

**KIT PART NUMBER 1670030**  
**INSTRUCTIONS FOR INSTALLING THE SUREVEND™ KIT IN A**  
**SNACK MACHINE**

**CHECK THE PARTS RECEIVED IN THE KIT WITH THE PARTS LIST IN THESE INSTRUCTIONS. IF ANY PARTS ARE MISSING, CONTACT THE NATIONAL VENDORS PARTS DEPARTMENT IMMEDIATELY.**

**Read these instructions carefully before installing the kit.**  
**Keep these instructions for part numbers and for future reference.**

**THIS KIT CONTAINS THE FOLLOWING :**

<b>PART NUMBER</b>	<b>DESCRIPTION</b>	<b>QUANTITY</b>
1451097	SCREW - #8 - 32 X .31 HEX HD TF - BLK	1
1452139	RETAINER - HARNESS	3
1670024	SNACK/REFRESHMENT CENTER PROGRAMMING GUIDE	1
1670034	LABEL - SUREVEND LOGO - 3.75"WIDE	1
1670035	ALCOHOL WIPES - 1 7/8" X 3 3/8	2
1672029	SENSOR BRACKET - ASSEMBLY - LT - SURE VEND	1
1672032	SENSOR BRACKET ASSEMBLY - RT - SURE VEND	1
1672038	DEFLECTOR - INNER - RH - FLT "T" BLK	1
1672039	DEFLECTOR - INNER - LH - FLT "T" BLK	1
1672043	COVER - PCB - LH	1
1672044	COVER - PCB - RH	1
1672050	PAPER BACKING - LT. PCB - SURE VEND	1
1672051	PAPER BACKING - RT. PCB - SURE VEND	1
1672052	LABEL - GUM & MINT - MATTE	1
1672054	FILLER ASSEMBLY - LT - DEL PAN	1
1672055	FILLER - RT - DEL. PAN	1
1672056	PRODUCT DEFLECTOR ASSY - RH - SUREVEND (38" CABINET ONLY)	1
1675002	INSERT - INSTR - UPPER - SUREVEND	1
1676000	PCB ASSEMBLY - PRODUCT DET. - RECEIVER	1
1676001	PCB ASSEMBLY - PRODUCT DET. - EMITTER	1
1679012	HARNESS - MAIN CONTROLLER TO SENSOR	1
1679013	HARNESS - EMITTER TO DETECTOR	1
1681058	DEFLECTOR - UPPER LHS - PLASTIC	1
1682054	PRODUCT DEFLECTOR ASSEMBLY - RH SUREVEND (32" CABINET ONLY)	1
2342044	CLIP - CHRISTMAS TREE	2
4042121	WIRE TIE - #PLT1M - M20	1
4721035	SCREW - #8-18 X .38	1
4732024	RETAINER - HARNESS	4
5262216	SCREW - #6 - 32 X 1/4" PPHD M SCR.	10
7971014	OVERLAY NON - REFL UPPER DEFLECTOR	1
7971015	OVERLAY NON - REFL LOWER PILFER DR	1
9900081	NUT - # 8 - 32 - KEPS ZINC PLATE	2
9900207	NUT - 10 - 32 SELF LOCKING	1
P1676002	EPROM ASSEMBLY - SUREVEND	1

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### Proceed as follows:

1. Turn the machine power switch OFF and disconnect the machine from electrical source.
2. Attach plastic deflector 1681058 to the cabinet wall with the christmas tree clips 2342044 as shown (figure 2).
3. Remove and discard all product deflectors as shown (figure 3).
4. Thoroughly clean the shaded areas shown (figure 3) with the alcohol wipes provided. After removing all grease and dirt on these parts, apply the black overlays to these areas as described in the illustration. Cut the overlays to length along the clear lines according to the width of your delivery pans.
5. According to the model you have, remove any existing filler assemblies or gum and mint module mounting hardware.
6. Remove the screws holding the upper deflector, but leave the part resting in place (figure 3).
7. Loosely attach the left and right sensor bracket assemblies and the new inner deflectors to the delivery pan sides, (figures 4 and 5). **VERY IMPORTANT:** align the lower hole of the bracket as shown to the hole in the side of the delivery pan and tighten the screws on the sides of the delivery pan (figures 4 and 5).
8. Attach the front of each sensor bracket and the upper deflector to the door (figures 4 and 5).
9. Attach the new filler assembly or gum and mint mounting hardware to the delivery pan, (figures 9 through 11). **NOTE:** for the 167 gum and mint module, use the thinner #10 lock nut 9900207 to reattach the module on the bracket side.
10. Route the wiring along and under the delivery pan with the harness clips as shown (figures 6 and 7). Bundle any excess harnessing under the delivery pan with a wire tie (figure 8).
11. ***Plug the machine back into the electrical service (this grounds the machine for the maximum protection against electrostatic discharge).*** Wearing electrostatic discharge protection, attach the left and right sensors assemblies and paper backing to the left and right brackets with the (10) #6 -32 screws provided (figures 4 and 5).
12. Attach the left and right PCB covers to the brackets (figures 4 and 5). Connect the black emitter to detector harness wire to the two sensor boards.
13. Connect the gray main controller to sensors harness wire to the main controller board connector J34 (figure 1) and route it inside the cabinet, making sure it is clear of any moving parts. Connect the harness wire to the sensor board as shown (figure 7). Route the harness wire into the harness clips along the delivery pan.
14. Wearing electro-static discharge protection, carefully remove the current EPROM and replace with the new EPROM per the instructions beginning on the next page.



# CAUTION



## PREVENTING CIRCUIT DAMAGE FROM ELECTROSTATIC DISCHARGE

Electronic printed circuit board assemblies are susceptible to physical damage, for example, broken components due to rough handling. In addition, printed circuit board assemblies (and their components, such as EPROMs) are subject to damage by various types of static electricity. Damage of this type is called **ELECTROSTATIC DISCHARGE (ESD)**. ESD can cause immediate damage to components on a circuit board assembly, or it can weaken them to the point where the damage will show up days, weeks, or months later.

