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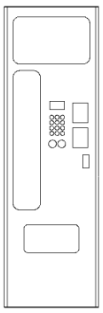

CB300-G1

CAN/BOTTLE VENDING MACHINE

MODEL 3501, 3501A

SERVICE MANUAL

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INTRODUCTION

This manual contains instructions, service and installation guidelines for the CB300-GVC1 Can/Bottle vending machine. All models are equipped with an electronic control system. All programming of the vend functions, pricing and features are done at the controller. Changes can be made without any additional accessories or remote parts.

Selections can be priced individually from $.05 to $99.95 in 5 cent increments (U.S. currency). When adapted to accept international or foreign currency, the vend price should be set using the smallest denomination of coin being accepted.

MODEL & SERIAL NUMBER

Record the Model and Serial number of your vending machine on the space below. The numbers are on the identification plate located on the backside of the vending machine. Refer to these numbers on all correspondence and inquiries concerning this vending machine. They are needed if service and parts information is required for your vending machine.

MODEL NUMBER: _____

SERIAL NUMBER: _____

If you have any questions regarding the information in the manual, replacement parts or the operation of the vending machine then you should contact your local distributor or service entity.

FOR U.S.A. UNITS:

VendNet™
165 North 10th Street
Waukee, IA 50263

PHONE: **1-515-274-3641**
1-800-833-4411
PARTS FAX: **1-515-987-4447**
SALES FAX: **1-515-274-0390**

SPECIFICATIONS

ELECTRICAL

Model	3501	3501A
Voltage	120 VAC	230 VAC
Frequency	60 Hz	50 Hz
Current	8 Amps	4 Amps

REFRIGERATION

Unit Size	1/3+ HP Hermetically Sealed
Refrigerant	R-134a
Charge	5.1 Oz.

SIZE

Height	72 In (183 cm)
Width	21 In (53 cm)
Depth	33.5 In (85 cm)
Weight	360 Lbs. (163.3 kg)

CAPACITY

Selections	6
Columns	6
12 Oz. Cans	52 per column, 312 total
20 Oz. Bottles	23 per column, 138 total

FEATURES

- On-Board 4 Digit, 7-Segment, Ultra high intensity LED Display.
- MDB (Multi Drop Bus) coin mechanism and bill validator interface.
- Piezo "beeper" to provide audible feedback for key presses and control board activity.
- No change or loss of program or memory because of power failure.
- Multi Vend.
- First-in first-out for all selections.
- Motorized delivery electronically controlled.
- Impact sensor delivery system.
- Dual Regulated Power Supplies for logic and motor control.
- User friendly Service Mode.
- Cash and Vend accountability. Information for individual selections or total machine can be compiled and used for inventory and ordering records.
- Individual product pricing from free vend ($0.00) to $99.95
- Motor vend testing selection.

UNPACKING

This vending machine was thoroughly inspected before leaving the factory and the delivering carrier has accepted responsibility for this vending machine. Note any damage or irregularities at the time of delivery and report them to the carrier. Request a written inspection report from the claims inspector to file any claim for damage. File the claim with the carrier (not the manufacturer) within 15 days after receipt of the machine.

Carefully remove outside packing material to avoid damage to the finish or exterior of the machine. Remove adhesive residue with denatured alcohol or common household vinegar.

Remove the Knock-Away Support by placing a spacer under the vending machine, insert a screwdriver or prying tool into the grove and split the wood in two. Discard the washer located on each side of the wooden supports. Turn the leveling screws as far in as possible. See FIGURE 1.

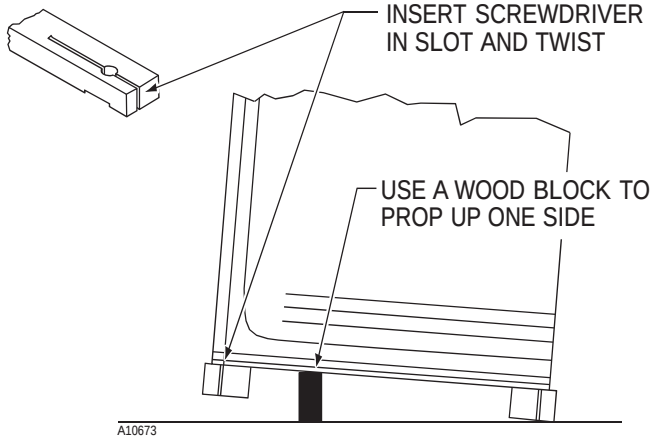

FIGURE 1. REMOVING KNOCK-AWAY SUPPORTS

INSTALLATION

Consult local, state and federal codes and regulations before installation of the vending machine.

To minimize installation time and to avoid service problems due to improper installation, follow the instructions outlined in this manual.

Position the vending machine in its place of operation no further than six feet from the power outlet or receptacle and check that the door will open fully without interference. Leave at least four inches of space between the back of the vending machine and any wall obstruction for proper air circulation.

CAUTION: Do not block the vent openings in front or in the rear of the vending machine. Always allow free ventilation behind a bank installation so that exhaust air is not trapped. Failure to do so could result in refrigeration failure.

Level the vending machine, making sure all levelers are touching the floor. The vending machine must be level for proper operation. If it is properly leveled, it should not "rock" or "teeter" on any of the levelers. When the vending machine is level, the door can be opened to any position and not move by itself. Try the door half closed, straight out and in a wide open position before deciding that the vending machine is level.

Remove all shipping brackets, tape and inner packing material from the vending machine. Operating the vending machine without removing the tape and packing material could result in damage to the vending machine.

GROUNDING (EARTHING) & ELECTRICAL

Prior to connecting the equipment, the integrity of the main electrical supply must be checked for correct polarity, voltage, (earth) ground and (amperage) circuit protection. The fuse or breaker protecting the circuit must be rated at 15 amps or greater. It is recommended that these checks be repeated at 6 months intervals with the routine safety electrical testing of the equipment itself. To correct negative voltage, amperage, polarity or ground (earth) checks, consult a qualified technician.

A noise suppressor has been installed in this vending machine to compensate for any signal noise that could interfere with the normal operation of the control board. The vending machine must be grounded for noise suppressor to work.

WARNING: Do not use extension cords.

INSTALL WALL MOUNT BRACKET

WARNING: Failure to install the Wall Mount Bracket in strict accordance with the following procedure may create an unintentional tipping, hazard, or may result in improper positioning of the machine against the wall, and possible damage to the refrigeration unit. All installation and service work must be done by a qualified service technician.

1. Find the Wall Mount Bracket and eight (8) screws in the service package.
2. Align holes of the Wall Mount Bracket with the hole pattern in the cabinet back. Use the eight (8) screws to attach the Wall Mount Bracket to the cabinet back. See FIGURE 2.

