



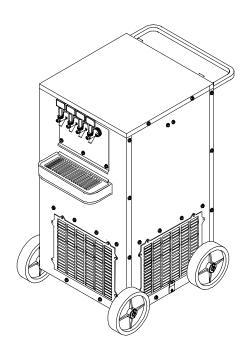


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# Service Manual C-1550XR UNIVERSAL PRE-MIX DISPENSER (R-404A REFRIGERANT)



Part No. 309989004 January 7, 1986 Revised: January 27, 1999 Control Code A

# THIS DOCUMENT CONTAINS IMPORTANT INFORMATION

This Manual must be read and understood before installing or operating this equipment

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# SAFETY INFORMATION

### **Recognize Safety Information**

This is the safety-alert symbol. When you see this symbol on our machine or in this manual, be alert to the potentially of personal injury.

Follow recommended precautions and safe operating practices.



## **Understand Signal Words**

A signal word - **DANGER**, **WARNING**, OR **CAUTION** is used with the safety-alert symbol. **DANGER** identifies the most serious hazards.

Safety signs with signal word **DANGER** or **WARNING** are typically near specific hazards.

General precautions are listed on **CAUTION** safety signs. **CAUTION** also calls attention to safety messages in this manual.



## **Follow Safety Instructions**

Carefully read all safety messages in this manual and on your machine safety signs. Keep safety signs in good condition. Replace missing or damaged safety signs. Learn how to operate the machine and how to use the controls properly. Do not let anyone operate the machine without instructions. Keep your machine in proper working condition. Unauthorized modifications to the machine may impair function and/or safety and affect the machine life.

## CO<sub>2</sub> (Carbon Dioxide) Warning

 $CO_2$  Displaces Oxygen. Strict Attention *must* be observed in the prevention of  $CO_2$  (carbon dioxide) gas leaks in the entire  $CO_2$  and soft drink system. If a  $CO_2$  gas leak is suspected, particularly in a small area, *immediately* ventilate the contaminated area before attempting to repair the leak. Personnel exposed to high concentration of  $CO_2$  gas will experience tremors which are followed rapidly by loss of consciousness and suffocation.

#### Shipping, Storing, Or Relocating Unit

CAUTION: Before shipping, relocating, or storing this Unit, the product coils *must* be flushed with potable water, all water *must* be purged from the product coils, ice bank *must* be melted, and water *must* be drained from the water tank. A freezing ambient environment will cause residual water remaining inside the Unit to freeze resulting in damage to the Unit internal components.

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# **GENERAL INFORMATION**

#### TO THE USER OF THIS MANUAL

This Manual is a guide for servicing and maintaining this equipment. Refer to Table of Contents for page location of detailed information pertaining to questions that may arise.

This Unit must be installed and serviced by a qualified Service Person. This Unit contains no User serviceable parts.

## **CLAIMS INSTRUCTIONS**

Claims: In the event of shortage, notify the carrier as well as IMI Cornelius immediately. In the event of damage, notify the carrier. IMI Cornelius is not responsible for damage occurring in transit, but will gladly render assistance necessary to pursue your claim. Merchandise must be inspected for concealed damage within 15 days of receipt.

## WARRANTY REFERENCE INFORMATION

	Warranty Registration Date (to be filled out by customer)
Unit Part Number:	
Serial Number:	
Install Date:	
Local Authorized Service Center:	

## **DESIGN DATA**

Table 1. Design Data	
Unit Part Numbers:	
Universal C-1550XR Four-Flavor	2849749020
Universal C-1550XR Four-Flavor	2849749200
Universal C-1550XR Five-Flavor	2849759200
Universal C-1550XR Five-Flavor (230 VAC, 50 Hz)	4949759020
Universal C-1550XR Five-Flavor (115 VAC, 60 Hz)	2849759020
Universal C-1550XR Five-Flavor (230 VAC, 50 Hz)	4949759200
Overall Dimensions:	
	10.1/0:
Height	42-1/2 inches
Width	21-3/4-inches
Depth (with drip tray)	31-1/2 inches
Weights:	
Shipping (1 Carton)	189 pounds
Dry Weight	170 pounds
With Water Tank Full of Water	403 pounds
Ice Bank Weight	100 pounds
Capacities:	
Unit Water Bath (no ice bank) approx.	28 gallons

Table 1. Design Data (cont'd)				
Dispensing Rate:				
12-oz. drinks 8/minute	724 (see <b>NOTE</b> )			
NOTE: *Number of 12-oz. drinks that can be dispensed at 40° F or below with and 75° F ambient.	n 75° F product inlet temperature			
Refrigerant Requirement	See Unit Nameplate			
Ambient Operating Temperature	40° F to 100° F			
Electrical Requirements:	See Unit Nameplate			

#### UNIT DESCRIPTION

The Unit (see Figure 1) is equipped with manually operated self-closing dispensing valves. The Unit is equipped with a handle and wheels which makes it a mobile Unit. The refrigeration system is equipped with a 3/4 H.P. compressor that is easily accessible for service and maintenance.

