



**SERVICE & TROUBLESHOOTING MANUAL  
FOR  
DISPLAY HOLD CABINETS  
DHC SERIES**



## ELECTRICAL SPECIFICATIONS

	Item #	Description	Voltage	Hz.	Watts	Amps	Cord/Plug	Dimensions
Domestic	DHC 24H	Display Hold Cabinet w/hum	120 VAC	60	1500	12.5	6', NEMA 5-15P	24" W x 36" H x 24" D
Domestic	DHC 24	Display Hold Cabinet w/o hum	120 VAC	60	1175	9.8	6', NEMA 5-15P	24" W x 36" H x 24" D
International	DHC 24H-CE	Display Hold Cabinet w/ hum	230 VAC	50	1500	7	2 M, CEE 7/7	610mm W x 915mm H x 610mm D
International	DHC 24-CE	Display Hold Cabinet w/o hum	230VAC	50	1175	5.5	2 M, CEE 7/7	610mm W x 915mm H x 610mm D

## OPERATION

- The DHC is designed to display and hold up to 4 – 18” pizzas for one hour.
- Set Main Power switch to the “ON” position.
- Pre-heat the unit for 20 minutes.
- Set the temperature control at desired temperature for your product. Factory recommendations are setting 6 on the temperature dial (175° F, 80° C). The temperature range is 125° F (52° C) to 205° F (96° C).
- The red “Add Water” light will start blinking when water is needed. Fill the water tank with distilled water in preparation to start the humidity cycle. The water tank will hold 1 gallon (3.75 liters) of water. Be careful not to overfill. If the tank is overfilled water will exit back out of the fill cup. An audible alarm will sound prior to overfilling of the tank. If the alarm is heard the operator is to cease filling the water tank.
- Set humidity. Factory recommendations are setting to “medium.”
- Open the access door(s) and load the product onto the shelves of the rotating rack. The rack will stop rotating when the door(s) are opened.
- The DHC will keep your product hot and fresh for serving. The digital display will monitor the cabinet temperature. The alarm will sound when the tank needs to be refilled.

## CONTROL PANEL FEATURES

Main Power On/Off Switch – This switch controls power to the unit.

Temperature Display – Shows cabinet temperature in °F or °C.

Heat Control – This control regulates the cabinet temperature. The settings range from low to high.

Humidity Control – This control regulates the amount of cabinet humidity. The settings range from low to high.

Heat / On Light – This green light illuminates when the heat control is energized.

Add Water Light – This red light illuminates when additional water is required.

## CHANGING MERCHANDISING DISPLAY PANELS

The merchandising panels supplied by Merco Savory are easily changed by removing the four (4) mounting screws located on the top and back side of the unit (2 on each side).

## WATER RESERVOIR FILLING INSTRUCTIONS

### INITIAL FILLING

**IMPORTANT:** To prevent excess mineral build-up, which could affect the operation of this unit, only use low mineral or distilled water. Service required due to excessive mineral build-up *WILL NOT* be covered under warranty.

1. Set main power switch to the “ON” position.
2. Open the water reservoir cover (located on the left side of the control panel). Using the measuring cup provided, start filling the tank.
3. Fill the tank until the beeping sound is heard. This indicates the tank is filled to capacity. Do not overfill or water will overflow from the water reservoir.
4. Close water tank reservoir.
5. Filling the water reservoir to capacity will allow for approximately 6 to 8 hours, depending on the type of food displayed, control settings, frequency of door openings, etc.

## WATER RESERVOIR FILLING INSTRUCTIONS (CONT'D)

### RE-FILLING

1. The red "Add Water" light will illuminate when additional water is required.
2. **IMPORTANT: DO NOT** add water until this light is illuminated. The add water alarm will not sound unless the light is on.
3. Fill the tank until the beeping sound starts.

## CLEANING INSTRUCTIONS



**CAUTION:** UNPLUG UNIT AND ALLOW IT TO COOL BEFORE CLEANING.

The DHC Display and Hold Cabinets are designed for easy cleaning. Remove the interior rack and wash in hot sudsy water. The interior and exterior surfaces need nothing more than a daily wiping with a soft, damp cloth. Do not use abrasive cleaners on any part of the unit. This will cause damage to the unit. This appliance shall not be cleaned with high-pressure water jets.

