



START UP PROCEDURE

WATER CONNECTION

The National Sanitation Foundation requires the following for an NSF approved water hook-up:

- A quick disconnect water connection or enough coiled tubing so that the machine can be moved for cleaning underneath.
- An approved backflow prevention device, such as a double check valve to be installed between the machine and water supply.
A 1/4" male flare adapter is provided. Installation to a water filter system is recommended to prevent lime and scale build-up in the machine.
- Water pipe connections and fixtures directly connected to portable water supply shall be sized, installed and maintained in accordance with federal, state and local codes.
- Flush the water line to purge any debris from the supply line.
Connect a 1/4" pressurized water line to the 1/4" male connection (on rear of brewer) and turn the water supply on.
 - a) Minimum water pressure to the machine: 30 psi
 - b) Maximum water pressure to the machine: 80 psi

NOTE: Single head machines may be used without a pressurized water supply. (See Pour-Over Mode section)

ELECTRICAL CONNECTION

NOTE: Wiring connections should be performed by a qualified technician. (Refer to serial tag to verify model number of your machine)

- Remove front panel.
- Connect electrical service through rear of machine to terminal block (inside front panel) marked L1, N, and L2. (See Figures A and B)
- On dual volt units, flip voltage switch (inside front panel next to terminal block) to 120V for 120 Volt service or 240V for 120/208, or 120/240 Volt service. (See Figures A, B and table below)
- Re-install front panel.
- Turn on (plug-in) electrical service to brewer.
- Water tank will fill after a 7-second delay. The machine will make a hissing sound when this occurs. On single head models, allow approximately 1.5 minutes for the brewer to fill. On two head models, allow approximately five minutes for the brewer to fill.

NOTE: If water supply is inadequate or not connected, display will read "P-O" after 4 minutes of fill time (Refer to Pour-Over Mode section). If Fill Cycle times out and display reads "P-O" before tank is full, turn unit OFF then ON again to reset and continue filling.

- The tank will begin heating slightly before machine fills.
- Turn brewer on by pressing ON/OFF switch in front of machine. (Light will illuminate)
- The brewer settings can be adjusted through the front touch pad. (Refer to Adjustments section)
- The water will be hot and the brewer will be ready to brew when "READY" light illuminates.
- Set Brew volume. (Refer to Setting Brew Volume section)

POWER REQUIREMENTS: (Refer to serial tag for voltage to be supplied.)

Applied Volts	Models	Watts	Amps	NEMA Plug	Cord AWG	Connections
120	B-3, B-3WL, B-3WR	1800	15	5-15P, 5-20P for CUL	3X14	Hot to L1
	B-SAP, B-ID	1780	14.9			Neutral to N
120/208	B-3, B-3WL, B-3WR	2920	14.1	L14-20P	4X12	Hot to L1
	B-SAP, B-ID, B-DAP, B-DGP	2620	12.6			Neutral to N
	B-6	5110	24.6	L14-30P	4X10	Hot to L2
	B-DAP, B-DGP (30A)	4510	21.7			Ground to ground screw
120/240	B-3, B-3WL, B-3WR	3800	15.9	L14-20P	4X12	Hot to L1
	B-SAP, B-ID, B-DAP, B-DGP	3500	14.6			Neutral to N
	B-6	6600	27.5	L14-30P	4X10	Hot to L2
	B-DAP, B-DGP (30A)	6000	25			Ground to ground screw

For 120V, 15A or 20A Service
(2 Wire + Ground)

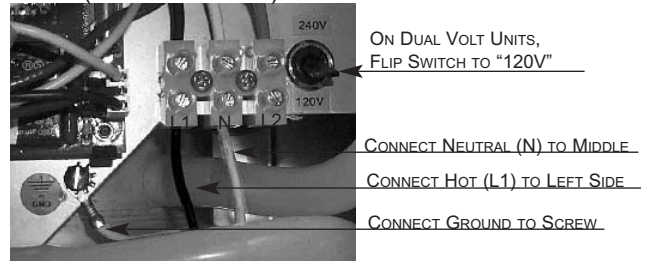


Figure A

For 120/208-240V, 20A Service
(3 Wire + Ground)

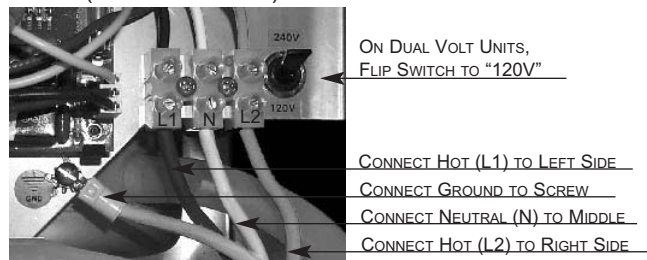


Figure B

FACTORY SETTINGS (for each dispense head)

- Tank temperature is set at 200 degrees F.
- Brew time is pre-set at 2:20. (Volume/time to be set on-site)
- Pulse Brew is set for 1 pulse, 20 sec on, 20 sec off.
- Warmer Energy Savings mode is set for 60-minutes. ("OFF" for models without warmers)
- Low Temp / No Brew option is set to "OFF" or disabled.
- Pour over setting override is set to "no" or plumb in.
- Settings lock-out jumper on controller is set in "unlock" position.

ADJUSTMENTS:

Refer to B-Series Programming Chart on page 5.

NOTE: Set each dispense head individually on two head models with two controllers and serial numbers A166225 and lower (without a -P suffix). Tank temperature must be set to the same setting on both heads in order for the unit to operate properly.

Tank Temperature:

Left display controls this.

- Press-and-hold both "up" and "down" arrows for 5 seconds.
- The display will indicate either "d F" or "d C". (Fahrenheit or Celsius)
- Press up or down arrow to change from one scale to the other.
- Press "BREW" button to accept and proceed to the next setting.
- The display will read temperature value in the scale previously selected.
- Press up or down arrow to change temperature value.
- Press "BREW" button to accept and proceed to the next setting.

Brew Time:

- The display will read "br ". (brew time)
- Press "BREW" button to proceed to the next setting.
- The display will read the set brew time in minutes and seconds. (ex: 2.20)
- Press up or down arrow to change time value.
- Press "BREW" button to accept and proceed to the next setting.

Pulse Brewing Mode:

- The display will read "P-b". (pulse brew)
- Press "BREW" button to proceed to the next setting.
- The display will read "OFF" - "1"- "6".
- Press up or down arrow to change number of pulses.
- Press "BREW" button to proceed to the next setting.
- The display will read "0.05" - "0.30".
- Press up or down arrow to change pulse-on time for each pulse in seconds.
- Press "BREW" button to proceed to next setting.
- The display will read "0.05" - "0.30".
- Press up or down arrow to change pulse-off time for each pulse.
- Press "BREW" button to accept and proceed to the next setting.

Energy Savings Mode (Warmer shut-off):

- The display will read "E-S". (energy savings)
- Press "BREW" button to proceed to the next setting.
- The display will read "Off" - "10" - "240" in multiples of 10.
- Press up or down arrow to change time value in minutes. Must be "OFF" for models without warmers.
- Press "BREW" button to accept and proceed to the next setting.

Low Temp/No Brew Mode:

- The display will read "Ltn" (Low Temp/No Brew).
- Press "BREW" button to proceed to the next setting.
- Press up or down arrow to change to "ON" or "OFF".
- Press "BREW" to accept and proceed to the next setting.

ADJUSTMENTS (cont.):

Refer to B-Series Programming Chart on page 5.

Pour-Over Mode

Left display controls this.

