FlexPay™ IV CRIND® Retrofit Kit
Installation Instructions for Encore® 500 S

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SECTION 1 - INTRODUCTION

Purpose

This manual provides instructions to install a 5.7-inch or 10.4-inch Color Screen FlexPay™ IV CRIND® Secure Payment Outdoor Terminal [(SPOT) M7] Retrofit Kit in an Encore® 500 S pump/dispenser (with or without CRIND). The FlexPay IV CRIND provides a secure payment platform that is EMV®-certified and Payment Card Industry PIN Entry Device (PCI-PED)-certified.

Intended Users

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

Required Tools

- Phillips® and Flat-blade Screwdrivers
- 1/4-inch Socket Set (Nut Driver)
- 7- and 8-mm Socket (Nut Driver or Socket Set)
- T15 Torx Drive
- Diagonal Cutters
- Needle Nose Pliers
- 1/4-inch Hexagonal-head Security Screwdriver

Configured Kits - Parts List

FlexPay IV CRIND Retrofit Kits are configured based on the serial number of the pump/dispenser (unit) for which they are intended. Therefore, the parts list will vary for each configured kit and unit/option type. For additional parts details, refer to the Bill of Materials (BOM) in the kit, your distributor, or contact Gilbarco Customer Service. For more information, you can also refer to *PT-1937 Encore 300, Encore 500/500 S, Encore 550, Encore 700 S, Eclipse® Recommended Spare Parts Manual*.

A common FlexPay IV CRIND Retrofit Kit will include the following parts:

- Enhanced Customer Interface Module (E-CIM™) door
- T-rail assembly with Auxiliary Feature PCB (AFP)
- Universal Serial Bus (USB) Printer assembly (for non-CRIND units only)

SECTION 1 - INTRODUCTION

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Configured Kit Optional Components

The following parts are potential configured kit optional components:

- UX400 Contactless
- Applause™ Media System, Dispenser Communication Module (DCM)2, and Gilbarco Systems on Module (GSoM).
- Cabinet Heater (optional for both 5.7- and 10.4-inch displays)
- Bank Note Acceptor (BNA)
- 2D Imager
- TRIND®
- Intercom
- Keypad Heater Kit (power supply and cable harness)

For a complete parts list of the configured kit, refer to the build ticket that is provided with the kit. *Note: Printers will be needed for non-CRIND units.*

Critical Components

Note: Some of the parts listed below are optional. For complete parts list, see the packing list.

The following parts are critical components for FlexPay IV:

Location	Description	Part #	Notes
E-CIM	Contactless Card Reader, VeriFone® UX400	M14331A001	
	10.4" Softkeys	M10206B00X	1 = Right, 2 = Left
	5.7" Softkeys	M01254A003	
	Printed Circuit Assembly (PCA) Intercom Interface	M09751A002	
	PCA, Call Interface	M04528A001	
	Card Reader, VeriFone UX300	M14330A001	
	5.7" Color Display	M10369B001 M10369B003	Ampire
	10.4" Color Display	M14004B003	Kyocera®
	PCA, Peripheral Interface PCB (PIP)3	M13987A00X	1 = 5.7", 2 = 10.4"
	Assembly, Universal Payment Module (UPM)	M13888AXXX	"XXX" varies based on the customer requirement
	TRIND	M06143A00X	1, 3 = Red, 2, 4 = Amber
	Imager, 2D	M16110B001	
Mounted on Main Door	Cable, Wire and Speaker Next Generation Payment (NGP)	M09259A001	

SECTION 1 - INTRODUCTION

Location	Description	Part #	Notes
Part of AFP or DCM2 Assembly	DCM2	M14576A001	
	Secure System on Module (SSoM)	M14579A101	
	PCA, AFP	M13124A001	
	DCM	M11071A001	
	DCM2.2	M15341A101	
	Phoenix Supply	M04161B001	
	Fuse Board	M05748A001	
Mounted on Printer Door	Americans with Disabilities Act (ADA) Keypad	M12287B001	
Mounted in Main Electronics Area (Opposite Main Power Supply)	Intercom PCA with Call Interface	M14595A001	
On T-rail	Heater/Fan Assembly	M07333A001	

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

Working With Fuels and Electrical Energy

Prevent Explosions and Fires

Fuels and their vapors will explode or burn, if ignited. Spilled or leaking fuels cause vapors. Even filling customer tanks will cause potentially dangerous vapors in the vicinity of the dispenser or island.

DEF is non-flammable. Therefore, explosion and fire safety warnings do not apply to DEF fluid lines.

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.

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

3

> **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.

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.
   Note: Retain all parts (including cables, nuts, bolts, screws, and so on) that are removed. These are required in case the unit must be reverted to the original as a fallback mitigation.

2 Read all the safety information found in *MDE-3804 Encore and Eclipse Start-up/Service Manual* and "Important Safety Information" on page 5. Perform a Job Safety Analysis (JSA) before beginning the installation.

3 Inform the manager.

4 Barricade the unit to be worked on.

5 Verify that the printer firmware is version 3.00.1 or later by removing and refeeding paper to the printer while it is still powered.
   Note: If software is not V3.00.1 or later, be prepared to replace the printer.

6 Remove power to the unit at the breaker panel. Follow OSHA lockout/tagout procedures.

7 Isolate two-wire connection to the unit.

> **⚠ 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

Encore 500 S

| IMPORTANT INFORMATION |
|---|
| Ensure that the unit is functional. Check with the manager for any existing operational issues. If the unit has any special features, such as TRIND, barcode scanner, and so on, verify proper operation before removal. Print a system health report to verify printer and CRIND functions. For more information, refer to *MDE-5221 FlexPay IV Start-up Manual.* |

Pump Handle Boot Switch(es) and Totalizers

To remove the pump handle boot switch(es) and totalizers:

Note: Ensure that all the cables going to the door from the Computer Display (CD) module are disconnected before attempting to remove the door.

1   Remove the pump handle boot switch(es), and then remove the totalizers [assembly (two screws)]. If no totalizers, remove the bracket that is used for cable routing at the door. These will be reinstalled on the new door.
Note: Retain the boot switches and totalizers, and brackets (assembly) and screws for the new door.

Figure 1: Pump Handle Boot Switch and Totalizers

(i)
Pump Handle Boot Switch

Pump Handle Connector

Totalizer Bracket   (ii)   Screw (2X)

(iii)
Totalizer Assembly
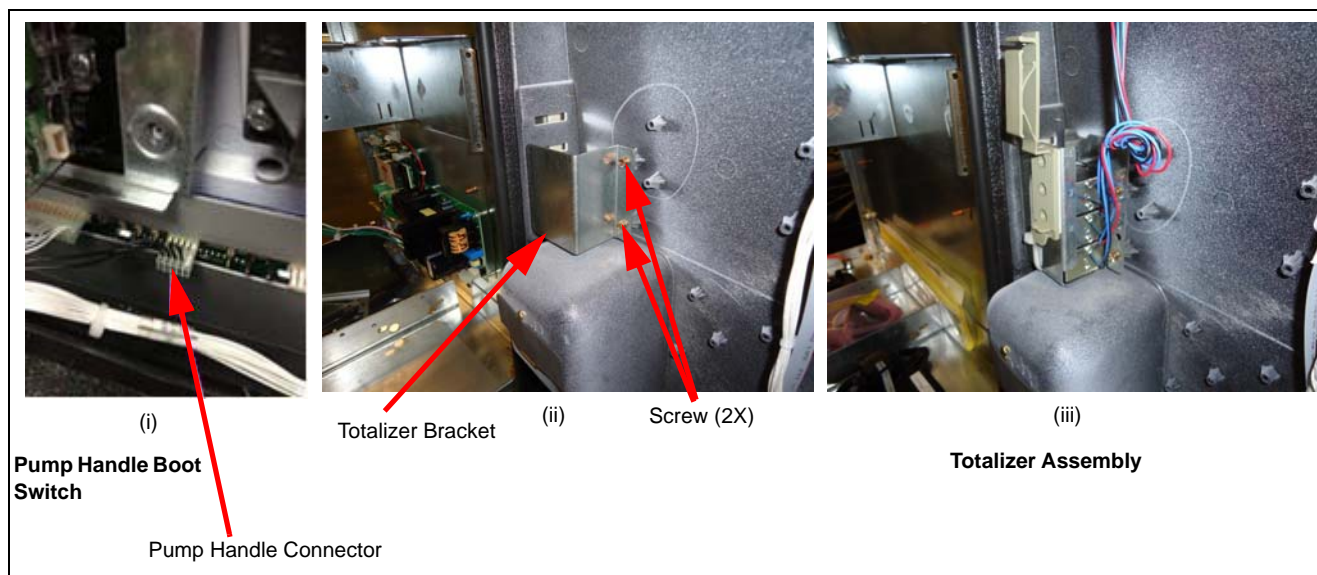
2   Remove the grade select buttons and their bases from the front of the main door for reuse on the new E-CIM door. Retain all hardware for reuse.
Note: Be careful not to dislodge the magnets.

SECTION 3 - REMOVING COMPONENTS

Door Node

> *Note: Retain the door node and screws for reuse.*

To remove the door node:

1 Remove the Cable Assembly (M06115A001 or M06115A002) that carries data and power from the door node to the Price per Unit (PPU) board. These cables can be discarded.
Note: A new M06115A003 Cable is provided in the kit and is already connected to the door.

2 Remove all the cables from the door node before removing the door node.

IMPORTANT INFORMATION

If the door node has CROWN lighting pins, remove the CROWN lighting pins from the door node using diagonal cutters as close to the board as possible (see Figure 2). Eye protection must be used while clipping the CROWN lighting pins.

For every door, inspect the door node. Ensure that there are no CROWN lighting pins at the connector (associated with door node 3). If CROWN lighting pins/connector are present on the door node (see Figure 2), carefully remove and discard the pins. It is important to have them removed. There is a potential for damaging the door node if these pins are not removed.

Figure 2: Removing Door Node

CROWN Lighting Pins (cut these pins)

These can be removed.
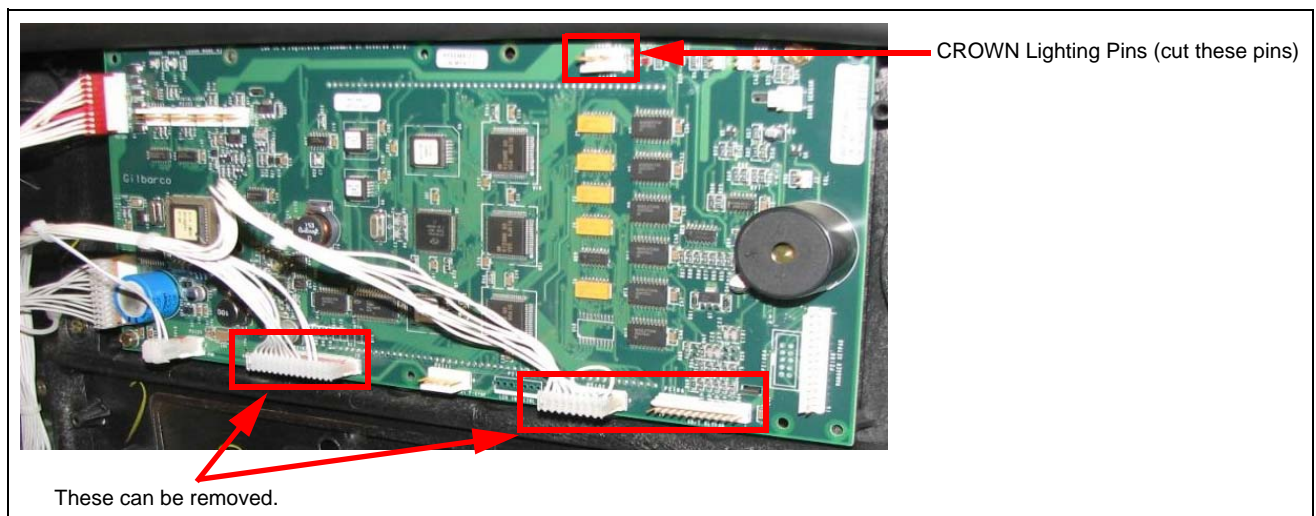
SECTION 3 - REMOVING COMPONENTS

3 Remove the door node by removing the four screws that secure it. Retain the screws and door node for reuse.

Notes: 1) Be sure to place the door node on the correct side of the unit when re-installing on the new door.

2) Before you remove the main door, ensure all cables going to the door have been disconnected.

4 Remove any peripheral options, such as call button board, that will be reused from the door.
Note: Not all CRIND options are directly transferrable to the FlexPay IV CRIND platform. The options that are not transferrable will be provided in the kit.

Speaker

Note: Speaker may not be required for all installations. For example, Applause Media System applications will require a speaker with a connector installed.

If the speaker must be replaced, remove the speaker at this time.

To remove the speaker, disconnect speaker wires and remove the four screws holding the speaker and take it out.
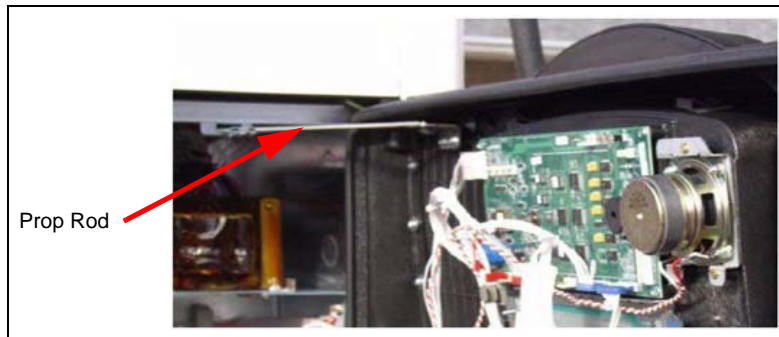
Figure 3: Removing Speaker
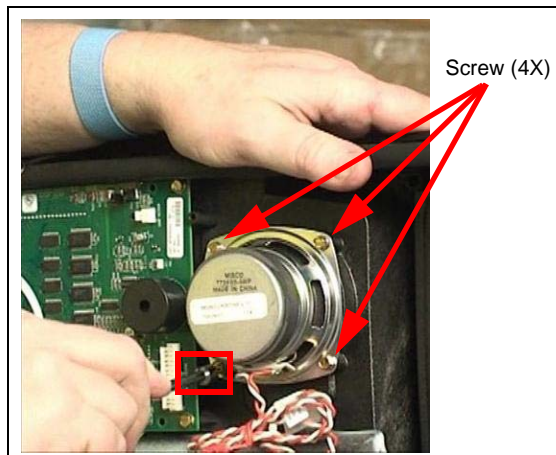
SECTION 3 - REMOVING COMPONENTS

Prop Rod

To remove the prop rod, lift it upwards and then pull it out of its housing slot (see Figure 4).
*Note: Retain the prop rod for reuse.*

Figure 4: Removing Prop Rod

Prop Rod

PPU Board

To remove the PPU board:

1 Remove the card reader first, to allow the PPU board to be removed.

2 Remove the following cables from the PPU board:
   - PPU backlight power (J2202)
   - PPU data (J2201)
   - Pump-handle cable

3 Remove and discard the three screws that secure the PPU board (see Figure 5).
   Note: The new door requires a 1/4-inch screw that is provided in the kit.

4 Open the printer door to remove the PPU board.
   Note: Retain the PPU board for reuse.

Figure 5: Removing 1 of 3 Screws of PPU Board
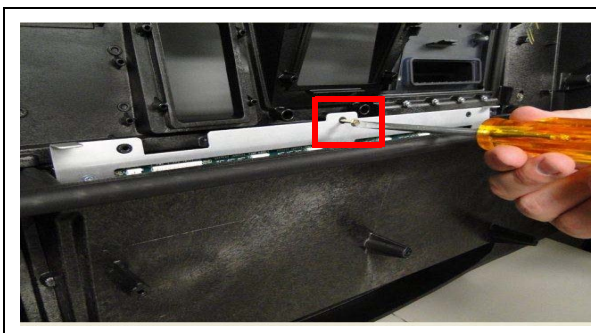
5 Carefully lift the PPU board out of the tray and place it in a safe place for reinstall.

