



TDM TO MINIMECH CONVERSION PROCEDURE
(MODEL 9100 ATM)

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Document Updates

Apr 1, 2009	Original
March 12, 2014	Part number corrections

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PURPOSE

This guide covers the steps for swapping your TDM dispenser in the Model 9100 ATM with a MiniMech dispenser. This procedure includes a list of all tools and hardware necessary for the conversion as well as the steps involved. It includes the replacement of the original power supply with an updated version.

SCOPE

This procedure applies to all service personnel involved in the process of maintaining or converting Triton ATMs. It is to be performed by skilled Triton trained personnel ONLY.

OVERVIEW

The TDM to MiniMech Dispenser Conversion will require the replacement of the TDM dispenser, the power supply assembly, and all associated hardware and cables. The kit includes all cabling and associated mounting hardware. The TDM will be replaced with the MiniMech and its associated bracket assembly. The single power supply will be replaced with an updated power supply and its associated adapter bracket. Additional primary components of the kit include a 6' AC extension cord, new power cables for the printer controller and docking boards, as well as the MiniMech and all brackets. It also includes the addition of an Electronic Journal (EJ), connected between the docking board and the dispenser. A software upgrade is also required, and included. This instruction manual will cover the replacement of the TDM with the MiniMech, the replacement of the power supply, and the addition of the EJ.

SAFETY

Adhere to all common safety practices while performing this conversion. After performing the shut down procedure, ENSURE AC POWER IS DISCONNECTED FROM THE WALL SOURCE.

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REQUIRED PARTS AND TOOLS

TOOLS REQUIRED		
#1 & #2 Phillips Screwdrivers, 1/4 & 11/32 inch nut drivers, miniature flat tip screwdriver		
MODEL 9100 TDM to MiniMech CONVERSION KIT P/N 06100-08134		
PARTS SUPPLIED		
PART NUMBER	DESCRIPTION	QUANTITY
09120-07054	Mini-Mech Power Cable	1
09120-00073	Cable DC Power Supply to Docking Board	1
09120-07095	AC Power Extension Cable	1
09110-01214	Power Supply SubAssy	1
03011-05216	Power adaptor bracket	1
02054-00302	Screw #8-32 3/8" Type B Thread Forming Hex Head	3
02301-00024	Nut #8-32 Hex Nut Ext. Tooth Washer	7
03072-00015	6 Inches TY Wraps	4
05200-00399	9XXX Software Upgrade	1
09120-00388	Cable Power Printer	1
03011-52027	Bracket, Mech Mount	1
09120-07048	EJ to MiniMech comm cable-right angle	1
02054-00309	Screw #10-32 x 1/2" L Machine Screw w/ Washer Pan Phil	2
09200-00075	Yellow EJ (Electronic Journal)	1
03011-01481	EJ mount bracket	1
02301-00041	Nut 1/4-20 Kep Nut	4
09120-00311	EJ to Main board cable	1
09005-00600	Dispenser MiniMech with Cassette	1
03072-00038	Cable Clip 3/4" Round, Screw-In Quick Release	1
03072-00027	Cable Clip	1
02617-00031	Strain Relief Plugs	2
01200-00043	Fuse Medium Blow 4A Spare	1
02054-00169	Screw #8-32 3/8 Inch Pan Phil Head w/Ext Tooth Wash	2
00000-00201	Serial Number(Cassettes) 1 or A	1
07102-00079	TDM to MiniMech Installation Instructions	1

REMOVE THE TDM-100 DISPENSER

Before proceeding, follow these steps to remove power from the ATM:

Perform a controlled shut down as per the appropriate procedures. Then unlock and open the ATM control panel. Turn the power switch to the OFF (0) position, and **unplug the ATM power cord at the wall outlet.**

1. Open the cabinet vault door. Rotate the dispensing mechanism mounting platform to the service position. To do this, locate the spring-loaded locking pin on the underside of the mounting tray. This pin lets you lock the dispenser's swivel mounting platform into half-turn access positions. (Figure 1)
2. Pull the pin down to release the swivel mounting platform. Slowly turn the tray clockwise so that the note and reject cassettes can be accessed from the front. Release the locking pin and move the mounting platform back and forth slightly to ensure the pin snaps back into place, locking the mounting platform into the service position (Figures 2 and 3).
3. Disconnect the power and communication (Comms) cables from the dispenser (Figure 4, below). Open the ferrite component that surrounds the 2 cables and set aside. Push the cables up into the upper cabinet.