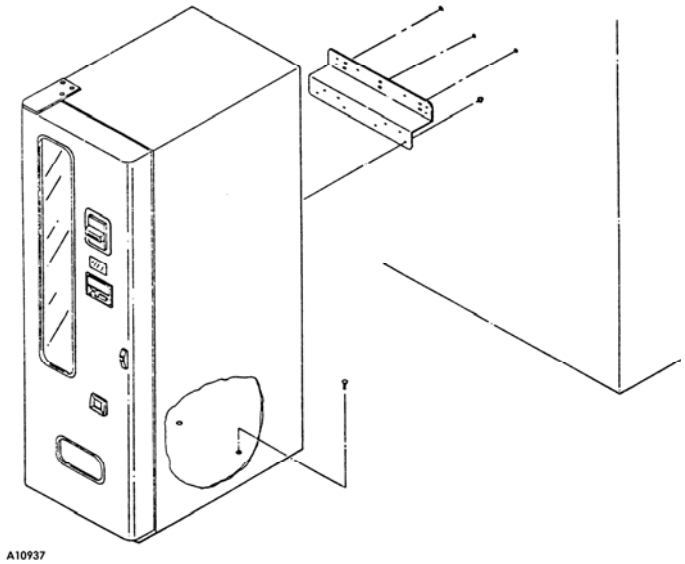

FIGURE 2. WALL MOUNT BRACKET

3. Push machine to desired position against wall and clearly mark, through Wall Mount Bracket, hole intended for mounting. These holes allow attachment to both concrete and sheet rock walls. Fasteners are determined by the type of wall machine is mounted to. For suggested fasteners see FIGURE 3.
   - Use the two center holes for a 24" stud sheet rock wall.
   - Use the outermost holes for a 16" stud sheet rock wall.
   - Use the smallest holes for sheet rock wall when studs are not available.
   - Use any pattern for a concrete wall.
4. Push the machine away from markings for desired mounting holes and drill these holes in wall. The fasteners used to attach bracket to wall will determine diameter of hole to be drilled.
5. Finally, push machine back to desired position against wall and securely attach Wall Mount Bracket to wall using proper fasteners. Fasteners are not provided. See FIGURE 2.
6. Holes are provided in the bottom of cabinet (see FIGURE 2) to allow machine to be mounted to floor. Follow similar procedures for marking and drilling holes. The construction of the floor determines the type of fasteners to use. See FIGURE 3 for suggested fasteners.

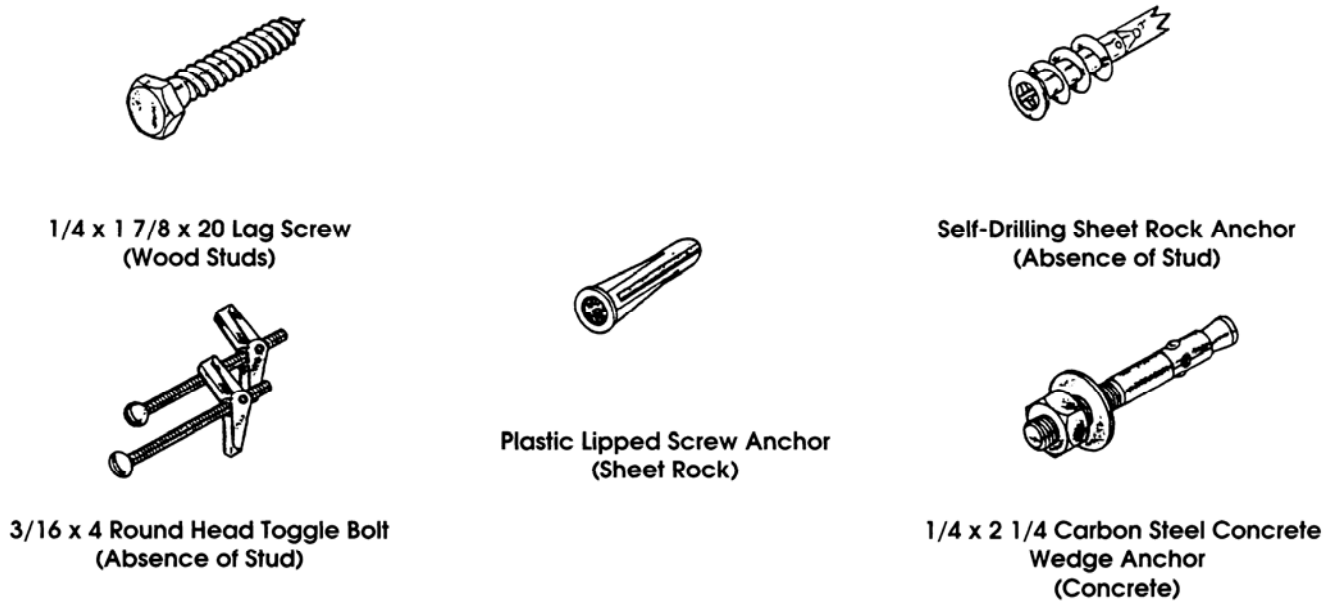

FIGURE 3. WALL MOUNT BRACKET FASTENERS

INSTALLATION CHECKLIST

- ❑ All shipping brackets, packing material and tape have been removed.
- ❑ Make sure the vendor is level from left to right and front to back.
- ❑ The dedicated outlet is polarized and grounded.
- ❑ The coin mechanism switches have been set properly.
- ❑ Each coin tube has at least 20 coins and no tube is filled above the fill level line. Refer to Tube Fill section on page 10 for information on using the MDB feature of the controller to track and maintain coin levels.
- ❑ All vend prices have been set correctly. Refer to Pricing section on page 10.
- ❑ Vendor has been properly loaded and all items in each selection correspond to the display product and vend price. Refer to Loading Products section on page 5.
- ❑ The machine is plugged directly into a live 115 volt dedicated outlet.

NOTE: Extension cords cause problems – Do not use extension cords.

- ❑ The machine has at least 4" of space behind it.
- ❑ The vendor door is closed tightly and locked.

POWER SWITCH

A power switch is located on the power panel (bottom left area with door open), along with a 3 amp breaker. With the door open, this switch will shut off the light and controller, leaving evaporator fans running. See FIGURE 4. The 3 amp breaker is protection for the controller.