### THEORY OF OPERATION

(see Figure 4)

A  $CO_2$  cylinder delivers carbon dioxide ( $CO_2$ ) gas through adjustable  $CO_2$  regulators to the product tanks. When dispensing valves are opened,  $CO_2$  pressure exerted upon the product tanks pushes product from the tanks, through the Unit cooling coils, and on to the dispensing valves resulting in cold dispensed drinks.

When Unit power cord has been plugged into the electrical outlet and power switch (115 VAC, 60-Hz Units only) on back of the Unit has been positioned to "ON" (up) position, the compressor, condenser fan motor, and agitator motor will start and begin forming an ice bank. When a full ice bank has been formed, the compressor and condenser fan motor will stop but the agitator motor will continue to operate, circulating ice water bath in water tank. The water tank ice bank sensing bulb will cycle the compressor and the condenser fan motor on and off as required to maintain a full lice bank.

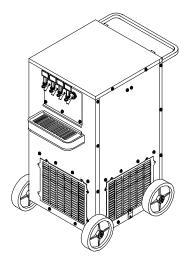


FIGURE 1. UNIVERSAL C-1550XR (FOUR-FLAVOR UNIT SHOWN)

# SERVICE AND MAINTENANCE

This section describes the service and maintenance procedures to be performed on the Unit.

IMPORTANT: Only qualified Personnel should service the Unit internal components or electrical wiring.



WARNING: Disconnect electrical power from the Unit to prevent personnel injury before attempting any internal maintenance. Only qualified personnel should service the internal components or electrical wiring.



CAUTION: This Unit is intended for indoor installation *only. Do not* install this Unit in an outdoor environment which would expose it to the outside elements.

IMPORTANT: For the most efficient operation of the Unit, the ambient operating temperature for the Unit should not exceed 90° F. Satisfactory temperatures may be obtained using blowers, air conditioning, etc. Check your local codes.

## PREPARING UNIT FOR SHIPPING, RELOCATING, OR STORING

CAUTION: Before shipping, relocating, or storing the Unit, the product cooling coils *must* be sanitized, all sanitizing solution *must* be purged from the product coils, the ice bank *must* be melted, and all water *must* be drained from the water tank. A freezing ambient environment will cause residual water remaining inside the Unit to freeze resulting in damage to internal components of the Unit.

#### PERIODIC INSPECTION

- 1. Check Unit condenser coil (see Figure 3) for accumulation of dust, lint, or grease and if necessary, clean the coil as instructed. Restriction of air flow through the condenser coil will decrease cooling efficiency of the Unit.
- 2. Check area in front, back, sides, and above the Unit for obstructions. These areas *must* be kept clear at all times. Listed below are the minimum clearances that *must* be maintained.
  - A. Clearance above the Unit ----- 12 inches to nearest obstruction.
  - B. Clearance back of Unit ------ 12 inches to nearest obstruction.
  - C. Clearance on sides of Unit ------12 inches to nearest obstruction.
  - D. Clearance on front of Unit ----- Open
- 3. Check dispensing valves for dripping that indicates leaking and repair as necessary.

#### **ADJUSTMENTS**

## ADJUSTING PRODUCT TANK CO<sub>2</sub> REGULATORS

(see Figure 4)

NOTE: To adjust CO<sub>2</sub> regulator to provide a lower pressure, loosen adjusting screw lock nut, then turn screw to the left (counterclockwise) until pressure gage reads 5-psi lower than new setting will be. Turn adjusting screw to the right (clockwise) until gage registers new setting. Then tighten lock nut.

Set product tank CO<sub>2</sub> regulators, using Cornelius PRE-MIX COMPUTER slide rule or bottling room chart. Enter equilibrium pressure for highest temperature encountered between product tank storage area and cooling unit plus 5 psig operating pressure for lines 10 feet in length or less and no vertical lift. Add one pound for every 10 feet over initial 10 feet of product tank to cooling unit line length and one pound for every 2 feet of vertical lift. Add one pound for every product tank on line over three tanks. MAXIMUM UNIT INLET PRESSURE MUST NOT EXCEED 100 psig. Loosen lock nut on CO<sub>2</sub> regulator adjusting screw, then turn adjusting screw to the right (clockwise) until gage registers desired pressure. Tighten adjusting screw lock nut.