Figure 4. Power and Comm cable disconnected.

4. Remove the note and reject cassettes. Using a phillips head screwdriver, remove the four (4) screws that secure the dispenser to the swivel platform (Figure 5, below). Remove the TDM-100 dispenser mechanism.

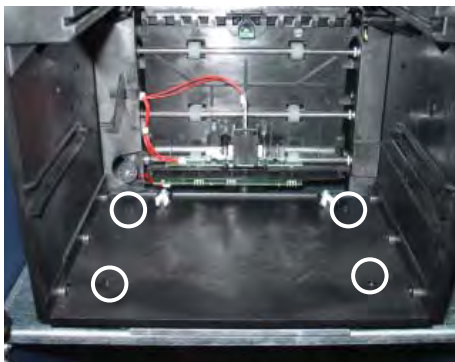


Figure 5. Remove mounting screws.

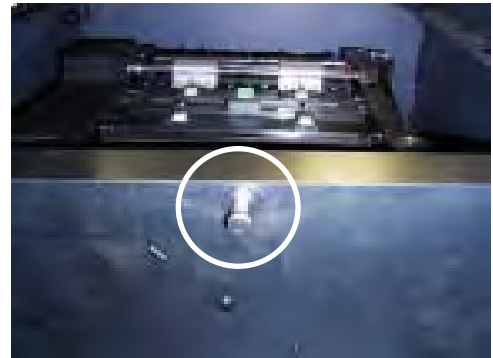


Figure 1. Pull release pin for swivel platform.



Figure 2. Rotate dispenser clockwise.



Figure 3. Mechanism in service position.

REMOVE THE DISPENSER TRAY

1. Remove the nut that secures the cabinet grounding strap to the mounting bolt that supports the left-front corner of the dispenser tray (Figure 6). Remove the nuts from the remaining mounting bolts (Figure 7).



Figure 6. Grounding strap secured to dispenser tray mounting bolt.

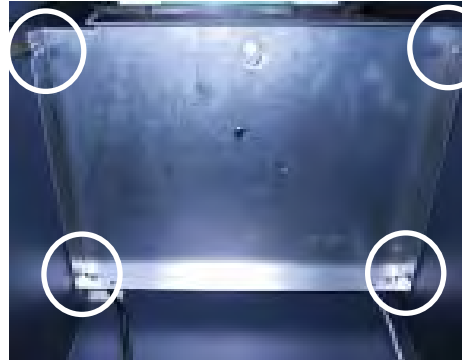


Figure 7. Location of dispenser tray mounting bolts. (from bottom)

2. Lift the tray up and away from the bolts and remove it from the cabinet. You will need to turn the tray slightly to clear the edges of the cabinet opening.



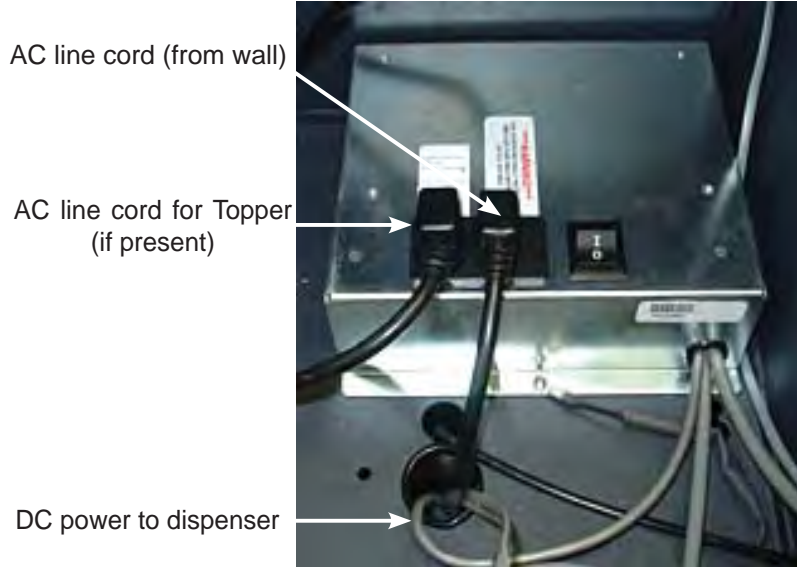
Figure 8. Turn tray to clear door edges.



