

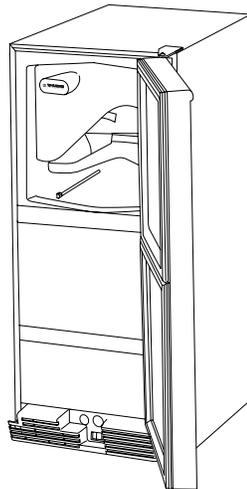


U-LINE
CORPORATION

SERVICE AND PARTS MANUAL

For Product Manufactured With
HFC-134A Freon

CLR60 Clear Ice Maker



U-Line Corporation

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Service and Parts Manual

NOTES

INTRODUCTION

Three generations of pride in quality manufacturing and design improvements are built into all U-Line products.

We are proud and excited to announce the latest edition to the U-Line family of products, the CLR60, a 60-pound clear ice maker. We have been developing this product for over two years and are excited about the quality and features which are unmatched by any other model in its class. In addition to producing more ice than all other models in its class, the U-Line CLR60 offers new, patented technology. We have reduced water consumption by 50% per pound of ice compared to some other models on the market. The CLR60 has the easiest self cleaning process of any model in its class. All clear ice makers require periodic cleaning due to minerals in the water. We have simplified this process through our electronic control which means ease and convenience for our customers. This model also uses a commercial-grade water circulation pump which is permanently sealed and lubricated, this pump increases the life and performance of the ice maker. This pump requires no maintenance.

Finally, we have developed an exclusive drain pump for those installations in which a floor drain is not available. The U-Line P60 pump is a fully submersible, self lubricating pump that requires no maintenance. It is sealed to prevent water overflow in the event of a power failure or drain line restriction and is fully integrated into the automatic shut off feature of the CLR60 with a "quick connect" plug right into the power cord. The P60 pump is available only through U-Line or our Distributors and Dealers.

This service manual contains specific instructions for servicing U-Line's newest model the CLR60 - Clear Ice Maker.

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Warranty Statement

On 11-1-98, U-Line Corporation modified the warranty provided with our units. We have significantly improved the coverage of the sealed system in years two through five of the unit's life. The new warranty covers parts and labor for one year from the date of purchase. In years two through five, from the date of purchase, the warranty covers parts and labor for the entire sealed system. The sealed system consists of the compressor, condenser, evaporator, heat exchanger, dryer, hot gas bypass-valve and all connecting tubing.

This decision reflects our continuing commitment to strive to maintain the leadership position within the under counter refrigeration and ice making industry whether that be through design, product innovation, or enhanced consumer warranties. This decision reinforces the confidence that U-Line has in the performance and reliability of our products.

Our previous warranty covered parts and labor for one year from the date of purchase plus four additional years for the compressor, part only.

The new, modified warranty applies **only to units shipped after 11-1-98**. All units shipped before 11-1-98 have the previous warranty.

PRODUCTS SHIPPED BEFORE 11-1-98 - Warranty covers parts and labor for one year from the date of purchase, plus four additional years for the compressor (part only).

PRODUCTS SHIPPED AFTER 11-1-98 - Warranty covers parts and labor for one year from the date of purchase and covers parts and labor for the entire sealed system for five years.

DETERMINING SHIP DATES

In order to assure that U-Line is Y2K compliant, we have recently completed a major computer system modification. The new computer system has led to changes in the way we operate in most areas of the company. You'll soon notice that our packing lists are different, our invoices are different, our checks are different, and more. The change that will impact you the most is the change in serial numbers.

With the new computer system, our serial number format has changed. There are some definite advantages that go with the new format, such as being able to tell the month and year in which the unit was produced.

The new serial number format breaks the number down into four segments. A typical serial number is 99 918-06-9351. The first segment —99, represents the year that the unit was made. The second segment – 918, represents the shop order number. This can be a three or four digit number. Order number 918 is assigned for Model 29 Black –00 units made in June. The third segment – 06 represents the month that the unit was made. The fourth segment – 9351 represents a sequence of numbers that is used internally 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 Registration Card included with the product should be promptly completed by you and mailed back to U-Line.

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.

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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 Corp. 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 would be 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.

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 Warning or Caution.

WARNING

Warning means that failure to follow this safety statement may result in extensive product damage, serious personal injury, or death.

CAUTION

Caution means that failure to follow this safety statement may result in minor or moderate personal injury, property or equipment damage.

WARNING

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.

WARNING

- 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.

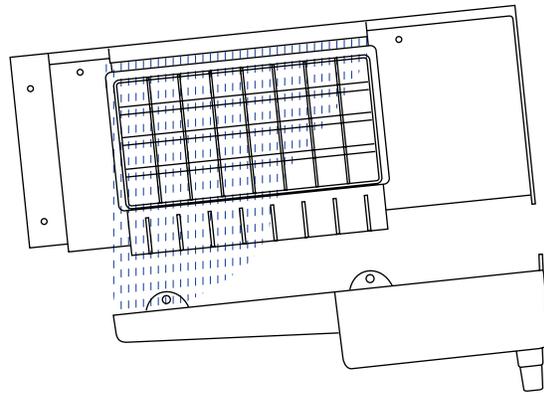
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LEVELING AND INSTALLATION REQUIREMENTS

The objective of this section is to assist the service technician in diagnosing problems that are related to installation and/or leveling.

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 that floors near drains have a tendency to slope towards the drain.

