



11685 Main Street  
Williston, SC 29853  
www.dixienarco.com

## ENTRAY FIELD KIT

### M070.0

5/2/05

**Subject:** Field installation of the Entray Field Kit

**Models Affected:** Dixie-Narco Beverage Max DN55## Venders serialized 0001-8072DZ and higher and all Beverage Max DN35## Venders.

**Reason:** To provide a kit that adds vending flexibility and creates new placement opportunities for existing machines.



## INTRODUCTION



**WARNING: Disconnect power from electrical source before performing this procedure.**

Please read and familiarize yourself with these instructions in their entirety before proceeding. The procedure below shows the step by step instructions to convert a Dixie-Narco Beverage Max Vender (DN55## and DN35## Series) to an Entry Vender. These instructions **do not apply** to any models other than the DN5500 Series (e.g. DN2145, DN2054). The Beverage Max series is an all drink (can and bottle) machine, while the Entry is a combination snack and drink machine. The Entry shelves may replace drink shelves in only shelf locations A, B, and C; and must start with shelf location A and progress to B and C (top to bottom) if less than 3 Entry shelves are to be used.

## TOOLS NEEDED

- 1/4" Socket Wrench
- Philips Screw Driver
- Scissors
- EPROM Puller
- Static Discharge Strap

## ORDER

| PART DESCRIPTION                                 | DN55## KIT     | DN35## KIT     |
|--|----------------|----------------|
| Tray Assembly 5 Column 5 – 11                    | 645,010,00x.x4 | NA             |
| Tray Assembly 5 Column 5 – 11 No Vend Sensor Kit | 645,010,20x.x4 | NA             |
| Tray Assembly 3 Column 3 - 11                    | NA             | 645,010,10x.x4 |
| Tray Assembly 3 Column 3 – 11 No Vend Sensor Kit | NA             | 645,010,30x.x4 |

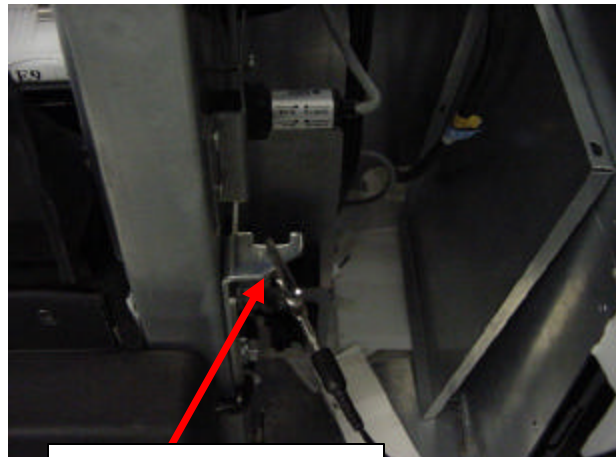
**Note: Kits do not include helix. Please order helix as needed.**

| Part Description    | Part #         | Part Description    | Part #         |
|---------------------|----------------|---------------------|----------------|
| 28 Count Right Hand | 801,701,35x.x1 | 10 Count Right Hand | 801,701,39x.x1 |
| 28 Count Left Hand  | 801,701,36x.x1 | 10 Count Left Hand  | 801,701,41x.x1 |
| 20 Count Right Hand | 801,701,48x.x1 | 9 Count Right Hand  | 801,701,42x.x1 |
| 20 Count Left Hand  | 801,701,49x.x1 | 9 Count Left Hand   | 801,701,43x.x1 |
| 17 Count Right Hand | 801,701,26x.x1 | 8 Count Right Hand  | 801,701,44x.x1 |
| 17 Count Left Hand  | 801,701,27x.x1 | 8 Count Left Hand   | 801,701,45x.x1 |
| 13 Count Right Hand | 801,701,37x.x1 | 7 Count Right Hand  | 801,701,31x.x1 |
| 13 Count Left Hand  | 801,701,38x.x1 | 7 Count Left Hand   | 801,701,32x.x1 |
| 11 Count Right Hand | 801,701,28x.x1 | 6 Count Right Hand  | 801,701,46x.x1 |
| 11 Count Left Hand  | 801,701,29x.x1 | 6 Count Left Hand   | 801,701,47x.x1 |
|                     |                |                     |                |
|                     |                |                     |                |

**Note: Make sure technician is properly grounded, with a Static Discharge Strap (shown below), when handling any electronic or electrical components.**

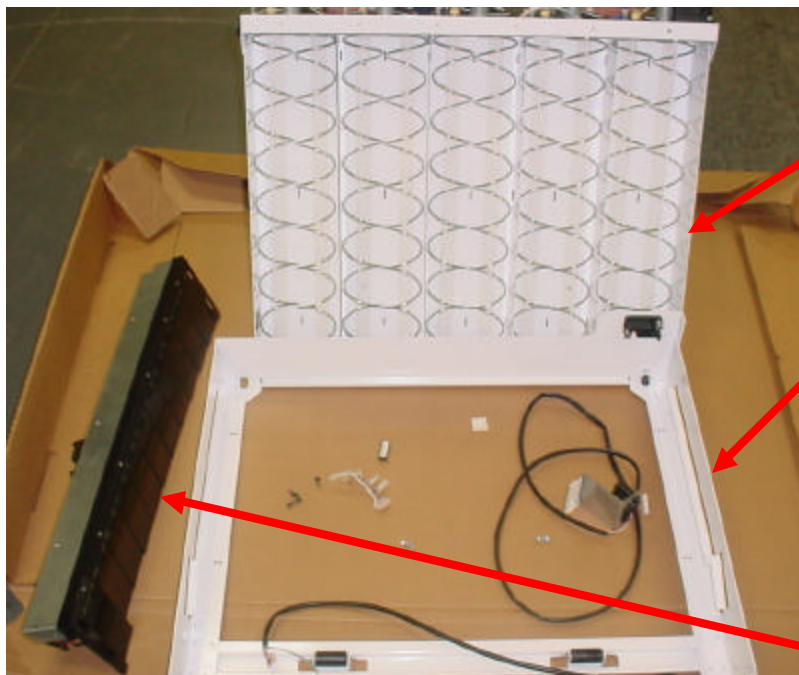


**Static Discharge Arm Strap**



**Connect Strap to Lower Hinge Bracket**

**PARTS DIAGRAM FOR KIT with VEND SENSOR**  
**(Helix shown are not included in kit)**



**Tray Assembly**  
(see pg. 2 for part numbers)

**Frame Assembly**  
645,070,00x.x3 wide  
645,070,70x.x3 narrow

**Segmented Door Assembly**  
645,073,90x.x3 wide  
645,074,00x.x3 narrow

**Figure 1**

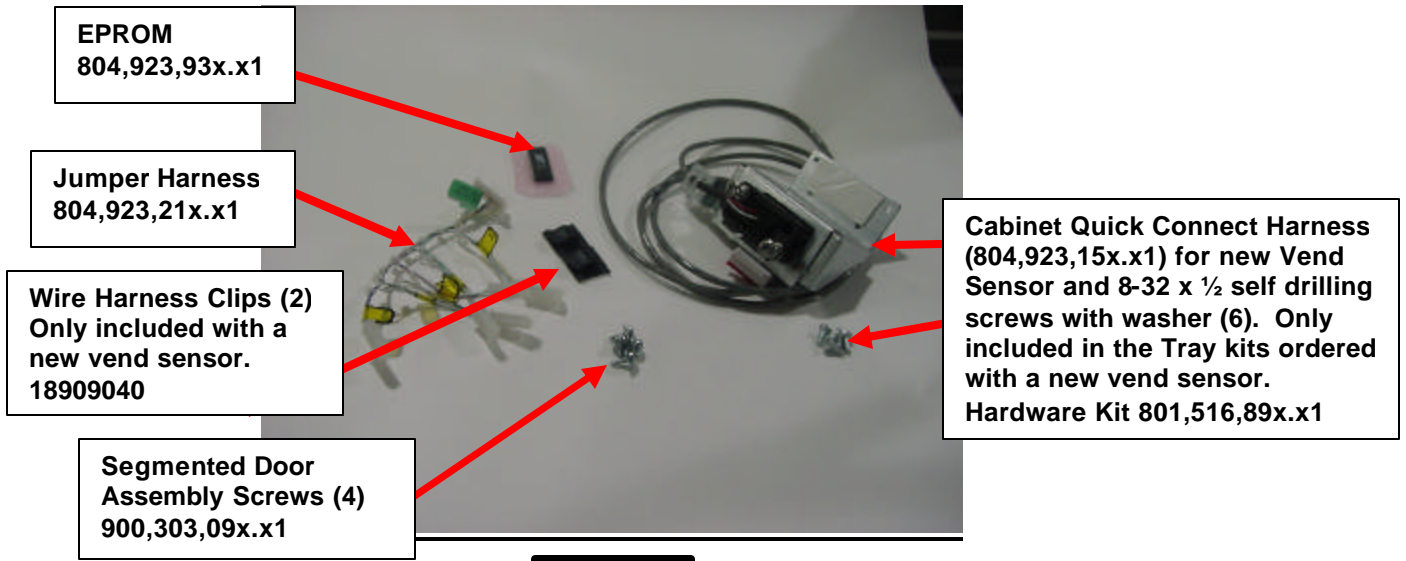


Figure 2

**REMOVAL OF EXISTING DRINK TRAY FROM DN55## VENDER.**

- 1.) Start with a DN55##/DM35## UL listed Vending Machine that is currently operating normally as factory produced.



Figure 3

- 2.) Unplug the vender from the electrical outlet.



Figure 4



3.) Remove all of the insulating putty from the tray wire harness holes in the cabinet wall.



**Remove Product Area Putty  
(retain putty for later use).**

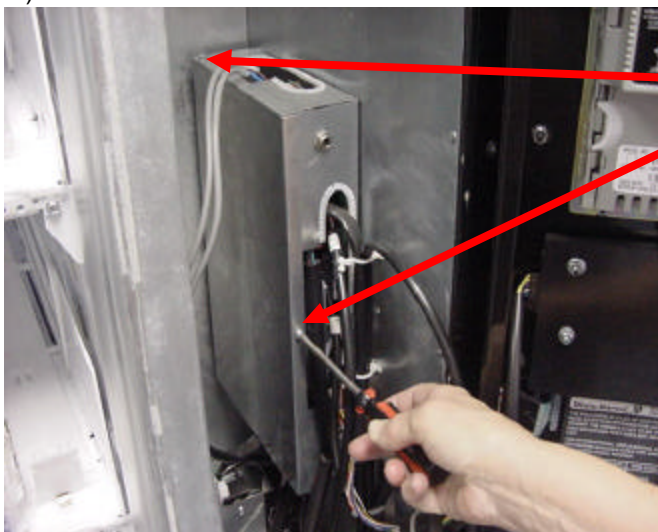
Figure 5



**Remove Service Area Putty  
(Retain putty for later use).**

Figure 6

4.) Remove the screws from the Control Board Cover and retain.



