



SCR ADVANCE™ RECYCLER USER GUIDE

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MEI® SCR Advance™ Recycler – User Guide

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SAFETY INSTRUCTIONS

Expected use conditions: The MEI® SCR Advance™ Recycler product validates, denominates, stores, and recycles banknotes. The product is intended to be integrated as a peripheral within a Host Machine.



SAFETY INSTRUCTIONS

Before installing the unit into a Host Machine, turn off all power.

When installing or removing electronic boards observe all ESD precautions to prevent damage.

Beware of hot surfaces!

STANDARDS CONFORMANCE

MEI SCR series products operate at Safety Extra Low Voltage level (SELV) as defined in standard EN60950-1 «Safety of information technology equipment». They may be designed into equipment complying with IEC60950-1/EN60335-1 'Safety of Information Technology Equipment'.

SCR Banknote Recycler Series products are of Class 2 construction.

EMC NOTICE

This digital device does not exceed the Class A limits according to EN 55032 and IEC/CISPR 32 limits for radio interference. In a domestic environment the User may be required to take adequate measures.

DANGEROUS ENVIRONMENTS

The unit must not be operated in the presence of flammable gasses, fumes or water.



PRODUCT DISPOSAL

Do not dispose of any part of an SCR Banknote Recycler Series by incineration.

1. USER GUIDE

The intent of this document is to familiarize an Operator with the basic functions of the MEI® SCR Advance™ Recycler, ensure the product is installed properly, and highlight simple product upkeep. For more information on the product and about other operations, see the SCR Advance Recycler Field Service Manual.

Convention used in this document and in the Service Manual:

- Paragraph with the icon  is intended to identify safety concerns.
- Paragraph with the icon  provides helpful instructions to make the product easier to use.

1.1. PRODUCT OVERVIEW

SCR Advance™ Recycler

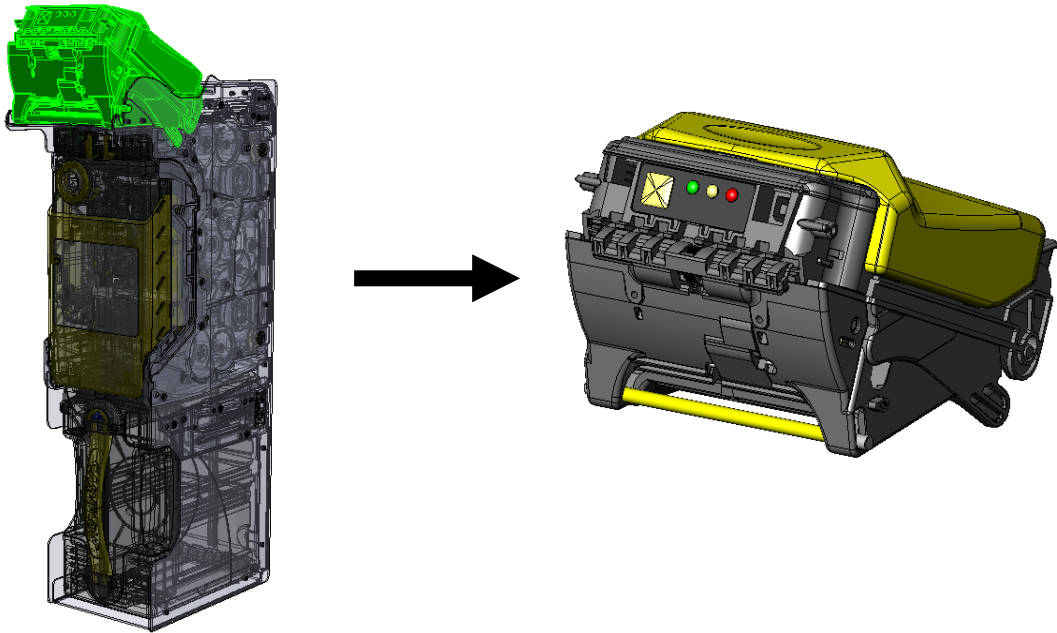
The product processes multi-width international “street money” with the following basic functions:

1. Denomination, Validation and Acceptance of street banknotes for multiple countries
2. Temporarily store the banknotes of the current transaction (Optional)
3. Provide change to the consumer from temporary cash stores held in the Recycler Drums
4. Store the banknotes in a permanent store, at the Cashbox Module

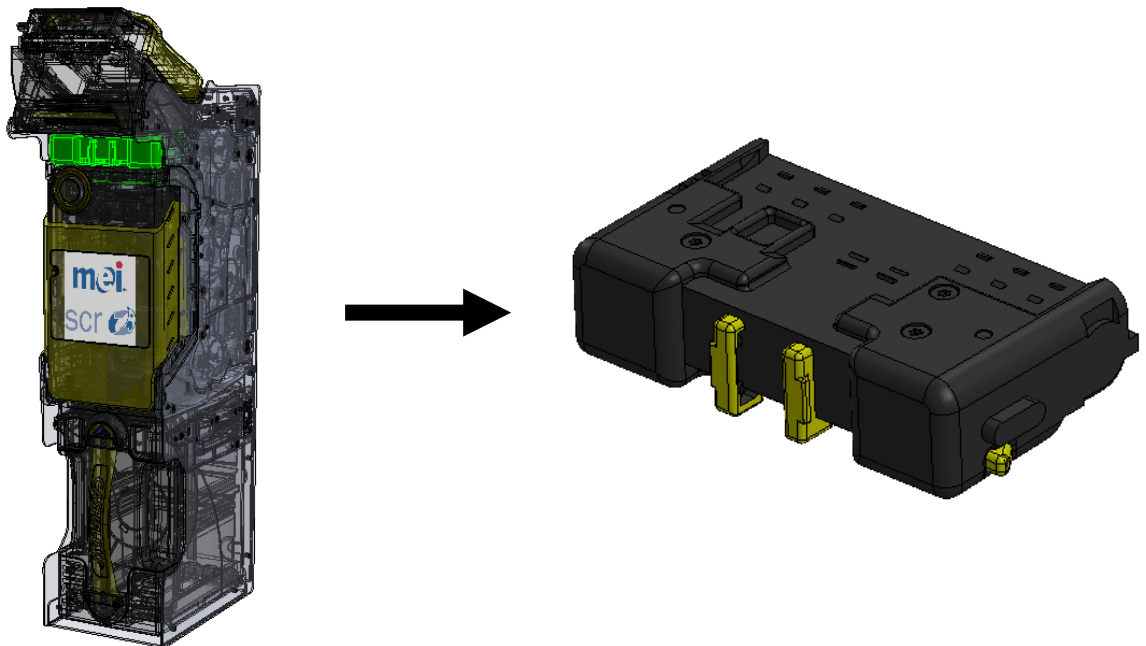
1.2. MAIN COMPONENTS

The SCR Advance™ Recycler is composed of the following modules:

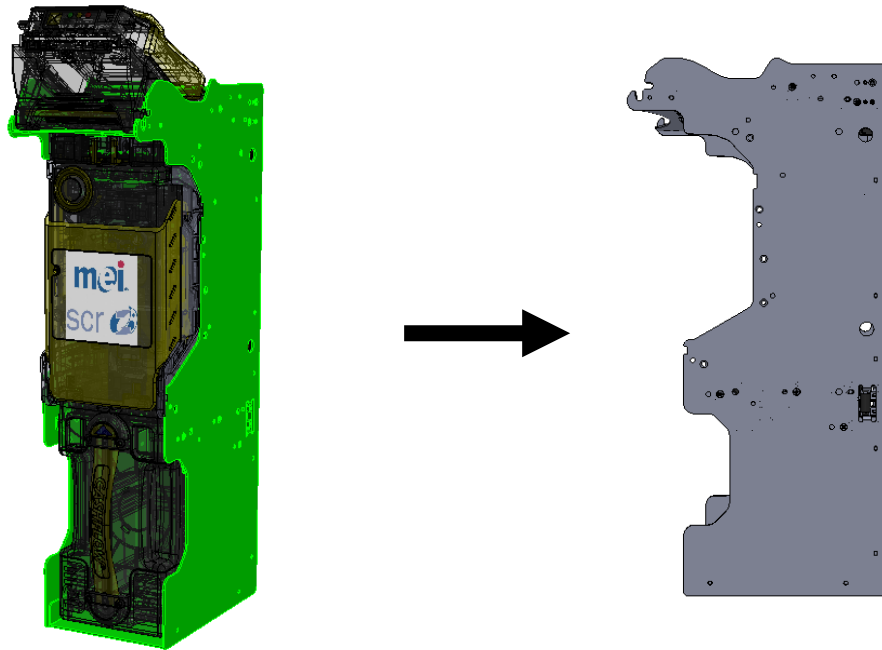
Acceptor Module- interface to the User (Inlet or “Bezel”) and banknote validation system.



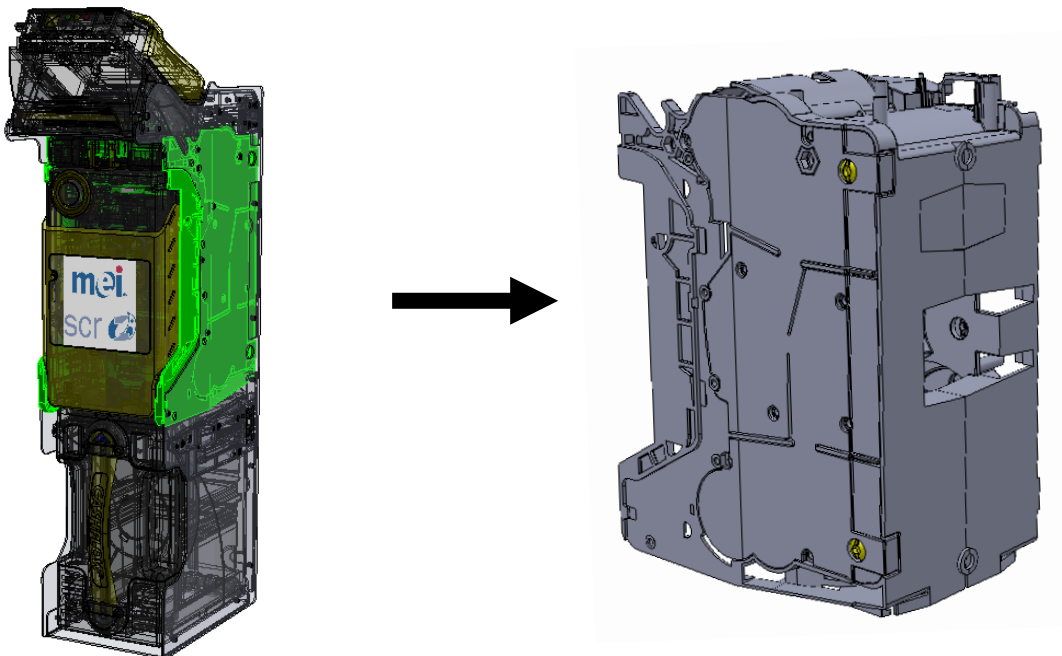
Vault Module- a device used to prevent unauthorized access to stored banknotes.



Chassis - a metal frame containing all the other modules. The Recycler Module is permanently fixed to the chassis.

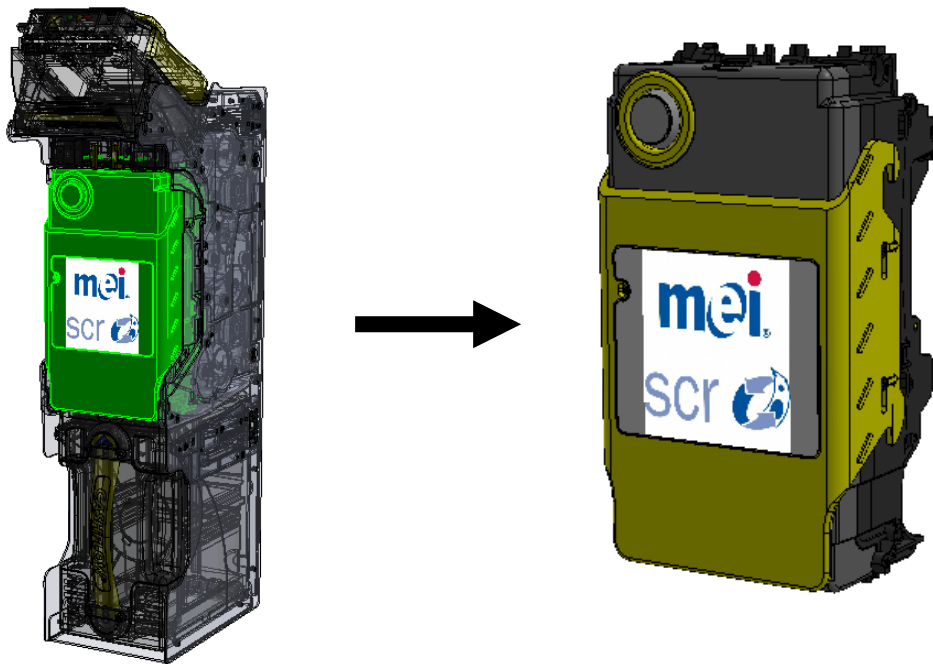


Recycler Module - a device for storing and dispensing banknotes.



