



**T9 EPP  
CONTROL PANEL UPGRADE  
FOR 9100 ATMS**

TDN 07103-00257 Rev. B  
July 21, 2015

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# INTRODUCTION

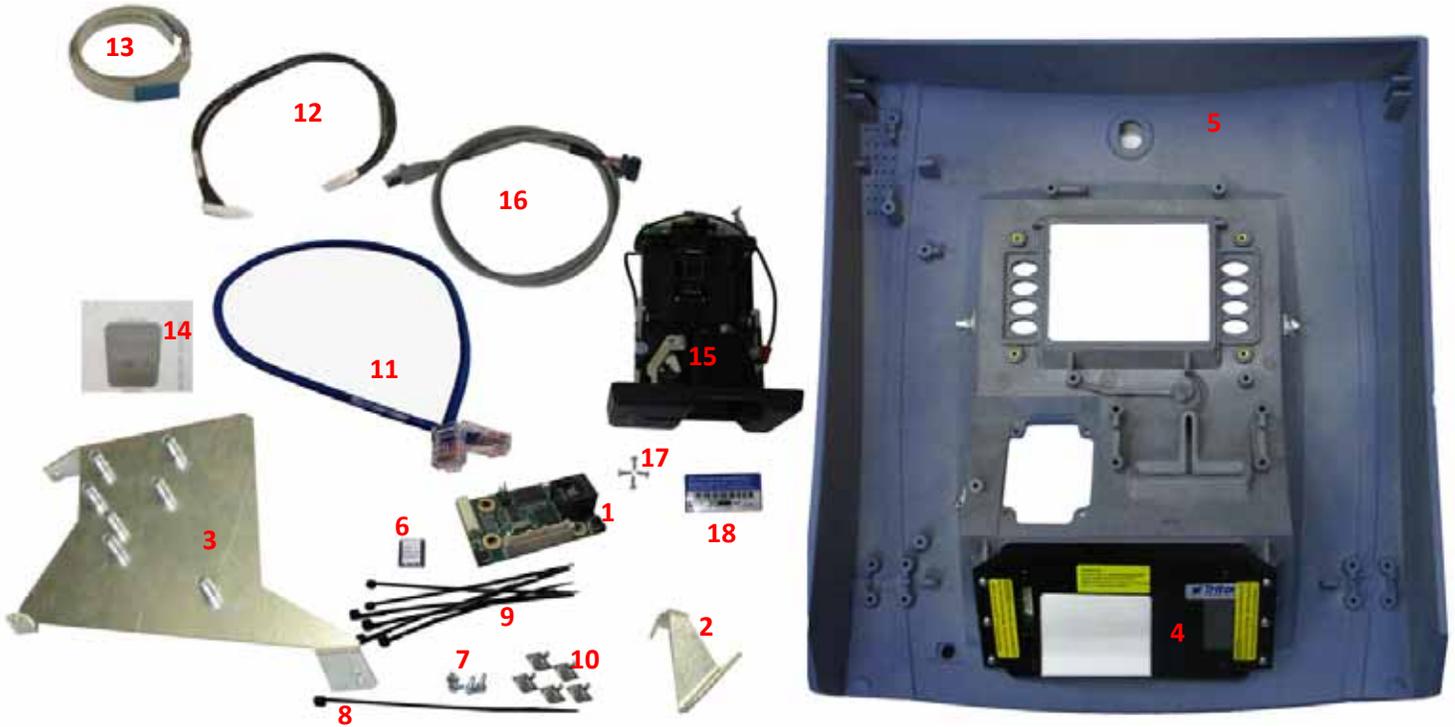
<p><b>TOOLS REQUIRED</b></p>	<p>#1 Flathead screwdriver                  #1 Phillips screwdriver                  #2 Phillips screwdriver                  #2 Phillips screwdriver (long shaft)                  1/4" Nut-driver                  Vise grips                  PLCC extraction tool                  Electric screwdriver with torque control                  Ratchet                  7/8" deep socket                  Side Cutters</p>
<p>Tools Required:</p>  <p><b>NOTE:</b> Use a <b>torque between 11-13.4 in-lbs</b> on the electric screwdriver for all the screws, unless otherwise noted in the instructions.</p>	
<p><b>KIT P/N:</b></p>	<p>06200-00274</p>

## DOCUMENT UPDATES

Rev. A .....	Original	April 30, 2015	1030367
Rev. B .....	Updated Step 21	July 21, 2015	1030624

## T9 EPP CONTROL PANEL UPGRADE—HARDWARE INSTALLATION INSTRUCTIONS

<b>PARTS SUPPLIED IN KIT - 06200-00274</b>		
<b>PART</b>	<b>DESCRIPTION</b>	<b>QTY</b>
1. <u>91xx to T9 Translator PC-board</u>	Translates the SPED communications protocol into the T9 communications protocol.	1
2. <u>Headphone board retaining bracket</u>	Provides a cable routing guide and mounts the headphone board if speech is installed.	1
3. <u>9100 speech and T9 Translator mounting bracket</u>	The bracket attaches to the main-board assembly metal box, and mounts the 91xx to T9 Translator board needed for the T9 EPP.	1
4. <u>Keypad, T9 PCI 3 EPP, English-French-Canadian, RKT, Black</u>	The T9 EPP is pre-installed on the new control panel	1
5. <u>9100 Control Panel, Blue</u>	The new control panel comes with the T9 EPP, labels, and metal clips preinstalled. The clips have tabs that you bend down to secure the screen key flat cable.	1
6. <u>9100 EPROM</u>	The EPROM chip is preloaded with the software to support communications to the T9 EPP. The existing EPROM needs to be removed from its socket using a PLCC extraction tool. The new EPROM needs to be installed into the main PC-board socket. The board must be protected against Electrostatic Discharges (ESD) during the removal and installation of the EPROM. Please familiarize yourself with the use of the PLCC extraction tool, and ESD protection guidelines.	1
7. <u>Screws, #8x32, 3/8" long, pan head with/ext tooth washer</u>	Used to attach the T9 Translator board onto the bracket.	4
8. <u>8" zip tie</u>		1
9. <u>6" zip ties</u>		6
10. <u>Metal clips, 0.42"X.082" with tabs</u>		5
11. <u>T9 EPP communications cable</u>		1
12. <u>T9 key cable</u>	Connects the T9 EPP to the T9 Translator board	1
13. <u>Flat screen key cable</u>	Connects the left and right 4-button screen key boards. The cable is included in the kit as a spare for older 9100 ATMs with a short cable that won't reach to the T9 translator board.	1
14. <u>Braille label</u>	Needed if Speech is installed	1
15. <u>EMV Card Reader</u>		1
16. <u>Card Reader Cable</u>		1
17. <u>Screws #6-19 X 3/8 Phillips Drive</u>	Used to attach the Card Reader to the Control Panel.	4
18. <u>Credit Call EMV License</u>		1



## New Control Panel

The new control panel comes with the T9 EPP, card reader label, printer label, and metal clips pre-installed from the factory. Besides new parts supplied with kit, several parts and assemblies from the old control panel will need to be installed onto the new control panel.

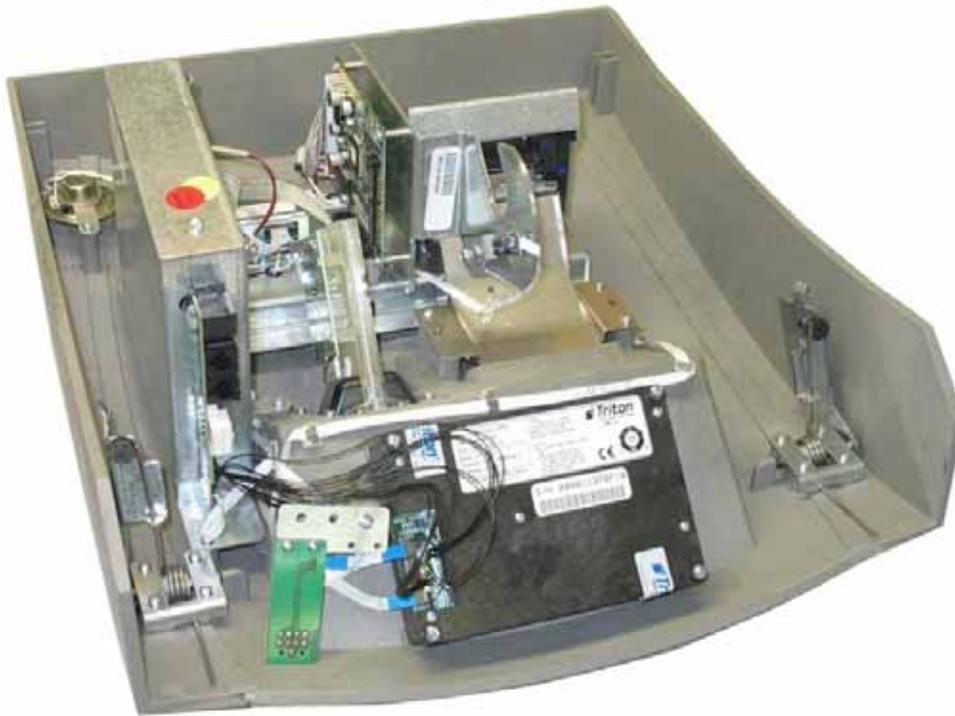


## T9 EPP CONTROL PANEL UPGRADE—HARDWARE INSTALLATION INSTRUCTIONS

### Parts to reuse from the old control panel include:

Main board assembly and screws
Printer assembly and screws
Low paper sensor
Low paper sensor flat cable
Printer chute and screws
Speaker, mounting bracket, and screws
Hinges, springs, and screws
SPED communications cable
LCD assembly
Screen key flat cables
Headphone board (if speech is installed)
Headphone flat cable (if speech is installed)

Old control panel showing the components to be reused and some to be discarded:



### Parts to discard from the old control panel include:

SPED
SPED mounting screws
Flat headphone bracket (if speech is installed)
Headphone bracket mounting screws (if speech is installed)
Cable routing clips
Control panel plastic

## OVERVIEW

Take time to read this manual and familiarize yourself with all the steps before starting the upgrade. The T9 EPP control panel upgrade for the 9100 ATM involves detaching the old control panel from the 9100 cabinet. The main-board, printer, display assembly, the speaker and some smaller hardware from old control panel will be installed on the new control panel along with the new parts in this kit. Observe proper Electrostatic Discharge (ESD) protection during the removal and installation of all the electrical components. Care must be taken when removing and installing the hinges and springs on the control panel. Both hinge retainer springs are under heavy tension when the control panel is in the open position. Unless otherwise noted in the instructions, use a torque between 11-13.4 in. lbs on the electric screwdriver for all the screws.

## SAFETY INFORMATION



**CAUTION:** Observe proper Electrostatic Discharge (ESD) protection when handling electronic devices.



**WARNING:** Be careful removing and installing the control panel hinges.

# 1. REMOVING THE CONTROL PANEL

**NOTE:** Throughout this document, directions (such as left and right) will be determined from the perspective of the front of the machine.

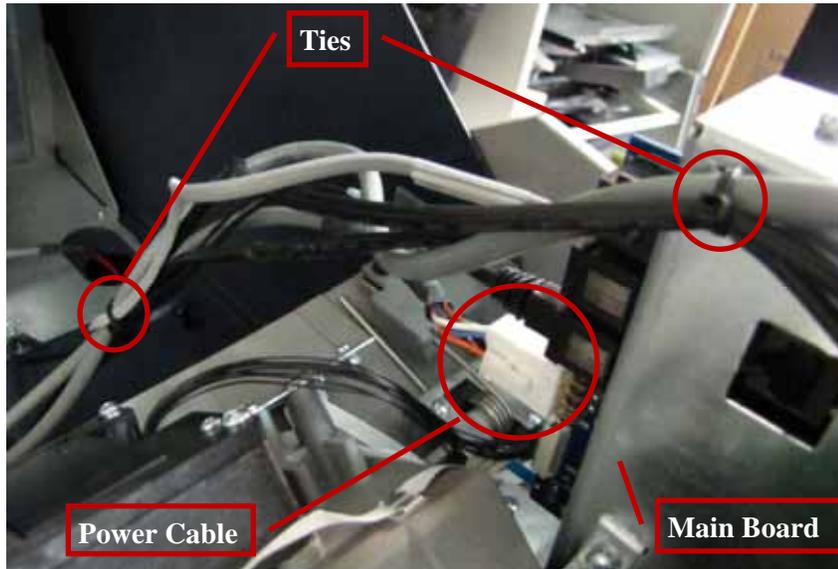
1.1-Turn off the 9100 and unplug the AC power cord. Remove the paper roll.



1.2—Remove the two screws that hold the ground wire lugs; one at the paper chute, and one at the display near the lock at the top of the panel. (See below for reference).



**1.3**—Cut the zip ties that hold the cables together. Unplug the power cables, telephone cable, SPED cable, and EJ/dispenser cable from the main board. (Note that there are more zip ties holding cables than shown in this photo.)



**1.4**—Unplug the printer power cable from the printer controller board. Ensure that no other cables are attached from the back of the cabinet to the control panel. (Ex: phone line, dispenser cable, etc.) Ensure that there are no cables interfering with the hinges.



## **WARNING**

The hinge retainer spring is under tension when the control panel is in the open position, and can easily snap back when the screw is removed.

1.5—Clamp the vise-grip pliers onto the left hinge. Keep a firm hold on the pliers while removing the screw. Pull the bracket away from the side of the cabinet and **slowly** release the spring tension by guiding the pliers counter clockwise. Repeat this process for the right hinge.



1.6—Remove the old control panel from the cabinet by partially closing the control panel until it's nearly in a vertical position, lifting, and pulling. Place the old control panel on a flat surface.



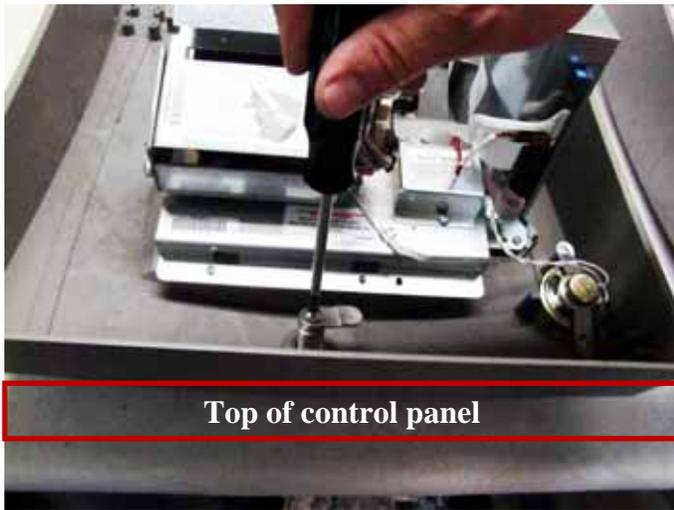
1.7—Place the new control panel assembly (with T9 EPP) on a flat surface with protection to prevent scratching, next to the old control panel.



## 2. SWAPPING CONTROL PANEL LOCK

2.1—Remove the retainer screw and lock pawl from the old control panel lock.

