

## Installation of the 7th Tray for AP 7000, 113, 123, 123 A, B, and C

*Important Note: Please read all instructions thoroughly before continuing with installation of kit. If you are having problems installing the kit, please call **1-800-321-2311** and select option 3 for Support.*

**WARNING: Prior to installation, turn the power off to the vending machine and unplug it from its power source.**

Tools Needed
Phillips Screwdriver OR Cordless Drill with Phillips bit
1/8" Drill Bit and Cordless Drill
Portable Light
Pliers

Rail Replacement Part Numbers	
Item	Part #
Standard Rail	VE8470D
Certs Rail	VE8470E
Coil Guide	VE8450L
Halls Rail	VE8450J



Figure 1

Remove the bottom two trays directly above the old gum and mint tray.

To remove these two trays, release the white safety lock (Figure 1) on either side and slide them out of the machine.

## Section I:

*Important Note: Please read all instructions thoroughly before continuing with installation of kit.*

For AP 7000, 113 and 123 follow instructions below. For AP 123A, 123B and 123C skip to Section II.

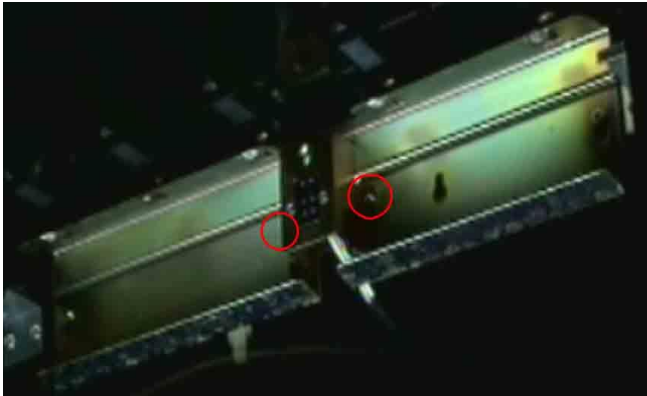


Figure 2

### Harness (Figure 2)

To remove the gum and mint tray, locate the bracket that holds the factory harness in place. It's located underneath the tray. Remove the screws from the harness and let it hang.

### Bracket (Figure 3)

Remove the screws from each side of the bracket and remove it. You can now slide the gum and mint tray out of the machine.



Figure 3

## Section II:

For 123A, 123B, 123C

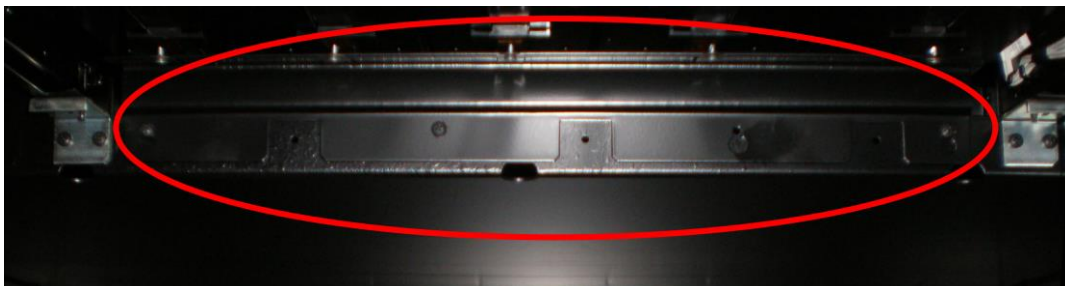


Figure 4

Remove the 4 screws under the old gum tray that hold it in place (Figure 4).

Then, slide the gum tray out of the machine.

