





12955 Enterprise Way Bridgeton, MO 63044-1200 (314) 298-3510

This machine has been engineered to our own rigid safety and performance standards. It has earned a "Letter of Compliance" from NAMA indicating that it complies with sanitation and health guidelines recommended by the Automatic Merchandising Health-Industry Council (AMHIC) and it conforms with all other NAMA safety recommendations. This machine has been FCC verified.

This machine has been manufactured in accordance with the safety standards of both Underwriter's Laboratories and the Canadian Standards Association. To maintain this degree of safety and to continue to achieve the level of performance built into this machine, it is important that installation and maintenance be performed so as to not alter the original construction or wiring and that replacement parts are as specified in the parts section of your *Service Manual*. Your investment in this equipment will be protected by using this *Service Manual* in your operation, service, and maintenance work. By following prescribed procedures, machine performance and safety will be preserved.

These merchandisers are warranted for one (1) year against defective parts and workmanship. Any part or parts which are proven to be defective within one (1) year of the date of shipment will be repaired or replaced free of charge when the defective part is returned, with transportation charges prepaid, to the destination designated by the Glasco Warranty Department.

This warranty applies only to the original purchaser of the merchandiser and is null and void if the merchandiser is sold during the period of warranty.

This warranty is also null and void for all electrical components, wiring, or circuits and/or for all mechanical parts or assemblies damaged as a result of operating the merchandiser at other than 110-120 volts, 60 Hertz current. This warranty is null and void in the event of vandalism, fire, or negligence on the part of the operator.

No warranty is given or implied on incandescent lamps, neon lamps, fluorescent lamps, ballasts, starters, or other expendable items. No warranty will be given when other manufactured components are installed in Glasco merchandisers.

Further, Glasco is not responsible for any cost of service rendered or repairs made on merchandisers or parts by anyone other than an authorized Glasco distributor, unless authorization to incur such expense has been given in writing by Glasco prior to incurring such expense.

This warranty is in lieu of all warranties expressed or implied, including, without limitation, warranties of merchantability and all other obligations or liabilities on the part of Glasco. Furthermore, Glasco neither assumes nor authorizes any person to assume for it any other obligation or liability in connection with the sale of said equipment or any part thereof.

Glasco [™] 12955 Enterprise Way Bridgeton, MO 63044-1200

TABLE OF CONTENTS

Power Requirements	
Unpack the Machine	
Controls and Indicators	
How to Turn the Merchandiser ON and OFF	
Initial Set-Up	
Move the Merchandiser Through a Narrow Doorway	
Position the Merchandiser	
Can Module Set-Up	
Install Price Labels for Cold Can Selections	
Adjust the Price Rolls for Cold Can Selections	
Install Product ID Labels for Cold Can Selections	
Install Selection ID Labels	
Load the Cold Can Module	
Removing the Can Compartment Door Assembly	
Food Module Set-Up	
Install Price Labels for Food Module Selections	
Install Selection ID Labels for Food Module Items	
Adjust the Price Labels for Food Module Selections	
Load the Refrigerated Food Module	
Hot Drink Module Set-Up	
Water Service	
Preliminary Set-Up	
Remove the Canisters	
Remove Two Trays	
Install the Water Filter Cartridge	
Install the Water Inlet Elbow	
Adjust the Hot Drink Price Labels	
Adjust the Cup Mechanism	
Load the Cup Mechanism	
Adjust the Cup Deflector	
Load the Dry Ingredient Canisters	
Connect the Water Heater Harness	
Replace the Two Trays	
Replace the Canisters	
Water Measurement and Adjustment	
Measuring and Adjusting Dry Ingredients	
Air Pressure Adjustment	
	34
Water Filter Cartridge Replacement	
Overall Cleaning	
Sanitation	
Identification of Brewer Components	
Removing the Brewer Barrel and Manifold	
Disassembling the Brewer Barrel and Manifold	
Brewer Basket Removal	
Brewer Basket Replacement	
Brewer Basket Screen Removal	
Cleaning the Brewer Basket Screen and Brewer Barrel Screen	
Brewer Basket Screen and Brewer Barrel Screen Replacement	
Brewer Barrel and Manifold Reassembly	39

	Brewer Barrel and Manifold Replacement	. 39
	Brewer Funnel Removal	39
	Brewer Funnel Replacement	39
	Brewer Mechanism Cleaning	40
	Brewer Timing Adjustment	41
	Cup Delivery Compartment Removal and Replacement	. 42
	Cup Delivery Compartment Sanitizing	. 42
	Beverage Discharge Nozzle Sanitizing	
	Vent Blower Filter Removal and Replacement	. 42
	Grounds Pail Cleaning	43
	Waste Pail Sanitizing	43
	Water Filter Cartridge Service Limits	. 43
	Measuring and Setting Water Temperature	. 43
	Dry Ingredient Air Fluffing	
	Sugar and Whitener Mixing Bowl Inspection	
	Dry Ingredient Shelf Cleaning	
	Canister Sanitizing	
	Mixing Bowl Sanitizing	44
	Chocolate Funnel and Impeller Housing Sanitizing	
Sr	nack Section Set-Up	
	Place A Tray In The Loading Position	. 46
	Set Up Trays to Vend Products	47
	Set Up A Tray To Vend Wide Products	47
	Removing a Tray	48
	Removing And Installing Column Dividers	. 50
	Replacing a Motor With a Spiral Bearing	
	Connecting and Disconnecting a Motor Harness	
	Removing and Installing Spirals	
	Removing a Spiral Coupler	
	Removing and Installing a Spiral Motor	
	Installing a Gear	
	Installing a Spiral Coupler	56
	Moving a Tray Up or Down	. 58
	Installing a Tray in the Merchandiser	
	Installing and Removing a Product Spacer	. 61
	Load Trays With Product	62
	Return the Trays to the Vending Position	. 66
	Install and Set Price Labels	67
	Install Selection ID Labels	69
Gι	um and Mint Unit Set Up	. 71
	Install Price Labels	71
	Put the Gum and Mint Dispenser in the Loading Positon	. 71
	Load the Gum and Mint Dispenser With Product	. 72
	Return the Gum and Mint Dispenser in the Vending Position	. 73
	Removing and Installing Column Reducers	

Final Installation	
Level the Merchandiser	74
Refrigeration Module	75
Connect a Refrigeration Module to an External Drain (Optional)	75
Install the Base Plate	76
Install the Lock Cylinder	77
Install the Optional Cash Box Lock	77
Set Up the Coin Mechanism	
Load the Coin Mechanism	78
Programming	79
Data	83
Pay Out	83
Price	84
Faults	
Service	
Setup	87
Coffee	90

Power Requirements

MODEL	VOLTS AC	AMPS	HZ	PHASE	OUTLET	TYPE
493	115	15	60	Single	3-pin	GND

CHECKING THE POWER OUTLET:

VOLTAGE CHECK:

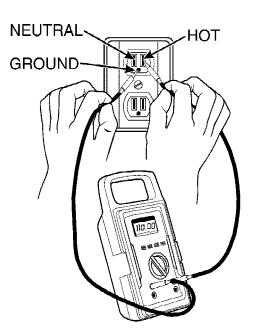
When placed across the HOT and NEUTRAL terminals, a volt-ohmmeter should indicate 110-130 volts ac.

POLARITY CHECK:

When placed across the HOT and GROUND terminals, a volt-ohmmeter should indicate 110-130 volts ac.

NOISE POTENTIAL CHECK:

When placed across the NEUTRAL and GROUND terminals, a volt-ohmmeter should indicate 0 volts ac. A reading of greater than 1.5 to 2.0 volts ac could result in noise problems for the electronic circuitry.



Unpack the Machine

Remove all packing materials from the interior of the machine. Keep all documents; warranty cards, etc. Set aside the base plate kit (if present).

Controls and Indicators

<u>Interlock Switch</u>. When the cabinet door is open, this switch turns off the optional fan (if so equipped) and turns on the service light (not present on all models).

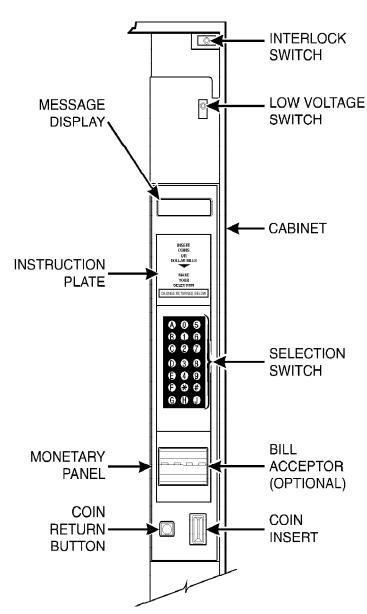
<u>Low Voltage Switch</u>. Informs the controller software of the main door open or closed status.

Message Display. This is how the merchandiser communicates with the outside world. Customers can see messages about how much money they have put into the merchandiser. The message display also tells customers when a selection is sold out and when vending is free. The message display shows you what you are doing when you program the merchandiser, and can show you what is wrong if there is a failure.

<u>Selection Switch Panel</u>. The customer uses these switches to make selections. Also, maintenance people may use this switch panel during programming and other support modes.

<u>Coin Return Button</u>. Pressing this button returns any coins that have been paid into the merchandiser prior to a vend.

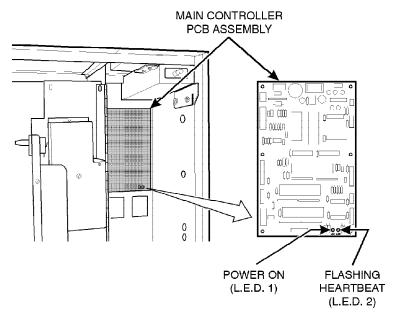
<u>Bill Acceptor (Optional</u>). Accepts bills in various denominations, depending upon the type of bill validator, and how the machine is configured.



PAGE2 Glasco™

Controls and Indicators (continued)

MAIN CONTROLLER PCB DISPLAY



<u>Main Controller PCB Display.</u> This display consists of two light emitting diodes (LED) mounted on the controller PCB.

POWER ON When lit, this red LED indicates electrical power is applied to the controller PCB.

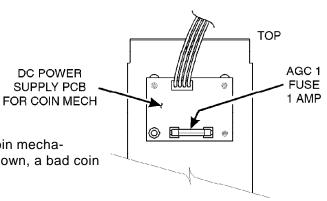
HEARTBEAT When flashing, this red LED indicates that the controller PCB is **(L.E.D. 2)** active, and the software is operating.

NORMAL CONDITIONS:

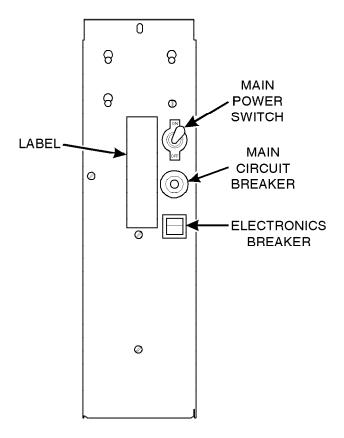
When the merchandiser is operating normally, you should see a steady red **POWER ON** indicator and a flashing red **HEARTBEAT** indicator. Contact a service representative if any other condition exists.

Back Side of U.S./Canada Power Panel. The circuit board mounted on the rear of the power panel is a dc power supply for the coin mechanism. A fuse protects the board circuitry in the event of a soin mechanism solonoid failure. If the

event of a coin mechanism solenoid failure. If the coin mechanism is not working, check this fuse. If the fuse is blown, a bad coin mechanism solenoid could be at fault.



How to Turn the Merchandiser ON and OFF



POWER PANEL

- Power to the merchandiser is controlled by the main power switch, located on the power panel.
- The power panel is on the right side of the merchandiser, behind the monetary door.

WARNING

Lethal voltages are present. Unplug the merchandiser whenever you do one of the following tasks:

- Change a fuse
- Change the fluorescent lamp
- Change the lamp starter
- Connect or disconnect a harness (except a motor harness when a tray has been removed)

Failure to do so may result in personal injury.

Initial Set-Up

1. Move the Merchandiser Through a Narrow Doorway

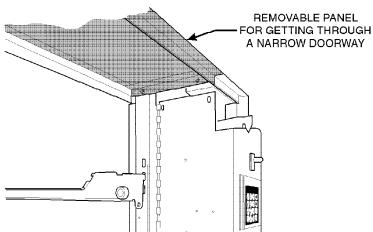
If necessary, this merchandiser can be moved through an opening as narrow as 30 inches by removing panels at the top and bottom of the cabinet.

REMOVE THE TOP PANEL:

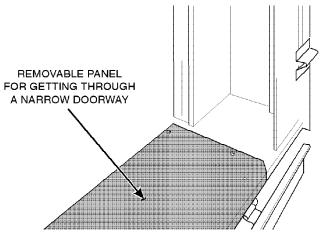
- 1. Remove the two screws that secure each end of the panel to the cabinet.
- 2. Pull the panel forward to remove it from the merchandiser.

REMOVE THE BOTTOM PANEL:

- 1. Remove the screws that secure the panel to the cabinet.
- 2. Pull the panel forward to remove it from the cabinet.



VIEW LOOKING INTO THE TOP OF THE CABINET



VIEW LOOKING INTO THE BOTTOM OF THE CABINET

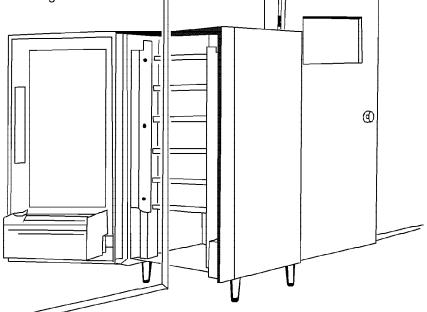
1. Move the Merchandiser Through a Narrow Doorway (continued)

TAKE THE MERCHANDISER THROUGH THE OPENING:

- Open the cabinet door and place it square with the left side of the cabinet.
- 2. Carefully walk the merchandiser through the opening.

REASSEMBLE THE MERCHANDISER:

1. Replace the upper and lower panels.



2. Position the Merchandiser

Move the merchandiser to its *approximate* position. (There are some procedures you need to do before it is in its permanent location.) Plug in your merchandiser and turn the power switch to ON.

- You can position this merchandiser anywhere in a bank of machines. It can even be placed on an end flush against a side wall.
- Place the merchandiser at least six inches away from the back wall. This will provide adequate air circulation for the refrigeration unit.
- The merchandiser will operate more efficiently when placed in a shaded location.
- There should be enough room in front of the merchandiser for the door to move freely.

WARNING

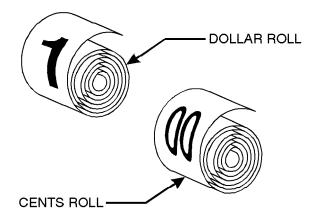
This machine is only rated for installation in an indoor location.

Can Module Set-Up

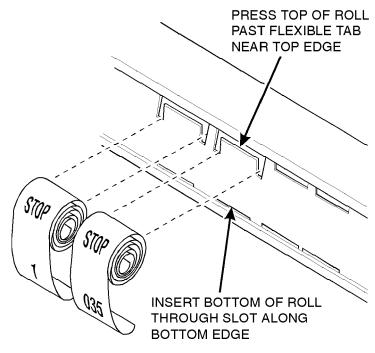
1. Install Price Labels for Cold Can Selections

- Price rolls are printed on coiled-up strips as shown. You will find these in the plastic bag that contained this manual.
- There are two types of price rolls:

Dollar roll - 1 to 12, increments of 1 Cents roll - 00 to 95, increments of 05



- There are three pairs of slots in the front of the can unit for each position.
- 1. Insert the dollar roll in the left-most pair of slots as shown if the price is \$1.00 or more.
- 2. If not already installed, insert the cents roll in the center pair of slots as shown.
- 3. The low-number end of the roll goes in the top slot and the high-number end of the roll goes in the bottom slot.

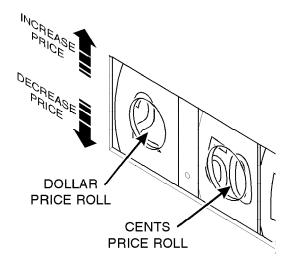


2. Adjust the Price Rolls for Cold Can Selections

- There are two price label rolls for each selection.
- The roll on the left is for dollars, and it goes from \$0 to \$12.
- The roll on the right is for cents, and it goes from .00 to .95 in steps of .05.
- Scroll downward to decrease the price. 1.
- Scroll upward to increase the price. 2.

NOTE

The rolls are easier to scroll if you use the eraser end of a pencil.



3. Install Product ID Labels for Cold Can Selections

Product ID labels (flavor strips) are in the plastic bag that contained this book. They are held in place above the price labels for each selection. To install a new ID label, proceed as follows:

- Flex the label as shown and place it into position. 1.
- 2. Release the label, and allow the label frame to hold it in place.
- Pop the label out of place with a pencil or your fingernail.

If you need a specific product ID label that was not included in the plastic bag containing this manual, contact:

> **SCREEN ART** 1801 Mid Park Drive Knoxville, TN 37921 Phone: 1-800-251-9031

In Tennesee: 1-800-332-9924 Refer to style SA13 (1.75 x 4.62)



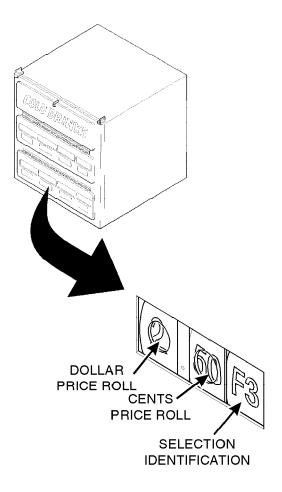
Glasco™

4. Install Selection ID Labels

Selection ID numbers are printed on clear plastic sheets. You will find these in the plastic bag that contained this manual. You will need to separate them along the scored lines between the selections. **BE CAREFUL** when doing this, because it is easy to split the labels. Use the "E" selections for the top row and the "F" selections for the bottom row of the can module.