#### ADJUSTING DISPENSED PRODUCT FLOW RATE

(see Figure 2)

Rotate dispensing valve Compensator Adjusting Screw to the left (counterclockwise) for higher product flow rate or to the right (clockwise) for lower product flow rate.

## REPLENISHING CO<sub>2</sub> SUPPLY

NOTE: When indicator on CO<sub>2</sub> cylinder regulator assembly 1800 psi gage is in shaded ("change CO<sub>2</sub> cylinder") portion of dial, CO<sub>2</sub> cylinder is almost empty and should be replaced.



**CAUTION:** Wear protective eyewear to avoid injury from gas-driven particles.

WARNING: CO<sub>2</sub> displaces oxygen. Strict attention *must* be observed in the prevention of CO<sub>2</sub> (carbon dioxide) gas leaks in the entire CO<sub>2</sub> and soft drink system. If a CO<sub>2</sub> gas leak is suspected, particularly in a small area, *immediately* ventilate the contaminated area before attempting to repair the leak. Personnel exposed to high concentration of CO<sub>2</sub> gas will experience tremors which are followed rapidly by loss of consciousness and suffocation.

- 1. Fully close (clockwise) CO<sub>2</sub> cylinder valve.
- 2. Slowly loosen CO<sub>2</sub> regulator assembly coupling nut allowing CO<sub>2</sub> pressure to escape, then remove regulator assembly from empty CO<sub>2</sub> cylinder.
- 3. Unfasten safety chain and remove empty CO<sub>2</sub> cylinder.



WARNING: To avoid personal injury and/or property damage, always secure CO<sub>2</sub> cylinder in an upright position with safety chain to prevent it from falling over. Should the shutoff valve become accidentally broken off, CO<sub>2</sub> cylinder can cause serious personal injury.

- 4. Position CO<sub>2</sub> cylinder and secure with safety chain.
- 5. Make sure gasket is in place inside CO<sub>2</sub> regulator coupling nut, then install regulator on CO<sub>2</sub> cylinder.
- Open (counterclockwise) CO<sub>2</sub> cylinder valve slightly to allow lines to slowly fill with gas, then open valve fully to back-seat valve. (Back-seating valve prevents leakage around valve shaft).
- 7. Check CO<sub>2</sub> connections for leaks.

#### REPLENISHING PRODUCT SUPPLY

- 1. Remove inlet (CO<sub>2</sub>) disconnect (grey) and outlet disconnect (black) from empty product tank, then remove tank.
- 2. Place full product tank in position, then connect inlet (CO<sub>2</sub>) disconnect (grey) and outlet disconnect (black) to tank.

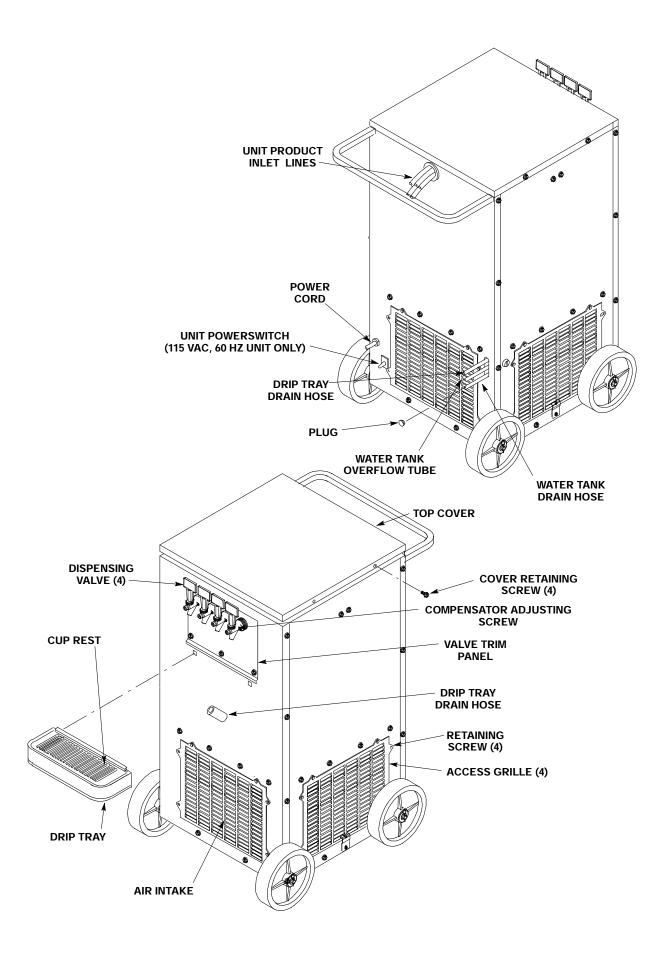
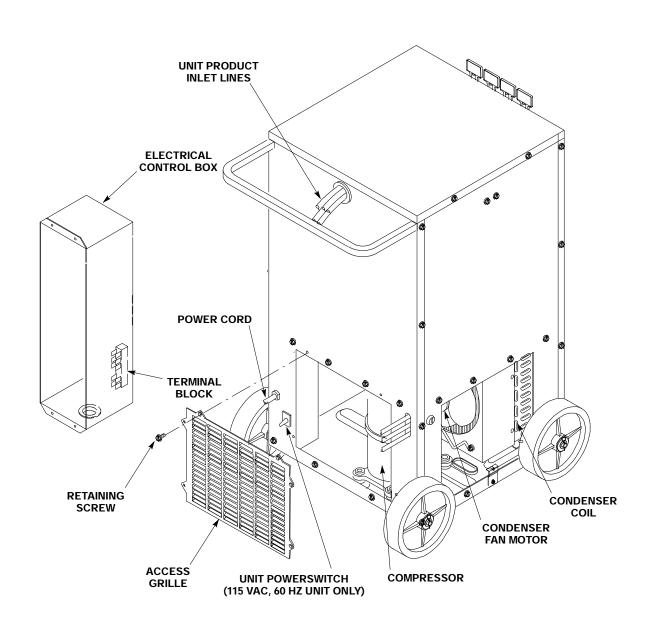