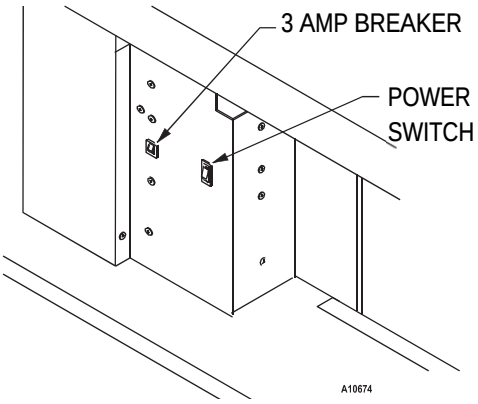

FIGURE 4. POWER SWITCH (POWER PANEL)

LOADING PRODUCTS

VEND RACK

IMPORTANT SUGGESTION: Load the front rack with products that sell faster. When loading, fill the rear selections first. This method makes it easier to load the rack.

1. Products featured in front door Live Display must match the products being loaded.
2. Funnel slides must be kept clean. Refer to FIGURE 5 for part names, locations and product orientation.
3. Refer to FIGURE 6. Product container bottoms must face towards the center of the rack as shown.
4. Do not store bottles in "spare" space of the cabinet. The refrigeration unit could be damaged.
5. A loading chart has been provided on the inner door to make it easier to keep track of what types of products have been loaded into the CB300-G1. Use a dry erase marker to avoid making a permanent mark.
6. If refilling with the same product size into the same column, then load products into the columns. Skip steps 7 through 11.
7. If a) loading for the first time, or b) changing a column to a different product size, then load one row of products in each column and test vend each column using real money.

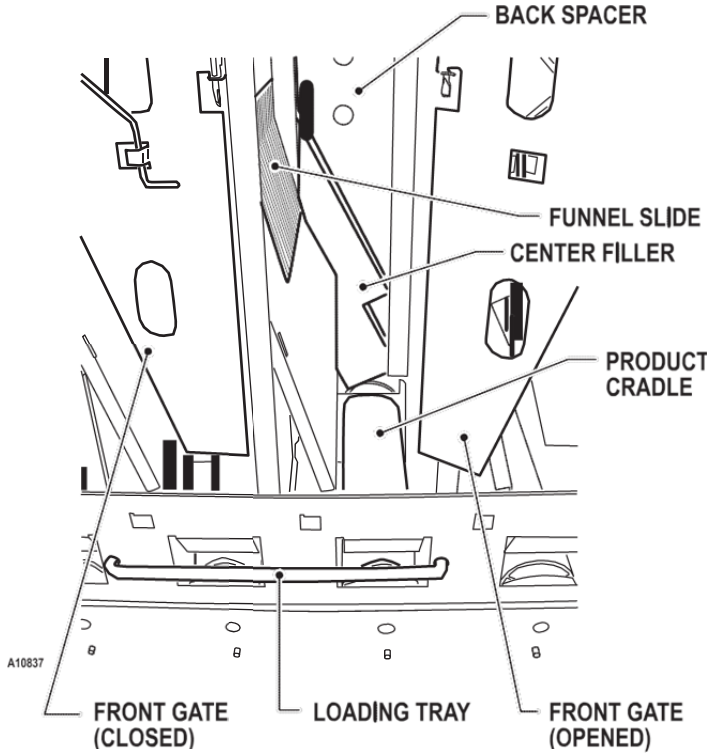

FIGURE 5. VEND RACK

CAUTION: Do not load dented or damaged cans or bottles in the columns. Possible jams could occur.

8. Add five (5) products in each column to check product spacing. Products should have 1/4 to 1/2 inches of free space at the front or back of the columns. See FIGURE 6. See step 9.

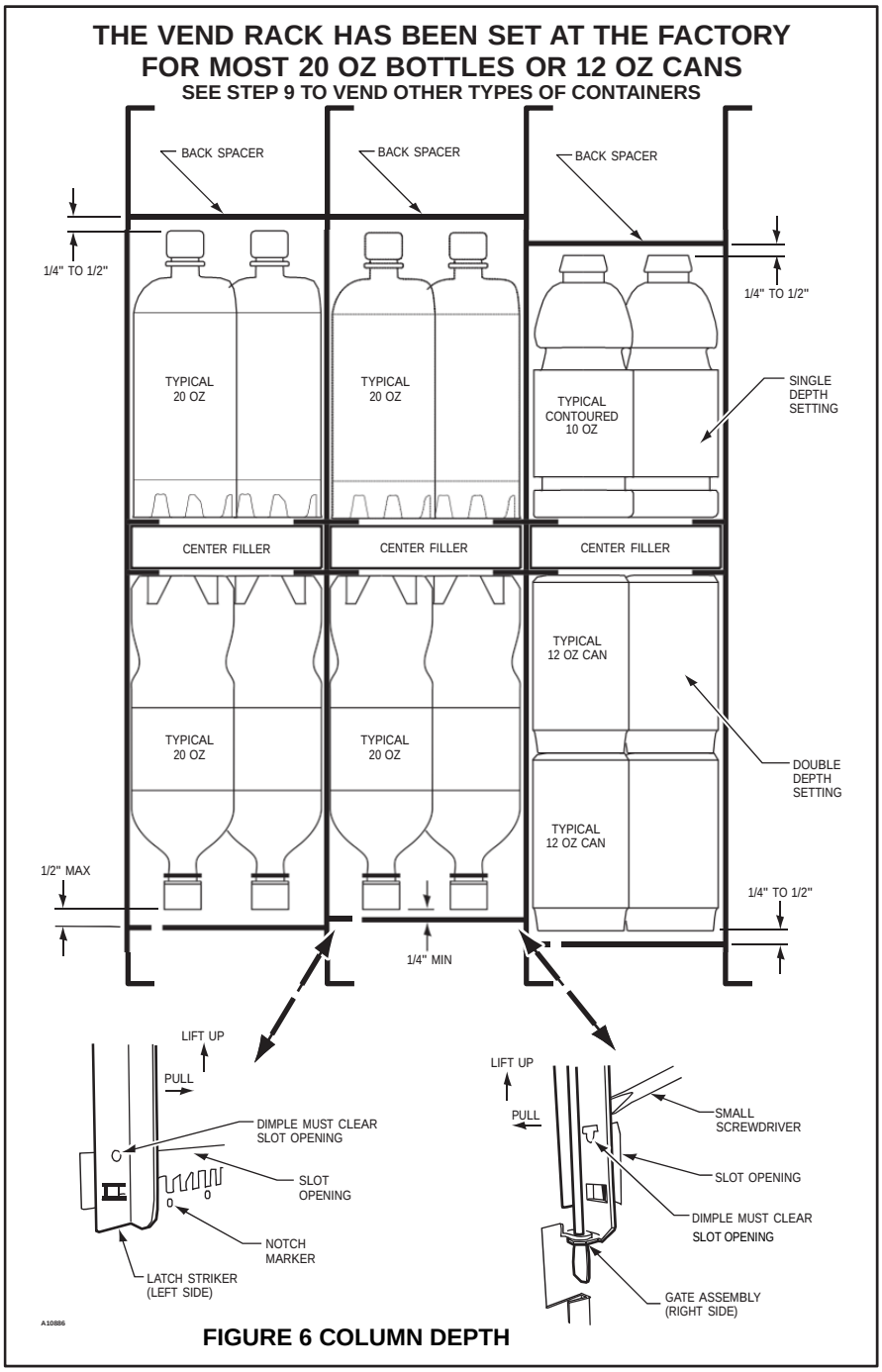

FIGURE 6 COLUMN DEPTH

9. VEND RACK ADJUSTMENTS:

Adjust the back spacer, latch striker or gate assembly to achieve the required dimension. The Vend Rack has been factory set for most 20-oz. bottles or 12-oz. cans. There are a wide variety of water bottle sizes. Avoid vending containers that collapse on itself when stacked. Test vend before using. Call service for additional can/bottle vending information and suggestions.

