

FlexPay™ IV Numeric Keypad to Alphanumeric Keypad Upgrade Instructions



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SECTION 1 - INTRODUCTION

Purpose

This manual provides instructions for upgrade of a dispenser door from a numeric keypad to a secure alphanumeric keypad for a FlexPay™ IV CRIND®.

Intended Users

This manual is intended for Gilbarco®-trained and certified Authorized Service Contractors (ASCs).

Required Tools

- Phillips® Screwdriver
- Metric Socket Set
- Standard Socket Set

Configured Kits - Parts List

The following parts are included in a common E-CIM™ Kit:

Location	Description	Part #	Quantity	Notes
	5.7" E-CIM Bezel	M15718A8XXXX	1	5.7" with Printer
	5.7" E-CIM Insert	M15717A913XXX	1	5.7" without Printer
	10.4" E-CIM Bezel	M15720A8XXXX	1	10.4" with Printer
	10.4" E-CIM Insert	M15719A913XXX	1	10.4" without Printer
Pre-mounted to E-CIM	Card Reader	M14330A001	1	
	Universal Payment Module (UPM)	M15550AXXX	1	Secure Alphanumeric Keypad
	UPM Bracket	M16007A001	1	UPM Bracket
	UPM Gasket	M16040B001	1	UPM Gasket
	Soft Keys, 5.7"	M01254B003	1	For 5.7" Display
	Soft Keys 10.4"	M10206B001/B002	1 each	B001=Right, B002=Left
	Americans with Disabilities Act (ADA) Membrane	M12287B001	1	ADA Membrane
Pre-mounted to Bezel (printer option only)	Printer***	M04119A001	1	-
	Printer Shield***	M15734B001	1	Printer Shield
	Cable Universal Serial Bus (USB)***	M03695B012	1	USB Cable for Printer
	24V Cable***	M04405A010	1	Printer Power Cable
	Ground Cable***	M04431A007	1	Printer Ground Cable
Optional	UPM Heater**	M07953A013	1	One-sided heater (optional)
		M07953A008	1	Double-sided heater (optional)
Graphics for Bezel				
<i>Note: Configured based on template.</i>				
** Items apply to optional UPM Heater				
*** Items only apply to the optional printer				

SECTION 1 - INTRODUCTION

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SECTION 2 - IMPORTANT SAFETY INFORMATION

Important Safety Information

- Notes:** 1) *Save this Important Safety Information section in a readily accessible location.*
- 2) *Although DEF is non-flammable, Diesel is flammable. Therefore, for DEF cabinets that are attached to Diesel dispensers, follow all the notes in this section that pertain to flammable fuels.*

This section introduces the hazards and safety precautions associated with installing, inspecting, maintaining or servicing this product. Before performing any task on this product, read this safety information and the applicable sections in this manual, where additional hazards and safety precautions for your task will be found. Fire, explosion, electrical shock or pressure release could occur and cause death or serious injury, if these safe service procedures are not followed.

Preliminary Precautions

You are working in a potentially dangerous environment of flammable fuels, vapors, and high voltage or pressures. Only trained or authorized individuals knowledgeable in the related procedures should install, inspect, maintain or service this equipment.

Emergency Total Electrical Shut-Off

The first and most important information you must know is how to stop all fuel flow to the pump/dispenser and island. Locate the switch or circuit breakers that shut off all power to all fueling equipment, dispensing devices, and Submerged Turbine Pumps (STPs).

⚠ WARNING

 The EMERGENCY STOP, ALL STOP, and PUMP STOP buttons at the cashier's station WILL NOT shut off electrical power to the pump/dispenser. This means that even if you activate these stops, fuel may continue to flow uncontrolled.

 You must use the TOTAL ELECTRICAL SHUT-OFF in the case of an emergency and not the console's ALL STOP and PUMP STOP or similar keys.

Total Electrical Shut-Off Before Access

Any procedure that requires access to electrical components or the electronics of the dispenser requires total electrical shut off of that unit. Understand the function and location of this switch or circuit breaker before inspecting, installing, maintaining, or servicing Gilbarco equipment.

Evacuating, Barricading and Shutting Off

Any procedure that requires access to the pump/dispenser or STPs requires the following actions:



- An evacuation of all unauthorized persons and vehicles from the work area
- Use of safety tape, cones or barricades at the affected unit(s)
- A total electrical shut-off of the affected unit(s)

Read the Manual

Read, understand and follow this manual and any other labels or related materials supplied with this equipment. If you do not understand a procedure, call the Gilbarco Technical Assistance Center (TAC) at 1-800-743-7501. It is imperative to your safety and the safety of others to understand the procedures before beginning work.

Follow the Regulations

Applicable information is available in National Fire Protection Association (NFPA) 30A; *Code for Motor Fuel Dispensing Facilities and Repair Garages*, NFPA 70; *National Electrical Code (NEC)*, Occupational Safety and Health Administration (OSHA) regulations and federal, state, and local codes. All these regulations must be followed. Failure to install, inspect, maintain or service this equipment in accordance with these codes, regulations and standards may lead to legal citations with penalties or affect the safe use and operation of the equipment.

Replacement Parts

Use only genuine Gilbarco replacement parts and retrofit kits on your pump/dispenser. Using parts other than genuine Gilbarco replacement parts could create a safety hazard and violate local regulations.

Federal Communications Commission (FCC) Warning

This equipment has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense. Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate this equipment.

Safety Symbols and Warning Words

This section provides important information about warning symbols and boxes.