**Remove the screws securing the  
Control Board Cover.**

Figure 7

5.) Remove the Control Board Cover.

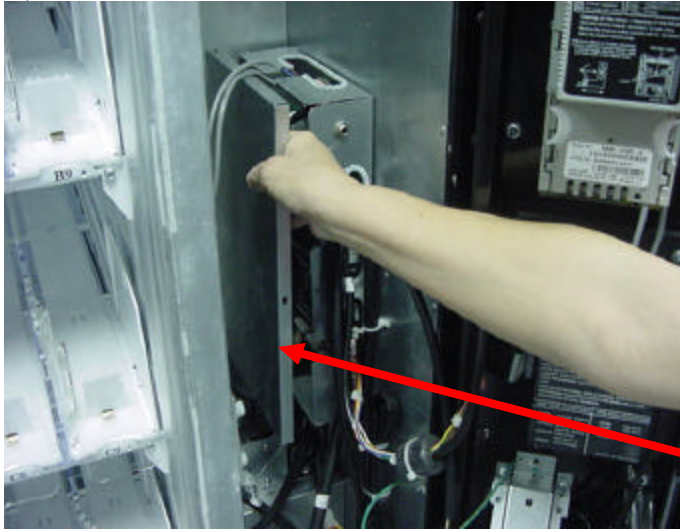


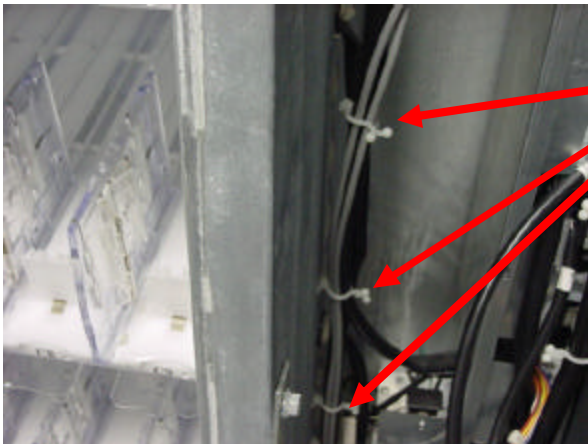
Figure 8

Control Board Cover

6.) Untwist the Tray Harness Wire Ties associated with the Tray harness(s) (i.e. A, B, or C) being removed.



Figure 9



Untwist all wire ties on Tray Harness between the tray and the control board.

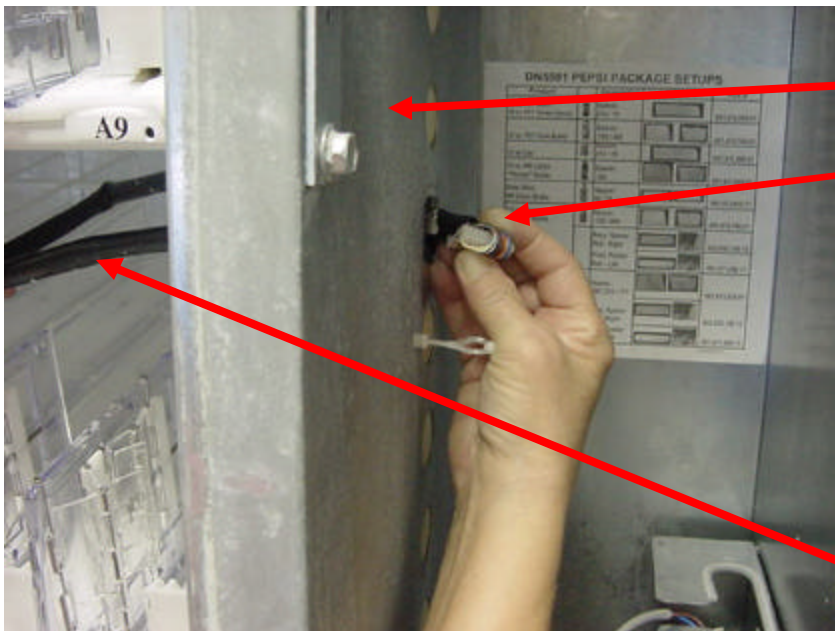
Figure 10

7.) Unplug the Tray Wire Harness(s) from the Control Board (see Figures 27 & 28).



Figure 11

8.) During the removal of the Tray Wire Harness through the Cabinet Wall hole, use care with the connector end of the harness. Push the connector through the hole while gently pulling the harness from the product side as shown in Figure 12.



Cabinet Wall

Push connector through hole from right to left.

Gently pull harness through from the product area.

Figure 12

9.) Remove the right and left hex head Tray mounting screws with ¼" Socket Driver (or Philips Screw Driver if applicable) and retain for use in installing Entry Frame.



Figure 13



Figure 14



10.) Remove the Tray with Harness. Note: Be sure to clear tray above rear supports when removing.  
**Note: If the Tray is difficult to remove, the tray mounting screws on the lower trays can be loosened to ease removal.**

**CAUTION! TRAY WEIGHS APPROXIMATELY 30 LBS.**



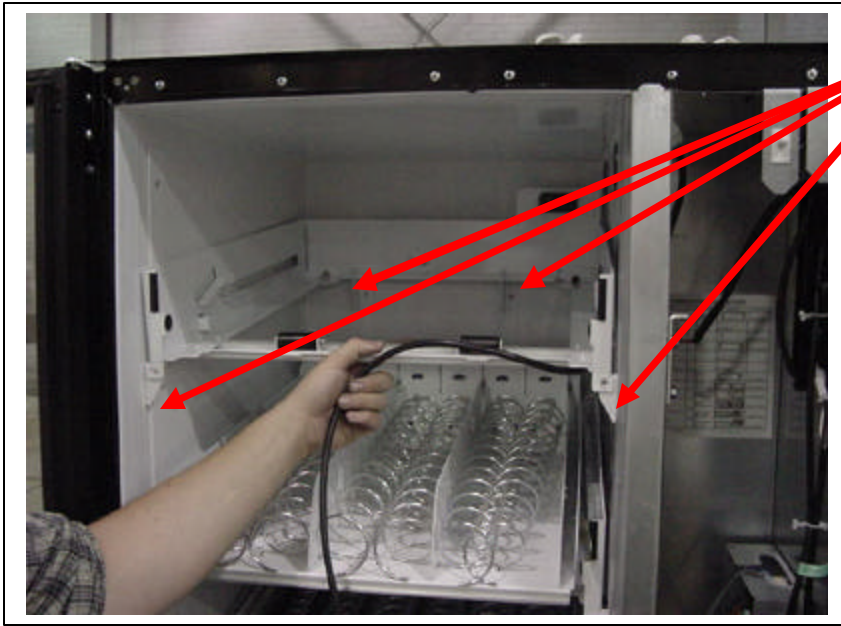
Figure 15

**INSTALLATION OF AN ENTRAY TRAY:**

11.) Place the Entry Frame Assembly (645,070,00x.x3) into the vender so that it rests on all four tray supports. **USE CARE NOT TO PINCH, PULL OR CHAFE THE FRAME WIRE HARNESS/CONNECTOR** (See Figures 16 Thru 19).



Figure 16



Tray Supports

Figure 17

12.) Secure Frame with the two screws removed from the drink tray using the same tool (see Figures 18 and 19).

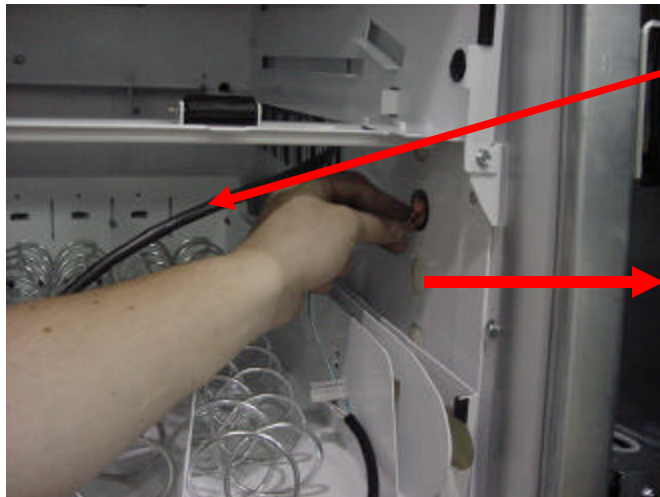


Figure 18



Figure 19

13.) Route the Snack Frame Harness through the same Cabinet hole that the corresponding Drink Tray Harness was removed. **USE CAUTION WHEN ROUTING THE HARNESS, ESPECIALLY NEAR THE CONNECTOR (See Figures 20 thru 22).**



**FRAME HARNESS**

**Arrow shows direction of harness installation through Cabinet Wall.**

**Figure 20**



**USE CARE NOT TO CUT OR CHAFE HARNESS CONNECTOR WHEN ROUTING THROUGH CABINET WALL!**

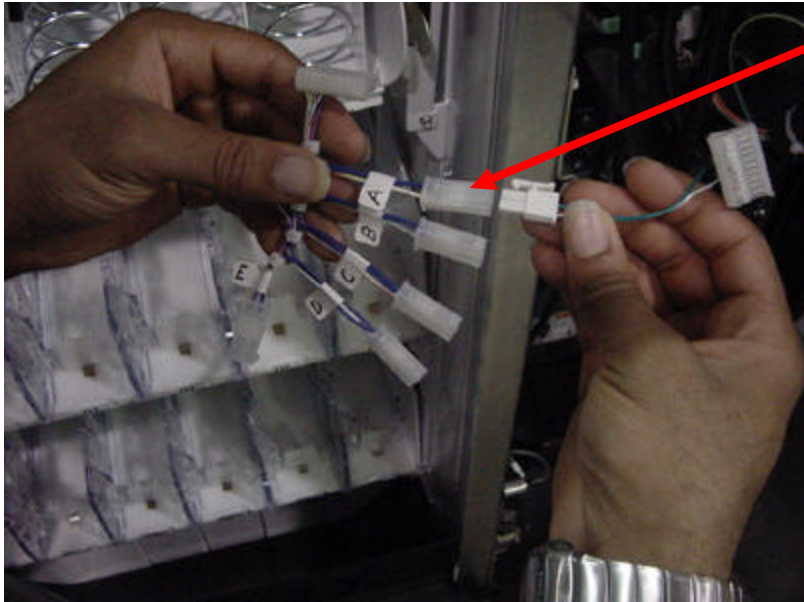
**Figure 21**



Minimize the remaining slack on the Snack Frame Harness in the product area.