NOTE: Remove screw with caution because lock assembly will come apart after screw is removed.



2.2—Note that the small tab on the top of the lock assembly should be facing the top of the panel. Remove the large nut with a 7/8" deep socket. Remove the lock and carefully keep it in the same position as before.



## T9 EPP CONTROL PANEL UPGRADE—HARDWARE INSTALLATION INSTRUCTIONS

**2.3**—Keeping the lock in its former position, install the lock onto the new control panel. Screw on the large nut. Use a torque between 22-30 in. lbs for the electric screwdriver.



**2.4**—Place the lock pawl in locked position onto the lock body (See below for reference). Insert the retainer screw that previously held the lock cam in place and tighten. Use a torque between 22-30 in. lbs for the electric screwdriver



### 3. SWAPPING HINGES

3.1—Remove the 4 screws from the right hinge of the old panel. Install the hinge onto the new control panel.

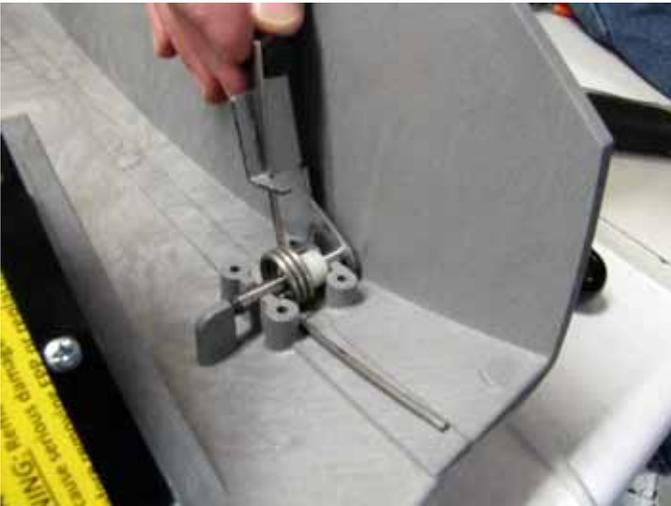
Old panel



Disassembled hinge



New panel and hinge assembly



## T9 EPP CONTROL PANEL UPGRADE—HARDWARE INSTALLATION INSTRUCTIONS

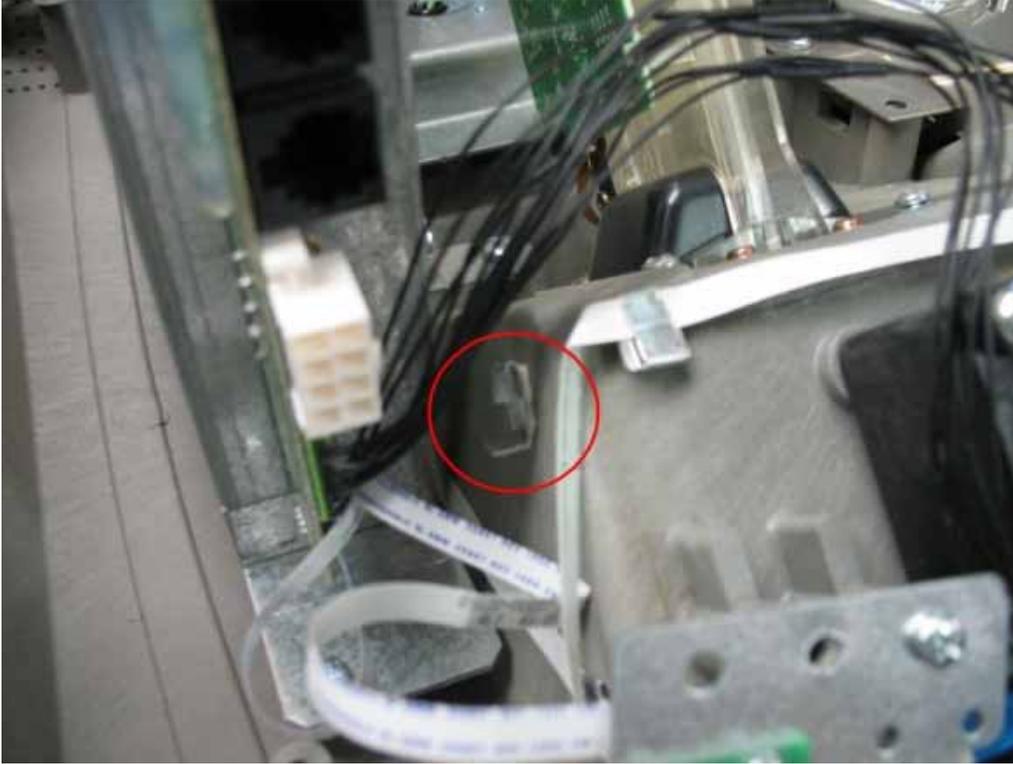
**3.2—** Remove the 4 screws from the hinge of the old panel. Install the hinge onto the new control panel using only 2 of the 4 screws. The remaining 2 screws will be used to install the head-phone bracket in the next step.



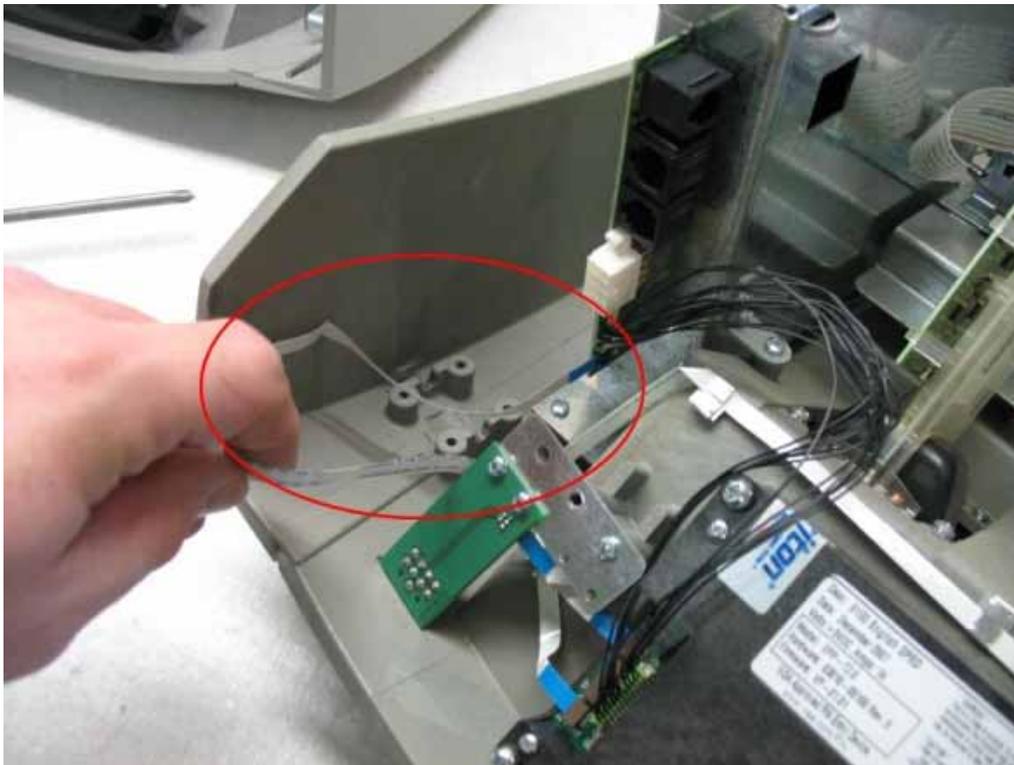
## 4. SWAPPING HEADPHONE BOARD

**IF NO SPEECH, ONLY STEP 4.11 NEEDS TO BE COMPLETED.**  
**HEADPHONE BRACKET NEEDS TO BE INSTALLED FOR CABLE ROUTING.**

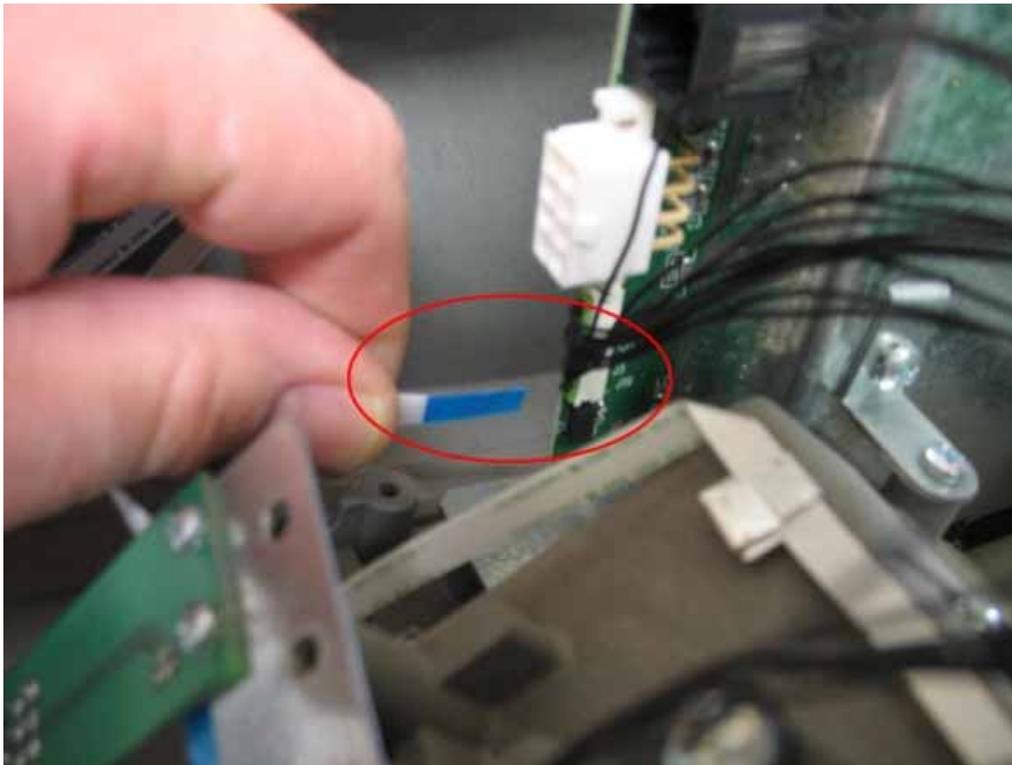
Remove headphone board, bracket, and flat cable from old control panel



4.2—Un-route the flat cable and leave flat cable PLUGGED into headphone board.



**4.3**—Unplug the flat cable from the main board. Pull the flat cable straight out and note the position of the blue tab for proper installation on the new control panel.



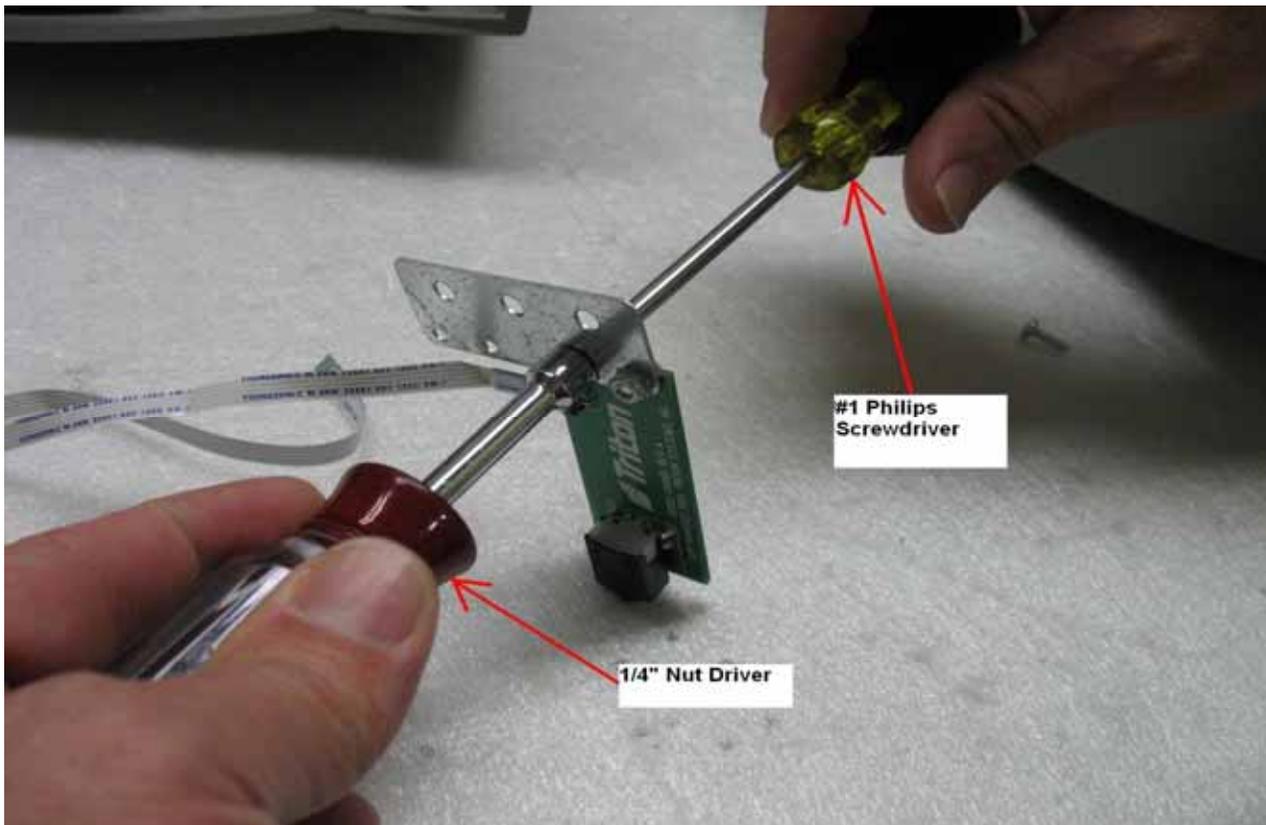
**4.4**—Remove two screws that hold the headphone board to the control panel. Discard these two screws.



4.5—Remove the headphone board/bracket/cable from the old control panel.



4.6—Remove the two screws and two nuts that hold the headphone board to the bracket using 1/4" nut driver and #1 screwdriver. Save these two screws and two nuts for installation on the new control panel headphone board bracket. Discard old headphone board bracket.

