

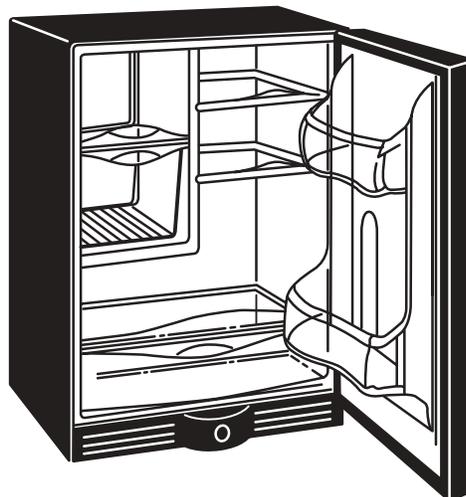
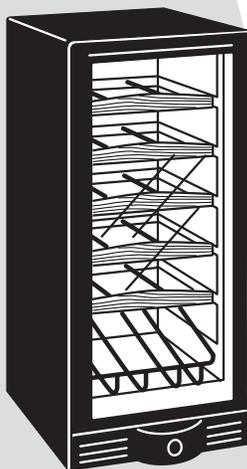
Échelon[™]



Service and Parts Manual

For Models

- CO2075FF
- 2075R
- 2075WC
- BI•2015
- 2075RF
- 2015R
- 2015WC
- CLR2060
- Combo U-CO29FF



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INTRODUCTION

Three generations of pride and quality manufacturing and design improvements are built into all U-Line products. The result: U-Line leads the market with innovative technology and superior craftsmanship.

This manual contains specific instructions for servicing the U-Line Échelon Products which include these models:

- CO2075FF
- 2075R
- 2075WC
- BI•2015
- 2075RF
- 2015R
- 2015WC
- CLR2060 Clear Icemaker
- Combo U-CO29FF

Potential Problems With HFC-134A

This Service Manual has been written to cover product manufactured with HFC-134a. HFC-134A compressors will be received with a synthetic based ester oil charge. The hygroscopic (water attraction) property of ester oil is many times greater than that of the mineral oils previously used with CFC-12. High system moisture causes the formation of acids and alcohol which can damage the compressor. Systems should not be left open for more than fifteen (15) minutes at any time as humidity from the air will enter system. To assure system dehydration, the system should be pulled down to 100 microns and vacuum pump oil (mineral oil) must not be allowed to enter the system.

Cleanliness of the system will be extremely important. The presence of residues (chlorinated or greasy residues, mineral oil, or impurities) can lead to capillary tube restrictions, oil return problems and compressor damage. Flux must not be used on brazed joints.

IMPORTANT

You can check for the latest service related information at U-LineService.com. The Technical Knowledge base is continuously updated and can be accessed 24/7.



É c h e l o n



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.



DANGER indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.



WARNING indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



CAUTION indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

CAUTION

CAUTION used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, may result in property damage.

IMPORTANT

IMPORTANT indicates installation, operation or maintenance information which is important but not hazard-related.

TABLE OF CONTENTS

General Information	5
Serial Number Format	5
Limited Warranty	6
Warranty Claims Procedure	7
Proof of Purchase	8
Parts Listing	9
Safety Precautions	10
Échelon™ Door Adjustment	11
Screening Calls	13
Guide For Screening Calls	13
CO2075FF/2075RF/Origins Combo U-CO29FF Models	17
Compressor/Electrical Specifications	17
Compressor Pins	17
U-Line Frost Free Refrigeration System	18
Typical Frost Free Airflow Configuration	19
Refrigeration System Diagnosis Guide	20
CO2075FF and U-CO29FF Ice Maker Operation	21
Ice Maker Diagnosis Flow Chart	22
Troubleshooting	23
Disassembly Procedures	26
Replacing Ice Maker Assembly	27
Replacing Mold and Heater	28
CO2075FF Wiring Diagram	29
U-CO29FF Wiring Diagram	29
2075RF Wiring Diagram	30
CO2075FF Parts List	33
Model 402-CO2075FF Icemaker Parts List	37
Model U-CO29FF – 2002 Design Parts List	39
Model U-CO29FF & Icemaker	42
Model 402-CO29FF Parts List	43
Model 2075RF Parts List	45
2075R/2015R Models	49
Compressor/Electrical Specifications	49
Compressor Pins	49
Refrigeration System	50
Refrigeration System Diagnosis Guide	51
Troubleshooting	52
2075R/2015R Wiring Diagram	53
2075R Parts List	55
2015R Parts List	57



2075WC/2015WC Models .....	.59
Compressor/Electrical Specifications .....	.59
Compressor Pins .....	.59
Refrigeration System .....	.60
Refrigeration System Diagnosis Guide .....	.61
Troubleshooting .....	.62
2075WC/2015WC Wiring Diagram .....	.63
2075WC Parts List .....	.65
2015WC Parts List .....	.67
BI•2015 Model .....	.69
Compressor/Electrical Specifications .....	.69
Compressor Pins .....	.69
Temperature Control Specifications .....	.70
Limit Switch Specifications .....	.71
Refrigeration System-Normal Vapor .....	.72
Refrigeration System Diagnosis Guide .....	.73
Ice Maker Diagnosis Flow Chart .....	.74
Ice Maker Operating Cycles .....	.75
BI•2015 Cycle Schematics .....	.76
BI•2015 Replacing Ice Maker Assembly .....	.78
BI•2015 Replacing Mold and Heater .....	.79
Troubleshooting .....	.80
BI•2015 Wiring Diagram .....	.82
BI•2015 Parts List .....	.85
Model 402-BI•2015 Ice Maker Parts List .....	.87
CLR2060 Model .....	.89
Electrical Specifications .....	.89
Compressor Pins .....	.89
Leveling and Installation Requirements .....	.90
Gravity Drain Installation .....	.91
Connecting a Drain Pump .....	.92
Automatic Clean Cycle Instructions .....	.93
Sequence of Operation .....	.94
Thermistor .....	.96
New CLR2060 Control Board Design .....	.97
Low Side Pressure Changes .....	.99
Refrigeration System Diagnostic Guide .....	.100
Ice Thickness Adjustment .....	.101
Ice Production Rates .....	.104
Troubleshooting .....	.105
CLR2060 Wiring Diagram .....	.109
CLR2060 Parts List .....	.111



SERIAL NUMBER FORMAT

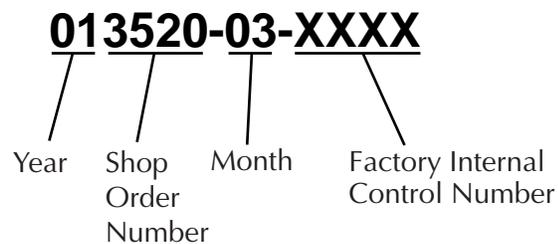
The serial number is divided into four segments. A typical serial number is 013520-03-0433.

The first two digits of the first segment, 01, represents the year the unit was made.

The next four digits of the first segment, 3520, represents the shop order number. Order number 3520 is assigned for the Model 75R White-00 units.

The second two digit segment, 03, represents the month the unit was made.

The third four digit segment, XXXX, is a factory internal control number used at U-Line Corporation.



LIMITED WARRANTY

U-Line Corporation warrants each U-Line product to be free from defects in materials and workmanship for a period of one year from the date of purchase; and warrants the sealed system (consisting of the compressor, the condenser, the evaporator, the hot gas bypass valve, the dryer and the connecting tubing) in each U-Line product to be free from defects in materials and workmanship for a period of five years from the date of purchase. During the initial one-year warranty period for all U-Line products U-Line shall: (1) at U-Line's option, repair any product or replace any part of a product that breaches this warranty; and (2) for all Marine, RV and Domestic U-Line products sold and serviced in the United States (including Alaska and Hawaii) and Canada, U-Line shall cover the labor costs incurred in connection with the replacement of any defective part. During years two through five of the warranty period for the sealed system, U-Line shall: (1) repair or replace any part of the sealed system that breaches this warranty; and (2) for all Marine, RV and Domestic U-Line products sold and serviced in the United States (including Alaska and Hawaii) and Canada, U-Line shall cover the labor costs incurred in connection with the replacement of any defective part of the sealed system. All other charges, including transportation charges for replacements under this warranty and labor costs not specifically covered by this warranty, shall be borne by you. This warranty is extended only to the original purchaser of the U-Line product. The Product Registration Card included with the product should be promptly completed by you and mailed back to U-Line or you can register on-line at www.U-LineService.com.

The following are excluded from this limited warranty: installation charges; damages caused by disasters or acts of God, such as fire, floods, wind and lightning; damages incurred or resulting from shipping, improper installation, unauthorized modification, or misuse/abuse of the product; customer education calls; food loss/spoilage; door and water level adjustments (except during the first 90 days from the date of purchase); defrosting the product; adjusting the controls; door reversal; or cleaning the condenser.

If a product defect is discovered during the applicable warranty period, you must promptly notify either the dealer from whom you purchased the product or U-Line at P.O. Box 23220, Milwaukee, Wisconsin 53223 or at 414-354-0300. In no event shall such notification be received later than 30 days after the expiration of the applicable warranty period. U-Line may require that defective parts be returned, at your expense, to U-Line's factory in Milwaukee, Wisconsin, for inspection. Any action by you for breach of warranty must be commenced within one year after the expiration of the applicable warranty period.

This limited warranty is in lieu of any other warranty, express or implied, including, but not limited to any implied warranty of merchantability or fitness for a particular purpose; provided however, that to the extent required by law, implied warranties are included but do not extend beyond the duration of the express warranty first set forth above. U-Line's sole liability and your exclusive remedy under this warranty is set forth in the initial paragraph above. U-Line shall have no liability whatsoever for any incidental, consequential or special damages arising from the sale, use or installation of the product or from any other cause whatsoever, whether based on warranty (express or implied) or otherwise based on contract, tort or any other theory of liability.

Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages, so the above limitations may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.



WARRANTY CLAIMS PROCEDURE

When submitting claims for warranty payment, please follow these guidelines.

You can use any form you would normally use to bill your customer (your own computer generated form, Narda, USA, etc.).

The model and serial number **MUST** be on the claims. Claims will not be paid without a model and serial number.

If you work on more than one unit per service call please submit a separate claim for each unit.

We track all defects through warranty claims, so please be specific on what the repair was. If it is a system leak, please specify where the leak was.

Please be sure the claim is legible. If the claim form cannot be read, it will be returned, unpaid.

U-Line will **not** cover part or labor claims for the replacement of a complete ice maker assembly. All ice maker parts are available as replacement parts and are stocked in our inventory. **Remember:** we do not pay customer education calls. Door and water level adjustments are 90 day warranties only.

If you are changing out a unit please supply the model and serial number of both units (the unit being replaced and the new unit) and the R.A. number.

Occasionally the customer does not return their warranty cards. In this case we use the date the unit was shipped to our distributor for a beginning warranty date. This may cause the claim to be rejected for a proof of purchase. If you want to check on a purchase date, you may contact the U-Line Corporation Customer Assurance Department at 1-800-779-2547. This will allow you to get a proof of purchase, if needed, before you submit the claim.

At U-Line, parts and labor claims are paid separately. Included in labor are freon and recovery charges, all other parts are handled by the parts department. We require that some parts be returned to us, so we may return them to our vendor. It will be noted on your packing list if we require you to return the part. If a part is to be returned please include a copy of the packing list and a copy of your claim. If the part was purchased at one of our part distributors, you must handle the part warranty with that company. For labor payment please send a readable copy of your claim to U-Line Corporation, P.O. Box 245040, Milwaukee WI, 53224-9540, for warranty payment.



PROOF OF PURCHASE

Proof of Purchase and/or Proof of Install is an important part of the warranty claim process. Sometimes it is difficult to obtain a proper Proof of Purchase/Install for a number of different reasons:

- The customer does not have a copy (only the original).
- The customer has only their copy of the final Walk Through or sign-off of new construction.
- Other valid reasons that prevent your technician from leaving the job site with a suitable Proof of Purchase/Install.

We understand the problem and have modified our Proof of Purchase policy to help you in these situations. Effective immediately, if a copy of the Proof of Purchase/Install is not available at the site, the technician should record the following information on the Labor Invoice:

- The name of the selling Dealer
- The date of purchase/installation
- The Order or Invoice number (if available)
- The type of document they saw, i.e. Store Receipt, Closing Papers, Sign-Off of Building Permit, Final Walk Through, etc.

If we have this information on the Labor Invoice, and we have the other information that is needed (**correct Serial Number, type of repair, time spent on repairs, etc.**), we will be able to process the invoice for you in a timely manner.



PARTS LISTING

How to Order Replacement Parts

1. Locate the illustration(s) for the model you are servicing.
2. Refer to the area where the desired part would be installed, locate the part and note the item number assigned to it.
3. Locate the item number in the left column of the parts listing which is on the next page from the product illustration. Note the full description and the corresponding part number. If this is for a warranty unit, please indicate and record the model and serial numbers.
4. When ordering parts, it will be necessary to supply us with Model Number, Serial Number, Part Number, Part Description and in some cases Color or Voltage.
5. U-Line requires the return of the parts listed below if replaced under warranty.
 - Fan motors (condenser and evaporator)
 - Temperature controls
 - Water solenoid valves
 - Pumps
 - Control boards
 - Ice maker motors
 - Bypass solenoids
 - Compressors (two years old or less - lines soldered closed)

All warranty parts will be shipped at no charge as long as warranty status has been confirmed. We require that some parts be returned to us, so we may return them to our vendor. It will be noted on your packing list if we require you to return a part or if you may field scrap it. If U-Line requires a defective part to be returned, a prepaid shipping label will be included with your new replacement part. When returning parts please enclose a copy of your packing list and a copy of your labor claim, showing the model and serial number, and tag or label the part with the nature of the defect.

Our warranty records may not match the customer's information. In this case a proof of purchase will be required. If you do not have the proof of purchase at the time the order is placed, the part will be sent net 15 days (COD if you don't have an open account with U-Line Corporation). When the proof of purchase is provided we will credit your account (a check will be sent if the part was sent COD).

6. Parts may be ordered by FAX, phone or on-line:

FAX Number (414) 354-7905

Phone Number (414) 354-0300 or (414) 354-7885; press 3

www.U-LineService.com

To expedite parts shipments, FAX all parts orders to: (414) 354-7905. Copy the FAX Parts Order Form, located in the back of this manual, when placing an order.

7. Effective immediately, U-Line will **not** pay warranty claims for the replacement of a complete ice maker assembly. Complete ice maker assembly replacement is not necessary because all ice maker parts are available as replacement parts and are stocked in our inventory.

REPLACEMENT PARTS: Use only genuine U-Line replacement parts. The use of non-U-Line parts can reduce ice rate, cause water to overflow from ice maker mold, damage the unit, and may void the warranty.



SAFETY PRECAUTIONS

Do not attempt to service or repair the unit until you have read the entire procedure. Safety items throughout this manual are labeled with Danger, Warning or Caution.

DANGER

Risk of child entrapment. Before you throw away an old refrigerator or freezer: Take off the doors, leave shelves in place so that children may not easily climb inside.

DANGER



- Never attempt to repair or perform maintenance on the unit until the electricity has been disconnected.
- Altering, cutting of power cord, removal of power cord, removal of power plug, or direct wiring can cause serious injury, fire and/or loss of property and/or life and will void the warranty.

CAUTION

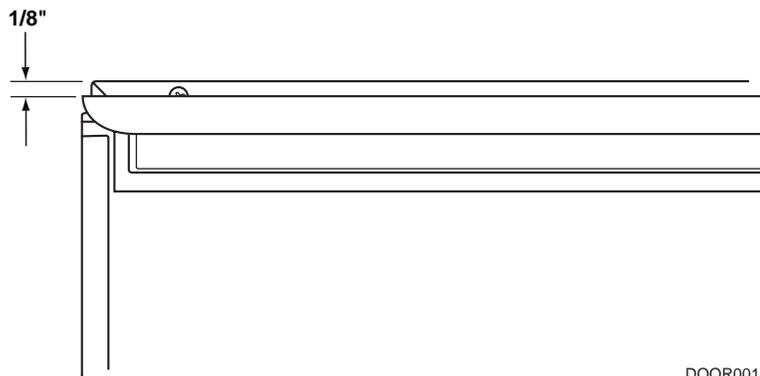
- Do not lift unit by door handle.
- Never use an ice pick or other sharp instrument to help speed up defrosting. These instruments can puncture the inner lining or damage the cooling unit.
- Failure to clean the condenser every three months can cause the unit to malfunction. This could void the warranty.
- Never install the unit behind closed doors. Be sure front grille is free of obstruction. Obstructing free air flow can cause the unit to malfunction, and may void the warranty.

ÉCHELON™ DOOR ADJUSTMENT

All Échelon™ model doors are aligned at the factory before shipment. Occasional re-adjustment may be necessary, especially if an Overlay Panel is installed. The following procedure will correct for up to 1/4" alignment.

IMPORTANT

The door should never be flush with the top of the cabinet. Even when level, the top edge of the door will be 1/8" below the top of the cabinet (see Figure 1).



DOOR001

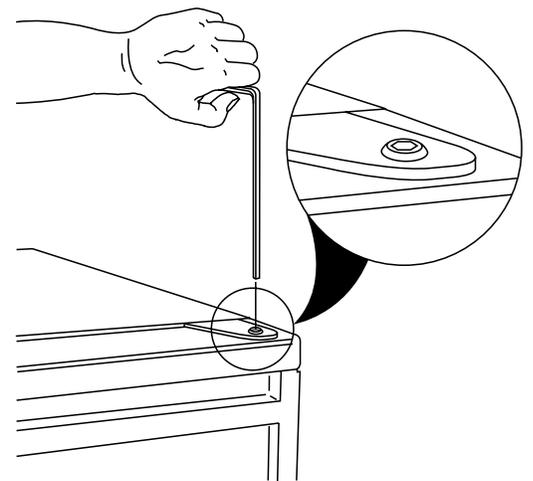
Figure 1

To adjust door:

1. Compare the top edge of the door (opposite the hinges) to the top edge of the cabinet and note the type (up or down) of adjustment needed.
2. Remove the top hinge pivot pin with a 7/64" hex wrench (see Figure 2) and lift door off bottom hinge pin. Be careful not to lose door closer inserts (see Figure 5).

Note: *The hinge plate on some Échelon™ models does not have the holes slotted for adjustment. New hinge plates are available from U-Line Customer Service.*

3. With door upside-down, inspect the bottom hinge plate mounting holes.
 - a. If your plate has slotted mounting holes, loosen but do not remove the two hinge plate screws.
 - b. If your plate does not have slotted mounting holes, remove the old plate and install the new plate with the notch to the inside of the door (see Figure 3).

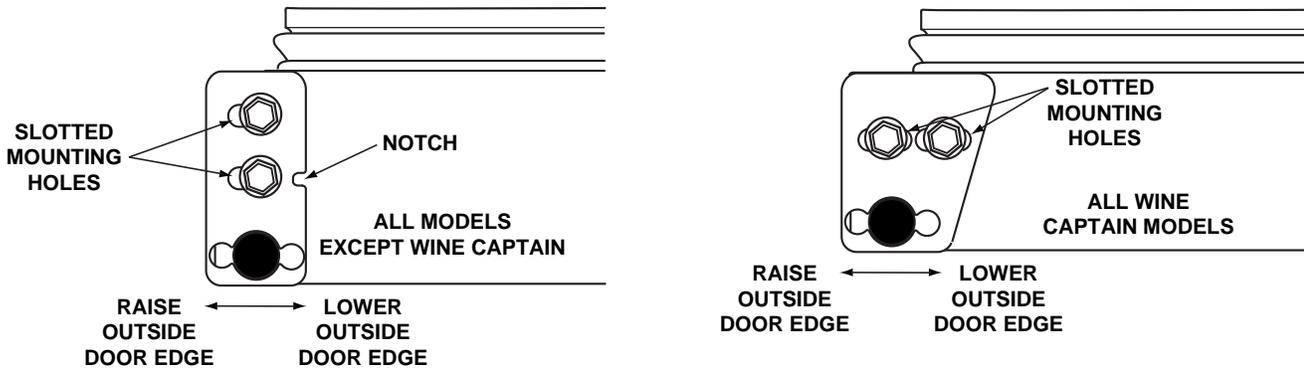


UL310

Figure 2



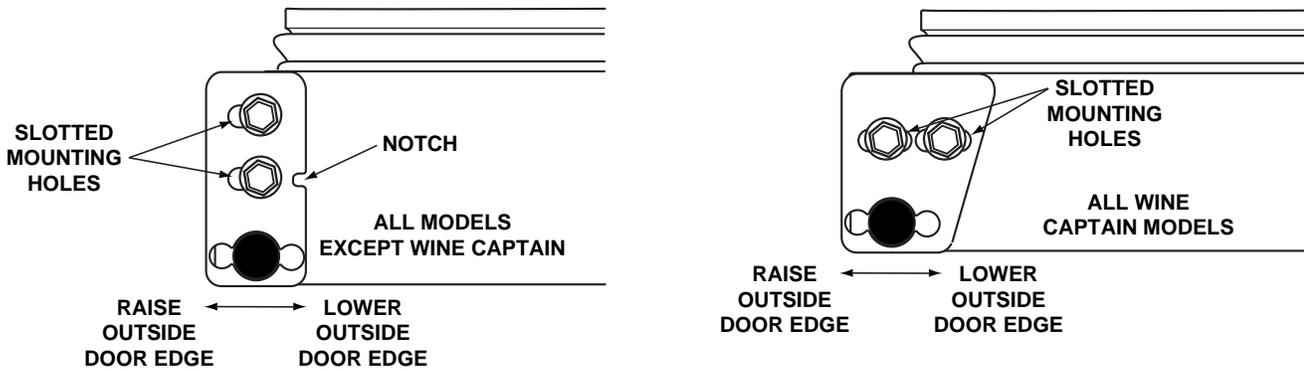
- If door edge opposite the hinges needs to move up, move plate toward outside of door. If door edge needs to move down, move plate toward inside of door (see Figure 3). Repeat until top edge of door is parallel with top of cabinet and tighten screws securely.



DOOR003

Figure 3

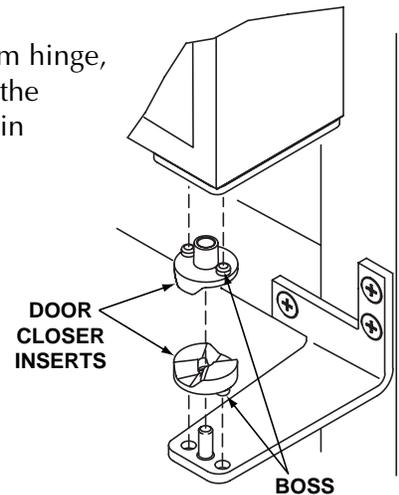
- If you have an older model, you must slot the door frame to accommodate the door closer boss. Using the bottom hinge plate pivot hole as a guide, slot the frame hole by using an 11/32" drill.



DOOR003

Figure 4

- After adjustment is complete, remove the door closers from the bottom hinge, clean thoroughly and apply petroleum jelly to the mating surfaces of the closers (see Figure 5). Be sure that bosses on closers align with holes in hinge and hinge plate. Mount door and install top hinge pivot pin.



UL312

Figure 5

GUIDE FOR SCREENING CALLS

U-line's warranty does not cover customer education calls. It has been reported that as high as 50% of all service calls performed are customer education calls.

The following guide has been developed to help screen calls on the most common customer education issues. It can be used by persons scheduling service calls. Questions to ask before scheduling a service call:

CUSTOMER COMPLAINT

The unit is not cold enough!

- Are you familiar with the factory specifications for this unit? (Many factors can cause these figures to vary: ambient temperature, application, amount of use, etc.)

Model Numbers	Approximate Temperatures
2075WC, 2015WC	60° top rack /55° middle/ 45° bottom
2075R, 2015R	38°
2075RF	38° fresh food, 0° freezer
CO2075FF, U-CO29FF	38° fresh food

- Is the door sealing properly? If the door is not sealed properly, it allows heat into the unit. U-Line's warranty is 90 days for door adjustments.
- Is the condenser clean? U-Line's warranty does not cover cleaning the condenser.
- Is the unit behind closed doors? The unit must have free air flow to the front grille.
- Did you try turning the temperature control colder? Turning the control knob clockwise is colder. Be sure to allow 24 hours between temperature control adjustments.
- **For Wine Captain Units Only** - Is the light on constantly to display the wine? If the light is on constantly, this could cause the unit to run warmer.

CUSTOMER COMPLAINT

The unit is frosting up!

- Are you familiar with the defrost technology of the unit?

Defrost Technology	Model Numbers
Manual Defrost	BI•2015
Cycle Defrost	2075R, 2015R, 2075WC, 2015WC
Frost Free	CO2075FF, 2075RF, U-CO29FF

- Is the door sealing properly? U-Line's warranty is 90 days for door adjustments.
- Has the door been left open?
- Is the unit in an application of heavy usage? Heavy usage or high ambient temperatures will cause a unit to frost up.

CUSTOMER COMPLAINT

The light on my Wine Captain never shuts off!

- Did you turn the ON/OFF switch near the base of the unit? The ON/OFF switch is for the light operation only. When the switch is in the OFF position, the light will turn on only when the door is open. When the switch is in the ON position, the light will be on constantly to display the wine. To shut the unit OFF, turn the temperature control all the way counterclockwise.



CUSTOMER COMPLAINT **The ice cubes are sticking together! - U-CO29FF, CO2075FF and BI•2015 Models Only**

- **BI•2015 Model Only** - Does the unit need to be defrosted?
- Is the door sealing properly? This could cause the ice cubes to stick together.
- Have you tried to shake the ice bucket? If the ice sits without being used, it will tend to stick together. Shaking the bucket will usually break apart the ice cubes. If the ice has been sitting for a long time, we recommend dumping the bucket and making fresh ice.
- **CO2075FF, U-CO29FF** - Turn freezer control colder.

CUSTOMER COMPLAINT **Water is leaking out of the unit! - U-CO29FF, CO2075FF and BI•2015 Models Only**

- Have you checked the connection at the water solenoid valve? U-Line’s warranty does not cover installation adjustments.

CUSTOMER COMPLAINT **No ice or not enough ice! - U-CO29FF, CO2075FF, BI•2015 and CLR2060 Models Only**

- Are you aware of the factory specifications for ice production?

Model #	Approx. Daily Ice Rate	Approx. Ice Storage
CO2075FF, U-CO29FF	8 lbs.	13 lbs. bucket
CLR2060	60 lbs.	35 lbs. bucket
BI•2015	25 lbs.	25 lbs. bucket

- Is the ice maker bin arm down? When the arm is up, it will not make ice.
- Is the door sealing properly? U-Line’s warranty is 90 days for door adjustments.
- Does the water level need to be adjusted? U-Line’s warranty is 90 days for water level adjustments.
- **BI•2015 Model Only** - Is the temperature control set to the warmest setting? The unit will produce the most ice when set at the warmest setting. Let the unit run overnight.
- **CO2075FF, U-CO29FF** - Turn freezer control colder.

CUSTOMER COMPLAINT **My cubes are wet - CLR2060 Model Only**

- The storage bin that holds the ice is not refrigerated. The cubes in the bin are slowly melting down. The bin will maintain a temperature of 32 to 34 degrees.

CUSTOMER COMPLAINT **The floor is very warm in front of my CLR2060 Model**

- The unit is designed for a built-in application, so the warm air will discharge out the bottom of the unit below the door. There is a safety feature built into the control board that will shut the unit down if the warm air cannot be dissipated.

CUSTOMER COMPLAINT **No ice, water pours into the trough and down into the drain - CLR2060 Model Only**

- The standpipe needs to be inserted into the drain hole of the water trough to maintain the proper level of water inside the trough.



**CUSTOMER
COMPLAINT****When I turn the unit on, all I get is water fill - CLR2060 Model Only**

- Check to be sure switch is in ice mode.
- Once the unit is turned on, there will be a three minute water fill. This will assure that a fresh batch of water has filled the trough. If water flows more than three minutes a service call will be required.

**CUSTOMER
COMPLAINT****My ice does not come out in a perfect cube shape - CLR2060 Model Only**

- The manner in which the ice is made causes a small hole or “dimple” to appear on the front or top of the cube. Increasing or decreasing the time of the freeze cycle will adjust the size of the dimple. A service company will need to make this adjustment.

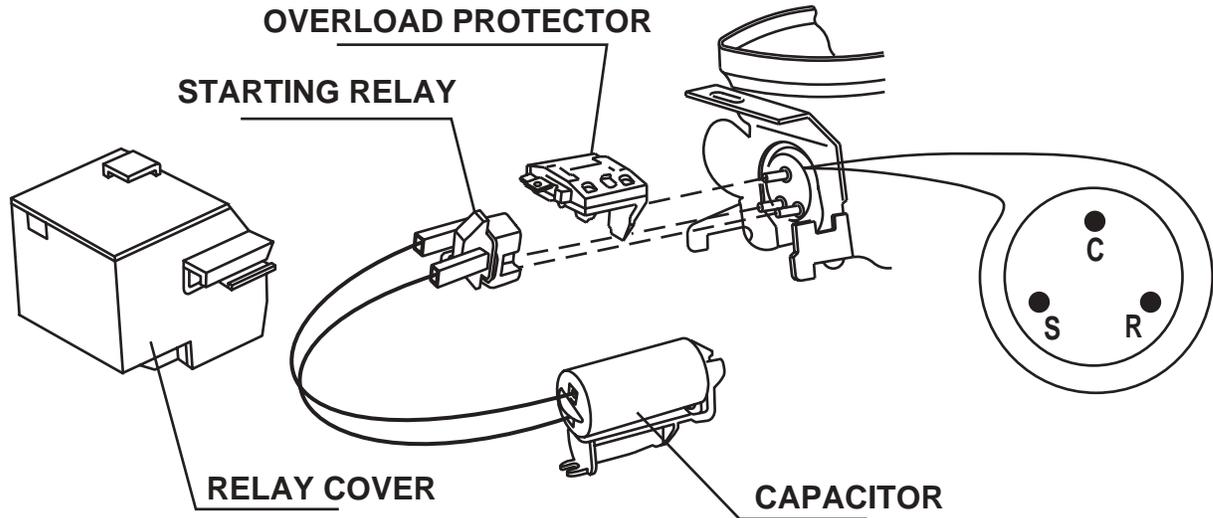
**CUSTOMER
COMPLAINT****The cubes do not fall into bin as individual cubes - CLR2060 Model Only**

- Normal - You can use the scoop to break apart.

**CUSTOMER
COMPLAINT****Not enough ice is stored in the bin - CLR2060 Model Only**

- Check the level of the unit.



COMPRESSOR/ELECTRICAL SPECIFICATIONS

UL183-3.1

COMPRESSOR PINS

To measure start winding resistance, measure across the C-S pins.

To measure run winding resistance, measure across the C-R pins. Ensure that pins C and R are not shorted to ground.

Specifications

EMU45HSC Start Winding Resistance:	5.60 OHMS
EMU45HSC Run Winding Resistance:	6.70 OHMS
115 VOLT Ice Maker Heater Resistance:	80 OHMS
115 VOLT Water Valve Coil Resistance:	335 OHMS
115 VOLT Drain Pan Heater	630-661 OHMS



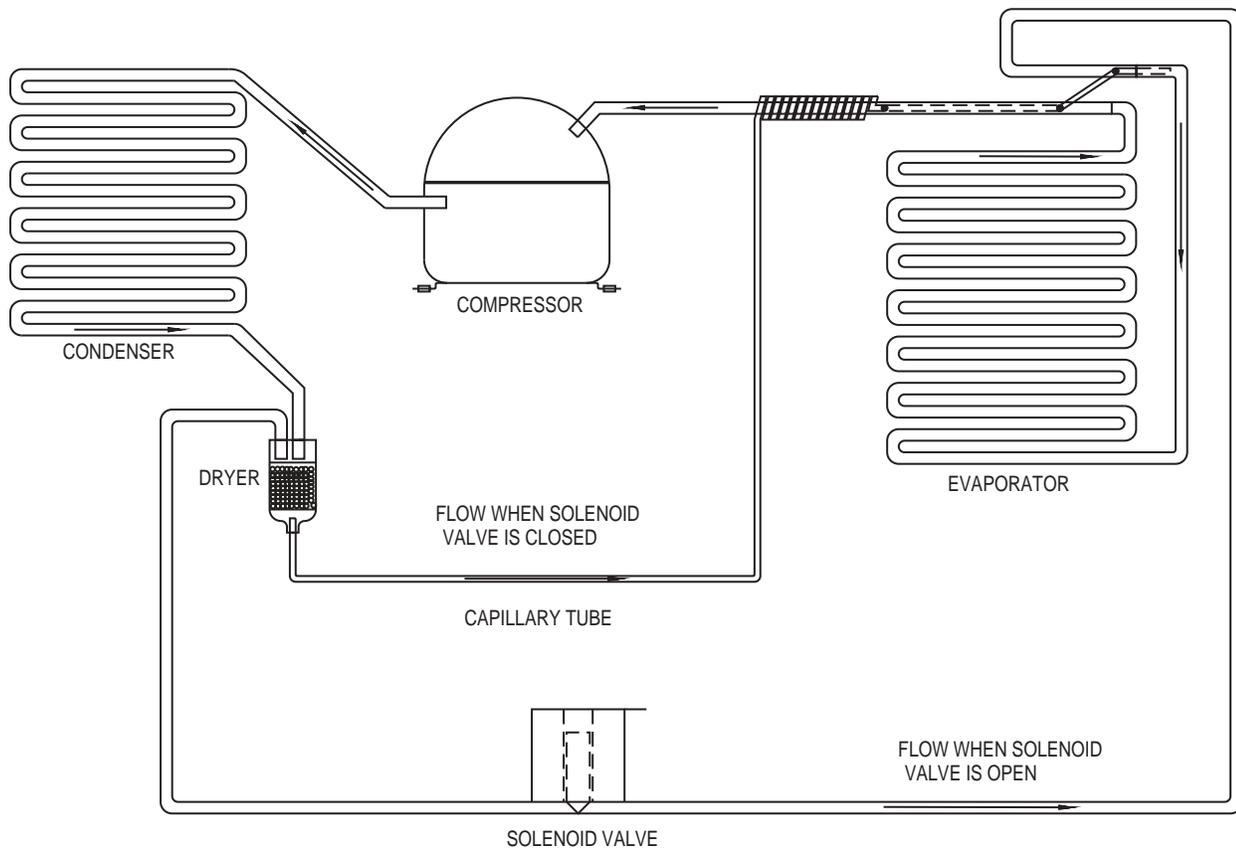
U-LINE FROST FREE REFRIGERATION SYSTEM

Cooling Mode:

- Bypass solenoid valve closed
- Evaporator fan operating
- Refrigerant flows through capillary tube
- Normal vapor/compression cycle refrigeration
- Drain heater off

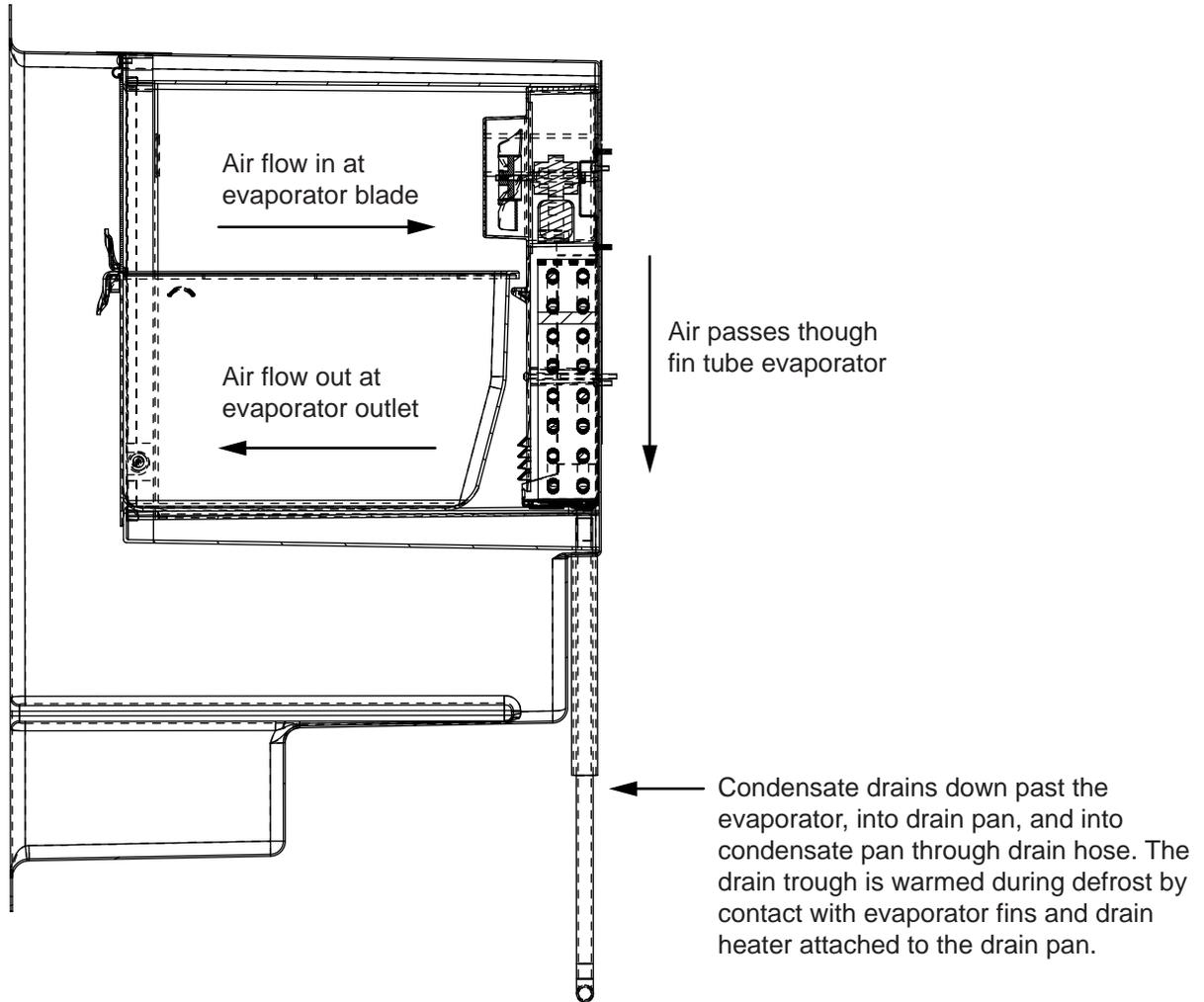
Defrost Mode:

- Bypass solenoid valve open
- Refrigerant flows through bypass system
- Vapor flows from condenser to evaporator without a phase change
- Drain heater on



UL183-2

TYPICAL FROST FREE AIRFLOW CONFIGURATION



U-LINE1015



REFRIGERATION SYSTEM DIAGNOSIS GUIDE

System Condition	Suction Pressure	Suction Line	Compressor Discharge	Condenser	Capillary Tube	Evaporator	Wattage
Normal	Normal	Slightly below room temperature	Very hot	Very hot	Warm	Cold	Normal
Overcharge	Higher than normal	Very cold may frost heavily	Slightly warm to hot	Hot to warm	Cool	Cold	Higher than normal
Undercharge	Lower than normal	Warm - near room temperature	Hot	Warm	Warm	Extremely cold near inlet - outlet below room temperature	Lower than normal
Partial Restriction	Somewhat lower than normal-in vacuum	Warm - near room temperature	Very hot	Top passes warm - lower passes cool (near room temperature) due to liquid	Room temperature (cool) or colder	Extremely cold near inlet - outlet below room temperature backing up	Lower than normal
Complete Restriction	In deep vacuum	Room temperature (cool)	Room temperature (cool)	Room temperature (cool)	Room temperature (cool)	No refrigeration	Lower than normal
No Gas	0 PSIG to 25"	Room temperature (cool)	Cool to hot	Room temperature (cool)	Room temperature (cool)	No refrigeration	Lower than normal



CO2075FF AND U-CO29FF ICE MAKER OPERATION

Note: *The refrigeration system operates independently of the ice maker. This is a new design for U-Line. All other U-Line ice makers use a double throw control system where the unit is either in a freeze mode or harvest mode. In the CO2075FF and the U-CO29FF the refrigeration system will cycle on and off depending on the temperature of the freezer. In most cases this means the refrigeration system will be operating during the ice making and harvest modes. If the freezer control is set too warm the refrigeration system may cycle off during ice making mode, slowing the ice production rate. If this happens adjust the freezer control colder.*

Ice Maker Operating Cycles

1. Freeze Cycle
 - A. Ice maker thermostat (located behind grille) open.
 - B. Freezer control closed and refrigeration system is operating.