### **Section III: Removing and relocating the left gum and mint tray guide rail**

**For: AP 7000 (Skip to page 5 for 113 and 123s)**

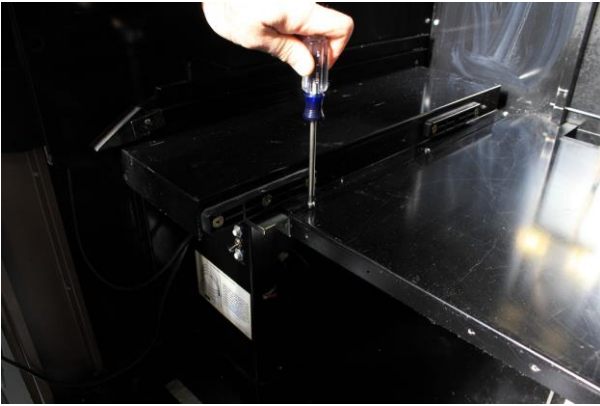


Figure 5

If there is a block out plate on the spacer assembly, in the 7000, remove it.

Remove the spacer assembly from cabinet by removing sheet metal screws that hold unit to cabinet (Figure 5).

Remove the left side locking mechanism (Figure 6).

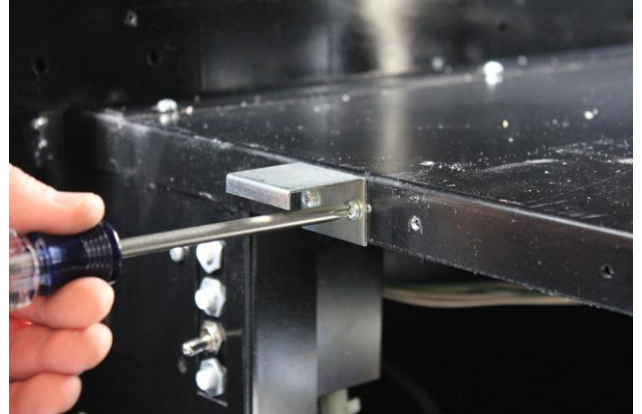


Figure 6

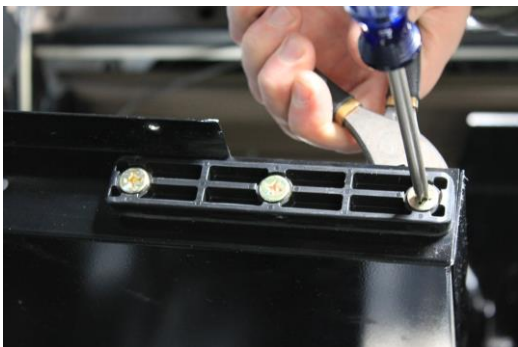


Figure 7

Remove the plastic slides from the spacer assembly. Retain the bolts for future use (Figure 7). You may discard the block out plate, spacer assembly, and locking mechanism.

Use the spacers brackets, supplied in the kit, to attach plastic slides. Use the retained bolts from original assembly (nut not needed, spacer pre-threaded). Only 2 bolts are needed per slide (Figure 8).



Figure 8

Use the bolt sticking through the back of the slide to line up the new spacer for drilling (Figure 9). Place the bolt into the factory holes on the left wall (Figure 10).



Figure 9



Figure 10

Drill 2 holes and use the supplied self-tapping screws to attach the new brackets. Repeat for the back bracket (Figure 11).

Ensure the spacers are secured flush against the cabinet (Figure 12).



Figure 11



Figure 12

**For: AP 113, 123, 123A, B, and C**

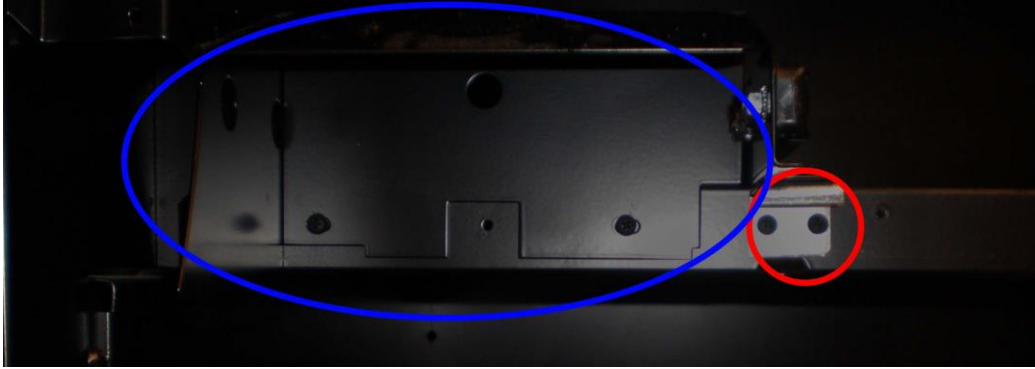


Figure 13

Take out the block out plate by removing the two screws located underneath the plate on the flange of the shelf (Circled in blue, Figure 13).

