volt models.
 - b) 230 volts ac for two wire 230 volt models.
 - c) 100 volts ac for two wire 100 volt models.
6. Disconnect the brewer from the power source.

If voltage is present as described, reconnect the blue/black wire to the limit thermostat. The limit thermostat is operating properly.

If voltage is not present as described, replace the limit thermostat.

Removal and Replacement

1. Remove both wires from the limit thermostat terminals.
2. Carefully slide the limit thermostat out from under the retaining clip.
3. Carefully slide the new limit thermostat into the retaining clip.
4. Refer to Fig. 9 when reconnecting the wires.

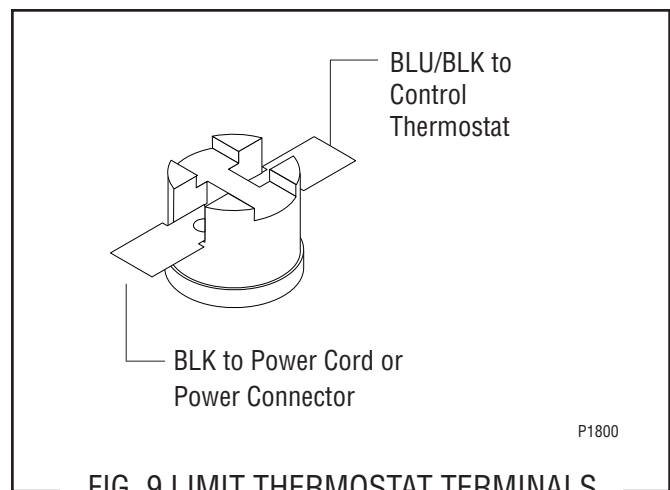


FIG. 9 LIMIT THERMOSTAT TERMINALS

SERVICE (cont.)
ON/OFF SWITCH

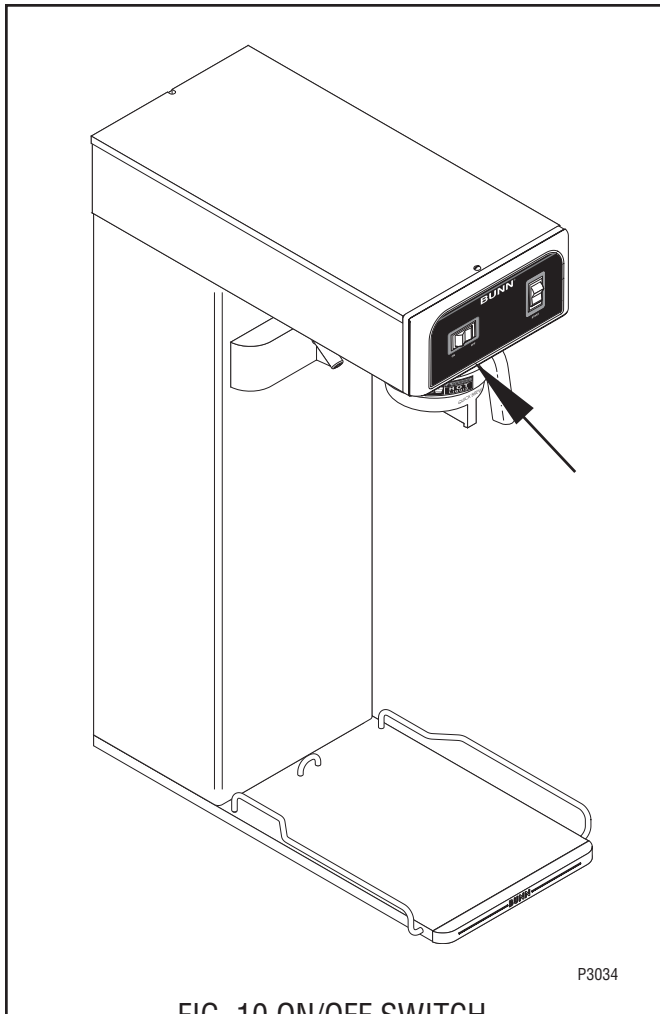


FIG. 10 ON/OFF SWITCH

Location:

The ON/OFF switch is located in the front of the hood, above and to the left of the brew funnel.

Test Procedure:

1. Disconnect the brewer from the power source.
2. Remove the black and white/violet wires from the switch terminals.
3. With a voltmeter, check the voltage across the black wire removed from the ON/OFF switch and the white wire on the 100 and 120 volt two wire, and red wire on the 230 volt two wire remaining on the switch terminal.
4. Connect the brewer to the power source. The indication must be:
 - a) 120 volts ac for two wire 120 volt models.
 - b) 230 volts ac for two wire 230 volt models.
 - c) 100 volts ac for two wire 100 volt models.

