GRINDMASTER™

CORPORATION

AUTO-SERIES BREWERS

Installation, Operation, and Service Manual

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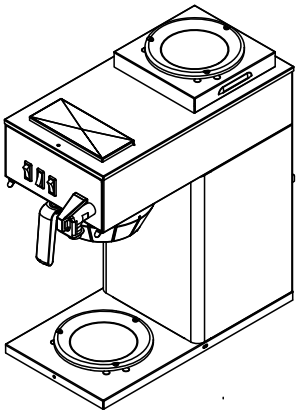
Prior authorization must be obtained from Grindmaster Corporation™ for all warranty claims.



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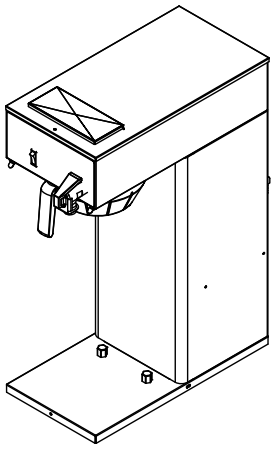

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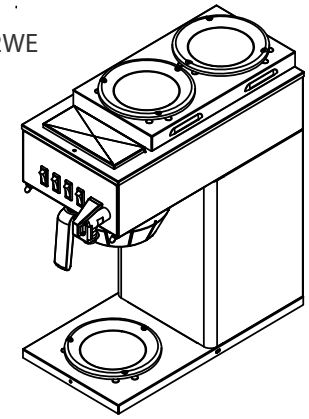

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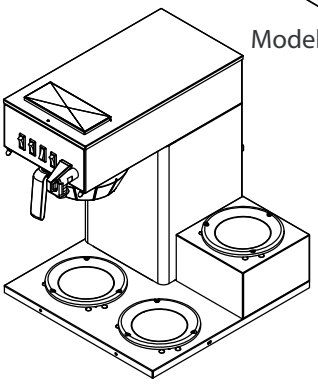

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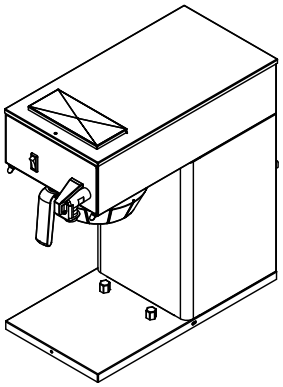

Model AT-TC/AT-TCE

GRINDMASTER™
CORPORATION

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www.grindmaster.com

0307 Form # BW-340-02
Part # 73254

WARNING LABELS

The following warning labels were on your dispenser when it was shipped from the factory. They should remain on your dispenser in good, readable condition at all times. If one of your labels is missing or damaged, order a replacement label immediately.

Part # 71509 (for warmer models only)
Located near warmer plates

Part # 71582
Located on rear and top access panels

Part # 70248
Located on front, behind server

Part # 71949 or 71149
Located on brew basket

Part #71949

Part #71149

⚠ WARNING - Read and follow installation instructions before plugging or wiring in machine to electrical circuit. Warranty will be void if unit is connected to any voltage other than that listed on the name plate.

FILL BREWER TANK WITH WATER BEFORE CONNECTION TO POWER SUPPLY

WATER CONNECTION

The following is required for water hook-up:

1) A quick disconnect water connection or enough coiled tubing so the machine can be moved for cleaning underneath. (required for NSF approved water hook-up)
2) A 1/4" male flare adapter is provided to be attached by the installer to the back of the machine for hook-up to water supply.
3) Installation to a water filter system is required to prevent lime and scale build up in the machine.
4) Water pipe connections and fixtures directly connected to potable water supply shall be sized, installed, and maintained in accordance with Federal, State, and Local codes. (required for NSF approved water hook-up)
5) Equipment is to be installed with adequate backflow protection to comply with applicable Federal, State, and local codes. (required for NSF approved water hook-up)

Minimum water pressure to the machine: 30 psi (2.0 bar)
Maximum water pressure to the machine: 80 psi (5.6 bar)

INSTALLATION INSTRUCTIONS

1) Place the decanter under brew basket, raise top evaporation cover and pour three decanters of water through the top pour-in opening. Water should come through the brew basket as the third decanter of water drains out of the pour-in basin.
2) Brewer is shipped with thermostat turned on, (full clockwise position). Plug brewer into a dedicated, grounded 120V/15A circuit (230V/15A circuit for E models).
3) Allow 10-15 minutes for water in tank to heat to brewing temperature. (Hot water may drip from brew basket on initial thermal expansion of water in the tank). This will not occur thereafter.
4) After water has reached brewing temperature (thermostat will click off, heating noise will stop and green ready light will be on) pour 1 decanter (60 oz./1.8L) of water through pour-in opening. Machine is now ready to use.
5) Pour 1 decanter of water through pour-in opening to check for proper temperature setting with an accurate thermometer. Take the temperature of this water at a point below the brew basket opening at the start of the brew cycle and when the decanter is half full. Recommended temperature of the water is approximately 195°F (91°C) .
6) In higher altitude locations (5,000 feet/1,500m above sea level) the thermostat may have to be adjusted lower to prevent boiling.

COFFEE PREPARATION PROCEDURES (Pour-Over Mode)

1) Place filter into brew basket.
2) Put the proper amount of coffee into the filter.
3) Slide the brew basket into holder.
4) Place empty decanter on warmer located directly under the brew basket and turn corresponding warmer switch ON.

NOTE: For airpots, open airpot lid, remove pump stem from airpot and place airpot opening directly under center hole in brew basket.

5) Pour decanter of fresh water through pour-in opening at top of brewer.
6) Hot water will be delivered through the sprayhead. This distributes the hot water evenly over the coffee bed within the brew basket. The coffee will drain from brew basket into the container below.
7) TURN OFF WARMER WHEN NOT IN USE. (Red light indicates warmer is ON.) Not for airpot brewers.
8) Before brewing next pot, remove brew basket from brew rails and dump filter into waste basket.

COFFEE PREPARATION PROCEDURES (Auto Mode)

1) Place filter into brew basket.
2) Put the proper amount of coffee into the filter.
3) Slide the brew basket into holder.
4) Place empty decanter on warmer located directly under the brew basket and turn corresponding warmer switch ON.

NOTE: For airpots, open airpot lid, remove pump stem from airpot and place airpot opening directly under center hole in brew basket.

5) Press Brew switch once then release.
6) Valve will turn on approximately 1 minute and fill pour-in basin.
7) Hot water will be delivered through the sprayhead. This distributes the hot water evenly over the coffee bed within the brew basket. The coffee will drain from brew basket into the container below.
8) TURN OFF WARMER WHEN NOT IN USE. (Red light indicates warmer is ON.) Not for airpot brewers.
9) Before brewing next pot, remove brew basket from brew rails and dump filter into waste basket.
10) Do not press Brew switch more than once during brew cycle.

BREW VOLUME ADJUSTMENT

1) Disconnect power to brewer.
2) Remove plug on upper left side of chassis.
3) With a flat head screwdriver, turn dial clockwise slightly to increase volume and counter-clockwise to decrease volume.