If vending 16.9-oz water bottles, remove Filler (4211816) shipped inside the Delivery Box and install it in the Vend Rack. Follow instructions on Filler decal.

ADJUSTING THE BACK SPACER:

Lift the back spacer and reposition it in the adjustment slots. Use notch markers as reference points to align it vertically. See FIGURE 6.

ADJUSTING THE LATCH STRIKER AND GATE ASSEMBLY:

Pull and lift up on the lower end of the gate assembly (or latch striker). Use a small screwdriver as a wedge to gently pry the dimple away from the slot opening. See FIGURE 6 Reposition them in the adjustment slots. Use notch markers as reference points to align it vertically.

10. If product spacing is correct, then test vend each column using real money.
11. Load the columns to full capacity.

LIVE DISPLAY

Products featured in the front door Live Display must match the products being loaded.

1. Open the main cabinet door, then open the inner door.
2. Place product containers on the shelves of the Live Display.

DROP SENSOR

A drop (vibration) sensor on the delivery chute detects if a product has been vended after a selection is made. The control board located on the back of the main door controls the sensor sensitivity.

The drop sensor sensitivity is factory calibrated for 12 oz Cans / 20 oz Bottles and should not need adjustment.

Please refer to DROP SENSOR instructions on page 9 in the CONTROLLER PROGRAMMING section of this manual to restore the drop sensor sensitivity to factory default.

NORMAL VEND OPERATION

1. STAND-BY CONDITION

When the control board is in Sales Mode the display will show "ICE COLd" or the amount of credit. If a customer presses a selection before establishing a credit, the vend price for that selection will display signaling the customer that more money is needed for that selection.

2. ESTABLISHING CREDIT

Feeding coins into the coin mechanism or bills into the bill validator results in the display of the corresponding credit value. The coin mechanism or bill validator will accept money until the highest vend price has been reached or exceeded. At this point a credit has been set up through the control board that will enable a vend for any selection less than or equal to the established credit.

3. VALID SELECTION

Making a selection on the keypad causes the control board to determine if a vend motor is available and if enough credit is established. If both conditions are met then a vend is initiated.

4. VEND SEQUENCE

The control board then distributes 24 volts DC through the door and cabinet wiring harnesses and to the coil of the selected product cradle motor. At the same time, the display will flash. This indicates to the customer that a vend is in progress. As the product cradle motor receives power, it will turn the product cradle attempting to vend a can or bottle.

5. PRODUCT DELIVERY

As the can or bottle drops onto the product delivery chute, impact or vibration allows the drop sensor to send a low voltage signal to the control board indicating that the product has been vended. After receiving the drop sensor signal, the control board will recognize how the vending machine is programmed and responds accordingly. Refer to CAN/BOTTLE menu section on page 10 for additional features.

6. SOLD OUT

The display will blink to show the vend process of each selection. If a product drop is not detected in 10 to 12 seconds, "MAKE ANOTHER SELECTION" light turns on. This condition may be due one of the following: See FIGURE 7.

- Column is actually sold out.
- Selected column is jammed.
- Wrong selection number.
- Drop Sensor does not detect product drop which may be an indication of a faulty Drop Sensor.

If the "MAKE ANOTHER SELECTION" indicator light is turned on, the customer may make a different selection or receive a refund by pressing the coin return lever. If the machine is set for forced purchase, the customer must make an initial selection. If the selection is sold out, a full refund or an alternate selection will be allowed.

CONTROLLER PROGRAMMING

CONTROL BOARD

This vending machine has a GVC1 control board that is connected to product cradle motors. It is also connected to a drop sensor (impact vibration) for delivery detection.

Open the main door and then open the inner door. The control board is located on the back of the main door (top middle). See FIGURE 8.

FIGURE 7. DISPLAY

SALES MODE

The vending machine defaults to sales mode when it is turned on. While it is in sales mode, the display will show "ICE COLd". If there is credit to the customer, it will display the amount of credit.

CURRENT TEMPERATURE READING

STEP		DISPLAY
1.	Press [0] to view the temperature sensor reading	36F

SERVICE MODE

Pressing the service mode button while the vending machine is in sales mode will activate service mode. See FIGURE 8. The display will display the number of working motors.

While in service mode, the control board will automatically revert to sales mode after one (1) minute if a keypad button is not pressed.

NOTE: Always watch display readout after pressing the Service Mode button or keypad button.

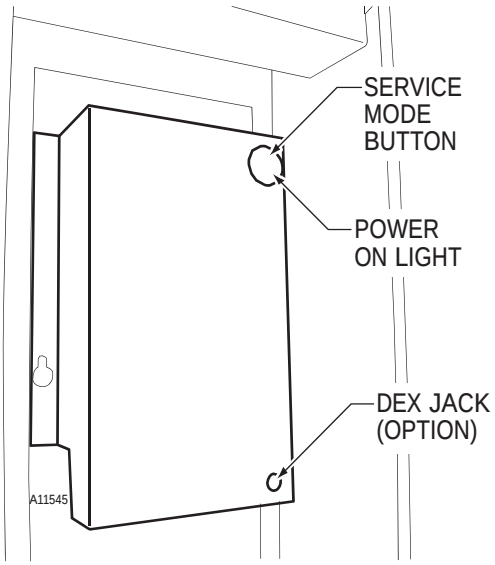

FIGURE 8. SERVICE MODE BUTTON

KEYPAD

Use the buttons on the keypad as directed in the step-by-step instructions in this manual in programming the vendor.

DISPLAY

Check the display after pressing the **Service Mode Button** and/or **Keypad Buttons** to make sure that the program is responding correctly.

Buttons 0-9 are used to move between the various modes, menus and sub-menus; while the # button is used to enter a menu, confirm or save a setting.