# SECTION 3 - REMOVING COMPONENTS

Door

To remove the existing door from the unit:

Note: Ensure that all the cables going to the door from the CD module are disconnected before removing the door.

1 After all the components that will be reused are removed from the door, remove the existing door from the unit (see Figure 6).
Note: After you completely open both the doors, the top sheathing must slide over enough to access and remove the pin. If not, you may have to remove the inner sheathing so that you can slide the top cover and access the pin.

Figure 6: Removing Pin from Door

Top Sheathing
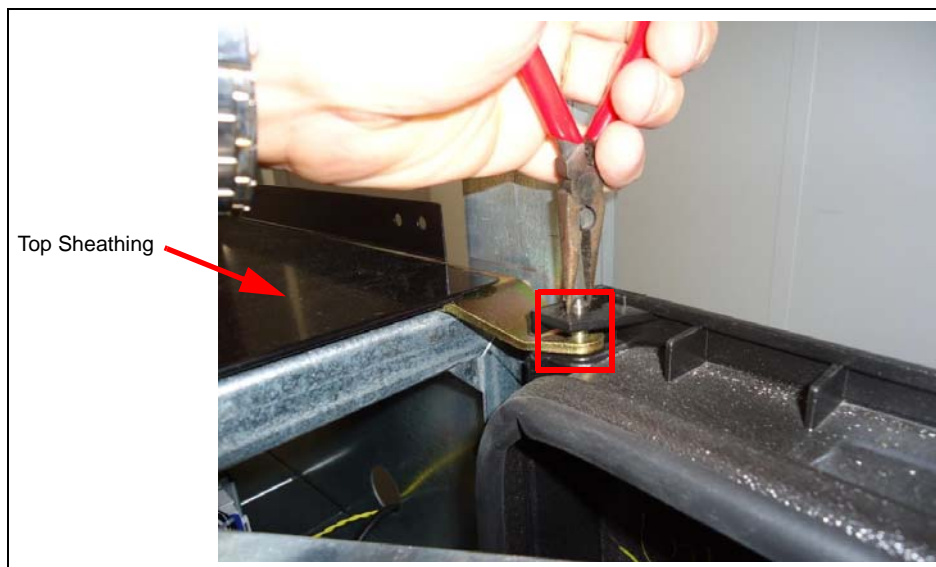
2 Remove the pin at the upper door hinge. Ensure that you hold the door steadily with one hand while removing the pin.
Note: Use both hands to remove the door. Otherwise, the door may fall off the unit and get damaged.

3 After you remove the pin, lift the door from the lower mounting hinge and move to a safe location.
Note: Retain all the parts in case you must revert to the original equipment for any reason.

4 Repeat door removal for the other side.

SECTION 3 - REMOVING COMPONENTS

UL® Buckets

Remove the Underwriters Laboratories (UL) buckets (one on each side) to allow room to install the mailbox style printer assemblies. Retain the UL bucket with the UL label and serial number, and one Self-tapping Screw (M00417B101), and then attach it inside the unit.

Note: The sides of the UL bucket must be removed before placing it in the unit. To remove the sides and bottom, bend them repeatedly to break them off [see Figure 7 (ii) and Figure 7 (iii)].
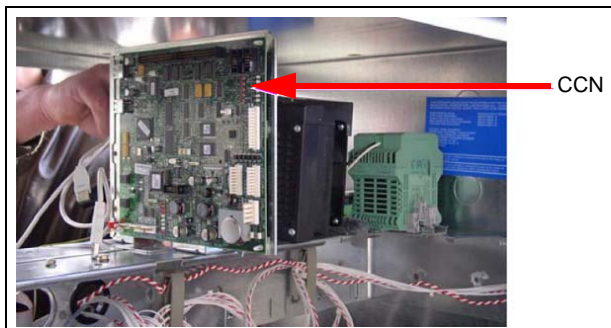
3

Figure 7: Removing UL Bucket

(i) UL Bucket with sides

(ii) Bend the sides and bottom repeatedly to break them off

(iii) UL Bucket (without sides) with the UL Label and Serial Number
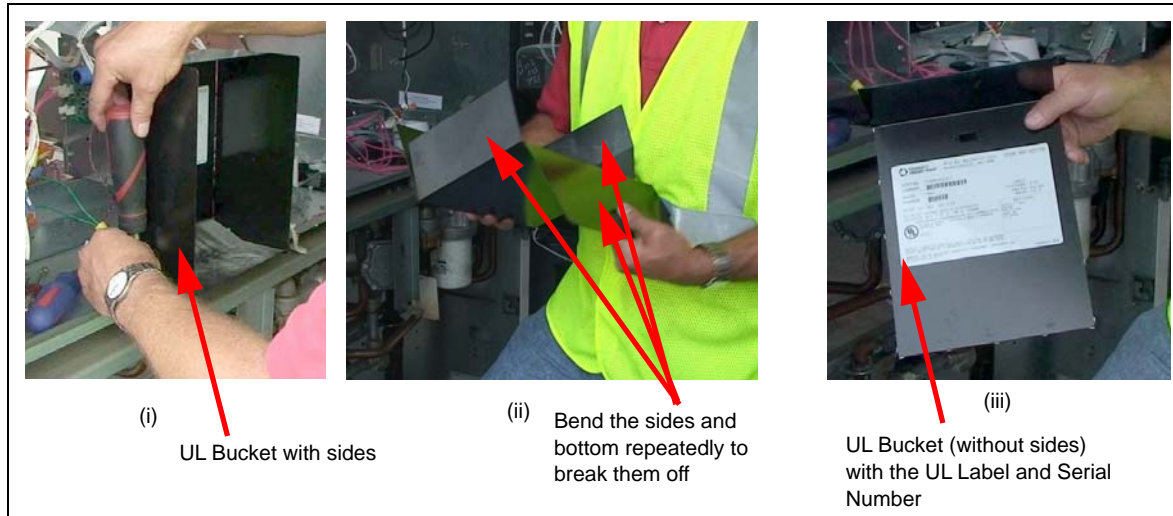
CCN Assembly

To remove the CRIND Control Node (CCN) assembly:

1 Disconnect all the cables from the CCN.

Figure 8: Removing CCN Assembly

CCN

2 Remove the CCN assembly from the T-rail by removing the three nuts located at the bottom of the mounting bracket.
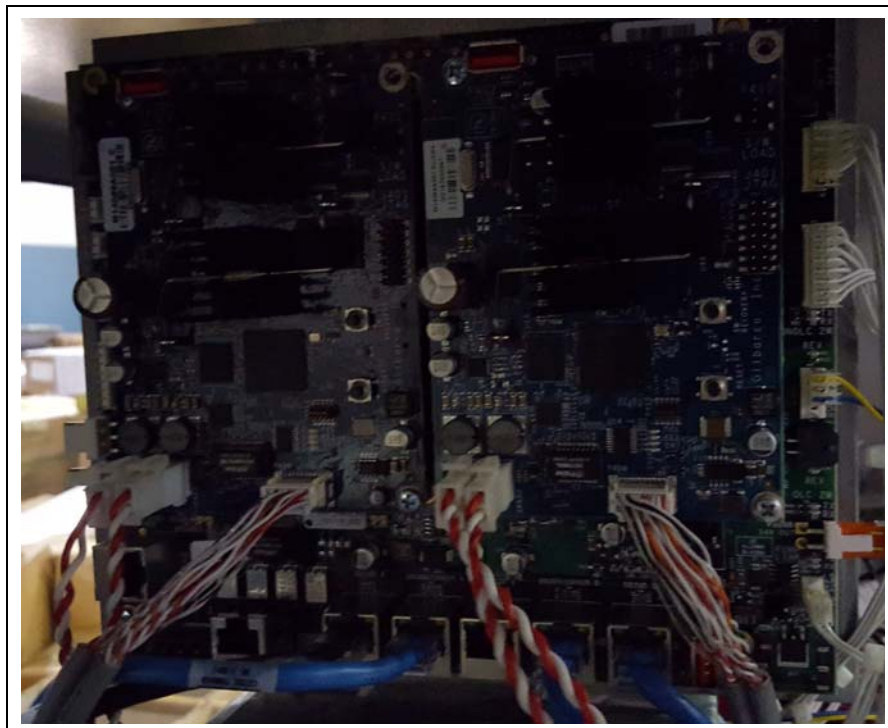*Note: Retain the nuts for mounting the AFP assembly.*

SECTION 3 - REMOVING COMPONENTS

AFP/HIP 2/DCM2/DCM2.1

To remove the Hub Interface PCB (HIP) 2/AFP/DCM2/DCM2.1 bracket:

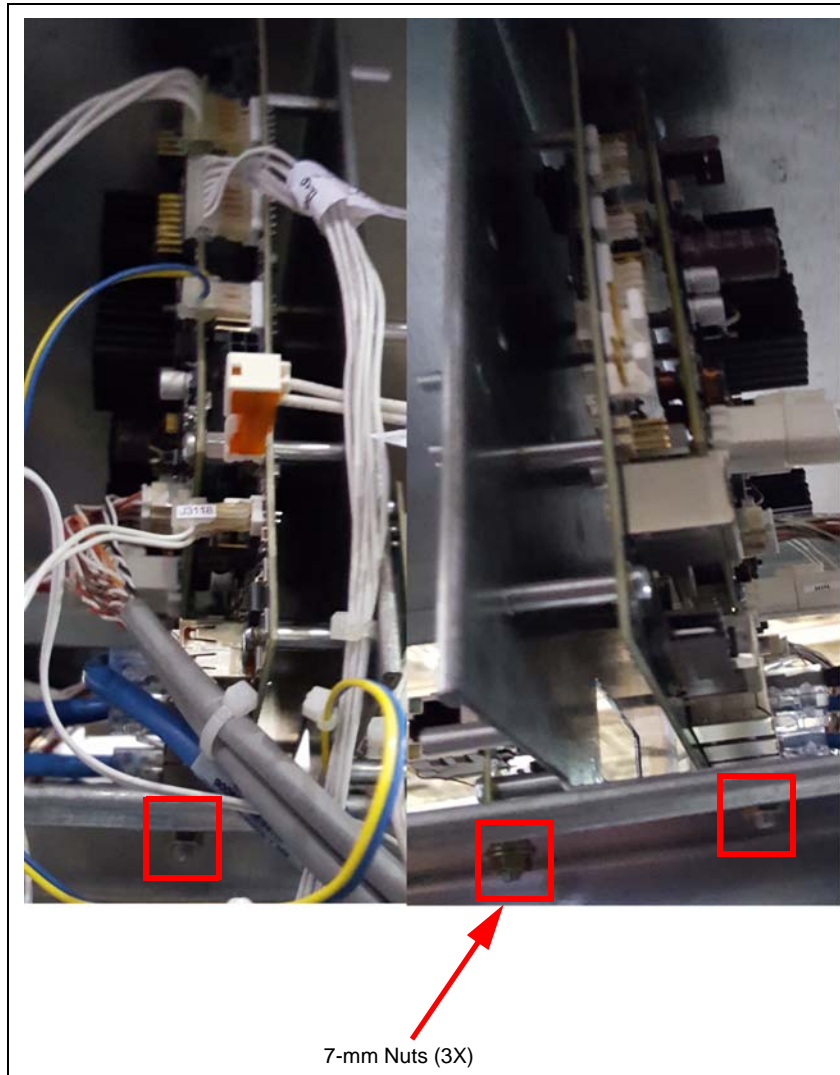**1** Disconnect all the cables from the AFP, HIP 2, or DCM2/DCM2.1 (see Figure 9).

Figure 9: Disconnecting Cables

SECTION 3 - REMOVING COMPONENTS

2 Remove the HIP2/AFP/DCM2/DCM2.1 bracket located on the T-rail by taking off the three 7-mm nuts as shown in Figure 10. Retain the nuts for reuse.

Figure 10: Removing Nuts

7-mm Nuts (3X)

3 Remove the GSoMs from the existing assembly. Retain the GSoMs for reuse.

SECTION 3 - REMOVING COMPONENTS

3

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SECTION 4 - INSTALLATION

FlexPay IV CRIND Retrofit Kit

E-CIM Door

To install the E-CIM Door:

1 Install the new retrofit door onto the unit by reversing steps 2 and 3 on page 12.

2 Insert the lower portion of the door in the lower hinge and then place the pin in the upper hinge (see Figure 2 on page 9).

After the door is in place, install all the following parts removed previously:

- Door node

  Note: Ensure that the correct door node is put on the correct side and ensure that the CROWN lighting pins have been removed (if applicable).

- PPU board

  Notes: 1) Card reader must be removed before reinstalling the PPU board. See "IMPORTANT INFORMATION".

 *2) Use the 1/4-inch screws provided in the kit. DO NOT use the screws taken out previously from the PPU board.*

IMPORTANT INFORMATION
You will have to remove the UX300 card reader from the new door before reinstalling the PPU board. Reinstall the UX300 once the PPU board has been installed. Failure to use the new 1/4-inch screws provided in the kit will damage the door.

- Totalizer assembly or totalizer bracket

- Pump-handle switches

- Grade select bases and buttons

  Note: Carefully place the buttons in their correct location.

- Transfer any other options that may have been removed to the new door or add any CRIND options included in the kit.

- Attach the Air Gap Panel (M07900B001) to the bottom of the new door using the three Q11677-24 Screws provided in the kit.

  Note: These items show up in the packing list as PKM07900A001.

Figure 1: Air Gap Panel (M07900B001)


Q11677-24 Screw (3X)
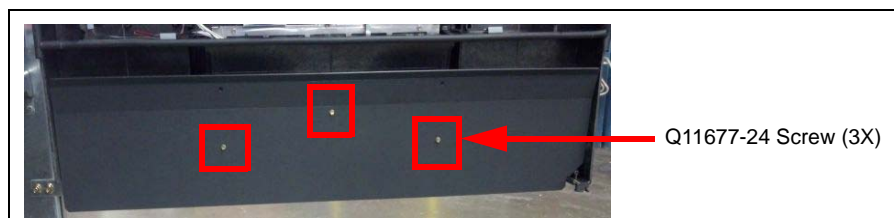
SECTION 4 - INSTALLATION

UL Bucket

Attach the UL bucket to the T-rail using a self-tapping screw (retained earlier) to a safe place inside the unit, as shown in Figure 2.

Note: The UL bucket must be placed inside the electronics cabinet because it contains the UL serial number.

Figure 2: Attaching UL Bucket to T-rail

Self-tapping Screw (M00417B101)

UL Bucket attached to T-rail
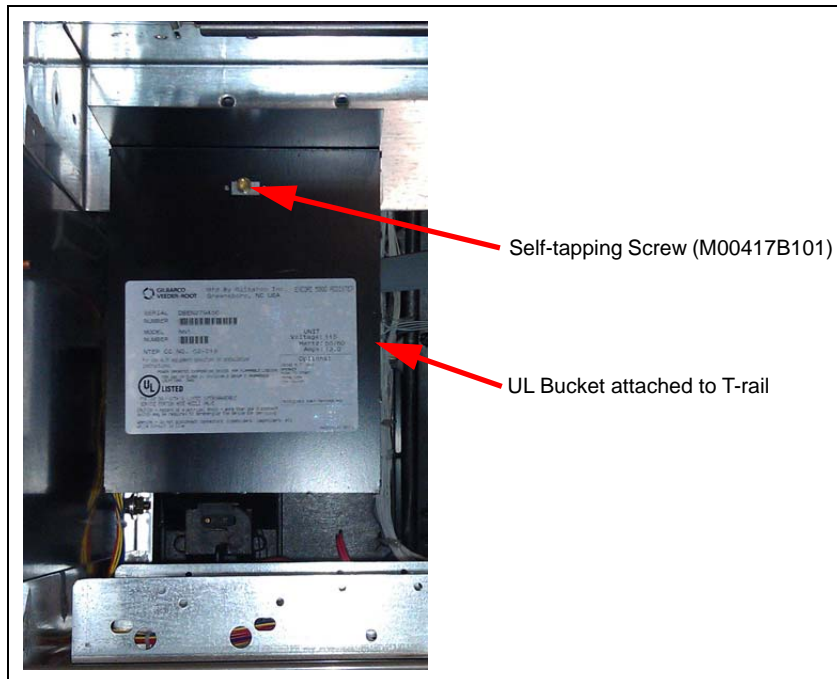
Mailbox Printer

To install the mailbox printer:

1 Ensure that the tab on the back side of the mailbox printer is inserted into the U-channel before inserting the four mounting screws [see Figure 3 and Figure 4 (i) on page 19].

