



TDM-100/150 TO NMD-50 CONVERSION PROCEDURES (MODEL RL5000 ATM)

TDN 07102-00062 03/2005

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PURPOSE

This guide covers the steps for replacing your TDM-100 or TDM-150 dispenser in the Model RL5000 ATM with an NMD-50 multi-cassette dispenser. This procedure includes a list of all tools and hardware necessary for the conversion as well as the steps involved.

SCOPE

This procedure applies to all service personnel involved in the process of maintaining or converting Triton ATMs.

APPLICATION

The two (2) conversion kits available depend on the Model RL5000 unit cabinet you currently have. The following guidelines will determine which kit is required to upgrade your ATM:

- Units built with serial numbers **Before LRL5111042931385** require kit **P/N 06200-00104**. These cabinets are identified with a vault door “T-Handle” installed.
- Units built thereafter require kit **P/N 06200-00103**. These cabinets (current) are identified with a vault door “Lift” handle.

How to Determine Unit Builds

To determine when your unit was built, the serial number (located on the affixed label inside the control panel) has a “julian” date located in the block of numbers. For example, in the serial number mentioned above, LRL5111**04293**1385, the “04293” is the year (04) and julian day (293th day of the year) that the unit was built.

Section 1 - This section covers the conversion procedures with older style cabinets (P/N 06200-00104).

Section 2 - This section covers the conversion procedures with the current cabinet.

SECTION 1 - CONVERSION WITH "OLDER" STYLE CABINETS (w/T-HANDLE)

REQUIRED PARTS AND TOOLS

TOOLS REQUIRED		
Slotted and Phillips Screwdriver 11/32" (9mm) and 7/16" (11 mm) Nut Driver		
TDM to NMD-50 CONVERSION KIT (P/N 06200-00104) "T-Handle" Cabinet		
PARTS SUPPLIED		
PART NUMBER	DESCRIPTION	QUANTITY
09200-00009	Power Supply	1
09005-00120	NMD-50 Mechanism (w/2 Cassettes and Reject Vault)	1
03011-02032	Bracket, L-shaped, Slide Stop	1
02054-00209	Screw, 4mm x 10mm, Low Profile, Slotted Panhead	6
03011-00104	Handle Bracket (Dispenser)	2
01060-00416	Connector, Quick Connect, Molex	1
03072-00009	Clip, Panduit Adhesive Cable	6
03082-00000	Custom Slide, 18"	2
03011-05023	Slide Spacer Bracket	1
09600-00057	Data Cable, EJ to Mech	1
09120-00117	DC Power Cable, NMD-50	1
09600-02036	EJ Module, Yellow	1
03011-00389	Bracket, EJ	1
09120-00367	Ground Wire, NMD-50	1
02302-00005	Hex Bolt, 1/4-20 x 3/8", Zinc Steel	3
02309-00016	Lock Washer, 1/4", Zinc Steel	3
02301-00037	Kep Nut, 1/4 - 20	2
02054-00048	Screw, #8-32, 3/8", Truss Phillips Head, Zinc	8
03072-00015	Ty Wrap	3
03072-00019	Flat Cable Clamp, Adhesive	1
03072-00002	Snap-in Connector, Plastic	1
07100-00024	Model RL5000 Quick Reference Card (NMD-50)	1
07102-00062	TDM to NMD-50 Conversion Procedures (RL5000)	1

DISASSEMBLY PROCEDURES

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

Enter **Management Functions > System Parameters > Shut Down the Terminal**. When prompted, turn power **OFF** on the ATMs power supply. Unlock and open the ATM control panel. Turn the power switch to the OFF (0) position. If possible, unplug the ATM power cord at the wall outlet.

1. Power Supply - Open the control panel. Disconnect all cables (AC/DC) from the terminal power supply (Figure 1). Lift the control panel slightly. Using an 11/32" nut driver, **loosen** the two (2) nuts that secure the power supply to the cabinet (Figure 2). Slide the power supply towards the rear of cabinet and remove from the unit.



Figure 1. Disconnect all cables from power supply.



