

Introduction

Purpose

This manual provides instructions to install the FlexPay™ EMV® CRIND® Retrofit Kit (EPK EMV ENC3 and EPK EMV ENC5) in Encore® 300/500 units.

The EPK EMV ENC3 is a configured kit for Encore 300 and EPK EMV ENC5 is a configured kit for Encore 500 units.

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Required Tools

Following tools are required for installing the FlexPay EMV CRIND Retrofit Kit:

- 1/4-inch, 5/16-inch, and 9/32-inch Nut Drivers

Parts List

Following tables list the EPK EMV ENC3 and EPK EMV ENC5 parts:

Hub Interface Printed Circuit Board [PCB (HIP)] Assembly (Encore 300 Provided with New Printers)

Item#	Description	Part Number	Quantity	
			Dual-sided Kit	Single-sided Kit
1	Assembly, EMV HIP	M10279A002	1	1
2	Nut, Metric, Flange	M00414B005	3	3
3	Cable, Two-wire (Encore 300 and The Advantage® Series)	M10326A001	1	1

HIP Assembly (Encore 300 Using Existing Printers)

Item#	Description	Part Number	Quantity	
			Dual-sided Kit	Single-sided Kit
1	Assembly, HIP, and CRIND Regulator	M01554A002	1	1
2	Nut, Metric, and Flange	M00414B005	3	3
3	Cable, Two-wire (Encore 300 and The Advantage Series)	M10326A001	1	1

HIP Assembly (Encore 500)

Item#	Description	Part Number	Quantity	
			Dual-sided Kit	Single-sided Kit
1	Assembly, EMV HIP	M07931A002	1	1
2	Cable, SMARTConnect™	M07970A001	1	1
3	Cable, Special Two-wire	M00491A001	1	1
4	Nut, Metric	M00414B005	3	3

Door Assembly (Encore 300/500)

Item#	Description	Part Number	Quantity	
			Dual-sided Kit	Single-sided Kit
1	Assembly, CIM™ Door	M01208A9XX	2	1
2	EMV Display (Generic) ~OR~ EMV Display (Global Pay)	M08001A001 ~OR~ M08001A002	2	1
3	Keypad Miscellaneous Options	M08412B001	2	1
4	Cable, Encrypting PIN Pad (EPP) Auxiliary Keypad	M08409A002	2	1
5	Printed Circuit Assembly (PCA), Secure PIN Pad for Outdoor Terminal (SPOT) Interface (SIP)	M07793A001	2	1
6	Cable, Two-wire/Cash A/Spare Data, EMV	M07946A001	2	1
7	Cable, SPOT Power, EMV	M07947A001	2	1
8	Cable, SPOT to Serial Interface PCB (SIP) TCR™)	M07949A001	2	1
9	Cable, DC Power SIP, EMV	M07974A001	2	1
10	Assembly, Bracket Electrostatic Discharge (ESD) Grounding	M08191A002	2	1
11	Cable, HIP to SIP Serial	M07979A002	2	1
12	Cable, Work Area 10' (3.04 m)	Q13850-10	2	1
13	Bracket, EMV Encore SIP	M09760B001	2	1
14	Cable, Ground EMV Display	M04431A002	2	1
15	Gasket	M08083B002	2	1
16	Reader, Secure Tribid	M07999B001	2	1
17	Cable, TCR/SP Interface	M07702A011	2	1
18	Cable, Encrypted Card	M07709A001	2	1
19	Bracket, Card Reader	M07574B001	2	1
20	Gasket, Card Reader	M13127B006	2	1
21	Keypad, SPOT	M08003B001	2	1
22	Gasket	M08084B001	2	1
23	Cable, SPOT Secure Keypad	M07956A002	2	1
24	Cable, Ground Hengstler®	M04431A003	2	1
25	Adapter, Keypad	M08399B001	2	1
26	Assembly, EMV Card Reader	M09993A001	2	1
27	Bracket, Printer Bezel	M03534B002	2	1
28	Gasket, Printer	M00325B002	4	2

Item#	Description	Part Number	Quantity	
			Dual-sided Kit	Single-sided Kit
29	Screw, Self-tapping Hexagonal-head 6-20 X	Q11677-24	24	12
30	Nut, Metric, Flange	M00414B005	6	3
31	Support Circuit Board Locking	Q10651-02	8	4
32	Screw, Self-tapping Hexagonal-head 6-20 X	Q11677-28	2	1
33	Screw, Self-tapping Hexagonal-head 6-20 X	Q11677-26	4	2
34	Gasket, Bezel (1.5 X 6.4 X 430 mm)	M01046B004	2	1
35	Gasket, Bezel (1.5 X 12.7 X 548 mm)	M01046B005	2	1
36	Gasket, Bezel (3.2 X 8 X 548 mm)	M01046B006	2	1
37	Rain Shield, SPOT	M13847A002	2	1

Printer Assembly Encore 300/500 (Optional New Printer)

Item#	Description	Part Number	Quantity	
			Dual-sided Kit	Single-sided Kit
1	Assembly, Printer Module	M04119A001	2	1
2	Screw, Metric M5 X 10	M00417B101	4	2
3	Cable, USB/Ground/+24 V Hengstler Printer	M06745A001	2	1

Printer Assembly Encore 300 (Optional Reuse Existing Printer)

Item#	Description	Part Number	Quantity	
			Dual-sided Kit	Single-sided Kit
1	PCA, Universal Parallel Port (UPP) Printer Convert	M10216A001	2	1
2	Bracket, Support PCB	M10347B001	2	1
3	Support Circuit Board Locking	Q10651-02	8	4
4	Cable, USB/Ground/+24 V Hengstler Printer	M06745A001	2	1

TRIND® to EMV Interface (Optional Units with TRIND)

Item#	Description	Part Number	Quantity	
			Dual-sided Kit	Single-sided Kit
1	TRIND/SPOT Interface	M08472A002	1	1
2	Cable, Gateway to TRIND	M08520A002	1	1
3	Cable, TRIND/SPOT	M08521A001	1	1
4	Cable, Power Supply	M05859A001	1	1

TRIND to EMV Interface (Optional Units with TRIND)

