



**Subject: New F53 BDU Conversion Kit for U-SCAN NextGen 1.0**

**New F53 BDU Conversion Kit (North America Only)**

To take advantage of newer technology and higher reliability, some customers have requested to upgrade their U-Scan NextGen 1.0 system from a DeLaRue to an F53 BDU. An adapter kit is required to retrofit the F53 BDU to the NextGen 1.0 with front door dispensing.

**Solution**

Two adapter kits have been created, for 2 and 3 denominations and support both Left Hand and Right Hand units.

The kits use a new F53 pathway module (12000125), so the bills dispense through the existing slot on the front door of the NextGen 1.0 units. This pathway module installs on a Front Service F53 BDU (12000129).

**Software**

The U-Scan software will be required to be updated or new load installed for the F53 BDU. This will need to be coordinated with the CDM for the specific account.

**Tools Needed**

The following tools are required to perform the installation.

- #2 Phillips Screwdriver
- Flat Screwdriver
- Adjustable Wrench

**Install Time**

The time to install a kit is approx. 2 hours per robot, based on field trial installations.

A copy of the installation instructions are included with each kit. A copy is also attached to the bulletin for reference.

INQUIRIES TO:	DATE
Fujitsu Transaction Solutions Inc.	_____
Exchange: Sustaining Engineering	Sustaining Engineering
Mail: Fujitsu USA04, Sustaining Engineering	_____
FAX: 858-731-4781 (7888-4781)	Product Manager
Internet: <a href="mailto:SustainingEngineering@fxs.fujitsu.com">SustainingEngineering@fxs.fujitsu.com</a>	_____
FTP: <a href="ftp://ftp.fxs.fujitsu.com/">ftp://ftp.fxs.fujitsu.com/</a>	Author
Original signature copies maintained by Sustaining Engineering.	



**KIT #11002009 (CONVERSION KIT, F53 BDU, NG1.0, 3 DENOMINATION)**

The following parts are contained in this kit.

<b>Part Number</b>	<b>Item Description</b>
D900000265	INSTALLATION GUIDE
11000540	CABLE TIE MOUNTING BASE
11000553	SPRING, EXTENSION, .437 OD x 8.5 LG
11002263	SHEET METAL, F53 CONV.KIT, NG1
11000432	BRACKET, POWER SUPPLY UNIT, F53 BDU
11001024	SCREW, PAN HEAD, PHILLIPS, SEMS , ZINC-2
11001715	BDU ADAPTER BRACKET, F53 (NG1.0)
11001716	BDU ADAPTER PLATE, F53 (NG1.0)
11001976	NUT, KEPS, 8-32, STEEL, ZN PL
11002012	PAN HEAD MACHINE SCREW, SEMS, PHILLIPS DRIVE, 6-32 x 1/4", ZN PL
12000005	CASH CASSETTE, ADDITIONAL DENOMINATION, MODEL F53 OR F56
12000125	PATHWAY MODULE, F53 DELARUE
12000129	BILL DISPENSER, MODEL F53, SEMI-BUNCH, DELARUE REPLACEMENT
11000403	ADAPTER, DB9M-DB25F
CAB-15000425	F53 CABLE KIT, NORTH AMERICA
11000425	CABLE ASSY, AC POWER CORD, F53
11000426	CBL ASSY, F53 RS232, D9 FEMALE
11000427	CBL ASSY, 24VDC, F53 BILL DISPENSER
11000479	PSU, POWER SUPPLY, 24VDC, F53 BILL DISPENSER
11001806	Label, Denomination, 1
11000844	Label, Denomination, 5
11000845	Label, Denomination, 10
11001197	Label, Denomination, 20



**KIT #11002010 (CONVERSION KIT, F53 BDU, NG1.0, 2 DENOMINATION)**

The following parts are contained in this kit.