Figure 2. Loosen the 2 nuts that secure power supply.

2. Dispenser Cable Harness - Using a 7/16" nut driver, remove the screw that secures the ground wire (Figure 3). After removing the ground wire, reinstall the screw. Next, disconnect the **Dispenser** data cable (RJ-45 end) connected to the Docking board assembly. Loosen/turn the cable bundle guides (Figure 4) and separate data cable from bundle. Feed the dispenser data, power, and ground wire harness down to the vault area through the cable access hole in Figure 5.



Figure 3. Disconnect ground wire.

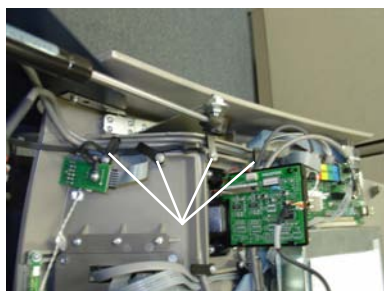


Figure 4. Loosen guides.



Figure 5. Feed cables down to vault area.

3. TDM Dispenser - Open the cabinet vault door. Release the locking slide rail and fully extend the dispenser from the cabinet. Rotate the dispenser mounting platform 180° to the "Service" position. Locate the spring-loaded locking pin on the underside of the mounting tray (Figure 6). Pull the pin down and turn the tray **clockwise** (Figure 7) so the note and reject cassettes can be accessed from the front. Release the locking pin and move the platform back and forth slightly to ensure the pin snaps into place to the "Service" position (Figure 8).

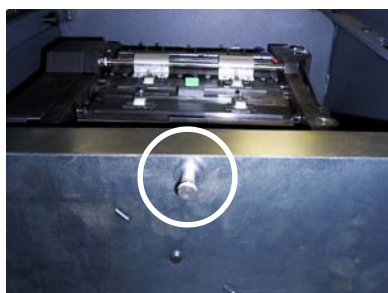


Figure 6. Pull release pin.



Figure 7. Rotate mechanism "clockwise".



Figure 8. Mech in "Service" position.

SECTION 1 - CONVERSION WITH "OLDER" STYLE CABINETS (w/T-HANDLE)

4. Disconnect the power and communication (Comms) cables from the dispenser (Figure 9). Carefully cut any Ty wraps that are securing the cables to the dispenser. Remove the cables from the cabinet. Remove the note and reject cassettes. Using a phillips-head screwdriver, remove the four (4) or six (6) mounting screws that secure the dispenser to the swivel platform (Figure 10). Remove the TDM dispenser mechanism.

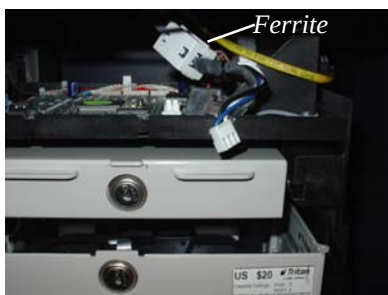


Figure 9. Power and Comm cable disconnected.



Figure 10. Remove mounting screws.

6. Dispenser Slide Rail Hardware - With the tray extended out, use a phillips screwdriver to remove the screws (3 on each side) that secure the slide rails to the mounting brackets (Figure 11). Remove the slide rails (with mounting tray attached) from the cabinet.



Figure 11. Remove slide rails w/tray.

UPGRADE KIT ASSEMBLY PROCEDURES

1. Right Side Slide Assembly - On a flat surface, assemble the right side slide assembly. Extend one of the slide rails (Figure 1) and secure to the slide spacer bracket with four (4) Truss phillip head screws (Figures 1 and 2). Mount this assembly to the right cabinet bracket shown in Figure 3. Using a 7/16" nut driver, secure the assembly to the cabinet bracket using two (2) 3/8" hex bolts and lock washers. When installed, the slide rail (pushed in) should be even with the door flange (Figure 4).



Figure 1. Slide rail extended.