Alert Symbol



This safety alert symbol is used in this manual and on warning labels to alert you to a precaution which must be followed to prevent potential personal safety hazards. Obey safety directives that follow this symbol to avoid possible injury or death.

Signal Words

These signal words used in this manual and on warning labels tell you the seriousness of particular safety hazards. The precautions below must be followed to prevent death, injury or damage to the equipment:



DANGER: Alerts you to a hazard or unsafe practice which will result in death or serious injury.



WARNING: Alerts you to a hazard or unsafe practice that could result in death or serious injury.



CAUTION with Alert symbol: Designates a hazard or unsafe practice which may result in minor injury.

CAUTION without Alert symbol: Designates a hazard or unsafe practice which may result in property or equipment damage.

SECTION 2 - IMPORTANT SAFETY INFORMATION

No Open Fire



Open flames from matches, lighters, welding torches, or other sources can ignite fuels and their vapors.

No Sparks - No Smoking



Sparks from starting vehicles, starting, or using power tools, burning cigarettes, cigars, or pipes can also ignite fuels and their vapors. Static electricity, including an electrostatic charge on your body, can cause a spark sufficient to ignite fuel vapors. Every time you get out of a vehicle, touch the metal of your vehicle, to discharge any electrostatic charge before you approach the dispenser island.

Working Alone

It is highly recommended that someone who is capable of rendering first aid be present during servicing. Familiarize yourself with Cardiopulmonary Resuscitation (CPR) methods, if you work with or around high voltages. This information is available from the American Red Cross. Always advise the station personnel about where you will be working, and caution them not to activate power while you are working on the equipment. Use the OSHA Lockout/Tagout procedures. If you are not familiar with this requirement, refer to this information in the service manual and OSHA documentation.

Working With Electricity Safely

Ensure that you use safe and established practices in working with electrical devices. Poorly wired devices may cause a fire, explosion, or electrical shock. Ensure that grounding connections are properly made. Take care that sealing devices and compounds are in place. Ensure that you do not pinch wires when replacing covers. Follow OSHA Lockout/Tagout requirements. Station employees and service contractors need to understand and comply with this program completely to ensure safety while the equipment is down.

Hazardous Materials

Some materials present inside electronic enclosures may present a health hazard if not handled correctly. Ensure that you clean hands after handling equipment. Do not place any equipment in the mouth.

WARNING

The pump/dispenser contains a chemical known to the State of California to cause cancer.

WARNING

The pump/dispenser contains a chemical known to the State of California to cause birth defects or other reproductive harm.



Gilbarco Veeder-Root encourages the recycling of our products. Some products contain electronics, batteries, or other materials that may require special management practices depending on your location. Please refer to your local, state, or country regulations for these requirements.

In an Emergency

Inform Emergency Personnel

Compile the following information and inform emergency personnel:

- Location of accident (for example, address, front/back of building, and so on)
- Nature of accident (for example, possible heart attack, run over by car, burns, and so on)
- Age of victim (for example, baby, teenager, middle-age, elderly)
- Whether or not victim has received first aid (for example, stopped bleeding by pressure, and so on)
- Whether or not a victim has vomited (for example, if swallowed or inhaled something, and so on)

WARNING



Gasoline/DEF ingested may cause unconsciousness and burns to internal organs. Do not induce vomiting. Keep airway open. Oxygen may be needed at scene. Seek medical advice immediately.

WARNING

DEF generates ammonia gas at higher temperatures. When opening enclosed panels, allow the unit to air out to avoid breathing vapors. If respiratory difficulties develop, move victim away from source of exposure and into fresh air. If symptoms persist, seek medical attention.

WARNING



Gasoline inhaled may cause unconsciousness and burns to lips, mouth, and lungs. Keep airway open. Seek medical advice immediately.

WARNING



Gasoline/DEF spilled in eyes may cause burns to eye tissue. Irrigate eyes with water for approximately 15 minutes. Seek medical advice immediately.

WARNING



Gasoline/DEF spilled on skin may cause burns. Wash area thoroughly with clear water. Seek medical advice immediately.

WARNING

DEF is mildly corrosive. Avoid contact with eyes, skin, and clothing. Ensure that eyewash stations and safety showers are close to the work location. Seek medical advice/recommended treatment if DEF spills into eyes.

IMPORTANT: Oxygen may be needed at scene if gasoline has been ingested or inhaled. Seek medical advice immediately.

Lockout/Tagout

Lockout/Tagout covers servicing and maintenance of machines and equipment in which the unexpected energization or start-up of the machine(s) or equipment or release of stored energy could cause injury to employees or personnel. Lockout/Tagout applies to all mechanical, hydraulic, chemical, or other energy, but does not cover electrical hazards. Subpart S of 29 CFR Part 1910 - Electrical Hazards, 29 CFR Part 1910.333 contains specific Lockout/Tagout provision for electrical hazards.

SECTION 3 - REMOVING COMPONENTS

Before You Begin

CAUTION



A properly grounded Electrostatic Discharge (ESD) wrist strap must be worn while servicing any electronic devices or components. Failure to use electrostatic precautions may damage electronic components and void warranty.

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To prepare the site and unit for the installation:

- 1 Perform an inventory of the parts list provided. Ensure that there is no damage to the parts and that all the parts are accounted for based on the BOM shipped with the kit. Ensure that you carry the recommended spare parts to the installation site.
- 2  Read and understand all the safety information found in *MDE-5221 FlexPay IV Start-up Manual* and “[Important Safety Information](#)” on [page 3](#). Perform a Job Safety Analysis (JSA) before beginning the installation.
- 3 Inform the manager.
- 4 Barricade the unit to be worked on.
- 5 Remove power to the unit at the breaker panel. Follow OSHA lockout/tagout procedures.

