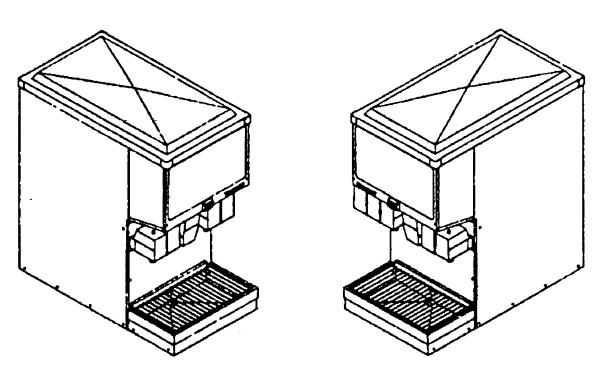


# ICE/BEVERAGE DISPENSER MODELS: DB90S-BC (4V) DB90S-BC (5V)

**Operator's Manual** 



Distributed By: Commercial Refrigeration Service, Inc. WWW.CorneliusParts.COM WWW.IceCubes.NET (866) 423-6253 (623) 869-8881

Part No. 91772 Revised: August, 1995

THIS DOCUMENT CONTAINS IMPORTANT INFORMATION This Manual must be read and understood before installing or operating this equipment

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### TABLE 1. SPECIFICATIONS 2

Manufactured Under One or More of the following Patent Numbers: 3,211,336, 3,274,792, 3,393,839,3,517,860, 3,739,842, 4,215,803,4,227,377, 4,300,359, 4,346,824 Canadian Patent Numbers: 912,514 (10/72), 936,855 (11/73), 4,429,543, 4,921,149 Other Patents Pending

## SAFETY PRECAUTIONS

<u>Always</u> disconnect power to the dispenser before servicing or cleaning.

<u>Never</u> place hands inside of hopper or gate area without disconnecting power to the dispenser. Agitator rotation occurs automatically when the dispenser is energized!

This ice dispenser has been specifically designed to provide protection against personal injury and eliminates contamination of ice. To insure continued protection and sanitation, observe the following

**ALWAYS** be sure the removable lid is properly installed to prevent unauthorized access to the hopper interior and possible contamination of ice.

ALWAYS be sure the upper and lower front panels are securely fastened.

ALWAYS keep area around the dispenser clean of ice cubes.

CAUTION: Dispenser cannot be used with crushed or flaked ice. Use of bagged ice which has frozen into large chunks can void warranty. The dispenser agitator is not designed to be an ice crusher. Use of large chunks of ice which "jam up" inside the hopper will cause failure of the agitator motor and damage to the hopper. If bagged ice is used, it must be carefully and completely broken into small, cube-sized pieces before filling into the dispenser hopper.

## **GENERAL DESCRIPTION**

The Remcor "DB" series of ice dispensers will solve ice and beverage service needs in the sanitary, space saving, economical way. Designed to be manually filled with ice from any remote ice making source, these dispensers will dispense cubes (up 1-1/4" in size), cubelets, hard-chipped or cracked ice and Scotsman MH750 pellet ice; and in addition, several flavors of post-mix beverages. "B" models contain beverage faucets **only** and must be supplied with cold product from any remote cold plate or refrigerated soda factory. "-BC" models include beverage faucets and a cold plate and are designed to be supplied directly from the syrup tanks and carbonator, with no additional cooling required.

# IMPORTANT: For dispensing Scotsman "pellet" style ice (Model MH750 icemakers), REMCOR Kit #02234 Ice Diverter must be installed on the dispenser. (See INSTALLATION INSTRUCTIONS)

#### **Table 1. Specifications**

Model: Ice Storage: Maximum Number of Faucets Available: Built-in Cold Plate: Electrical:

Dimensions:

Model: Ice Storage: Maximum Number of Faucets Available: Built-in Cold Plate: Electrical:

Dimensions:

Model: Ice Storage: Maximum Number of Faucets Available: Built-in Cold Plate: Electrical:

Dimensions:

### DB90S-BZ

90 lbs. 4 No 120/1/60 3A Cord Connected; 15A, 125V Plug 16" W x 29-3/4" D x 32" H

#### DB90S-B

90 lbs. 4 No 120/1/60 3A Cord Connected; 15A, 125V Plug 16" W x 29-3/4" D x 32" H

### DB90S-BC

90 lbs. 5 Yes 120/1/60 3A Cord Connected; 15A, 125V Plug 16" W x 29-3/4" D x 32" H

#### LEGEND

- Z No sink option
- BC Beverage/Cold Plate System
- S All Stainless Steel
- B Beverage System

## **INSTALLATION INSTRUCTIONS**

1. Locate the dispenser indoors on a level counter top.

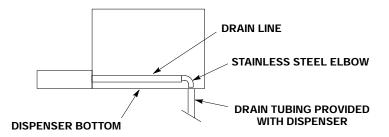
#### **COUNTER MOUNTING**

The ice dispenser **must be sealed** to the counter. The template drawing indicates openings which must be cut in the counter. Locate the desired position for the dispenser, then mark the outline dimensions on the counter using the template drawings. Cut openings in the counter.

Apply a continuous bead of NSF *International* (NSF) listed silastic sealant (Dow 732 or equal) approximately 1/4" inside of the unit outline dimensions and around all openings. Then position the unit on the counter within the outline dimensions. All excess sealant must be wiped away immediately.

