

Technical Bulletin

Bulletin Number: 409 Revision Number: R-02

Release Date: February 7, 1991 Revision Date: August 25, 1998

SUBJECT: *MPC VENDER SET-UP AND INSTALLATION PROCEDURE.

MODELS AFFECTED: All *MPC Venders

SERIAL BREAK: 0001-3203DO TO 0001-6111AR

REASON: The Dixie-Narco MPC Series can and bottle vender was designed utilizing technology featuring a highly sophisticated, micro-computer based control system. The vender design provides the flexibility required for the changing beverage industry as well as dependable performance for many years. This bulletin has been prepared to assist the proper installation and set-up of the vender. Please read this bulletin carefully and become familiar with the MPC Series Vender before placing the vender on location.

RECEIVING INSPECTION

When the vender is received inspect if for any damage. If there is any damage have the delivery driver note the damage on the bill of lading. Although the terms of sale are FOB shipping point, which requires the consignee to originate shipping claims, Dixie-Narco will gladly help if you must file a claim.

UNPACKING THE VENDER

Remove the stretch wrap and top covers from the vender. If flavor labels were shipped with your vender they will be in an envelope taped to the back of a vender in the shipment.

NOTE: DO NOT STORE THE VENDER OUTSIDE WITH THE STRETCH WRAP ON. THIS COULD CAUSE THE STRETCH WRAP TO BOND TO THE VENDER'S SURFACE WHICH COULD DAMAGE THE FINISH.

*MPC = Multi Price Controller

Remove the shipping boards from the bottom of the vender. The shipping boards are fastened to the base with the leveling legs. Remove the shipping boards by removing the leveling legs to avoid damage to the leveling legs or the base. A 1-1/2 inch socket type wrench can be used on the bottom of the leveling legs.

The door lock keys will be found taped in the coin return cup. Remove the keys and open the vender door. Remove all internal packaging. Check the coin box on the door for any extra parts, pricing labels, or other information on any factory equipped accessories. Check the handle for proper alignment and locking function. Check all lamps for proper function.

ELECTRIC POWER NEEDED

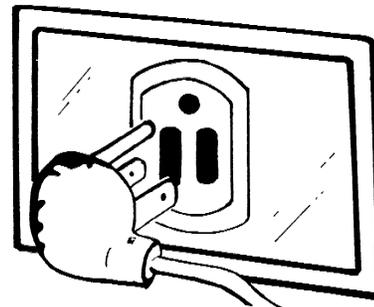
The vender uses 115 volts single phase, 60 cycle, alternating current. The voltage must be between 103 and 127 volts. Look at the cabinet serial number plate to determine how much current the vender requires. Be sure the vender is plugged into a circuit which will provide correct amperage, with its own circuit protection (fuse, circuit breaker). Do not use an extension cord.



GROUND THE VENDER

The vender is equipped with a three wire power supply cord and **MUST** be plugged in a properly grounded outlet. **DO NOT REMOVE THE GROUND PIN OR IN ANY WAY BYPASS THE GROUNDING OF THE VENDER.** If the outlet will not accept the power cord plug, contact an electrician to install a proper AC outlet.

WARNING: Failure to comply with these instructions may subject the user to the risk of injury or electrical shock which can be serious or fatal.



COIN CHANGERS AND OTHER ACCESSORIES

The MPC vender must have a coin changer installed and can have a bill acceptor installed. If the coin changer and other accessories are not factory installed refer to the instructions received from the manufacturer of the coin changer and other accessories for proper set-up and installation.

The MPC vender can be equipped with either a controller style coin changer or a single price coin changer. The controller style coin changer must be used if multi-pricing is required. The controller style coin changer must be a 120 volt AC changer. **CAUTION: DO NOT USE 24 VOLT CHANGERS IN THE DIXIE-NARCO MPC VENDER.**

BILL ACCEPTORS

If a bill acceptor is not factory installed a bill acceptor interface kit must be ordered from Dixie-Narco. See the chart below:

Acceptor	Bill Acceptor Interface Harness	
	Pepsi-Cola & Other Venders	Coca-Cola Venders
Ardac USA	804,906,15x.x1	804,906,15x.x1
Mars VFM-1 & VFM-3	804,906,15x.x1	804,906,15x.x1
Maka	804,902,84x.x1	804,902,84x.x1
Coinco / Rowe CBA-2	804,903,37x.x1	804,903,37x.x1
\$1 Only		
Rowe CBA-2	804,906,15x.x1	804,906,15x.x1
\$1 & \$5 (UBA)		
BA30	804,907,73x.x1	804,907,73x.x1

Note: Bill acceptors will be inhibited anytime the door interlock switch is in the center position (service mode enable) even if service mode time out has occurred restoring the vender to normal operation.