WARNING

Failure to turn off the unit during kit installation may cause injury or bodily harm from electrical shock. Ensure that all power to the unit is turned off before opening the door to the unit and during installation.

SECTION 3 - REMOVING COMPONENTS

Replacing the E-CIM or Full Bezel

Depending on the upgrade, you might need to replace the full bezel or the E-CIM insert only.

- If the upgrade includes the printer option, then all components from the old bezel must be uninstalled and re-installed on the new bezel. Refer to [“Removing Components from Full Bezel”](#) on [page 10](#).
- If the upgrade includes E-CIM only and does not affect the bezel, then remove all of the E-CIM components and transfer to the new E-CIM insert. A new bezel is not required. Continue to the [“Removing Components from E-CIM”](#) section.

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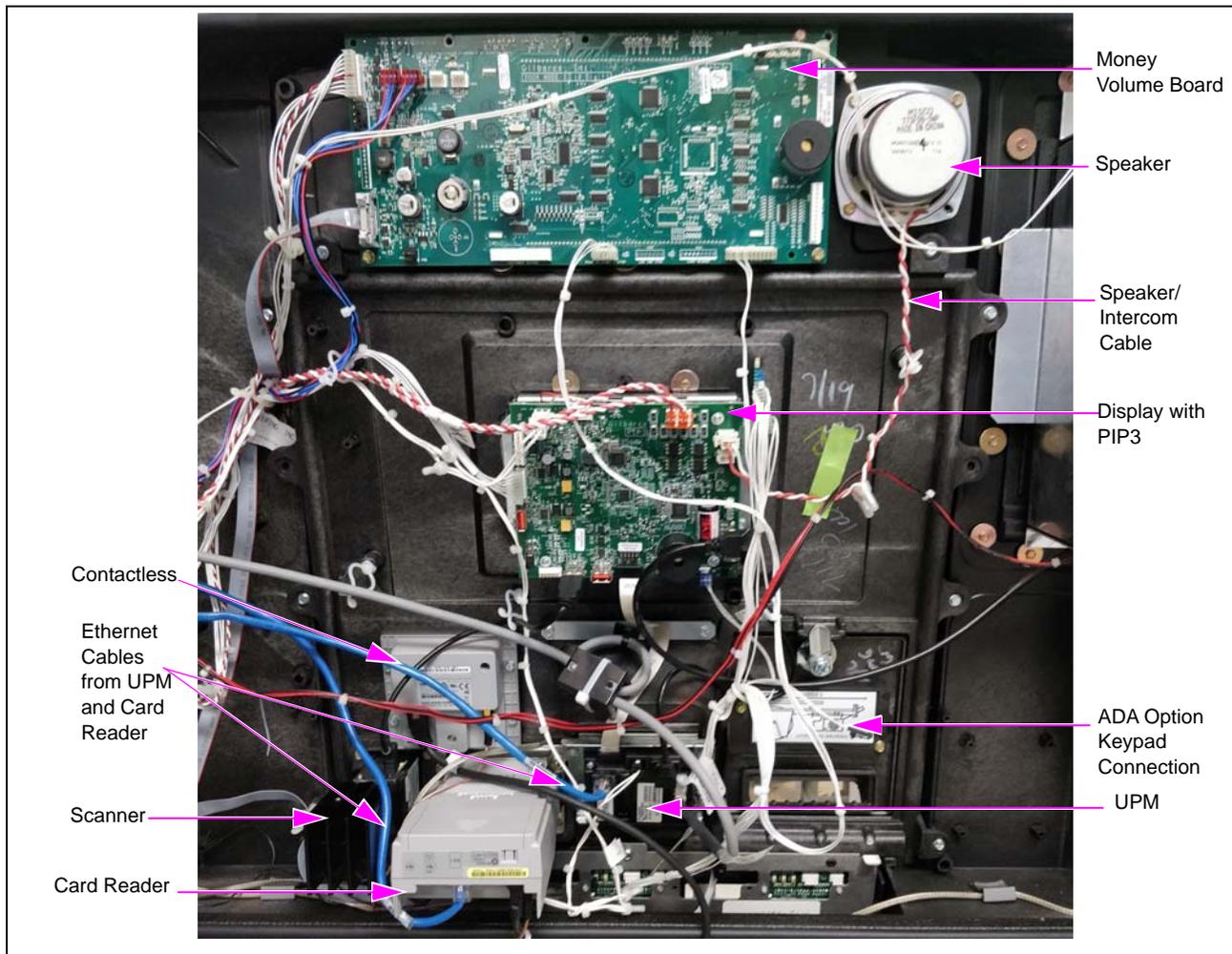
Removing Components from E-CIM

To remove the E-CIM from the door:

- 1 Remove all cable connections from the electronics on the E-CIM door (see [Figure 2](#)). The following are the cable connections:
 - M14340 Power Cable from Peripheral Interface PCB (PIP)3, UPM, and card reader
 - M14339 Serial Cable from PIP3
 - M14338A001 and M14425A001 Applause™ Media System cables (if present) from UPM and PIP3
 - Speaker or intercom cable (if present) from PIP3
 - USB cable to printer from PIP3 (and second scanner, if present)
 - Ethernet® cables from UPM and card reader
 - M13119 Cable from door node
 - Ground cables from UPM and card reader

SECTION 3 - REMOVING COMPONENTS

Figure 1: Removing Components from E-CIM



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2 Remove the grade select buttons by pushing down from the top of the soda button while pulling from bottom of the soda buttons. The grade select bases will remain in position.

