Snack Center 1
147/148
MECHANICAL SET-UP, OPERATION and MAINTENANCE MANUAL

CRANE-NATIONAL VENDORS
12955 ENTERPRISE WAY
BRIDGETON, MO 63044
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</tbody>
</table>

**NOTE**

The instructions for installing and operating this merchandiser are contained in the following manuals:

- Mechanical Set-Up, Operation and Maintenance Manual
- Programming Guide
The information in this part of the manual has been provided to help you install the merchandiser on location.

INSTALLATION OF THE MERCHANDISER

I-1 Location and Identification of Major Assemblies
I-2 Electrical Requirements
I-3 Moving Merchandiser Through A Narrow Doorway
I-4 Positioning and Leveling the Merchandiser
I-5 Installing the Optional Base Plate
I-6 Turning the Merchandiser ON and OFF
ELECTRICAL SERVICE

* Power Outlet Requirements
  - 120 volts; not less than 110 volts at peak usage time
  - 60 Hz
  - Single phase
  - 3 amp
  - 3-pin, grounded type outlet

NOTE

THE WARRANTY ON THIS MERCHANDISER
IS NULL AND VOID WHEN THE ELECTRICAL
REQUIREMENTS LISTED ABOVE ARE NOT MET.

* 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 1.5-2.0 volts ac
    could result in noise problems
    for the electronic circuitry.
This merchandiser can be moved through an opening as narrow as 30 inches by removing the Cabinet Extensions.

**REMOVING THE TOP EXTENSION** (Figure -A)

* Remove the two screws that secure each end of the extension to the sides of the cabinet.

* Model 147 - Remove the other five screws that secure the extension to the cabinet.

Model 148 - Remove the other four screws that secure the extension to the cabinet.

* Pull extension forward to remove it from the merchandiser.

**REMOVING THE DOOR CHECK** (Figure -B)

* Remove the nut and bolt that secure the Door Check to the Door Check Plate.

* Pull the Door Check fully forward, lift upward and pull the short end of the Check from the Door Check Plate and Spring Assembly.

**REMOVING THE BOTTOM EXTENSION** (Figure -C)

* Remove the two screws that secure each end of the extension to the sides of the cabinet.

* Model 147 - Remove the other five screws that secure the extension to the bottom of the cabinet.

Model 148 - Remove the other four screws that secure the extension to the bottom of the cabinet.

* Pull the extension forward and remove it from the cabinet.
TAKING THE MERCHANDISER THROUGH THE OPENING

* Open the Cabinet Door and place it square with the left side of the Cabinet.

* Carefully walk the merchandiser through the opening.

DO YOU HAVE AN OPTIONAL BASE PLATE?

YES  INSTALL THE BASE PLATE

NO  CONTINUE

REASSEMBLE THE MERCHANDISER

* Replace the Upper Extension.

* Replace the Lower Extension.

* Replace the Door Check.
POSITIONING THE MERCHANDISER

* You can position this merchandiser anywhere in a bank of machines. It can even be placed on an end flush against a side wall.

* To prevent damage to the power cord, the merchandiser should be located at least 1 inch away from the back wall.

* There should be enough room in front of the merchandiser for the door to move freely. Model 147 requires 39 inches and Model 148 requires 32 inches.

WARNING

This machine is only rated for use in indoor locations.

LEVELING THE MERCHANDISER

IMPORTANT

A level merchandiser is less likely to tip over and cause a personal injury.

* Level the merchandiser from right to left and from front to back. Use a spirit level while leveling the merchandiser. See Figure .A.

* If this merchandiser will be part of a group of machines, it should also be leveled in reference to the other machines.

CAUTION

Have an assistant hold the merchandiser while you adjust the levelers. If the cabinet tips, you may be injured or the merchandiser may be damaged.

* If the merchandiser is not level, move the Leg Levelers in or put to make it level. See Figure .B.

* You may need to use pliers or channel locks to loosen the leg leveler.
**Mounting the Extension & Support Assembly and the Base Plate Brackets**

* The pair of mounting holes furthest to the right side should be used when mounting the Extension & Support Assembly. Use two of the self-tapping hex head screws to secure the assembly to the cabinet extension.

* Use two of the hex head screws to secure a Base Plate Bracket Spacer and a Base Plate Bracket at each of the remaining pairs of holes.
MOUNTING THE BASE PLATE AND SLIDES

* 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.

* Insert the long arms of the slides into the base plate brackets.

* Insert and secure a cotter pin through the hole in the back end of each of the slides.

* Push the base plate toward the merchandiser cabinet. The front tab of the base plate bracket should seat in the notch in the long arm of the slide.
* Power to the merchandiser is controlled by the Main Power Switch. It is located on the Power Panel.