Item#	Description	Part Number	Quantity	
			Dual-sided Kit	Single-sided Kit
1	Cable, Call Interface	M02802A001	2	1
2	Tie Cable	Q10178-01	2	1
3	Cable, Call Interface	M04687A001	2	1
4	Cable, Keypad to Call	M02803A001	2	1
5	Cable, Call Button	M01233A002	2	1

Item#	Description	Part Number	Quantity	
			Dual-sided Kit	Single-sided Kit
6	PCA, Call Interface	M04528A001	2	1
7	Screw, Self-tapping Hexagonal-head 6-20 X	Q11677-24	2	1
8	Support Circuit Board Locking	Q10651-02	4	2
9	Clamp, Flat Cable Mount	M01102B002	2	1
10	Bracket, Call Button	M08857B001	2	1

Related Documents

Document Number	Title	GOLD SM Library
MDE-3804	Encore and Eclipse® Start-up/Service Manual	<ul style="list-style-type: none"> • Encore and Eclipse • Service Manual
MDE-3970	Speaker Retrofit Kit M01491K001	Encore and Eclipse

Abbreviations and Acronyms

Term	Description
CCN	CRIND Control Node
CD	Computer Display
CIM	Customer Interface Module
CPU	Central Processing Unit
CRIND	Card Reader in Dispenser
EMV	Europay®, Mastercard®, and Visa®
EPP	Encrypting PIN Pad
ESD	Electrostatic Discharge
GOLD	Gilbarco® Online Documentation
HIP	Hub Interface PCB
J-box	Junction Box
NEC®	National Electrical Code
NFPA	National Fire Protection Association
OSHA	Occupational Safety and Health Administration
PCA	Printer Circuit Assembly
PCB	Printed Circuit Board
POS	Point of Sale
SIP	Serial Interface PCB
SPOT	Secure PIN Pad for Outdoor Terminals
TCR	Tribrid Card Reader
TRIND	Transmitter/Receiver in Dispenser
UPP	Universal Parallel Port
USB	Universal Serial Bus

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 a Gilbarco Authorized Service Contractor or call the Gilbarco Support Center at 1-800-800-7498. 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.

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.

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 lines.

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.

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.

Before You Begin

CAUTION



A properly grounded 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 dispenser for the installation, proceed as follows:

- 1 Read and understand all safety information found in *MDE-3804 Encore and Eclipse Start-up/Service Manual*.
- 2 Inform the manager that power must be removed and remove all power supplied to the unit at the breaker located in the building. Follow OSHA lockout/tagout procedures.
- 3 Block off the unit from the customers.

WARNING

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

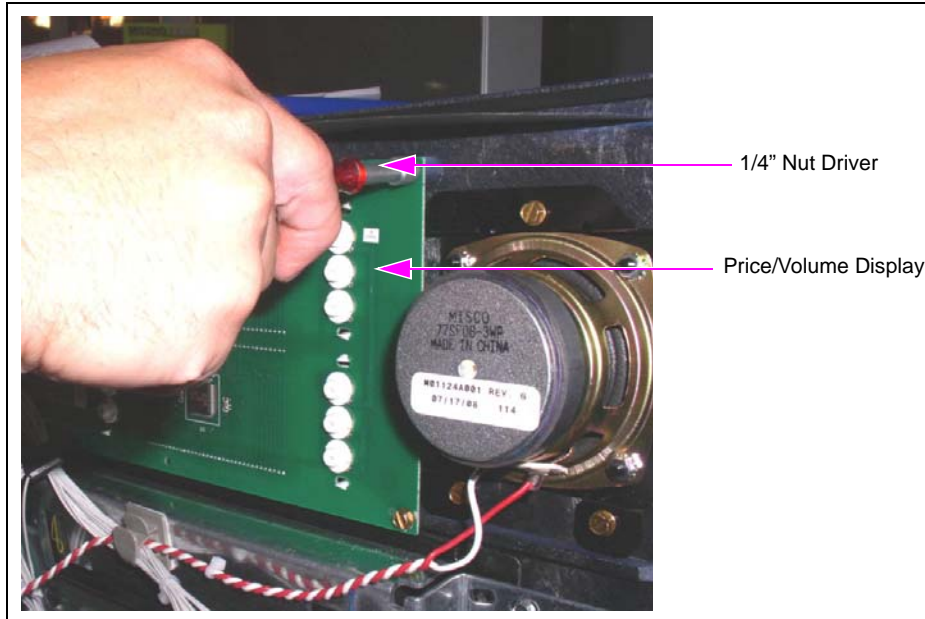
Installing FlexPay EMV CRIND Retrofit Kit in Encore 300/500

To install the FlexPay EMV CRIND Retrofit Kit in Encore 300/500 units, proceed as follows:

- 1 Open the main door.
- 2 Isolate the CRIND two-wire cable.

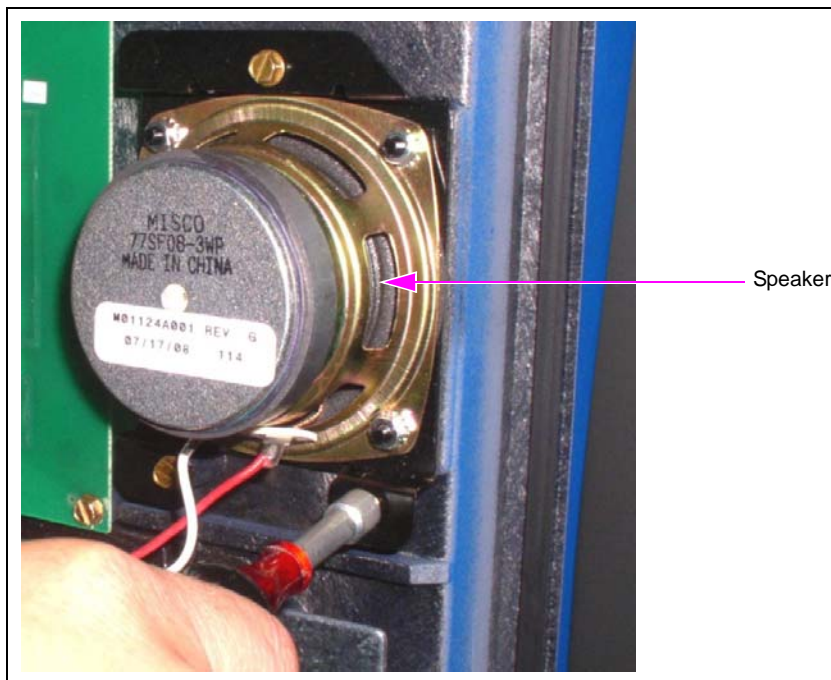
- 3 Remove the screws that secure the price/volume display using a 1/4-inch nut driver.
Note: The price/volume display must be remounted on the new FlexPay EMV CRIND door.