Note: Ensure that you do not dislodge the magnets.

3 Remove the Price Per Unit (PPU) graphic (including adhesive and white adhesive tape) to gain access to each of the five E-CIM mounting screws on the front of the main door.

Note: Ensure that you have a graphic replacement.

SECTION 3 - REMOVING COMPONENTS

- Loosen and remove the five Phillips-head screws in the top row on the front of the unit (see [Figure 2](#)).
Note: Retain the screws for reinstallation.

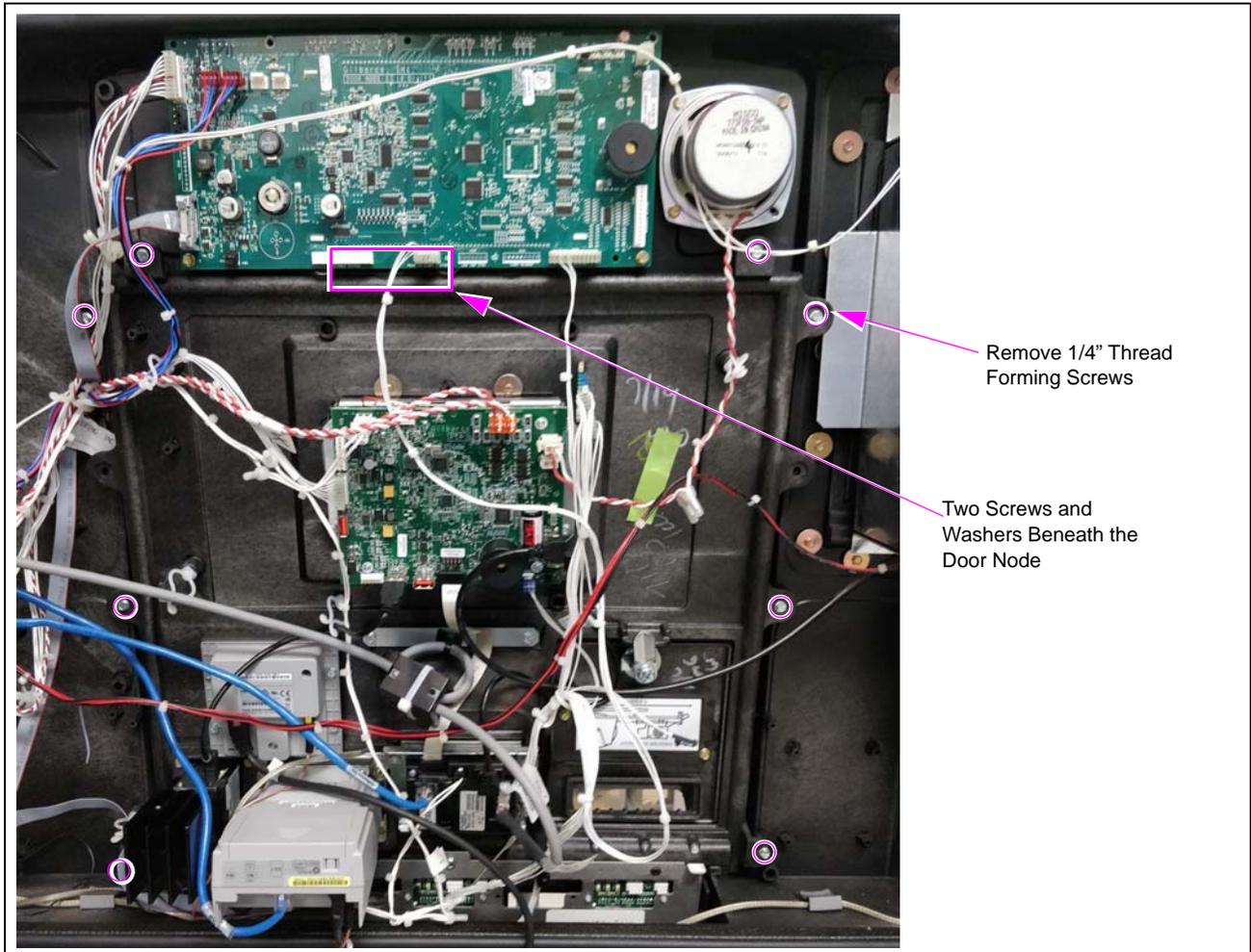
Figure 2: Loosening and Removing E-CIM Mounting Screws



- Remove the door node to access the two top-center, E-CIM mounting screws.
Note: If you are working on both doors, ensure that you do not swap the door nodes in further steps.
- Remove all 1/4-inch thread forming screws connecting the E-CIM to the door, including the 1/4-inch thread forming screws that are also connected to the PPU bracket at the bottom of the E-CIM.
Note: Ensure that you remove the five screws beneath the PPU graphic first. You need not remove the PPU assembly, just the screws that attach it to the E-CIM. For more information, refer [Figure 3](#) on [page 9](#).

SECTION 3 - REMOVING COMPONENTS

Figure 3: Removing 1/4-inch Thread Forming Screws



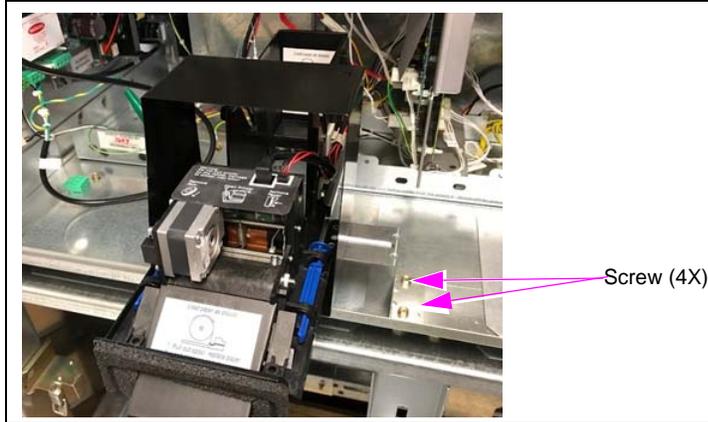
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SECTION 3 - REMOVING COMPONENTS

7 Remove the Sliding Printer.

Note: Remove the Security Shield before removing the Printer.