- The display will read "P-O" (pour-over).
- Press "BREW" button to proceed to the next setting.
- Press up or down arrow to change to "YES" or "NO". Plumbed-in units must be set to "NO".
- Press "BREW" button to accept and exit menu.

SETTING BREW VOLUME:

- Remove brew basket & spray head.
- Make sure "READY" light is on.
- Place empty server under exit nozzle to capture water.
- Press "BREW" button to fill water lines.
- Press "BREW" button again after approximately 10 seconds to stop water flow.
- Empty server then place under exit nozzle.
- Press-and-hold "BREW" button for 5 seconds until display reads "Pro", then release.
- Press-and-release "BREW" button to initiate brew.
- The brew valve opens and the time begins to count up on display.
- Water will flow into decanter.
- When water level reaches desired amount, press-and-release "BREW" button again.
- Time value will flash in the display.
- Press-and-release "BREW" button within 10 seconds to set time.
- Reinstall spray head and brew basket.
- Repeat process for each brew head.

BREWING PROCEDURE:

- Place a new paper filter in the brew basket.
- Put desired amount of ground coffee in brew basket. (3.5 oz (100 grams) maximum)
- Place decanter or airpot under brew basket.
- Be sure lower warmer is on. (if available)
- Press "BREW" button to start brewing.

The "READY" light will flash for the entire brew cycle.

Water will dispense for the set time of brew, and light will flash after water is dispensed to denote "drip time".

(ex.. Time set for 2:30, water is dispensed for 2:30, and light continues to flash for another 1:15 for total brew cycle of 3:45.)

Do not remove the brew basket while the "READY" light is blinking.

A stop function is added to the "BREW" switch. Pressing the "BREW" switch during a brew cycle will stop the brew. Coffee will need to be emptied from brew basket and brew procedure will need to be started again.

After a brew cycle, the tank must reheat and the "READY" light must be lit before starting the next cycle. Reheat (recovery) time is dependent on voltage applied and inlet water temperature.

Approximate reheat times for a 64 oz decanter are as follows:

120 Volt supply: 3-4 minutes; 120/208 Volt supply: 30-90 seconds; 120/240 Volt supply: 0 – 30 seconds

PULSE BREWING MODE:

- When mode is "ON" (number of pulses, pulse on, and pulse off time), and a brew cycle is initiated, water is dispensed for the ON time then stops for the OFF time to define one pulse. This repeats for number of pulses programmed. After pulsing is finished, the water continues to dispense for the remaining set time. During the pulse-off time, the water infuses the coffee and the bed rises to allow for better extraction.
- When mode is "OFF" and a brew cycle is initiated, water is dispensed continually for the entire set time without any delay.

ENERGY SAVINGS MODE (WARMER SHUT-OFF):

(ONLY FOR MODELS WITH WARMERS)

When set time has elapsed after a brew cycle, the lights above the warmer switches will flash and the warmers will automatically turn off. To stop lights from flashing, press one of the warmer switches. To turn warmers back on, press corresponding warmer switch. The timer will reset when a new brew cycle is initiated.

Refer to Adjustments section to adjust time values or simply disable mode. Time values may be adjusted from OFF to 10 minutes to 240 minutes in increments of 10 minutes.

LOW TEMP/NO BREW MODE:

When set to "ON", a brew cycle cannot be initiated until tank is hot and "READY" light is ON.

When set to "OFF", a brew cycle may be initiated at any time.

POUR-OVER MODE:

Note: Not available on B-6, B-DAP, and B-DGP (twin) models.

Brewers are capable of operating without a pressurized water source.

If there is no pressurized water source, brewer can be set-up as a pour-over.

1. If no water is in the tank to begin with, pour about three decanters of fresh water into the basin (Fig. D). A small amount of water should remain in the basin.
2. If tank already has water, pour fresh water into basin (Fig D) until a small amount is in the basin and no longer drains into the tank.
3. Place server under the EMPTY brew basket.
4. Turn power on to machine
5. Go into Settings Mode and change "P-O" to "YES".
6. Display will read "P-O". (Fig C)
7. Wait until Ready light illuminates.
8. Press-and-release Brew button to initiate a brew cycle.
9. Water should stop flowing before READY light stops flashing to create a "short pot".
10. After tank water recovers and READY light illuminates, brewer is ready to brew coffee. See Brew Procedure.



Figure C



Figure D

If brewer is in operation (connected to a pressurized water source) and water is shut off for four minutes, display will read "P-O" (Fig C) and brewer can be used as a pour-over:

1. Place server under the EMPTY brew basket.
 2. Wait until Ready light illuminates.
 3. Press-and-release Brew button to initiate a brew cycle.
 4. Water should stop flowing before READY light stops flashing to create a "short pot".
 5. After tank water recovers and READY light illuminates, brewer is ready to brew coffee. See Brew Procedure.
- If water pressure problem is resolved, simply press Off then On.

Brew Procedure while brewer is in pour over "P-O" mode:

1. Wait until tank water heats up and READY light is on.
2. Place brew basket in place with ground coffee inside filter.
3. Pour a full (64oz) maximum container of fresh water into basin at top/front of brewer. (Fig D)
4. Place container under brew basket.
5. Press-and-release "BREW" button to initiate brew cycle.

COUNTER:

The brewer is equipped with a counter that displays the total number of brew cycles for each dispense head. After turning the brewer on, the number will scroll across the display two times and then clears.

CLEANING CABINET

- The outside of the brewer can be cleaned with a damp cloth, a household dusting spray or a stainless steel cleaner. Do not use an abrasive such as Scotchbrite or Brillo pads. These may mar the finish.
- Wipe the underside of the cabinet hood with a clean cloth. Be especially careful when using soap or detergent around the sprayhead. Any soap left on the deflector may impart an unpleasant taste to the first brews.