## WARNINGS



To prevent electric shock, always unplug the unit before performing cleaning, maintenance or repair.



Plug the cabinet into a properly grounded electrical outlet of the correct voltage, size and plug configuration. If the plug and receptacle do not match, contact a qualified electrician to determine proper voltage and size and install the proper electrical outlet.



Do not attempt to clean the water tank system with chemical agents.



Only use GE F13T5CW Teflon coated fluorescent bulbs or equivalent for replacement.

## CAUTIONS



Some exterior surfaces on the Display Cabinet will get hot. Use caution when touching these areas to avoid injury.



The unit must be transported in an upright position. If transported on its side, all glass surfaces must be secured with tape and the water must be drained.



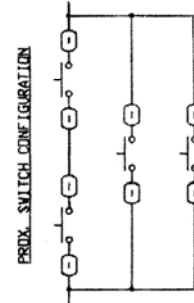
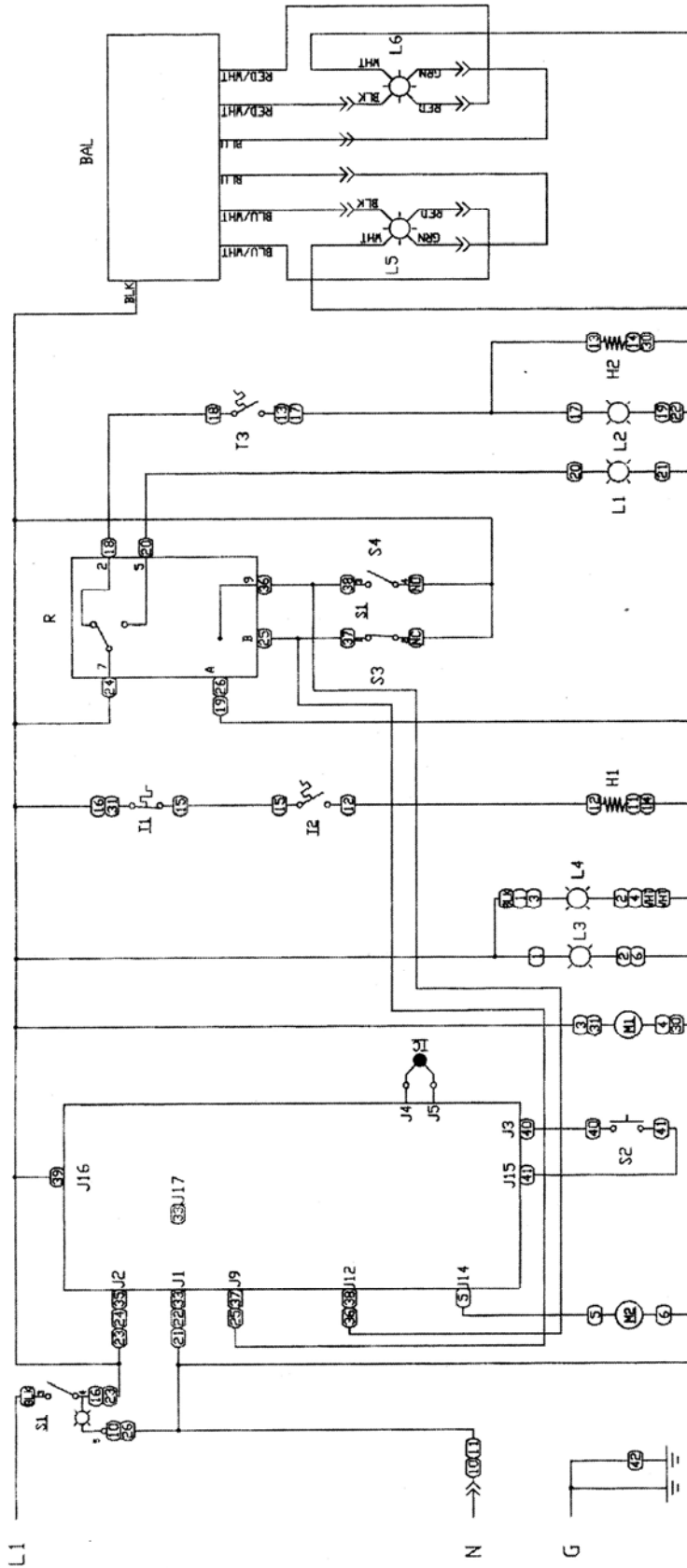
Never use anything but water in the tank system.