Figure 22

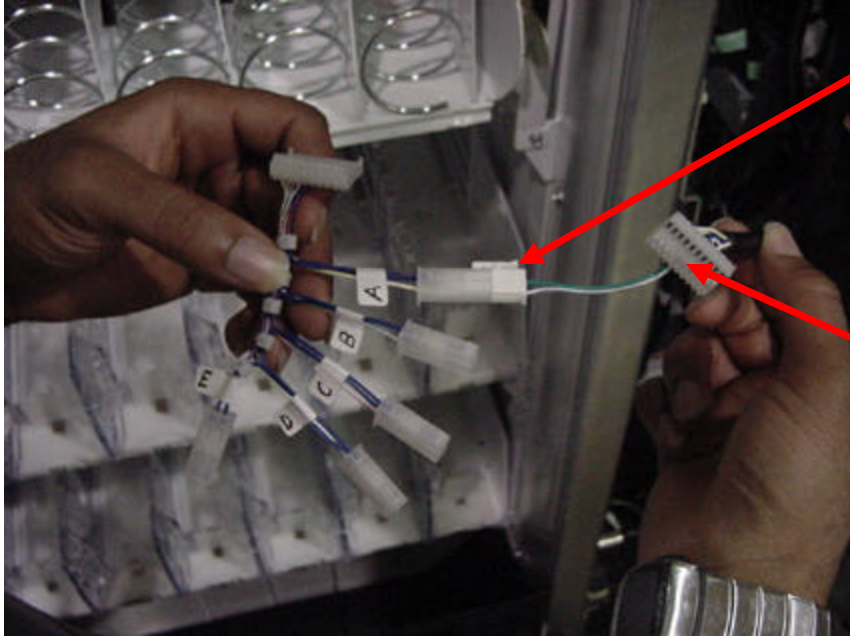
14.) Plug the Mini-Fit Connector on the Frame Harness into the matching Jumper Harness (804,923,21x.x1) provided in the kit (used only on Wide Vender Tray Kits, for Narrow Vender Tray Kits skip steps 14 and 16). Match the letters on the Adapter Harness with the tray level letters (i.e. A, B or C) as shown in Figures 23 & 24.



Jumper Harness

Figure 23





Plug Mini-Fit Connector on Frame Harness to appropriate connector (A, B, C) on Jumper Harness.

FRAME HARNESS/CONNECTOR

Figure 24

15.) Plug the Frame Harness into the Control Board in the same plug where the corresponding Drink Tray was removed in step 7. (E.g. Tray A to Tray A, etc) (Reference Figures 25 thru 28).

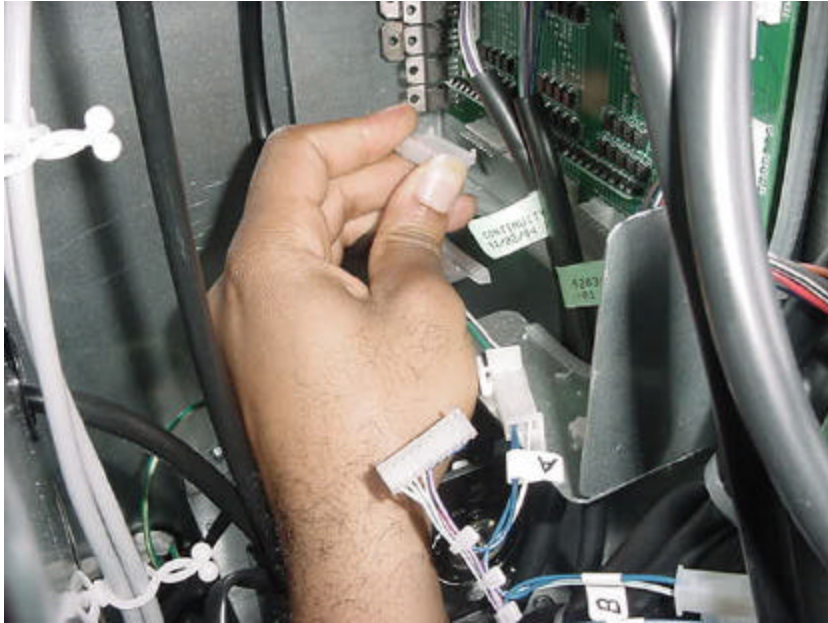


Figure 25

16.) Plug the Jumper Harness into the Tray F Connector on the Control Board (as shown in Figures 26 & 28).

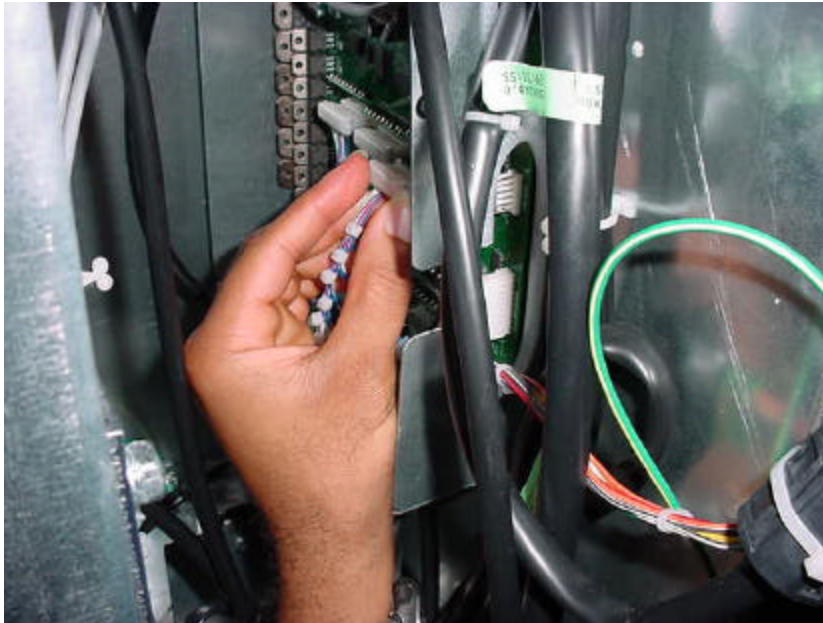


Figure 26

17.) Control Board diagrams.

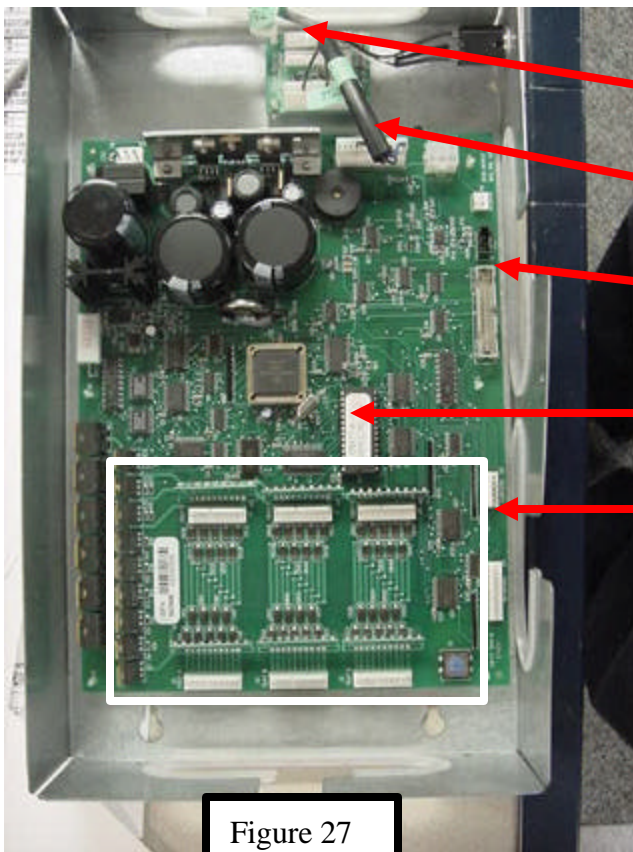


Figure 27

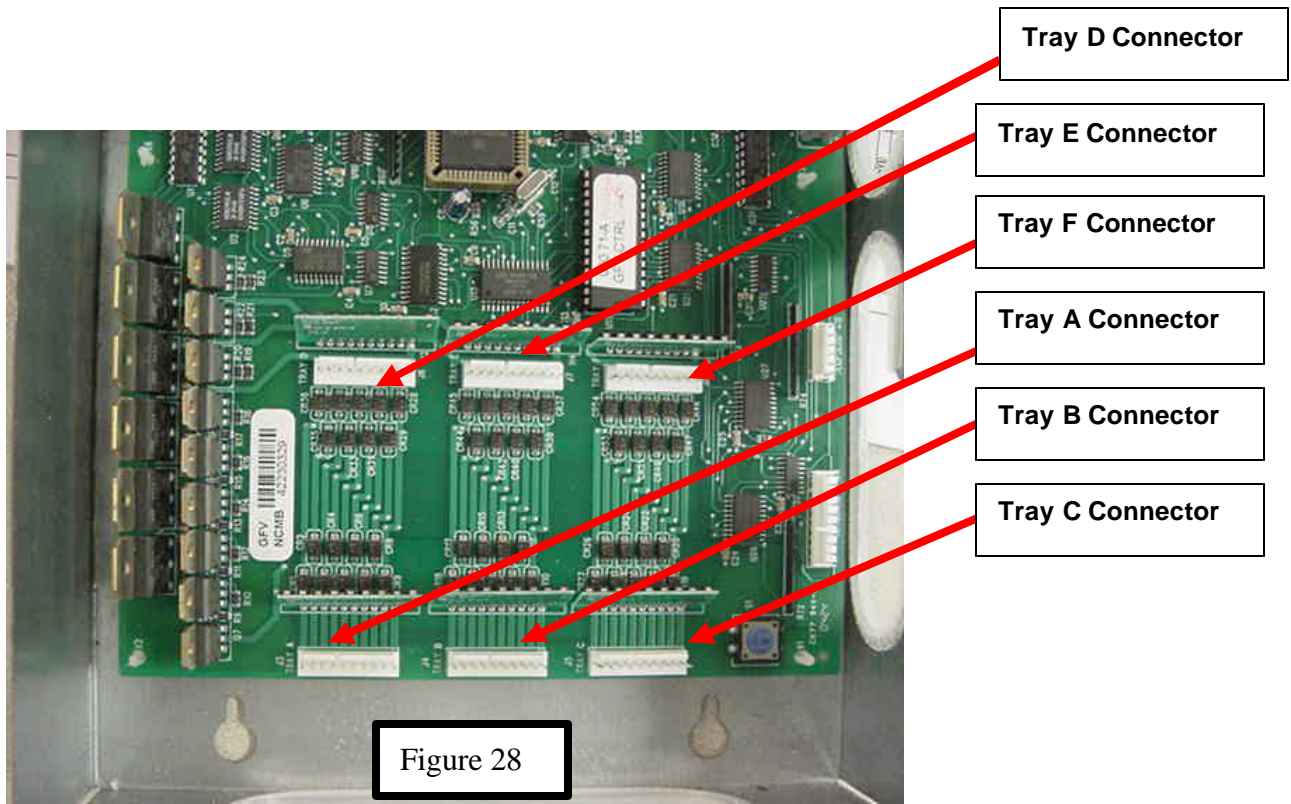


Figure 28

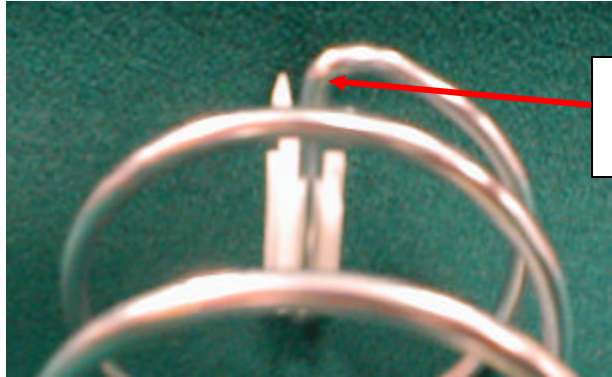
18.) Dress the Frame Harness with the existing wire ties from the Drink Trays.