See Figure 9

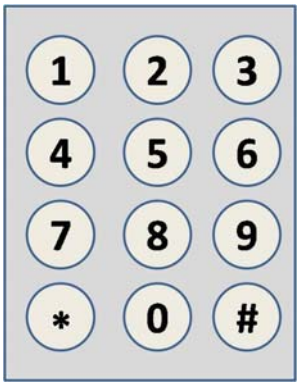

FIGURE 9. KEYPAD

PROGRAMMING

Refer to the basic programming steps in this manual or on the control cover label. Press the Service Mode Button; check the display for instructions or choices while using the keypad. For detailed programming instructions see the GVC1 programming manual p/n 4216961.

COIN TUBE FILL

The coin mechanism will keep track of the exact number of each coin as they are added through the coin insert. Denominations do not have to be added in order. The control board will keep track of each coin as it is paid out.

	STEP	DISPLAY
1.	Press Service Mode Button ■.	6
2.	Press 1 and begin depositing coins.	tUFL
3.	Press * two times to exit.	ICE COLd

DISPENSE COINS

Manually dispense coins from the coin mechanism

	STEP	DISPLAY
1.	Press Service Mode Button ■.	6
2.	Press 1 .	COIN
3.	Press 1 to dispense dollar coins.	1.00
4.	Press 2 to dispense quarters (25¢).	.25
5.	Press 3 to dispense dimes (10¢).	.10
6.	Press 4 to dispense nickels (5¢).	.05
7.	Press * two times to exit.	ICE COLd

MOTOR COUNT

Displays the total count of working motors

	STEP	DISPLAY
1.	Press Service Mode Button ■.	6
2.	Press 2 then wait.	6
3.	Press * to exit.	ICE COLd

FORCE VEND

This feature would require the customer to purchase an item from the vending machine once credit equal to or greater than the highest selection price has been deposited.

	STEP	DISPLAY
1.	Press Service Mode Button ■.	6
2.	Press 3 .	OPtn
3.	Press 1 .	Frcn
4.	Press 1 to toggle ON or OFF. *Note: Frcn=NO (OFF), FrcY=YES (ON)*	FrcY
5.	Press # to save.	FrcY
6.	Press * three times to exit.	ICE COLd

BILL ESCROW

This feature will hold a bill in escrow (mechanically) until either a vend is performed or the coin return lever is pressed. This prevents the customer from using the vending machine as a bill changer.

	STEP	DISPLAY
1.	Press Service Mode Button ■.	6
2.	Press 3 .	OPtn
3.	Press 2 .	ESCy
4.	Press 2 to toggle ON or OFF. *Note: ESCn=NO (OFF), ESCy=YES (ON)*	ESCn
5.	Press # to save.	ESCn
6.	Press * three times to exit.	ICE COLd

MULTI VEND

Multi Vend feature will hold the change (credit), allowing the customer to make more than one vend provided there is sufficient credit remaining.

	STEP	DISPLAY
1.	Press Service Mode Button ■.	6
2.	Press 3 .	OPtn
3.	Press 3 .	NULn
4.	Press 3 to toggle ON or OFF.	NULY
5.	Press # to save.	NULY
6.	Press * three times to exit.	ICE COLd

FREE VEND

This feature allows the customer to select any item for free.

	STEP	DISPLAY
1.	Press Service Mode Button ■.	6
2.	Press 3 .	OPtn
3.	Press 4 .	FrEn
4.	Press 4 to toggle ON or OFF.	FrEY
5.	Press # to save.	FrEY
6.	Press * three times to exit.	FREE

FAST CHANGE

Allows the vending machine to give change immediately after the customer makes a selection. If Fast Change is ON, it will override the Multi Vend feature.

	STEP	DISPLAY
1.	Press Service Mode Button ■.	6
2.	Press 3 .	OPtn
3.	Press 5 .	FCHn
4.	Press 5 to toggle ON or OFF. *Note: FCHn=NO (OFF), FCHY=YES (ON)*	FCHY
5.	Press # to save.	FCHY
6.	Press * three times to exit.	ICE COLd

POINT OF SALE MESSAGE (POS)

Turns OFF (or ON) the default "ICE COLD" flashing display message.

	STEP	DISPLAY
1.	Press Service Mode Button ■.	6
2.	Press 3 .	OPtn
3.	Press 7 .	POSY
4.	Press 7 to toggle ON or OFF. *Note: FCHn=NO (OFF), FCHY=YES (ON)*	POSn
5.	Press # to save.	POSn
6.	Press * three times to exit.	0.00

SET REFRIGERATION MODE

	STEP	DISPLAY
1.	Press Service Mode Button ■.	6
2.	Press 4 .	CBS
3.	Press 0 to view the current setting.	PASS
4.	Enter Password (default 2314).	ACFG
5.	Press 7 to view the current setting.	SNAC
6.	Press 7 until Cold is displayed	COLD
7.	Press # to save.	(CHOICE)
8.	Press * three times to exit.	ICE COLd

TARGET TEMPERATURE

	STEP	DISPLAY
1.	Press Service Mode Button ■.	6
2.	Press 3 .	OPtn
3.	Press 8 to view the current setting.	36F
4.	Press 8 to increase the temperature Note: max is 62°F then it will roll back to 34°F	
5.	Press # to save.	36F
6.	Press * three times to exit.	ICE COLd

DROP SENSOR SENSITIVITY

This menu allows you to adjust the Drop Sensor sensitivity.

	STEP	DISPLAY
1.	Press Service Mode Button ■.	6
2.	Press 3 .	OPtn
3.	Press 0 .	drP3
4.	Press 0 to toggle for settings 1-9. *Note: 1 most sensitive, 9 Least sensitive*. Default is 3	drP2
5.	Press # to save.	drP2
6.	Press * three times to exit.	ICE COLd

CAN/BOTTLE CONFIGURATION

CAn – Can setting is normally used with double-depth loading of cans to double the product capacity of that selection. During a vend, the product cradle stops rotating as soon as the drop sensor detects a vend. This is to prevent double vending.

Bott – Bottle setting is normally used with single depth loading of bottles. This setting allows the product cradle to continue rotating a few more seconds so that it is positioned closer to the loading zone. This reduces the customer's waiting time when the product cradle is activated for the next vend.

The controller has been configured to operate as a CB300 can/bottle vending machine and all selections are defaulted to vend cans. Follow the instructions below to change all or some of the selections to vend bottles.

