

Model 161

Soft Serve Freezer

Service Manual

055155-S



10/18/07

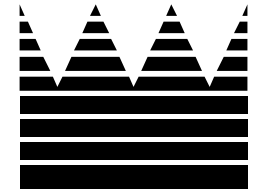


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CAUTION: Information in this manual is intended to be used by Taylor Authorized Service Technicians only.

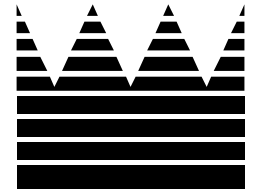
Note: Continuing research results in steady improvements; therefore, information in this manual is subject to change without notice.

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055155-S



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Section 1: Introduction

- **Safety**
- **Refrigerant**
- **Specifications**
- **Installation Instructions**
- **Running Specifications**

Safety

We at Taylor are committed to manufacturing safe operating and serviceable equipment. The many built-in safety features that are part of all Taylor equipment are aimed at protecting operators and trained service technicians alike.

This manual is intended exclusively for Taylor authorized service personnel.



DO NOT attempt any repairs unless the main power supply to the machine has been disconnected. Failure to follow this instruction may result in electrocution.



Stationary appliances which are not equipped with a power cord and a plug or other device to disconnect the appliance from the power source must have an all-pole disconnecting device with a contact gap of at least 3 mm installed in the external installation. Failure to follow this instruction may result in electrocution.



This machine must be placed on a level surface. Failure to comply may result in personal injury or equipment damage.



DO NOT install the unit in an area where a water jet could be used to clean or rinse the freezer. Failure to follow this instruction may result in serious electrical shock.

This machine is designed to operate indoors, under normal ambient temperatures of 70°-75°F (21°-24°C). The machine has successfully performed in high ambient temperatures of 104°F (40°C) at reduced capacities.

NOISE LEVEL: Airborne noise emission does not exceed 78 dB(A) when measured at a distance of 1.0 meter from the surface of the machine and at a height of 1.6 meters from the floor.

Refrigerant

Taylor uses R404A refrigerant. This refrigerant is generally considered non-toxic and non-flammable; however, any gas under pressure is potentially hazardous.



NEVER fill any refrigerant cylinder completely with liquid. Filling the cylinder to approximately 80% will allow for normal expansion.



Refrigerant liquid sprayed onto the skin may cause serious damage to tissue. Keep eyes and skin protected. If refrigerant burns should occur, flush immediately with cold water. If burns are severe, apply ice packs and contact a physician immediately.



Taylor reminds technicians to be cautious of government laws regarding refrigerant recovery, recycling, and reclaiming systems. If you have any questions regarding these laws, please contact the factory Service Department.

WARNING: R404A refrigerant used in conjunction with polyolester oils is extremely moisture absorbent. When opening a refrigeration system, the maximum time the system is open must not exceed 15 minutes. Cap all open tubing to prevent humid air or water from being absorbed by the oil.



If the crossed out wheeled bin symbol is affixed to this product, it signifies that this product is compliant with the EU Directive as well as other similar legislation in effect after August 13, 2005. Therefore, it must be collected separately after its use is completed, and cannot be disposed as unsorted municipal waste.

The user is responsible for returning the product to the appropriate collection facility, as specified by your local code.

For additional information regarding applicable local laws, please contact the municipal facility and/or local distributor.

Model 161 Specifications

Freezing Cylinder

Two, 1.5 quart (1.4 liter) volume.

Mix Hopper

Two, 8 quart (7.6 liter) capacity.

Beater Motor

Two, 0.5 hp.

Refrigeration Unit

One, 8,000 BTU/hr compressor. R404A.
Separate Hopper Refrigeration (SHR), one 300 BTU/hr. R134a. (Actual BTU's may vary based on application.)

Electrical

Electrical	Total Amps	Supplied with NEMA Cord
208-230/60/1 Air	10.0	6-15P
220-230/60/1 Water	10.0	6-15P
220-240/50/1 Air	15.0	---
220-240/50/1 Water	15.0	---

This unit may be manufactured in other electrical characteristics. Refer to the local Taylor Distributor for availability. (For exact electrical information, always refer to the data label of the unit.)

Air Cooled

Clearance: 6" (152 mm) on left and right, and 0" in the rear. Install the air deflector provided and place the rear of the unit against the wall to prevent recirculation of warm air. Minimum air clearances must be met to assure adequate air flow for optimum performance.

Dimensions

Width: 21-1/8" (537 mm)

Depth: 26-5/8" (677 mm)

Height: 28-1/8" (715 mm)

Counter Clearance: Designed to rest on a plastic pad directly on the counter top or optional cart.

Approximate Weights

Net: 305 lbs. (138.3 kgs.)

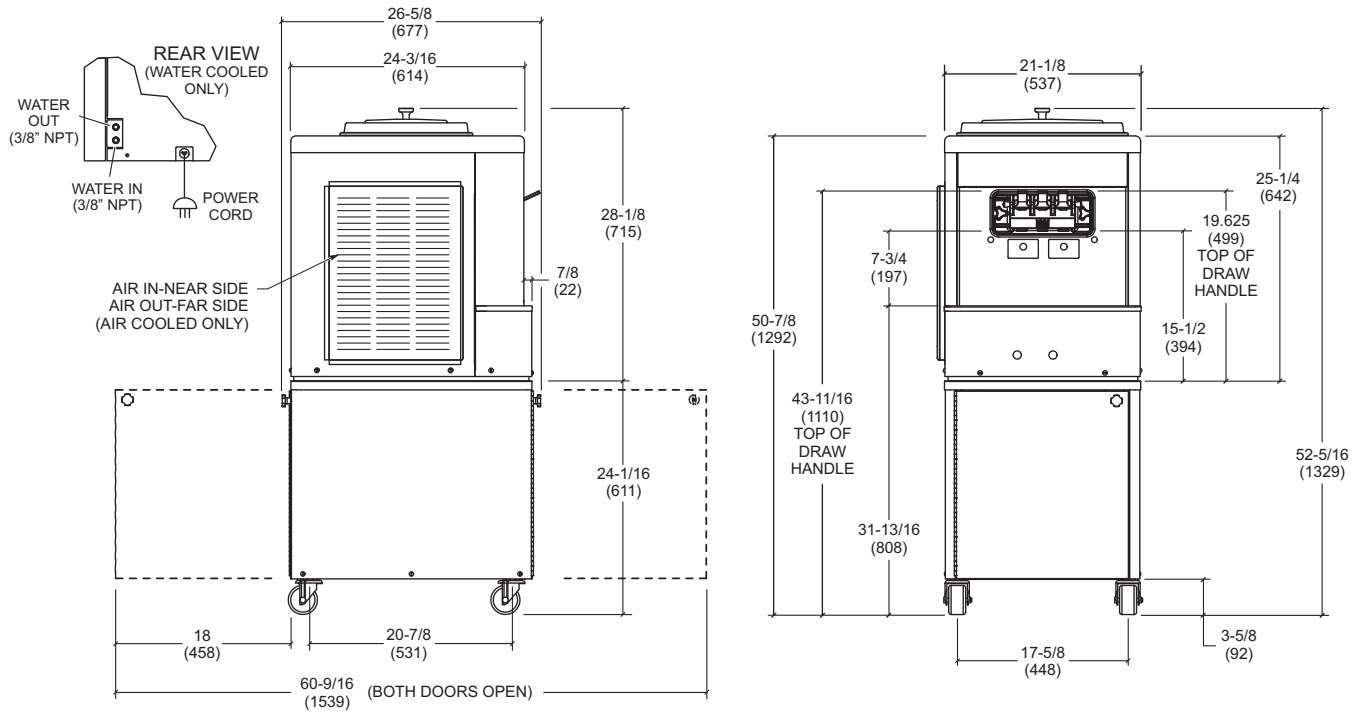
Crated: 355 lbs. (161.0 kgs.)

Volume: 17.9 cu. ft. (0.51 cu. m.)

Availability and specifications are subject to change without notice.

This unit is designed and constructed to meet stringent safety and sanitation requirements for NSF and UL.

Model 161 Specifications (Continued)



NOTE:
FIGURES IN PARENTHESES INDICATE MILLIMETERS.

Installation Instructions

Air Cooled Units

Air cooled units require a minimum of 6" (152 mm) of clearance around all sides of the freezer. Failure to allow for adequate clearance can reduce the refrigeration capacity of the freezer and possibly cause damage to the compressor.

Electrical Connections

Each freezer requires a dedicated power supply. Check the data label on the freezer for fuse, circuit ampacity and electrical specifications. Refer to the wiring diagram, provided inside the control box, for proper power connections.

In the United States, this equipment is intended to be installed in accordance with the National Electrical Code (NEC), ANSI/NFPA 70-1987. The purpose of the NEC code is the practical safeguarding of persons and property from hazards arising from the use of electricity. This code contains provisions considered necessary for safety. Compliance therewith and proper maintenance will result in an installation essentially free from hazard!

In all other areas of the world, equipment should be installed in accordance with the existing local codes. Please contact your local authorities.

Stationary appliances which are not equipped with a power cord and a plug or other device to disconnect the appliance from the power source must have an all-pole disconnecting device with a contact gap of at least 3 mm installed in the external installation.



CAUTION: This machine must be properly grounded! Failure to do so can result in severe personal injury from electrical shock!



FOLLOW YOUR LOCAL ELECTRICAL CODES!

Beater Rotation

Beater rotation must be clockwise as viewed looking into the freezing cylinder.

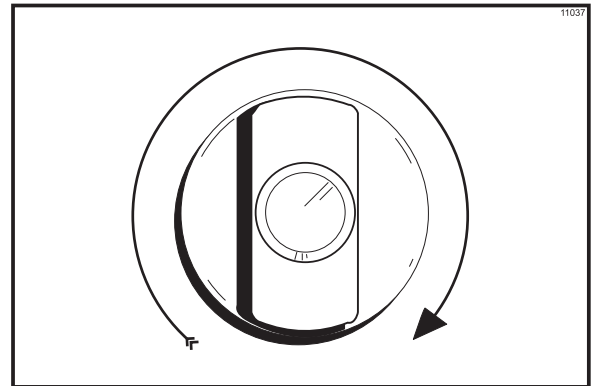


Figure 1

To correct rotation on a three phase unit, exchange leads at the main terminal block.



CAUTION: Make sure the power switch is in the OFF position before correcting the beater rotation. Failure to do so may result in electrocution or component damage.

Electrical connections are made directly to the terminal block provided in the control box.

Running Specifications

Pressures/Temperatures

The following are the Taylor recommended settings for various components within these models. The Model 161 uses R404A.

Expansion Valve - Low Side (Suction)

Soft Serve

Air Cooled - 21 psi. (145 kPa) for a normal product of 16° to 18°F (-8.8° to -7.7° C). Set each side separately at 16 psi (110 kPa).

Expansion Valve Adjustment

Place your gauge on the access valve on the suction line (located at the compressor).

Adjust the pressure higher or lower by turning the adjustment screw. Clockwise turns will raise the pressure and counterclockwise turns will lower the pressure.

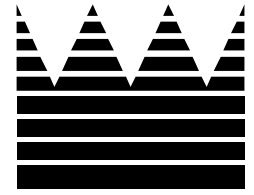
Make expansion valve adjustments with mix in the cylinder and the freezer in the AUTO mode. Be sure to allow adequate time for the pressure to stabilize.

Repeat these instructions for the other side of the unit. The expansion valve on each side of the unit must be set separately.

High Side (Discharge)

High side pressure varies for air cooled units, depending on the ambient temperature.

Ambient Temperature		Normal Operating Head Pressures
F.	C.	PSI
70°	21.1°	240 - 270 (1,655 - 1,862 kPa)
80°	26.7°	270 - 300 (1,862 - 2,069 kPa)
90°	32.2°	300 - 340 (2,069 - 2,344 kPa)
100°	37.8°	340 - 380 (2,344 - 2,620 kPa)



Section 2: Controls

- **Generation II Control Logic Board**
- **Service Tips for Generation II Boards**
- **Control Overview**

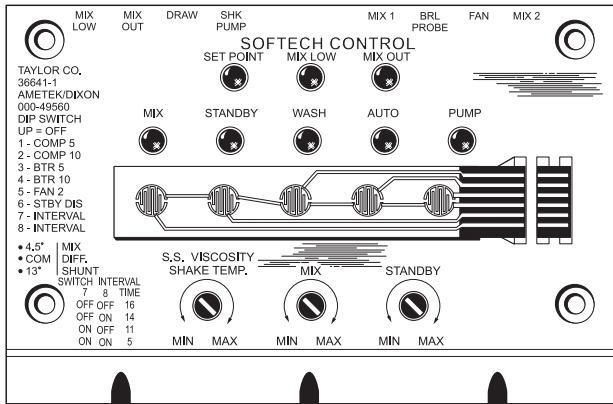
Generation II Control Logic Board

The Generation II logic board's primary function is to interpret modes of operation. The board monitors mix levels and temperatures by sending commands to the control's power board. Commands are sent via a ribbon cable, enabling the proper relays on the power board to open or close. (See Control Overview illustration on page 16.)

Function

Interpret a mode of operation/monitor mix level and temperature/monitor product viscosity or product temperature and send a command to the power board through a ribbon cable enabling the proper relays on the power board to be open or closed.