- 2. The beverage tubes, drain line and power cord are routed through the large opening in the bottom of the unit. See the MOUNTING TEMPLATE, for locating the required clearance hole in the counter for these utility lines.
- 3. SINK DRAIN ASSEMBLY: Connect the drain tube to an open drain. Additional drain tubing is provided with the unit. The drain line must continuously pitch downward away from the unit and contain no "traps" or improper drainage will result.
  - A. Use tube, clamp and insulation provided to assemble drain.
  - B. To assure proper drainage, do not allow "trap" to form in drain line. Be sure drain line runs flat with bottom of dispenser.
- 4. Connect the beverage system product lines as indicated in Figure 2 (and in Figure 3 for cold plate units). This work should be done by a qualified service person. Note that the hoses are marked with numbers (1 through 4 or 5) for syrup connections On 5 valve "-BC" units, the plain water is marked "NON CARB WATER".
- 5. Clean the hopper interior (see CLEANING INSTRUCTIONS).
- 6. Connect the power cord to a 120 volt, 60 cycle, 3-wire grounded receptacle.

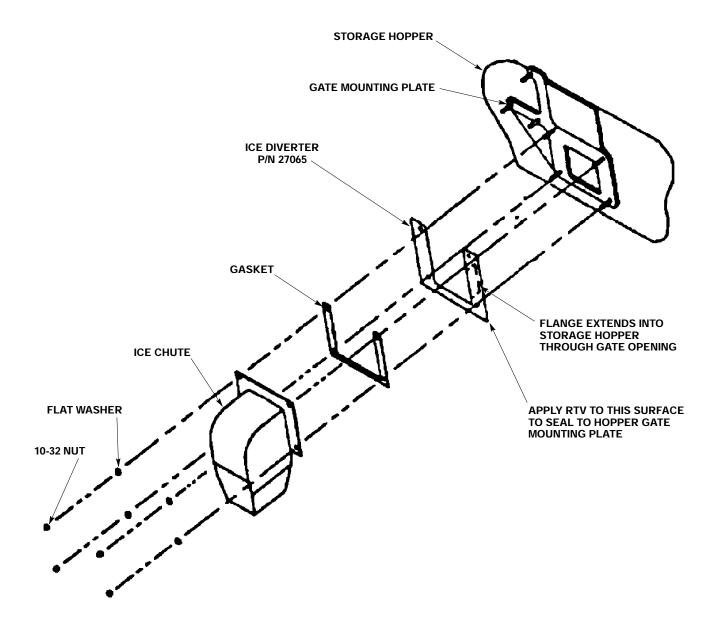
# NOTE: Water pipe connections and fixtures directly connected to a potable water supply shall be sized, installed and maintained according to Federal, State and Local Laws/



## **KIT 03324 INSTALLATION INSTRUCTIONS**

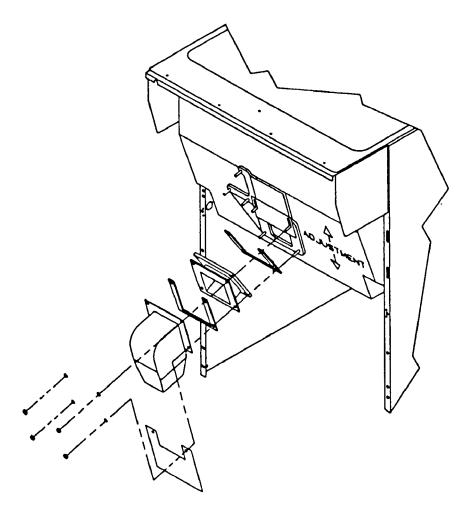
# NOTE: For dispensing Scotsman NM 650 "nugget" style and MH 750 "pellet" style ice and Wilshire MCC500 and MCC700 compressed ice cubes.

- 1. Disconnect power to dispenser.
- 2. Remove upper front panel from dispenser.
- 3. Remove ice chute and discard Gate Restrictor.
- 4. Reinstall front panel and energize unit.





CAUTION: Disconnect power to dispenser before installing, removing or adjusting restrictor