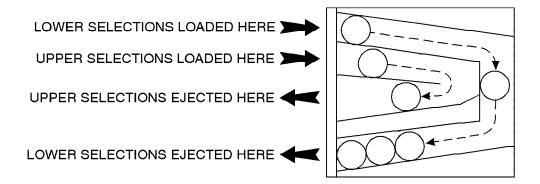
INSTALLING SELECTION ID NUMBERS:

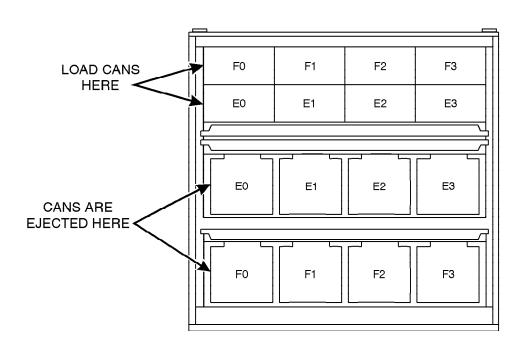
- 1. Make sure the price rolls have been installed.
- 2. Press together the two long edges of the selection ID label.
- 3. Snap the selection ID label into position on the front of the tray as shown. See the bottom figure on the next pate for the position of each of the selections.



5. Load the Cold Can Module

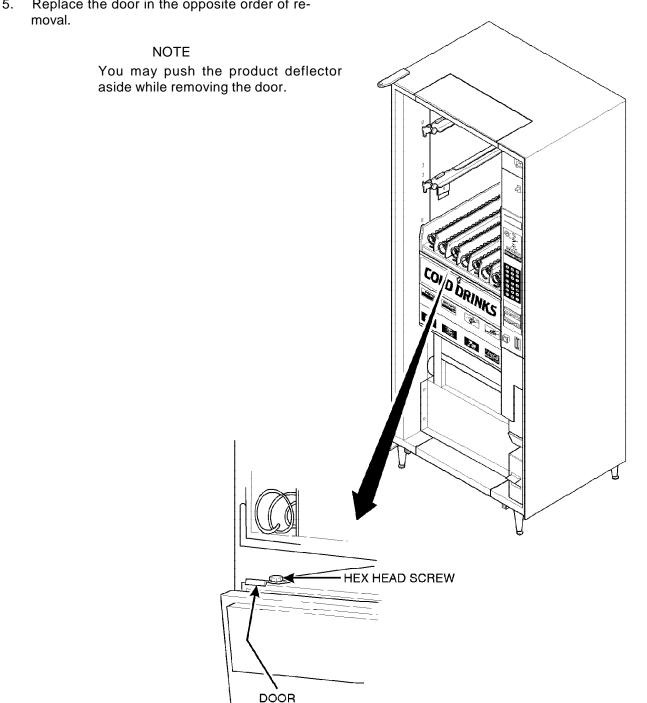
- 1. Turn the loading door latch to the left or the right.
- 2. Lower the loading door into the loading position.
- 3. Load each of the selections as shown.
- 4. After all selections are loaded, raise the door and secure it in place.





6. Removing the Can Compartment Door Assembly

- Remove the bottom tray. See REMOVING A TRAY in Snack Section Set-Up in this manual.
- Loosen the screws securing the door retainers to the can compartment, and the angle bracket to the sides of the cabinet.
- Push up on the retainers and tilt the door forward and down.
- Lift the door clear of the retaining channel. 4.
- 5. Replace the door in the opposite order of re-



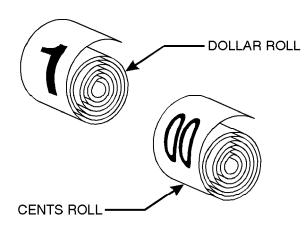
RETAINER

Food Module Set-Up

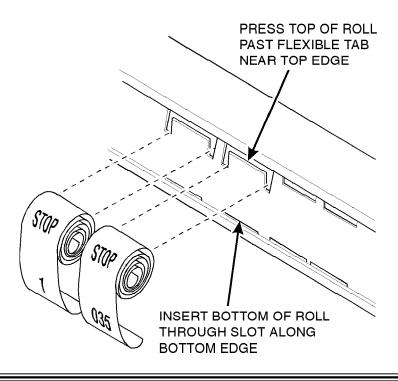
1. Install Price Labels for Food Module Selections

Price labels are printed on coiled-up rolls. You will find the price labels in the plastic bag which contained this manual.

- There are two price label rolls for each selection.
- The roll on the left is for dollars, and it goes from \$0 to \$12 in \$1 increments.
- The roll on the right is for cents, and it goes from .00 to .95 in .05 increments.



- There are three pairs of slots in the front of the tray for each column position.
- 1. Insert the dollar roll in the left slot below each column as shown if the price is \$1.00 or more. Place the low-number end of the roll in the top slot and the high-number end of the roll in the bottom slot.
- 2. Insert the cents roll in the slot immediately to the right of the dollar roll as shown. Place the lownumber end of the roll in the top slot and the high-number end of the roll in the bottom slot.



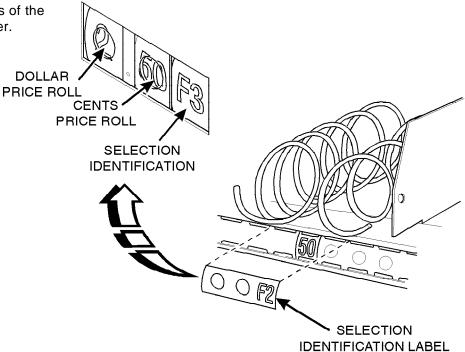
2. Install Selection ID Labels for Food Module Items

Selection ID numbers are printed on clear plastic labels. You will find these in the plastic bag that contained this manual. Use the "D", "E", and "F" selection labels for the food module.

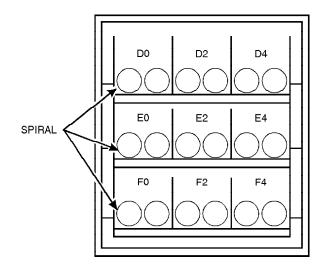
Make sure the price rolls are installed.

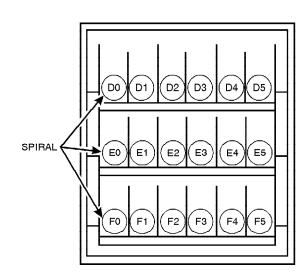
2. Press the two long edges of the selection ID label together.

3. Snap the label into position on the front of the tray as shown. The selection positions are shown in the figure below.



WHICH LABEL GOES WITH WHICH SELECTION?





3. Adjust the Price Labels for Food Module Selections

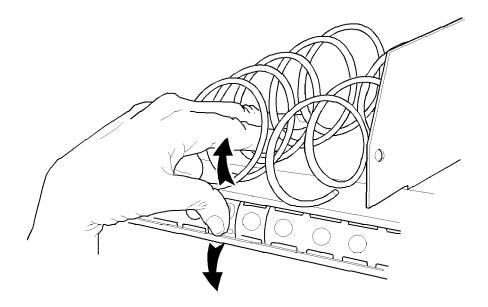
You can set selection prices within the following range:

Minimum price \$.00 Maximum price \$12.95 Increment \$.05

- 1. Using your thumb or the eraser end of a pencil, scroll downward to decrease the price.
- 2. Using your thumb or the eraser end of a pencil, scroll upward to increase the price.

NOTE

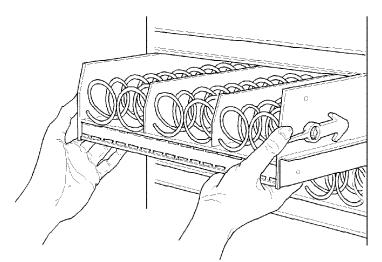
You will see the word **STOP** near either end of the roll.

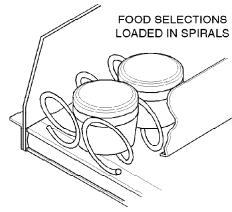


PAGE14 Glasco™

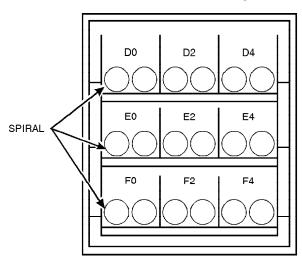
4. Load the Refrigerated Food Module

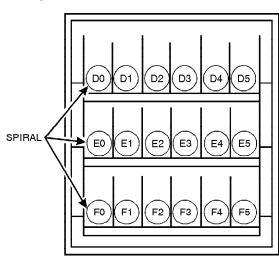
- 1. Lift the loading door latch and open the loading door.
- 2. Place both hands on the food module tray as shown.
- Lightly push back on the tray with your palms. This will release the tray latches on the sides of the tray.
- 4. Push down on the tray latches with your thumbs.
- 5. Pull the tray forward until it stops.
- 6. Load each of the spiral selections as shown
- 7. See below for spiral assignments.
- 8. After all selections are loaded, push the tray in until it latches. Close and latch the door.





SPIRAL ASSIGNMENTS





Hot Drink Module Set-Up

Interior View VENT BLOWER HOT DRINK MODULE WATER CONTROLLER ASSEMBLY INLET VALVE COFFEE/TEA WHITENER CANISTER CANISTER **SUGAR** CANISTER CHOCOLATE **CANISTER** WATER **FILTER** CARTRIDGE **CUP TURRET** WATER **ASSEMBLY TANK** COFFEE **FUNNEL** CUP **CUP DELIVERY MECHANISM** COMPARTMENT **BEVERAGE BREWER** DISPENSING **NOZZLE COLD CAN MODULE** WASTE PAIL WASTE PAIL SWITCH ASSEMBLY GROUNDS PAIL **GUM AND MINT ASSEMBLY**

Water Service

WATER SUPPLY:

The best type of water for coffee brewing is normal hard water.

If your location has chemnically softened water, one of the following steps is advised:

- Have a non-softened supply line run to the merchandiser.
- Contact your local water filter supplier for information and suggestions.

Well water can also be used in your merchandiser. However, you should have it checked for levels of carbonates and alkalies. Contact your water filter supplier if these values are relatively high.

WATER PRESSURE REQUIREMENTS:

Minimum water pressure: 10 psi (69.0 kPa) at ½ gallons per minute. Maximum water pressure: 80 psi (522.0 kPa) at ½ gallons per minute.

FLUSHING WATER SUPPLY LINE:

Flush the water supply line before connecting it to the merchandiser. A minimum of five gallons is usually required before connecting the merchandiser to the supply line. DO NOT flush the merchandiser water system.

SUPPLY LINE REQUIREMENTS:

Locate the supply line so it will be behind the merchandiser and equip it with a shut-off valve.

TO CONNECT THE MERCHANDISER TO THE SUPPLY LINE:

You will need the following:

- A coil of copper tubing with an outside diameter of ³/₈" (9.5 mm) or greater. The appropriate plastic tubing may be substituted.
- A 3/8" flare fitting.

USING A WATER FILTER CARTRIDGE:

The filter cartridge supplied with this merchandiser will do the following:

- Filter many particles suspended in the water.
- Introduce a good grade of sequesterant into the water to inhibit the formation of lime scale when hard water is heated.

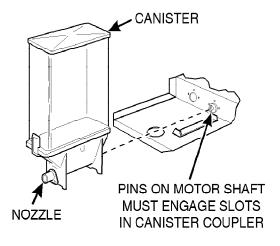
The filter cartridge is effective to the following limits:

- 7 oz. cup 26,000 vends
- 8.25 oz. cup 22,000 vends
- 9 oz. cup 20,000 vends

Preliminary Set-Up

1. Remove the Canisters

- 1. The retaining clip wraps around the canister nozzle and is used to secure the canister to the shelf. Unlatch the retaining clip.
- Lift up on the lower front edge of the canister base and lift the assembly clear of the shelf.

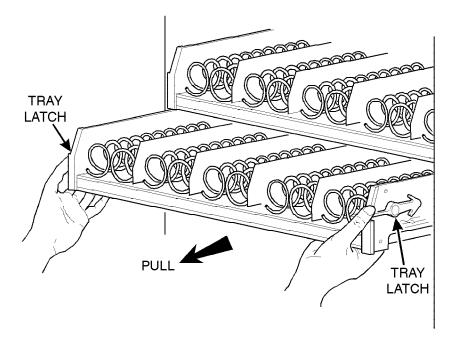


PAGE18 Glasco™

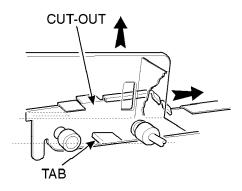
2. Remove Two Trays

You will need to remove the second and third trays from the top. This will make it much easier to install the water filter cartridge.

- 1. Push back on the tray slightly with your palms. This releases the tray latches.
- 2. Push down on the tray latches with your thumbs.
- 3. Pull the tray forward until you hear and feel the rear tray rollers drop into a cut-out in the top of the guide rail.



- 4. Lift up on the tray and slide it toward the back. No more than an inch should be needed.
- 5. The tab near the back of the tray should align with the cut-out in the top of the guide rail as shown.



6. Lift the tray clear of the guide rail and out of the merchandiser.

CAUTION

When the cabinet door is not fully open, use extra care in removing the bottom tray. Failure to do so may result in damage to the tray or to the delivery pan assembly.

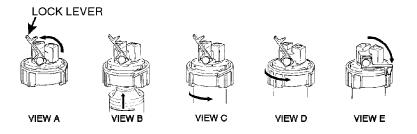
3. Install the Water Filter Cartridge

- Make sure the main power switch is in the **OFF** position.
- See the Interior View for the location of the water filter. Flip the lock lever UP to the OFF position 2. (view A).
- 3. As viewed from above, rotate the locking collar clockwise about 60° until it drops to the filter receiving position.
- Align the raised rib near the top of the cartridge with the ribless portion of the locking collar. 4.
- Push the cartridge up into the filter head (view B). 5.
- 6. As viewed from above, rotate the cartridge clockwise until the lock lever engages the locking collar
- 7. Push the lock lever DOWN to the ON position (view E).

NOTES

The water filter assembly cannot be operated without a properly installed water filter cartridge.

The valve handle on the water filter head is used to open and close the water inlet to the merchandiser.



4. Install the Water Inlet Elbow

A $\frac{3}{8}$ " flare x $\frac{3}{8}$ " NPTF elbow fitting is included in the same plastic bag that contained this manual.

Apply one turn of teflon tape or a thin coating of teflon paste to the ${}^{\text{COUPLING}}$ 1. threads, if they are not already coated.

Turn the pipe thread end of the elbow into the inlet coupling mounted in 2. back wall of the cabinet.



INLET **ELBOW**

INLET

the

line

CAUTION

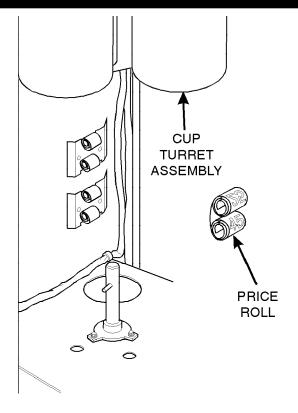
Do not overtighten the elbow. Doing so could cause the weld between the coupling and the cabinet to break.

- 3. Before connecting your water line to the merchandiser, flush the as follows:
 - a. Place the free end of the water line in a large container.
 - b. Turn on the water at its source, and let at least five gallons of water flow through the line.
 - c. Turn off the water at its source.
- Connect the water line to the water inlet elbow. 4.
- 5. Turn on the water at its source and check for leaks.
- Make sure the main power switch is OFF. Plug in the machine. Turn the main power switch to ON. Listen for the water tank to begin filling. Check for leaks from time to time while the tank is filling.

Glasco™

5. Adjust the Hot Drink Price Labels

- 1. Remove the cup turret assembly to access the price labels.
 - The upper price roll is for the coffee selection.
 - The lower price roll is for the hot chocolate selection.
- 2. Scroll the price roll down to decrease the price.
- 3. Scroll the price roll up to increase the price.
- 4. View the price from the front of the door. Verify that the price is correct and centered.



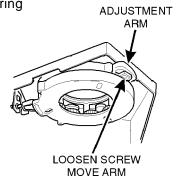
6. Adjust the Cup Mechanism

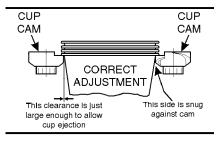
Your machine is factory set to use an 8-ounce cup. If you are going to use a different size cup, see the Programming Section for instructions on how to change cup sizes.

IMPORTANT

Two 8-ounce cups from different manufacturers can physically differ. It is important that you adjust the cup mechanism and cup deflector for the specific cup you are going to use, especially if you change cup sizes.

- 1. The large opening in the top of the cup mechanism is the drop ring opening. Place seven cups in the drop ring opening.
- 2. Observe the clearance between the cups and the cup cams. Compare with the three bottom views on the right.
- 3. If the clearance is correct, you are finished with this procedure. If not, go to the next step.
- 4. Adjust the cup ring as follows:
 - a. Loosen the adjustment arm screw as shown.
 - b. Move the adjustment arm until the correct clearance is achieved, and the cups rotate freely.
 - c. Hold the adjustment arm in place and tighten the adjustment arm screw.