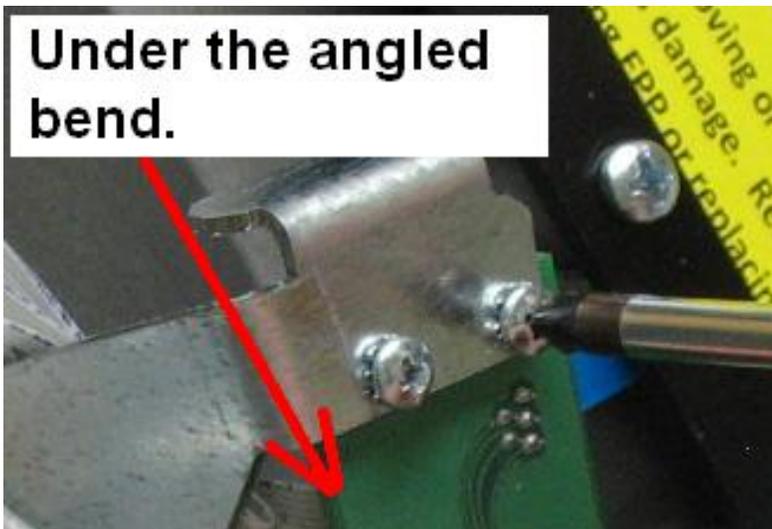


### Install headphone board onto new angled headphone bracket

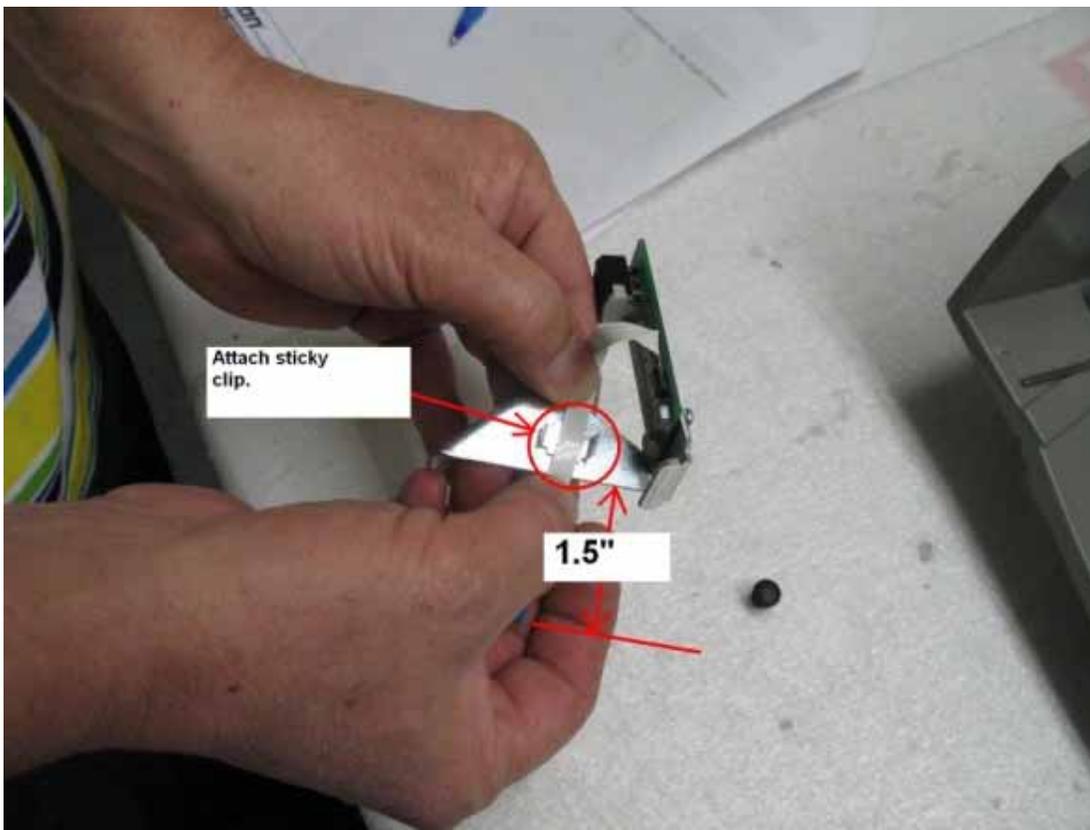
**4.7**—Position the headphone board on the new HEADPHONE BOARD RETAINING BRACKET under the angled bend. Loosely attach headphone board to bracket using two screws and two nuts. The screws will be tightened in a later step.



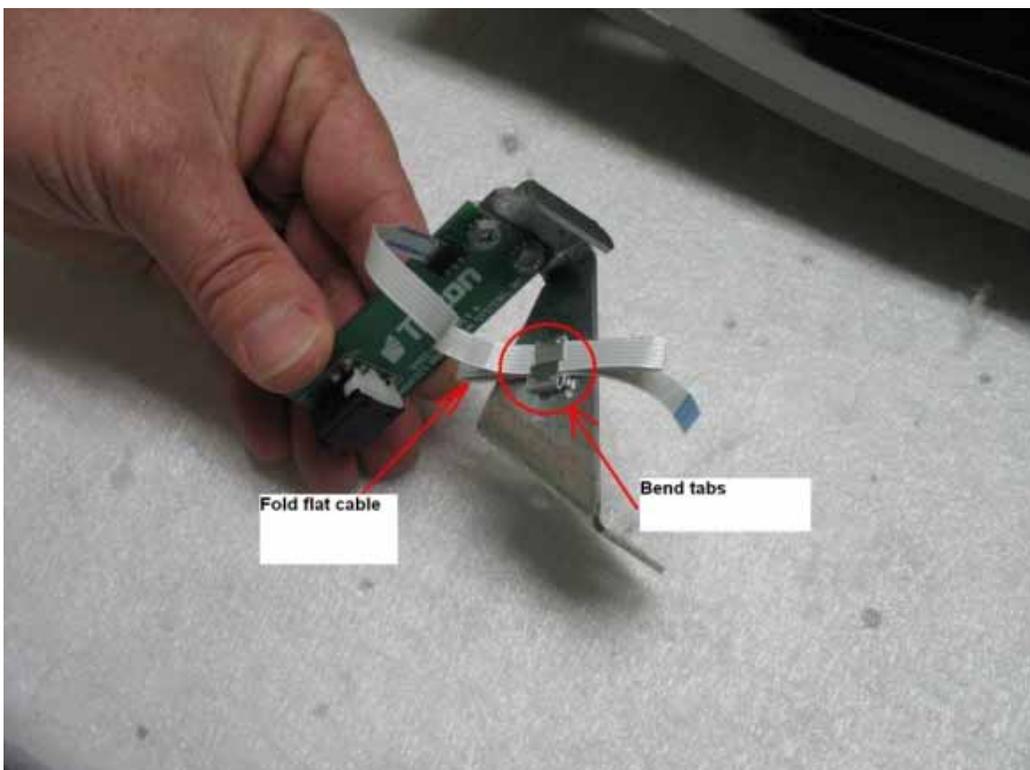
Under the angled bend.



**4.8**—Attach a sticky clip onto the bracket in the following position. Place the flat cable into the sticky clip between the tabs and leave 1.5” pigtail.



**4.9**—Fold the flat cable twice and secure under sticky clip bends. **NOTE: To prevent damage, do not crease cable.**



### Install angled headphone bracket onto new control panel

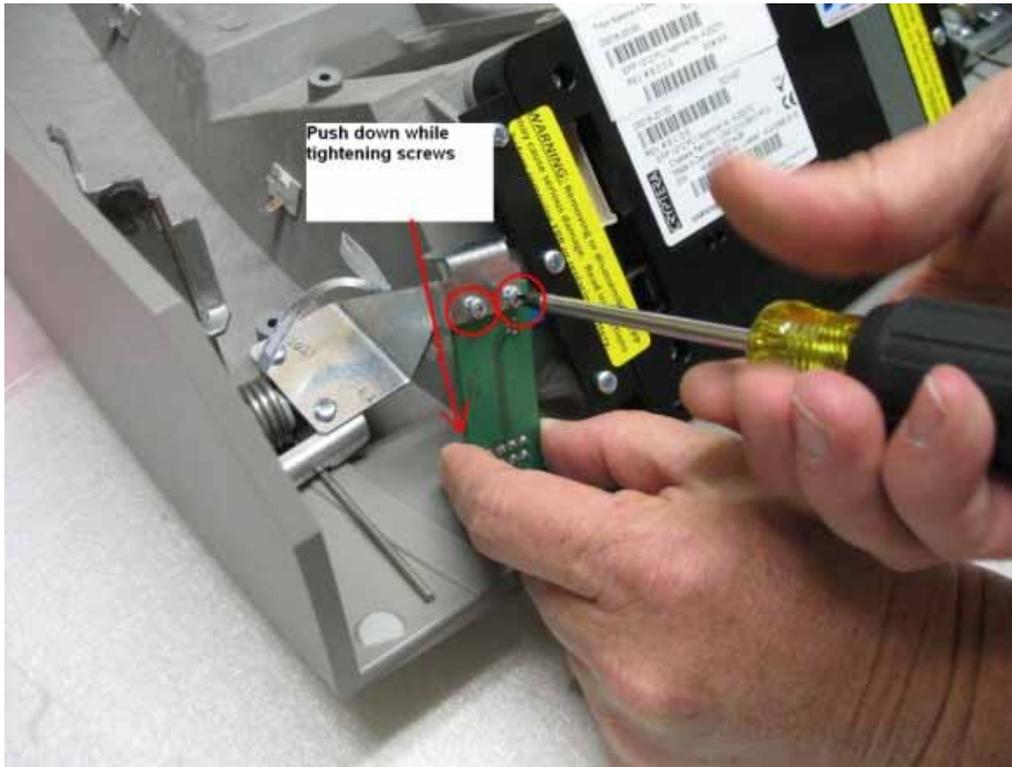
**4.10**—Remove plug from new control panel. Note slot in control panel for headphone board edge and jack.



**4.11**—Attach bracket onto the control panel over the hinge bracket using two plastite screws. **Note:** That if speech is not installed the headphone bracket is still needed as a cable routing attachment point.

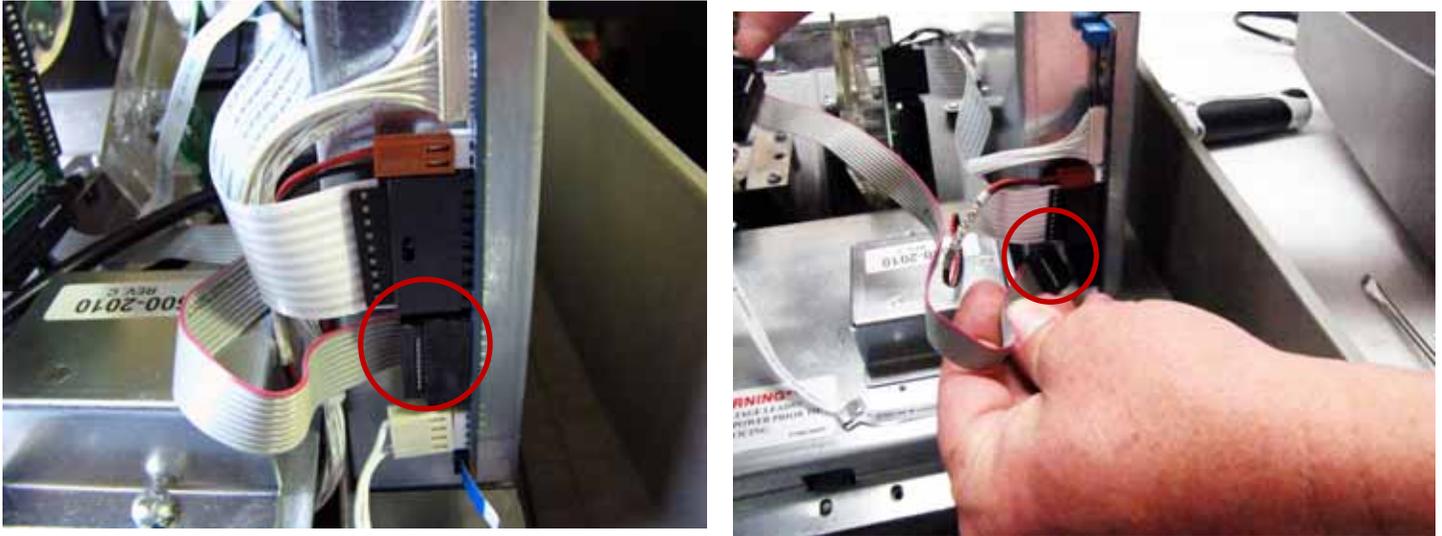


**4.12**—Loosen the screws that attach the headphone board to the bracket. Position the end of the headphone board snugly into the slot on the control panel and hold it down while hand tightening the headphone board screws.

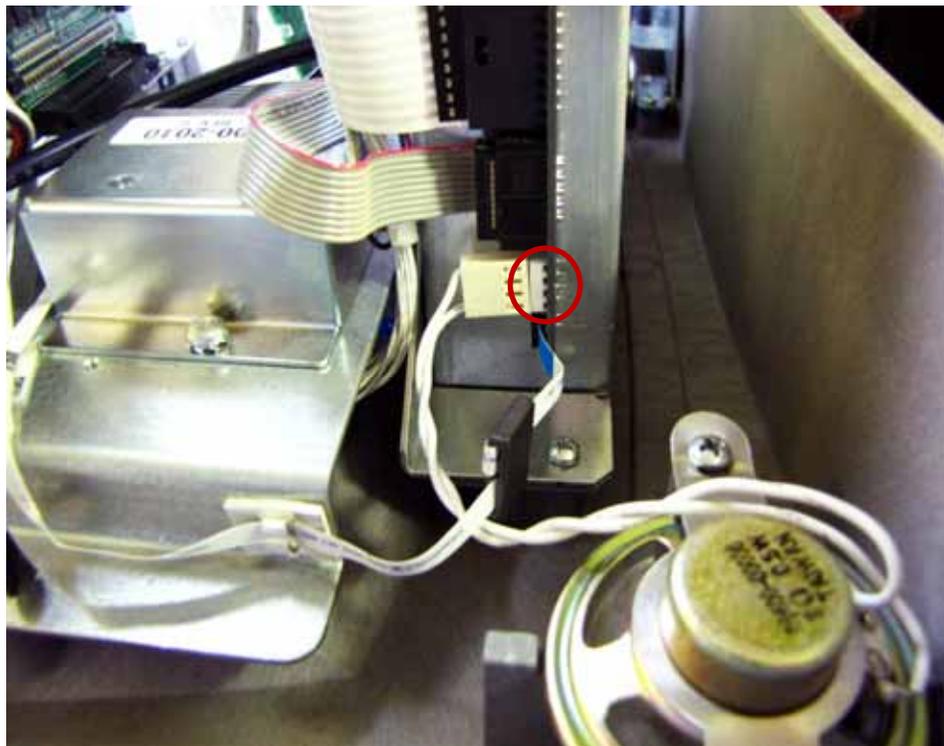


## 5. REMOVING PRINTER ASSEMBLY

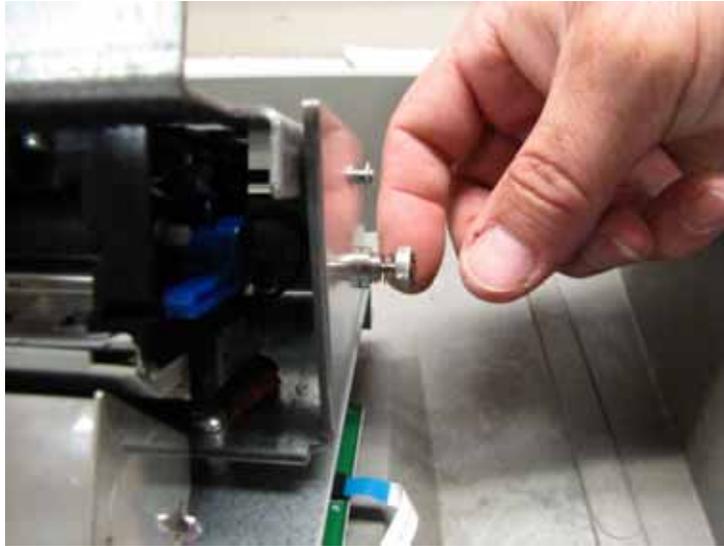
5.1—Unplug the printer communications cable from the main board.