CLEANING WARMERS

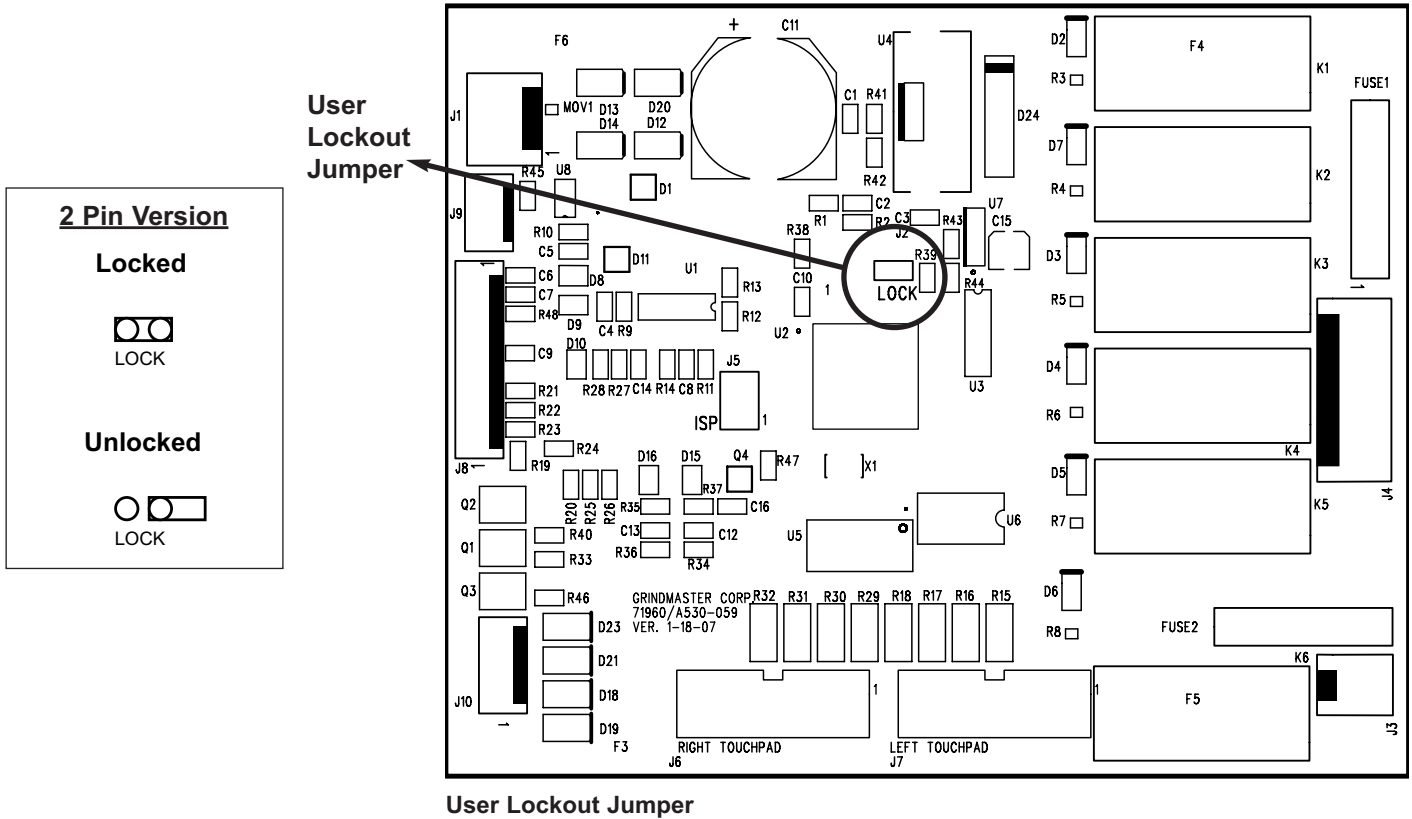
The warmer plates are easy to clean and will maintain its appearance longer if cleaned regularly. Coffee stains can be wiped off with a damp cloth. Use detergent or sanitizer for heavy deposits, but refrain from using abrasives.

CLEANING BREW BASKET, AIRPOTS AND DECANTERS

Use commercial grade urn cleaner (as directed by manufacturer) and rinse thoroughly.

User Lockout

User Lockout is achieved via the position of the LOCK jumper on the board header. Locate the header on the board (shown below) and place the jumper in the desired position. In the *Locked* position all menus in this document are locked out, and the unit will only allow brewing or grinding functions. There are two versions of the header, 10 pin and 2 pin. Both configurations are shown below.



Controller Fuse Sizes

Fuses















Controller (pn A530-059) uses (2) 5mm x 20mm 5 Ampere fuses.

Controller (pn A530-056) uses (2) fuses - 1.25" x 0.25" 3AG series 312.

- (1) is a 1 Ampere 3AG-1
- (1) is a 5 Ampere 3AG-5

Programming for B-Series

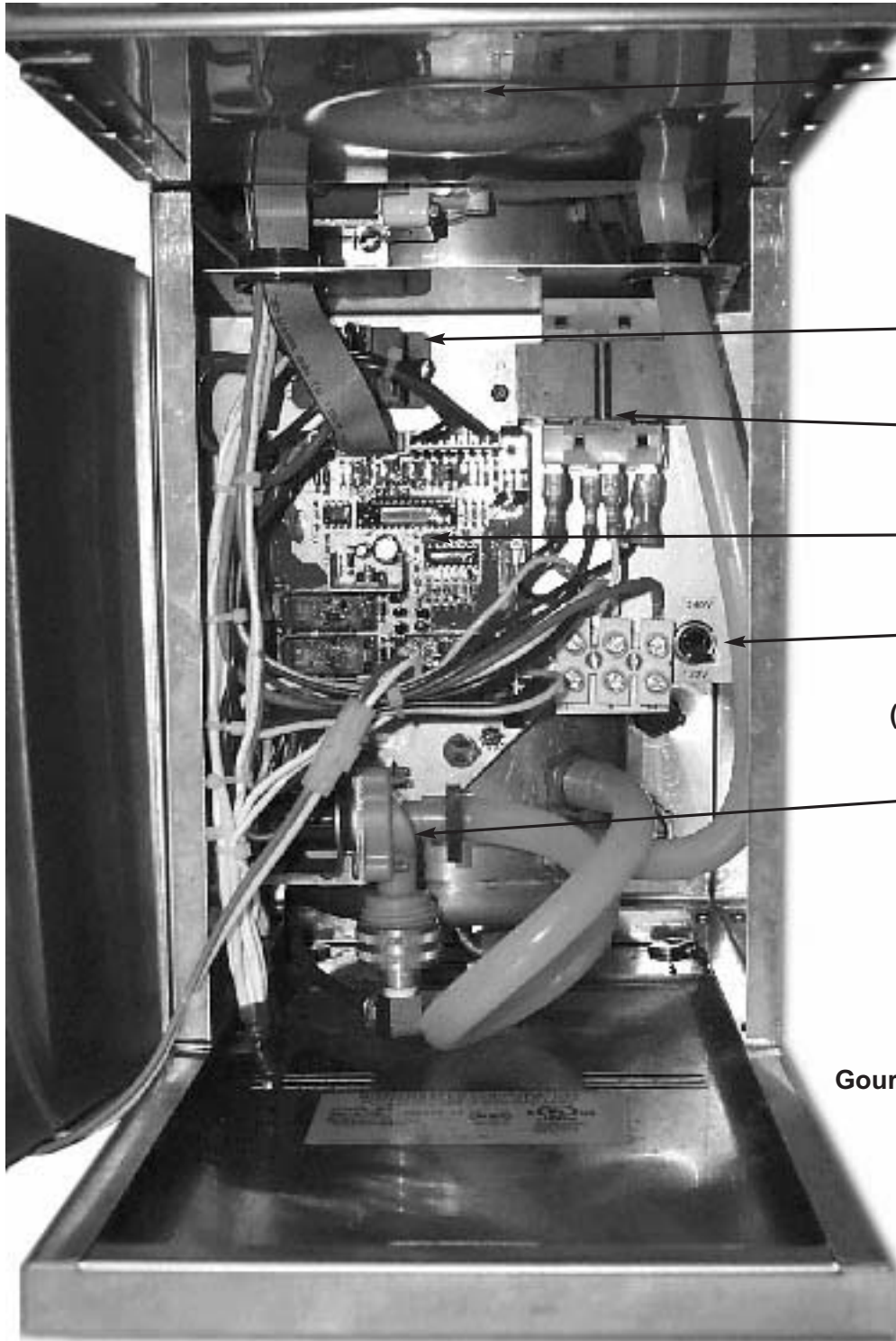
PRESS-AND-HOLD UP & DOWN ARROWS FOR 5 SECONDS.
 DISPLAY WILL READ AS FOLLOWS:

	DISPLAY READING	ADJUST	ADVANCE
TEMP SCALE	<input type="text" value="° C"/> OR <input type="text" value="° F"/>	△ ▽	
TANK TEMP (170-202F)	<input type="text" value="93"/> OR <input type="text" value="200"/>	△ ▽	
BREW TIME	<input type="text" value="br"/>		
BREW TIME (0:01-5:00)	<input type="text" value="2:30"/>	△ ▽	
PULSE BREW	<input type="text" value="P-b"/>		
# OF PULSES (OFF, 1 - 6)	<input type="text" value="OFF"/> TO <input type="text" value="6"/>	△ ▽	
PULSE ON TIME (0:05-0:30)	<input type="text" value=".20"/>	△ ▽	
PULSE OFF TIME (0:05-0:30)	<input type="text" value=".20"/>	△ ▽	
ENERGY SAVINGS (WARMER SHUT-OFF)	<input type="text" value="E-S"/>		
SHUT-OFF TIME (OFF, 10-240 MINUTES)	<input type="text" value="OFF"/> TO <input type="text" value="240"/>	△ ▽	
LOW-TEMP/NO-BREW	<input type="text" value="Ltn"/>		
LOW-TEMP/ NO-BREW	<input type="text" value="On"/> OR <input type="text" value="OFF"/>	△ ▽	
POUR-OVER MODE	<input type="text" value="P-0"/>		
POUR-OVER MODE	<input type="text" value="YES"/> OR <input type="text" value="no"/>	△ ▽	

Models B-3, B-3WR, B-3WL, B-SAP & B-ID Parts List

serial numbers without a -P suffix only

Model B-3 Dual Voltage Unit Shown



A12124
Spray Head
Deflector Kit

A531-072
Heater Relay,
12VDC coil

A554-109
Transformer
30VA, 24V ct

A71934
Controller Kit*

A61467
Switch,
120 or 240 Heater
(Dual volt models only)

A71683
24VAC Inlet Valve

A71619
Brew Basket
Assembly
(not shown)

A71431
Gourmet Brew Basket Assy
(optional for B-SAP)
(not shown)

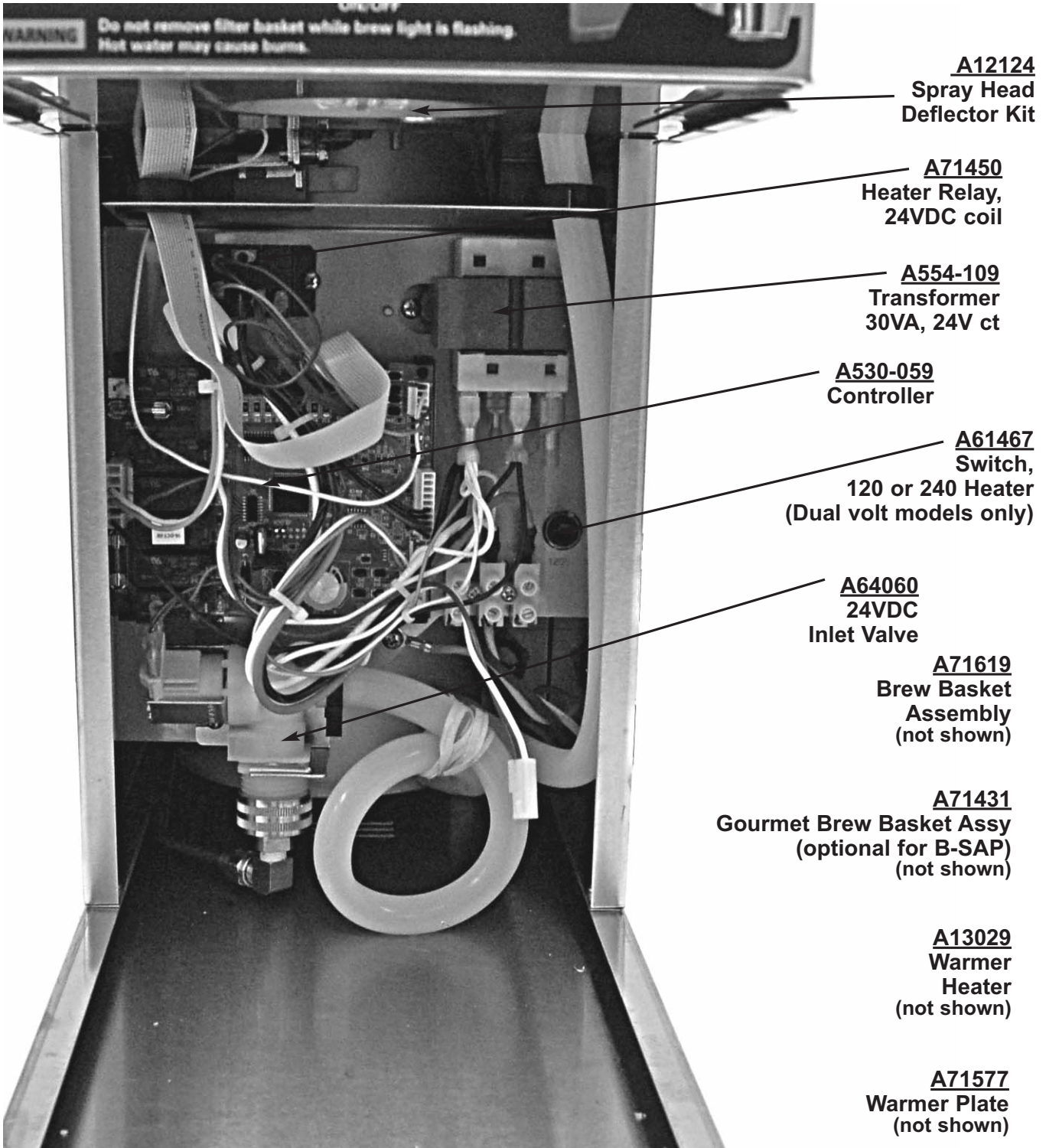
A13029
Warmer
Heater
(not shown)

A71577
Warmer Plate
(not shown)

* Each kit includes: (1) A530-056 controller and (1) A71933 touchpad

Models B-3, B-3WR, B-3WL, B-SAP & B-ID Parts List
serial numbers with a -P suffix only

Model B-3 Dual Voltage Unit Shown



A12124
Spray Head
Deflector Kit

A71450
Heater Relay,
24VDC coil

A554-109
Transformer
30VA, 24V ct

A530-059
Controller

A61467
Switch,
120 or 240 Heater
(Dual volt models only)

A64060
24VDC
Inlet Valve

A71619
Brew Basket
Assembly
(not shown)