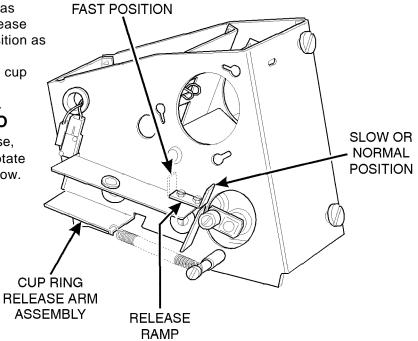


6. Adjust the Cup Mechanism (continued)

 If you are using plastic cups, move the release ramp to the fast position as shown. If not, make sure the release ramp is in the slow or normal position as shown.

6. Remove the seven cups from the cup ring.

- 7. Close and open the cabinet door.
- 8. Look at the display. If it shows **NO CUPS**, you are finished. Otherwise, perform the sold-out and turret rotate switch adjustment procedure, below.



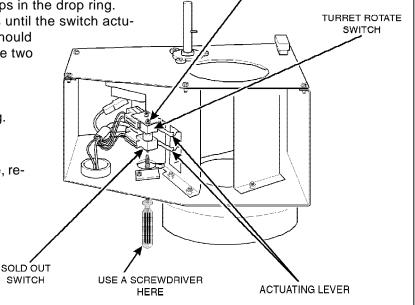
ADJUST THE SOLD-OUT AND TURRET ROTATE SWITCHES:

 Loosen the front nut securing the switches to the cup dispenser.
 Pivot the switches away from the cup drop ring opening.

Install a stack of seven or more cups in the drop ring.
Pivot the switches toward the cups until the switch actuating levers touch the cups. You should

ating levers touch the cups. You should hear a "clicking" sound made by the two switches.

- 5. Tighten the nut that secures the switches to the cup dispenser.
- 6. Remove the cups from the cup ring.
- 7. Close and open the cabinet door.
- Look at the display. If it shows NO CUPS, you are finished. Otherwise, return to step 1.



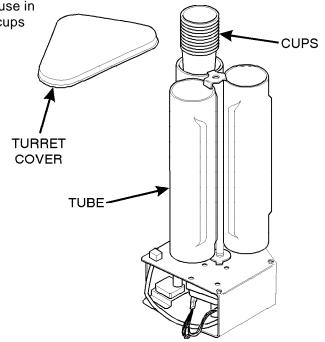
FRONT ADJUSTING

7. Load the Cup Mechanism

CAUTION

Use only cups which have been designed for use in a hot beverage vending machine. Handle all cups with care, and avoid touching the rims.

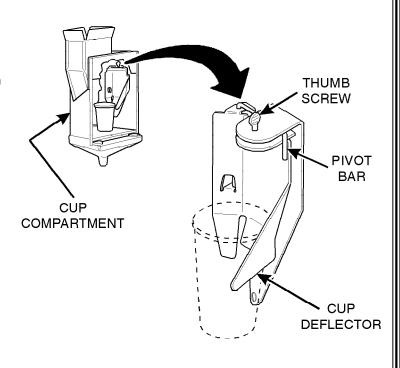
- 1. Replace the turret in the machine.
- 2. Remove the turret cover.
- 3. Inspect a stack of cups. Do the following:
 - a. Discard any irregular cups,
 - b. Discard any crushed or damaged cups,
 - c. Loosen any cups stuck together
- Place one hand under the cup mechanism to catch the cups as you drop them into each tube.
- 5. Replace the turret cover after all of the tubes have been loaded.



8. Adjust the Cup Deflector

The cup deflector is adjustable for different cup sizes.

- Into the cup compartment, place one of the same kind of cups you loaded in the cup turret.
- 2. Loosen the thumb screw on the top of the cup deflector.
- 3. The distance between the cup and the deflector should be about ¼" (6mm).
- 4. Move the pivot bar to the left to decrease the distance between the cup and the deflector.
- 5. Move the pivot bar to the right to increase the distance between the cup and the deflector.
- 6. Hold the pivot bar and deflector in place and tighten the thumb screw.



PAGE24 Glasco™

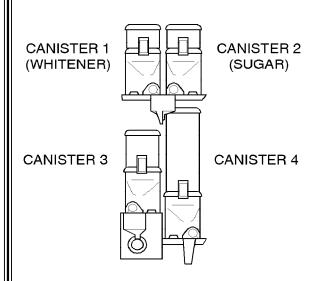
9. Load the Dry Ingredient Canisters

INGREDIENT SPECIFICATIONS

PRODUCT	CANISTER CAPACITY	SPECIFICATION	SPECIAL COMMENTS
Chocolate	5 lb. (2.3 kg)	All-in-one commercial chocolate mix	DO NOT tap the canister to settle the contents. (Doing so can pack the auger, and the product will not dispense.)
Whitener	3 lb. (1.4 kg)	Non-caking powder type	
Sugar	5 lb. (2.3 kg)	Regular, fine, granulated table sugar	Cane sugar is the recommended alternative.
Tea	5 lb. (2.3 kg)	Bulk leaf tea	
Fresh brew coffee or decaf	4.5 lb (2.1 kg)	Single cup, fine grind, vending machine coffee or decaf is recommended.	Soft water problems may require the use of a coarse grind.
Freeze dry coffee or decaf	3 lb. (1.4 kg)	Instantly soluble type	

CANISTER ASSIGNMENTS:

CANISTER 3 AND 4 INGREDIENT OPTIONS:



	CANISTER			
PRODUCT MIX	3 NON-BREWED	4 BREWED or FREEZE DRY		
FRESH BREW	Chocolate *	Coffee, decaf, or tea		
FB/SHORT	Chocolate *	Coffee or decaf		
FB/SHORT /CAPP.	Chocolate **	Coffee or decaf		
FREEZE DRY	Chocolate *	Coffee, decaf, or tea		
FD/SHORT	Chocolate *	Coffee or decaf		
FD/SHORT /CAPP.	Chocolate **	Coffee or decaf		

^{*} Chocolate is otional.

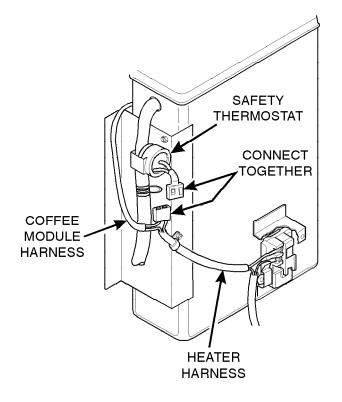
^{**} Chocolate must be present to make a Cappuccino drink.

10. Connect the Water Heater Harness

WARNING

Lethal voltages are present. Be sure to turn the machine power OFF before completing the following procedure. Failure to do so may result in personal injury.

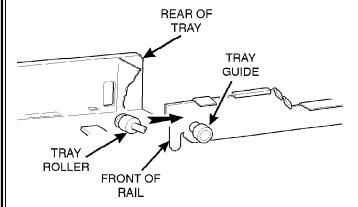
- 1. Wait until the water tank is full (the water will stop running).
- 2. Turn the machine power **OFF**.
- 3. Locate the safety thermostat on the water tank overflow tube.
- 4. Connect the safety thermostat to the heater harness.
- 5. Turn machine power **ON**.



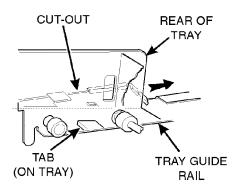
PAGE26 Glasco™

11. Replace the Two Trays

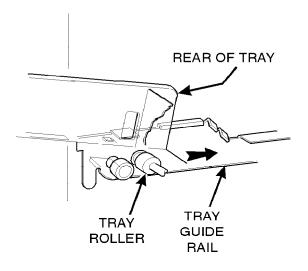
- Study this procedure before you install a tray for the first time; while you are holding the tray you will not be able to see this area. Proceed as follows:
- 1. Insert the tray so that the tray rollers pass over the tray guide rollers.



Hold the tray up while pushing it toward the rear. Stop when the tab on the tray aligns with the opening in the tray guide.

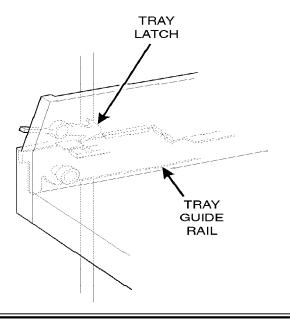


2. Bring the tray roller to rest on the tray guide.



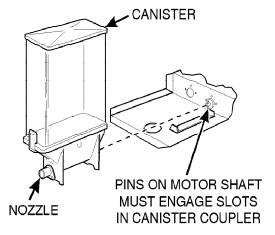
Tilt the tray upward.

- 5. Lower the tray until it rests on the tray guide roller. Push the tray in all the way.
- 6. The tray latch will fall into the locking position.



12. Replace the Canisters

- 1. Be sure the pin in the dispenser motor shaft seats properly in the auger coupling as shown.
- 2. Place the wire retaining clip over the canister nozzle.
- 3. Be sure the canisters are securely resting on the shelves.



The drink recipes used by your machine are factory set. However, you can change these recipes to suit your individual taste. See the Programming Section for instructions on how to do this.

Setup is complete. The remainder of this manual shows you how to load product, adjust water and product throw times, how to clean and sanitize your merchandiser, how to remove and replace selected assemblies, and how to program the various functions in your merchandiser.

Glasco™

Water Measurement and Adjustment

<u>SETTING WATER TIME IN A NEW MERCHANDISER OR WHEN AN OLD MERCHANDISER HAS A NEW VALVE:</u>

- 1. Set the cup size option to 7 oz. See the *Programming Section* for the correct procedure.
- Locate the correct time for the chosen product and cup size. See table A, Suggested Water Times, page 31.
- 3. Set the water time for this product. See the <u>Programming Section</u> for the correct procedure, and use the time for a 7 oz. cup.
- 4. Prepare to collect the water throw. See COLLECTING WATER THROWS FOR A BREWED SE-LECTION or COLLECTING WATER THROWS FOR THE HOT CHOCOLATE OR HOT WATER SELECTIONS, as appropriate.

WARNING

The water in the water tank is very hot. Use care when collecting water throws.

- 5. With the water time shown in the display, press (J). Water will be dispensed.
- Measure the volume of the collected water. Compare with the values shown in Table B, Recommended Water Volume, page 31.
- 7. Adjust the valve as needed to increase or decrease water flow. See **ADJUSTING THE WATER VALVES**, page 31.
- 8. Repeat steps 4 through 7 until the correct volume of water is dispensed.
- 9. If a larger cup size is to be vended, increase the water time to the value listed in Table A.
- 10. Measure and compare the collected water volume with the value in Table B.
- 11. Adjust the time as needed to increase or decrease the water flow.
- 12. Reconnect the water supply tube to the brew barrel, if removed earlier.

SETTING WATER TIME AT ANY OTHER TIME:

- Locate the correct time for the chosen product and cup size. See Table B, Recommended Water Volume, page 31.
- 2. Set the water time for this product. See the *Programming Guide* for the correct procedure.
- 3. Prepare to collect the water throw. See COLLECTING WATER THROWS FOR A BREWED SE-LECTION, page 31, or COLLECTING WATER THROWS FOR THE HOT CHOCOLATE OR HOT WATER SELECTIONS, page 31, as appropriate.

WARNING

The water in the water tank is very hot. Use care when collecting water throws.

- 4. With the water time shown in the display, press (J). Water will be dispensed.
- 5. Measure the volume of the collected water. Compare with the values shown in Table B.
- Adjust the time as needed to increase or decrease the water flow.
- 7. Repeat steps 3 through 6 until the correct volume of water is dispensed.
- 8. Reconnect the water supply tube to the brew barrel, if removed earlier.

Water Measurement and Adjustment (continued)

<u>COLLECTING WATER THROWS FOR A BREWED</u> <u>SELECTION:</u>

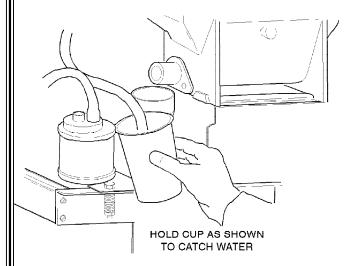
WARNING

The water in the water tank is very hot. Use care when collecting water throws.

- Remove the water supply tube from the brew barrel manifold.
- 2. Insert the disconnected water tube in a clean cup and hold as shown.

COLLECTING WATER THROWS FOR THE HOT CHOCOLATE OR HOT WATER SELECTIONS:

1. Place a clean cup in the cup station to collect the water.



ADJUSTING THE WATER VALVES:

WARNING

The water in the water tank is very hot. Use care when collecting water throws.

- Turn the water valve adjusting screw (as shown) clockwise to decrease water flow.
- Turn the water valve adjusting screw (as shown) counterclockwise to increase water flow.

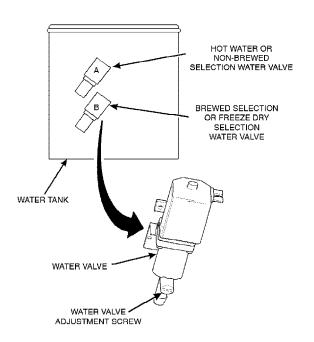


TABLE A: SUGGESTED WATER TIMES

SELECTION	CUP SIZE				
SELECTION	5 oz	7 oz	8.25 oz	9 oz	
Fresh brew	4.30 sec	5.00 sec	5.90 sec	6.40 sec	
Freeze dry	6.75 sec	8.00 sec	9.45 sec	10.25 sec	
Hot chocolate	8.65 sec	10.2 sec	12.0 sec	13.0 sec	
Hot water	6.75 sec	8.00 sec	9.45 sec	10.25 sec	
Instant Tea	6.75 sec	8.00 sec	9.45 sec	10.25 sec	
Fresh Brew Tea	4.30 sec	5.00 sec	5.90 sec	6.40 sec	

Local conditions may require different times in order to dispense the correct volume of water.

TABLE B: RECOMMENDED WATER VOLUME

CEL ECTION	CUP SIZE				
SELECTION	5 oz	7 oz	8.25 oz	9 oz	
Fresh brew	130 ml	190 ml	220 ml	240 ml	
Freeze dry	120 ml	170 ml	200 ml	210 ml	
Hot chocolate	100 ml	140 ml	170 ml	180 ml	
Hot water	100 ml	140 ml	170 ml	180 ml	
Instant Tea	120 ml	170 ml	200 ml	210 ml	
Fresh Brew Tea	130 ml	190 ml	220 ml	240 ml	

PAGE30 Glasco ™

Measuring and Adjusting Dry Ingredients

COFFEE

CANISTER

SETTING BREWED SELECTION THROW:

WARNING

Keep your hands away from the moving parts of the brewer while it is cycling.

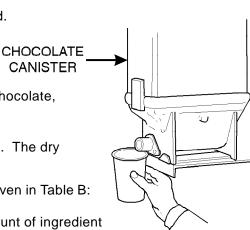
- 1. Locate the correct time for the chosen product and cup size. See Table A: **SUGGESTED INGREDIENT TIMES**, page 33.
- Set a new time for this ingredient or review the current time. See the <u>Programming Section</u> for the correct procedure.
- 3. Hold a clean, empty cup under the canister discharge funnel as shown.
- 4. With the ingredient time shown in the display, press (ر

The dry ingredient will be dispensed.

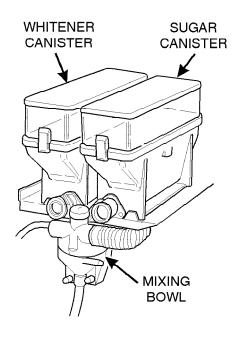
- 5. Weigh the collected ingredient. Compare with the value given in Table B: **RECOMMENDED INGREDIENT WEIGHTS**, page 33.
- 6. Adjust the time as needed to increase or decrease the amount of ingredient dispensed.
- 7. Repeat steps 3 through 6 until the correct amount of dry ingredient has been dispensed.

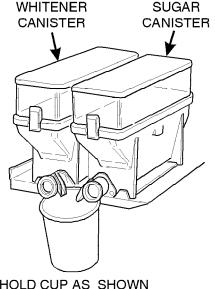
SETTING HOT CHOCOLATE, SUGAR, AND WHITENER THROW:

- Locate the correct time for the chosen product and cup size. See Table A: SUG-GESTED INGREDIENT TIMES, page 33.
- 2. Remove the mixing bowl for the ingredient being measured.
- 3. Set a new time for this ingredient or review the current time. See the <u>Programming Section</u> for the correct procedure.
- Hold a clean, empty cup under the dispensing spout for the chosen ingredient. See the figure at the right for hot chocolate, and the figure on the next page for sugar or whitener.
- 5. With the ingredient time shown in the display, press **(J**). The dry ingredient will be dispensed.
- 6. Weigh the collected ingredient. Compare with the value given in Table B: **RECOMMENDED INGREDIENT WEIGHTS**, page 33.
- 7. Adjust the time as needed to increase or decreae the amount of ingredient dispensed.
- 8. Repeat steps 4 through 7 until the correct amount of dry ingredient has been dispensed.



Measuring and Adjusting Dry Ingredients (continued)





HOLD CUP AS SHOWN TO CATCH TEST THROW

TABLE A: SUGGESTED INGREDIENT TIMES

SELECTION

	5 0		/ OZ	8.25 OZ	9 OZ
Fresh brew		2.60 sec	2.60 sec	2.90 sec	3.40 sec
	Regular	2.00 sec	1.10 sec	1.50 sec	1.90 sec
dry	Strong	2.25 sec	1.55 sec	1.80 sec	2.10 sec
Hot chocolate		3.10 sec	2.90 sec	3.40 sec	3.80 sec
Tea		Find correct time by testing.			