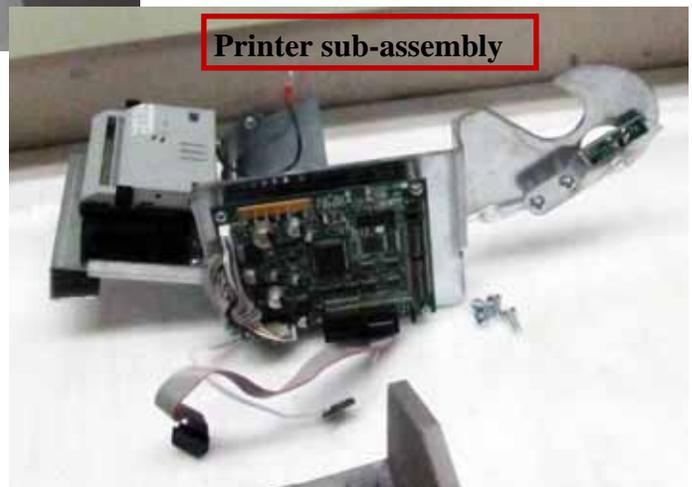
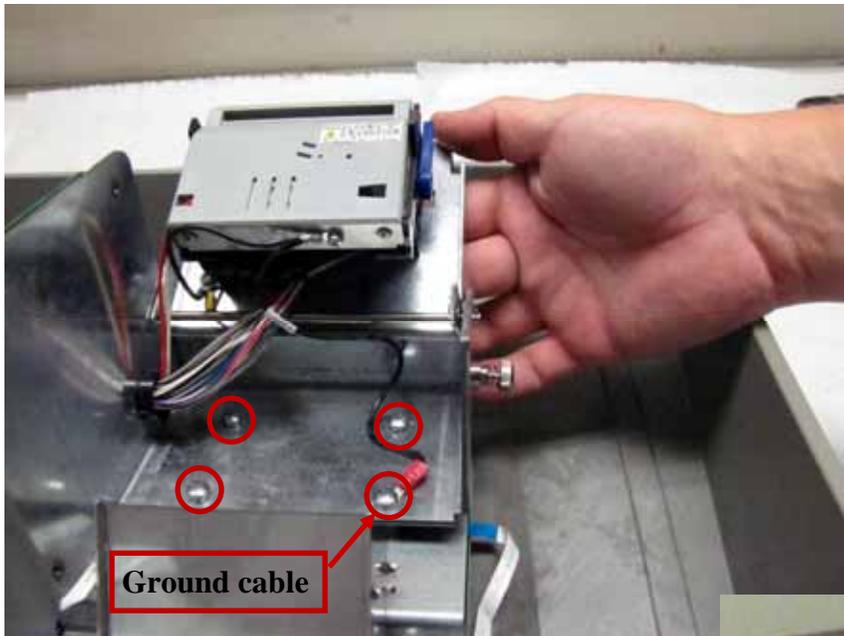
5.2—Unplug the printer low-paper sensor cable from the main board. Unbend sticky clip tabs and remove the flat low-paper sensor cable.



5.3—Release the thumb screw from the printer bracket by loosening it.



5.4—Flip open the printer assembly. Remove the 4 screws and save them for re-install. Note the location of the ground cable. Note: some older 9100 ATMs may not contain the ground cable. Set the printer sub-assembly aside for later re-installment.

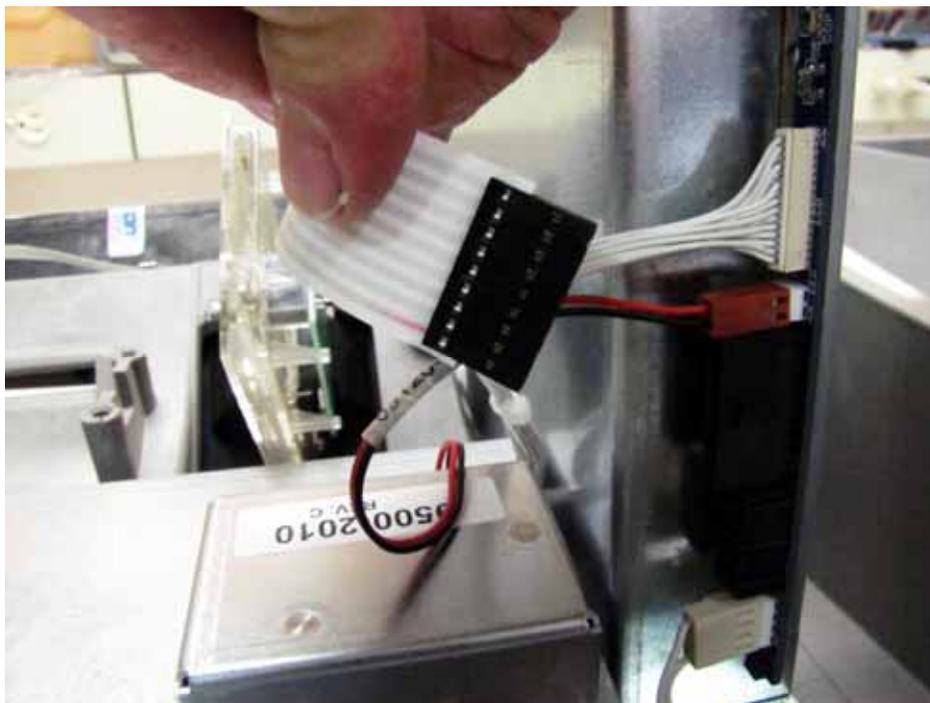


5.5—Remove the paper chute by removing the 4 screws holding it in place. Set the chute and screws aside for later re-installment.

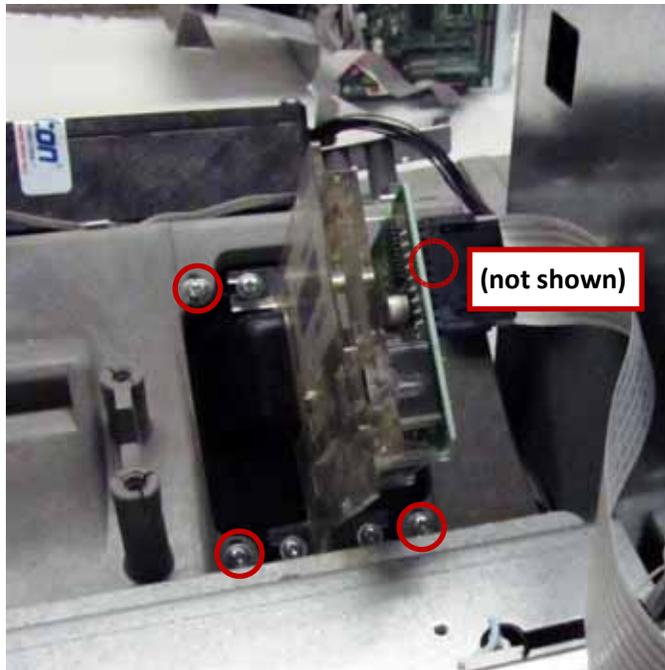


## 6. REMOVING CARD READER

6.1—Unplug the card reader communications cable from the main board.

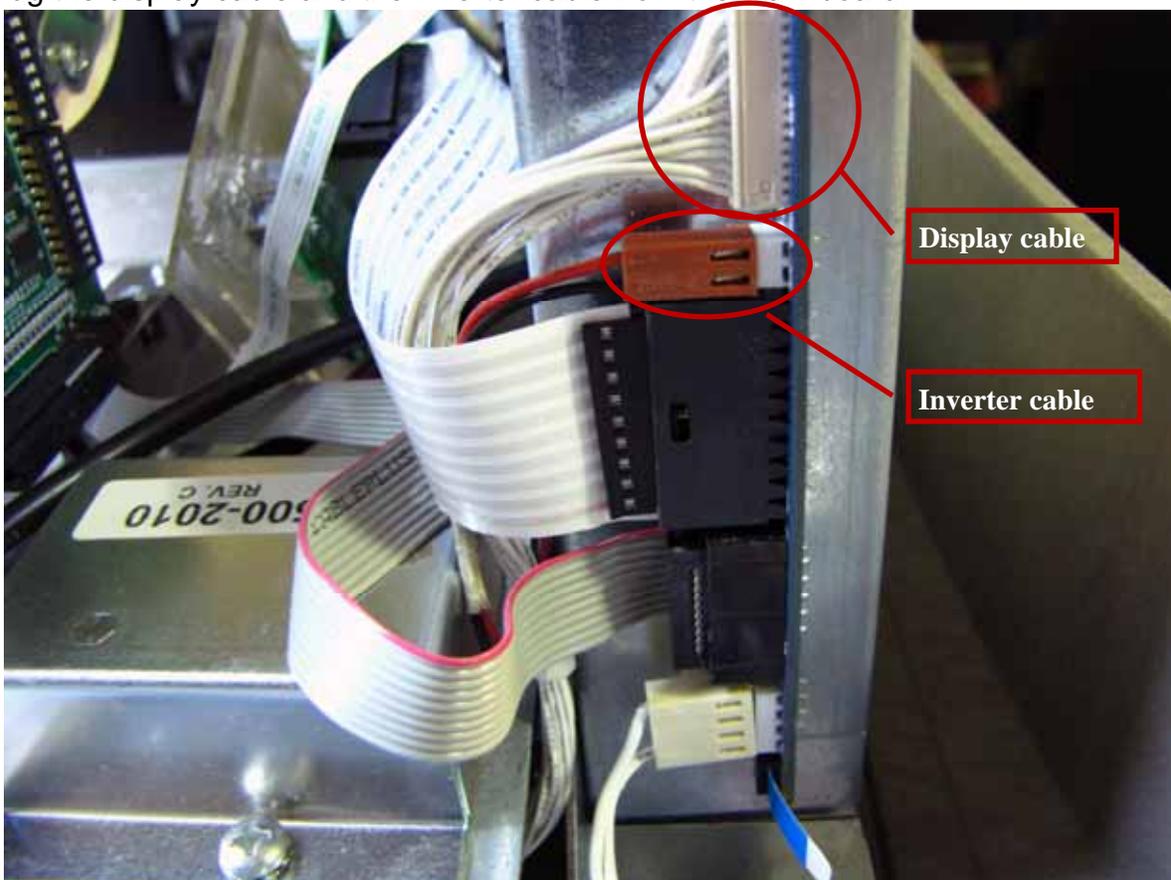


6.2—Remove the card reader by removing the 4 screws holding it in place.



## 7. REMOVING MAIN BOARD HOUSING

7.1—Unplug the display cable and the inverter cable from the main board.





7.4—Remove the 3 screws that attach the main board assembly housing. Remove the main board assembly housing and set it aside for later re-install.



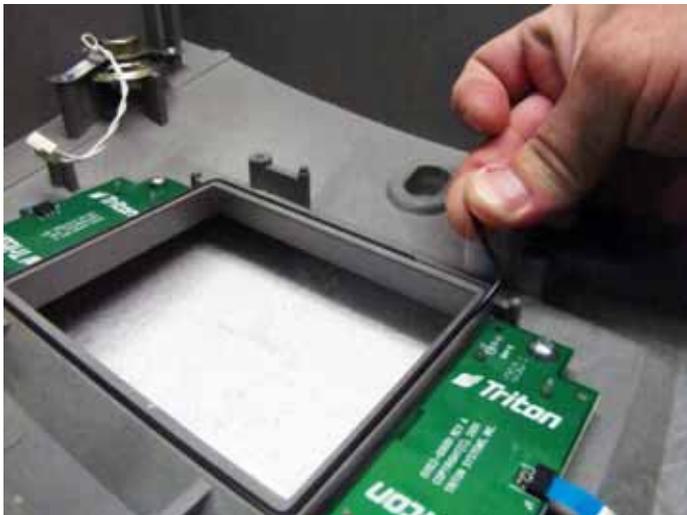
## 8. REMOVING LCD ASSEMBLY

8.1— Remove the 3 screws holding the display assembly in place. Hold the display glass while lifting the display. Set the display aside for later re-installation.

**Caution:** Ensure the display is placed in a dust-free environment to avoid damage.

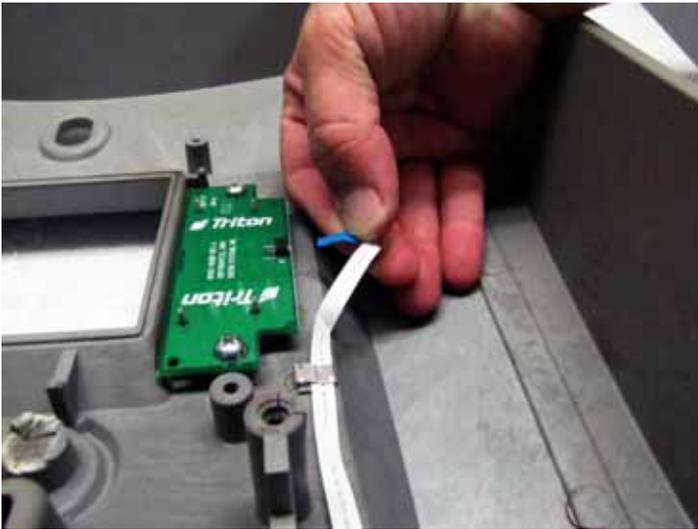


8.2— Remove the gasket from the old control panel and re-install it onto the new panel.



## 9. SWAPPING LEFT AND RIGHT SCREEN KEYS

**9.1**—Unplug the left and right screen key cables. Note the orientation of the blue tab. Set the cables aside for later re-installation. The flat screen key cable included in the kit may be used for the left side if the old flat cable is too short.