Figure 9. Dispenser tray removed from cabinet.

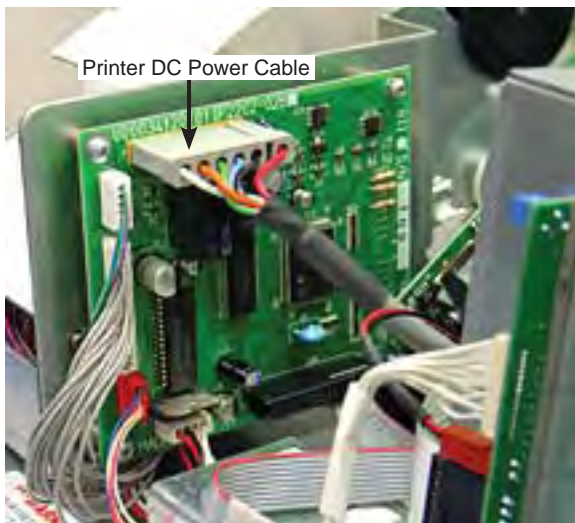
REMOVAL OF THE 9100 SINGLE POWER SUPPLY

1. Refer to Figure below. Disconnect the AC line cord and topper (if present) at the DC power supply.

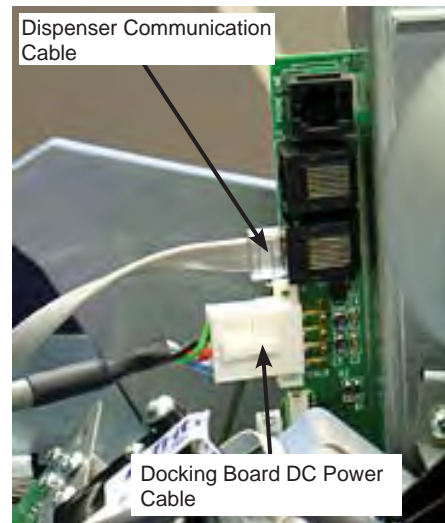


Disconnecting the 9100 single DC power supply

2. Refer to Figures below. Disconnect the DC power cable for the receipt printer from CN1 on the printer controller PCB. Connect the new printer power cable at the same point.
3. Disconnect the DC power cable for the docking board from J4 on the docking board (inward edge connector of the main-board). Connect the new docking board power cable at the same point.
4. Disconnect the Dispenser communications cable from the docking board, and remove it from the cabinet.



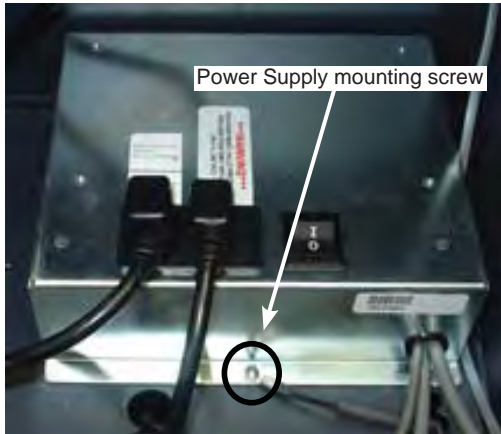
DC power connection at CN1 on the Printer Controller PCB



DC power connection at J4 on the Docking Board

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5. Refer to the Figures below. Remove the DC power supply mounting screw (and ground straps if present) along the front edge of the power supply case.
6. Slide the DC power supply forward until it stops and then carefully lift it straight up from the top cabinet enclosure (with attached cables).