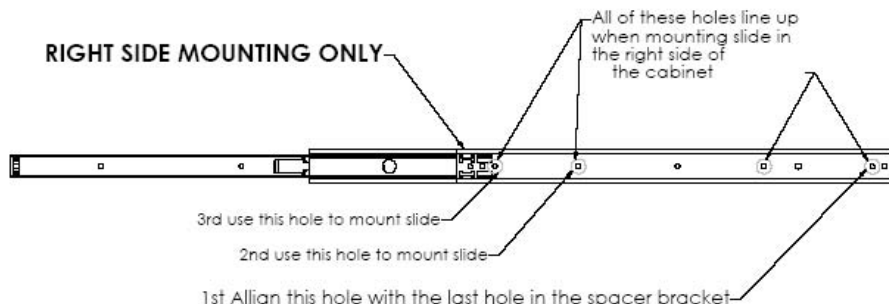
Figure 2. Slide rail/spacer assembly.



Figure 3. Cabinet bracket.



Figure 4. Assembly mounted to cabinet.



TDM-100/150 TO NMD-50 CONVERSION PROCEDURES

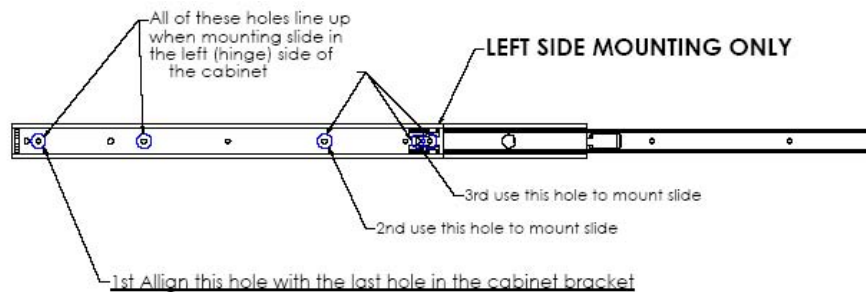
2. Left Side Slide Rail - Mount the other slide rail to the left cabinet bracket (Figure 5) using four (4) Truss phillip head screws (Figure 6). Use the diagram below for screw locations. **Note:** When installing slide rail, ensure the power/phone cables are “tucked” behind the cabinet bracket as shown in Figure 5. **Slide rails will be offset when extended.**



Figure 5. Cabinet bracket.



Figure 6. Slide rail installed.



3. Electronic Journal (EJ) and Bracket - The EJ (yellow), bracket, and cables (2 - EJ to dispenser, EJ to docking board) should be pre-assembled in the kit. If they are not, use Figure 7 as a reference for assembly. Locate the two (2) bolts in the upper right of the vault area (Figure 8). Mount the EJ assembly to the bolts (cable connects towards rear of cabinet) and secure with the two (2) Kep nuts provided using a 7/16" nut driver (Figure 9).



Figure 7. EJ and hardware assembly.



Figure 8. Mounting bolt location.



Figure 9. EJ mounted.

4. Dispenser Ground - Remove the cabinet ground bolt (Figure 10), if installed. If no bolt is available, one is included in the kit. Install the dispenser ground wire included and secure both ground wires with the bolt previously removed or one included (Figure 11). The other end of ground wire will attach to the NMD-50 when installed.



Figure 10. Remove door ground bolt.

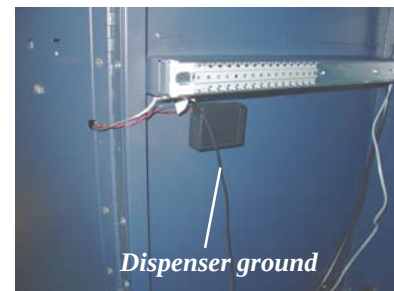


Figure 11. Dispenser ground installed.

SECTION 1 - CONVERSION WITH “OLDER” STYLE CABINETS (w/T-HANDLE)

5. Dispenser Power and Data Cables - Feed the EJ to Docking board cable (RJ-45 connector end) through the control panel access hole shown in Figure 12. Feed the dispenser power cable (insert) also up to the control panel (10-pin connector end). These 2 cables will be connected in later steps. Route the 2 cables in the vault area (EJ to dispenser, dispenser power cable end) in the existing cabinet cable clips (Figure 13).