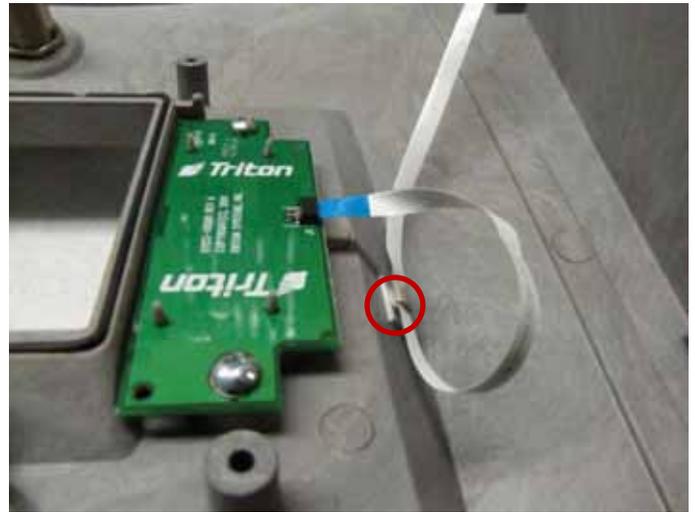
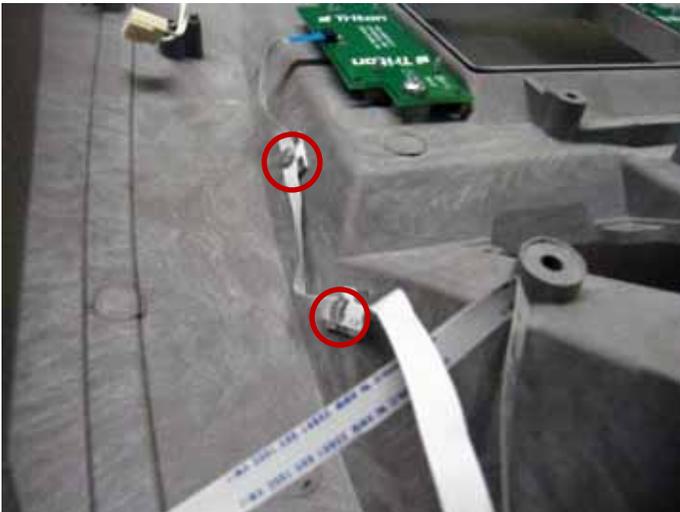
**9.2**—Remove the 2 screws from the left screen key board and install onto the new control panel. Repeat this process for the right screen.



**9.3**—Next, re-install the screen key cables. Note that the left screen key cable is longer than the right. Plug the left screen key cable into the left screen keyboard connector, and the right screen key cable into the right screen keyboard connector.



**9.4**—Partially route the flat cables under the clips on the new control panel as shown. Close the clips by folding down on the tabs.



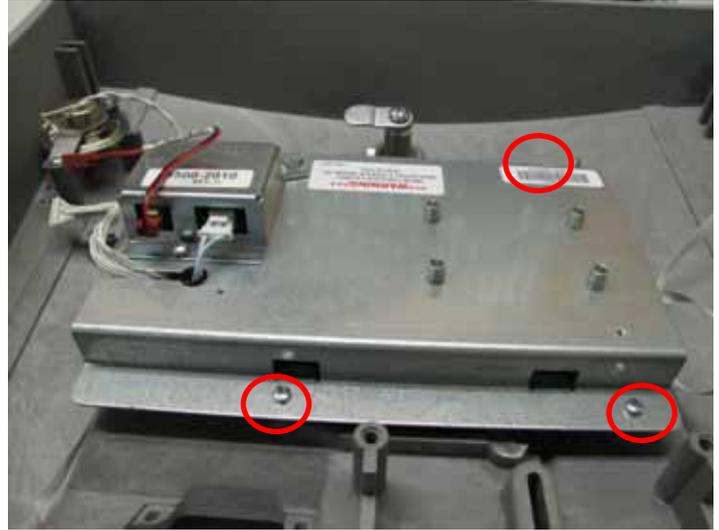
## 10. SWAPPING SPEAKER

10.1—Remove the speaker bracket by removing the 2 screws that hold it in place. Install the speaker and bracket onto the new panel.



## 11. INSTALLING LCD ASSEMBLY

11.1—Peel and stick the clips onto the LCD bracket in location shown below. Align the LCD bracket onto the control panel opening. Secure the bracket using 3 screws shown below. Leave one screw out for the attachment of the ground wire lug later. Color display shown below.

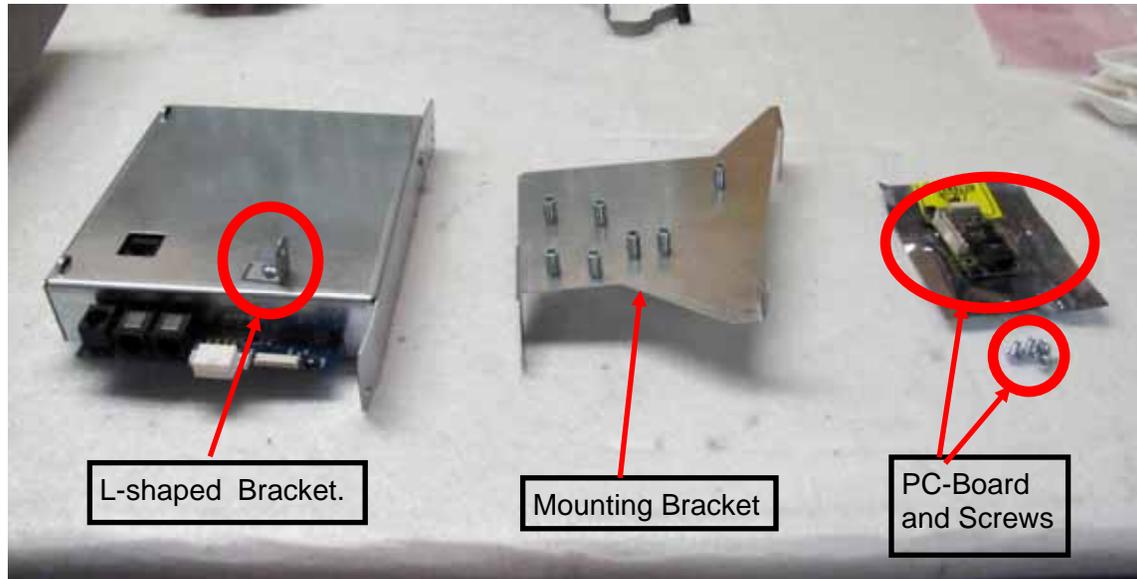


11.2—Continue routing the flat screen key cables through the clips and fold down the 2 side tabs as pictured below.

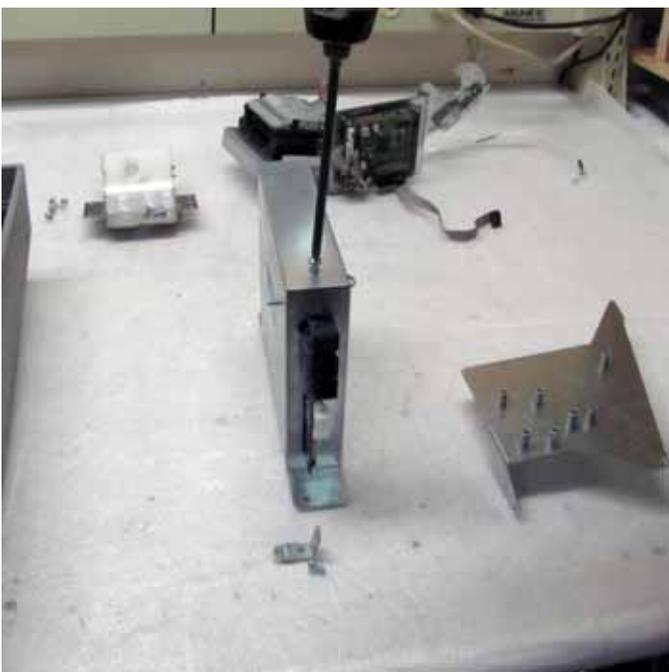


## 12. CHANGING EPROM IN MAINBOARD

12.1—Remove the small L-shaped bracket from the main pc-board housing and discard it, **but keep the screw**. Locate the new T9 translator mounting bracket, T9 translator board and four mounting screws.



12.2—Remove the two screws from the main board housing and remove the cover.





**CAUTION:** Observe proper Electrostatic Discharge (ESD) protec-

12.3—Remove the old EPROM with the PLCC extraction tool.

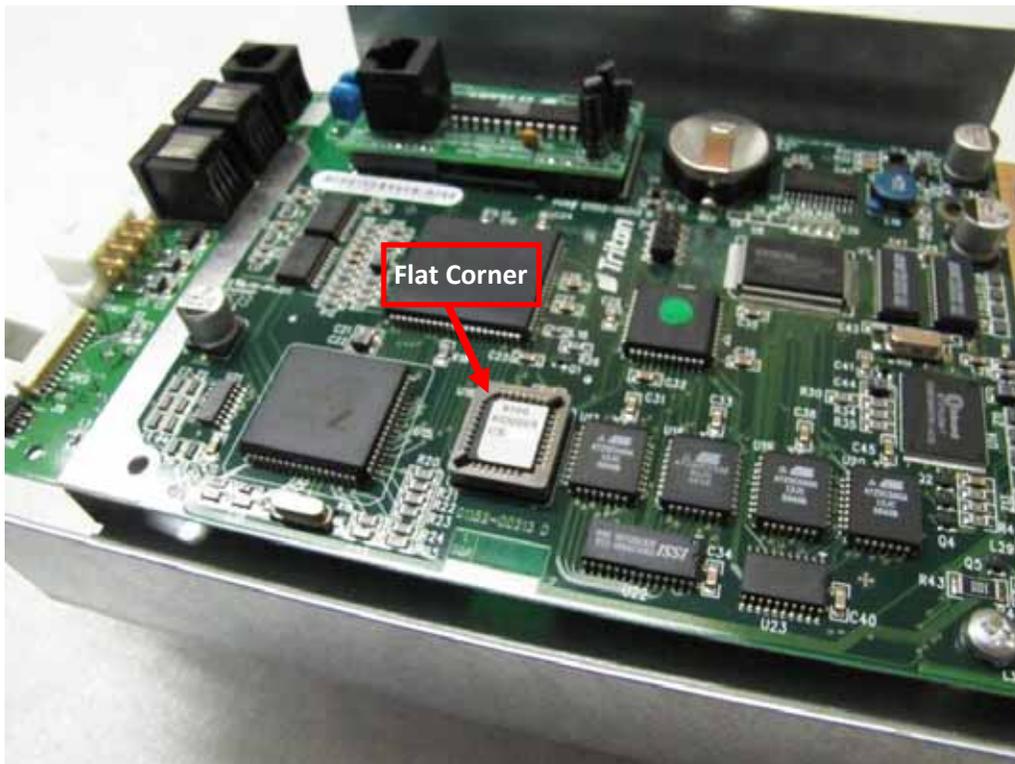




**CAUTION:** Observe proper Electrostatic Discharge (ESD) protec-

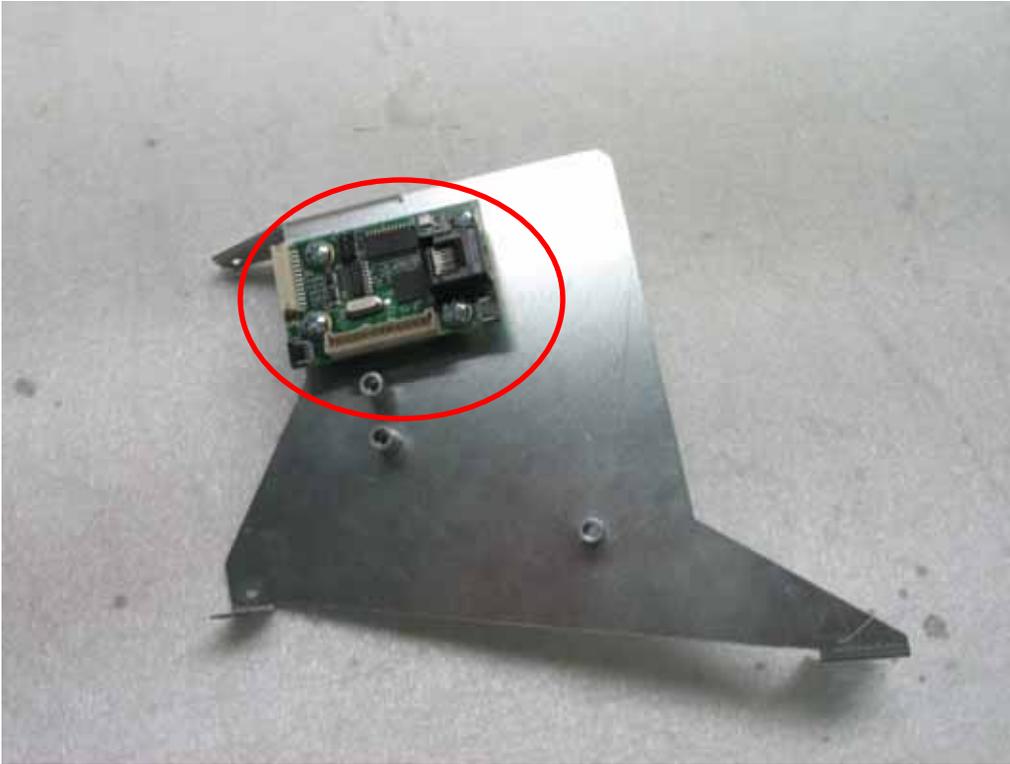
**12.4**—Install the new EPROM Version into the PLCC socket on the main board. Ensure that the flat corner of the EPROM chip is located in the flat corner of the socket when it's inserted.

**12.5**—Close the main board housing and secure it with a screw on the bottom side only. The top screw will be installed when the new bracket is installed.



## 13. INSTALLING T9 TRANSLATOR BOARD

**13.1**—Place the T9 translator board on the standoffs on the bracket and secure the board in place using four screws supplied in the kit.



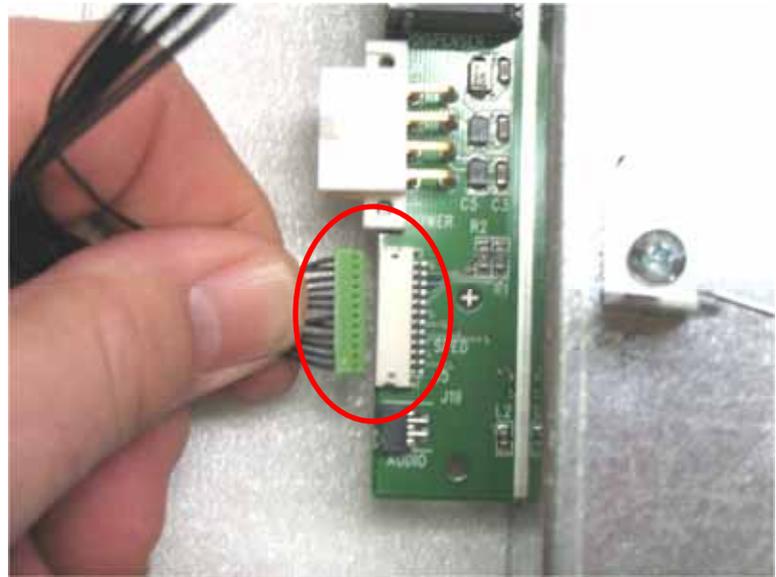
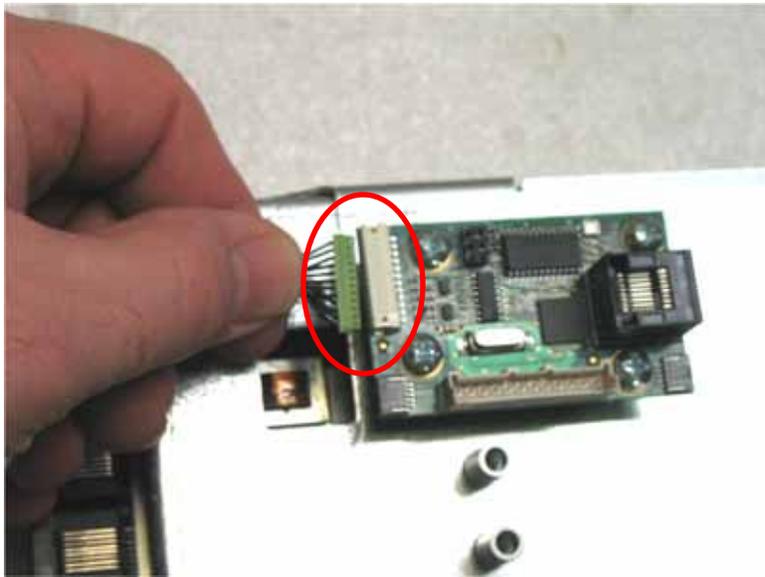
**13.2**—Secure the bracket onto the mainboard housing with the two screws removed previously. The screw on top is a flat-head hex screw that can be installed with a 1/4 nut-driver or a flat-head screwdriver. The other screw is a Phillips-pan-head screw with a captive tooth washer.