Reference timer setting:

Water Pressure (psi)	Timer setting(sec)	Volume (oz)
35	64	64
40	63	64
50	62	64

4) Reconnect power and run a brew cycle to check volume.
5) Repeat steps 1-3 if necessary.

BREW BASKET RAIL ADJUSTMENT

1) Disconnect power to brewer.
2) Remove lid and pour-in basin.
3) Loosen nuts for brew rails.
4) Fit basket in place.
5) Tighten nuts and check basket fit.

SPARE PARTS LIST

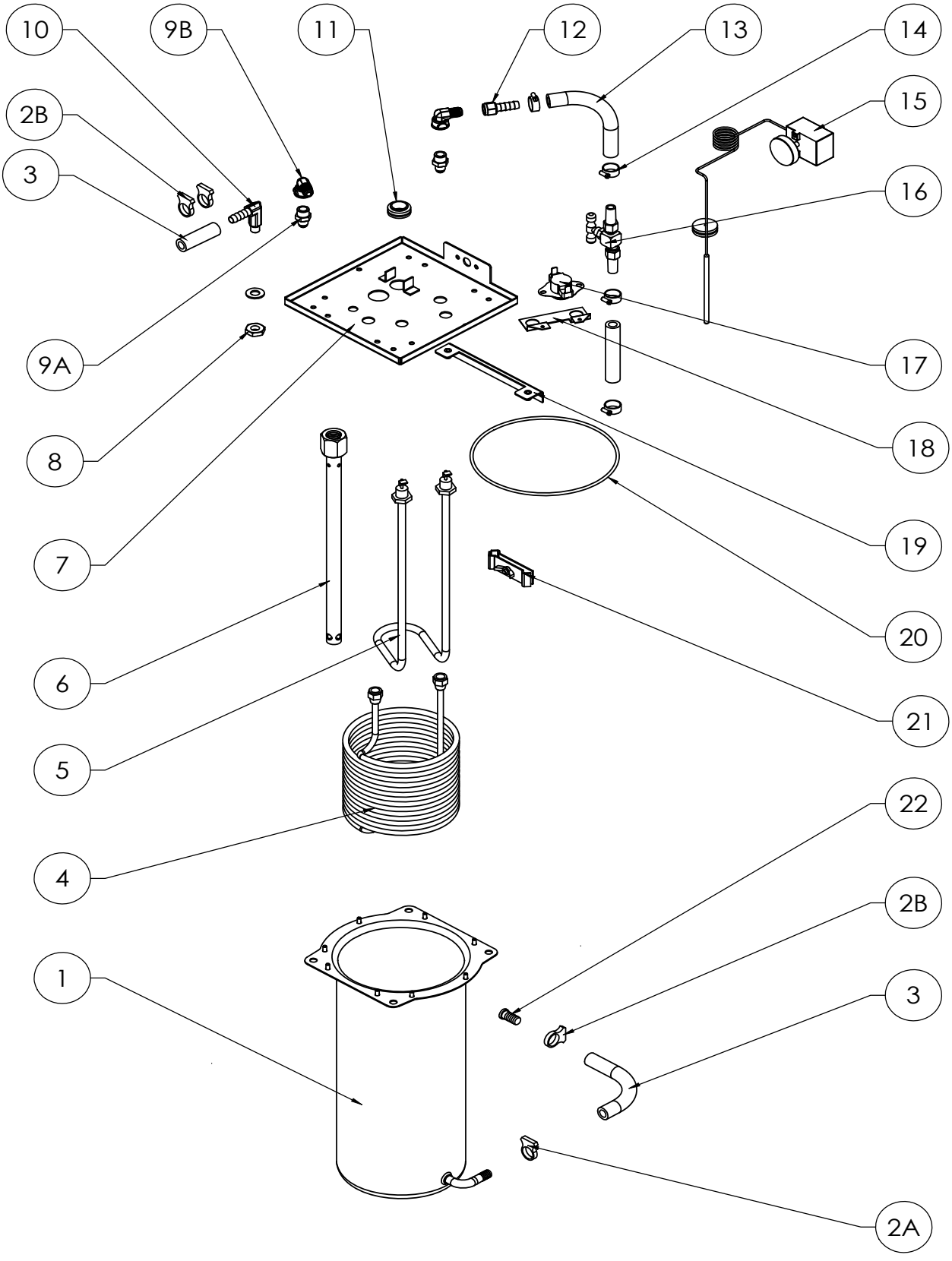
Item No.	Part No.	Description
1	73035	Water Tank
2A	73252	Clamp Hose, Nylon .468" ID
2B	73283	Clamp Hose, Nylon .531" ID
3	71155	Tubing, 5/16"ID x 1/2"OD Silicone
4	73318	Heat Exchanger Inside Tank 3/8" ID
5	70818	Element, Heating 1400W 120V
	70820	Element, Heating 2500W 240V
	73222	Element, Heating 1780W 120V
6	73037-1	Inlet Tube Assembly
7	73186A	Cover, Tank W/Bracket, Thermostat
8	61143	Nut, Pipe Jam 1/8" NPT
9A	73317	Fitting Brass 1/4"MFL x 3/8"NPT
9B	73177	Fitting Brass 1/4"MFL x 1/4"NPT
10	73033	Elbow Brass, 1/8" NPT 3/8" Barb
11	61243	Grommet, Dump Valve
12	73178	Fitting, 1/4"MFL x 3/8" Barb
13	73234	Tube, Inner Braided Silicone
14	60550	Clamp Hose, Stainless
15	73036	Thermostat Regulating
16	61150	Valve, Ambient Flow Control Assy
17	62237	T-Stat, Hi-Limit, 120V Models
	100523	T-Stat, 1/2" Manual Reset 230V Models
18	62238	Bracket, Hi-Limit 120V Models
	100524	Bracket, Hi-Limit Manual Reset 230V Models
19	73095	Bracket, Water Tank
20	73057	Gasket, Tank O-Ring
21	73096	Thermostat Clip Lock
22	61232	Plug 3/8" Barbed
23	73028	Leg, Support
24	73026	Base Welded
25	73024	Base Cover Panel, AT-AP, AT-AC
26	73027	Airpot Stopper
27A	73183	Rail Brew, RH. Assembly
27B	73182	Rail Brew, LH. Assembly
28	71952	Brew Basket
29	73249	Pressure Faucet
30	63495	Ready Light, Green 120V
	61125	Ready Light, Green 240V
31	70445	Brew Switch
32A	73058	Switch Warmer Lighted 230V
	73059	Switch Warmer Lighted 120V
32B	73194	Switch Power - Optional
33A	73320-1	Decal, Main Front AT-AP, AT-TC
33B	73320	Decal, Main Front W/Switch Power AT-AP, AT-TC
34	06491	Deflector, Spray HD
35	06490	Nozzle, Spray HD
36	07220	Nut, Lock Palnut Spray HD
37	70341	Elbow, Silicone 90 deg