Logic Board (Part Numbers)



As of July, 1996 we have modified the differential on Generation II controls from 13°F/7.2°C to 4.5°F/2.5°C in order to meet the new NSF mix temperature requirements. The new control has a shunt (jumper) to select proper temperatures. This shunt is located beneath the dip switches on the left side of the control. The shunt is set in the upper position for 4.5°F/2.5°C differential for use on mix hopper systems and in the lower position for 13°F/7.2°C differential for use on mix cabinet systems. The new control is compatible with older units. This change will require new part numbers as follows:

Old Part No.	New Part No.
X36641-SER Gen. II	X36641SER1
X38523-SER Gen. II-W/Chime	X38523SER1

Power Board (Part Number)

X32326-SER

Thermistor Probes

There are two types of thermistor probes used on model 161 freezers. The resistance value of the thermistor probes corresponds with the temperature. As the temperature becomes warmer, the probe resistance decreases.

- X31602 - Barrel Probe (Senses temperature of product in freezing cylinder.)
- X55540 - Hopper Probe (Senses temperature of mix in hopper.)

Approximate probe resistance readings:

- 10,000 OHMS at room temperature (77°F/25°C).
- 30,035 OHMS at hopper temperature (35°F/2°C).
- 48,636 OHMS at soft service temperature (18°F/-7.7°C).

Viscosity Function

In soft serve freezers the logic board monitors amp draw on the beater motor, which is directly related to the viscosity of the product in the freezing cylinder. When the amp draw reaches its set point, the unit cycles off. Therefore, the viscosity of the product will always be consistent even through its temperature may vary slightly.

To monitor amperage, L1 power supplied to the beater motor must pass through the power board beater terminals. The same softech controls are used in both single and three phase applications. For this reason the control must be set to operate in an amperage range which relates to the beater motor amperage and the desired product viscosity setting.

The selected amperage range simply determines the adjustment span of the viscosity adjustment potentiometer on the logic board. The jumper on the power board determines the amperage range selection. The jumper is placed on the pin which corresponds to the beater motor amperage when the desired product viscosity is attained. See page 16 to locate the range selection jumper.

Viscosity Control Range Selections

- 2.4 PIN - 1.2 AMP to 2.4 AMP
- 5.0 PIN - 2.5 AMP to 5.0 AMP
- 8.0 PIN - 4.0 AMP to 8.0 AMP
- 11.2 PIN - 5.7 AMP to 11.2 AMP

Setting Viscosity Adjustment

1. Place an amp probe on one of the L1 leads on the beater terminal on the power board.
2. Turn the viscosity adjustment screw to the "MAX" position.
3. With the freezer properly primed, actuate the refrigeration cycle (press "AUTO").

4. During the freezing process, draw a sample and inspect the product appearance. When the desired product viscosity and appearance is achieved, note the beater motor amperage.
5. Cancel the refrigeration cycle (press "AUTO").
6. Using the chart, set what range the beater motor amperage falls into and place the jumper on the proper pin. (**Note:** See previous chart for amperage range.)
7. Press "AUTO". When amperage achieves the previously noted beater motor amperage, turn the viscosity adjustment screw counterclockwise **slowly** until the unit cycles off.
8. Draw several samples to verify that the amperage at cycle off and product quality remains consistent.

Mix Adjustment

The mix setting is the temperature adjustment for the mix hopper.

Ideal mix temperature = 38°F (3.3°C) to 40°F (4.4°C).

Cut-out temperature will always be 4.5°F (2.5°C) lower than the cut-in temperature. (See SB 2474.)

The range for cut-in temperature is "MIN" approximately 52°F (11.0°C) and "MAX" approximately 36°F (2.2°C).

Setting the Mix Hopper Temperature

1. To set the mix hopper temperature, fill the hopper at least half full with approximately 40°F (4.4°C) mix.
2. Install a suction pressure gauge at the EPR valve (evaporator pressure regulator) and verify the correct operating pressure. Adjust if necessary.
3. Set the "MIX" potentiometer to mid-range.
4. Allow the mix hopper refrigeration system to cycle until the mix temperature is stabilized. Adjust the setting if necessary.

Note: The temperature adjustment must be made on the left logic board.

Standby Adjustment

Maintains mix temperature in the freezing cylinder during long "no sale" periods to prevent over-beating of the product.

Ideal standby temperature = 30°F (1.1°C) to 35°F (1.7°C).

Cut-out temperature will always be 4°F (2°C) lower than the cut-in temperature.

The range for cut-in temperature is "MIN" approximately 44°F (6.6°C) and "MAX" approximately 30°F (-1.1°C).

Setting Standby Temperatures

1. With the unit properly primed with fresh mix, turn the STANDBY adjustment screw to the warmest position.
2. Press "STANDBY".
3. When the main refrigeration system cycles off, draw a sample portion and check the product temperature.
4. To get the desired standby temperature, make a slight clockwise adjustment and wait until the main refrigeration cycles off.

Thermistor Curve

When checking a thermistor probe, first determine the present temperature at the probe and find it on this chart along with the approximate correct ohmmeter reading. The ohmmeter reading may vary

F.°	C.°	K OHM
-10	-23.3	118.201
-9	-22.7	114.394
-8	-22.2	110.709
-7	-21.6	107.143
-6	-21.1	103.692
-5	-20.5	100.352
-4	-20.0	97.120
-3	-19.4	94.085
-2	-18.8	91.144
-1	-18.3	88.296
0	-17.7	85.536
1	-17.2	82.863
2	-16.6	80.273
3	-16.1	77.765
4	-15.5	75.334
5	-15.0	72.980
6	-14.4	70.627
7	-13.8	68.350
8	-13.3	66.147
9	-12.7	64.014
10	-12.2	61.951
11	-11.6	59.953
12	-11.1	58.021
13	-10.5	56.150
14	-10.0	54.340
15	-9.4	52.854
16	-8.8	51.409
17	-8.3	50.003
18	-7.7	48.636
19	-7.2	47.306
20	-6.6	46.012
21	-6.1	44.754
22	-5.5	43.530

from the correct one. Determine whether the difference is acceptable. If a probe is actually faulty, the difference will be great.

F.°	C.°	K OHM
23	-5.0	42.340
24	-4.4	41.136
25	-3.8	39.967
26	-3.3	38.830
27	-2.7	37.727
28	-2.2	36.654
29	-1.6	35.612
30	-1.1	34.599
31	-0.5	33.616
32	0	32.660
33	0.5	31.760
34	1.1	30.885
35	1.6	30.035
36	2.2	29.207
37	2.7	28.403
38	3.3	27.620
39	3.8	26.859
40	4.4	26.120
41	5.0	25.400
42	5.5	24.721
43	6.1	24.059
44	6.6	23.416
45	7.2	22.789
46	7.7	22.180
47	8.3	21.586
48	8.8	21.009
49	9.4	20.447
50	10.0	19.900
51	10.5	19.884
52	11.1	18.881
53	11.6	18.392
54	12.2	17.915
55	12.7	17.451

F.°	C.°	K OHM
56	13.3	16.998
57	13.8	16.557
58	14.4	16.128
59	15.0	15.710
60	15.5	15.315
61	16.1	14.929
62	16.6	14.554
63	17.2	14.187
64	17.7	13.830
65	18.3	13.482
66	18.8	13.143
67	19.4	12.812
68	20.0	12.490
69	20.5	12.185
70	21.1	11.888
71	21.6	11.598
72	22.2	11.315
73	22.7	11.039
74	23.3	10.769
75	23.8	10.507
76	24.4	10.250
77	25.0	10.000
78	25.5	9.763
79	26.1	9.532
80	26.6	9.306
81	27.2	9.085
82	27.7	8.870
83	28.3	8.659
84	28.8	8.454
85	29.4	8.254
86	30.0	8.058
87	30.5	7.872
88	31.1	7.691
89	31.6	7.513
90	32.2	7.340
91	32.7	7.171
92	33.3	7.006
93	33.8	6.884
94	34.4	6.686

F.°	C.°	K OHM
95	35.0	6.532
96	35.5	6.386
97	36.1	6.242
98	36.6	6.102
99	37.2	5.966
100	37.7	5.832
103	39.4	5.448
106	41.1	5.096
109	42.8	4.769
112	44.4	4.466
115	46.1	4.184
118	47.8	3.922
121	49.4	3.680
124	51.1	3.454
127	52.8	3.244
130	54.4	3.048
133	56.1	2.866
136	57.8	2.696
139	59.4	2.539
142	61.1	2.391
145	62.8	2.252
148	64.4	2.124
151	66.1	2.004
154	67.8	1.891
157	69.4	1.785
160	71.1	1.687
163	72.8	1.594
166	74.4	1.508
169	76.1	1.427
172	77.8	1.351
175	79.4	1.279
178	81.1	1.212
181	82.8	1.149
184	84.4	1.090
187	86.1	1.034
190	87.8	.982
193	89.4	.932
196	91.1	.886
199	92.8	.842

Service Tips for Generation II Boards

Initial Service Tips

1. Check all connections.
2. Check the cable to verify that it is secure.
3. Verify that all pins are securely fastened in their sockets.
4. Verify that all cables correctly face away from the boards. If the cable is attached incorrectly, damage to the logic board will occur. Beater motor operation will be disabled.
5. Verify probe resistance.
6. Use the self-test program.

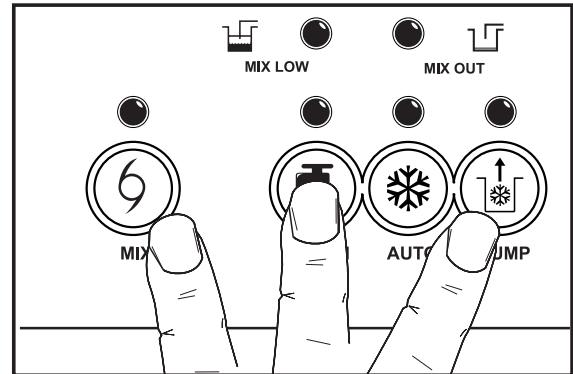


Figure 2

Each light corresponds with a particular relay. The light on the panel will not extinguish until the test is completed for that particular relay.

Self-Test Program

The Generation II controls are programmed for a self-test. The control can be used to help identify problems in the power board, the logic board, and the thermistor probes. The self-test program is not intended to, and will not take the place of a reasonable and prudent service technician.

The self-test program is divided into two sections. The first section is performed automatically by the logic board itself and the second section is performed by the technician.

This test is designed to aid in identifying problems within the logic board, the power board, or the thermistor probes.

Self-Test - Part I

The self-test program is initiated by holding down the MIX, WASH, AND PUMP keys on the logic board while simultaneously turning on the power switch. Hold down the keys until all eight lights illuminate.

Note: If all eight lights do not illuminate, or if the test cannot be initiated, the logic board is defective.

Logic Board Light	Corresponding Relay
MIX LOW	Mix Relay
MIX OUT	Fan Relay
MIX	Pump Relay
STANDBY	Beater Motor Relay
WASH	Compressor Relay
AUTO	Spinner Relay
PUMP	Portion Relay

When the self-test is initiated, all eight lights will remain on for three seconds. At this time, the processor will begin to check the power board relays as follows:

Note: Each relay closes for three seconds during this test. As the relay opens, the corresponding light extinguishes. There is a ten second pause between the activation of each relay.

1. The SET POINT light turns off.
Ten seconds after the SET POINT light turns off:
2. The MIX relay closes and opens again. The MIX LOW light extinguishes.
3. The FAN relay closes and opens again. The MIX OUT light extinguishes.

4. The PUMP relay closes and opens again. The MIX light extinguishes.
5. The "BTR" (beater motor) relay closes and opens again. The STANDBY light extinguishes.
6. The "COM" (compressor) relay closes and opens again. The WASH light extinguishes.
7. All lights are off and a tone sounds for three seconds. This designates the end of the first section.

If all or most of the power board relays fail to close, the logic board is defective. If only one relay fails to close, the power board is defective. This test can be used to determine if a problem exists with the logic board, the power board, or elsewhere in the freezer. In other words, if during the test the beater relay closes on the power board, but the beater motor contactor does not operate, the problem occurs after the command reaches the power board.

Self-Test - Part II

When the first section of the self-test is complete, the control will advance to the starting point of the second section. The technician will have to complete this portion of the test. The first part of this section verifies the function of the control potentiometers (adjustment screw).

During this test, the MIX, STANDBY, WASH, AUTO, and PUMP lights function in direct relationship with the "MIN" and "MAX" adjustments of the potentiometer. In other words, when the adjustment screw is turned all the way to "MIN", the MIX light will be illuminated. When the adjustment is turned all the way to "MAX", the light will travel down and illuminate the PUMP light. If the screw adjustment is made between the "MAX" and the "MIN" adjustment, one of the other lights will illuminate depending on the adjustment.

These lights create a bar graph which is directly related to the product temperature. "MIX" is warm and "PUMP" is cold.

1. The SET POINT light is illuminated, indicating that the control is reading the soft serve viscosity potentiometer.
2. Rotate the adjustment screw back and forth from "MIN" to "MAX". The bar graph should travel accordingly. This indicates that the potentiometer is functional.

If the bar graph lights do not react, the logic board is defective.



IMPORTANT: If the freezer's controls have been set previously, return the adjustment to its original position. For example, if the WASH light was illuminated before an adjustment screw was rotated - - before going to the next step - - rotate the adjustment screw until the WASH light is illuminated again.