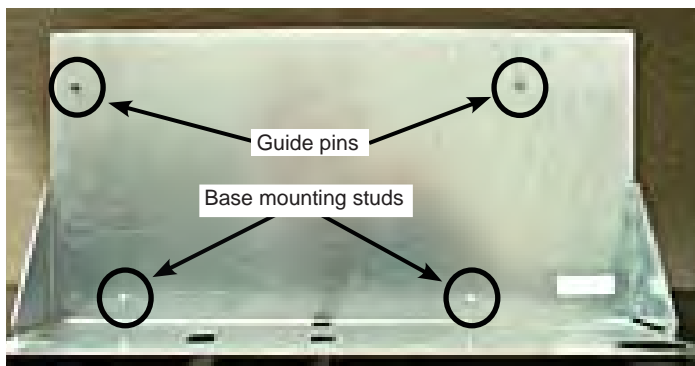
Location of single power supply mounting screw



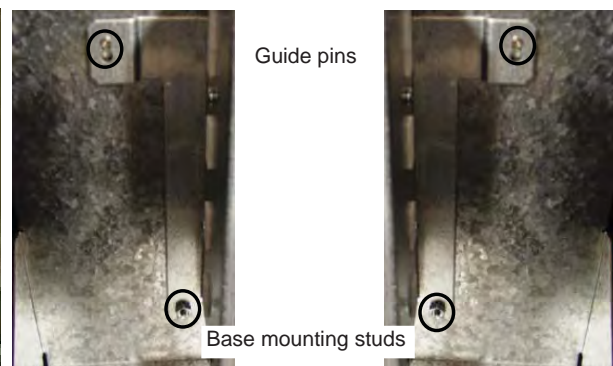
Slide the single power supply forward and lift it from the cabinet top enclosure

INSTALLATION OF THE REPLACEMENT POWER SUPPLY

1. Refer to the Figures below. Start the nuts on the two (2) base mounting studs on the power adaptor bracket. Do not tighten.
2. Mount the power supply on the power adaptor bracket. Make sure the guide pins and base studs on the bracket fit into the corresponding locations on the brackets of the power supply. Make sure the U-shaped openings on the lower edge of the power supply slip onto the base mounting studs between the nuts and the bracket.
3. Press down on the power supply until the guide pins on the bracket slide all the way up into the corresponding slots on the power supply. Tighten the nuts on the base mounting studs.



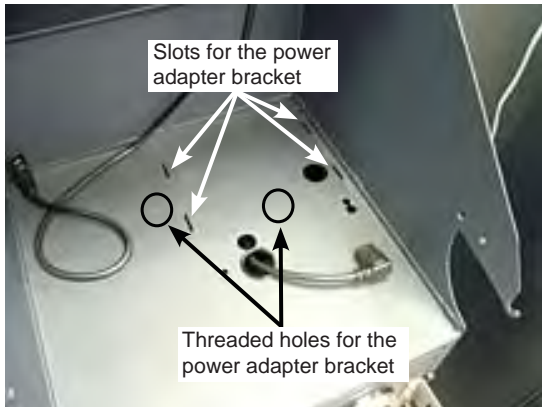
Power supply mounting points on the power adaptor bracket



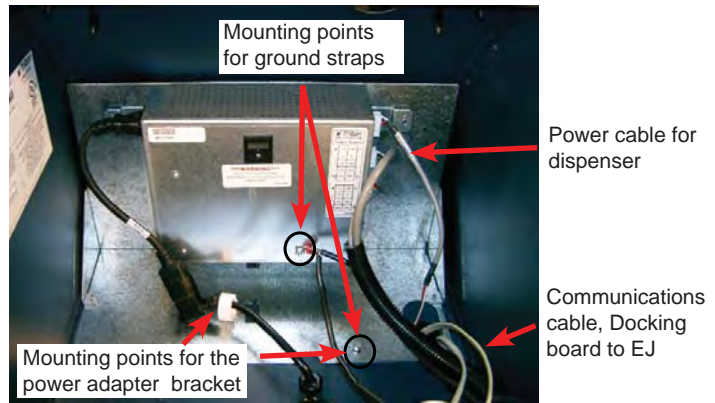
Mounting points on the power supply bracket

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4. Refer to the Figures below. Set the adaptor bracket with the power supply in the back of the top enclosure with the base plate (the plate side with the openings) down and the angle sides facing forward. Make sure the four (4) L-shaped locking tabs underneath the base plate slip into the four (4) open slots on the base of the top cabinet enclosure.
5. Push the power adaptor bracket towards the rear until it locks into place.
6. Secure the power adaptor bracket, with the plastic cable retainer, to the base of the top cabinet enclosure at the center rear mounting point. Secure the power adaptor bracket, as well as any ground wires to the base of the top cabinet enclosure at the right front mounting point. Place the power cord in the cable retainer.