Figure 12. EJ to Docking board cable.



Dispenser power cable



Figure 13. Route power/data cables.

5. Dispenser - Extend the slides fully. Ensure all cables in vault area have been moved out of way before installing mechanism. Remove cardboard support from mechanism cassettes. With 2-personnel, lift the NMD-50 by the green handles and align the rails on the dispenser with the slide rails. Start inserting the rail on the **RIGHT** *first*, then the **LEFT** due to the offset of the rails (Figure 14). Slide mechanism up to the rail stops, then push the **RIGHT** release in, then **LEFT** (Figure 15) and continue sliding mechanism fully into cabinet. Repeat extending/inserting mechanism into cabinet a few times to ensure no binding on slide rails.



Figure 14. Rails extended (offset).



Figure 15. Push release tabs “in”.

6. Dispenser Cables - Connect the power, data, and ground wires to the NMD-50 as shown in Figures 16 and 17. Route the cables through the cable clips attached to the mechanism covers (Figure 18). Ground wire routes down behind slide and through the lower cable clips.



Figure 16. Power cable connection.

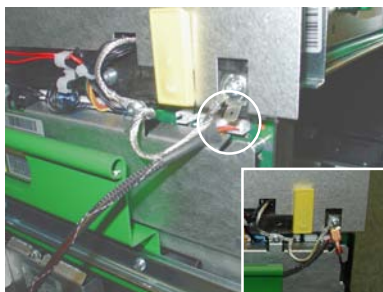


Figure 17. Data/ground connections.

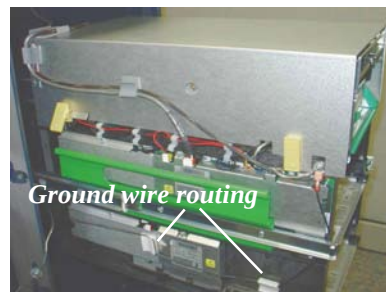


Figure 18. Route cables thru clips.

TDM-100/150 TO NMD-50 CONVERSION PROCEDURES

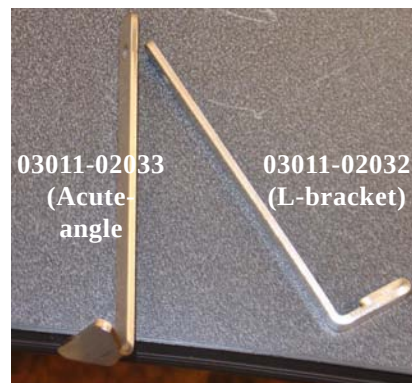
7. Power Supply/Cables - Open the control panel. Connect the EJ to Docking board cable (RJ-45 connector end) to the "Auxillary" port of Docking board. Route the cable through the cable guides (see Figure 4, "Disassembly Procedures"). Next, install the new power supply by reversing the procedures in Step 1, "Disassembly Procedures". Reconnect all power cables (AC/DC) to the power supply (Figure 19). Reconnect ATM power cord to wall outlet, if applicable.



Figure 19. Power supply connected.

The following illustrations show the installation of the slide catch bracket to the dispenser slide rail. Tool required is a #2 flat-tip screwdriver. Installation time approximately less than 5 minutes. See table below to determine which type and placement for the catch bracket.

NMD-50 Slide Stop (Model / Placement)		
Model / Cabinet	Bracket #	Placement
RL5115 (Business Hours / T-Handle)	03011-02032	Right side



Step 1

Fully extend mechanism. Remove screw shown from **Right** or **Left** side rail (see table). Retain screw.



Step 2

Slide catch bracket through slot on front of rail (L-shaped or angle end pointing **out**).



Step 3

Secure bracket with screw previously removed.



Step 4

Slide mechanism back in cabinet.