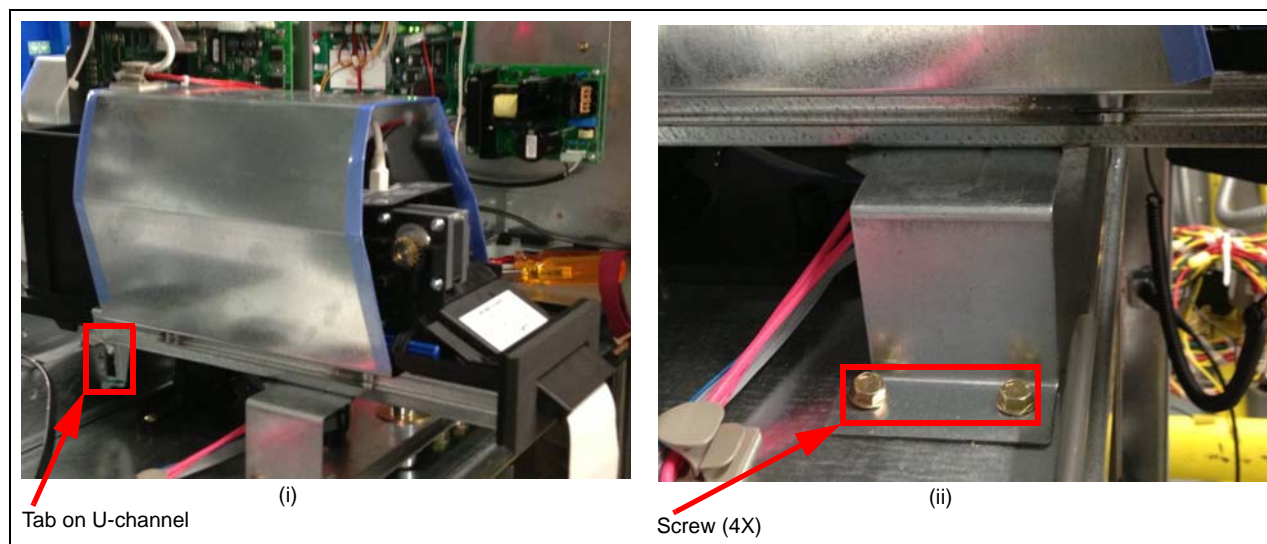**Figure 3: Tab on Back Side of Printer**

SECTION 4 - INSTALLATION

2 Install the new mailbox printer assembly to the unit air gap sheet-metal plate at the bottom of the CD module using the four 8-mm screws [see Figure 4 (ii)].

Note: Mailbox printer must be mounted in the same location where the UL bucket was removed.

Figure 4: Mailbox Printer

(i)

Tab on U-channel

(ii)

Screw (4X)

4

SECTION 4 - INSTALLATION

Speaker

If applicable, reinstall the speaker, reconnect speaker wires, and reinsert the four screws holding the speaker that were removed in the "Speaker" section on page 10.

Note: If Applause Media System/GSoM is installed, speaker wires are connected to the PIP3, or through the intercom board to the PIP3, if so equipped.

Figure 5: Removing Speaker
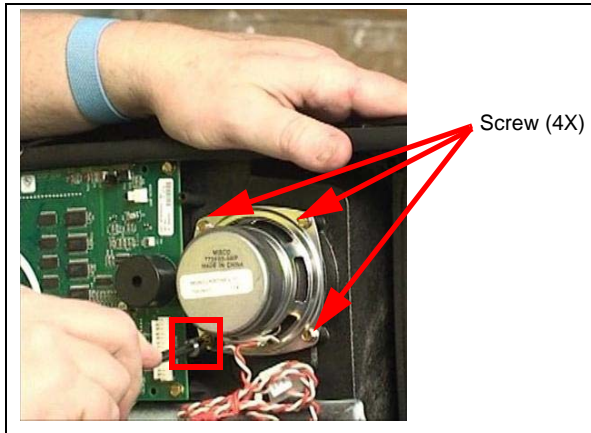
Note: For some peripherals, new components may be shipped with the kit depending on the types of options installed.

For peripheral options, refer to "Appendix A: Peripheral Options" on page 47.

For cable block diagrams, refer to "Appendix B: Block Diagrams" on page 51.
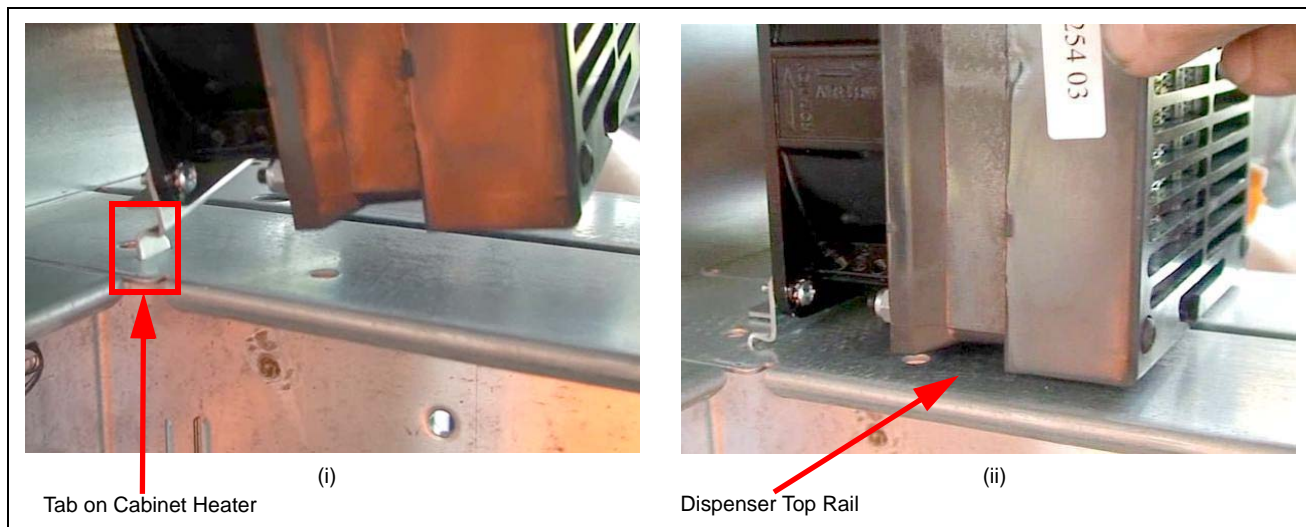
SECTION 4 - INSTALLATION

Cabinet Heater (Optional for 10.4 and 5.7)

To install the cabinet heater, proceed as follows:

1 Insert the tab on the heater onto the top rail in the dispenser (see Figure 6).

2 To secure the heater, place a nut on the other side of the stud and tighten it.

For more information, refer to *MDE-4609 Heater/Fan Kit (M07333K00X) Installation Guide for Encore 300/The Advantage® Series [with FlexPay EMV (Canada Only)] and Encore S/Encore 500 Units. Note: This manual is included in the kits that have a heater.*

4

Figure 6: Installing Cabinet Heater

(i)

Tab on Cabinet Heater

(ii)

Dispenser Top Rail

SECTION 4 - INSTALLATION

## Connecting 24 V Printer Power Cable Connector (M04405A00X)

To connect the 24 V printer power cable connector:

1 Connect the AC cable of the AFP assembly power supply to the AC distribution cable located within the unit.

Note: Older transformer assemblies do not have an AC distribution cable already located within the unit. This cable will be provided in the kit for installation. The AC Distribution cable connects to P1 on the Deutsche Industrie Norm (DIN) Rail Power Supply.

2 Connect the 24 V printer power cable connector to P4 and P5 on the DIN rail power supply board [use existing 24 V connector/DIN rail power supply (see Figure 7)].

Figure 7: Connecting 24 V Printer Power Cable Connector

P4   P5

DIN Rail Power Supply Board
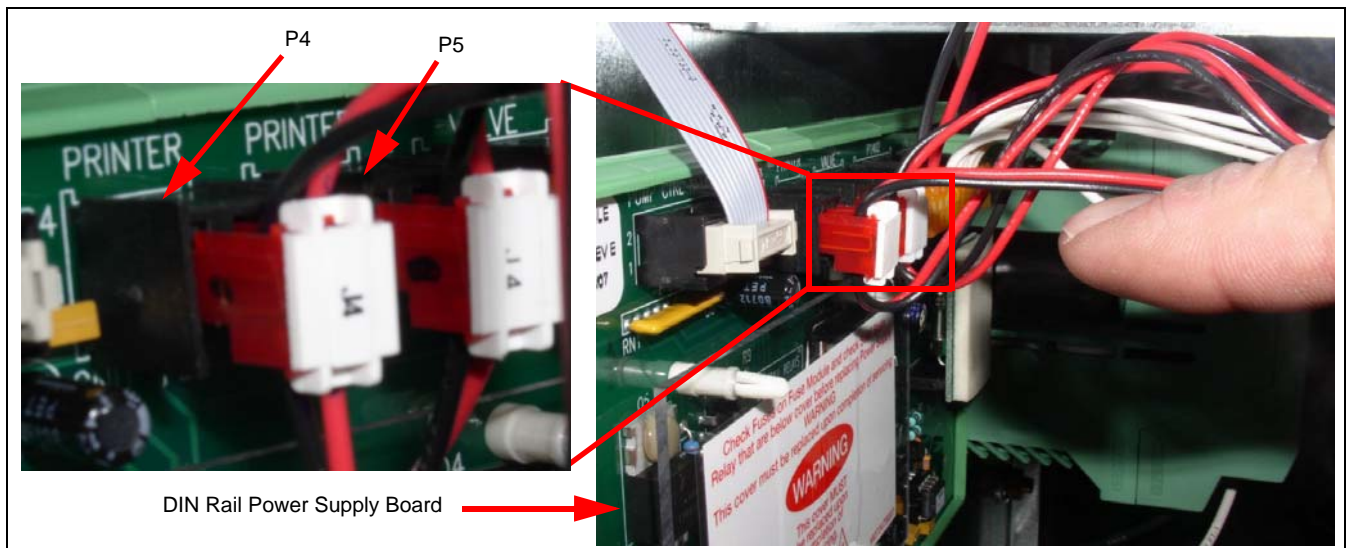
AFP/DCM2/DCM2.1/DCM2.2 Assembly

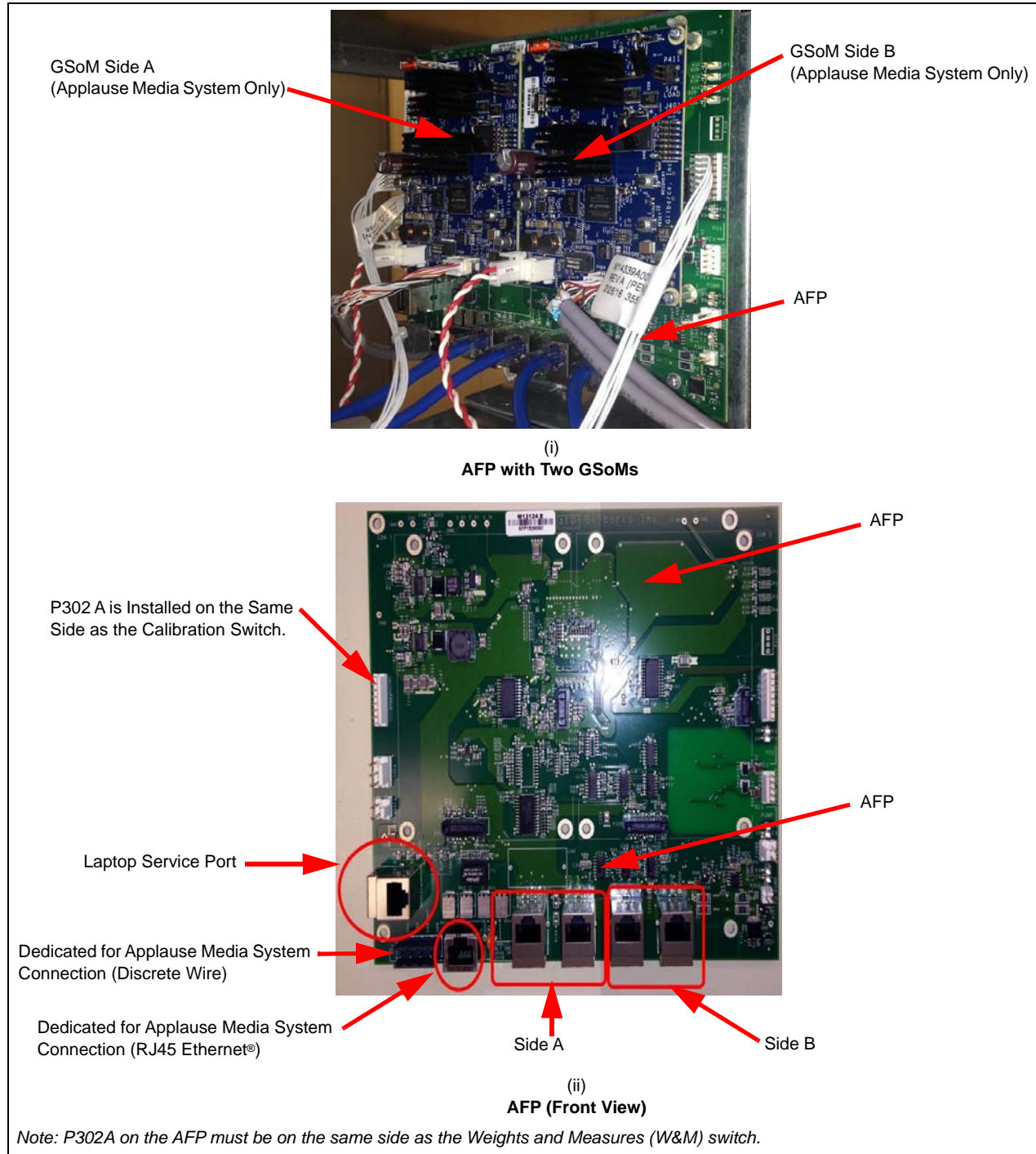## AFP Assembly

To install the AFP assembly:

Notes: 1) Mounting the AFP is the same as mounting the HIP 1 or HIP 2 board. The main difference is the two-wire connections. Some units may not be equipped with CRIND. Mount the AFP assembly in the three hole pattern on the T-rail where side A connectors on the AFP (for example P302A) is located on side A of the unit (that is the side with the calibration switch is located). For DCM2 installation, refer to "DCM2 Assembly" on page 27.

2) If the FlexPay IV CRIND Retrofit Kit includes the optional Insite360™ Encore Power Supply, refer to MDE-5349 Insite360 Encore Power Supply Retrofit Kit Installation Instructions (included) for power supply installation instructions.

SECTION 4 - INSTALLATION

1 Mount the AFP assembly on the T-rail by using the three 7-mm nuts removed in step 2 on (see Figure 8).
Note: Use the same hole pattern as the CCN or HIP assembly removed previously.

4

Figure 8: Installing AFP Assembly

GSoM Side A
(Applause Media System Only)

GSoM Side B
(Applause Media System Only)

AFP

(i)
AFP with Two GSoMs

AFP

P302 A is Installed on the Same Side as the Calibration Switch.

AFP

Laptop Service Port

Dedicated for Applause Media System Connection (Discrete Wire)

Dedicated for Applause Media System Connection (RJ45 Ethernet®)

Side A

Side B

(ii)
AFP (Front View)

Note: P302A on the AFP must be on the same side as the Weights and Measures (W&M) switch.

SECTION 4 - INSTALLATION

2 Connect the AC Line Cable (M03689A003) of the DIN rail power supply to the AC Distribution Cable (M04406*A001*) located in the unit, where applicable. If a kit requires a supplementary power supply, the AC distribution cable is included in the kit.

Notes: 1) If a kit includes a power supply as part of the AFP assembly, plug the supplementary supply's AC line cable to the AC distribution cable located across the bottom of the electronics cavity. If that cable is not preset, install the provided AC distribution cable.