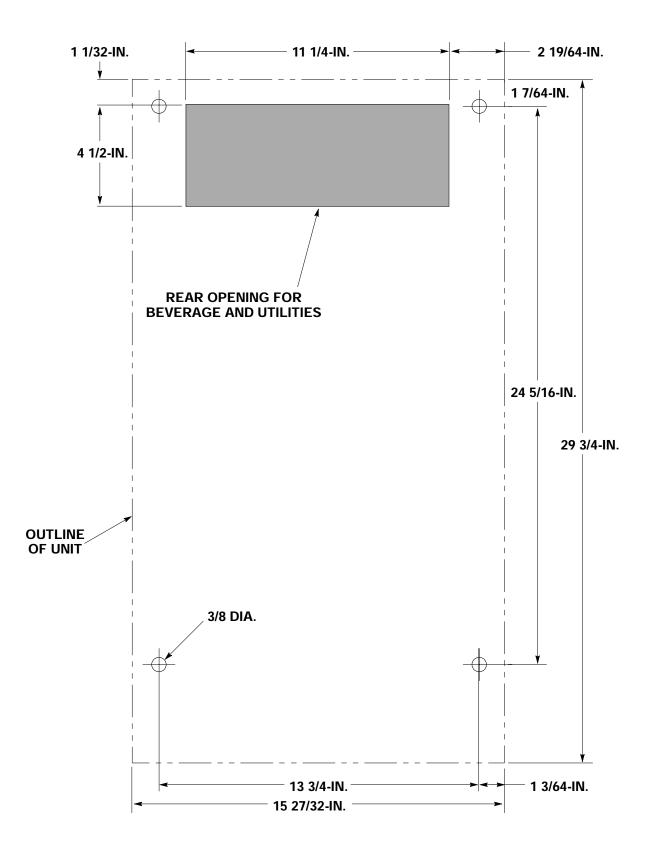
#### FIGURE 2. GATE RESTRICTOR PLATE

### **ADJUSTMENT**

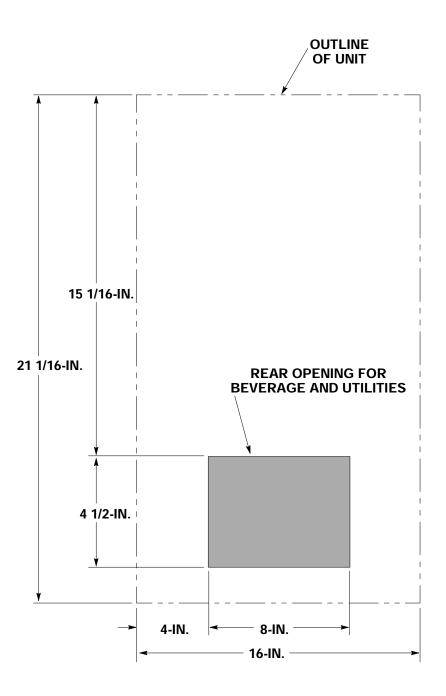
This dispenser is provided with a gate restrictor plate, installed in its highest position. This plate adjusts the rate of ice flow from the dispenser. In applications using buckets, carafes or other large containers, the plate may be removed entirely for maximum ice flow. For glasses and cups, the plate may be adjusted downward to reduce the flow of ice. The best position depends on the type of ice being used and the size container and must be found by trial and error. Adjustment is made by loosening the upper two ice chute retaining nuts, sliding the restrictor plate to the desired position and re-tightening the nuts.

If the dispenser fails to dispense the ice when operated, check that the hopper has ice in it and that power is being supplied to the unit. If the problem persists, refer to the troubleshooting guide (page 16).

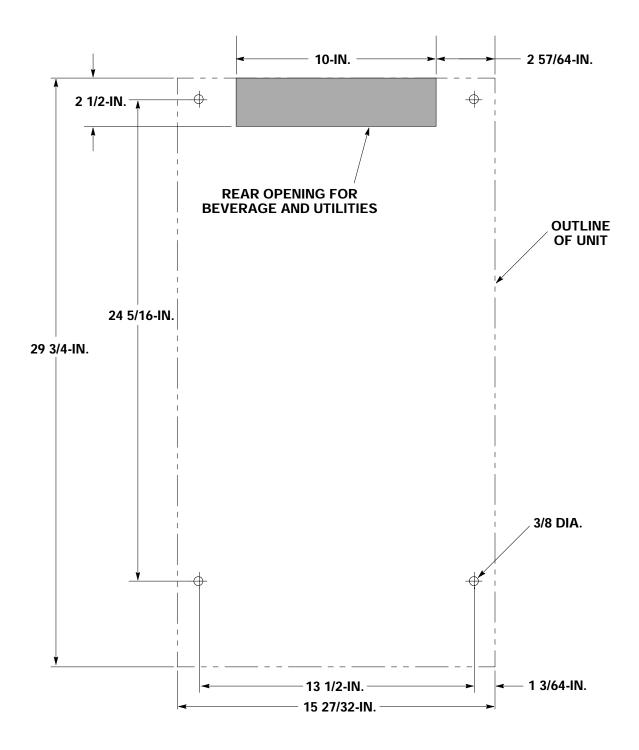
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NOTE: 1) Shaded areas indicate openings in cabinet bottom needed for utilities and beverage tubing.