### PRECAUTIONS TO TAKE WHEN HANDLING PCB ASSEMBLIES

1. The PCB assembly is usually shipped in a cardboard shipping carton to prevent physical damage. Inside the carton, the PCB was placed in 1 of 3 types of closed protective bags: black translucent, smoked gray transparent, or pink transparent.
2. For storage, the best protection for the assembly is to leave it in its shipping carton. If it is removed from the carton, leave the assembly in its **CLOSED storage bag while transporting, or until it is ready to be installed in a machine.**
3. Before handling the PCB assembly, be sure you are wearing a conductive wrist strap or other suitable ESD protective device. The conductive wrist strap should be connected to ground in the machine. This can be any **PLATED exposed metal part. DO NOT CONNECT YOUR WRIST STRAP TO A PAINTED PART.**
4. Remove the new PCB assembly from its bag. Set the PCB assembly on top of the bag on a flat surface while you remove the old PCB assembly from the machine.
5. Pick up the new PCB assembly and set the old one down on the protective bag. Install the new PCB assembly in the machine.
6. Insert the old PCB assembly into the protective bag. Seal the bag.
7. If the old PCB assembly is to be returned to National Vendors, it is best to ship it in the same shipping carton you received with the new PCB assembly.

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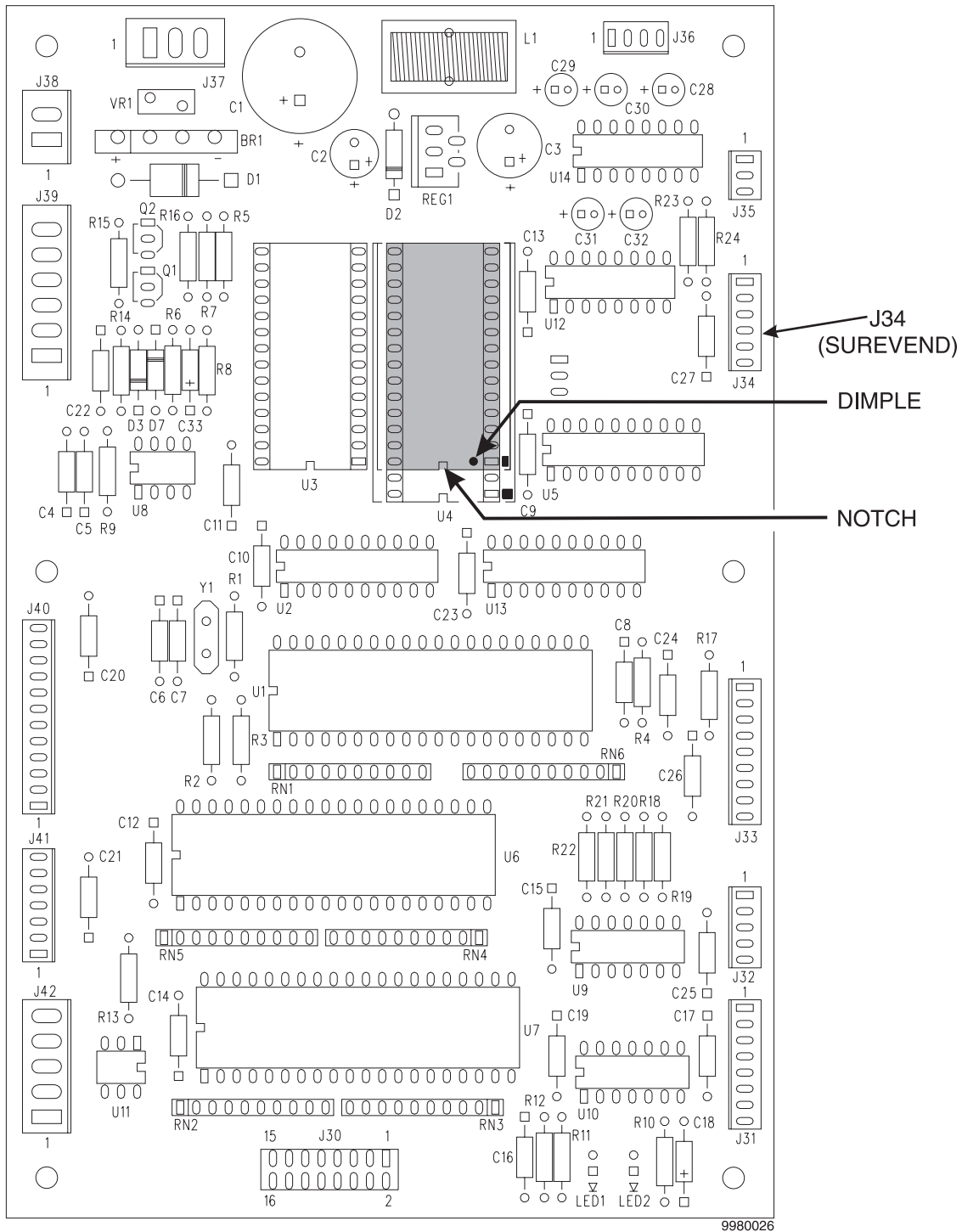
**CAUTION**

*Do not remove the new EPROM from its shipping carton until you are ready to use it.*