2. Harvest Cycle-1
 - A. Ice maker thermostat closed.
 - B. Refrigeration system operating.
 - C. If bin arm is up the harvest will not initiate.
 - D. Power goes through the bin switch to the ice maker motor and mold heater.

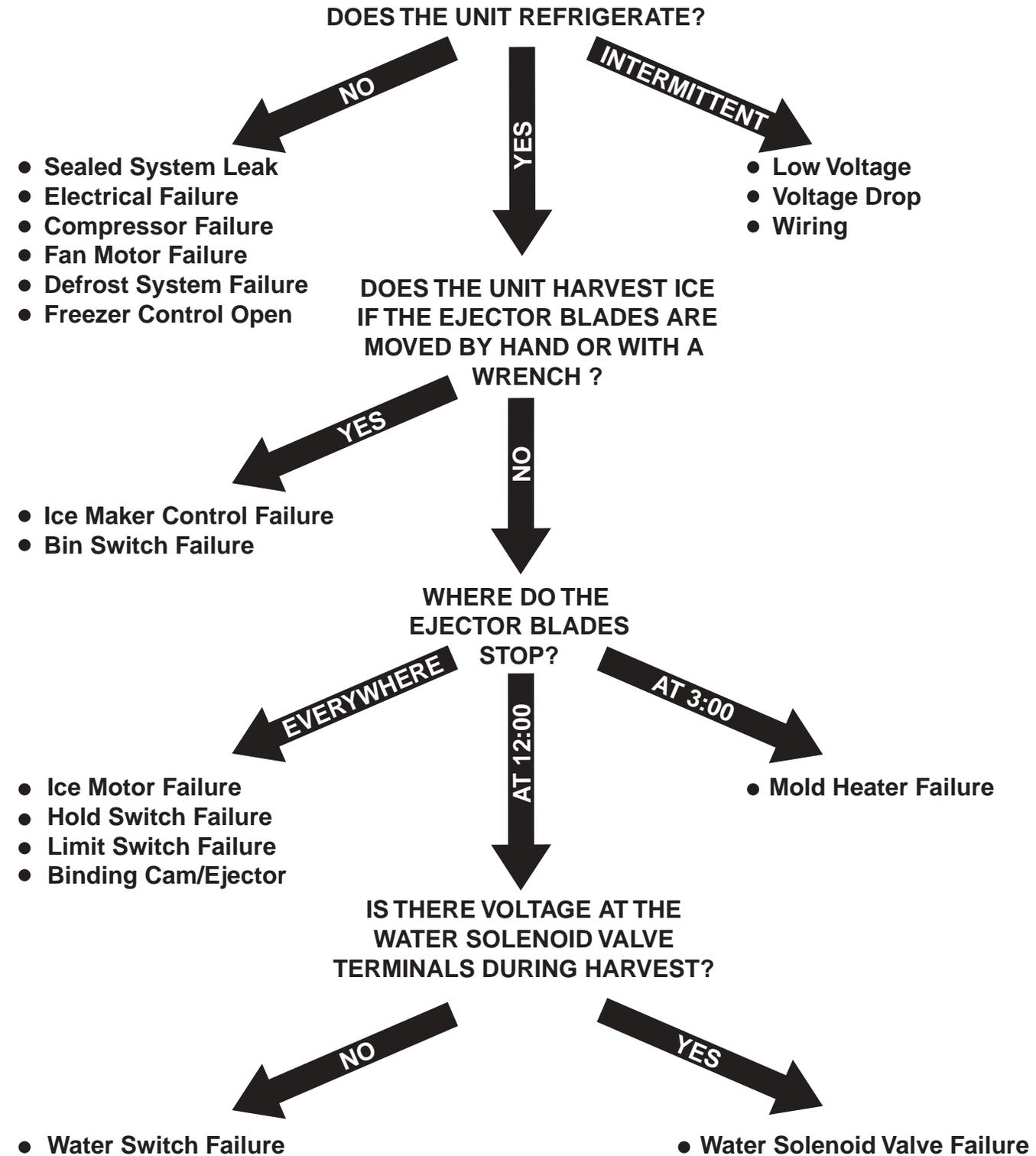
3. Harvest Cycle-2
 - A. Ice maker ejector blades reach 2:00 position and cam depresses the hold switch.
 - B. Ejector blades stall on ice and ice maker motor pulsates until mold heater warms and ice releases.
 - C. Refrigeration system operating.

4. Water Fill Cycle
 - A. Ice maker blades reach approximately 10:00 position and cam depresses the water fill switch.
 - B. Power to the water valve. Ice maker mold fills.
 - C. Refrigeration system operating.

5. Eject Cycle
 - A. Ejector blades push ice into bucket and stop at 12:00 position.
 - B. Ice maker temperature control opens.
 - C. Refrigeration system still operating.



ICE MAKER DIAGNOSIS FLOW CHART



U-LINE1005



TROUBLESHOOTING

1. Will not eject ice (water frozen)

Cause

- Icemaker control setting too cold.
- Icemaker control defective (contacts open).
- Bin switch defective.
- Limit switch defective.
- Ice maker assembly motor stalled.
- Broken wire in ice maker circuit.
- Dirty condenser.
- Door gasket not sealing.
- Refrigerant leak causing slight undercharge.

2. Will not fill with water

Cause

- No water supply to unit.
- Water switch defective.
- Solenoid valve defective.
- Fill tube frozen.
- Broken wire in water fill circuit.
- Fill tube kinked.
- Inlet screen on water valve obstructed.

3. Will not stop making ice

Cause

- Bin switch defective.
- Bin arm not raising up completely.

4. Water will not stop filling

Cause

- Water switch defective.
- Solenoid valve defective.
- Stalled ice maker motor.
- Icemaker temperature control defective. Ice maker is in continuous harvest cycle (contacts closed).
- Ejector blades will not stop turning

Cause

- Water switch defective (closed).
- Hold switch defective.
- Defective wiring.
- Short in mold heater.

6. Low ice production

Cause

- Icemaker control set too cold.



DO NOT service the unit until the main electrical power has been disconnected.

Remedy

- Adjust icemaker control warmer (counterclockwise).
- Replace icemaker control.
- Replace bin switch.
- Replace limit switch.
- Replace motor.
- Replace defective wiring.
- Clean condenser.
- Replace gasket of fix obstruction.
- Find and repair leak/replace refrigerant.

Remedy

- Open water supply connection.
- Replace switch.
- Replace valve.
- Replace solenoid valve and defrost the fill tube.
- Replace defective wiring.
- Straighten out tube.
- Clean or replace valve.

Remedy

- Replace bin switch.
- Lubricate pivot point, loosen bin arm lever screw, or replace bent bin arm.

Remedy

- Replace switch.
- Replace solenoid valve.
- Replace motor and solenoid valve.
- Replace icemaker temperature control.

Remedy

- Replace water switch
- Replace hold switch.
- Repair or replace wiring.
- Replace heater.

Remedy

- Adjust icemaker control warmer (counterclockwise).



- b. Fan motor stalled.
 - c. Ice cubes too large.
 - d. Dirty condenser.
 - e. Bypass valve stuck open.
7. Not freezing (compressor and fans are operating)

Cause

- a. Little or no frost pattern on evaporator.
 - b. Bypass valve stuck open.
8. Not freezing (compressor not operating - fans operating)

Cause

- a. Relay defective.
 - b. Overload defective (open).
 - c. Compressor defective.
9. Not freezing (compressor and fans not operating)

Cause

- a. On-off switch defective (open).
- b. Hold switch defective (open).
- c. Freezer control defective (open).
- d. Broken wire in compressor circuit.
- e. Power cord not plugged in.
- f. On-off switch in off position (FF only).
- g. Freezer control in off position.
- h. Ejector blades not in the freeze position (12:00).

10. Compressor overheating

Cause

- a. Condenser air flow restricted.
- b. Condenser fan blade obstructed.
- c. Condenser fan motor stalled.
- d. Defective compressor.

11. Compressor will not stop operating

Cause

- a. Freezer control set too cold.
- b. Freezer control defective (contacts will not open).
- c. Control sensing bulb not sensing freezer temperature.
- d. Evaporator fan stalled.

12. Water leak (under unit)

Cause

- a. Water supply line leaking at solenoid valve inlet.
- b. Water line leaking at solenoid valve outlet.
- c. Water line leaking at fill tube.

- b. Replace fan motor.
- c. Lower water fill adjustment.
- d. Clean condenser.
- e. Replace bypass valve.

Remedy

- a. Check for sealed system leak or restriction.
- b. Replace bypass valve.

Remedy

- a. Replace relay.
- b. Replace overload.
- c. Replace compressor.

Remedy

- a. Replace on-off switch.
- b. Replace hold switch.
- c. Replace freezer control.
- d. Repair or replace wiring.
- e. Plug in power cord.
- f. Put switch in on position.
- g. Rotate freezer control knob clockwise.
- h. Manually advance the ejector blades to the 12:00 position (test ice maker and limit switch).

Remedy

- a. Remove restriction (clean condenser and grille).
- b. Remove blade restriction.
- c. Replace fan motor.
- d. Replace compressor.

Remedy

- a. Adjust freezer control warmer (counterclockwise).
- b. Replace freezer control.
- c. Fully insert bulb into well tube on side of freezer, routing bulb away from compressor discharge tube.
- d. Remove obstruction or replace motor.

Remedy

- a. Tighten or replace fitting.
- b. Replace water line and fitting.
- c. Tighten clamp on fill tube or replace fill tube assembly.



- d. Defrost drain line not in drain pan.
- e. Crack in water line.

13. Water leak (inside unit)

Cause

- a. Ice maker assembly fill cup obstructed.
- b. Fill ice cup and fill tube out of alignment.
- c. Water level too high.
- d. Defrost drain plugged.

14. Excessive frost build-up

Cause

- a. Door gasket not sealing properly.
- b. Door out of alignment.
- c. Water soaked cabinet insulation.
- d. Light stays on when door is closed.

15. Noisy

Cause

- a. Copper refrigeration tube touching cabinet.
- b. Fan blade touching shroud.
- c. Fan blade obstruction (wiring, foam insulation, packaging material).

16. Ice build-up in drain trough or drainage problem.

Cause

- a. Obstructed drain cup or tube.
- b. Evaporator not touching drain trough.
- c. Kinked drain tube.
- d. Drain trough spout and drain cup not aligned.

17. Unit will not defrost

Cause

- a. Bypass valve not vertical (will not operate).
- b. Bypass coil defective.
- c. Defrost timer defective.
- d. Bypass valve defective.

18. Fresh food temperature too cold

Cause

- a. Ice bucket not fully inserted.
- b. Freezer temperature control set too cold.

- d. Position drain line in drain pan.
- e. Replace water line.

Remedy

- a. Remove obstruction.
- b. Align fill tube and fill cup.
- c. Adjust water level.
- d. Ice in drain trough (refer to #16).

Remedy

- a. Adjust door hinges or replace door gasket.
- b. Align door hinges.
- c. Replace foamed cabinet assembly (factory repair only).
- d. Repair or adjust light bracket.

Remedy

- a. Carefully adjust tubing.
- b. Adjust fan mounting or shroud.
- c. Remove obstruction.

Remedy

- a. Clear obstruction.
- b. Reposition evaporator to contact drain trough along entire length.
- c. Reposition drain tube.
- d. Align drain trough and drain cup.

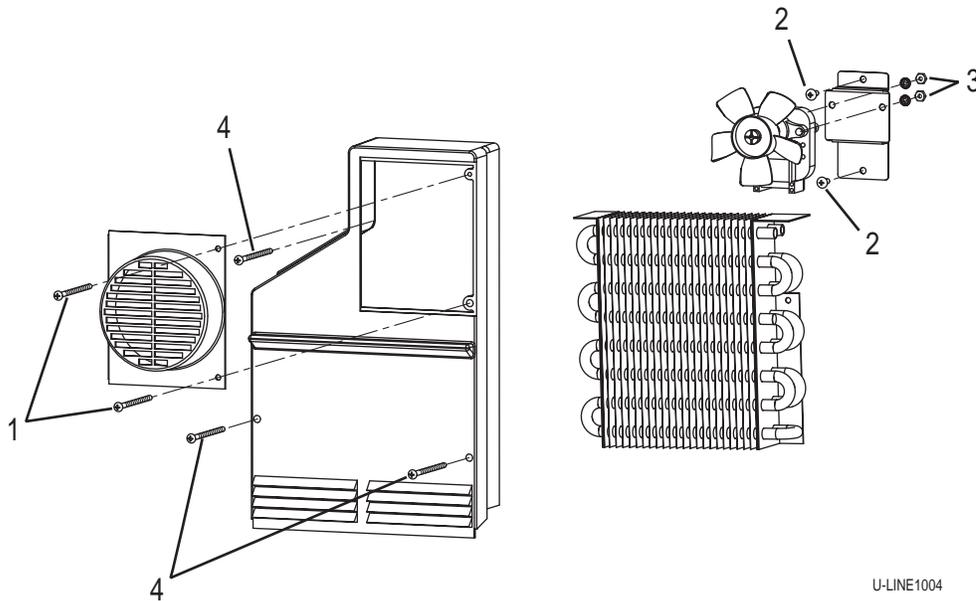
Remedy

- a. Align bypass valve and coil assembly.
- b. Replace bypass valve.
- c. Replace defrost timer.
- d. Replace bypass valve.

Remedy

- a. Push ice bucket in place.
- b. Adjust freezer control to warmer setting (counterclockwise).





U-LINE1004

DISASSEMBLY PROCEDURES

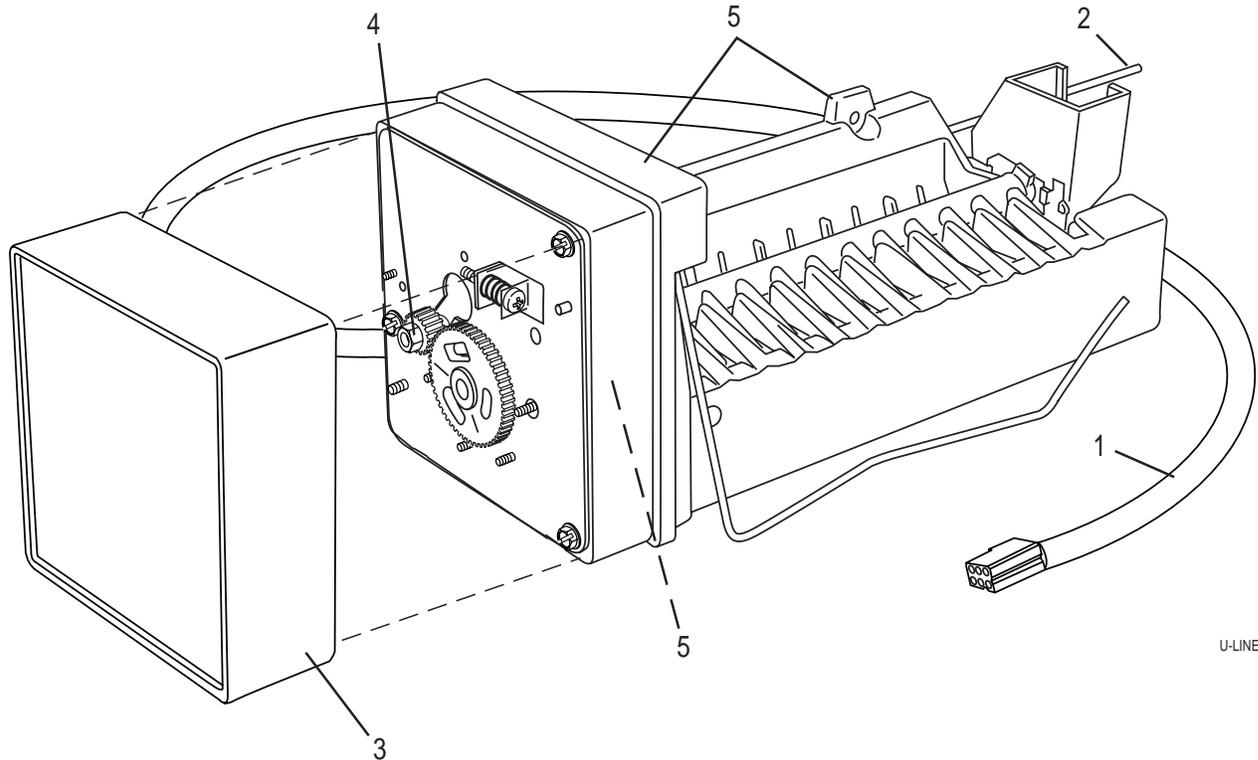
Note: *Échelon* models do not require removal of the ice maker or freezer housing to access the fan motor, drain or evaporator.

To replace evaporator fan motor:

1. Disconnect unit from power source.
2. Remove 2 screws (1) from fan cover.
3. Remove 2 screws (2) holding fan bracket to liner.
4. Unplug fan connection.
5. Remove 2 nuts (3) holding the fan to the fan bracket.
6. Replace with new fan.
7. Plug in the fan connection.
8. Re-install fan bracket to liner making sure the fan wires are tucked behind the fan bracket.
9. Re-install unit and test.

To access evaporator or drain:

1. Disconnect unit from power source.
2. Remove 2 screws (1) from fan cover.
3. Remove 3 screws (4) from evaporator cover.
4. To remove, pull evaporator cover forward and turn.

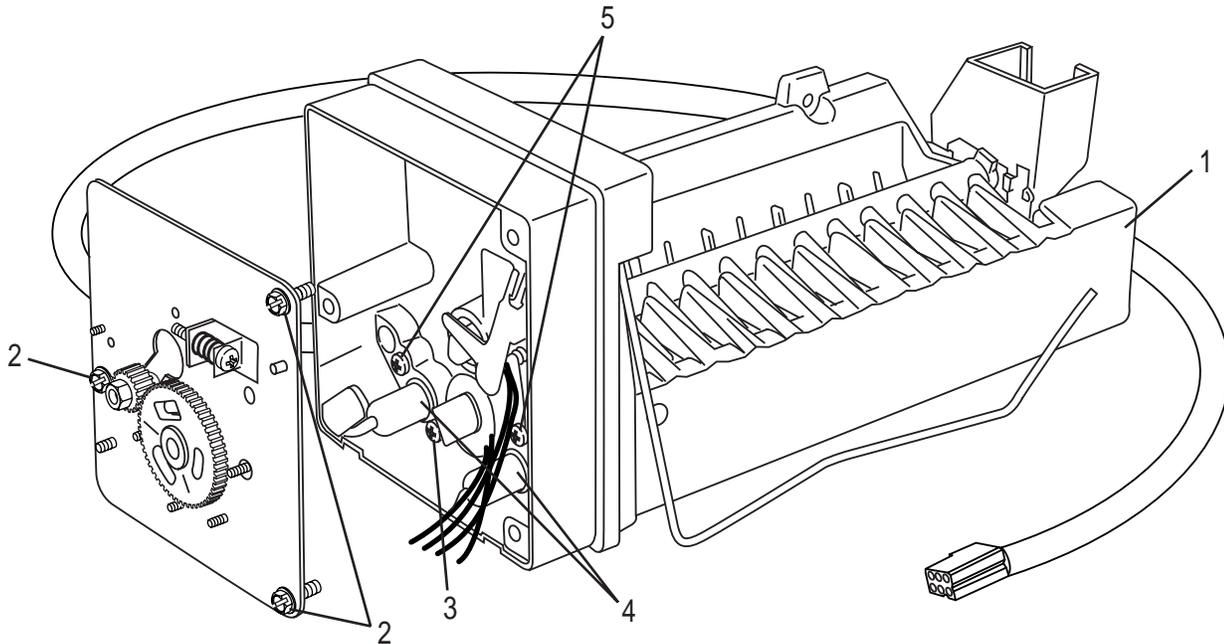
REPLACING ICE MAKER ASSEMBLY

U-LINE1001

1. Unplug unit.
2. Disconnect ice maker wire harness at plug (1).
3. Remove control capillary tube from sensing tube on ice maker assembly (2).
4. Remove water inlet tube.
5. Remove front cover (3).
6. Advance ejector blade to the 3 o'clock position by turning the 5/16" hex head on the small brass gear counterclockwise (4).
7. Remove three screws from wall of freezer housing (5).
8. Remove ice maker assembly.
9. Install new ice maker assembly.
10. Reconnect plug.
11. Insert control capillary tube into ice maker sensing tube.
12. Insert water inlet tube.
13. Apply Permagum® to all exit holes.
14. Install back panel.
15. Plug in unit and test.



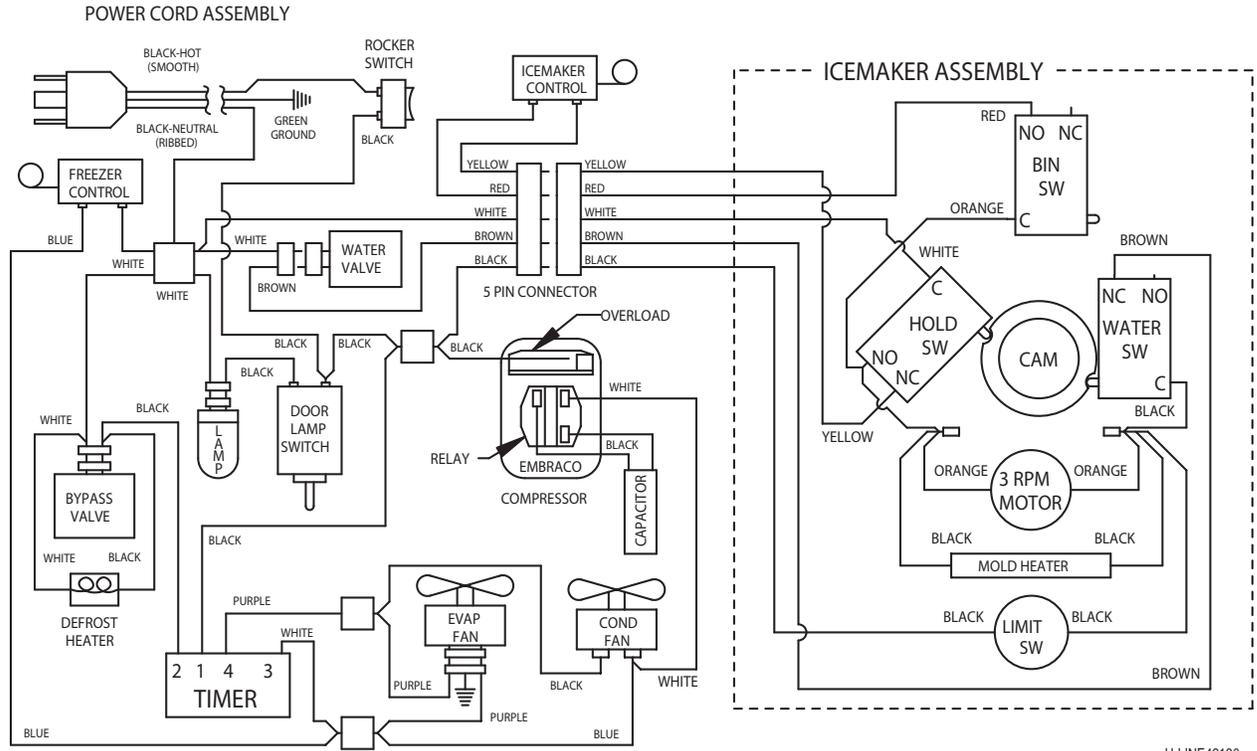
REPLACING MOLD AND HEATER



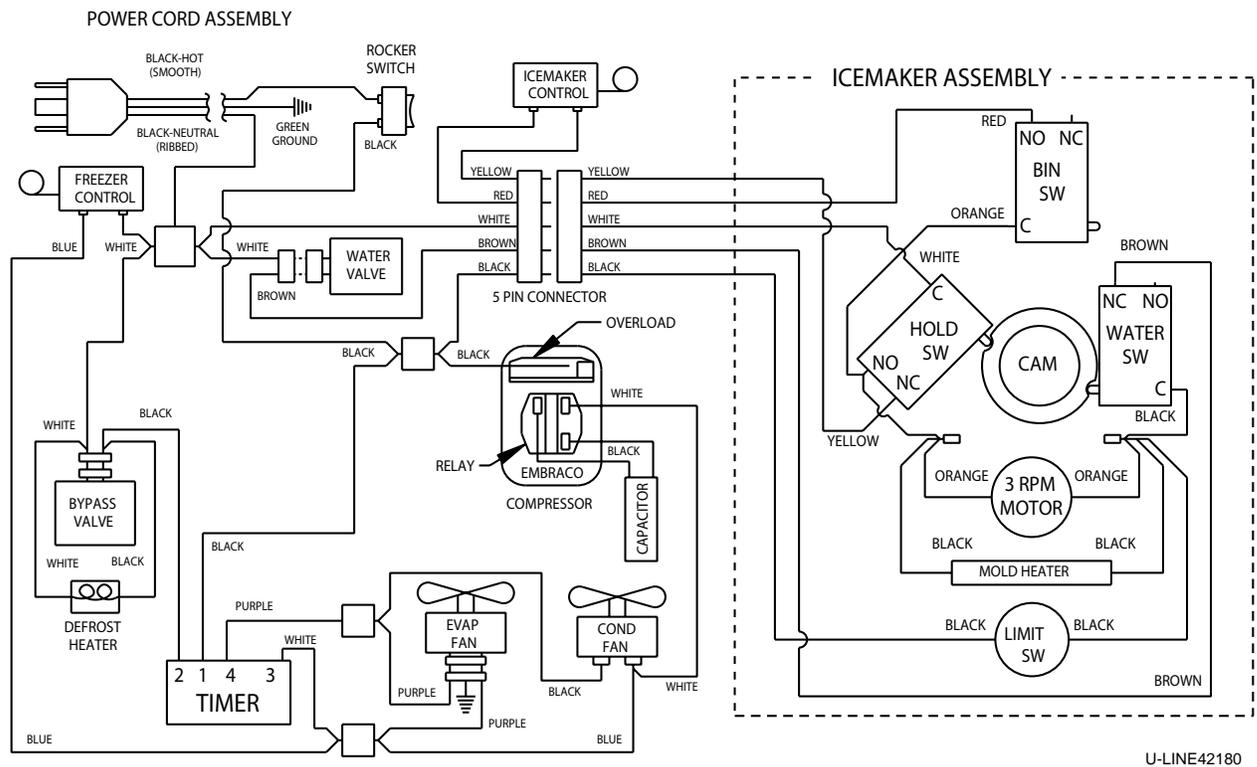
U-LINE1002

1. Remove ice maker assembly. Refer to REPLACING ICE MAKER ASSEMBLY.
2. Remove one stripper screw (1) and stripper.
3. Remove three face plate screws (2) and face plate.
4. Remove one screw (3) and detach limit switch from mold.
5. Detach heater leads (4).
6. Remove two screws (5) and mold from support housing.
7. To assemble, replace parts in reverse order.
8. Install the ice maker assembly.

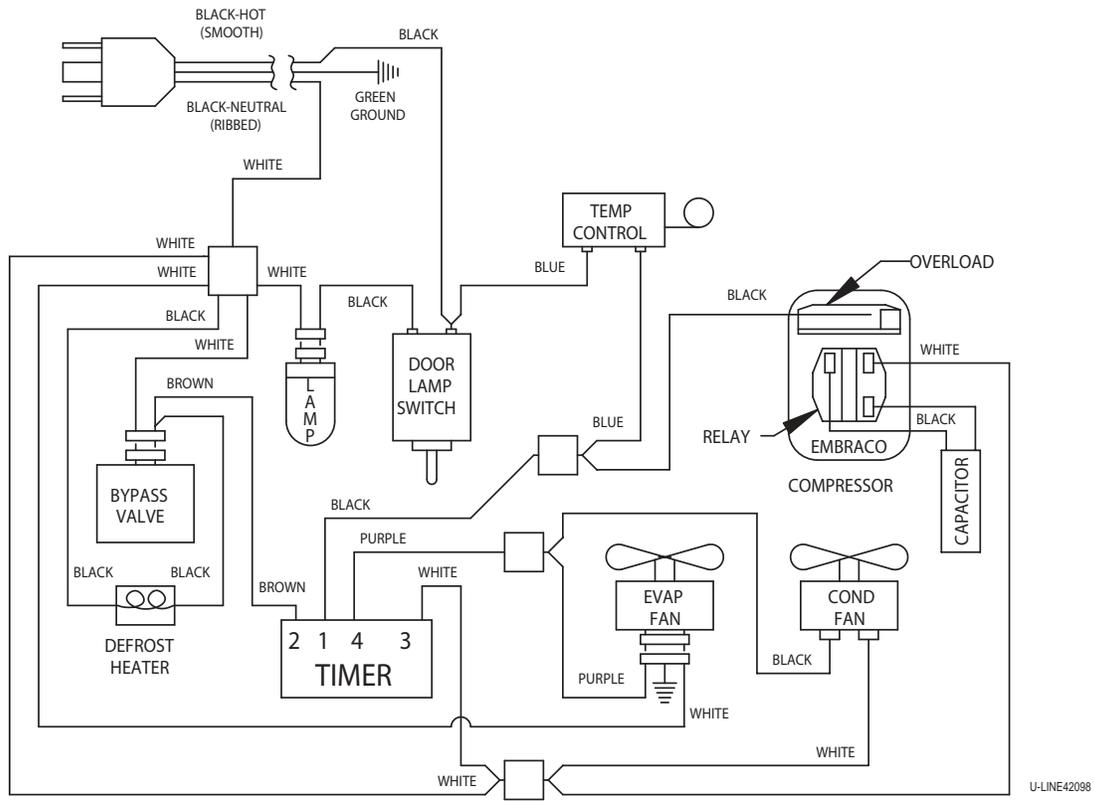
COMBO 2075FF WIRING DIAGRAM



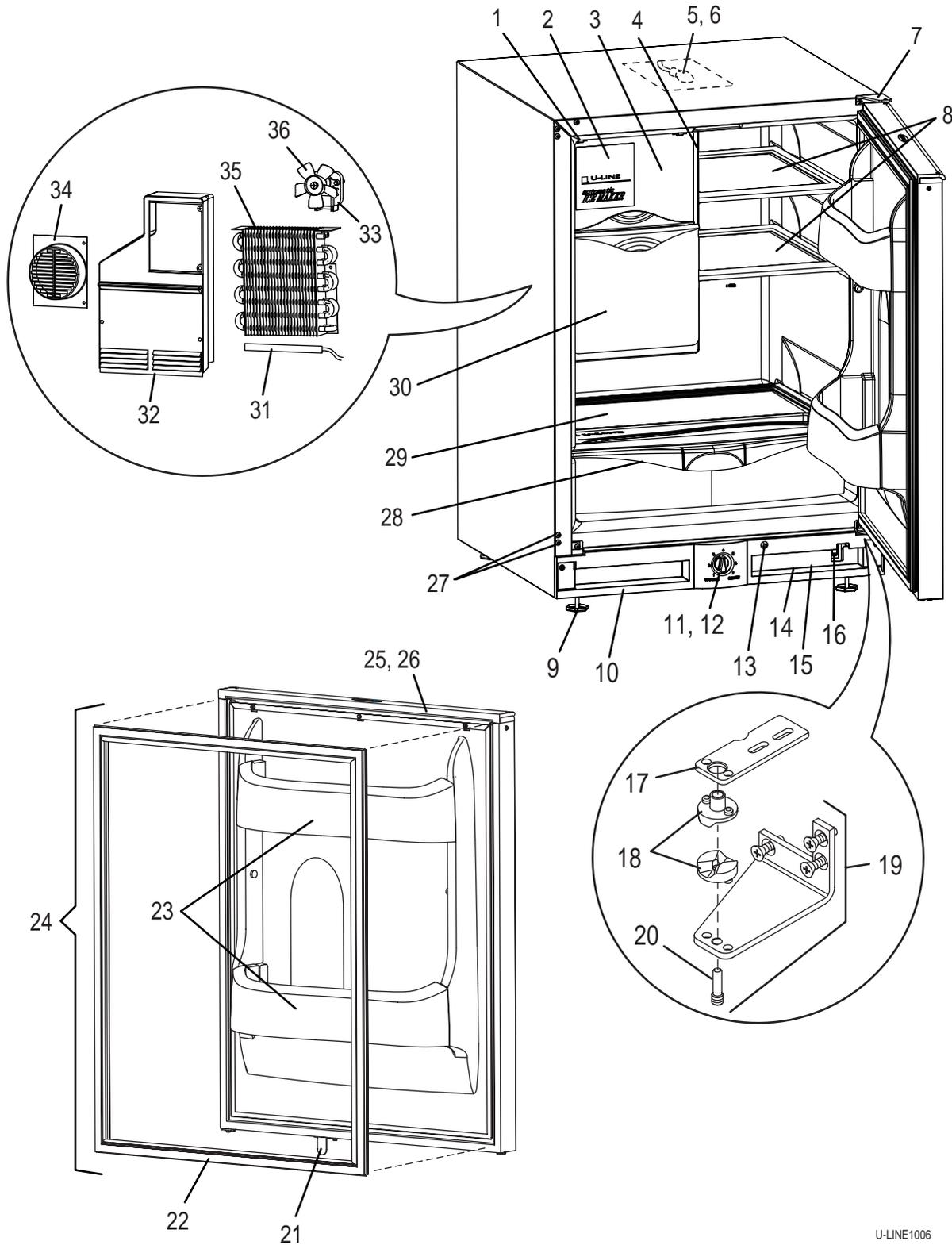
U-CO29FF WIRING DIAGRAM



2075RF WIRING DIAGRAM



COMBO 2075FF (1 OF 2)



U-LINE1006

CO2075FF (1 OF 2)

For Item #2, see Model 402-CO2075FF Ice Maker (pages 30-31) for separate breakdown.