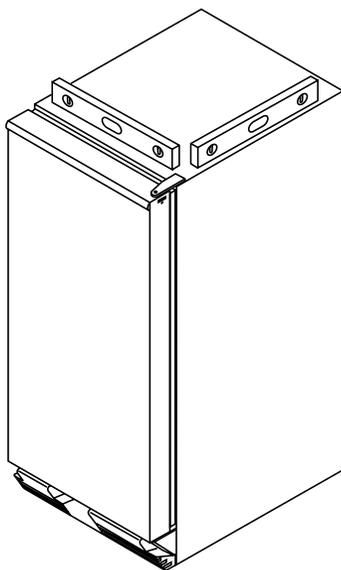


UL307

Figure A

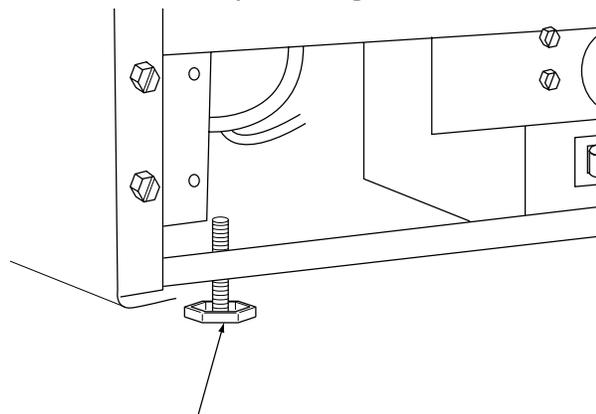
Leveling the Unit

1. Use a level to check the levelness of the icemaker from front to back and from side to side. See 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 the levelness after each adjustment and repeat the previous steps as necessary until the unit is level.



UL215

Figure B



UL205

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

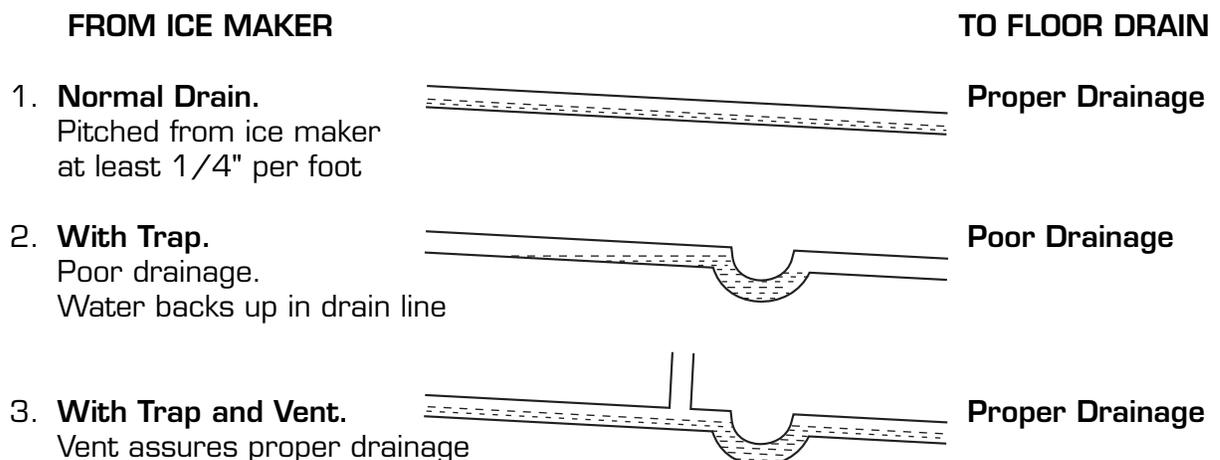
Plumbing installation must observe all state and local codes.

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 inch inside diameter
- Drain lines must have a 1 inch drop per 48 inches of run (1/4 inch 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

If water is backing up into the storage bin, it will be the result of one of the above points not being followed. Below are examples of gravity drain line installations for your review. If there must be a trap in the drain line, it is critical that the drain line is vented to assure proper draining. Without the vent, water will backup until enough pressure builds up to force the water past the trap. The problem is that the 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 because the ice that has been made is melting prematurely due to water 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, and you have not purchased the CLR60 with factory installed pump, install the U-Line P60 drain pump in the rear compartment of the ice maker. The U-Line P60 drain pump is available through your Dealer, or direct from U-Line with complete installation instructions.

If a gravity drain connection is not available, and you have not purchased the CLR60 with factory installed pump, U-Line strongly recommends the use of the U-Line P60 drain pump. 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).

In the event of a power outage, restricted drain or pump failure, the failure to use the U-Line P60 drain pump or a pump with the above listed specifications, could result in substantial water leakage and pooling with severe and costly water damage and related consequential damages and harm.

AUTOMATIC CLEAN CYCLE INSTRUCTIONS

Automatic Clean Cycle

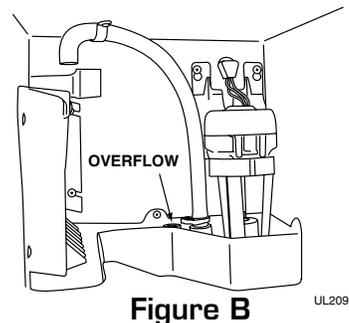
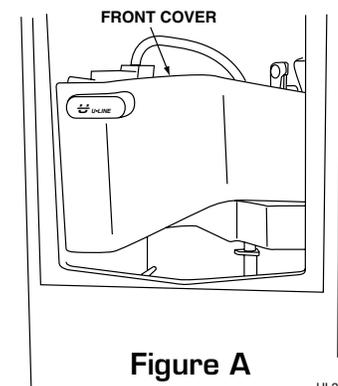
To maintain operational efficiency, clean unit every six months (depending on water conditions more or less frequent cleaning may be necessary). If the ice maker requires more frequent cleaning, consult a qualified plumber to test the water quality and recommend appropriate treatment. Use only U-Line 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 and 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 side-wall. 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 3 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). At this time, 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 1 tablespoon of bleach and 1 gallon of water. Rinse thoroughly with clean water.
4. Check that all drain connections are in place.
5. Reconnect power to the unit.