5. Disconnect the brewer from the power source.

If voltage is present as described, proceed to #6.
 If voltage is not present as described, refer to the Wiring Diagrams and check the wiring harness.

6. Check for continuity across the center and end terminals of the top row when the switch is in the "ON" position.

If continuity is present as described, replace the wires, the switch is operating properly.
 If continuity is not present as described, replace the switch.

Removal and Replacement:

1. Remove the wires from the switch terminals.
2. Compress the clips inside the hood and gently push the switch through the opening.
3. Push the new switch into the opening and spread the clips to hold the switch captive in the hood.
4. Refer to FIG. 11 when reconnecting the wires.

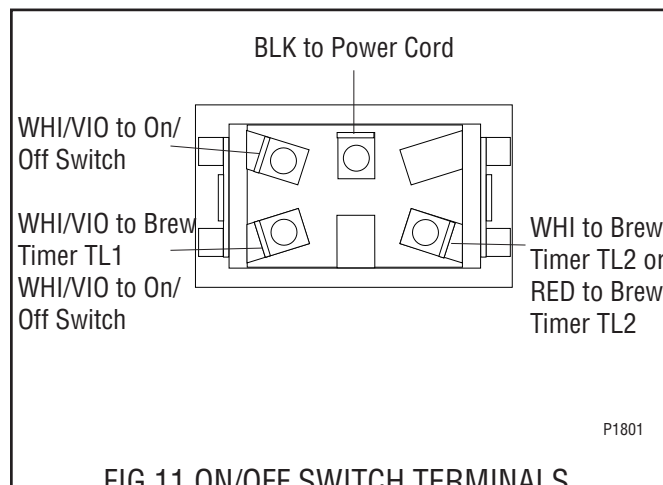


FIG. 11 ON/OFF SWITCH TERMINALS

SERVICE (cont.)
START SWITCH

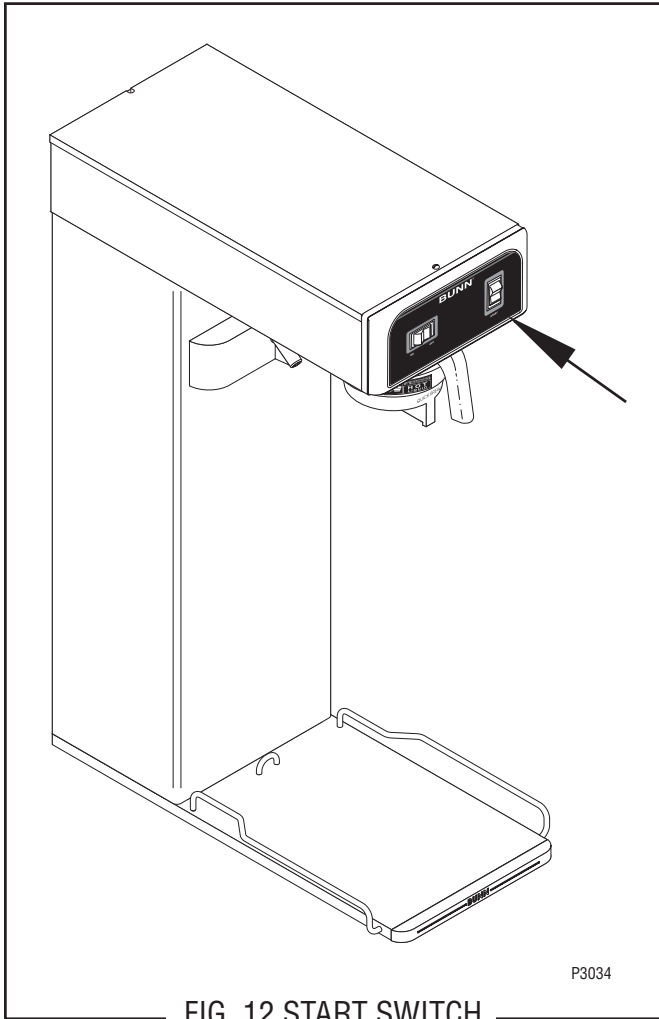


FIG. 12 START SWITCH

Location:

The start switch is located in the front of the hood, above and to the right of the brew funnel.

Test Procedure:

1. Disconnect the brewer from the power source.
2. Remove the wires from all terminals.
3. Check for continuity across the two terminals on the right side of the switch when it is held in the lower position. Continuity must not be present across these terminals in the upper position.