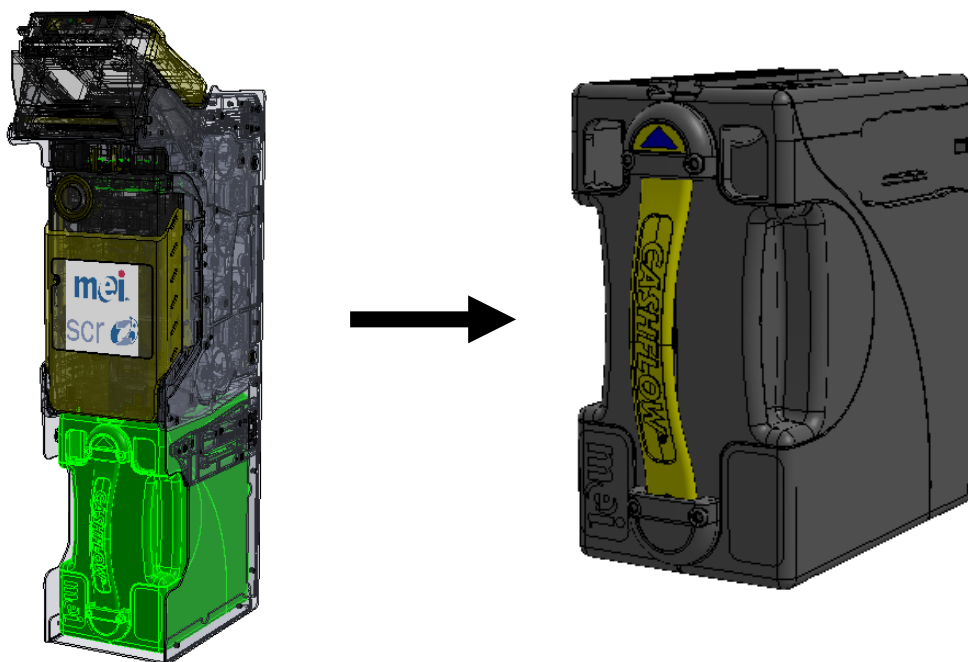
The Recycler Module is part of the Chassis and not removable without the use of special tools. The Recycler Module is permanently installed inside of the Chassis.

Transport Module - a device for transporting banknotes through the system.



The Transport Module is part of the Recycler and Chassis. The need to remove any single component requires removal of all three (3) modules.

CashBox Module- lockable, secure, and removable cash storage cassette.



2. COMPONENT INSTALLATION / REMOVAL

2.1. ACCEPTOR MODULE

Acceptor Removal

1. Grasp the Acceptor firmly and lift the lower release bar (Image 1).

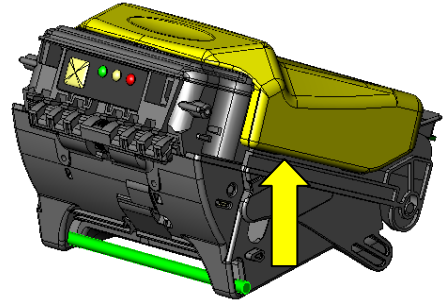


Image 1

2. Pull the Acceptor out and away from the Chassis.

NOTE: The Acceptor Module can be removed with or without removing the bezel (if equipped) beforehand.

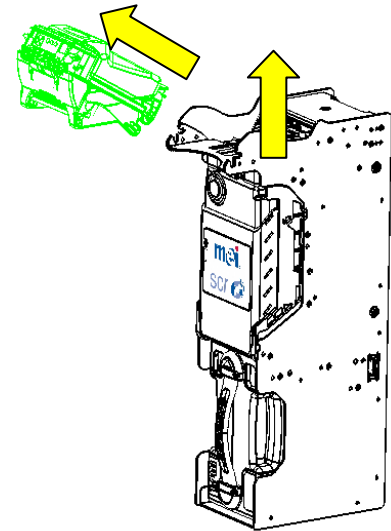


Image 2

Acceptor Installation

1. Grasp the Acceptor firmly and lift the lower release bar.
2. Depress the bar and place the Acceptor into the channel guides of the Chassis. Ensure that the release bar is fully seated into the cutout shown. **Failure to fully seat the Acceptor may result in Out-of-Service (OOS) condition.**

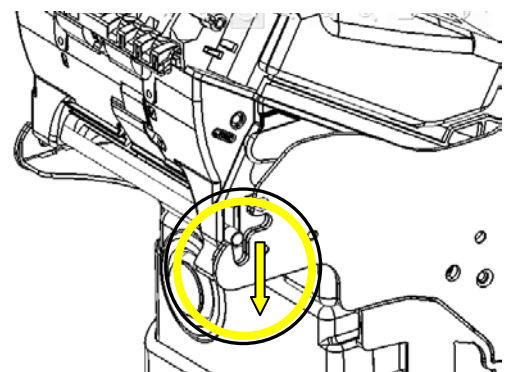


Image 3



After replacement, the unit will automatically perform a full reset.

2.2. VAULT MODULE

Vault Removal / Installation

1. Locate the two yellow tabs on the Vault Module (Image 4).
2. Pinch the yellow tabs inward and pull the Vault Module straight out and away from the Chassis (Image 5).
3. To replace, insert Vault Module with serial number stickers facing down, into the Chassis.