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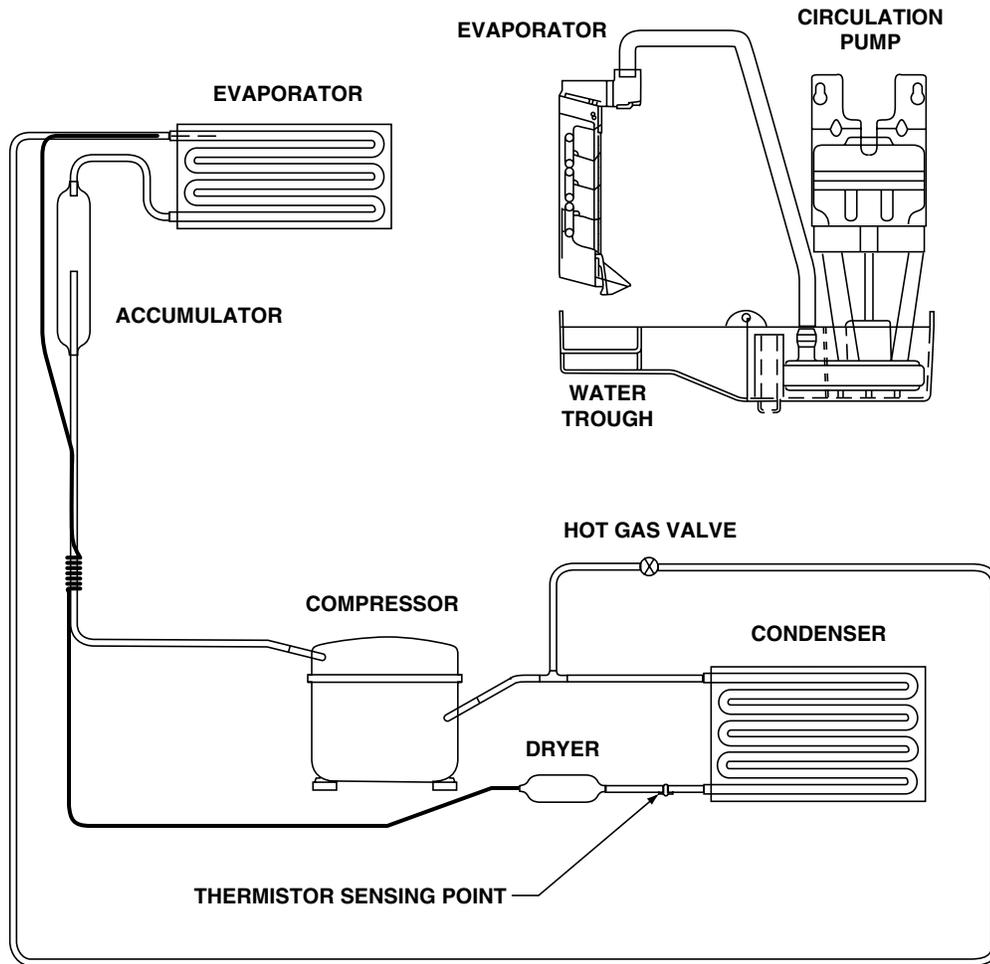
U-LINE CLR60 SEQUENCE OF OPERATION

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 (3 minutes). This ensures that the icemaking cycle starts with fresh water, and that 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, and 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 remains off until enough ice has been removed from the bin or has melted that the ice cubes are no longer in contact with 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

Service and Parts Manual

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.

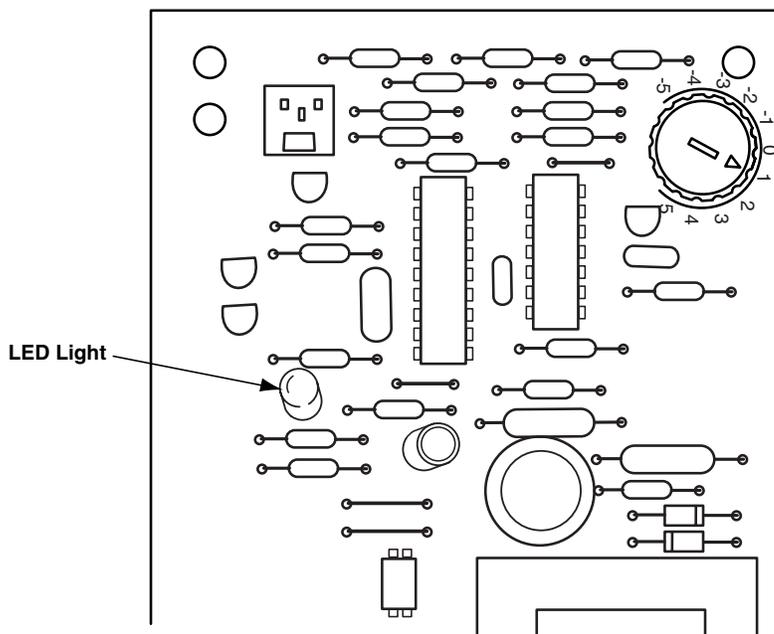
Thermistors generally fail due to moisture or physical damage. U-Line “high side” thermistors are encased in a specially-designed, moisture-sealed aluminum block. The thermistor is also mounted to the “high side” or “dry” portion of the refrigeration system. This eliminates physical damage and moisture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

Check Procedure w/LED Light on Control Board

The LED light on the control board serves three functions.