FIGURE 2. DISPENSER COMPONENTS (FOUR-FLAVOR UNIT SHOWN)



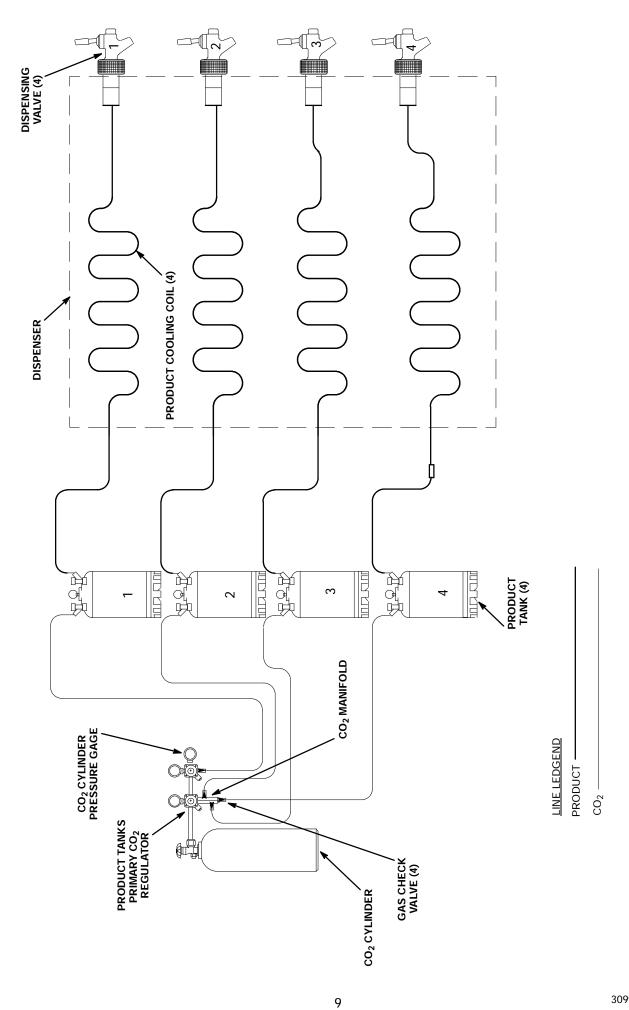


FIGURE 4. FLOW DIAGRAM (FOUR-FLAVOR UNIT SHOWN)

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#### PRODUCT FLAVOR CHANGE

Sanitize applicable system as instructed, then install full tank of new flavor product.

#### CLEANING CONDENSER COIL

(see Figure 3)

NOTE: Air circulation through the condenser coil, required to cool the coil, is drawn in through grille on Unit front panel and is exhausted out through grilles on sides and back of the Unit. Restricting air flow through the condenser coil will decrease cooling efficiency of the Unit.

Area in front, sides, and back of the Unit *must* be kept free of obstructions at all times which would prevent air flow in and out of the Unit.