If continuity is present as described, reconnect the wires, the switch is operating properly. If continuity is not present as described, replace the switch.

Removal and Replacement:

1. Remove the wires from the switch terminals.
2. Compress the clips inside the hood and gently push the switch through the opening.
3. Push the new switch into the opening and spread the clips to hold the switch captive in the hood.
4. Refer to Fig. 13 when reconnecting the wires.

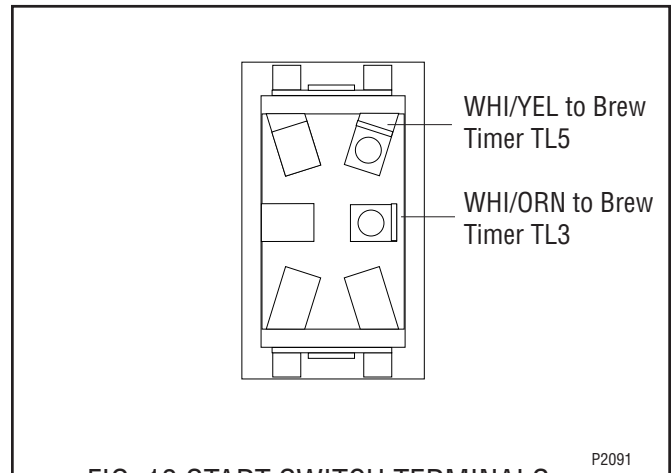


FIG. 13 START SWITCH TERMINALS

SERVICE (cont.)

UNSWEET/OFF/SWEET SWITCH (Sweetner Option)

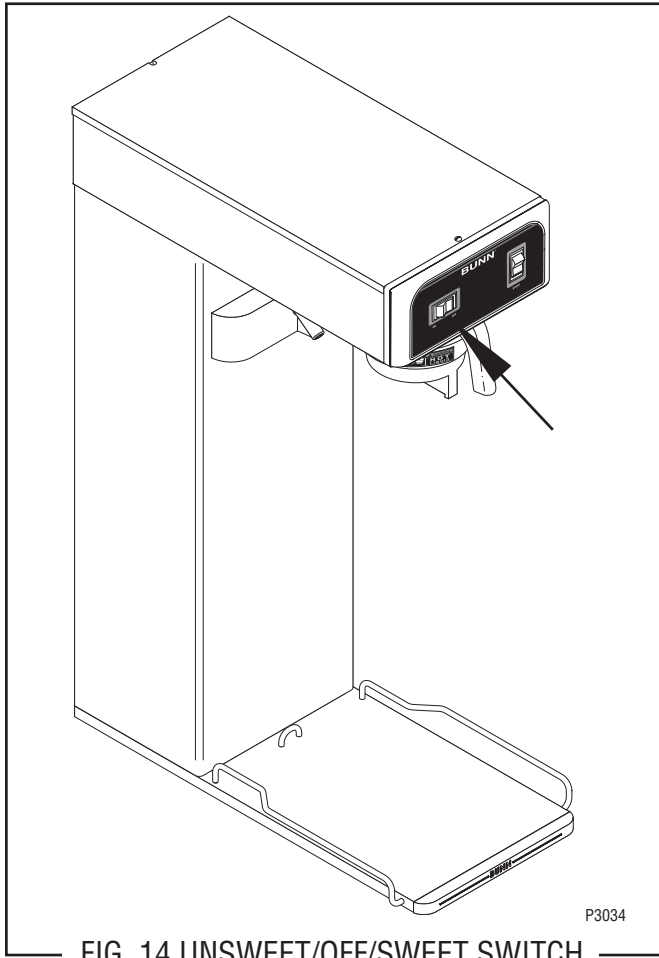


FIG. 14 UNSWEET/OFF/SWEET SWITCH

Location:

The UNSWEET/OFF/SWEET switch is located in the front of the hood, above and to the left of the brew funnel.

Test Procedure:

1. Disconnect the brewer from the power source.
2. With a voltmeter, check the voltage across the black wire and white wire on the selector switch.
3. Connect the brewer to the power source. The indication must be:
 - a) 120 volts ac for two wire 120 volt models.
 - b) 230 volts ac for two wire 230 volt models.
 - c) 100 volts ac for two wire 100 volt models.
4. Disconnect the brewer from the power source.

If voltage is present as described, proceed to #5.
If voltage is not present as described, refer to the *Wiring Diagrams* and check the wiring harness.

5. Disconnect the black and white wires from the center terminals.
6. Disconnect the brown/white and white/violet wires from the right side terminals.
7. Check for continuity across the center and right terminals in rows one through four when the switch is in the "SWEET" position.