Figure 29

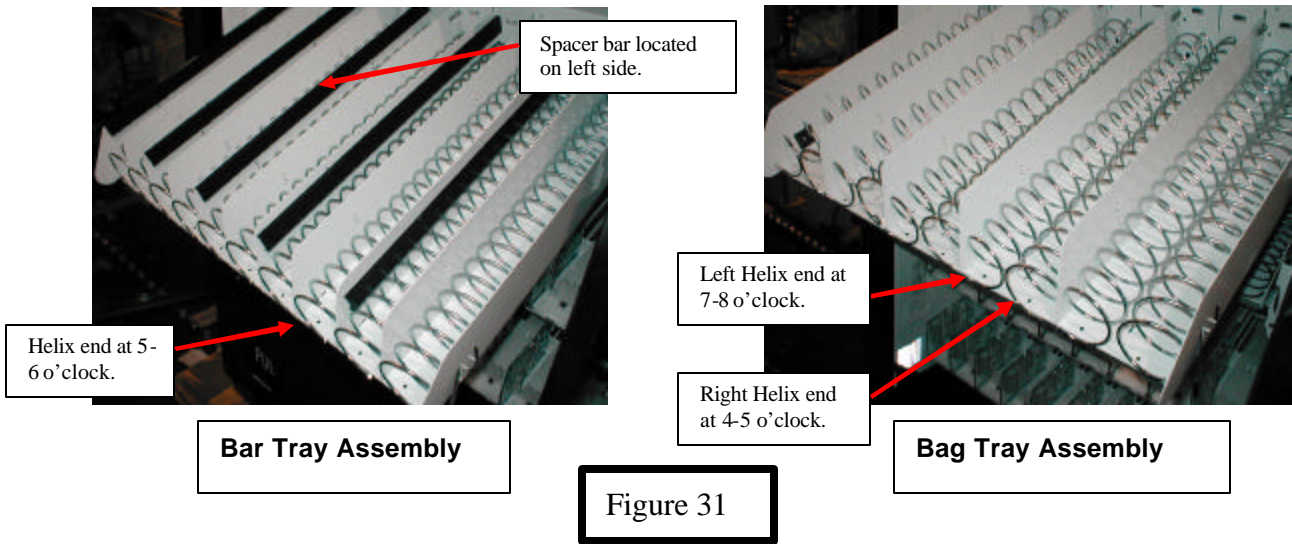


19.) Insert the helix, to be used in each column, to the motor at the back of the column by inserting the adapter helix to motor (801,810,21x.x1) in to the motor socket so the vertical leg on the back of the helix is as close to the 12 o'clock position as possible. The end of the bar (single) helix locates approximately at the 5-6 o'clock position and the bag (double) helix locates approximately at the 7-8 o'clock position for a left helix and 4-5 o'clock for a right helix to ensure proper vending. See figures 30 and 31.



**Vertical leg at approximately 12 o'clock.**

**Figure 30**



**Bar Tray Assembly**

**Bag Tray Assembly**

**Figure 31**



20.) Place the Entry Tray into the Frame as shown ensuring that the Tray slides back into the Frame, mates with the electrical plug, and the retaining clips are engaged fully with Frame (See Figures 32 &33).

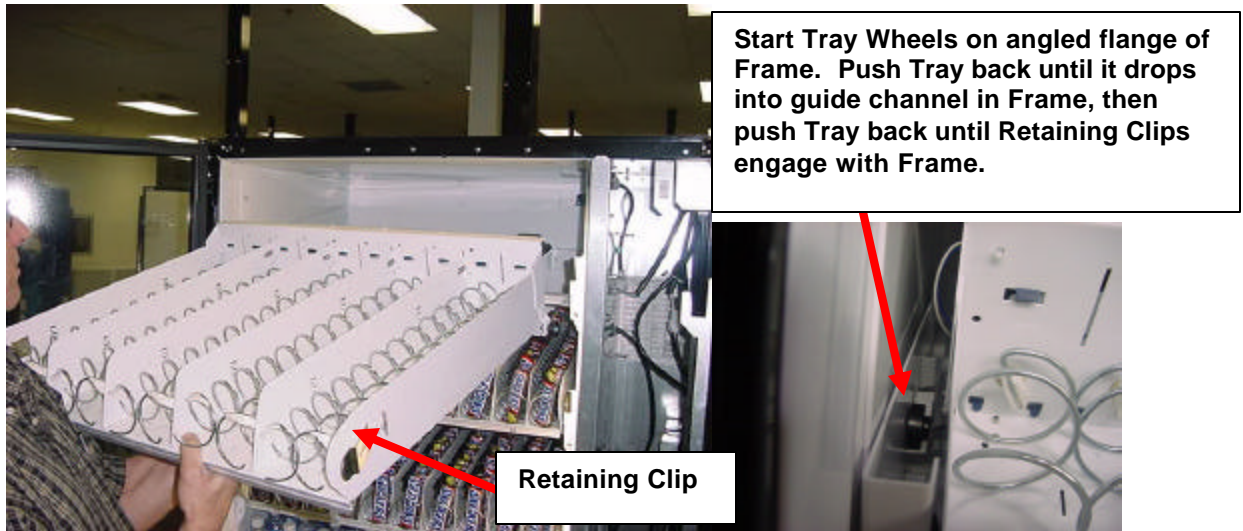


Figure 32

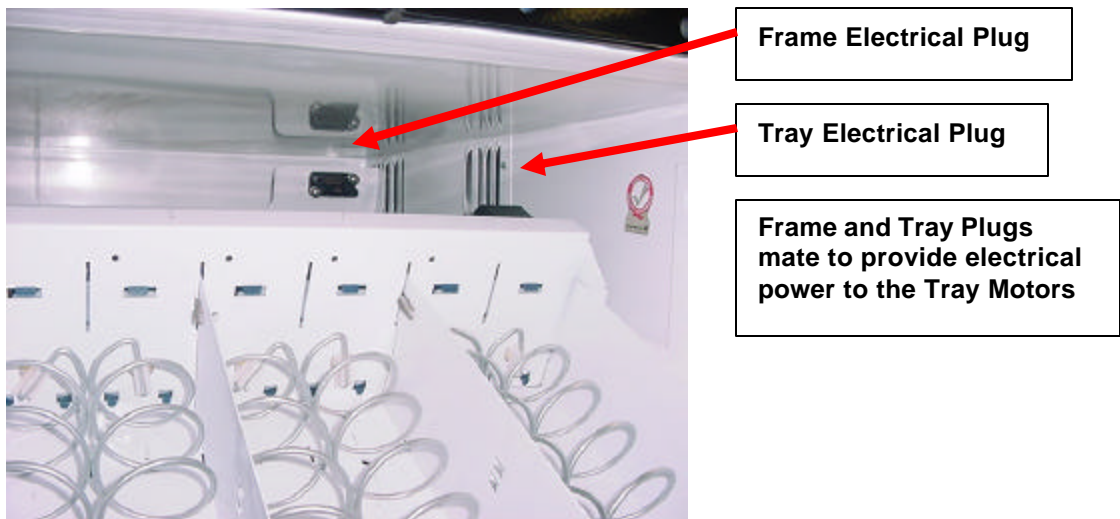
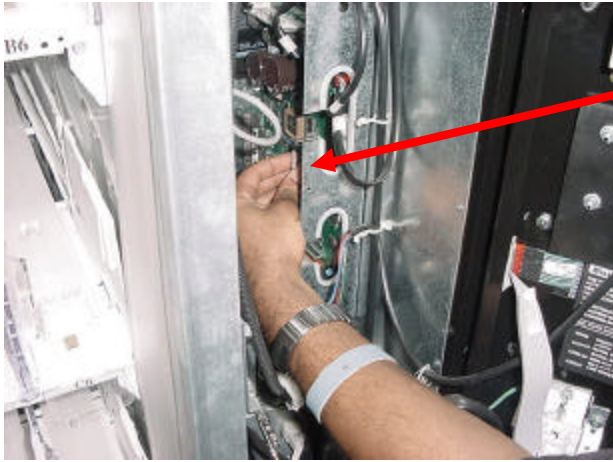


Figure 33

**NOTE: REPEAT STEPS 3 -19 (SKIPPING 4 & 5) FOR TRAYS B & C IF NECESSARY. IF NOT GO TO STEP 20.**

**IMPORTANT: IN DN55## VENDERS THE “A” TRAY LOCATION HAS TO BE A 5 COLUMN ENTRY SHELF.**

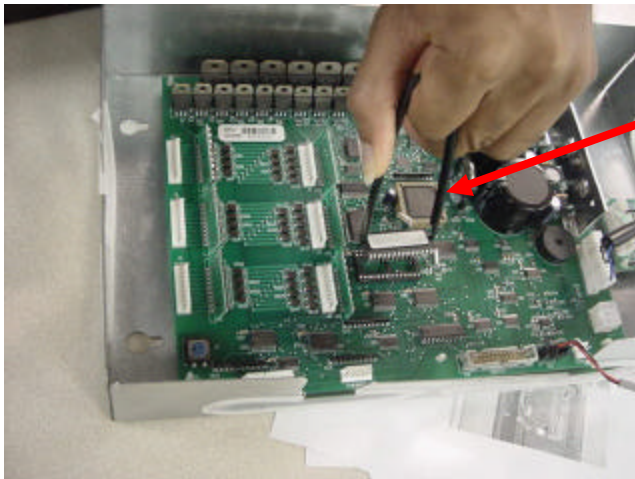
21.) Remove and discard the existing EPROM from Control Board and replace it with the new Entray EPROM (804,923,03x.x1 provided in the kit). Ensure the proper Electro Static Discharge equipment is used. An EPROM "puller" may be required to remove the EPROM.