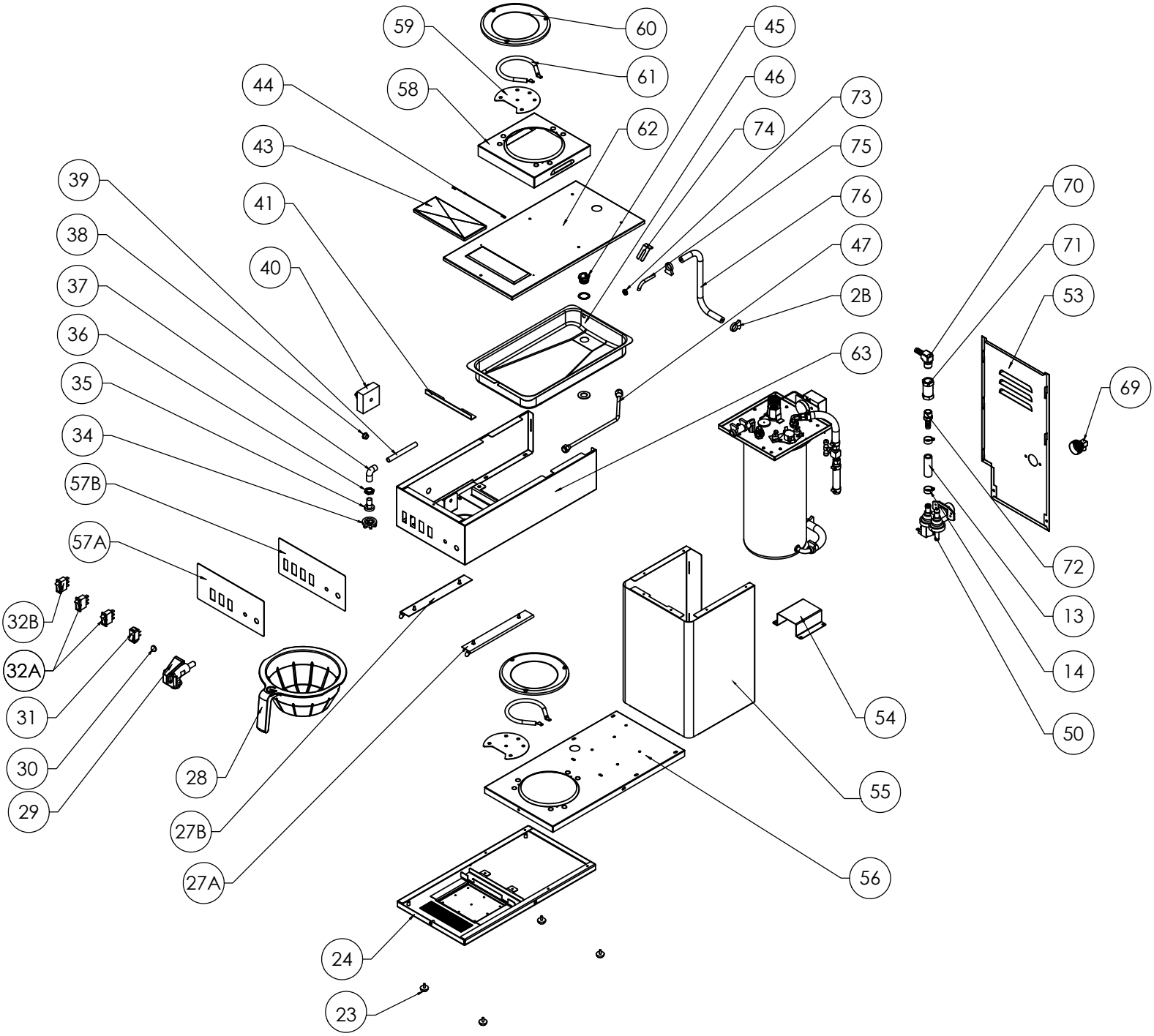
Item No.	Part No.	Description
38	73242	Hole Plug
39	71093	Pipe Adapter
40	73179	Timer Relay, 120V
	73251	Timer Relay, 230V
41	73114	Bracket, Panel Spray HD
42	73003	Top Cover SS, AT-AP, AT-3WR
43	71607	Panel, Pour-Over Lid
44	71529	Wire Hinge, Pour-Over Lid
45	73008	Nut Slotted Hex SS (size M20x1.5)
46	73010	Pan, Receiving
47	73175	Assy, Water Line to Faucet
48	73188A	Top Body Assemply AT-AP, AT-TC
49	73191	Panel, Back AT-AP, AT-APE
50	73291	Valve Inlet 120V, 50/60Hz
	73298	Valve Inlet 230V, 50/60Hz
51	73021	Bracket, Tank Base AT-AP, AT-APE
52	73192	Panel Center SS. AT-AP, AT-APE
53	73190	Panel, Back AT-TC, AT-2W, AT-3WR
54	73213	Base Tank
55	73185	Panel Center SS. AT-TC, AT-2W, AT-3WR
56	73029	Base Cover Panel, AT-2W, AT-3W
57A	73321-1	Decal, Main Front AT-2W
57B	73321	Decal, Main Front W/Switch Power AT-2W
58	73031	Panel, Warmer Top AT-2W
59	73001	Bracket, Warmer
60	73002	Plate, Warmer
61	13029	Heater, Warmer 120V, 100W
	A535-028	Heater, Warmer 220V, 100W
62	73004	Top Cover SS, AT-2W
63	73218A	Top Body Assemply AT-2W
64	73079	Base Welded AT-3WR
65	73080	Base Cover Panel, AT-3WR
66	73078	Panel, Warmer 3RD, AT-3WR
67A	73319-1	Decal, Main Front AT-3WR
67B	73319	Decal, Main Front W/Switch Power AT-3WR
68	73184A	Top Body Assemply AT-3WR
69	61237	Fitting Assembly 1/4MFL x 3/4Hs Brass
70	73292	Elbow, Barbed 3/8" Hose ID x 3/8" NPT
71	73294	Orifice, Flow Control, 0.5 GPM
72	73293	Barb, 3/8" Hose ID x 3/8" NPT
73	73312	Grommet Pipe Connect Silicone
74	73315	Bracket, Pipe Connect
75	73313	Pipe connect 1/4” OD
76	73314	Tubing Silicone 0.2” ID x 0.5” OD
77A	73297-1	Decal, Main Front AT-3W
77B	73297	Decal, Main Front AT-3W, W/Switch Power
78	73287	Top Cover SS, AT-3W
79	73288	Panel, 2 Warmers

Not shown:

61530	Power Cord, 120V
61453	Power Cord, 230V

WATER TANK ASSEMBLY

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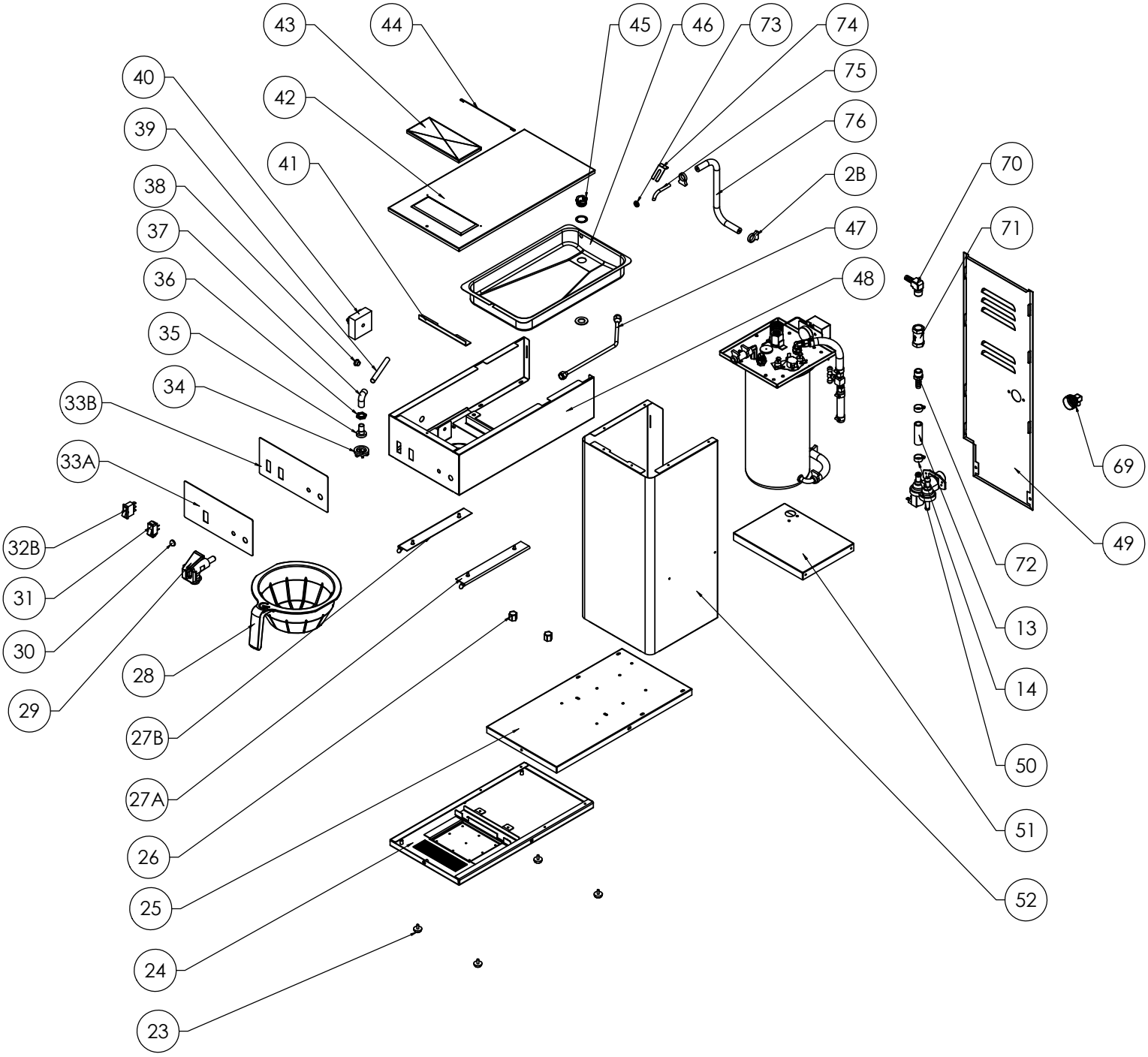
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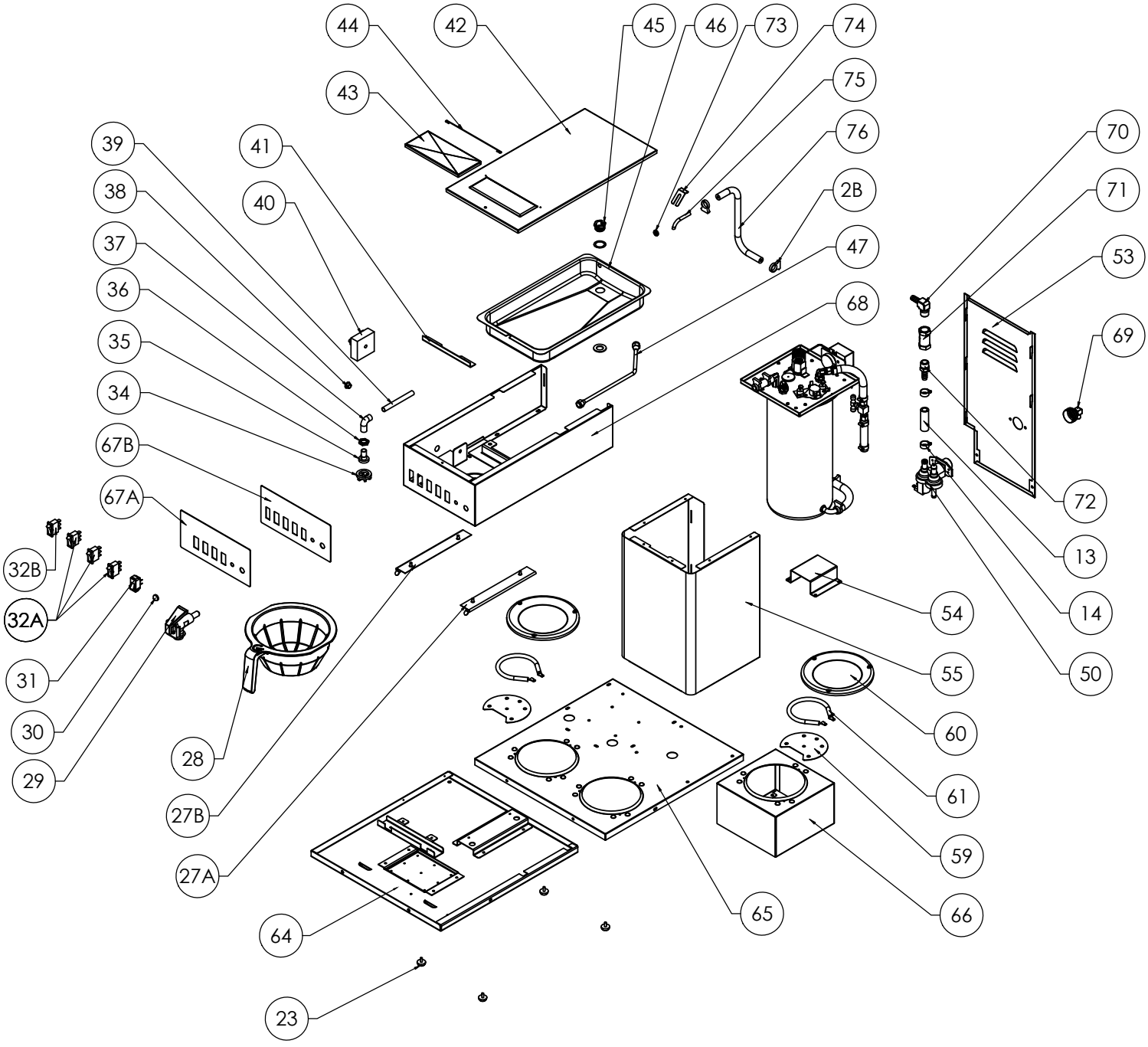
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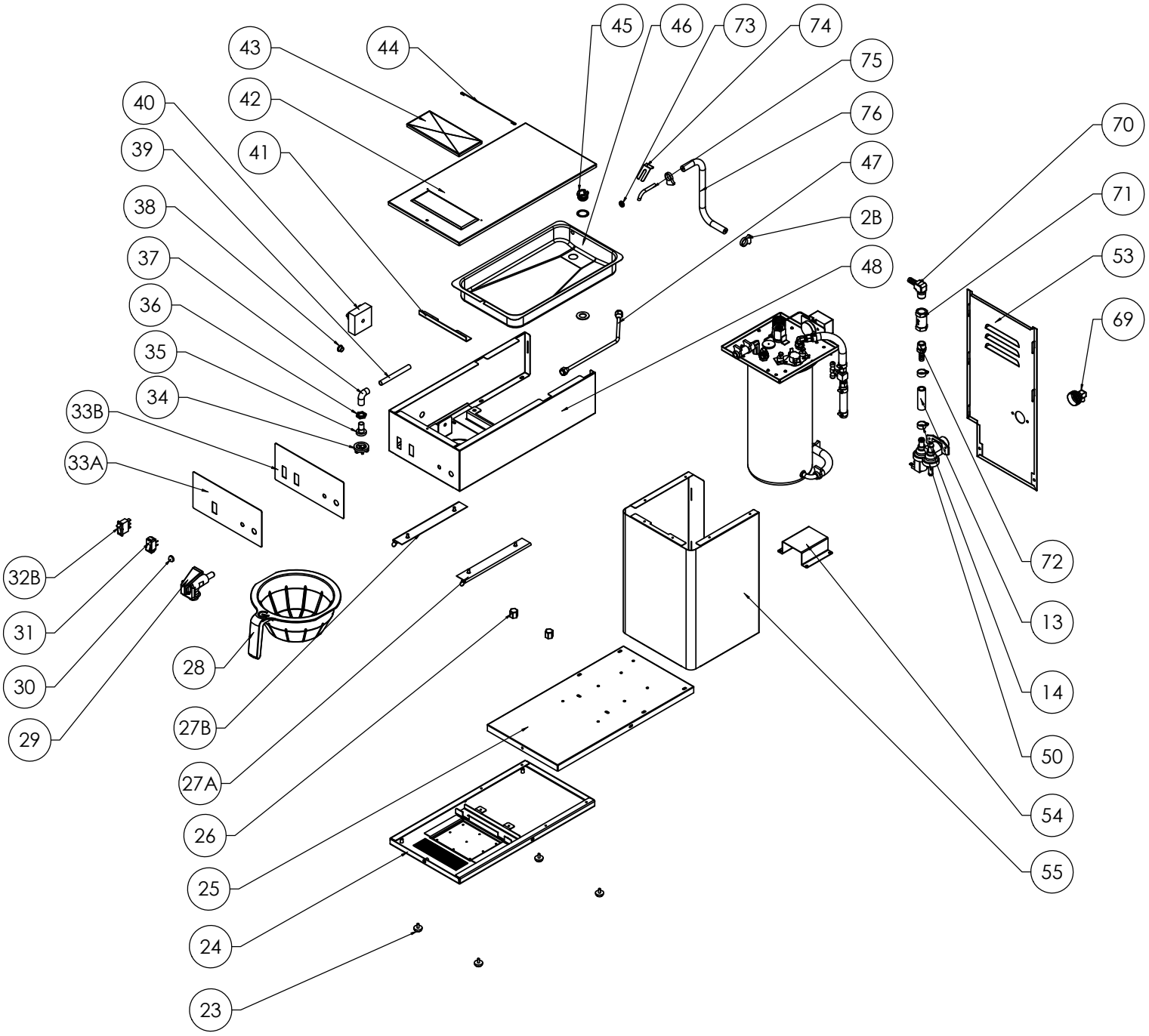
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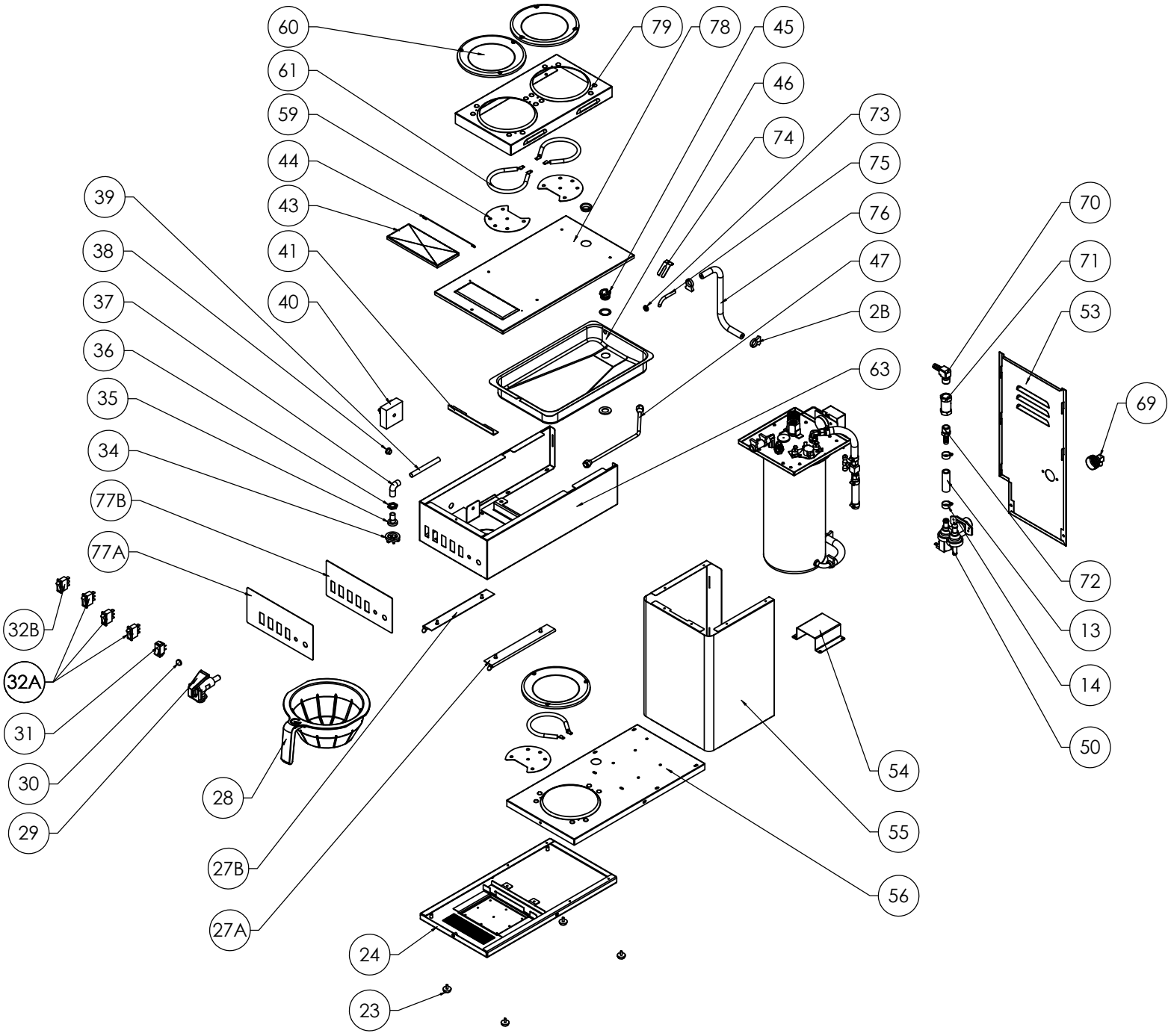
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TROUBLESHOOTING GUIDE