2) If a kit does not include a power supply as part of the AFP assembly, locate P305 at the end of the M07973A004 Cable connected to the AFP. Plug it into J305 on the M05547A006 Cable that goes from the main power supply to the pump board.

4

IMPORTANT INFORMATION
Cable routing is critical. It is very important to route and dress the cables properly. Exercise care in routing the cables, keeping in mind that the door(s) opens and closes for service. The cables must be dressed neatly. Ensure that there is no interference after the cables are connected and routed.

3 Connect the Ethernet cable from the UPM and Card Reader to the AFP board at J312.

4 Connect the Card Reader Ethernet Cable to the AFP RJ45 Port. The ports on the AFP are assigned but leave the ones on the left for Laptop and Applause Media System ports (see Figure 9).

Figure 9: Connecting Ethernet Cable to Card Reader

Ethernet Cable (Use this Connector.)

Do not Use.

Bottom View of the UX300 Card Reader
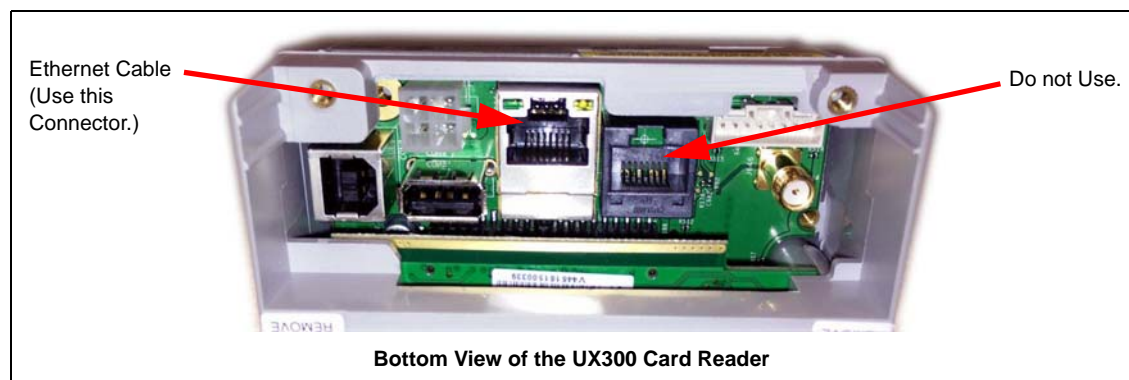
5 Connect J301A/B of M13120A001 Cable to the +24 V cable from the AFP assembly power supply.
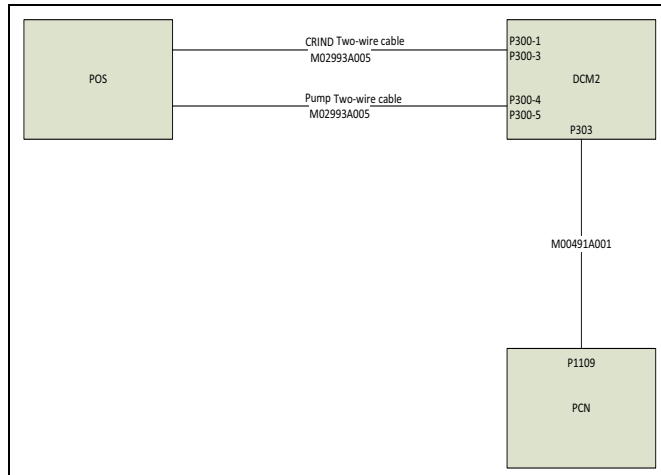
SECTION 4 - INSTALLATION

Making Two-wire Connections for AFP Assembly

To connect the AFP board with the Pump Control Node (PCN):

1 For Major Oil Company (MOC) Mode and Generic mode, connect the 5-pin two-wire cable (J300 to P300) from field wiring (new cable provided in kit part number M02993A005).

Figure 10: AFP Board Wiring Block Diagram

2 Connect the Pump two-wire cable from connector P303 on the AFP to P1109 on the PCN. Install JP5 on the AFP if unit used in MOC Mode (i.e., Passport®).
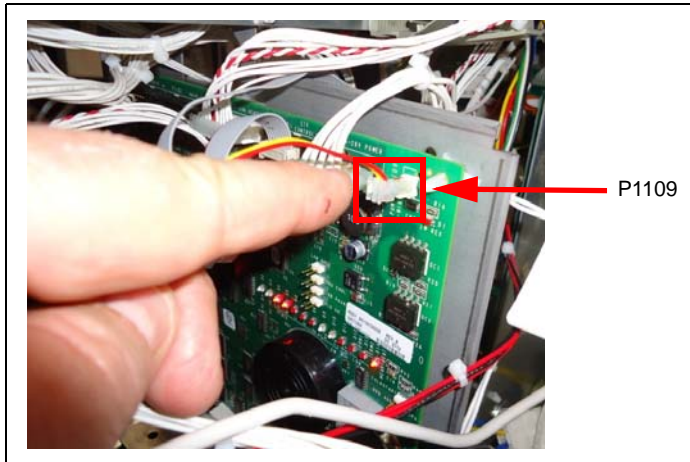
Figure 11: Connecting Cables
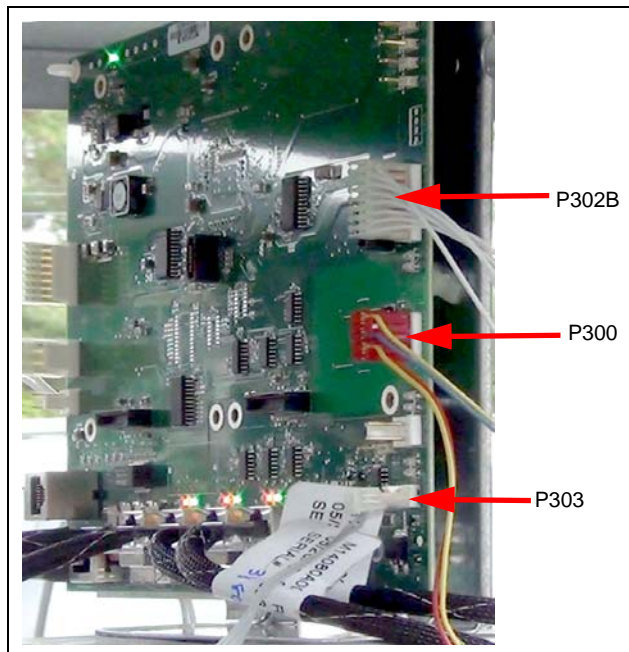
Note: The PCN and door node software may need to be upgraded to the latest available released version. This can be obtained from the Laptop Tool on the Gilbarco Extranet.

SECTION 4 - INSTALLATION

Figure 12: Connecting Pump Two-wire to P1109 on PCN (Generic and MOC)

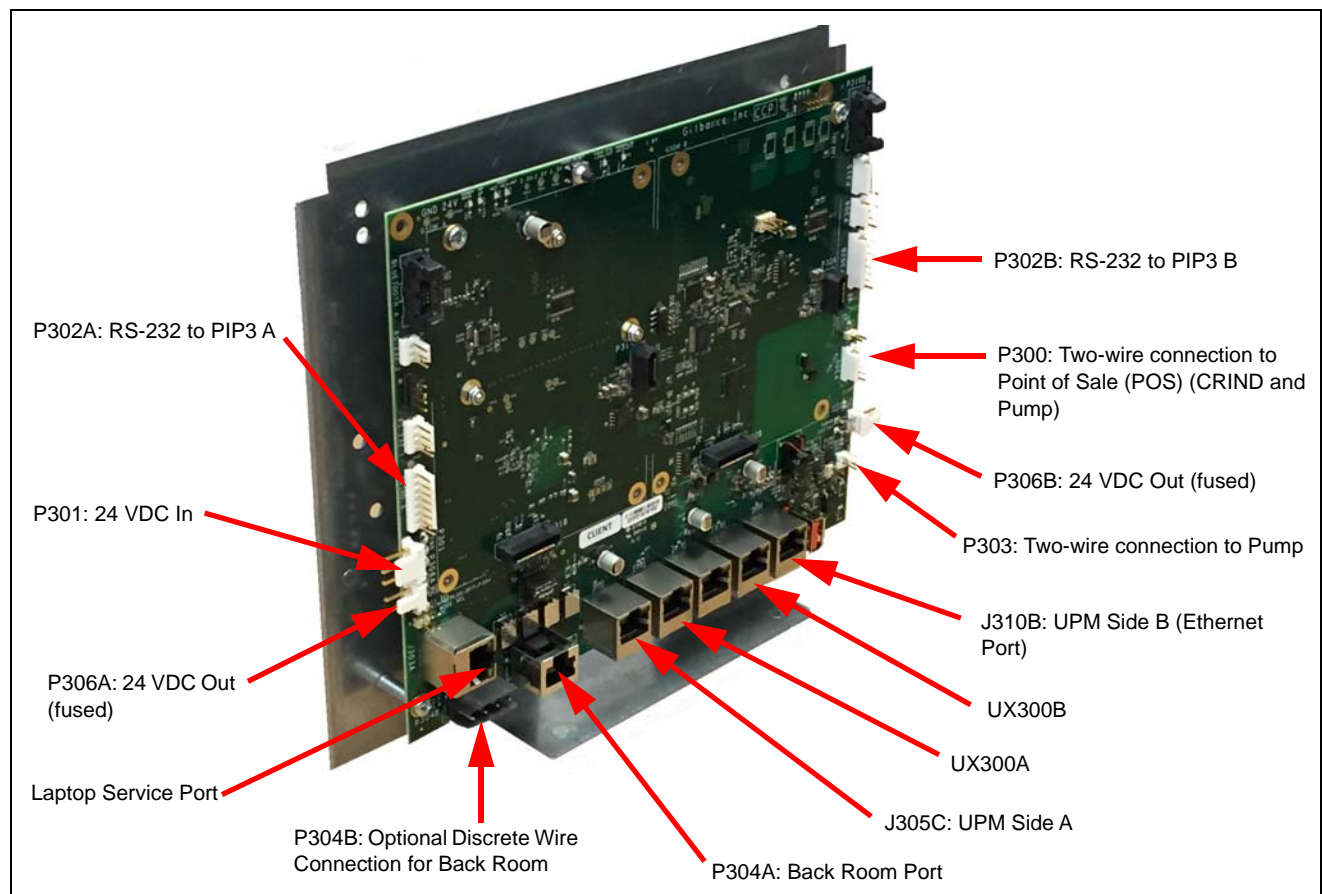

P1109

SECTION 4 - INSTALLATION

DCM2 Assembly

The DCM2 is used when the back room is using High Speed through a Back Room Communication Module (BRCM)2.

Note: If the FlexPay IV CRIND Retrofit Kit includes the optional Insite360 Encore Power Supply, refer to MDE-5349 Insite360 Encore Power Supply Retrofit Kit Installation Instructions (included) for power supply installation instructions.

To install the DCM2 assembly:

1 Mount the DCM2 assembly on the T-rail by using the three 7-mm nuts removed earlier or provided in the kit.

2 Place the DCM2 assembly in the exact same location as the recently removed AFP assembly.
Note: Make sure that P302A is on the same side as the W&M switch. Place a jumper on J3.

Figure 13: DCM2 PCBA Board

P302B: RS-232 to PIP3 B

P302A: RS-232 to PIP3 A

P300: Two-wire connection to Point of Sale (POS) (CRIND and Pump)

P306B: 24 VDC Out (fused)

P301: 24 VDC In

P303: Two-wire connection to Pump

J310B: UPM Side B (Ethernet Port)

P306A: 24 VDC Out (fused)

UX300B

UX300A

Laptop Service Port

J305C: UPM Side A

P304B: Optional Discrete Wire Connection for Back Room

P304A: Back Room Port

SECTION 4 - INSTALLATION

Connecting Cables

To connect the cables:

- If the DCM2 assembly has a Phoenix power supply:

  - Connect the J301 of the M12777A003 Power Cable to P301 of the DCM2.
  - Connect P301A/B of M13120A001 on side A to J301A of M12777A003.
  - Connect P301A/B of M13120A001 on side B to J301A of M12777A003.
  - ***Note: Ensure to route the AC wiring away from DC.***

- If the DCM2 assembly does not have a Phoenix power supply:

  - Connect P305 to J305 on the M05547A00X.
  - Connect J401 of M07973A004 to P301 on the DCM2.
  - Connect P301A/B of M13120A001 side A to J301A of M07973A004.
  - Connect P301A/B of M13120A001 side B to J301A of M07973A004.

3 Connect J302A/B of "RS-232 cable to PIP3" to P302A of DCM2.

4 Connect J302A/B of "RS-232 cable to PIP3" to P302B of DCM2.

Making Two-wire Connections to DCM2 (Generic and MOC)

To connect the DCM2 board with the PCN and conduit, proceed as follows:

1 Disconnect the existing two-wire from the AFP.

2 Remove the J1109 connector of the pump two-wire from the PCN.

3 **For Generic**: Remove the two-wire cables from the conduit that are attached to A9, A19, B9, and B19.

4 **For MOC**: Remove the two-wire cables from the conduit that are attached to A9 and A19
   (see Figure 16 on page 30).

5 Connect the wires labeled 'CRIND' and pump of the M02993A005 Cable to the two-wire cables coming out of the conduit. Connect the colored wires as follows:

For Generic:

- Connect the red wire to pump A9.
- Connect the mated yellow wire to pump A19 and CRIND B19.
- Connect the blue wire to CRIND B9.

For MOC:

- Connect the blue wire to CRIND A9.
- Connect the mated yellow wire to CRIND A19.

6 Connect the J300 connector of the M02993A005 Cable to P300 of the DCM2 board.

7 Connect J403 of the M00491A001 Cable to P303 on the DCM2.

8 Connect the other end of the M00491A001 Cable to the P1109 on the PCN.
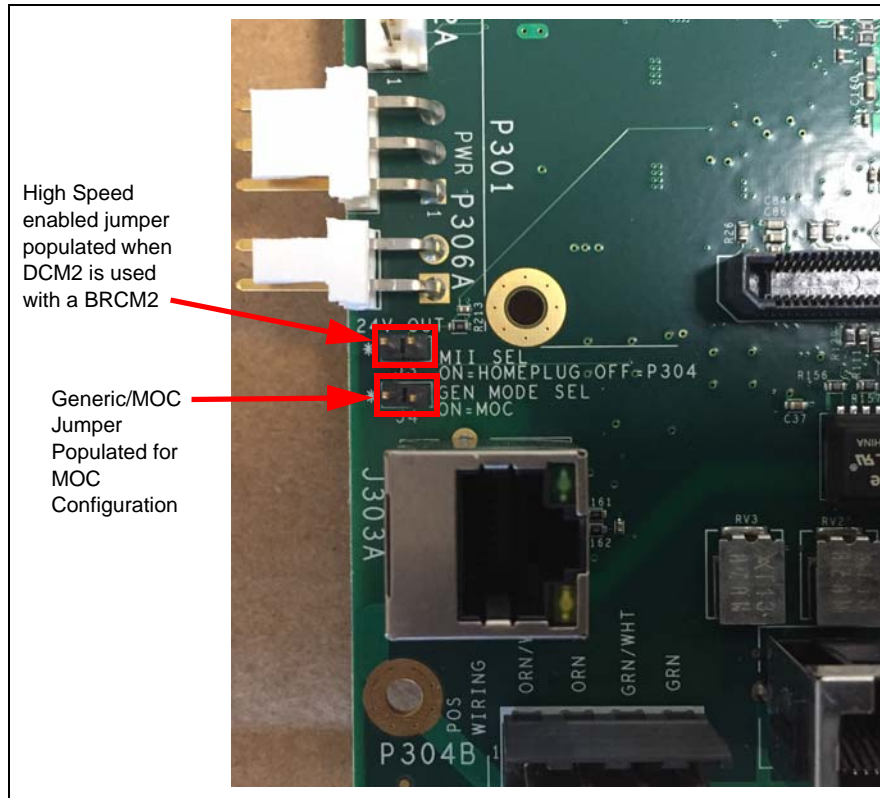
SECTION 4 - INSTALLATION

For Generic: Verify that a jumper is **not** populated on J4.

For MOC: Verify that a jumper **is** populated on J4.