Remove the locking tab by taking out the two screws located underneath the tab on the flange of the shelf (Circled in red, Figure 13). Retain for later use.

*The block out plate may be discarded as it is not needed for the installation.*

Remove the guide rail from the cabinet by unscrewing the 4 screws holding it in place (Figure 14). You will be reusing these screws later.



Figure 14



Figure 15

Reinstall the locking tab on the left side of the cabinet.  
Slide the rail over to the bottom left side of the cabinet and line the screw holes in the rail with the screw holes on the cabinet. Replace the 4 screws to secure the rail into its new location (Figure 15).



## **Section IV:**

### **Installing the jumper board for AP 7000**

First, make sure the machine is powered off and unplugged. Unplug the door switch from the control board, and remove the cover from the control board (Figure 16). Remove the tray harness from the control board (Figure 17).

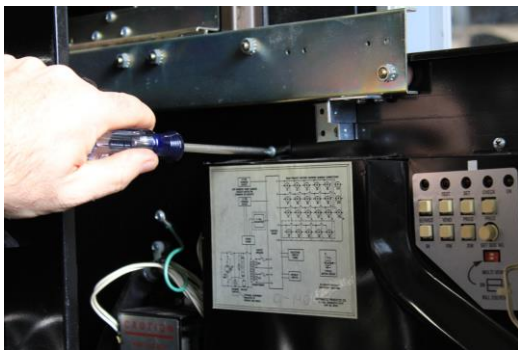


Figure 16

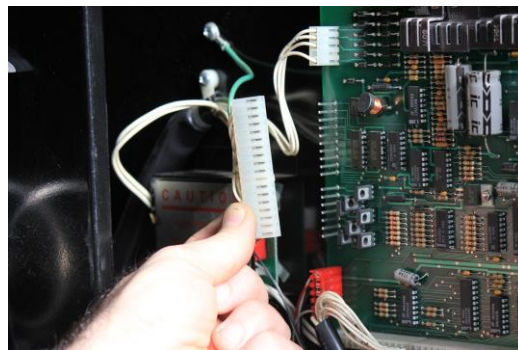


Figure 17

Install the jumper board, supplied with kit, on the pins for the factory harness on the control board as shown in Figure 18. Make sure the pins on the jumper board are facing to your left (as seen). Reattach the tray harness to the new jumper board (Figure 19).

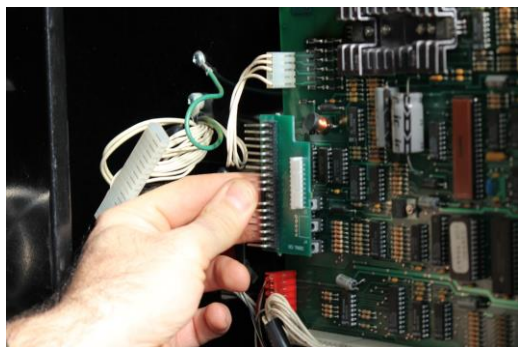


Figure 18

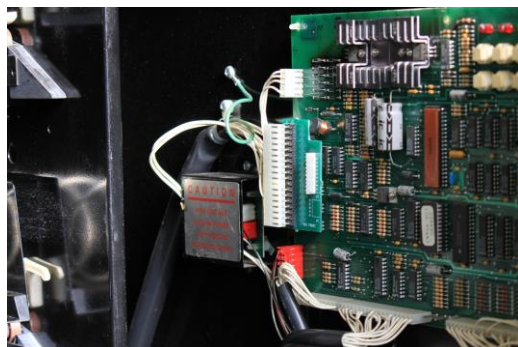


Figure 19

Attach the small end of the new 7<sup>th</sup> tray motor harness to the jumper board. Route the new tray harness following the main cable harness to the bottom of the cabinet, using supplied zip ties (Figure 20). Put the cover back on with the retained screws and reattach the door switch to the control board (Figure 21)

