
DOCUMENT 1570146

INSTRUCTIONS FOR INSTALLING THE SUREVEND™ KIT IN A 157 SNACK MACHINE

CHECK THE PARTS RECEIVED IN THIS KIT WITH THE PARTS LIST IN THESE INSTRUCTIONS. IF ANY PARTS ARE MISSING CONTACT THE CRANE MERCHANDISING SYSTEMS' PARTS DEPARTMENT AT 1-800-621-7278.

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

THIS KIT CONTAINS THE FOLLOWING: Proceed as follows:

PART NUMBER	DESCRIPTION	QTY
1451097	SCREW - #8 - 32 X .31 HEX HD TF - BLK	2
1452139	RETAINER - HARNESS	3
1471099	BAG - POLYETHYLENE	1
1670024	SNACK/REFRESHMENT CENTER PROGRAMMING GUIDE	1
1670035	ALCOHOL WIPES - 1 7/8" X 3 3/8	2
1570146	INSTRUCTIONS - SUREVEND KIT	1
1572464	SENSOR BRKT ASSY-L.H.-SUREVEND	1
1572467	SENSOR BRKT ASSY-R.H.-SUREVEND	1
1572471	FILLER-G&M-LARGE	2
1572470	EXTENSION-PRODUCT DEFLECTOR-RH	1
1572466	COVER-PCB-LH-SUREVEND	1
1572469	COVER-PCB-RH-SUREVEND	1
1582243	FILLER-G&M-SMALL-L.H.	1
1582244	FILLER-G&M-SMALL-R.H.	1
1672052	LABEL - GUM & MINT - MATTE	1
1582242	EXTENSION-PRODUCT DEFLECTOR-LH	1
1675006	INSERT - INSTRUCTIONS - UPPER - SUREVEND	1
CURRENT	PCB ASSEMBLY - PRODUCT DETECTION - RECEIVER	1
CURRENT	PCB ASSEMBLY - PRODUCT DETECTION - LED (W/EPOXY)	1
1679012	HARNESS - MAIN CONTROLLER TO SENSOR	1
1679013	HARNESS - EMITTER TO DETECTOR	1
2351027	PLASTIC BAG - 12X20	1
2360036	BAG PACKING	1

PART NUMBER	DESCRIPTION	QTY
CURRENT	IC ASSY - VERSION - SNACK	1
4042121	WIRE TIE - #PLT1M - M20	1
5262216	SCREW - #6 - 32 X 1/4" PPHD M SCR.	10
7971014	OVERLAY NON - REFLECTIVE UPPER DEFLECTOR	2
1170206	SCREW-#8-32X3/8 PHILLIPS TRUSS	7
9900081	NUT - # 8 - 32 - KEPS ZINC PLATE	7
9900207	NUT #10-32 SELF-LOCKING	1
9900078	NUT #6-32 KEPS ZINC PLATE	1
9900179	SCREW #6-32 X 5/16 THS	1
1679054	HARNESS-"MDB" COIN & VAL.	1
1679056	HARNESS-DEX INTERFACE	1

Note:

If your machine has a 4-arrow keypad, you need to order a new keypad part #6335002.

1. Turn the machine power switch OFF and disconnect the machine from electrical source.
2. Remove and discard all deflectors as shown in Figure 1. Thoroughly clean the shaded area shown with the alcohol wipes provided. After removing all grease and dirt on this part, apply the black overlay to the area as shown in the illustration. Cut the overlay to length along the clear lines according to the width of your delivery pan.