* The Power Panel is on the right side of the merchandiser, behind the monetary door.

**WARNING**

You should unplug the merchandiser whenever you do one of the following:

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

**NOTE**

The Tray List feature (P4-9) is set at the factory to list the trays that were installed at the time of shipping. If any trays are not locked in place and do not make good electrical contact, the display will alternate between:

**ID TRAY - UNLATCHED**

when the door is closed. You will hear a beeping sound. This condition will continue for one minute. The normal stand-by message will return to the display at the end of this period of time. You may disable this feature by using procedure P4-9 to remove all trays from the list.
The information in this part of the manual has been provided to help you prepare the merchandiser for vending.

MECHANICAL SET-UP PROCEDURES

COIN MECHANISM SET-UP

TRAY SET-UP

S-1 Placing Tray In Loading Position
S-2 Adjusting Tray To Accommodate Wider Products
S-3 Removing A Tray From the Merchandiser
S-4 Removing A Column Divider
S-5 Changing A Spiral
S-6 Removing A Spiral Coupler
S-7 Installing A Spiral Bearing
S-8 Installing A Gear
S-9 Installing A Spiral Coupler
S-10 Returning A Tray To the Merchandiser
S-11 Disconnecting and Connecting A Motor Harness
S-12 Installing A Spiral Motor
S-13 Adjusting Merchandiser To Vend Taller Products
S-14 Installing, Adjusting and Removing Product Spacers
S-15 Loading A Tray With Product
S-16 Returning A Tray To the Vending Position
S-17 Installing and Adjusting Price Labels
S-18 Installing Selection ID Labels

GUM & MINT DISPENSER SET-UP

S-30 Putting Gum & Mint Dispenser In Loading Position
S-31 Removing and Installing Column Reducers
S-32 Loading Gum & Mint Dispenser With Product
S-33 Returning Gum & Mint Dispenser To Vending Position
S-34 Attaching Product Price Labels
* 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**

<table>
<thead>
<tr>
<th>QUARTER SWITCH POSITION</th>
<th>ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOW</td>
<td>Will accept only one $1.00 bill.</td>
</tr>
<tr>
<td>HIGH</td>
<td>Will accept $1.00 bills equal in value to first whole dollar above highest vend price.</td>
</tr>
</tbody>
</table>

**LOADING THE COIN MECHANISM**

* Open the Cabinet Door.

* Open the Monetary Door.

* Insert coins one at a time until each of the coin tubes has been filled.

* Inspect the tubes for shingled coins and correct if necessary.
MECHANICAL SET-UP OF TRAYS

S-1

PULL TRAY FORWARD FOR UNLOADING

IS COLUMN WIDE ENOUGH FOR PRODUCT

NO

SET UP TRAY FOR WIDER PRODUCT

YES

WILL PRODUCT FIT BETWEEN SPIRAL TURNS

NO

CHANGE THE SPIRAL

YES

WILL PRODUCT PASS UNDER TRAY ABOVE

NO

REPOSITION THE TRAY AND GUIDES

YES

WILL PRODUCT TOUCH THOSE ON EITHER SIDE

NO

INSTALL A PRODUCT SPACER

LOAD THE PRODUCT

RETURN TRAY TO VENDING POSITION

SET PRICE LABELS FOR SELECTIONS

INSTALL SELECTION ID NUMBERS

CONTINUE

S-5

S-13

S-14

S-16

S-17

S-18
* Place both hands on the Tray as shown in Figure S-1a.
* Lightly push back on the Tray with your palms. This will release the Tray Catches on the sides of the Tray.
* Push down on the Tray Catches with your thumbs.
* Pull the Tray forward until you hear and feel the rear rollers of the Tray drop into a cut-out in the top of the Guide Rail.
* Continue pulling the Tray forward for another inch. You will then be able to tilt the Tray downward into the loading position as shown in Figure S-1b.

**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.
CANDY TRAY
SET-UP FOR WIDER PRODUCTS

REMOVE TRAY FROM THE MERCHANDISER

REMOVE COLUMN DIVIDERS INSIDE THE GROUP

REMOVE ALL BUT THE LEFT MOST SPIRAL IN GROUP

HOW MANY POSITIONS WIDE IS THE GROUP

REPLACE THE INNER MOTORS WITH SPIRAL BEARINGS

REPLACE THE RIGHT MOST SPIRAL BEARING WITH A MOTOR

INSTALL A SPIRAL IN THE RIGHT MOST POSITION IN GROUP

RETURN TRAY TO THE MERCHANDISER

CONTINUE

S-3

S-4

S-5

S-7

S-12

S-5

S-10

NOTE

The left-most position of a coupled group must be position 0 or an even numbered position.
* Push back on the tray slightly with your palms. This releases the tray catches.