**Remove EPROM**

**Figure 34**

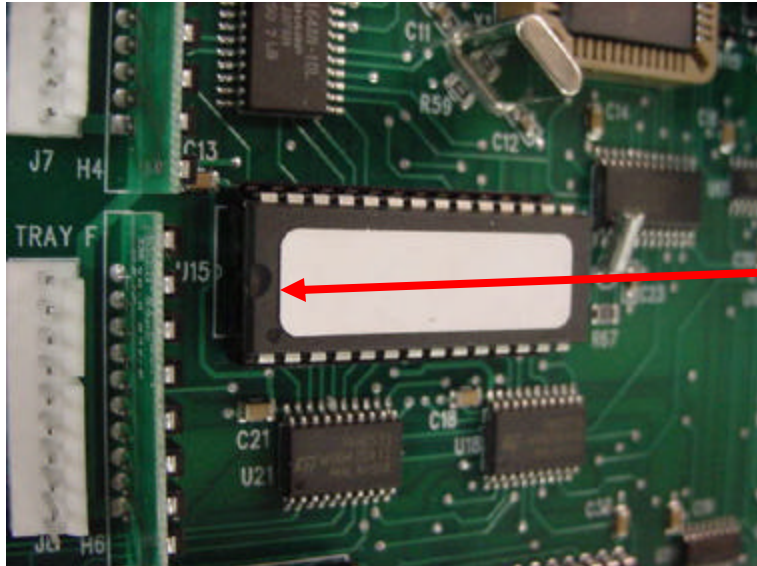
22.) Control Board diagrams showing EPROM replacement.



**Use EPROM "puller" if necessary. Pull away from Control Board to remove.**

**Grip EPROM on both sides and pull up evenly using care not to damage adjacent components on control board.**

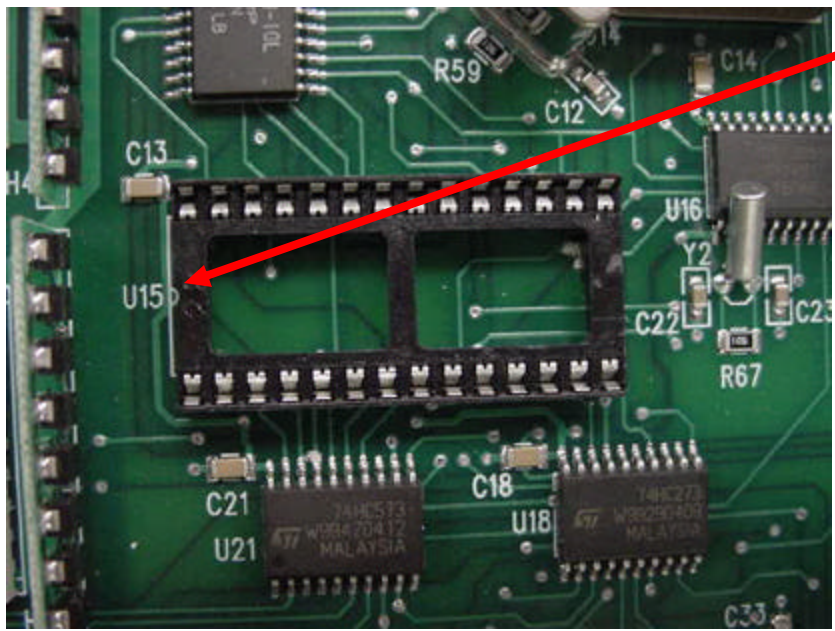
**Figure 35**



Make sure the dimple on the EPROM aligns with the mating plug on the Control Board.

EPROM dimple

Figure 36



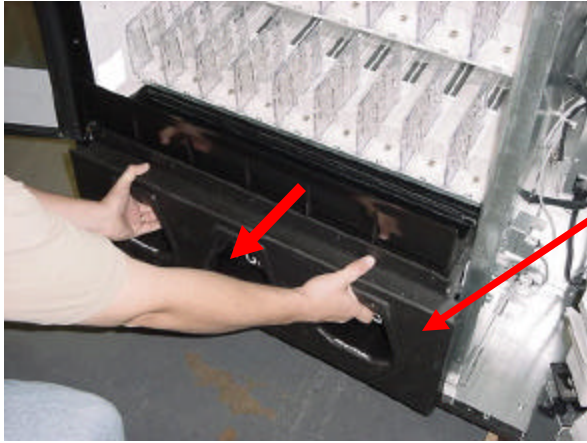
Control Board dimple

Figure 37



## INSTALLATION OF SEGMENTED DOOR ASSEMBLY

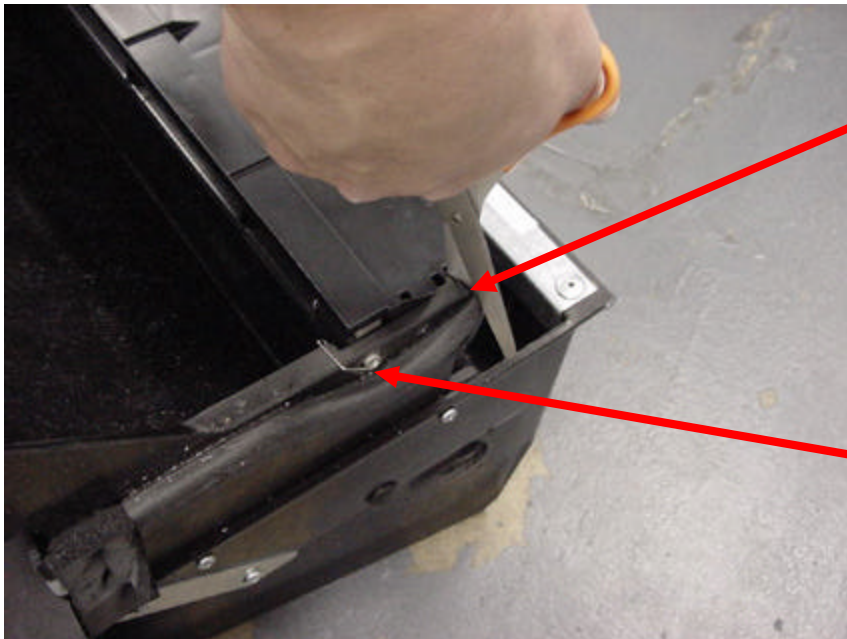
23.) Remove the existing Recovery Unit from the vender.



Existing Recovery Unit

Figure 38

24.) Cut the existing gasket as shown using scissors. Cut the gasket on the right side (when facing the front) using the fixed edge on the Recovery Unit as a guide.



Use fixed edge as a guide while cutting.

Existing spring

Figure 39



25.) Remove the spring from the existing delivery door if present.

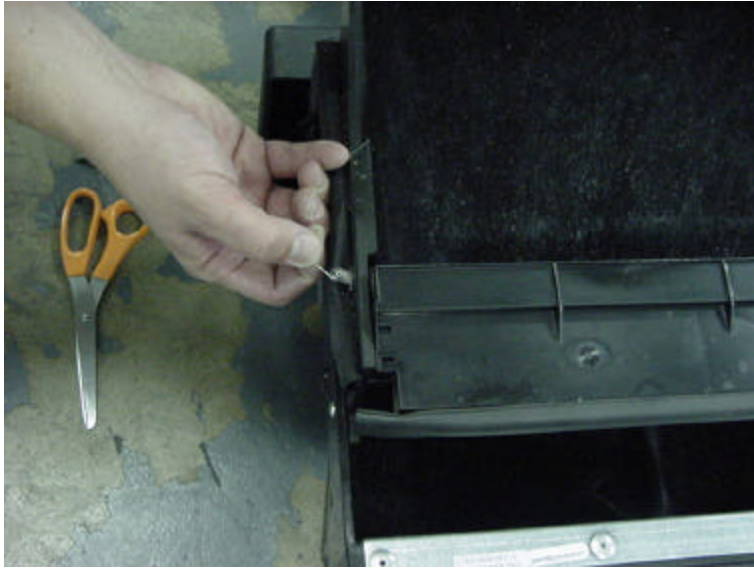
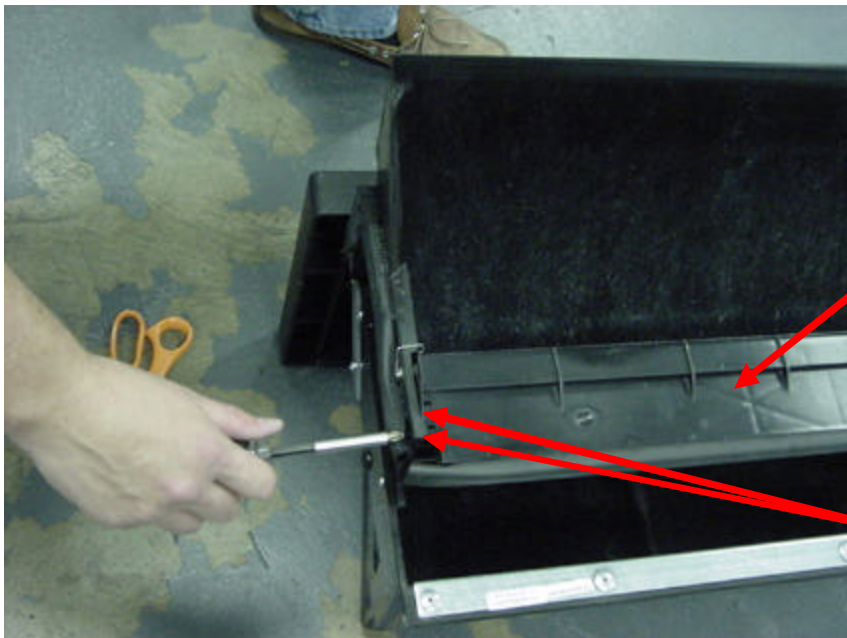


Figure 40

26.) Remove the two (2) screws holding the plastic cross member to the Recovery Unit.

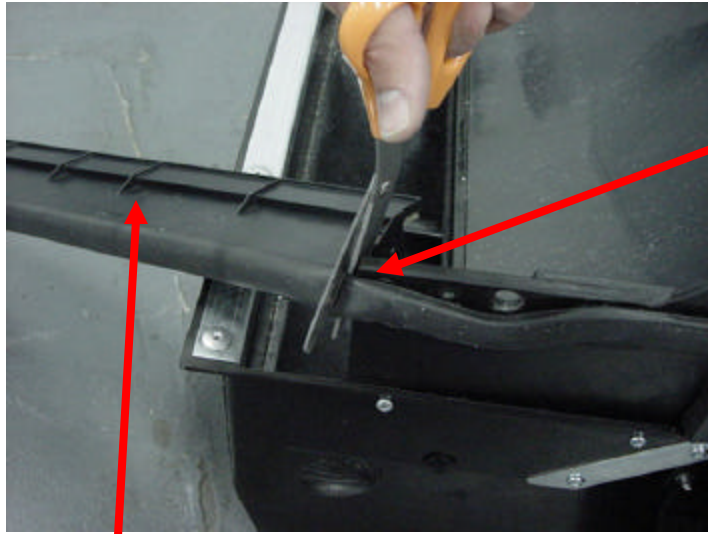


Plastic Cross member

Remove two (2) screws

Figure 41

27.) Cut the gasket on the left side of the Recovery Unit; again using the fixed edge shown as a cutting guide. Remove the plastic cross member and discard.