STEP		DISPLAY
1.	Press Service Mode Button [■].	6
2.	Press [4].	CbS
3.	To set all selections press [3] then go to step 4. To set a selection, go to step 6.	ALL CAn
4.	Press [1] to toggle the setting until CAn (or bott) is displayed. Do not select SnAc. *Note: CAn=Can, bott=bottle, SnAc=Snack*	CAn
5.	Press [#] [*] to save setting then go to **step 6** to set selections or go to **step 11** to exit.	
6.	Press [1] to begin to set a selection.	C b --
7	Press selection number on keypad	CAn
8.	Press [1] to toggle the setting between **CAn** (can) or **bott** (bottle).	bott
9.	Press [#] to save the setting.	--
10.	Go to **step 7** to set more selections	
11.	Press [*] three times to exit.	ICE COLd

SET PRICE
OF ENTIRE MACHINE

STEP		DISPLAY
1.	Press Service Mode Button [■].	6
2.	Press [5].	Prc
3.	Press [3] and wait a moment.	ALL
4.	Enter new price on keypad	.75
5.	To erase, press [*] then repeat step 4.	
6.	To save press [#].	
7.	Press [*] four times to exit.	ICE COLd

SET PRICE
BY SELECTION

STEP		DISPLAY
1.	Press Service Mode Button [■].	6
2.	Press [5].	Prc
3.	Press [1] and wait a moment.	--
4.	Enter selection number on keypad	10
5.	Enter new price on keypad	.75
6.	To erase, press [*] then repeat step 4.	
7.	To save press [#].	--
8.	Repeat steps 4 - 6 for other selections	
9.	Press [*] four times to exit.	ICE COLd

SET COUPON VALUE

STEP		DISPLAY
1.	Press Service Mode Button [■]	6
2.	Press [5].	Prc
3.	Press [4].	CPn1
4.	Press [1] thru [5] to select coupon number.	
5.	Press [#] to view or set value of coupon.	1.00
6.	Enter new value of coupon	
7.	To erase, press [*] then repeat step 6.	
8.	To save press [#].	CPn1
9.	Repeat steps 4 – 8 to set values of other coupons	
10.	Press [*] three times to exit.	ICE COLd

SET TOKEN VALUE

STEP		DISPLAY
1.	Press Service Mode Button [■]	6
2.	Press [5].	Prc
3.	Press [5].	thn1
4.	Press [1] thru [5] to select coupon number.	
5.	Press [#] to view or set value of coupon.	1.00
6.	Enter new value of coupon	
7.	To erase, press [*] then repeat step 6.	
8.	To save press [#].	thn1
9.	Repeat steps 4 – 8 to set values of other coupons	
10.	Press [*] three times to exit.	ICE COLd

ACCOUNTING
TOTALS BY SELECTION

STEP		DISPLAY
1.	Press Service Mode Button [■]	6
2.	Press [6].	Acct
3.	Press [1].	EACH
4.	Press the selection number	--
5.	Press [1] for total non-resettable vend count.	0
6.	Press [2] for total non-resettable cash value.	0.00
7.	Press [3] for total resettable vend count.	0
8.	Press [4] for total resettable cash value.	0.00
9.	Press [5] [#] to clear the resettable counters.	Clr? Clrd
10.	Press [*] and go to step 4 for other selections.	Acct
11.	Press [*] four times to exit.	ICE COLd

ACCOUNTING
TOTALS OF ENTIRE MACHINE

STEP		DISPLAY
1.	Press Service Mode Button [■]	6
2.	Press [6].	Acct
3.	Press [3].	ALL
4.	Press [1] for total non-resettable vend count.	0
5.	Press [2] for total non-resettable cash value.	0.00
6.	Press [3] for total resettable vend count.	0
7.	Press [4] for total resettable cash value.	0.00
8.	Press [5] [#] to clear the resettable counters.	Clr? Clrd
9.	Press [*] and go to step 4 for other selections.	Acct
10.	Press [*] four times to exit.	ICE COLd

TEST SINGLE MOTOR

	STEP	DISPLAY
1.	Press Service Mode Button ■.	6
2.	Press 8 and wait a moment.	SLct
3.	Enter selection number on keypad	--
4.	Repeat step 3 to test other selections	
5.	Press * two times to exit.	ICE COLd

TEST SINGLE MOTOR

	STEP	DISPLAY
1.	Press Service Mode Button ■.	6
2.	Press 9 Motor selection number will display while it is being tested.	ALL
3.	Press * two times to exit.	ICE COLd

DIAGNOSTICS

	STEP	DISPLAY
1.	Press Service Mode Button ■.	6
2.	Press 0 .	dIAG
3.	Press 1 to perform a self-diagnostic test.	tESt
4.	Press * three times to exit.	ICE COLd

RELAY TEST

	STEP	DISPLAY
1.	Press Service Mode Button ■	6
2.	Press 0 .	diaG
3.	Press 2 .	rLY
4.	Press 1 to display compressor relay 1 status.	rL1o
5.	Press 1 to turn ON the compressor relay Press 1 again to turn it off. CAUTION: Once the compressor has been turned off, wait 3 minutes before turning it on again to prevent possible damage to the compressor. *Note: rL1o = relay 1 switch contacts open (OFF). rL1c = relay 1 switch contact closed (ON).*	rL1c
6.	Press * four times to exit.	ICE COLd

KEYPAD BACKLIGHT

This menu controls the intensity level of the keypad backlight.

	STEP	DISPLAY
1.	Press Service Mode Button ■.	6
2.	Press 3 .	OPtn
3.	Press 9 to view the setting.	bL 3
4.	Press 9 repeatedly to change. *Note: bL0=OFF, bL1=Low bL2=Med, bl3=High, bL4=Max*	bL 0
5.	Press # to save.	bL 3
6.	Press * three times to exit.	ICE COLd

REFRIGERATION

REFRIGERATION CONTROLS

The target temperature setting for the refrigeration system has been preset at the factory. Refer to **TARGET TEMPERATURE** in the **PROGRAMMING** section (SET REFRIGERATION MODE page 9) of this manual. If setting up for the first time, please allow sufficient time for the refrigeration system to cool the products.

WARNING: A colder setting does not cool drinks faster and may cause drinks to freeze.

REFRIGERATION TROUBLESHOOTING

CAUTION: Do not place any object in the evaporator assembly area or inside the cabinet area that will block the airflow because this may damage the refrigeration system, which may void the refrigeration warranty.

CAUTION: Breaking the refrigerant joints or seals on the system voids the unit warranty. Failure to keep the condenser coil clean and free of dirt, dust and other similar debris voids the unit warranty.

If the refrigeration unit is turned off or the power is interrupted or the door is opened then the refrigeration unit will not start for at least three (3) minutes regardless of the temperature. This is done to prevent damage to the refrigeration unit.

Know and understand how to service the unit and how it operates. Units may vary but the operation is basically the same. Never guess at the problem. Find the symptom before attempting any repair.

REMEMBER: Most refrigeration problems are electrical.

Unauthorized work done to the sealed hermetic system will void the warranty. The sealed hermetic system is not to be worked on outside the Factory Service Center. The three (3) things that can go wrong with a sealed system and should be repaired at the Factory Service Center are:

1. Low Charge - usually caused by leaks. Look for oil around seals and welds. Unit will not cool properly. The capillary tube will be frosted before it enters the evaporator inlet tube.
2. Restriction in System (unit frosts, then melts) - not cooling properly.
3. Bad valves - unit does not cool properly or noisy compressor.