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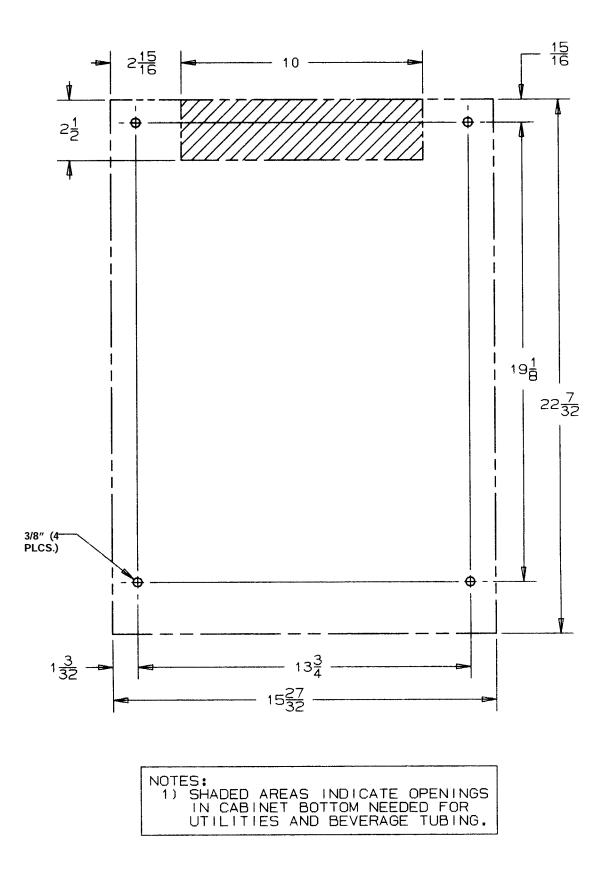
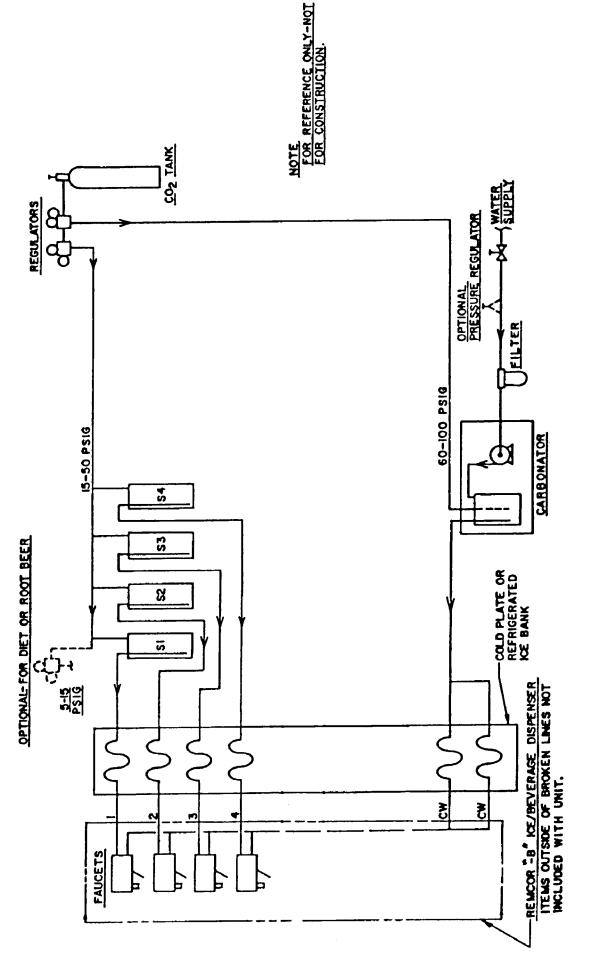


FIGURE 6. MOUNTING TEMPLATE DB90-BCZ





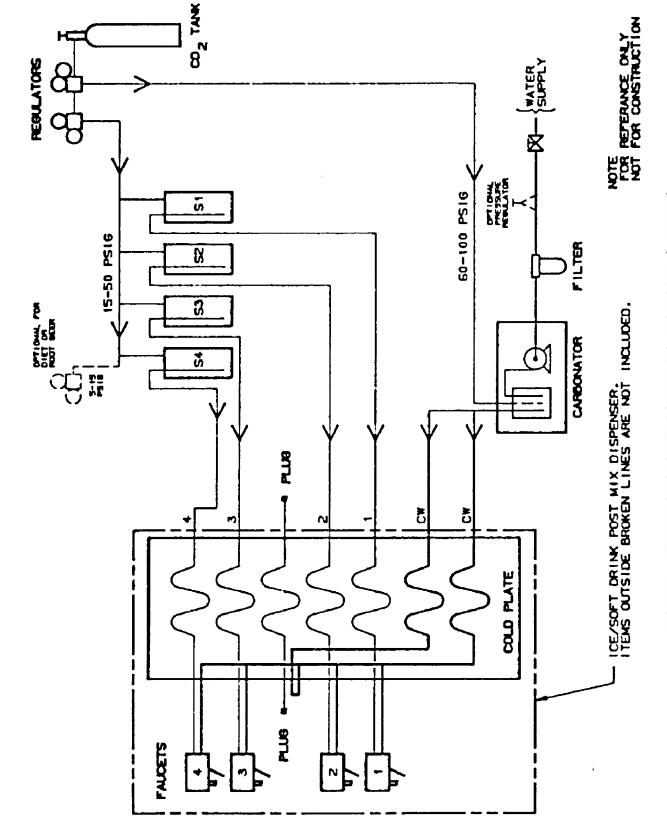
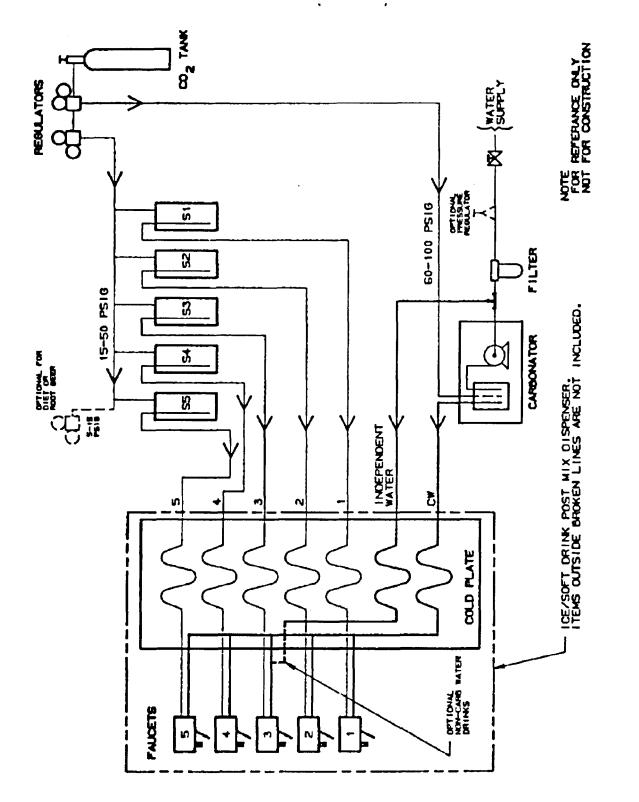
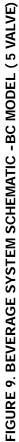


FIGURE 8. BEVERAGE SYSTEM SCHEMATIC - BC MODEL (4 VALVE)





## MAINTENANCE

The following dispenser maintenance should be performed at the intervals indicated:

### **DAILY** or as required

Remove foreign material from the vending area sink to prevent drain blockage.