* Push down on the tray catches with your thumbs.

* Pull the tray forward until you hear and feel the back rollers of the tray drop into the cut-out in the top of the guide rail. See Figure S-3a.

![Figure S-3a](image)

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

* The tab near the back of the tray should align with the cut-out in the top of the guide rail. See Figure S-3b.

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

**NOTE**

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

![Figure S-3b](image)
* Push the Column Divider toward the back of the Tray. See Figure S-4a.

![Figure S-4a](image)

* Lift the Column Divider clear of the Tray. See Figure S-4b.

![Figure S-4b](image)
* All spirals are the same diameter.

* There are two types of spirals:

  **COUNTER-CLOCKWISE**

  ![COUNTER-CLOCKWISE Diagram](image)

  **CLOCKWISE**

  ![CLOCKWISE Diagram](image)

* Spirals are available in seven different capacities. Four of these are standard and three are options.

<table>
<thead>
<tr>
<th>ITEM CAPACITY OF SPIRAL</th>
<th>PART NUMBER CLOCKWISE (RH)</th>
<th>PART NUMBER COUNTERCLOCKWISE (LH)</th>
</tr>
</thead>
<tbody>
<tr>
<td>11 (Standard)</td>
<td>1477027</td>
<td>1477024</td>
</tr>
<tr>
<td>13 (Standard)</td>
<td>1477033</td>
<td>1477030</td>
</tr>
<tr>
<td>15 (Standard)</td>
<td>1477039</td>
<td>1477036</td>
</tr>
<tr>
<td>20 (Standard)</td>
<td>1477045</td>
<td>1477042</td>
</tr>
<tr>
<td>25 (Optional)</td>
<td>1477051</td>
<td>1477048</td>
</tr>
<tr>
<td>30 (Optional)</td>
<td>1477057</td>
<td>1477054</td>
</tr>
<tr>
<td>38 (Optional)</td>
<td>1477063</td>
<td>1477060</td>
</tr>
</tbody>
</table>
TO REMOVE A SPIRAL

* Pull forward on the retaining clip and remove the end of the spiral from the spiral coupler.

* Remove the spiral from the tray.

TO INSTALL A SPIRAL

* Pull the bottom of the retaining clip toward the front of the spiral.

* Lower the spiral into the tray column and insert the end of the spiral into the spiral coupler.

* Release the retaining clip.

SHOULD I USE A CLOCKWISE OR A COUNTERCLOCKWISE SPIRAL?

* The type of spiral used is determined by the column position it will occupy in the tray.

* Refer to Figure S-5a and Table S-5a to find the correct spiral type.

<table>
<thead>
<tr>
<th>SPIRAL TYPE</th>
<th>COLUMN POSITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLOCKWISE (RH)</td>
<td>A1 A3 A5 A7 A9</td>
</tr>
<tr>
<td>COUNTERCLOCKWISE (LH)</td>
<td>A0 A2 A4 A6 A8</td>
</tr>
</tbody>
</table>

Table S-5a

Figure S-5a
REMOVING A SPIRAL COUPLER

* Pinch together the prongs on the end of the Spiral Coupler.

* Pull the Coupler forward.

Figure S-6a
REMOVING A MOTOR

* Disconnect the Harness from the Motor. See S-11

* Remove the Spiral. See S-5

* Remove the Spiral Coupler. See S-6

* Lift the Motor clear of the Tray Assembly.

INSTALLING A SPIRAL BEARING (See Figure S-7a)

* Put Gear in position if required in this set-up. See S-8

* Install the Spiral Coupler. See S-9

Figure S-7a
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? (See Figures S-8a and S-8b)

* There are two possible orientations for the Gear.

<table>
<thead>
<tr>
<th>ORIENTATION 1</th>
<th>ORIENTATION 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Figure S-8a" /></td>
<td><img src="image2" alt="Figure S-8b" /></td>
</tr>
</tbody>
</table>

* 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

* Place Gear in position if one is required for this set-up. See S-8

* When used with a motor - See Figure S-9a

* Hold Motor in place and push Spiral Coupler through the Motor Gear Box until it locks into position.

Figure S-9a

* When used with a coupler bearing - See Figure S-9b

* Hold the Coupler Bearing in place and push the Spiral Coupler through the Bearing until the Coupler locks into position.

Figure S-9b
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.
* Complete the following procedure when installing a tray:

1. Insert the tray so that the tray rollers pass over the tray-guide rollers.

   ![Diagram of tray being inserted](image)

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

   ![Diagram of tray roller resting](image)

3. Tilt the tray upward.

   ![Diagram of tray tilted](image)

4. 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.