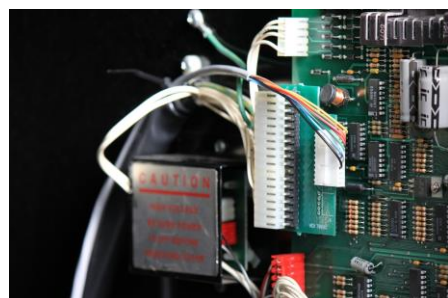


Figure 20

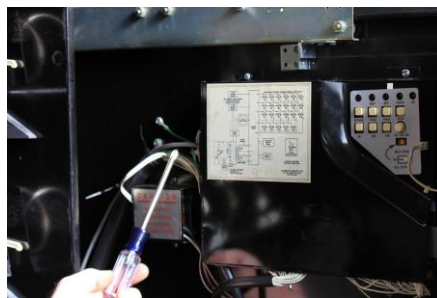


Figure 21

The following section applies to installation of the jumper board on the 113, 123, and 123A.  
For 123B and 123C skip to Section V.

First, make sure the machine is powered off and unplugged. Open the inner door on the right side of the machine and locate the control board.



Figure 22

Unlock and remove the back of the Validator to access the wires on the control board (Figure 22).

For AP 113:

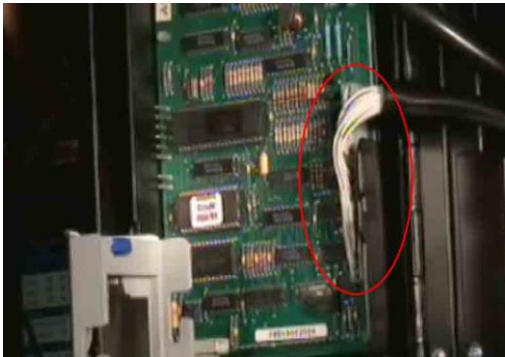


Figure 23A

Remove Control Board cover.

Detach the motor harness from the lower right-hand corner of the control board (Figure 23A).

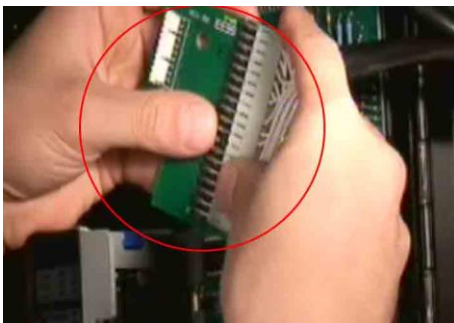


Figure 23B

Attach the motor harness to the jumper board included in the kit (Figure 23B).

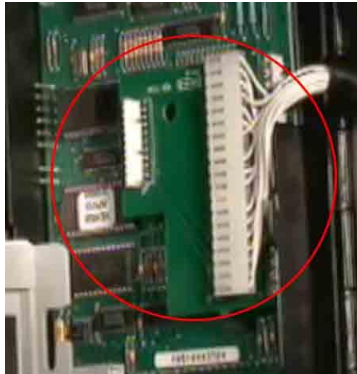


Figure 23C

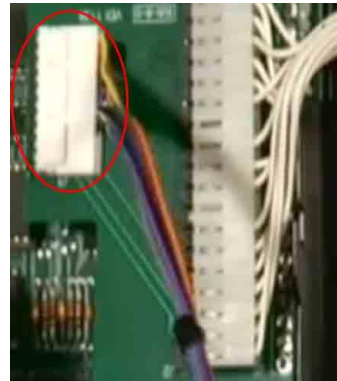


Figure 23D

Then, connect the jumper board to the pins where the motor harness was originally attached (Figure 23C).

Take the included cabinet harness, and attach the smaller end to the remaining connector pins on the jumper board (Figure 23D).