CUP SIZE

		5 02	7 02	0.25 02	9 02	
Fresh brew		2.60 sec	0 sec 2.60 sec 2.90 sec		3.40 sec	
Freeze	Regular	2.00 sec	1.10 sec 1.50 sec		1.90 sec	
dry	Strong	2.25 sec	1.55 sec	1.80 sec	2.10 sec	
Hot ch	Hot chocolate		2.90 sec	3.40 sec	3.80 sec	
Tea		Find correct time by testing.				
Sugar		1.70 sec	1.60 sec	1.80 sec	2.10 sec	
Total sugar extra		2.50 sec	2.20 sec	2.40 sec	2.70 sec	
Whitener		1.50 sec	0.30 sec	0.55 sec	0.65 sec	
Total whitener ex.		2.10 sec	0.50 sec	0.65 sec	0.80 sec	

TABLE B: RECOMMENDED INGREDIENT **WEIGHTS**

SELECTION		CUP SIZE				
		7 oz 8.25 oz		9 oz		
Fresh brew		8 g.	9 g.	10 g.		
Freeze	Regular	1.0 g.	1.5 g.	2.0 g.		
dry	Strong	1.2 g.	1.7 g.	2.3 g.		
Hot cl	Hot chocolate		28 g.	31 g.		
Tea		Find correct weight by testing.				
Sugar		6 g.	7 g.	8 g.		
Total sugar extra		8 g.	9 g.	10 g.		
Whitener		1.5 g.	2 g.	2.5 g.		
Total whitener ex.		2 g.	2.5 g.	3 g.		

In the end, the amount of dry ingredients you use is a matter of taste. The times in the tables are only meant to be used as a starting point. If the drink does not taste right to you, try a range of times until the taste is more to your liking. In addition to taste, the amount of dry ingredients is also influenced by local water conditions and the brand of ingredient you use.

Air Pressure Adjustment

The air pressure gauge is located below the chocolate canister. It is mounted on the front of the chocolate shelf as shown.

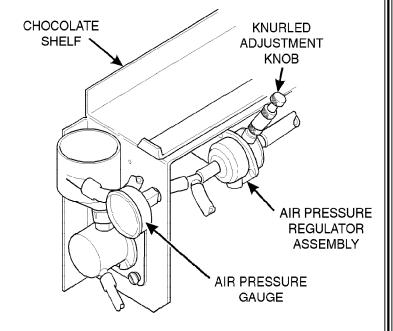
The air pressure regulator assembly is located on the other side of the shelf panel in line with the gauge as shown.

- Adjust the air pressure regulator while a brewed selection is being vended.
- While the air compressor is running, the pressure will register on the pressure gauge.
- Air pressure must be sufficient to force the brew past the filter screen, out of the brewer barrel, and up to the mixing bowl.
- Once the brew reaches the mixing bowl, it must start a swirling action in the bowl. The swirling action mixes the sugar and whitener with the brew.
- Ideally, you should set the air pressure to the lowest workable pressure; between 4 and 8 psi (0.28 and 0.55 bar).
 If the pressure is too high, the brew will overshoot the mixing bowl.
- Turn the knurled knob on the regulator clockwise to increase pressure. Turn it counterclockwise to decrease the pressure.

NOTE

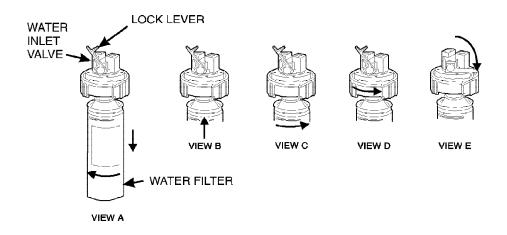
Generally, decaf requires more pressure than regular coffee.

2. Run a series of test vends to determine the best setting for your location and machine.



Water Filter Cartridge Removal

- 1. Close the water supply line shut-off valve.
- 2. Turn the main power switch to the OFF position.
- 3. Flip the lock lever up (view A).
- 4. As viewed from above, rotate the cartridge clockwise about 60°. The locking collar will turn with the cartridge.
- 5. When the locking collar drops about 3/8", rotate the cartridge another 45° or so.
- 6. Pull the cartridge down to separate it from the head assembly.



Water Filter Cartridge Replacement

- 1. Make sure the main power switch is in the **OFF** position.
- 2. Flip the lock lever UP (view A).
- 3. As viewed from above, rotate the locking collar clockwise about 60° until it drops to the filter receiving position.
- 4. Align the raised rib near the top of the cartridge with the ribless portion of the locking collar.
- 5. Push the cartridge up into the filter head (view B).
- 6. As viewed from above, rotate the cartridge clockwise until the lock lever engages the locking collar (view C).
- 7. Push the lock lever DOWN (view D).

NOTES

DO NOT flush the water filter cartridge.

The water filter assembly cannot be operated without a properly installed water filter cartridge.

The valve handle on the water filter head is used to open and close the water inlet to the merchandiser.

PAGE34 Glasco [™]

Overall Cleaning

- Inspect the merchandiser both inside and out. Be sure to check corners and less visible parts of the merchandiser.
- 2. Clean where needed.
- 3. Allow the inside of the cabinet to dry thoroughly before closing the door.
- 4. Glasco recommends using the following supplies:
 - Use a commercial glass cleaner on the glass in the cabinet door.
 - Use a mild detergent and warm water on the cabinet, trays, spirals, gum and mint assembly, and other non-electrical components. Brewer cleaning is discussed later in this manual.

CAUTION

Clean the plastic components in this merchandiser with a mild detergent and warm water. Avoid using other cleaning agents because they may damage the material.

RECOMMENDED SERVICE

PROCEDURE	DAILY	WEEKLY	MONTHLY	QUARTERLY	SEMI-ANNUAL
Brewer barrel and basket	Х				
Coffee funnel					Х
In-tank water temperature	Х				
Water filter service limit	Х				
Water volume check				Х	
Water tank liming inspection					Х
Refill coin tubes	Х				
Inspect and clean coin mech		Х			
Inspect and clean bill validator		Х			
Empty bill magazine	Х				
Refill ingredient canisters	Х				
Fluff dry ingredients		Х			
Test vend products	Х				
Inspect mixing bowls	Х				
Check ingredient throw				Х	
Refill cup tubes	Х				
Inspect lamp bulbs	Х				
Inspect exhaust filter		Х			
Lubrication					Х
Inspect springs					X
Inspect moving parts					Х

NR = No reference given

Sanitation

RECOMMENDED SANITATION

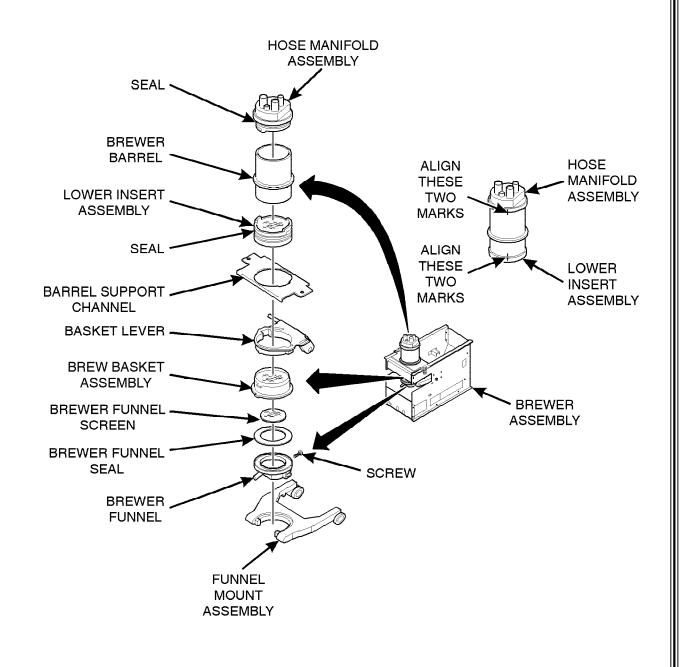
PROCEDURE	DAILY	WEEKLY	MONTHLY	QUARTERLY	SEMI-ANNUAL
Clean brewer mechanism		Х			
Wash brewer mechanism			Х		
Clean ingredient shelf	Х				
Sanitize canisters			Х		
Rinse mixing bowls	Х				
Sanitize mixing bowls		Х			
Sanitize impeller funnel		Х			
Sanitize dispenser nozzles		Х			
Replace tubing					X See note 1
Sanitize cup compartment	Х				
Clean the grounds pail	Х				
Sanitize the waste pail	Х				
Clean merchandiser overall	Х				

Note 1: Replace the tubing only if needed. Use of the auto rinse feature extends the life of the tubing.

THE MOST PROFITABLE MERCHANDISER IS CLEAN AND WELL MAINTAINED

PAGE36 Glasco™

Identification of Brewer Components



Removing the Brewer Barrel and Manifold

WARNING

Wear safety goggles or other eye protection whenever you remove the brewer mechanism cover.

- 1. Remove the brewer mechanism cover.
- 2. If the barrel and manifold are to be removed as an assembly, disconnect the tubes from the manifold.
- 3. Rotate the brewer barrel with the slots in the support channel.
- 4. Lift the brewer barrel and manifold assembly clear of the support channel.

Disassembling the Brewer Barrel and Manifold

- 1. As viewed from the bottom, rotate the brewer barrel ¼ turn clockwise and pull the lower insert assembly clear of the brewer barrel.
- 2. As viewed from the top, rotate the brewer barrel ¼ turn clockwise and pull the manifold clear of the brewer barrel.

Brewer Basket Removal

 Rotate the basket ¼ turn clockwise to align the flanges of the basket with the slots in the basket lever.

Brewer Basket Replacement

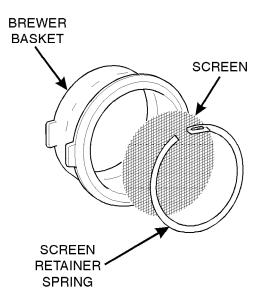
- Raise the basket lever and hold in position;
- 2. Align the flanges of the basket with the slots in the lever.
- 3. Insert the basket into the lever and rotate the basket counterclockwise. A spring clip in the basket lever should engage the lock tab in the basket.

Brewer Basket Screen Removal

CAUTION

Use care during this procedure, as the screen can be easily damaged if your screwdriver slips.

- Using a small screwdriver, remove the screen retainer screen from the bottom side of the brewer basket as shown.
- 2. Remove the screen from the basket.



PAGE38 Glasco™

Cleaning the Brewer Basket Screen and Brewer Barrel Screen

- 1. Inspect the screens and replace them if damaged.
- 2. Prepare a solution of urn cleaner in a container.
- 3. Place the screens in the urn cleaner solution. Agitate the solution while brushing the screen with a soft bristle brush.
- 4. Rinse the screens thoroughly in hot water.

NOTE

You can save time by replacing these parts with similar parts that have already been cleaned in the shop.

Brewer Basket Screen and Brewer Barrel Screen Replacement

- 1. Return the brewer basket to the brewer barrel.
- Return the brewer barrel screen to the brewer barrel.

NOTE

Use a 230 mesh screen in this merchandiser.

- 3. Press the screen firmly in place.
- 4. When replacing the brewer basket screen, insert the plain end of the retainer spring into the groove in the brewer basket.
- 5. Press the retainer spring until it seats in the groove. See the figure on the previous page.

Brewer Barrel and Manifold Reassembly

- 1. Insert the manifold into the top of the brewer barrel.
- 2. When viewed from the top, rotate the barrel counterclockwise until the registration marks are in line.
- 3. Insert the lower insert assembly into the brewer barrel.
- 4. As viewed from the bottom, rotate the barrel counterclockwise until the registration marks are in line.

Brewer Barrel and Manifold Replacement

- 1. Position the brewer barrel and manifold assembly so the flanges of the barrel are in line with the slots in the support channel.
- 2. Press down and rotate the barrel ¼ turn clockwise.
- 3. If any tubes were disconnected from the manifold, reconnect them.

Brewer Funnel Removal

- Raise the funnel mount lever.
- 2. Pivot the front edge of the funnel assembly downward about 90°
- 3. Push down on the funnel to separate it from the lever pins.
- 4. If the funnel is to be removed from the merchandiser, disconnect the discharge tube from the funnel.

Brewer Funnel Replacement

- 1. Raise the funnel mount lever.
- 2. The dispensing port should be pointed downward and the top of the funnel should be facing left. While the funnel is in this position, slide it over the lever pins.
- 3. Pivot the funnel assembly upward and return the lever to the home position.
- 4. If the funnel was removed from the merchandiser, reconnect the discharge tube.

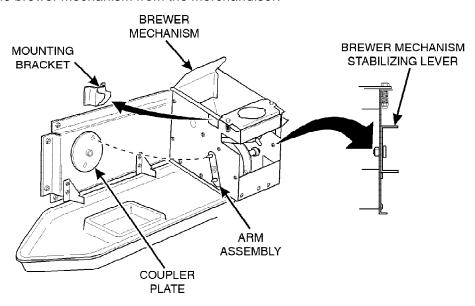
Brewer Mechanism Cleaning

REMOVING THE BREWER MECHANISM:

NOTE

Glasco recommends that the brewer mechanism be removed from the merchandiser for cleaning.

- Remove the brewer barrel and manifold assembly. See REMOVING THE BREWER BARREL AND MANIFOLD, page 39.
- Disconnect the discharge tube from the brewer funnel. See BREWER FUNNEL REMOVAL, page 40.
- 3. Remove the cup delivery compartment. See *CUP DELIVERY COMPARTMENT REMOVAL AND REPLACEMENT*, page 43.
- 4. Remove the cup delivery compartment mounting bracket.
- 5. Rotate the brewer mechanism stabilizing lever forward and up as shown. Place it in a horizontal position.
- 6. Lift the brewer mechanism off its mounting bracket.
- 7. Remove the brewer mechanism from the merchandiser.



WASHING THE BREWER MECHANISM:

- 1. Wash the brewer mechanism with detergent and hot water.
- 2. Rinse the mechanism and allow it to dry thoroughly.

REPLACING THE BREWER MECHANISM:

- 1. Hang the brewer mechanism on its mounting bracket.
- 2. Be sure the arm assembly pins (at the rear of the brewer) line up with the holes in the coupler plate as shown.
- 3. Replace the cup delivery compartment mounting bracket, the cup delivery compartment, the brewer barrel and manifold assembly, and the brewer mechanism cover.
- 4. Reconnect all of the tubes that were disconnected.
- Rotate the brewer mechanism stabilizing lever down and back into place.

Glasco™

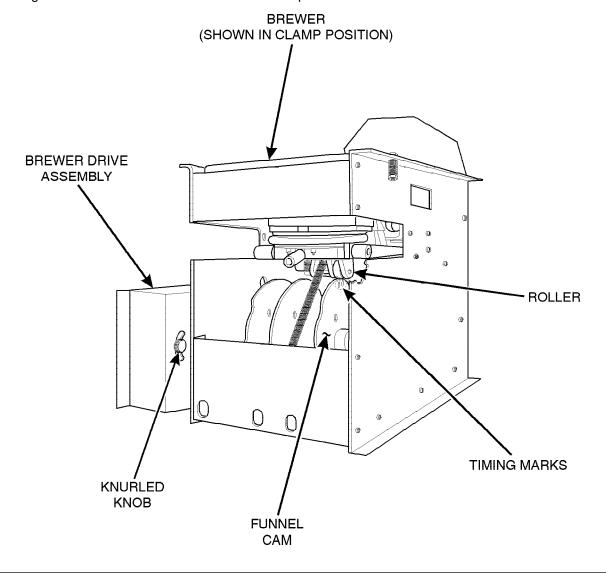
Brewer Timing Adjustment

CHECK THE TIMING:

- Remove the cup station.
- 2. Refer to the *Programming Section*: Cycle the brewer into the CLAMP position.
- 3. Look inside the brewer and observe the roller which rides on the funnel cam. There should be two marks on the funnel cam lobe on either side of the roller. These are the timing marks. If the roller is not between the marks, the timing needs to be adjusted.

ADJUST THE TIMING:

- 1. Loosen the knurled knob on the brewer drive assembly next to the coupler plate.
- 2. Move the knurled knob up or down slightly in its groove.
- 3. Tighten the knob.
- 4. Refer to the *Programming Section*: Cycle the brewer until it is in the CLAMP position again.
- 5. Check the timing. If necessary, repeat the adjustment steps until the roller is between the two timing marks when the brewer is in the CLAMP position.



Cup Delivery Compartment Removal and Replacement

REMOVAL:

Lift the compartment from its mounting bracket and then remove the compartment from the cabinet.

REPLACEMENT:

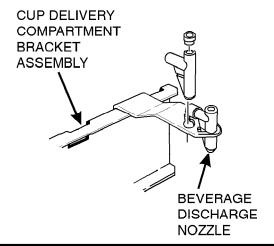
 Position the compartment over the mounting bracket. Lower the compartment until it hangs from the mounting bracket.

Cup Delivery Compartment Sanitizing

- 1. Remove the cup delivery compartment from the merchandiser.
- 2. Wash and sanitize the compartment.
- 3. Rinse the compartment with clean, hot water and dry thoroughly.
- 4. Return the cup delivery compartment to the merchandiser.

Beverage Discharge Nozzle Sanitizing

- 1. Disconnect the dispensing tube.
- 2. Turn the nozzle until its slotted web is in line with the slotted mounting hole in the bracket.
- 3. Remove the nozzle.
- 4. Remove the cap from the nozzle.
- 5. Clean and sanitize the nozzle and cap.
- 6. Replace the nozzle and cap.
- 7. Reconnect the dispensing tube.