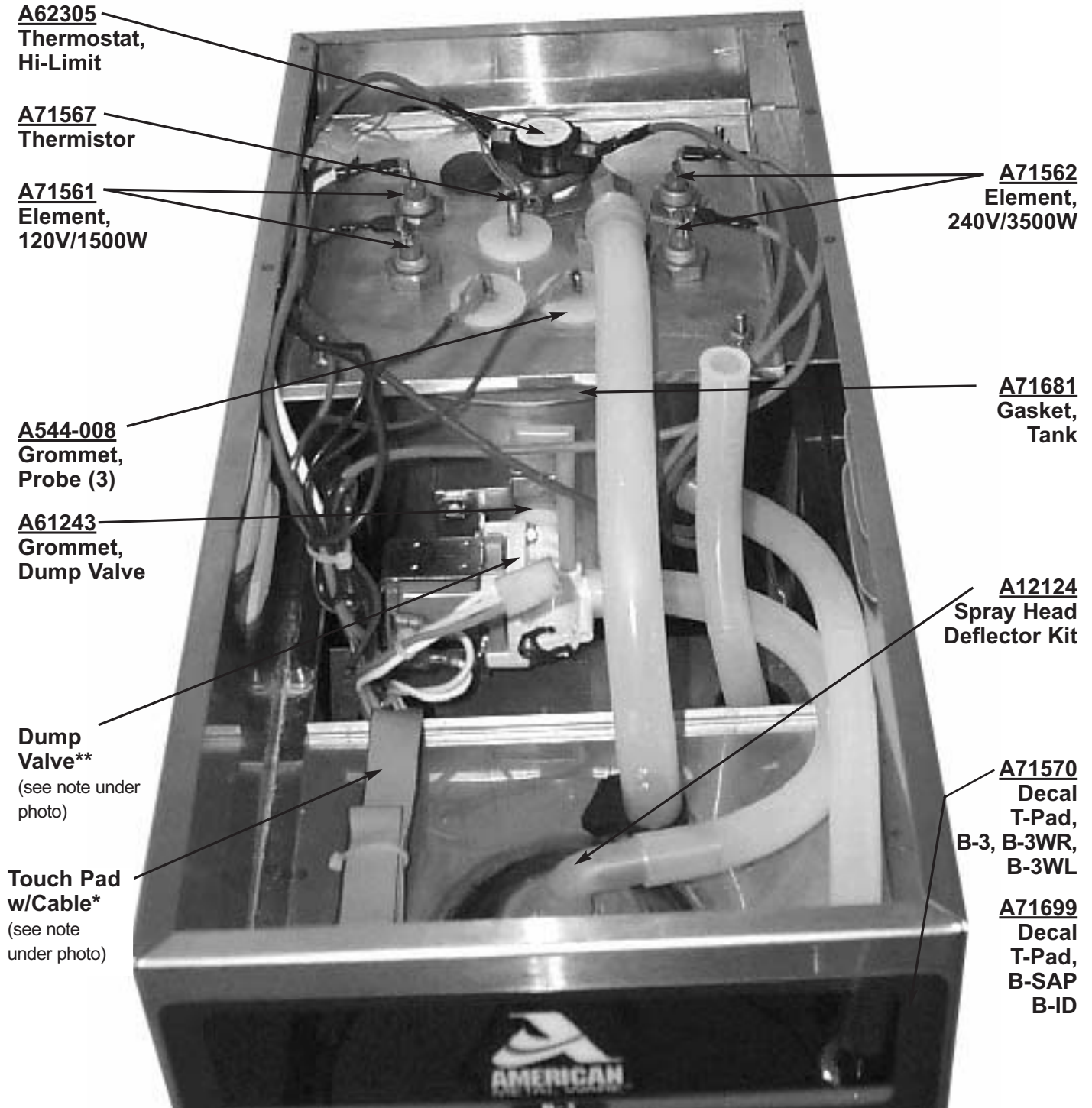
A71431
Gourmet Brew Basket Assy
(optional for B-SAP)
(not shown)

A13029
Warmer
Heater
(not shown)

A71577
Warmer Plate
(not shown)

Models B-3, B-3WR, B-3WL, B-SAP & B-ID Parts List

Dual Voltage Unit Shown



A62305
Thermostat,
Hi-Limit

A71567
Thermistor

A71561
Element,
120V/1500W

A71562
Element,
240V/3500W

A544-008
Grommet,
Probe (3)

A71681
Gasket,
Tank

A61243
Grommet,
Dump Valve

A12124
Spray Head
Deflector Kit

Dump Valve**
(see note under
photo)

A71570
Decal
T-Pad,
B-3, B-3WR,
B-3WL

**Touch Pad
w/Cable***
(see note
under photo)

A71699
Decal
T-Pad,
B-SAP
B-ID

Touch Pad w/ Cable:

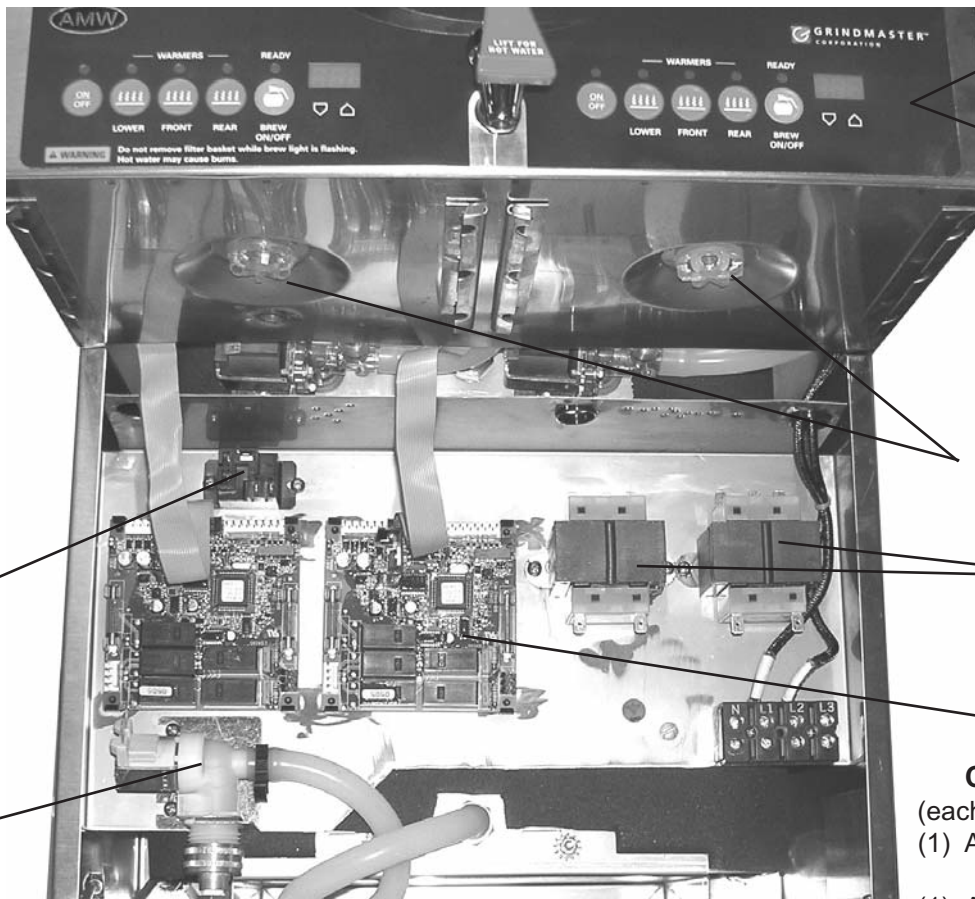
* A71933: used on serial numbers without a -P suffix and with controller # A530-056
A530-061: used on serial numbers with a -P suffix and with controller # A530-059

Dump Valve:

** A71684 (24VAC): used on serial numbers without a -P suffix and with controller # A530-056
A64062 (24VDC): used on serial numbers with a -P suffix and with controller # A530-059

Models B-6, B-DGP & B-DAP Parts List
 serial numbers without a -P suffix only

Model B-6 Shown



A71822
 Decal,
 T-pad
 B-6

A71823
 Decal,
 T-pad,
 B-DAP,
 B-DGP

A548-128
 Deflector Spray
 Head (2)

A61481
 Transformer (2)
 40VA, 24VCT

A71934
 Controller Kit (2)
 (each kit includes:
 (1) A530-056 controller
 and
 (1) A71933 touchpad)

A531-072
 Heater
 Relay,
 12VDC coil

A71683
 Valve, Inlet
 24VAC

A71619
 Brew Basket Assy. (not shown) (2)