An excessive accumulation of dust, lint, and grease on the condenser coil will restrict air flow through the coil which will decrease cooling efficiency of the Unit. The Unit condenser coil should be periodically cleaned by performing the following:

- 1. Unplug Unit power cord from electrical outlet.
- 2. Remove four screws securing air intake grille on the Unit front panel, then remove the grille.
- 3. Vacuum or use a soft brush to clean the condenser coil. If available, use low-pressure compressed air.
- 4. Install air intake grille on the Unit and secure with four screws.
- 5. Plug Unit power cord into electrical outlet.

#### CHECKING ICE WATER BATH

A "gurgle' heard from the Unit, indicates water level in the water tank is low and more water should be added for maximum product cooling. Before adding more water to the water tank, the ice water bath and the ice bank should be checked for cleanliness and the water tank components checked for excessive mineral deposit build-up.

- 1. Unplug Unit power cord from electrical outlet.
- 2. Remove four screws securing the Unit top cover, then remove cover.
- 3. Check condition of the ice water bath and the ice bank. The ice water bath should be clear and the ice bank should be free of foreign particles.
- 4. Check agitator motor shaft and ice bank sensing bulb for excessive mineral deposit build-up.
- 5. If cleaning of water tank is necessary, refer to CLEANING WATER TANK in this section for cleaning procedure.
- 6. Make sure end of water tank overflow tube is placed in a waste container. Fill water tank with clean wateruntil water starts flowing from overflow tube into the waste container. USE A LOW-MINERAL-CONTENT WATER WHERE A LOCAL WATER PROBLEM EXIST.
- 7. Install Unit top cover and secure with four screws.
- 8. Plug Unit power cord into electrical outlet. After water has stopped dripping from the water tank overflow tube, remove tube from the waste container and place back inside the Unit.

#### **CLEANING WATER TANK**

NOTE: The ice water bath should be changed as often as necessary to keep the water tank clean. A convenient time to perform this operation is at the time the Unit is being sanitized. To save time, water can be drained from the water tank while the Unit is being sanitized.

- 1. Unplug Unit power cord from electrical outlet.
- 2. Remove screws securing the Unit top cover, then remove cover.
- 3. Remove four screws securing either the side or the back access grille, then remove the grille.
- 4. Route water tank drain hose out hole in back of the Unit to a waste container or to a drain.
- 5. Remove plug from end of the drain hose and allow water to drain from the water tank.

NOTE: If ice bank is clear and contains no foreign particles, it does not have to be melted down. Skip steps 6 and 7 and proceed with step 8.

6. If ice bank is dirty, allow it to melt. Hot water may be used to speed up melting.



CAUTION: Never use an ice pick or other instrument to remove ice from the evaporator coil. Such practice can result in a punctured refrigerant circuit or damage to the water tank.

- 7. Wash inside of the water tank with a mild soap solution.
- 8. Using a fiber brush, carefully clean mineral deposit build-up from the agitator motor shaft and the ice bank sensing bulb.
- 9. Rinse all parts and flush water tank with clean water.
- 10. Install plug in end of the water tank drain hose, then place drain hose back inside the Unit.
- 11. Place end of the Unit water tank overflow tube in a waste container.
- 12. Fill water tank with clean water until water starts flowing from the overflow tube into the waste container. USE A LOW-MINERAL-CONTENT WATER WHERE A LOCAL WATER PROBLEM EXIST.
- 13. Install Unit top cover and secure with four screws.
- 14. Plug Unit power cord into electrical outlet. Make sure compressor, condenser fan motor, and agitator motor are operating.
- 15. After water has stopped dripping from the water tank overflow tube, remove tube from the waste container, then place tube back inside the Unit.
- 16. Install access grille on the Unit and secure with screws.

#### **CLEANING AND SANITIZING**

#### **DAILY CLEANING OF UNIT**

NOTE: A drip tray that does not have a drain hose routed to a waste container or a permanent drain *must* be removed from the Unit and be thoroughly cleaned. A drip tray that has a drip tray drain hose routed to a waste container or a permanent drain may be cleaned in place on the Unit as follows.

- 17. Remove cup rest from the drip tray.
- 18. Wash drip tray in place on the Unit, then rinse drip tray with hot water allowing water to drain out through the drain hose.
- 19. Wash cup rest, then rinse the cup rest with clean water. Install cup rest in drip tray.
- 20. Clean all external surfaces of the Unit with a sponge. Rinse out the sponge with clean water, then wring excess water out of the sponge and wipe off all external surfaces of the Unit. Wipe Unit dry with a clean soft cloth. DO NOT USE ABRASIVE-TYPE CLEANERS.