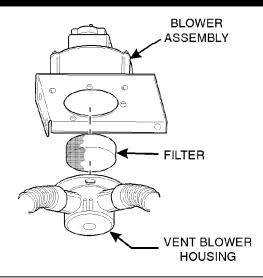
Vent Blower Filter Removal and Replacement

REMOVAL:

- 1. Rotate the vent blower housing clockwise.
- 2. Lower the housing.
- Remove the filter from inside the housing.

REPLACEMENT:

- Place the new filter in the vent blower housing.
- Position the housing over the mounting studs on the bottom of the blower assembly.
- 3. Rotate the housing counterclockwise to secure it in place.





Grounds Pail Cleaning

- 1. Empty and rinse the grounds pail.
- 2. Reline the pail with a clean plastic trash liner.

Waste Pail Sanitizing

- Empty, wash and sanitize the waste pail.
- 2. Sprinkle half of a handful of detergent powder in the bottom of the pail. This will help control odors from waste liquids.

Water Filter Cartridge Service Limits

Check the water filter cartridge installation record. There is a place to write the vend number on the cartridge.

The effective limits of the cartridge are as follows:

NOTE

7 oz cup - 26,000 vends 8.25 oz cup - 22,000 vends 9 oz cup - 20,000 vends Local conditions may require more frequent replacement.

Measuring and Setting Water Temperature

The temperature of the water in the water tank is controlled by the temperature control thermostat.

WARNINGS

The water in the tank is very hot. Be careful when adjusting the temperature control thermostat.

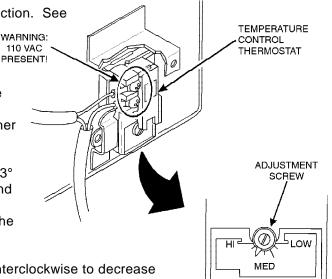
110 VAC is present at thermostat terminals as shown. Make sure machine power is OFF before attempting to adjust the thermostat.

- 1. Place a cup in the cup station.
- 2. Initiate a water throw for the hot chocolate selection. See the *Programming Section* for the correct procedure.

 WARNING:
 110 VAC

3. Repeat steps 1 and 2 until you have thrown ten cups of water.

- 4. Wait 20 minutes to allow the temperature in the water tank to stabilize.
- Place a cup in the cup station and initiate another water throw.
- Measure the temperature of the water. Water temperature should be 190° to 200° F (88° to 93° C). Compare your reading with these values and adjust the thermostat accordingly:
 - a. **Turn the main power switch OFF**. Turn the thermostat adjustment screw clockwise to increase the temperature.
 - b. Turn the thermostat adjustment screw counterclockwise to decrease the temperature. **Turn the main power switch ON.**



Dry Ingredient Air Fluffing

NOTE

This will help prevent the ingredients from compacting in the canister base.

- Remove the canister from the merchandiser.
- 2. Hold the lid securely and invert the canister.

Sugar and Whitener Mixing Bowl Inspection

- Look for an accumulation of sugar or whitener in the mixing bowl.
- 2. If necessary, clean and sanitize the bowl. See MIXING BOWL SANITIZING.

Dry Ingredient Shelf Cleaning

- 1. Remove the canisters from all of the shelves.
- 2. Clean the shelves with a damp, disposable wiper.
- 3. Allow shelves to thoroughly dry before replacing the canisters.
- 4. Replace the canisters.

Canister Sanitizing

- 1. Empty and wash the canister.
- 2. Sanitize the canister, lid, auger, and spout.
- 3. Rinse all parts in hot water.
- 4. Allow the parts to thoroughly dry before reassembly.
- 5. Reassemble the canister and return it to the merchandiser.
- 6. Load the canister with the appropriate ingredient.

Mixing Bowl Sanitizing

- 1. Remove the mixing bowl from the dry ingredient shelf assembly.
- Wash, sanitize, and thoroughly rinse the mixing bowl.
- 3. Return the mixing bowl to the dry ingredient shelf assembly.

PAGE44 Glasco ™

Chocolate Funnel and Impeller Housing Sanitizing

REMOVAL:

- Disconnect the tubing from the funnel.
- 2. Remove the funnel.
- 3. Rotate the impeller housing clockwise.
- 4. Pull the housing forward and away from the mounting plate assembly.

SANITIZING:

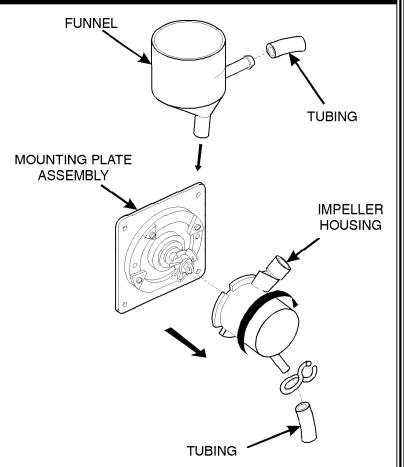
- 1. Wash and sanitize the funnel and the impeller housing.
- 2. Rinse both with hot water and thoroughly dry them before replacing.

REPLACEMENT:

 Reverse the removal procedure to replace the funnel and impeller housing.

CAUTION

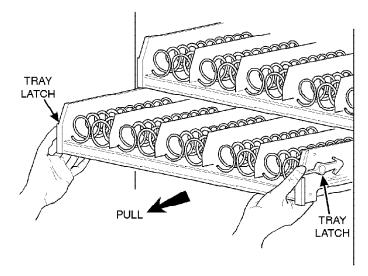
Do not run water through the whipper unless the whipper is operating. Water can leak from the whipper chamber.



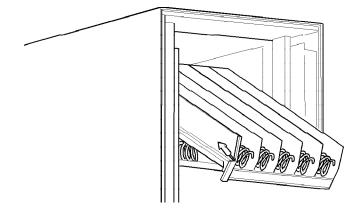
Snack Section Set-Up

1. Place A Tray In The Loading Position

- 1. Place both hands on the tray as shown.
- 2. Lightly push back on the tray with your palms. This will release the tray latches on the sides of the tray.
- 3. Push down on the tray latches with your thumbs.
- 4. Pull the tray toward you until you hear and feel the rear tray rollers drop into a cut-out in the top of the guide rail.



5. Continue pulling the tray forward for another inch. You will then be able to tilt the tray downward into the loading position as shown.



NOTE

When the cabinet door is not fully open, the bottom tray will rest on the delivery pan assembly. Handle the tray with care to avoid scratching the delivery pan assembly.

2. Set Up Trays to Vend Products

These instructions will guide you through setting up your trays for vending. You will be asked to determine if your tray can physically hold the products you intend to vend. If not, you will be directed to other procedures which will help you get them set up. Follow these nine steps for each tray in your machine:

- 1. Make sure the tray is in the loading position (see page 47).
- 2. Is the column wide enough for the intended product? If so, proceed to the next step. Otherwise, set up your tray to vend wider products (see below, this page). When you're done, return to step 3 in this procedure.
- 3. Will the products fit between the spiral turns? If so, proceed to the next step. Otherwise, change the spiral (see page 53).
- 4. Will the product pass under the tray immediately above? If so, proceed to the next step. Otherwise, reposition the tray and guides (see page 59).
- 5. Will the product touch products on either side? If not, proceed to the next step. Otherwise, install a product spacer (see page 62).
- Load products in the tray (see page 63).
- 7. Return the tray to the vending position (see page 67).
- 8. Install the price labels (see page 68).
- 9. Install the selection ID numbers (see page 70).

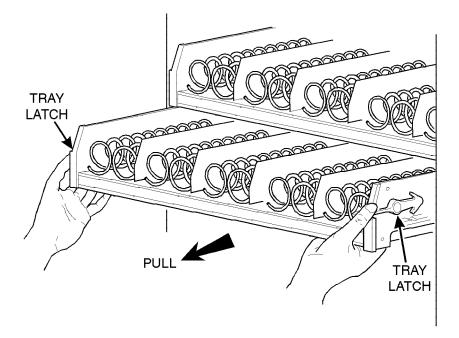
Set Up A Tray To Vend Wide Products

The following steps will help you configure your tray to vend wide products. When you have completed the procedures called out in each step, return to the next step in the procedure. When you are done with the entire wide product steps, return to the set-up procedures above.

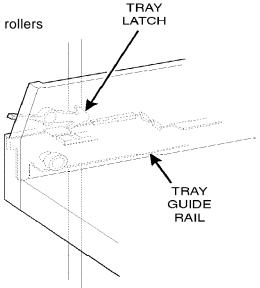
- 1. Remove the tray from the merchandiser and place on a flat surface (see page 67).
- 2. Based on the size of the product you want to vend, decide how many spiral positions it will occupy. Please remember that the leftmost spiral in the group **must** have an even ID number (0, 2, 4, etc.) For example, if a product is three spirals wide, the left spiral will be ID number 0, and the right spiral will be ID number 2. Be careful how wide you set up for, because really wide products could get hung up in the delivery door.
- 3. Remove the column dividers inside the group (see page 51). In the example of three spiral positions, you would be removing the dividers between spiral ID numbers 0 and 1, and 1 and 2.
- 4. If your group only consists of 2 spirals, replace the rightmost motor with a spiral bearing and gear (see page 52), and install a gear on the leftmost motor (see page 56). Skip to step 8.
- 5. Remove all spirals in the group except the leftmost spiral.
- 6. Do one of the following:
 - a. If your group has an **ODD** number of spirals (3, 5, etc.) remove the harnesses from all motors in the group except the leftmost one (see page 52). To the rightmost motor, connect the harness from the motor immediately to its left.
 - b. If your group has an **EVEN** number of spirals (4, 6, etc.) remove the harnesses from all motors **inside** the group (leave the harnesses connected to the leftmost and rightmost motors) (see page 52).
- 7. Install a spiral at the rightmost position in your group (see page 53). Make sure it has the same product capacity and is opposite to the one in the leftmost position.
- 8. Return the tray to the merchandiser (see page 61).
- 9. Electronically couple the motors as needed (see your *Programming Guide* for information).
- 10. Return to step 3 in the Set Up Trays to Vend Products procedure, above.

Removing a Tray

- Study this procedure before you install a tray for the first time; while you are holding the tray you will not be able to see this area. Proceed as follows:
- 1. Push back on the tray slightly with your palms. This releases the tray latches.
- 2. Push down on the tray latches with your thumbs.

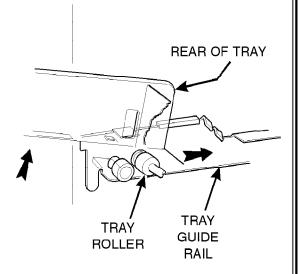


3. Pull the tray forward until you hear and feel the rear tray rollers drop into a cut-out in the top of the guide rail.

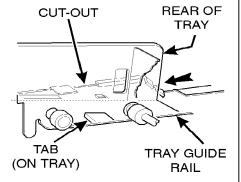


Removing a Tray (continued)

4. Lift up on the tray and slide it toward the back. No more than an inch should be needed.



- 5. The tab near the back of the tray should align with the cut-out in the top of the guide rail as shown.
- 6. Lift the tray clear of the guide rail and out of the merchandiser.

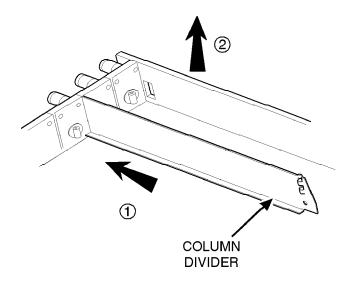


CAUTION

When the cabinet door is not fully open, use extra care in removing the bottom tray. Failure to do so may result in damage to the tray or to the delivery pan assembly.

Removing And Installing Column Dividers

Push the column divider toward the back of the tray - (1).



- Lift the column divider clear of the tray (2). Install the column divider in the reverse order of removal.

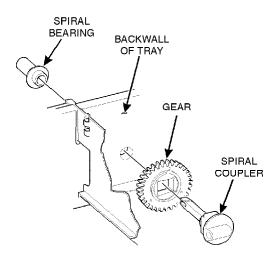
Replacing a Motor With a Spiral Bearing

REMOVING A MOTOR:

- 1. Disconnect the harness from the motor. See **CONNECTING AND DISCONNECTING A MOTOR HARNESS**, below.
- 2. Remove the spiral. See **REMOVING AND INSTALLING SPIRALS**, page 53.
- 3. Remove the spiral coupler. See **REMOVING A SPIRAL COUPLER**, page 55.
- 4. Remove the motor (see *REMOVING AND INSTALLING A SPIRAL MOTOR*, page 55).

INSTALLING A SPIRAL BEARING:

- 1. Put the gear into position if required in this set-up as shown. See INSTALLING A GEAR, page 56.
- 2. Install the spiral coupler. See INSTALLING A SPIRAL COUPLER, page 57.



Connecting and Disconnecting a Motor Harness

CAUTION

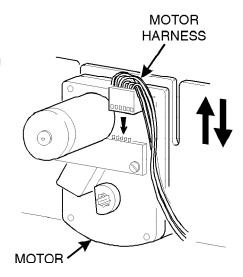
To avoid breaking the motor circuit board, hold the header on the circuit board whenever connecting or disconnecting a motor harness.

DISCONNECTING A MOTOR HARNESS:

- Pull the harness connector away from the circuit board as shown.
- 2. Tuck the unused part of the harness out of the way in the trough at the back of the tray.

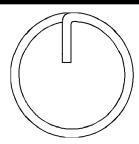
CONNECTING A MOTOR HARNESS:

- Locate the harness connector for the appropriate tray position.
- 2. Push the harness connector over the header pins on the motor circuit board as shown.



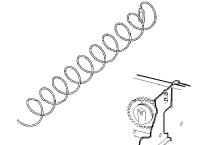
Removing and Installing Spirals

• All spirals are the same diameter:

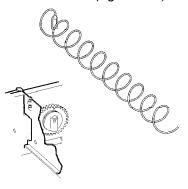


There are two types of spirals:

COUNTER-CLOCKWISE (left hand)



CLOCKWISE (right hand)



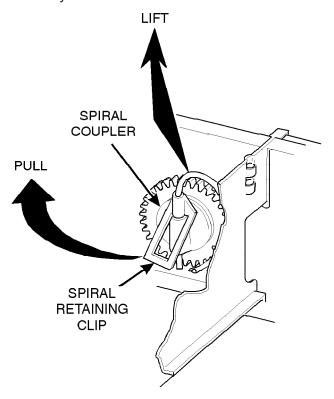
• Spirals are available in eight different capacities. Four of these are standard, and four are options.

ITEM CAPACITY	PAR ⁻	CLIP	
OF SPIRAL	CLOCKWISE (RH)	COUNTERCLOCKWISE (LH)	COLOR
6 (Optional)	1477104	1477102	Purple
11 (Standard)	1477027	1477024	Blue
13 (Standard)	1477033	1477030	Yellow
15 (Standard)	1477039	1477036	Red
20 (Standard)	1477045	1477042	White
25 (Optional)	1477051	1477048	Green
30 (Optional)	1477057	1477054	Black
38 (Optional)	1477063	1477060	Orange

Removing and Installing Spirals (continued)

TO REMOVE A SPIRAL:

- 1. Pull forward on the retaining clip and remove the end of the spiral from the spiral coupler as shown.
- 2. Remove the spiral from the tray.

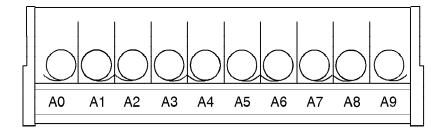


TO INSTALL A SPIRAL:

- 1. Pull the bottom of the retaining clip toward the front of the spiral.
- 2. Lower the spiral into the tray column and insert the end of the spiral into the spiral coupler as shown.
- 3. Release the retaining clip.

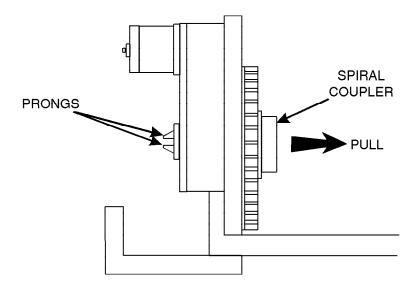
SHOULD I USE A CLOCKWISE OR A COUNTERCLOCKWISE SPIRAL?

- 1. The type of spiral used is determined by the column position it will occupy in the tray.
- 2. Refer to the figure below to find the correct spiral type.



Removing a Spiral Coupler

- 1. Pinch together the prongs on the end of the spiral coupler as shown.
- 2. Pull the coupler forward (in the direction of the arrow as shown).



Removing and Installing a Spiral Motor

REMOVING A SPIRAL MOTOR: NOTE, some steps may already be completed.

1. Remove the tray. See **REMOVING A TRAY**, page 49.

2. Disconnect the motor harness. See **CONNECTING AND DISCONNECTING A MOTOR HARNESS**, page 52.

3. Remove the spiral. See **REMOVING AND IN-STALLING SPIRALS**, page 53.

4. Remove the spiral coupler. See *REMOVING A SPI-RAL COUPLER*, page 55.

5. Lift the motor clear of the tray.

6. Return the tray to the merchandiser. See *IN- STALLING A TRAY IN THE MERCHANDISER*, page 61.

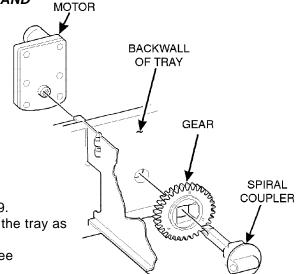
INSTALLING A SPIRAL MOTOR:

Remove the tray. See REMOVING A TRAY, page 49.

2. Place the motor in the correct position at the rear of the tray as shown.

3. Place a gear in position if required by this set-up. See *INSTALLING A GEAR*, page 56.

- 4. Install a spiral coupler in the proper orientation. See *INSTALLING A SPIRAL COUPLER*, page 57.
- Connect the motor harness. See CONNECTING AND DISCONNECTING A MOTOR HARNESS, page 52.
- 6. Return the tray to the merchandiser. See *INSTALLING A TRAY IN THE MERCHANDISER*, page 61.