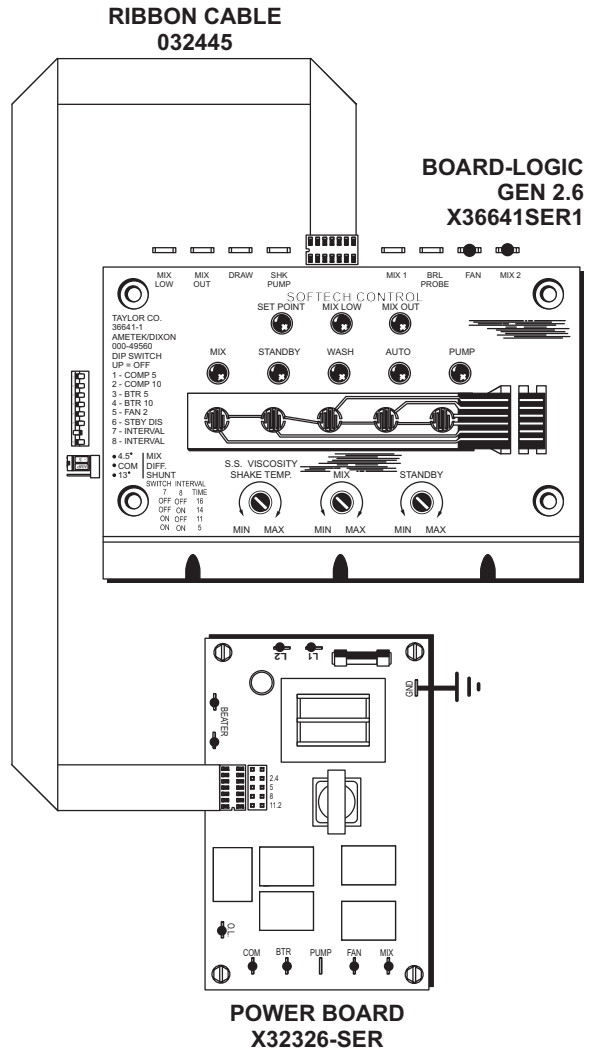
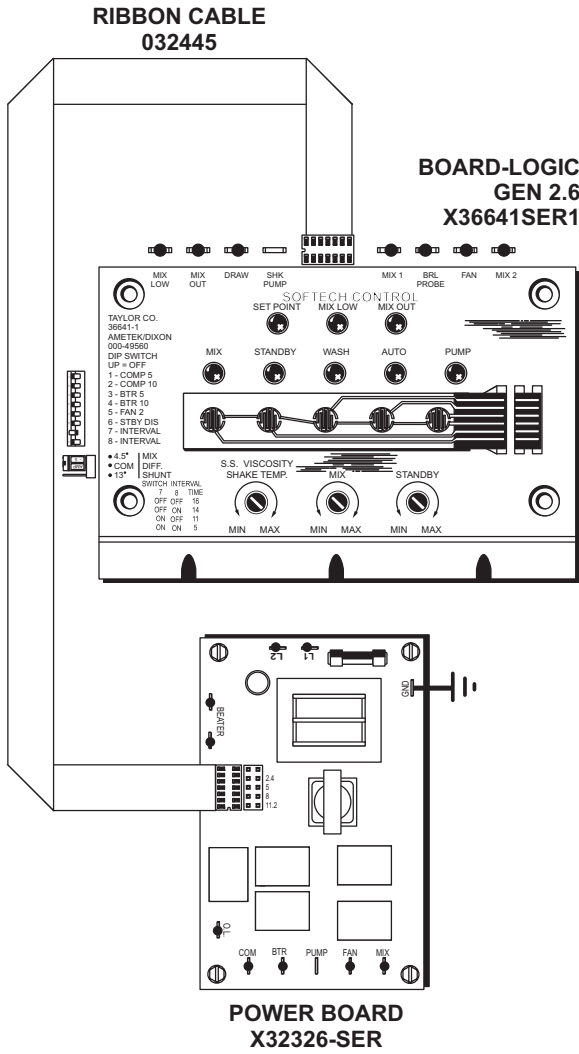
3. Press the MIX key once.
4. The MIX LOW light is illuminated, indicating that the control is reading the MIX potentiometer.
5. Rotate the adjustment screw as in Step 2.
6. Press the MIX key once.
7. The MIX OUT light is on, indicating the control is reading the STANDBY potentiometer.
8. Rotate the adjustment screw as in Step 2.
9. Press the MIX key once.
10. The MIX LOW light is illuminated, indicating that the control is reading the "MIX 1" terminal.

11. The capability of this terminal to read the thermistor probe can be checked by the following method:
 - a. Remove the thermistor probe wire from the "MIX 1" terminal.
 - b. Connect the "MIX 1" terminal directly to ground (simulating a warm probe). The MIX light will illuminate.
 - c. Remove the terminal connection from ground (simulating a cold probe). The PUMP light will illuminate.

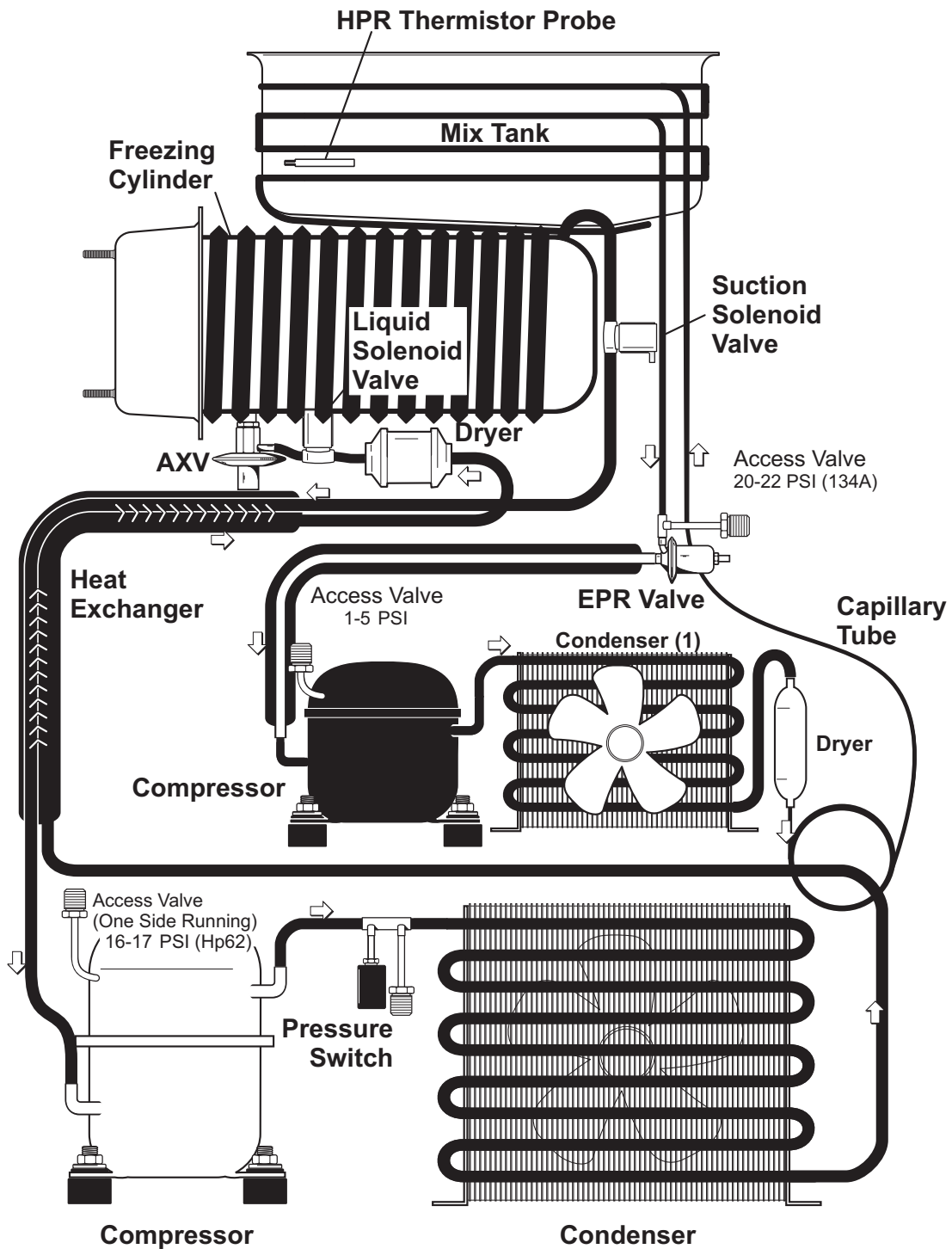
If the lights do not react, the panel is defective.

12. Press the MIX key once.
13. The MIX OUT light is illuminated, indicating that the control is now reading the BARREL (freezing cylinder) probe terminal.
14. Check the BARREL (freezing cylinder) probe (as in Step 13) by removing the wire from the panel.
15. Press the MIX key again, and the self-test program is terminated.

Control Overview

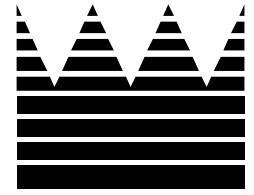


Refrigeration Schematic



Valve Functions

COMP LABEL	DESCRIPTION	FUNCTION	BASIC OPERATING LOGIC	INPUT / OUTPUT
EPR	Inlet Pressure Upstream Regulator	Limits the minimum refrigerant pressure in the hopper (currently set to 60 psig).	Limiting the minimum refrigerant pressure in the hopper prevents freezing of product mix on the hopper wall.	
Filter/Dryer		This keeps moisture, dirt, metal, and chips from entering the refrigerant flow control valves.		
Heat Exchanger (sub cooler)		This allows the liquid refrigerant to be cooled before it reaches the AXV and TXV.	When the liquid is subcooled before it reaches the refrigerant control, the refrigeration effect per unit mass of refrigerant is increased.	
AXV	Automatic expansion valve of the freezing cylinder circuit.	Controls the refrigerant flow during the cooling of the freezing cylinder.		



Section 3: Troubleshooting

- **General Troubleshooting Guide**
- **Electrical Troubleshooting**

General Troubleshooting Guide

PROBLEM	PROBABLE CAUSE	REMEDY
1. No product is being dispensed.	Low on mix. The MIX OUT light is on.	Add mix to the mix hopper
	The power switch is in the OFF position.	Place the power switch to the ON position and press the AUTO key.
	Beater motor is out on reset.	Allow the beater motor to cool. Place the power switch to the OFF position. Press the reset button firmly. Place the power switch to the ON position and press the WASH key. Open the side access panel and observe that the drive shaft is turning CLOCKWISE as viewed from the front of the unit. Press the AUTO key to return to the AUTO mode.
	Incorrect usage of the mix feed tube.	Follow the correct feed tube procedures and use of air orifice.
2. The product is too thick.	Improper priming procedures.	Drain the freezing cylinder and re-prime the unit.
	The viscosity control is set too cold.	Adjust the viscosity.
3. The product is too soft.	The draw rate is set too fast.	Adjust the draw rate to 5 - 7-1/2 oz. (142 g. - 213 g.) of product by weight every 10 seconds.
	Outdrawing the capacity of the freezing cylinder.	The continuous draw rate is approximately 15 cones.
	There is inadequate air space around the unit.	A minimum of 6" (15.2 cm) of clearance around all sides is required.
	Dirty condenser or air filters on air cooled units.	Clean regularly.
	Inadequate water supply on water cooled units.	Check the water supply. Check the water lines for leaks or kinks.
	Bad scraper blades.	Replace the scraper blades.
	The viscosity control is set too warm.	Adjust the viscosity.
	Incorrect usage of the mix feed tube.	Follow the correct feed tube procedures and use of the air orifice.

PROBLEM	PROBABLE CAUSE	REMEDY
4. The mix in the hopper is too warm.	The hopper cover is not in position.	Clean the hopper cover and place it in position.
	The hopper temperature is out of adjustment.	Adjust the temperature control.
5. The mix in the hopper is too cold.	The hopper temperature is out of adjustment.	Adjust the temperature control.
6. Product is collecting on top of the freezer door.	The top o-ring on the draw valve is improperly lubricated or worn.	Lubricate properly or replace the o-ring.
7. Excessive mix leakage from the bottom of the door spout.	The bottom o-ring on the draw valve is improperly lubricated or worn.	Lubricate properly or replace the o-ring.
8. Excessive mix leakage into the long drip pan.	The seal on the drive shaft is improperly lubricated or worn.	Lubricate properly or replace the seal.
	The seal is installed inside-out on the drive shaft.	Install the seal correctly.
9. Excessive mix leakage from the rear of the freezer into the short drip pans.	Worn or missing o-rings.	Install or replace the o-rings.
	Inadequate lubrication of the drive shaft.	Lubricate properly.
	The drive shaft and beater assembly work forward.	Verify the refrigerant charge and check for a shorted freezing cylinder.
	Worn rear shell bearing.	Replace the component.
	Gear box out of alignment.	Re-align the gear box.
10. The drive shaft is stuck in the drive coupling.	Mix and lubricant have collected in the drive coupling.	Brush clean the rear shell bearing area regularly.
	Rounded corners of the drive shaft, the drive coupling or both.	Replace worn component(s).
	The gear box is out of alignment.	Re-align the gear box.
11. Freezing cylinder walls are scored.	Missing or worn front bearing.	Install or replace the front bearing.
	The beater assembly is bent.	The beater assembly must be replaced.
	The gear box is out of alignment.	Re-align the gear box.