<b>Part Number</b>	<b>Item Description</b>
D900000265	INSTALLATION GUIDE
11000540	CABLE TIE MOUNTING BASE
11000553	SPRING, EXTENSION, .437 OD × 8.5 LG
11000569	ASSEMBLY, F53 SPACER
11000570	PANEL, F53 SPACER, LEFT
11000571	PANEL, F53 SPACER, RIGHT
11000572	BASE, F53, SPACER
11000573	BRACE, F53 SPACER, TOP
11000574	BRACE, F53 SPACER, VERTICAL
11000575	CLIP, F53 SPACER ATTACHMENT
11002263	SHEET METAL, F53 CONV.KIT, NG1
11000432	BRACKET, POWER SUPPLY UNIT, F53 BDU
11001024	SCREW, PAN HEAD, PHILLIPS, SEMS , ZINC-2
11001715	BDU ADAPTER BRACKET, F53 (NG1.0)
11001716	BDU ADAPTER PLATE, F53 (NG1.0)
11001976	NUT, KEPS, 8-32, STEEL, ZN PL
11002012	PAN HEAD MACHINE SCREW, SEMS, PHILLIPS DRIVE, 6-32 × 1/4", ZN PL
12000125	PATHWAY MODULE, F53 DELARUE
12000129	BILL DISPENSER, MODEL F53, SEMI-BUNCH, DELARUE REPLACEMENT
11000403	ADAPTER, DB9M-DB25F
CAB-15000425	F53 CABLE KIT, NORTH AMERICA
11000425	CABLE ASSY, AC POWER CORD, F53
11000426	CBL ASSY, F53 RS232, D9 FEMALE
11000427	CBL ASSY, 24VDC, F53 BILL DISPENSER
11000479	PSU, POWER SUPPLY, 24VDC, F53 BILL DISPENSER
11001806	Label, Denomination, 1
11000844	Label, Denomination, 5
11000845	Label, Denomination, 10
11001197	Label, Denomination, 20



## Installation Guide for F53 BDU Conversion Kit for U-SCAN NG1.0



Revision 02  
2007-11-12

# Installation Guide for F53 BDU Conversion Kit for U-SCAN NG1.0

## 1. Scope

This procedure applies to U-SCAN Next Gen 1.0 Customer Stations.

## 2. Pre-requisites

The following components are assumed to be installed in the unit to be upgraded.

1. A Powervar Uninterruptible Power Supply (UPS).
2. A DeLaRue Bill Dispensing Unit.

## 3. Requirements

### 3.1 Parts

One of the following two kits is required to perform the conversion from a U-Scan Next Gen 1.0 system with a DeLaRue bill dispensing unit.

#### ● 11002009, CONVERSION KIT, F53 BDU, NG1, 3 DENOMINATIONS

This kit contains the following:

Item	Description	Qty
11002263	SHEET METAL, F53 CONVERSION KIT, NG1	1
	11001715, BDU ADAPTER BRACKET, F53 (NG1.0)	1
	11001716, BDU ADAPTER PLATE, F53 (NG1.0)	1
	11000432, BRACKET, POWER SUPPLY UNIT, F53 BDU	1
	11002012, PAN HEAD MACHINE SCREW, SEMS, PHILLIPS DRIVE, 6-32 x 1/4", ZN PL	14
	11001024, PAN HEAD MACHINE SCREW, SEMS, PHILLIPS DRIVE, M4 x 6mm LG	2
11000540	CABLE TIE MOUNTING BASE	1
11000553	SPRING, EXTENSION, .437 OD x 8.5 LG	1
12000129	BILL DISPENSER, MODEL F53, SEMI-BUNCH, DELARUE REPLACEMENT	1
12000005	CASH CASSETTE, ADDITIONAL DENOMINATION, MODEL F53 OR F56	1

12000125	PATHWAY MODULE, F53 DELARUE	1
CAB-15000425	F53 CABLE KIT, NORTH AMERICA	1
11000403	CBL ASSY, Adapter, DB9M-DB25F, Length= 500mm	1


**11002010, CONVERSION KIT, F53 BDU, NG1, 2 DENOMINATIONS**

This kit contains the following:

Item	Description	Qty
11002263	SHEET METAL, F53 CONVERSION KIT, NG1	1
	11001715, BDU ADAPTER BRACKET, F53 (NG1.0)	1
	11001716, BDU ADAPTER PLATE, F53 (NG1.0)	1
	11000432, BRACKET, POWER SUPPLY UNIT, F53 BDU	1
	11002012, PAN HEAD MACHINE SCREW, SEMS, PHILLIPS DRIVE, 6-32 x 1/4", ZN PL	14
	11001024, PAN HEAD MACHINE SCREW, SEMS, PHILLIPS DRIVE, M4 x 6mm LG	2
11000540	CABLE TIE MOUNTING BASE	1
11000553	SPRING, EXTENSION, .437 OD x 8.5 LG	1
12000129	BILL DISPENSER, MODEL F53, SEMI-BUNCH, DELARUE REPLACEMENT	1
11000569	F53 SPACER ASSEMBLY	1
12000125	PATHWAY MODULE, F53 DELARUE	1
CAB-15000425	F53 CABLE KIT, NORTH AMERICA	1
11000403	CBL ASSY, Adapter, DB9M-DB25F, Length= 500mm	1

**3.2 Tools**

The following tools are required to perform the installation.