Figure 1: Removing Price/Volume Display



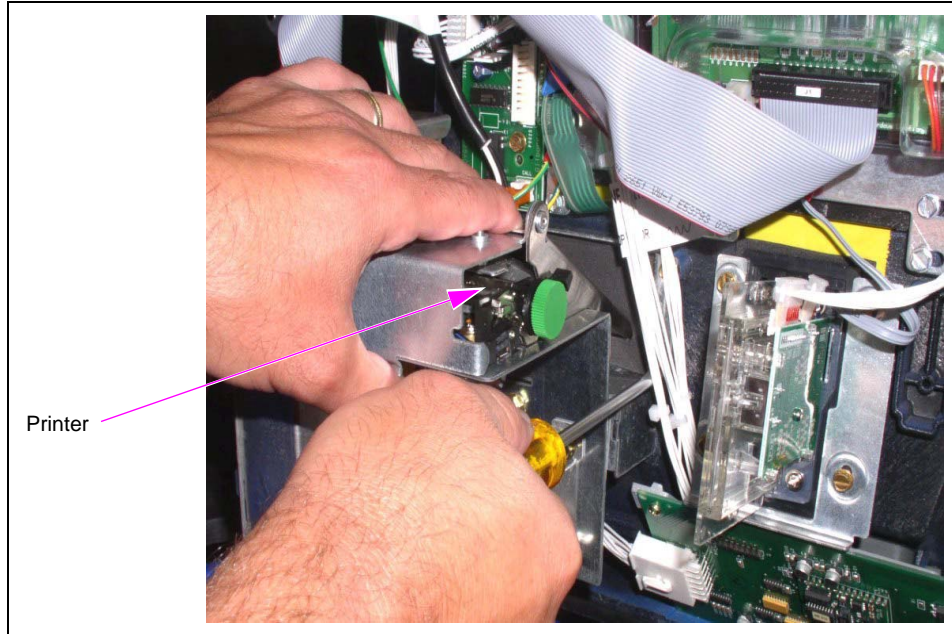
- 4 Remove the three screws that secure the speaker to the door using a 1/4-inch nut driver.
Note: The speaker must be remounted on the new FlexPay EMV CRIND door.

Figure 2: Removing Speaker



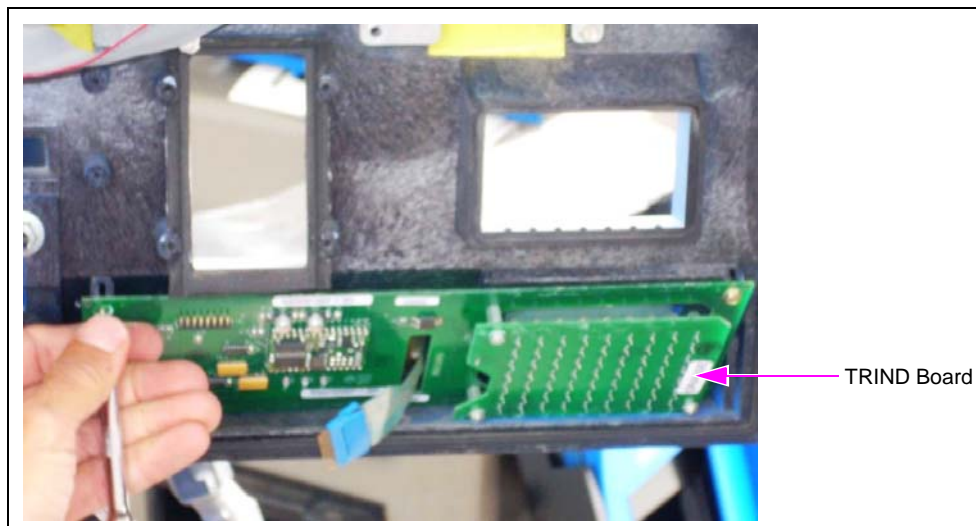
- 5 Remove the screws that secure the printer to the door.
Note: This step is required only if the new printer is not provided in the kit.

Figure 3: Removing Printer



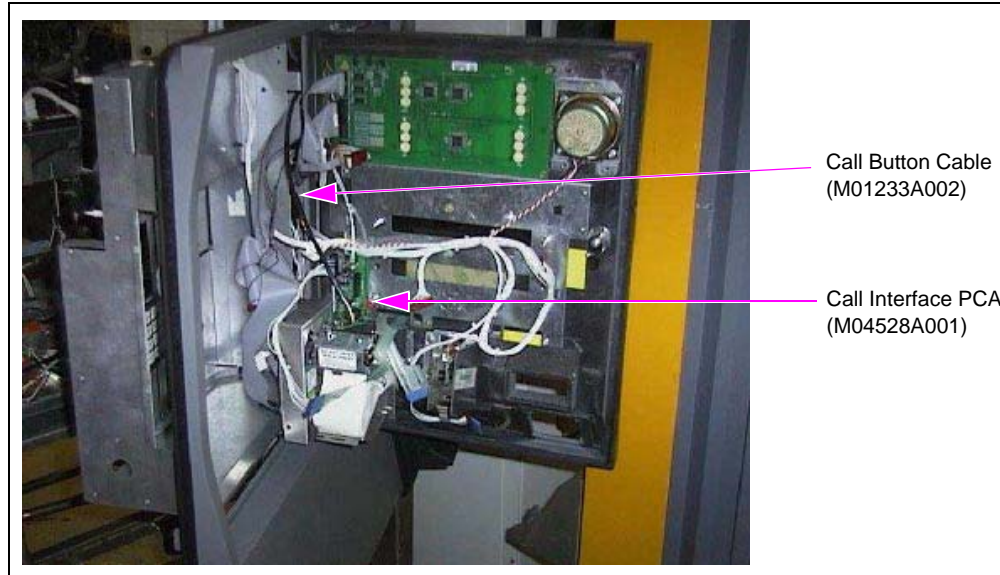
- 6 Remove the two screws that secure the TRIND board to the door, if applicable.