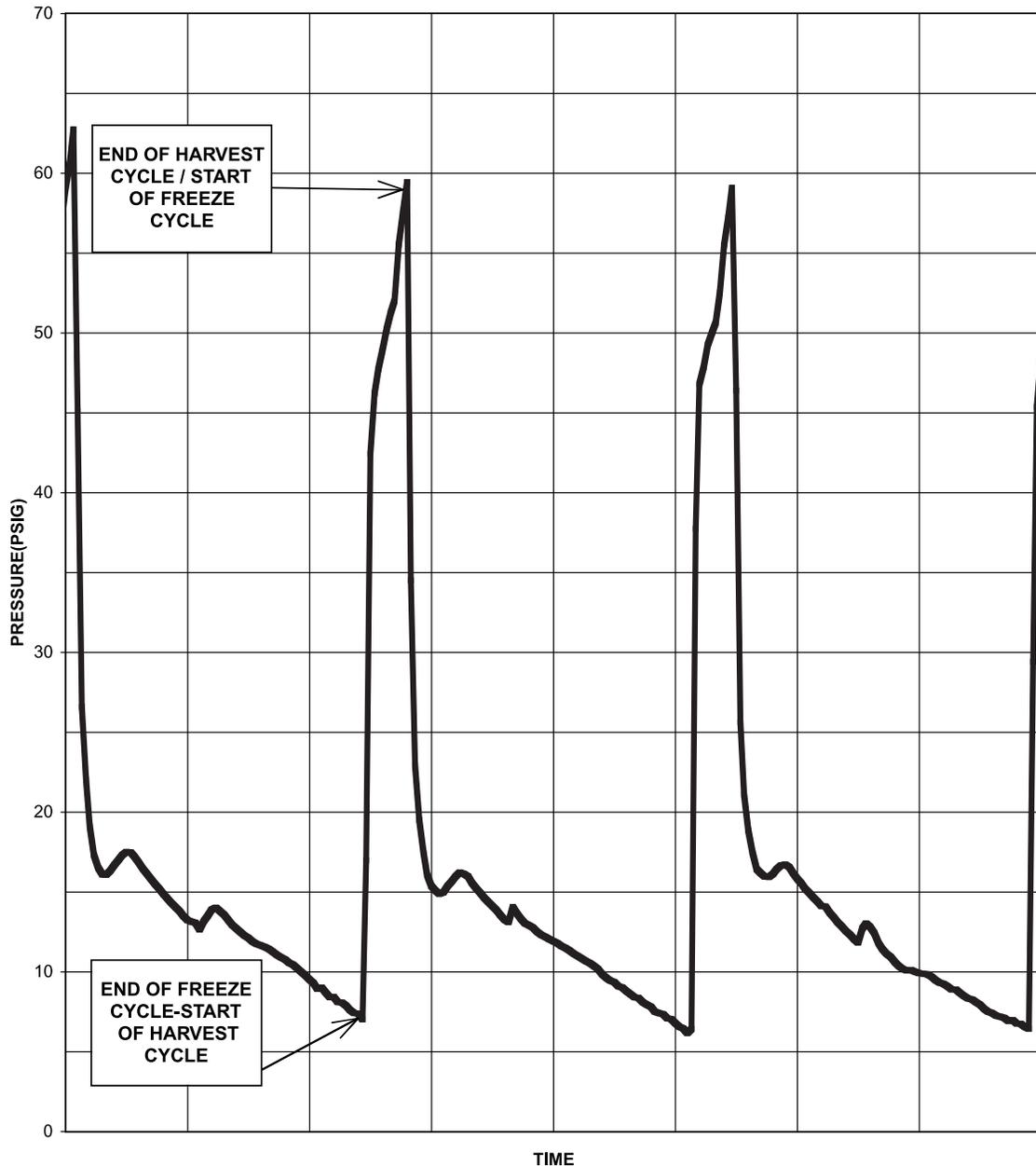
- 1. Steady light -** The control board has power to it. There are no sensing problems and operation is normal.
- 2. Slow flash -** The control board has detected a sensor problem. This will happen if the thermistor’s plug is disconnected from the control board. This will also happen if the thermistor fails open.
- 3. Rapid flashing -** This indicated that 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

Low Side Pressure Changes



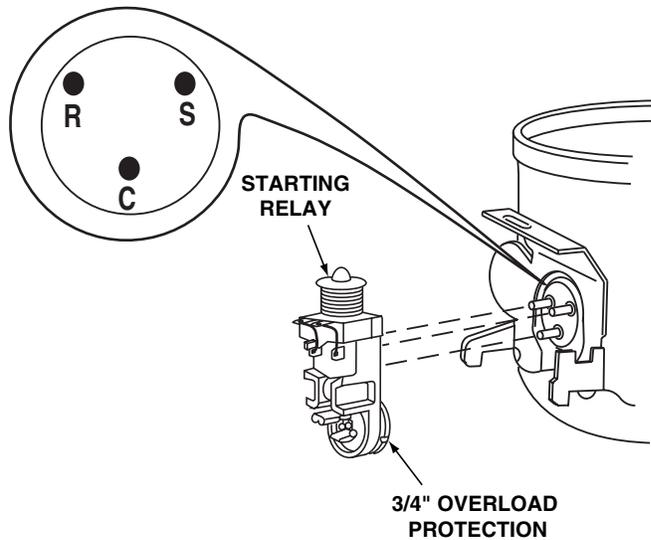
The chart above shows the low side pressure changes through the cycles of a CLR60 unit. It shows that during a harvest cycle, the low side pressures climb to nearly 60 psig. When the freeze cycle starts, the pressure quickly drops to approx. 17 psig and throughout the freeze cycle it continues to slowly drop to approx. 7 psig just before the harvest cycle.

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

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.

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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. These pins should never measure any resistance to ground. This would indicate a shorted compressor.

Specifications:

FF7.5HBK Compressor Start Winding	12.0 OHMS
FF7.5HBK Compressor Run Winding	2.9 OHMS
CLR60 Water Valve Coil Resistance	280 OHMS
Bypass Coil Resistance	380 OHMS
Pump Motor Winding Resistance	71.5 OHMS

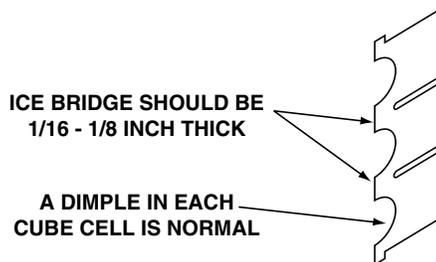
Refrigeration System Diagnosis Guide

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" vacuum	Room temperature (cool)	Cool to hot	Room temperature (cool)	Room temperature (cool)	No refrigeration	Lower than normal

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ICE THICKNESS ADJUSTMENT

The ice thickness control is factory set to maintain an ice bridge of 1/16" to 1/8". A dimple in each cube is normal. This size cube will break apart from the slab easily as it falls into the ice bin. A fuller cube, with less of a dimple, can be achieved by adjusting the cube size. This will result in a thicker ice bridge. As the ice bridge becomes thicker, the tendency for the cubes to stay together as a slab increases.