SECTION 2 - CONVERSION WITH "CURRENT" STYLE CABINETS (w/LIFT HANDLE)

REQUIRED PARTS AND TOOLS

TOOLS REQUIRED		
Slotted and Phillips Screwdrivers 11/32" (9mm) and 7/16" (11 mm) Nut Driver		
TDM to NMD-50 CONVERSION KIT (P/N 06200-00103) "Lift Handle" Cabinet		
PARTS SUPPLIED		
PART NUMBER	DESCRIPTION	QUANTITY
09200-00009	Power Supply	1
09005-00120	NMD-50 Mechanism (w/2 Cassettes and Reject Vault)	1
03011-02033	Bracket, Acute Angle, Slide Stop	1
02054-00209	Screw, 4mm x 10mm, Low Profile, Slotted Panhead	6
03011-00104	Handle Bracket (Dispenser)	2
01060-00416	Connector, Quick Connect, Molex	1
03072-00009	Clip, Panduit Adhesive Cable	6
03082-00000	Custom Slide, 18"	2
03011-00720	Left Slide Bracket	1
03011-00721	Right Slide Bracket	1
09600-00057	Data Cable, EJ to Mech	1
09120-00117	DC Power Cable, NMD-50	1
09600-02036	EJ Module, Yellow	1
03011-00389	Bracket, EJ	1
09120-00367	Ground Wire, NMD-50	1
02301-00004	Hex Nut, #8-32, Ext.Tooth Washer, Zinc	6
02301-00037	Kep Nut, 1/4-20	2
02054-00048	Screw, #8-32 x 3/8", Truss Phillips Head, Zinc	6
03072-00015	Ty Wrap	3
03072-00002	Snap-in Connector, Plastic	1
07100-00024	Model RL5000 Quick Reference Card (NMD-50)	1
07102-00062	TDM to NMD-50 Conversion Procedures (RL5000)	1

DISASSEMBLY PROCEDURES

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

Enter **Management Functions > System Parameters > Shut Down the Terminal**. When prompted, turn power **OFF** on the ATMs power supply. Unlock and open the ATM control panel. Turn the power switch to the OFF (0) position. If possible, unplug the ATM power cord at the wall outlet.

1. **Power Supply** - Open the control panel. Disconnect all cables (AC/DC) from the terminal power supply (Figure 1). Lift the control panel slightly. Using an 11/32" nut driver, **loosen** the two (2) nuts that secure the power supply to the cabinet (Figure 2). Slide the power supply towards the rear of cabinet and remove from the unit.



Figure 1. Disconnect all cables from power supply.



Figure 2. Loosen the 2 nuts that secure power supply.

2. **Dispenser Cable Harness** - Using a 7/16" nut driver, remove the screw that secures the ground wire (Figure 3). After removing the ground wire, reinstall the screw. Next, disconnect the **Dispenser** data cable (RJ-45 end) connected to the Docking board assembly. Loosen/turn the cable bundle guides (Figure 4) and separate data cable from bundle. Feed the dispenser data, power, and ground wire harness down to the vault area through the cable access hole in Figure 5.



Figure 3. Disconnect ground wire.

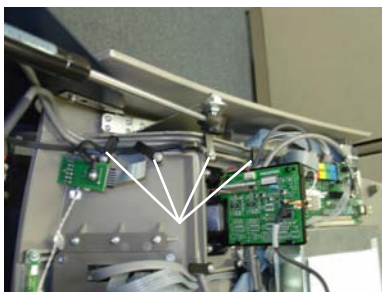


Figure 4. Loosen guides.



Figure 5. Feed cables down to vault area.

3. **TDM Dispenser** - Open the cabinet vault door. Release the locking slide rail and fully extend the dispenser from the cabinet. Rotate the dispenser mounting platform 180° to the "Service" position. Locate the spring-loaded locking pin on the underside of the mounting tray (Figure 6). Pull the pin down and turn the tray **clockwise** (Figure 7) so the note and reject cassettes can be accessed from the front. Release the locking pin and move the platform back and forth slightly to ensure the pin snaps into place to the "Service" position (Figure 8).

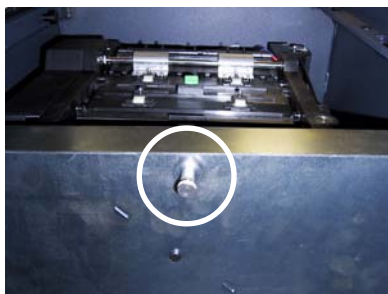


Figure 6. Pull release pin.