## SEQUENCE OF OPERATIONS

DHC-24      120VAC      Single Phase

Power is permanently supplied to the normally open on/off switch. Closing the on/off switch supplies 120VAC to the display, fan motor, and two 60 Watt back lights through the normally closed hi-limit to the normally open heating thermostat. Power is also supplied to the relay, float switches (located in the water tank), and the fluorescent lights. The relay supplies 120VAC to the normally open humidity thermostat. When the humidity thermostat closes, 120VAC is supplied to the water heating element and to the humidity indicator light. When the float switch detects a low water condition, the relay switches power from the humidity thermostat to the low water indicator light. When the door is closed, the proximity switch closes and the display board will supply 120VAC to the rack motor. The display uses a RTD probe to sense and show cabinet air temperature.

# SCHEMATIC



- S2 - SWITCH, PROXIMITY
- S3 - SWITCH, FLOAT
- S4 - SWITCH, FLOAT
- T1 - THERMOSTAT, HI LIMIT
- T2 - THERMOSTAT, HEATING
- T3 - THERMOSTAT, HUMIDITY

- BAL - BALLAST
- DIS - DISPLAY
- L1 - INDICATOR, LOW WATER
- L2 - INDICATOR, HUMIDITY
- L3, L4 - LAMP, DISPLAY, 60W
- L5, L6 - LAMP, FLUORESCENT, 15W
- H1 - HEATER, AIR
- H2 - HEATER, WATER
- M1 - MOTOR, FAN
- M2 - MOTOR, RACK
- R - RELAY
- S1 - SWITCH, POWER

(XX) - WIRE NUMBERS

## TROUBLESHOOTING GUIDE

CONDITION	POSSIBLE CAUSES	SUGGESTED SOLUTIONS
No Steam	<ol style="list-style-type: none"> <li>No water in tank</li> <li>Lime/mineral build-up</li> <li>Closed Hi-Limit</li> <li>Defective Thermostat (humidity)</li> <li>Defective Relay</li> <li>Defective Floats</li> <li>Defective Element</li> </ol>	<ol style="list-style-type: none"> <li>Check to see if water tank is filled</li> <li>Clean or replace affected parts</li> <li>Check continuity. 200 Ohms. Replace as needed.</li> <li>Check for cycle by increasing. Replace as needed.</li> <li>Replace as needed</li> <li>Long float is normally open. Replace as needed.</li> <li>Check continuity. 120V=44 Ohms + 10%, -5%. 230V=160 Ohms. Replace as needed.</li> </ol>
No Heat	<ol style="list-style-type: none"> <li>Defective Hi-Limit</li> <li>Defective Heating Thermostat</li> <li>Defective Element</li> <li>Defective Motor</li> </ol>	<ol style="list-style-type: none"> <li>Replace as needed.</li> <li>Replace as needed.</li> <li>Check continuity. (13 Ohms) Replace as needed.</li> <li>Check coil for continuity. Replace as needed.</li> </ol>
Water leaking in control area	<ol style="list-style-type: none"> <li>Water tank overfilled</li> <li>Defective water line</li> </ol>	<ol style="list-style-type: none"> <li>Check for proper water level.</li> <li>Repair as needed.</li> </ol>
Rack will not rotate	<ol style="list-style-type: none"> <li>Defective proximity switch</li> <li>Defective Display Board</li> <li>Defective Motor</li> <li>Missing Roll Pin(s)</li> <li>Defective Clutch</li> </ol>	<ol style="list-style-type: none"> <li>Check continuity or missing magnet. Replace as needed.</li> <li>Check connections, replace as needed.</li> <li>Replace as needed.</li> <li>Reinstall roll pin(s)</li> <li>Replace as needed.</li> </ol>
Rack continues to rotate when door is open	<ol style="list-style-type: none"> <li>Defective Proximity Switch</li> <li>Defective Board</li> </ol>	<ol style="list-style-type: none"> <li>Check continuity. Replace as needed.</li> <li>Replace as needed.</li> </ol>
Fluorescent lights do not illuminate	<ol style="list-style-type: none"> <li>Lights burned out</li> <li>Improper socket connections</li> <li>Defective Ballast</li> </ol>	<ol style="list-style-type: none"> <li>If light flickers, check grounding. Replace as needed.</li> <li>Check connections, replace as needed.</li> <li>Replace as needed.</li> </ol>
Light doesn't illuminate when tank is low	<ol style="list-style-type: none"> <li>Defective or Limed Floats</li> <li>Bad Light</li> <li>Bad Relay</li> </ol>	<ol style="list-style-type: none"> <li>Replace as needed.</li> <li>Replace as needed.</li> <li>Check signal to coil. Verify wiper trips. Replace as needed.</li> </ol>
No temperature display	<ol style="list-style-type: none"> <li>Defective RTD</li> <li>Defective Display Board</li> </ol>	<ol style="list-style-type: none"> <li>Check continuity (see chart). Replace as needed.</li> <li>Replace as needed.</li> </ol>
Sign lights do not illuminate	<ol style="list-style-type: none"> <li>Burned out bulbs</li> <li>Improper Socket Connections</li> </ol>	<ol style="list-style-type: none"> <li>GE F13T5CW. 18-20 Ohms across pins on same end. Replace bulbs as needed.</li> <li>Check connections, replace as needed.</li> </ol>
Water inside cabinet	<ol style="list-style-type: none"> <li>Defective Drain Valve</li> <li>Humidity too high</li> </ol>	<ol style="list-style-type: none"> <li>Replace as needed.</li> <li>Turn down humidity.</li> </ol>