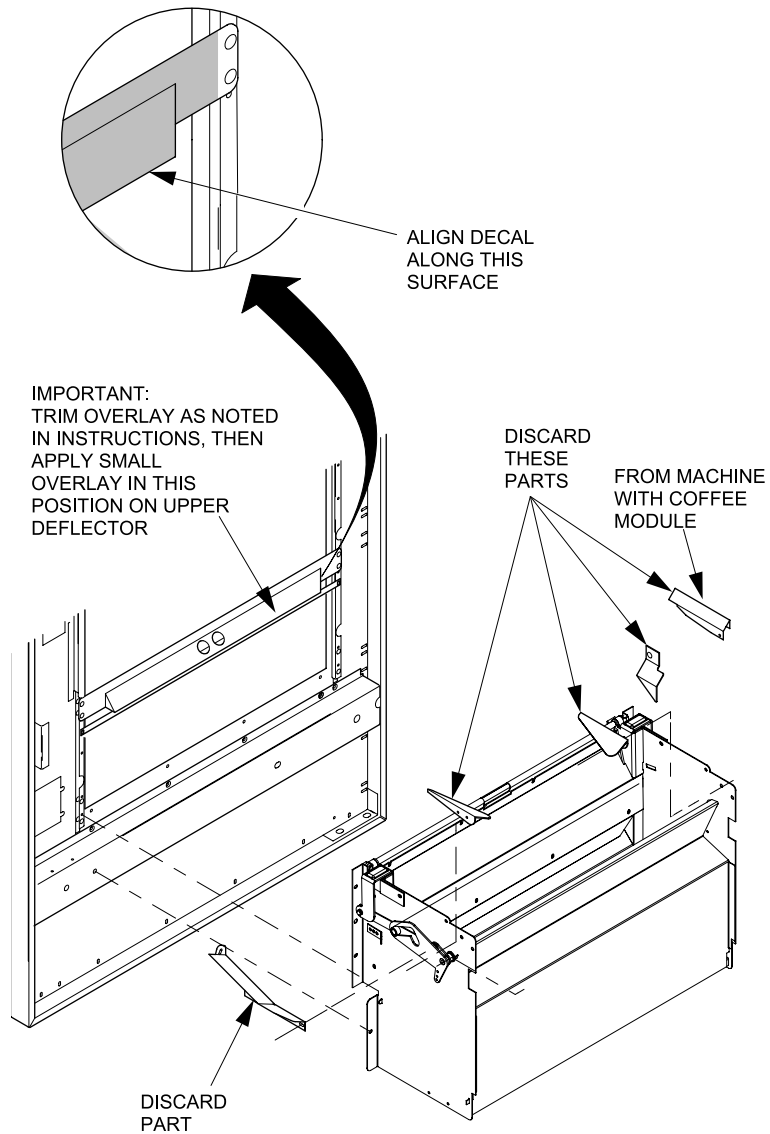


Figure 1

3. Loosely attach the left and right sensor bracket assemblies and the new inner deflectors to the delivery pan sides using part #1170206 and part #9900081 as shown below. **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.