SPIRAL

Installing a Gear

WHEN ARE GEARS USED?

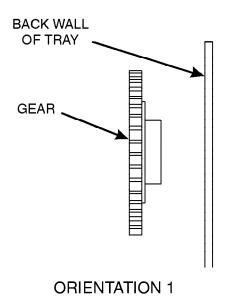
- Gears are used to mechanically couple the spirals together.
- This happens whenever you have two spirals and only one motor for vending a selection.

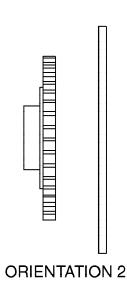
WHERE ARE THE GEARS PLACED?

• The gear is placed between the back of the tray and the spiral coupler.

HOW IS THE GEAR ORIENTED?

There are two possible orientations for the gear:





There are two rules to follow when orienting gears:

RULE 1 - The gears for selections next to each other cannot use the same orientation.

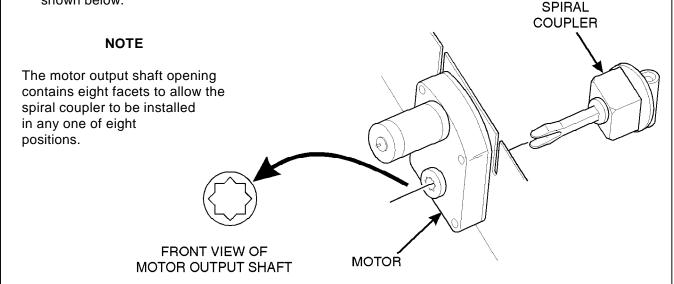
RULE 2 - All gears for a single selection must use the same orientation.

Installing a Spiral Coupler

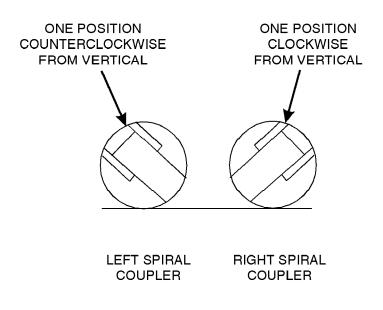
1. Place the gear in position if one is required for this set-up. See *INSTALLING A GEAR*, page 56.

WHEN USED WITH A MOTOR:

2. Hold the motor in place and push the spiral coupler through the motor gear box until it clicks into position. Be sure the spiral couplers are oriented as shown below.



SPIRAL COUPLER ORIENTATION

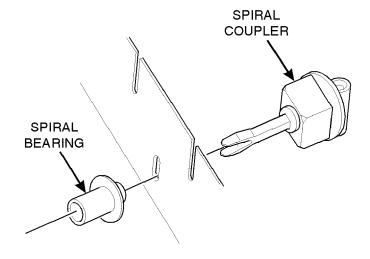


AS VIEWED FROM FRONT OF TRAY

Installing a Spiral Coupler (continued)

WHEN USED WITH A COUPLER BEARING:

2. Hold the coupler bearing in place and push the spiral coupler through the bearing until the coupler clicks into position. Be sure the coupler is in the proper orientation as shown.



Moving a Tray Up or Down

This merchandiser can be adjusted to vend taller products. Some guidelines must be followed:

- Keep in mind that when you increase the product height available to a tray by lowering it, you will be decreasing the product height available to the tray below.
- If a tray is in the lowest position, the tray below it should not be in the highest position.
- If a tray is in the highest position, the tray above it should not be in the lowest position.
- You will need to experiment with various tray positions to get the best results for your products.

CAUTION

Trays should not be positioned over an open air discharge vent.

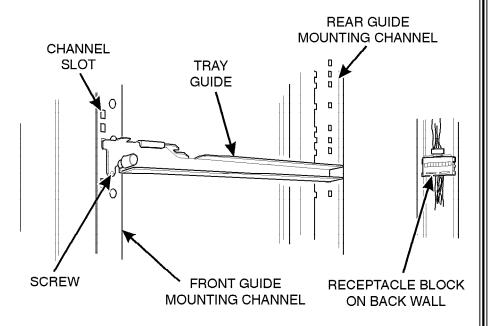
 Move the receptacle block in the same direction and the same distance as you plan to move the tray guide mounting channels. (The slot number used for the tray guide mounting channels will be the same as the slot number used for the receptacle mounting channel.)

NOTE

Tray movement is limited because the tray harness will limit the amount of travel available to the receptacle blocks.

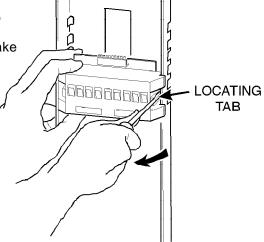
Proceed as follows:

- 1. Remove the tray from the merchandiser. See *REMOVING A TRAY*, page 50.
- 2. Remove the screw that secures the left tray guide to the front guide mounting channel as shown.
- 3. Tap up on the tray guide and unseat the guide rail tabs from the channel slots.
- 4. Pull the guide rail away from the channels.
- 5. Move the tray guide to the desired position.
- 6. Insert the guide rail tabs into the channel slots as shown.
- 7. Tap down on the guide rail to seat the tabs in the channel slots.
- Replace the screw that secures the guide rail to the front guide mounting channel.
- 9. Repeat steps 2 through 8 for the right guide rail.



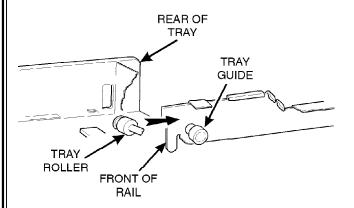
Moving a Tray Up or Down (continued)

- 10. Disconnect the harness from the receptacle block.
- 11. Press the blade of a slotted head screwdriver between one of the receptacle block locking tabs and the receptacle mounting channel as shown at right. This will unseat the locking tab.
- 12. Pull the receptacle block away from the channel.
- 13. Move the receptacle block to the desired position.
- 14. Push the receptacle block tabs into the slots in the channel.
- 15. Reconnect the harness to the receptacle block.
- 16. Return the tray to the merchandiser. See **INSTALLING A TRAY IN THE MERCHANDISER**, page 61.
- 17. Load products into the trays, and perform test vends. Make sure the trays don't interfere with the products you are vending, and that all products vend properly.

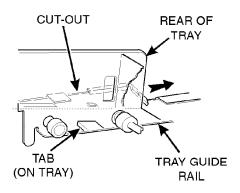


Installing a Tray in the Merchandiser

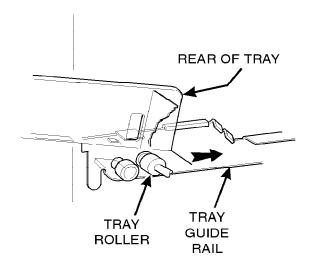
- Study this procedure before you install a tray for the first time; while you are holding the tray you will not be able to see this area. Proceed as follows:
- 1. Insert the tray so that the tray rollers pass over the tray guide rollers.



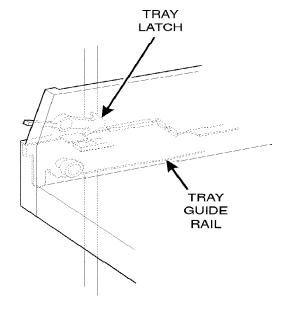
Hold the tray up while pushing it toward the rear. Stop when the tab on the tray aligns with the opening in the tray guide.



2. Bring the tray roller to rest on the tray guide.



- Lower the tray until it rests on the tray guide roller. Push the tray in all the way.
- The tray latch will fall into the locking position.

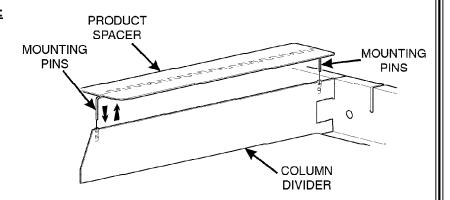


3. Tilt the tray upward.

Installing and Removing a Product Spacer

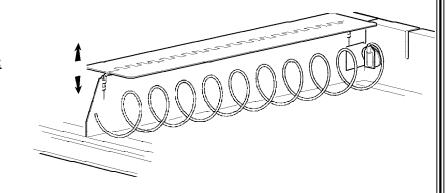
INSTALLING A PRODUCT SPACER:

Insert the product spacer mounting pins into the column divider as shown.



ADJUSTING A PRODUCT SPACER:

With product loaded in the tray, rotate the product spacer up or down to keep the product upright as shown.



REMOVING A PRODUCT SPACER:

Pull the product spacer mounting pins from the column divider.

3. Load Trays With Product

SPIRAL CAPACITY COLOR CODES

SPIRAL CAPACITY	SPIRAL COUPLER COLOR	SPIRAL CAPACITY	SPIRAL COUPLER COLOR
6	Purple	20	White
11	Blue	25	Green
13	Yellow	30	Black
15	Red	38	Orange

The color of the spiral coupler (the little plastic tab attached to the rear of the spiral will tell you how many products will fit in the spiral. See table at left. NOTE

Another way to determine spiral capacity is to count the spaces in the spiral!

LOADING A TRAY WITH PRODUCTS IN GENERAL:

- See **PRODUCT PUSHER USAGE** on page 65 for spirals with capacity of 11, 13, or 15.
- See SPIRAL WALL RETAINER USAGE on page 64for spirals with capacity of 20, 25, 30, or 38.
- Begin loading products at the front of the tray and work toward the back. Position the product so the package rests on the tray. DO NOT force a product into a spiral.
- If the fit is too tight or too loose, change the spiral size. See **REMOVING AND INSTALLING A** SPIRAL on page 53.
- Be sure there are no empty positions between products in each spiral.

SPECIAL CONSIDERATIONS:

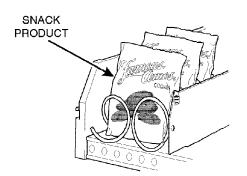
Bagged Products -Position package upright, then push the tops slightly toward the rear of the tray. Also, see **PRODUCT PUSHER USAGE** on page 64.

Thin Packages Position the package upright. Also, see SPIRAL WALL RETAINER USAGE on

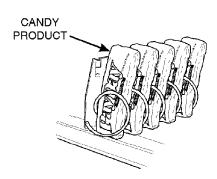
page 64.

KitKat The two right-most columns of the candy tray are designed to accept the KitKat

candy bar.



CORRECT LOADING OF SNACKS



CORRECT LOADING OF CANDY

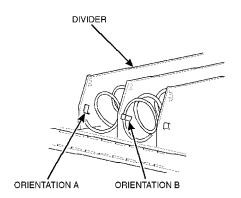
3. Load Trays With Product (continued)

SPIRAL WALL RETAINER USAGE:

A spiral wall retainer serves to compress the spiral and make it act like a spring to more forcefully eject a product. Do some test vends and use a spiral wall retainer when a product does not readily leave the spiral.

- Use a spiral wall retainer in the following cases:
 - The spiral has a capacity of 20, 25, 30, or 38.
 - The product is thin.
 - The product is on a candy tray.
- The spiral wall retainer can also be used with other spirals and types of products.
- The spiral wall retainer is installed near the front of the column divider.
- There are two ways to install the spiral wall retainer.

	RETAINER ORIENTATION		
	A B		
COLUMN DIVIDER BETWEEN THESE	0 and 1	1 and 2	
	2 and 3	3 and 4	
	4 and 5	5 and 6	
	6 and 7	7 and 8	
POSITIONS	8 and 9		



SPIRAL

WALL

RETAINER

- To install a spiral wall retainer, insert the retainer in the square slot near the front of the column divider.
- The spiral wall retainer must be removed in two cases:
 - A Kit-Kat bar loaded into either of the two right hand positions of a tray will not clear the retainer on the column divider between the two positions.
 - A product pusher will catch on a retainer in ORIENTATION A.

PRODUCT PUSHER USAGE:

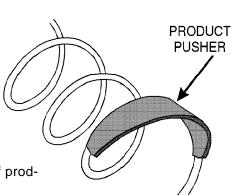
The product pusher will give the top of a product an extra tilt to help it fall into the delivery pan.

Use a product pusher in the following cases:

- The spiral has a capacity of 15, 13, or 11.
- The package is non-rigid like bagged peanuts

The product pusher can also be used with other spiral and types of products.

Product pushers are available from the Glasco parts department. To use a product pusher, snap it on the spiral as shown. You can adjust the product pusher by moving it around on the spiral to achieve the best vending results.



3. Loading a Tray With Product (continued)

PREPARING THE MERCHANDISER FOR VENDING "LUNCH BUCKET":

Because of the weight and shape of the package, Glasco recommends that this product be vended only from the bottom tray.

To vend this product, two adjacent positions must be coupled together.

See **INSTALLING A GEAR**, page 56, for mechanical coupling directions, or see the Programming Guide for electrical coupling directions.

The left spiral coupler should be installed one position counterclockwise from the vertical position.

The right spiral coupler should be installed one position clockwise from the vertical position.

ONE POSITION
COUNTERCLOCKWISE
FROM VERTICAL

ONE POSITION
CLOCKWISE
FROM VERTICAL

LEFT SPIRAL COUPLER

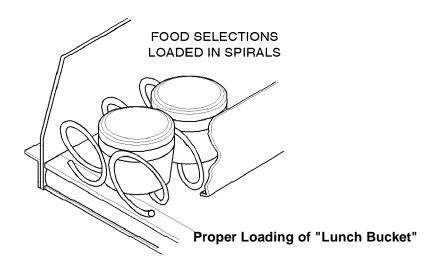
RIGHT SPIRAL COUPLER

AS VIEWED FROM FRONT OF TRAY

Replace the current spirals with six-count spirals. These are available from the Glasco parts department. See **REMOVING AND INSTALLING SPI-RALS**, page 53.

A pad can be installed in the bottom of the delivery pan to quiet and cushion product delivery. This part is available from the Glasco parts department.

Load "Lunch Bucket" products as shown.



PAGE64 Glasco ™

3. Loading a Tray With Product (continued)

PREPARING THE MERCHANDISER FOR VENDING "TOP SHELF":

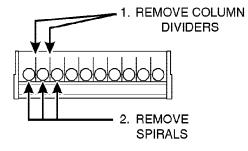
Glasco recommends that this product be vended from a candy tray.

Move the tray so the package can be loaded standing on its left or right edge. See **MOVING A TRAY UP OR DOWN**, page 59.

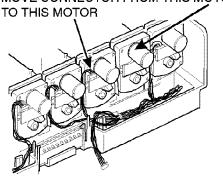
The following steps must be completed for three adjacent positions on the tray:

NOTE

The left-most position in the group of three must be an even numbered position.

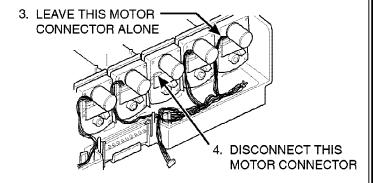


5. MOVE CONNECTOR FROM THIS MOTOR

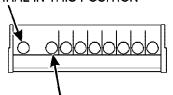


Couple the left motor to the right motor. See the Programming Section.

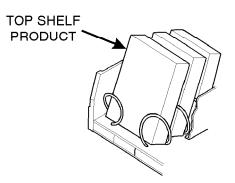
Load the "Top Shelf" products as shown.



6. INSTALL AN 11-COUNT LEFT HAND SPIRAL IN THIS POSITION



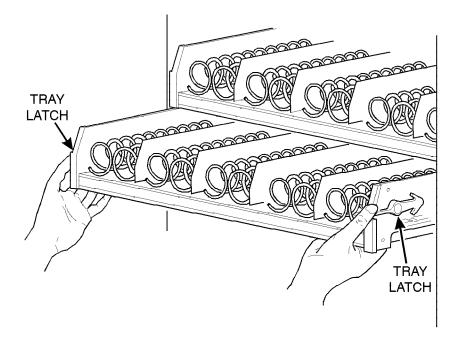
7. INSTALL AN 11-COUNT RIGHT-HAND SPIRAL IN THIS POSITION



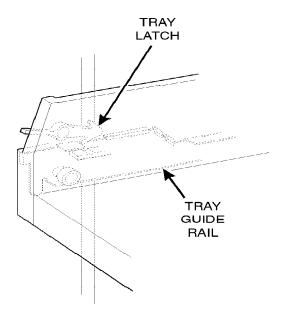
Correct Loading Of "Top Shelf".

4. Return the Trays to the Vending Position

1. Lift the tray until it is parallel to the floor as shown.



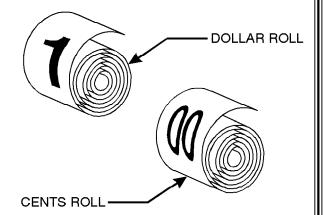
2. Push the tray toward the back of the cabinet. The tray latches on the sides of the tray will lock into position.



5. Install and Set Price Labels

- Price rolls are printed on coiled-up strips as shown. You will find these in the plastic bag that contained this manual.
- There are two types of price rolls:

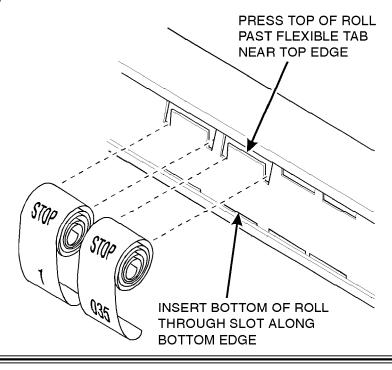
Dollar roll - 1 to 12, increments of 1 Cents roll - 00 to 95, increments of 05



INSTALLING PRICE LABELS:

There are three pairs of slots in the front of the tray for each column position.