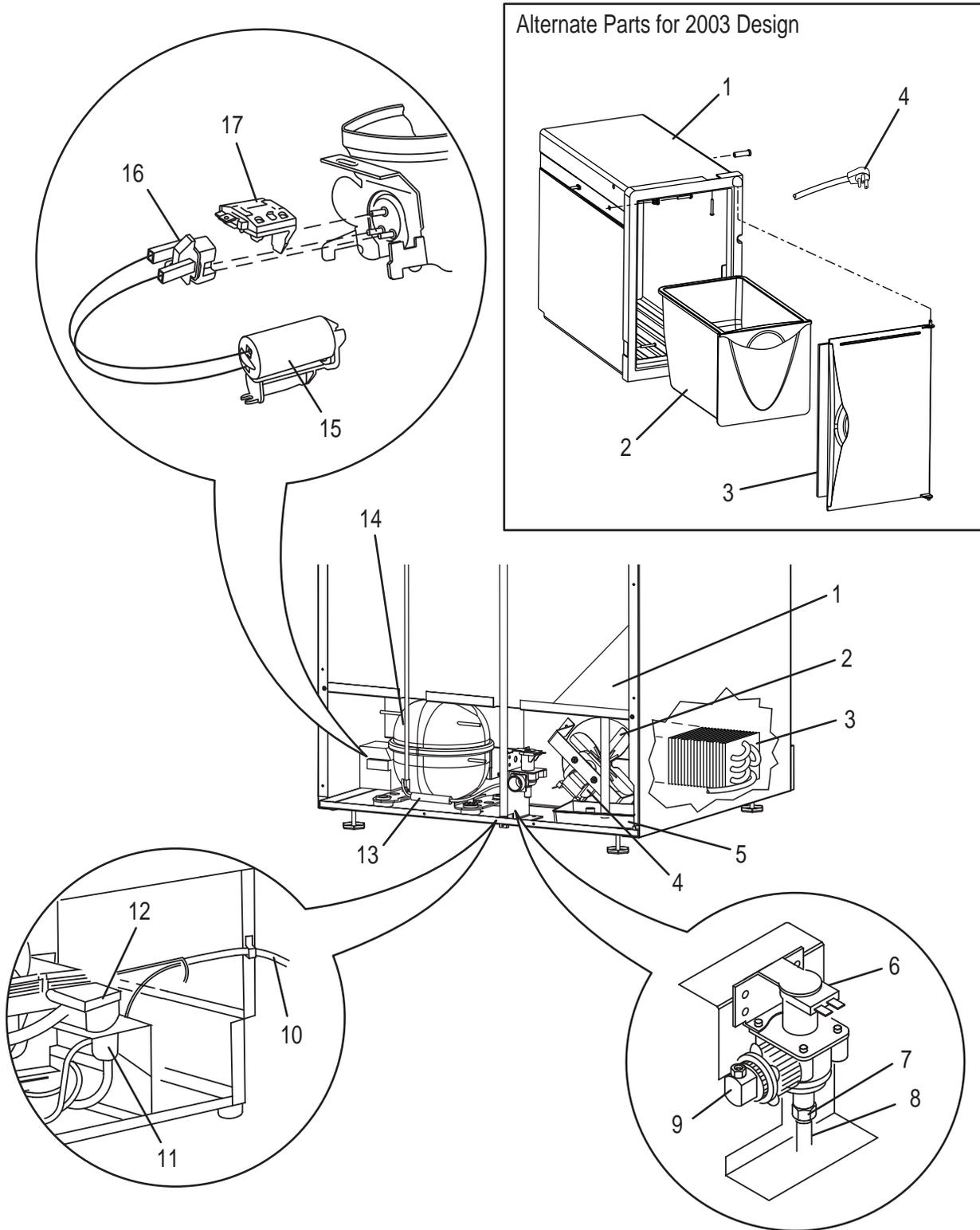
Item	Description	White	Black	Stainless Steel
1	Ice Bin Door Hinge	31463	31463	31463
2	Ice Maker Assembly	402-CO2075FF	402-CO2075FF	402-CO2075FF
3	Bin Door Assembly	11957-S	11957-S	11957-S
4	Ice Maker Housing	80-35002-S	80-35002-S	80-35002-S
5	Lamp Bulb	31317	31317	31317
6	Lens Cover	11859	11859	11859
7	Hinge Assembly Top R/H	11898-S-KIT	11898-S-BLK	11898-S-SS
8	Glass Shelf	31696	31696	31696
9	Leveling Leg (4)	41319	41319	41319
10	Grille	11902-KIT-01	11902-BLK-01	11902-BLK-01
11	Control - Refrigerator	2897	2897	2897
12	Control Knob	42090-KIT	42090-BLK	42090-BLK
13	Door Switch	1916	1916	1916
14	Defrost Timer	68000	68000	68000
15	Control CO2075FF IM	2792	2792	2792
16	On-Off Switch	2053	2053	2053
17	Pivot Plate	11901-1	11901-1	11901-1
18	Door Closer Assembly	31673-S	31673-S	31673-S
19	Hinge Assembly Bottom R/H	11899-S-KIT	11899-S-BLK	11899-S-SS
20	Pivot Post	42096	42096	42096
21	Door Switch Bracket	11973	11973	11973
22	Door Gasket	12094-03	12094-01	12094-02
23	Door Shelf	31686	31686	31686
24	Door Assembly	80-17002-02	80-17002-01	See Parts Not Shown
25	Door Handle Top	11926-4-KIT	11926-4-BLK	N/A
26	Door Handle Bottom	11927-4-KIT	11927-4-BLK	11927-4-BLK
27	Threaded Hole Plug	31723-WHT	31723-BLK	41156
28	Crisper	31685	31685	31685
29	Crisper Shelf	31689	31689	31689
30	Ice Bucket	31687	31687	31687
31	Drain Pan Heater	42134	42134	42134
32	Evaporator Cover	11955	11955	11955
33	Evaporator Fan Motor	5434	5434	5434
34	Evaporator Fan Cover	11952	11952	11952
35	Evaporator Assembly	2334-FFS	2334-FFS	2334-FFS
36	Evaporator Fan Blade	31656	31656	31656

Parts Not Shown

Item	Description	White	Black	Stainless Steel
	Door Assembly Stainless Steel - Right Hand Hinge	N/A	N/A	80-17002-03
	Door Assembly Stainless Steel - Left Hand Hinge	N/A	N/A	80-17002-13
	Door Handle Top Modified	N/A	N/A	11926-7-BLK
	Door Handle	N/A	N/A	11949



COMBO 2075FF (2 OF 2)



U-LINE1007



COMBO 2075FF (2 OF 2)

Item	Description	White	Black	Stainless Steel
1	Back Panel	11969	11969	11969
2	Condenser Fan Blade	5188	5188	5188
3	Condenser Assembly	2303-FFS	2303-FFS	2303-FFS
4	Condenser Fan Motor	5263	5263	5263
5	Drain Pan	31550-1-F	31550-1-F	31550-1-F
6	Water Valve	2552A	2552A	2552A
7	Plastic Nut & Sleeve Assembly	41254	41254	41254
8	Water Line Assembly	404FF	404FF	404FF
9	Water Line Connection	41826	41826	41826
10	Power Cord	2344-2	2344-2	2344-2
11	Bypass Valve Assembly	2749-S	2749-S	2749-S
12	Bypass Valve Solenoid Only	73001-S	73001-S	73001-S
13	Dryer	2692	2692	2692
14	Compressor Assembly	5408-FFS	5408-FFS	5408-FFS
15	Capacitor	5437	5437	5437
16	Relay	5436	5436	5436
17	Overload	5435	5435	5435

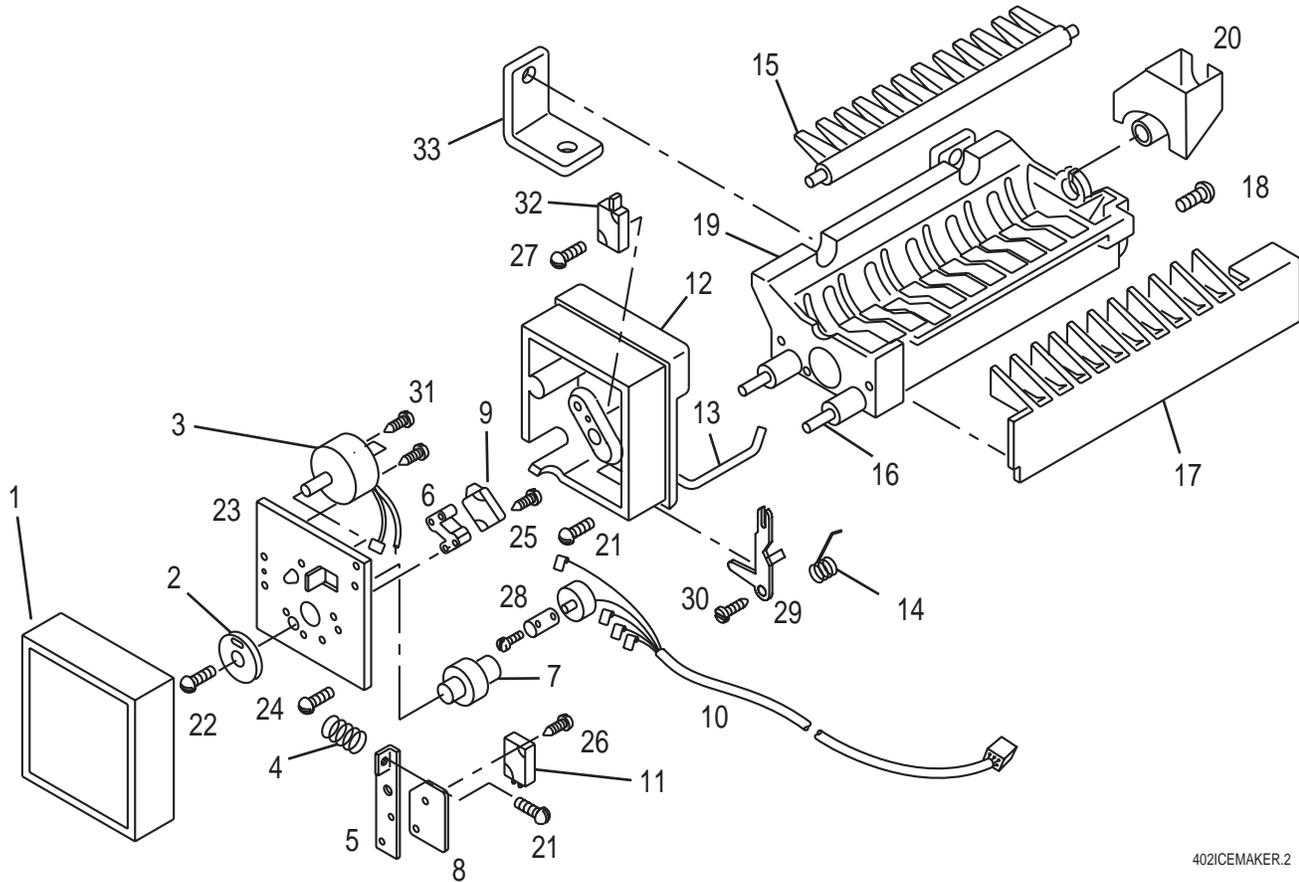
Alternate Parts for 2003 Design

Item	Description	White	Black	Stainless Steel
1	Icemaker Housing	80-35002-S	80-35002-S	80-35002-S
2	Ice Bucket	26011	26011	26011
3	Freezer Door	11959-S	11959-S	11959-S
4	Power Cord	2889	2889	2889-2



MODEL 402-CO2075FF

Note: This ice maker is used only on CO2075FF.



402ICEMAKER.2

MODEL 402-CO2075FF

Note: *This ice maker is used only on CO2075FF.*

CAUTION

Use only genuine U-Line replacement parts. U-Line ice maker parts are not the same as standard FSP Whirlpool parts. Using non-U-Line parts can reduce ice production rate, cause water to overflow from ice maker mold, damage the unit, and may void the warranty.

Item	Description	Part No.	Item	Description	Part No.
-	Ice Maker Assembly	402-CO2075FF	17	Stripper	31400
-	Faceplate Assembly	150	18	Stripper Screw	489128
1	Cover	627000	19	Mold & Heater Assembly	628123-S-E75
2	Gear	628210*	20	Water Cup	544304
3	Motor	627973*	21	Spring & Housing Screw	488372*
4	Spring	627163*	22	Gear Screw	488957*
5	Valve Switch Plate	625836*	23	Face Plate	11641*
6	Switch Spacer	625834*	24	Plate Screw	41375
7	Cam	627302*	25	Long SW Screw	488361*
8	Insulator	627680*	26	Short SW Screw	488362*
9	Hold Switch	2506*	27	Bin SW Screw	488360
10	Wire Harness	2361**	28	Clamp	625829
11	Valve Switch	2506*	29	Arm Lever	625830
12	Support Housing	625827	30	Arm Lever Screw	627199
13	Bin Arm	2886	31	Motor Screw	488622*
14	Bin Arm Spring	627526	32	Bin Switch	2506*
15	Ejector	627375	33	Support Bracket	42166
16	Mold Heater	625843-S			

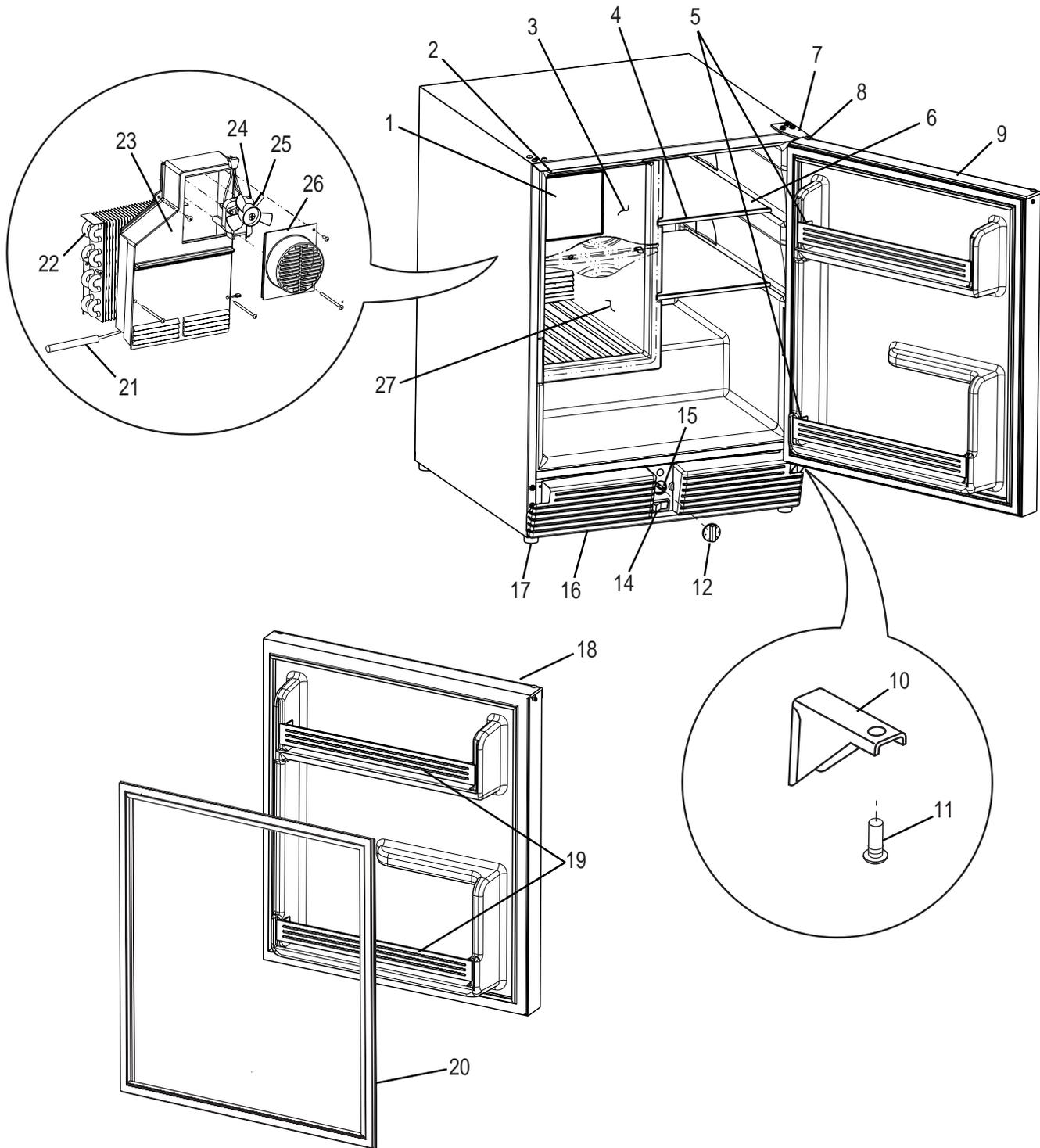
* Parts included in the 150 faceplate assembly.

** Includes the limit switch.

U-Line will **not** pay warranty claims for the replacement of a complete ice maker assembly. Complete ice maker assembly replacement is not necessary. All ice maker parts are available as replacement parts and are stocked in our inventory.



MODEL U-CO29FF – 2002 DESIGN (1 OF 2)



COMBO29FFe

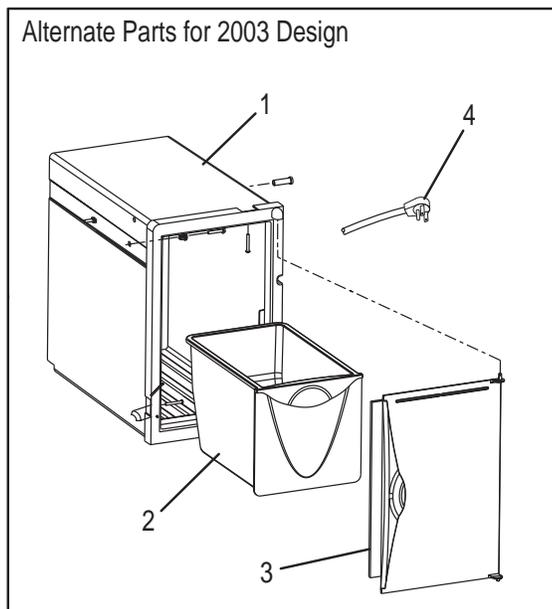
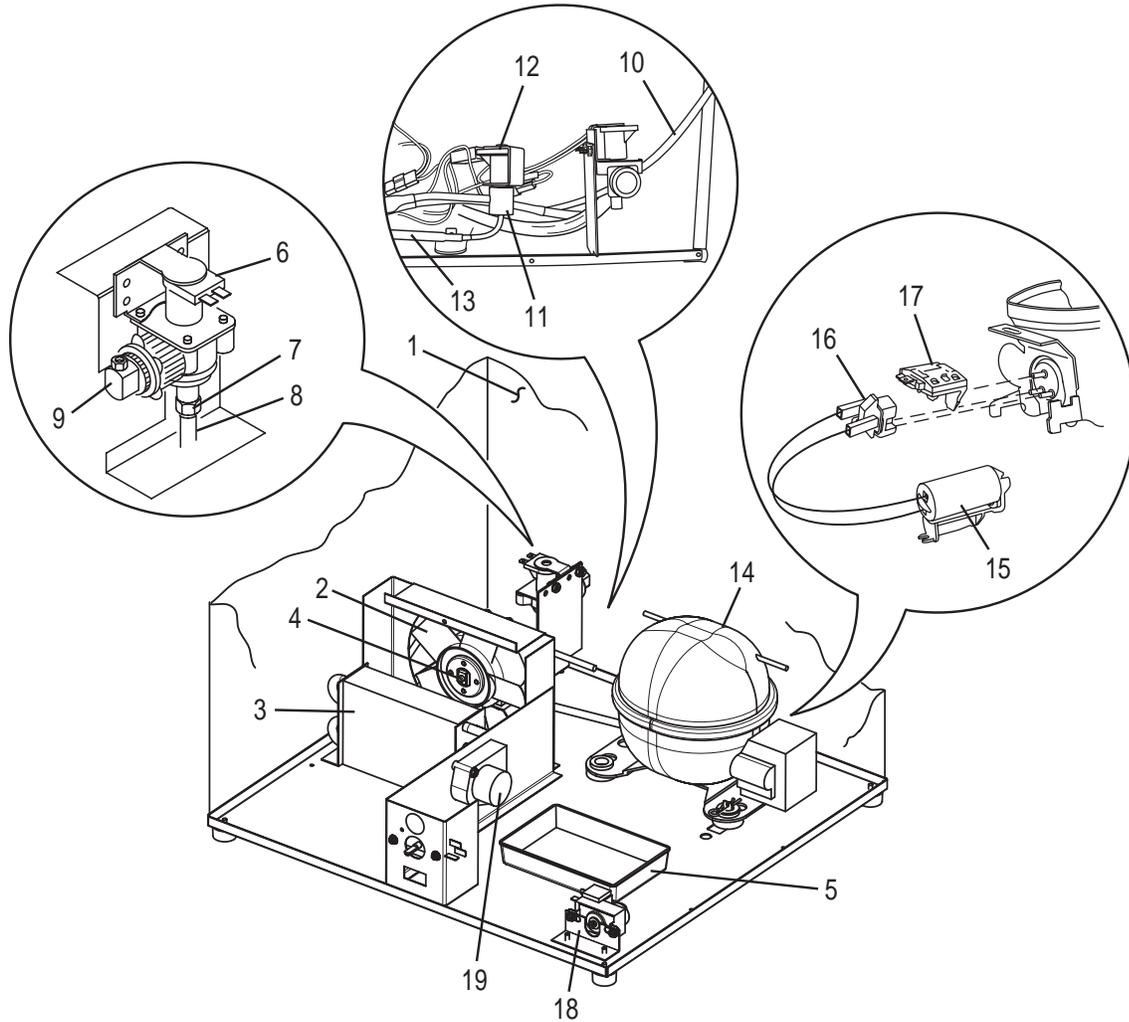
MODEL U-CO29FF – 2002 DESIGN (1 OF 2)

Item	Description	White	Black	Stainless Steel
1	Ice Maker Assembly	402-CO29FF	402-CO29FF	
2	Ice Bin Door Hinge	31463	31463	
3	Ice Bin Door	11957-S	11957-S	
4	Shelf Trim Strip	31443-6	31443-6	
5	Shelf Retainer Rivet	41824	41824	
6	Glass Shelf	31425-03	31425-03	
7	Hinge Top	11697-ST-KIT	11697-ST-BLK	
8	Pivot Screw Top	41785-SSW	41785-SSB	
9	Door Assembly	80-17014-02	80-17014-01	
10	Hinge Bottom	11695-S-KIT	11695-S-BLK	
11	Pivot Screw Bottom	41747-SSW	41747-SSB	
12	Control Knob	42067	42067	
14	Switch On-Off	2053	2053	
15	Control - Refrigerator	2885	2885	
16	Grille	11663-KIT	11663-BLK	
17	Cabinet Foot	41125	41125	
18	Handle	31489-3-KIT	31489-3-BLK	
19	Door Shelf Retainer	31521-2	31521-2	
20	Door Gasket	31493-3-WHT	31493-3-GRY	
21	Drain Pan Heater	42134	42134	
22	Evaporator and Heat Exchanger	2334-FFS	2334-FFS	
23	Evaporator Cover	11955	11955	
24	Evaporator Fan Motor	5434	5434	
25	Evaporator Fan Blade	31656	31656	
26	Evaporator Fan Cover	11952	11952	
27	Bucket	31687	31687	

* Please indicate color.



MODEL U-CO29FF – 2002 DESIGN (2 OF 2)



CO29F_2002FF1

MODEL U-CO29FF – 2002 DESIGN (2 OF 2)

Item	Description	White	Black	Stainless Steel
1	Back Panel	11545-1	11545-1	
2	Fan Blade	5428	5428	
3	Condenser	2303-FFS	2303-FFS	
4	Fan Motor	5300	5300	
5	Drain Pan	31550-1-F	31550-1-F	
6	Water Valve	2552A	2552A	
7	Plastic Nut and Sleeve Assembly	41254	41254	
8	Water Line Assembly	404FF	404FF	
9	Water Line Connection	41826	41826	
10	Power Cord	2370	2370	
11	Bypass Valve Assembly	2749-S	2749-S	
12	Bypass Valve - Solenoid Only	73001-S	73001-S	
13	Dryer	2692	2692	
14	Compressor	5408-FFS	5408-FFS	
15	Capacitor	5437	5437	
16	Relay	5436	5436	
17	Overload	5435	5435	
18	Control - Ice Maker	2792	2792	
19	Defrost Timer	6800	6800	

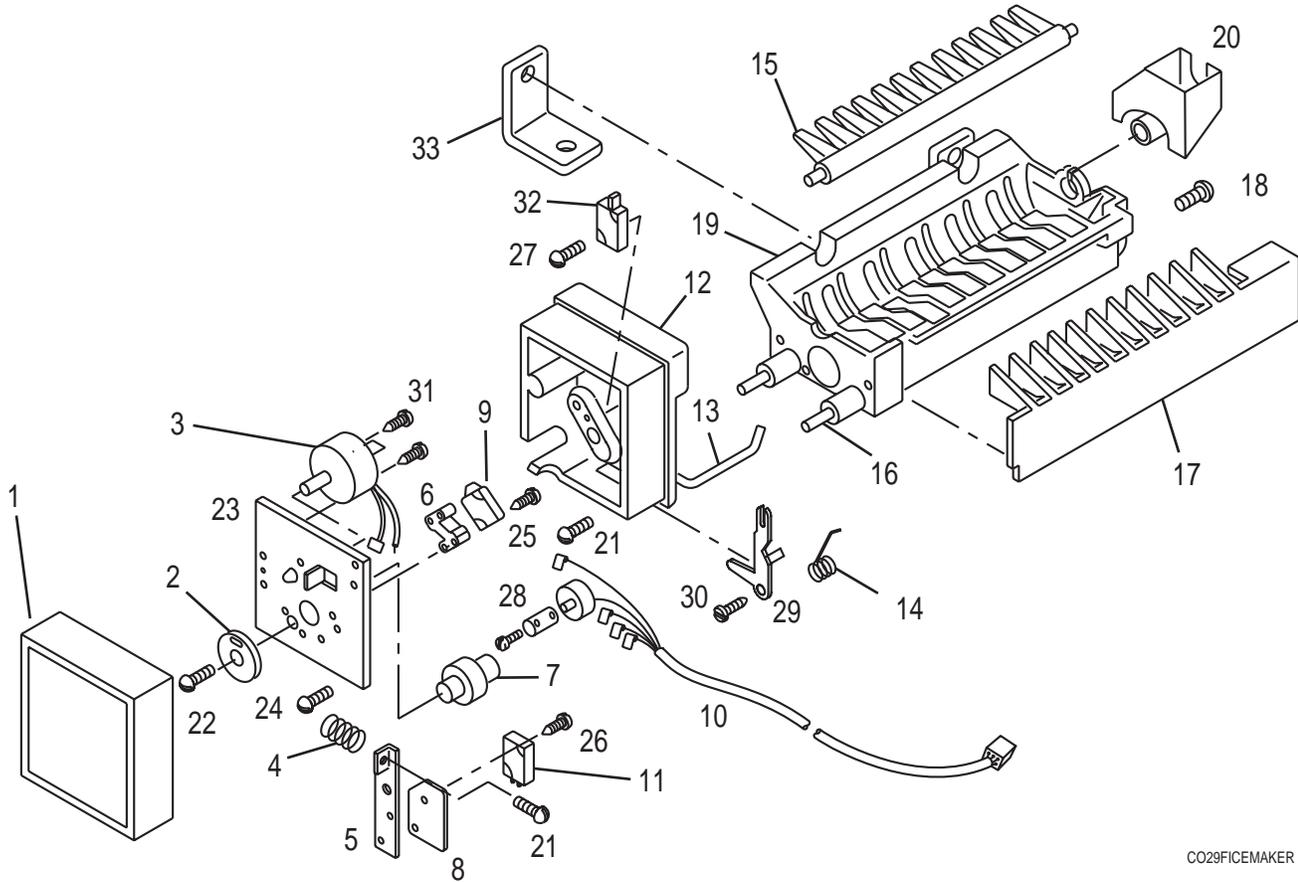
Alternate Parts for 2003 Design

Item	Description	White	Black	Stainless Steel
1	Icemaker Housing	80-35003-S	80-35003-S	
2	Ice Bucket	26011	26011	
3	Freezer Door	11959-S	11959-S	
4	Power Cord	2902	2902	



MODEL U-CO29FF & ICEMAKER

Note: This ice maker is used only on Combo U-CO29F.



CO29FICEMAKER

MODEL 402-CO29FF

Note: This ice maker is used only on Combo U-CO29FF.

CAUTION

Use only genuine U-Line replacement parts. U-Line ice maker parts are not the same as standard FSP Whirlpool parts. Using non-U-Line parts can reduce ice rate, cause water to overflow from ice maker mold, damage the unit, and may void the warranty.

Item	Description	Part No.	Item	Description	Part No.
-	Ice Maker Assembly	402-CO29FF	17	Stripper	31400
-	Faceplate Assembly	150	18	Stripper Screw	489128
1	Cover	627000	19	Mold & Heater Assembly	628123-S-E29
2	Gear	628210*	20	Water Cup	544304
3	Motor	627973*	21	Spring & Housing Screw	488372*
4	Spring	627163*	22	Gear Screw	488957*
5	Valve Switch Plate	625836*	23	Face Plate	11641*
6	Switch Spacer	625834*	24	Plate Screw	41375
7	Cam	627302*	25	Long SW Screw	488361*
8	Insulator	627680*	26	Short SW Screw	488362*
9	Hold Switch	2506*	27	Bin SW Screw	488360
10	Wire Harness	2361**	28	Clamp	625829
11	Valve Switch	2506*	29	Arm Lever	625830
12	Support Housing	625827	30	Arm Lever Screw	627199
13	Bin Arm	2886	31	Motor Screw	488622*
14	Bin Arm Spring	627526	32	Bin Switch	2506*
15	Ejector	627375	33	Support Bracket	42166
16	Mold Heater	625843-S			

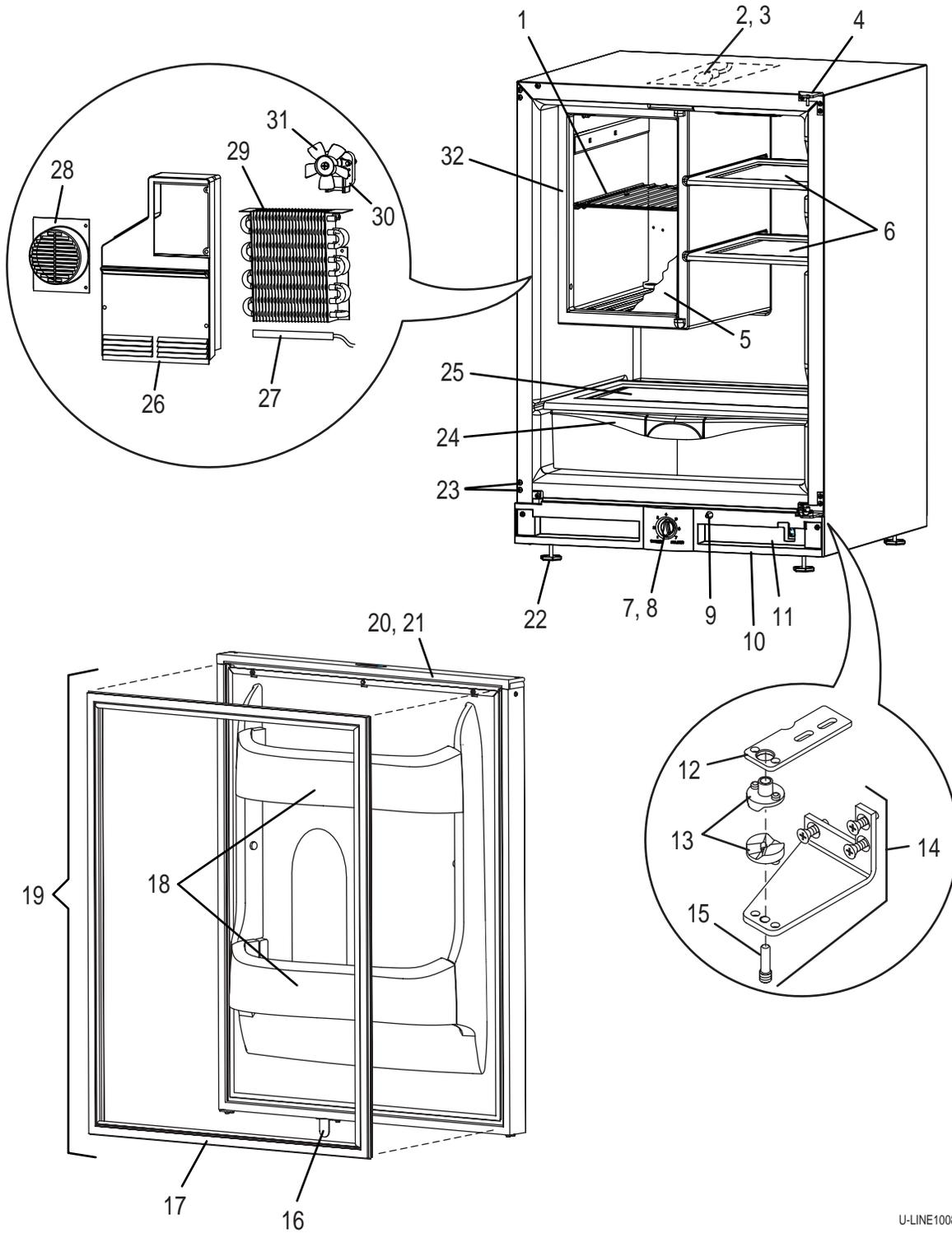
* Parts included in the 150 faceplate assembly.