If continuity is present as described, replace the wires on the right side and proceed to #8.

If continuity is not present as described, replace the switch.

8. Disconnect the white/violet wires on the left side terminal.
9. Check for continuity across the center and left side terminals in rows one through four when the switch is in the "UNSWEET" position.

If continuity is present as described, replace the wires the switch is operating properly.

If continuity is not present as described, replace the switch.

Removal and Replacement:

1. Remove the wires from the switch terminals.
2. Compress the clips inside the hood and gently push the switch through the opening.
3. Push the new switch into the opening and spread the clips to hold the switch captive in the hood.
4. Refer to FIG. 15 when reconnecting the wires.

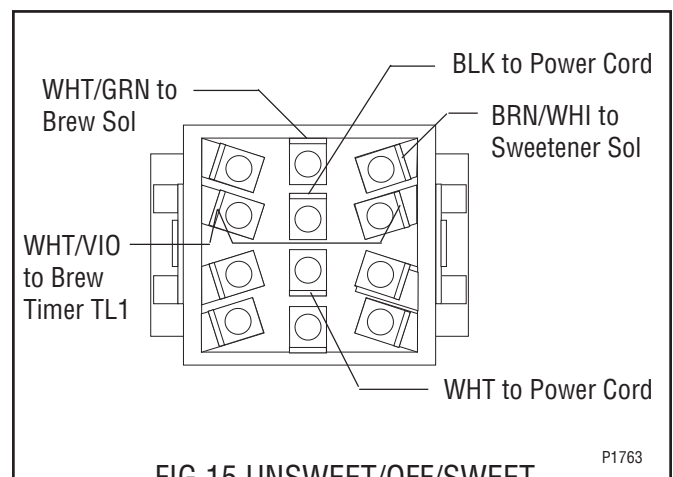


FIG. 15 UNSWEET/OFF/SWEET SWITCH TERMINALS

SERVICE (cont.)
SWEETNER SOLENOID VALVE

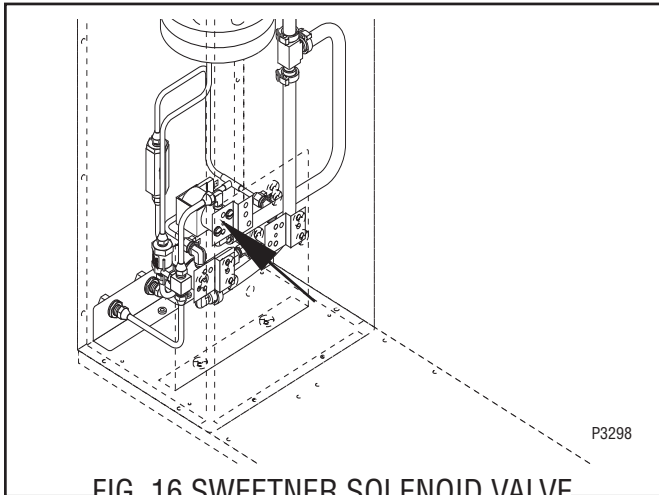


FIG. 16 SWEETNER SOLENOID VALVE

Location:

Viewing the brewer from the front, the sweetener solenoid is mounted on the right side of the solenoid mounting bracket which is secured to the bottom base housing.

Test Procedure:

1. Disconnect the brewer from the power source.
2. With a voltmeter, check the voltage across the brown/white and white/violet wires on the sweetener solenoid terminals when the UNSWEET/OFF/SWEET switch is in the "SWEET" position and the start switch is momentarily placed in the lower position. Connect the brewer to the power source. After the approximate setting on the delay dial, the indication must be:
 - a) 120 volts ac for two wire 120 volt models.
 - b) 230 volts ac for two wire 230 volt models.
 - c) 100 volts ac for two wire 100 volt models, remain for the approximate setting on the dilution dial, and then return to its previous indication.
3. Disconnect the brewer from the power supply.

If voltage is present as described, proceed to #4.
 If voltage is not present as described, refer to the Wiring Diagrams and check the wiring harness.

4. Remove both wires from the coil and check for continuity across the coil terminals. If continuity is present as described, reconnect the brown/white and white/violet wires and proceed to #5.

If continuity is not present as described, replace the solenoid valve.

5. Check the solenoid valve for coil action. Connect the brewer to the power source, place the UNSWEET/OFF/SWEET switch in the "SWEET" position and momentarily place the start switch in the lower position and release. At the start of a brew cycle, listen carefully in the vicinity of the solenoid valve for a "clicking" sound as the coil magnet attracts and at the end of the brew cycle when the plunger is released.
6. Disconnect the brewer from the power source.