PROBLEM	PROBABLE CAUSE	REMEDY
12. The unit will not run when in the AUTO mode.	The unit is unplugged.	Plug into wall receptacle.
	The beater motor is out on reset.	Allow the beater motor to cool. Place the power switch to the OFF position. Press the reset button firmly. Place the power switch to the ON position, and press the WASH key. Open the side access panel and observe that the drive shaft is turning clockwise as viewed from the front of the unit. Press the AUTO key to return to the AUTO mode. Note: Do not use metal objects to press the reset button.
	The circuit breaker is off, or the fuse is blown.	Turn the breaker on, or replace the fuse.
	Low on mix. The MIX OUT light is on.	Add mix to the mix hopper and press the AUTO key.
	The water is turned off, on water cooled units.	Turn the water on.
13. Product is not feeding into the freezing cylinder.	The mix inlet hole is frozen up.	The hopper temperature needs adjustment.
	Incorrect usage of the mix feed tube.	Follow the correct feed tube procedures and use of the air orifice.
14. Product is "popping" when drawn.	The draw rate is set too fast.	The draw rate should be set at 5 - 7-1/2 oz. of product per 10 seconds.
15. The MIX LOW and MIX OUT probes are not functioning.	There is milkstone build-up in the hopper.	Clean the hoppers thoroughly.

Electrical Troubleshooting

The following information provides a sequential list of electrical components that L-1 power travels through to initiate various operations.

Auto Mode of Operation:

L-1 power travels through the power switch, beater overload switch, the compressor high pressure cut-out switch, the overload terminal (OL) on the power board, the BTR terminal of the power board, and energizes the coil of the beater motor contactor.

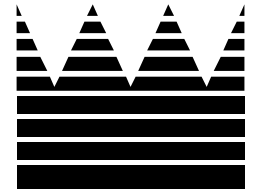
L-1 power travels through the power switch, beater overload switch, the compressor high pressure cut-out switch, the overload terminal (OL) on the power board, the COM terminal of the power board, and energizes the coil of the compressor contactor.

L-1 power travels through the power switch, beater overload switch, the compressor high pressure cut-out switch, the L-1 terminal of the power board, the MIX terminal of the power board, and energizes the hopper refrigeration compressor and condenser fan.

Wash Mode of Operation:

L-1 power travels through the power switch, beater overload switch, the compressor high pressure cut-out switch, the overload terminal (OL) on the power board, the BTR terminal of the power board, and energizes the coil of the beater motor contactor.

Notes:



Section 4: Parts

- **Warranty Explanation**
- **Exploded Views**
- **Complete Parts List**
- **Wiring Diagrams**

Warranty Explanation

- Class 103 Parts:** The warranty for new equipment parts is one year from the original date of unit installation, with a replacement parts warranty of three months.
- Class 212 Parts:** The warranty for new equipment parts is two years from the original date of unit installation, with a replacement parts warranty of twelve months.
- Class 512 Parts:** The warranty for new equipment parts is five years from the original date of unit installation, with a replacement parts warranty of twelve months.
- Class 000 Parts:** Wear Items - no warranty.

CAUTION: Warranty is valid only if required service work is provided by an Authorized Taylor Service Technician.

NOTE: Taylor reserves the right to deny warranty claims on equipment or parts if a non-approved refrigerant was installed in the machine, system modifications were performed beyond factory recommendations, or it is determined that the failure was caused by neglect or abuse.

Compressor Warranty Disclaimer

The refrigeration compressor(s) on this machine are warranted for the term indicated on the warranty card accompanying this machine. However, due to the Montreal Protocol and the U.S. Clean Air Act Amendments of 1990, many new refrigerants are being tested and developed; thus seeking their way into the service industry. Some of these new refrigerants are being advertised as drop-in replacements for numerous applications. It should be noted that, in the event of ordinary service to this machine's refrigeration system, only the refrigerant specified on the affixed data label should be used. The unauthorized use of alternate refrigerants will void your compressor warranty. It will be the owners' responsibility to make this fact known to any technicians they employ.

It should be noted, that Taylor does not warrant the refrigerant used in its equipment. For example, if the refrigerant is lost during the course of ordinary service to this machine, Taylor has no obligation to either supply or provide its replacement either at billable or unbillable terms.

Taylor will continue to monitor the industry and test new alternates as they are being developed. Should a new alternate prove, through our testing, that it would be accepted as a drop-in replacement, then the above disclaimer would become null and void. To find out the current status of an alternate refrigerant as it relates to your compressor, call the local Taylor Distributor or the Taylor Factory. Be prepared to provide the model/serial number of the unit in question.

Model 161 Exploded View

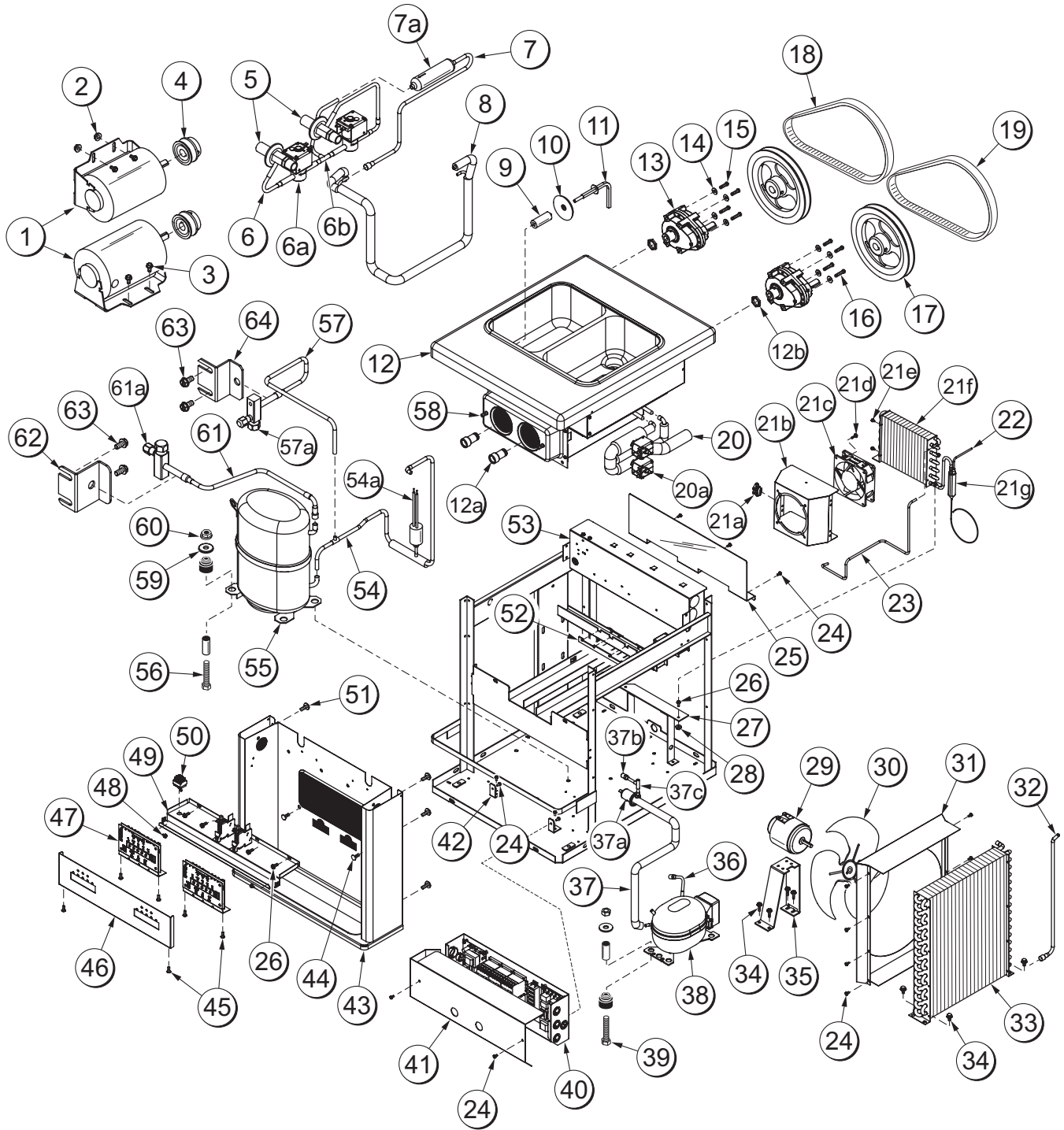


Figure 3

Model 161 Exploded View

ITEM	DESCRIPTION	PART NO.
1	MOTOR-1/2 HP REMOTE CAPS	055097-27G
2	NUT-5/16-18 WHIZ FLANGE	017327
3	SCREW-5/16-18X5/8 SERR.	017326
4	PULLEY-AK20X5/8	041162
5	VALVE-EXP-AUTO-1/4S X1/4	046365
6	LINE A.-LIQUID *SOLENOID	X55592-27
6a	VALVE-SOLENOID 7/64 ORF	043449-27
6b	TEE-1/4S-COPPER	003949
7	LINE A.-LIQ *HTE-DRY*AC*	X64360
7a	DRYER-FILTER 1/4 X 1/4 SLDR	048878
8	EXCHANGER A.-HEAT	X64357
9	SPACER-PROBE *SQ HOLE*	030966
10	DISC-PROBE *SQ HOLE*	030965
11	PROBE A.-MIX *SQUARE*	X30922
12	SHELL A.-INSULATED	X58457
12a	BEARING-REAR SHELL	023648
12b	NUT-REAR BEARING	023647
13	GEAR A.*REDUCER 4 TO 1	025770-SER
14	WASHER-5/16 SAE FLAT CR3	017660
15	SCREW-1/4-20X3 HEX HEAD	025984
16	SCREW-1/4-20X3-1/4 HEX HD	025985
17	PULLEY-5.7" PITCH DIA X 5/8	041498
18	BELT-AX24	055201
19	BELT-AX45	045311
20	LINE A.-SUCTION	X64358-27
20a	VALVE-SOL-1/4 ORF X 3/8 IN-1/2 OUT	062019-27
21	CONDENSER A.-DANFOSS INCLUDES:	X63551-27G
21a	CONNECTOR-BX 3/8 STR	014569
21b	SHROUD DANFOSS	048818
21c	MOTOR-FAN	062253-27
21d	SCREW-10-32X3/8 UNSL HWH	039381
21e	SCREW-8X1/4 SLTD HEX	009894
21f	CONDENSER-A/C 7X6X1.25	027155
21g	DRYER-CAP TUBE .021 IDX9F	055522
21h	HARNESS-WIRE DANFOSS	063839
22	LINE-PROCESS AUX DRYER	055185
23	LINE-DISCHARGE *DANFOSS	063560

ITEM	DESCRIPTION	PART NO.
24	SCREW-10X3/8 SLOTTED HEX	015582
25	COVER-CAP.& RELAY BOX	055136
26	SCREW-10-32X1/2 SERR.	020982
27	BRACKET A.-COND-DANFOSS	X63562
28	NUT-10-32 WHIZ FLANGE LCK	020983
29	MOTOR-FAN 50 WATT W/GRD	029770-27
30	FAN-3 BLADE 12 " PULL 24°	063397
31	SHROUD-CONDENSER	064356
32	LINE A.-LIQ *HTE-COND*AC	X64359
33	CONDENSER-AC 12LX16H X 2.5T 3 ROWS	048935
34	SCREW-10-32X3/8 UNSL HWH	039381
35	BRACKET-FAN MOUNT	058675
36	VALVE-ACCESS-1/4 MFLX1/4	047016
37	LINE A.-SUCTION *DANFOSS	X63559
37a	VALVE-EPR 1/4S	022665
37b	VALVE-ACCESS 1/4FL X 1/4	044404
37c	TEE-1/4S-COPPER	022665
38	COMPRESSOR PL35G	055187-27
39	KIT-MOUNTING-COMPRESSR	047704
40	CONTROL A. -COMPLETE	X58494-27
41	COVER-CONTROL BOX	058496
42	BRACKET-BOX-CONTROL MT	055117
43	PANEL A.-FRONT	X58488
44	BOLT-CARRIAGE 1/4-20X3/4	012347
45	SCREW-6-32X3/8 SLTD BNDR	002201
46	PLATE-DEC	055512
47	BOARD-LOGIC-GEN 2.6-SD	X36641SER1
48	SCREW-8X1/4 SLTD HEX	009894
49	CONTROL A.-CHANNEL	X55480-27
50	SWITCH A.-POWER	X52306
51	SCREW-10-24X1/2 TORX	002077
52	PLATE-MOUNTING	055507
53	BOX A.-CAP&RELAY	X59557-27
54	LINE A.-DISCHARGE	X63556
54a	SWITCH-PRESSURE 405 PSI	052663
55	COMPRESSOR L63B562BBCB	048727-27E
56	SCREW-5/16-18X1-1/2 HEX HD	001894
57	LINE A.-ACCESS DISCHARGE	X63554

*NOT SHOWN

Model 161 Exploded View (Continued)

ITEM	DESCRIPTION	PART NO.
57a	VALVE-ACCESS-1/4MFL X 3/8	053565
58	STUD-NOSE CONE- 5/16-18X5/16	013496
59	WASHER-5/16 USS FLAT CR3	000651
60	NUT-5/16-18 WHIZ FLANGE	017327