Reinstall control board cover.

For AP 123/123A:

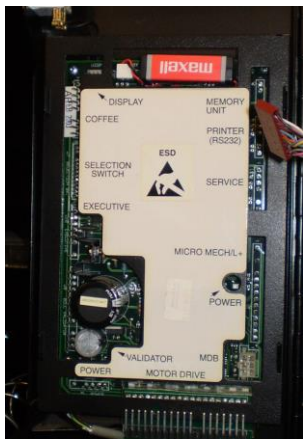


Figure 24A

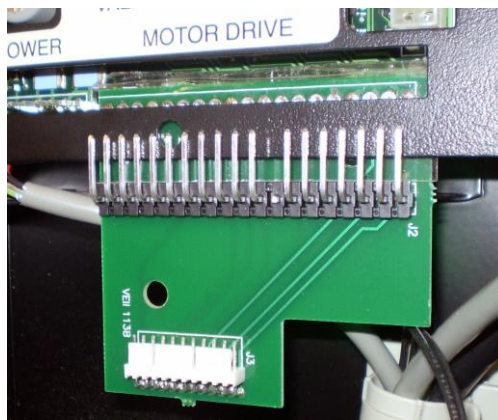


Figure 24B

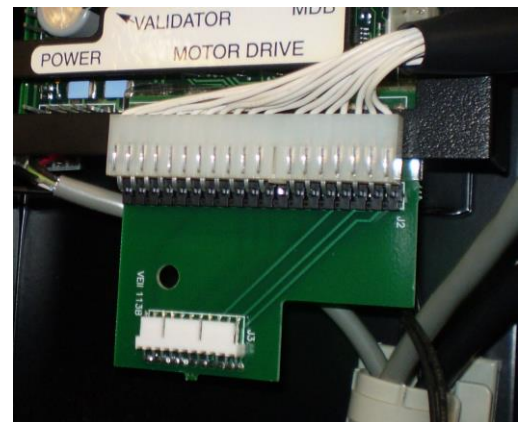


Figure 24C

First make sure the machine is powered off and unplugged. Remove the control board cover (Figure 24A).

Attach the jumper board to the motor connector located at the bottom right-hand corner of the board.

Reattach the cover by, first, inserting the bottom lip of the cover between the pins and main assembly of the jumper board (Figure 24B).

Then, attach the factory motor harness to the jumper board (Figure 24C).

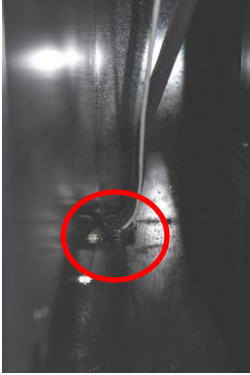
Take the included cabinet harness, and attach the smaller end to the remaining connector pins on the jumper board. Reinstall the back of the Validator.



## Route the new 7<sup>th</sup> tray cabinet harness.

For 7000:

Figure 25A



Route the new 7<sup>th</sup> tray cabinet harness along the factory cabinet harness. Feed it through the hole in the back of the cabinet (Figure 25A). Continue following the harness up into the main tray cabinet of the machine. Secure with zip ties.

For 113, 123:

Move the factory cabinet harness (Figure 25B) from the plastic mount and use a wire tie to adhere it to the channel at the back of the machine (Figure 25C). Then, use a scraper to remove the plastic mount, since it may be in the way of the new bracket.

Figure 25B



Figure 25C



For 123 A:



Figure 26A



Figure 26B

You will need to remove and relocate the old gum and mint tray cabinet bracket in order to install the new cabinet bracket in its place (Figure 26A).

Unscrew the old bracket from its position on the wall behind the gum tray shelf.

Vertically position it to the guide rail left of the channel (Figure 26B). While holding the bracket in place, drill a 1/8" hole through the original screw hole and the back of the machine.

Screw it into place with one of the self tapping Phillips screws provided in the kit.

Attach the wiring harness to the tray. Figure 27A and B tell you which wires correspond to what motors. Harness connections #6 and #7 are for future expansion of motors.