Notes: 1) When DCM2 is used with a BRCM2 and the high-speed data is merged to the existing two-wire, this connection becomes the Over Legacy Cable (OLC) connection. The OLC connection always connects to pin 4 and pin 5 on P300.

2) Verify that a jumper is populated onto J3 when the DCM2 is used with a BRCM2.

Figure 14: Generic/MOC Header Location

4

SECTION 4 - INSTALLATION
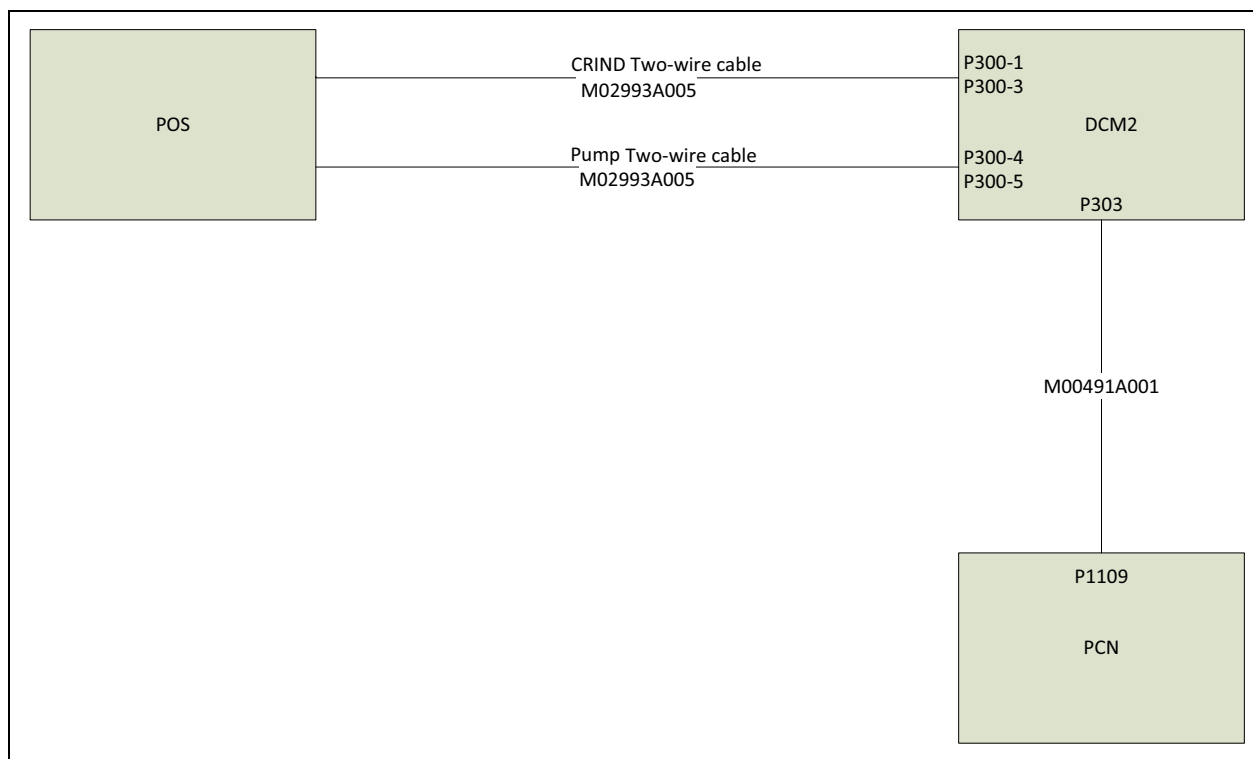
4

Figure 15: DCM2 Board Wiring Block Diagram (Generic)

POS

CRIND Two-wire cable
M02993A005

Pump Two-wire cable
M02993A005

P300-1
P300-3

DCM2

P300-4
P300-5

P303

M00491A001

P1109

PCN

Figure 16: DCM2 Board Wiring Block Diagram (MOC)

POS

CRIND Two-wire cable
M02993A005

P300-1
P300-3

DCM2

P300-4
P300-5

P303

M00491A001

P1109

PCN
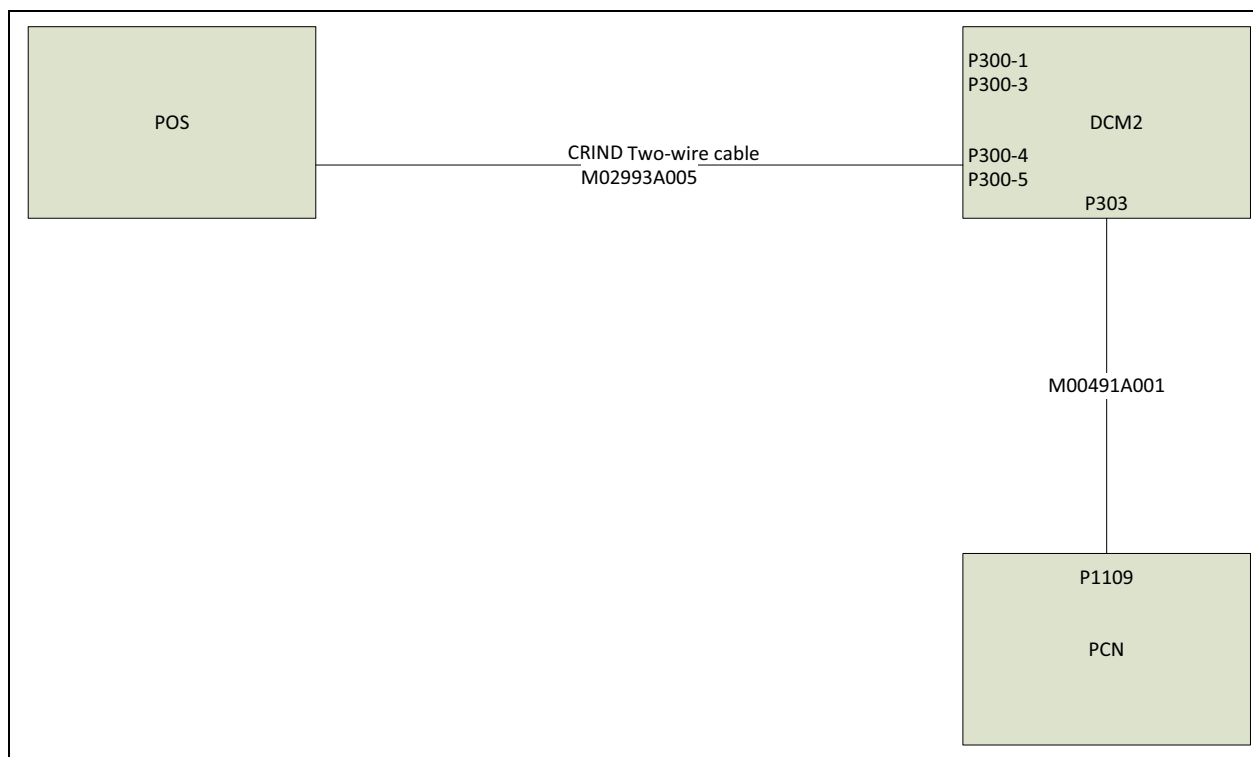
SECTION 4 - INSTALLATION

DCM2 Connectors

The following table lists the port numbers and functions of DCM2 connectors:

DCM2 Connector	Port Number	Function
3-pin Mass Terminal Assembly (MTA) .156"	P301	24 VDC power input
2-pin MTA .156"	P306A	24 VDC power output (fused). This is primarily used to power the DCM in Applause Media System.
2-pin MTA .156"	P306B	24 VDC power output (fused)
5-pin MTA .100"	P300	Two-wire connection from Distribution Box (D-Box) [CRIND and Pump (Generic only)].
2-pin MTA .100"	P303	Two-wire connection to PCN
8-pin MTA .100"	P302A	RS-232 pump and CRIND to PIP3 A
8-pin MTA .100"	P302B	RS-232 pump and CRIND to PIP3 B
RJ-45	P304A/B	Ethernet connection to the back room. P304B is the optional discrete wire connection.
	J305C	Ethernet connection to UPM Side A
	J310A UX300A	
	J310B	Ethernet connection to UPM Side B
	J303B UX300B	
	J310A	Laptop Service port
	J303A	

DCM2 Jumpers

The following table lists the status and functions of jumpers:

	On	Off	Function
J3	x		High Speed active. P304 A/B disabled.
		x	High Speed inactive. P304 connects to the Ethernet switch (router disabled).
J4	x		Unit is connected to a Passport POS (MOC).
		x	Unit is connected to a third party POS (Generic).

SECTION 4 - INSTALLATION

DCM2.1 Assembly

To install a DCM2.1, proceed as follows:

1 Check the software versions of the dispensers and POS to ensure that they meet minimum requirements (this should have been completed during pre-installation. For more information, refer to *MDE-5314 Insite360 Encore Remote Management Installation, Start-up, and Service Manual*).

2 Update POS pump and CRIND software as needed. Always use the latest version of software available on the Extranet.

• Minimum pump software is version 03.3.19 (except for Encore 300 and The Advantage Series)

• Minimum M5 CRIND software is version 03.2.13

• Minimum M7 CRIND software is version 42.06.XX

3 Transfer the GSoMs removed in step 3 on page 15 onto the new DCM2.1 assembly.
Note: The new standoff of the post and screws are required for mounting the GSoMs on the new DCM2.1 assembly (these parts are provided in the kit).

4 Ensure that you label the boards for side A and side B. You will reinstall them as labeled on the DCM2.1 assembly. Dismount the 24 V power supply, if present, and transfer it to the new bracket.

NOTE
If the dispenser is currently using a DCM module for Applause Media System, retain it for reuse.

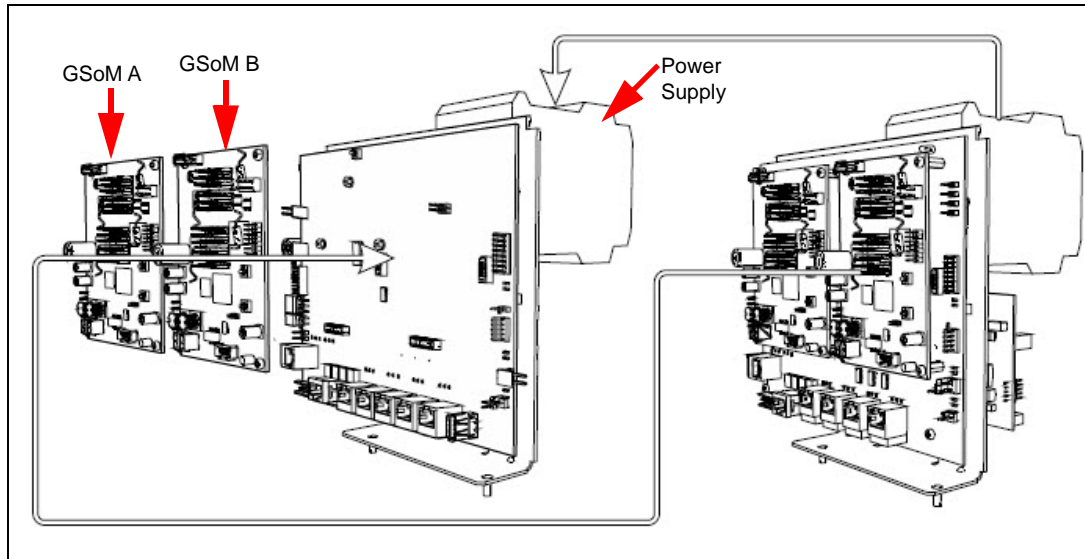**Figure 17: Using Pre-existing FlexPay Connect - Backroom Hardware**
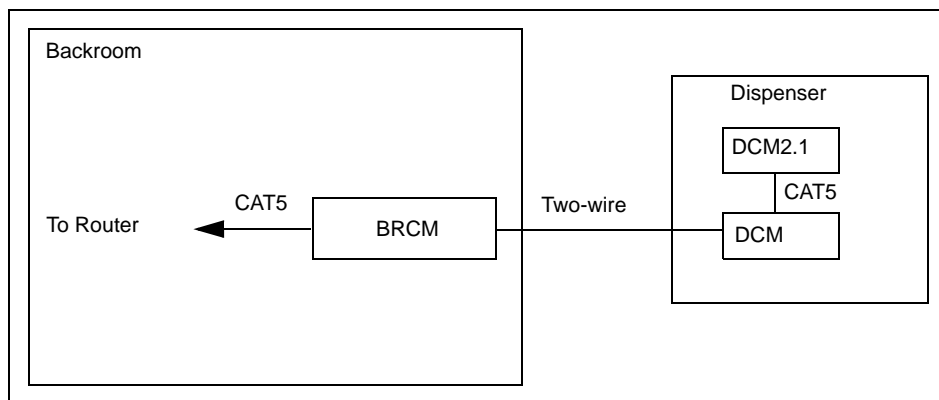
SECTION 4 - INSTALLATION

**5** Install GSoM boards on the new DCM2.1 module.

Note: New mounting posts and screws are included in the kit. Do not re-use the existing mounting posts and screws.

Figure 18: Installing GSoM Board

6 If the dispenser is using FlexPay Connect, the DCM module may need to be removed and mounted on the back of the new DCM2.1 bracket.

7 If the site is using BRCM2.1 for Ethernet connectivity, install the HomePlug Jumper (J3) on DCM2.1.

8 If the site CRIND terminals are operated in the MOC mode, install the MOC Jumper (J4).

**Figure 19: Installing MOC and HomePlug Jumpers**
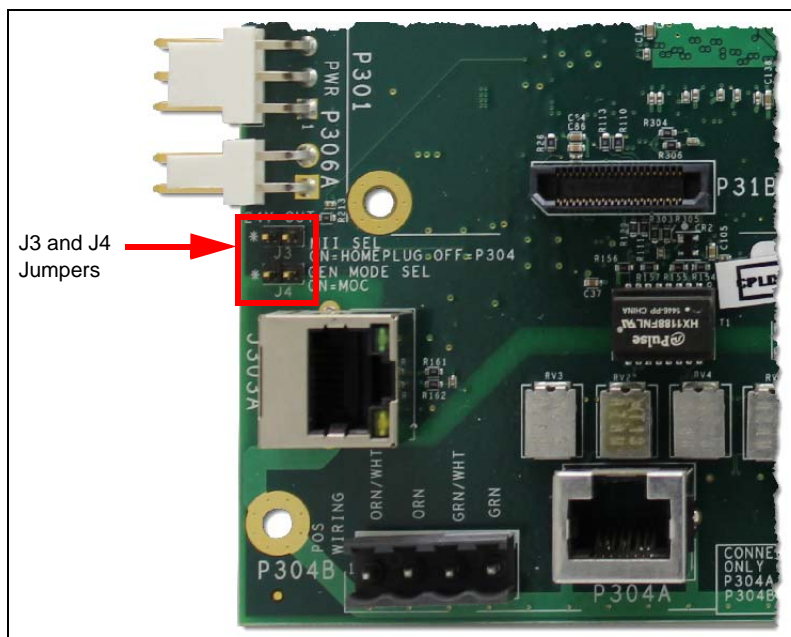
SECTION 4 - INSTALLATION

9 Verify that JP7 (Watchdog enabled) is installed on the PCN. If JP7 is not installed, the PCN will lock up during the remote reset process.

10 Install DCM2.1 assembly (combination of CCP Client and SSoM) in the dispenser on the T-rail in the same location of the recently removed HIP or AFP board.