OTHER ACCESSORIES

The MPC vender is capable of interfacing to Debit Card and Data Recording systems. At this time only a few such accessories have been tested by Dixie-Narco. If such accessories are to be used check with either Dixie-Narco or the accessory manufacturer about physical and electrical compatibility before attempting to interface such accessories to the MPC vender.

INSTALLING A SINGLE PRICE COIN CHANGER

Set the vend price according to the instructions for the coin changer. Also set the escrow mode in the coin changer to "Escrow to Price" and if required, set the coin changer for the proper bill acceptor interface. Hang the coin changer on its mounting panel and secure it by tightening the three securing screws. Plug the coin changer into the 8 pin Jones socket in the vender.

CAUTION: The coin changer must be plugged in with the power removed from the door or the coin changer may not power on properly.

If a bill acceptor is being used, the bill acceptor must be interfaced to the coin changer not to the MPC control board.

After restoring power, manually load the coin changer coin tubes with at least 10 coins each. Following the program instructions for the MPC vender, program selection #1 for the same price that is set in the coin changer. This will enable the display and the accounting functions to operate properly. After the pricing is set return the vender to its operate mode by either closing the door or pulling the door closed switch out. "Prime" the coin changer by making one correct change transaction.

For free vend set program selection #1 to 0.00 and unplug the coin changer.

The following single price coin changers will work properly with the MPC vender:

MARS ELECTRONICS INT.	COIN ACCEPTORS, INC.
TRC 6200	3340-S
TRC 6200C	9340-S
TRC 6800	9360-S
TRC 6800H	9370-S
TRC 6800C	S75-9400B-977
TRC 6800HC	S75-9800B-907
MC 5802	S300E-9240
MC 5800	
MC 5800DH	

CRANE INT.	CONLUX-USA
525E	US-111A-1
525C	US-111AD-1D
525EC	USP-121A-0C
500	
510	
C-3000	

INSTALLING A CONTROLLER STYLE COIN CHANGER

A controller style coin changer must be used if multi-pricing is required. The following controller style coin changers will work properly with the MPC vender.

MARS	TRC6000
COINCO	9300L
MAKA	USPX001

CAUTION: DO NOT USE A 24VAC CONTROLLER STYLE COIN CHANGER IN THE MPC VENDER. DAMAGE TO THE COIN CHANGER AND THE VENDER MAY RESULT. USE ONLY 120VAC CONTROLLER COIN CHANGERS.

Hang the coin changer on its mounting plate and secure it by tightening the three securing screws. Plug the coin changer into the 15 pin Jones socket in the vender. The 15 pin Jones socket is designed to accept the 12 pin plug used on controller style coin changers.

CAUTION: The coin changer must be plugged in with the power removed from the door or the coin changer may not power on properly. If a bill acceptor is being used, the bill acceptor must be interfaced to the MPC control board.

After restoring power, manually load the coin changer coin tubes with at least 10 coins each. Following the program instructions for the MPC vender, program each selections for its own vend price. A price of \$0.00 is free vend. After the pricing is set return the vender to its operate mode either by closing the door or pulling the door closed switch out. "Prime" the coin changer by making a correct change transaction.

NOTE: If using a Mars TRC-6000 coin changer function switch #4 in the coin changer, must be set in the off position (down).

PROGRAMMING THE MPC VENDER

In order to program the MPC vender, it is necessary to enter the Service Mode. This is done by opening the inner door and pressing the "Service Switch" on the control board. At this time the display should read S-t. If the display reads 1.00 then the door interlock switch did not go to its center position or the switch is defective.

NOTE: The door interlock switch has three positions. Fully in and fully out puts the vender into its normal mode. When the switch is in its center position the Service Mode can be entered.

There is a time out for the Service Mode such that if no accounting or set-up functions are used for 2 minutes the vender will return to its normal mode. After time out the service switch on the control board has to be pressed to re-enter the Service Mode.

The following notes apply to the programming functions:

1. All accounting functions are historical and non-resettable.
The meter roll over points are:

\$42,949,642.96 for sales total (st)
4,294,967,296 for product counts (HPt and HPC)
2. Coin dump (c-d) works only with a controller coin changer.