<b>Description</b>	
Screwdriver, Phillips drive #2	

Screwdriver, flat	
Adjustable wrench	

## 4. Installation Procedure

### 4.1 Remove DeLaRue cash cassettes

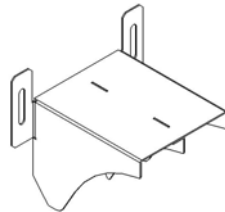
3. Before turning off the computer, unlock and remove the cash cassettes from the DeLaRue bill dispenser.

### 4.2 Turn off power

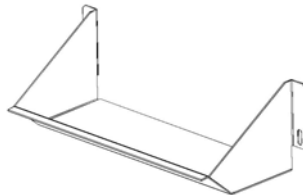
1.  Make sure that the Self-Checkout unit is powered off.

### 4.3 Remove the bill chute parts

4. Remove the two nuts holding the bill chute top assembly on the front door.
5. Pull out the bill chute top.



6. Remove the two nuts holding the bill chute bottom on the front door.
7. Pull out the bill chute bottom.



### 4.4 Remove the front fan

1. Unplug the fan from the power bar.
2. Remove the fan cable from inside the unit.
3. Remove the four nuts holding the front fan.

4. Pull out the fan.



#### **4.5 Reverse the back fan**

1. The fan installed on the back panel needs to be reversed, so that the air flows from the outside to the inside of the unit.
2. Clean or replace the fan if required.

#### **4.6 Remove the DeLaRue Bill Dispensing Unit**

1. Disconnect all cables from the BDU.
2. Remove the screws holding the BDU on each side.
3. Pull out the BDU.
4. Discard BDU according to Field Services instructions.

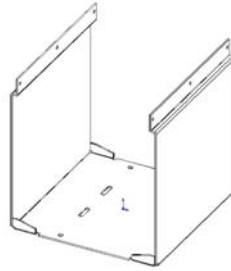


#### **4.7 Remove the DeLaRue BDU power supply**

1. Disconnect the cables from the bill dispenser power supply.
2. Pull out the DeLaRue power supply.

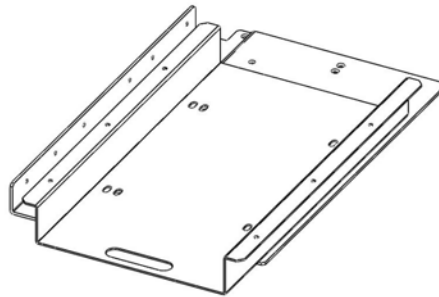
#### **4.8 Remove the DeLaRue channel bracket**

1. Remove the four screws and washers holding the BDU channel bracket.
2. Set them aside, they will be used later.
3. Pull out the BDU channel bracket.



#### 4.9 Install the adapter bracket

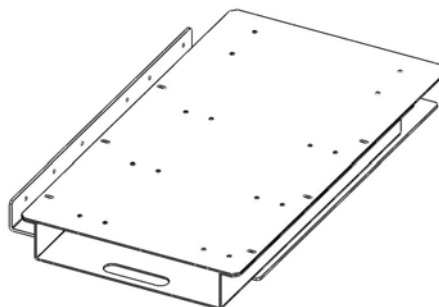
1. Using the four screws and washers previously removed; install the adapter bracket (11001715) over the sliding tray.