#### **SANITIZING PRE-MIX SYSTEMS**

# IMPORTANT: Only qualified Service Personnel should perform sanitizing procedure on the pre-mix product systems.

The pre-mix product systems should be sanitized every 90-days using a non-scented household liquid bleach such as Hi-Lex or Chlorox containing a 5.25% sodium hypochlorite concentration. Proceed as follows to sanitize the pre-mix product systems.

- 1. Disconnect product tanks from the product systems.
- 2. Rinse product tanks quick disconnects with warm potable water.
- 3. Using a clean empty product tank, prepare a full tank of non-scented liquid dishwasher detergent solution by using 70° F (21° C) to 100° F (38° C) potable water and 0.5 oz. (15 ml) of liquid dishwasher detergent (such as Joy, Ivory, etc.) to one gallon of potable water. Shake tank containing detergent solution to thoroughly mix the solution.
- 4. Connect tank containing detergent solution into one of the product systems.
- 5. Place waste container under the applicable dispensing valve.
- 6. Activate the dispensing valve to permit detergent solution to purge product out of the line, coil, and the dispensing valve. Continue to dispense until only detergent solution is dispensed from the dispensing valve.
- 7. Connect tank containing detergent solution into remaining product systems and flush product out of systems as instructed in steps 5 and 6 preceding.
- 8. Using a clean product tank, prepare sanitizing solution using 70° F (21° C) to 100° F (38° C) potable water and 0.5 oz. (15 ml) of household liquid bleach such as non-scented Hi-Lex or Chlorox that contains a 5.25 % sodium hypochlorite concentration to one gallon of potable water. This mixture *must* not exceed 200 PPM of chlorine. Shake tank containing sanitizing solution to thoroughly mix the solution.
- 9. Connect tank containing sanitizing solution into one of the product systems.
- 10. Place waste container under the applicable dispensing valve.
- 11. Activate the dispensing valve for one minute to purge detergent solution from and install sanitizing solution in the product system.
- 12. Continue activating the dispensing valve in cycles ("ON" for 15-seconds, "OFF", then "ON" for 15-seconds). Repeat "ON" and "OFF" cycles for 15 cycles.
- 13. Repeat steps 9 through 11 preceding to purge detergent solution from the remaining product systems.
- 14. Allow sanitizing solution to remain in the product system for not less than 10-minutes or for no more than 15-minutes.
- 15. Connect product tank containing potable water into the product system to be flushed.



WARNING: Flush sanitizing solution from the system(s) as instructed. Residual sanitizing solution left in the product system(s) could create a health hazard.

- 16. Place waste container under applicable dispensing valve.
- 17. Activate the dispensing valve for one minute to purge all sanitizing solution out of the product system.
- 18. Continue activating the dispensing valve in cycles ("ON" for 15-seconds, "OFF", then "ON" for 15-seconds). Repeat "ON" and "OFF" cycles for 15 cycles.
- 19. Repeat steps 15 through 18 preceding to purge sanitizing solution from the remaining product systems.

- 20. Remove product tank containing flush water from the product system, then connect a clean empty product tank into the system.
- 21. Place waste container under applicable dispensing valve.
- 22. Activate the dispensing valve to purge all water from the product system.
- 23. Repeat steps 20 and 22 preceding to purge all water from the remaining product systems.
- 24. Dispose of waste sanitizing solution in a sanitary sewer, not in a storm drain, then thoroughly rinse the inside and the outside of the container that was used for sanitizing solution to remove all sanitizing solution residue.

# **CLEANING CO<sub>2</sub> GAS CHECK VALVES**

(see Figures 4 and 5)

The primary CO<sub>2</sub> regulator assembly CO<sub>2</sub> gas check valves must be inspected and serviced at least once a year under normal conditions and after any servicing or disruption of the CO<sub>2</sub> system. ALWAYS REPLACE QUAD RING SEAL EACH TIME GAS CHECK VALVES ARE SERVICED.