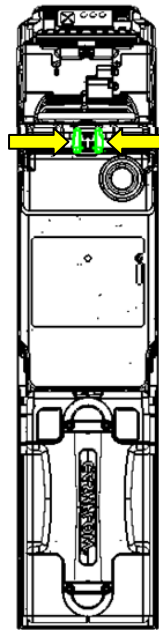


Image 4

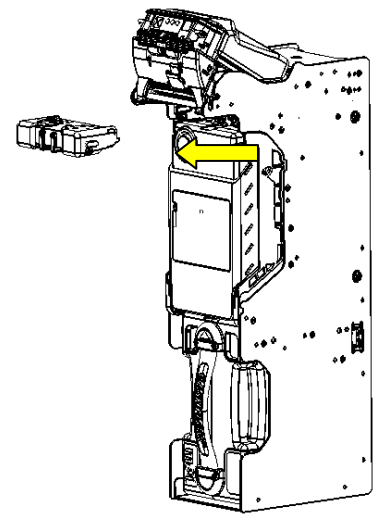


Image 5



Make sure that the Vault is fully seated in the chassis. The Vault should have a audible click upon insertion, and the yellow tabs should be fully outward. If in doubt, push on the Vault module to make sure that it cannot move inward any further.

2.3. TRANSPORT MODULE

Transport Removal

1. Remove Vault Module (see Section 2.2).
2. Grasp both sides of the Transport Module Cover and pull up (Image 6).

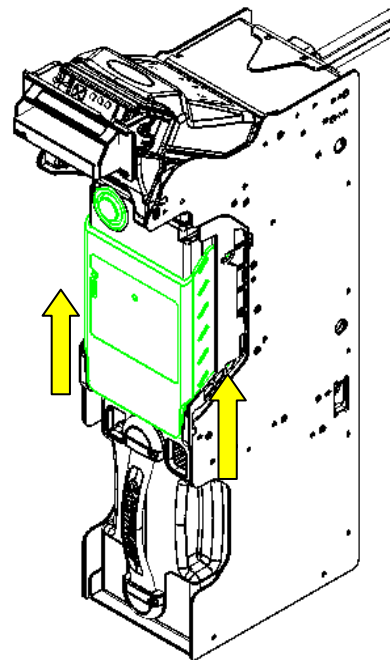


Image 6

3. Rotate the Transport section out, exposing the Recycler drums and transport internals (Image 7).

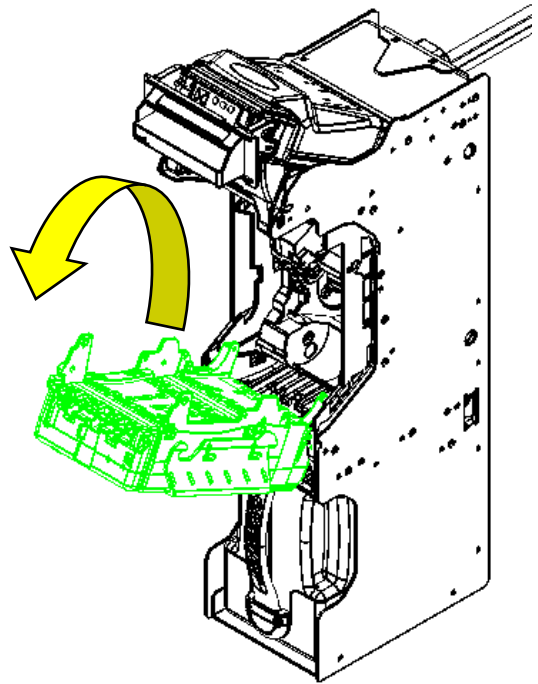


Image 7



After replacement of the Vault Module, the unit will automatically perform a full reset.

2.4. CASHBOX MODULE

Cassette Removal / Installation

1. Grasp the yellow handle of the Cassette and pull to remove from Chassis.
2. To replace, push Cassette into Chassis slot until fully seated.



After replacement, the unit will automatically perform a stack and cycle of the Stacker Motor.

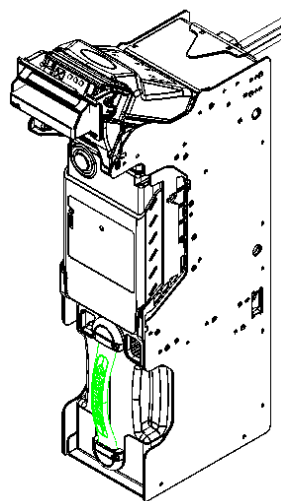


Image 8

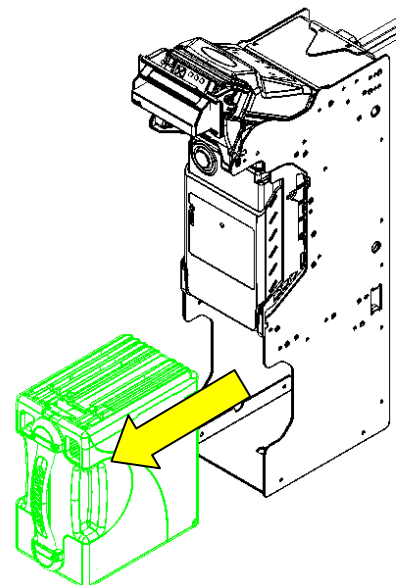


Image 9

3.0 MMI WARNING AND ERROR CODES

Each MEI® Acceptor Module is equipped with a Man-Machine-Interface (MMI) panel, located on the front face. This panel is used to indicate the device's internal state and highlight if the SCR Advance™ Recycler currently has an error or fault. For indication, three LEDs are used: Green, Yellow (Amber) and Red.



Image 10, MMI Indicator Panel



Image 11, MMI w/ LEDs

In addition to the Acceptor Module, one Green LED is provided on the front face of the Transport Module. This LED is designed to provide information concerning the “owner” of a note that has jammed in normal operation.

When the LED is illuminated and solid, the note belongs to the User / Customer.

When the LED is blinking, the note belongs to the system / SCR Advance Recycler.



Image 12

The table below provided a reference to help determine the current device state and possible methods that can be employed to correct irregular operation.