Figure 4: Removing TRIND Board



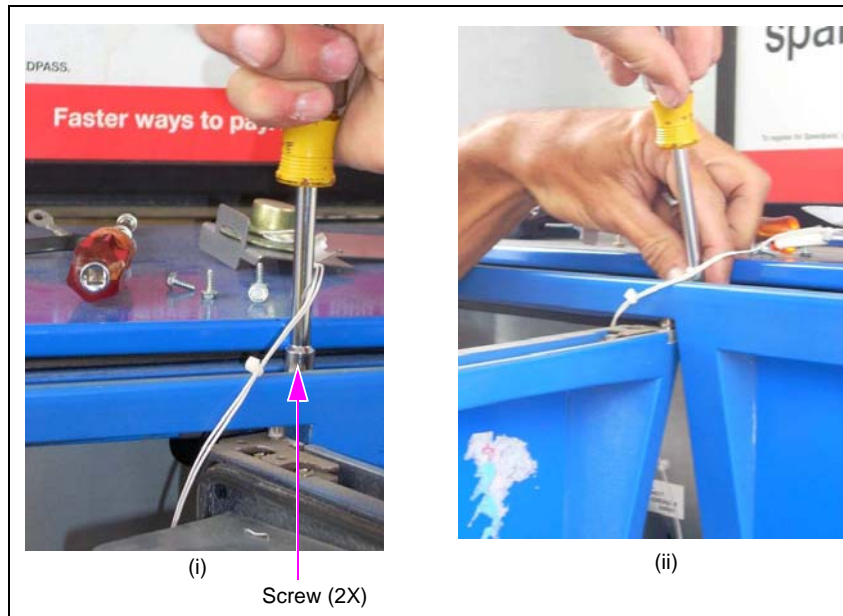
- 7 Remove the call button assembly by removing the two screws and disconnecting the cables, if applicable.

Figure 5: Rear View of Encore CIM Door with Call Button Cable



- 8 Remove the two screws and bracket that secure the CIM door.

Figure 6: Removing Two Screws and Bracket



- 9 Remove the CIM door.

Mounting HIP Assembly

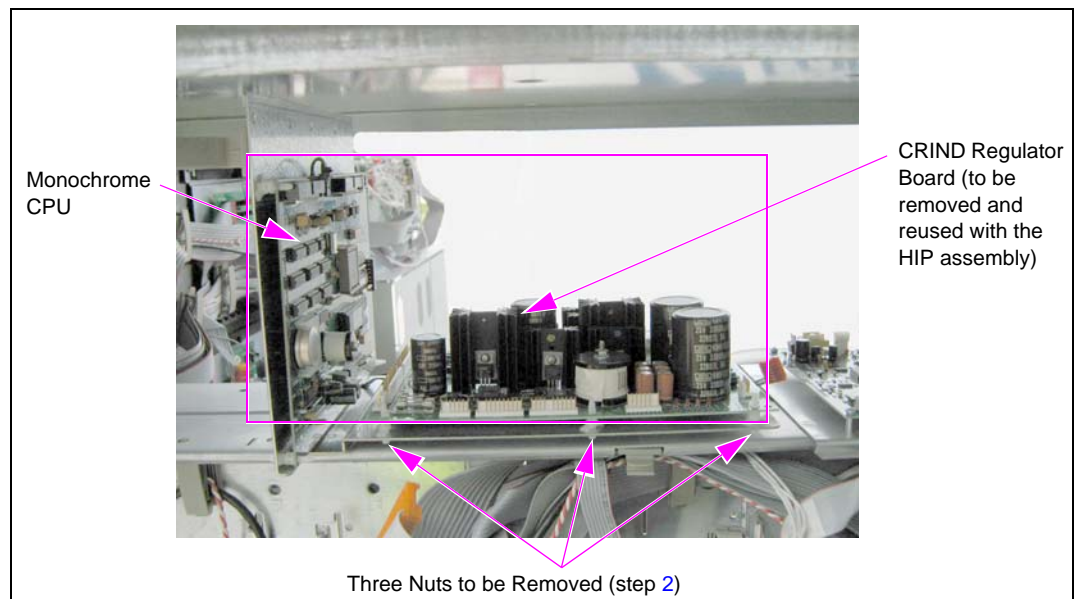
To mount the HIP assembly, proceed as follows:

Encore 300

If the door includes a printer, proceed as follows:

- 1 Disconnect all the cables from the CRIND Regulator Board (T20306-GX) and monochrome Central Processing Unit (CPU).
- 2 Remove the three nuts that secure the bracket holding the CRIND regulator board and monochrome CPU in place (see [Figure 7](#)).
- 3 Remove the CRIND regulator board and monochrome CPU from the Computer Display (CD) module (see [Figure 7](#)).

Figure 7: Removing CRIND Regulator Board



- 4 Mount the HIP Assembly [M10279A002 (refer to step 3)].

If you are reusing the existing Fujitsu® printer, the printer is not provided on the preassembled FlexPay EMV CRIND door. The mounting bracket for the HIP assembly is also different for this requirement (see [Figure 8](#) on [page 12](#)).

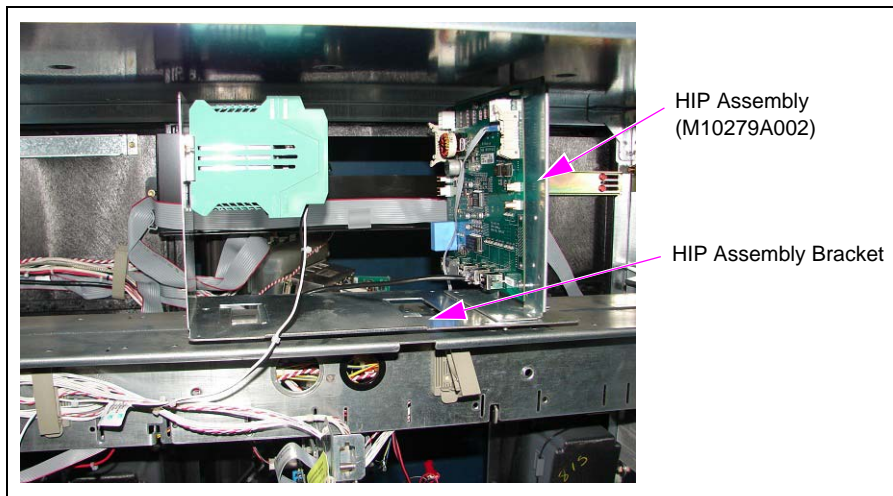
Reusing Existing Fujitsu Printer

To reuse the existing Fujitsu printer, proceed as follows:

- 1 Disconnect all the cables from the CRIND regulator board and monochrome CPU.
- 2 Remove the three nuts that secure the bracket holding the CRIND regulator board and monochrome CPU in place.