   ![Diagram of tray being held](image)

5. Lower the tray until it rests on the tray-guide roller. Push the tray in all the way.

   ![Diagram of tray being pushed in](image)

6. The tray retaining clip will fall into the locking position.

   ![Diagram of tray retaining clip](image)
NOTE

Hold the header on the Motor Circuit Board whenever connecting or disconnecting a Motor Harness. This will help prevent breakage of the Circuit Board.

DISCONNECTING A MOTOR HARNESS

* Pull the harness connector away from the circuit board.

* 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 tray position of interest.

* Push the harness connector over the header pins on the Motor Circuit Board.
Removing a Spiral Motor

* Place the Tray in the loading position. See S-1
* Disconnect the Motor Harness. See S-11
* Remove the Spiral. See S-5
* Remove the Spiral Coupler. See S-6
* Lift the Motor clear of the Tray.

Installing a Spiral Motor (See Figure S-12a)

* Place the Tray in the loading position. See S-1
* Place the Motor in the correct position at the rear of the Tray.
* Place a Gear in position if required by this set-up. See S-8
* Install a Spiral Coupler. See S-9

NOTE

The Spiral Coupler holds the motor in place.

Figure S-12a

* Connect the Motor Harness. See S-11
* This merchandiser can be adjusted to vend taller products.

* When you increase the product height for one tray, you will be decreasing the product height available for the tray below, the tray above or sometimes for both of these trays.

* The Trays can be relocated as follows:

<table>
<thead>
<tr>
<th>6-TRAY CONFIGURATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRAY</td>
</tr>
<tr>
<td>POSSIBLE POSITIONS</td>
</tr>
</tbody>
</table>

* When relocating Trays, the following rules apply:

<table>
<thead>
<tr>
<th>NEW POSITION OF TRAY BEING MOVED</th>
<th>ALLOWABLE POSITIONS FOR TRAY ABOVE</th>
<th>ALLOWABLE POSITIONS FOR TRAY BELOW</th>
</tr>
</thead>
<tbody>
<tr>
<td>UPPER</td>
<td>MIDDLE</td>
<td>UPPER</td>
</tr>
<tr>
<td>MIDDLE</td>
<td>UPPER</td>
<td>MIDDLE</td>
</tr>
<tr>
<td>LOWER</td>
<td>UPPER</td>
<td>MIDDLE</td>
</tr>
<tr>
<td>LOWER</td>
<td>MIDDLE</td>
<td>LOWER</td>
</tr>
</tbody>
</table>
* The slot number used in the Tray-Guide Mounting Channels will be the same as the slot number used in the Receptacle Mounting Channel.
TO RELOCATE A TRAY

1. Remove the Tray from the merchandiser. See S-3

2. Remove the screw that secures the Left Tray-Guide to the Front Guide-Mounting Channel. See Figure S-13a.

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. See Figure S-13b.

7. Tap down on the Guide Rail to seat the tabs in the Channel slots.

8. Replace the screw that secures the Guide Rail to the Front Guide-Mounting Channel. See Figure S-13a.


10. Disconnect the Harness from the Receptacle Block. See Figure S-13a.

11. Press the blade of a slotted head screw driver between one of the Receptacle Block locking tabs and the Receptacle Mounting Channel. See Figure S-13c. 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 tabs of the Receptacle Block into the slots in the Channel.
15. Reconnect the Harness to the Receptacle Block.
16. Return the Tray to the Merchandiser. See S-10

Figure S-13b

Figure S-13c
INSTALLING A PRODUCT SPACER

Insert the mounting pins of the Product Spacer into the Column Divider. See Figure S-14a.

ADJUSTING A PRODUCT SPACER

With product loaded in Tray, rotate the Product Spacer up or down to keep the product upright. See Figure S-14b.

 REMOVING A PRODUCT SPACER

Pull the mounting pins of the Product Spacer from the Column Divider. See Figure S-14c.
* Place Tray in the loading position. See S-1

* Begin loading products at the front of the Tray and work to the back.

* Position the product so the package rests on the tray.

![Correct Loading of Snacks](image)

![Correct Loading of Candy](image)

**NOTE**

Be sure there are no empty positions between products in each Spiral.

* DO NOT force the product into the Spiral.

* If the product is too tight or too loose, change the spiral size. See S-12

**SPECIAL CONSIDERATIONS**

Bagged Products - position package upright, then push tops slightly toward the rear of the Tray

Thin Packages - position package upright

KitKat - the two right most candy columns are designed to accept the KitKat candy bar
WHEN THE TRAY IS IN THE LOADING POSITION:

* Lift the Tray until it is parallel to the floor. See Figure S-16a.