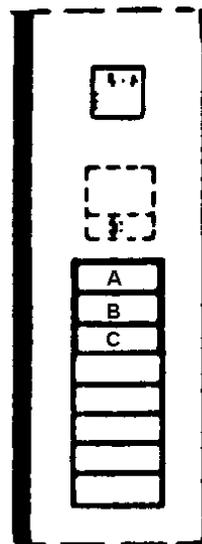
3. Escrow to select will allow a customer to cancel sale anytime before a selection is made. Escrow to select provides two bill acceptor escrow modes. NO BILL ESCROW stacks all bills and a cancel sale will be paid from the coin changer. LAST BILL ESCROW will hold the last bill required to meet or exceed the maximum vend price. A cancel sale will return the held bill from the bill acceptor, plus any deposit amount above a dollar from the coin changer. Last Bill Escrow will work only with a low level bill acceptor such as the Ardac USA. Maximum possible deposit is \$0.95 plus the maximum vend price.
4. Escrow to price will not allow a cancel sale if the minimum vend price has been met or exceeded. There is no bill escrow in this mode.
5. The escrow functions work only with a controller coin changer. When using a single price coin changer the escrow to price mode must be set in the coin changer.
6. If 0.00 is entered for a price that selection will free vend when using a controller coin changer.
7. The maximum vend price that can be programmed is \$9.95.

The Service Mode functions are divided into two basic groups.

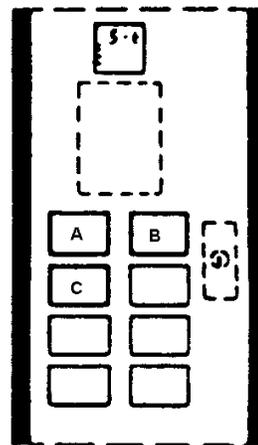
Group 1 - is used to read accounting functions.

Group 2 - is used to set-up functions.

All Service Mode functions are accessed and changed by using the vender select buttons. There are 2 selection panel button configurations used by Dixie-Narco. The first is in-line and the other is side by side.



INLINE



SIDE BY SIDE

When the Service mode is entered the vender starts with the Group 1 accounting functions. The 3 accounting functions will repeat with successive pushes of select buttons A + B. If the Group 2 setup functions are entered the 4 set-up functions will repeat with successive pushes of select buttons A + B. The following shows the different displays and explains the different modes.

**CURRENT MPC MENU
(Used with -11 Eprom)**

CONTROLLER PROGRAMMING

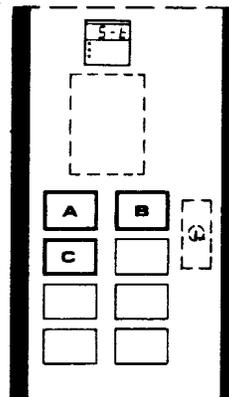
THE CONTROLLER HAS TWO MODES:
NORMAL AND SERVICE

NORMAL MODE:

IN NORMAL MODE, THE DISPLAY WILL SHOW A DECIMAL POINT. WHEN MONEY IS INSERTED, THE DISPLAY INDICATES THE TOTAL AMOUNT OF THE DEPOSIT. THE SELECTOR BUTTONS ARE USED TO SELECT THE PRODUCT.

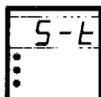
SERVICE MODE:

SERVICE MODE IS ENTERED WHEN THE VENDER INNER DOOR IS OPEN AND THE SERVICE SWITCH IS PRESSED. THE CONTROLLER DISPLAY SHOWS 5-*t*. AT THIS TIME THE MESSAGE INDICATES WHAT FUNCTION THE CONTROLLER IS PREPARED TO PERFORM. WHEN THE TOP TWO SELECT SWITCHES **A+B** ARE PUSHED SIMULTANEOUSLY, THE CONTROLLER GOES TO THE NEXT FUNCTION AND DISPLAYS A MESSAGE FROM THE LIST BELOW.



DIXIE-NARCO

GROUP 1



SALES TOTAL:

THIS FUNCTION DISPLAYS THE TOTAL CASH COLLECTED BY THIS VENDER. PUSH ANY SELECTOR SWITCH.



HISTORICAL PRODUCT TOTAL COUNT:

THIS FUNCTION IS USED TO DISPLAY THE TOTAL NUMBER OF VENDS FROM THE MACHINE. PUSH ANY SELECTOR SWITCH.