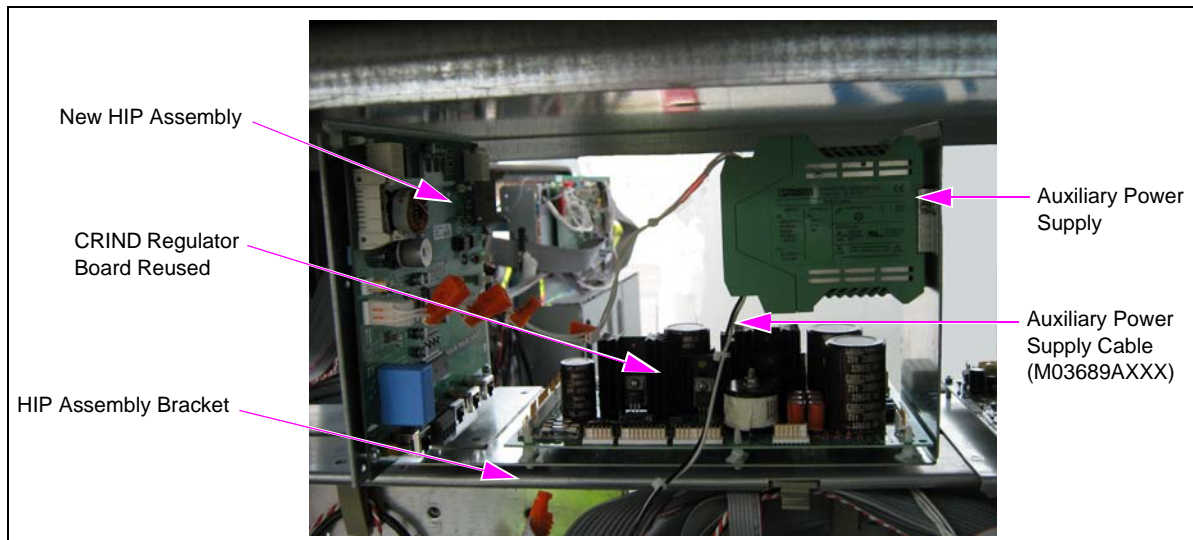
- 3 Remove the CRIND regulator board and monochrome CPU.
Note: The CRIND regulator board must be reused on the new HIP Assembly [M10279A002 (see [Figure 8](#))].
- 4 Install the HIP assembly.

Figure 8: HIP Assembly for Encore 300



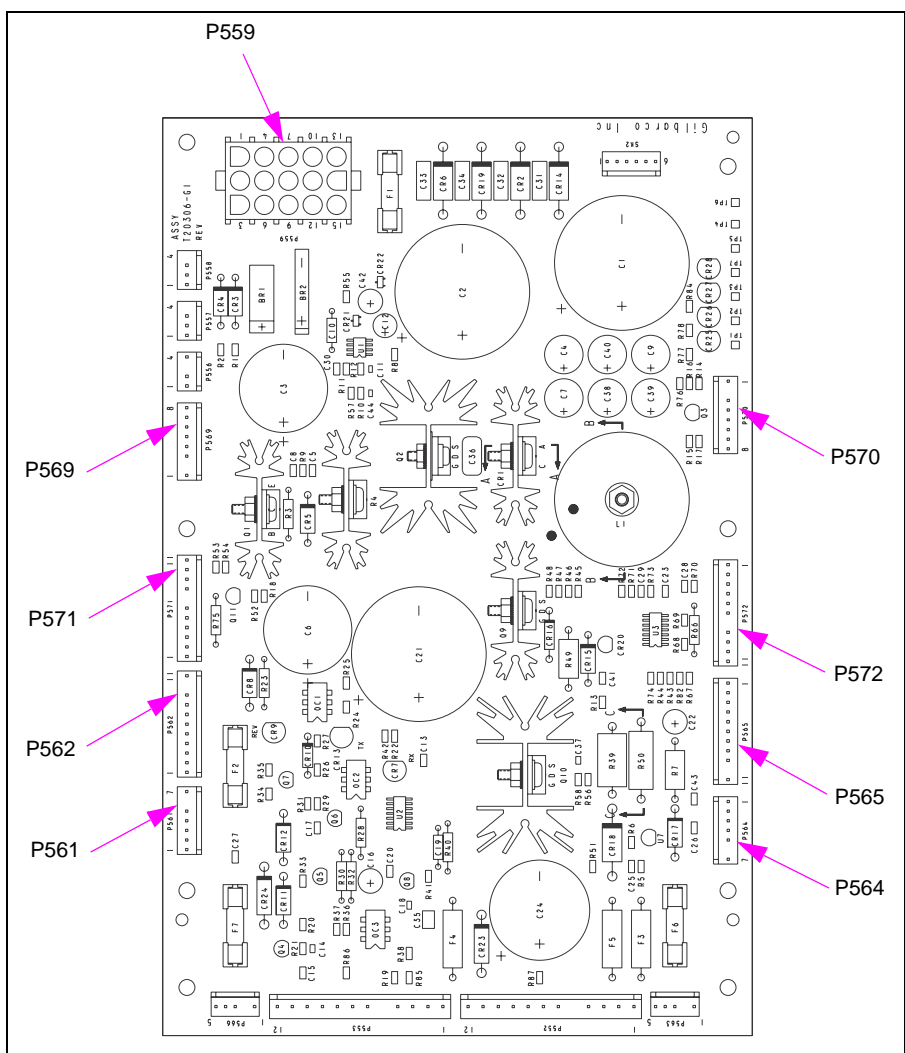
- 5 Remount the CRIND regulator board on the new HIP assembly bracket (see [Figure 9](#)).