![Figure S-16a](image)

* Push the Tray toward the back of the cabinet.
  - The connector on the back of the Tray mates with the Receptacle Block
  - The retaining clips on the sides of the Tray lock into position.

![Figure S-16b](image)
Price labels are printed on coiled-up rolls. You will find these in the plastic bag that contained this manual. See Figure S-17a.

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.

* Insert the dollar roll in the left-most pair of slots if the price is $1.00 or more. See Figure S-17b.

* Insert the cents roll in the center pair of slots. See Figure S-17b.

* 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.
ADJUSTING THE PRICE LABELS

* You can set selection prices within the following range:

  Minimum Price $ .00
  Maximum Price $12.95
  Increment $ .05

* Use your thumb to move each price roll up or down as needed to set the desired price. See Figure S-17c.

NOTE

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

Figure S-17c
Selection ID Numbers are printed on clear plastic labels. You will find these in the plastic bag that contained this manual. See Figure S-18a.

**INSTALLATION OF SELECTION ID NUMBERS**

* The price label should be installed first.

* Press the two long edges of the label together.

* Snap the label into position on the front of the Tray. See Figure S-18b.

**WHICH LABEL GOES WITH WHICH SELECTION?**

<table>
<thead>
<tr>
<th>MOTOR POSITION</th>
<th>TRAY A</th>
<th>A0</th>
<th>A1</th>
<th>A2</th>
<th>A3</th>
<th>A4</th>
<th>A5</th>
<th>A6</th>
<th>A7</th>
<th>A8</th>
<th>A9</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOP TRAY</td>
<td>TRAY A</td>
<td>A0</td>
<td>A1</td>
<td>A2</td>
<td>A3</td>
<td>A4</td>
<td>A5</td>
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<td>TRAY B</td>
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<td>TRAY F</td>
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<td>BOTTOM TRAY</td>
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EXAMPLE OF A BASIC SNACK TRAY

LABEL TO USE

EXAMPLE OF A BASIC CANDY TRAY

LABEL TO USE

EXAMPLE OF A COUPLED CANDY TRAY

* When motor positions have been coupled together, the SMALLEST EVEN-NUMBERED position within the group will be the selection ID Number that you should use for this selection.
MECHANICAL SET-UP OF GUM & MINT DISPENSER

PLACE GUM & MINT DISPENSER IN THE LOADING POSITION

REMOVE OR INSTALL COLUMN REDUCERS IN THE TWO LEFT COLUMNS AS NEEDED

LOAD THE GUM & MINT DISPENSER

RETURN GUM & MINT DISPENSER TO THE VENDING POSITION

ATTACH THE PRODUCT PRICE LABELS

CONTINUE
* The Gum & Mint Assembly is hinged to the Delivery Pan Assembly.

* The Gum & Mint Assembly is held in the vending position by two magnets.

* On version number 1, pivot the Gum & Mint Assembly upward until the support arms fall into the locked position. See Figure S-30a below.

* On version number 2, the Gum & 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 & Mint assembly. Use the loop as a handle and raise the Gum & Mint magazine with your left hand. Use your right hand to move the free end of the hook so it catches the loop. This will hold the magazine while you are loading it with product. See Figure S-30b below.

* The lid of the Gum & Mint assembly is held closed by two magnets.

* Pivot the lid up and back until it is a little past the vertical position.

* The Gum & Mint Assembly is now in the loading position

---

Figure S-30a  Version Number 1

Figure S-30b  Version Number 2
* 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 3-1/16 inches.

* When the column reducer is removed, the width of the column will be 3-7/8 inches.

**TO REMOVE A COLUMN REDUCER**

* Pull the reducer away from the cabinet door to disengage the locking tabs.

* Lift up to remove the reducer from the Gum & Mint Assembly.

**TO INSTALL A COLUMN REDUCER**

* Place the reducer on the Gum & Mint Dispenser so the locking tabs are in the slots.

* Push the reducer toward the cabinet door to lock the reducer in position.

Figure S-31a
* Complete the following steps when loading the Gum & Mint Dispenser:

**CAUTION**

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

1. Move the product pusher into the loading position.
   - Pull back on the pusher.
   - Pull down on pusher and lock the front glide into position.

2. Load the product.
   - Push product forward.
   - Be sure last item is completely under the product retaining lip.

**CAUTION**

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 damage to the dispenser, damaged product or personal injury.

3. Move the product pusher into the dispensing position.
   - Pull pusher down to unlock the front glide.
   - Guide the pusher toward the product.
* All product pushers should be in the vending position.

* Close the lid of the Gum & Mint Assembly.