**CAUTION:** Observe proper Electrostatic Discharge (ESD) protec-

**13.3**—Plug the SPED communications cable from the old control panel into the T9 translator board and mainboard.



## 14. INSTALLING MAINBOARD HOUSING

14.1—Place the main board housing onto the new control panel. Ensure proper routing of the screen key and headphone cables (if applicable) under the main board housing.

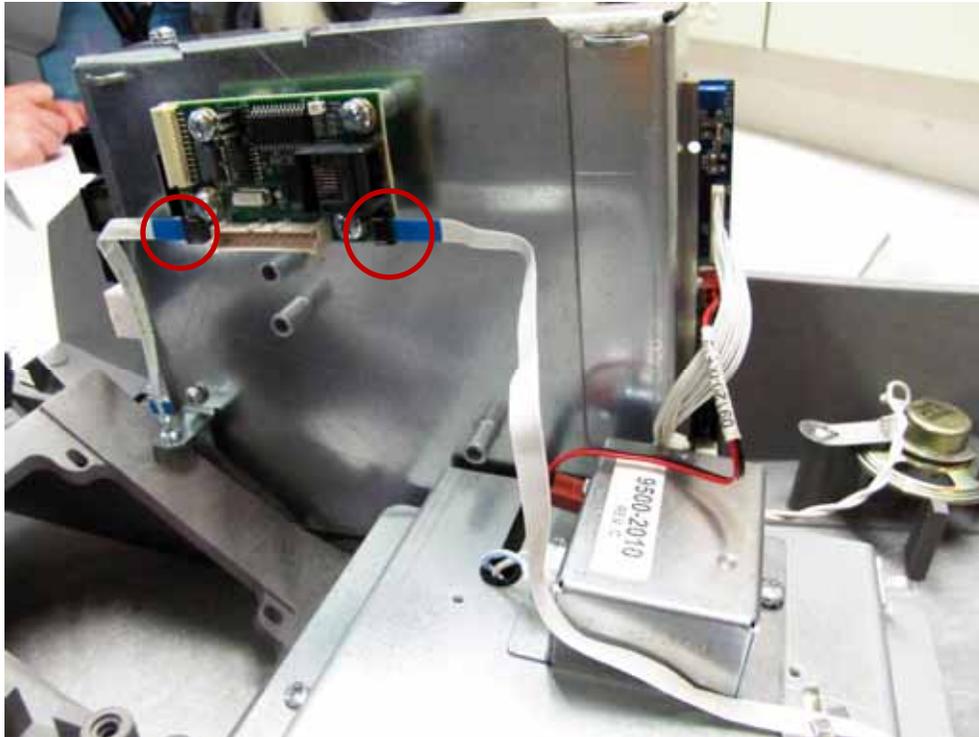


14.2—Install 3 screws to mount the main board housing.

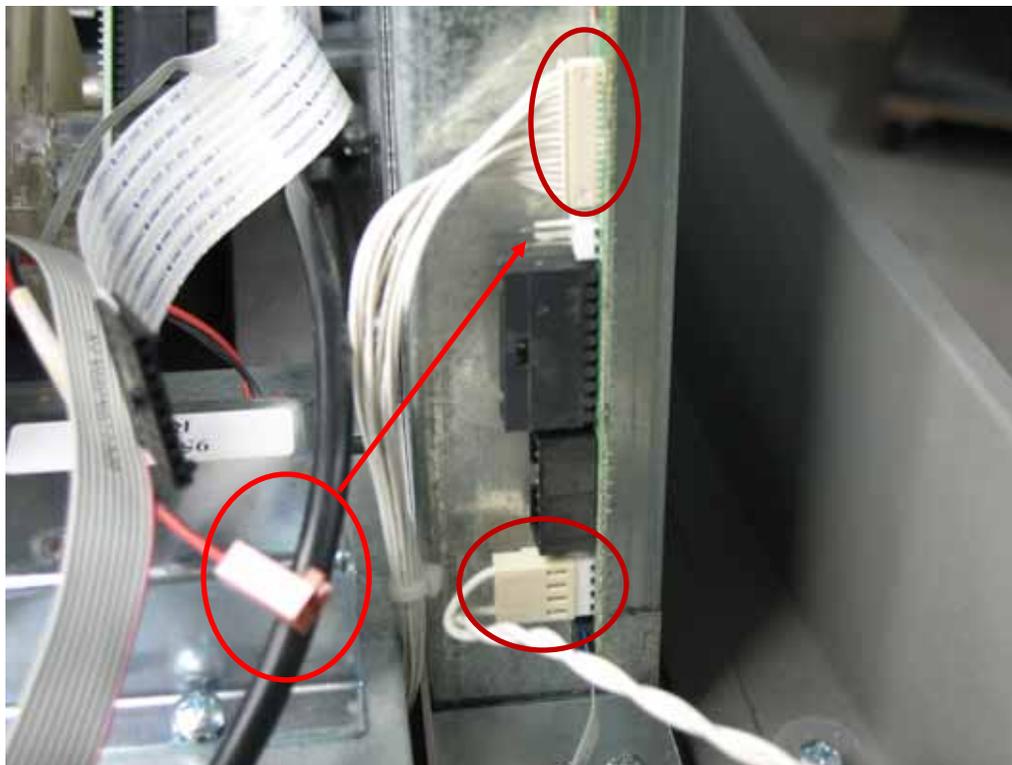


## T9 EPP CONTROL PANEL UPGRADE—HARDWARE INSTALLATION INSTRUCTIONS

**14.2**—Plug the screen key cables into the T9 translator board. Note that the blue tab on the cable should be facing away from the main board.

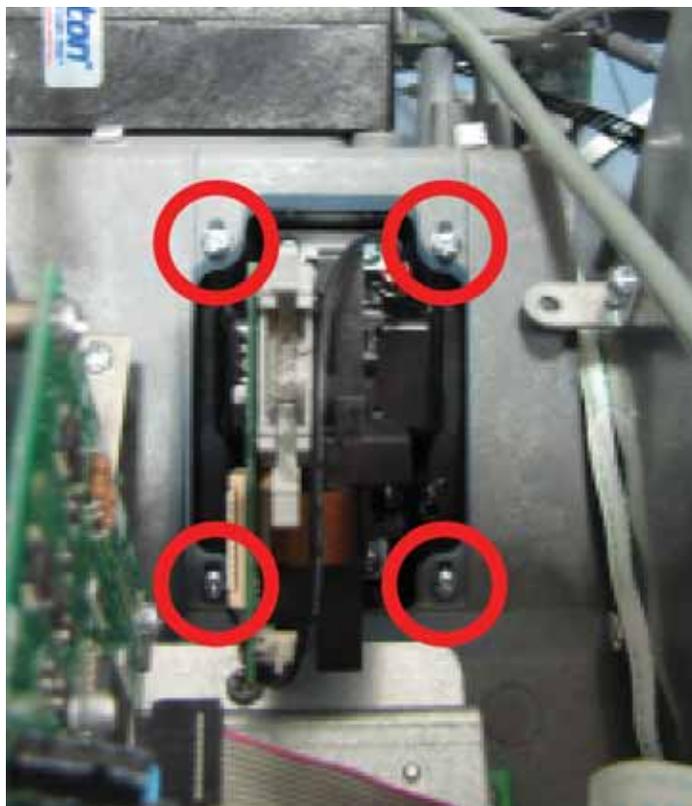


**14.3**—Plug the display cable, inverter cable and the speaker cable into the mainboard.

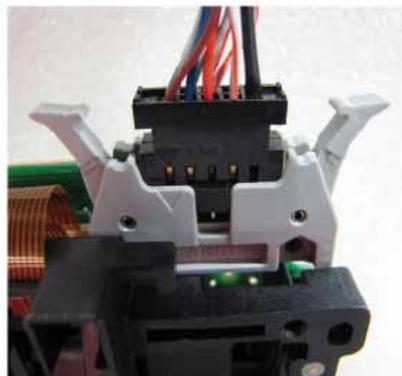
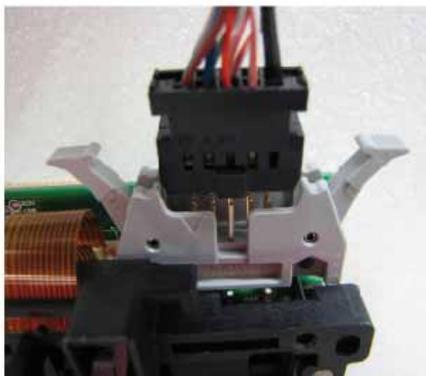
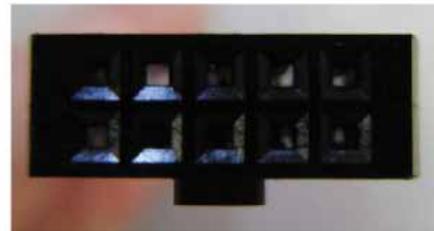
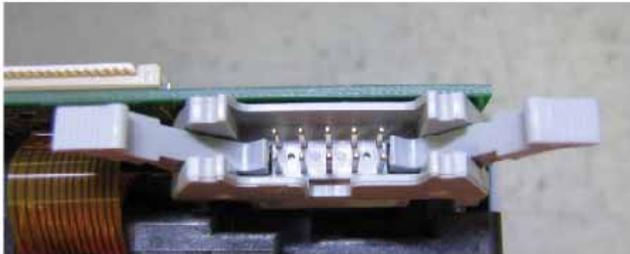


## 15. INSTALLING CARD READER

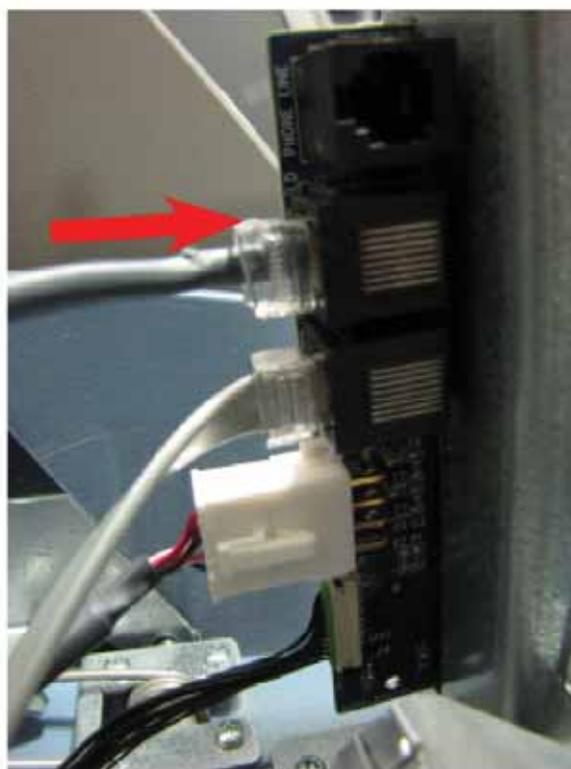
15.1—Place the card reader into the front of the new control panel, in the correct orientation (see image below for reference). Secure the card reader in place using 4 screws. You will need a long shaft Phillips screwdriver for these screws.



- 15.2**—Obtain the card reader cable. Examine the cable end and the cable port on the card reader. Ensuring the locking tabs are out, plug the cable into the card reader lining up the tab on the cable with the notch in the port. The tabs will close as the cable is inserted into the port. Ensure the tabs click into the locking position.

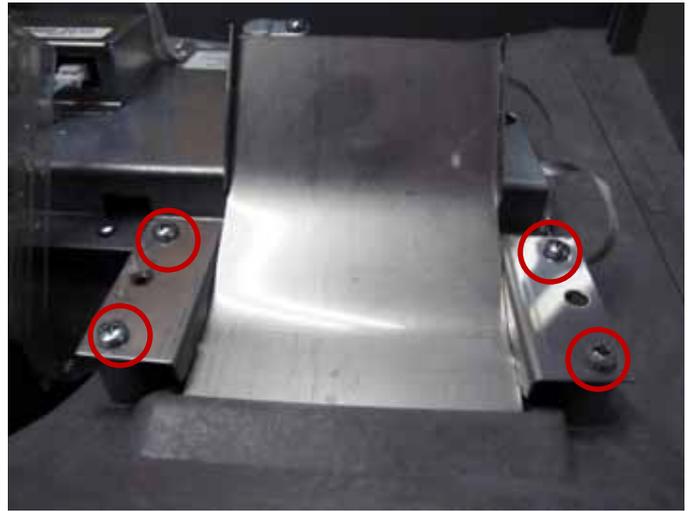


- 15.3**—Plug the card reader cable into port J2 in the back of the mainboard.