Figure 4: Removing Printer



8 Carefully remove the E-CIM from the door and place on a flat surface with the front facing down.

Removing Components from Full Bezel

To remove the full bezel from the dispenser:

1 Remove cables and components.

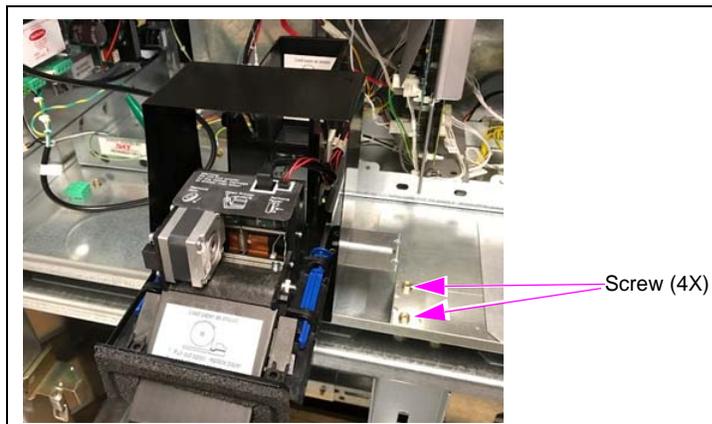
- M14340 Power Cable from Peripheral Interface PCB (PIP)3, UPM, and card reader
- M14339 Serial Cable from PIP3
- M14338A001 and M14425A001 Applause™ Media System cables (if present) from UPM and PIP3
- Speaker or intercom cable (if present) from PIP3
- USB cable to printer from PIP3 (and second scanner, if present)
- Ethernet® cables from UPM and card reader
- M13119 Cable from door node
- Ground cables from UPM and card reader

2 Set aside Money Volume, PPU, and Speaker to transfer to the new bezel.

SECTION 3 - REMOVING COMPONENTS

- 3 Ensure that you do not interchange the door nodes in a two-sided unit.
- 4 Remove the bezel from the dispenser.
- 5 Remove the Sliding Printer.

Figure 5: Removing Printer



SECTION 3 - REMOVING COMPONENTS

Removing the Security Shield

Removing the Security Shield allows access to the electronics behind it.

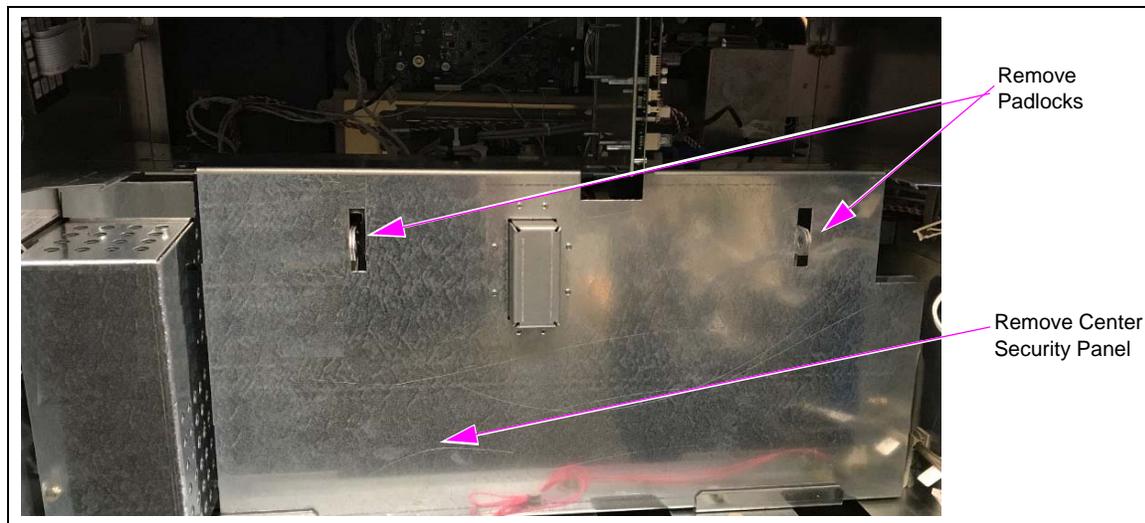
To remove the Security Shield:

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- 1 Remove any padlocks and the center security panel as shown in [Figure 6](#). If the dispenser has the printer option with a printer clearance hole, discard the old center panel.

If the center security shield section is the old style, which extends above the T-rail, it must be replaced with a new center section.