### WEEKLY or as required

Clean vending area. Check for proper water drainage from the vending area sink.

### MONTHLY

Clean and sanitize the hopper interior (see CLEANING INSTRUCTIONS).

### START-UP AND OPERATING INSTRUCTIONS

Fill the hopper with ice. For "-BC" models with a built-in cold plate, dispense several large cups of ice (approximately 20 to 30 seconds total dispensing time) to allow ice to fill the cold plate. Add ice to the hopper as necessary to refill and replace the lid. Allow 10 to 15 minutes for the cold plate to cool down. Repeat this procedure whenever the dispenser has been standing overnight or other long periods without ice use. On "-B" and "-BC" models, start up the beverage system and adjust faucets to the proper brix. Contact your local syrup distributor for complete information on the beverage system.

In normal operation, pushing the ice dispenser lever will cause ice to flow from the ice chute. Ice flow will continue until the lever is released. Pushing the lever on any faucet will provide beverage of the appropriate flavor.

CAUTION: Use caution to avoid spilling ice when filling dispenser. Immediately clean up any spilled ice from filling or operating the unit. To prevent contamination of ice, the lid must be installed on the unit at all times.

## **CLEANING INSTRUCTIONS**



WARNING: DISCONNECT POWER BEFORE CLEANING! Do not use metal scrapers, sharp objects or abrasives on the ice storage hopper, top cover and the agitator disk, as damage may result. Do not use solvents or other cleaning agents, as they may attack the plastic al.

### DISPENSER

- 1. Clean the ice storage hopper at least once a month.
- 2. Lift off the agitator and the agitator disk. Wash with a mild detergent solution and rinse them thoroughly to remove all traces of detergent.
- 3. Wash down the inside of the hopper and top cover with a mild detergent solution and rinse thoroughly to remove all traces of detergent.
- 4. Replace the agitator.
- 5. Sanitize the inside of the hopper and agitator with a solution of 1 ounce of household bleach in 2 gallons of water. (200 PPM)
- 6. Replace the agitator disk. Sanitize as described in Step 5.
- 7. Remove Ice Chute cover as follows:
  - A. Flex sides outward to disengage lower pins.
  - B. Lift Ice Chute cover to disengage upper pins.
  - C. Lower Ice Chute cover down out of unit. Note: it may be helpful to twist cover slightly.
- 8. Clean the inside of the ice chute and ice chute cover with a mild detergent solution and rinse thoroughly to remove all traces of detergent.
- 9. Reverse steps above to reassemble ice chute.
- 10. Sanitize as described in Step 5.

### **BEVERAGE SYSTEM**

- 1. Remove faucet spouts, wash in mild detergent, rinse and replace.
- 2. Disconnect electrical power to the carbonator. Shut off the water supply and close the CO<sub>2</sub> regulator to the carbonator.
- 3. Disconnect the syrup tanks from the system.
- 4. Energize the beverage faucets to purge the remaining soda in the system.
- 5. Use a clean 5 gallon tank for each of the following.
  - A. <u>Cleaning tank</u> fill with hot (120° 140°) potable water.
  - B. <u>Sanitation Tank</u> Fill with a chlorine sanitizing solution in the strength of 1 ounce of household bleach (sodium hypochlorite) to 2 gallons of cold (ambient) potable water (200 PPM).

6. Repeat the following procedure on each of the units' syrup product lines:

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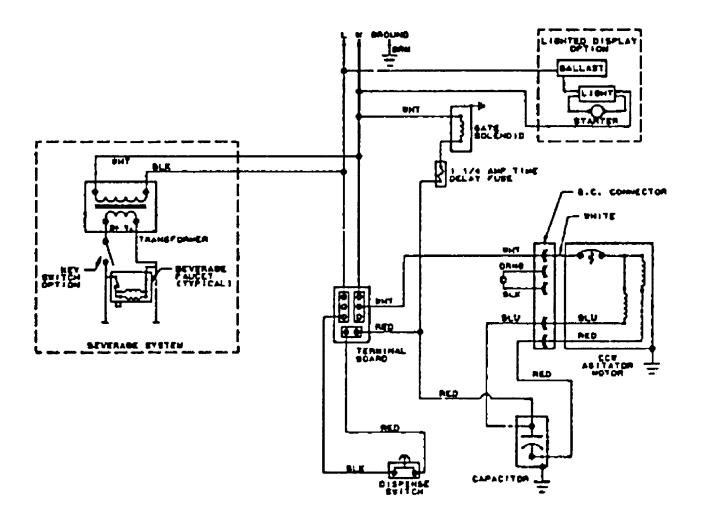
- A. Connect the cleaning tank to the syrup line to be sanitized and to the CO<sub>2</sub> system.
- B. Energize the beverage faucet until the liquid dispensed is free of any syrup.
- C. Disconnect the cleaning tank and hook-up the sanitizing tank to the syrup line and CO<sub>2</sub> system.
- D. Energize the beverage faucet until the chlorine sanitizing solution is dispensed through the faucet. Flush at least 2 cups of liquid to insure that the sanitizing solution has filled the entire length of the syrup lines.
- E. Disconnect the sanitizing tank. Hook-up the product tank to the syrup line and to the CO<sub>2</sub> system.
- F. Energize the faucet to flush the sanitizing solution from the syrup line and faucet. Continue to draw on the faucet until only syrup is dispensed.
- 7. Repeat Step 2 in reverse order to turn on the carbonator. Dispense at lease 1 cup of beverage from each faucet. Check taste. Continue to flush if needed, to obtain a satisfactory tasting drink.