** Includes the limit switch.

U-Line will **not** pay warranty claims for the replacement of a complete ice maker assembly. Complete ice maker assembly replacement is not necessary. All ice maker parts are available as replacement parts and are stocked in our inventory.



MODEL 2075RF (1 OF 2)



U-LINE1008

MODEL 2075RF (1 OF 2)

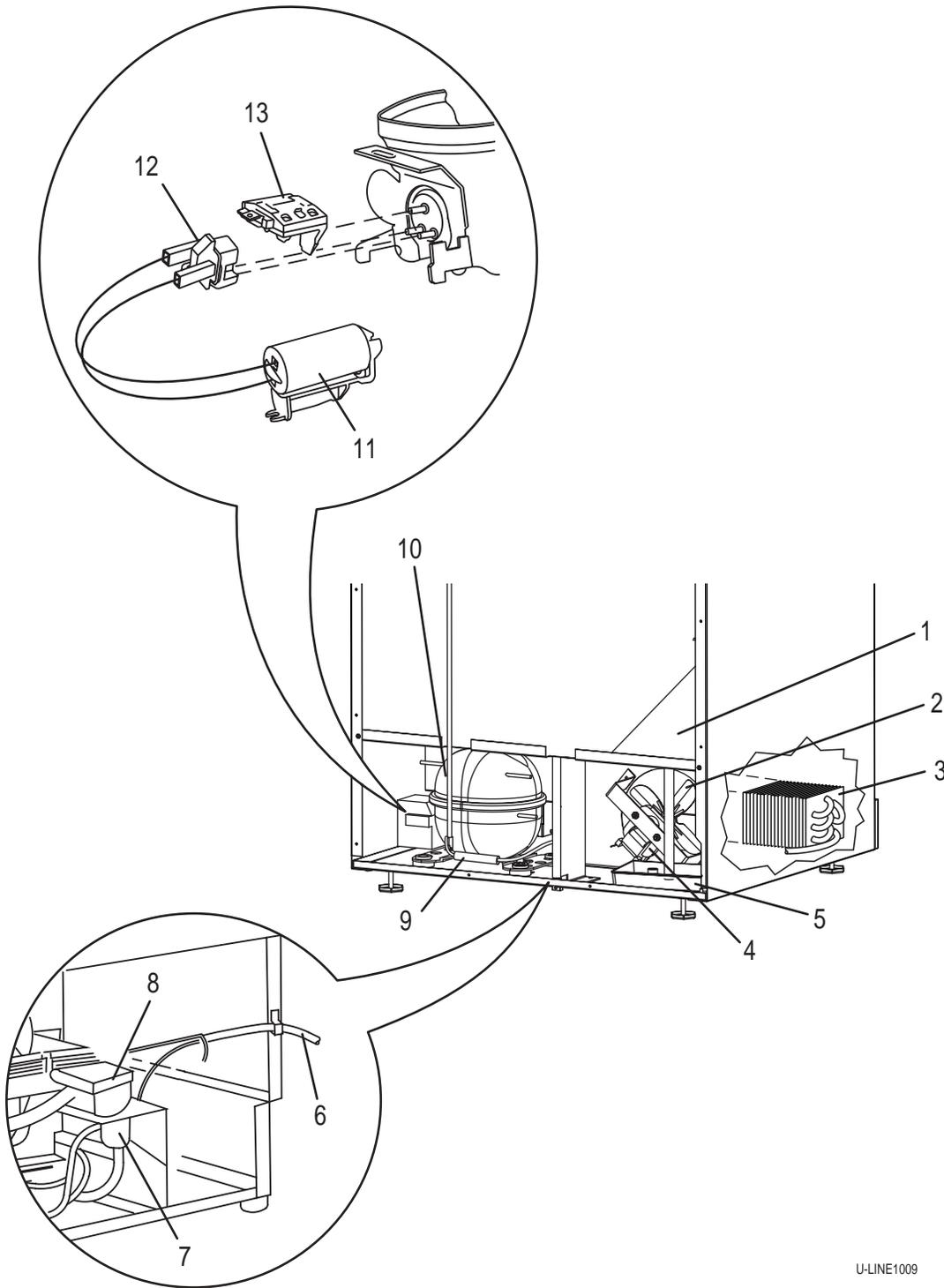
Item	Description	White	Black	Stainless Steel
1	Freezer Shelf	2348	2348	2348
2	Lamp Bulb	31317	31317	31317
3	Lens Cover	11859	11859	11859
4	Hinge Assembly Top R/H	11898-S-KIT	11898-S-BLK	11898-S-SS
5	Freezer Door Assembly	11959-S	11959-S	11959-S
6	Glass Shelf (2)	31696	31696	31696
7	Control	2885	2885	2885
8	Control Knob	42090-KIT	42090-BLK	42090-BLK
9	Door Switch	1916	1916	1916
10	Grille	11902-KIT-01	11902-BLK-01	11902-BLK-01
11	Defrost Timer	68000	68000	68000
12	Pivot Plate	11901-1	11901-1	11901-1
13	Door Closer Assembly	31673-S	31673-S	31673-S
14	Hinge Assembly Bottom R/H	11899-S-KIT	11899-S-BLK	11899-S-SS
15	Pivot Post	42096	42096	42096
16	Door Switch Bracket	11973	11973	11973
17	Door Gasket	12094-03	12094-01	12094-02
18	Door Shelf	31686	31686	31686
19	Door Assembly	80-17002-02	80-17002-01	See Parts Not Shown
20	Door Handle Top	11926-4-KIT	11926-4-BLK	N/A
21	Door Handle Bottom	11927-4-KIT	11927-4-BLK	11927-4-BLK
22	Leveling Leg (4)	41319	41319	41319
23	Threaded Hole Plug	31723-WHT	31723-BLK	41156
24	Crisper	31685	31685	31685
25	Crisper Shelf	31689	31689	31689
26	Evaporator Cover	11955	11955	11955
27	Drain Pan Heater	42134	42134	42134
28	Evaporator Fan Cover	11952	11952	11952
29	Evaporator Assembly	2334-FFS	2334-FFS	2334-FFS
30	Evaporator Fan Motor	5434	5434	5434
31	Evaporator Fan Blade	31656	31656	31656
32	Freezer Housing	80-35001-S	80-35001-S	80-35001-S

Parts Not Shown

Item	Description	White	Black	Stainless Steel
	Door Assembly Stainless Steel - Right Hand Hinge	N/A	N/A	80-17002-03
	Door Assembly Stainless Steel - Left Hand Hinge	N/A	N/A	80-17002-13
	Door Handle Top Modified	N/A	N/A	11926-7-BLK
	Door Handle	N/A	N/A	11949



MODEL 2075RF (2 OF 2)



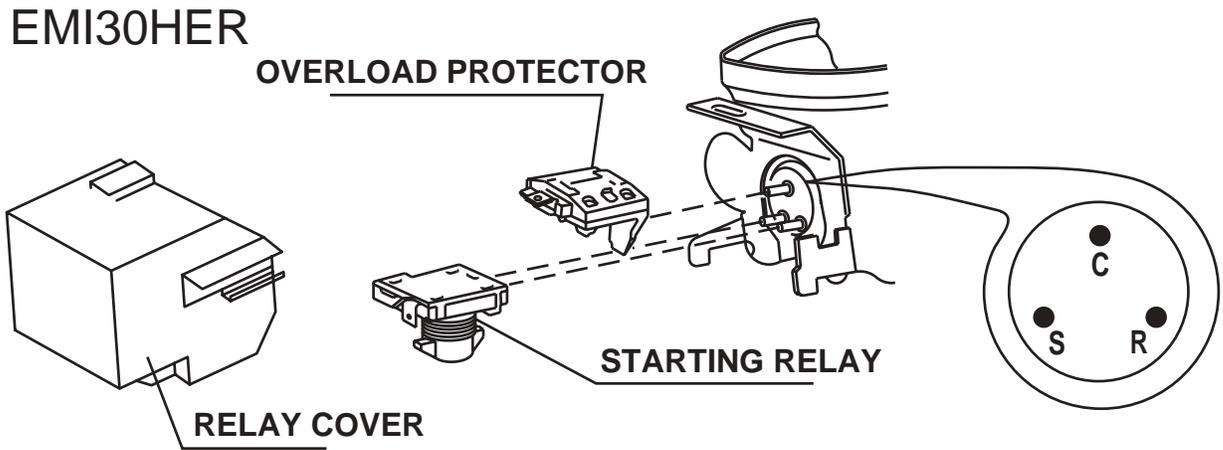
U-LINE1009

MODEL 2075RF (2 OF 2)

Item	Description	White	Black	Stainless Steel
1	Back Panel	11969	11969	11969
2	Condenser Fan Blade	5188	5188	5188
3	Condenser Assembly	2303-FFS	2303-FFS	2303-FFS
4	Condenser Fan Motor	5263	5263	5263
5	Drain Pan	31550-1-F	31550-1-F	31550-1-F
6	Power Cord	2901	2901	2901-2
7	Bypass Valve Assembly	2749-S	2749-S	2749-S
8	Bypass Valve Solenoid Only	73001-S	73001-S	73001-S
9	Dryer	2692	2692	2692
10	Compressor Assembly	5408-FFS	5408-FFSS	5408-FFS
11	Capacitor	5437	5437	5437
12	Relay	5436	5436	5436
13	Overload	5435	5435	5435



COMPRESSOR/ELECTRICAL SPECIFICATIONS



COMPRESSOR PINS

To measure start winding resistance, measure across the C-S pins.

To measure run winding resistance, measure across the C-R pins. Ensure that pins C and R are not shorted to ground.

Specifications

EMI30HER Start Winding Resistance: 28 OHMS

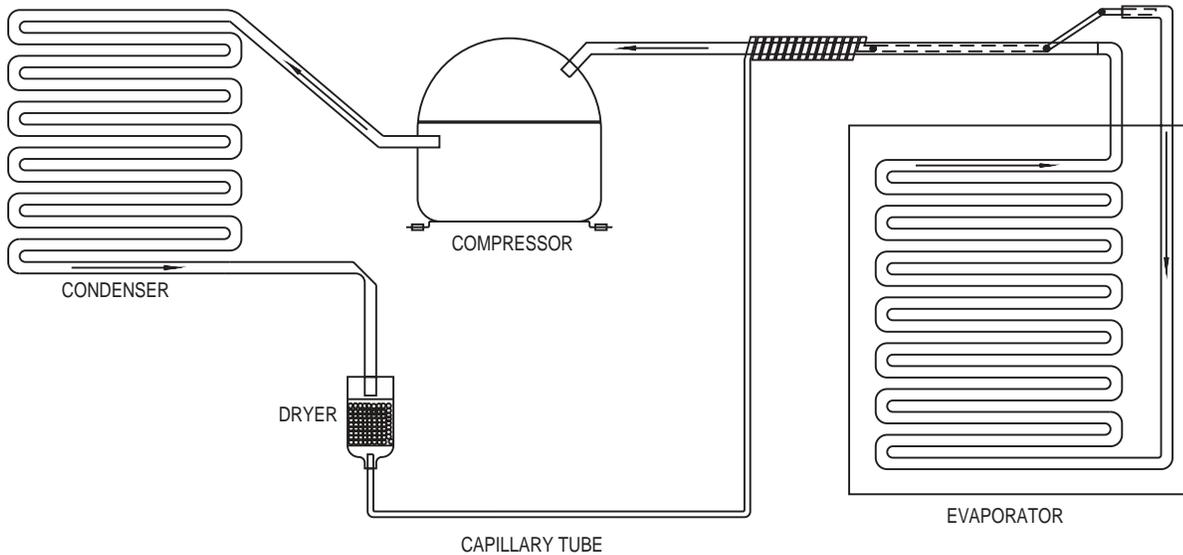
EMI30HER Run Winding Resistance: 8 OHMS



REFRIGERATION SYSTEMS

Normal Vapor/Compression Cycle Refrigeration

- Refrigerant is pumped from the compressor to the condenser as a high pressure, high temperature vapor.
- As the refrigerant cools in the high pressure condenser, the vapor condenses to liquid. During this phase change, a great amount of heat is rejected with the help of the condenser fan.
- The liquid then flows to the dryer where it is strained and filtered.



UL183-1

- From the dryer, the refrigerant flows through the capillary tube which meters the liquid refrigerant to the evaporator. The pressure of the refrigerant is reduced to the evaporating or low side pressure.
- The reduction of pressure on the liquid refrigerant causes it to boil or vaporize until it reaches saturation temperature. As the low temperature refrigerant passes through the evaporator coil, it continues to absorb a lot of heat, causing the boiling action to continue until the refrigerant is completely vaporized. It is during this phase change that the most heat is absorbed (the cooling takes place) in the refrigerator.
- The refrigerant vapor leaving the evaporator travels through the suction line to the compressor inlet. The compressor takes the low pressure vapor and compresses it, increasing both pressure and temperature. The hot high pressure gas is pumped out the discharge line and into the condenser. The cycle continues.



REFRIGERATION SYSTEM DIAGNOSIS GUIDE

System Condition	Suction Pressure	Suction Line	Compressor Discharge	Condenser	Capillary Tube	Evaporator	Wattage
Normal	Normal	Slightly below room temperature	Very hot	Very hot	Warm	Cold	Normal
Overcharge	Higher than normal	Very cold may frost heavily	Slightly warm to hot	Hot to warm	Cool	Cold	Higher than normal
Undercharge	Lower than normal	Warm - near room temperature	Hot	Warm	Warm	Extremely cold near inlet - outlet below room temperature	Lower than normal
Partial Restriction	Somewhat lower than normal-in vacuum	Warm - near room temperature	Very hot	Top passes warm - lower passes cool (near room temperature) due to liquid	Room temperature (cool) or colder	Extremely cold near inlet - outlet below room temperature backing up	Lower than normal
Complete Restriction	In deep vacuum	Room temperature (cool)	Room temperature (cool)	Room temperature (cool)	Room temperature (cool)	No refrigeration	Lower than normal
No Gas	0 PSIG to 25"	Room temperature (cool)	Cool to hot	Room temperature (cool)	Room temperature (cool)	No refrigeration	Lower than normal

TROUBLESHOOTING

1. Not refrigerating (compressor and fan are operating)

Cause

- a. Little or no frost pattern on evaporator.
2. Not refrigerating (compressor not operating - fan operating)

Cause

- a. Relay defective.
- b. Overload defective (open).
- c. Compressor defective.
3. Not refrigerating (compressor and fan not operating)

Cause

- a. Control defective (open).
- b. Broken wire in compressor circuit.
- c. Power cord not plugged in.
- d. Control in off position.
4. Compressor overheating

Cause

- a. Condenser air flow restricted.
- b. Condenser fan blade obstructed.
- c. Condenser fan motor stalled.
- d. Defective compressor.
5. Compressor will not stop operating

Cause

- a. Control set too cold.
- b. Control defective (contacts will not open).
- c. Control sensing bulb not sensing evaporator plate.
6. Water leak (inside unit)

Cause

- a. Defrost drain plugged.
7. Excessive frost build-up

Cause

- a. Door gasket not sealing properly.
- b. Door out of alignment.
- c. Water soaked cabinet insulation.
- d. Light stays on when door is closed.
8. Noisy

Cause

- a. Copper refrigeration tube touching cabinet.
- b. Fan blade touching shroud.
- c. Fan blade obstruction (wiring, foam insulation, packaging material).
9. Fresh food temperature too cold

Cause

- a. Temperature control set too cold.



DANGER



DO NOT service the unit until the main electrical power has been disconnected.

Remedy

- a. Check for sealed system leak or restriction.

Remedy

- a. Replace relay.
- b. Replace overload.
- c. Replace compressor.

Remedy

- a. Replace control.
- b. Repair or replace wiring.
- c. Plug in power cord.
- d. Rotate control knob clockwise.

Remedy

- a. Remove restriction (clean condenser and grille).
- b. Remove blade restriction.
- c. Replace fan motor.
- d. Replace compressor.

Remedy

- a. Adjust control warmer (counterclockwise).
- b. Replace control.
- c. Clamp bulb completely against bottom of plate, routing bulb away from compressor discharge tube.

Remedy

- a. Remove obstruction.

Remedy

- a. Adjust door hinges or replace door gasket.
- b. Align fill door hinges.
- c. Replace foamed cabinet assembly (factory repair only).
- d. Repair light bracket.

Remedy

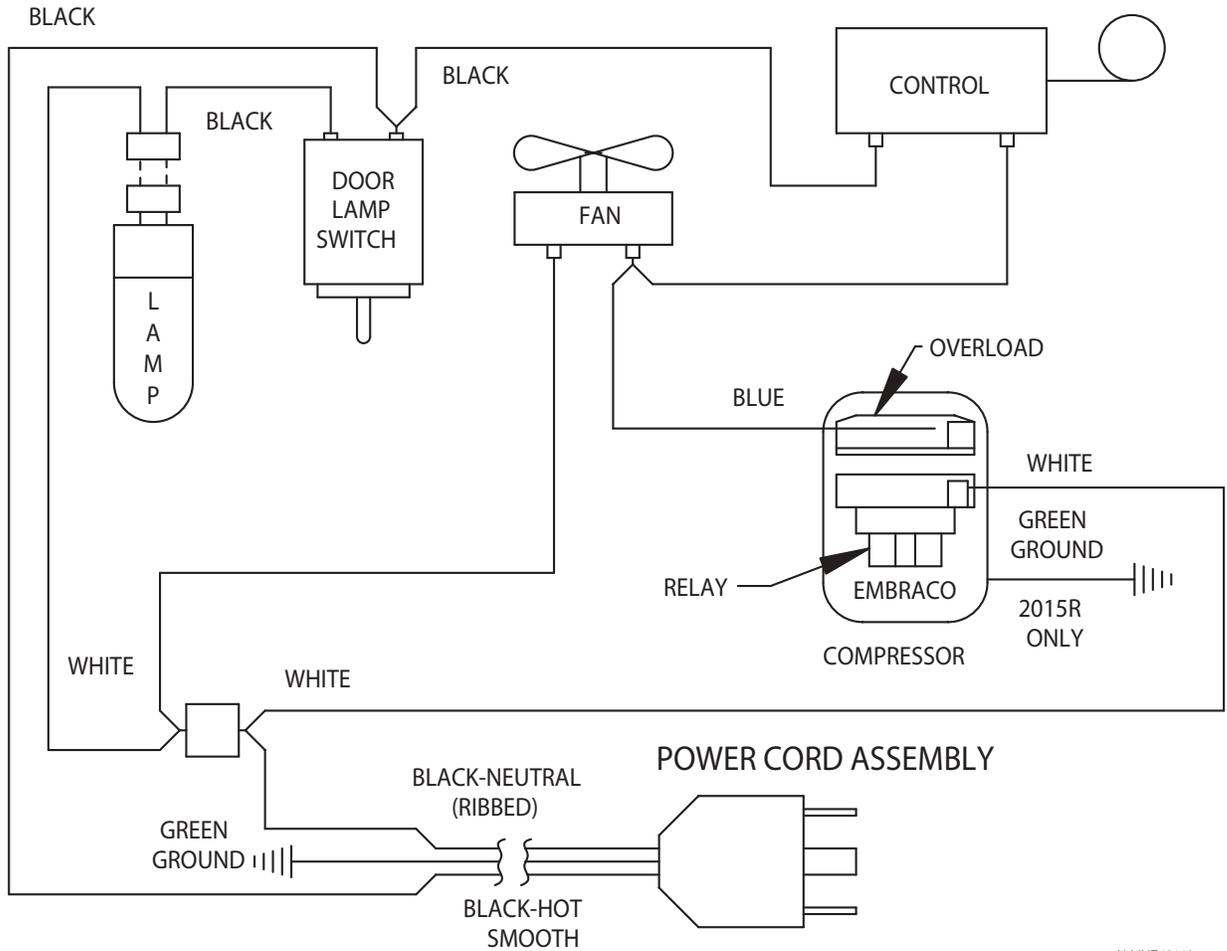
- a. Carefully adjust tubing.
- b. Adjust fan mounting or shroud.
- c. Remove obstruction.

Remedy

- a. Adjust control to warmer setting (counterclockwise).



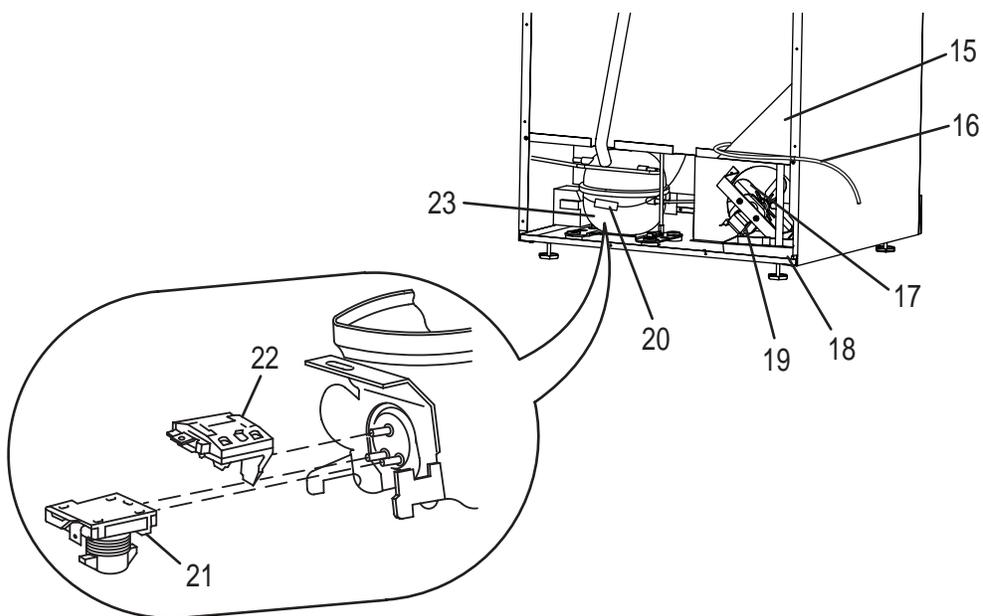
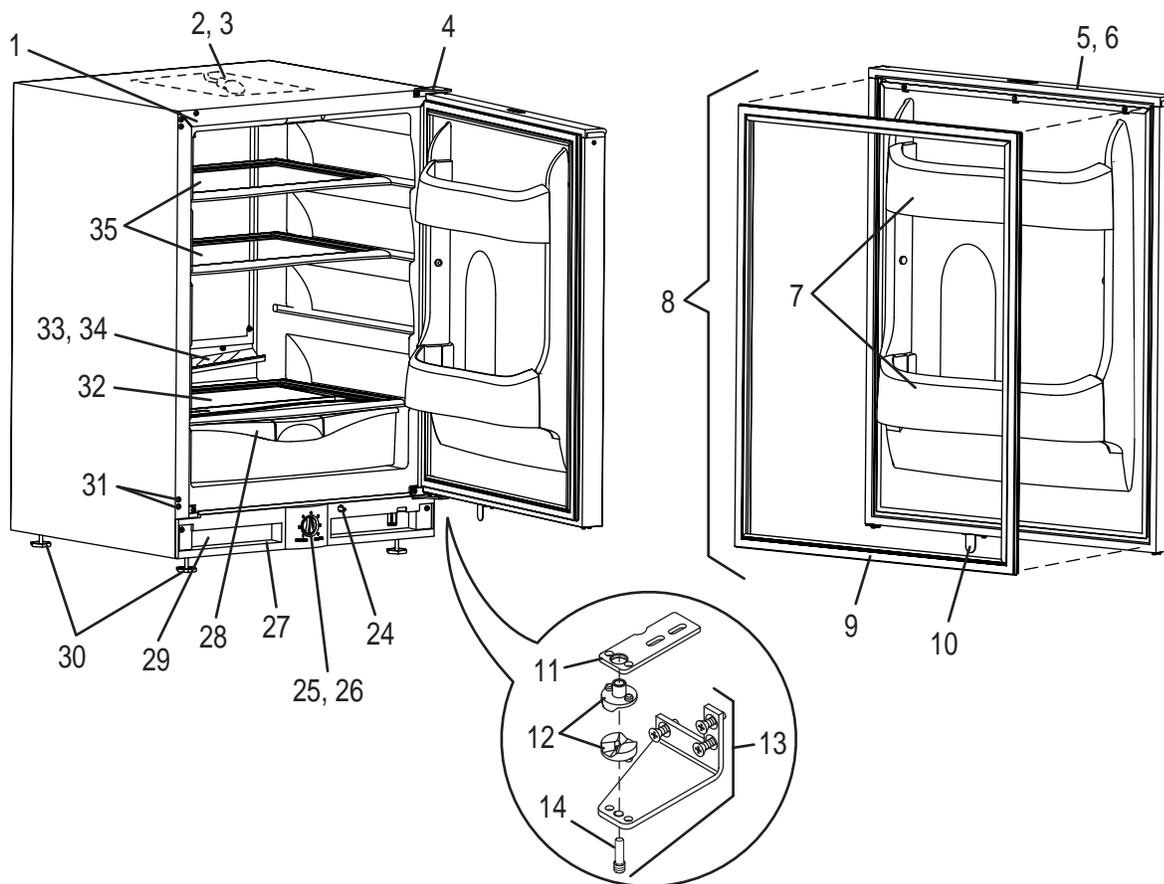
2075R/2015R WIRING DIAGRAM



U-LINE42113



MODEL 2075R



U-LINE1010

MODEL 2075R

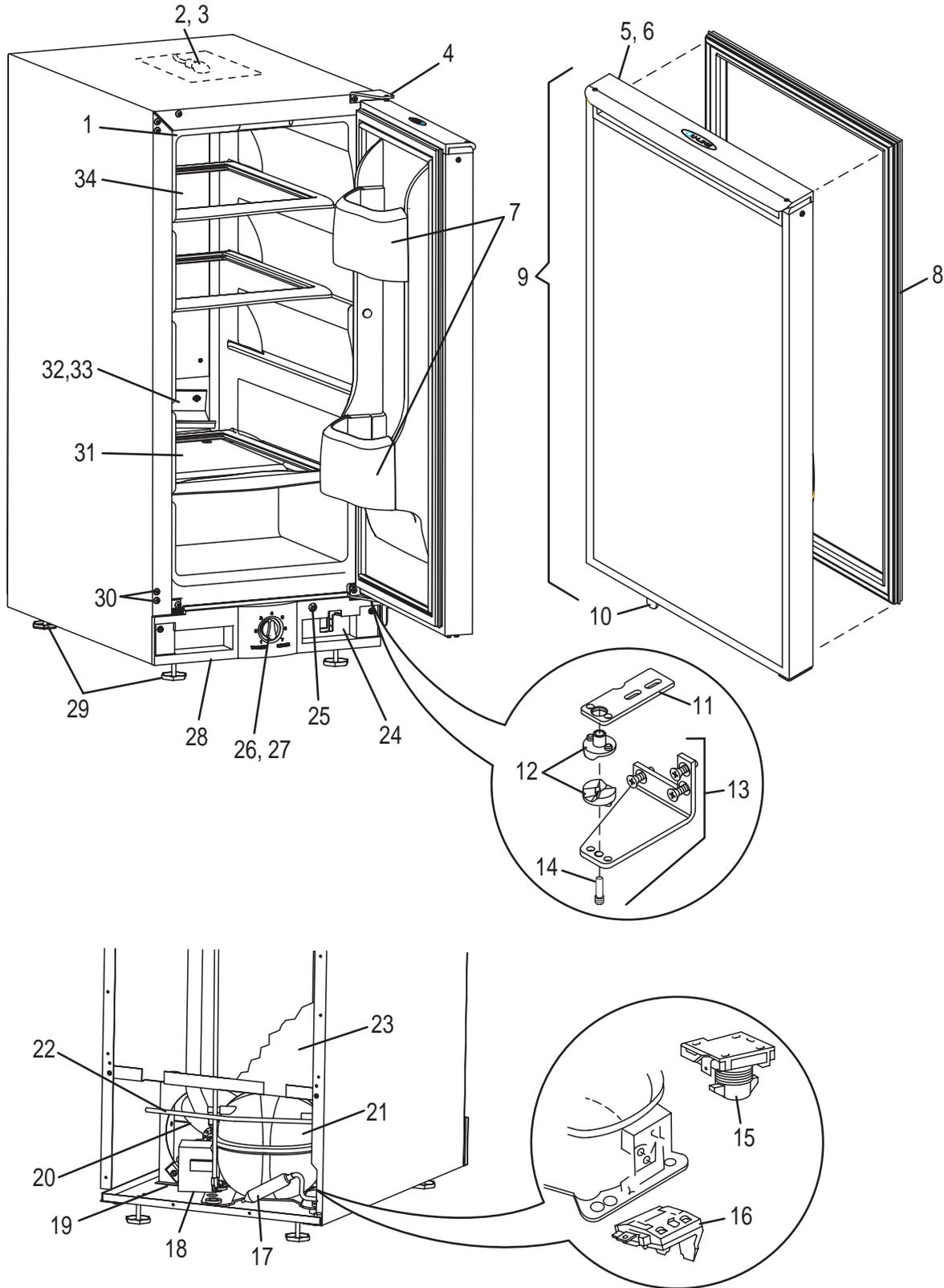
Item	Description	White	Black	Stainless Steel
1	Evaporator Assembly	2333-S	2333-S	2333-S
2	Lamp Bulb	31317	31317	31317
3	Light Cover	11859	11859	11859
4	Hinge Assembly Top R/H	11898-S-KIT	11898-S-BLK	11898-S-SS
5	Door Handle Top	11926-4-KIT	11926-4-BLK	N/A
6	Door Handle Bottom	11927-4-KIT	11927-4-BLK	11927-4-BLK
7	Door Shelf	31686	31686	31686
8	Door Assembly	80-17002-02	80-17002-01	See Parts Not Shown
9	Door Gasket	12094-03	12094-01	12094-02
10	Door Switch Bracket	11973	11973	11973
11	Pivot Plate	11901-1	11901-1	11901-1
12	Door Closer Assembly	31673-S	31673-S	31673-S
13	Hinge Assembly Bottom R/H	11899-S-KIT	11899-S-BLK	11899-S-SS
14	Pivot Post	42096	42096	42096
15	Back Panel	11969	11969	11969
16	Power Cord	2899	2899	2899-2
17	Fan Blade	5188	5188	5188
18	Drain Pan	31550-1-F	31550-1-F	31550-1-F
19	Fan Motor	5263	5263	5263
20	Dryer	2694	2694	2694
21	Relay	5412	5412	5412
22	Overload	5411	5411	5411
23	Compressor Assembly	5400-S	5400-S	5400-S
24	Door Switch	1916	1916	1916
25	Control	2923	2923	2923
26	Control Knob	42090-KIT	42090-BLK	42090-BLK
27	Grille	11902-KIT-01	11902-BLK-01	11902-BLK-01
28	Crisper	31685	31685	31685
29	Condenser Assembly	2303-S	2303-S	2303-S
30	Leveling Leg (4)	41319	41319	41319
31	Threaded Hole Plug	31723-WHT	31723-BLK	41156
32	Crisper Shelf	31689	31689	31689
33	Drain Trough	31391-3	31391-3	31391-3
34	Drain Cup	11508	11508	11508
35	Glass Shelf (2)	31688	31688	31688

Parts Not Shown

Item	Description	White	Black	Stainless Steel
	Door Assembly Stainless Steel - Right Hand Hinge	N/A	N/A	80-17002-03
	Door Assembly Stainless Steel - Left Hand Hinge	N/A	N/A	80-17002-13
	Door Handle Top Modified	N/A	N/A	11927-7-BLK
	Door Handle	N/A	N/A	11949
	Door with Lock	80-17012-02	80-17012-01	N/A



MODEL 2015R



U-LINE1011



MODEL 2015R

Item	Description	White	Black	Stainless Steel
1	Evaporator Assembly	2878-01-S	2878-01-S	2878-01-S
2	Lamp Bulb	31317	31317	31317
3	Light Cover	11859	11859	11859
4	Hinge Assembly Top R/H	11898-S-KIT	11898-S-BLK	11898-S-SS
5	Door Handle Top	11926-6-KIT	11926-6-BLK	N/A
6	Door Handle Bottom	11927-6-KIT	11927-6-BLK	11927-6-BLK
7	Door Shelf	31690	31690	31690
8	Door Gasket	31493-8-WHT	31493-8-BLK	31493-8-GRY
9	Door Assembly	80-17001-02	80-17001-01	See Parts Not Shown
10	Door Switch Bracket	11973	11973	11973
11	Pivot Plate	11901-1	11901-1	11901-1
12	Door Closer Assembly	31673-S	31673-S	31673-S
13	Hinge Assembly Bottom R/H	11899-S-KIT	11899-S-BLK	11899-S-SS
14	Pivot Post	42096	42096	42096
15	Relay	5412	5412	5412
16	Overload	5411	5411	5411
17	Dryer	2694	2694	2694
18	Fan Motor	5263	5263	5263
19	Drain Pan	31385	31385	31385
20	Fan Blade	5188	5188	5188
21	Compressor Assembly	5400-S	5400-S	5400-S
22	Power Cord	2375	2375	2375-2
23	Back Panel	11964	11964	11964
24	Condenser Assembly*	2303-02-S	2303-02-S	2303-02-S
25	Door Switch	1916	1916	1916
26	Control	2766-1	2766-1	2766-1
27	Control Knob	42090-KIT	42090-BLK	42090-BLK
28	Grille	11942-KIT-01	11942-BLK-01	11942-BLK-01
29	Leveling Leg	41319	41319	41319
30	Threaded Hole Plug	31723-WHT	31723-BLK	41156
31	Crisper Shelf	31703	31703	31703
32	Drain Cup	11508	11508	11508
33	Drain Trough	31391-4	31391-4	31391-4
34	Glass Shelf	31704	31704	31704

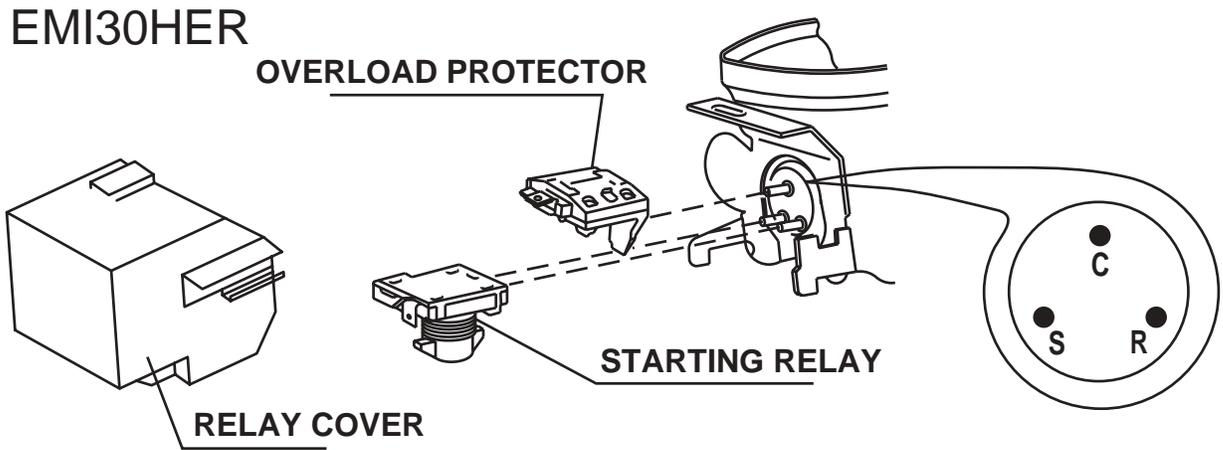
*Alternate Condenser Assembly 2223-S

Parts Not Shown

Item	Description	White	Black	Stainless Steel
	Door Assembly Stainless Steel - Right Hand Hinge	N/A	N/A	80-17001-03
	Door Assembly Stainless Steel - Left Hand Hinge	N/A	N/A	80-17001-13
	Door Handle Top Modified	N/A	N/A	11926-8-BLK
	Door Handle	N/A	N/A	11949



COMPRESSOR/ELECTRICAL SPECIFICATIONS



COMPRESSOR PINS

To measure start winding resistance, measure across the C-S pins.