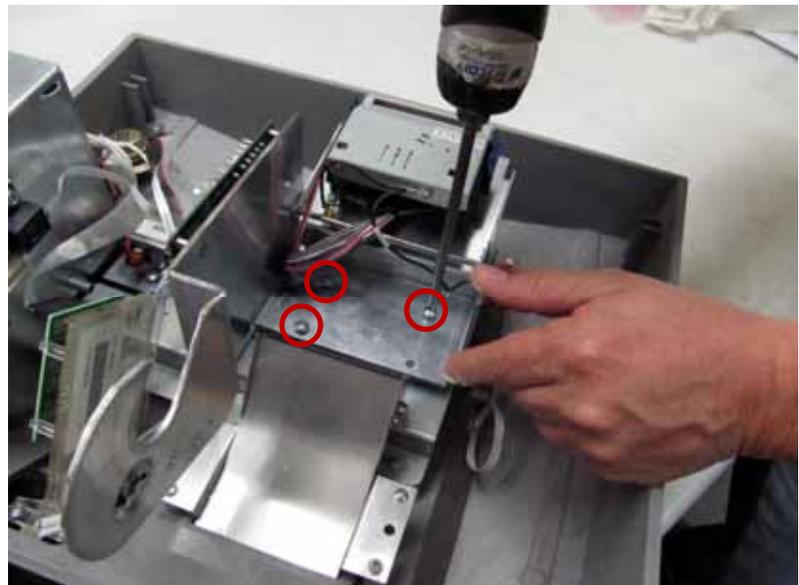
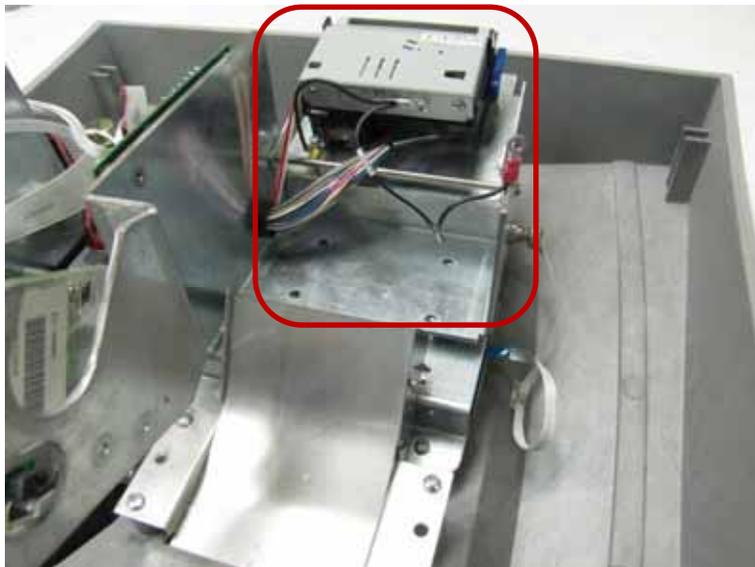


## 16. INSTALLING PRINTER ASSEMBLY

16.1—Secure the paper chute in place using 4 screws.



16.2—Secure the printer in place with 3 machine screws. The fourth screw will be used to mount the ground wire as well.

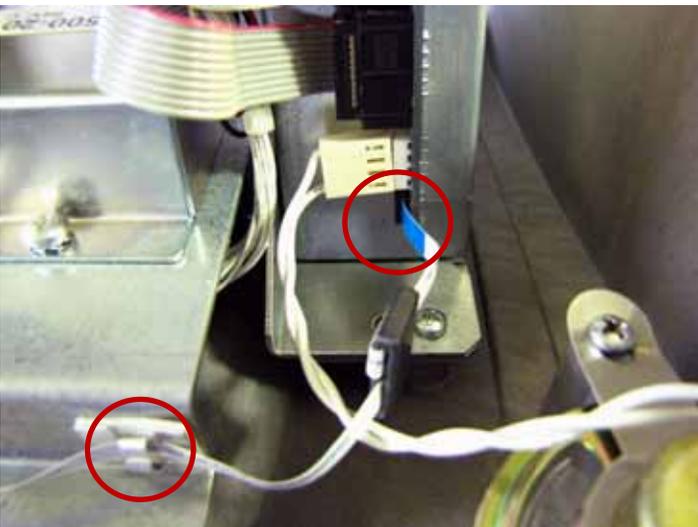
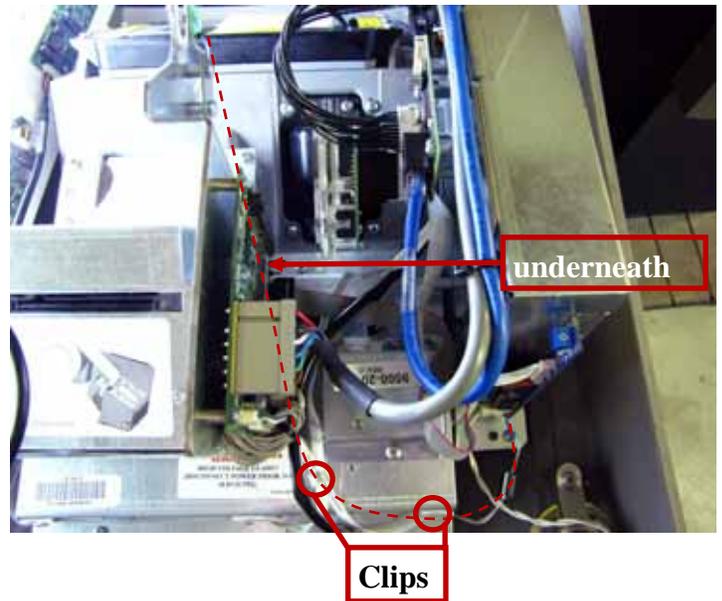


## T9 EPP CONTROL PANEL UPGRADE—HARDWARE INSTALLATION INSTRUCTIONS

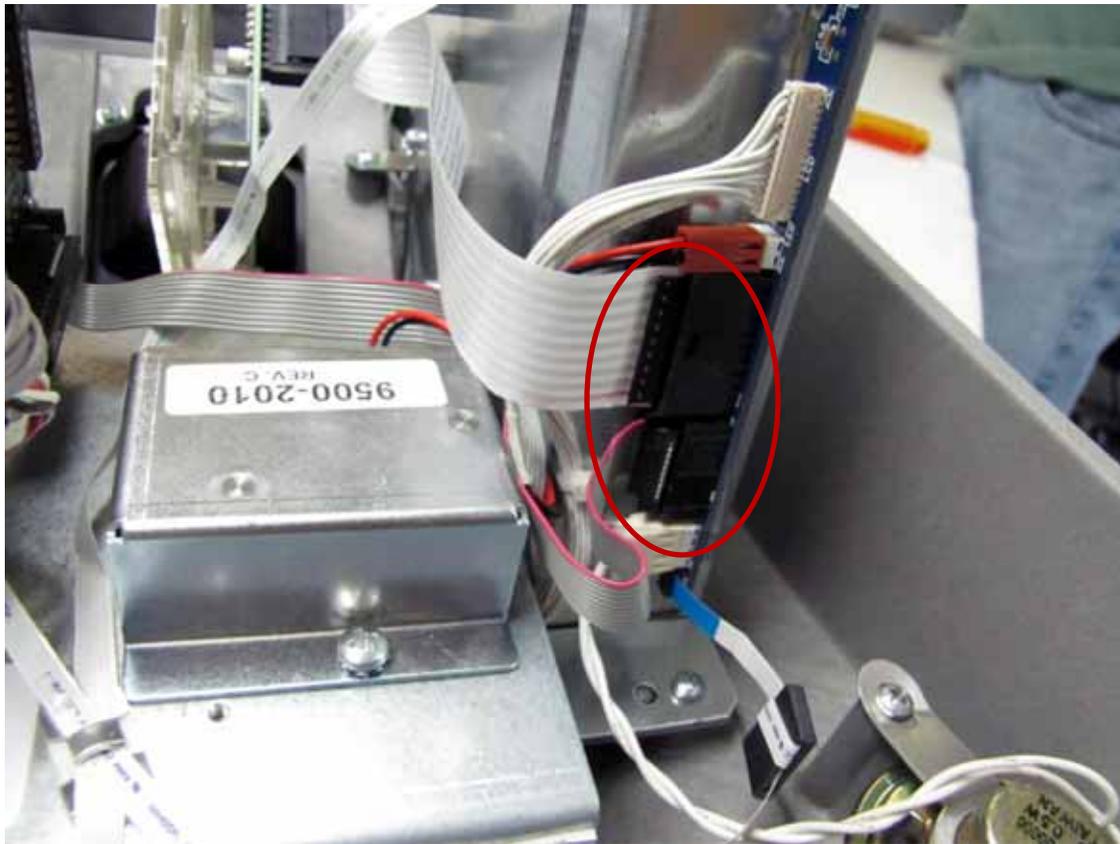
**16.3**—Place the ground wire lug over the 4th opening and secure with a screw. Fold the printer head down and secure with the thumb-screw.



**16.4**—Route the low paper sensor cable under the sensor board and through the clip. Pinch the clips down to secure the cable. Plug the cable into the main pc-board.



**16.5—** Plug the printer communications.



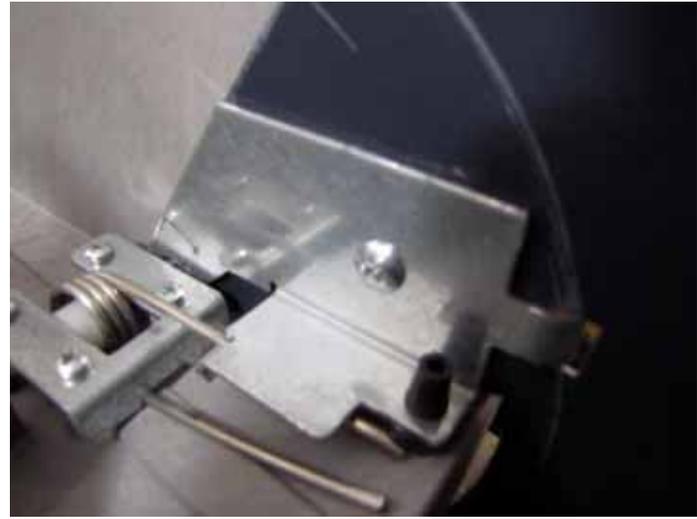
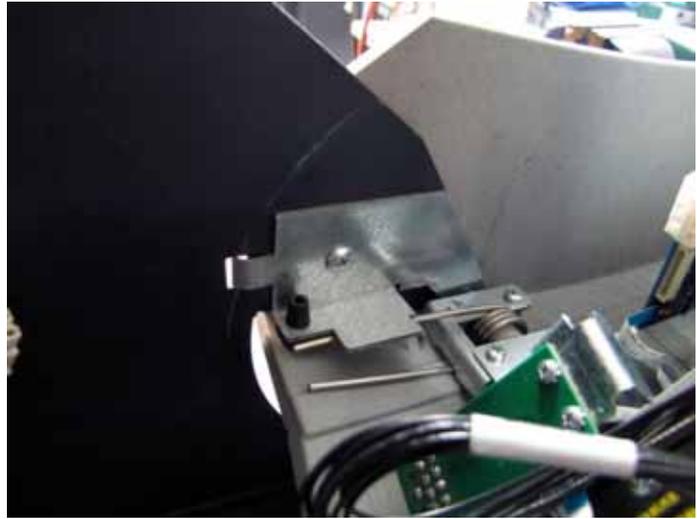
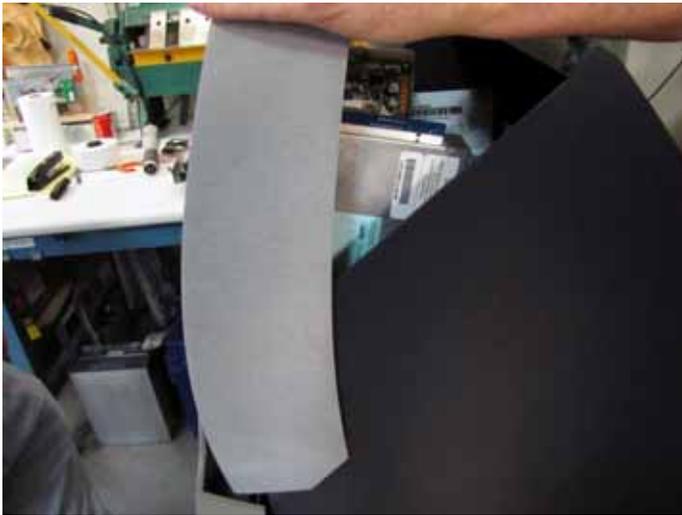
## **17. INSTALLING NEW CONTROL PANEL**



## **WARNING:**

**The hinge retainer spring is under tension when the control panel is in the open position, and can easily snap back before screw installed!**

17.1—Install the new control panel onto the cabinet. Re-install the left and right hinge retainers using 1 screw for each side.

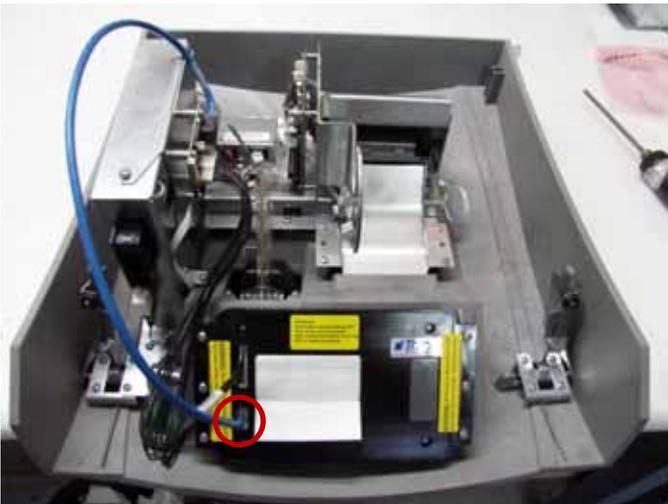


## 18. INSTALLING CABLES

18.1—Plug the screen key cable for the T9 EPP into the EPP connector and the T9 translator board connector.

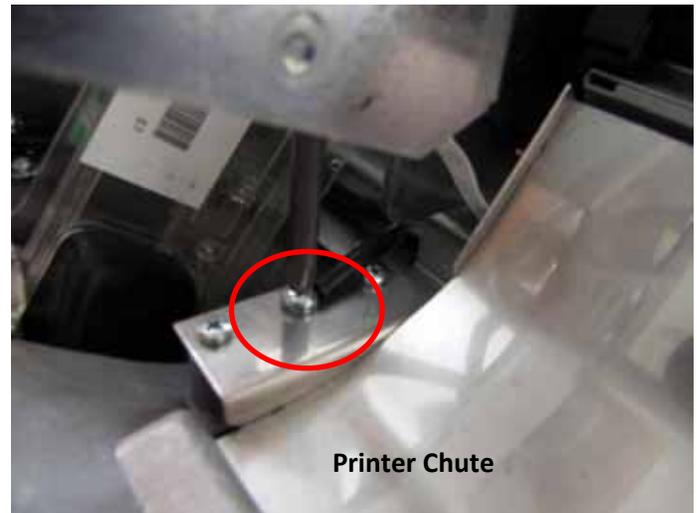
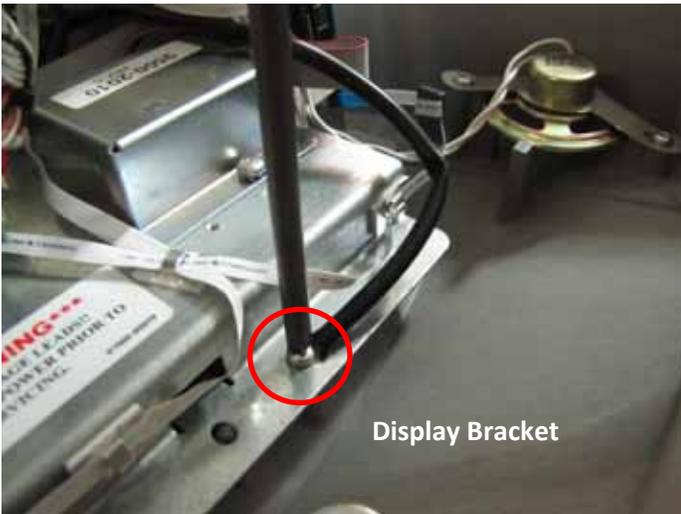


18.2—Plug the T9 EPP communications cable into the EPP and the T9 translator board connector.