MMI Indicator			Status	Correction	Section
Green	Yellow	Red			
Solid ON	-	-	Normal Operation	None	-
1 flash	-	-	Unit disabled by interface	Clear condition with host machine that is causing the note recycler to be disabled	-
2 flashes	-	-	Disabled by network	Correct network condition	-
3 flashes	-	-	Reserved	None	-
-	Solid ON	-	Cashbox not seated or not present	Reseat Cashbox	2.5
-	1 flash	-	Poor note acceptance	Preventative maintenance required by technician	5.2
-	2 flashes	-	Jam in Acceptor Module	Remove the jammed note from the acceptor's head	4.1
-	3 flashes	-	Jam in Cashbox	Remove jammed note from Cashbox	4.4
-	4 flashes	-	Jam in Recycler Module	Open recycler door and remove the jammed note. If Recycler Module's front green LED is solid, then return the note to the customer. If blinking, this note belongs to the Recycler/Cashbox (System)	4.2 / 4.3
-	5 flashes	-	Jam in Vault	Remove the vault module and open the Transport door. If Recycler Module's front green LED is solid, then return the note to the customer. If blinking, this note belongs to the Recycler/Cashbox (System)	5.3
-	-	Solid ON	Cashbox is Full	Replace Cashbox with a new (empty) one	2.5
-	-	1 flash	Acceptor hardware failure	Replace Acceptor Module	2.1
-	-	2 flashes	Interface Board failure	Replace Interface Board	?
-	-	3 flashes	Reserved	None	-
Solid ON	Solid ON	Solid ON	Unprogrammed unit of Software allocation memory is corrupt	Program unit with service tool (<i>for example, Cashflow™ STS or PPM Advance™</i>)	6
Flashing	Flashing	Flashing	Generic unit (programmed with factory default software)	Program unit with service tool (<i>for example, Cashflow STS or PPM Advance™</i>)	6
-	-	4 flashes	Unit's Asst Number miss-match (<i>related to Easitrax™</i>)	Insert blank Cashbox or with matched number programmed (<i>more information can be found in Easitrax™ User Manual</i>)	-
-	-	5 flashes	Easitrax Tag not found	Insert Cashbox with RF Tag installed	-
-	-	6 flashes	Communication Error (<i>related to Easitrax</i>)	Reseat or replace Cashbox with another RF tag	-
-	-	7 flashes	Asset number not found (<i>related to Easitrax</i>)	Program the Asset number into acceptor using Cashflow STS service tool	-
-	8 flashes	8 flashes	Unit has security timeout triggered (<i>related to high-security software</i>)	Wait 20 minutes until the timeout has elapsed. <i>Do not remove power from the unit.</i>	-

Table 1

3. JAM CLEARING

The following cases highlight how to properly open the SCR Advance™ Recycler and retrieve the jammed note in order to return functionality to the machine. To determine where the jam is located, refer to Section 3.

4.1 ACCEPTOR JAM

An Acceptor bill jam will be indicated by 2 flashes on the Yellow MMI LED (per Section 3).

1. Grasp the top latch of the Acceptor's head and pull in the direction of the arrow to disengage the lid (Image 13).

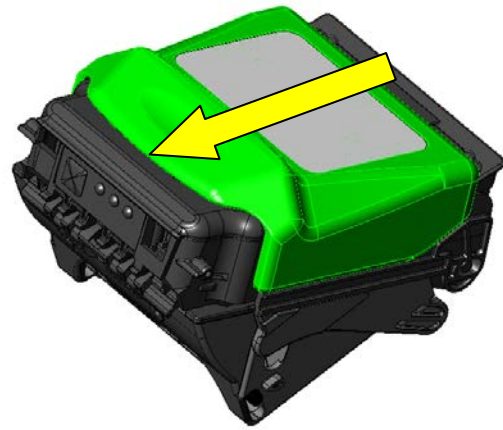


Image 13

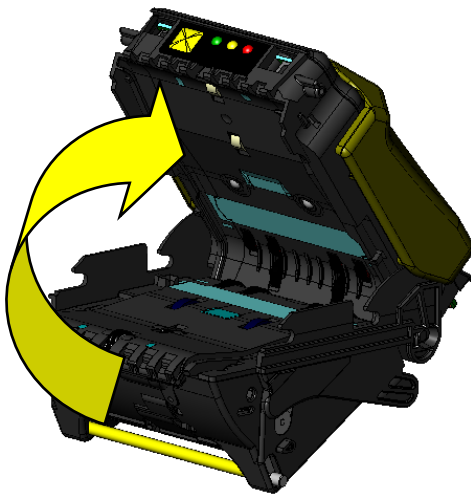


Image 14

2. Lift the top portion of the Acceptor's head, as in Image 14.
3. Check the bill path to see if a note or debris is present. Clear any obstruction, if one exists.
4. Grasp the upper latch of acceptor's head again (as in Image 13) and close latch until seated fully.

4.2 TRANSPORT / RECYCLER JAM

A transport/recycler bill jam will be indicated with 4 flashes on the Yellow MMI LED (per Section 3).

1. Remove the Vault Module (Section 2.2).
2. Open the Transport Module (Section 2.4).
3. Locate the Upper and Lower Bill Path Cover, highlighted in green.