To measure run winding resistance, measure across the C-R pins. Ensure that pins C and R are not shorted to ground.

Specifications

EMI30HER Start Winding Resistance: 28 OHMS

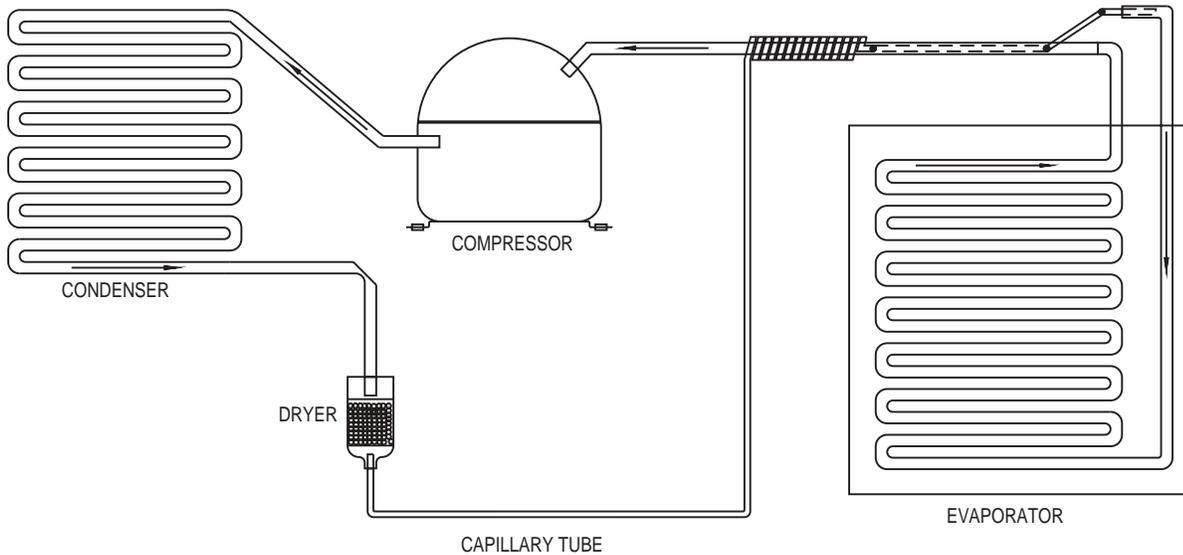
EMI30HER Run Winding Resistance: 8 OHMS



REFRIGERATION SYSTEMS

Normal Vapor/Compression Cycle Refrigeration

- Refrigerant is pumped from the compressor to the condenser as a high pressure, high temperature vapor.
- As the refrigerant cools in the high pressure condenser, the vapor condenses to liquid. During this phase change, a great amount of heat is rejected with the help of the condenser fan.
- The liquid then flows to the dryer where it is strained and filtered.



UL183-1

- From the dryer, the refrigerant flows through the capillary tube which meters the liquid refrigerant to the evaporator. The pressure of the refrigerant is reduced to the evaporating or low side pressure.
- The reduction of pressure on the liquid refrigerant causes it to boil or vaporize until it reaches saturation temperature. As the low temperature refrigerant passes through the evaporator coil, it continues to absorb a lot of heat, causing the boiling action to continue until the refrigerant is completely vaporized. It is during this phase change that the most heat is absorbed (the cooling takes place) in the refrigerator.
- The refrigerant vapor leaving the evaporator travels through the suction line to the compressor inlet. The compressor takes the low pressure vapor and compresses it, increasing both pressure and temperature. The hot high pressure gas is pumped out the discharge line and into the condenser. The cycle continues.



REFRIGERATION SYSTEM DIAGNOSIS GUIDE

System Condition	Suction Pressure	Suction Line	Compressor Discharge	Condenser	Capillary Tube	Evaporator	Wattage
Normal	Normal	Slightly below room temperature	Very hot	Very hot	Warm	Cold	Normal
Overcharge	Higher than normal	Very cold may frost heavily	Slightly warm to hot	Hot to warm	Cool	Cold	Higher than normal
Undercharge	Lower than normal	Warm - near room temperature	Hot	Warm	Warm	Extremely cold near inlet - outlet below room temperature	Lower than normal
Partial Restriction	Somewhat lower than normal-in vacuum	Warm - near room temperature	Very hot	Top passes warm - lower passes cool (near room temperature) due to liquid	Room temperature (cool) or colder	Extremely cold near inlet - outlet below room temperature backing up	Lower than normal
Complete Restriction	In deep vacuum	Room temperature (cool)	Room temperature (cool)	Room temperature (cool)	Room temperature (cool)	No refrigeration	Lower than normal
No Gas	0 PSIG to 25"	Room temperature (cool)	Cool to hot	Room temperature (cool)	Room temperature (cool)	No refrigeration	Lower than normal

TROUBLESHOOTING

1. Not refrigerating (compressor and fan are operating)

Cause

- a. Little or no frost pattern on evaporator.
2. Not refrigerating (compressor not operating - fan operating)

Cause

- a. Relay defective.
- b. Overload defective (open).
- c. Compressor defective.
3. Not refrigerating (compressor and fan not operating)

Cause

- a. Control defective (open).
- b. Broken wire in compressor circuit.
- c. Power cord not plugged in.
- d. Control in off position.
4. Compressor overheating

Cause

- a. Condenser air flow restricted.
- b. Condenser fan blade obstructed.
- c. Condenser fan motor stalled.
- d. Defective compressor.
5. Compressor will not stop operating

Cause

- a. Control set too cold.
- b. Control defective (contacts will not open).
- c. Control sensing bulb not sensing evaporator plate.

6. Water leak (inside unit)

Cause

- a. Defrost drain plugged.
7. Excessive frost build-up

Cause

- a. Door gasket not sealing properly.
- b. Door out of alignment.
- c. Water soaked cabinet insulation.
- d. Light stays on when door is closed.
8. Noisy

Cause

- a. Copper refrigeration tube touching cabinet.
- b. Fan blade touching shroud.
- c. Fan blade obstruction (wiring, foam insulation, packaging material).
9. Fresh food temperature too cold

Cause

- a. Temperature control set too cold.



DO NOT service the unit until the main electrical power has been disconnected.

Remedy

- a. Check for sealed system leak or restriction.

Remedy

- a. Replace relay.
- b. Replace overload.
- c. Replace compressor.

Remedy

- a. Replace control.
- b. Repair or replace wiring.
- c. Plug in power cord.
- d. Rotate control knob clockwise.

Remedy

- a. Remove restriction (clean condenser and grille).
- b. Remove blade restriction.
- c. Replace fan motor.
- d. Replace compressor.

Remedy

- a. Adjust control warmer (counterclockwise).
- b. Replace control.
- c. Clamp bulb completely against bottom of plate, routing bulb away from compressor discharge tube.

Remedy

- a. Remove obstruction.

Remedy

- a. Adjust door hinges or replace door gasket.
- b. Align fill door hinges.
- c. Replace foamed cabinet assembly (factory repair only).
- d. Repair light bracket.

Remedy

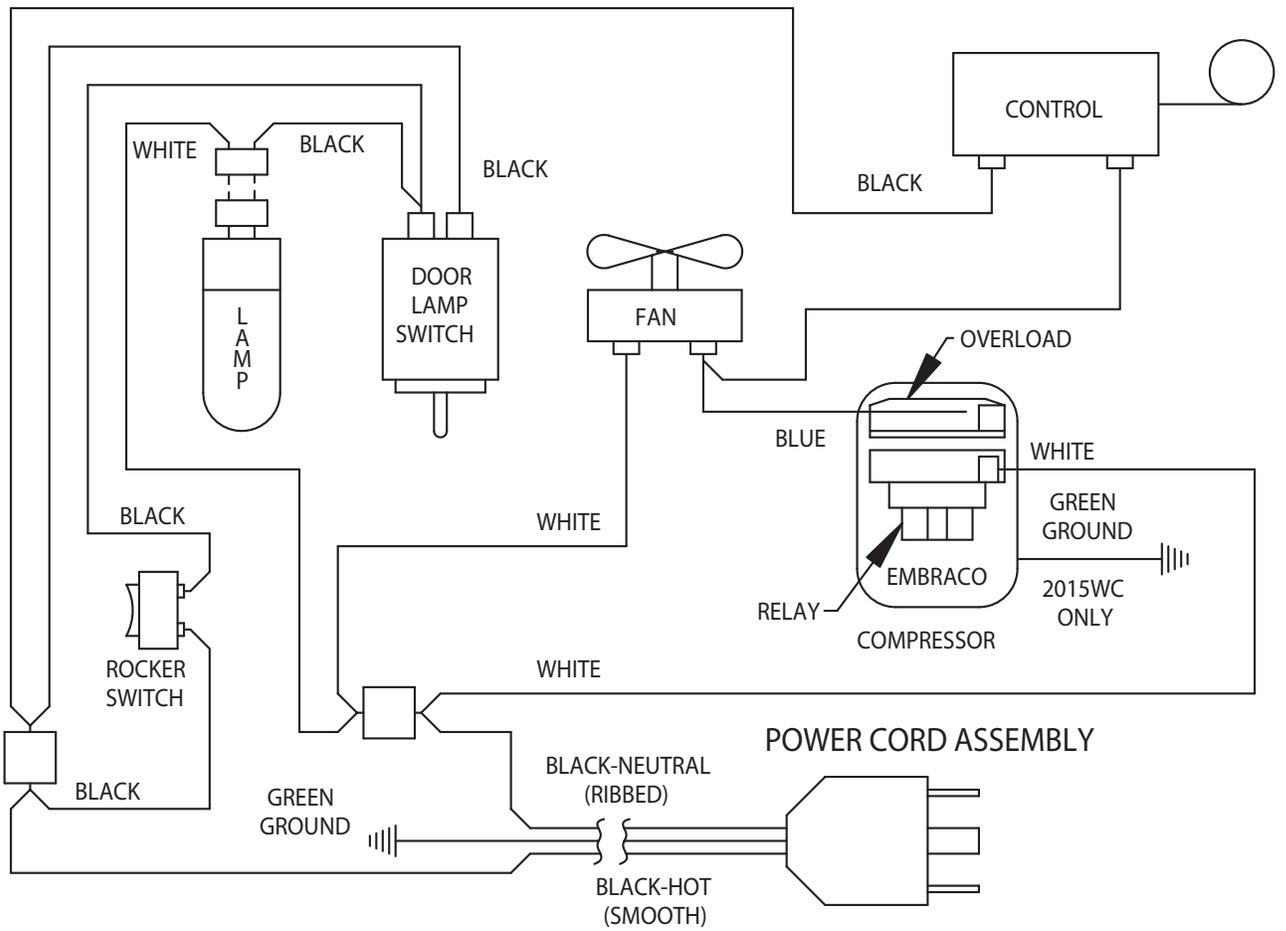
- a. Carefully adjust tubing.
- b. Adjust fan mounting or shroud.
- c. Remove obstruction.

Remedy

- a. Adjust control to warmer setting (counterclockwise).



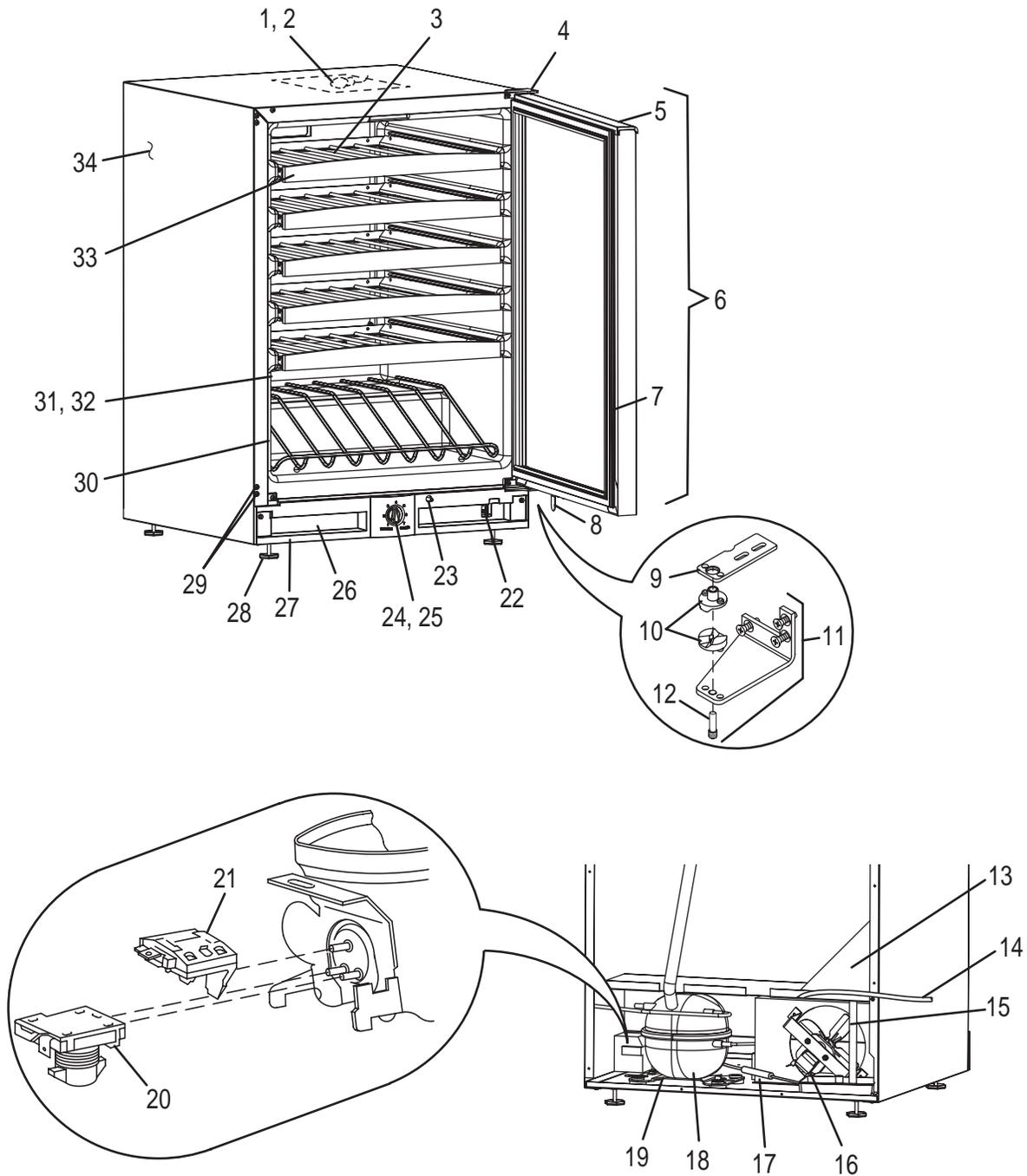
2075WC/2015WC WIRING DIAGRAM



U-LINE42110



MODEL 2075WC



U-LINE1018

MODEL 2075WC

Item	Description	White	Black	Stainless Steel
1	Lamp Bulb	31317	31317	31317
2	Light Cover	11859	11859	11859
3	Wine Rack Assembly	2346-S	2346-S	2346-S
4	Hinge Assembly Top R/H	11995-S-KIT	11995-S-BLK	11995-S-SS
5	Door Handle Top	11993-4-KIT	11993-4-BLK	N/A
6	Door Assembly	80-17004-02	80-17004-01	See Parts Not Shown
7	Door Gasket	12094-03	12094-01	12094-02
8	Door Switch Bracket	11973	11973	11973
9	Pivot Plate	11994-KIT	11994-BLK	11994-BLK
10	Door Closer Assembly	31673-S	31673-S	31673-S
11	Hinge Assembly Bottom R/H	11996-S-KIT	11996-S-BLK	11996-S-SS
12	Pivot Post	42096	42096	42096
13	Back Panel	11969	11969	11969
14	Power Cord	2900	2900	2900
15	Condenser Fan Blade	5188	5188	5188
16	Condenser Fan Motor	5263	5263	5263
17	Dryer	2694	2694	2694
18	Compressor	5400-S	5400-S	5400-S
19	Drain Pan	31550-1-F	31550-1-F	31550-1-F
20	Relay	5412	5412	5412
21	Overload	5411	5411	5411
22	Lamp On-Off Switch	2053	2053	2053
23	Door Switch	1916	1916	1916
24	Control	2767-1	2767-1	2767-1
25	Control Knob	42090-WHT	42090-BLK	42090-BLK
26	Condenser Assembly	2303-S	2303-S	2303-S
27	Grille	11902-KIT	11902-BLK	11902-BLK
28	Leg Levelers (4)	41319	41319	41319
29	Threaded Hole Plug	31723-WHT	31723-BLK	41156
30	Bottom Wine Rack Assembly	2347-S	2347-S	2347-S
31	Drain Cup	11508	11508	11508
32	Drain Trough	31391-3	31391-3	31391-3
33	Wood Fronts	39002	39002	39002
34	Evaporator Assembly	2186-S	2186-S	2186-S

Parts Not Shown

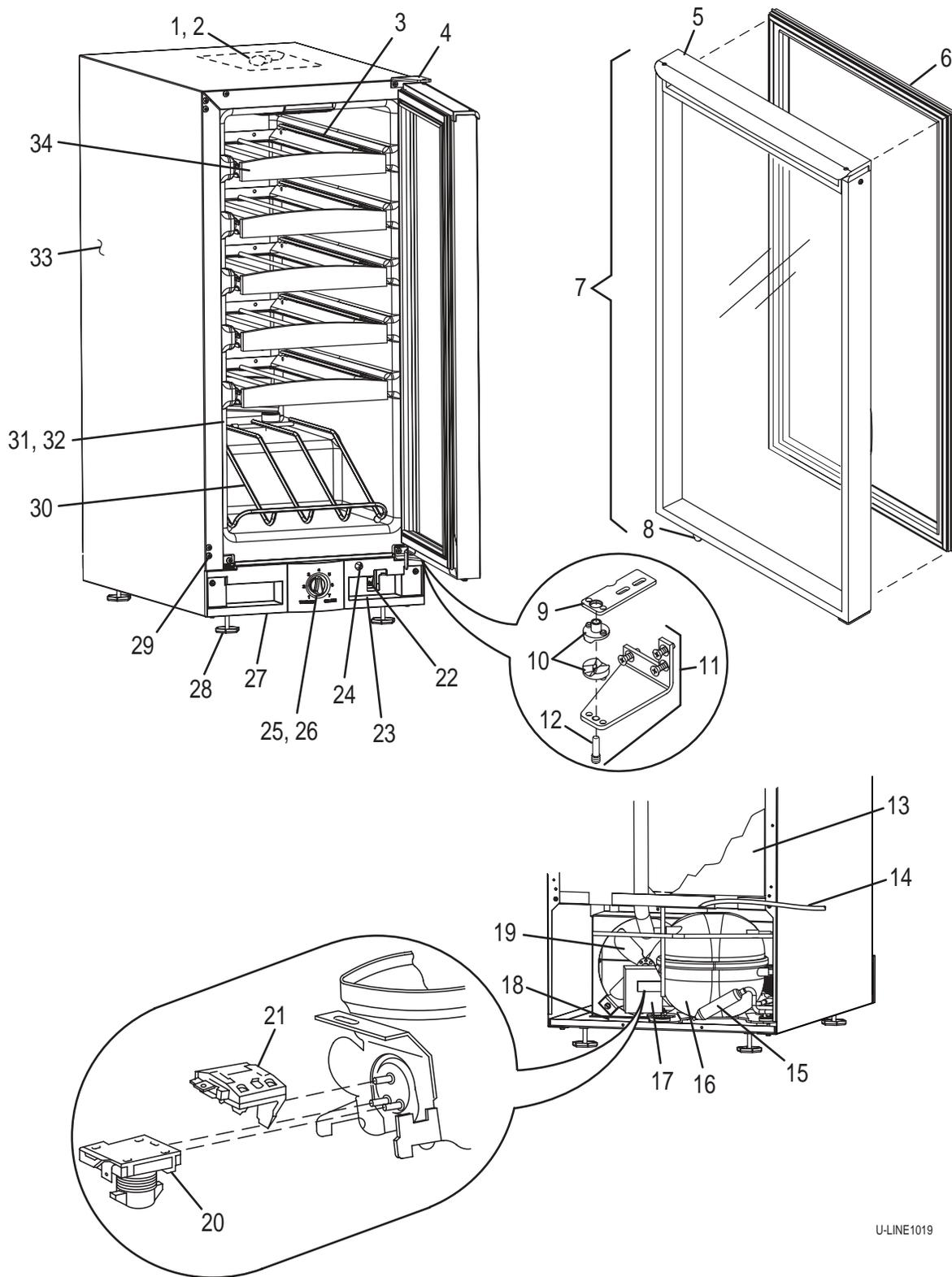
Item	Description	White	Black	Stainless Steel
	Door Handle Top Modified	N/A	N/A	11993-7-BLK
	Anti-Tip Mounting Bracket Kit	40-31735	40-31735	40-31735
	Door Assembly Stainless Steel-Right Hand Hinge	N/A	N/A	80-17004-03
	Door Assembly Stainless Steel-Left Hand Hinge	N/A	N/A	80-17004-13
	Door Handle	N/A	N/A	11949
	Full Overlay Door Assembly	80-17020-1S	80-17020-1S	N/A

220 Volt Part Numbers

Item	Description	Part No.	Item	Description	Part No.
1	Lamp Bulb	31318	20	Relay	5418
16	Condenser Fan Motor	5195	21	Overload	5417
18	Compressor	5403-S			



MODEL 2015WC



U-LINE1019



MODEL 2015WC

Item	Description	White	Black	Stainless Steel
1	Lamp Bulb	31317	31317	31317
2	Light Cover	11859	11859	11859
3	Wine Rack Assembly	2350-S	2350-S	2350-S
4	Hinge Assembly Top R/H	11995-S-KIT	11995-S-BLK	11995-S-SS
5	Door Handle Top	11993-6-KIT	11993-6-BLK	N/A
6	Door Gasket	31493-8-WHT	31493-8-BLK	31493-8-GRY
7	Door Assembly	80-17003-02	80-17003-01	See Parts Not Shown
8	Door Switch Bracket	11973	11973	11973
9	Pivot Plate	11994-KIT	11994-BLK	11994-BLK
10	Door Closer Assembly	31673-S	31673-S	31673-S
11	Hinge Assembly Bottom R/H	11996-S-KIT	11996-S-BLK	11996-S-SS
12	Pivot Post	42096	42096	42096
13	Back Panel	11964-01	11964-01	11964-01
14	Power Cord	2376	2376	2376
15	Dryer	2694	2694	2694
16	Compressor Assembly	5400-S	5400-S	5400-S
17	Condenser Fan Motor	5263	5263	5263
18	Drain Pan	31385	31385	31385
19	Condenser Fan Blade	5188	5188	5188
20	Relay	5412	5412	5412
21	Overload	5411	5411	5411
22	Lamp On-Off Switch	2053	2053	2053
23	Condenser Assembly*	2303-02-S	2303-02-S	2303-02-S
24	Door Switch	1916	1916	1916
25	Control	2767-1	2767-1	2767-1
26	Control Knob	42090-WHT	42090-BLK	42090-BLK
27	Grille	11942-KIT-01	11942-BLK-01	11942-BLK-01
28	Leveling Leg (4)	41319	41319	41319
29	Threaded Hole Plug	31723-WHT	31723-BLK	41156
30	Bottom Rack Assembly	2351-S	2351-S	2351-S
31	Drain Cup	11508	11508	11508
32	Drain Trough	31391-4	31391-4	31391-4
33	Evaporator Assembly	2649-S	2649-S	2649-S
34	Wood Front	11989	11989	11989

*Alternate Condenser Assembly 2223-S

Parts Not Shown

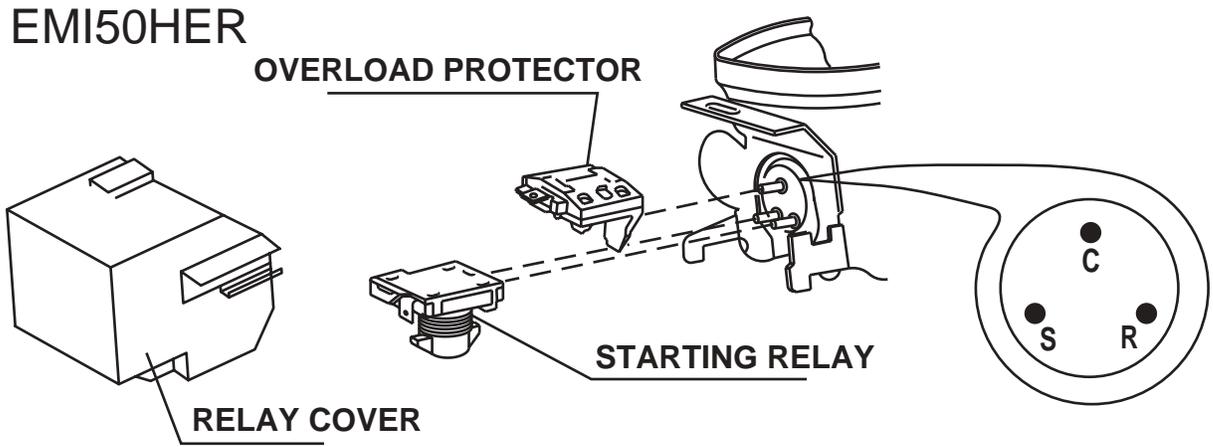
Item	Description	White	Black	Stainless Steel
	Door Handle Top Modified	N/A	N/A	11993-8-BLK
	Door Assembly Stainless Steel - Right Hand Hinge	N/A	N/A	80-17003-03
	Door Assembly Stainless Steel - Left Hand Hinge	N/A	N/A	80-17003-13
	Anti-Tip Mounting Bracket Kit	40-31735	40-31735	40-31735
	Door Handle	N/A	N/A	11949
	Full Overlay Door Assembly	80-17020-2S	80-17020-2S	N/A

220 Volt Part Numbers

Item	Description	Part No.	Item	Description	Part No.
1	Lamp Bulb	31318	20	Relay	5418
16	Compressor Assembly	5403-S	21	Overload	5417
17	Condenser Fan Motor	5195			



COMPRESSOR/ELECTRICAL SPECIFICATIONS



COMPRESSOR PINS

To measure start winding resistance, measure across the C-S pins.

To measure run winding resistance, measure across the C-R pins. Ensure that pins C and R are not shorted to ground.

Specifications

EMI50HER Start Winding Resistance: 12 OHMS

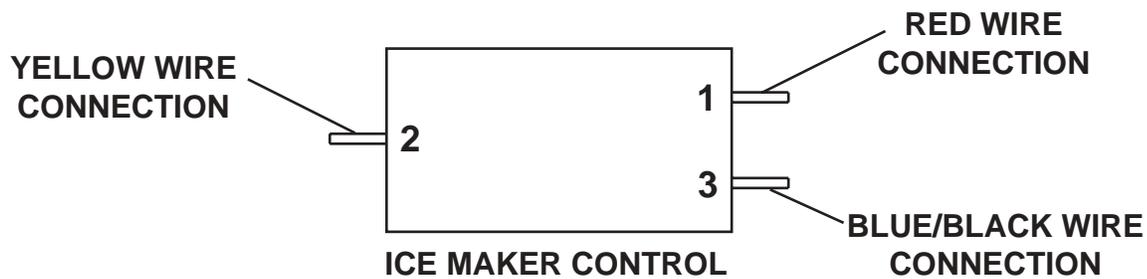
EMI50HER Run Winding Resistance: 4 OHMS



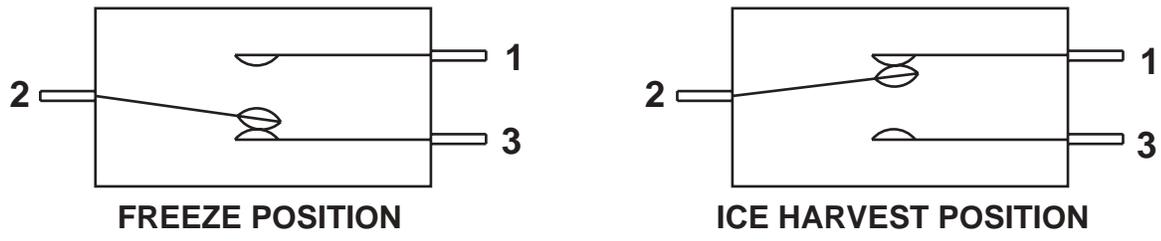
TEMPERATURE CONTROL SPECIFICATIONS - DOUBLE THROW ICE MAKER THERMOSTAT

These temperature controls use double throw, single pole relays. The sensing tube is inserted into the ice maker mold and senses mold temperature. After ice is sensed in the mold, the contacts at pins 2 and 3 open (stopping the compressor and condenser fan motor) and the contacts at pins 2 and 1 close (starting the ice maker motor). The 2-3 contacts change state before the end of the ice harvest cycle. This prepares the control for the next cycle.

The compressor motor and the ice maker motor **CANNOT** operate at the same time because of the relay contact configuration.



183-8



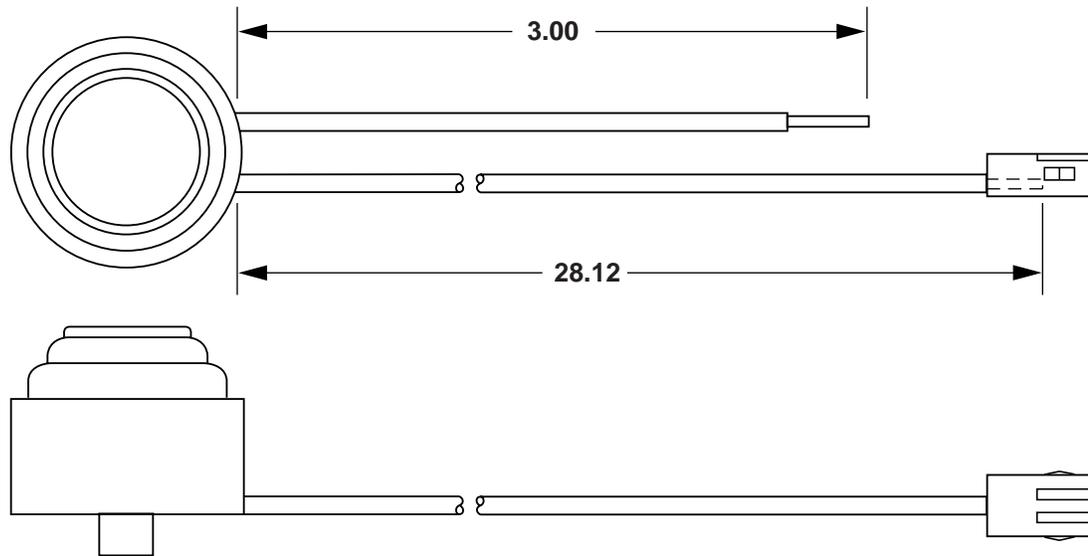
CYCLE	OPEN CIRCUIT	CLOSED CIRCUIT
FREEZE	2 - 1	2 - 3
HARVEST	2 - 3	2 - 1

183-9



LIMIT SWITCH SPECIFICATIONS

The Limit Switch is a component of the ice maker wiring harness.



UL-LINE1003

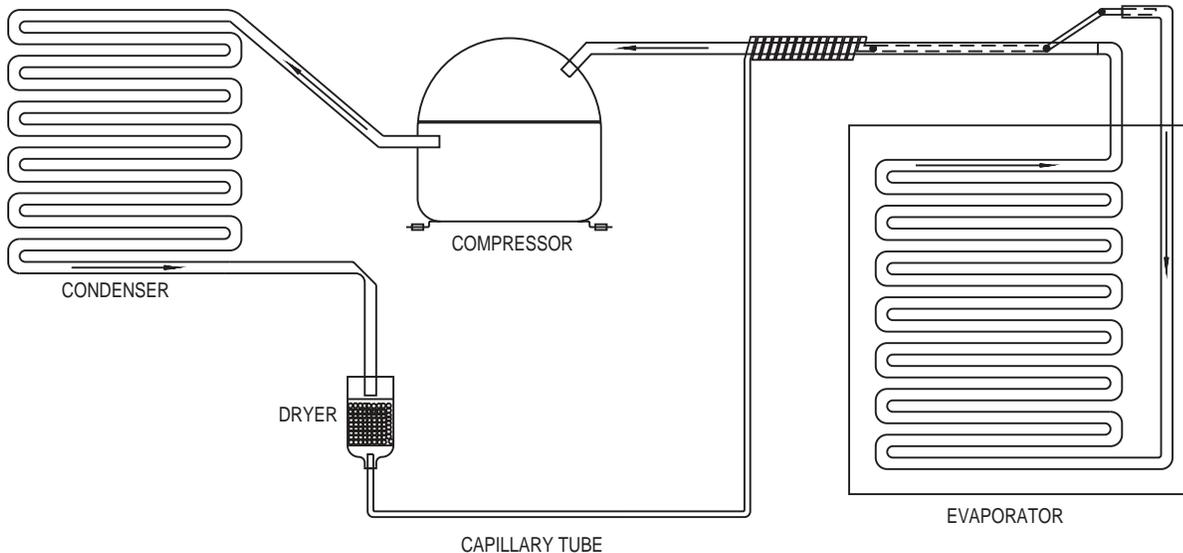
Normally Closed Bi-metal Switch
Open Temperature: 104 Degrees F
Close Temperature: 83 Degrees F

The function of this switch is to open in the event of an overheating condition. This bi-metal thermostat uses a set of normally closed contacts and does not initiate the ice harvest cycle. The ice harvest cycle is initiated by a single pole, double throw control located outside the ice maker assembly.

REFRIGERATION SYSTEMS

Normal Vapor/Compression Cycle Refrigeration

- Refrigerant is pumped from the compressor to the condenser as a high pressure, high temperature vapor.
- As the refrigerant cools in the high pressure condenser, the vapor condenses to liquid. During this phase change, a great amount of heat is rejected with the help of the condenser fan.
- The liquid then flows to the dryer where it is strained and filtered.