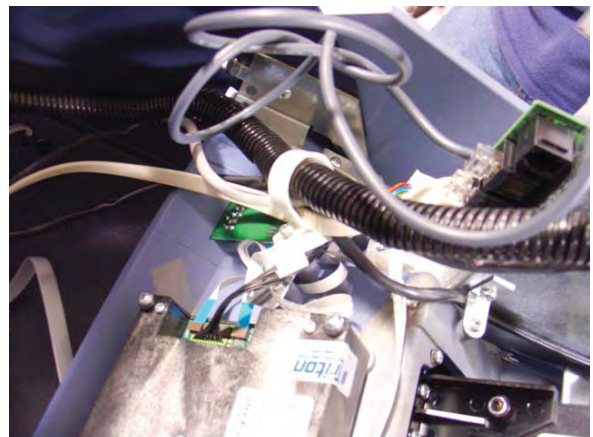
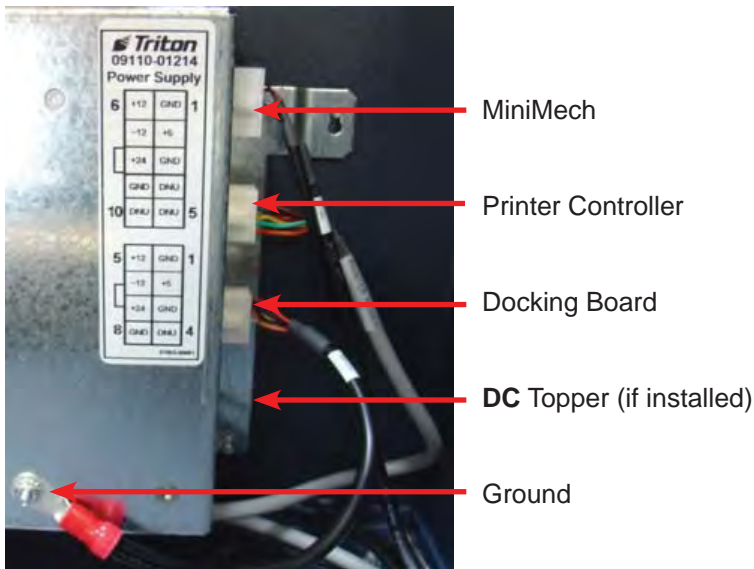


The mounting points for the power adapter bracket in the upper cabinet.



Power supply and adapter bracket in the top cabinet enclosure

7. ENSURE THE POWER SUPPLY IS IN THE OFF POSITION, AND THE AC CABLE IS DISCONNECTED FROM THE WALL OUTLET. Connect the AC cable extension to the AC cable and power supply as shown above. Ensure the cable is tightly seated and secure in the cable retainer.
8. Refer to the following Figures. Dress and route the DC power cables for the printer, and docking board, from the control panel to the power supply, using the cable clip shown, and ty wraps provided. Plug the printer, docking board and the lighted DC-powered topper (if one is installed) into the connectors as shown below. Plug the specific DC power cable for the MiniMech into the single 10-pin DC output connector on the power supply, and route it down through the cabinet to the vault below.



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*** IMPORTANT ***

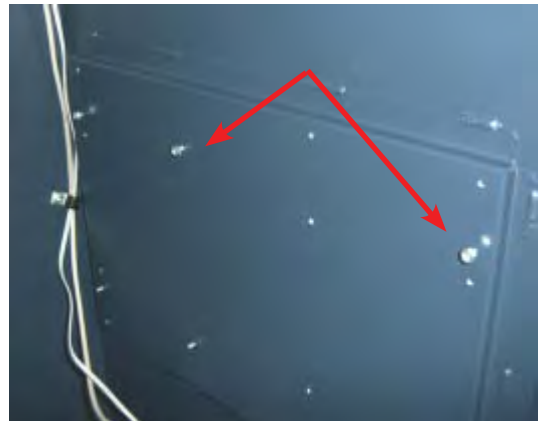
The Mini-Mech DC power cable has an in-line 4A fuse (a spare fuse is included in the kit). Before connecting a Mini-Mech DC power cable to the dispenser, make sure the correct fuse is installed in the casing and the fuse casing is securely fastened.