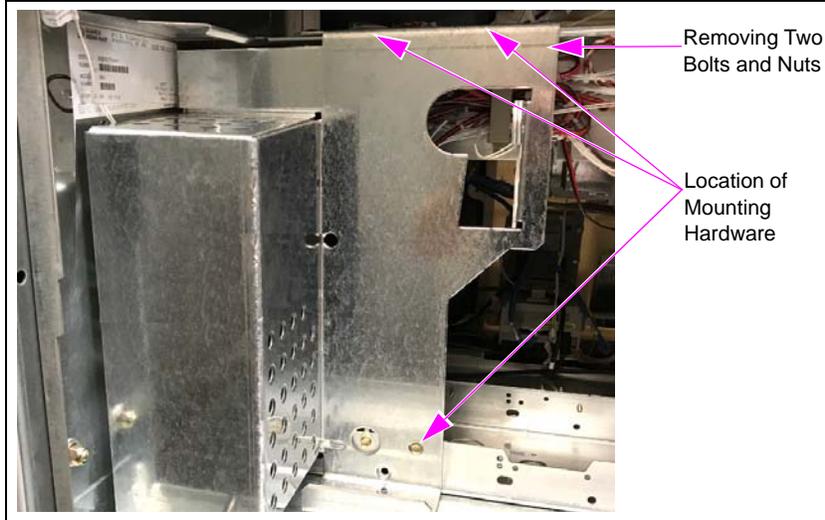
Figure 6: Removing Padlocks and Security Panel



SECTION 3 - REMOVING COMPONENTS

- 2 Remove the left side security panel by removing two bolts and nuts at the top and one thread-forming screw at the bottom. Discard the panel and retain the mounting hardware for reuse.

Figure 7: Removing Bolts and Nuts



SECTION 3 - REMOVING COMPONENTS

Security Shield for Ultra-Hi Units

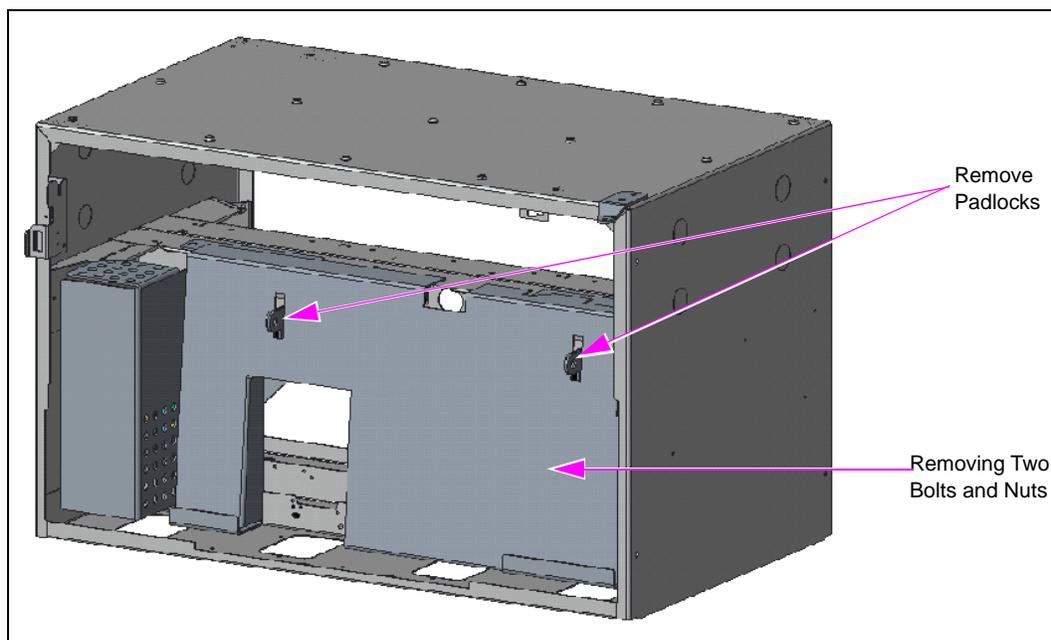
The Security Shield is the Ultra-Hi security shield upgrade for FlexPay IV. It is applicable for dispensers with a printer and with security shields.

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To remove the Security Shield, proceed as follows:

- 1 Remove the center security shield and discard.
- 2 Remove the padlocks.

Figure 8: Removing Padlocks and Center Security Shield

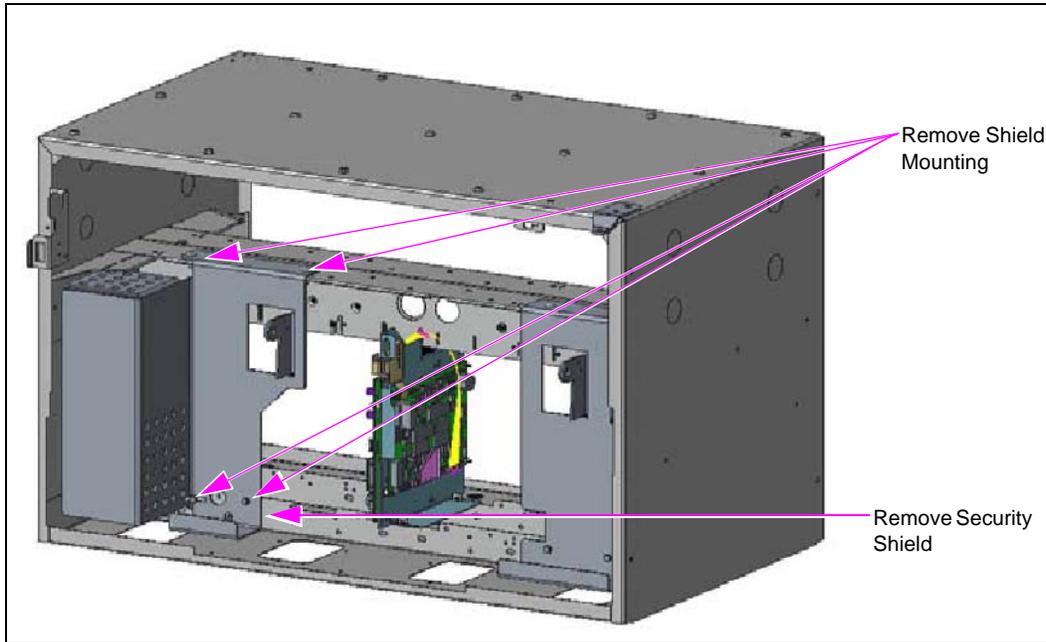


- 3 Remove the left side shield mounting hardware and save for reuse.