ITEM	DESCRIPTION	PART NO.
61	LINE A.-ACCESS LOW	X64407
61a	VALVE-ACCESS-1/4MFL X 3/8	053565
62	BRACKET-VALVE-ACCESS	053577
63	SCREW-1/4-20X1/2 SLT	051284
64	BRACKET-VALVE-ACCESS	055202

*NOT SHOWN

Model 161 Panel Identification

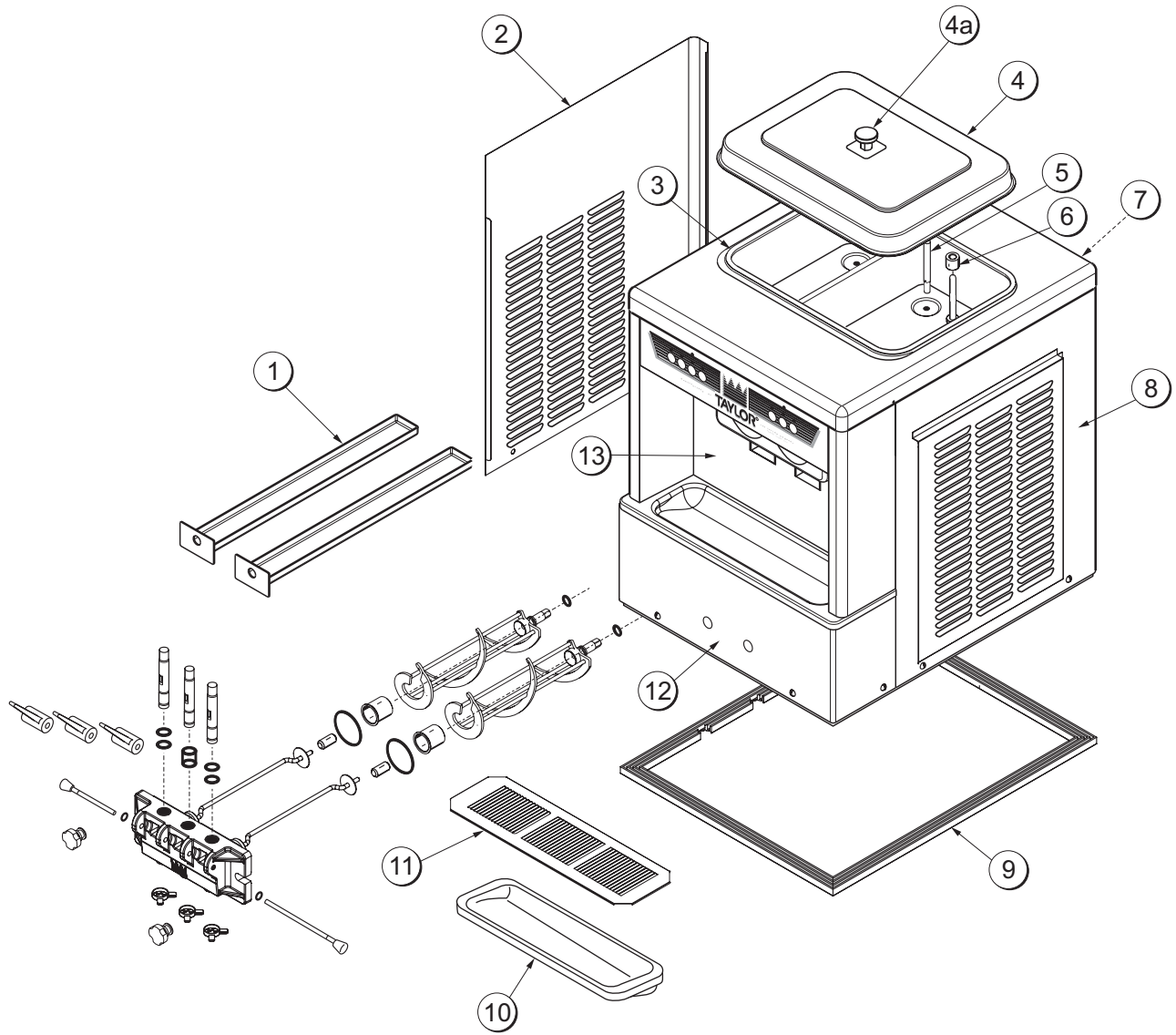


Figure 4

ITEM	DESCRIPTION	PART NO.
1	PAN-DRIP *161*	055206
2	PANEL A.-SIDE LEFT *161*	058491
3	GASKET-HOPPER COVER	037042
4	COVER A.-HOPPER	X37963-SER
4a	KNOB-MIX COVER	025429
5	TUBE-FEED	030797
6	COLLAR-MIX PROBE	031628
7	PANEL-REAR *161*	058492

ITEM	DESCRIPTION	PART NO.
8	PANEL-SIDE-RIGHT *161*	X58490
9	GASKET-BASE PAN	055815
10	TRAY-DRIP 16-7/8L X 5-1/8	020157-SP
11	SHIELD-SPLASH	022765
12	PANEL-LOWER FRONT *161*	058493
13	PANEL A.-FRONT *161*	X58488

Beater Door Assembly

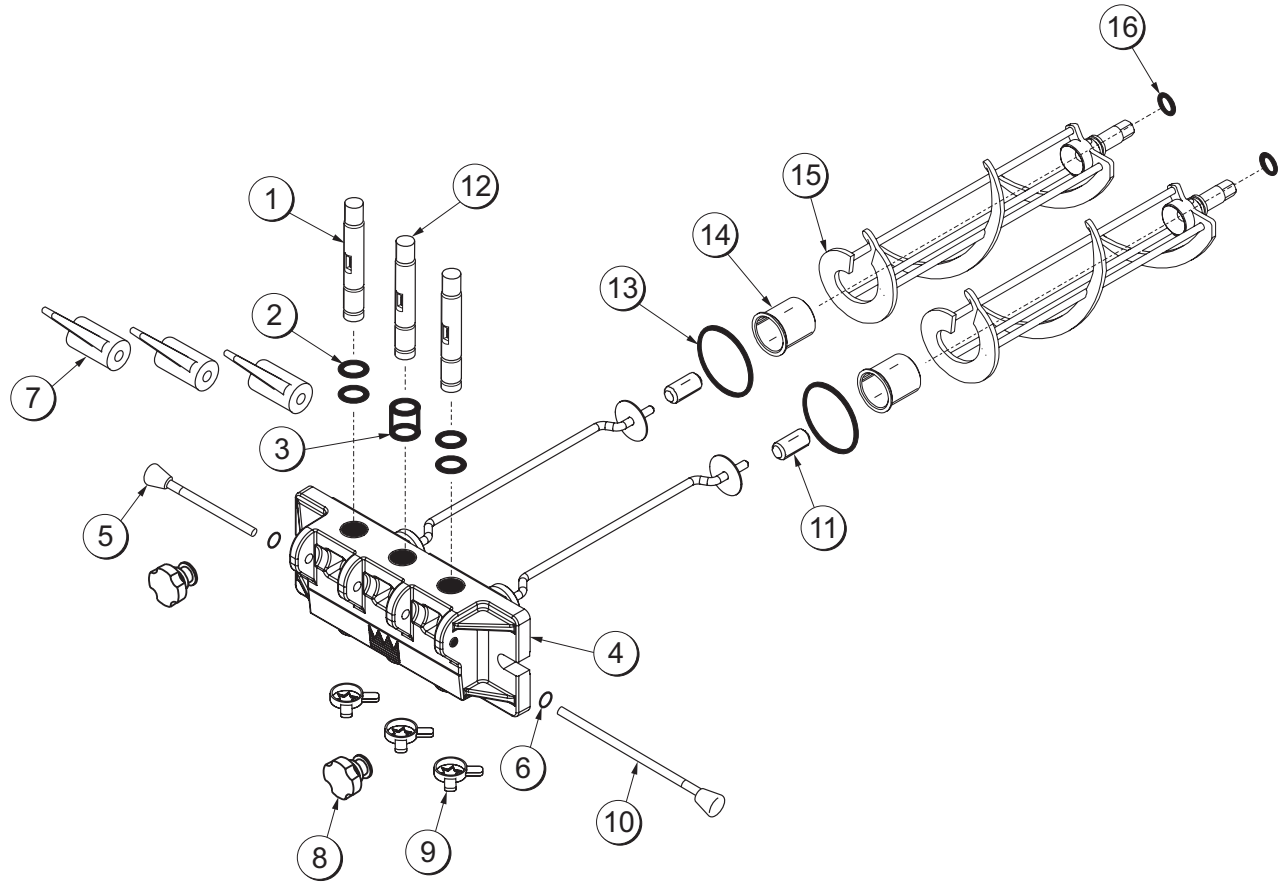


Figure 5

ITEM	DESCRIPTION	PART NO.
1	DRAW VALVE	024763
2	O-RING 7/8 OD X .103 W	014402
3	SEAL-VALVE	030930
4	DOOR A.-3 SP 1.5 QT VALOX	X56906SER1
5	PIVOT PIN A.-SHORT	X38539
6	O-RING 5/16 OD X .070 W	016272
7	DRAW VALVE HANDLE	030564
8	NUT-STUD	056802

ITEM	DESCRIPTION	PART NO.
9	DESIGN CAP	014218
10	PIVOT PIN A.-LONG	X38538
11	GUIDE BEARING	014496
12	CENTER DRAW VALVE	031164
13	O-RING 2-3/4 OD X .139 W	019998
14	FRONT BEARING	023262
15	BEATER ASSEMBLY	X24689
16	O-RING-13/16 OD X .139 W	021278

Accessories

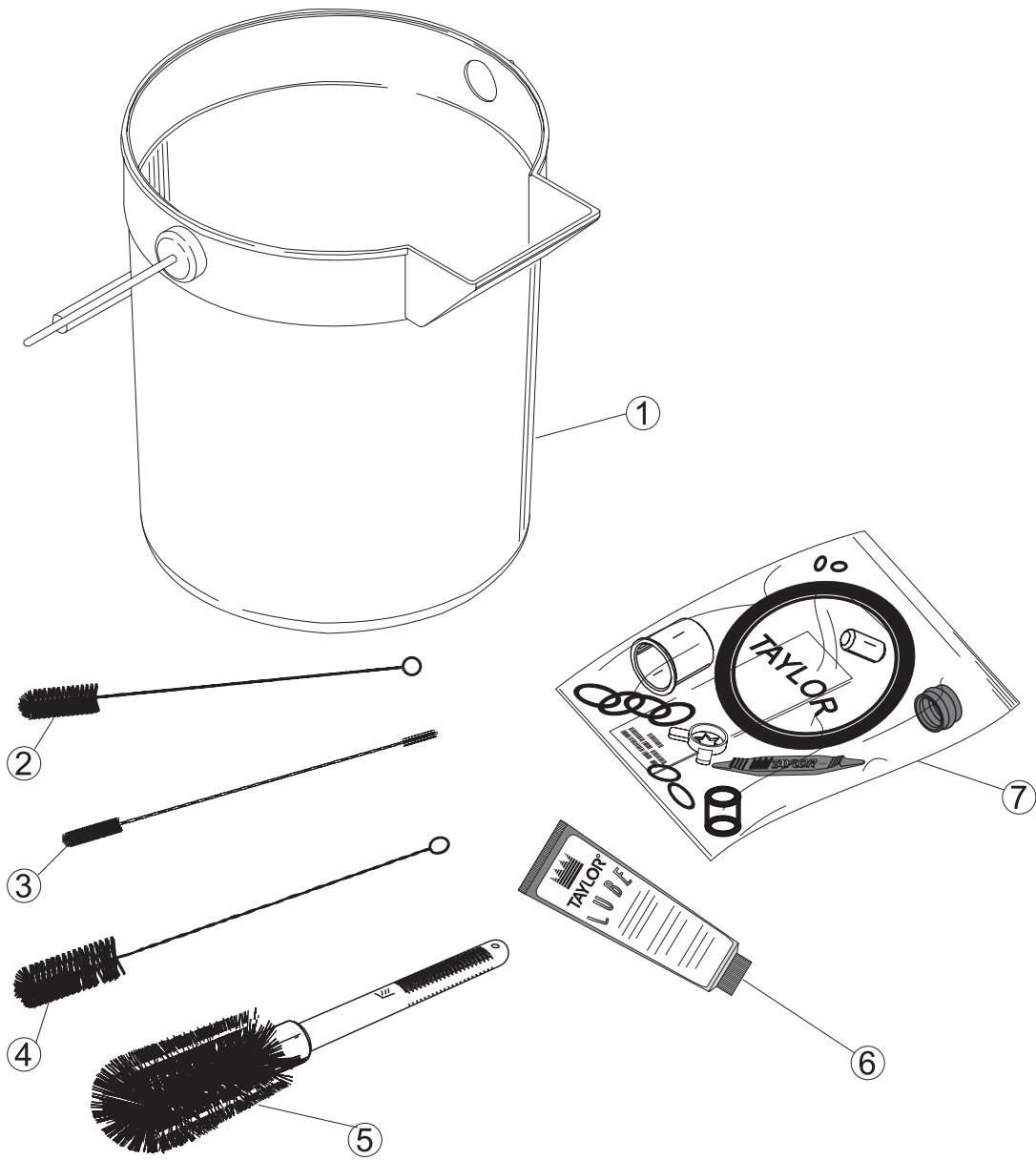


Figure 6

ITEM	DESCRIPTION	PART NO.
1	PAIL-6-QT.	023348
2	BRUSH-REAR BRG 1" D X 2" LG	013071
3	BRUSH-DOUBLE-ENDED	013072
4	BRUSH-DRAW-VALVE-1" OD X 2" X 17"	013073