Figure 9: Remounting CRIND Regulator Board



- 6 Make the required cable connections. Ensure that the following connections to the CRIND regulator board are secure. If required, reconnect the following (see [Figure 10](#)):
- Ribbon cable connector J564 to P564
 - Ribbon cable connector J565 to P565
 - Ribbon cable connector J572 to P572
 - Ribbon cable connector J570 to P570
 - Ribbon cable connector J561 to P561
 - Ribbon cable connector J562 to P562
 - Ribbon cable connector J571 to P571
 - Ribbon cable connector J569 to P569
 - Power cable connector J559 to P559

Figure 10: Connecting CRIND Regulator Board



IMPORTANT INFORMATION

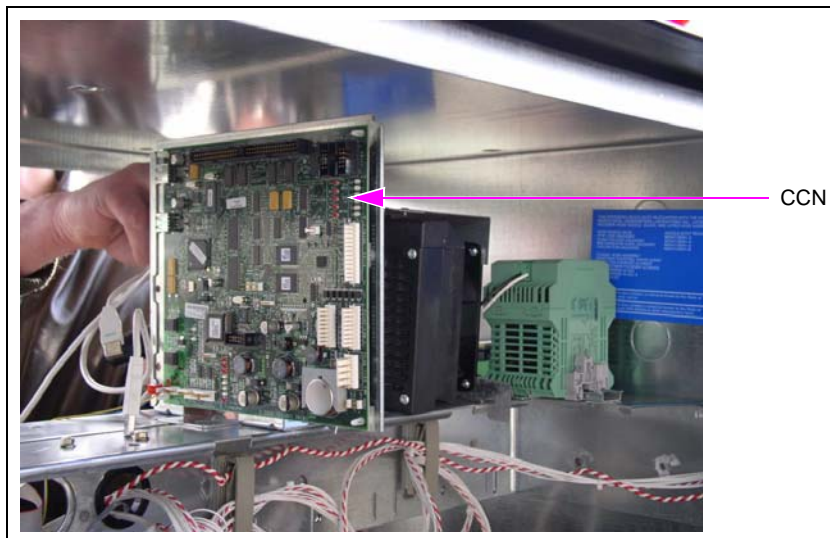
Cable routing is critical. It is very important to route and dress the cables properly. Exercise care in routing the cables, keeping in mind that the door(s) opens and closes for service. The cables must be dressed neatly. Ensure that there is no interference after the cables are connected and routed.

Encore 500

To mount the HIP assembly, proceed as follows:

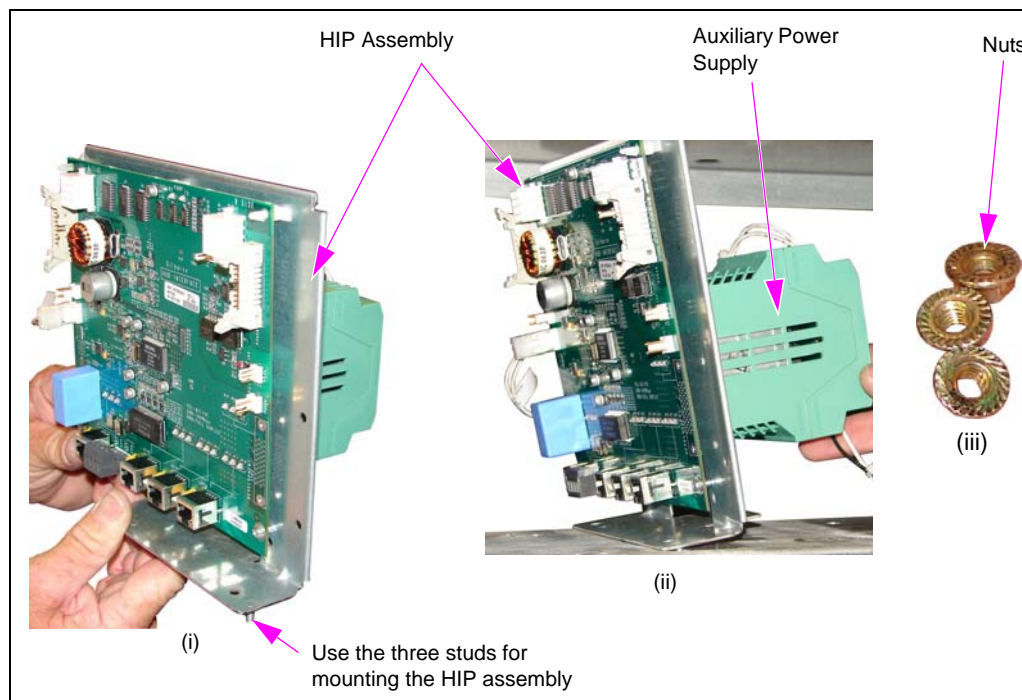
- 1 Disconnect all the cables from the CRIND Control Node (CCN) and monochrome CPU.
- 2 Remove the CCN.

Figure 11: Removing CCN



- 3 Mount the HIP assembly on the CD module using the three nuts provided in the kit (see Figure 12).