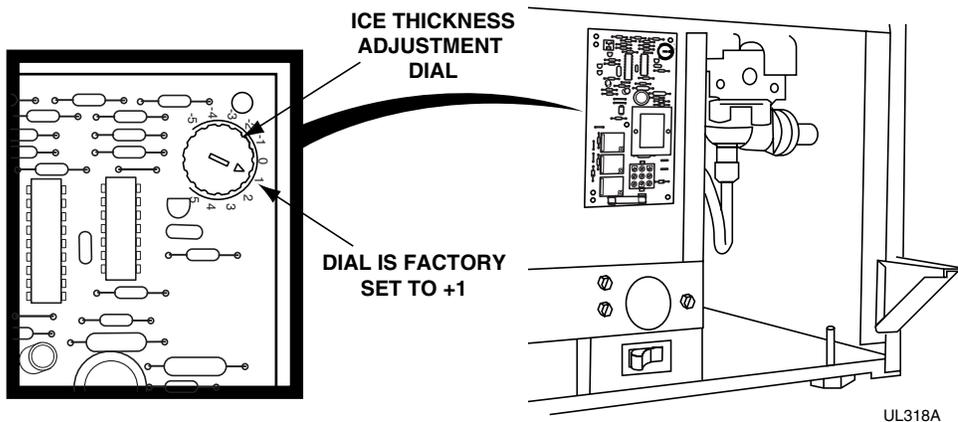
UL250

If an adjustment is needed, perform the following steps:



Do not touch electrical wires. Disconnect power to the ice maker before making any ice thickness adjustments.

1. Disconnect power from the unit.
2. Remove front access panel (2 screws).
3. Locate the ice thickness adjustment dial on the control board (See below).



NOTE

Ice thickness adjustment dial should be turned only one increment at a time. Allow the unit to stabilize for 24 hour hours before making further adjustments.

4. Turn ice thickness adjustment dial clockwise for a thicker ice bridge or counterclockwise for a thinner ice bridge.
5. Reinstall front access panel.
6. Reconnect power.

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.

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TROUBLESHOOTING



WARNING



NEVER attempt to repair or perform maintenance on 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

- No electrical power to the unit
- Rocker switch set incorrectly
- Drain tube is kinked or obstructed
- 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

- Make sure unit is plugged in and outlet has power
- Check switch wiring. Set to "ICE"
- Clear the tubing^a
- Change pump^b

a: If water cannot drain from pump, unit will shut down due to safety design of pump.

b: Jumping the two terminals on control board together 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

- No power to unit

Remedy

- Jumper plug off power cord

3. Unit Does Not Operate And Light On Control Board is Illuminated

Cause

- Bad bin thermostat
- Bin thermostat set incorrectly

Remedy

- Replace bin thermostat^c
- Set bin thermostat at the 10:00 position

c: The unit is falsely sensing a full bin.

4. No Ice Production

Cause

- No water supplied to unit
- Stand pipe not inserted in water trough
- Re-circulating pump is defective

Remedy

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

5. Low Ice Production

Cause

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

Remedy

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

- Bin thermostat set incorrectly
- Wiring plug off of bypass valve coil
- Defective bypass valve
- Deposit build-up on evaporator grid

Remedy

- Set bin thermostat at 10:00 position
- Re-install plug
- Replace bypass valve
- Run unit through the clean cycle. Use only U-Line Ice Machine Cleaner^e

e: If scale or mineral deposits accumulate on grid, cubes will not fall freely.

7. Ice Is Slow To Release From Evaporator

Cause

- Deposit build-up on evaporator grid
- Unit not level

Remedy

- Run unit through the clean cycle. Use only U-Line Ice Machine Cleaner.
- Level unit for even water flow^f

f: Uneven water flow will reduce ice rate and cause water to spill in ice bin.

8. Will Not Fill With Water

Cause

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

Remedy

- Install stand pipe
- Replace valve
- Repair wiring defect

9. Continuous Ice Production

Cause

- Bin thermostat set too cold
- Bin thermostat sensing bulb out of alignment
- Bin thermostat stuck in closed position
- Ice slab too thick

Remedy

- Set bin thermostat to the 10:00 position
- Insert bulb inside aluminum sensor tube
- Replace bin thermostat
- Set ice thickness adjustment dial to a lower setting^g

g: 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.

Service and Parts Manual

10. Low (or no) Ice Production

Cause

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

Remedy

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

NOTE: See chart of suction pressures in manual.

11. Poor Ice Quality (soft or unclear cubes)

Cause

- Poor incoming water quality
- Deposit build-up on evaporator grid
- Water splashing on cubes

Remedy

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

12. Unit Not Freezing (compressor and fan operating)

Cause

- Little or no cooling
- Bypass valve stuck in open position

Remedy

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

13. Unit Produces Shallow or Incomplete Cubes or the Ice Fill Pattern on the Grid is Incomplete

Cause

- Low water level
- Low water pressure
- Unit is not level
- Operating unit without back or front panel
- Bad thermister
- Bad control board

Remedy

- Check that standpipe is fully seated inside water trough
- Check water pressure into water valve (pressure should be 20 to 120 psi).
- Level unit to assure even water flow^h
- Install back or front panelⁱ
- Replace thermister
- Replace control board

h: uneven water flow will reduce ice rate and cause incomplete cubes. See Leveling Instructions in manual.

i: 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.