Problem	Possible Source	Check	Solution
No Hot Water	1. Tank heater	1. Check the voltage at the tank heater terminals. Voltage should be 120V (230V for E models). Check serial tag for proper voltage.	1. (A) If correct voltage is present at the tank heater terminals and water is not being heated, replace tank heater. (B) If voltage is not present at tank heater terminals, refer to step 2. (C) If incorrect voltage is present at tank heater terminals, check voltage at outlet.
	2. Hi-limit thermostat or main thermostat	2. Check the voltage between the white wire on the tank heater terminal and the incoming terminal (black wire) on the hi-limit thermostat, then the outgoing (black wire) terminal on the hi-limit thermostat.	2. (A) If voltage is present on incoming terminal on the hi-limit thermostat but not on the outgoing terminal, replace hi-limit thermostat. (B) Check voltage between black and white wire on receptacle. If voltage is not present check outlet or circuit breaker. (C) If voltage is not present on incoming terminal of hi-limit thermostat, replace main thermostat.
Steaming or Spitting Around Funnel	1. Main thermostat 2. High altitude	1. Thermostat contact stuck or out of calibration 2. For altitude above 5,000 feet (1,500m)	1. (A) Adjust thermostat to lower temperature setting. (B) Thermostat should be calibrated or replaced.
Dripping	1. Not siphoning properly	1. Water should flow from sprayhead freely	1. (A) Clean sprayhead holes (B) Check tightness of sprayhead tube. (C) Check brass elbow in tank for debris
	2. Leaky fill valve	2. Turn off water supply to see if dripping stops	2. Replace or repair inlet valve as needed
Dry Coffee Remaining on Brew Basket	1. Filters 2. Not siphoning properly 3. Improper loading of brew basket	1. Are correct filters being used 2. Refer to "dripping" step 1 3. Filter and coffee in brew basket	1. Use correct filter 2. Refer to "dripping" step 1 3. Filter should be centered in brew basket and coffee bed should be level.
Warmer Station	1. Warmer - defective 2. Warmer On/Off switch 3. Bad harness	1. Voltage at warmer terminals should be 120V (230V for E models). 2. If voltage is not present on warmer terminals, check continuity of switch 3. Check connections between harness and switch, and between switch and warmer.	1. If voltage is present on terminals, but warmer is not heating, replace warmer. 2. If switch does not make and break continuity when turned on and off, replace switch. 3. All connections should be tight.
Overflowing	1. Receiving container not completely empty at start of brew cycle. 2. Not siphoning properly 3. Adjust timer	1. Operating instructions 2. Refer to "dripping" step 1. 3. Check valve on-time with watch	1. Always start brew cycle with empty container. 2. Refer to "dripping" step 1. 3. Refer to "Brew Volume Adjustment" section
Low Pot Level	1. Adjust timer	1. Check valve on-time with watch	1. Refer to "Brew Volume Adjustment" section
Excessively Long Brew Times	1. Lime scale build-up	1. Remove spray head deflector and check nozzle.	1. Delime machine.
Little or No Water From Faucet	1. Lime scale build-up 2. Clogged inlet valve	Be sure water is turned on.	1. Delime heat exchanger. 2. Replace or repair inlet valve.