* On version number 1, hold the assembly as shown in Figure S-33a. While your fingers are supporting the magazine assembly on the bottom side, press down on the support release tabs with your thumbs and lower the magazine back into the vending position.

**WARNING**

Your hands must be in the position shown in Figure S-33a. In addition, continue to hold the magazine assembly until it has been fully lowered. You may be injured if you do not follow this procedure.

* On version number 2, 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. Continue to hold the loop until the magazine has been fully lowered.

* Pivot the Gum & Mint Assembly back to the vending position.
* The column ID labels have already been attached to the rear delivery door.

* A set of self-adhesive price labels are in the plastic bag that contained this manual.

* Stick the desired price label next to the column ID number as shown in Figure S-34a.

* Peel the old price label off when you want to change the price for a selection.
The information in this part of the manual has been provided to help you determine if the merchandiser is ready to put into operation.

OPERATIONAL READINESS CHECKING PROCEDURES

RC-1 Anti Hang-Up Procedure Overview
RC-2 Indexing 1 Spiral Used With A Right Hand Motor
RC-3 Indexing 1 Spiral Used With A Left Hand Motor
RC-4 Indexing 2 Spirals Used With 1 Motor
RC-5 Indexing 2 Spirals Used With 2 Motors
RC-6 Installing A Product Pusher
RC-7 Installing and Removing A Spiral Wall Retainer
RC-8 Retrieving A Product Through the Delivery Door
RC-9 Testing the Bill Validator
COMPLETE THE OPERATIONAL READINESS CHECK
WHEN YOU ARE INSTALLING A NEW MERCHANDISER,
WHEN YOU CHANGE THE SET-UP OF A TRAY OR
AFTER YOU HAVE CHANGED A PART OF THE CONFIGURATION

TEST VEND A SELECTION SEVERAL TIMES

DOES PRODUCT CATCH ON THE TRAY AND FAIL TO VEND

YES

RC-1

NO

RETRIEVE VENDED PRODUCT THROUGH DELIVERY DOOR

RC-8

NO

HAVE YOU TEST VENDED ALL SELECTIONS

YES

TEST COIN MECHANISM OPERATION

SEE PROGRAMMING GUIDE FOR PROPER PROCEDURE

TEST BILL VALIDATOR OPERATION

RC-9

RETURN TEST VENDED PRODUCTS TO THEIR TRAYS

S-15

CONTINUE
ANTI HANG-UP PROCEDURES
FOR
FINE TUNING SPIRALS

INDEX THE SPIRALS

NUMBER OF SPIRALS FOR THE SELECTION

1 SPIRAL WITH RH MOTOR

RC-2

1 SPIRAL WITH LH MOTOR

RC-3

2 SPIRALS WITH 1 MOTOR

RC-4

2 SPIRALS WITH 2 MOTORS

RC-5

INSTALL AND/OR ADJUST PRODUCT SPACERS

S-14

INSTALL A PRODUCT PUSHER

RC-6

INSTALL AND/OR REMOVE SPIRAL WALL RETAINERS

RC-7

* Work with these procedures individually and in various combinations. If you are not able to eliminate a hang-up, contact National Vendors Service Department for help.
HOME THE MOTOR