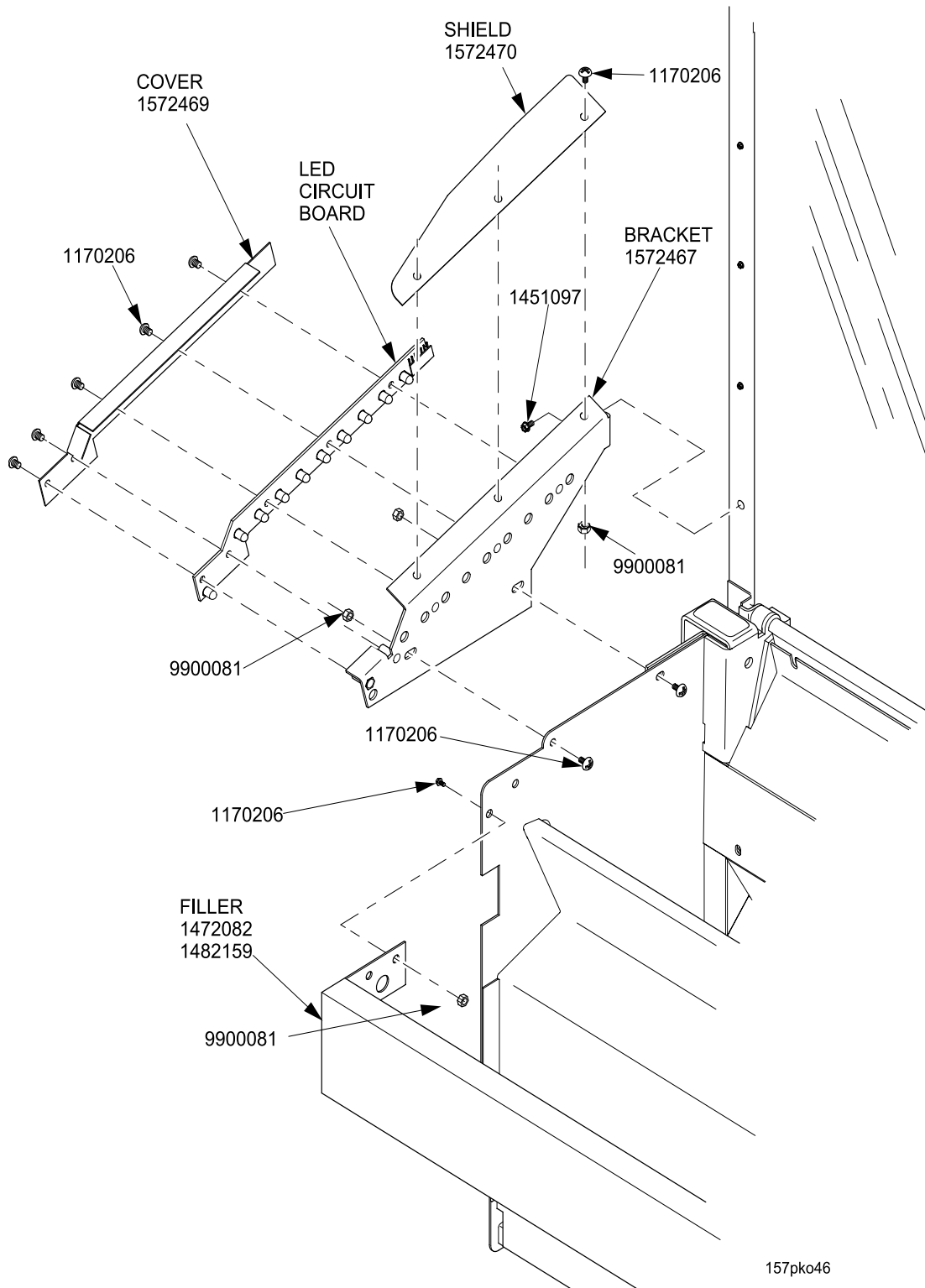


Figure 2

4. Attach the front of each sensor bracket and the upper deflector to the door with part # 5262216 and part# 9900081as shown below. (See Figures 3 & 4).

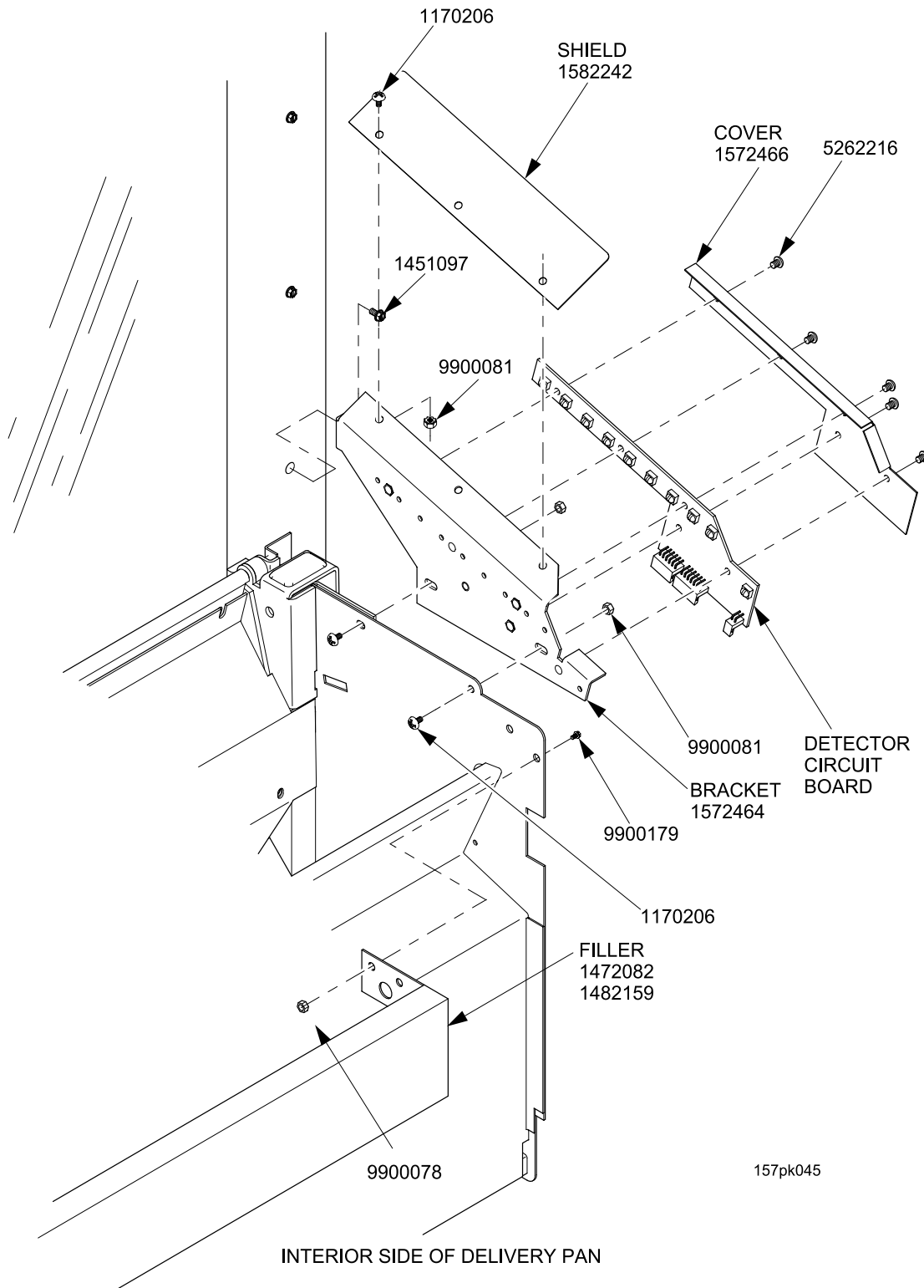


Figure 3

5. Use existing filler and replace hardware as shown in figures 2 and 3 for units without a gum and mint unit. You need to use part # 1170206 and part #9900081 to attach the left side of the filler plate and part #9900078 and part #9900179 to attach the right side of the filler plate.