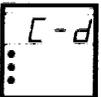


HISTORICAL PRODUCT COUNT:

THIS FUNCTION DISPLAYS THE NUMBER OF VENDS FROM EACH COLUMN IN THE MACHINE. TO DISPLAY THE NUMBER FOR A COLUMN, PRESS THE SELECTOR SWITCH FOR THAT COLUMN.

GROUP 2

TO SWITCH FROM GROUP 1 TO GROUP 2, HOLD SWITCHES **A+B** PUSHED AT THE *HPt* DISPLAY. THE DISPLAY CHANGES TO *HPc* FIRST, AFTER 5 SECONDS THE DISPLAY CHANGES TO *L-d*.



COIN DUMP:

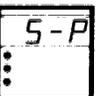
THIS FUNCTION IS USED TO DUMP COINS FROM THE COIN ACCEPTOR. THE FIRST SELECTOR SWITCH **A** IS USED TO DUMP NICKELS. THE SECOND SELECTOR SWITCH **B** IS USED FOR DIMES AND THE THIRD SELECTOR SWITCH **C** IS USED FOR QUARTERS.



ESCROW:

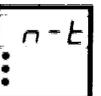
THIS FUNCTION IS USED TO DISPLAY AND CHANGE THE ESCROW CONDITION. TO DISPLAY THE ESCROW CONDITION, PUSH ANY SELECTOR BUTTON. TO CHANGE THE ESCROW CONDITION:

- HOLD SELECT BUTTON **A** • *P-r* WILL BE DISPLAYED. THE ESCROW CONDITION IS ESCROW TO PRICE. ALL DOLLAR BILLS WILL BE STACKED. NO CANCEL SALE IS ALLOWED ONCE MINIMUM VEND PRICE IS MET OR EXCEEDED.
- HOLD SELECT BUTTON **B** • *E-54* WILL BE DISPLAYED. THE ESCROW CONDITION IS ESCROW TO SELECT WITH THE DOLLAR BILLS BEING STACKED. CANCEL SALE WILL RETURN THE DEPOSIT FROM THE COIN CHANGER.
- HOLD SELECT BUTTON **C** • *E-51* WILL BE DISPLAYED. THE ESCROW CONDITION IS ESCROW TO SELECT WITH THE LAST DOLLAR BILL THAT MEETS OR EXCEEDS MAXIMUM VEND PRICE BEING ESCROWED IN THE VALIDATOR. CANCEL SALE WILL RETURN THE HELD DOLLAR BILL AND ANY AMOUNT OVER \$1 WILL COME FROM THE COIN CHANGER.



SET PRICE:

THIS FUNCTION IS USED TO SET THE PRICE OF EACH SELECTION. WHEN A SELECTOR SWITCH IS PUSHED, THE PRICE FOR THAT SELECTION WILL BE DISPLAYED. IF THE SWITCH IS HELD PRESSED, THE PRICE WILL INCREMENT OR DECREMENT. TO CHANGE FROM ONE TO THE OTHER, RELEASE THE SELECTOR SWITCH THEN PUSH IT AGAIN.



MOTOR TEST:

THIS FUNCTION IS USED TO RUN THE MOTORS. TO TEST A MOTOR, PUSH THE SELECTOR SWITCH FOR THAT COLUMN.

TO SWITCH FROM GROUP 2 TO GROUP 1, HOLD SWITCHES **A+B** PUSHED AT THE *5-P* DISPLAY. THE DISPLAY CHANGES TO *n-t* FIRST, AFTER 5 SECONDS THE DISPLAY CHANGES TO *5-t*.

**EARLY MPC MENU
(Used in Early Production MPC)**

CONTROLLER PROGRAMMING

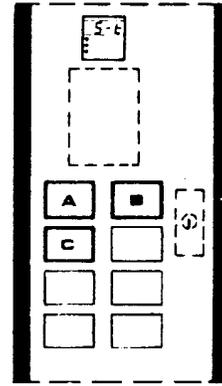
THE CONTROLLER HAS TWO MODES:
NORMAL AND SERVICE

NORMAL MODE:

IN NORMAL MODE, THE DISPLAY INDICATES THE TOTAL AMOUNT OF MONEY INSERTED INTO THE MACHINE. THE SELECTOR BUTTONS ARE USED TO SELECT THE PRODUCT

SERVICE MODE:

SERVICE MODE IS ENTERED WHEN THE VENDER INNER DOOR IS OPEN AND THE SERVICE SWITCH IS PRESSED. THE CONTROLLER SHOWS THE DISPLAY *S-t* AT THIS TIME. THE MESSAGE INDICATES WHAT FUNCTION THE CONTROLLER IS PREPARED TO PERFORM WHEN THE TOP TWO SELECT SWITCHES **A+B** ARE PUSHED SIMULTANEOUSLY. THE CONTROLLER POINTS AT THE NEXT FUNCTION AND DISPLAYS A MESSAGE FROM THE LIST BELOW.