- 1. Insert the dollar roll in the left-most pair of slots as shown if the price is \$1.00 or more.
- 2. Insert the cents roll in the center pair of slots as shown.
- The low-number end of the roll goes in the top slot and the high-number end of the roll goes in the bottom slot.



5. Install and Set Price Labels (continued)

Adjusting the price roll:

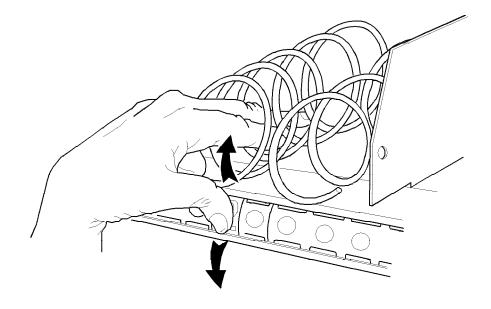
You can set selection prices within the following range:

Minimum price \$.00 Maximum price \$12.95 Increment \$.05

1. Use your thumb as shown to move each price roll up or down as needed to set the desired price.

NOTE

You will see the word STOP near either end of the roll.

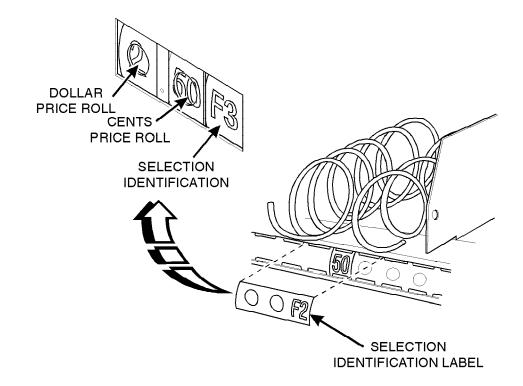


6. Install Selection ID Labels

Selection ID numbers are printed on clear plastic sheets. You will find these in the plastic bag that contained this manual. You will need to separate them along the scored lines between the selections. **BE CAREFUL** when doing this, because it is easy to split the labels.

INSTALLING SELECTION ID NUMBERS:

- 1. Press together the two long edges of the selection ID label.
- 2. Snap the selection ID label into position on the front of the tray as shown.



6. Install Selection ID Labels (continued)

WHICH ID LABEL GOES WITH WHICH SELECTION?

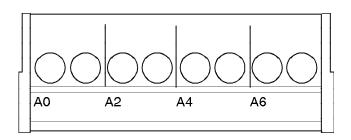
See the figures below for snack and candy tray positions.

TOP TRAY

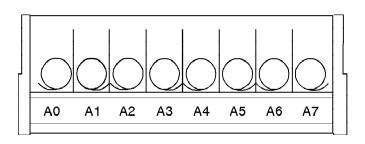
MOTOR POSITION								
TRAY A	A0	A1	A2	А3	A4	A5	A6	A7
TRAY B	В0	B1	B2	В3	B4	B5	B6	B7
TRAY C	C0	C1	C2	С3	C4	C5	C6	C7
TRAY D	D0	D1	D2	D3	D4	D5	D6	D7
TRAY E	E0	E1	E2	E3	E4	E5	E6	E7
TRAY F	F0	F1	F2	F3	F4	F5	F6	F7

FOOD SELECTION/CAN SELECTION/BOTTOM TRAY

EXAMPLE OF A BASIC SNACK TRAY ID LABEL TO USE



EXAMPLE OF A BASIC CANDY TRAY ID LABEL TO USE

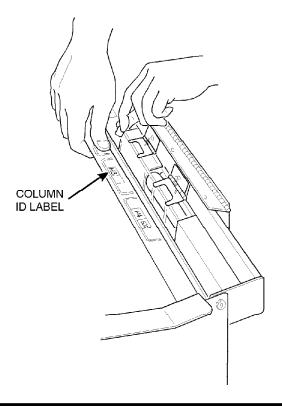


Set Up The Gum and Mint Unit

1. Install Price Labels

The column ID labels have already been attached to the delivery door, and a set of self-adhesive price labels are in the plastic bag that contained this manual.

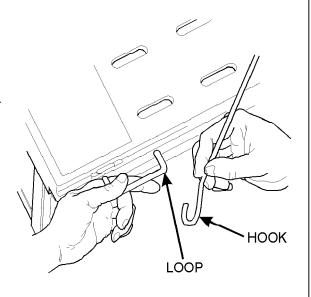
1. Stick the desired price label next to the column ID number as shown.



2. Put the Gum and Mint Dispenser in the Loading Positon

The gum and mint assembly is hinged to the delivery pan assembly and is held in the vending position by two magnets. The gum and mint assembly is held in the loading position by a hook and a loop. One end of the hook is attached to the right side of the door. The loop is mounted on the right side of the gum and mint assembly.

 Use the loop as a handle and raise the gum and mint magazine with your left hand. With your right hand, move the free end of the hook so it catches the loop. This will hold the magazine while you are loading it with product, as shown.



3. Load the Gum and Mint Dispenser With Product

 The gum and mint assembly lid is held closed by two magnets. Open the lid toward the inside of the merchandiser door.

WARNING

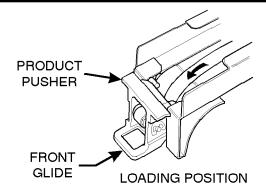
Keep your hand on the product pusher until it is locked in place. Failure to do so may result in personal injury or in damage to the dispenser.

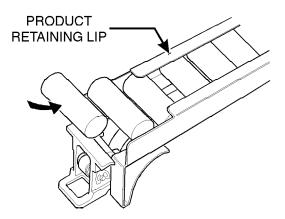
- 2. Move the product pusher into the loading position:
 - a. Pull back on the pusher.
 - b. Pull down on the pusher and lock the front glide into position.
- 3. Load the product:
 - a. Push the product forward.
 - b. Be sure the last item is completely under the product retaining lip.

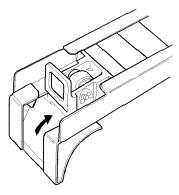
WARNING

Keep your hand on the product pusher until it comes to rest behind the last item in the column. Failure to do so may result in personal injury or in damage to the dispenser.

- 4. Move the product pusher into the dispensing position:
 - a. Pull the product pusher down to unlock the front glide.
 - Slide the product pusher toward the product.



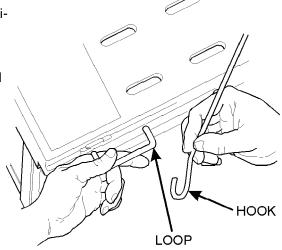




DISPENSING POSITION

4. Return the Gum and Mint Dispenser in the Vending Position

- 1. Make sure all product pushers are in the vending position.
- 2. Close the gum and mint assembly lid.
- 3. Hold the loop on the right side of the magazine with your left hand. Release the hook with your right hand and lower the magazine.
- 4. Continue to hold the loop until the magazine has been fully lowered.
- 5. Pivot the gum and mint assembly back to the vending position.



Removing and Installing Column Reducers

The two left-most vending columns (as seen from the loading side) can be adjusted for two different widths.

When a column reducer is in place, the width of the column will be 31/16 inches.

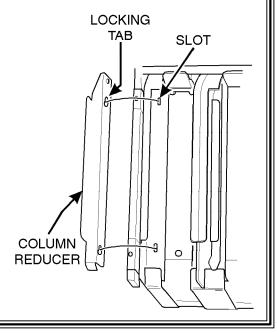
When a column reducer is removed, the width of the column will be 3⁷/₈ inches.

TO REMOVE A COLUMN REDUCER:

- 1. Pull the reducer away from the cabinet door to disengage the locking tabs.
- 2. Lift up to remove the reducer from the gum and mint assembly.

TO INSTALL A COLUMN REDUCER:

- 1. Place the reducer on the gum and mint dispenser so the locking tabs are in the slots.
- 2. Push the reducer toward the cabinet door to lock the reducer in place.



Final Installation

Move the merchandiser to its *final* position:

- You can position this merchandiser anywhere in a bank of machines. It can even be placed on an end flush against a side wall.
- Place the merchandiser at least six inches away from the back wall. This will provide adequate air circulation for the refrigeration unit.
- There should be enough room in front of the merchandiser for the door to move freely.

WARNING

This machine is only rated for installation in an indoor location.

1. Level the Merchandiser

- Place a spirit level on the top front edge of the cabinet with the door fully closed. Adjust the front legs only until the cabinet is reasonably level (figure 1).
- 2. Hold the door open about 4 inches. (This relieves any stress the door may be placing on the cabinet.)

WARNING

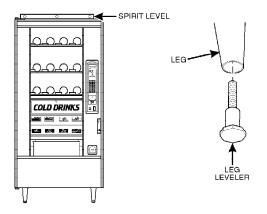
Have an assistant hold the merchandiser while you adjust the leg levelers.

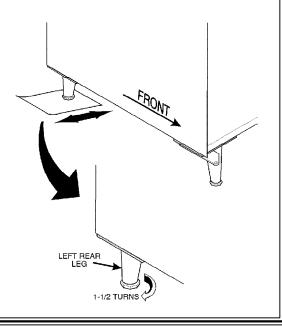
- 3. Adjust the back legs so that the back leg leveler on the hinge side is off the floor just enough so a piece of paper can slide under it with only a bit of resistance (figure 2).
- 4. For proper weight distribution on all four legs, raise the back leg on the hinge side by unscrewing the leveler 1½ turns.

NOTE

You may need to use pliers or channel locks to loosen the leg levelers.

A slight slope from front to back will improve the draining of condensate from merchandisers with refrigerating units. When the merchandiser is part of a bank of machines, level it in reference to the other machines. After leveling is complete, check that the door operates easily.



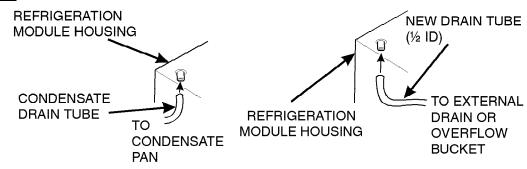


Refrigeration Module

Complete the setup of chilled snack features (if present):

A. Connect a Refrigeration Module to an External Drain (optional)

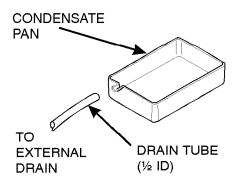
METHOD 1:



1. Remove the condensate drain tube from the refrigeration module.

- Connect a new drain tube to the refrigeration module housing.
- 3. Route the new tube to an external drain or to an overflow bucket.

METHOD 2:



- 1. Connect a drain tube to the condensate pan.
- 2. Route the drain tube to an external drain or to an overflow bucket.

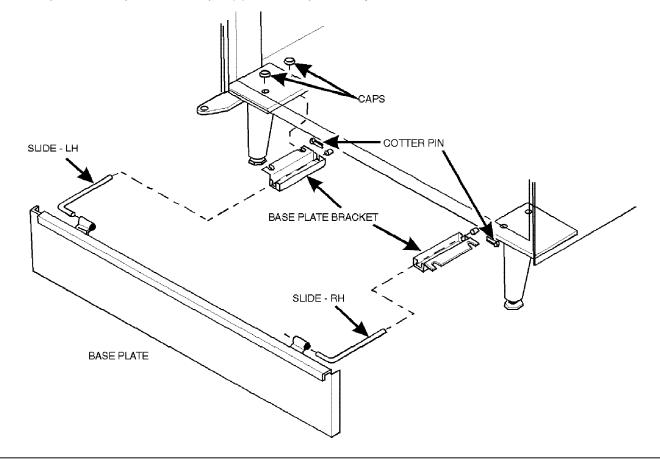
2. Install the Base Plate

Refer to the figure below while completing the following procedures:

WARNING

Do not move the cabinet while the hex head screws and/or carriage bolts are loosened. The cabinet would become unstable and likely to tip and cause injury.

- Remove the waste pail and the grounds pail from the merchandiser (refreshment center only).
- 2. Remove the floor liner from the merchandiser (refreshment center only).
- 3. Remove the two caps as shown.
- 4. Loosen the left leg assembly carriage bolts and nuts to allow mounting a base plate bracket.
- Secure one of the base plate brackets to the leg assembly using the two carriage bolts. Tighten the carriage bolts and nuts.
- 6. Loosen the right leg assembly hex screws to allow mounting the other base plate bracket.
- 7. Secure the other base plate bracket to the right leg assembly using the two hex head screws. Tighten the hex head screws.
- 8. Insert the short arms of the slides into the hinged tabs of the base plate. Position the slide so the notch near the short arm is on the bottom side.
- 9. Insert the long arms of the slides into the base plate brackets.
- 10. Insert and secure a cotter pin through the hole in the back of each of the slides.
- 11. Push the base plate toward the merchandiser cabinet. The front tabs of the base plate brackets should seat in the notches in the long arms of the slides.
- 12. Replace the caps, liner, and pail(s) removed previously.

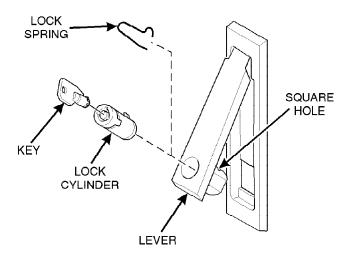


3. Install the Lock Cylinder

Install an optional lock cylinder in the merchandiser as follows:

- Position the lift handle lock lever as shown.
- 2. Depress the lock spring at the square hole of the lock cylinder receptacle and pull the lock springs out through the front.
- 3. Position the lock cylinder as shown. Depress the spring loaded lock pin.
- 4. Push the cylinder into the cylinder receptacle in the lever. The pin should snap into the square hole.
- 5. If the cylinder pin does not seat in the square hole, press against both ends of the lock cylinder. Rotate the cylinder until the pin snaps into place.
- 6. **Leaving the door open**, test the lock mechanism with a key.

Remove the cash box from the merchandiser.



4. Install the Optional Cash Box Lock

Assemble the lock as shown in the illustration to the right.
 Return the cash box to the merchandiser.

LOCK BAR
NUT
WASHER

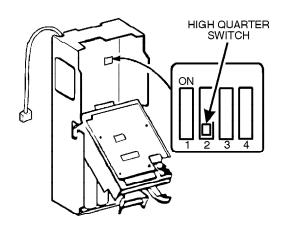
1.

5. Set Up the Coin Mechanism

If the changer is not a MARS TRC 6000, proceed to LOADING THE COIN MECHANISM.

If the changer is a MARS TRC 6000, you must set the high quarter switch.

SETTING THE QUARTER SWITCH:



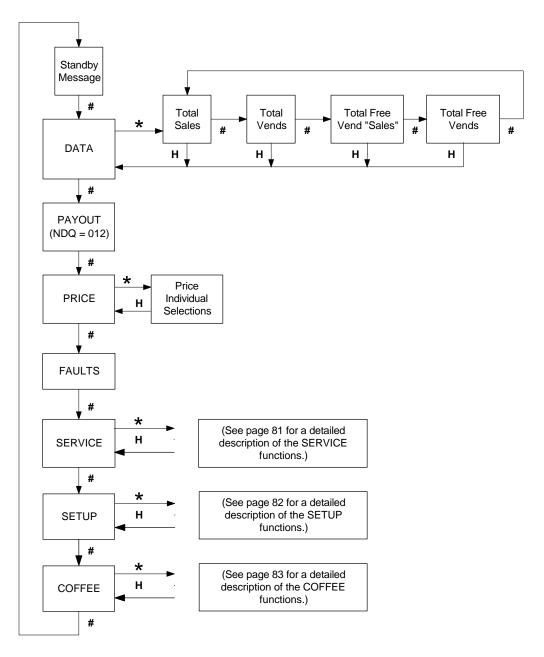
QUARTER SWITCH POSITION	ACTION
LOW	The coin mechanism will only store 6 quarters. The rest are sent to the coin box. Fewer quarters are available for change.
HIGH	The coin mechanism will store 69 quarters. More quarters are available for change.

6. Load the Coin Mechanism

- 1. Open the cabinet door.
- 2. Open the monetary door.
- 3. Insert coins one at a time until each of the coin tubes has been filled.
- 4. Inspect the tubes for shingled coins and correct if necessary.

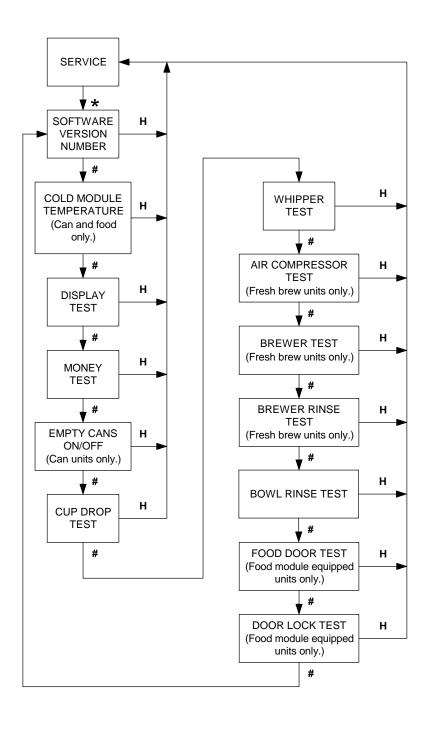
Programming

OVERALL PROGRAMMING FLOW CHART

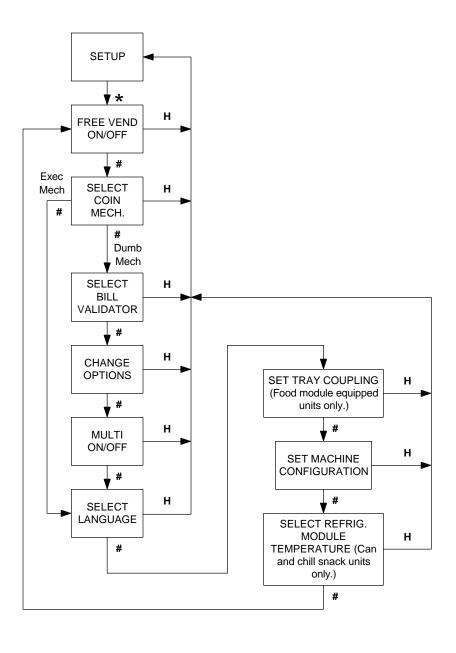


The diagrams on the next few pages are maps of the programming functions in your merchandiser. These functions will be described in greater detail in the text, but the diagrams will help you get around once you are familiar with how programming works. The symbols \mathbf{H} , $\mathbf{*}$, and $\mathbf{#}$ represent special keys that move you around inside the programming modes, and from one mode to another. As you can see on the diagram, these symbols show up in the pathways in and around the modes.