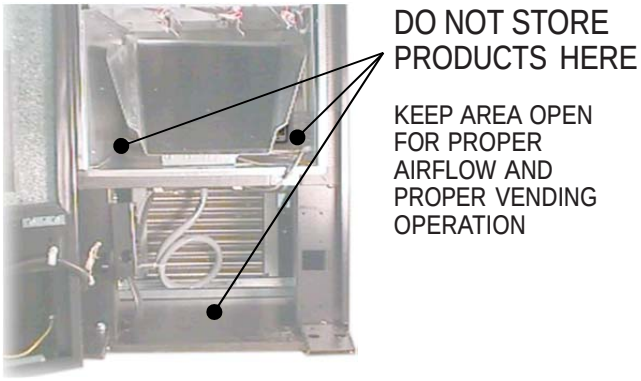

FIGURE 10. REFRIGERATION

COMPRESSOR WILL NOT START

a. Vending machine not plugged in.
b. Tripped breaker or blown fuse.
c. Faulty wall outlet.
d. Short or tear in power cord.
e. Improper wiring.
f. Low voltage: 5% below. Check the power source with the Multi-Meter.
g. Overload defective: Trips too fast. Check overload with the Multi-Meter.
h. Start relay defective. Check start relay with the Multi-Meter.
i. Compressor has open windings. Check compressor windings with a Multi-Meter.
j. Defective thermistor.

COMPRESSOR TRIPS ON OVERLOAD

a. Improper voltage: 5-10% above, 5% below. Check power source with Multi-Meter.
b. Overload defective: Trips too fast. Check overload with Multi-Meter.
c. Relay defective: Won't open after starting. Check relay with Multi-Meter.
d. Compressor has shorted windings: Check compressor windings with Multi-Meter.
e. Short in other component: Isolate and eliminate each electrical component until short is found.
f. Compressor is too hot.
   - Dirty condenser.
   - Faulty condenser motor or blade.
   - Restricted airflow.

CAUTION: Condenser must be kept clean of dirt and debris to allow for proper air circulation.

NOISY OR VIBRATING UNIT

a. Components rubbing or touching each other.
   - Check fan blades and motor.
   - Loose shrouds and harness.
   - Copper tubing.
   - Loose or unsecured parts.
b. Worn or aged grommets.
c. Compressor
   - Bad valves.
   - Slugging.
   - Bad windings (see Error! Reference source not found.3)
   - Low voltage.

UNIT SHORT CYCLES

- Temperature setting too warm. See Refrigeration Controls section in this manual.

UNIT OPERATES LONG OR CONTINUOUSLY

a. Air flow restricted:
   - Faulty evaporator motor or blades causing coils to ice over.
   - Loose connections on evaporator motor. (One motor not running).
   - Air flow blocked by product in front of evaporator or air duct t openings.
b. Gasket leak around main door.
c. Gasket leak around delivery door.
d. Excessive load: After loading, unit will run longer to pull out excessive heat from product.
e. Shortage of refrigerant or restriction.
f. Check target temperature setting.

REFRIGERATED SPACE TOO COLD

- Target temperature set too cold.

REFRIGERATED SPACE TOO WARM

a. Target temperature set too warm.
b. Restricted evaporator space.
   - Evaporator motor or blades faulty, causing the coils to ice over the evaporator.
   - Condenser airflow restricted.
     ~ Plugged or dirty condenser.
     ~ Condenser motor or blades bad.
     ~ Blade stuck.
   - Condensing space restricted.
     ~ Unit placed too close to a wall.
   - Compressor - bad valves.
     ~ Cap tube will start frosting 8 to 10 inches past evaporator connection tube.
     ~ Check for oil around brazed connections.
   - Leak around delivery door gasket.

TROUBLESHOOTING CIRCUITS WITH MULTI-METER

a. Check the power source. Use voltage section of the Multi-Meter. Should measure within 5-10% above, 5% below.
b. Check overload.

NOTE: Power must be off and fan circuit open.

Using the resistance section of the Multi-Meter, remove overload and check continuity across terminals. If no continuity is measured (infinity), overload may be tripped. Wait 10 minutes and try again. If still no continuity, overload is defective.

c. Check relay. See FIGURE 11 shown below. Remove lead terminals and remove relay from compressor. Keep relay upright.
d. Check terminals 10 and 11 with the Multi-Meter. Replace relay if continuity exists.
e. Check compressor windings. See FIGURE 11 shown below.
f. Check winding resistance with the Multi-Meter. If readings are not within 2 Ohms the compressor is faulty.

WARNING: Wiring diagram must be followed as shown. Wrong wiring can cause serious electrical hazard and potential damage or rupture component electrical parts.

WINDING RESISTANCE

Approximate resistance reading across terminals - use RXI scale.	
COMMON to START:	4.5 Ohms
COMMON to RUN:	1.1 Ohms
RUN to START:	5.6 Ohms
COMMON to SHELL:	No Continuity