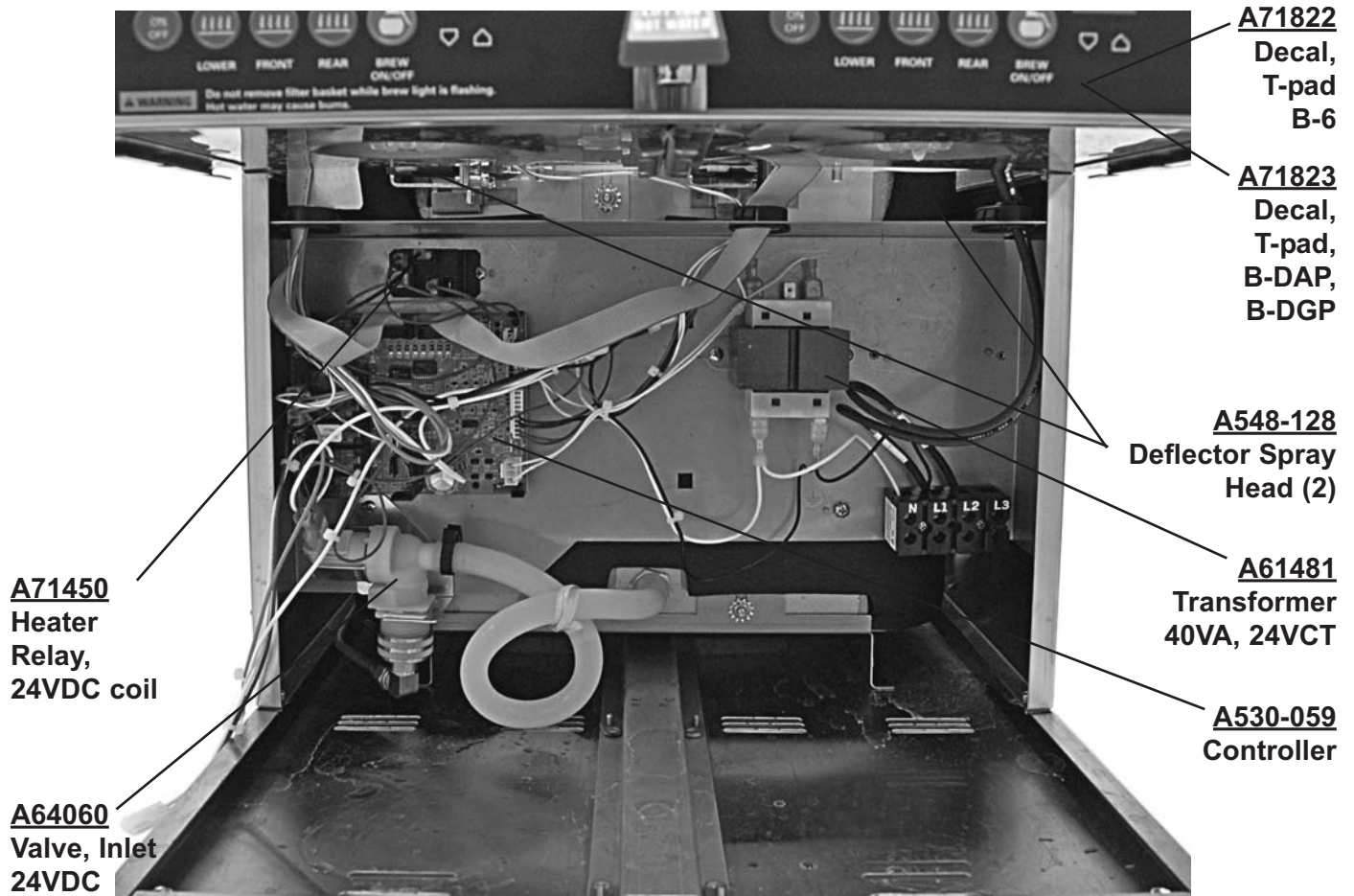
A13029
 Warmer Heater (not shown)

A71577
 Warmer Plate (not shown)

A71431
 Gourmet Brew Basket Assy (optional for B-DAP, B-DGP) (not shown)

**Models B-6, B-DGP & B-DAP Parts List
with a -P suffix only**

Model B-6 Shown



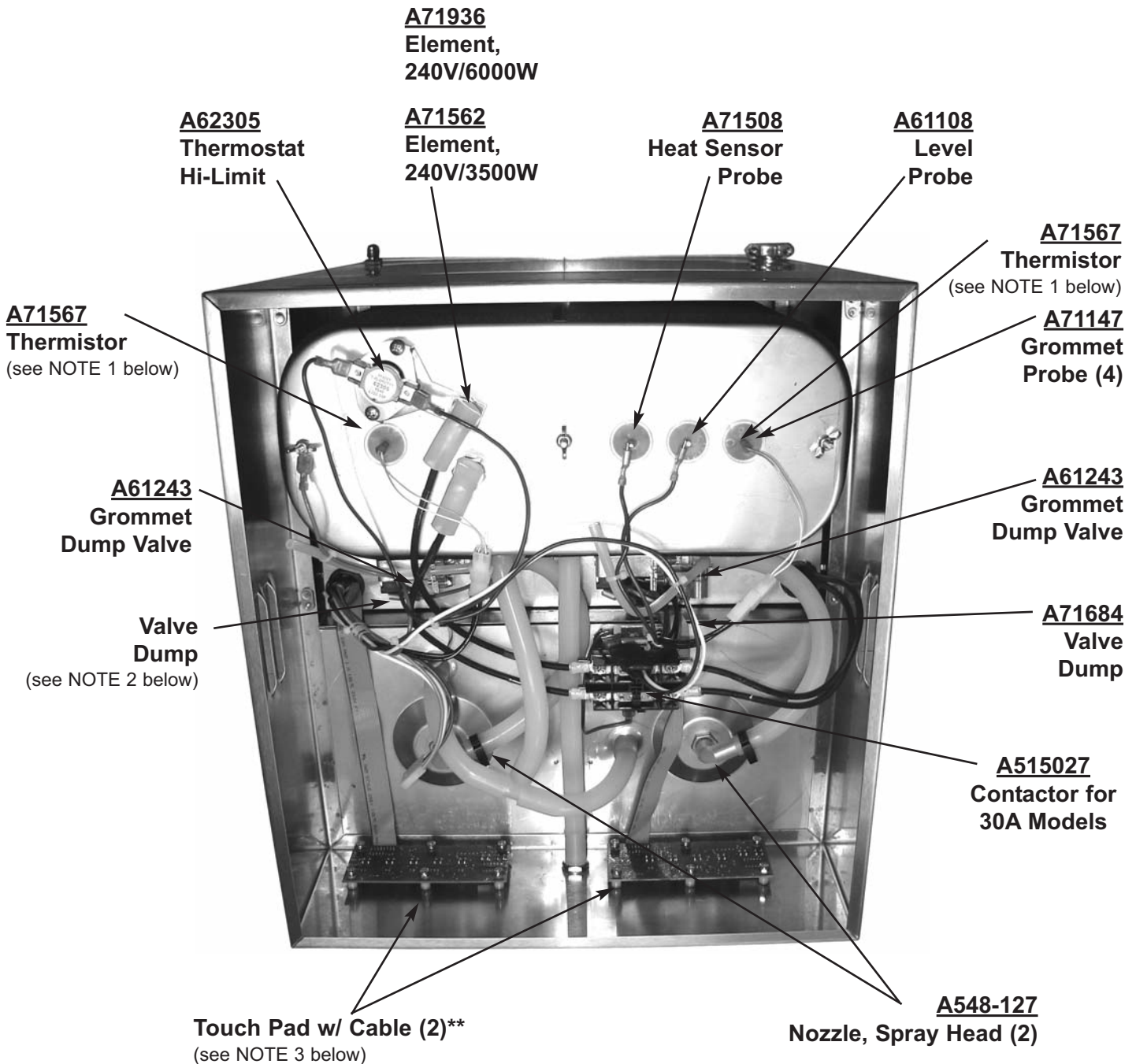
A71619
Brew Basket Assy. (not shown) (2)

A13029
Warmer Heater (not shown)

A71577
Warmer Plate (not shown)

A71431
Gourmet Brew Basket Assy (optional for B-DAP, B-DGP) (not shown)

Models B-6, B-DGP & B-DAP Parts List



Thermistor:

NOTE 1: (2) Thermistors (pn A71567) used on serial numbers without a -P suffix only and with controller # A530-056.
 (1) Thermistor (pn A71567) used on serial numbers with a -P suffix only with controller # A530-059.