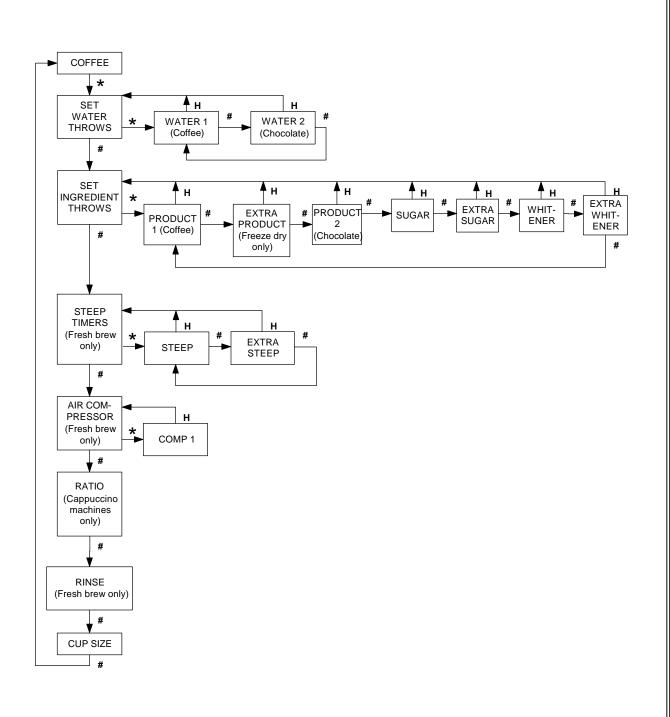
SERVICE PROGRAMMING FLOW CHART



SETUP PROGRAMMING FLOW CHART



COFFEE PROGRAMMING FLOW CHART



Glasco™

THE KEYPAD

During vending, customers use the keypad to make selections. When you pull the door switch to the ON position, the keypad becomes your programming input device. For reference, we will show the keypad on all the pages.

A 0 5 B 1 6 C 2 7 D 3 8 B 4 9 F * # G 1 0

DATA

View four types of data:

**\$ = Total Machine Sales

**CT = Total Machine Vends

**F\$ = Total Free Vend "Sales"

**FV = Total Free Vends

This data is nonresettable.

NOTE

At any time you can press **H** once to return to the **DATA** display. Press **H** again to return to the standby message.

- 1. Pull out the door switch button to the ON position.
- 2. Press # until the display shows **DATA**.
- 3. Press (X). The display shows ****\$** .XX. This is the dollar and cents amount of machine sales.
- 4. Press (#). The display shows ****CT XX**. This is the total count of all vends.
- 5. Press # .XX. This is the dollar and cents amount of free vend "sales".
- 6. Press (#). The display shows ****FV .XX**. This is the total count of free vends.
- 7. Press (#) to return to step 3, or **H** to exit.

PAY OUT

Pay out coins:

- 1. Pull out the door switch button to the ON position.
- 2. Press # until the display shows **N.D.Q. = 0.1.2**. This is telling you that pressing **0** pays out **N**ickels, pressing **1** pays out **D**imes, and pressing **2** pays out **Q**uarters.
- 3. Press the appropriate key once to pay out one coin.
- 4. Press and hold the appropriate key to pay out coins continuously.
- 5. Press **H** to return to the standby message.

PRICE

Set prices for all the selections in your merchandiser:

NOTE

Press \bigoplus once at any time to return to the **PRICE** display. Press \bigoplus again to return to the standby message.

METHOD A:

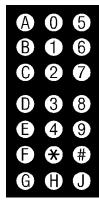
- 1. Pull out the door switch button to the ON position.
- 2. Press # until the display shows PRICE.
- 3. Press (x), and the display shows **A0 PR .XX**. "XX" is the price for the A0 selection.
- 4. Press (#) to step to the next selection.
- 5. Enter a new price with the number keys.
- 6. Price another selection or press \widehat{H} to exit.

METHOD B - Selections A through F:

- 1. Pull out the door switch button to the ON position.
- 2. Press (#) until the display shows **PRICE**.
- 3. Press (X).
- 4. Enter the letter/number of the selection you want to price.
- 5. Price another selection by repeating step 3, or press (H) to exit.

METHOD B - Selection H:

- 1. Pull out the door switch button to the ON position.
- 2. Press (#) until the display shows **PRICE**.
- 3. Press (X).
- 4. Press $\bigcirc G$ and $\bigcirc G$, then press $\bigcirc H$ to get to the first "H" selection.
- 5. Enter the price for the first "H" selection.
- 6. Press (#) to scroll through the "H" selections, or press (H) to exit.



FAULTS

Display all the <u>active</u> faults on your merchandiser:

NOTE

Press \widehat{H} once at any time to return to the standby message.

1. Pull out the door switch button to the ON position. If there is a fault on your machine, the display will immediately show the list of errors, one after another. Afterwards, the display shows

FAULT TST. Press (to see the fault list again.

2. Press (x) to see the list of faults (in a no-fault condition, the FAULT TST display remains)

NOTE: some faults are specific to certain machine configurations:

The coffee section is not responding to the controller

CPLERROR¹ An error with food module spiral coupling

FOODDOOR Food door has failed

HEALTHCTL The health control has been set

The water level in the tank is too low for vending

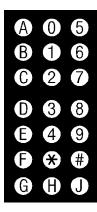
NOCUPS Cups are sold out

SERIALVAL An error in the bill validator (serial only)

TCERROR An error with the Tray/Column

TEVPFAULT An error exists in the food module refrigeration section

WASTEPAL The waste pail is full



¹ Couple errors can be cleared by following the procedure outlined in the SETUP mode.

SERVICE

View machine status and test certain functions:

NOTE

At any time press (H) once to return to the **SERVICE** display. Press

igoplus H again to return to the standby message.

- 1. Pull out the door switch button to the ON position.
- 2. Press (#) until the display shows **SERVICE**.
- 3. Press (X). The display shows the software version number.
- 4. Each time you press # the display shows a different test or indication as listed in the table below.

NOTE

Some tests may not appear due to machine configuration.

DISPLAY	DEFINITION	TESTS YOU CAN PERFORM
VER XXXX	Software version number.	None
F XXX	Temperature display.	None
DISPL TEST	Display test.	Press J to briefly light up all segments in the display.
MONEY 00	Tests if the coin mech and bill validator are working correctly.	Insert coins and bills into the merchandiser. The amount you inserted is displayed.
	Allows the last can in the can unit to be vended.	Press J to turn ON or OFF. When turned ON, press the selection number(s) to vend the last can(s).
CUP DROP	Tests the cup mechanism.	Press J to drop a cup.
WHIPPER	Tests the whipper motor.	Press J to run the whipper motor for one cycle.
AIR COMPR	Tests the air compressor.	Press J to operate the air compressor for one cycle.
BREWER	Tests the brewer.	Press J to open the brewer (if closed), or to close the brewer (if open).
REW RINS	Operates the brewer rinse system.	Press J to rinse the brewer.
OWL RINS	Operates the bowl rinse system.	Press J to rinse the bowls.
	Allows you to test the operation of the food door.	Press J to test the food door.
	Allows you to test the delivery door lock solenoid.	Press J to test the delivery door lock solenoid.

9. Press (#) to return to step 3, or (H) to exit.

Glasco™

A 0 5

Configure various machine functions:

NOTE

Press \bigoplus once at any time to return to the **SETUP** display. Press \bigoplus again to return to the standby message.

- 1. Pull out the door switch button to the ON position.
- 2. Press (#) until the display shows **SETUP**.
- 3. Press . The display shows either FREE ON or FREE OFF. When FREE ON is displayed, all selections are free. Press () to switch between ON and OFF.
- 4. Press # . The display shows either **DUMB MECH** or **EXEC MECH**. Press to switch between **DUMB MECH** and **EXEC MECH**. NOTE: **DUMB MECH** MUST be selected if you are using a MARS TRC-6000 or COINCO 9300 coin mech.

NOTE

If you selected **EXEC MECH**, skip to step 8. Otherwise, continue with step 5.

NOTE

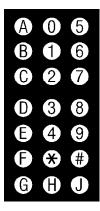
Some steps do not apply to all models covered in this manual.

- 5. Press # . The display shows either **SERIAL VAL** or **PULSE \$1**. Press to switch between SERIAL and PULSE bill validators.
- 6. Press # The display shows either CHANGE 125 or CHANGE OFF. 1, 2, and 5, represent which bill denomination(s) can be changed. Turn 1, 2, or 5 on or off by pressing the appropriate number key. When change is allowed, a customer may receive change for a bill without making

a vend. Press(\mathbf{J}) to switch between **CHANGE XXX** and **CHANGE OFF**.

- 7. Press # . The display shows either MULTI ON or MULTI OFF. When MULTI ON is displayed, a customer may purchase more than one item with a declining balance. Press to switch between ON and OFF.
- 8. Press (#). The display shows the currently selected language. Press

J to switch between ENGLISH, GERMAN, FRENCH, MEXICO, SPANISH, PORTUGUES, or BRAZIL



- 9. **FOOD MODULE EQUIPPED UNITS ONLY:** Press (#). The display shows SET COUPLE. This screen lets you couple and uncouple spirals.
 - a. Press (X). The display shows **CPLX 0246**. "X" is replaced by **D**, **E**, or **F**. Those are the only three trays which can have coupling. **0246** is one possible display. See the table below for a full explanation of coupling.
 - b. IF YOU HAVE DIFFICULTY: You can clear couple errors as follows:

At the display **CPLX 02468**, press (**J**). This will clear any coupling errors.

	AD	JACENT MOTOF	RS:
Enter the column ID for the left-most column of the pair to toggle between COUPLE and UNCOUPLE.	When this is displayed:	This pair is coupled:	The left-most column ID is shown for a COUPLED pair.
	0	0 and 1	
	2	2 and 3	
	4	4 and 5	
	NON-A	ADJACENT MOT	ORS:
DO THIS FIRST	When this is displayed:	This pair is coupled:	The left column of a COUPLED pair must have an even column ID.
Disconnect the tray harness from motors between motors to be COUPLED.	0.3	0 and 3	The right column of a COUPLED pair must have an odd column ID.
- OR -	0.5	0 and 5	
Reconnect the tray harness to the motors between motors to be UNCOUPLED.	2.5	2 and 5	<u>IMPORTANT</u>
THEN			It may be difficult or impossible to successfully retrieve a long product after it has been dispensed.
Enter the column ID for the left-most column of the pair to toggle between COUPLE and UNCOUPLE.			
FINAL NOTE: If this character is displa	ayed: \ <u> </u> <u>/ \ </u>	The right-most motor)	column selection is missing. (Possible disconnecte

PAGE88 Glasco™

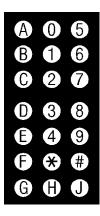
10. Press . The display shows **CNFIG X Y Z**. Set X Y and Z as indicated in the following tables:

First Digit - X			
0	No coffee		
1	Fresh brew coffee and chocolate		
2	Fresh brew coffee with espresso and chocolate		
3	Fresh brew coffee with cappuccino, espresso, and chocolate		
4	Freeze dry coffee and chocolate		
5	Freeze dry coffee with espresso and chocolate		
6	Freeze dry coffee with cappuccino, espresso, and chocolate		

		Second Digit - Y
(0	Gum and mint unit not present
1	1	Gum and mint unit present

	Third Digit - Z			
0	Snacks only			
1	Can unit present			
2	Chilled snacks			
3	Food unit present			

- 11. CAN MODULE EQUIPPED UNITS ONLY: Press (#). The display shows
 - **C----- W**. "C" is $\underline{\mathbf{C}}$ old, and "W" is $\underline{\mathbf{W}}$ arm. The more dashes between W and C, the warmer the refrigeration module temperature. To make the temperature warmer, keep pressing $\underbrace{\times}$. The dashes fill in the display from left to right. When the display is full of dashes, the next time you press $\underbrace{\times}$, they all disappear, which represents the coldest temperature.
- 12. Press (#) to return to step 3, or (H) to exit.



COFFEE

Configure the coffee section:

NOTE

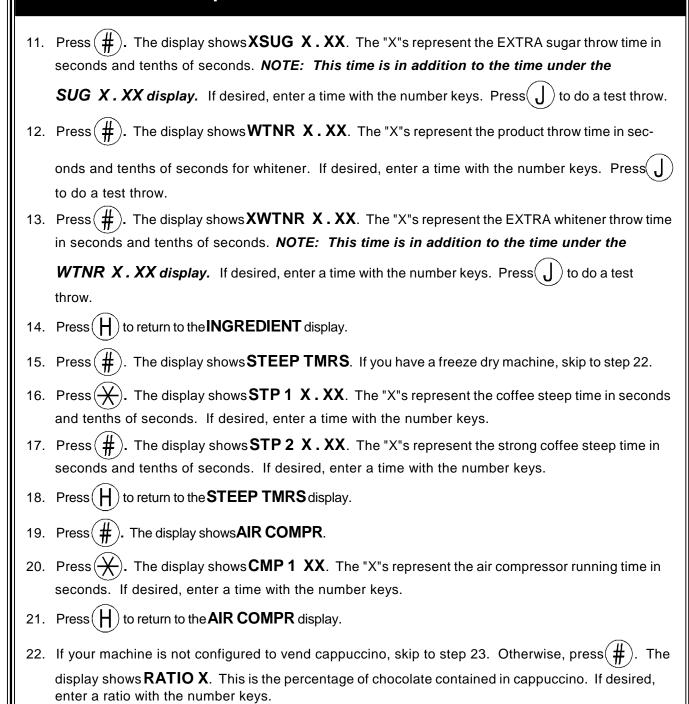
 $\mathsf{Press}\left(\overline{H}\right)$ once at any time to return to the $\mbox{\bf COFFEE}$ display. Press

(H) again to return to the standby message.

- 1. Pull out the door switch button to the ON position.
- 2. Press # until the display shows COFFEE.
- 3. Press (Y). The display shows **WATER**.
- 4. Press (X). The display shows WTR 1 X . XX. The "X"s represent the water throw time in seconds and tenths of seconds for coffee. Press (J) to do a test throw.
- 5. Press #. The display shows WTR 2 X . XX. The "X"s represent the water throw time in seconds and tenths of seconds for chocolate. Press 1 to do a test throw.
- 6. Press (H) to return to the **WATER** display.
- 7. Press #). The display shows INGREDIENT.
- 8. Press . The display shows **PROD 1 X . XX**. The "X"s represent the product throw time in seconds and tenths of seconds for coffee. If desired, enter a time with the number keys. Press to do a test throw.
- 9. Press #. The display shows **PROD 2 X . XX**. The "X"s represent the product throw time in seconds and tenths of seconds for chocolate. If desired, enter a time with the number keys.

 Press J to do a test throw.
- 10. Press #. The display shows **SUG X.XX**. The "X"s represent the product throw time in seconds and tenths of seconds for sugar. If desired, enter a time with the number keys. Press to do a test throw.

Glasco™



23. If you have a fresh brew machine, skip to step 24. Otherwise, press(#). The display shows

RINSE X. "X" is the length of time after a vend that the brewer is rinsed, expressed in hours. The machine will automatically rinse the water system after this time has elapsed. If desired, enter a

Glasco™

time with the number keys.

24. Press # The display shows **X OZ CUP**. "X" is the cup size currently selected. Press to switch between available cup sizes. If you change cup size, perform the procedure below.

CAUTION

Proceeding with the following procedure will cancel any custom throw times previously entered. Only do this if you have changed cup sizes.

After changing cup sizes, press (X). The display shows **PRESET TIME**

USED. All previously entered throw times are overwritten with the factory default times. If you want to customize your throw times, perform the appropriate steps give above.

25. Press (#) to return to step 3, or (H) to exit.

SPECIAL INSTRUCTIONS TO PRINT AND RESET DATA

I. UNLOCK PRINTER FUNCTION AND SPECIAL COUNTERS:

- 1. Pull out the door switch button to the ON position.
- 2. Press (#) until the display shows DATA.
- 4. Press and hold . While holding, press #. The printer function and special counters are now unlocked.

II. PRINT DATA:

- 1. Press (H) until the standby message is displayed.
- 2. Connect your printer.
- 3. Press # until the display shows PRITTR X000.
- 4. Enter the printer baud rate with the number keys (example: PRNTR 9600).
- 5. To print, press (J). Data is printed.

TO RESET THE SPECIAL COUNTERS:

- 1. Pull out the door switch button to the ON position.
- 2. Press # until the display shows DATA.
- 3. Press (**), then press (**) until the display shows a resettable counter.
- 4. When on any resettable counter in the DATA function, press J four times. All data in the resettable counters is cleared.