Figure 12: Mounting HIP Assembly on CD Module

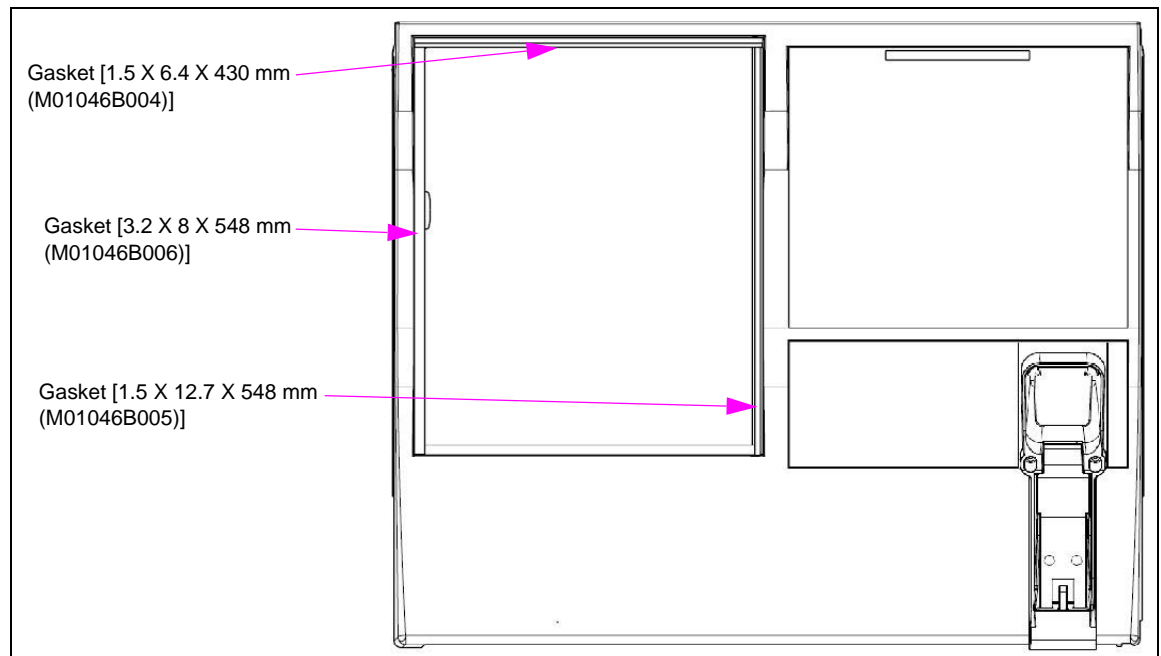


Installing Preassembled FlexPay EMV CRIND Door

To install the preassembled FlexPay EMV CRIND door, proceed as follows:

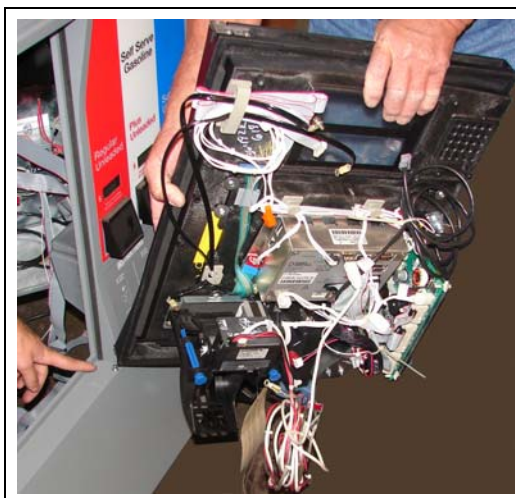
- 1 Remove the three old gaskets where the original CRIND door was located and install three new gaskets (see [Figure 13](#)). Ensure the following while installing the gaskets:
 - a Place the M01046B004 Gasket on top of the M01045B005 and M01045B006 Gaskets.
 - b Place the ends of M01045B005 and M01045B006 Gaskets against the M01046B004 Gasket without any gaps.

Figure 13: Installing New Bezel Gaskets



- 2 Mount the preassembled FlexPay EMV CRIND door over the mounting location (see [Figure 14](#)).

Figure 14: Mounting FlexPay EMV CRIND Door



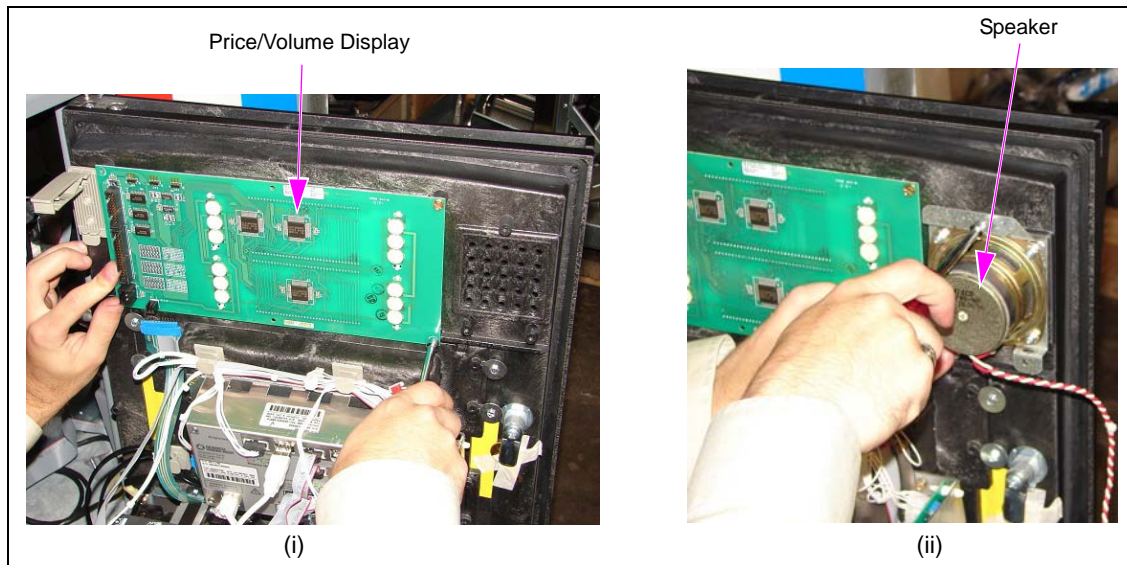
- 3 Insert the bracket and two screws. Tighten the screws to secure the new FlexPay EMV CRIND door (see [Figure 15](#)).

Figure 15: Securing FlexPay EMV CRIND Door



- 4 Remount the components from the old door (price/volume display, speaker, TRIND, and call button). To reinstall the call button, refer to “[Appendix: Installing Call Button](#)” on [page 27](#).
Note: If you are reusing the existing speaker, ensure that you install it on the new door.

Figure 16: Remounting Price/Volume Display and Speaker



- 5 For Encore 500 with Door Node 3 (M04326), Door Node 4 (M05835), or Door Node 5 (M12605), an Extension Cable (M07974A005) is required for the M07702A023 Cable to reach the door node.