2. Use the set of slots designed for Left or Right unit.
3. The slots provide forward and backward adjustment.

#### 4.10 Install the adapter plate

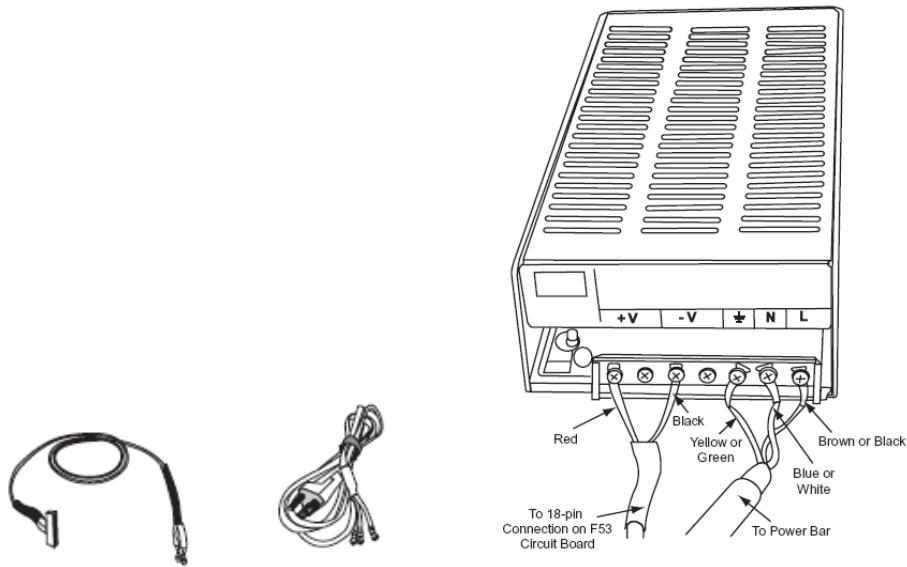
4. Using six 6-32 x 1/4" pan head SEMS screws, install the adapter plate (11001716) over the adapter bracket.



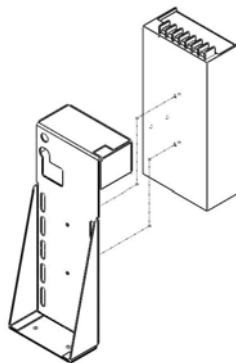
5. The slots provide side-to-side adjustment.

#### 4.11 Install the F53 power supply

1. Locate the F53 power supply and cable kit (CAB-15000425).
2. Locate the power supply bracket (11000432).
3. Route the A/C power cable through the rectangular cutout in the power supply bracket and attach the strain relief.
4. Route the F53 power cable trough the round cutout in the power supply bracket.
5. On the F53 power supply, remove the clear plastic covering the terminals.
6. Connect the input and output power cable wires to the power supply as shown below.

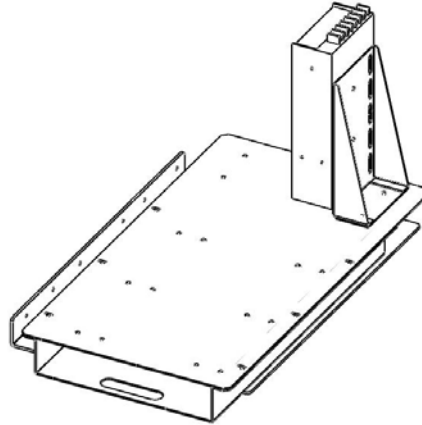


7. Re-install the clear plastic terminal cover.
8. Position the power supply in the power supply bracket, cable connection side facing up as shown below.



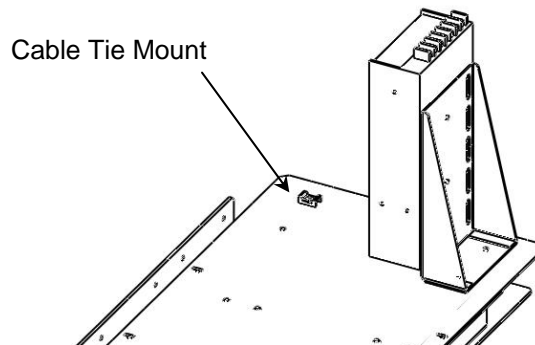
9. Secure the power supply to the bracket with two M4 x 6mm pan-head SEMS screws.
10. Install the power supply bracket on the adapter plate with two 6-32 x 1/4" pan head SEMS screws.

- Align the two holes on the power supply bracket with the last two holes at the back. The power supply installs on different sides for Left or Right units.



#### 4.12 Install the cable tie mount

- Install the cable tie mounting base (11000540) with one 6-32 x 1/4" pan head SEMS screw in the back hole.