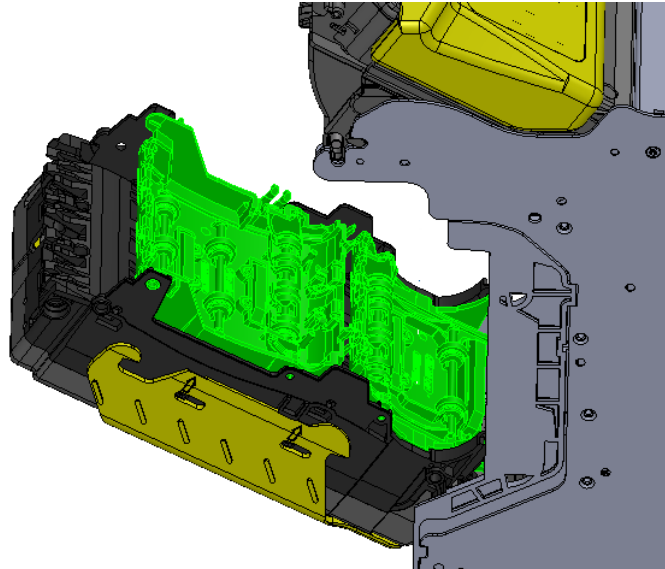


Image 15

4. Open each Bill Path Cover by pinching the yellow tabs on each end (Image 16).

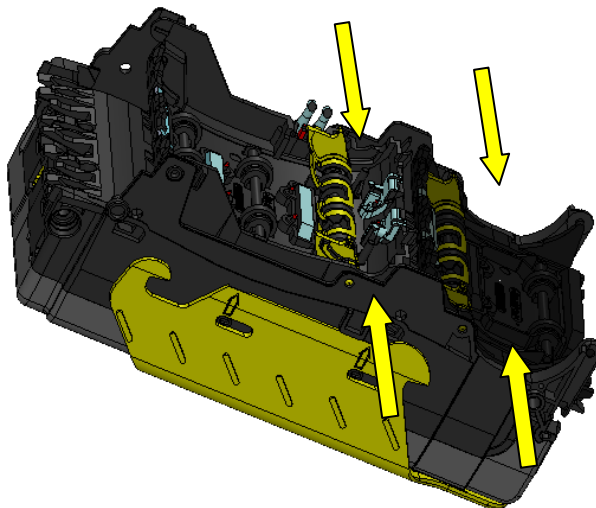


Image 16

5. Rotate the Bill Path Covers up and check for bill jams in the Transport Section. If no note or debris is present, close the Upper and Lower Bill Path covers and continue to Step 6.

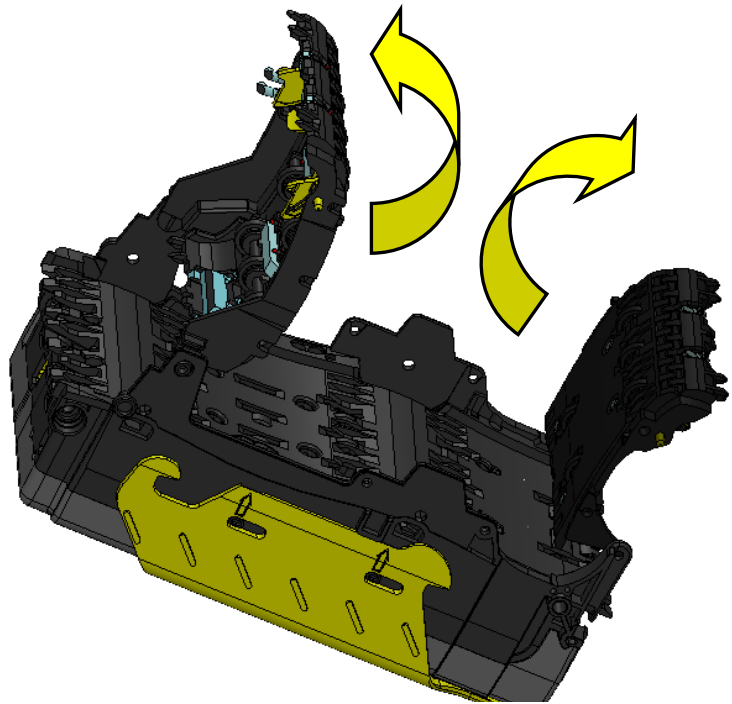


Image 17

6. If no bill or debris is present, check the Recycler Module drums. These drums can be accessed via the yellow pull handles (Image 18). Pull down on each handle to reveal the recycling drum.



Take care when opening the Recycling Drums. The tape should remain straight. If any of the tape becomes twisted, do not clear the jam and reset the unit without first straightening the tape. Never cut or pull the tape.

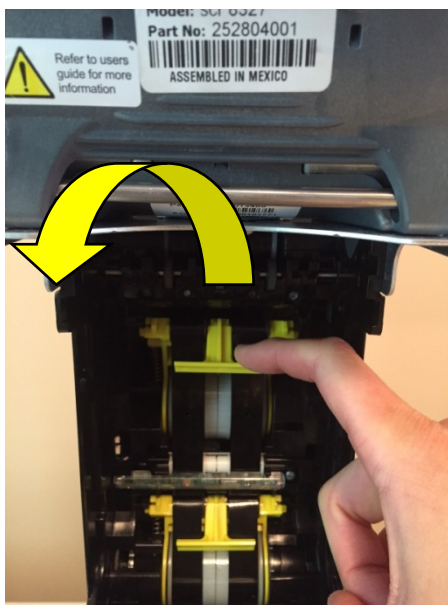


Image 18

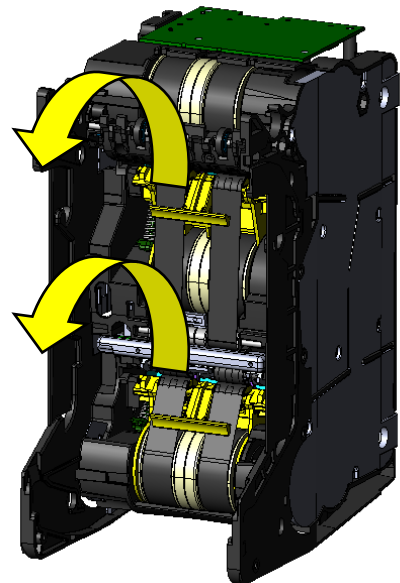


Image 19

Image 20 shows the normal position of a note located in the Recycler Drum (in this case, Drum 1). If the note is retrievable and not twisted around the tape, carefully grasp the edge of the note and slowly pull towards you to remove.



If the note is not easily retrievable, call a qualified field technician to assist. Do not risk damage to the tape.



Image 20



Image 21



It is not advisable to remove more than the jammed note from this location. Any note removed from the system will report as missing. Be sure to report the retrieved notes and account accordingly.

7. Be sure to close each recycling drum access handle prior to shutting the Transport Module.
8. Close the Transport Module and verify that it is fully latched.
9. Reinsert the Vault Module.

4.3 CASHBOX JAM

1. Check the Transport Section for the note jam. It is possible that a note may be at the very bottom of the Transport and can be retrieved without Cassette removal (see Section 4.1).
2. Refer to Section 2.3 for removal of the cassette (cashbox) module.



Be sure to carefully pull the cashbox, if removal is necessary. Aggressive removal may result in a torn note.

4. PREVENTATIVE MAINTENANCE

5.1 CLEANING FREQUENCY

The following table highlights the recommended maintenance frequency. The cleaning frequency was chosen to ensure optimal performance. It may be necessary to perform more or less frequent cleaning, depending on the operating environment and usage. If operating under particularly harsh conditions, extra attention should be given to the cleaning of the recognition sensors.