Note: DCM2.1 CCP Client is not interchangeable with the BRCM2.1 CCP Master.
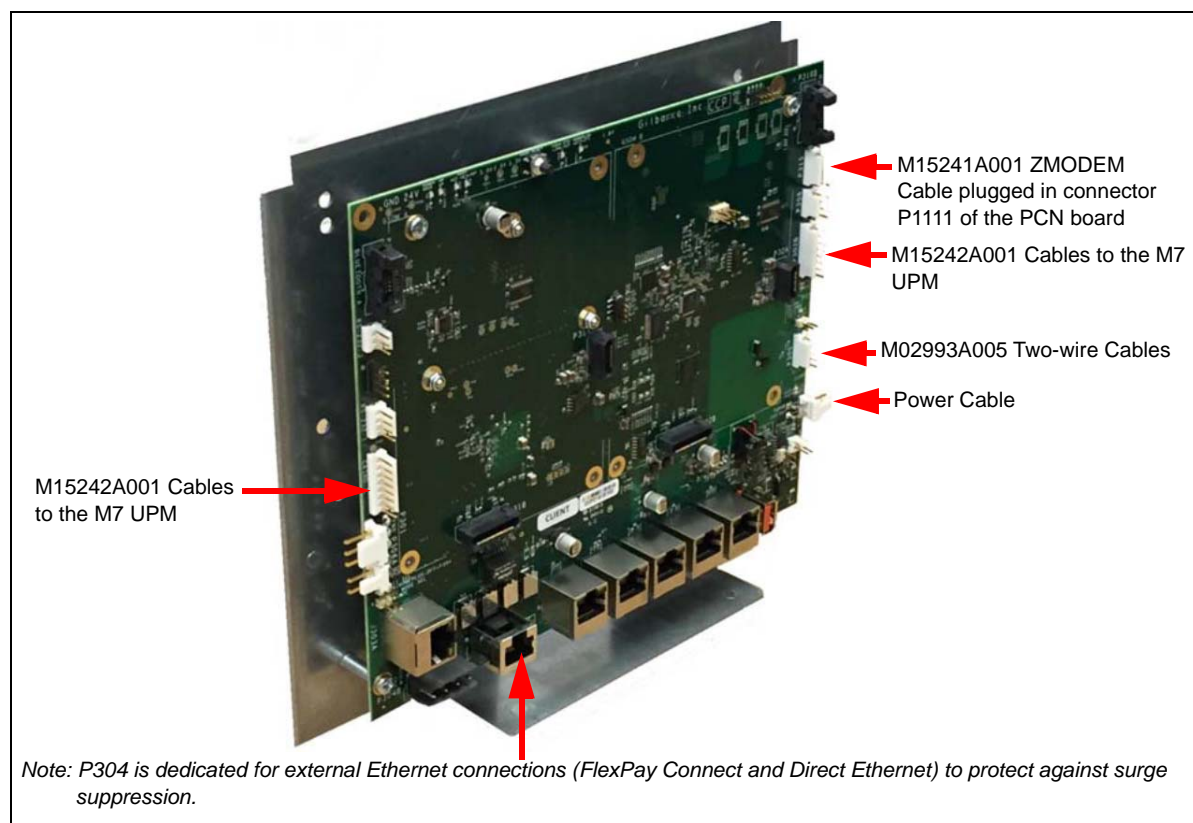
Figure 20: Installing DCM2.1 Assembly
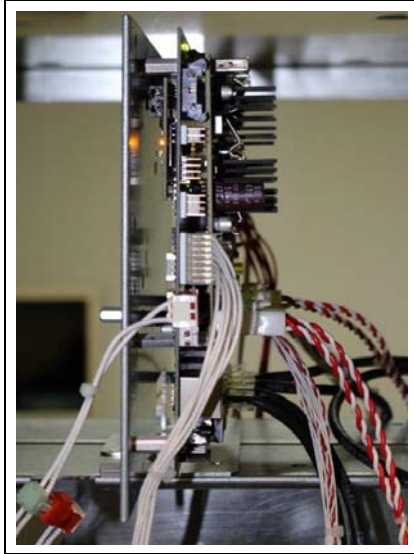
11 Depending on your configuration:

a If the site is using FlexPay Connect (DCM and BRCM), use a Category 5 (CAT5) cable to connect port P304A of the new DCM2.1 to the Ethernet connector of the existing DCM module.

b If the site is using a Direct Ethernet (CAT5) cable run from the building, connect the CAT5 to port P304A on the DCM2.1 and remove the HomePlug (J3) Jumper.

SECTION 4 - INSTALLATION

12 Reconnect existing cables to the DCM2.1.

Figure 21: Reconnecting Cables to the DCM2.1

M15241A001 ZMODEM Cable plugged in connector P1111 of the PCN board

M15242A001 Cables to the M7 UPM

M02993A005 Two-wire Cables

Power Cable

M15242A001 Cables to the M7 UPM

Note: P304 is dedicated for external Ethernet connections (FlexPay Connect and Direct Ethernet) to protect against surge suppression.

SECTION 4 - INSTALLATION

13 Connect the new ZMODEM cable to P1111 on the PCN, to P315 (also labeled as ZMODEM Pump) on the DCM2.1.

Figure 22: Connecting ZMODEM Cable

P1111
ZMODEM
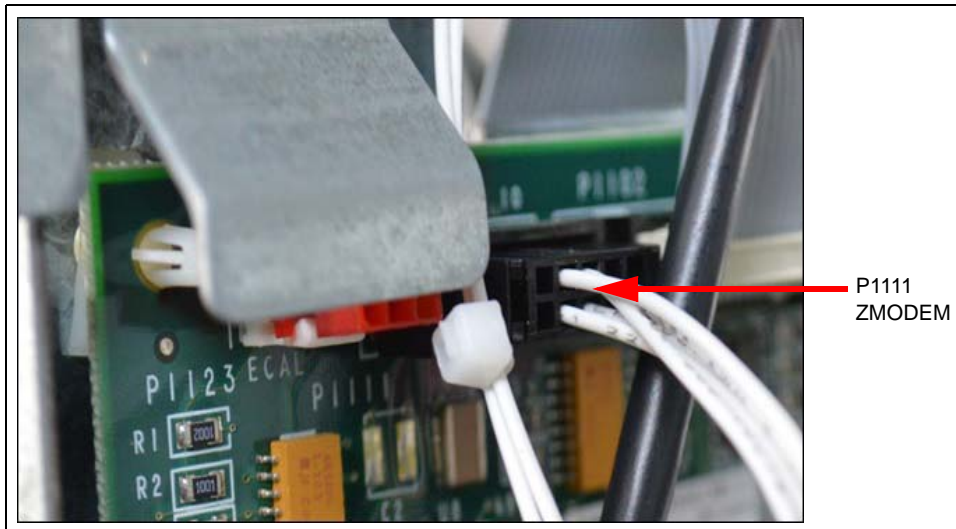
IMPORTANT INFORMATION

The ZMODEM is a new connection to PCN (laptop port) that is required to perform many remote PCN functions. Ensure that the ZMODEM cable is reconnected after performing any laptop tasks on PCN or after part replacement. Additionally, after part replacement (for example, PCN or CRIND replacement), ensure that the software on the new component meets minimum requirements.

SECTION 4 - INSTALLATION

DCM2.2 Assembly

The DCM2.2 Assembly (M15737A001) mounts in the same location as the DCM2.1 Assembly (M15399A001). Use the M15241A002 Cable in order to interface with PCN with the latest DCM2.2 Assembly. The M15341A101 CCP Board provides the same functionality as the AFP, along with a high-speed data connection for the Applause Media System (GSoMs), Insite360 Encore, and future EMV applications. DCM2.2 has the dedicated high-speed (P333) connection from the backroom, as well as a new LED that monitors the SSoM router functionality. Refer to "DCM2.2 LED Indicators" table on page 39.

To install DCM2.2:

1. If GSoMs were removed in step 3 on page 15, then transfer GSoMs to the new DCM2.2 assembly. *Note: Ensure that you transfer the GSoMs to the correct side (side A to side A; side B to side B).*

2. Mount the DCM2.2 assembly onto the mounting bracket using the three 7-mm nuts removed in step 2 on page 15. Ensure that you orient the DCM2.2 correctly. For example, P302A should be on the side A of the dispenser. The W&M switch is located on the side A.

3. Attach the mounting bracket.

4. Connect all the applicable cables to the DCM2.2 assembly as shown in Figure 23 on page 38.

5. Connect the M15241A002 ZMODEM cable to P1111 on the PCN, to P315 (also labeled as ZMODEM Pump on the DCM2.2).

6. Replace the 24 VDC M07973A006 Power Cable in place of M07973A004 and make the following connections:
   - Connect P305 to J305.
   - Connect J401 to P301 on the DCM2.2 assembly.
   - Connect power to each CRIND (J301A to P301A/B and J301B to P301A/B).

SECTION 4 - INSTALLATION

Figure 23: Connecting Cables to DCM2.2 Assembly
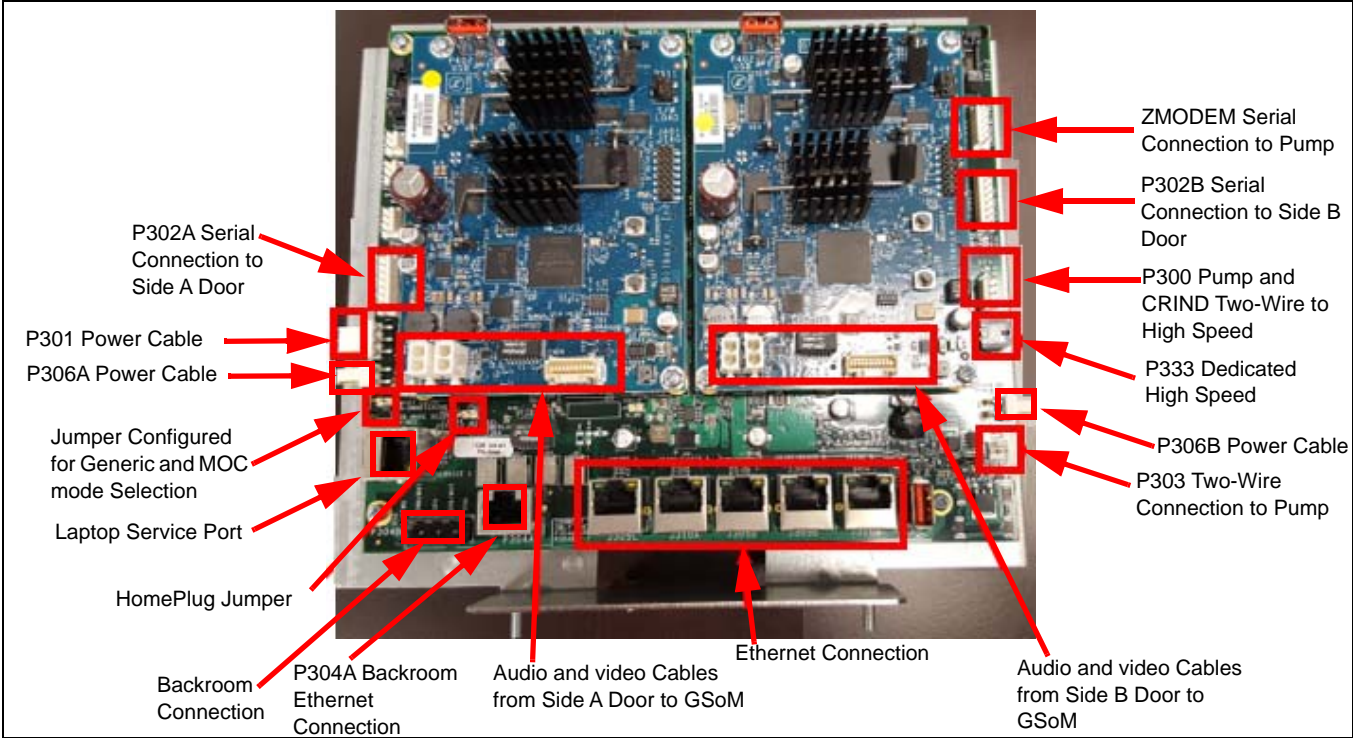
DCM2.2 Connectors

The following table lists the port numbers and functions of DCM2.2 connectors:

DCM2 Connector	Port Number	Function
3-pin MTA .156"	P301	24 VDC power input
2-pin MTA .156"	P306A	24 VDC power output (fused). This is primarily used to power the DCM in Applause Media System.
5-pin MTA .100"	P300	Two-wire from D-Box [CRIND and Pump (Generic only)].
2-pin MTA .100"	P303	Two-wire connection to PCN
8-pin MTA .100"	P302A	RS-232 pump and CRIND to PIP3A
4-pin	P333	Dedicated High Speed
8-pin MTA .100"	P302B	RS-232 pump and CRIND to PIP3B
RJ-45	P304A/B	Ethernet connection to the back room. P304B is the optional discreet wire connection.
	J305C	Ethernet connection to UPMA
	J310A	Ethernet connection to UX300A
	J310B	Ethernet connection to UPMB
	J303B	Ethernet connection to UX300B
	J303A	Laptop Service port 1
	J310A	Laptop Service port 2

SECTION 4 - INSTALLATION

DCM2.2 Jumpers

The following table lists the status and functions of jumpers:

Connector	ON	OFF	Function
J3	X		High-speed connection active. P304 A/B disabled.
		X	High-speed connection inactive. P304A and P304B connects to CAT5 running through the conduit for high speed connection (if used).
J4	X		Unit is connected to a Passport POS MOC
		X	Unit is connected to a third party POS (Generic)
J5	X		VLAN is enabled
		X	VLAN is disabled
J6	B		Install the jumper on the B position for the 45 mA Current loop

DCM2.2 LED Indicators

Check the following LED indicators after DCM2.2 is powered ON.

Function	Color	Control
CCP Power_Good LED	Green	Driven when 2.5 V, 3.3 V and 5 V are present
HomePlug Power LED	Green	ON: Power ready Flashing: Loading firmware OFF: Power not ready
HomePlug Status LED	Green	ON: High Speed link detected Flashing: TX or RX activity OFF: High Speed link not detected
Two-wire	Orange	Flashing: TX and RX (two-wire) detected ON: RX is solid and TX is OFF if there is an Open connection. Wire is not connected. OFF: No communication. Both TX and RX are OFF
SSoM Activity	Green	ON: SSoM is detected Flashing: After SSoM registered
Router Enable	Green	ON: When the SSoM is installed and has Cloud connectivity
P304 ETH Link/Act	Orange	ON: When using CAT5 configuration OFF: When using High Speed

4

SECTION 4 - INSTALLATION

Field Communication Wiring

Non-dedicated High Speed with Generic and MOC Type

If you are not using the dedicated high-speed connection, refer to the following figures.
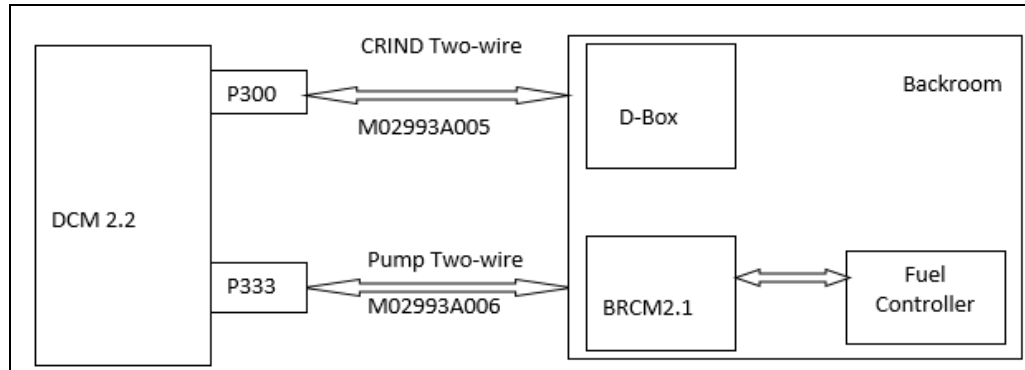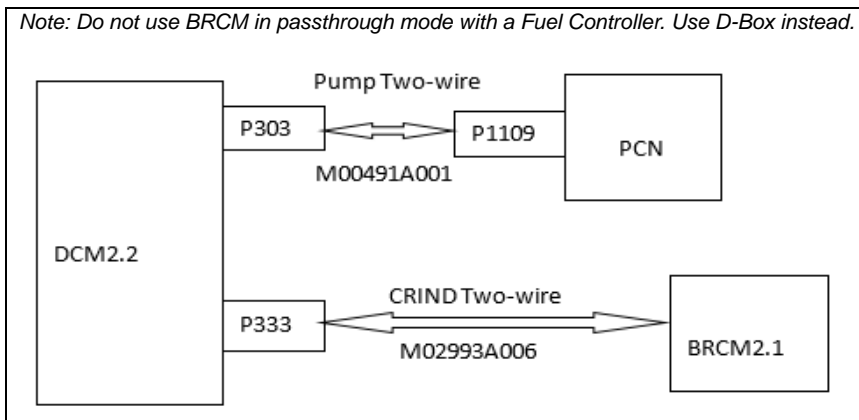
Figure 24: Generic Type Configuration Two-Wire