If you still need help, call an authorized dealer in your area or Grindmaster Corporation's Technical Service Department. You c an reach Technical Service at (502) 425-4776 or (800) 695-4500 (USA and Canada only) Monday - Friday, 8:00 AM - 8:00 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 Service Department for all warranty claims.

COMPONENT REPLACEMENT INSTRUCTIONS

⚠ WARNING - Disconnect power before servicing. Risk of electric shock.

These steps apply to replacement of TANK, TANK HEATER, and HI-LIMIT or MAIN THERMOSTAT

1. Remove brewer lid. Disconnect electrical connectors from upper warmer plate if applicable.
2. Remove pour in basin assembly (receiving pan).
3. Disconnect electrical terminals and hoses as needed.
4. Remove front two screws mounting the tank.
5. Lift tank and lid completely out of tank.
6. Remove two rear screws mounting tank to tank lid.
7. Reverse steps 1-6 to reassemble new tank assembly.

THERMOSTAT, HI-LIMIT

1. Disconnect wires to hi-limit thermostat.
2. Remove two screws and remove thermostat.
3. Check continuity of the new hi limit thermostat before installing.
4. Screw down new t-stat and reconnect wires.
5. Make sure the hi-limit thermostat is securely mounted and that all electrical connections are tight and isolated.

MAIN THERMOSTAT

1. Disconnect wires and remove tank and tank lid assembly.
2. Remove two rear screws mounting tank to tank lid.
3. Remove screws which secure thermostat to tank lid.
4. Loosen thumb nut securing capillary bulb.
5. Remove grommet from top of tank lid by pressing up with thumb and pulling capillary bulb out through hole.
6. Reverse steps 1-5 to reassemble new tank assembly.