Training Level Required	Estimated Time for Labor	Indoor		Outdoor	
		Location	Frequency	Location	Frequency
End User	10 minutes	Field	6 months or 60,000 cycles	Field	3 months or 30,000 cycles

Table 2

If issues related to preventative maintenance persist, or the unit in question is outside of the recommended frequency listed above, contact a qualified Field Service Technician to perform the following:

Training Level Required	Estimated Time for Labor	Indoor		Outdoor	
		Location	Frequency	Location	Frequency
Field Service	30 minutes	Field	12 months or 100,000 cycles	Field	6 months or 60,000 cycles
Overhaul	60-75 minutes	ASC	24 months or 200,000 cycles	ASC	12 months or 100,000 cycles

Table 3

5.2 ACCEPTOR MODULE

1. Remove the Acceptor Module from the Chassis as shown in Section 2.1.
2. Grasp the top latch of the Acceptor's head and pull in the direction of the arrow to disengage the lid.

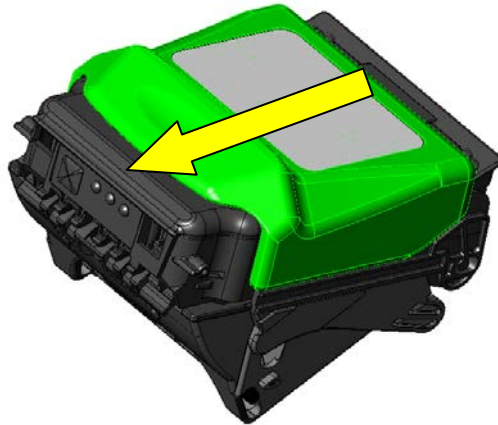


Image 22

3. Lift the top portion of the Acceptor's head

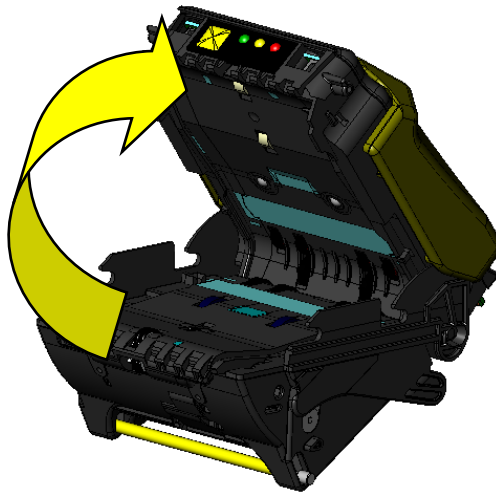


Image 23

4. Using compressed (canned) air, blow any dust or debris from the light pipes and recognition sensors on the top and bottom portions of the Acceptor.

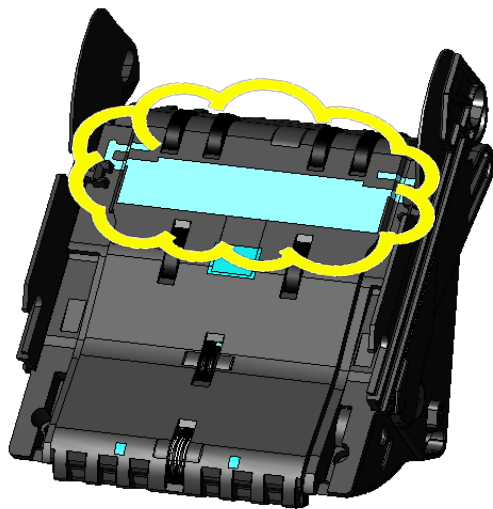
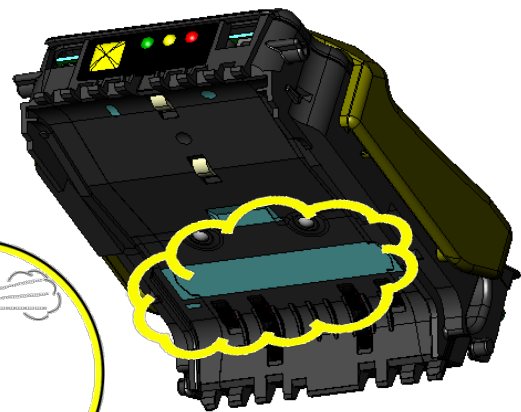


Image 24



Image 25



5.3 VAULT MODULE

1. Remove the Vault Module from the Chassis, as shown in Section 2.2.
2. Manually verify operation of the Vault Module by rotating the drum in the clockwise direction until an audible “click” is heard. Ensure that the movement is smooth and free from any unexpected friction.