**CAUTION**

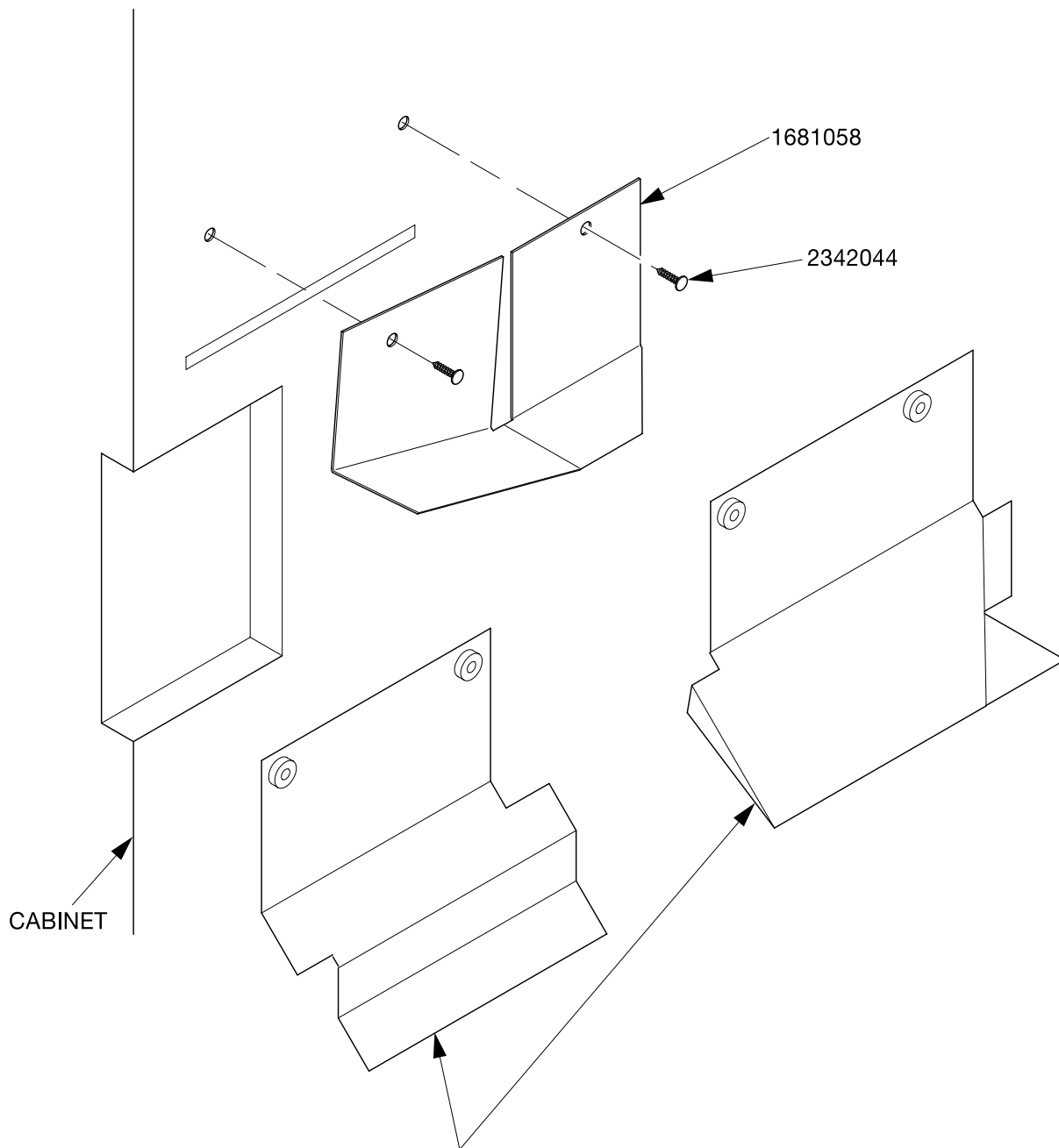
*Observe electrostatic discharge precautions to protect the electronics from damage while they are being handled. Wear a grounded wrist strap connected to any unpainted metal part of the machine. If a wrist strap is not available, remove any electrostatic charge (static electricity) from yourself by touching any unpainted metal part of the machine before handling any electronic component. Do this often during the removal and installation process.*

- a. On figure 1, see the shaded area representing EPROM U4. These devices have various means of showing how they are to be oriented on the circuit board. Some EPROMs will have a small notch which matches the notch printed on the controller board. Other EPROMs may have a small dimple as shown, others may have a painted stripe. Take note of where the locating mark is on the EPROM currently mounted on the controller board. Your new EPROM will be placed in that same orientation. Some EPROMs have 28 pins, so it does not use the entire socket. The shaded area on the figure is where the new EPROM will go, leaving the four holes at the bottom of the socket empty.
- b. Carefully remove the old EPROM from the controller board. Use an EPROM removal tool or a thin tool such as a small screwdriver or knife blade to gently rock the EPROM from its socket.
- c. Carefully insert the new EPROM in the controller board. **MAKE SURE THE LOCATING MARK (NOTCH, DIMPLE, STRIPE) ON THE EPROM IS FACING THE SAME WAY AS ON THE OLD EPROM!** Make sure each of the pins is in its respective hole in the socket before pushing the EPROM into place.
- d. Carefully seat the EPROM into place using uniform pressure all around.



**Figure 1. Controller Card Showing the Location of EPROM U4**

- e. Replace all items you removed.
  - f. Turn the machine power ON.
15. Power up the machine. You are now ready to check the sensors in the diagnostics mode (refer to the *Programming Guide*).