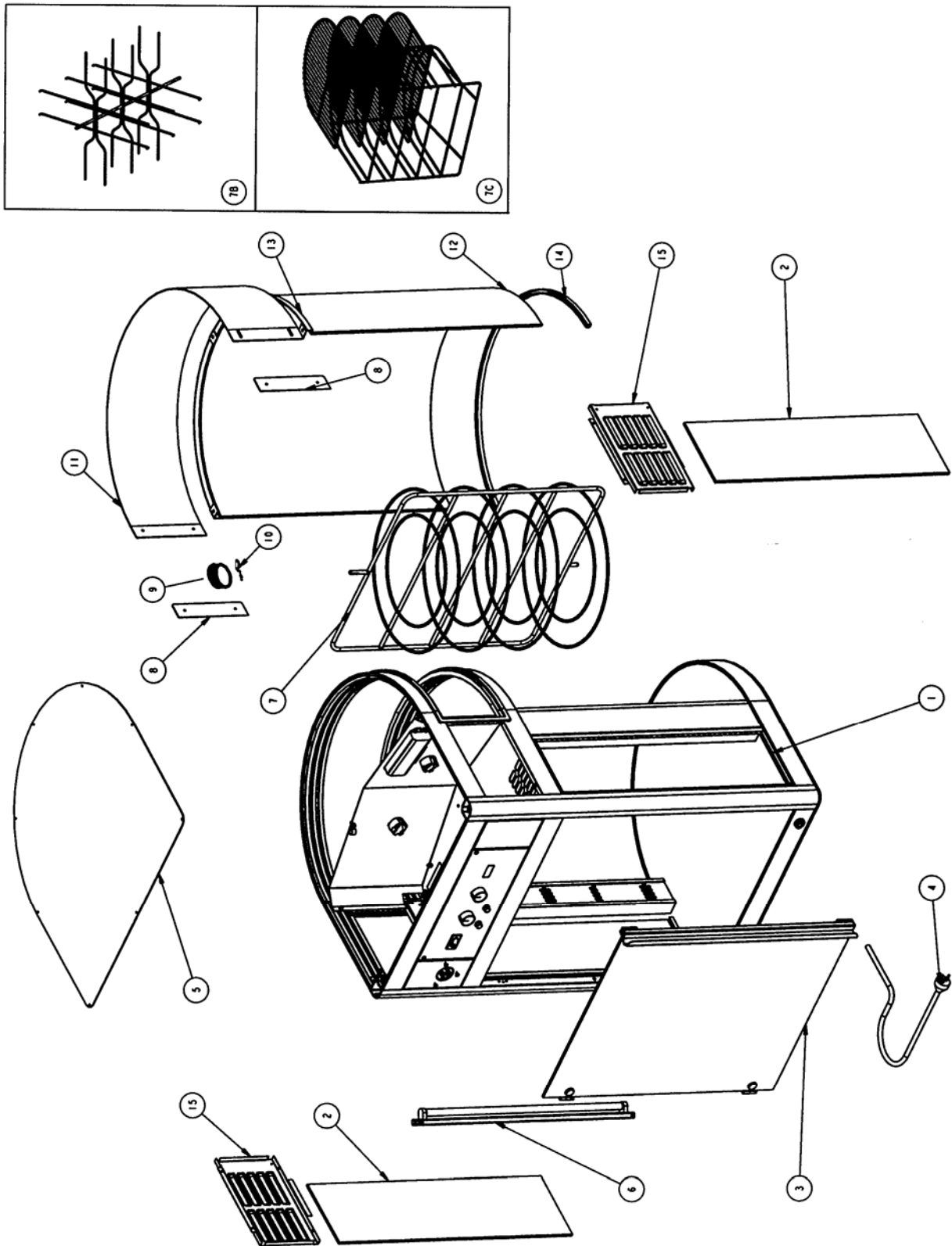
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## PARTS LIST – DHC-24 CABINET