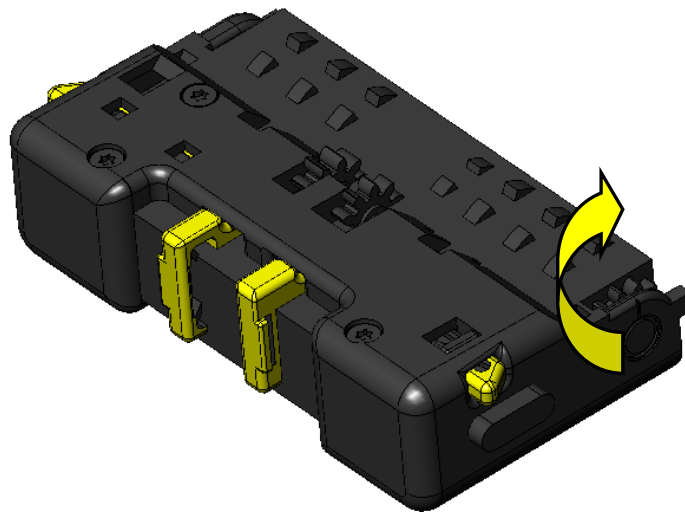


Image 26

3. Clean the transmission gears and optical lenses, shown in Images 27 and 28, of dust and debris using compressed air.

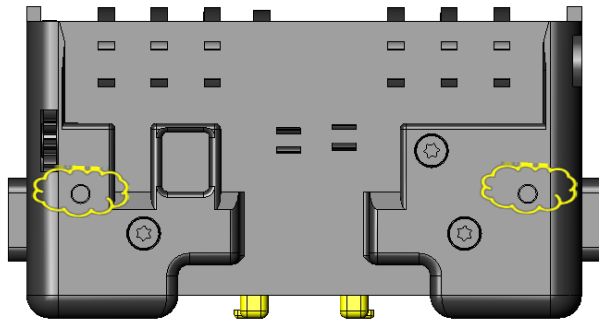


Image 27

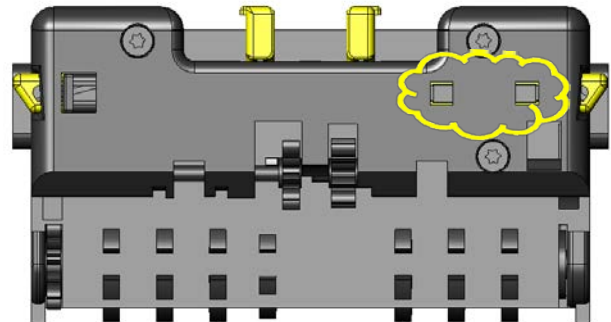


Image 28



5.4 TRANSPORT MODULE

1. Articulate the Vault Module away from the Chassis, as shown in Section 2.4
2. Rotate the Bill Path Covers up (Section 4.1). Using compressed air, blow any dust or debris from the light pipes.

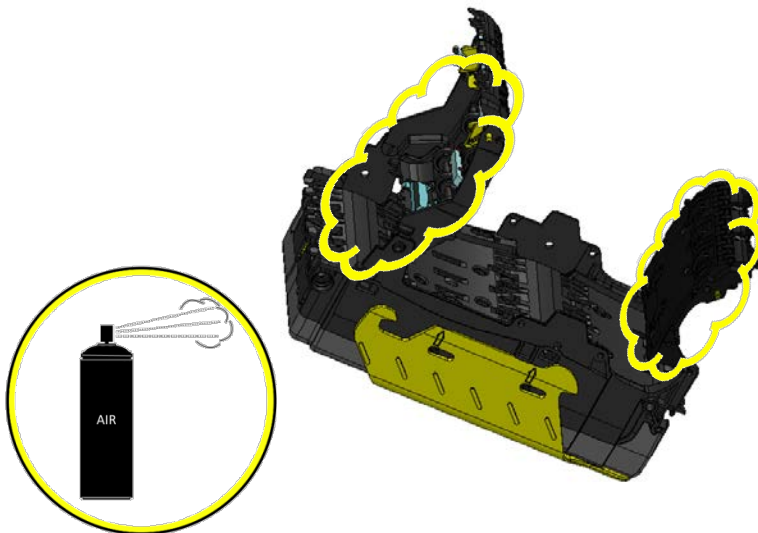


Image 29

- Using compressed (canned) air, blow any dust or debris from the light pipes present on the Transport Module.

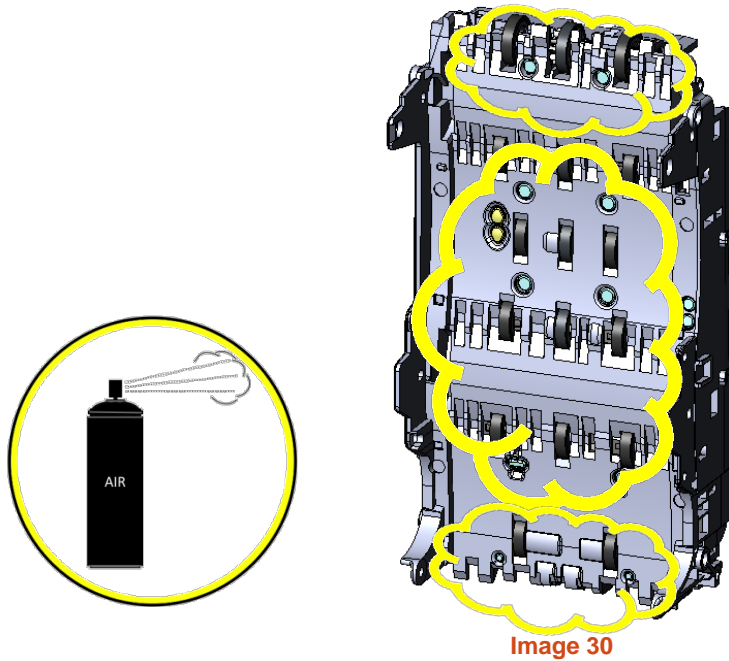


Image 30

5.5 RECYCLER MODULE

There are no Preventative Maintenance recommendations for the Recycler Module. Should an issue exist with the Recycler, call a trained and authorized field service technician.

5.6 CASHBOX MODULE

- Remove the Cashbox module from the Chassis (Section 2.3)
- Using compressed air, direct a spray to the two Cashbox presence sensors (circled in Image 30).
- Additionally, direct the compressed air into the bill path opening (near the gears) and spray to dislodge any accumulated dust and/or debris.

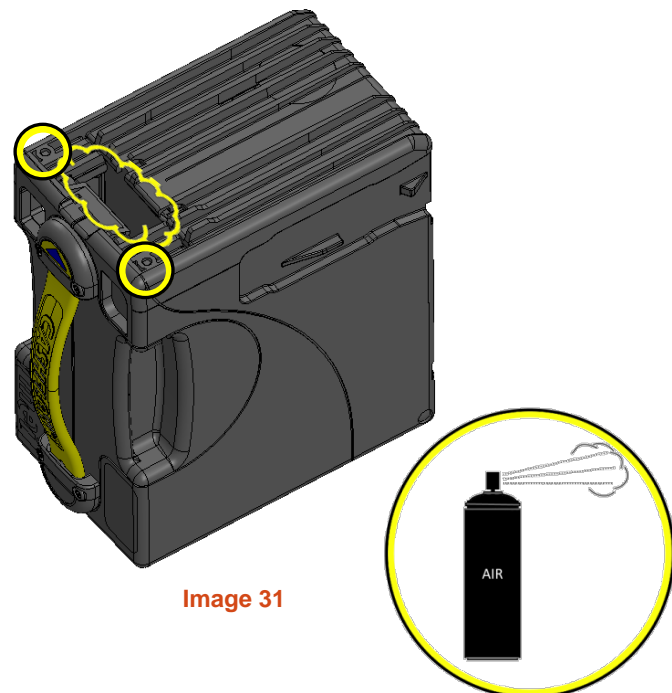


Image 31