DIXIE-NARCO

GROUP 1



SALES TOTAL:

THIS FUNCTION DISPLAYS THE TOTAL CASH COLLECTED BY THIS VENDER. PUSH ANY SELECTOR SWITCH



HISTORICAL PRODUCT TOTAL COUNT:

THIS FUNCTION IS USED TO DISPLAY THE TOTAL NUMBER OF VENDS FROM THE MACHINE. TO DISPLAY THIS NUMBER, PRESS SELECTOR SWITCH



HISTORICAL PRODUCT COUNT:

THIS FUNCTION IS USED TO DISPLAY THE NUMBER OF VENDS FROM EACH COLUMN IN THE MACHINE. TO DISPLAY THE NUMBER, PRESS THE SELECTOR SWITCH. AND THE COLUMN VEND COUNT IS SCROLLED ON THE DISPLAY. THIS NUMBER CAN GET LARGE BECAUSE IT IS NOT RESET.

GROUP 2

TO SWITCH FROM GROUP 1 TO GROUP 2, HOLD SWITCHES **A+B** PUSHED AT THE *HPE* DISPLAY. THE DISPLAY CHANGES TO *HPC* FIRST, AFTER 5 SECONDS THE DISPLAY CHANGES TO *C-d*.



COIN DUMP:

THIS FUNCTION IS USED TO DUMP COINS FROM THE COIN ACCEPTOR. THE FIRST SELECTOR SWITCH **A** IS USED TO DUMP NICKELS. THE SECOND SELECTOR SWITCH **B** IS USED FOR DIMES AND THE THIRD SELECTOR SWITCH **C** IS USED FOR QUARTERS.



ESCROW:

THIS FUNCTION IS USED TO DISPLAY AND CHANGE THE ESCROW CONDITION FROM ESCROW TO SELECT TO ESCROW TO PRICE. WHEN SELECTOR SWITCH **A** IS PUSHED. THE ESCROW CONDITION IS DISPLAYED AND IF THE BUTTON IS HELD DOWN, IT WILL CHANGE TO ESCROW TO SELECT. THE DISPLAY SHOWS *E-S* FOR THIS CONDITION. IF SELECTOR SWITCH **B** IS PUSHED THE ESCROW CONDITION IS DISPLAYED. IF SELECTOR **B** IS HELD DOWN THEN THE CONDITION WILL CHANGE TO ESCROW TO PRICE.



SET PRICE:

THIS FUNCTION IS USED TO SET THE PRICE OF EACH SELECTOR. WHEN A SELECTOR SWITCH IS PUSHED, THE PRICE FOR THAT SELECTION WILL BE DISPLAYED. IF THE SWITCH IS HELD PRESSED, THE PRICE WILL INCREMENT OR DECREMENT. TO CHANGE FROM ONE TO THE OTHER, RELEASE THE SELECTOR SWITCH THEN PUSH IT AGAIN.



MOTOR TEST:

THIS FUNCTION IS USED TO RUN THE MOTORS. TO TEST A MOTOR, PUSH THE SELECTOR SWITCH FOR THAT COLUMN.

TO SWITCH FROM GROUP 2 TO GROUP 1, HOLD SWITCHES **A+B** PUSHED AT THE *S-P* DISPLAY. THE DISPLAY CHANGES TO *n-t* FIRST, AFTER 5 SECONDS THE DISPLAY CHANGES TO *S-t*.

PLACING THE VENDER ON LOCATION

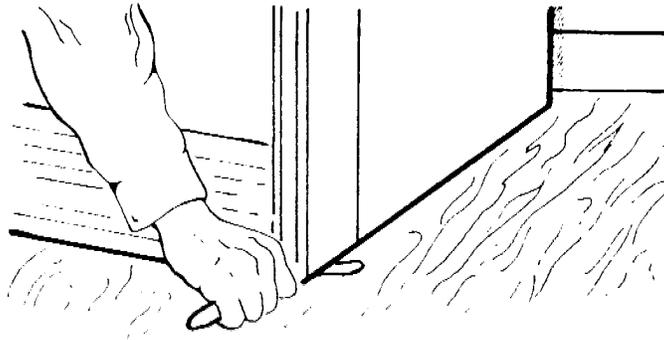
CAUTION: DO NOT TRANSPORT THE VENDER TO OR FROM THE LOCATION LOADED WITH PRODUCT OR DAMAGE TO THE VENDER MAY RESULT.