SECTION 3 - REMOVING COMPONENTS

4 Remove the left side security shield and discard.

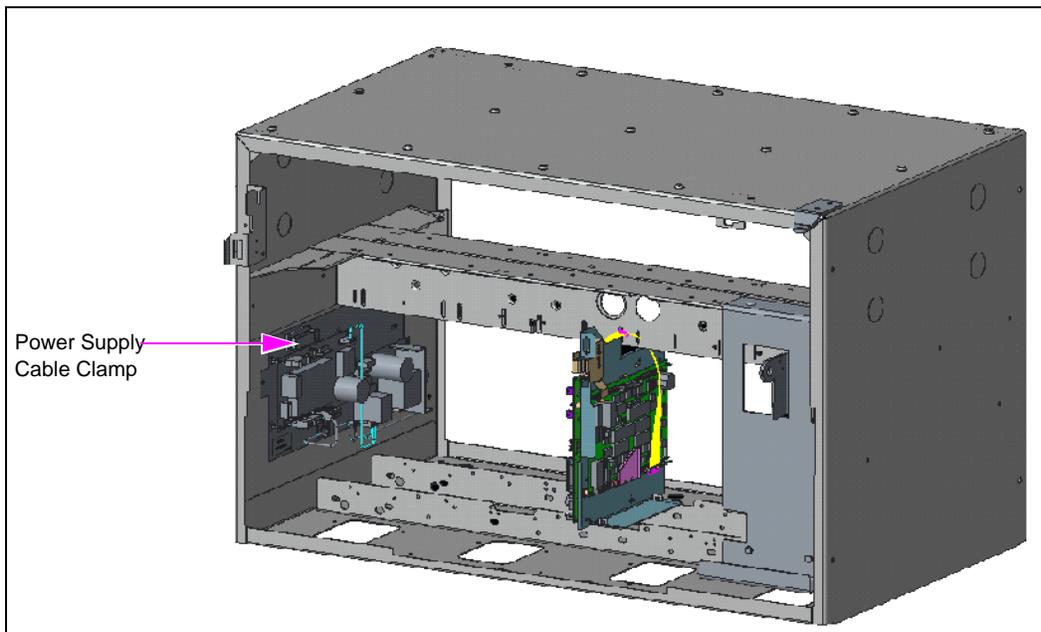
Figure 9: Removing Padlocks and Left Security Shield



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5 Open the power supply cable clamp and allow any cables to hang free.

Figure 10: Opening Power Supply Cable Clamp



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SECTION 4 - INSTALLATION

E-CIM

To install the E-CIM door:

- 1 Carefully mount the E-CIM on the door.
Note: Ensure that the E-CIM gasket seals properly against the door bezel.
- 2 Insert all 1/4-inch thread-forming screws to mount the E-CIM to the door removed in step 6 on page 8, including the 1/4-inch thread-forming screws to connect the PPU bracket at the bottom of the E-CIM.
- 3 Insert and tighten the five Phillips-head screws in the top row on the front of the unit.

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Figure 1: E-CIM Mounting Screws



- 4 Install the PPU graphic (including adhesive and white adhesive tape).
- 5 Install the grade select buttons.
- 6 Remount the door node.
Note: If you are working on both doors, ensure that you remount the door node to the same side from which it was removed.
- 7 Install card reader, display, and, if present, contactless, 2D scanner, speaker.