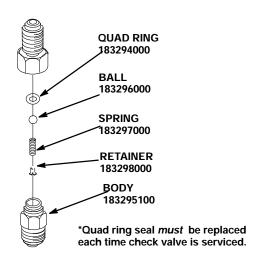


FIGURE 5. CO<sub>2</sub> GAS CHECK VALVE

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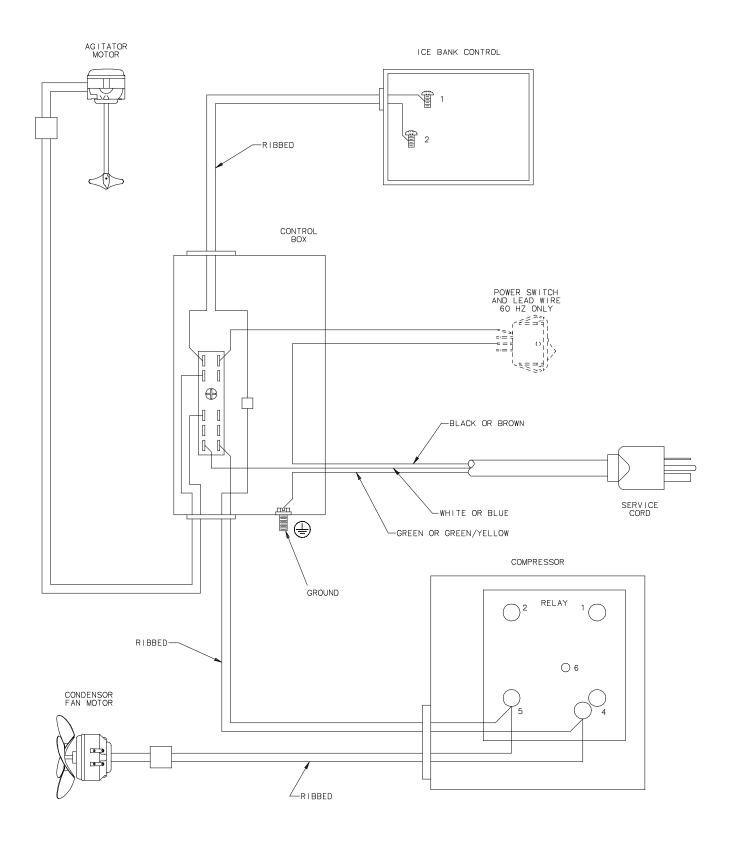


FIGURE 6. WIRING DIAGRAM

# **TROUBLESHOOTING**

IMPORTANT: Only qualified personnel should service internal components or electrical wiring.

WARNING: If repairs are to be made to a product system, remove quick disconnects from the applicable product tank, then relieve the system pressure before proceeding. If repairs are to be made to the CO<sub>2</sub> system, stop dispensing, shut off the CO<sub>2</sub> supply, then relieve the system pressure before proceeding. If repairs are to be made to the refrigeration system, make sure electrical power is disconnected from the Unit.

#### TROUBLESHOOTING PRODUCT SYSTEM

Trouble		Probable Cause		Remedy
NO PRODUCT DISPENSED.	A.	Product tank quick disconnects not attached properly.	A.	Attach quick disconnects securely.
	B.	No product supply (product tank empty).	B.	Replenish product supply as instructed.
	C.	No CO <sub>2</sub> supply.	C.	Replenish CO <sub>2</sub> supply as instructed.
DISPENSED PRODUCT COMES OUT OF DISPENSING VALVE CLEAR BUT FOAMS IN CUP OR GLASS	A.	Oil film or soap scum in cup or glass.	A.	Use clean cups and glasses.
	B.	Ice used for finished drink is sub-cooled.	B.	Do not use ice directly from freezer. Allow ice to become "wet" before using. (Refer to following <b>NOTE</b> )
NOTE: Crushed ice also cause carbonation is released from c			ense	d drink hits sharp edges of ice,
DISPENSED PRODUCT FOAMS AS IT LEAVES DISPENSING VALVE.	A.	Recovery rate of unit exceeded (ice bank depleted).	A.	Allow ice bank to recover.
	B.	Product tanks CO <sub>2</sub> regulator adjusted too high.	B.	Adjust product tanks CO <sub>2</sub> regulator to proper equilibrium pressure as instructed, then replace product supply.
	C.	Dispensing valve restricted or dirty.	C.	Sanitize product system as instructed.
	D.	Tapered nylon washer inside tube swivel nut connection distorted from being overtightened restricting product flow.	D.	Replace nylon washer. Make sure it is properly seated.
	E.	Oil, water, or dirt in CO <sub>2</sub> supply.	E.	Remove contaminated CO <sub>2</sub> . Clean CO <sub>2</sub> system (lines, regulators, etc.). Install clean CO <sub>2</sub> supply.