Figure 7. Rotate mechanism "clockwise".



Figure 8. Mech in "Service" position.

SECTION 2 - CONVERSION WITH “CURRENT” STYLE CABINETS (w/LIFT HANDLE)

4. Disconnect the power and communication (Comms) cables from the dispenser (Figure 9). Carefully cut any Ty wraps that are securing the cables to the dispenser. Remove the cables from the cabinet. Remove the note and reject cassettes. Using a phillips-head screwdriver, remove the four (4) or six (6) mounting screws that secure the dispenser to the swivel platform (Figure 10). Remove the TDM dispenser mechanism.

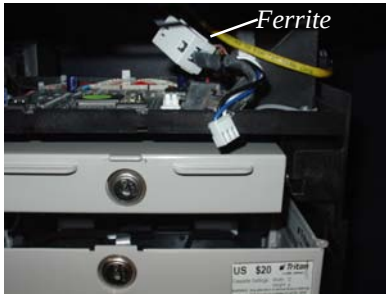


Figure 9. Power and Comm cable disconnected.

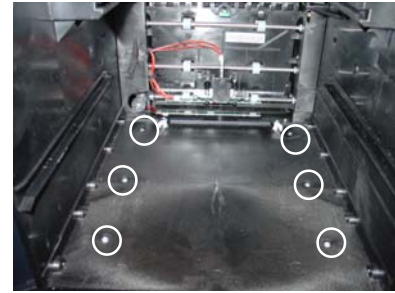


Figure 10. Remove mounting screws.

6. Dispenser Slide Rail Hardware - With the tray extended out, use a phillips screwdriver to remove the screws (3 on each side) that secure the slide rails to the mounting brackets (Figure 11). Remove the slide rails (with mounting tray attached) from the cabinet.
7. Mounting Brackets - Using an 11/32" nut driver, **loosen** the two (2) nuts that secure the brackets to the cabinet (Figure 11). Remove the brackets. These will be replaced. Start two (2) more nuts (one each side) to the third bolt closest to rear of cabinet (Figure 12). **Note:** The cabinet ground wire is attached to the left side front bolt. You will have to temporarily remove this nut to remove the ground wire lug. Nut will be attached in later steps.



Figure 11. Side rails removed.



Figure 12. Nuts started on bolts.

8. Tray Stop (Door) - Locate the tray stop mounted on the door (Figure 13). Remove this item from the door using a 7/16" nut driver..



Figure 13. Remove tray stop.

UPGRADE KIT ASSEMBLY PROCEDURES

1. Electronic Journal (EJ) and Bracket - The EJ (yellow), bracket, and cables (2 - EJ to dispenser, EJ to docking board) should be pre-assembled in the kit. If they are not, use Figure 1 as a reference for assembly. Locate the two (2) bolts in the upper right, rear of the vault area (Figure 2). Mount the EJ assembly to the bolts (cable connects towards top of cabinet, Figure 3) and secure with the two (2) Kep nuts provided using a 7/16" nut driver.



Figure 1. EJ and hardware assembly.

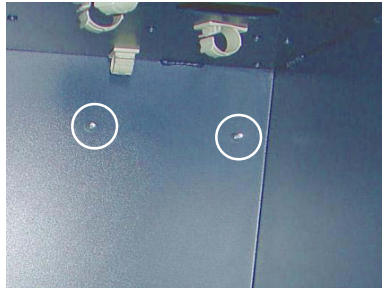


Figure 2. Mounting bolt location.



Figure 3. EJ mounted.

2. Slide Rail Mounting Brackets - Locate the two (2) mounting brackets in kit (Figure 4). There is a Left (**L**) and Right (**R**) specific. Mount brackets by first starting backslot (Figure 5) on the rear screw and rotating down over the other two (2) screws. Using an 11/32" nut driver, secure the hex nuts.