KEY NUMBER	PART NUMBER	DESCRIPTION	QTY USED
1		Trim	2
2		Slide Glass L & R	2
3	46206SP	Rear Door Assembly 24" Cabinet	1
	-	Door Hinge (Part of Door Assembly)	3
	-	Rear Door Glass	1
	-	Rear Seal Door Stop	1
	-	Door Handle Assembly	1
4		Power Cord	1
5		Top Cover	1
6	46201SP	Light Assembly Complete	2
	-	4-40 x 1/4" Pan Screw	4
	46214SP	Fluorescent Bulb, F13T5	1
	46215SP	T5 Lampholder	2
7	46301SP	Pizza Rack 24"	1
7A	46305SP	Pretzel Rack 24"	1
7B	46306SP	Sandwich Rack 24"	1
8	46257SP	Trim	1
9	46258SP	Clutch	1
10	46259SP	Cotter Pin	1
11	46314SP	Sign – Pizza 24"	1
11B	46315SP	Sign – Pretzel 24"	1
11C	46316SP	Sign – Sandwich 24"	1
12	46218SP	Front Curved Glass	1
12A	46219SP	Front Door Left and Right*	1
		* Must be purchased as set	
13	46220SP	Top Seal	1
14	46221SP	Bottom Seal	1
15	46222SP	Louver Panel Left	1
15A	46223SP	Louver Panel Right	1