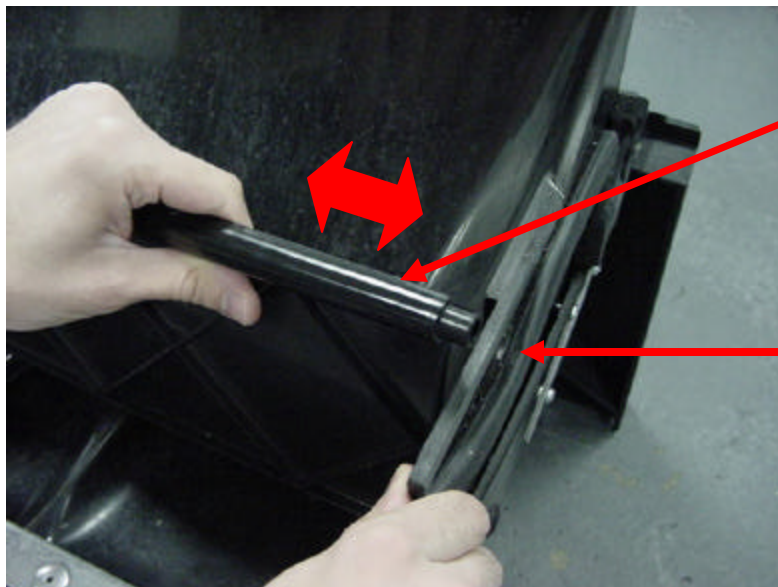


Use fixed edge as a guide while cutting.

Figure 42

Plastic Cross member.

28.) Remove the existing Delivery Door by separating the door from the mounting hole in the Recovery Unit on one side as shown in Figure 43.



Delivery Door

Mounting hole in Recovery Unit

Figure 43

29.) Install the new Entry Segmented Delivery Assembly (645,071,50x.x3 provided in the kit) by first inserting the plastic leads into the existing Recovery Unit door alignment holes as shown.

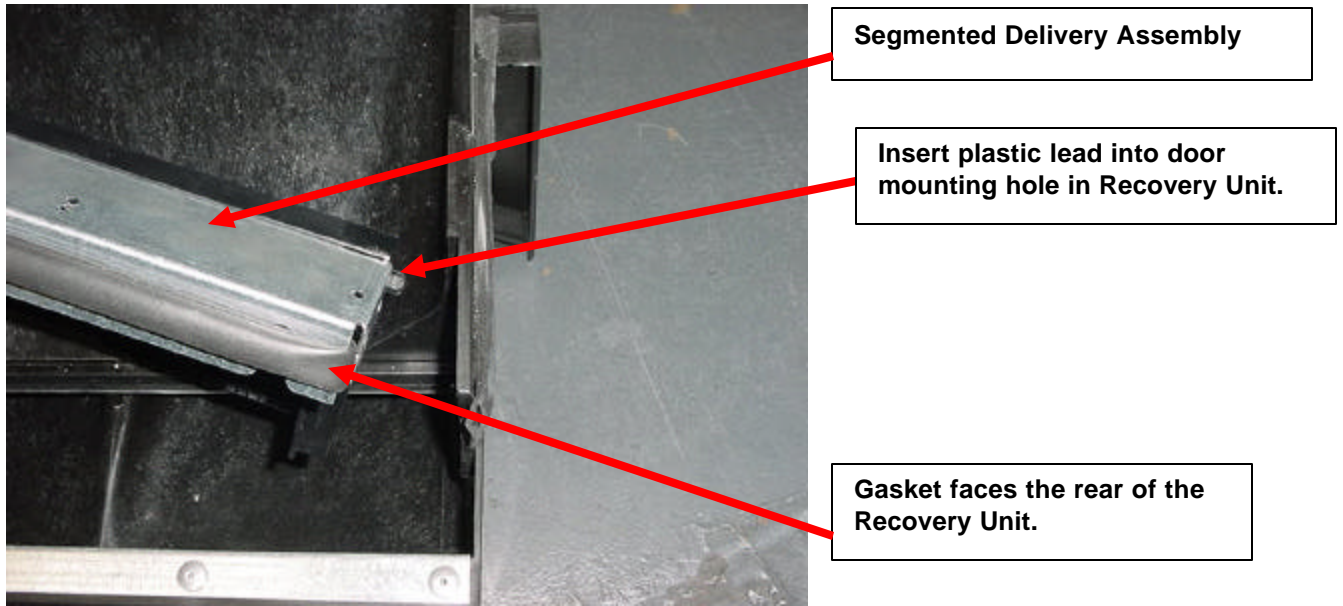


Figure 44

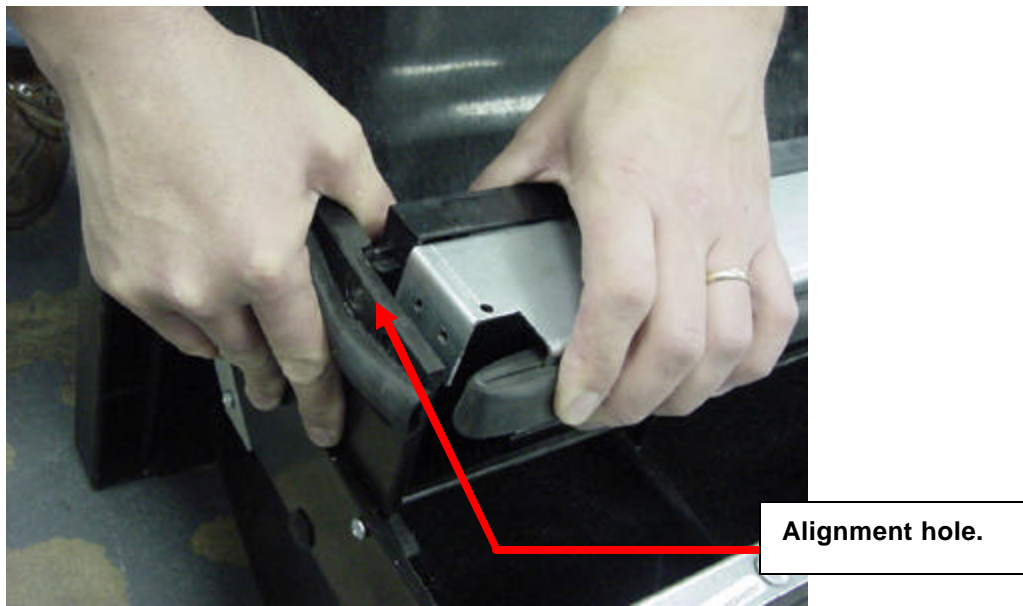
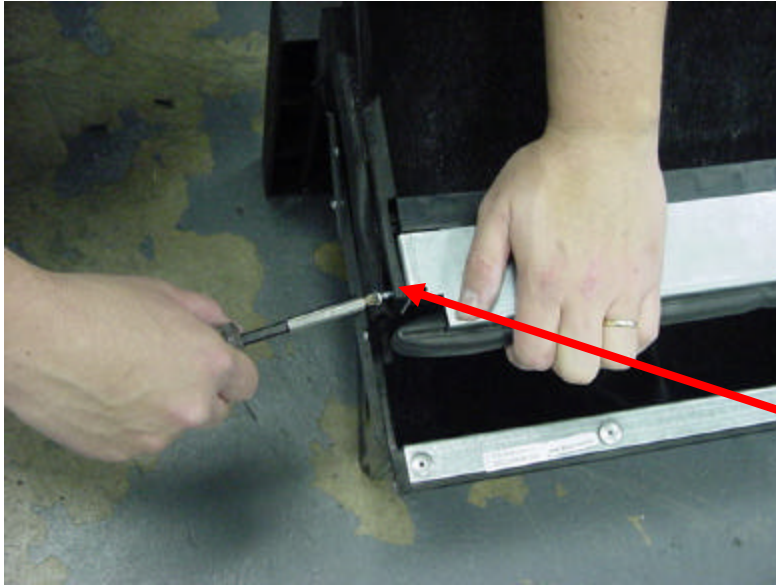


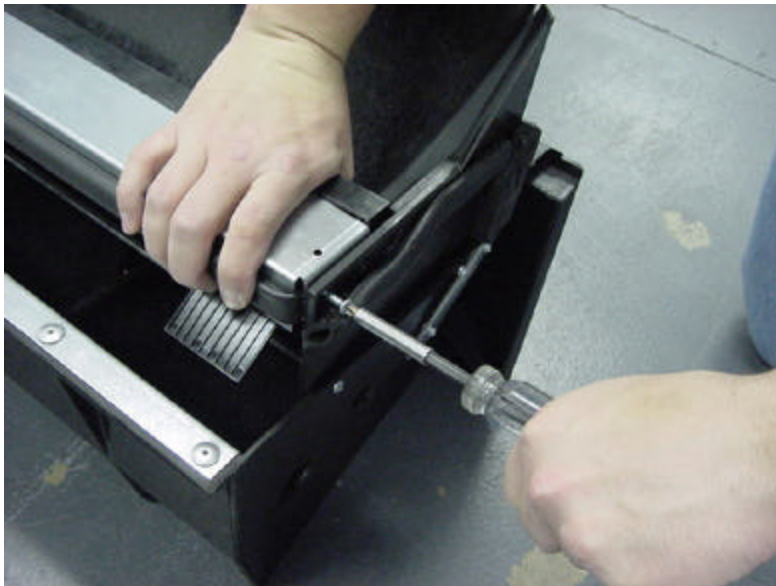
Figure 45

30.) Insert the two (2) screws (provided) in each side of the Recovery Unit (See Figures 46 & 47).



**Install two (2) screws on each side to mount new Entry Segmented Delivery Assembly.**

**Figure 46**

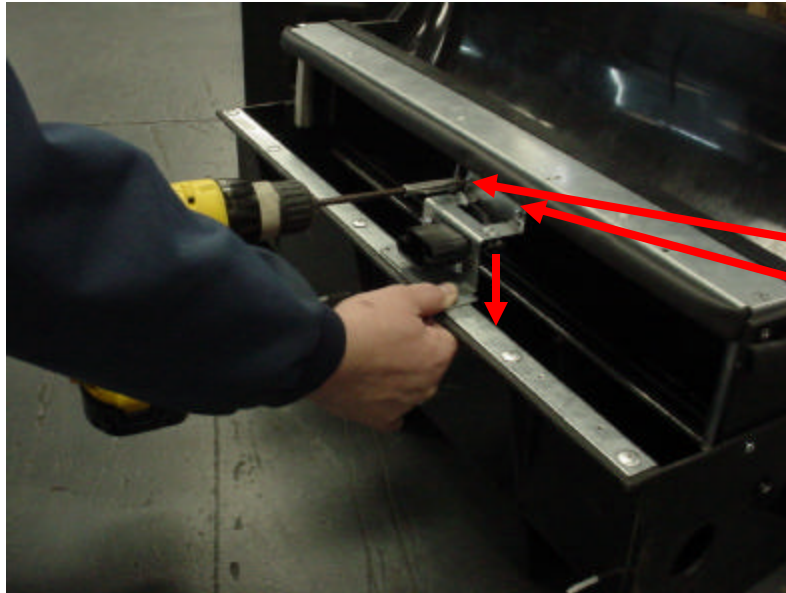


**Figure 47**

31.) If you have a No Vend Sensor Kit, go to step 42.