* SEE PROGRAMMING GUIDE FOR PROPER PROCEDURE

REMOVE THE SPIRAL S-5

IS COUPLER IN THE BASE POSITION

NO

YES

MOVE COUPLER TO THE BASE POSITION S-6 and S-9

MOVE COUPLER TO NEXT CLOCKWISE POSITION S-6 and S-9

REPLACE THE SPIRAL S-5

TEST VEND A SELECTION

* SEE PROGRAMMING GUIDE FOR PROPER PROCEDURE

REMOVE THE SPIRAL S-5

NO

HAVE YOU MOVED ONE CLOCKWISE POSITION FROM BASE POSITION

YES

TRY ANOTHER ANTI HANG-UP PROCEDURE RC-1

NO

YES

DOES PRODUCT HANG-UP AT END OF VEND CYCLE

THE PROCEDURE IS COMPLETE
HOME THE MOTOR

* SEE PROGRAMMING GUIDE FOR PROPER PROCEDURE

REMOVE THE SPIRAL S-5

IS COUPLER IN THE BASE POSITION

NO

YES

MOVE COUPLER TO THE BASE POSITION S-6 and S-9

MOVE COUPLER TO NEXT COUNTERCLOCKWISE POSITION S-6 and S-9

REPLACE THE SPIRAL S-5

TEST VEND A SELECTION

* SEE PROGRAMMING GUIDE FOR PROPER PROCEDURE

REMOVE THE SPIRAL S-5

NO

HAVE YOU MOVED ONE COUNTERCLOCKWISE POSITION FROM THE BASE POSITION

YES

YES

TRY ANOTHER ANTI HANG-UP PROCEDURE RC-1

NO

THE PROCEDURE IS COMPLETE

YES

DOES PRODUCT HANG-UP AT END OF VEND CYCLE
HOME THE MOTOR

* SEE PROGRAMMING GUIDE FOR PROPER PROCEDURE

REMOVE LH SPIRAL S-5

IS LEFT SPIRAL COUPLER IN BASE POSITION
NO

YES

MOVE LEFT SPIRAL COUPLER TO NEXT COUNTERCLOCKWISE POSITION S-6 and S-9

MOVE LEFT SPIRAL COUPLER TO BASE POSITION S-6 and S-9

REPLACE LH SPIRAL S-5

REPLACE RH SPIRAL, SPIRAL COUPLER AND GEAR AS A UNIT S-6 and S-9

TURN THIS UNIT UNTIL RH SPIRAL MIRRORS POSITION OF LH SPIRAL

REPLACE RH SPIRAL, SPIRAL COUPLER AND GEAR S-6 and S-9

* SEE PROGRAMMING GUIDE FOR PROPER PROCEDURE

TEST VEND THE SELECTION P13-1

REMOVE THE LH SPIRAL S-5

NO

HAVE YOU MOVED ONE COUNTERCLOCKWISE POSITION FROM THE BASE POSITION

YES

YES

TRY ANOTHER ANTI HANG-UP PROCEDURE RC-1

NO

DOES PRODUCT HANG-UP AT END OF VEND CYCLE

THE PROCEDURE IS COMPLETE
HOME THE MOTOR  
* SEE PROGRAMMING GUIDE FOR PROPER PROCEDURE

REMOVE LH SPIRAL S-5

IS LEFT SPIRAL COUPLER IN BASE POSITION

YES

MOVE LEFT SPIRAL COUPLER TO NEXT COUNTERCLOCKWISE POSITION S-6 and S-9

NO

MOVE LEFT SPIRAL COUPLER TO BASE POSITION S-6 and S-9

REPLACE LH SPIRAL S-5

REMOVE THE RH SPIRAL AND SPIRAL COUPLER AS A UNIT S-6 and S-9

TURN THIS UNIT UNTIL RH SPIRAL MIRRORS POSITION OF LH SPIRAL

REPLACE RH SPIRAL and SPIRAL COUPLER AS A UNIT S-6 and S-9

* SEE PROGRAMMING GUIDE FOR PROPER PROCEDURE

TEST VEND THE SELECTION

NO

REMOVE THE LH SPIRAL S-5

HAVE YOU MOVED ONE COUNTERCLOCKWISE POSITION FROM THE BASE POSITION

YES

TRY ANOTHER ANTI HANG-UP PROCEDURE RC-1

NO

YES

DOES PRODUCT HANG-UP AT END OF VEND CYCLE

THE PROCEDURE IS COMPLETE
* A Product Pusher is normally used 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 spirals and types of products.

* A bag of Product Pushers has been shipped with the merchandiser. Additional product pushers are available from National Vendors Parts Department.

* Snap the Product Pusher on the Spiral as shown above.

* Test Vend the selection.

* If the product still hangs up, reposition the product pusher or try another anti hang-up procedure.
* A Spiral Wall Retainer is normally used 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.

<table>
<thead>
<tr>
<th>RETAINER ORIENTATION</th>
<th>A</th>
<th>B</th>
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<tbody>
<tr>
<td>COLUMN DIVIDER</td>
<td>0 and 1</td>
<td>1 and 2</td>
</tr>
<tr>
<td>BETWEEN THESE</td>
<td>2 and 3</td>
<td>3 and 4</td>
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<tr>
<td>POSITIONS</td>
<td>4 and 5</td>
<td>5 and 6</td>
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<td>6 and 7</td>
<td>7 and 8</td>
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<td>8 and 9</td>
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* 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.
* When a product is dispensed, it will fall into the delivery pan.

* Push inward on the delivery door with one hand and retrieve the product with your other hand.
IS VALIDATOR IN ESCROW MODE

YES

INSERT A $1 BILL IN VALIDATOR

PUSH COIN RETURN BUTTON TO GET MONEY BACK

You should receive four quarters in change.

INSERT A $1 BILL IN VALIDATOR

MAKE A SELECTION

The correct selection should be vended and correct change should be returned

CONTINUE

NO

INSERT A $1 BILL IN VALIDATOR

PUSH COIN RETURN BUTTON TO GET MONEY BACK

Money is not returned; you must make a selection to receive any change.