Trouble		Probable Cause		Remedy		
TROUBLESHOOTING REFRIGERATION SYSTEM						
COMPRESSOR DOES NOT OPERATE.	A.	Ice bank sufficient.	A.	Refrigeration not called for.		
	B.	Unit power cord unplugged or Unit power switch in "OFF" (down) position.	B.	Plug in power cord or place power switch in "ON" (up) position.		
	C.	No power source (blown fuse or tripped circuit breaker).	C.	Replace fuse or reset circuit breaker. (Note: Fuse or circuit breaker are not part of Unit.)		
	D.	Low voltage at compressor terminals.	D.	Voltage must be at least 103 volts (115 VAC Unit) or 208 (230 VAC Unit) at compressor terminals when compressor is trying to start.		
	E.	Loose, disconnected, or broken wiring.	E.	Tighten connections or replace broken wiring.		
	F.	Overload protector cut out; over-heated compressor. Condenser fan motor not operating as required.	F.	Compressor will cool enough to restart. Do not overdraw cooling capacity of Unit. Refer to "CONDENSER FAN MOTOR NOT OPERATING" in this section.		
	G.	Inoperative overload protector or start relay.	G.	Replace inoperative part.		
	H.	Inoperative ice bank control.	H.	Replace ice bank control.		
	I.	Inoperative compressor.	I.	Replace compressor.		
COMPRESSOR WILL NOT STOP AFTER SUFFICIENT ICE BANK IS FORMED. (NOTE-ICE BANK SHOULD JUST COVER CONTROL BULB).	A.	Ice bank control cap tube kinked or broken.	A.	Replace ice bank control.		
	B.	Ice bank control stuck in closed position.	B.	Replace ice bank control.		
COMPRESSOR OPERATES CONTINUOUSLY BUT DOES NOT FORM SUFFICIENT ICE BANK.	A.	Cooling capacity is exceeded by over-drawing.	A.	Reduce amount of drinks drawn per given time.		
	B.	Unit located in excessively hot area or air circulation through condenser coil is restricted.	B.	Relocate Unit or determine and correct condenser coil restriction.		
	C.	Refrigeration system leak.	C.	Repair refrigeration system.		
NOTE: Ice bank freezes from I	botto	NOTE: Ice bank freezes from bottom of evaporator upward. A refrigerant leak or insufficient charge				

NOTE: Ice bank freezes from bottom of evaporator upward. A refrigerant leak or insufficient charge might show an ice bank at bottom and not at top of evaporator.

NOTE: If overload protector cuts out compressor, condenser fan motor will continue to operate; otherwise; troubleshooting condenser fan motor problems is same as for "COMPRESSOR DOES NOT OPERATE" paragraph plus the following:

Trouble		Probable Cause		Remedy	
CONDENSER FAN MOTOR NOT OPERATING.	A.	Jumper cord loose or disconnected from motor or terminal block. Broken wire in cord.	A.	Tighten connections or replace cord.	
CONDENSER FAN MOTOR NOT OPERATING. (cont'd)	B.	Fan blade obstructed.	B.	Remove obstructions.	
	C.	Inoperative condenser fan motor.	C.	Replace condenser fan motor.	
AGITATOR MOTOR NOT OPERATING.	A.	Unit power cord or agitator motor power cord disconnected or Unit power switch in "OFF" position.	A.	Plug in power cords or place Unit power switch in "ON" position.	
	B.	No power source (blown fuse or tripped circuit breaker).	B.	Replace fuse or reset circuit breaker. (Note: Fuse or circuit breaker are not part of Unit.)	
	C.	Agitator motor propeller obstructed.	C.	Remove obstruction.	
	D.	Low voltage.	D.	Voltage must be at least 103 volts (115 VAC Unit) or 208 (230 VAC Unit) at compressor terminals when compressor is trying to start.	
	E.	Loose, disconnected, or broken wiring.	E.	Tighten connections or replace broken wiring.	
	F.	Inoperative agitator motor.	F.	Replace agitator motor as instructed.	

# WARRANTY

IMI Cornelius Inc. warrants that all equipment and parts are free from defects in material and workmanship under normal use and service. For a copy of the warranty applicable to your Cornelius, Remcor or Wilshire product, in your country, please write, fax or telephone the IMI Cornelius office nearest you. Please provide the equipment model number, serial number and the date of purchase.

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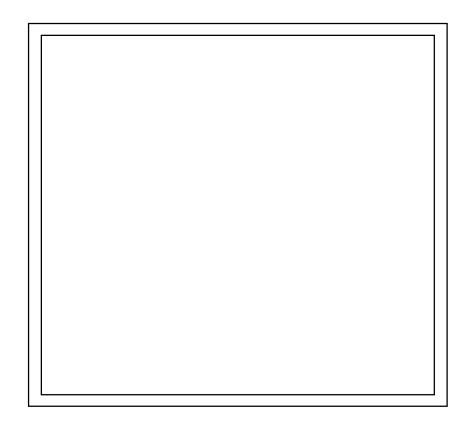
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