14. Not Freezing Compressor Not Running / Fan Operating

Cause

- Bad overload (open)
- Bad compressor

Remedy

- Replace overload
 - Replace compressor
-

15. Not Freezing (compressor and fan not operating)

Cause

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

Remedy

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

IF UNIT HAS P-60 PUMP

Cause

- Drain tube kinked or obstructed
- 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.*
- Open wire in wiring harness

Remedy

- Clear the tubing^j
- Change pump^k
- Trace defective wire and repair or replace parts accordingly

j: If water cannot drain from pump, unit will shut down due to safety design of pump.

k: Jumping the two terminals on control board together with a jumper wire will eliminate pump from the circuit.

16. Water Leak Under Unit

Cause

- Incoming water supply line leaking
- Fill tube leaking
- Bin spout is cracked or mis-formed

Remedy

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

17. Water In Ice Bin

Cause

- Bin drain kinked or restricted
- External drain is restricted
- Bad pump

Remedy

- Clear drain of obstruction or kink
- Clear restriction
- Replace pump

18. Water Will Not Stop Filling

Cause

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

Remedy

- Replace water valve
- 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

- Fan motor not secured to bracket
- Fan blade bent
- Vibration from refrigerant lines
- Obstruction in fan blade

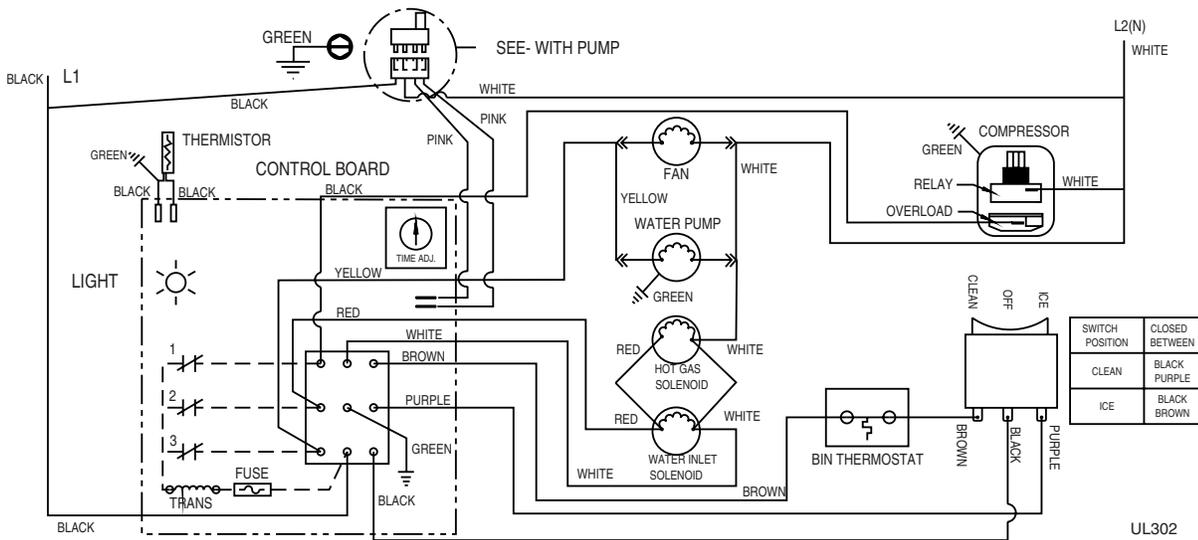
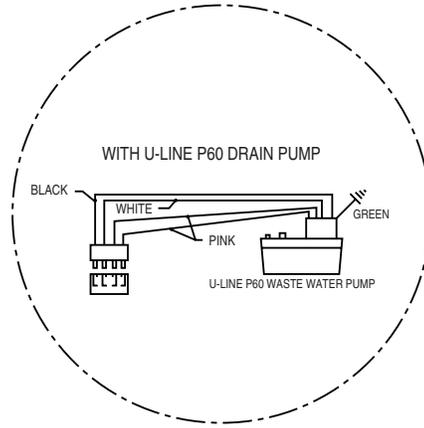
Remedy

- Tighten motor
- Realign or replace blade
- Secure tubing
- Remove obstruction

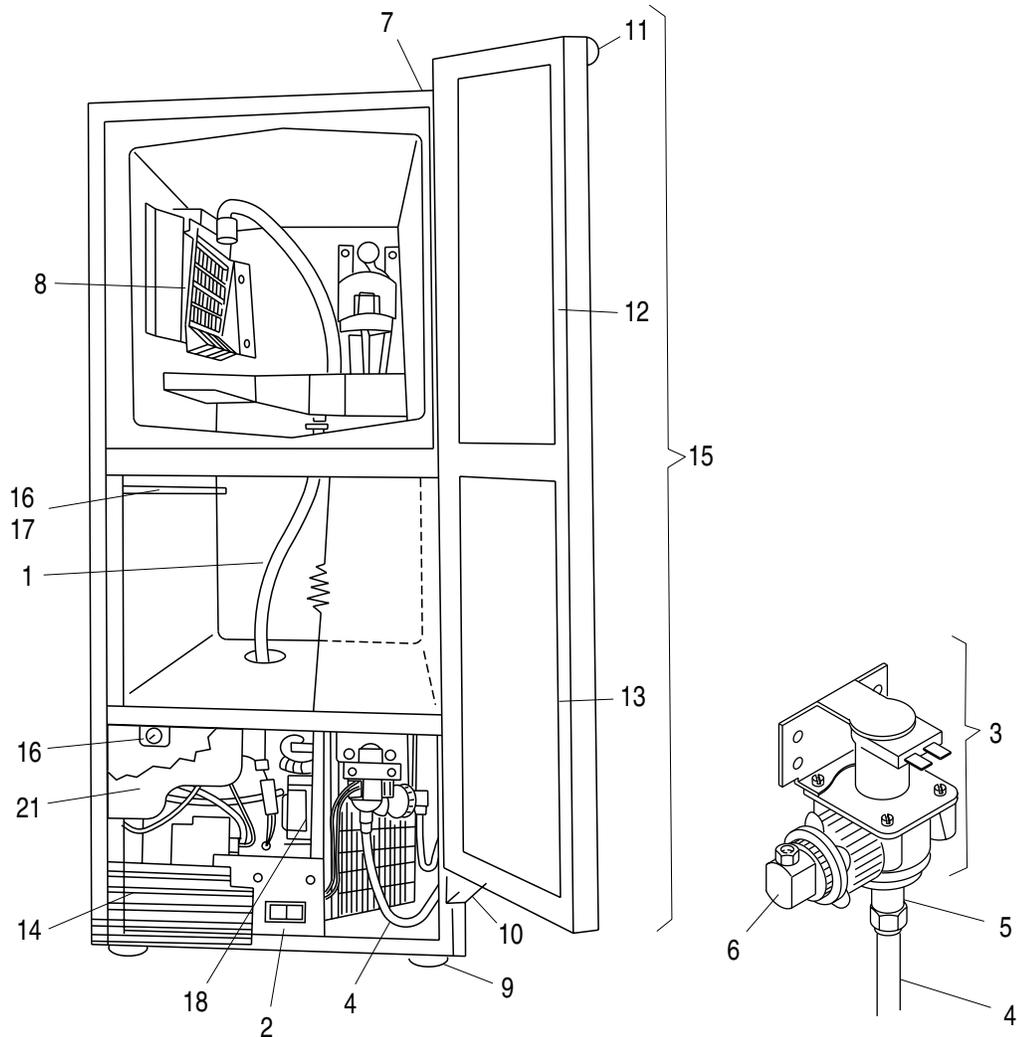
REPLACEMENT PARTS: Use only genuine U-Line replacement parts. The use of non U-Line parts can reduce ice rate, cause water to overflow from ice maker mold, damage the unit, and may void the warranty.