Figure 27A

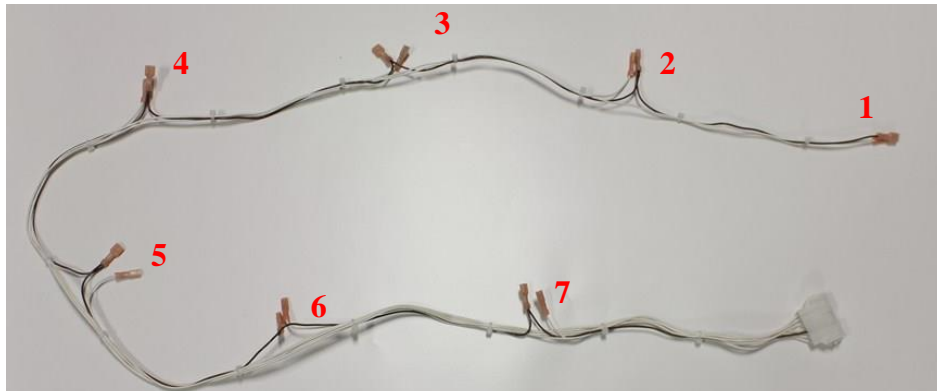
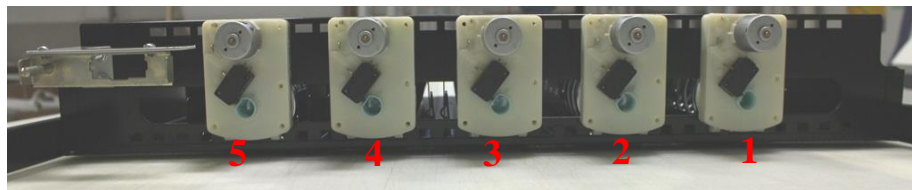


Figure 27B



The brown cable of the wiring harness connects to the bottom, or larger pin. The white cable connects to the top, or smaller pin (Figure 28A). Make sure motor #1 of the tray connects with the #1 set of connectors on the supplied wiring harness, as referenced in Figure 27A and B. Continue making the connections in this same manner. The tray with the motor wiring harness attached should look like Figure 28B. You should have 2 motor connections not used.



Figure 28A

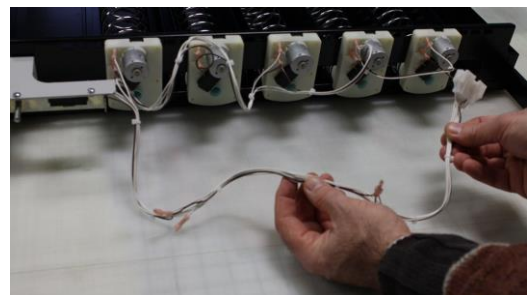


Figure 28B

Insert the tray wiring harness connector into the new tray bracket as shown in Figure 29. Be sure that it snaps in place. Secure the loose wiring harness with supplied zip ties (Figure 30) and the tray is ready to be inserted into the machine.



Figure 29

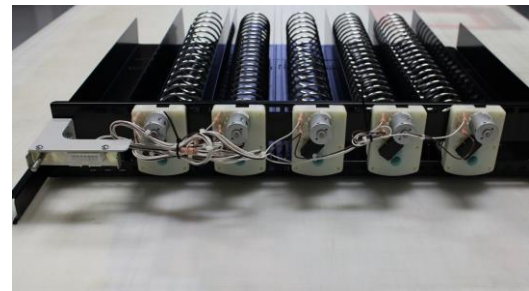


Figure 30

Attach the mini fit junior connector to the new cabinet bracket as shown (Figure 31). The connector is keyed so that it will only install one way. Slide the new tray half-way into the machine. Clean the back of the machine with provided alcohol swab, where the connection will be made. Remove the backings from the 2 pieces of double-sided tape on the new cabinet bracket.



Figure 31

Position and attach the new cabinet bracket on the back of the tray (Figure 32). Now, glide the gum tray fully into position. Apply pressure to the tray to make sure that the connector adheres to the back of the machine. Slide the tray back out of the machine and briefly move it out of the way.