UL183-1

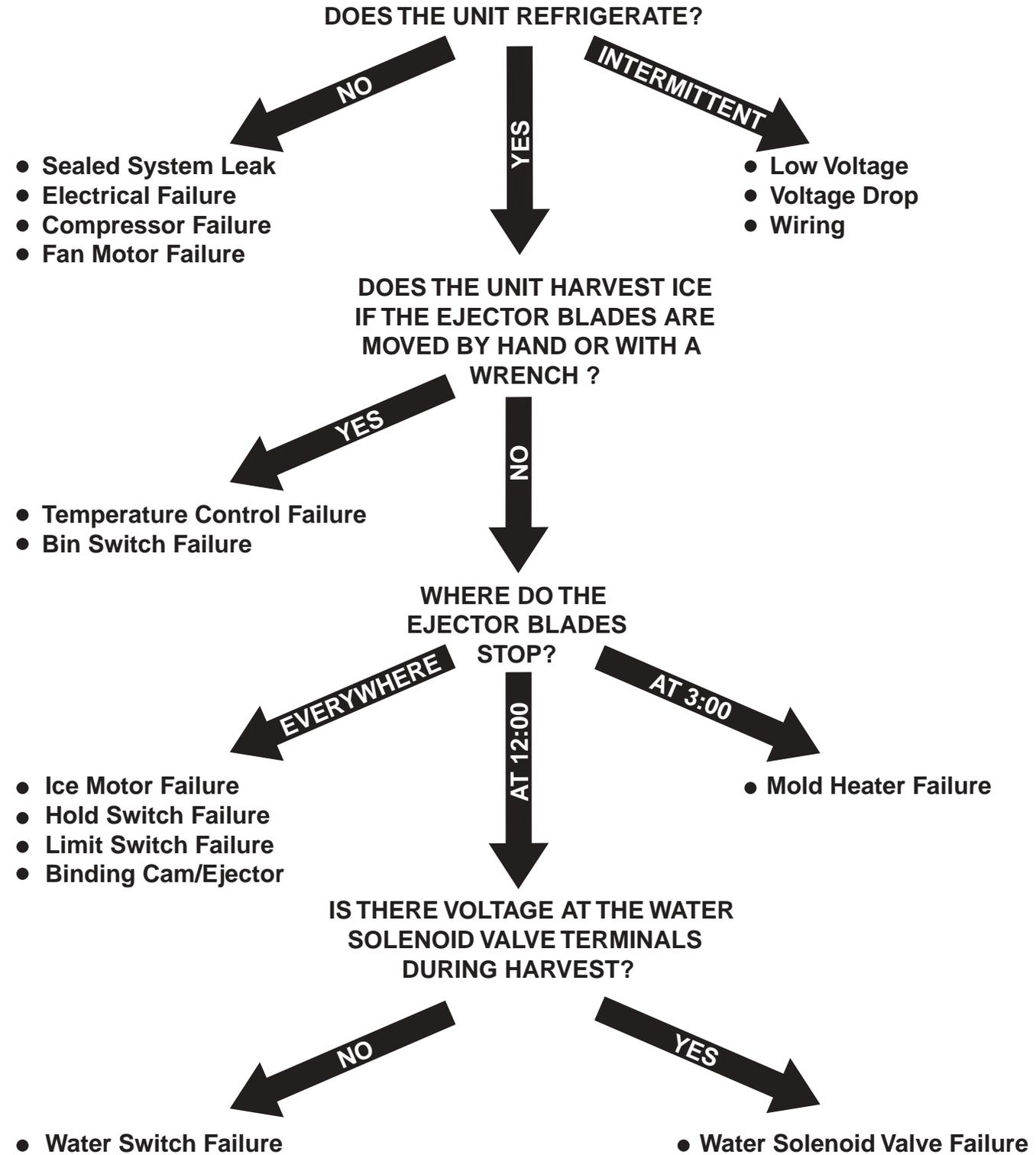
- From the dryer, the refrigerant flows through the capillary tube which meters the liquid refrigerant to the evaporator. The pressure of the refrigerant is reduced to the evaporating or low side pressure.
- The reduction of pressure on the liquid refrigerant causes it to boil or vaporize until it reaches saturation temperature. As the low temperature refrigerant passes through the evaporator coil, it continues to absorb a lot of heat, causing the boiling action to continue until the refrigerant is completely vaporized. It is during this phase change that the most heat is absorbed (the cooling takes place) in the refrigerator.
- The refrigerant vapor leaving the evaporator travels through the suction line to the compressor inlet. The compressor takes the low pressure vapor and compresses it, increasing both pressure and temperature. The hot high pressure gas is pumped out the discharge line and into the condenser. The cycle continues.



REFRIGERATION SYSTEM DIAGNOSIS GUIDE

System Condition	Suction Pressure	Suction Line	Compressor Discharge	Condenser	Capillary Tube	Evaporator	Wattage
Normal	Normal	Slightly below room temperature	Very hot	Very hot	Warm	Cold	Normal
Overcharge	Higher than normal	Very cold may frost heavily	Slightly warm to hot	Hot to warm	Cool	Cold	Higher than normal
Undercharge	Lower than normal	Warm - near room temperature	Hot	Warm	Warm	Extremely cold near inlet - outlet below room temperature	Lower than normal
Partial Restriction	Somewhat lower than normal-in vacuum	Warm - near room temperature	Very hot	Top passes warm - lower passes cool (near room temperature) due to liquid	Room temperature (cool) or colder	Extremely cold near inlet - outlet below room temperature backing up	Lower than normal
Complete Restriction	In deep vacuum	Room temperature (cool)	Room temperature (cool)	Room temperature (cool)	Room temperature (cool)	No refrigeration	Lower than normal
No Gas	0 PSIG to 25"	Room temperature (cool)	Cool to hot	Room temperature (cool)	Room temperature (cool)	No refrigeration	Lower than normal

ICE MAKER DIAGNOSIS FLOW CHART



U-LINE1012



ICE MAKER OPERATING CYCLES

- 1. FREEZE CYCLE**
 - A. Temperature control terminals 2 and 3 are closed.
 - B. Power to the compressor.
 - C. Power to the condenser fan.

- 2. HARVEST-1 CYCLE**
 - A. Temperature control terminals 2 and 3 are open - 2 and 1 closed.
 - B. No power to the compressor or condenser fan.
 - C. If bin arm is down, power goes through bin arm switch to ice maker motor and mold heater.
If bin arm is up, the ice maker will not harvest.

- 3. HARVEST-2 CYCLE**
 - A. Ice maker ejector blades reach approximately 2:00 position and cam depresses the hold switch. Power goes through the hold switch to the ice maker motor and mold heater.
 - B. Ejector blades stall on ice and ice maker motor pulsates until mold heater warms and ice releases.

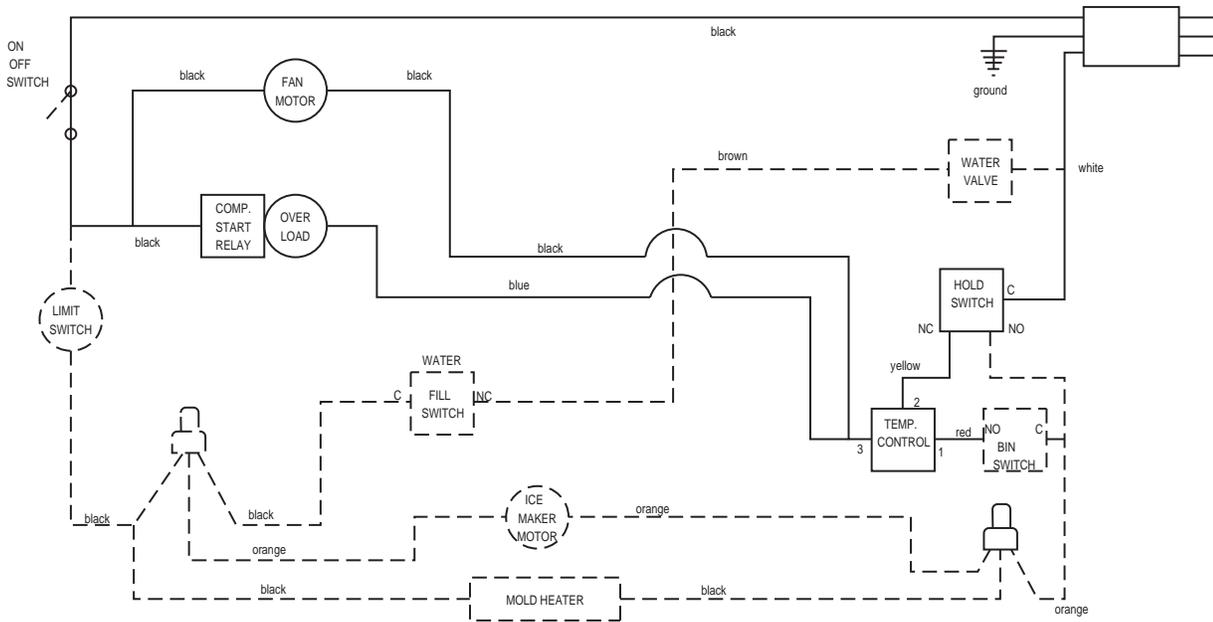
- 4. WATER FILL CYCLE**
 - A. Ice maker ejector blades reach approximately 10:00 position and cam depresses the water fill switch.
 - B. Power to the water valve. Ice maker mold fills.

- 5. EJECT CYCLE**
 - A. Ejector blades push ice into bucket and stop at 12:00 position.
 - B. Temperature control terminals 2 and 3 have closed during harvest cycle.
 - C. Next freeze cycle begins with power to the compressor and condenser fan.



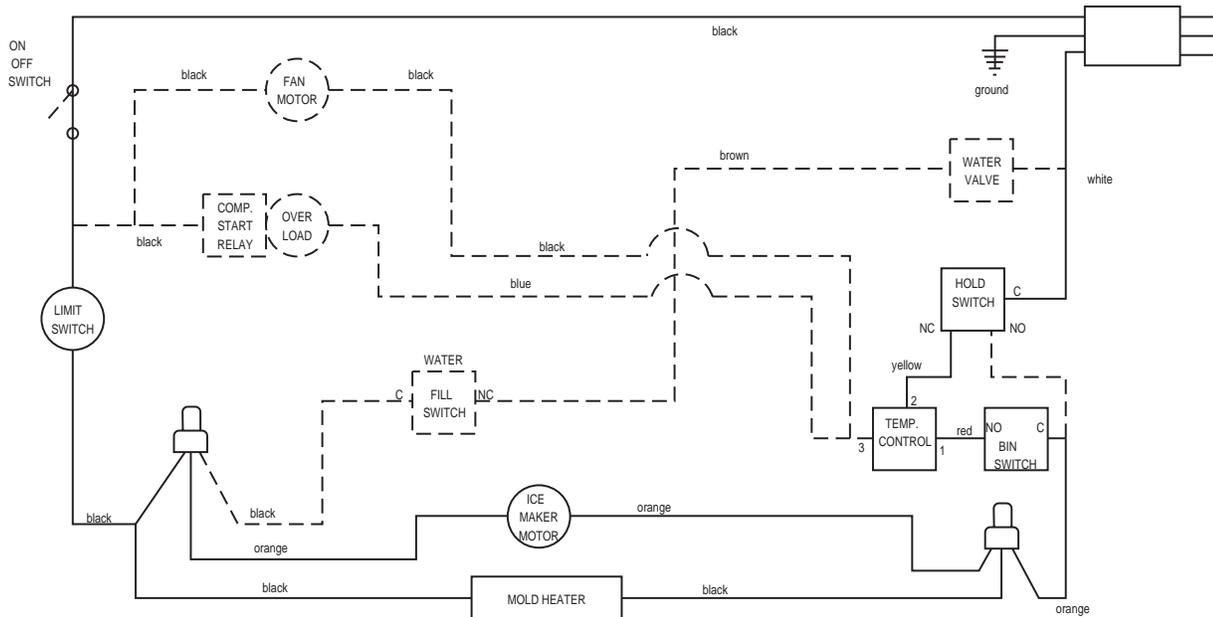
BI•2015 CYCLE SCHEMATICS

FREEZE CYCLE



UL183-4

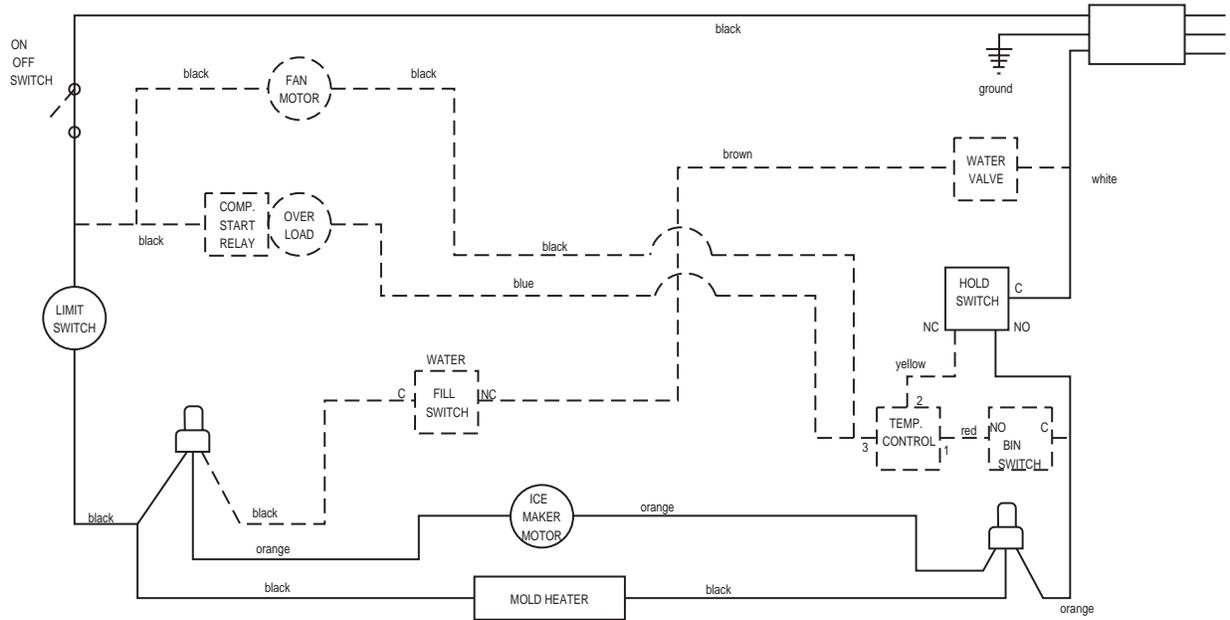
HARVEST-1 CYCLE
(Hold Switch In Normal Position)



UL183-5

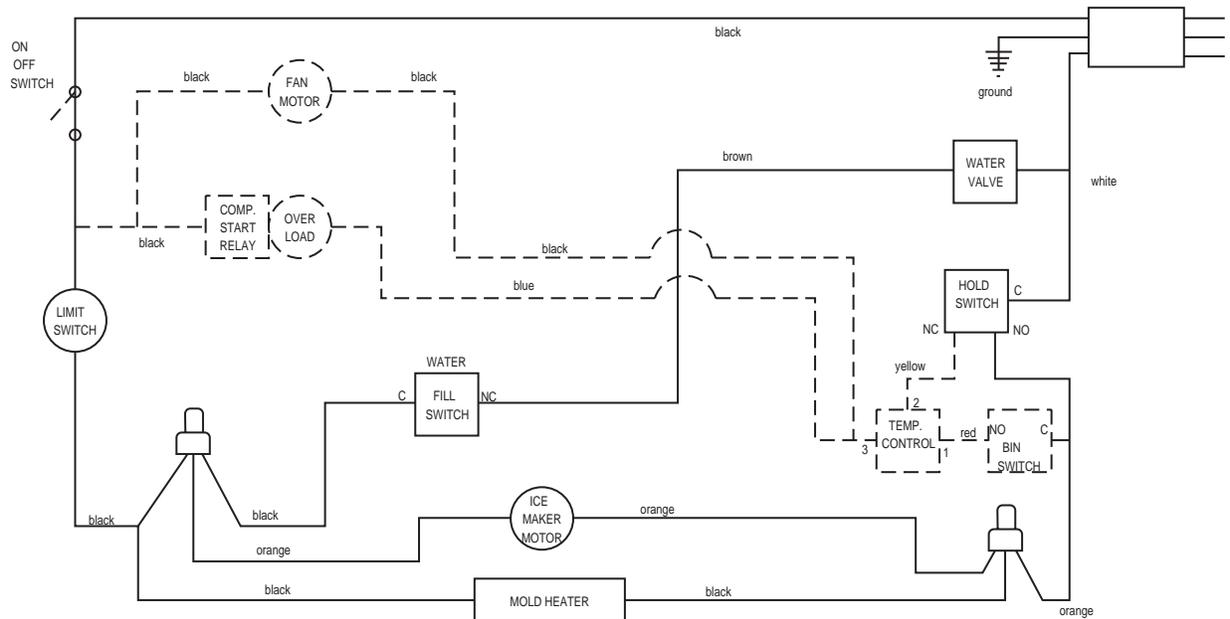


HARVEST-2 CYCLE
(Hold Switch In Switched Position)



UL183-6

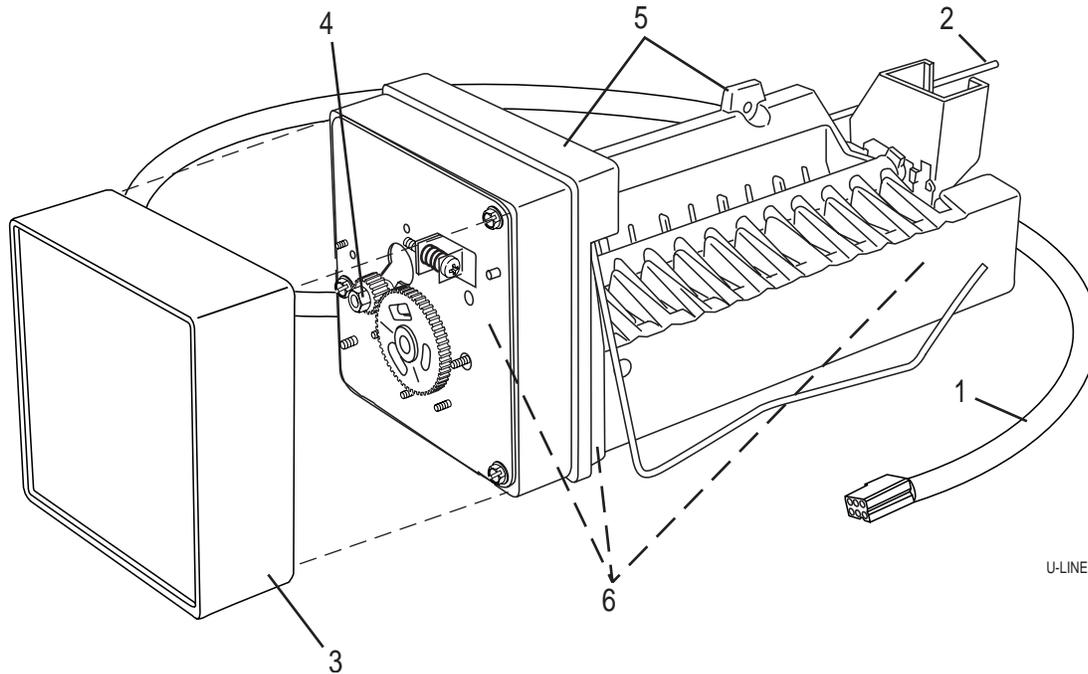
WATER FILL CYCLE



UL183-7



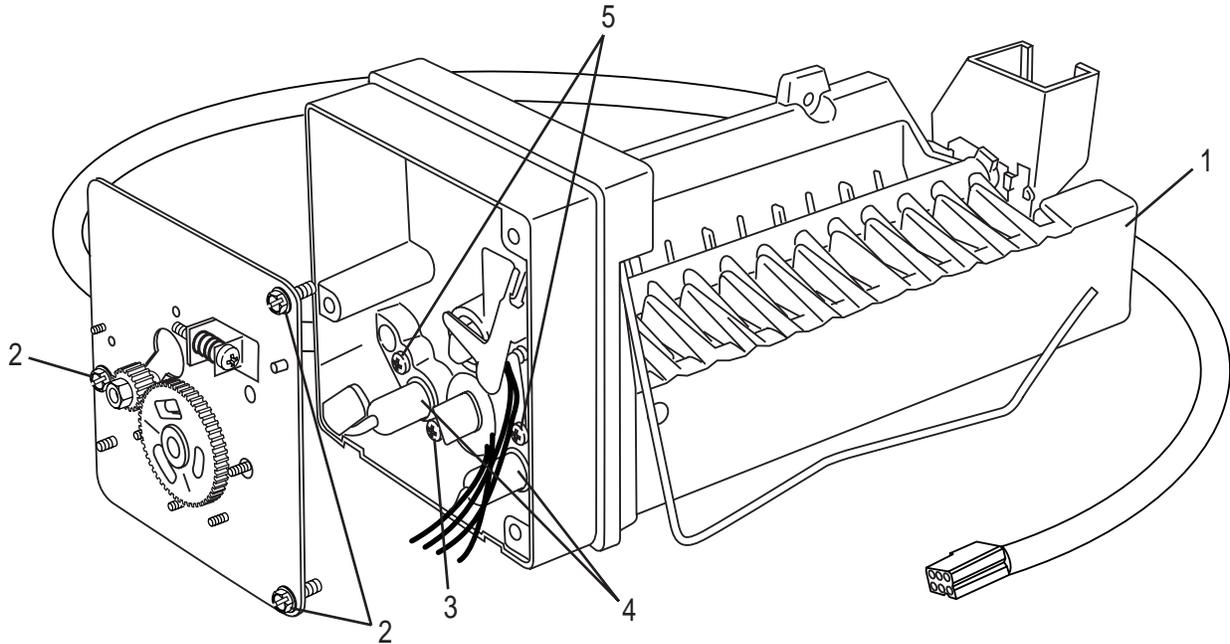
BI•2015 REPLACING ICE MAKER ASSEMBLY



U-LINE1001A

1. Unplug unit.
2. Disconnect ice maker wire harness at plug (1).
3. Remove control capillary tube from sensing tube on ice maker assembly (2).
4. Remove water inlet tube.
5. Remove front cover (3).
6. Advance ejector blade to the 3 o'clock position by turning the 5/16" hex head on the small brass gear counterclockwise (4).
7. Remove two screws from wall of freezer housing (5).
8. Remove three screws (6) from bottom of evaporator shelf.
9. Remove ice maker assembly.
10. Remove old alumilastic compound from evaporator shelf.
11. Apply 1/4" of fresh alumilastic compound to the bottom of the new ice maker assembly.
12. Install new ice maker assembly.
13. Reconnect plug.
14. Insert control capillary tube into ice maker sensing tube.
15. Insert water inlet tube.
16. Apply Permagum to all exit holes.
17. Install back panel.
18. Plug in unit and test.

BI•2015 REPLACING MOLD AND HEATER



U-LINE1002

1. Remove ice maker assembly. Refer to REPLACING ICE MAKER ASSEMBLY.
2. Remove one stripper screw (1) and stripper .
3. Remove three face plate screws (2) and face plate.
4. Remove one screw (3) and detach limit switch from mold.
5. Detach heater leads (4).
6. Remove two screws (5) and mold from support housing.
7. To assemble, replace parts in reverse order.
8. Install the ice maker assembly.



TROUBLESHOOTING

1. Will not eject ice (water frozen)

Cause

- a. Control setting too cold.
- b. Control defective (1-2 contacts open).
- c. Bin switch defective.
- d. Limit switch defective.
- e. Ice maker assembly motor stalled.
- f. Broken wire in ice maker circuit.
- g. Dirty condenser.
- h. Door gasket not sealing.
- i. Refrigerant leak causing slight undercharge.

2. Will not fill with water

Cause

- a. No water supply to unit.
- b. Water switch defective.
- c. Solenoid valve defective.
- d. Fill tube frozen.
- e. Broken wire in water fill circuit.
- f. Fill tube kinked.
- g. Inlet screen on water valve obstructed.

3. Will not stop making ice

Cause

- a. Bin switch defective.
- b. Bin arm not raising up completely.

4. Water will not stop filling

Cause

- a. Water switch defective.
- b. Solenoid valve defective.
- c. Stalled ice maker motor.
- d. Temperature control defective. Ice maker is in continuous harvest cycle (contacts 1-2 closed).

5. Ejector blades will not stop turning

Cause

- a. Water switch defective (closed).
- b. Hold switch defective.
- c. Defective wiring.
- d. Short in mold heater.

6. Low ice production

Cause

- a. Control set too cold.
 - b. Fan motor stalled.
 - c. Ice cubes too large.
7. Not freezing (compressor and fans are operating)

Cause

- a. Little or no frost pattern on evaporator).



DO NOT service the unit until the main electrical power has been disconnected.

Remedy

- a. Adjust control warmer (counterclockwise).
- b. Replace control.
- c. Replace bin switch.
- d. Replace limit switch.
- e. Replace motor.
- f. Replace defective wiring.
- g. Clean condenser.
- h. Replace gasket or fix obstruction.
- i. Find and repair leak/replace refrigerant.

Remedy

- a. Open water supply connection.
- b. Replace switch.
- c. Replace valve.
- d. Replace solenoid valve and defrost tube.
- e. Replace defective wiring.
- f. Straighten out tube.
- g. Clean or replace valve.

Remedy

- a. Replace bin switch
- b. Lubricate pivot point, loosen bin arm lever screw, or replace bent bin arm.

Remedy

- a. Replace switch.
- b. Replace solenoid valve.
- c. Replace motor and solenoid valve.
- d. Replace temperature control.

Remedy

- a. Replace water switch.
- b. Replace hold switch.
- c. Repair or replace wiring.
- d. Replace heater.

Remedy

- a. Adjust control warmer (counterclockwise).
- b. Replace fan motor.
- c. Adjust water fill screw. Dirty condenser.

Remedy

- a. Check for sealed system leak or restriction.



8. Not freezing (compressor not operating - fan operating)

Cause

- a. Relay defective.
- b. Overload defective (open).
- c. Compressor defective.

Remedy

- a. Replace relay.
- b. Replace overload.
- c. Replace compressor.

9. Not freezing (compressor and fans not operating)

Cause

- a. On-off switch defective (open).
- b. Hold switch defective (open).
- c. Control defective (open).
- d. Broken wire in freeze circuit.
- e. Power cord not plugged in.
- f. On-off switch in off position.
- g. Ejector blades not in the freeze position (12:00).

Remedy

- a. Replace on-off switch.
- b. Replace hold switch.
- c. Replace control.
- d. Repair or replace wiring.
- e. Plug in power cord.
- f. Put switch in on position.
- g. Manually advance the ejector blades to the 12:00 position (test ice maker and limit switch).

10. Compressor overheating

Cause

- a. Condenser air flow restricted.
- b. Condenser fan blade obstructed.
- c. Condenser fan motor stalled.
- d. Defective compressor.

Remedy

- a. Remove restriction (clean condenser and grille).
- b. Remove blade restriction.
- c. Replace fan motor.
- d. Replace compressor.

11. Compressor will not stop operating

Cause

- a. Control set too cold.
- b. Control defective (2-3 contacts will not open).
- c. Control sensing bulb not sensing mold temperature.

Remedy

- a. Adjust control warmer (counterclockwise).
- b. Replace control.
- c. Fully insert bulb into ice maker tube, routing bulb away from compressor discharge tube.
- d. Remove obstruction or replace motor.

d. Evaporator fan stalled.

12. Water leak (under unit)

Cause

- a. Water supply line leaking at solenoid valve inlet.
- b. Water line leaking at solenoid valve outlet.
- c. Water line leaking at fill tube.
- d. Crack in water line.

Remedy

- a. Tighten or replace fitting.
- b. Replace water line and fitting.
- c. Tighten clamp on fill tube or replace fill tube assembly.
- d. Replace water line.

13. Water leak (inside unit)

Cause

- a. Ice maker assembly fill cup obstructed.
- b. Fill ice cup and fill tube out of alignment.
- c. Water level too high.

Remedy

- a. Remove obstruction.
- b. Align fill tube and fill cup.
- c. Adjust water level.

14. Excessive frost build-up

Cause

- a. Door gasket not sealing properly.
- b. Door out of alignment.
- c. Water soaked cabinet insulation.

Remedy

- a. Adjust door hinges or replace door gasket.
- b. Align fill tube and fill cup.
- c. Replace foamed cabinet assembly (factory repair only).

15. Noisy

Cause

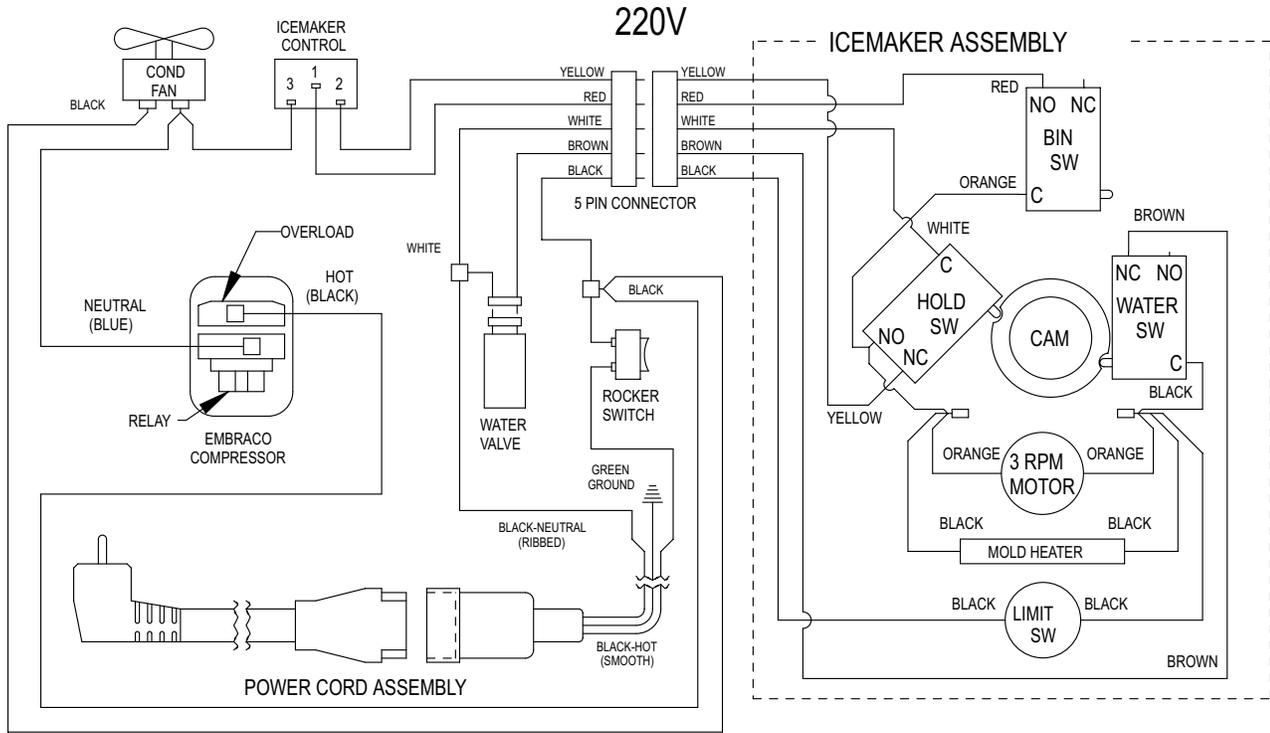
- a. Copper refrigeration tube touching cabinet.
- b. Fan blade touching shroud.
- c. Fan blade obstruction (wiring, foam insulation, packaging material).

Remedy

- a. Carefully adjust tubing.
- b. Adjust fan mounting or shroud.
- c. Remove obstruction.



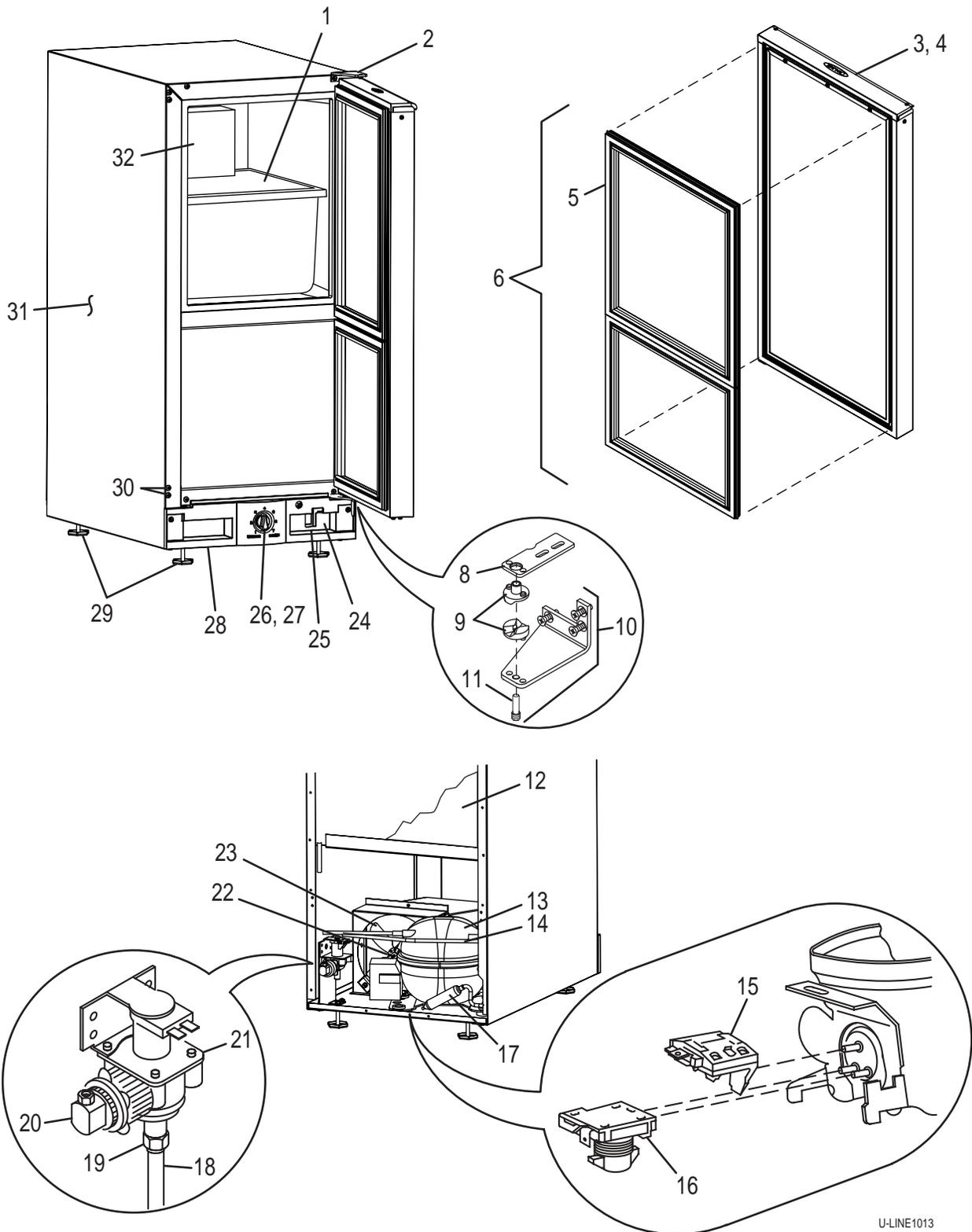
BI•2015 WIRING DIAGRAM



C42183.eps



MODEL BI•2015



U-LINE1013



MODEL BI•2015

For Item #32, see Model 402-BI•2015 Ice Maker (pages 76-77) for separate breakdown.