CABINET

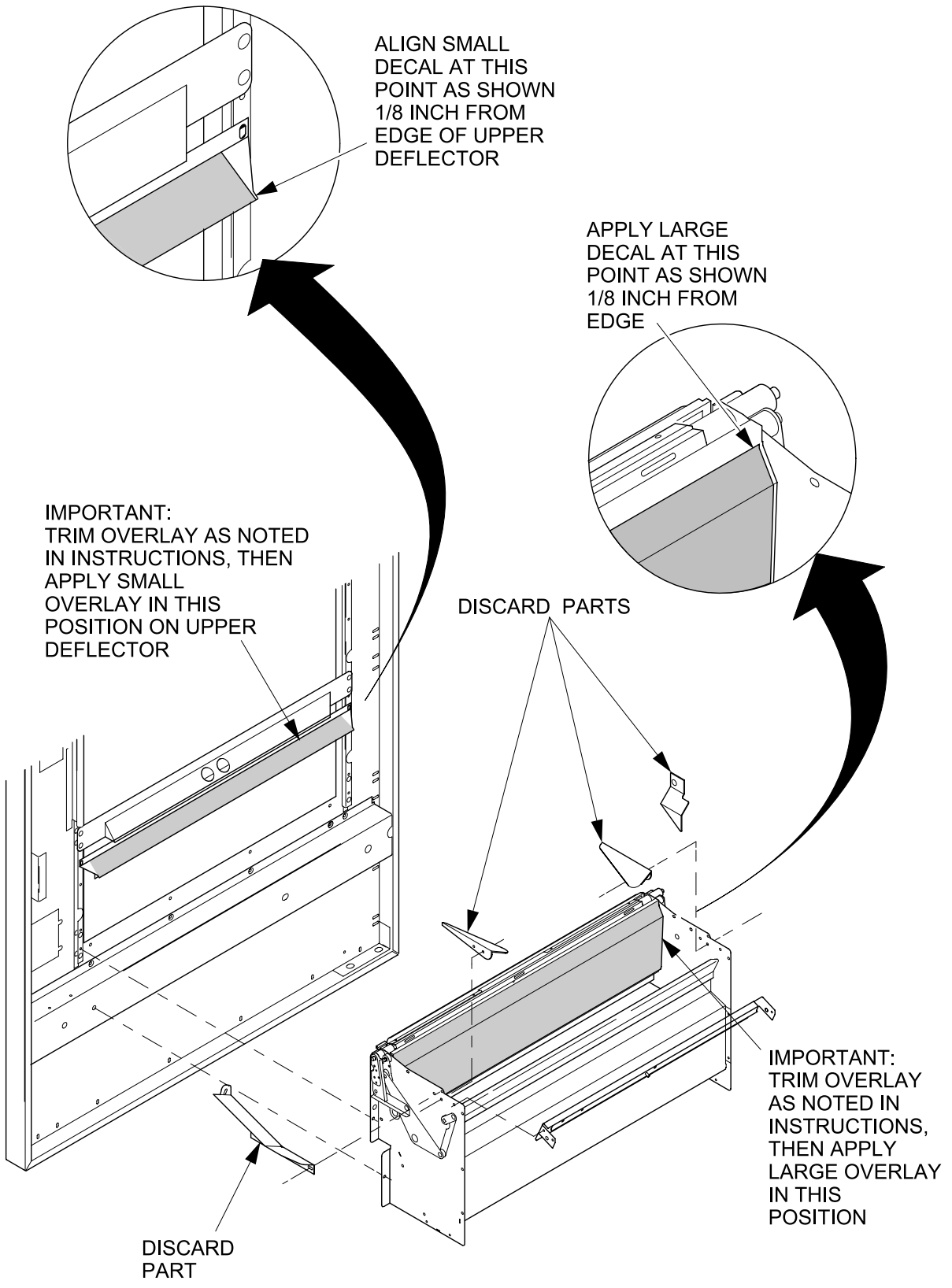
1681058

2342044

REMOVE AND DISCARD  
 DEFLECTOR STYLE THAT  
 IS ON MACHINE FROM  
 SIDE OF CABINET AND  
 REPLACE WITH 1681058

167pk019