If the sound is heard as described and sweetener will not pass through the solenoid valve, there may be a blockage in the sweetener line before or after the solenoid valve or, the solenoid valve may require inspection for wear, and removal of particles.
 If the sound is not heard as described, replace the solenoid valve.

Removal and Replacement:

1. Remove all wires from the solenoid valves.
2. Turn off the sweetener supply to the brewer.
3. Disconnect the water lines to and from the solenoid valves.
4. Remove the two #8-32 keps nuts holding the solenoid bracket to the mounting bracket.
5. Lift out the valve and bracket.
6. Remove the two #10-32 slotted-head screws holding the solenoid valve to the mounting bracket.
7. Securely install the new solenoid valve to the mounting bracket.
8. Attach the solenoid valve and bracket to the mounting bracket.
9. Securely fasten the sweetener and water lines to and from the solenoid valves.
10. Refer to Fig. 17 when reconnecting the wires.

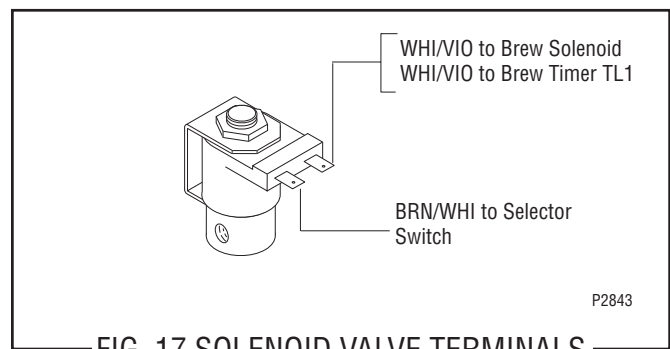


FIG. 17 SOLENOID VALVE TERMINALS

SERVICE (cont.)

TANK HEATER

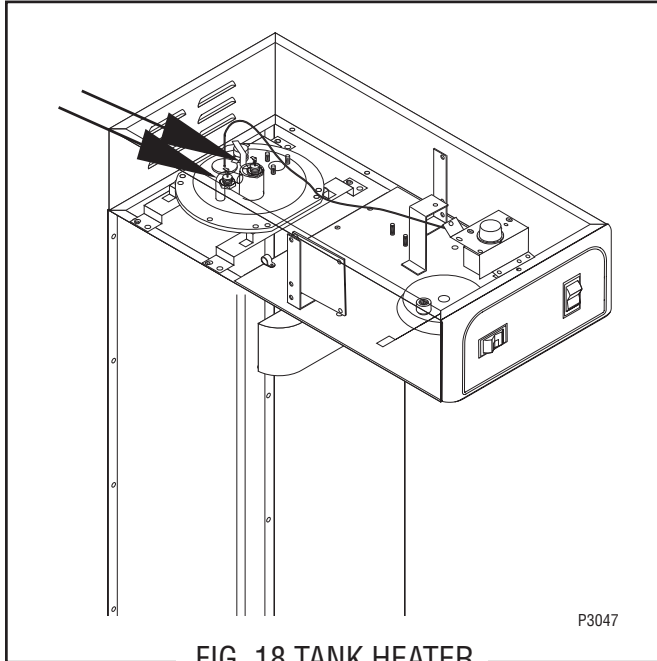


FIG. 18 TANK HEATER

Location:

The tank heater is located inside the tank and secured to the tank lid.

Test Procedures:

1. Disconnect the brewer from the power supply.
2. With a voltmeter, check the voltage across the black and white wires on 100 volt and 120 volt models or the black and red wires for 230 volt models. Connect the brewer to the power source. The indication must be:
 - a) 120 volts ac for two wire 120 volt models.
 - b) 230 volts ac for two wire 230 volt models.
 - c) 100 volts ac for two wire 100 volt models.
3. Disconnect the brewer from the power source.

If voltage is present as described, proceed to #4
If voltage is not present as described, refer to the *Wiring Diagrams* and check wiring harness.

4. Disconnect the black wire and the white wire or red wire from the tank heater terminals.
5. Check for continuity across the tank heater terminals.

If continuity is present as described, reconnect the wires, the tank heater is operating properly.
If continuity is not present as described, replace the tank heater.

NOTE: If the tank heater remains unable to heat, remove and inspect heater for cracks in the sheath.