ITEM	DESCRIPTION	PART NO.
5	BRUSH-MIX-PUMP-BODY-3"X7" WHITE	023316
6	LUBRICANT-TAYLOR-4-OZ.	047518
7	KIT-A.-TUNE-UP	X31167
*	SANITIZER KAY-5 125 PKTS	041082

*NOT SHOWN

X58494-27 Control A.-161 Gen II

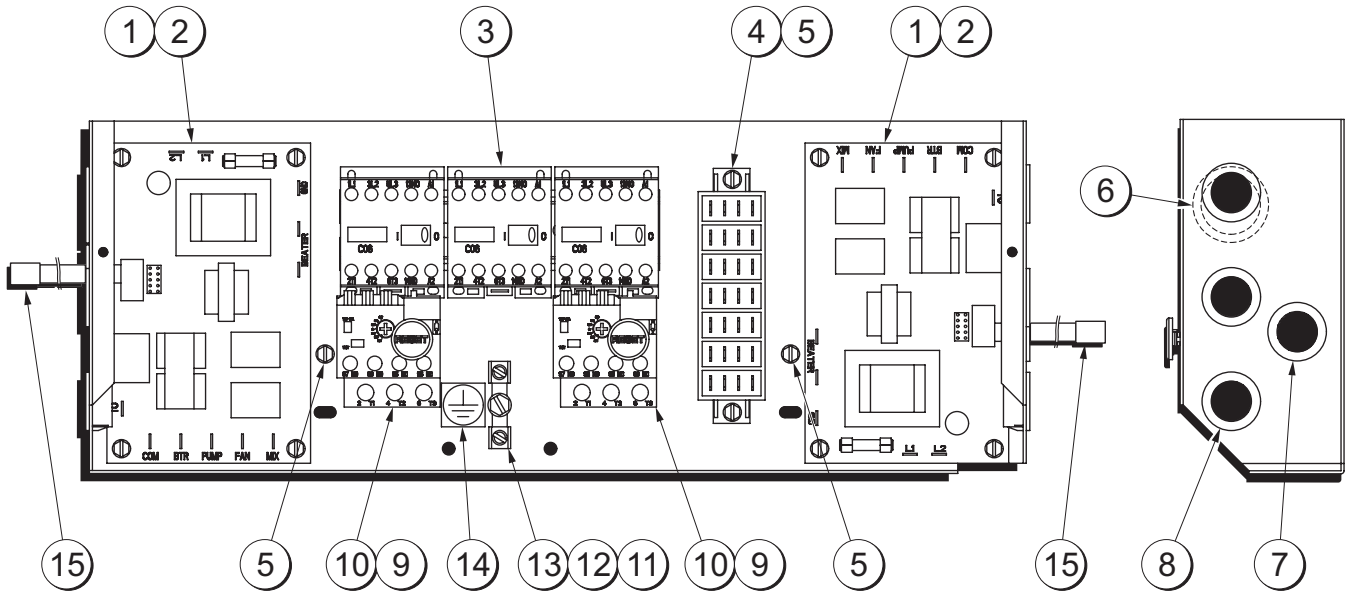


Figure 7

ITEM	DESCRIPTION	PART NO.
1	BOARD-POWER-GEN 1 & 2	X32326-SER
2	SCREW-6-32X5/8 UNSLTD	041363
3	CONTACTOR 230VAC 1PH 50/60HZ	055248-27
4	BLOCK-TERMINAL 7P 20A 300V	022606
5	SCREW-8X1/4 SLTD HEX	009894
6	BUSHING-SNAP 1 ID X 1-1/4OD	600288
7	BUSHING-SPLIT 43/64ID X 7/8	027691
8	BUSHING-SNAP 11/16 ID X 7/8	010548
9	BUTTON-RESET-RED PLASTIC	055249

ITEM	DESCRIPTION	PART NO.
10	OVERLOAD-THERMAL-2P-2.4/3.6A	055249-27G
11	LUG-GROUNDING 260 W/GR. SCREW	020928
12	SCREW-10-32X1/2 SERRATED	020982
13	NUT-10-32 WHIZ FLANGE LOCKNUT	020983
14	LABEL-GROUNDING SYMBOL	017669
15	CABLE-RIBBON-PWR/RELAY-6	032445
*	HARNESS-WIRE-CONTROL	055838-27
*	HARNESS-WIRE-MAIN	063573-27

*NOT SHOWN

X55480-27 Control A.-Channel

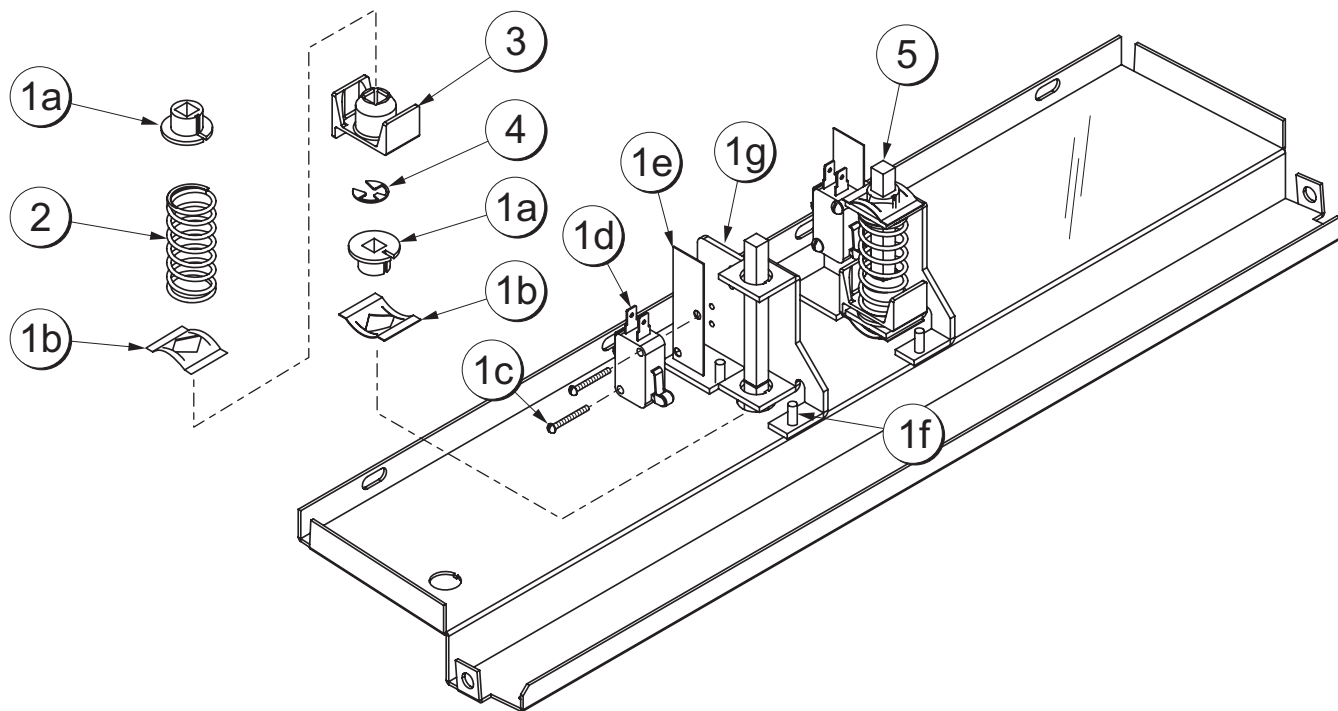


Figure 8

ITEM	DESCRIPTION	PART NO.
1	SWITCH A.-DRAW (INCLUDES: 1a-1f)	X55234
1a	BEARING-SWITCH	029244
1b	NUT-PUSH ON-1/2DIA. SHAFT	039735
1c	SCREW-4-40 X 1 SLTD ROUND	028890
1d	SWITCH-LEVER-SPDT-15A-125	027214
1e	INSULATOR-SWITCH 1/64	029099

ITEM	DESCRIPTION	PART NO.
1f	SCREW-4-40X1 SLTD ROUND	028890
1g	BRACKET-SWITCH	035524
2	SPRING-COMP.720X.063X2.00	023664
3	ACTUATOR-SWITCH-PLASTIC	035609
4	E-RING-1/4 IN-ZD	034962
5	ARM A.-SWITCH	X30736

X59447-27 Box A.-Cap & Relay

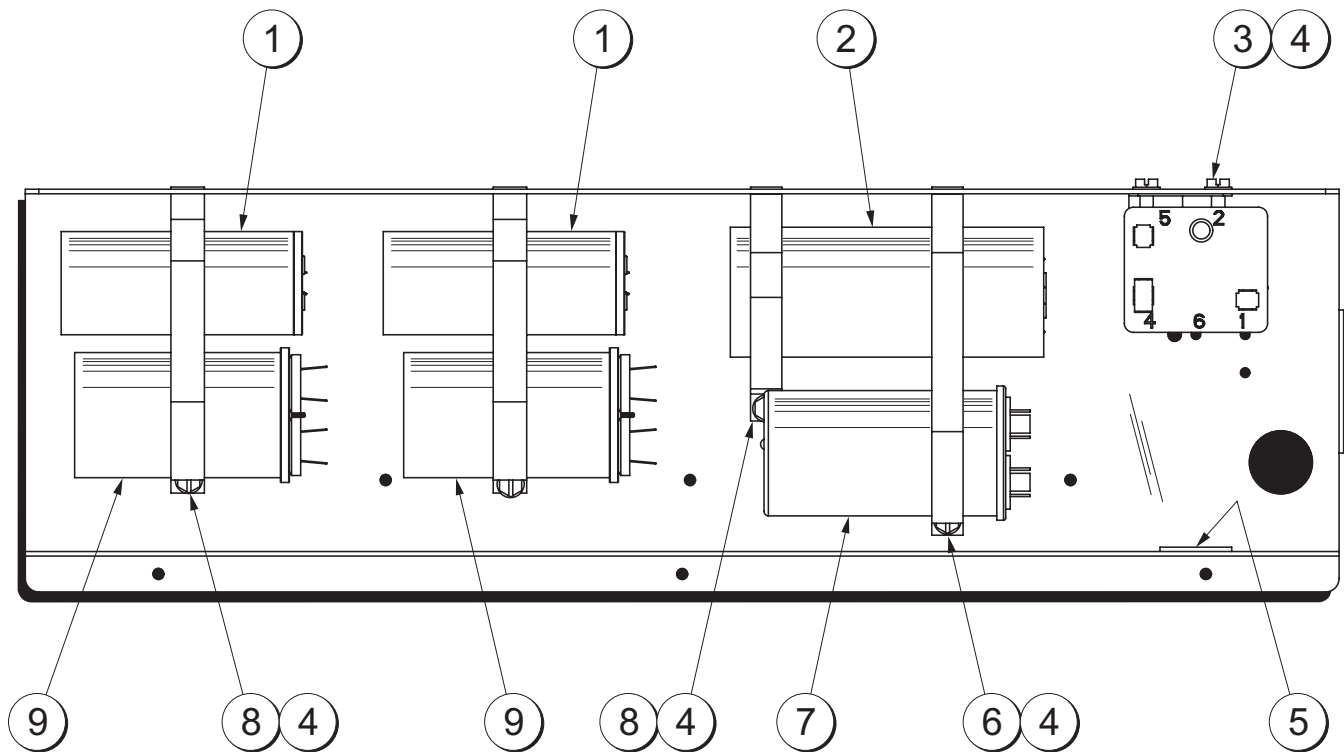


Figure 9

ITEM	DESCRIPTION	PART NO.
1	CAPACITOR-START 72-88UF/330V	059757
2	CAPACITOR-START 161-193UF/25	031790
3	RELAY-START-COMPRESSOR	047067
4	SCREW-10X3/8 SLOTTED HEX	015582
5	BUSHING-SNAP 11/16 ID X 7/8	010548

ITEM	DESCRIPTION	PART NO.
6	STRAP-CAPACITOR 7-11/32	037890
7	CAPACITOR-RUN 30UF/370V	038487
8	STRAP-CAPACITOR 5-5/8 IN.	030258
9	CAPACITOR-RUN 10UF/370V	059998
*	HARNESS-WIRE-CAP/RELAY	063975-27