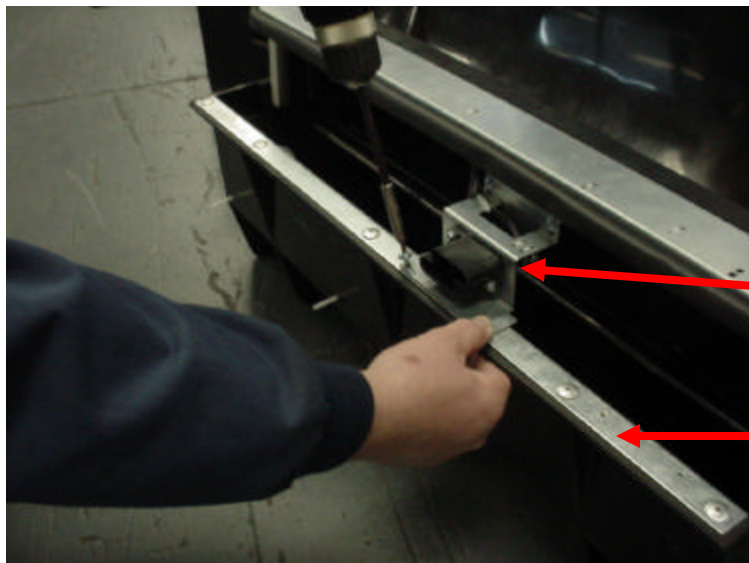
32.) Secure the Recovery Unit quick connect bracket (645,070,27x.x3) to the Recovery Unit as shown in Figures 48 & 49.



Slide Recovery Unit Bracket down to meet Recovery Unit Flange; next tighten the two (2) screws to the Entry Segmented Delivery Assembly.

Tighten two (2) screws to Entry Segmented Delivery Assembly.

Figure 48



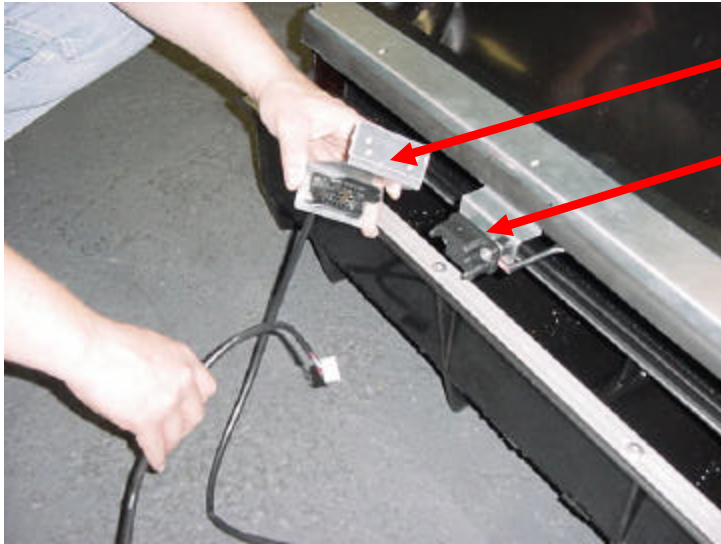
Drive two (2) self drilling screws which secure the Recovery Unit Bracket to the Recovery Unit Flange.

Recovery Unit Bracket

Recovery Unit Flange

Figure 49

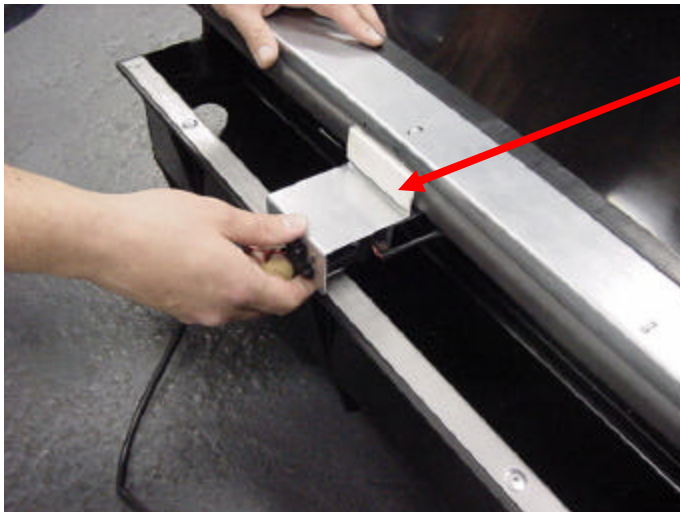
33.) Pre-mount the Cabinet Quick Connector (645,074,10x.x3 provided in kit) to the Recovery Unit Quick Connector as shown in Figures 50 thru 52.



**Cabinet Quick Connector**

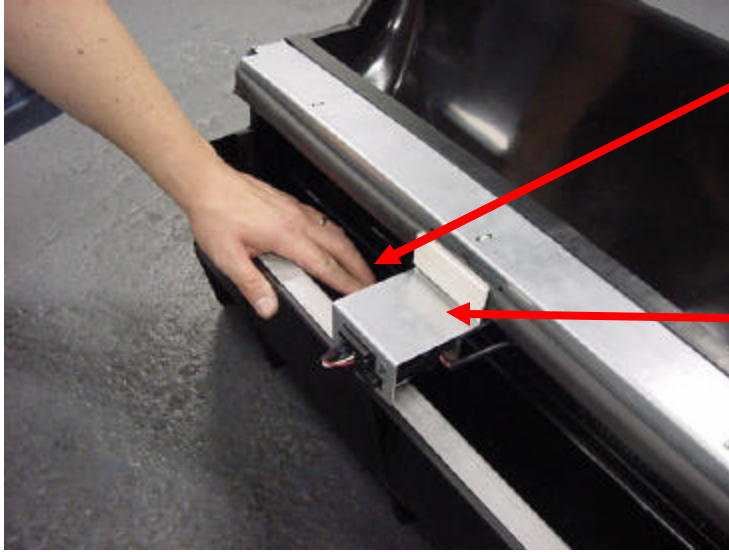
**Recovery Unit Quick Connector**

**Figure 50**



**Pre-mount connectors**

**Figure 51**

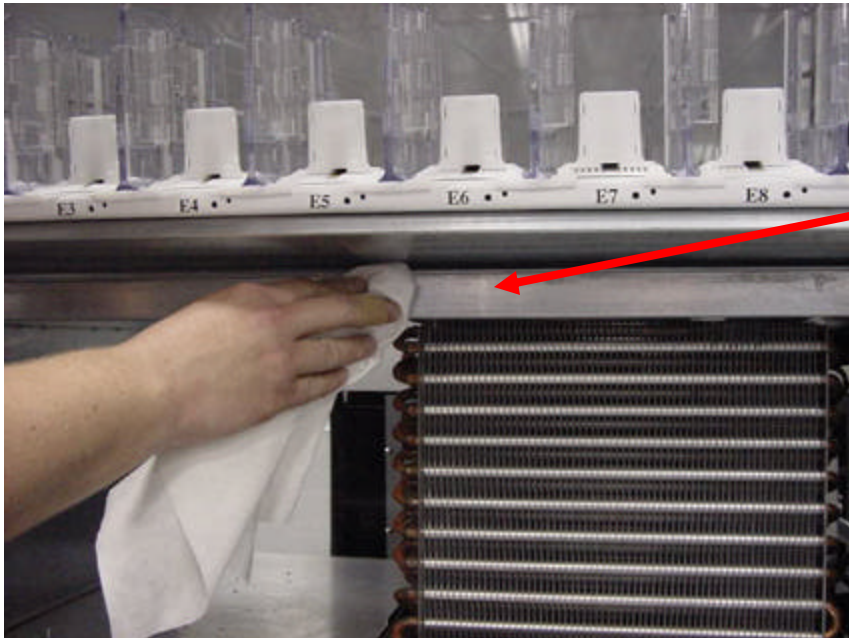


Store the excess connector harnessing in Recovery Unit temporarily.

Double faced tape will temporarily hold Cabinet Quick Connector in place in Cabinet at proper location until mounting screws can be used to hold Connector Bracket permanently (see step 36 and 37).

Figure 52

34.) Clean the face of the Cabinet Mullion (under the bottom drink tray and above the condenser).



Clean Mullion using a mild detergent. Make sure Mullion is free from dirt, tape, and gasket material.

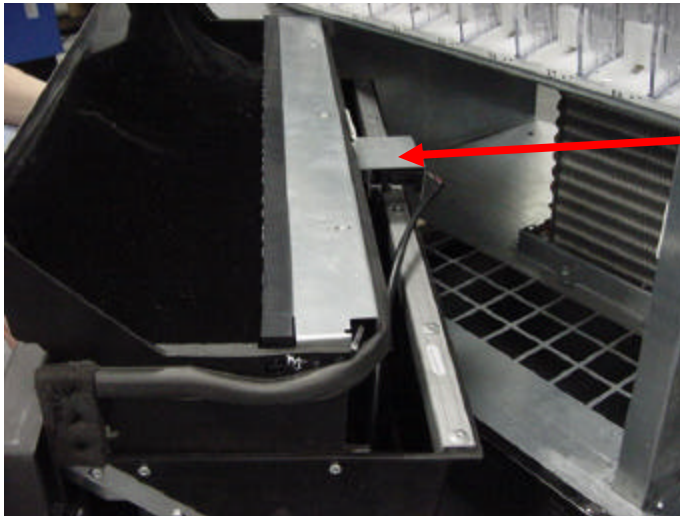
Figure 53

35.) Remove the double faced tape (803,601,25x.x1) on the Recovery Unit.



Figure 54

36.) Slide the Recovery Unit into place making sure the Cabinet Connector stays on the Recovery Unit Connector.