Install the Mounting Bracket for the MiniMech

1. Start but do not tighten four (4) nuts (2 on each side) on the sides of the cabinet.
2. Place the MiniMech mounting bracket on the four (4) standoff screws on the side of the cabinet. Notice the rear slots are angled, and are inserted first, then the front is rotated down. The MiniMech retaining fingers are to the rear.



Angled slot

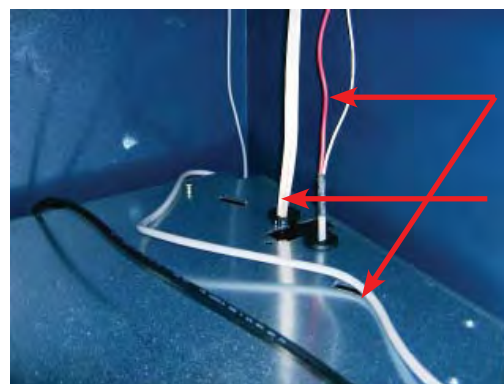


Mounting screws, nuts installed



Bracket mounted to cabinet.

3. Ensure the slots on the mount engage the screws. Secure the four (4) nuts. Secure the door ground cable, removed in an earlier step, to the front left screw and nut.
4. Route the dispenser power cable and docking board to EJ cable as shown. Place a black plastic cable strain relief plug around each cable and press into the dispenser mounting bracket. Route the power cable from under the bracket to the back and over the top as shown.



Dispenser power cable

Docking board to EJ cable

Install the Mounting Bracket and EJ

1. Place the EJ and mounting bracket as shown in the figure. Slide the EJ into the bracket.



2. Mount the EJ and mounting bracket under the right side of the dispenser bracket as shown. Secure with two (2) nuts. The EJ connectors are positioned at the top.

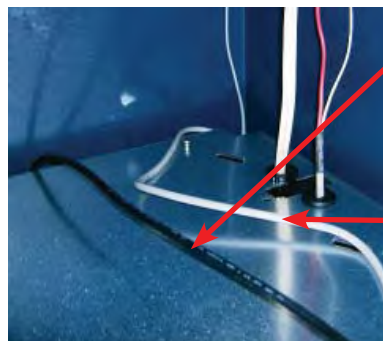


Mounting
Screws

Docking board connector is on the left.
Dispenser connector is on the right.



3. With the EJ secured, connect the docking board cable and secure with thumb screws. Connect the EJ to dispenser cable and secure. Route the dispenser cable under the dispenser bracket to the back, over the top, and out the front with the power cable.



EJ to
Dispenser
cable

Power
cable

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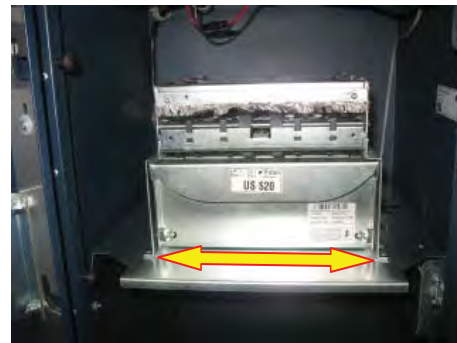
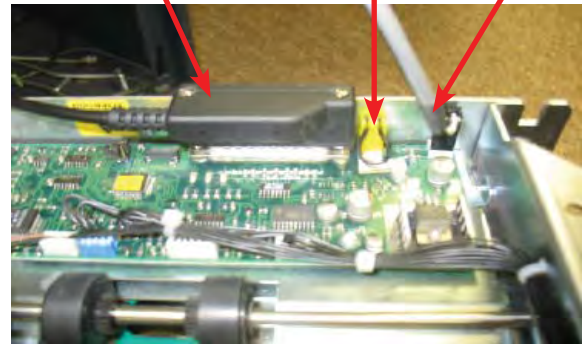
Install the MiniMech Dispenser

1. Place the MiniMech on the floor in front of the ATM, facedown, printed circuit board up.
2. Connect the power cable and the EJ cable to the dispenser, secure the EJ cable. Ensure the jumper located between the power cable and the EJ cable remains connected.
3. Place the dispenser on the mounting tray. Slide the dispenser back until it engages the finger mounts in the rear. Minor alignment may be necessary to ensure the front holes line up with the brackets screw holes. Secure the dispenser with two (2) screws. Allow the excess cable to hang over the back of the bracket.