Removal and Replacement:

1. Disconnect the black wire and the white or red wire from the tank heater terminals.
2. Remove sprayhead and the hex nut securing the sprayhead tube to the hood. Set aside for reassembly.
3. Disconnect vent tube and water inlet tube.
4. Remove the six #10 thread cutting screws securing the tank lid to the tank.
5. Remove the tank lid with limit thermostat, sprayhead tube, tank heater and vent tube.
6. Remove the two hex nuts securing the tank heater to the tank lid. Remove tank heater with gaskets and discard.
7. Install new tank heater with gaskets on the tank lid and secure with two hex nuts.
8. Install tank lid with limit thermostat, sprayhead tube, tank heater and vent tube using six #10 thread cutting screws.
9. Secure sprayhead tube to hood using a hex nut.
10. Install sprayhead.
11. Connect vent tube and water inlet tube to fitting.
12. Reconnect the wires to the limit thermostat, tank heater. See limit thermostat section in this manual when reconnecting wires.
13. Refer to Fig.19 when reconnecting the tank heater wires.

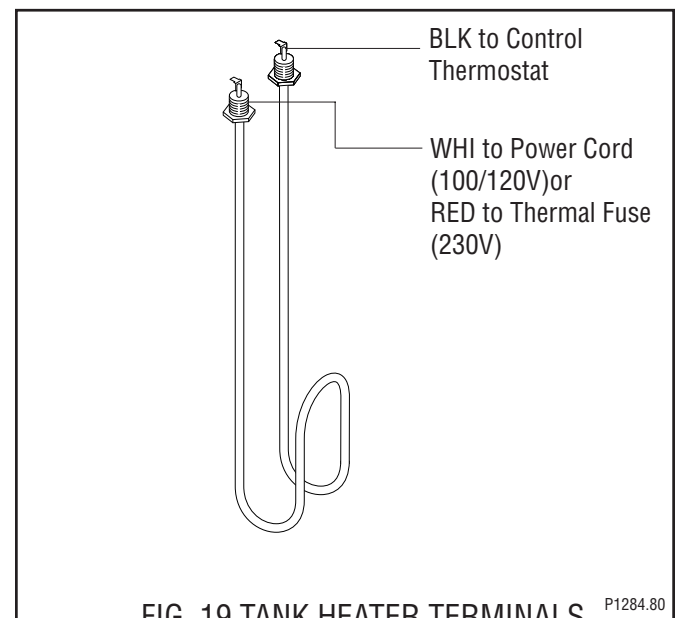
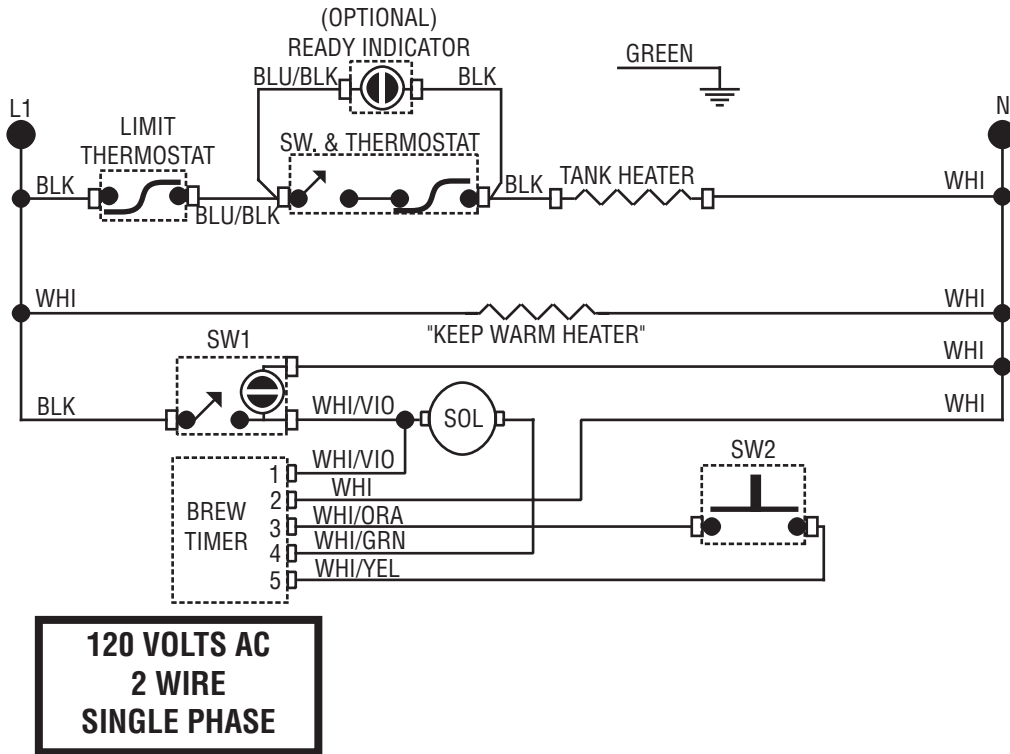
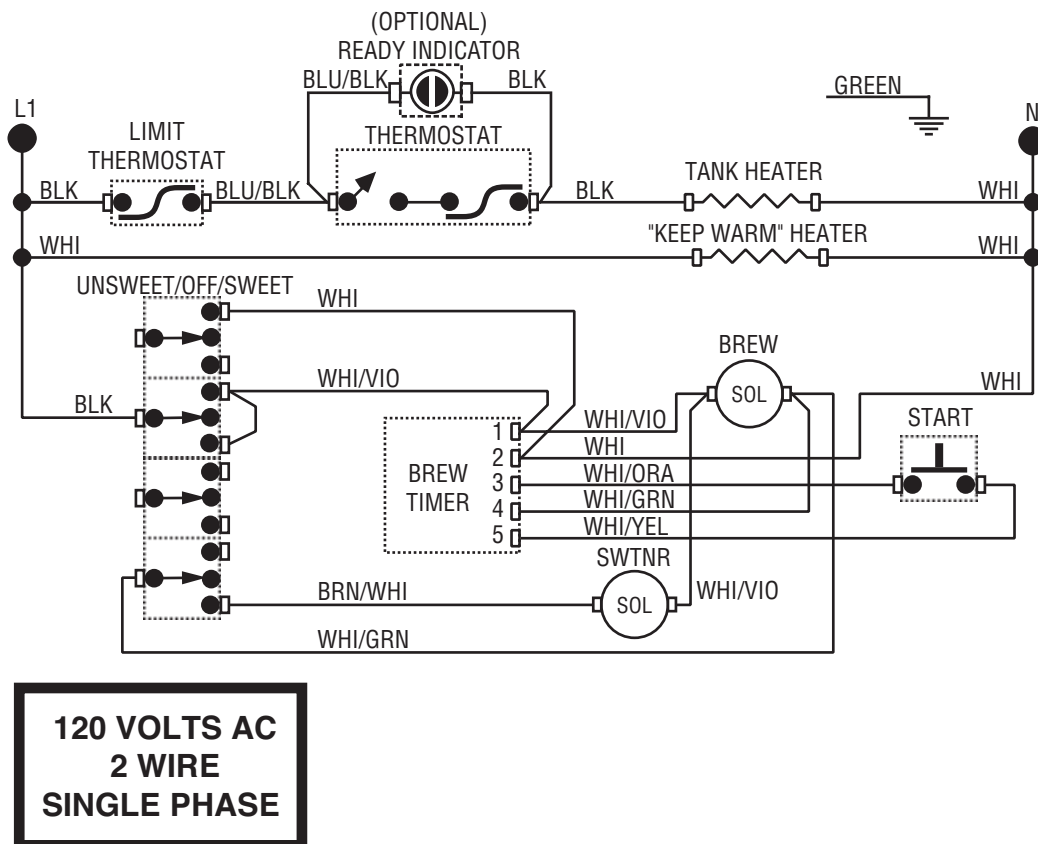