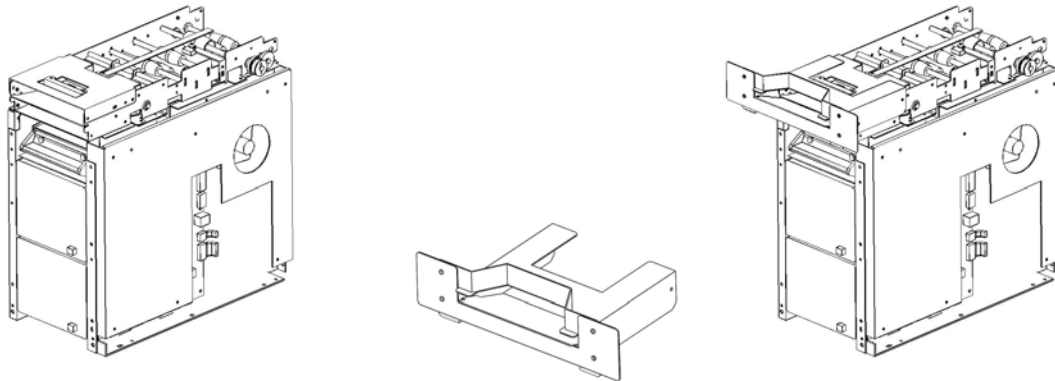


#### 4.13 Configure the cash cassettes

- Remove the cash cassettes from the F53 BDU.
- Configure the magnets on the cash cassettes to match each denomination used.
- Place an identification label on each cassette to indicate the denomination.

#### 4.14 Install the Pathway module on the F53 BDU

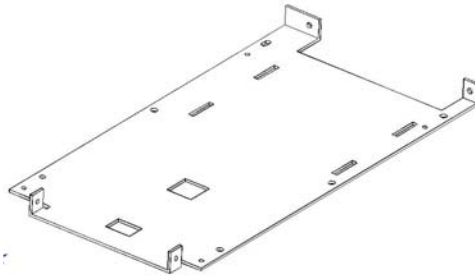
- Install the pathway module (12000125) on top of the F53 Bill Dispensing Unit (12000129) with two screws.



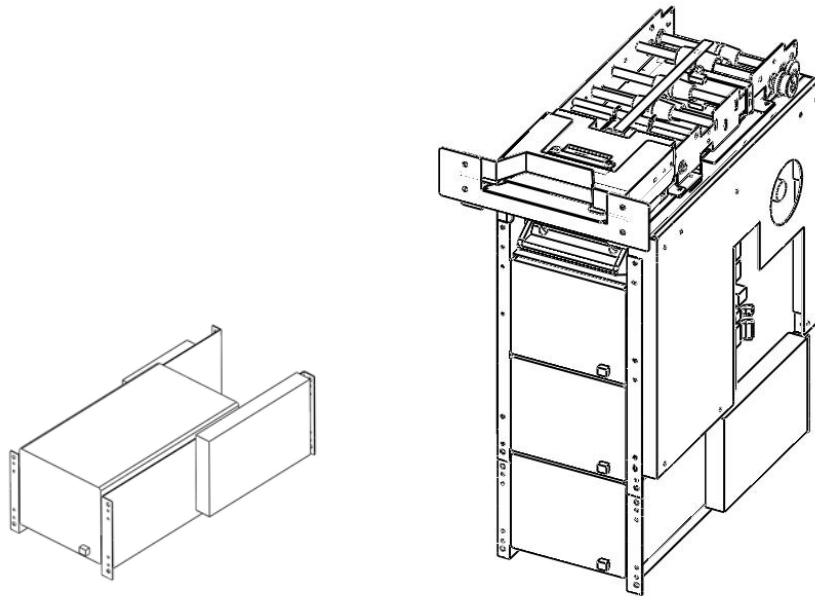
#### 4.15 Install the additional denomination unit (for 3 denominations)

Perform the steps below if you are installing a three-denomination F53 to raise it to the proper level inside the casing.

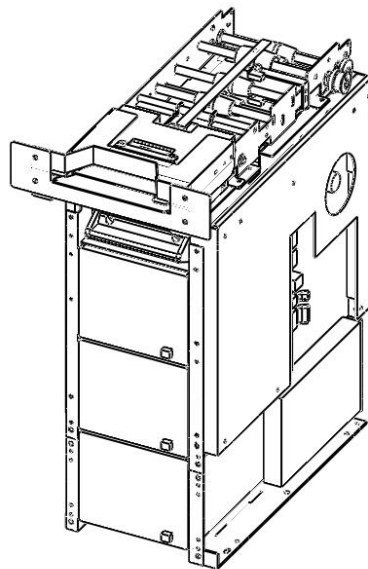
2. Remove the bottom tray from the F53.