The vender should be located on a solid, flat, and level surface. The vender must be positioned close enough to an electrical outlet that an extension cord is not required. If securing the vender to the floor or wall is required, call the Dixie-Narco Factory Service Department or your Dixie-Narco Representative for securing suggestions.

LEVEL THE VENDER

Level the vender. When the vender is level the door can be opened to any position and it will not move by itself. Open the door to several different positions before deciding that the vender is level. A carpenter's level will help to verify that the machine is level. If you cannot level the vender, select another location. Do not place any objects under the machine.

Make sure that all of the leveling legs are touching the floor.



DANGER: The vender must be properly located and leveled to minimize the risk of injury or death from tipping in the event of misuse or vandalism.

SPACE THE VENDER

Do not block the rear of the vender. Keep the vender 4 inches from the wall to provide adequate ventilation for the condenser and compressor. At the front of the vender, make sure that nothing obstructs the air intake at the bottom of the door. At the rear of the vender, make sure that nothing obstructs the air exhaust at the bottom of the cabinet.

LOADING THE VENDER

All MPC venders are shipped ready to vend 12oz. cans unless another package was specified at the time the vender was ordered from the factory. If a package other than a 12oz. can is to be vended contact Dixie-Narco Factory Service Representative, or refer to the proper Technical Bulletin for spacer settings and shims.

INITIAL LOADING

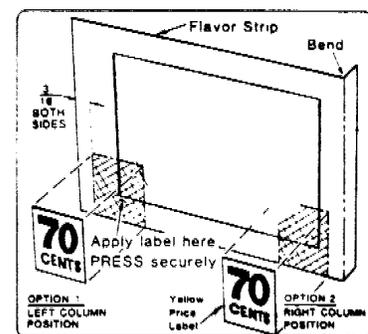
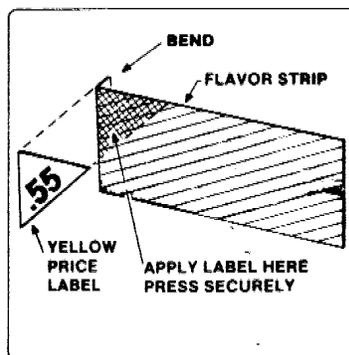
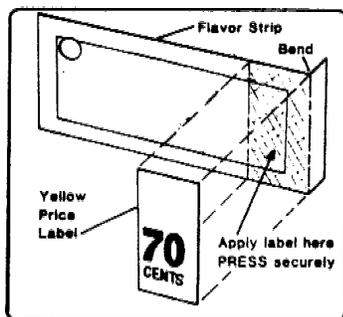
Oscillators must be in the extreme left or right position to insure proper loading. When loading wide columns, the first row of cans should be loaded on the bottom bar of the oscillator. The second row of cans must be loaded on the top bar of the oscillator. Always load complete rows, do not load only to the back or only to the front of the column. Rotors must be in the "cup" position to receive the first cans. When loading narrow columns lay the rows in the column until the column is full.

Do not fill the columns to the top of the cabinet. Allow about 3 inches at the top of the column because the can stack will move up and down in the column during the vend cycle. Correct loading will prevent service calls and insure proper vending.

After loading a vender for the first time test vend each selection with money until the first can is delivered. This will ensure that the vender is loaded and working properly.

NOTE: TO INSURE PROPER AIR FLOW THROUGH THE EVAPORATOR, DO NOT PLACE CANS (OR OTHER FOREIGN OBJECTS) IN THE BOTTOM OF THE TANK.

INSTALLING FLAVOR CARDS AND PRICE LABELS



In the MPC vender the price labels are fastened to the flavor cards before the flavor cards are inserted into the selection buttons. To insert the flavor cards into the selection buttons swing the coin changer mounting plate away from the outer door exposing the back of the selection buttons. The flavor cards can be inserted into the back of the selection buttons from either side. Ensure that the flavor cards are placed in the selection buttons that correspond to the columns the product is in.