EJ cable (connector may vary)

Jumper

Mini-Mech power cable



4. Review all steps of this procedure to ensure all connections have been made. At a minimum check for the following:
 - AC power extension cable to power supply.
 - New power cable from power supply to MiniMech. (Do not forget the fuse)
 - New power cable from power supply to Printer.
 - New power cable from power supply to Main board.
 - Dc topper to power supply. (if installed)
 - New communications cable from docking board to EJ. (RJ45 to 25 pin D) (may be tan)
 - New communications cable from EJ to MiniMech. (15 pin D to 25 pin D) (may be black)
 - Grounds at power supply and power supply bracket, and front left of dispenser tray bracket.
- Ensure ALL cables are secured and do not pose any hazard to the moving parts of the MiniMech dispenser, or to the opening and closing of the control panel.

Power UP

ENSURE THE SWITCH ON THE POWER SUPPLY IS TURNED TO THE OFF POSITION.

Connect the AC cord from the ATM to the wall outlet.

Turn the power switch on the power supply to the on position.

Observe the initiation of the ATM is correct.

Updating Terminal Software

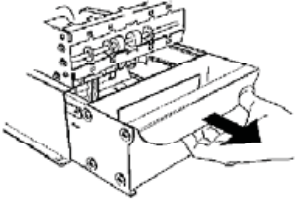
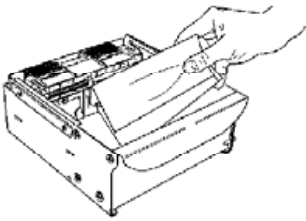
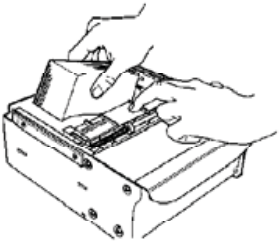
Terminal software **may** need to be upgraded to recognize the MiniMech and new Electronic Journal. Refer to document 07103-00014 V3 dated 12/04, Model 9100 Automated Teller Machine Service Manual, Section 8 for update instructions if necessary. Also read Section 10 on Journal entries as they pertain to the external EJ.

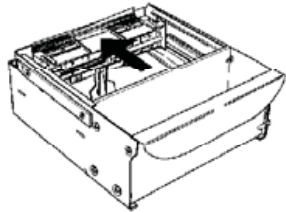
Servicing the MiniMech Cassette

The management and diagnostic functions of the ATM remain the same. All screens are the same. To service the MiniMech cassette, follow the normal close procedures and the steps on the next page.

REPLENISH MINI MECH CASSETTE



STEP	ACTION
1	<p>UNLOCK/OPEN DISPENSER SECURITY DOOR. GRASP TRAY HANDLE AND REMOVE NOTE CASSETTE</p> 
2	<p>REMOVE ANY REJECTED NOTES FROM THE REJECT COMPARTMENT. DO NOT RECYCLE REJECTED NOTES!</p> 
3	<p>MOVE THE PUSHER PLATE TO THE REAR OF THE TRAY (TOWARDS THE HANDLE).</p> 
4	<p>COUNT THE NUMBER OF BILLS THAT REMAIN IN THE CASSETTE, IF ANY.</p> <p>COUNT THE NUMBER OF BILLS THAT ARE BEING ADDED TO THE REMAINING NOTES.</p> <p>THE TOTAL OF THESE AMOUNTS WILL BE ENTERED IN THE “ENTER CASSETTE QUANTITY” PROMPT FOR CASSETTE CLOSE PROCEDURE.</p>

STEP	ACTION
5	<p>PLACE CURRENCY IN THE CASSETTE. SLOWLY PUSH PACKER FORWARDS AGAINST THE NOTES.</p> 
6	<p>GRASP THE HANDLE AND SLIDE THE NOTE CASSETTE FULLY INTO THE DISPENSER.</p> 