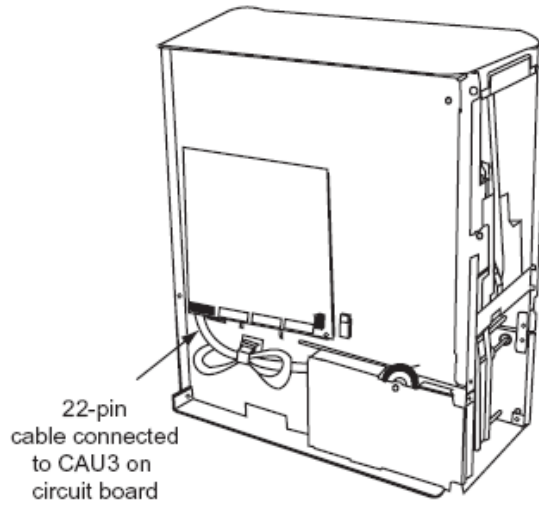
3. Install the additional denomination unit (12000005).



4. Re-install the bottom tray on the F53.



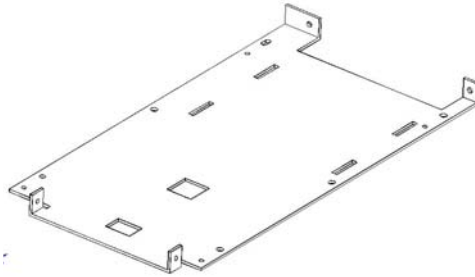
5. Connect the 22-pin cable on the third cassette module to the CAU3 connector on the bottom of the circuit board.



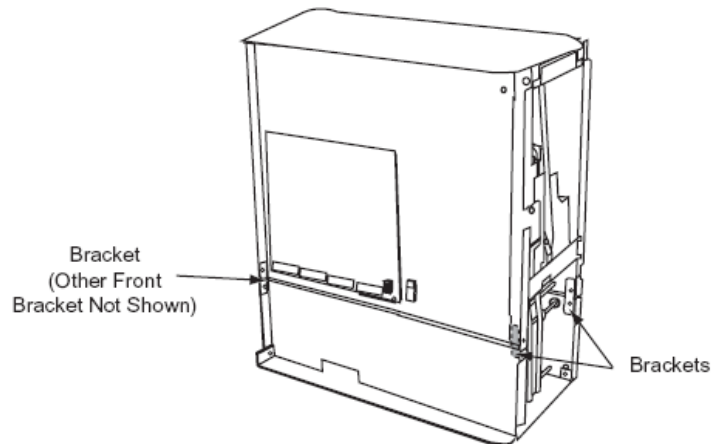
#### 4.16 Install the spacer (for 2 denominations)

Perform the steps below if you are installing a two-denomination F53 to raise it to the proper level inside the casing.

1. Remove the bottom tray from the F53.



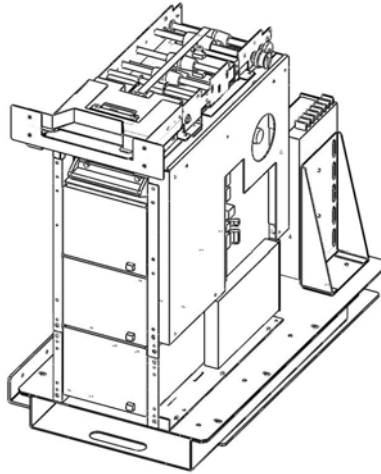
2. Install the spacer (11000569) under the F53 BDU.



3. Re-install the bottom tray on the spacer.

#### 4.17 Install the F53 DBU

1. Install the F53 Bill Dispensing Unit on the adapter plate with five 6-32 x 1/4" pan head SEMS screws.



2. Use the set of holes designed for Left or Right unit, in order to align the bill dispensing pathway with the bill bezel.

#### 4.18 Connect the F53 Cables

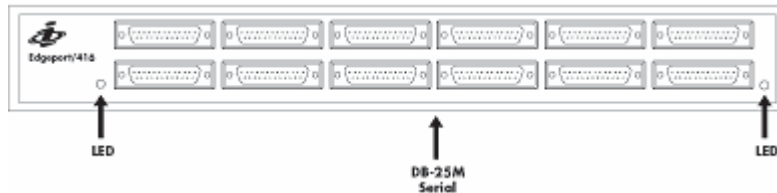
1. Locate the communication cable.