*NOT SHOWN

Parts List

DESCRIPTION	PART NUMBER	QTY.	WARR. CLASS	REMARKS	PARTS UPDATE
BEARING-FRONT	023262	2	000		
BEARING-GUIDE	014496	2	000		
BEARING-REAR SHELL *150-52-68*	023648	2	000		
+COLLAR-REAR BEARING *150-2-68*	025564	2	103		
+NUT-REAR BEARING *150-52-68*	023647	2	000		
+TAB-BEARING LOCK *150-2-68*	025027	2	000		
BEATER A. *150-2-162-168*	X24689	2	103		
+O-RING-13/16 OD X .139W	021278	2	000		
BELT-AX24	055201	1	000		
BELT-AX45	045311	1	000	K5103487 & UP	
BELT-AX42	023877	1	000	K5103486 & PRIOR	
BLOCK-TERMINAL 7 POLE	022606	1	103	208-230V 60HZ 1PH	
BOARD-LOGIC-GEN 2.6-SD	X36641SER1	2	212		
BOARD-POWER-GEN 1 & 2	X32326-SER	2	212		
BOOT-VALVE-EXPANSION	050900	2	000	K5103487 & UP	
BOOT-VALVE-EXPANSION	027137	2	000	K5103486 & PRIOR	
BRUSH-DOUBLE ENDED-PUMP&FEED T	013072	1	000		
BRUSH-DRAW VALVE 1"ODX2"X17"L	013073	1	000		
BRUSH-MIX PUMP BODY-3"X7"WHITE	023316	1	000		
BRUSH-REAR BRG 1IN.DX2IN.LGX14	013071	1	000		
CABLE-RIBBON-PWR/RELAY-60 IN	032445	2	103		
CAP-DESIGN-1.010"ID-6 POINT	014218	3	000		
COLLAR-HOLDING	019481	2	103		
COMPRESSOR L63B562BBCB	048727-27E	1	512	K5103487 & UP	
+CAPACITOR-RUN 30UF/370V	038487	1	103	K5103487 & UP	
+CAPACITOR-START 161-193UF/25	031790	1	103	K5103487 & UP	
+RELAY-START-COMPRESSOR	047067	1	103	K5103487 & UP	
+HARNES-WIRE-CAP/RELAY *161	063975-27	1	103	K5103487 & UP	
COMPRESSOR RS80C1E-CAV-224	051958-27	1	512	K5103486 & PRIOR - 208-230V 60HZ 1PH	
+CAPACITOR-RUN- 20UF/440V	012906	1	103	K5103486 & PRIOR - 208-230V 60HZ 1PH	
+CAPACITOR-START-189-227UF/330V	033044-1	1	103	K5103486 & PRIOR - 208-230V 60HZ 1PH	
+RELAY-START-COMPRESSOR	051957-27	1	103	K5103486 & PRIOR - 208-230V 60HZ 1PH	

+ Available Separately

DESCRIPTION	PART NUMBER	QTY.	WARR. CLASS	REMARKS	PARTS UPDATE
+HARNES-WIRE-CAP/RELAY *161	055840-27	1	103	K5103486 & PRIOR - 208-230V 60HZ 1PH	
COMPRESSOR PL35G	055187-27	1	512	SHR	
+CAPACITOR-START- 43-52UF/250V	033041	1	103		
+RELAY-START-COMPRESSOR	055358	1	103		
CONDENSER-AC 12LX16HX2.5T3RO	048935	1	103	J5103487 & UP - MAIN	
CONDENSER-AC-12LX16HX2.5-3 ROW	055140	1	103	J5103486 & PRIOR - MAIN	
CONDENSER-AC 7X6X1.25-2 ROW	027155	1	103	SHR K5103487 & UP	
+DRYER-CAP. TUBE .021 ID X 9F	055522	1	103	SHR	
+HARNES-WIRE-DANFOSS *161*	063563	1	103	SHR	
+SHROUD DANFOSS *060*710*	048818	1	103	SHR	
CONTACTOR-230VAC 1PH 50/60HZ	055248-27	3	103	BEATER MOTOR RELAY	
+BUTTON-RESET-RED PLASTIC	055249	2	103		
+OVERLOAD-THERMAL 2P-2.4/3	055249-27G	2	103		
COVER A.-HOPPER *162-168*	X37963	1	103		
KNOB-MIX COVER	025429	1	103		
+GASKET-HOPPER COVER-8QT	037042	1	000		
CORD-POWER-250V-15A-95"L-SO	042936-27	1	103		
CORE-SCHRADER VALVE-TEFLON	037047	2	103		
DECAL-DEC-TAYLOR 161 GEN 11	055511	1	000		
DECAL-INST-CLN HPR	019029	1	000		
DECAL-TROUBLESHOOT	038374	1	000		
DIAGRAM-WIRING *161*	063820-27S	1	000	K5103487 & UP - 208-230V 60HZ 1 PH	
DIAGRAM-WIRING *161*	055376-27S	1	000	K5103486 & PRIOR - 208-230V 60HZ 1PH	
DOOR A.-3SPT 1.5QT VALOX W/BAF	X56906SER1	1	103	K3013048 & UP	
O-RING-2-3/4 OD X .139W	019998	2	000	DOOR	
HANDLE-DRAW VALVE	030564	3	103		
PIN A.-PIVOT *168-LONG*	X38538	1	103		
O-RING-5/16 OD X .070W	016272	1	000	PIVOT PINS	
PIN A.-PIVOT *168-SHORT*	X38539	1	103		
O-RING-5/16 OD X .070W	016272	1	000	PIVOT PINS	
VALVE-DRAW *150-2*	024763	2	103		
O-RING-7/8 OD X .103W	014402	4	000	DRAW VALVES	
VALVE-DRAW-CENTER *TM*	031164	1	103		

+ Available Separately

DESCRIPTION	PART NUMBER	QTY.	WARR. CLASS	REMARKS	PARTS UPDATE
SEAL-VALVE	030930	1	000	CENTER DRAW VALVE	
DOOR A.-3 SPOUT-1.5 QT	X30753-SER	1	103	K2024231 & PRIOR USE X56906-SER KIT	
DRYER-CAP. TUBE .021 ID X 9FT	055522	1	000	SHR	
DRYER-FILTER 1/4 X 1/4 SOLDER	048878	1	000		
DVD-OPS TRAIN VIDEO*TAYLORMATE	037665-DVD	1	000		
FAN-3 BLADE 12 " PULL 24DEG CW	063397	1	103	K5103487 & UP	
FASTENER-CLIP 1/4-20 U-TYPE	045865	8	000	PANELS	
FASTENER-CLIP 10-32 J TYPE	048353	2	000	RIGHT PANEL	
FILTER-AIR 13.5X17.75X7/16	042703	1	000		
GASKET-BASE PAN *161*	055815	1	000	S/N K6036537 & UP	
GEAR A.*REDUCER 4 TO 1	025770	2	212		
HOOD A. *161* SOLDERED	X55118	1	103		
KIT A.-TUNE UP*162-168*	X31167	1	000		
BEARING-FRONT	023262	2	000		
BEARING-GUIDE	014496	2	000		
CAP-DESIGN-1.010"ID-6 POINT	014218	3	000		
O-RING-13/16 OD X .139W	021278	2	000		
O-RING-2-3/4 OD X .139W	019998	2	000		
O-RING-5/16 OD X .070W	016272	2	000		
O-RING-7/8 OD X .103W	014402	4	000		
SEAL-VALVE	030930	1	000		
TOOL-O-RING REMOVAL-FREEZER	048260-WHT	1	000		
LABEL-CAUTION-GRD-PERM-ENG/SP	032164	1	000		
LABEL-DOOR-MOVE PART	032749	1	000		
LABEL-SW-POWER-OFF/ON-SYMBOLS	052632	1	000		
LABEL-WARN-COVER	051433	5	000		
LABEL-WARN-ELEC-TW-SMALL	032718	1	000		
LEG-4" 3/8-16 STUD	036397	4	103	S/N K6035648 & PRIOR	
+CAP-RUBBER	037268	4	000		
LUBRICANT-TAYLOR 4 OZ.	047518	1	000		
MAN-OPER 161	055155-M	1	000		
MOTOR-1/2 HP REMOTE CAPS	055097-27G	2	212	K5103881 & UP - 208-230V 60HZ 1 PH	
+CAPACITOR-RUN 10UF/370V	059998	2	103	K5103487 & UP	

+ Available Separately

DESCRIPTION	PART NUMBER	QTY.	WARR. CLASS	REMARKS	PARTS UPDATE
+CAPACITOR-START 72-88UF/330V	059757	2	103	K5103487 & UP	
MOTOR-1/2 HP 1PH 60 HZ	055097-27	2	212	K4126923 & PRIOR - 208-230V 60HZ 1PH	
+CAPACITOR-START 43-52UF/250V	056168	2	103	K4126923 & PRIOR	
+CAPACITOR-RUN- 9-11UF/370V	025962	2	103	K4126923 & PRIOR	
MOTOR-FAN	062253-27	1	103	K5103881 & UP - 208-230V 60HZ 1 PH	
MOTOR-FAN 50 WATT	029770-27	1	103		
+FAN-3 BLADE 12 " PULL 24DEG	063397	1	103	K5103487 & UP	
+FAN-5 BLADE 12" PUSH 22DEG CCW	049009	1	103	K5103486 & PRIOR	
NUT-STUD *161-162-168*	056802	2	103	K3013048 & UP - HANDSCREWS	
NUT-STUD *150-152-162-168*	034829	2	103	K2024231 & PRIOR - HANDSCREWS	
OVERLOAD-THERMAL-2P-2.4/3.6A	055249-27G	2	103	BEATER MOTOR OVERLOAD	
PAIL-6 QT.	023348	1	000		
PAN-DRIP *161*	055206	2	103		
PANEL A.-FRONT *161*	X58488	1	103	K5103487 & UP	
PANEL-SIDE-LEFT *161*	058491	1	103	K5103487 & UP	
PANEL-LOWER-FRONT *161*	058493	1	103	K5103487 & UP	
PANEL-REAR *161*AC	058492	1	103	K5103487 & UP	
PANEL A.-SIDE RIGHT *161*	X58490	1	103	K5103487 & UP	
PANEL A.-FRONT *161*	X55203	1	103	K5103486 & PRIOR	
PANEL A.-SIDE LEFT *161*	X55122	1	103	K5103486 & PRIOR	
PANEL-LOWER FRONT *161* GENII	055513	1	103	K5103486 & PRIOR	
PANEL-REAR *161*	055129	1	103	K5103486 & PRIOR	
PANEL-SIDE-RIGHT *161*	055130	1	103	K5103486 & PRIOR	
PANEL-SKIRT-AIR *161*	055508	1	103	K5103486 & PRIOR	
PLATE-DEC *161* GENII	055512	1	103		
PROBE A.-MIX *SQUARE*	X30922	2	103	K5103486 & PRIOR	
+DISC-PROBE *SQ HOLE*	030965	2	103		
+SPACER-PROBE *SQ HOLE*	030966	2	103		
PROBE A.-THERMISTOR	X31602	2	103	SHR	
PROBE-THERMISTOR-BARREL-2% TOL	038061-BLK	1	103	BARREL	
PULLEY-5.7" PITCH DIA X 5/8	041498	2	103	GEAR	
PULLEY-AK20X5/8	041162	2	103	BEATER MOTOR	
RESISTOR A.-*161* CONT. BOX*	X55449	1	103	BEATER MOTOR CONTACTOR	