Dump Valve:

NOTE 2: A71684 (24VAC): used on serial numbers without a -P suffix and with controller # A530-056.
 A64062 (24VDC): used on serial numbers with a -P suffix and with controller # A530-059.

Touch Pad w/ Cable:

NOTE 3: A71933: used on serial numbers without a -P suffix and with controller # A530-056.
 A530-061: used on serial numbers with a -P suffix only and with controller # A530-059.

TROUBLESHOOTING GUIDE

Problem	Possible Cause	Solution
Weak coffee	<ul style="list-style-type: none"> • Not enough coffee used • Grind is too coarse • Water not hot enough • Coffee bed has dry areas 	<ul style="list-style-type: none"> • Set to portion more coffee • Readjust to finer grind • Check spray temp; should be greater than 185°F/85°C • Spray deflector broken or missing. Replace
Strong coffee	<ul style="list-style-type: none"> • Too much coffee used 	<ul style="list-style-type: none"> • Use less coffee
Bitter coffee	<ul style="list-style-type: none"> • Grind is too fine 	<ul style="list-style-type: none"> • Use a coarser grind
Grounds in coffee	<ul style="list-style-type: none"> • Paper filter collapsed during brewing 	<ul style="list-style-type: none"> • Use proper filter • Position filter carefully
Brew basket overflowed	<ul style="list-style-type: none"> • Too much coffee • Grind is too fine • Double batching 	<ul style="list-style-type: none"> • Use no more than 3 1/2 oz. (100 grams) of coffee • Use a coarser grind • You must dump old coffee and use fresh new filter for each brew
Unpleasant taste	<ul style="list-style-type: none"> • Water tank or brew basket needs cleaning 	<ul style="list-style-type: none"> • Clean, sanitize (delime)
Quantity of coffee dispensed each throw is not the same	<ul style="list-style-type: none"> • Lime scale build-up • Hose kinked • Dump Valve not adjusted properly • Defective timer 	<ul style="list-style-type: none"> • Delime machine • Check hoses • Turn screw on Dump Valve to open fully • Check the length of time brewer runs with watch
Circuit breaker trips continuously	<ul style="list-style-type: none"> • Insufficient current due to use of extension cord • Insufficient current due to overloaded line 	<ul style="list-style-type: none"> • Plug unit directly into outlet. Do not use extension cord • Designate single line for unit. Do not use multi-outlet box
Control board displays "P-O"	<ul style="list-style-type: none"> • Water supply turned off • Water fill valve on too long 	<ul style="list-style-type: none"> • Turn water supply on, then reset power • Clean or replace water fill valve
Control board displays "ER2"	<ul style="list-style-type: none"> • Problem with thermistor 	<ul style="list-style-type: none"> • Replace if defective
Water boiling (or steaming)	<ul style="list-style-type: none"> • Temperature set too high • Defective thermistor 	<ul style="list-style-type: none"> • Check settings with actual temperature
No lights are on (including warmer lights)	<ul style="list-style-type: none"> • No power to brewer • Power switch turned off • Touch pad disconnected 	<ul style="list-style-type: none"> • Check power at source • Turn switch on • Reconnect touchpad
Too much or not enough water in server	<ul style="list-style-type: none"> • Water volume adjustment 	<ul style="list-style-type: none"> • Readjust
Spray head dripping	<ul style="list-style-type: none"> • Lime build up in dump valve 	<ul style="list-style-type: none"> • Delime unit
Hot water spigot dripping	<ul style="list-style-type: none"> • Faulty seal 	<ul style="list-style-type: none"> • Replace seal
Hot water spigot not dispensing	<ul style="list-style-type: none"> • Tube limed up • Defective valve seat 	<ul style="list-style-type: none"> • Delime tank • Replace seat
Warmer failure	<ul style="list-style-type: none"> • Loss of power • Bus fuse (5 Amp) on controller board is blown • Defective warmer heater 	<ul style="list-style-type: none"> • Check power source • Replace fuse • Replace defective heater
Water solenoids not working	<ul style="list-style-type: none"> • Bus fuse (1 Amp) on controller board is blown 	<ul style="list-style-type: none"> • Replace fuse
One indicator light will not illuminate	<ul style="list-style-type: none"> • LED burned out 	<ul style="list-style-type: none"> • Replace touchpad

Error Messages

Problem	Possible Causes	Service Check	Remedy
ER1	<ul style="list-style-type: none"> • Fill valve on for over 6 min. (This occurs during initial fill on some units – see Initial Start-up.) 	<ul style="list-style-type: none"> • Check system for water leaks. 	<ul style="list-style-type: none"> • Correct any leaks and reset controller.
ER2	<ul style="list-style-type: none"> • Thermistor failure or loose connections in thermistor circuit. 	<ul style="list-style-type: none"> • Ensure that connector is securely attached to controller and that thermistor is securely connected. 	<ul style="list-style-type: none"> • Secure connections and reset controller. If error reoccurs, replace thermistor.
ER3	<ul style="list-style-type: none"> • Thermistor is reading out of range. 	<ul style="list-style-type: none"> • Check tank temperature. 	<ul style="list-style-type: none"> • Replace thermistor.
ER4	<ul style="list-style-type: none"> • No heating is detected 	<ul style="list-style-type: none"> • Verify power to heating element and high limit operation 	<ul style="list-style-type: none"> • Repair as needed.