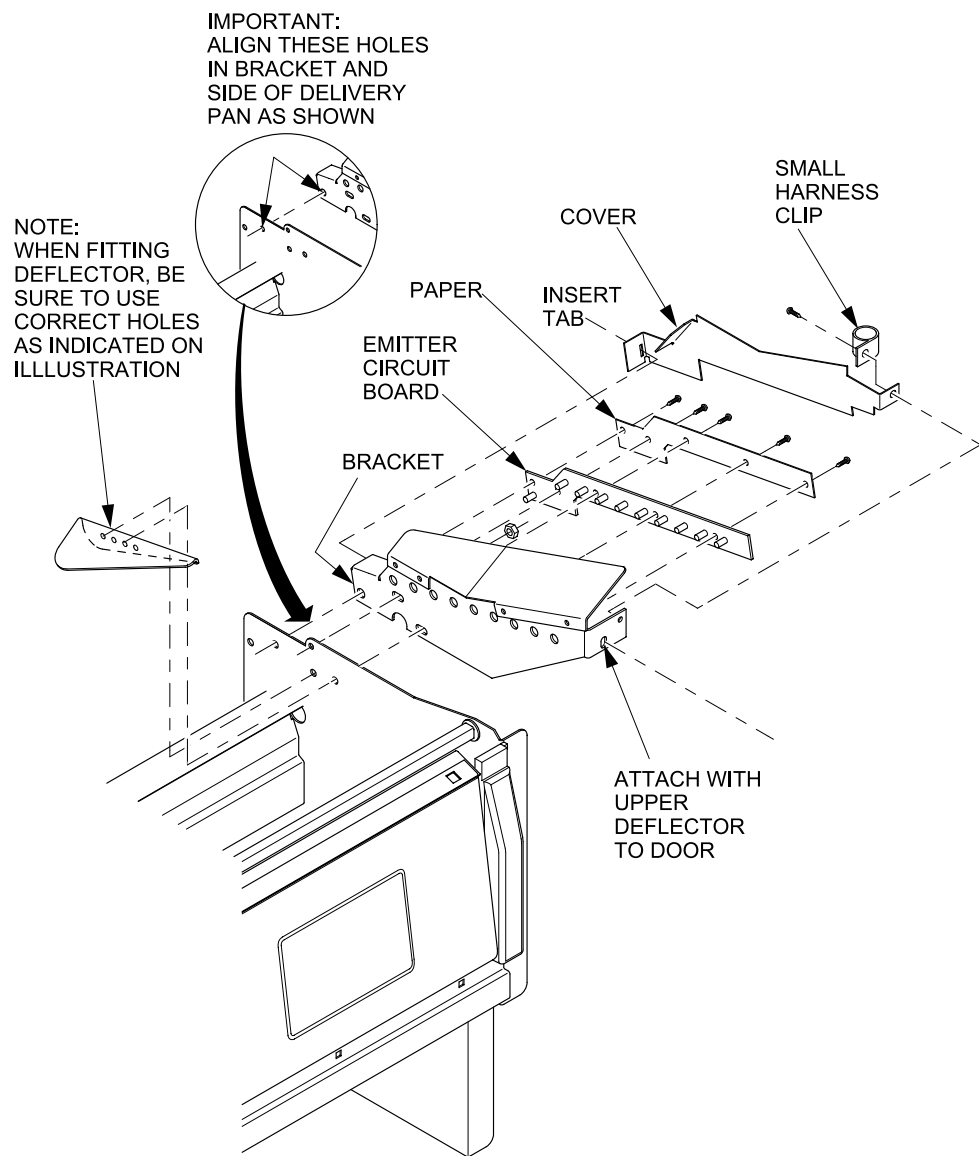
Figure 2



DELIVERY PAN SHOWN REMOVED FOR CLARITY ONLY

167pk020

Figure 3

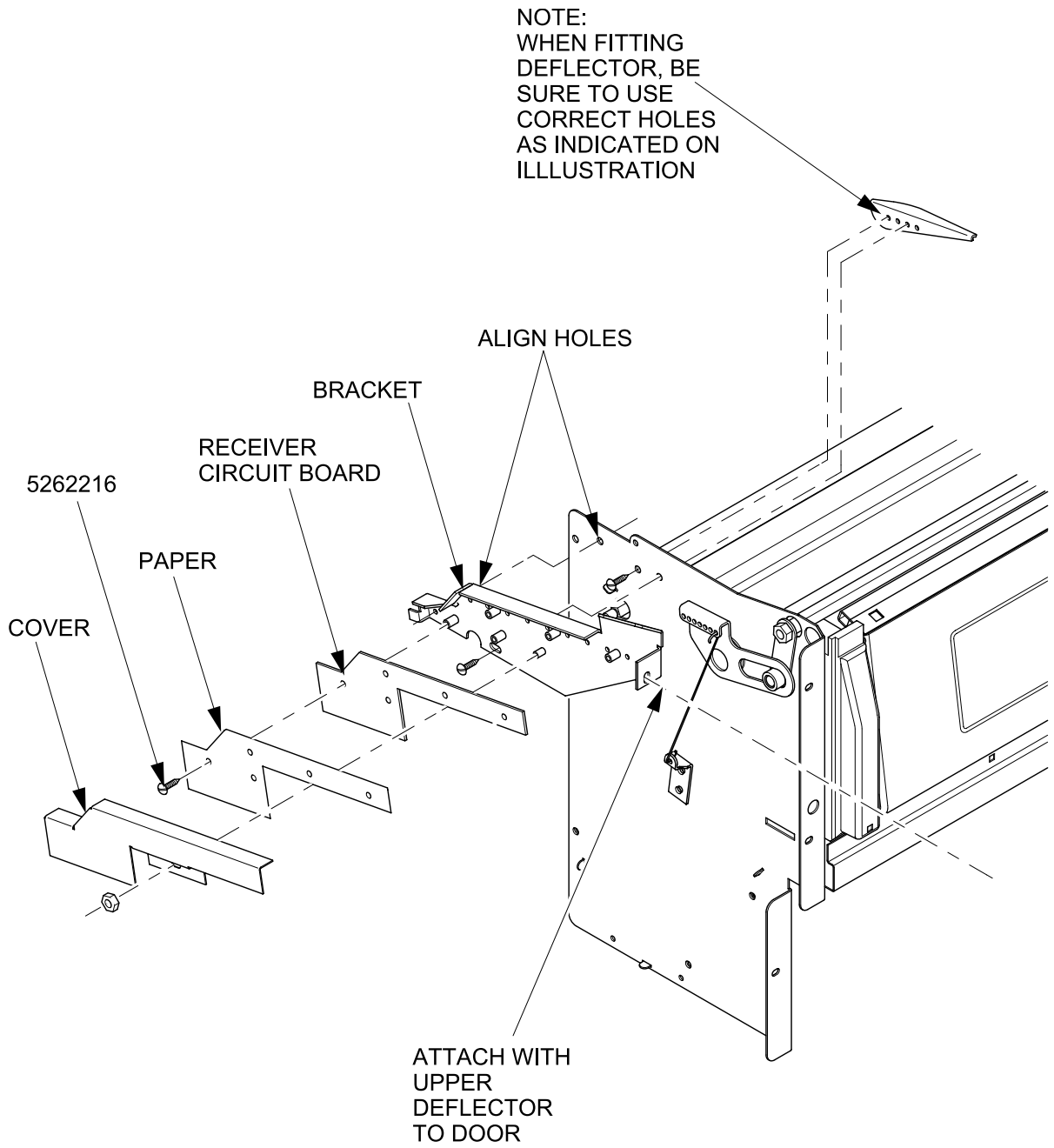


167pk021

LOCK SIDE OF DOOR