**Figure 25: MOC/Passport Type Configuration Two-Wire**

SECTION 4 - INSTALLATION

Dedicated High-Speed Field Wiring (Non-POS) Instructions (DCM2.2 Only)

Connect the Dedicated High Speed Cable (M02993A006) from port P333 on the DCM2.2 to the dedicated high-speed connection from the backroom. Refer to for a detailed view of the wiring for the Generic configuration.
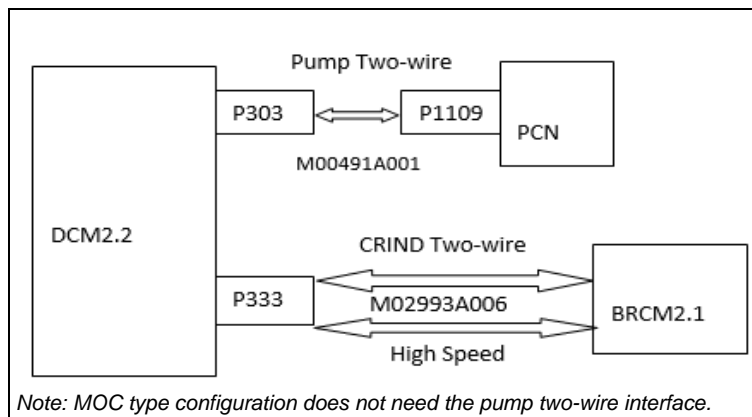
Figure 26: Generic Type Configuration
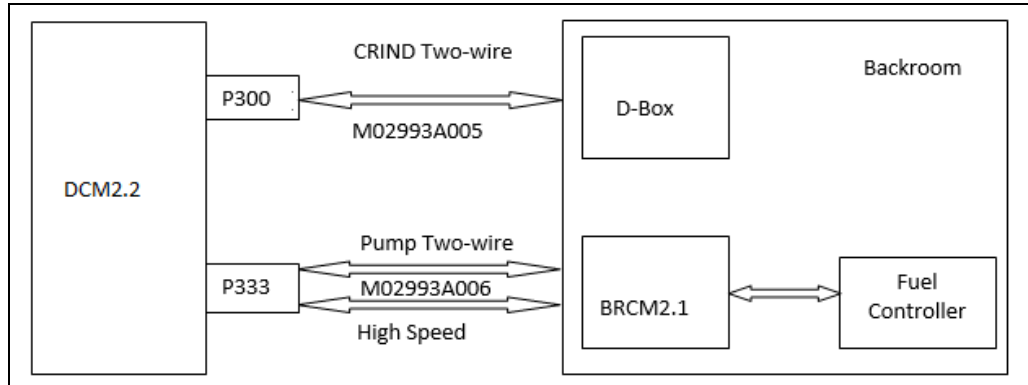
The following table lists wiring details for Generic mode:

Cable Part	Connector	Color	Description
M02993A005	P300.1	Red	CRIND+
M02993A005	P300.3	Yellow	CRIND-
M02993A006	P333.1	Yellow	High Speed
M02993A006	P333.2	Yellow	High Speed
M02993A006	P333.3	Red	Pump+
M02993A006	P333.4	Blue	Pump-

Figure 27: MOC Type Configuration

Note: MOC type configuration does not need the pump two-wire interface.

SECTION 4 - INSTALLATION

The following table lists wiring details for MOC mode:

Cable Part	Connector	Color	Description
M02993A006	P333.1	Yellow	High Speed
M02993A006	P333.2	Yellow	High Speed
M02993A006	P333.3	Red	CRIND+
M02993A006	P333.4	Blue	CRIND-

4 Grounding

Figure 28 shows a ground wire connected to the chassis. The 8-mm ground screw (2X) is provided in the kit. *Note: Fasten each ground cable individually to the chassis (one cable per ground screw).*
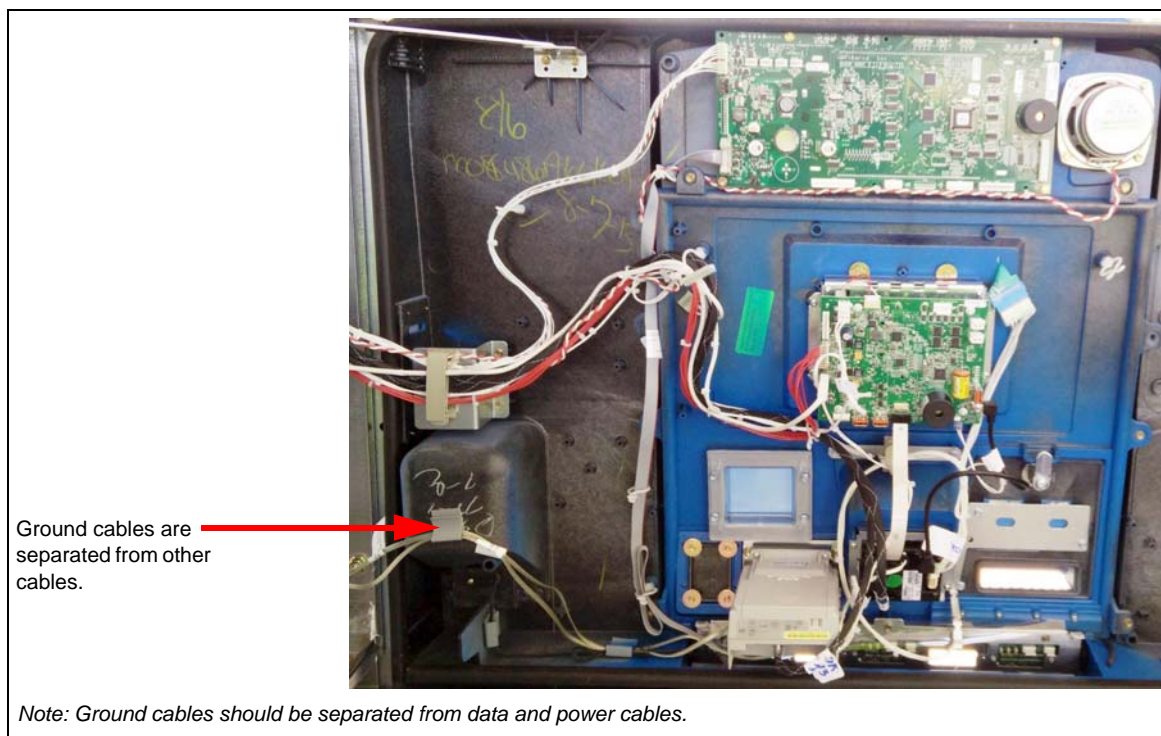
Figure 28: Ground Wire Connected to Chassis

U-channel
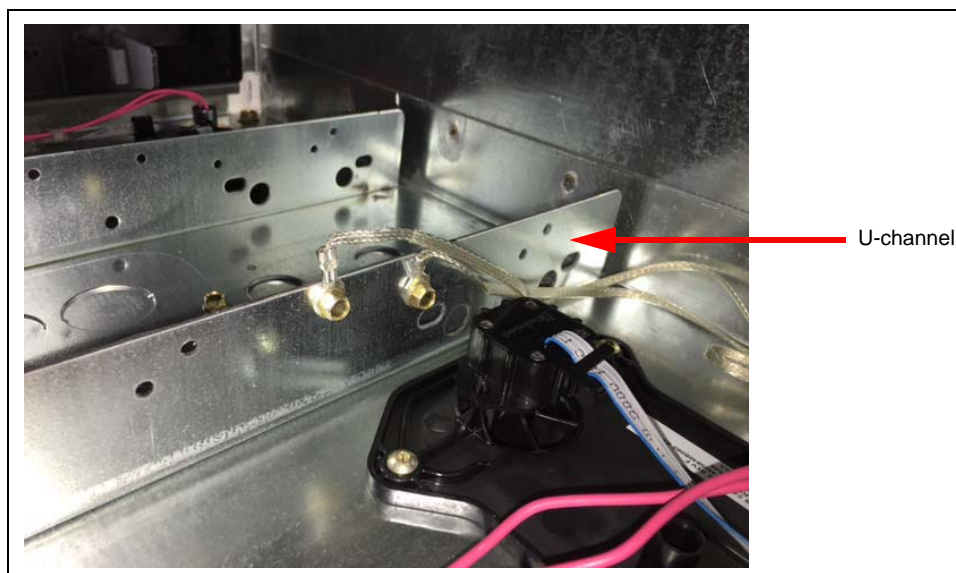
SECTION 4 - INSTALLATION

shows an example of good cable routing (cables secured with cable clamps and cable ties).

Figure 29: Example of Good Cable Routing

Ground cables are separated from other cables.

Note: Ground cables should be separated from data and power cables.

4

SECTION 4 - INSTALLATION

Completing Installation

To complete installation:

1 Inspect all the connections and cable routing before applying power.

<table>
<tr><td colspan="2" align="center">IMPORTANT INFORMATION</td></tr>
<tr><td></td><td>Cable routing is critical. It is very important to route and dress the cables properly. Exercise care in routing the cables, keeping in mind that the door(s) opens and closes for service. The cables must be dressed neatly. Ensure that there is no interference after the cables are connected and routed.
After making all cable connections, close the main door and open the printer door. Pull the sliding printer tray and ensure that there is no cable interference.</td></tr>
</table>

2 Apply power to the unit with the two-wire still in the isolated position [this will prevent any premature POS downloading].

3 Ensure that the printer(s) have paper.

4 Program the FlexPay IV CRIND using startup instructions in *MDE-5221 FlexPay IV CRIND Start-up Manual*.

5 To set up SSoM, Applause, and Insite360, refer to *MDE-5314 Insite360 Remote Management Installation, Start-up, and Service Manual*.

Registering Kits with Gilbarco Warranty

To register the kits with Gilbarco Warranty:

1 After the kits are successfully installed, register kits through web commissioning within 30 days.

2 Provide the correct model and serial numbers. The kit model number is EPK M7 E-CIM.
Note: Registering the kits ensures that proper warranty is applied.

SECTION 5 - REFERENCE INFORMATION

Related Documents

Document No.	Title
MDE-3804	Encore and Eclipse Start-up/Service Manual
MDE-4366	USB Printer Maintenance Guide
MDE-4609	Heater/Fan Kit (M07333K00X) Installation Guide for Encore 300/The Advantage Series [with FlexPay EMV (Canada Only)] and Encore S/Encore 500 Units
MDE-4699	Applause Media System Installation, Service, and Parts Manual
MDE-4736	FlexPay EPP Heater Kit (M08631K001) and Card Reader Heater Installation Instructions
MDE-4902	Encore 700 S Start-up and Service Manual
MDE-4917	FlexPay Connect Distribution Box Installation Manual
MDE-5221	FlexPay IV CRIND Start-up Manual
MDE-5223	FlexPay IV CRIND Service/Troubleshooting Manual
MDE-5227	M7 Maintenance Tool User Guide
MDE-5314	Insite360 Remote Management Installation, Start-up, and Service Manual
MDE-5349	Insite360 Encore Power Supply Retrofit Kit Installation Instructions
PT-1936	Encore Series Pumps and Dispensers Illustrated Parts Manual
PT-1937	Encore 300, Encore 500/500 S, Encore 550, Encore 700 S, Eclipse Recommended Spare Parts Manual

Abbreviations and Acronyms

Term	Description
ADA	Americans with Disabilities Act
AFP	Auxiliary Feature PCB
ASC	Authorized Service Contractor
BRCM	Back Room Communication Module
CAT5	Category 5
CCN	CRIND Control Node
CD	Computer Display
CRIND	Card Reader in Dispenser
DCM	Dispenser Communication Module
D-Box	Distribution Box
DIN	Deutsche Industrie Norm
E-CIM	Enhanced Customer Interface Module
EMV	Europay®, MasterCard®, and Visa®
EPP	Encrypting PIN Pad
ESD	Electrostatic Discharge
FCB	FlexPay Control Board
FCC	Federal Communications Commission
GSoM	Gilbarco Systems on Module
HIP	Hub Interface PCB
I/O	Input/Output

SECTION 5 - REFERENCE INFORMATION

Term	Description
JSA	Job Safety Analysis
MOC	Major Oil Company
MTA	Mass Terminal Assembly
NGP	Next Generation Payment
OLC	Over Legacy Cable
OSHA	Occupational Safety and Health Administration
PCB	Printed Circuit Board
PCI	Payment Card Industry
PCI-PED	Payment Card Industry PIN Entry Device
PCN	Pump Control Node
PIP	Peripheral Interface PCB
POS	Point of Sale
PPU	Price per Unit
SPOT	Secure Payment Outdoor Terminal
SSoM	Secure System on Module
TRIND	Transmitter/Receiver in Dispenser
W&M	Weights and Measures
UL	Underwriters Laboratories
UPM	Universal Payment Module
USB	Universal Serial Bus

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SECTION 6 - APPENDICES

Appendix A: Peripheral Options

PIP3 Board Connections

The following table lists the connections on the PIP3:

| Connector	Port Number	Function	From	To
8-pin MTA	P202A	RS-232 Pump and CRIND data from AFP	P202A	P302A/B
10-pin MTA	P201	Cash Acceptor	P201	BNA
6-pin MTA	P204	TRIND	P204	TRIND J182
3-pin Plug	P213	BEEP Connector	P213	UPM P2
4-pin Plug	P220	24 VDC IN	P220	Power Supply Cable (M14340)
Mini USB	USB UPLINK	USB IN	USB UPLINK	UPM P4
USB	P214A	USB Out	P214A	USB Expand
USB	P214B	USB Out	P214B	USB Expand
USB	P214C	USB Out	P214C	USB Expand
USB	P214D	USB Out	P214D	USB Expand
USB	P214E	SS Flash Drive (optional)	P214E	SS Flash Drive
4-pin MTA	P219	Speaker Input from AFP	P219	GSoM P219 L and R
2-pin Mat-n-Lok	P211	Audio to Left Speaker	P211	Left Speaker
2-pin Mat-n-Lok	P212	Audio to Right Speaker	P212	Right Speaker
25-pin	P205	Video Input from UPM	P205	UPM P5
20-pin	P206	LVDS Data to 10.4"	P206	10.4"
33-pin	P207	Video Data to 5.7"	P207	5.7"
2-pin	P215	Up/Down for 5.7"	P215	DNP
3-pin	JP1	Beeper Volume		Jumper
10-pin	P208	10.4" Backlight	P208	10.4" Backlight
3-pin	P210	5.7" Backlight	P210	5.7" Backlight Leads

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SECTION 6 - APPENDICES

UPM Board Connections

CAUTION

Keypad Connector Tab
Some of the connectors have a tab on the side that must be pressed prior to removing the connector. You must depress and hold the tab on the side of the UPM softkey connector if you want to remove it. If you do not press the tab, the wire might be pulled out from the connector.