## **TROUBLESHOOTING GUIDE**

Should your unit fail to operate properly, check that there is power to the unit and that the hopper contains ice. If the unit does not dispense, check the following chart under the appropriate symptoms to aid in locating the defect.

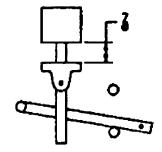
Trouble		Probable Cause
BLOWN FUSE OR CIRCUIT BREAKER	Α.	Short circuit in wiring.
	В.	Defective gate solenoid.
	C.	Defective agitator motor.
GATE DOES NOT OPEN.	Α.	No power.
	В.	Defective dispensing switch.
	C.	Blown/defective fuse or jammed gate solenoid.
GATE DOES NOT OPEN OR IS SLUGGISH. AGITATOR TURNS.	Α.	Defective gate solenoid.
	В.	Weak gate spring.
	C.	Excessive pressure against gate slide.
GATE OPENS. AGITATOR DOES NOT TURN.	Α.	Ice solidified in hopper.
	В.	Defective agitator motor.
	C.	Defective capacitor.
ICE DISPENSES CONTINUOUSLY.	Α.	Stuck or bent push button (does not release switch).
	В.	Defective dispensing switch.
	C.	Improper switch installation.
SLUSHY ICE. WATER IN HOPPER.	Α.	Blocked drain.
	В.	Unit not level.
	C.	Poor ice quality due to water quality or icemaker problems
	D.	Improper use of flaked ice.
BEVERAGES DO NOT DISPENSE	Α.	No 24 volt power to faucets.
	В.	No CO <sub>2</sub> pressure.
BEVERAGES TOO SWEET.	А.	Carbonator not working.
	В.	No CO <sub>2</sub> pressure in carbonator.
	C.	Faucet brix requires adjusting.
BEVERAGES NOT SWEET ENOUGH.	Α.	Empty syrup tank.
	В.	Faucet brix requires adjusting.
BEVERAGES NOT COLD	Α.	Unit standing with no ice in hopper, no ice in cold plate

Contact your local syrup or beverage equipment distributor for additional information and troubleshooting of your beverage system.



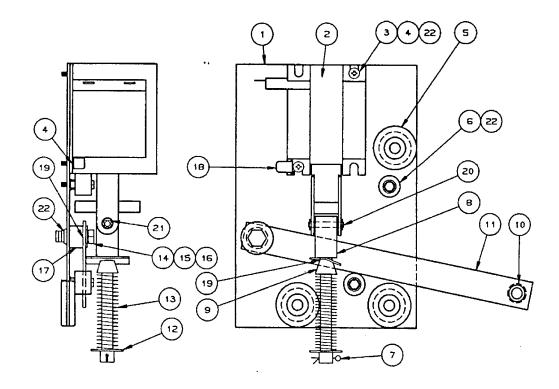
# SERVICE INFORMATION

DANGER | ELECTRIC SHOCK HAZARD. DISCONNECT POWER BEFORE SERVICING UNIT.





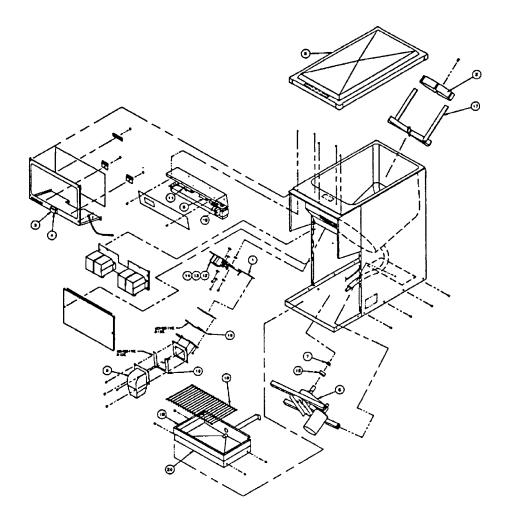
WHEN REPLACING SOLENOID, ADJUST TO 7/8-INCH AS SHOWN BEFORE TIGHT-ENING MOUNTING SCREWS.