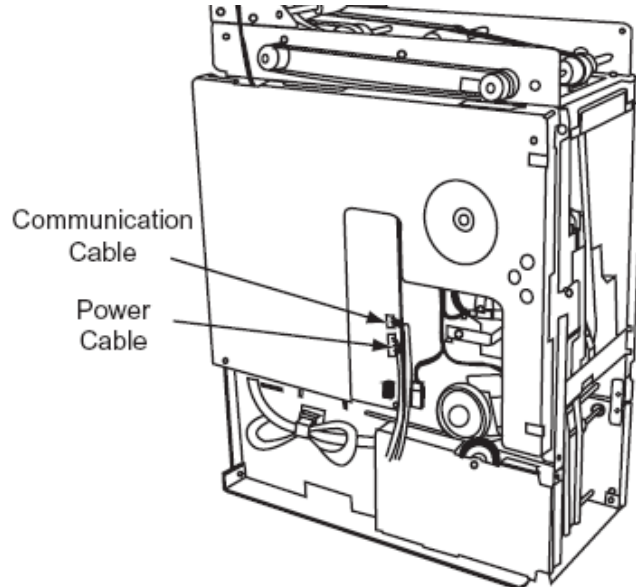
2. Connect the communication cable to the 5-pin connector on the F53 circuit board.
3. Connect the DB-9 male to DB-25 female adapter (11000403) to the DB-9 end of the communication cable.
4. Use three tie-wraps as shown below to fasten the adapter and communication cable together.



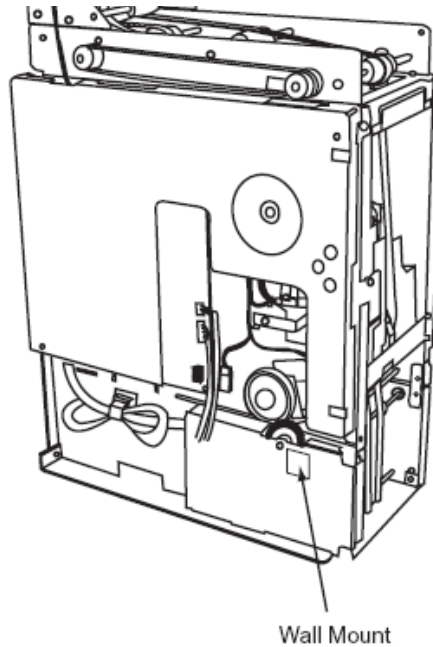
5. Route the communication cable through the casing to the Edgeport/416. Connect it to Port 7 (COM 9) of the Edgeport/416.



6. Connect the 18-pin connector of the F53 power cable to the power port on the circuit board.



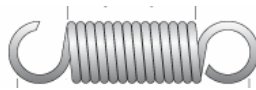
7. Affix a wall mount to the F53 just below the green and white gears as shown below.



8. Route the AC power cable back through the casing and plug it into port 9 on the bottom power bar.

#### 4.19 Manage the cables

1. Attach the AC power cable and the communications cable to the cable tie mounting base with a tie-wrap, so the cables do not snag when the sliding tray is pulled in and out.
2. Use a tie-wrap to attach one end of the extension spring (11000553) to the top portion of the casing, behind the scanner module shelf.





3. Use a tie-wrap to attach the other end of the extension spring to the cables, in order to keep the cables out of the way.

#### 4.20 Final adjustment

1. Make sure that the F53 bill dispenser is properly aligned with the bill bezel on the scanner module door. Adjust if necessary.
2. Make sure that the door closes properly. Adjust if necessary.

#### 4.21 Test the F53 Bill Dispenser

1. Connect the UPS power cable to a dedicated AC outlet (socket).
2. Press the power button  on the UPS to turn it on.
3. Press the power button  on the computer to turn it on.
4. Wait until the U-Scan® software starts.
5. Stop the software.
6. On the computer keyboard, press ALT+TAB to select the Robot Control window.
7. Click Stop Robot.
8. The Launchpad displays.
9. Access the Device Tester.
10. Click Device Tester.
11. A number keypad displays.
12. Enter the password (1379) and touch OK.
13. Click the Bill Dispenser tab.
14. Make sure the .DLL file for the F53 is selected.
15. Follow the standard testing procedure.