The cabinet bracket is now positioned and in place.

While carefully holding the bracket, drill two 1/8" size holes, each in opposite corners from one another, through existing holes in the bracket and the back of the machine (Figure 33). Take two Phillips self-tapping screws supplied in the kit and use them to securely attach the bracket to the back of the machine.

Slide the gum and mint tray back into the machine.

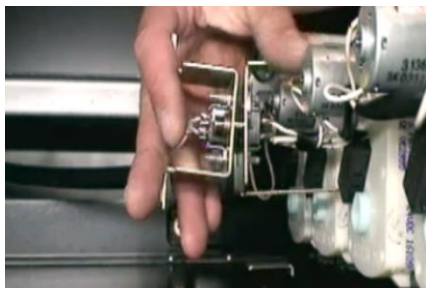


Figure 32

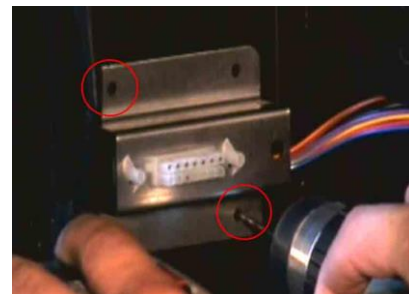


Figure 33

## **Section V:**

If you have not already done so, please refer to the wiring harness installation, to install the tray harness on page 10.

For AP 123B and 123C:

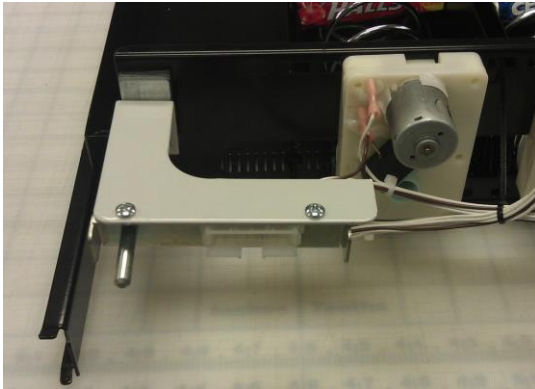


Figure 34

Since your new tray already has the harness and factory plug installed, you should be able to simply slide the new tray into place.

However, there is variation between machines. First, loosen the screws that hold the wiring harness bracket to the tray. Slide the tray in and make the connection with the cabinet plug. Retighten screws and slide the tray in and out to ensure a good fit. If this does not work, it may be necessary to adjust the plug mount bracket (Figure 34) up and down by applying enough pressure to slightly bend it so that a good connection is made with the cabinet plug.

## **Section VI:**



Figure 35

Open the vending machine and clean the dust off the inside wall of the drop bucket closest to you. The label is made to fit exactly inside of the vend bucket, so you can start applying it to either side of the vend bucket.



Figure 36

Determine which of the two provided product labels you will need to attach to the machine.

Position the label as shown (Figure 35).

Next, attach a price sticker next to each of the product numbers as shown (Figure 36).