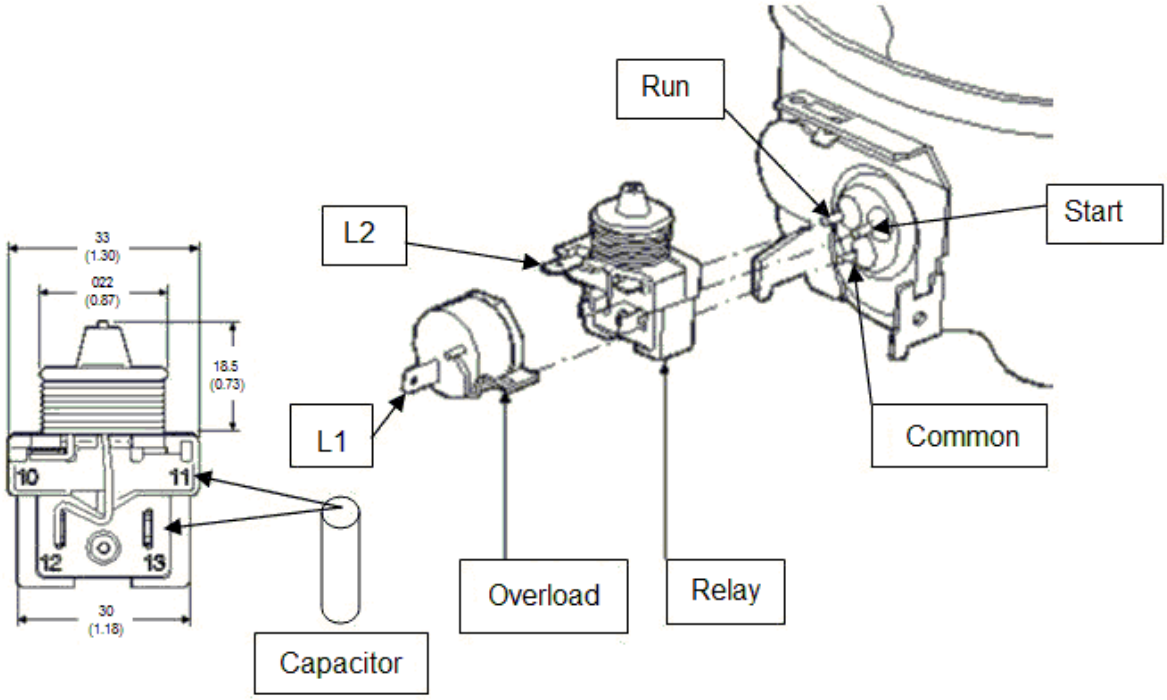

FIGURE 11. COMPRESSOR START COMPNENTS

REFRIGERATION UNIT REMOVAL

The refrigeration unit is a hermetically sealed completely self-contained modular 1/3+ H.P. unit charged with 5.1 ounces of ozone-friendly R-134-a refrigerant. The complete refrigeration unit can be removed if there is a service problem.

WARNING: Disconnect power before servicing.

1. Unplug the CB300-G1 power cord from the electrical wall outlet.
2. Remove the two screws holding the suction line cover.
3. Remove only the ten screws holding the refrigeration unit to the cabinet as shown in Figure 12.
4. From the front, disconnect the green ground (earth) wire from the power switch plate.
5. From the front, remove the screws holding the hopper and remove the hopper.
6. From the front, remove the air duct and Evaporator Fan Assembly.
7. From the back, disconnect the refer harness.
8. Use the handle on the unit and pull straight back to remove.

To re-install the refrigeration unit, reverse the above procedures.

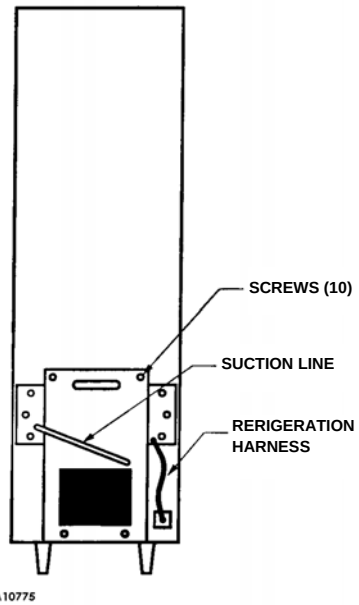

FIGURE 12. REFRIGERATION UNIT REMOVAL

CARE & CLEANING

WARNING: Always disconnect power before cleaning.

CABINET EXTERIOR

Wash with a mild detergent and water, then rinse and dry thoroughly. Polish occasionally with a quality car wax. Plastic exterior parts may be cleaned with a quality plastic cleaner.

CABINET INTERIOR

CAUTION: Do not get cleaning solution on electrical components.

Wash with a mild detergent and water, then rinse and dry thoroughly. Including baking soda or ammonia in the cleaning solution may eliminate odors. Plastic parts may be cleaned with a quality plastic cleaner. Remove and clean Condensate Drain Hose to eliminate any deposits that may restrict condensate water flow.

Vend mechanism must be kept clean. Any build-up of syrup deposits can cause the mechanism to malfunction. Use soap and water with great care so as not to get water into the electrical components.

To insure proper vending keep delivery slide area free of dirt and sticky substances.

REFRIGERATION SYSTEM

CLEAN REFRIGERATION INTAKE SCREEN - Remove screen and clean dust and debris from screen using a soft bristle brush or a vacuum cleaner.

CLEAN CONDENSER COIL & REAR EXHAUST SCREEN - Remove the Cover Assembly and clean the condenser coil of the refrigeration unit using a soft bristle brush or vacuum cleaner.

Pull the refrigeration unit and clean the rear exhaust screen of dirt and debris.

Do not block the evaporator or any area of the airflow with product or supplies.

PARTS ORDERING PROCEDURE

WARNING: Disconnect electrical power to avoid electrical shock when performing service. Do not remove electrical components or parts without first unplugging the power cord from the power source.

PLEASE HAVE THE FOLLOWING INFORMATION:

- The model number and serial number of the vending machine.
- Correct part number and description from the pertinent part and/or parts manual.

  If you do not have the correct parts manual, go online to www.vendnetusa.com or contact VendNet™ and we will provide a copy for you.

  Note: *Unless specified otherwise, when "right" or "left" are used as a description in a part name, it is defined to mean that the person is facing the vending machine with the door closed.*

- Shipping address.
- Address where the invoice should be sent.
- The number of parts required.
- Any special shipping instructions.
- Desired carrier: air or air special, truck, parcel post or rail.
- If ordering by mail, need signature and date.

  If a purchase order number is used, be sure that it is visible and legible.

PARTS ORDER OPTIONS:

- **Go online to www.vendnetusa.com**. Browse the parts manuals. Place a secured order online using your credit card or Vendnet™ account.
- **Email: vendnet@vendnetusa.com**. Please note that this is not as secured as playing an order online.
- **Phone**:
  USA & Canada ..... (888) 259-9965
  International ..... (515) 274-3641
- **Fax Order**: ..... (515) 274-5775
- **Mail Order**:

  VendNet™
  165 North 10th Street
  Waukee, IA 50263
  USA

BEFORE CALLING FOR SERVICE

PLEASE CHECK THE FOLLOWING:

- Does your vending machine have at least 4" of clear air space behind it?
- If the power is turned on at the fuse box, is the vending machine the only thing that doesn't work?
- Is the vending machine plugged directly into the outlet?

WARNING: Do not use extension cords. Extension cords cause problems.

- Is the evaporator coil free of dust and dirt?
- Is the condenser coil free of dust and dirt?
- Is the compressor free of dust? A blanket of dust can prevent the compressor from cooling off between workouts.
- Is the circuit breaker at the fuse box reset?
- Are evaporator lines running? Take a sheet of paper approximately 4" x 5" in size. Place the paper in front of the evaporator coil and see if the evaporator fans will draw the paper to the coil.
- Is the condenser fan running? Fold a sheet of 8-1/2" x 1" paper in half. Place the paper in front of the condenser coils and see if it draws the paper to it.
- Is the shelf in front of the evaporator coil clear? There must be no tools or other air restricting items.
- Is the set temperature set between 36°F and 40°F.

NOTE: Setting the cold control at a colder temperature does not accelerate cooling of product and may cause product to freeze.

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