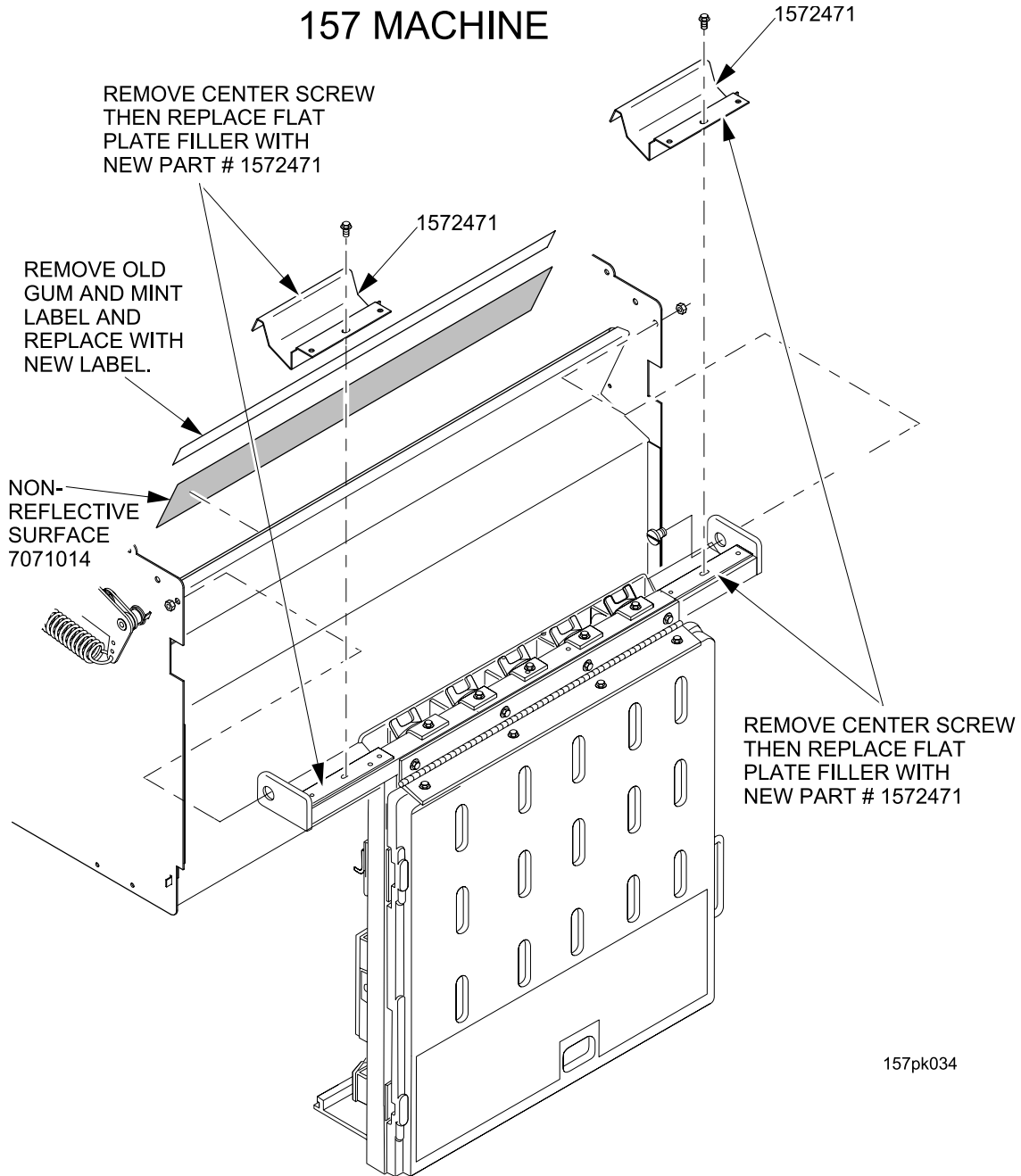


Figure 4

158 MACHINE

PLACE EDGE OF FILLER AGAINST PIVOT PLATE AND AGAINST FRONT OF TUBE. DRILL .140 DIA HOLE

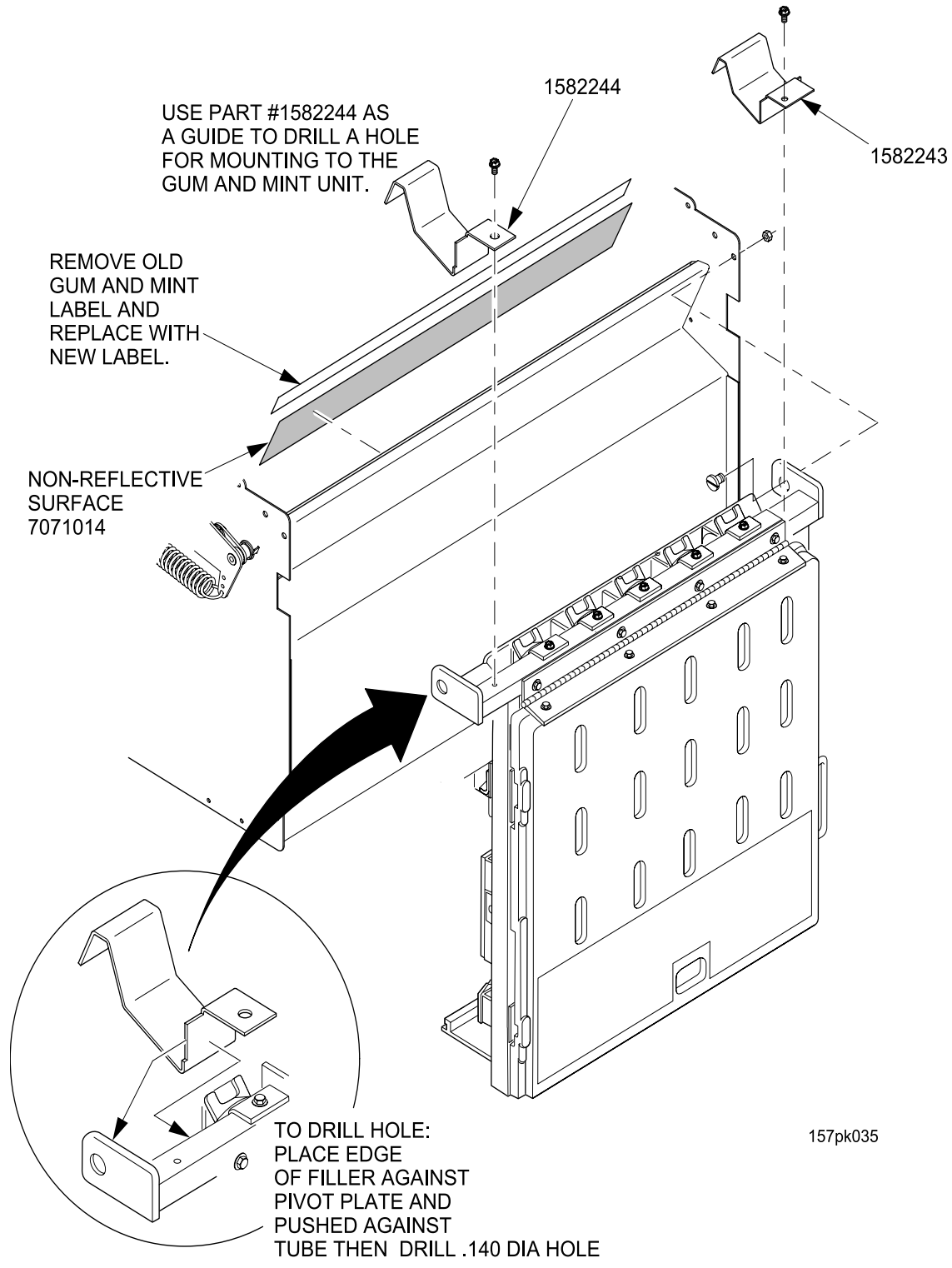
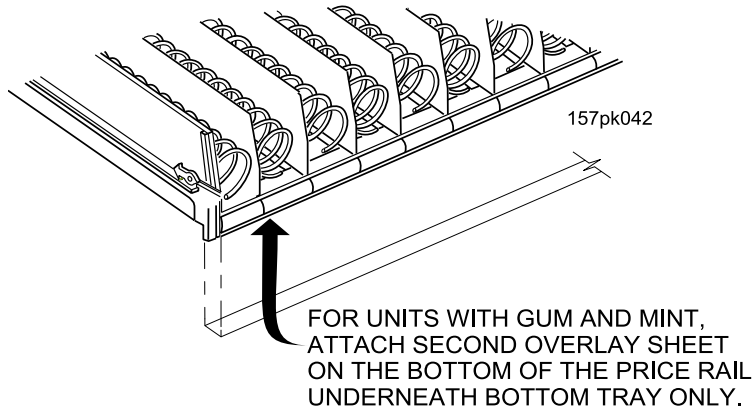


Figure 5



6. **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 to the left and right brackets with the (10) #6-32 screws provided (See Figure 2 on page 4) and (See Figure 3 on page 5).