Service and Parts Manual

CLR60 WIRING DIAGRAM



CLR60 - Clear Ice Maker



Top Pivot Screw - 41785 - Specify Color
 Bottom Pivot Screw - 41747 - Specify Color

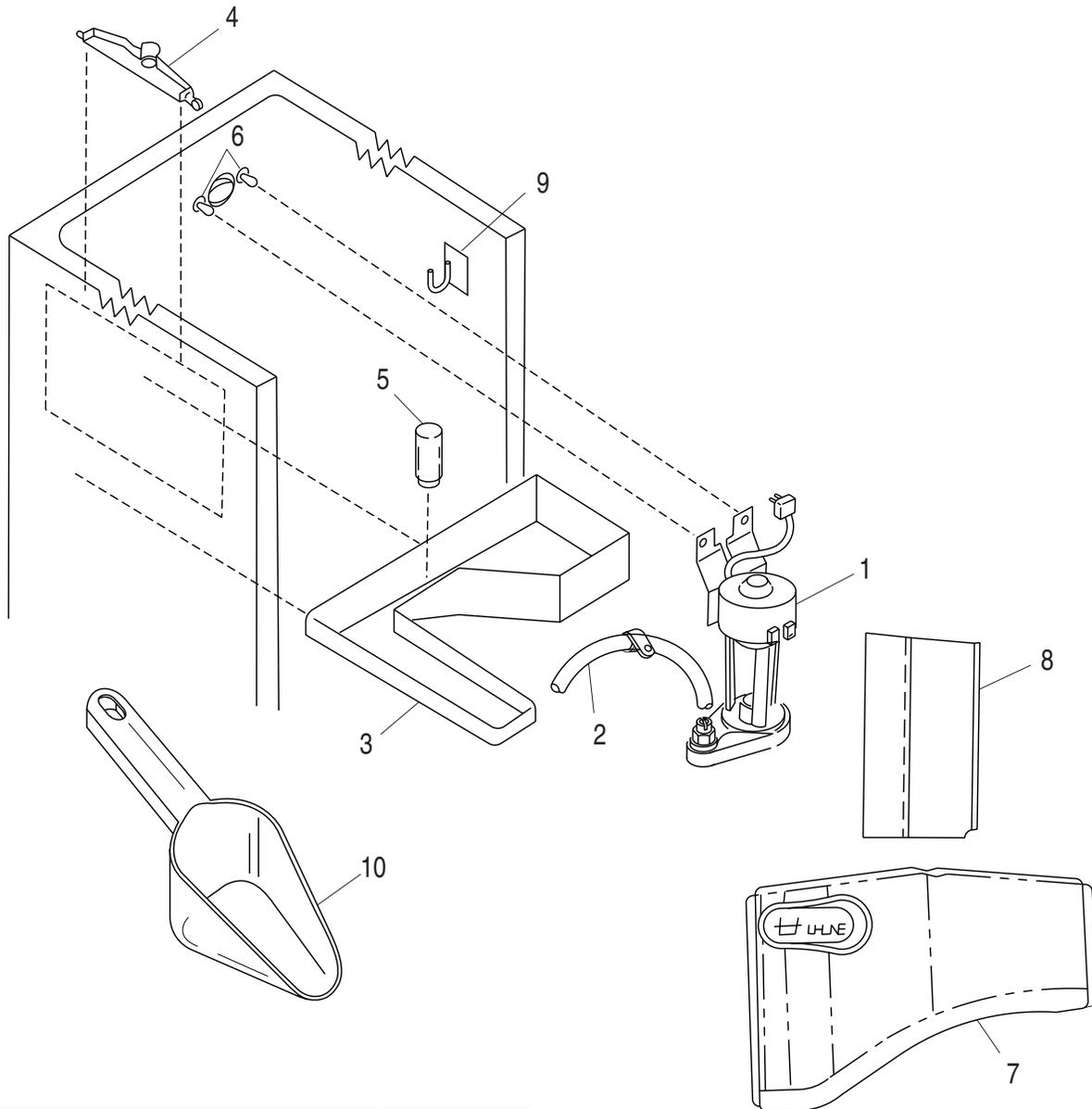
CLR60A

Item	Description	Part No.	Item	Description	Part No.
1	Drain Tube (Clear)	2820-S	11	Door Handle	31489-2**
2	Rocker Switch CL60	2285		Door Handle, Stainless Steel	42021
3	Water Valve	2716	12	Door Gasket Upper	31625*
4	Water Line	404-CLR60	13	Door Gasket Lower	31626*
5	Nut Sleeve Assembly	41254	14	Grille	31543*
6	90 Degree Brass	41826	15	Door Assembly	CLR60-DOOR*
7	Hinge Top	11697-ST*	16	Bin Thermostat	2708
	Hinge Top, Stainless Steel	1848A-SS	17	Bin Thermostat Tube	11841
8	Evaporator Assembly	2276-S	18	Control Board	2707-S
9	Leveling Leg	41319	21	Lower Front Panel	11816*
10	Hinge Bottom	11695-S*	**	Hinge Plate Top (Not Shown)	1847-1-SS
	Hinge Bottom, Stainless Steel	11624-1-S-BLK	**	Hinge Plate Bottom (Not Shown)	1847-2-SS

*Please indicate color.
 **Stainless Steel Only.

Service and Parts Manual

CLR60 - Clear Ice Maker

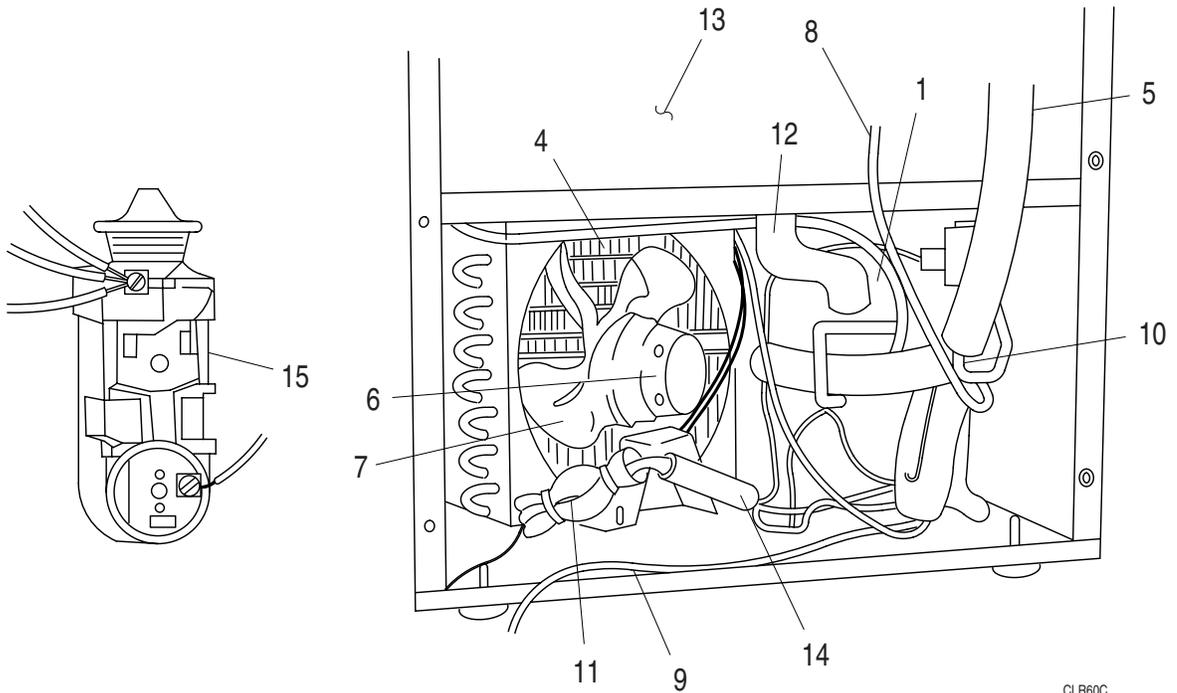
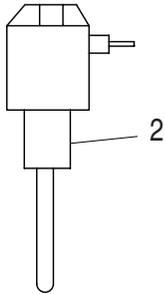


CLR60B

Parts Not Shown	Part No.
U-Line Specified CLR60 Cleaner (Six applications per order)	41978
U-Line Specified Drain Pump	P60

Item	Description	Part No.	Item	Description	Part No.
1	Pump	31613	6	Well Nut	41979
2	Pre-formed Tube (White)	31615-S	7	Cover (Front)	11868
3	Water Trough	11813	8	Pump Cover (Rear)	11893
4	Water Disp. Receptacle	11812	9	Hook for Ice Scoop	42011
5	Stand Pipe	31619	10	Ice Scoop	31614

CLR60 - Clear Ice Maker



CLR60C