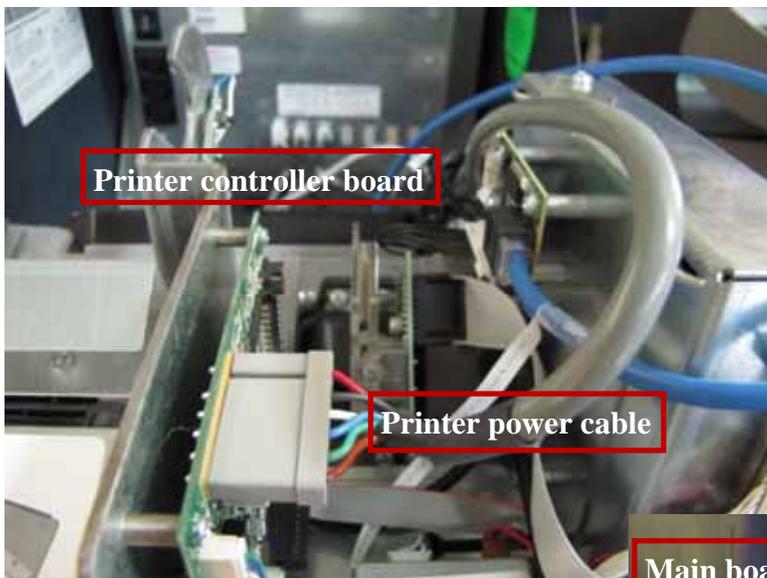


## T9 EPP CONTROL PANEL UPGRADE—HARDWARE INSTALLATION INSTRUCTIONS

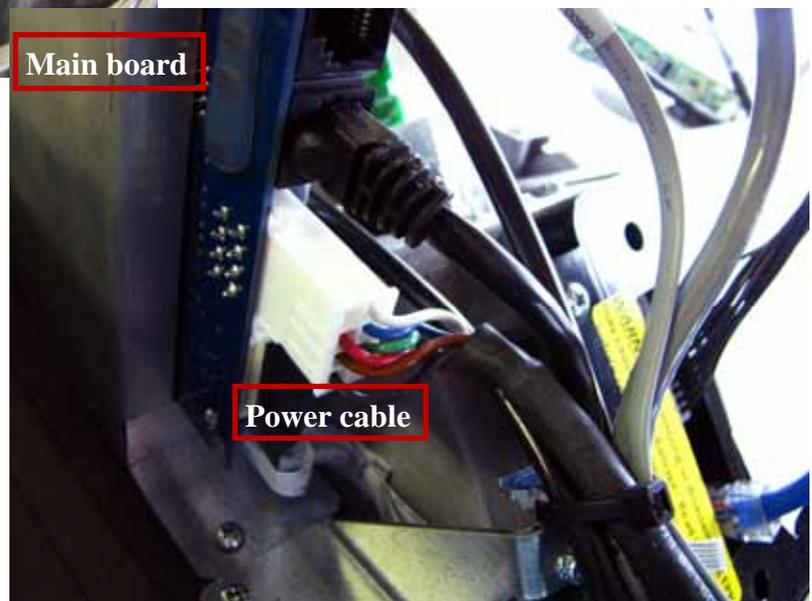
**18.3**—Next, re-install the cables. Secure with screw the ground wire lug from the power supply on the display bracket. Secure with screw the ground wires from the card reader and control panel on the printer chute.



**18.4**—Plug the power cable into the main board, and the printer power cable into the printer controller board.



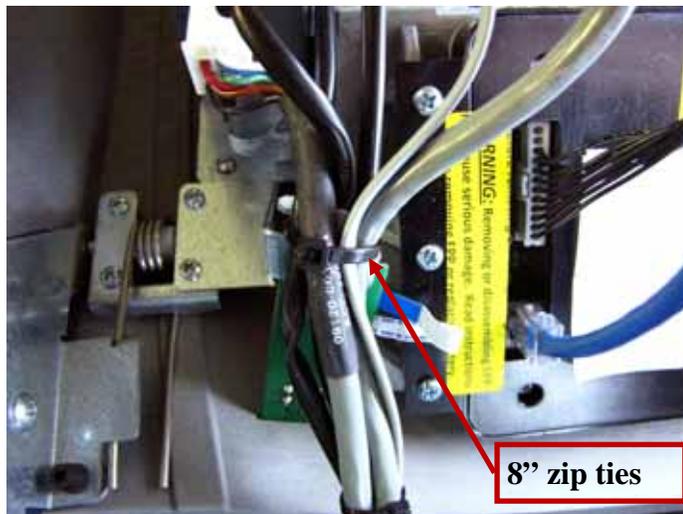
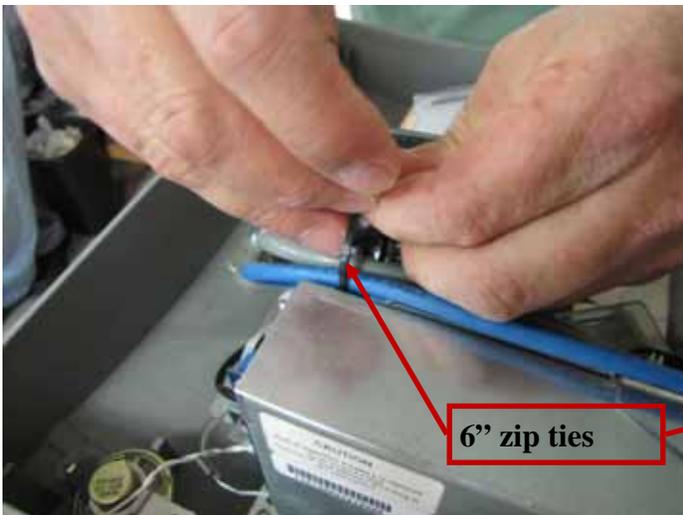
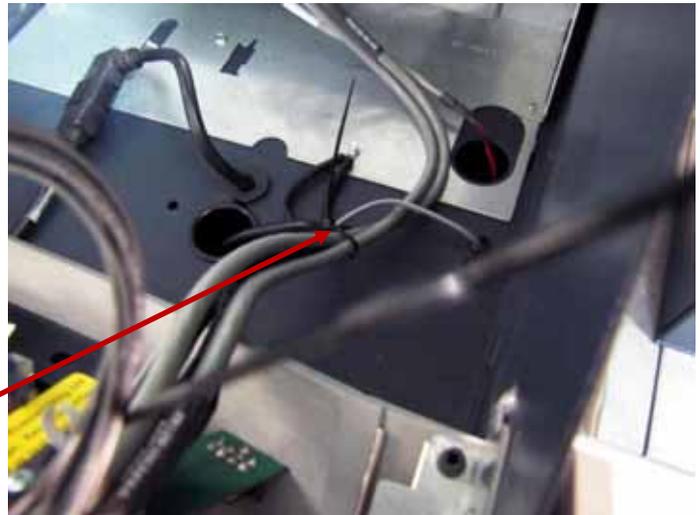
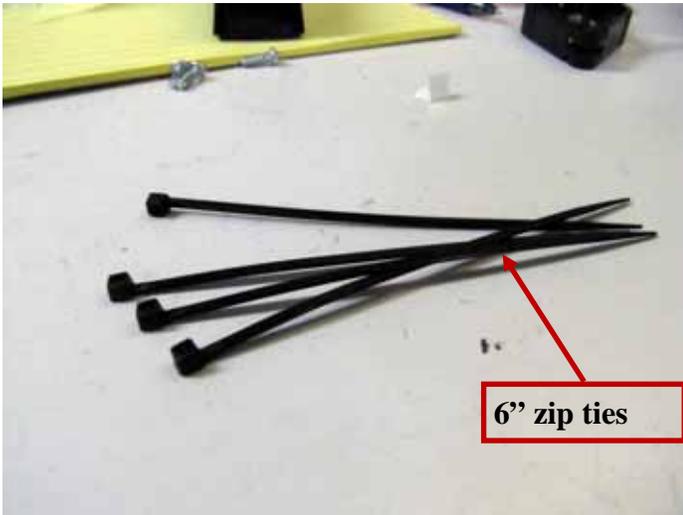
Improper grounding may cause damage to ATM and/or components.



**18.5**— Plug EJ/dispenser communications and any other cables as necessary into the main pc-board.

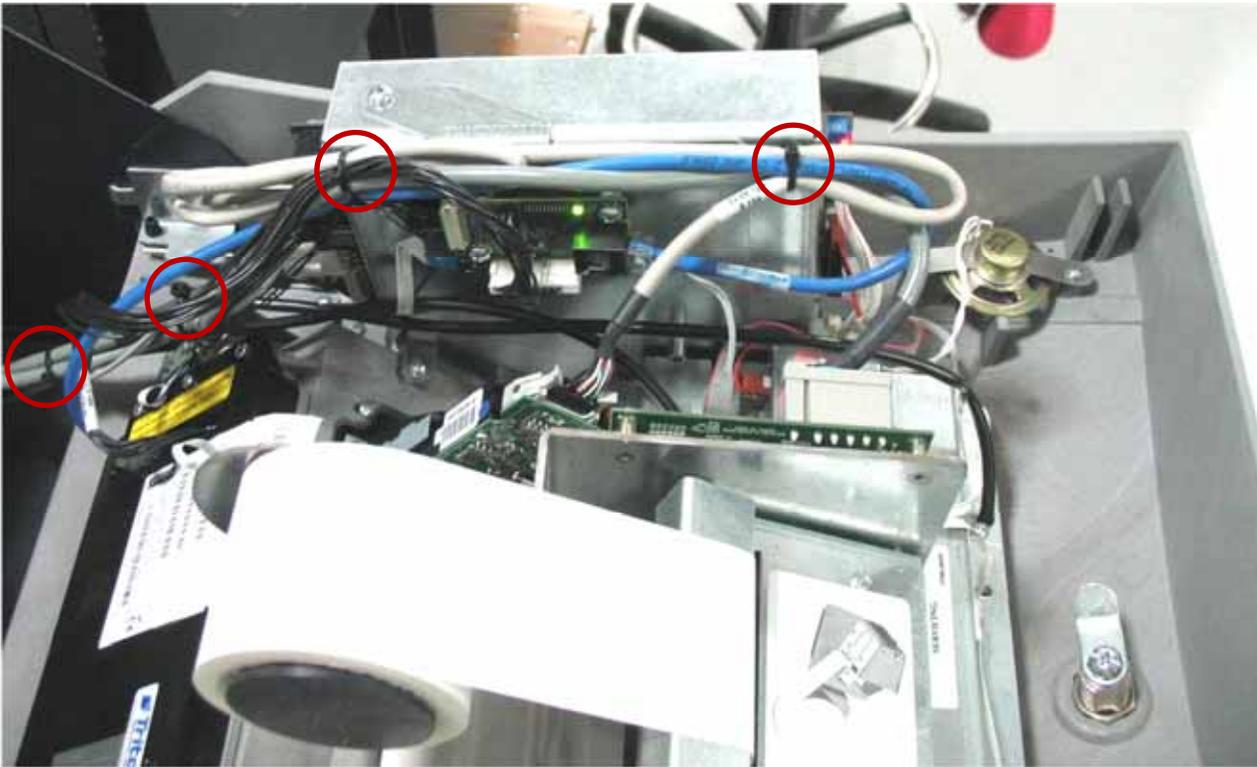


18.6—Secure all cables in place with proper length zip-ties.

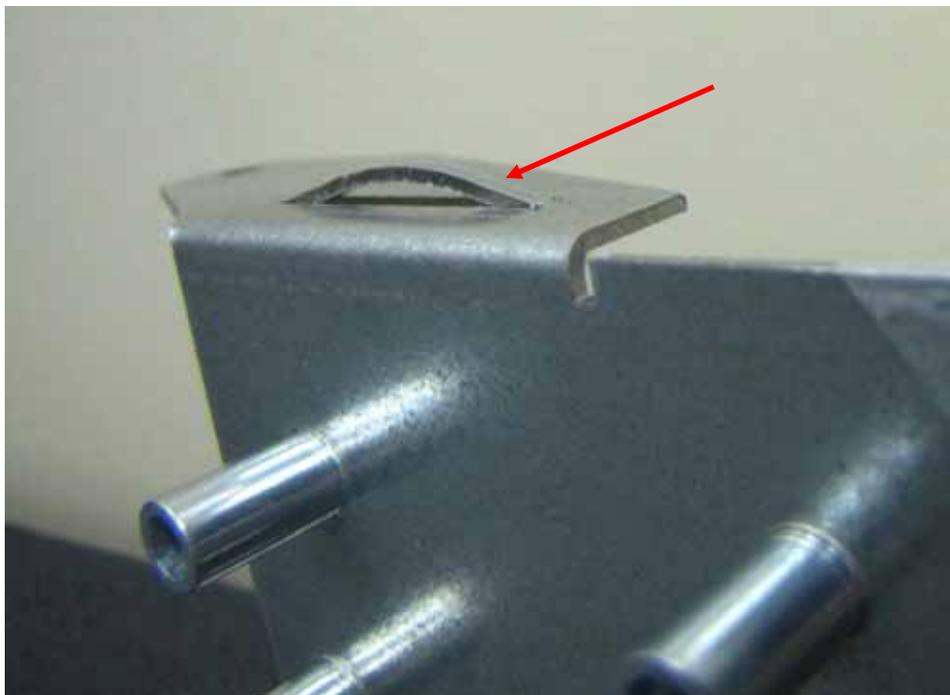


**Note:** The headphone pc-board mounting bracket has a cable routing feature built-in to secure a zip-tie.

**18.7**—Clip excess tie from zip-ties after the cables are secured. Ensure that the cables are neatly routed and not pinched.



**Note:** - If no cable tie lance form on the mainboard use the lance form on translator board



18.8—Replace the paper roll. Plug in the AC power cord.



## 19. INSTALLING BRAILLE LABEL (IF SPEECH IS INSTALLED)

19.1—Place the Braille label onto the front of the ATM to the right of the headphone jack



## 20. INSTALLING HEADPHONE CABLE (IF SPEECH IS INSTALLED)

20.1—Plug the flat headphone cable into the main board. Note the position of the blue tab for proper installation.



## 21. POWERING UP THE ATM

21.1—Power on the ATM and perform software setup.

### Final Steps:

1. Verify the EPROM is installed in mainboard per step 12.
2. Power on ATM.
3. Watch display for “Programmed” in the PRG FLH: line. Press and release the #1 key on the keypad. (May need to press it two or three times.)
4. EPROM Access menu is displayed. Enter “123456” for the code (or the EPROM ACCESS CODE for that board).\*
5. In the EPROM Menu press ERASE EEPROM.
6. Enter 2455 on the keypad.
7. Watch for "ERASE COMPLETED" message at bottom of screen. If this does not show up in a few seconds, Repeat steps 5 and 6.
8. Press Download to enable sending software load file to the ATM.

\*If the EPROM ACCESS CODE is not known, a Challenge will be presented. A Response to that Challenge will need to be obtained from Tech Support (or the Triton Partner Site) in order to access the EPROM menus.