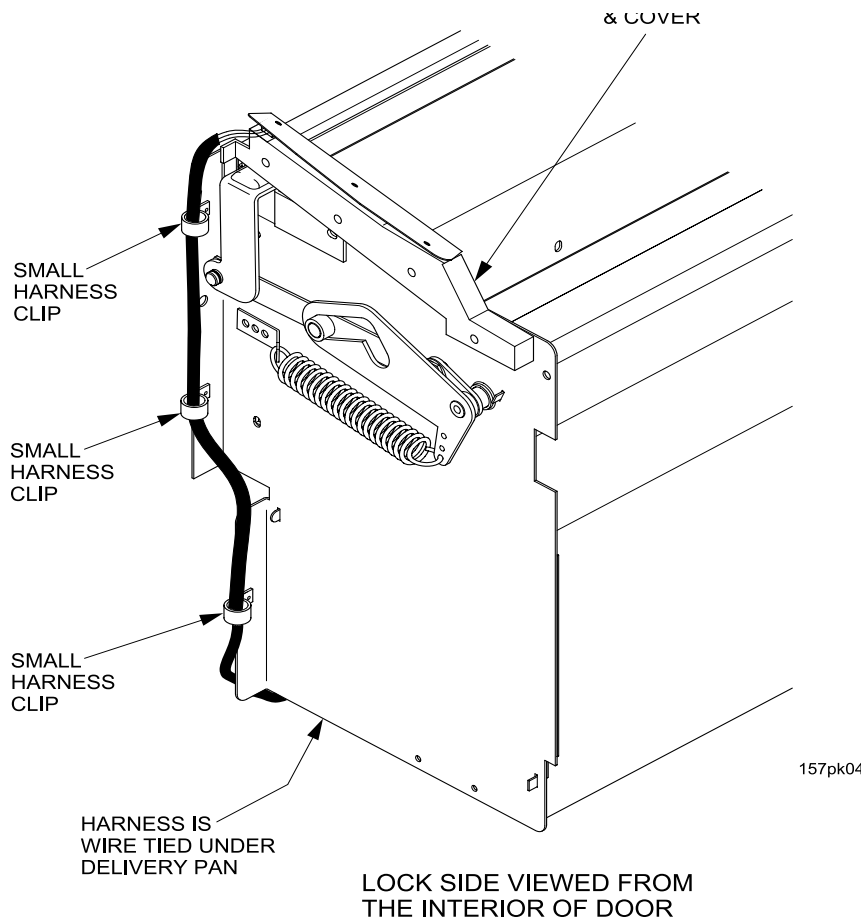
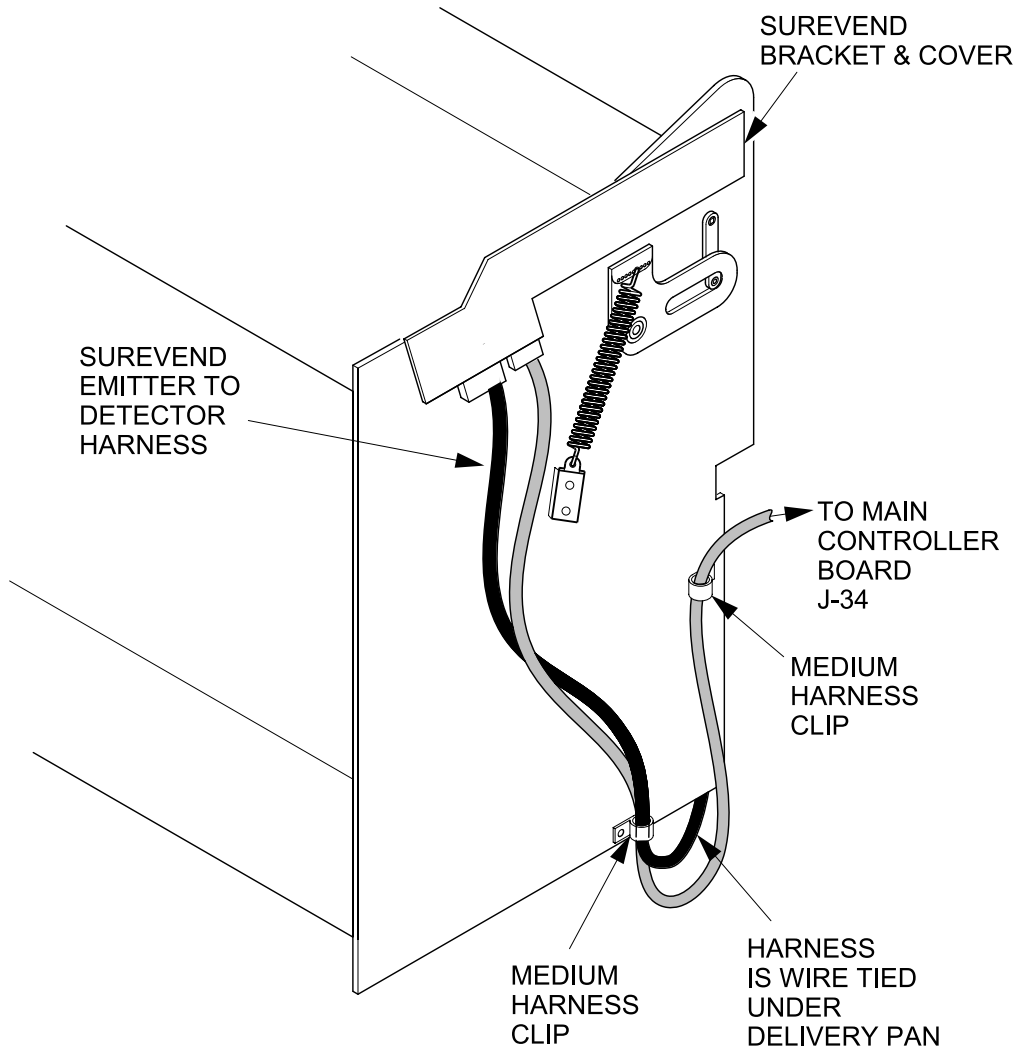