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Figure 1: Keypad and Video Connector Tabs

Keypad Connector Tab (used on all systems)

Video Connector Tab (used only with Applause Media System)
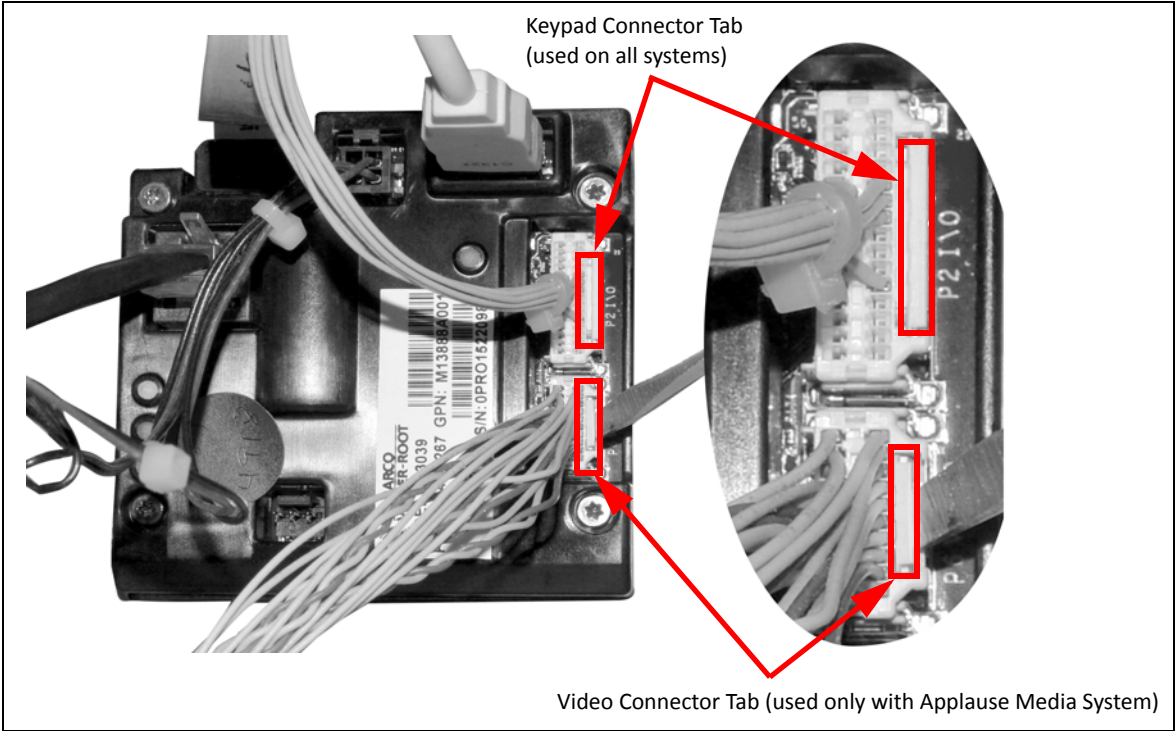
The following table lists the connections on the UPM:

Port Number	To	Function
P1	24 V Power into UPM	UPM power (and keypad heater power, if equipped)
P2	PIP3 - (P213), softkeys, door node (P2111), door switch (192), ADA, call	Input/Output (I/O) to multiple CRIND functions: • Softkeys • ADA • Door switch • Beeper
P3	AFP - Side A or B J303B/J305A, J305B, or J305C	Ethernet to the AFP board
P4	PIP3 - USB uplink	USB uplink to the PIP3
P5	PIP3 - P205	Video out
P6	GSoM - P406 Applause Media System video input	Video input from the GSoM

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The following table lists the peripherals for the cables:

Part Number	Port Number	Function
M03184A00X	P201	Cash Acceptor
R20773-GX	P204	TRIND
M13119A0XX	P213	BEEP Connector
M09794A00X	P220	24 VDC Power In
M14337A001	P1	UPM Heater Cable

TRIND

To install the TRIND:

1 Remove the TRIND Light Indicator Assembly (M06143A00X) from the old E-CIM door.

2 Reattach the TRIND light indicator assembly to the new E-CIM door provided in the kit.

3 Connect the PIP3 using the TRIND Cable (R20773-G10). Connect the J204 to P204.

Figure 2: Connecting TRIND Cable

TRIND Cable Connection
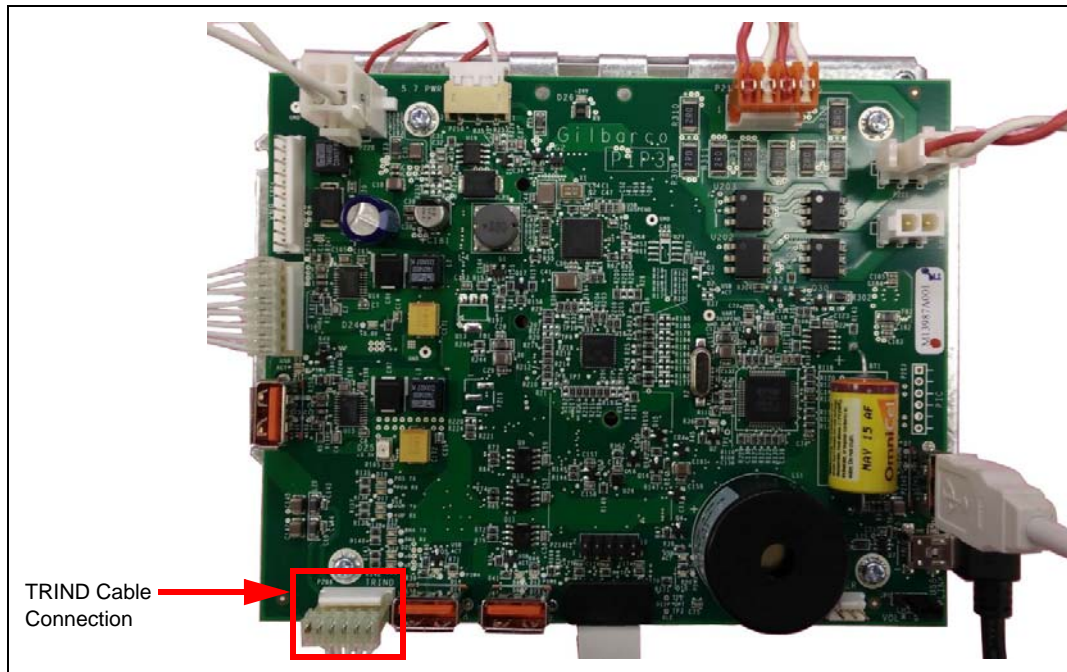
SECTION 6 - APPENDICES

Call Button

To install the call button:

1 Install the two Q10651-02 Stand-offs on the FlexPay Control Board (FCB) bracket [to the left of the FCB (see Figure 3)].

Figure 3: Installing Stand-offs

Q10651-02
Stand-off (2X)
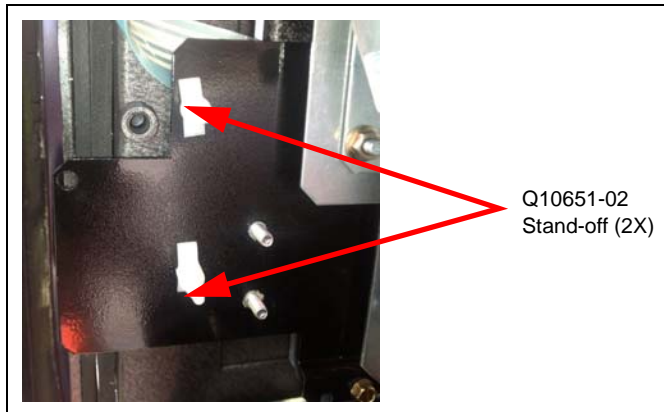
2 Install the call button board.

Figure 4: Installing Call Button Board

Call Button Board

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Appendix B: Block Diagrams

Figure 5: Cable Block Diagram for FlexPay IV CRIND

SECTION 6 - APPENDICES

Figure 6: Cable Block Diagram for DCM2.2
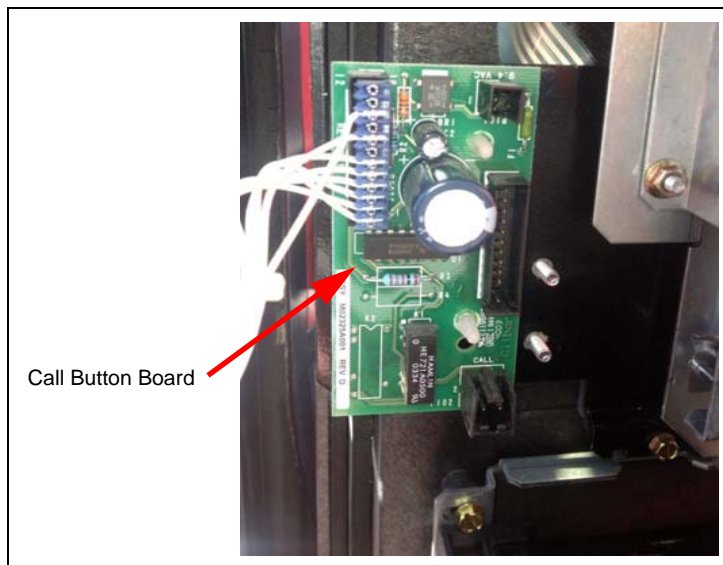
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Non-Dedicated High-Speed Field Wiring

If you are not using the dedicated high-speed connection, refer to the following diagram (see Figure 7).

Figure 7: Block Diagram for DCM2.2 Two-wire Configuration (Non-Dedicated)
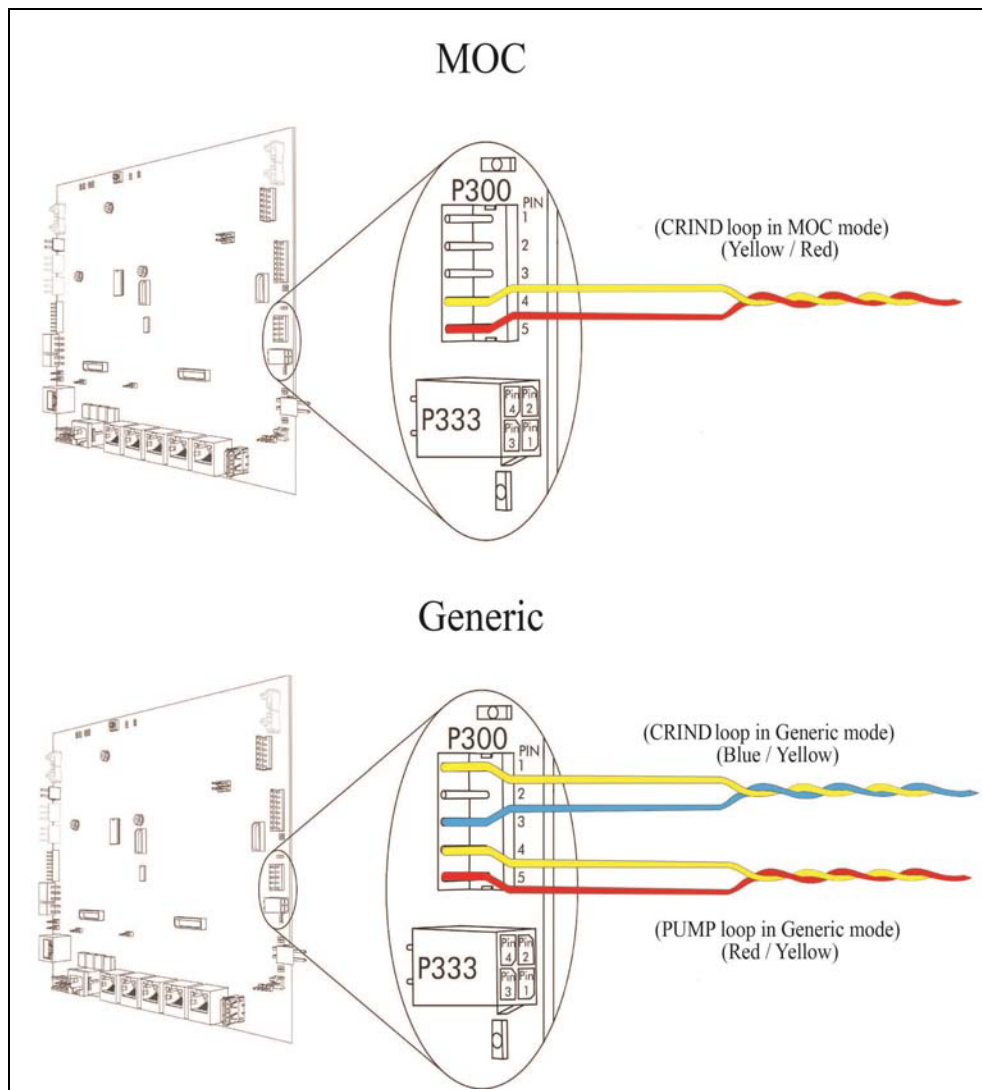
Note: Do not use the BRCM in passthrough mode with a Fuel Controller. Use D-Box instead.

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Dedicated High-Speed Field Wiring (Non-POS) Instructions (DCM2.2 only)

MOC

If you are using the dedicated high-speed connection (MOC configuration), refer to the following:

Figure 8: Block Diagram for DCM2.2 Two-wire Configuration (Dedicated)
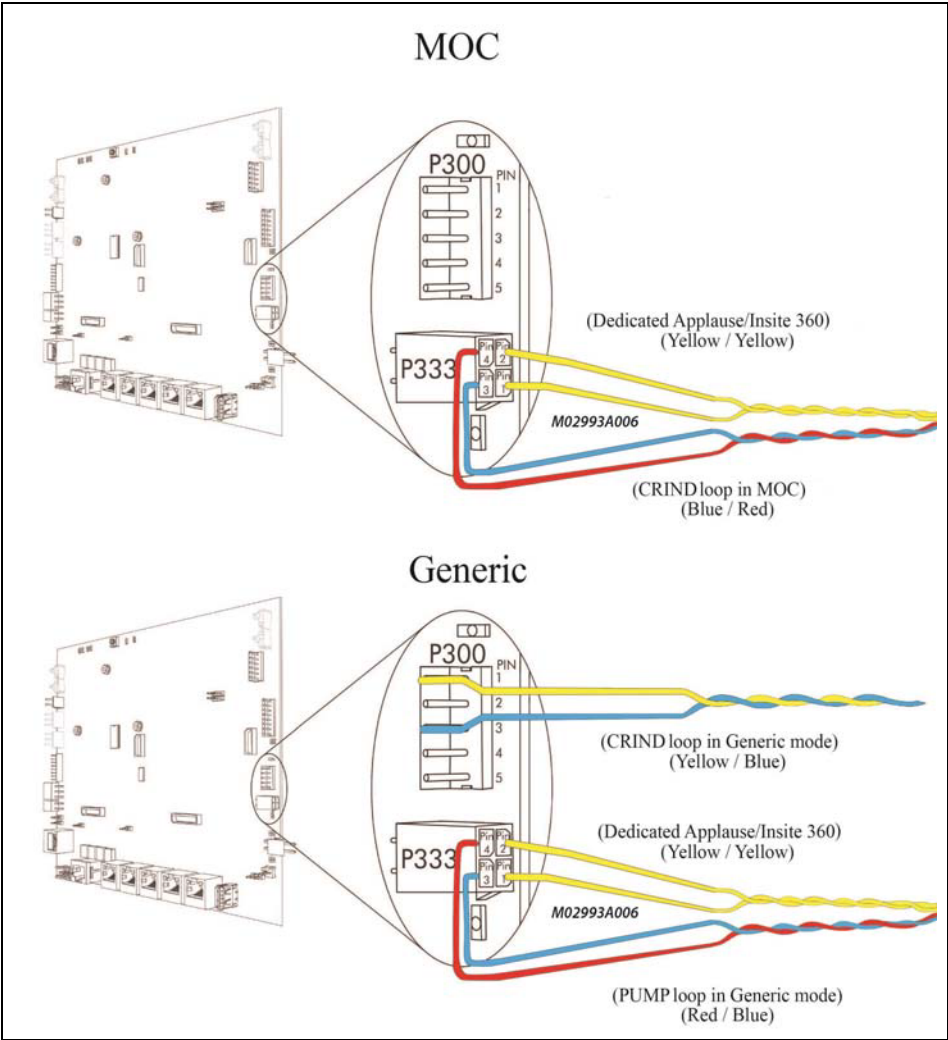
The following table lists wiring details for MOC mode:

Cable Part	Connector	Color	Description
M02993A006	P333.1	Yellow	High Speed
M02993A006	P333.2	Yellow	High Speed
M02993A006	P333.3	Red	CRIND+
M02993A006	P333.4	Blue	CRIND-

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Generic

If you are using the dedicated high-speed connection (Generic type configuration), refer to the following:

Connect the M02993A006 Dedicated High-Speed Cable (M02993A006) from P333 on DCM2.2 to the dedicated high-speed connection from the back room as shown in .

The following table lists wiring details for Generic mode:

Cable Part	Connector	Color	Description
M02993A005	P300.1	Red	CRIND+
M02993A005	P300.3	Yellow	CRIND-
M02993A006	P333.1	Yellow	High Speed
M02993A006	P333.2	Yellow	High Speed
M02993A006	P333.3	Red	Pump+
M02993A006	P333.4	Blue	Pump-

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