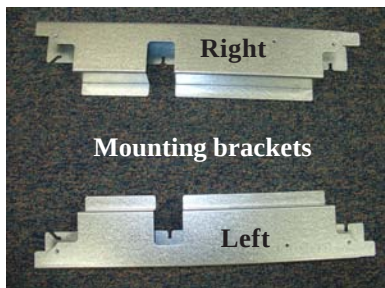


Figure 4. Rail mounting brackets.

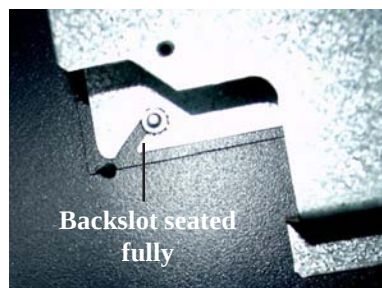
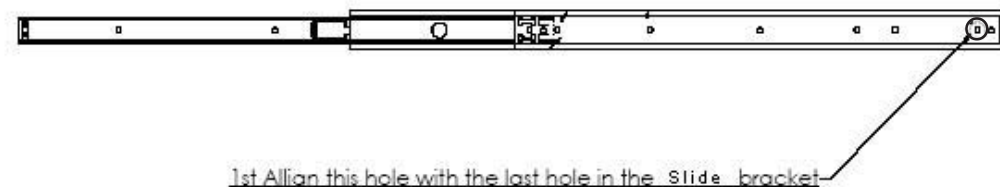


Figure 5. Mount bracket on rear screw first, then rotate down.

*** Important***
Ensure all screws are fully seated in the bracket slots and not resting on bracket. Brackets must be level when installed!

3. Slide Assemblies - Install slide rails to the mounting brackets. Start a truss phillips screw in the second to last hole of the slide assembly first (Figure 6). Extend rails out and install the other two (2) screws and secure all. Push in slide rails. When installed correctly, the front of slide rails will be flush with mounting brackets (Figures 7 and 8).

Figure 6. Slide rail.



Figures 7 and 8.
Slide rails flush w/bracket front.



SECTION 2 - CONVERSION WITH “CURRENT” STYLE CABINETS (w/LIFT HANDLE)

4. Dispenser/Cabinet Grounds - Reconnect the cabinet ground wire removed in Step 7 (page 11) to the front left screw. Install the dispenser ground wire included and secure both ground wires with the nut previously removed (Figure 9). The other end of dispenser ground wire will attach to the NMD-50 when installed.
5. Dispenser Power and Data Cables - Feed the EJ to Docking board cable (RJ-45 connector end) through the control panel access hole. Feed the dispenser power cable (insert) also up to the control panel (Figure 10). These 2 cables will be connected in later steps. Route the 2 cables in the vault area (EJ to dispenser, dispenser power cable end) in the existing cabinet cable clips (Figure 11).

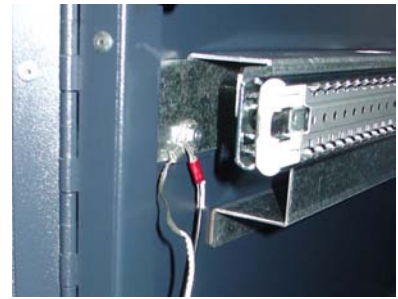


Figure 9. Ground wires installed.



Figure 12. EJ and dispenser power cables.



Dispenser power cable

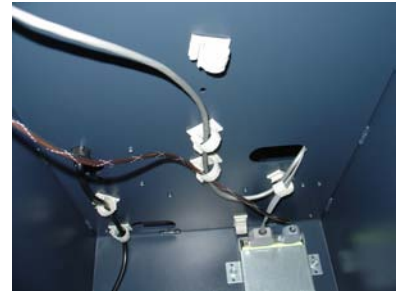


Figure 11. Route power/data cables.

6. Dispenser - Extend the slides fully. Ensure all cables in vault area have been moved out of way before installing mechanism. Remove cardboard support from mechanism cassettes. With 2-personnel, lift the NMD-50 by the green handles and align the rails on the dispenser with the slide rails. Insert the rails and slide mechanism up to the rail stops (Figure 12). Push the release tabs in (Figure 13) and continue sliding mechanism fully into cabinet. Repeat extending/inserting mechanism into cabinet a few times to ensure no binding on slide rails.