Item	Description	Part No.	Item	Description	Part No.
1	Compressor	5406-S	9	Power Cord	2282
2	Bypass Valve Assembly	2749-S60	10	Copper "T"	2296-S
4	Condenser Assembly	2269-S	11	Thermistor	2709-S
5	Heat Exchanger Assembly	2725-S	12	Drain Tubing	31617-S
6	Condenser Fan Motor	5300	13	Back Panel	41802
7	Condenser Fan Blade	5303	14	Drier	2693
8	Wire	2284	15	Overload/Relay	5427

Service and Parts Manual

PARTS LISTING

How to Order Replacement Parts

1. Locate the illustration(s) for the model you are servicing.

NOTE

Some models may have more than one illustration based on Serial Number breaks.

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 below the product illustration. Note the full description and the corresponding part number. If this is for a warranty unit, please indicate so.
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 parts listed below if replaced under warranty:
 - Pumps
 - Control Boards
 - Evaporator Assemblies
 - Fan Motors
 - Bin Thermostat
 - Solenoid Valves
 - Bypass Solenoids
 - Compressors (during the first two years only)

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. When returning parts please enclose a copy of your packing list and a copy of your labor claim, showing the model and serial number.

Our warranty records may not match the customers information. In which 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 or phone.

FAX Number (414) 354-7905

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

Toll Free 1-800-779-2547

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.

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