Figure 6

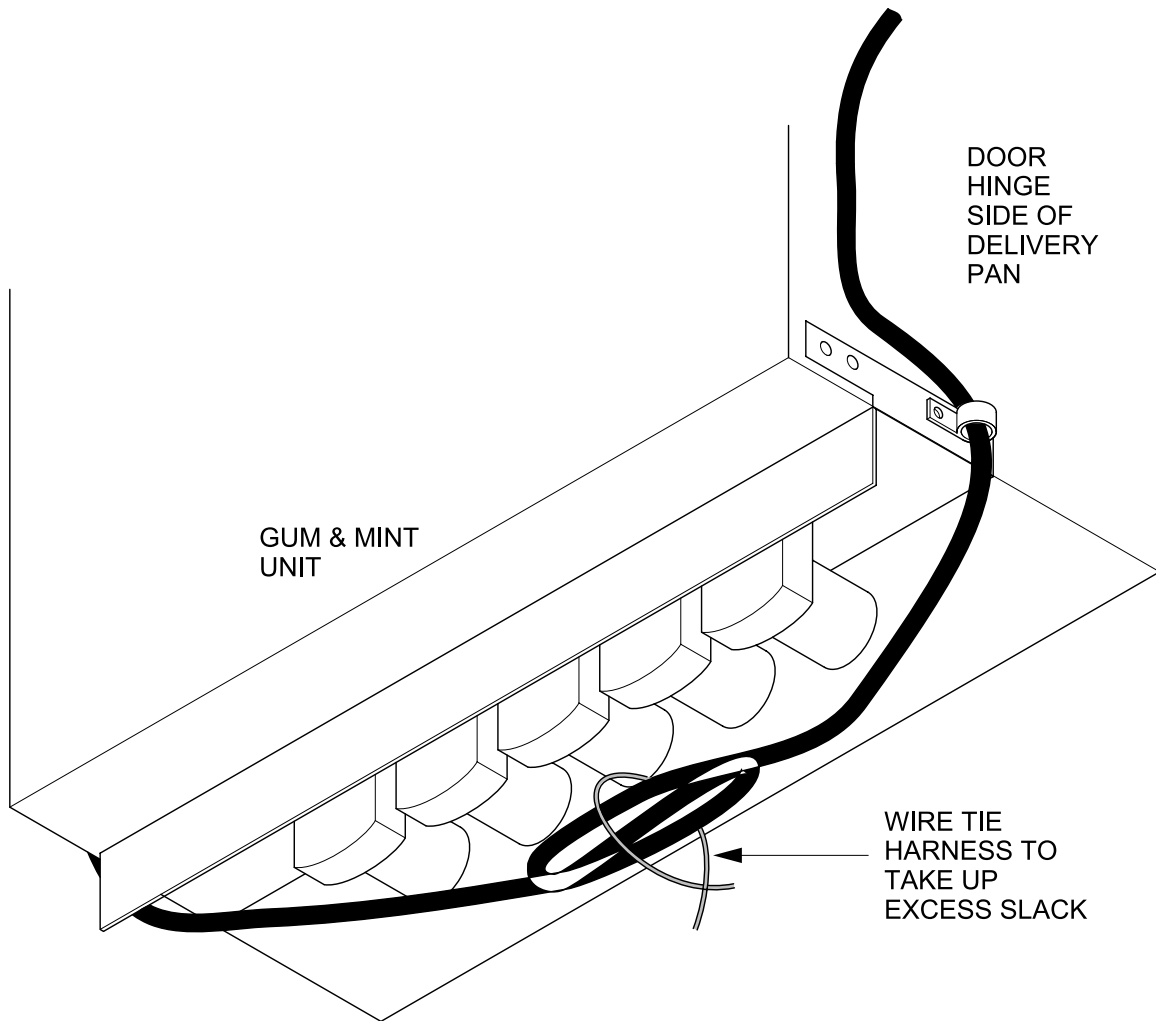


HINGE SIDE OF DELIVERY PAN
VIEWED FROM THE INTERIOR
OF DOOR

157pk040

Figure 7

7. Route the wiring along and under the delivery pan with the harness clips as shown (See Figure 6 on page 8) and (See Figure 7 on page 9). Bundle any excess harnessing under the delivery pan with a wire tie (See Figure 10 below).