Figure 4

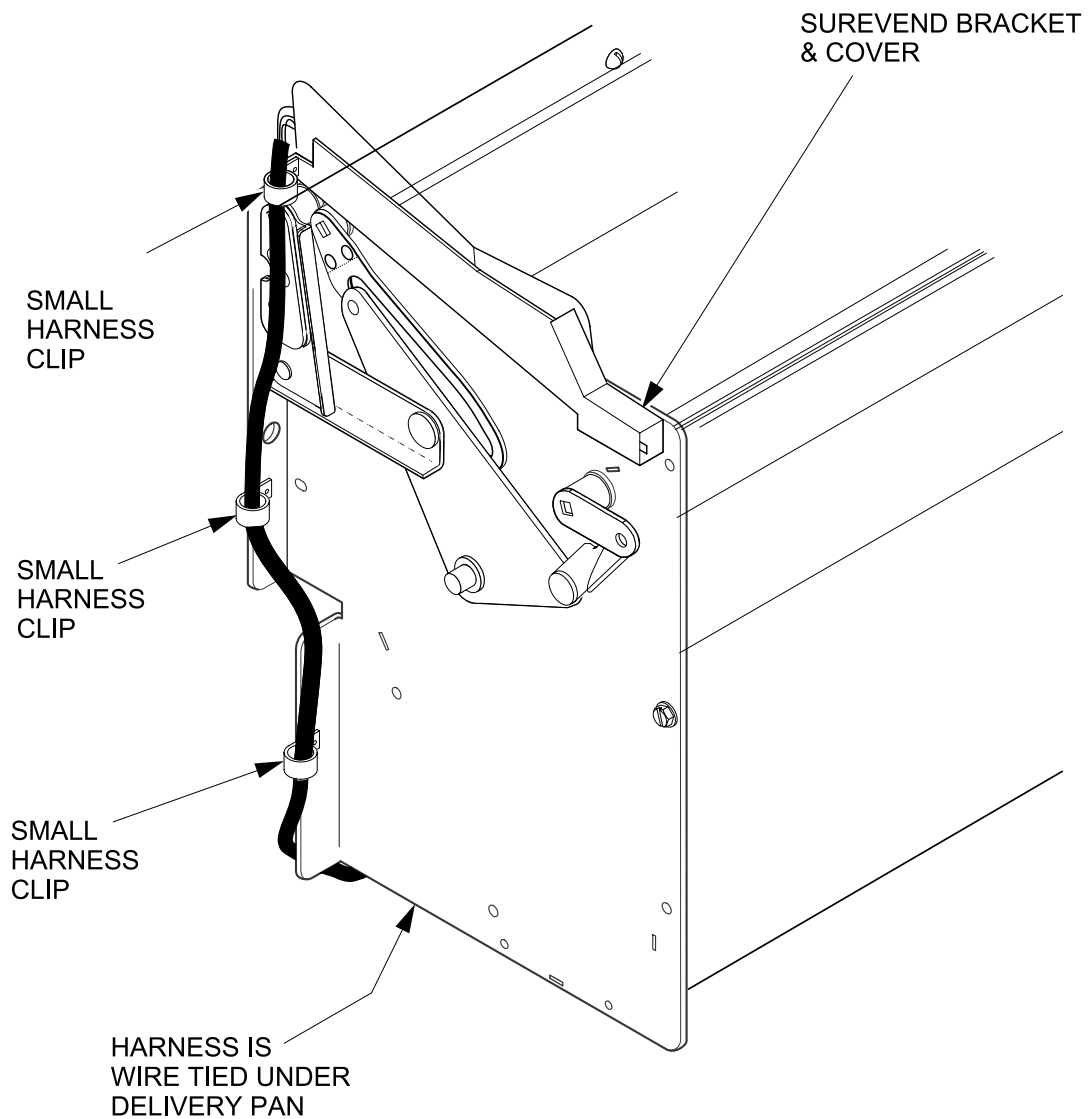




167pk022

HINGE SIDE OF DOOR

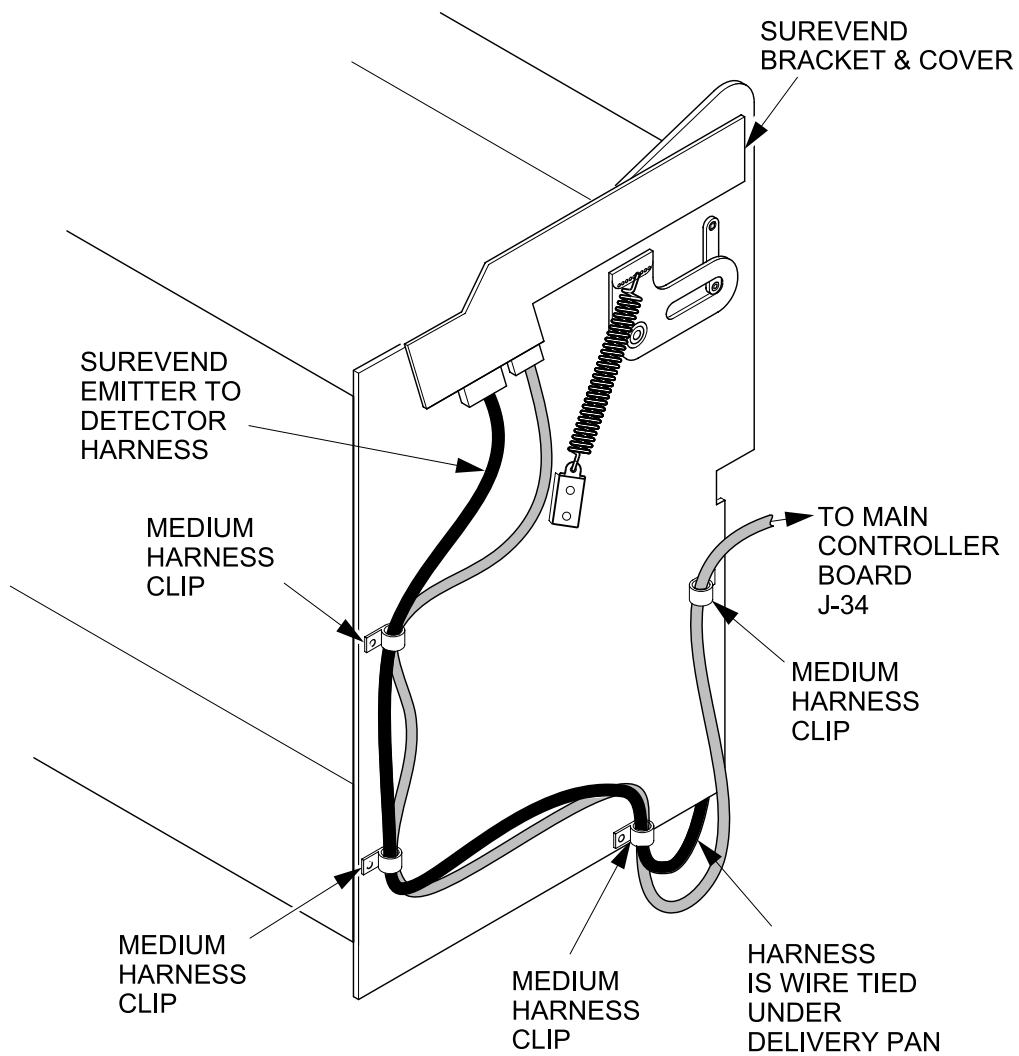
Figure 5



LOCK SIDE VIEWED FROM THE INTERIOR OF DOOR