Item	Description	White	Black	Stainless Steel
1	Ice Bucket	31430	31430	31430
2	Hinge Assembly Top R/H	11898-S-KIT	11898-S-BLK	11898-S-SS
3	Door Handle Top	11926-6-KIT	11926-6-BLK	N/A
4	Door Handle Bottom	11927-6-KIT	11927-6-BLK	11927-6-BLK
5	Door Gasket Assembly	12094-06-S	12094-04-S	12094-05-S
6	Door Assembly	80-17008-02	80-17008-01	See Parts Not Shown
8	Pivot Plate	11901-1	11901-1	11901-1
9	Door Closer Assembly	31673-S	31673-S	31673-S
10	Hinge Assembly Bottom R/H	11899-S-KIT	11899-S-BLK	11899-S-SS
11	Pivot Post	42096	42096	42096
12	Back Panel	11964-01	11964-01	11964-01
13	Compressor	5402-S	5402-S	5402-S
14	Power Cord	2374	2374	2374-2
15	Overload	5413	5413	5413
16	Relay	5414	5414	5414
17	Drier	2694	2694	2694
18	Water Line Assembly	404	404	404
19	Plastic Nut & Sleeve	41254	41254	41254
20	90 Degree Brass Fitting	41826	41826	41826
21	Water Valve	2552A	2552A	2552A
22	Condenser Fan Motor	5263	5263	5263
23	Condenser Fan Blade	5188	5188	5188
24	Condenser Assembly	2303-02-S	2303-02-S	2303-02-S
25	Rocker Switch	2053	2053	2053
26	Control	2780	2780	2780
27	Control Knob	42090-KIT	42090-BLK	42090-BLK
28	Grille	11942-KIT-01	11942-BLK-01	11942-BLK-01
29	Leveling Leg (4)	41319	41319	41319
30	Threaded Hole Plugs	31723-WHT	31723-BLK	41156
31	Evaporator/Cabinet Assembly	2183-S2015-WHT	2183-S2015-BLK	2183-S2015-SS
32	Icemaker Assembly	402-BI2015	402-BI2015	402-BI2015

Parts Not Shown

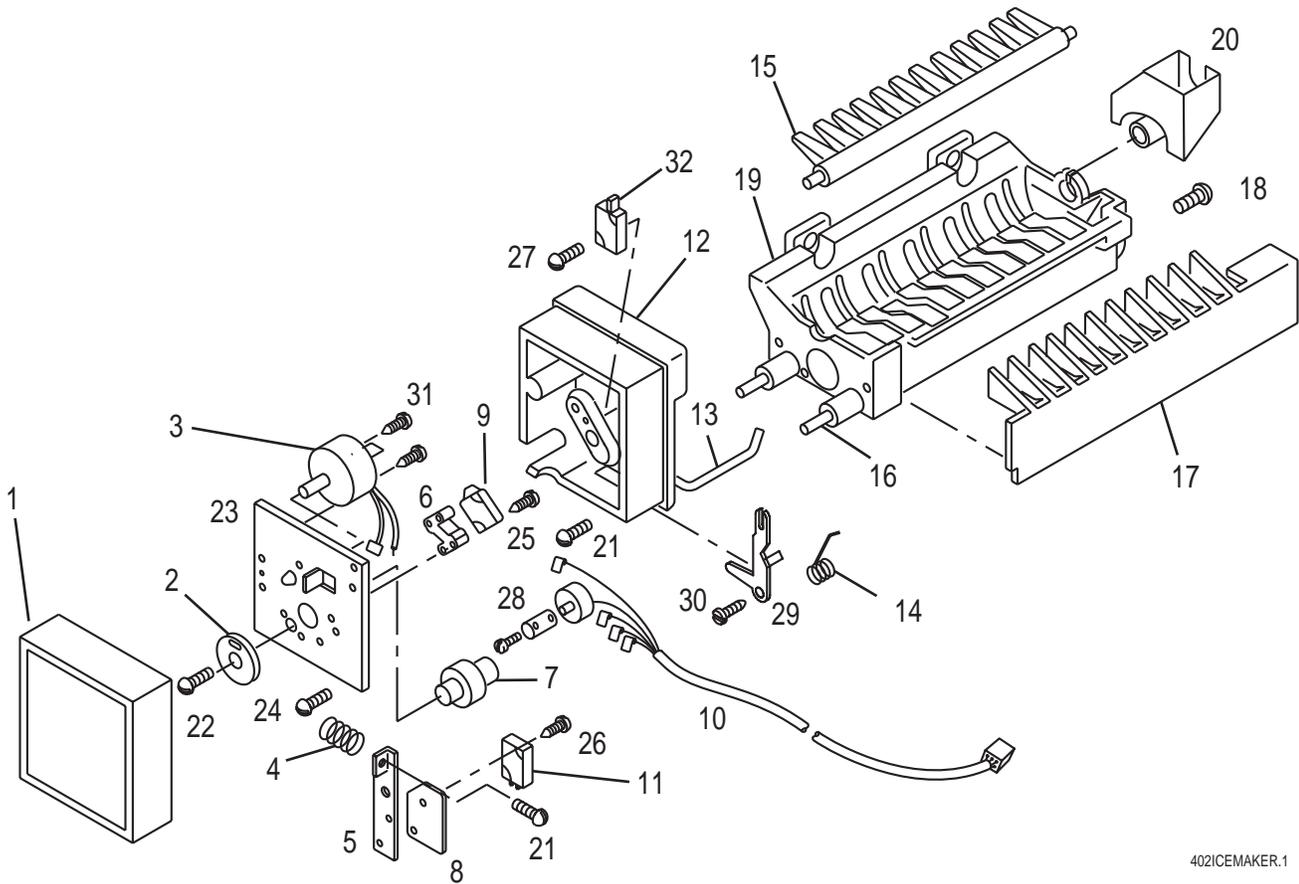
Item	Description	White	Black	Stainless Steel
	Door Assembly Stainless - Right Hand Hinge	N/A	N/A	80-17008-03
	Door Assembly Stainless - Left Hand Hinge	N/A	N/A	80-17008-13
	Door Handle Top Modified	N/A	N/A	11926-8-BLK
	Door Handle	N/A	N/A	11949

220 Volt Part Numbers

Item	Description	Part No.	Item	Description	Part No.
13	Compressor	5404-S	21	Water Valve	2555A
15	Overload	5415	22	Condenser Fan Motor	5195
16	Relay	5416			



MODEL 402-BI•2015



402ICEMAKER.1



MODEL 402-BI•2015

CAUTION

Use only genuine U-Line replacement parts. U-Line ice maker parts are not the same as standard FSP Whirlpool parts. Using non-U-Line parts can reduce ice rate, cause water to overflow from ice maker mold, damage the unit, and may void the warranty.

Item	Description	Part No.	Item	Description	Part No.
-	Ice Maker Assembly	402-BI2015	16	Mold Heater	625843-S
-	Faceplate Assembly	150	17	Stripper	31400
1	Cover	627000	18	Stripper Screw	489128
2	Gear	628210*	19	Mold & Heater Assembly	628123-S
3	Motor	627973*	20	Water Cup	544304
4	Spring	627163*	21	Spring & Housing Screw	488372*
5	Valve Switch Plate	625836*	22	Gear Screw	488957*
6	Switch Spacer	625834*	23	Face Plate	11641*
7	Cam	627302*	24	Plate Screw	41375
8	Insulator	627680*	25	Long SW Screw	488361*
9	Hold Switch	2506*	26	Short SW Screw	488362*
10	Wire Harness	2361**	27	Bin SW Screw	488360
11	Valve Switch	2506*	28	Clamp	625829
12	Support Housing	625827	29	Arm Lever	625830
13	Bin Arm	2886	30	Arm Lever Screw	627199
14	Bin Arm Spring	627526	31	Motor Screw	488622*
15	Ejector	627375	32	Bin Switch	2506*

* Parts included in the 150 faceplate assembly.

** Includes the Limit Switch.

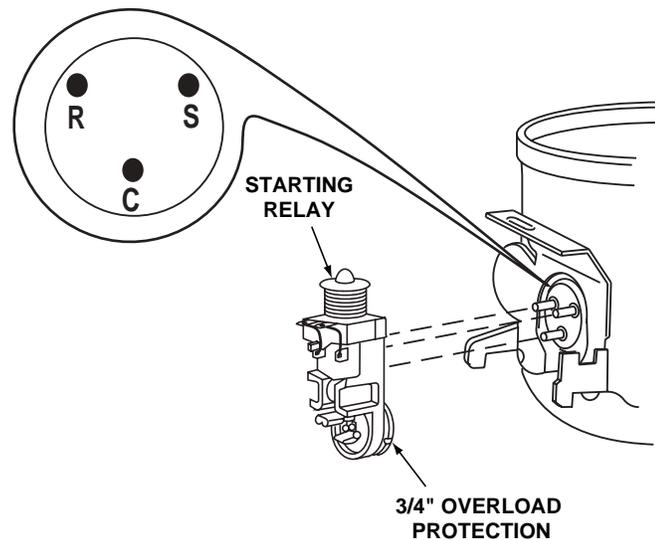
220 Volt Part Numbers

Item	Description	Part No.	Item	Description	Part No.
-	Ice Maker Assembly	2015-IM-BASE 220	16	Mold Heater	626069-S
-	Faceplate Assembly	650	19	Mold Heater Assembly	618
3	Motor	628109			

U-Line will **not** pay warranty claims for the replacement of a complete ice maker assembly. Complete ice maker assembly replacement is not necessary because all ice maker parts are available as replacement parts and are stocked in our inventory.



ELECTRICAL SPECIFICATIONS



UL303

Compressor Pins

To measure start winding resistance, measure across the C-S pins.

To measure run winding resistance, measure across the C-R pins. Ensure that pins C and R are not shorted to ground.

Specifications

FF7.5HBK Compressor Start Winding: 12.0 OHMS

FF7.5HBK Compressor Run Winding: 2.9 OHMS

Water Valve Coil Resistance: 280 OHMS

Bypass Coil Resistance: 380 OHMS

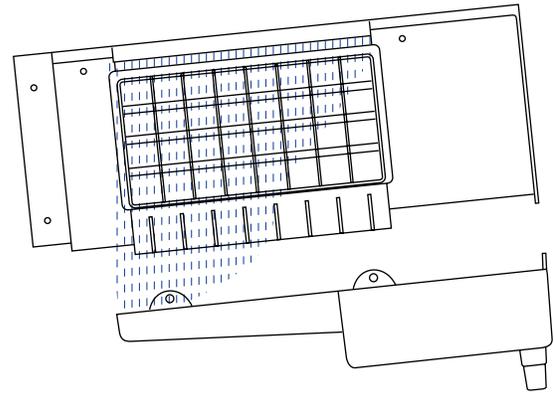
Pump Motor Winding Resistance: 71.5 OHMS



LEVELING AND INSTALLATION REQUIREMENTS

It is extremely important that the unit is level. If it is not level, the ice mold will not fill evenly. This can cause a reduction in ice rate, uneven sized cubes or water spilling into the storage area which will cause the ice in the bin to melt prematurely. See Figure A.

Remember the floor surrounding a drain has a tendency to slope towards the drain.

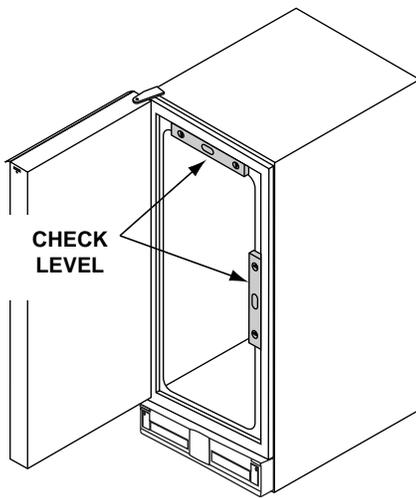


UL307

Figure A

Leveling the Unit

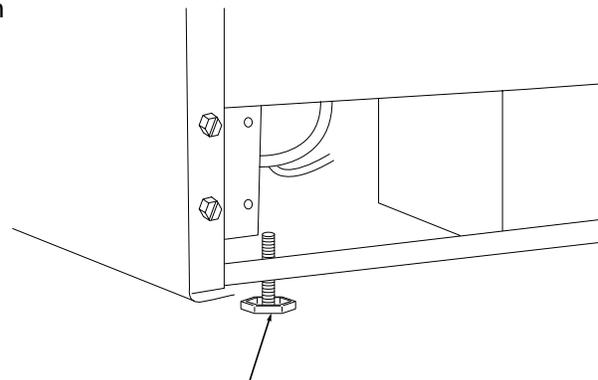
1. Use a level to check the icemaker from front to back and from side to side. See Figure B.



UL314

Figure B

2. If the icemaker is not level, adjust the feet on the corners of the unit as necessary. See Figure C.
3. Check after each adjustment and repeat the previous steps as necessary until the unit is level.



UL205A

Figure C

Installation Requirements

- The unit may be built into a cabinet. There is no minimum clearance requirement for the top, left or right sides of the unit.
- The location must allow enough clearance for water, drain, and electrical connections in the rear of the unit.
- The location must not obstruct air flow to the front of the unit.

GRAVITY DRAIN INSTALLATION



CAUTION

Plumbing installation must observe all state and local codes.

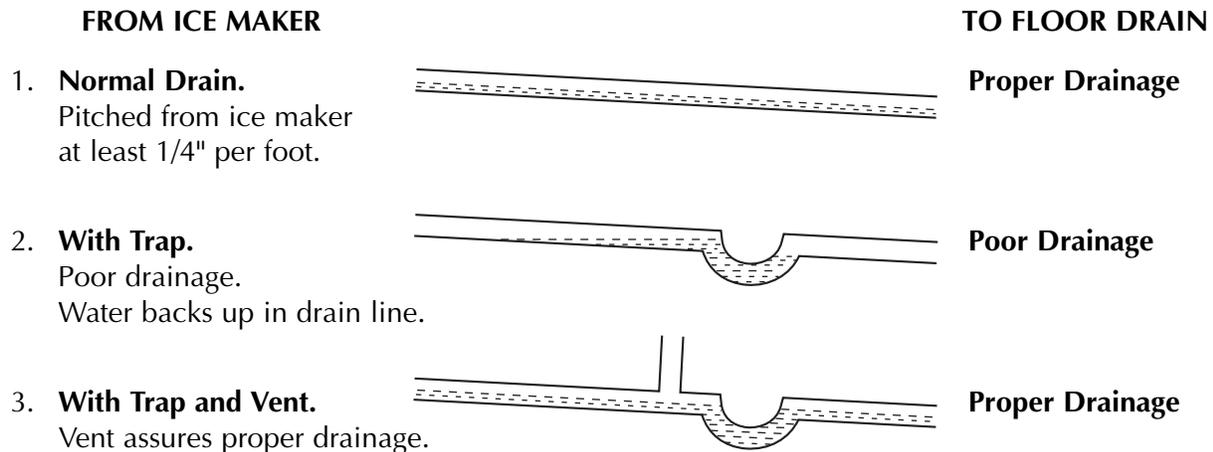
These guidelines must be followed when installing drain lines to prevent water from flowing back into the ice maker storage bin and potentially flowing onto the floor causing water damage:

- Drain lines and fittings must have a 5/8" inside diameter.
- Drain lines must have a 1" drop per 48" of run (1/4" per foot) and must not create traps.
- The floor drain must be large enough to accommodate drainage from all drains.
- Insulate the bin drain line to prevent condensation.

Be sure to follow these guidelines to prevent water backing up into the storage bin.

Below are examples of gravity drain line installations. If a trap is in the drain line, the drain line must be vented to ensure proper draining. Without the vent, water will backup until enough pressure builds up to force the water past the trap. Water may backup into the ice bin before the amount of pressure needed is achieved. Water in the storage bin will cause the ice in the bin to melt prematurely.

The customer's complaint will be slow ice production. The ice that has been made is melting prematurely because water is backing up in the ice bin.



UL306

Examples of Gravity Drain Installations



CONNECTING A DRAIN PUMP



CAUTION

Plumbing installation must observe all state and local codes. All water and drain connections **MUST BE** made by a licensed/qualified plumbing contractor. Failure to follow recommendations and instructions may result in damage and/or harm.

If a gravity drain connection is not available, U-Line strongly recommends the use of the U-Line P60 drain pump. If your CLR2060 is not equipped with a factory installed pump, a P60 drain pump is available through your Dealer, or direct from U-Line. If a pump other than the U-Line P60 drain pump is to be used, it must meet the following specifications:

- It must be UL listed and have a UL listed, 120 VAC, 3-wire grounded power cord.
- Overall maximum outside dimensions of 8-3/4" wide x 5-3/4" deep x 7-3/4" high.
- Minimum flow rate of 15 gallons per hour at 10 feet of lift.
- It must have a sealed sump which does not allow water leakage in the case of a power outage, restricted drain or pump failure.
- It must have a check valve in the discharge line to prevent waste water return to the pump.
- It must have an overflow protection control which will shut off power to the ice maker in the event of a pump failure.
- Operating temperature range of 50°F to 110°F (10°C to 40°C).

If your CLR2060 is not equipped with a P60 drain pump or an equivalent drain pump, severe damage and costly repair could result in the event of a power outage, restricted drain or pump failure.



AUTOMATIC CLEAN CYCLE INSTRUCTIONS

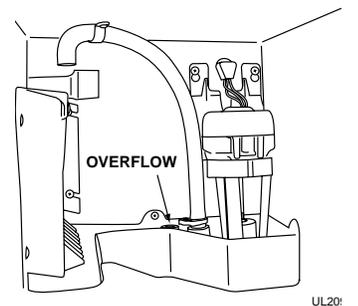
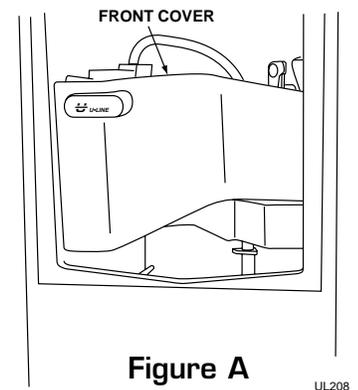
To maintain operational efficiency, clean unit every six months (depending on water conditions more or less frequent cleaning may be necessary). If the ice maker requires more frequent cleaning, consult a qualified plumber to test the water quality and recommend appropriate treatment. Use only U-Line Ice Machine Cleaner (part number 41978).



CAUTION

Use only U-Line Ice Machine Cleaner (part number 41978). It is a violation of Federal law to use this solution in a manner inconsistent with its labeling. Use of any other cleaner can ruin the finish of the evaporator and will void the warranty. Read and understand all labels printed on the package before use. Ice machine cleaner is used to remove Lime scale and other mineral deposits. Refer to the following steps for mineral deposit removal.

1. Set the cycle selector switch (located in the center of the grille) to OFF. Allow the ice to melt off of the evaporator.
2. Remove all ice from the storage bin.
3. Remove inside front cover by gently pulling away from sidewall. See Figure A.
4. Remove the overflow tube by lifting it up while using a slight back and forth motion to loosen it from the drain hole. See Figure B. The water in the reservoir will flow down the drain.
5. Replace the overflow tube after all the water has been drained from the reservoir.
6. Move the cycle selector switch to the CLN position.
7. When water begins to flow over the evaporator, approximately three minutes, add one packet of U-Line Ice Machine Cleaner to the reservoir.
8. Reinstall inside front cover.
9. When the self cleaning process stops, approximately 45 minutes, it may be desirable to clean the storage bin. **See INTERIOR STORAGE BIN CLEANING.**
10. Move the cycle selector switch to the ICE position to resume ice production.



Interior Storage Bin Cleaning

1. Disconnect power from the ice maker.
2. Remove any ice from the storage bin.
3. Wipe down the storage bin with a solution of non-abrasive mild soap or detergent and warm water. Rinse with clean water. Sanitize the bin with a solution of one tablespoon of bleach and one gallon of water. Rinse thoroughly with clean water.
4. Check that all drain connections are in place.
5. Reconnect power to the unit.



SEQUENCE OF OPERATION

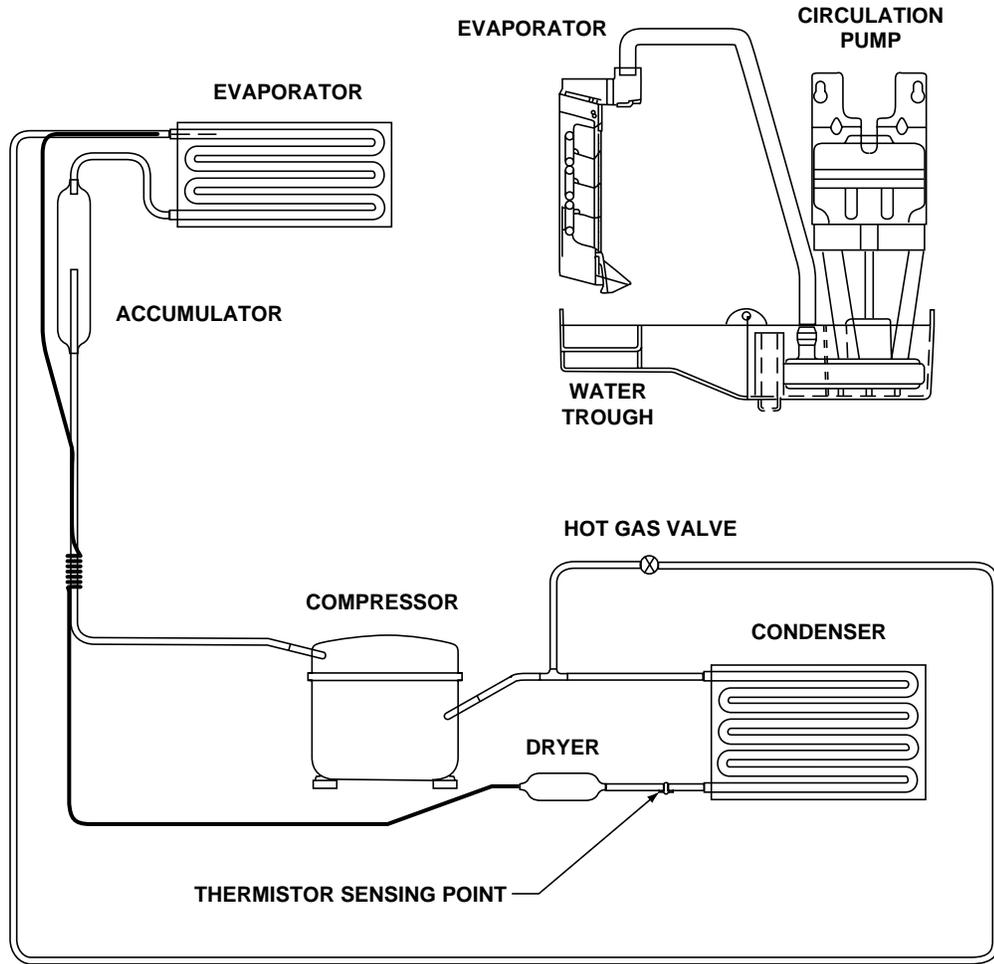
On initial start-up or restart, closing of bin thermostat, the toggle switch is in the ICE position:

1. The water solenoid valve and hot gas solenoid valve are opened (energized) for 180 seconds (three minutes). This ensures the icemaking cycle starts with fresh water, and the refrigerant pressures are equalized prior to compressor start-up.
2. The compressor starts 175 seconds after the hot gas solenoid valve and water solenoid valves are opened.
3. The water pump and condenser fan motor are energized. The hot gas solenoid valve and water solenoid valves are de-energized (closed) five seconds after the compressor starts. The unit is now in the freeze cycle.
4. As the water pump circulates the water, an even flow is directed across the evaporator and into each cube cell, where it freezes. As the water freezes, gravity causes any sediment to drop into the water trough and not becoming imbedded in the ice. This gives a clearer cube with low mineral content.
5. The control system automatically determines the length of the freeze cycle by monitoring the temperature of the refrigeration system “high side” using a thermistor.
6. One minute prior to finishing the determined freeze cycle, the control determines the length of the harvest cycle by again monitoring the temperature at the thermistor.
7. When the freeze cycle is completed, the control de-energizes the water pump and the condenser fan motor. The compressor remains running during the harvest cycle. The control then energizes the hot gas solenoid valve and water solenoid valve for the duration of the harvest cycle. The hot refrigerant gas warms the evaporator causing the cubes to slide, as a sheet, off the evaporator and into the storage bin. At the same time, the water trough is being purged with fresh water.
8. At the conclusion of the harvest cycle, the machine returns to a new freeze cycle. The compressor continues to run. The water pump and condenser fan motor are energized. The hot gas solenoid valve and water solenoid valves are de-energized (closed).

Automatic Shut-off

The ice machine shut-off is controlled by the level of ice in the ice storage bin. When the bin is full, ice contacts the bin thermostat bulb holder, which senses the cool temperatures, then opens which stops the ice machine. The ice machine will remain off until the ice cubes no longer contact the bin thermostat bulb holder. This causes the bin thermostat to warm and close, restarting the ice machine. When the ice machine restarts, it returns to the start-up sequence (steps 1, 2, and 3 above).





UL304

CYCLE DESCRIPTION	INITIAL START-UP			FREEZE CYCLE												HARVEST CYCLE			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
TIME (MINUTES)																			
WATER FILL VALVE	■	■	■															■	■
HOT GAS VALVE	■	■	■															■	■
WATER CIRCULATION PUMP				■	■	■	■	■	■	■	■	■	■	■	■	■	■		
COMPRESSOR				■	■	■	■	■	■	■	■	■	■	■	■	■	■		
CONDENSER FAN				■	■	■	■	■	■	■	■	■	■	■	■	■	■		

ENERGIZED ■
NON-ENERGIZED □

NOTE: THE FREEZE / HARVEST CYCLE TIMES WILL VARY DUE TO OPERATING CONDITIONS.

UL305



THERMISTOR

The thermistor senses the refrigeration system “high side” temperature. This is used in conjunction with the control board to determine the length of the freeze and harvest cycles.

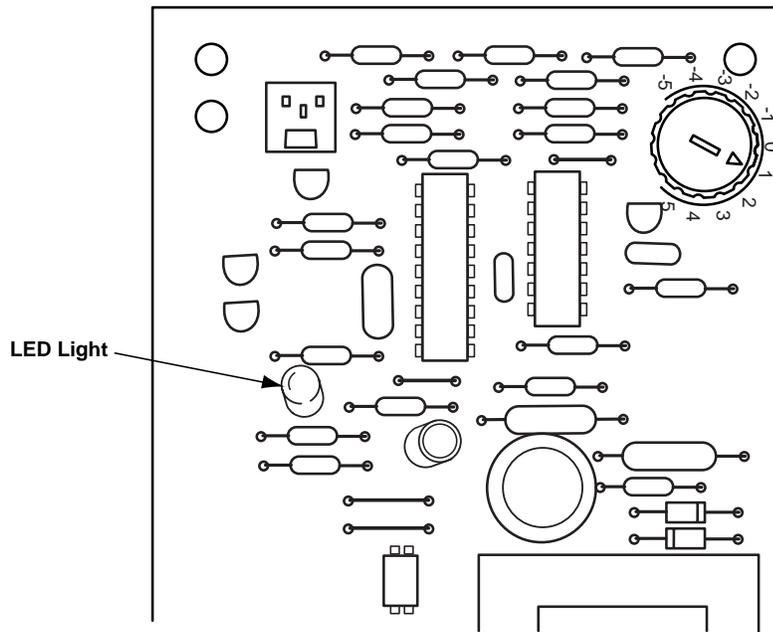
Thermistors generally fail due to moisture or physical damage. U-Line “high side” thermistors are encased in a specially-designed, moisture-sealed aluminum block. The thermistor is also mounted to the “high side” or “dry” portion of the refrigeration system. This eliminates physical damage and moisture concerns.

Check Light on Control Board

The LED light on the control board serves three functions.

1. **Steady light** - The control board has power to it and operation is normal.
2. **Slow flash** - The control board has detected a sensor problem. This will happen if the thermistor’s plug is disconnected from the control board. This will also happen if the thermistor fails open.
3. **Rapid flashing** - This indicates the control board is receiving a high heat signal from the thermistor. This can be caused by a dirty condenser, inadequate air flow (unit installed behind closed doors), failed condenser fan motor, etc.

In both the slow flash and rapid flashing situations, the unit will stop operation.



UL301

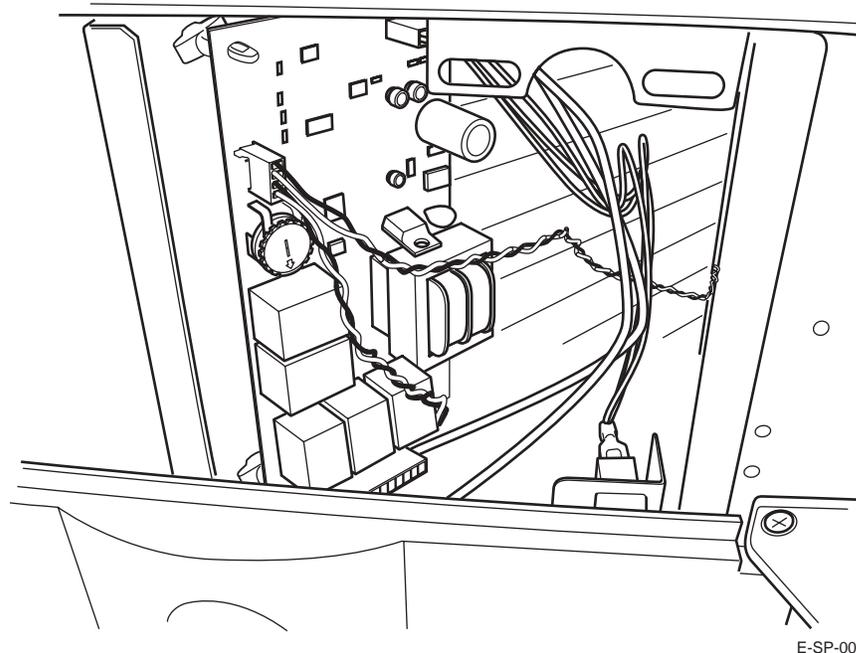
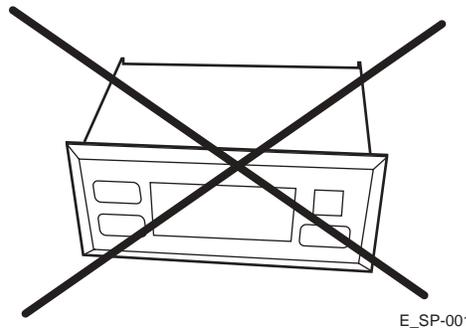
NEW CLR2060 CONTROL BOARD DESIGN

Models Manufactured After 12/1/03

U-Line has started manufacturing the CLR2060 with a revised electronic control board. The new control board design is similar to the control board used on the CLRCO2075 Clear Ice Maker/Refrigerator. This new board will have the advanced diagnostics that the CLRCO board has and the components can be tested in the same manner. This features a diagnostic LED and has 2 thermistors, one on the liquid line and one in the bin.

Note: The new board is **NOT** interchangeable in units with the original board. Also, in the case of a defective board, the board must be changed along with the thermistors, since they are matched to the board.

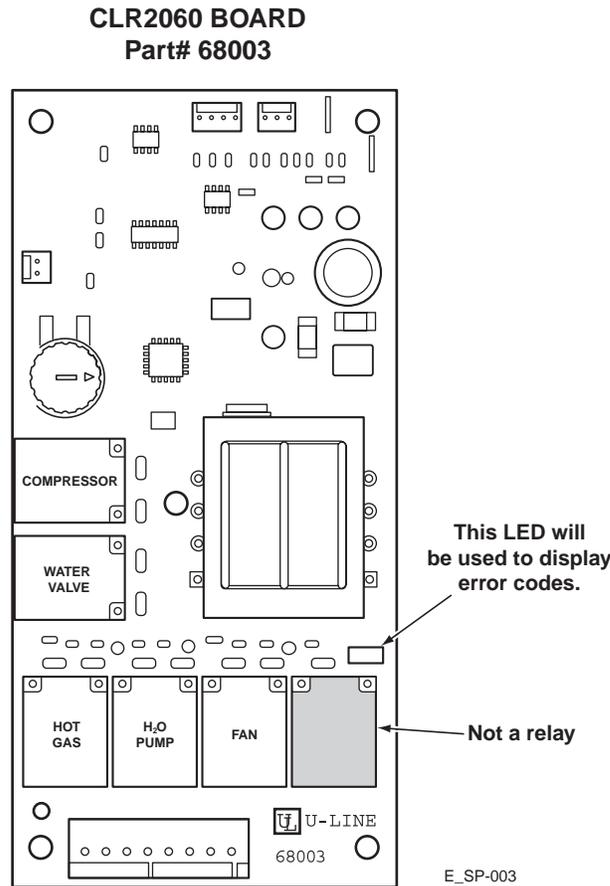
There is no display box installed on the CLR2060, however a display box from the CLRCO2075 will fit on this board. It can be used to read the bin temperature and the liquid line temperature.



The board is mounted in the lower front section of the CLR2060 Clear Ice Maker and is accessed by removing the service panel.



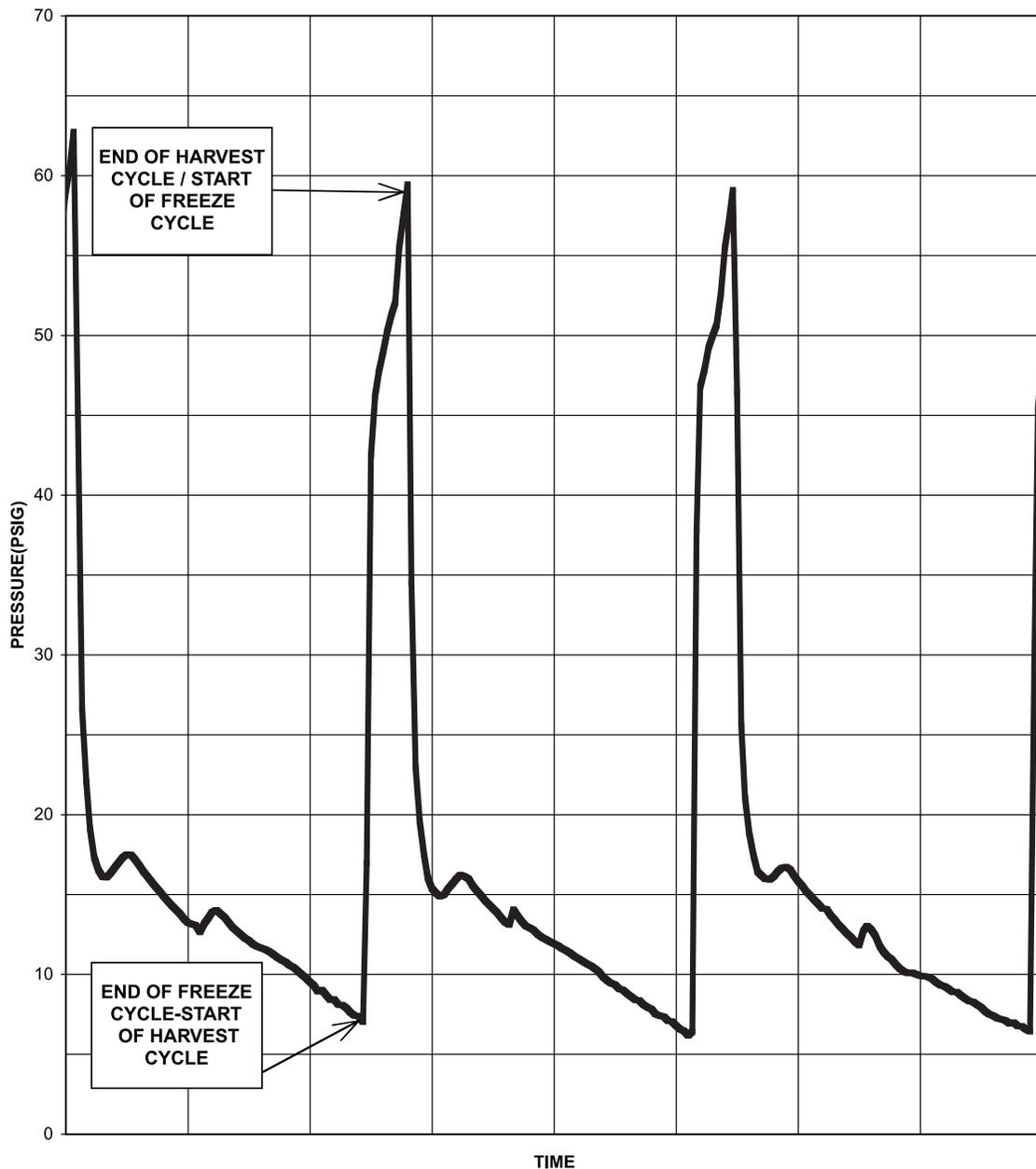
The diagnostic LED shown below will specify the following:



1. **One Flash** - Indicates the overflow protection circuit is open (only on P-60 pump equipped units).
2. **Two Flashes** - Indicate an open thermistor or out of range (too warm) problem.
3. **Three Flashes** - Indicate the unit has both failure conditions above.