157pk044

BOTTOM VIEW OF VEND BUCKET

Figure 8

8. Remove cover from control board.
9. Connect the gray main controller to sensors harness wire to the main controller board connector J34 (See Figure 11 below) 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 (See Figure 7 on page 9). Route the harness wire into the harness clips along the delivery pan.
10. Wearing electrostatic discharge protection, carefully remove the current EPROM and replace with the new EPROM per the instructions beginning on the next page.

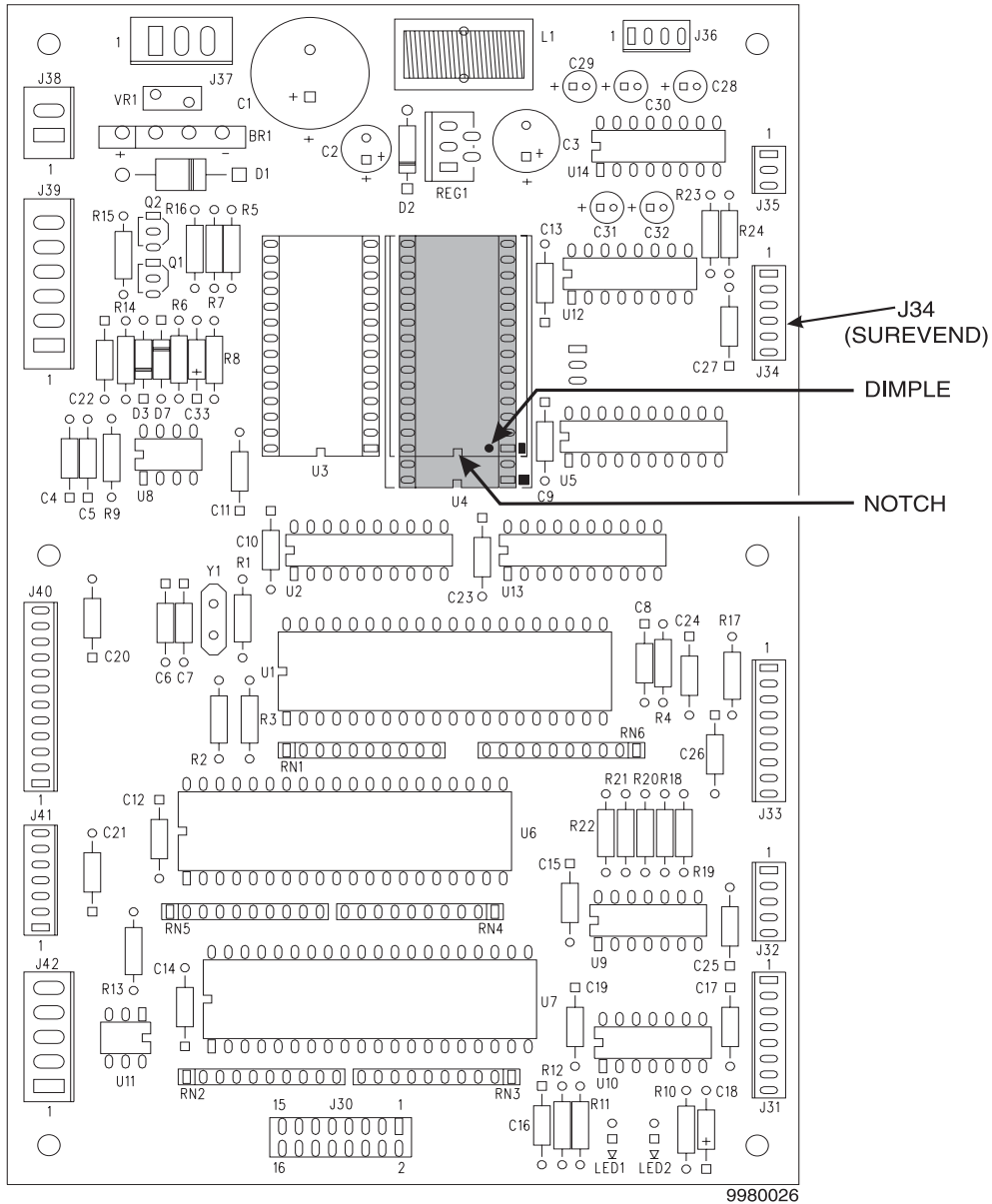


Figure 9 Controller Card Showing the Location of EPROM U4



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.

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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.

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 12, 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.
 - e. Replace all items you removed.
 - f. Turn the machine power ON.
11. If you are upgrading to MDB, plug the MDB harness part #1679054 on connector J39 on the control board.
 12. If you are upgrading to DEX, plug the DEX cable part #1679056 on connector J35 on the control board.
 13. Power up the machine. You are now ready to check the sensors in the diagnostics mode (refer to the *Programming Guide*).