## Section VII:

### Adjusting the gap between the door and the new gum tray

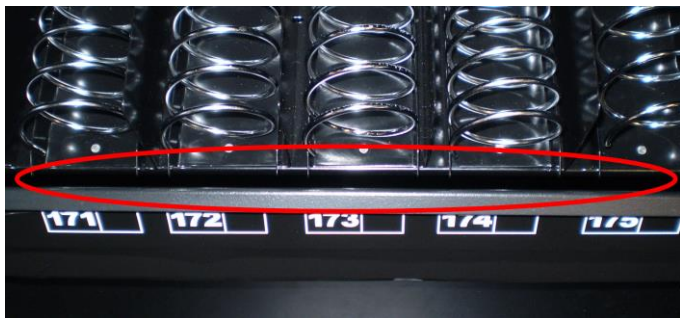


Figure 37A

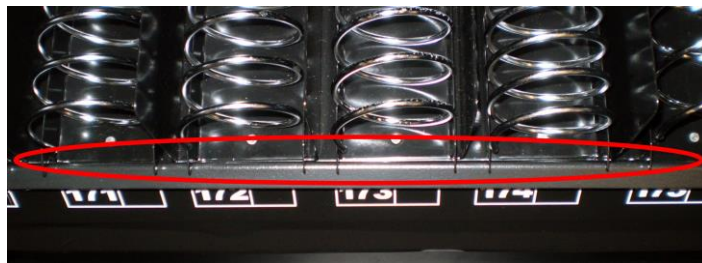


Figure 37B



Figure 38

Close the machine door. Look at the spacing between the drop bucket and the new gum tray (Figures 37A and 37B) to determine whether the gap is too large (and needs shims added) or is too tight (and needs shims removed). There are no shims installed and five included with the kit.

#### To Adjust:

Pull the gum tray out and locate the 2 screws at the back of the right most motor (Figure 38).

Use a Phillips screwdriver to loosen these 2 screws.

#### To Lessen the Gap:

Take the provided shims and install them between the back of the tray and the mounting bracket (Figure 39).

Tighten the 2 screws. Repeat again if necessary.

#### If the door fits too tight:

Shims will need to be removed. Tighten the 2 screws. Repeat again if necessary.



Figure 39

**Note: If your tray does not make a good connection after installing the shims**

First, loosen the screws that hold the wiring harness bracket to the tray. Slide the tray in and make the connection with the cabinet plug. Retighten screws and slide the tray in and out to ensure a good fit.

## Section VIII:

### Installing Product Pushers

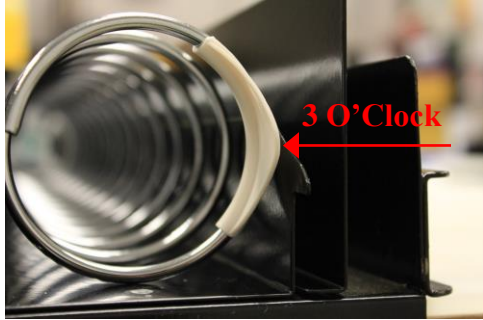


Figure 40

Supplied with the 5-wide Gum & Mint tray are 5 black product pushers (VE444A), one will be a spare. Product pushers **MUST** be installed for every product except Certs, as shown in Figure 40.

Place the product pusher so the tip is at 3 o'clock (Red Arrow, Figure 40)

**Note:** A white product pusher was used for photo purposes only.

Completed Tray with and without product



Figure 41



Figure 42

Replace all other trays removed from the machine; test ALL slots of the new gum and mint tray; fill with product and the installation is complete.

## TROUBLESHOOTING



Figure 43A

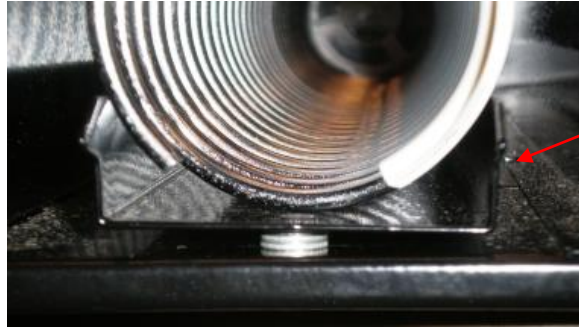


Figure 43B

**Issue:** The point of the vend rails hit the lip of the vend bucket.

The vend rails of the gum and mint tray are designed to “float” up and down on a pin. This will ensure proper alignment with the lip of the vend bucket. However, on occasions, due to a machines door, or cabinet, being out of square, the point of the vend rails may hit.

To correct:

Each kit comes with an assortment of flat washers that may be added to assure proper alignment of the **RAILS** (Figure 43A).

- If the rails interfere with the lip of the vend bucket, **ADD** washers under the rail by placing them on the pin. Add washers until the gap between the bucket and the rail clear the lip of the vend bucket (Figure 43B).

**Issue:** Door will not close; closes hard; or has a large gap between the tray and vend bucket.

Repeat door gap section on **Page 13**.