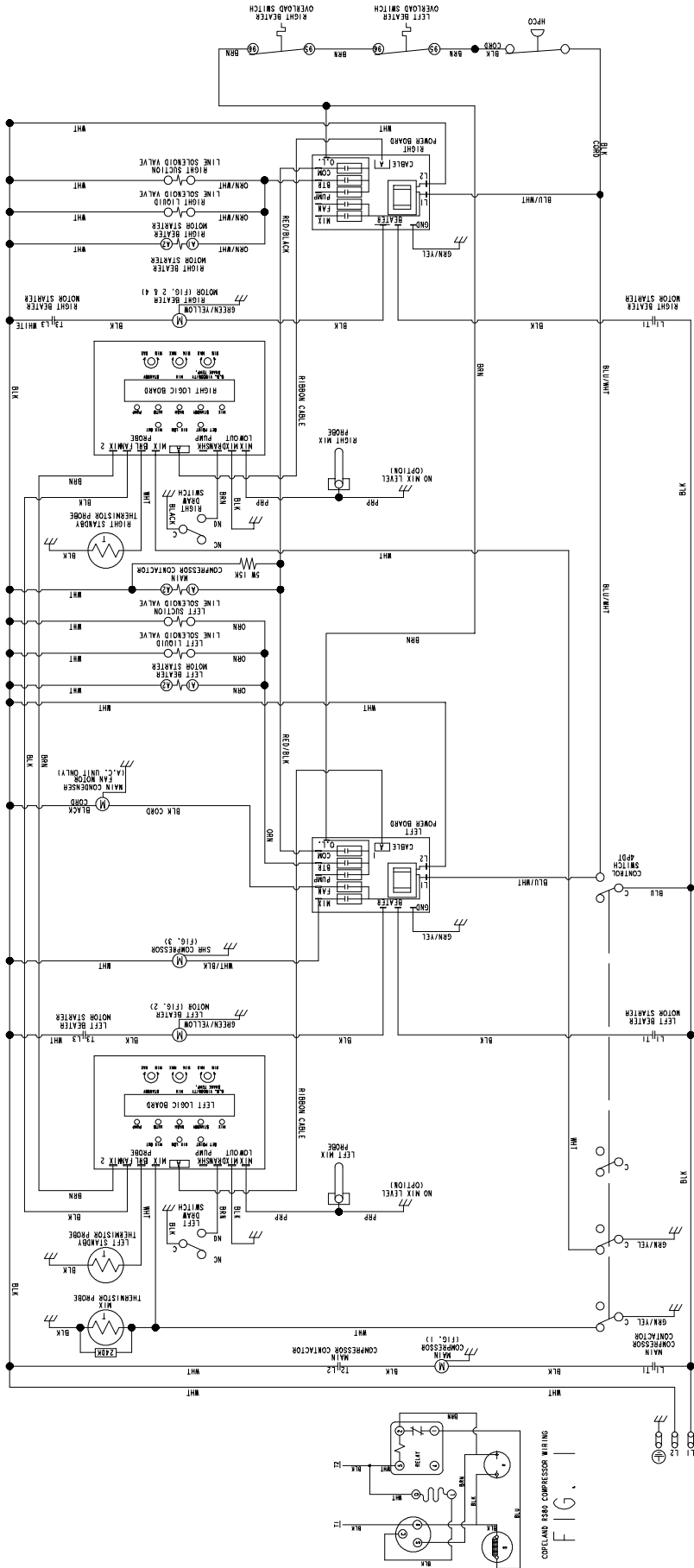
+ Available Separately

DESCRIPTION	PART NUMBER	QTY.	WARR. CLASS	REMARKS	PARTS UPDATE
SANITIZER KAY-5 125 PACKETS	041082	1	000		
SHELL A.-INSULATED *161*	X58457		512	K5103487 & UP	
+STUD-NOSE CONE-5/16-18X5/16-18	013496	2	103		
SHELL A.-INSULATED *161*GEN 11	X55629	1	512	K1075174-K5103486	
+STUD-NOSE CONE-5/16-18X5/16-18	013496	2	103		
SHIELD-SPLASH *5454-8-752-336*	022765	1	103		
SHROUD-CONDENSER *161*	064356	1	103	K5103487 & UP	
SHROUD-CONDENSER *161*	055128	1	103	K5103486 & PRIOR	
SHROUD DANFOSS *060*710*	048818	1	103	SHR	
SWITCH A.-DRAW *161*	X55234	2	103		
+ACTUATOR-SWITCH, PLASTIC	035609	2	103		
+ARM A.-SWITCH *162-168*	X30736	2	103		
BEARING-SWITCH	029244	4	000		
BRACKET-SWITCH *168*	035524	2	103		
+E-RING-1/4 IN-ZD	034962	2	000		
INSULATOR-SWITCH 1/64 ARMITE	029099	2	000		
NUT-PUSH ON-1/2DIA. SHAFT	039735	4	000		
SCREW-4-40X1 RD HD STEEL-ZP	028890	4	000		
+SCREW-6-32X3/8 BIN.HD SLOT SS	002201	4	000		
+SPRING-COMP.720X.063X2.00	023664	2	103		
SWITCH-LEVER-SPDT-15A-125-250V	027214	2	103		
SWITCH-PRESSURE 405 PSI-SOLDER	052663	1	103		
SWITCH-TOGGLE-4PDT*ON-NONE-ON	037394	1	103		
TRAY-DRIP 16-7/8L X 5-1/8	020157	1	103		
TUBE-FEED-SS-TM-TWIN	030797	2	103		
VALVE-ACCESS 1/4FL X 1/4SOLDER	044404	1	103	SHR	
VALVE-ACCESS-1/4 MFLX1/4 S-90	047016	1	103		
VALVE-ACCESS-1/4MFL X 3/8ODSDR	053565	2	103		
VALVE-EPR 1/4S	022665	1	103	SHR	
VALVE-EXP-AUTO-1/4S X11/4 FPT	046365	2	103	K5103487 & UP	
VALVE-EXP-AUTO-1/4S X 1/4FPT	047232	2	103	K5103486 & PRIOR	
+BOOT-EXPANSION VALVE	027137	2	000		
VALVE-SOLENOID 5/16ORFX1/2ODF	044982-27	2	103	SUCTION LINE	

+ Available Separately

DESCRIPTION	PART NUMBER	QTY.	WARR. CLASS	REMARKS	PARTS UPDATE
VALVE-SOLENOID 7/64ORF X 1/4S	043449-27	2	103	LIQUID LINE	
VALVE-TREV 3/8X3/8 220 *161*	055378	1	103	LIQUID REINJ VALVE K5103486 & PRIOR	
VIDEO-TRAIN FILM-SS-TAYLORMATE	037665-V	1	000	USE 037665-DVD	
220-240V 50HZ 1 PH					
BLOCK-TERMINAL-7 POLE GREEN	024156	1	103	220-240V 50HZ 1PH	
DIAGRAM-WIRING *161*	063820-40S	1	000	K6036551 & UP	
DIAGRAM-WIRING *161*	055376-40S	1	000	K6021398 & PRIOR	
DVD-OPS TRAIN VIDEO*TAYLORMATE	037665-DVD	1	000	K6036551 & UP	
COMPRESSOR L63B562BBKB	048727-40E	1	512	K6036551 & UP	
+CAPACITOR-RUN 15UF/370V	027087	1	103	K6036551 & UP	
+CAPACITOR-START 161-193UF/250V	031790	1	103	K6036551 & UP	
+RELAY-START-COMPRESSOR	048766	1	103	K6036551 & UP	
COMPRESSOR RS80C1E-CAZ-224	051958-40	1	512	K6021398 & PRIOR	
+CAPACITOR-RUN- 20UF/370V	023606	1	103	K6021398 & PRIOR	
+CAPACITOR-START- 64-77UF/250V	051960	1	103	K6021398 & PRIOR	
+RELAY-START-COMPRESSOR	051957-40	1	103	K6021398 & PRIOR	
CORD-1.5MM-3 HAR7 16GA 60DEG	051656-95	1	103	K6036551 & UP	
MOTOR-1/2 HP REMOTE CAPS	055097-40G	2	212	K6036551 & UP	
+CAPACITOR-START-88-108UF/	059759	1	103	K6036551 & UP	
MOTOR-1/2 HP 1 PH 50 HZ 230V	055097-34	2	212	K6021398 & PRIOR	
+CAPACITOR-START- 64-77UF/250V	026657	2	103	K6021398 & PRIOR	
VIDEO-TRAIN FILM-SS-TAYLORMATE	037665-PAL	1	000	USE 037665-DVD	
WATER COOLED 220-240V 50HZ 1 PH					
ADAPTOR-3/8MP X 1/2 BARB-BR	011021	2	103		
BRACKET-VALVE-W/C *C708*	058440	1	NNN		
CLAMP-HOSE-ADJ 7/16 X 25/32	010031	6	000		
CONDENSER-WC-SPIRAL 11-1/2 O	049309	1	103		
HOSE-RUBBER 1/2 ID X 7/8 OD	R50200	4'	000		
PANEL-REAR *161*WC*	063837	1	103		
PANEL-SIDE *161*R*WC*	063838	1	103		
VALVE-WATER 3/8 REG/HEAD PRESS	046686	1	103		

+ Available Separately



NOTE:
 1. FOR CONNECTION OF A. O. SMITH BEATER MOTOR CONNECT INTERNAL RED TO TERMINAL 4 & INTERNAL BLACK TO TERMINAL 2.

GROUND FRAME SECURELY

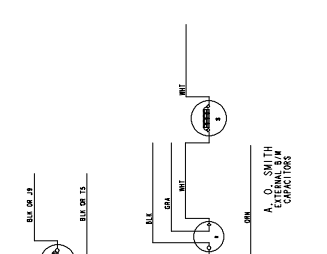


FIG. 3

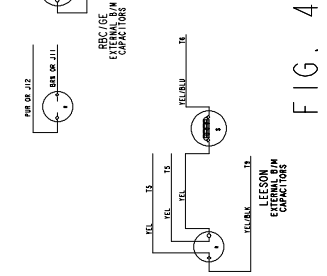


FIG. 2

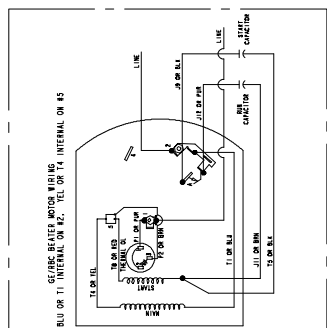


FIG. 1

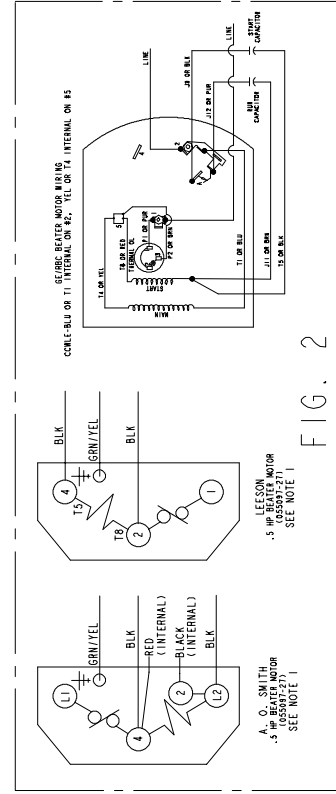
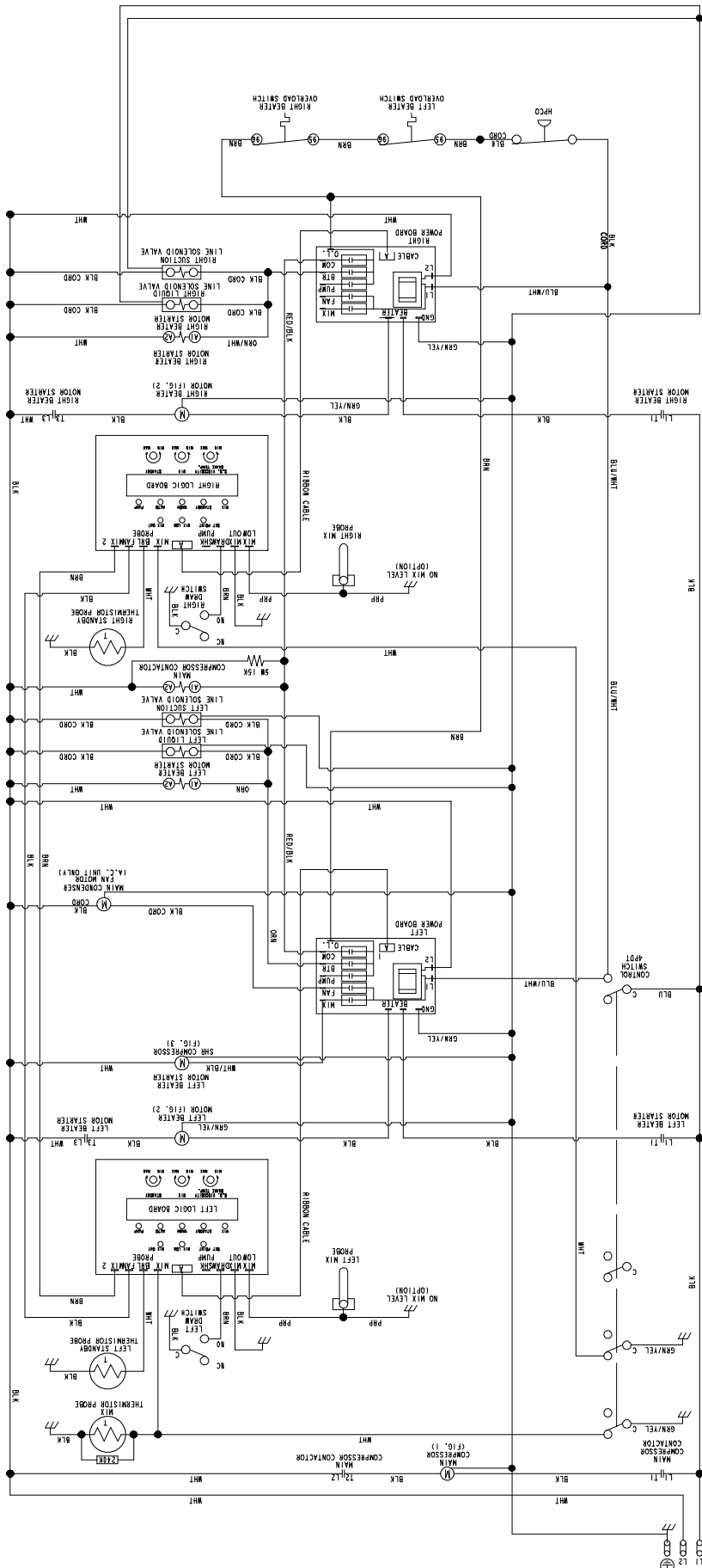


FIG. 2

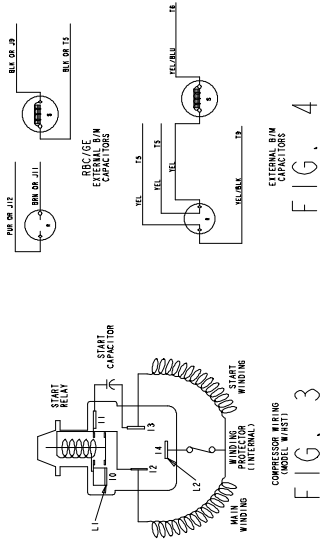


FIG. 3



FIG. 4

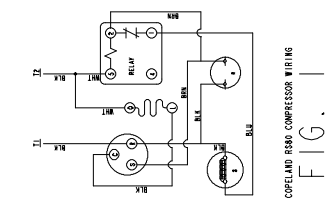


FIG. 1

Model 161
055376-40S
Rev. 11/06

GROUND FRAME SECURELY