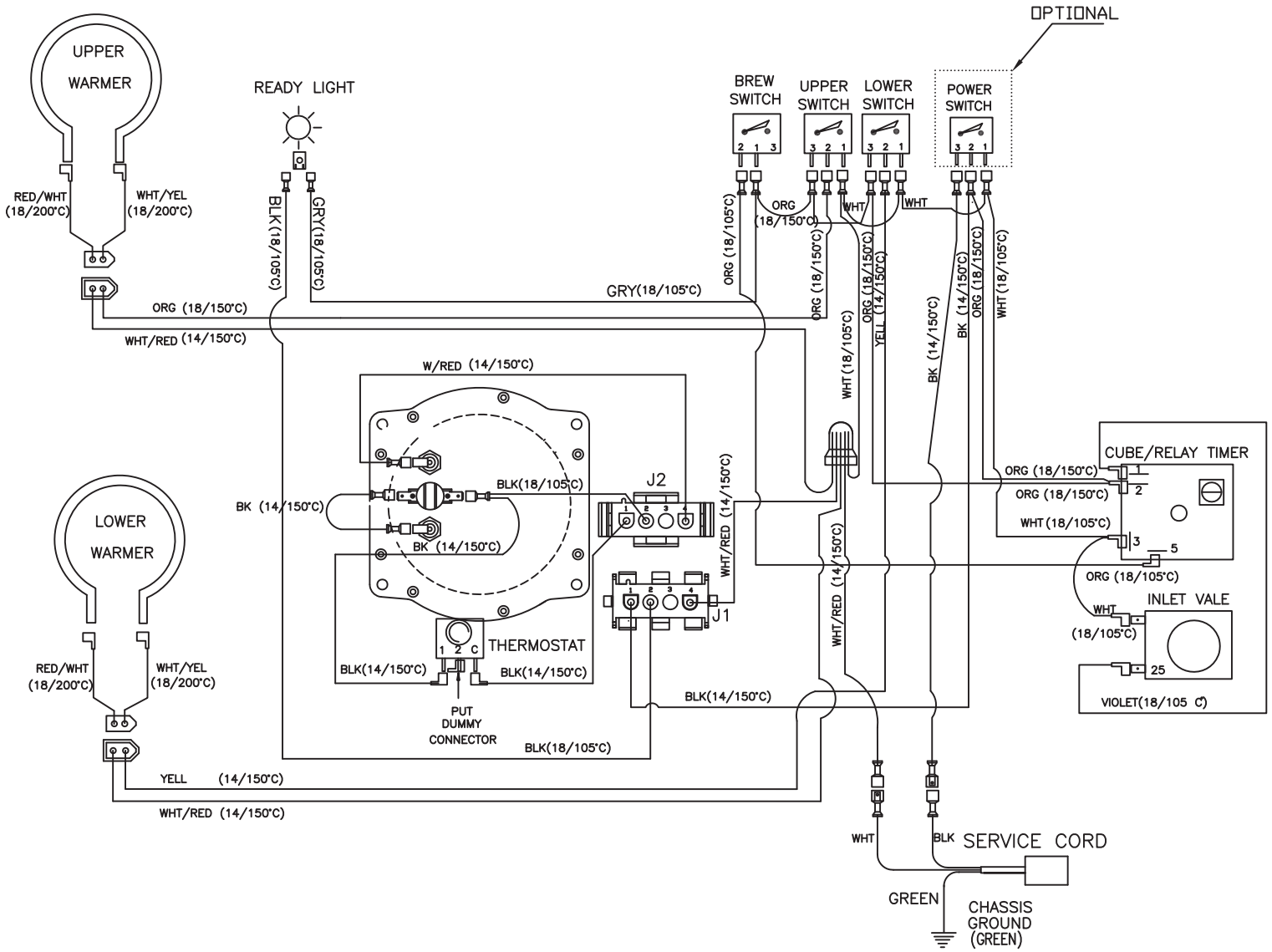
TANK HEATING ELEMENT

1. Disconnect wires and remove tank and tank lid assembly.
2. Remove two rear screws mounting tank to tank lid.
3. Loosen thumb nut securing capillary bulb and remove bracket.
4. Remove two brass nuts and remove element.
5. Install new element and washers with nuts secured tightly.
6. Inspect tank lid gasket and replace if necessary.
7. Reverse steps 1-3 to reassemble.

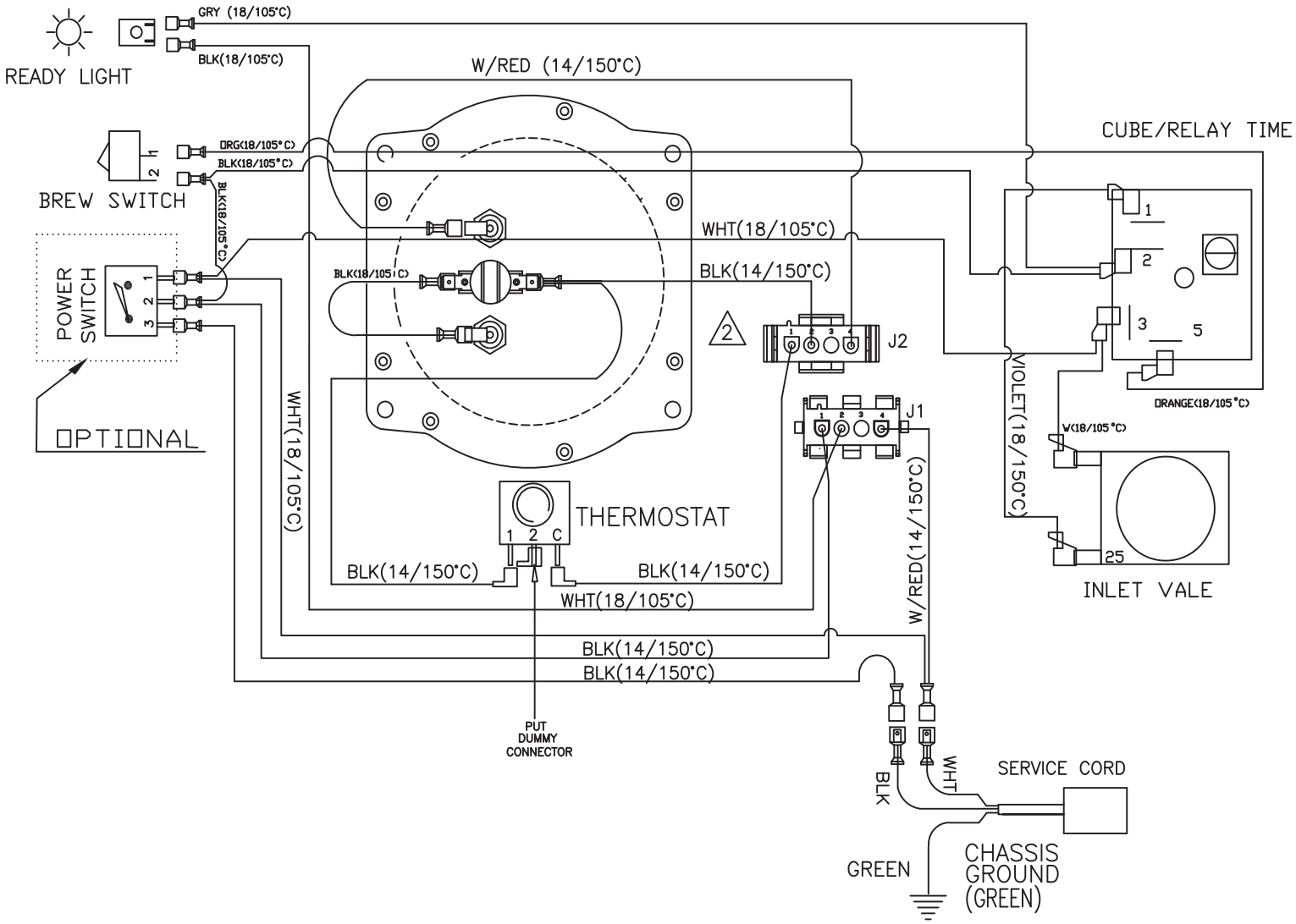
WARMER ELEMENT

1. Remove retaining screws from warmer plate.
2. Lift plate and disconnect leads.
3. Remove nuts and washers holding retaining plate and warmer element to plate.
4. Reverse steps 1-3 to reassemble.