Figure 12. Insert mechanism to rail stop.



Figure 13. Push release tab.

7. Dispenser Cables - Connect the power, data, and ground wires to the NMD-50 as shown in Figures 14 and 15. Route the cables through the cable clips attached to the mechanism covers (Figure 16). Ground wire routes down behind slide and through the lower cable clips. **Note:** Ensure ground wire doesn't catch on cabinet shoulder bolts when sliding mechanism into cabinet.



Figure 14. Power cable connection.

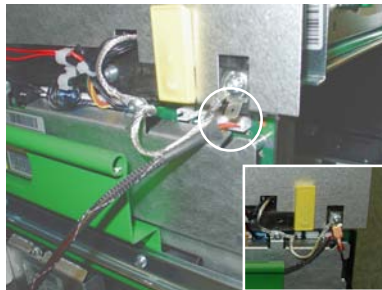


Figure 15. Data/ground connections.

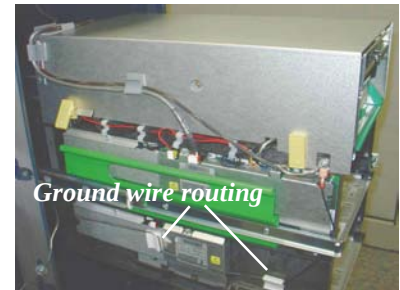


Figure 16. Route cables thru clips.

TDM-100/150 TO NMD-50 CONVERSION PROCEDURES

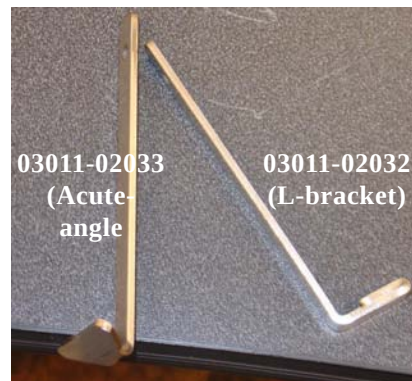
8. Power Supply/Cables - Open the control panel. Connect the EJ to Docking board cable (RJ-45 connector end) to the “Auxillary” port of Docking board. Route the cable through the cable guides (see Figure 4, “Disassembly Procedures”). Next, install the new power supply by reversing the procedures in Step 1, “Disassembly Procedures”. Reconnect all power cables (AC/DC) to the power supply (Figure 17). Reconnect ATM power cord to wall outlet, if applicable.



Figure 17. Power supply connected.

The following illustrations show the installation of the slide catch bracket to the dispenser slide rail. Tool required is a #2 flat-tip screwdriver. Installation time approximately less than 5 minutes. See table below to determine which type and placement for the catch bracket.

NMD-50 Slide Stop (Model / Placement)		
Model / Cabinet	Bracket #	Placement
RL5115 (Business Hours / Lift-Handle)	03011-02033	Right side
RL5125 (Level 1 - Vault)	03011-02033	Left side



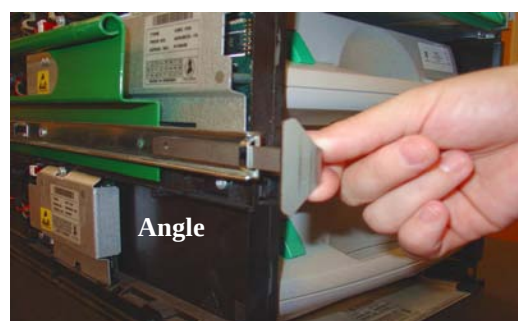
Step 1

Fully extend mechanism. Remove screw shown from **Right** or **Left** side rail (see table). Retain screw.



Step 2

Slide catch bracket through slot on front of rail (L-shaped or angle end pointing **out**).



Step 3

Secure bracket with screw previously removed.



Step 4

Slide mechanism back in cabinet.