### FIGURE 11. SOLENOID ASSEMBLY - EXPLODED VIEW & PARTS LIST

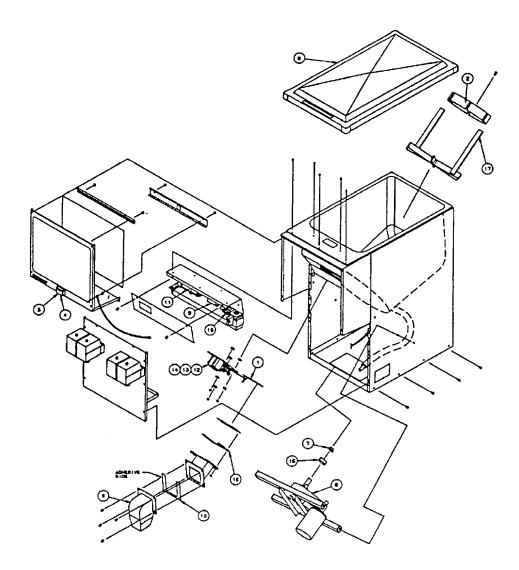
Index			
No.	Part No.	Quantity	Description
1	21493	1	Solenoid Mounting Plate
2#	31551	1	Solenoid Service Kit
3	70171	2	8-32 x 3/8 Phil Tr HD Screw
4	70121	2	No. 8 Lockwasher
5	50752	3	Isolator
6*	50789	2	Bumper Assembly
7*	70423	1	Cotter Pin
8*	10080	1	Gate Lift Rod
9	10081	1	Gate Lift Rod Bushing
10	50754	1	Gate Arm Bearing
11	21492	1	Gate lift Arm
12	70043	1	Flatwasher
13*	70422	1	Spring
14	70263	1	1/4-20 x 3/4 Hex Hd Screw
15	70048	1	1/4 Lockwasher
16	70066	1	1/4 Flatwasher
17	10077	1	Pivot Bearing
18	30227	1	1/4 Quick Connect Tab
19	50305		Lubricant
20*	21592	1	Solenoid Linkage Pin
21*	70433	2	Retainer Ring
22	51088		Loctite
*	70438		Rebuilding Kit

### NOTE: \* Parts supplied with rebuilding kit. # 31551 solenoid supplied with items 20 & 21.



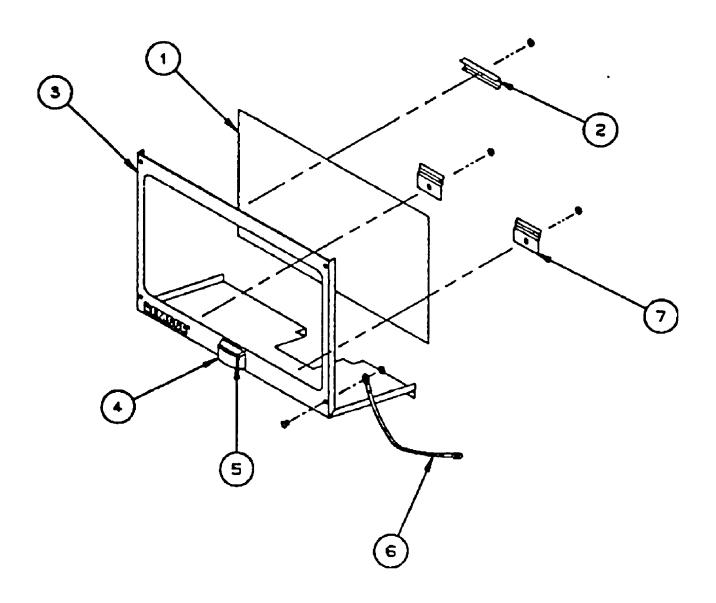
### FIGURE 12. EXPLODED VIEW & PART LIST DB90-B

Item		
No.	Part No.	Name
1	25734	Gate Slide
2	52072	Agitator Disk
3	32763	Ice Dispenser Switch
4	91511	Switch Label
5	31091	Transformer (-B models)
6	32745	Agitator Motor
7	50454	Motor Shaft Seal
8	52054	Lid
9	50751	Ice chute
10	51891	Gate Gasket
11	30997	Capacitor, Agitator Motor
12	31093	Gate Solenoid Assembly (See page 18)
13	31551	Gate Solenoid Kit
14	70438	Rebuilding Kit (Gate Solenoid)
15	31406	Fuse. Gate Solenoid
16	51860	Motor, Gasket
17	27597	Agitator
		PARTS FOR SINK MODEL ONLY
18	50750	Sink, Foamed
19	70426	Sink, Grill
20	27621	Sink, Ext. Weldment



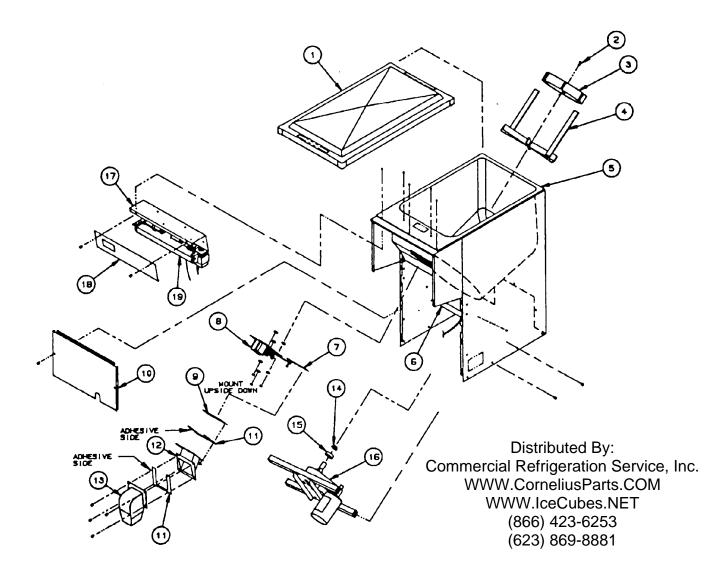
### FIGURE 13. EXPLODED VIEW & PART LIST DB90-BZ (NO SINK)