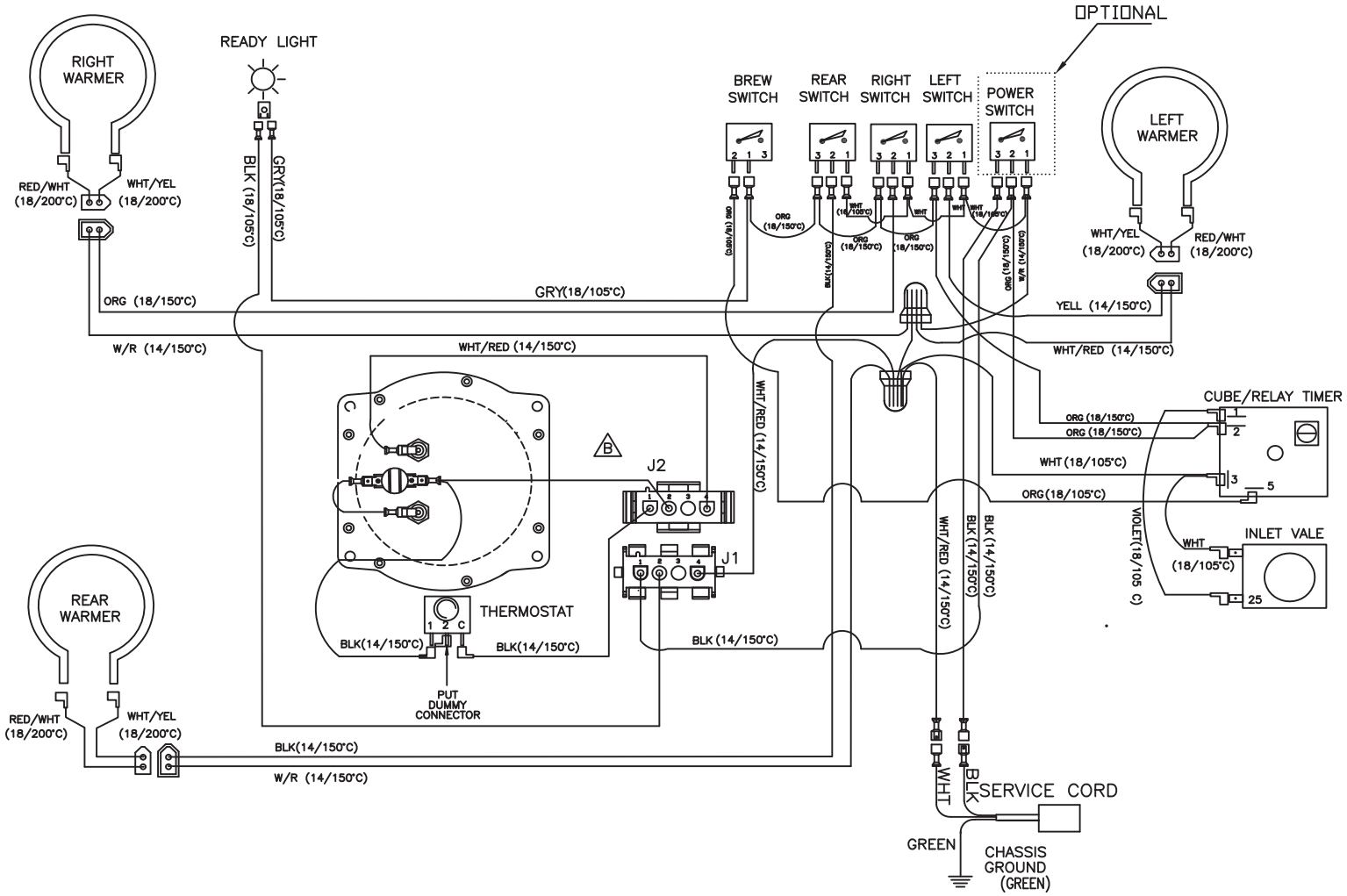
SCHEMATIC WIRING DIAGRAM AT-2W, AT-2WE



SCHEMATIC WIRING DIAGRAM AT-AP , AT-AP , AT-TC , AT-TCE



SCHEMATIC WIRING DIAGRAM AT-3WR, AT-3WRE



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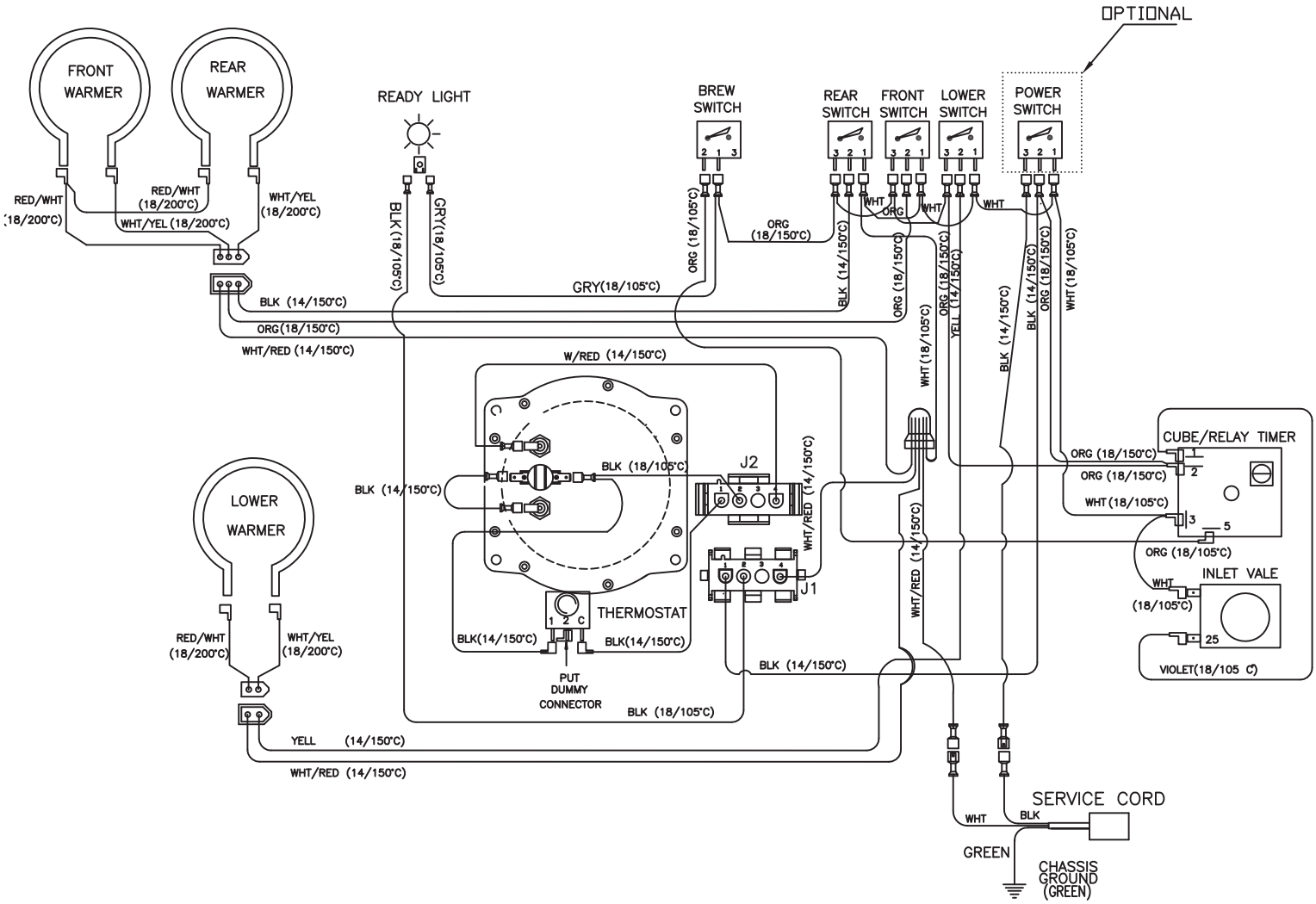

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