MAKE A SELECTION

The correct selection should be vended and correct change should be returned
The information in this part of the manual has been provided to help you maintain this merchandiser on a day-to-day basis.

ROUTINE MAINTENANCE AND SERVICE PROCEDURES

M-1 Removing and Replacing the 3/4 amp Fuse
M-2 Installing the Optional Cash Box Lock
M-3 Removal and Replacement of the Cash Box
M-4 Replacing the Fluorescent Lamp Starter
M-5 Replacing the Fluorescent Lamp
M-6 Installing the Optional Exhaust Fan
M-7 RESERVED FOR FUTURE USE
M-8 Lubrication
M-9 Cleaning the Merchandiser

Wiring Diagram - SNACK CENTER 1
Schematic Diagram - SNACK CENTER 1

A CLEAN AND WELL MAINTAINED MERCHANDISER IS THE MOST PROFITABLE MERCHANDISER
REMOVING AND REPLACING THE 3/4 AMP FUSE

* The 3/4 amp fuse is located on the power panel behind the monetary door.

**CAUTION**

*Turn the Main Power Switch to the OFF position before removing or replacing the fuse.*

REMOVING THE FUSE:

* Push in on the fuse-holder cap and turn counter-clockwise 90 degrees.
* Pull the fuse out of the holder and pull it out of the fuse-holder cap.

INSTALLING THE FUSE:

* Insert one end of the new fuse in the fuse-holder cap.
* Insert the other end of the fuse in the fuse holder.
* Align the tabs on the fuse-holder cap with the channels in the fuse holder, push in and turn clockwise 90 degrees.
* Turn the Main Power Switch to the ON position.
INSTALLING THE OPTIONAL CASH BOX LOCK

* Remove the cash box from the merchandiser.

* Assemble the lock as shown in the illustration to the right.

* Return the cash box to the merchandiser.
REMOVAL AND REPLACEMENT OF CASH BOX

* The cash box is located in the lower right-hand corner of the merchandiser near the front.

* If the cash box has a lock, you will need to unlock it first.

* Pull the cash box forward to remove it from the merchandiser.

* Reverse the procedure when replacing the cash box.

REPLACING THE FLUORESCENT LAMP STARTER

* The starter is mounted on the left end of the lamp assembly.

REMOVING THE STARTER

* Turn the starter counter-clockwise to unseat it from the socket.

INSTALLING THE STARTER

* Insert the starter and turn it clockwise to seat it in the socket.
REPLACING THE FLUORESCENT LAMP

* The fluorescent lamp is mounted on the inside of the cabinet door near the top.

REMOVING THE FLUORESCENT LAMP

* Hold the lamp as shown below and turn it to remove it from the lamp sockets.

![Image of lamp being removed](image)

WARNING

Exercise care when you remove or replace the lamp diffuser. Eye protection should be worn during this procedure.

* Carefully slide the lamp out of the diffuser.

INSTALLING THE FLUORESCENT LAMP

* The diffuser should be positioned on the lamp as shown in the illustration on the right.

* Carefully slide the fluorescent lamp into the diffuser as shown in the illustration below.

![Image of lamp being installed](image)
INSTALLING THE OPTIONAL EXHAUST FAN

* There is a vent screen at the top of the right-hand, rear tray-guide mounting channel.

* The exhaust fan will be mounted over this vent screen. See Figure M-6a.

* Turn the Main Power Switch to the OFF position.

* Remove the trays from the merchandiser. See S-3.

* Remove the screw that secures the cable clamp above the vent screen assembly.

* Remove the lower screw that secures the vent screen assembly.

* There is a tab on the top of the vent screen assembly. Hook the small, square hole in the back of the fan mounting over this tab.

* Secure the fan mounting bracket and the vent screen assembly. Use the screw previously removed.

* Connect the fan to one end of the jumper that is supplied with the fan.

* Connect the other end of the jumper to the mating connector in the power harness. See Figure M-6b.

* Secure the cable clamp above the fan with the screw previously removed.

* Replace the trays. See S-10.

* Turn the Main Power Switch to the ON position.
LUBRICATION

* Permanent lubrication has been incorporated in the SNACK CENTER whenever practical.

* The Door Check and the Lock Bar assemblies are two exceptions. See Figure 1 in the Installation Section of the manual for locations of these assemblies.

* Lubriplate or a similar product should be used in these areas.

* Whenever lubrication does become necessary in other areas, DO NOT use a silicone based product. A silicone based lubricant can cause electrical failures.

CLEANING THE MERCHANDISER

* National Vendors recommends using the following cleaning 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 & mint assembly and other non-electrical components

CAUTION

The plastic components in this merchandiser should be cleaned with a mild detergent and warm water. The use of other cleaning agents may damage the material and should be avoided.