FIG. 19 TANK HEATER TERMINALS

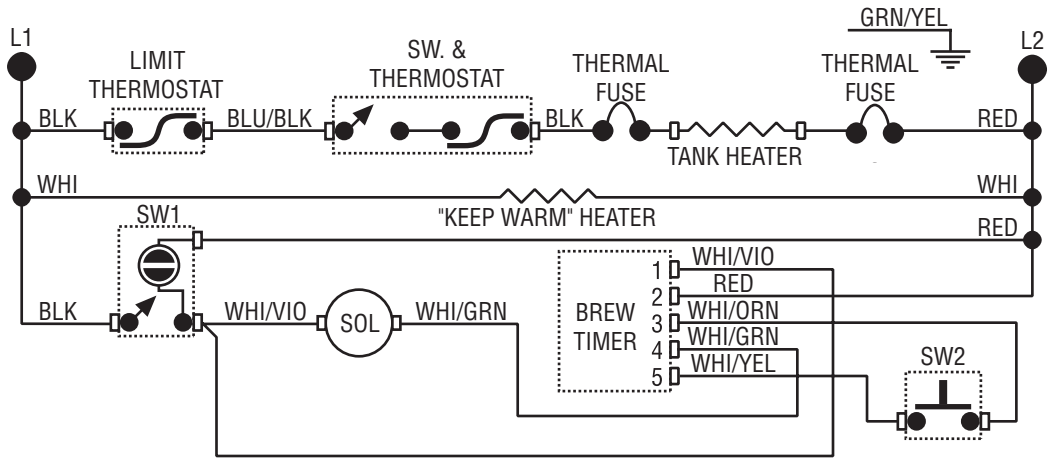
SCHEMATIC WIRING DIAGRAM TB3Q



SCHEMATIC WIRING DIAGRAM TB3Q W/SWEETENER



SCHEMATIC WIRING DIAGRAM TB3QA



**230 VOLTS AC
2 WIRE
SINGLE PHASE**

TB3, TB3Q & TDO-4

DAILY BREWING & CLEANING INSTRUCTIONS

BREWING**STEP 1**

Begin each brew cycle with a clean, empty funnel and server.

**STEP 2**

Insert **one tea pouch** into the funnel.

**STEP 3**

Slide the loaded brew funnel into the funnel rails until it stops. Place the power switch in the ON position. Momentarily press and release the START switch.

**STEP 4**

When tea no longer drips from the funnel tip, carefully remove the brew funnel and discard the used tea pouch. Return the power switch to OFF to prevent a false start. Thoroughly clean and sanitize the brew funnel and funnel tip screen.

**STEP 5**

Fresh tea is available at the faucet. Drain the reservoir before starting another brew cycle.

CLEANING**STEP 1**

Turn the faucet in a counter-clockwise direction and remove the faucet from the dispenser. Unscrew the faucet cap from the faucet body and disassemble all faucet parts.

**STEP 2**

Transfer these parts to a three compartment sink for cleaning. Fill the first sink with a soap solution using a mild detergent, the second sink is used for clean rinse, and the third sink with a sanitizer solution (75°F warm chlorine solution of at least 50-100 ppm).

**STEP 3**

Use a brush to thoroughly scrub the faucet body. (BOM #00674.0000)

**STEP 4**

Allow the parts to soak in a sanitizer solution for a minimum of ten minutes.

**STEP 5**

Remove the faucet parts from the sanitizer solution and rinse thoroughly. Allow parts to air dry over night.

DO NOT KEEP BREWED BEVERAGES OVERNIGHT

TB3, TB3Q & TDO-4

DAILY BREWING & CLEANING INSTRUCTIONS

CLEANING (Continued)



STEP 6

Thoroughly clean the entire inside surface of the dispenser and the faucet shank using a small brush (BOM #00674.0000) mild detergent and water solution. Thoroughly rinse the dispenser with clean water.



STEP 7

Prepare a sanitizer solution in a clean bucket (1/4 gallon). Use a commercial sanitizer that has 50-100 ppm of available chlorine with a concentration level of at least 3% available chlorine (KAY-5 Sanitizer). Follow the mixing instructions to ensure 100 ppm of available chlorine.



STEP 8

Pour a small amount of sanitizer solution into the dispenser. Use a small brush (BOM #00674.0000) to clean all the way through the faucet shank. Repeat several times.



STEP 9

Thoroughly rinse the dispenser with clean water.



STEP 10

Allow the dispenser to air dry over night



STEP 11

Assemble the faucet components and attach the faucet to the dispenser turning clockwise.



STEP 12

Once a week, fill the dispenser with a chlorine solution (75°F warm chlorine solution of at least 50-100 ppm).



STEP 13

Draw a small amount (2 oz.) of presoak through the faucet making contact with the faucet components. Allow the dispenser to soak over night. The next morning, perform the daily cleaning procedures on the faucet and dispenser.



STEP 14

Once a month, replace the faucet seat cup (B.O.M. #00600.0000). Discard the old seat cup.



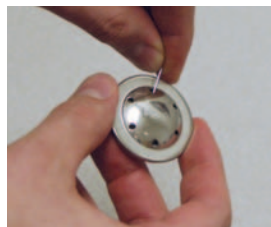
STEP 15

The faucet assembly (B.O.M. #03260.0001) can be ordered for replacement.



STEP 16

Clean and sanitize the brew funnel, funnel tip and screen assembly.



STEP 17

Remove and thoroughly rinse the sprayhead. The holes must be open and clear of any mineral deposits.



STEP 18

Wipe the sprayhead panel clean with a damp cloth.



STEP 19

Insert the deliming spring into the sprayhead tube until about an inch is visible and move it in and out five or six times. Insert the spring into the air vent hole in the sprayhead panel and move it in and out five or six times. Reinstall the sprayhead.



STEP 20

Wipe down the entire outside surface of the brewer with a clean damp cloth.