167pk023

Figure 6



HINGE SIDE OF DELIVERY PAN  
VIEWED FROM THE INTERIOR  
OF DOOR

167pk024

Figure 7

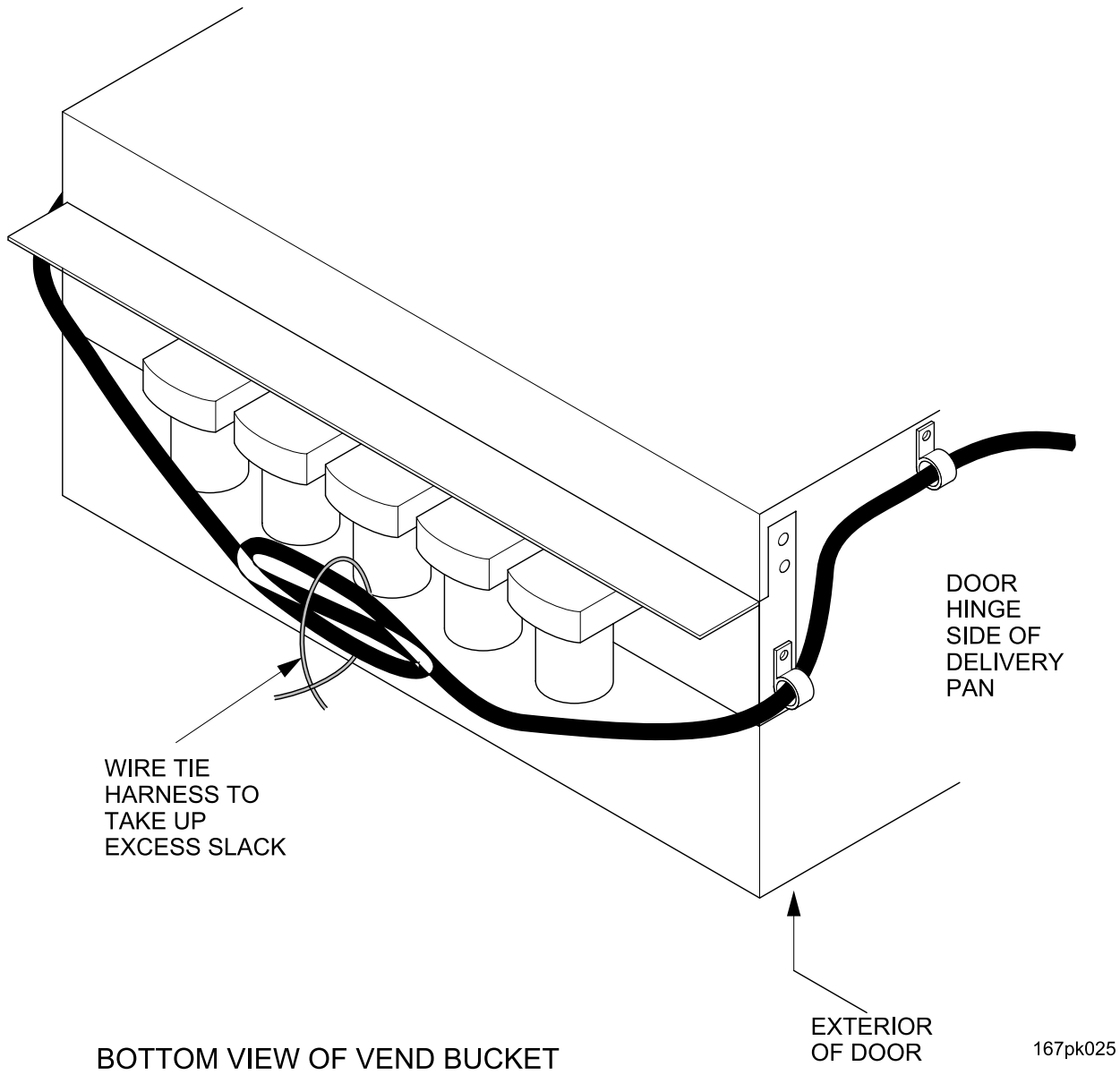
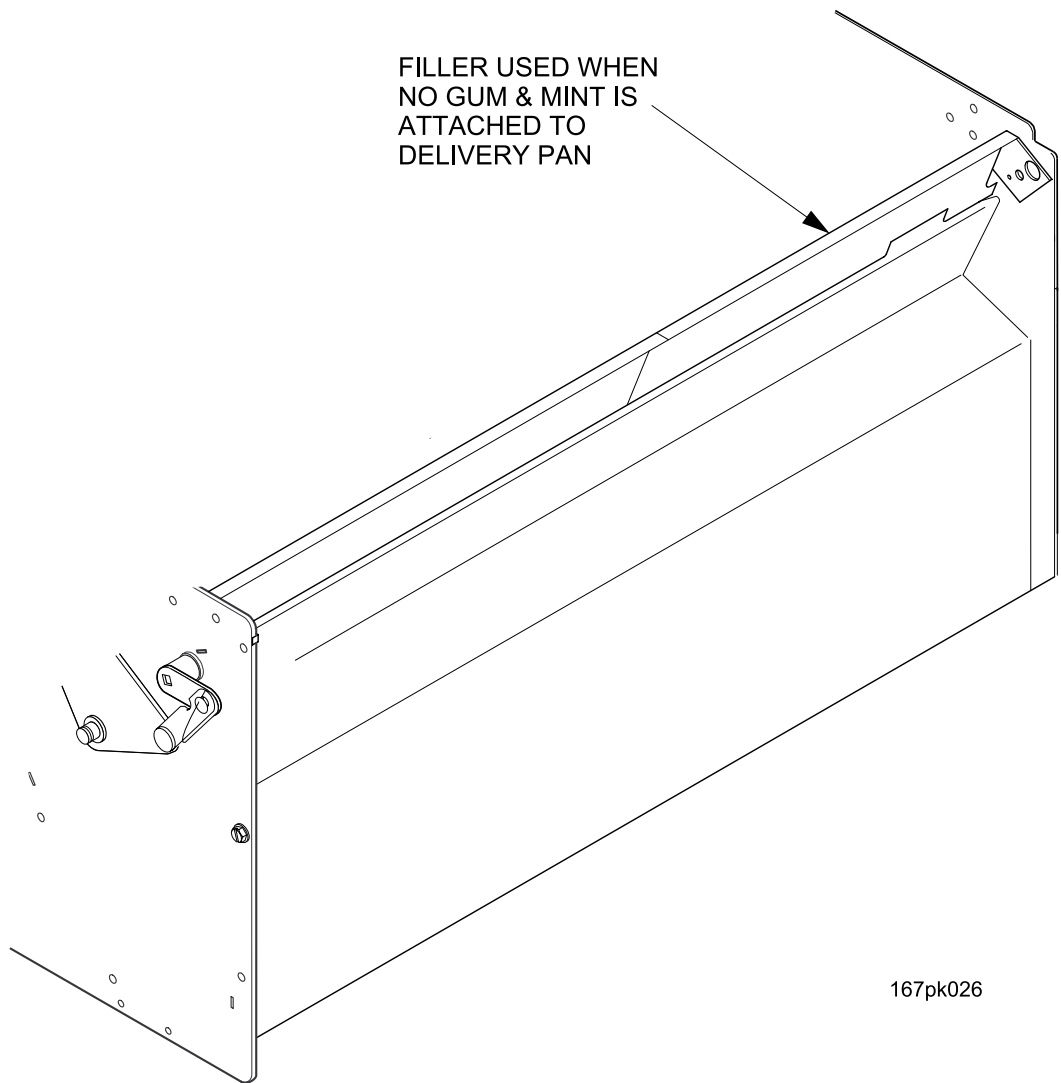