Item		
No.	Part No.	Name
1	27534	Gate slide
2	52072	Agitator Disk
3	32763	Ice dispenser switch
4	91511	Switch Label
5	31091	Transformer (-B Models)
6	32745	Agitator Motor
7	50454	Motor Shaft Seal
8	52054	Lid
9	53015	Ice Chute back section
	53016	Ice Chute Cover
10	51891	Gate Gasket
11	30997	Capacitor, Agitator Motor
12	31093	Gate Solenoid Assembly (See Page 18)
13	31551	Gate Solenoid Kit
14	70438	Rebuilding Kit (Gate Solenoid)
15	31406	Fuse, Gate Solenoid
16	51860	Motor, Gasket
17	27597	Agitator
91772		20



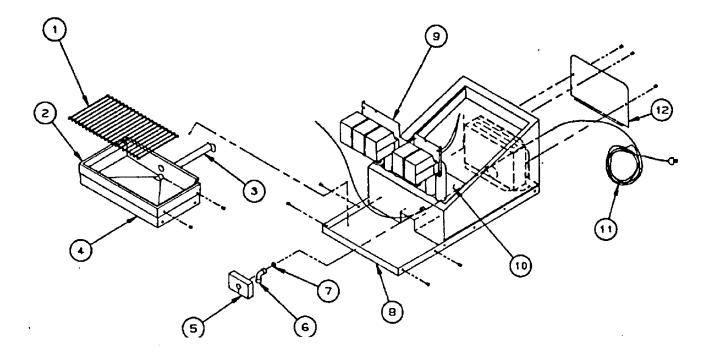
### FIGURE 14. EXPLODED VIEW & PARTS LIST DB90-BC MERCHANDISER SECTION

Item		
No.	Part No.	Name
1	52068	Merchandiser Panel, Plexiglass
2	27685	Bracket, Upper Merchandiser
3	28326	Merchandiser
4	32763	Ice Dispenser Switch
5	91511	Switch Label
6	32322	Cord, Lighted Merchandiser
7	27684	Bracket, Lower Merchandiser



### FIGURE 15. EXPLODED VIEW & PART LIST DB90-BC CABINET

Item		
No.	Part No.	Name
1	52054	Ice Storage Bin Ltd
2	70180	10-32 Thumbscrew
3	52072	Agitator Disk
4	27597	Agitator
5	52048	Ice Storage Bin
6	28410	Cabinet Wrapper
7	27534	Gate Slide
8	31093	Gate Solenoid Assembly
9	22081	Gate Restrictor
10	28328	Lower SS Panel
11	51891	Gate Gasket
12	52053	Ice Chute Conduit
13	53015	Ice Chute Back Section
	53016	Ice Chute Cover
14	50454	Agitator Motor Shaft Seal
15	51860	Agitator Motor Gasket
16	32745	Agitator Motor
17	32748	Electric Box Assembly
18	27510	Cover, Electric Box
19	32747	Fluorescent Lamp
91772		22

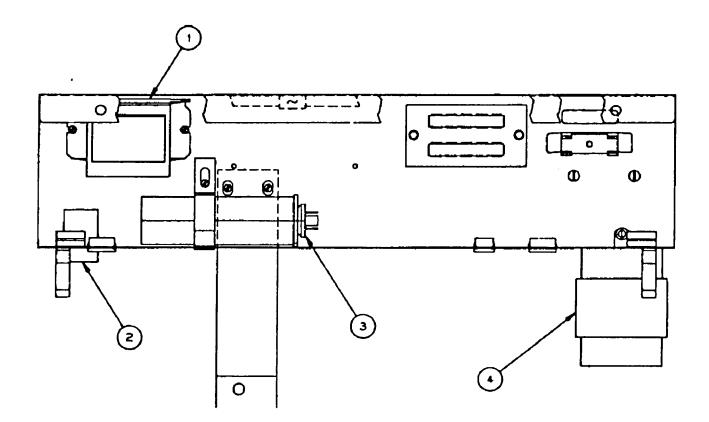


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### FIGURE 16. EXPLODED VIEW & PARTS LIST DB90-BC COLD PLATE SECTION

Item		
No.	Part No.	Name
1	70426	Sink Grill
2	52789	Sink, Foamed
3	52099	Drain Assembly, Sink
4	27621	Sink Extension
5	51801	Gasket, Cold Plate Drain Tube
6	51775	90° PVC Fitting
7	70350	Clamp, Hose
8	28411	Base, Cabinet
9	28840	Beverage Panel
10	52225	Cold Plate Cover
11	33035	Cord, Power Supply
12	28405	Cold Plate Access Panel

1to



### FIGURE 17. EXPLODED VIEW & PARTS LIST DB90-BC ELECTRIC BOX ASSEMBLY

Item		
No.	Part No.	Name
1	31621	Ballast
2	31620	Starter
3	30997	Capacitor
4	31363	Transformer Assembly



REMCOR PRODUCT COMPANY 500 Regency Drive Glendale Heights, IL 60139-2268 Telephone (708) 980-6900 Facsimile (708) 980-8511

## WARRANTY

REMCOR 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 REMCOR product, in your country, please write, fax or telephone the IMI Cornelius office nearest you. Please provide the equipment model number and the date of purchase.

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