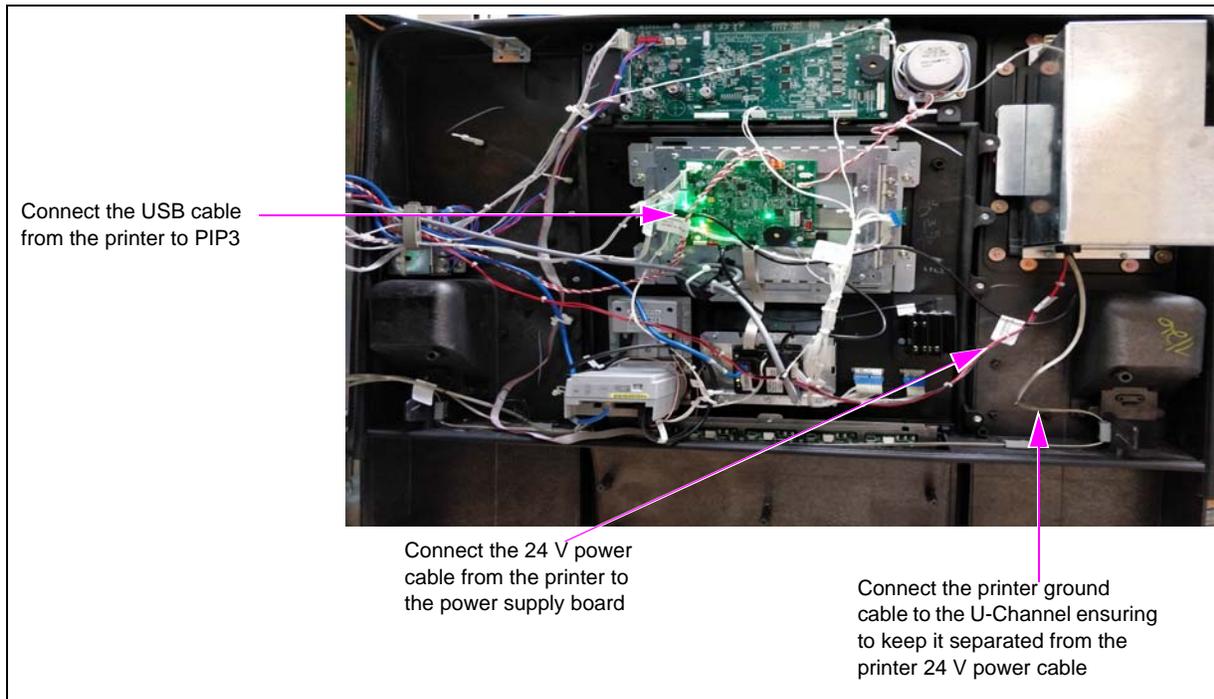
SECTION 4 - INSTALLATION

Cables

To connect the cables:

- 1 Connect all cable connections from the electronics on the 10.4-inch display E-CIM door. The following are the cable connections:
 - M14346 video cable from UPM to PIP3
 - M14340 Power Cable to PIP3, UPM, and card reader
 - M14339 Serial Cable from PIP3
 - M14338A001 and M14425A001 Applause Media System Cables (if present) from UPM and PIP3
 - Speaker or intercom cable (if present) from PIP3
 - USB cable from UPM to PIP3
 - USB cable from printer
 - Ethernet cables from UPM and card reader
 - M13119 Cable from door node

Figure 2: Printer Cable Connection for Alphanumeric Door

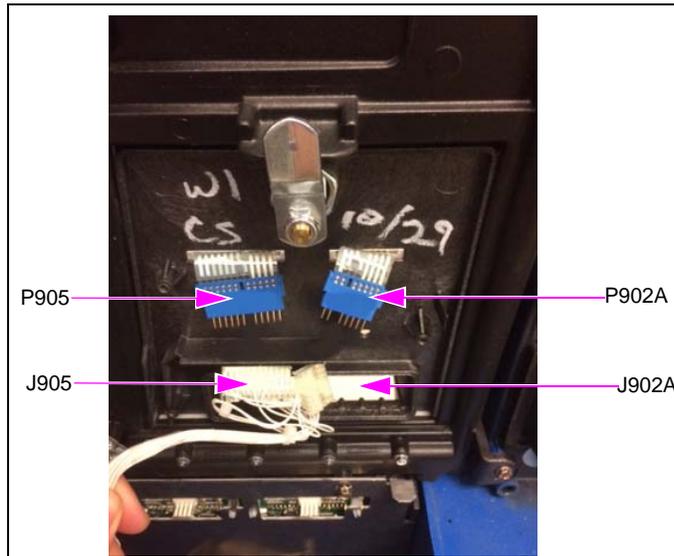


SECTION 4 - INSTALLATION

- 2 Connect the M13119A003 Cable to the left, right, and ADA softkey, PIP3, and then (after installing the E-CIM) to the door node, and J192 for the door switch.

Note: The M13119A003 Cable for the new E-CIM is the 10.4-inch display version and it will be included in the kit. The M13119A002 cable designed for the 5.7-inch E-CIM will not be transferred over to the new configuration.

Figure 3: Connecting M13119A003 Peripherals Cable



- 3 Connect M14346 Video Cable from UPM to display assembly.
- 4 Connect M14340A002 Power Cable to UPM, card reader, and PIP3.
- 5 Connect USB cable from UPM to PIP3.
- 6 Mount the ADA cable bracket to the door and tie-wrap the cable to the bracket.
- 7 If present, in the original door, connect the cables from the VeriFone UX400 Contactless Card Reader [M14331A001 (to card reader)], or 2D Scanner [M14055B001 (to PIP3)] onto the 10.4-inch E-CIM door.
- 8 If present connect the M14338 Applause Media System Video and M14425 Applause Media System Audio Cables to the UPM and PIP3.
- 9 Connect the M14339A001 Cable to the PIP3.
- 10 Connect the ground cables from the UPM and card reader (must be routed away from power/data cables).

SECTION 4 - INSTALLATION

Full Bezel

To install the full bezel:

- 1 Hang the new bezel to the frame.
- 2 Transfer all the components that were removed to the new bezel.
- 3 Connect all the cables. For more details, refer to the “Cables” section on [page 16](#).

4

Installing the alphanumeric keypad to the FlexPay IV CRIND is now complete.

Note: Ensure that the software version on the keypad/UPM is the latest. If not, upgrade to the latest.

SECTION 5 - REFERENCE INFORMATION

Related Documents

Document No.	Title
MDE-5220	FlexPay IV CRIND Retrofit Kit Installation Instructions for Encore S E-CIM
MDE-5290	FlexPay IV 5.7 to 10.4-inch Display Upgrade Kit

Abbreviations and Acronyms

Term	Description
ADA	Americans with Disabilities Act
ASC	Authorized Service Contractor
CRIND	Card Reader in Dispenser
E-CIM	Enhanced Customer Interface Module
ESD	Electrostatic Discharge
OSHA	Occupational Safety and Health Administration
PIP	Peripheral Interface PCB
PPU	Price Per Unit
UPM	Universal Payment Module
USB	Universal Serial Bus

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Greensboro, North Carolina 27420
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MDE-5491A FlexPay™ IV Numeric Keypad to Alphanumeric Keypad Upgrade Instructions