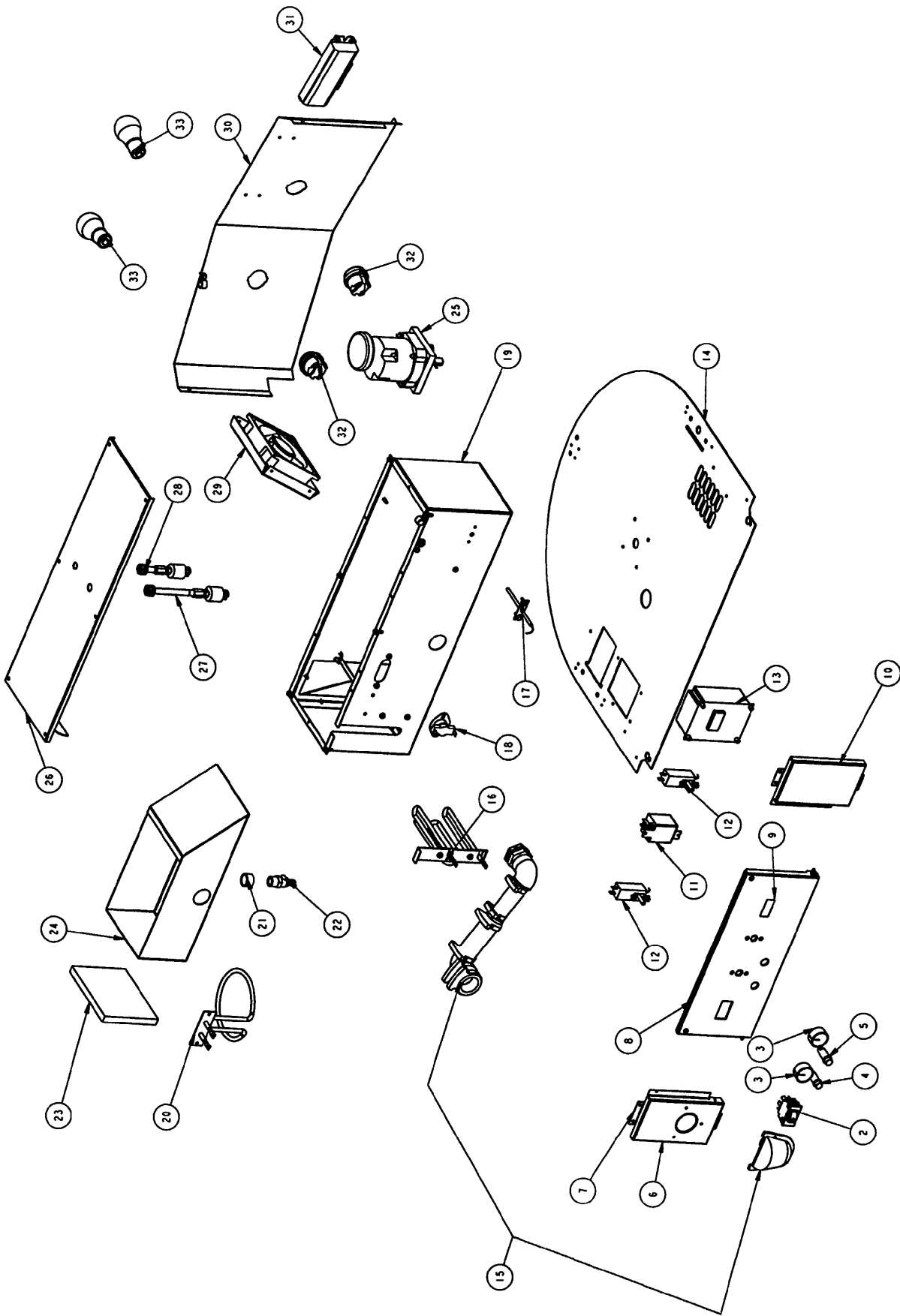
# EXPLODED VIEW ILLUSTRATION – DHC-24 CABINET



## PARTS LIST – DHC-24 ELECTRICAL COMPONENTS

KEY NUMBER	PART NUMBER	DESCRIPTION	QTY USED
2	369805	Rocker Switch	1
3	46225SP	Knob	2
4	46226SP	Green Pilot Light	1
5	M51052SP	Red Pilot Light	1
6	46227SP	Label Water Fill Hum.	1
7	46228SP	Panel, Left Hand Top Rear	1
8	46229SP	Control Panel	1
8a	46204SP	Control Panel Assembly	1
9	46230SP	Label, Control, Hum.	1
10	46231SP	Panel, Right Hand Top Rear	1
11	46232SP	Latching Relay	1
12	46233SP	Temp/Hum. Control with Probe	1
13	46234SP	Digital Display Unit	1
14	46235SP	Cover, Heat/Hum. Chamber	1
15	46236SP	Water Fill Assembly	
15a	46237SP	Elbow, ¾ NPT x ¾ Slip	1
15b	46238SP	Bulkhead Fitting	1
15c	46239SP	Nut, Bulkhead	1
15d	46240SP	90° Elbow ¾ NPT / Slip	1
15e	46241SP	Tubing, Tygon ¾" ID	
16	46242SP	Heater, Air, 120V	1
17	15856SP	Thermocouple, Air Inlet	1
18	46243SP	Hi Limit Thermostat	1
19	46244SP	Water Tank	1
20	46245SP	Heater, Immersion 120V	1
21	46246SP	Pipe Coupling	1
22	46247SP	Socket, Quick Connect	1
23	46248SP	Plate, Water Cover	1
24	46209SP	Water Tank	1
25	46249SP	Gearmotor 115V .2a	1
26	46250SP	Water Tank Top	1
27	46251SP	Switch, Float Lo Limit Assembly	1
28	46252SP	Switch, Float Hi Limit Assembly	1
		Switch, Float	
29	369124	Cooling Fan	1
29a	46254SP	Cooling Fan Shroud	1
30	46255SP	Bulkhead	1
31	46256SP	Ballast	1
32	000678SP	Lamp Socket	1
33	000370SP	Light Bulbs	1

EXPLODED VIEW ILLUSTRATION – DHC-24 ELECTRICAL COMPONENTS





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