Note: Interrupting power to the board is the only method of clearing the error codes. Switching off the ON/OFF/CLN switch does not clear the codes.

Low Side Pressure Changes



The chart above shows the low side pressure changes through the cycles of a CLR2060 unit. It shows that during a harvest cycle, the low side pressures climb to nearly 60 psig. When the freeze cycle starts, the pressure quickly drops to approx. 17 psig and throughout the freeze cycle it continues to slowly drop to approximately 7 psig just before the harvest cycle.

This unit was operating in a 75° fahrenheit ambient temperature and the incoming water temperature was 50° fahrenheit.

If a unit is operating in conditions other than these, the low side pressures will be different. A unit operating in a warmer ambient environment or using warmer water will have higher pressure readings. A unit in a cooler ambient environment or using cooler water will have lower pressure readings.



REFRIGERATION SYSTEM DIAGNOSIS GUIDE

System Condition	Suction Pressure	Suction Line	Compressor Discharge	Condenser	Capillary Tube	Evaporator	Wattage
Normal	Normal	Slightly below room temperature	Very hot	Very hot	Warm	Cold	Normal
Overcharge	Higher than normal	Very cold may frost heavily	Slightly warm to hot	Hot to warm	Cool	Cold	Higher than normal
Undercharge	Lower than normal	Warm - near room temperature	Hot	Warm	Warm	Extremely cold near inlet - outlet below room temperature	Lower than normal
Partial Restriction	Somewhat lower than normal-in vacuum	Warm - near room temperature	Very hot	Top passes warm - lower passes cool (near room temperature) due to liquid	Room temperature (cool) or colder	Extremely cold near inlet - outlet below room temperature backing up	Lower than normal
Complete Restriction	In deep vacuum	Room temperature (cool)	Room temperature (cool)	Room temperature (cool)	Room temperature (cool)	No refrigeration	Lower than normal
No Gas	0 PSIG to 25"	Room temperature (cool)	Cool to hot	Room temperature (cool)	Room temperature (cool)	No refrigeration	Lower than normal



ICE THICKNESS ADJUSTMENT

The CLR2060 Clear Ice Maker uses advanced technology to make ice that is crystal clear. This technology cascades a flow of water over a chilled ice mold that is mounted vertically so no water sits in it. Because of this ice making technology, clear ice cubes differ significantly from regular ice cubes. Differences are as follows:

- Dimples. U-Line clear ice cubes have “dimples” on one side from the cascading water process.
- Cube Variations. Cubes made from different batches, or even cubes within the same batch may have varying dimples, thicknesses and/or sizes due to the cascading water process.
- Cube “slabbing”. The U-Line clear ice maker makes a “slab” of ice that falls from the vertical mold relying on gravity to break the ice bridges. Depending on the control setting, and the fullness of the ice bucket, it may be necessary to tap the ice slab with the scoop to break it apart.

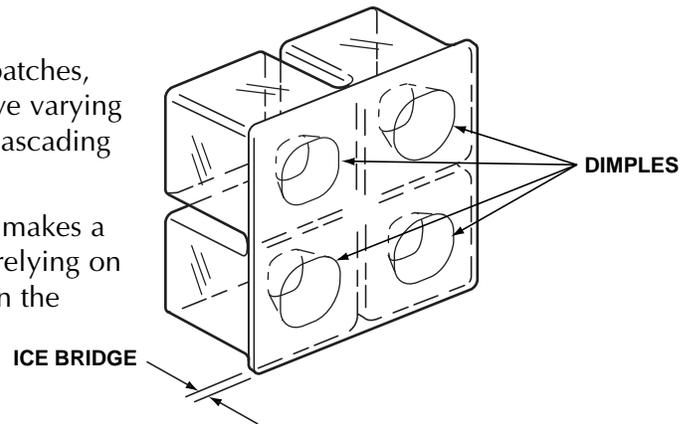
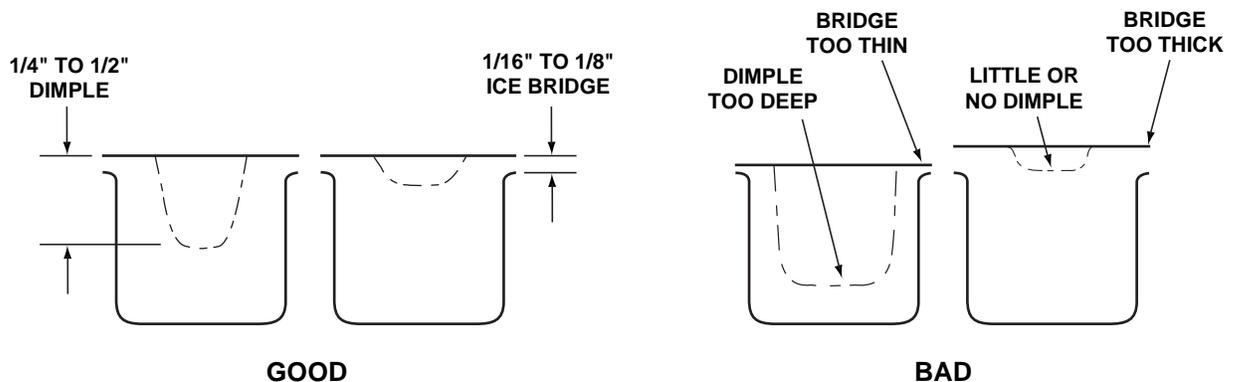


Figure 1

The ice cube thickness control is factory set for best overall performance. The factory setting is designed to maintain an ice bridge of approximately 1/16" to 1/8" under normal conditions resulting in a dimple of approximately 1/4" to 1/2" in depth (see Figure 2). A fuller cube with less of a dimple results in a thicker ice bridge. As the ice bridge becomes thicker, the tendency for the cubes to stay together as a slab increases. A bridge thicker than 1/8" may cause cubes to overflow the ice bucket.



ICE002

Figure 2



To adjust:



DANGER

Disconnect power to the ice maker before making any ice thickness adjustments.

1. Disconnect power to the unit.

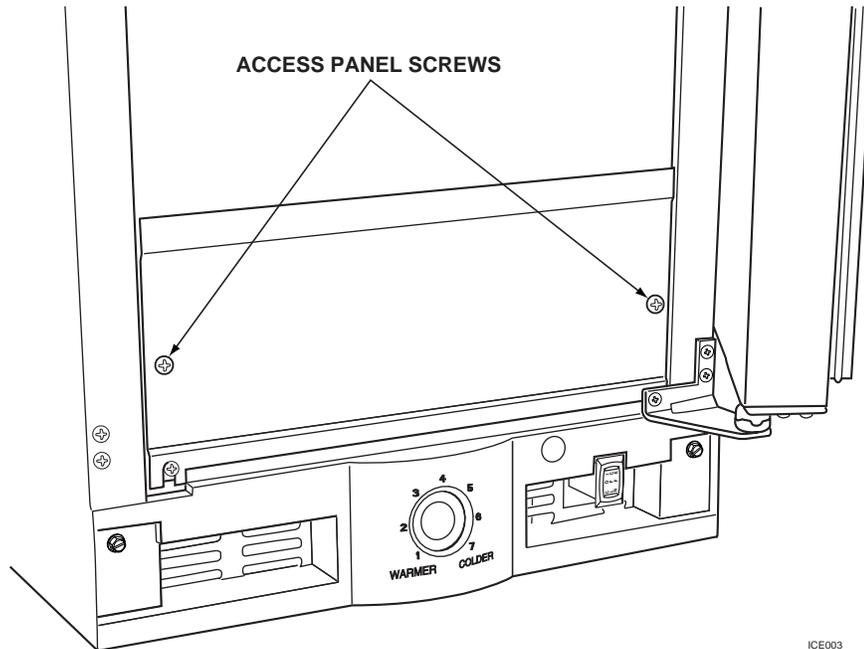


Figure 3

2. Remove the screws securing the front access panel (see Figure 3).

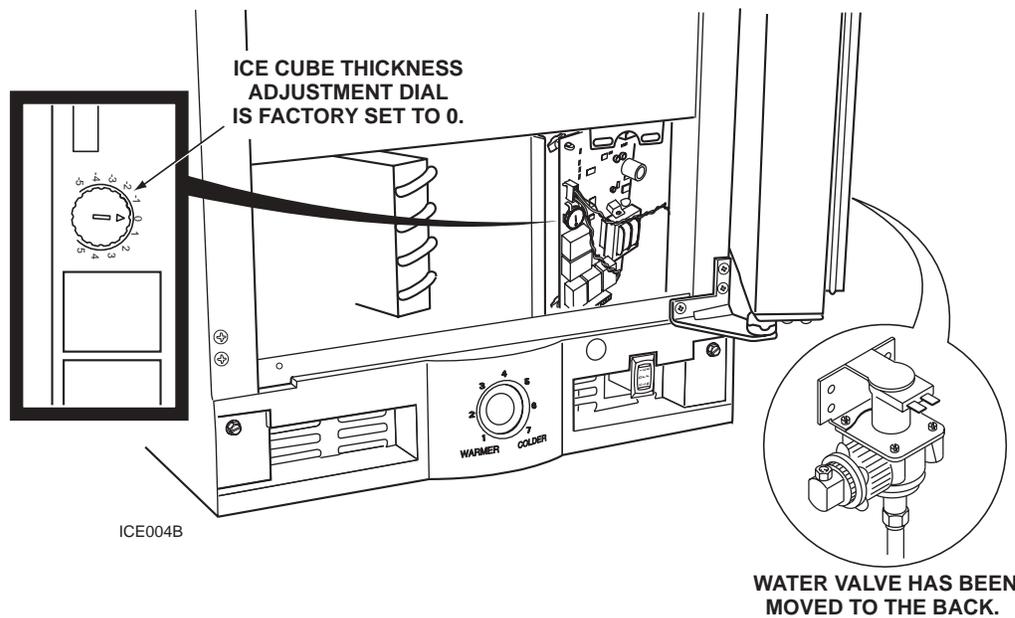


Figure 4

Note: Picture represents 2004 model

3. Locate the ice cube thickness adjustment dial on the control board (see Figure 4). Turn the dial clockwise (+ number) to thicken or counterclockwise (- number) to thin the ice bridge.

IMPORTANT

The door should never be flush with the top of the cabinet. Even when level, the top edge of the door will be 1/8" below the top of the cabinet (see Figure 1).

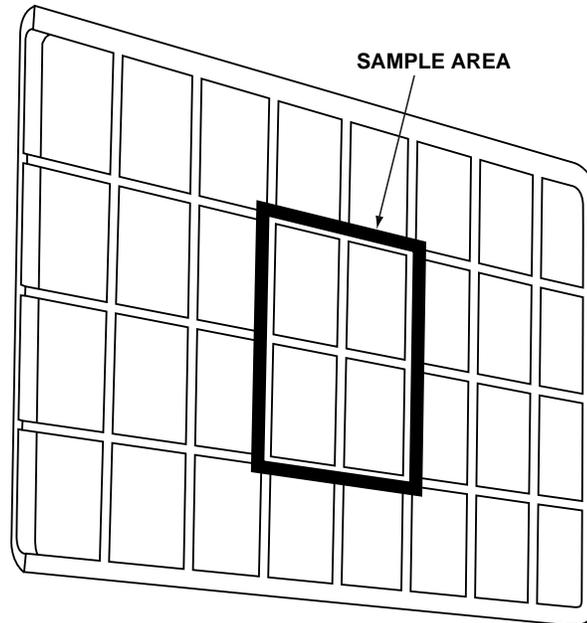


Figure 5

4. Reinstall front access cover.
5. Reconnect power to ice maker.
6. Empty ice bucket.



ICE PRODUCTION RATES

Ambient Temp/Water Temp degrees F	Approximate Ice Production (lbs/day)
50/50	60
60/50	60
70/50	58
80/50	54
90/70	47
100/70	40

NOTE

These characteristics will vary depending on operating conditions, condenser cleanliness, installation, and application.



TROUBLESHOOTING



DO NOT service the unit until the main electrical power has been disconnected.

1. Unit does not operate (with drain pump; light on control board is not illuminated)

Cause

- a. No electrical power to the unit.
- b. Rocker switch set incorrectly.
- c. Drain tube is kinked or obstructed.
- d. Bad pump. *Diagnose by bypassing the pump. Pull both pink wires from control board and jump the two terminals together. If unit starts up, then the pump is bad.*

Remedy

- a. Make sure unit is plugged in and outlet has power.
- b. Check switch wiring. Set to "ICE."
- c. Clear the tubing. If water cannot drain from pump, unit will shut down due to safety design of pump.
- d. Change pump. Jumping the two terminals together on the control board with a jumper wire will eliminate pump from the circuit.

2. Unit does not operate (without drain pump; light on control board is not illuminated)

Cause

- a. No power to unit.
3. Unit does not operate and light on control board is illuminated

Remedy

- a. Jumper plug off power cord.

Cause

- a. Bad bin thermostat.
- b. Bin thermostat set incorrectly.
4. No ice production

Remedy

- a. Replace bin thermostat. The unit is falsely sensing a full bin.
- b. Set bin thermostat at the 10:00 position.

Cause

- a. No water supplied to unit.
- b. Stand pipe not inserted in water trough.
- c. Re-circulating pump is defective.
5. Low ice production

Remedy

- a. Check that water is connected and turned on.
- b. Insert stand pipe securely into water trough.
- c. Replace re-circulating pump.

Cause

- a. High ambient temperatures around unit.
- b. Deposit build-up on evaporator grid.
- c. Ice thickness dial set incorrectly.
- d. Dirty condenser coil.

Remedy

- a. Lower ice rate is normal with high ambient temperatures.
- b. Run the unit through a clean cycle. Use only U-Line Ice Machine Cleaner.
- c. Adjust ice thickness dial accordingly.
- d. Clean condenser coil.



NOTE: Light on control board will indicate if condenser is too dirty. A rapid flash of light indicates high heat conditions which could be caused by either an inadequate air flow or a dirty condenser.

6. Will not eject ice (water frozen)

Cause

- a. Bin thermostat set incorrectly.
- b. Wiring plug off of bypass valve coil.
- c. Defective bypass valve.
- d. Deposit build-up on evaporator grid.

Remedy

- a. Set bin thermostat at 10:00 position.
- b. Re-install plug.
- c. Replace bypass valve.
- d. Run unit through the clean cycle. Use only U-Line Ice Machine Cleaner. If scale or mineral deposits accumulate on grid, cubes will not fall freely.

7. Ice is slow to release from evaporator

Cause

- a. Deposit build-up on evaporator grid.
- b. Unit not level.

Remedy

- a. Run unit through the clean cycle. Use only U-Line Ice Machine Cleaner.
- b. Level unit for even water flow. Uneven water flow will reduce ice rate and cause water to spill in ice bin.

8. Will not fill with water

Cause

- a. No stand pipe in water trough.
- b. Water valve is defective.
- c. Water solenoid unplugged or wire to solenoid has internal break.

Remedy

- a. Install stand pipe.
- b. Replace valve.
- c. Repair wiring defect.

9. Continuous ice production

Cause

- a. Bin thermostat set too cold.
- b. Bin thermostat sensing bulb out of alignment.
- c. Bin thermostat stuck in closed position.
- d. Ice slab too thick.

Remedy

- a. Set bin thermostat to the 10:00 position.
- b. Insert bulb inside aluminum sensor tube.
- c. Replace bin thermostat.
- d. Set ice thickness adjustment dial to a lower setting. If cubes release from grid and are too thick, cubes might not make contact with sensor tube (inside of bin); therefore bin thermostat would never be satisfied.

10. Low (or no) ice production

Cause

- a. Dirty condensing coil (Control board light shows rapid flash).
- b. Stalled condenser fan blade (Control board light shows a rapid flash).
- c. No water in water trough.
- d. Bypass valve stuck in open position.
- e. Ice forms on a portion of evaporator grid.

Remedy

- a. Clean condensing coil.
- b. Free up the blade or replace fan motor.
- c. Install stand pipe securely in trough.
- d. Replace bypass valve.
- e. Check unit for system undercharge or leak.



NOTE: See chart of suction pressures in manual.

11. Poor ice quality (soft or unclear cubes)

Cause

- a. Poor incoming water quality.
- b. Deposit build-up on evaporator grid.
- c. Water splashing on cubes.

12. Unit not freezing (compressor and fan operating)

Cause

- a. Little or no cooling.
- b. Bypass valve stuck in open position.

13. Unit produces shallow or incomplete cubes or the ice fill pattern on the grid is incomplete

Cause

- a. Low water level.
- b. Low water pressure.
- c. Unit is not level.
- d. Operating unit without back or front panel.
- e. Bad thermistor.
- f. Bad control board.

14. Not freezing compressor not running / fan operating

Cause

- a. Bad overload (open).
- b. Bad compressor.

15. Not freezing (compressor and fan not operating)

Cause

- a. No electrical power to unit.
- b. Rocker switch defective or wired incorrectly.

Remedy

- a. Consult a plumber.
- b. Run the unit through a clean cycle. Use only U-Line Ice Machine Cleaner.
- c. Adjust water flow above evaporator.

Remedy

- a. Check sealed system for leak or restriction.
NOTE: See chart of suction pressures in manual.
- b. Replace bypass valve.

Remedy

- a. Check that standpipe is fully seated inside water trough.
- b. Check water pressure into water valve (pressure should be 20 to 120 psi).
- c. Level unit to assure even water flow. Uneven water flow will reduce ice rate and cause incomplete cubes. See Leveling Instructions in manual.
- d. Install back or front panel. The unit will harvest ice according to temperatures of tubing at condensing coil. Increased air flow will give the thermister false information. This info could cause the ice to eject prematurely.
- e. Replace thermister.
- f. Replace control board.

Remedy

- a. Replace overload.
- b. Replace compressor.

Remedy

- a. Make sure unit is plugged in and outlet has power.
- b. Make sure switch is wired correctly and set in "ICE" position.



IF UNIT HAS P-60 PUMP

Cause

- a. Drain tube kinked or obstructed.
- b. Bad pump. *Diagnose by bypassing the pump. Pull both pink wires from control board and jump the two terminals together. If unit starts up, then the pump is bad.*
- c. Open wire in wiring harness.

Remedy

- a. Clear the tubing. If water cannot drain from pump, unit will shut down due to safety design of pump.
- b. Change pump. Jumping the two terminals on control board together with a jumper wire will eliminate pump from the circuit.
- c. Trace defective wire and repair or replace parts accordingly.

16. Water leak under unit

Cause

- a. Incoming water supply line leaking.
- b. Fill tube leaking.
- c. Bin spout is cracked or mis-formed.

Remedy

- a. Make sure brass connection is screwed tight to valve and threaded correctly.
- b. Tighten fill tube connection to water line.
- c. Unit not repairable. Contact U-Line tech line for assistance.

17. Water in ice bin

Cause

- a. Bin drain kinked or restricted.
- b. External drain is restricted.
- c. Bad pump.

Remedy

- a. Clear drain of obstruction or kink.
- b. Clear restriction.
- c. Replace pump.

18. Water will not stop filling

Cause

- a. Water solenoid stuck in open position.
- b. Open relay on control board.

Remedy

- a. Replace water valve.
- b. Replace control board.

NOTE: *A defective relay on control board would cause both the water valve and reversing valve to stay open, therefore, this failure would not allow the unit to freeze.*

19. Unit noisy

Cause

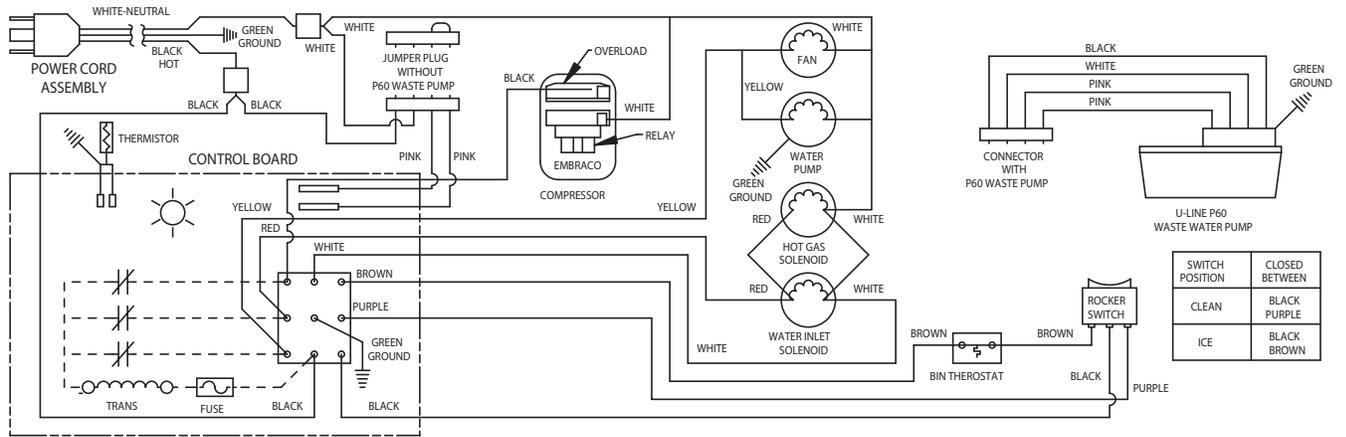
- a. Fan motor not secured to bracket.
- b. Fan blade bent.
- c. Vibration from refrigerant lines.
- d. Obstruction in fan blade.

Remedy

- a. Tighten motor.
- b. Realign or replace blade.
- c. Secure tubing.
- d. Remove obstruction.

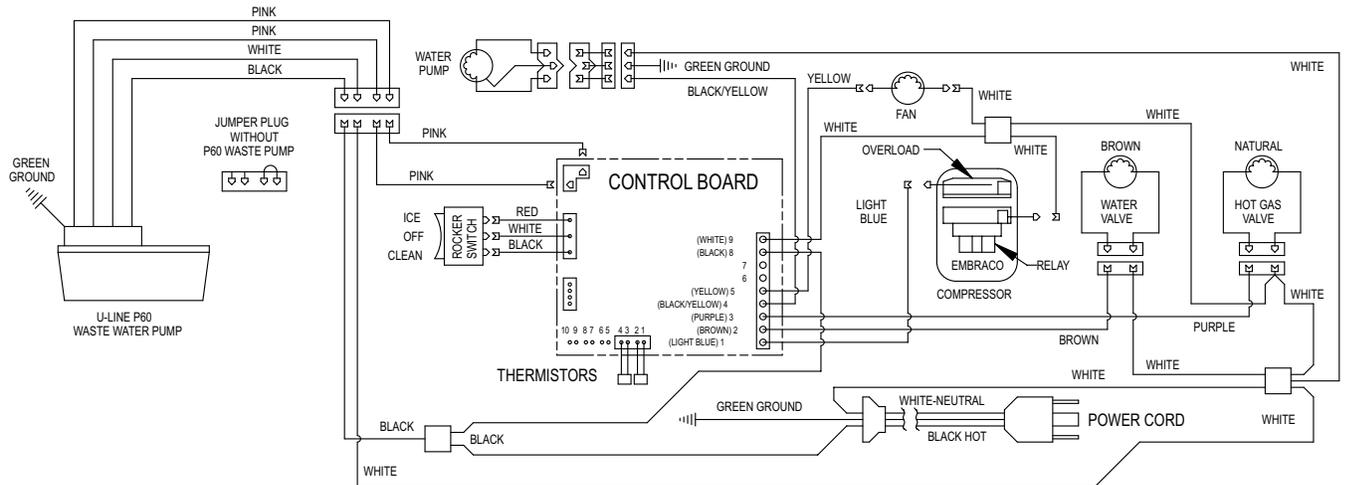
REPLACEMENT PARTS: Use only genuine U-Line replacement parts. The use of non U-Line parts can reduce ice rate, cause water to overflow from ice maker mold, damage the unit, and may void the warranty.

CLR2060 WIRING DIAGRAM



U-LINE42132

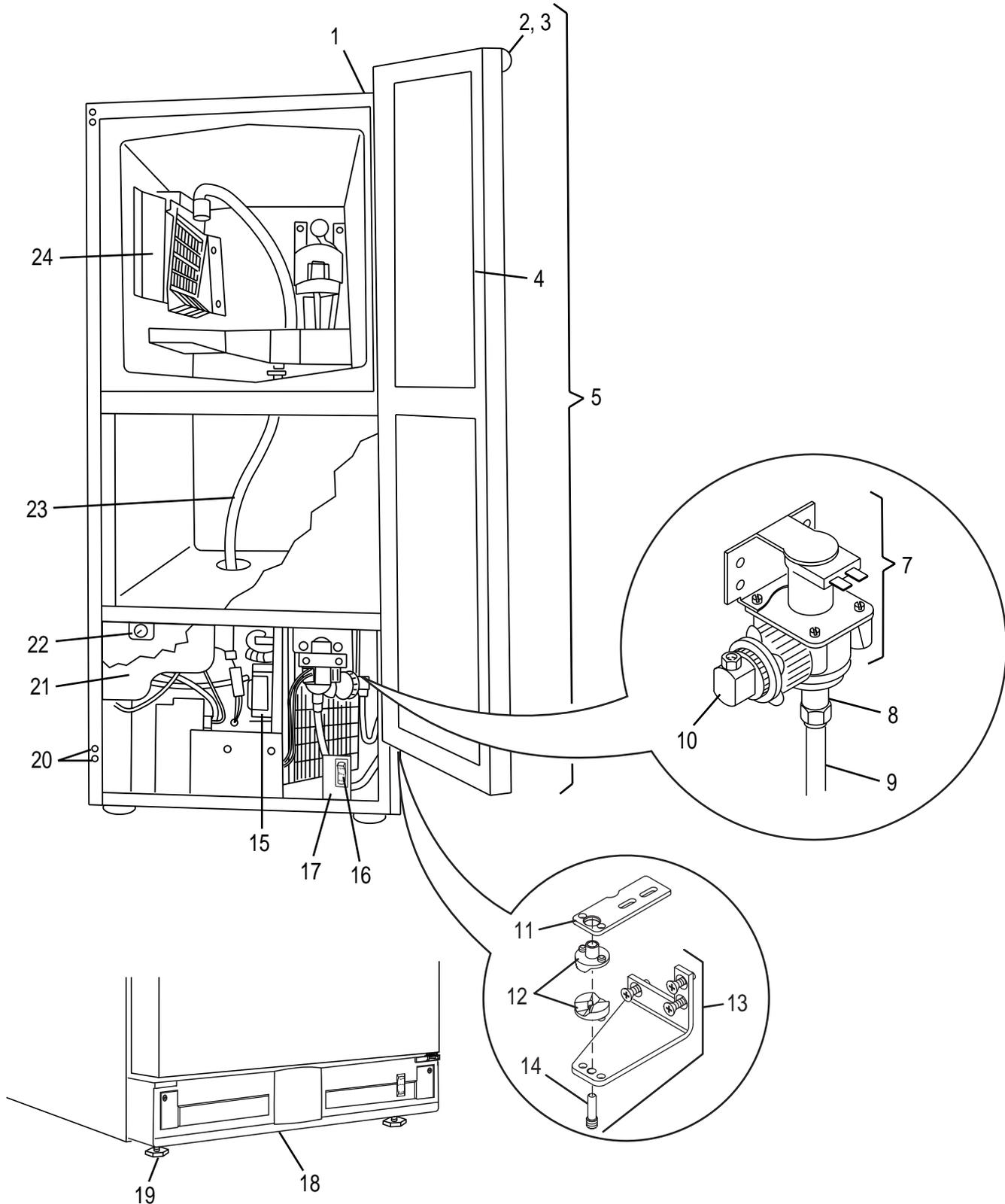
CLR2060 WIRING DIAGRAM WITH NEW BOARD



C42205.eps



CLR2060 - CLEAR ICE MAKER (1 OF 2)



CLR2060 - CLEAR ICE MAKER (1 OF 2)

Item	Description	White	Black	Stainless Steel
1	Hinge Assembly-Top R/H	11898-S-KIT	11898-S-BLK	11898-S-SS
2	Door Handle-Top	11926-6-KIT	11926-6-BLK	N/A
3	Door Handle Bottom	11927-6-KIT	11927-6-BLK	11927-6-BLK
4	Door Gasket Assembly	12094-06-S	12094-04-S	12094-05-S
5	Door Assembly	80-17007-02	80-17007-01	See Parts Not Shown
7	Water Valve Assembly	2716	2716	2716
8	Plastic Nut & Sleeve	41254	41254	41254
9	Water Line	404-CLR60	404-CLR60	404-CLR60
10	90 Degree Brass Fitting	41826	41826	41826
11	Pivot Plate	11901-1	11901-1	11901-1
12	Door Closer Assembly	31673-S	31673-S	31673-S
13	Hinge Assembly-Bottom R/H	11899-S-KIT	11899-S-BLK	11899-S-SS
14	Pivot Post	42096	42096	42096
15	Control Board	2707-S	2707-S	2707-S
16	Rocker Switch CLR2060	2285	2285	2285
17	Rocker Switch Mounting Bracket	12027	12027	12027
18	Grille	11942-KIT-01	11942-BLK-01	11942-BLK-01
19	Leveling Leg	41319	41319	41319
20	Threaded Hole Plug	31723-WHT	31723-BLK	41156
21	Lower Front Panel	12012-KIT	12012-BLK	12012-SS
22	Bin Thermostat	2756-S	2756-S	2756-S
23	Drain Tube (Clear)	2820-S	2820-S	2820-S
24	Evaporator Assembly	2276-S	2276-S	2276-S

Parts Not Shown

Item	Description	White	Black	Stainless Steel
	Door Assembly Stainless - Right Hand Hinge	N/A	N/A	80-17007-03
	Door Assembly Stainless - Left Hand Hinge	N/A	N/A	80-17007-13
	Door Handle Top Modified	N/A	N/A	11926-8-BLK
	Bin Thermostat Tube	11841-S	11841-S	11841-S
	Door Handle	N/A	N/A	11949

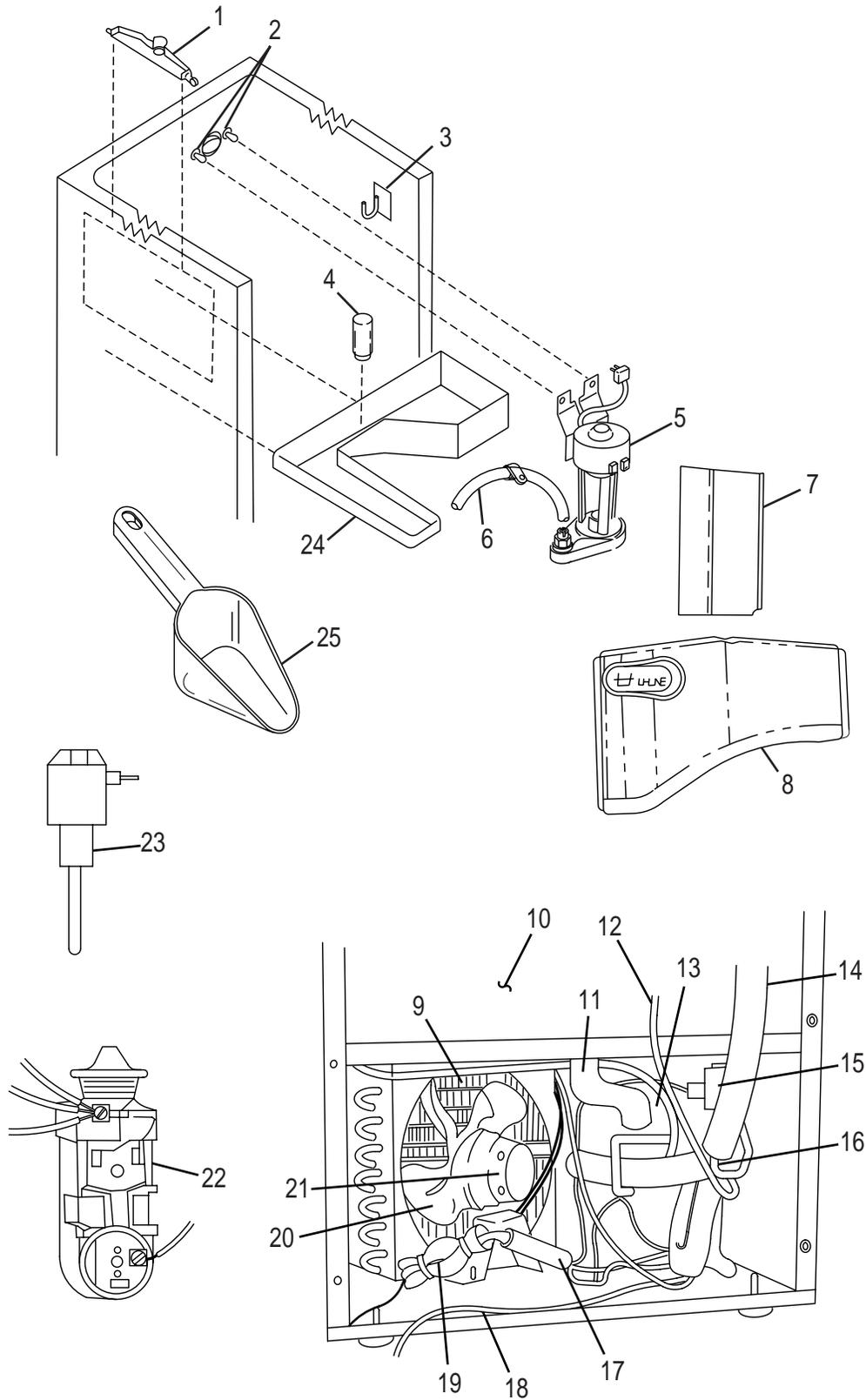
Alternate Parts 2004 Model

Control Board 68003-S

Control Board was moved to right side of base and the water valve was moved to the back of the unit.



CLR2060 - CLEAR ICE MAKER (2 OF 2)



U-LINE1017



CLR2060 - CLEAR ICE MAKER (2 OF 2)

Item	Description	White	Black	Stainless Steel
1	Water Dispersion Receptacle	11812-S	11812-S	11812-S
2	Well Nut	41979	41979	41979
3	Hook For Ice Scoop	42011	42011	42011
4	Stand Pipe	31619	31619	31619
5	Circulation Pump	31613	31613	31613
6	Pre-Formed Tube-White	31615-S	31615-S	31615-S
7	Circulation Pump Cover	11893	11893	11893
8	Cover-Front	11868	11868	11868
9	Condenser Assembly	2269-S	2269-S	2269-S
10	Back Panel	11964-01	11964-01	11964-01
11	Drain Tubing	31617-S	31617-S	31617-S
12	Wire - Pump To Power Cord	2284	2284	2284
13	Compressor	5406-S	5406-S	5406-S
14	Heat Exchanger Assembly	2725-S	2725-S	2725-S
15	Bypass Valve Solenoid	73001-S	73001-S	73001-S
16	Copper Tee	2296-S	2296-S	2296-S
17	Dryer	2850	2850	2850
18	Power Cord	2368	2368	2368-2
19	Thermistor Assembly	2709-S	2709-S	2709-S
20	Condenser Fan Blade	5303	5303	5303
21	Condenser Fan Motor	5300	5300	5300
22	Overload/Relay	5427	5427	5427
23	Bypass Valve Assembly	2749-S60	2749-S60	2749-S60
24	Water Trough	11813	11813	11813
25	Ice Scoop	31614	31614	31614
	Tube Retainer	26009	26009	26009

Parts Not Shown

Item	Description	White	Black	Stainless Steel
	U-Line Specified CLR2060 Cleaner - 6 Applications Per Order	41978	41978	41978
	U-Line Specified Drain Pump Kit	ULN-P60-00	ULN-P60-00	ULN-P60-00

Alternate Parts 2005 Model

Compressor	70081-S
Overload	71027
Relay	71028
Danfoss Bypass Valve Assembly	73002-1-S
Power Cord	2898-2







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