Figure 8



**Figure 9**

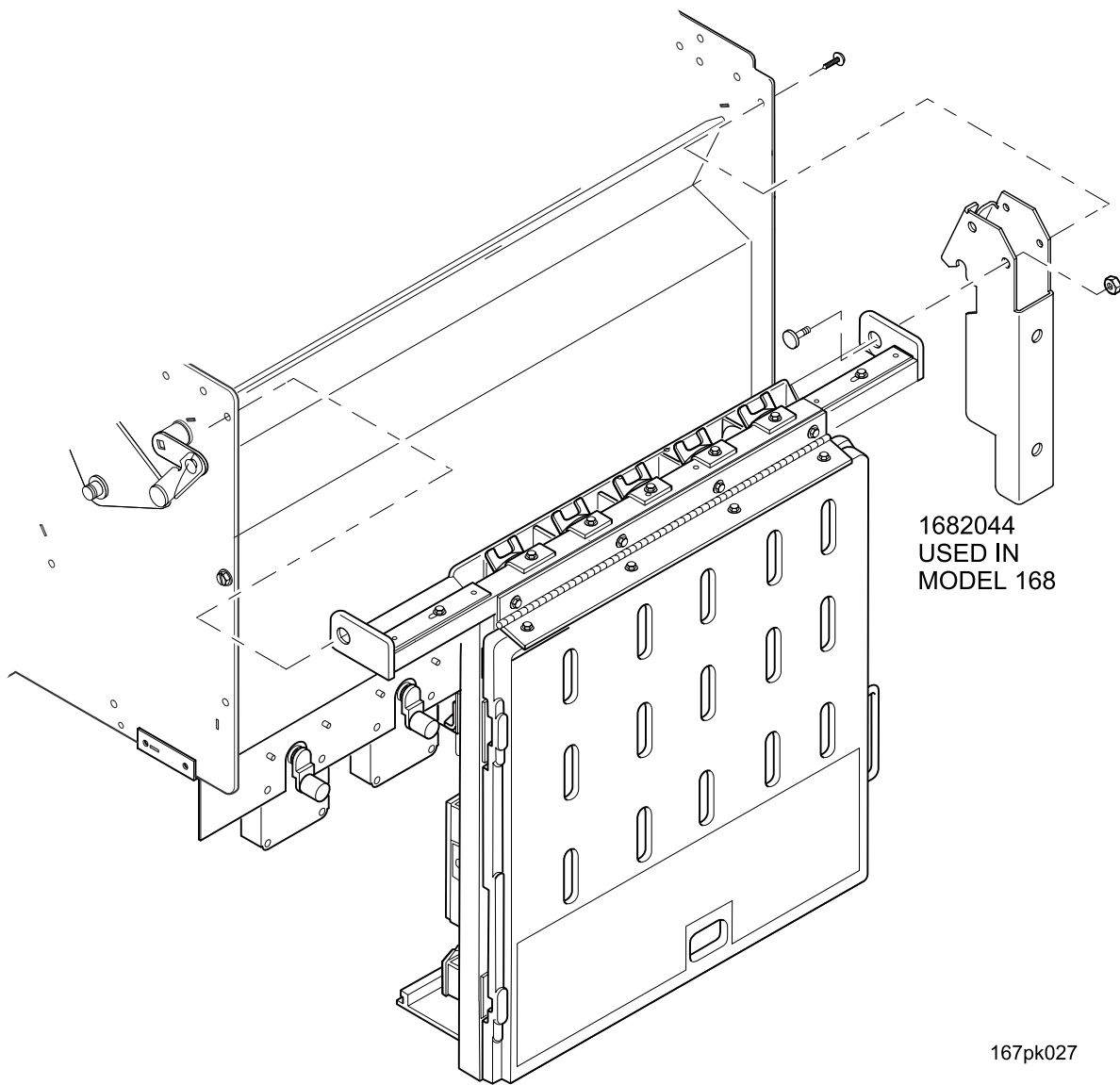


Figure 10

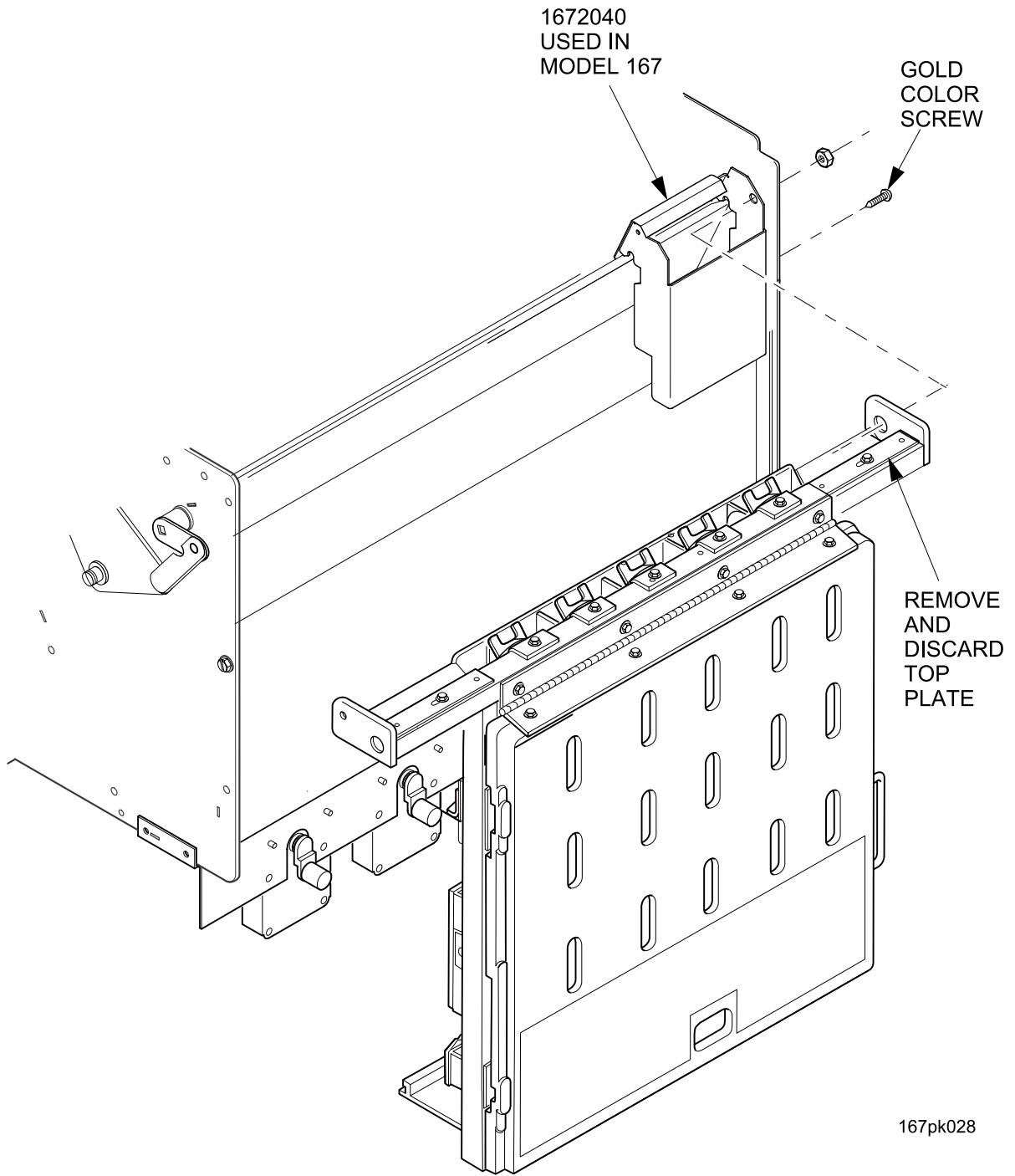


Figure 11