**Temporarily store excess Cabinet Connector harnessing in Recovery Unit before sliding Recovery Unit into place. Make sure the Cabinet Connector stays on the Recovery Unit Connector as you slide the Recovery Unit in place.**

Figure 55



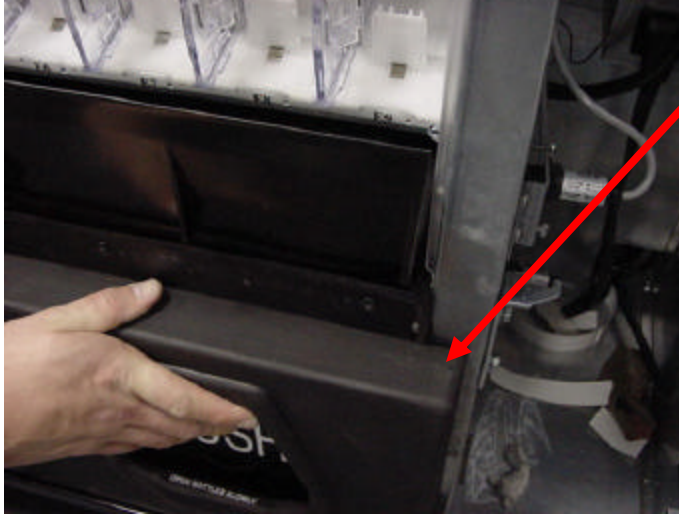


Figure 56

Slide the Recovery Unit into place. Press equally on both sides and hold firmly against the Cabinet Walls for 1 minute and then remove.



Figure 57

37.) The Cabinet Quick Connect will adhere to the Cabinet Mullion as shown.

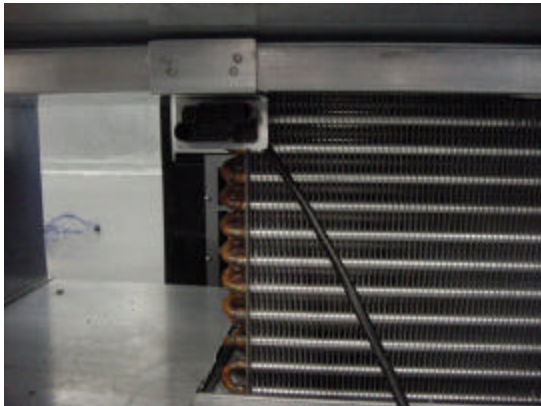


Figure 58

38.) Use power drill to install four (4) self-drilling (8-18x1/2) screws provided.

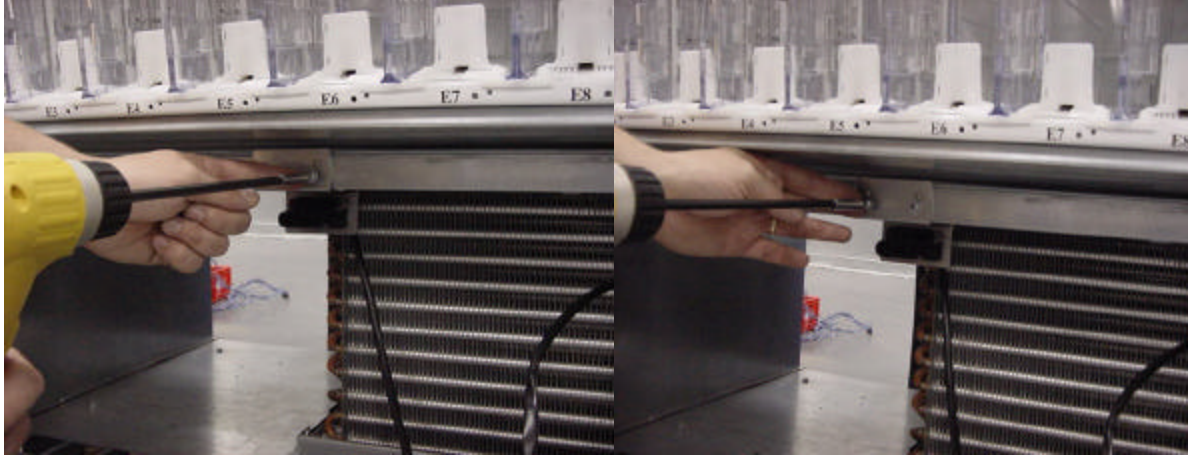


Figure 59

Figure 60

39.) Install the two (2) adhesive backed wire holders (18909040) between the Cabinet Quick Connector and the right side Cabinet Wall below the Mullion as shown in Figure 61. Location is approximate.

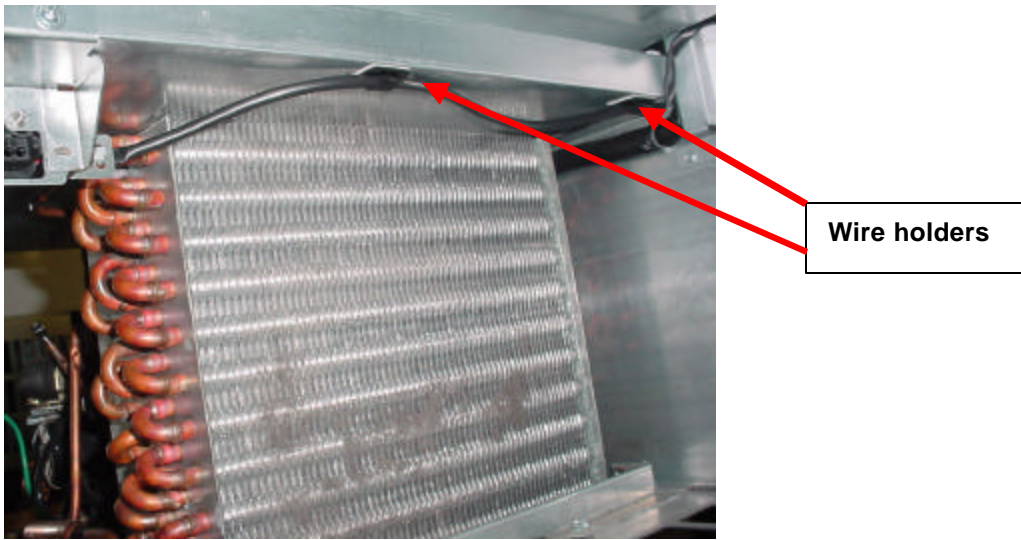


Figure 61

40.) Remove the Snap Ferrite from the Cabinet Quick Connect harness (it will be installed in step 43) and route the harness through the "E" Tray Harness hole similar to the way the Frame harness is routed as outlined in Figures 20 & 21.



Figure 62



Figure 63

Cabinet Quick Connect Harness

41.) Plug the Cabinet Quick Connect Harness into the Vend Sensor Connector on the Control Board (Reference Figure 27).



Figure 64



42.) Install the Control Board Cover and secure using the same screws when removed.

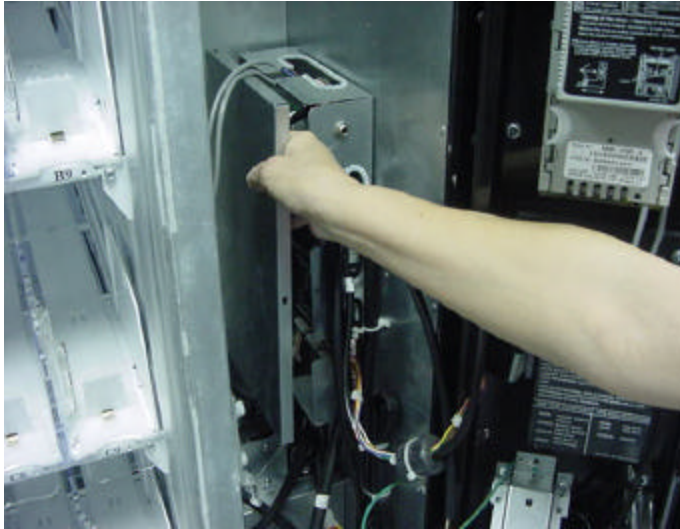


Figure 65

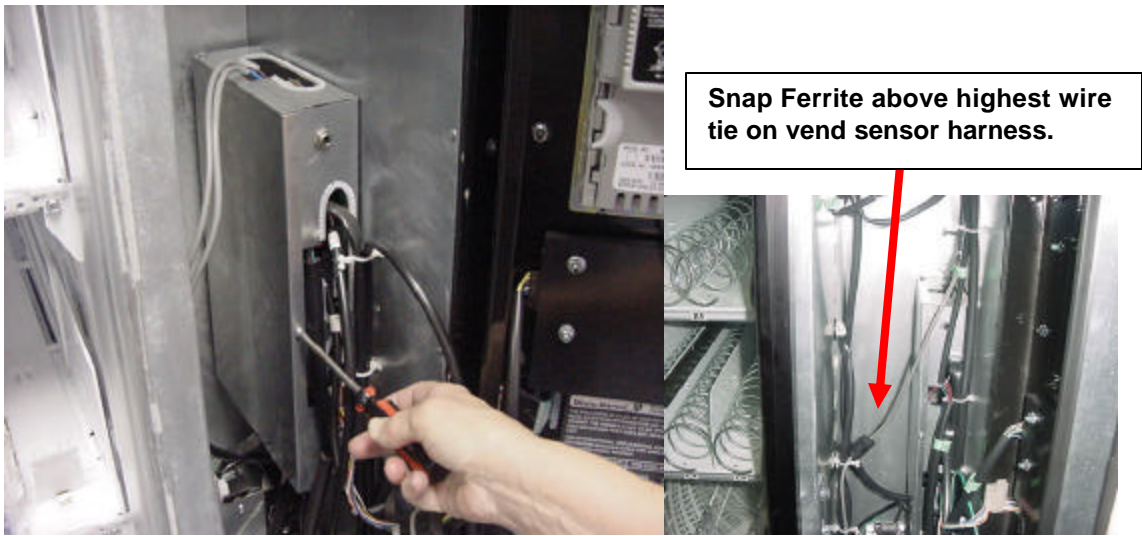


Figure 66

43.) Install a snap Ferrite above the highest wire tie on the vend sensor harness as shown in Figure 66.

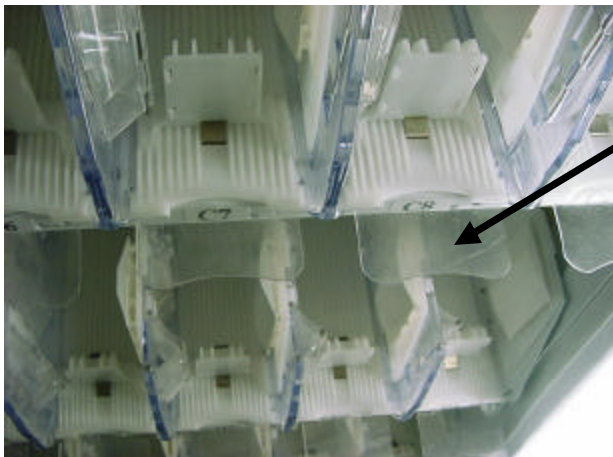


44.) Install the Recovery Unit in the Vender.



Figure 67

45.) Remove all stabilizers on remaining drink trays.



Stabilizer

Figure 68

46.) Close the vender doors, apply power to the vender, and test for proper operation.



Figure 69

47.) Converted DN55## with Entray Snack Trays shown below.



Figure 70

**NOTE: VERIFY PROPER OPERATION OF THE VENDING MACHINE BY LOADING WITH PRODUCTS AND VENDING EACH COLUMN.**