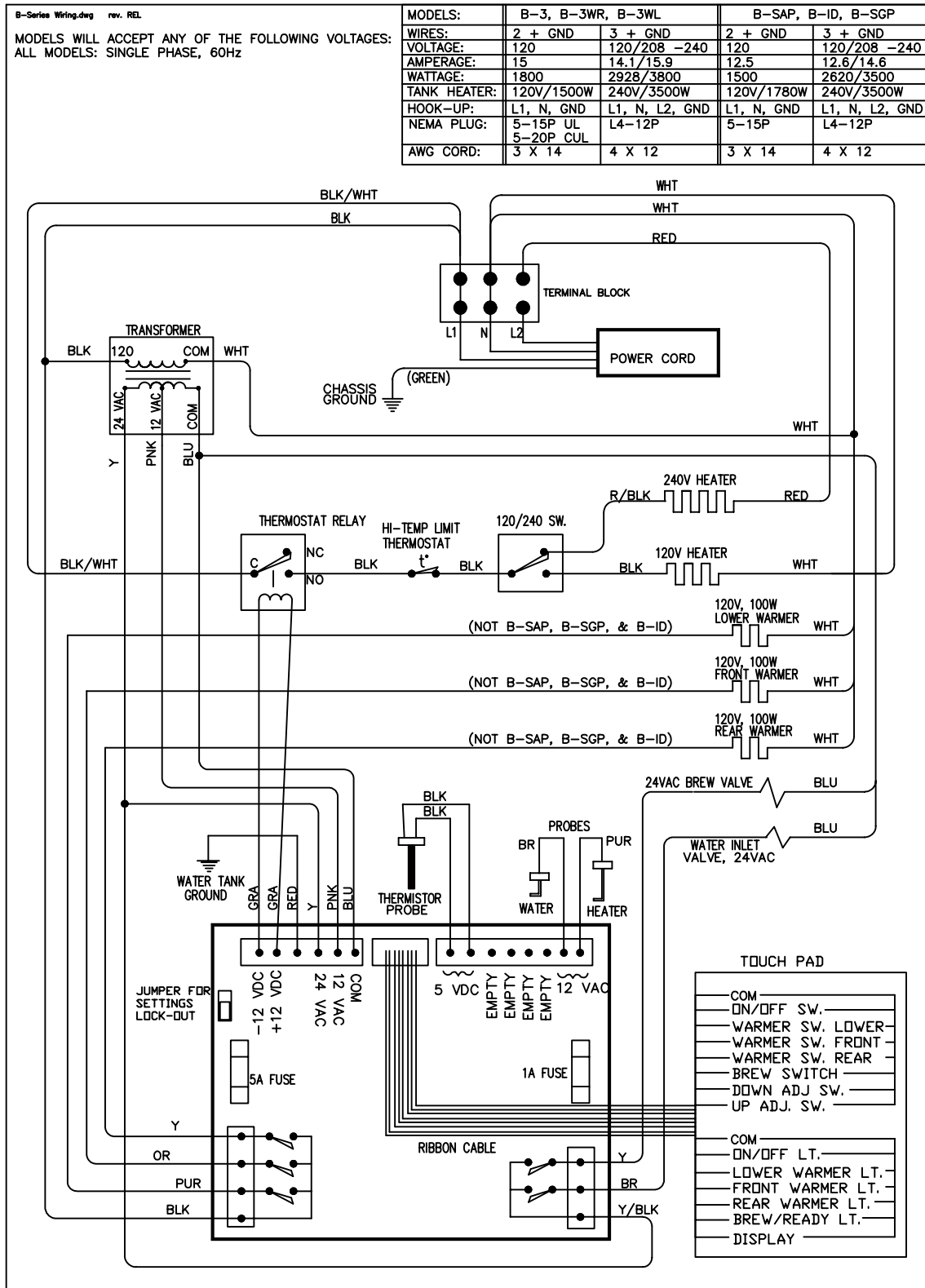
If you still need help, call an authorized dealer in your area or our Technical Service Department. You can reach Grindmaster Corporation's Technical Service Department at 800-695-4500 (USA & Canada only) or 502-425-4776 Monday-Friday, 8:00 AM - 6:00 PM EST. Please have the model and serial number ready so that accurate information can be given.

Prior authorization must be obtained from Grindmaster Corporation's Technical Services Department for all warranty claims.

Wiring Diagram

Models B-3, B-3WR, B-3WL, B-SAP & B-ID without a -P suffix

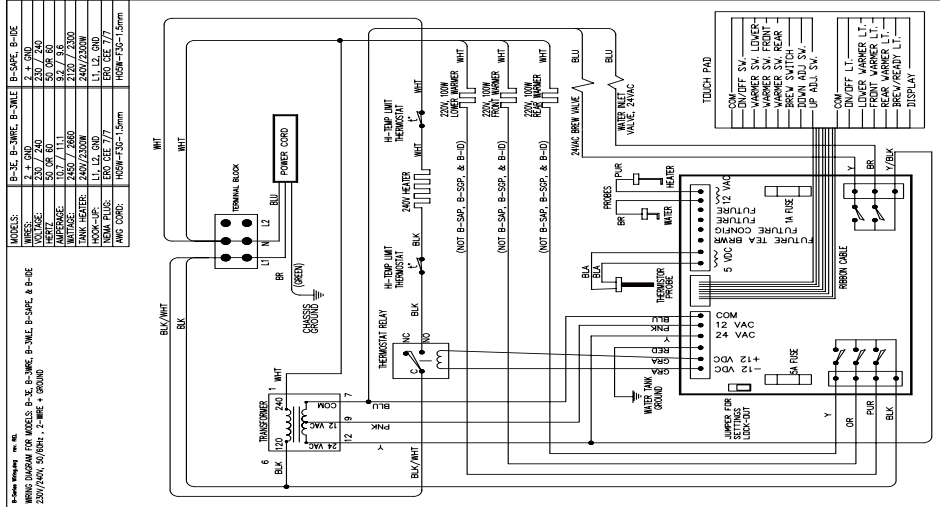
DUAL VOLTAGE



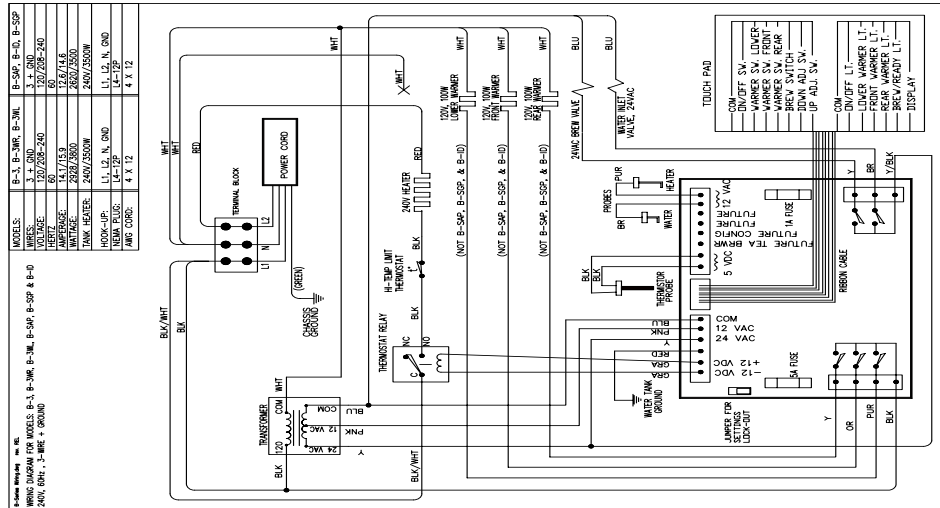
Wiring Diagram

Models B-3, B-3WR, B-3WL, B-SAP & B-ID without a -P suffix

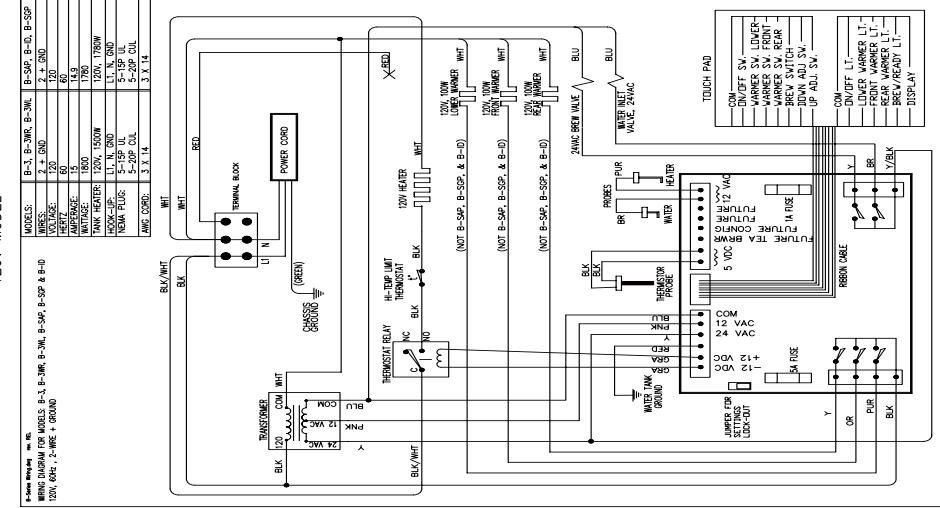
E MODEL



240V MODEL



120V MODEL



Wiring Diagram
Models B-6, B-DAP, B-DGP
without a -P suffix