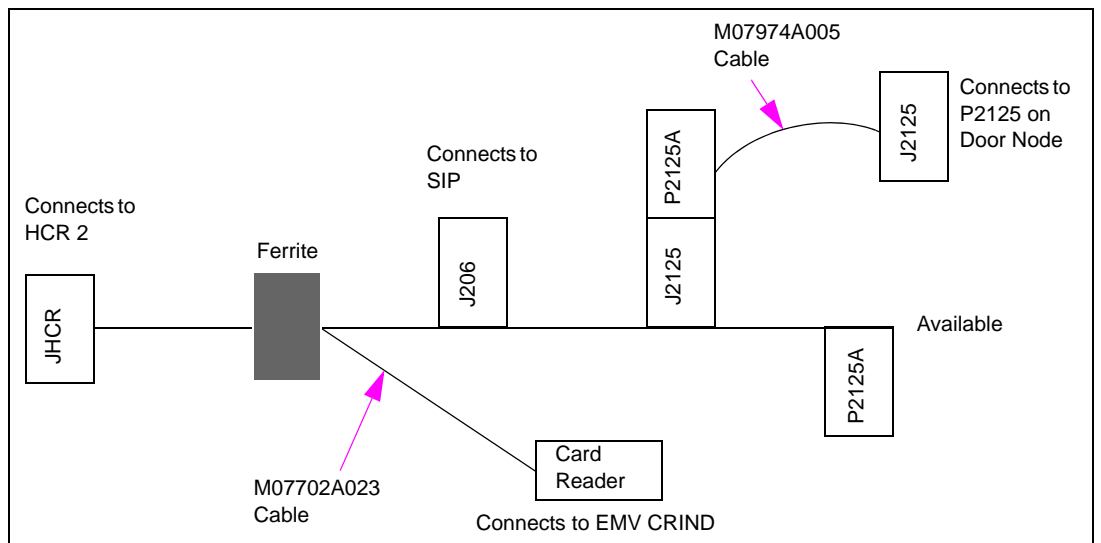
a Locate the M07702A023 Cable on the door.

b Connect the P2125B on the M07974A005 Cable to J2125 on the M07702A023 Cable.

c Connect the J2125 on the M07974A005 Cable to P2125 on the door node.

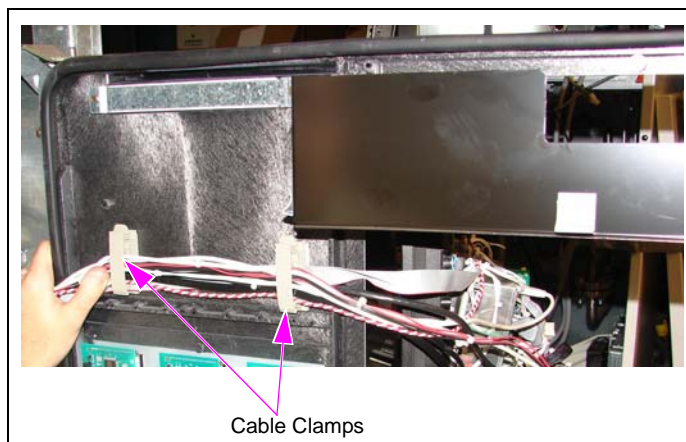
Note: P2125A on the M07702A023 Cable remains available for other connections.

Figure 17: Connecting Cables for Encore 500



- 4 Route the wires from the new door into the CD module through the cable clamps (see [Figure 18](#)).

Figure 18: Routing Wires Through Cable Clamps



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.

Installing Rain Shield (M13847A002)

To install the rain shield, proceed as follows:

- 1 Mount the rain shield using the pressure-sensitive adhesive tape.
Note: The rain shield comes with an adhesive tape attached to it.
- 2 Peel off the tape backing from the rain shield.
- 3 Place one edge of the rain shield on the door (see [Figure 19](#)). Then place the other edge and smooth in place (see [Figure 20](#)).

Figure 19: Mounting Rain Shield on Dispenser Door

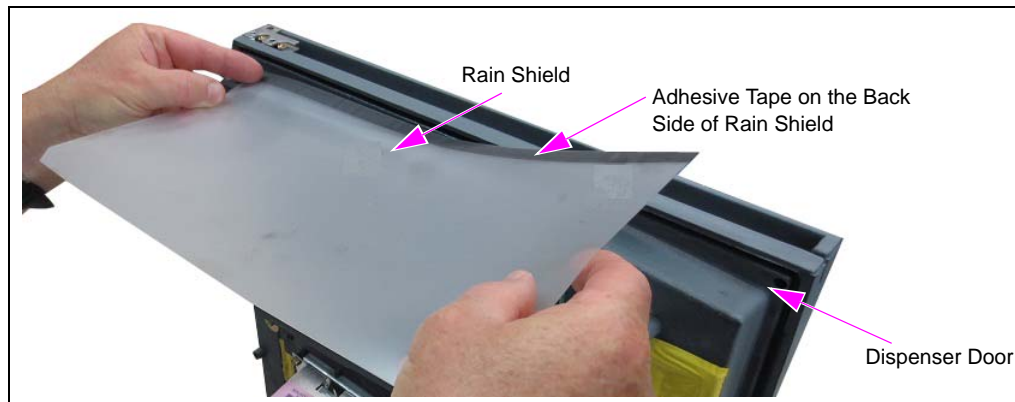
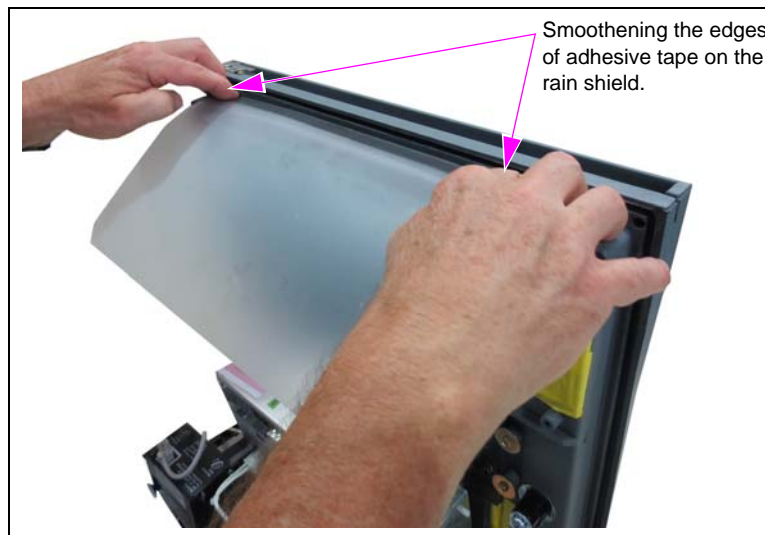


Figure 20: Smoothing Edges of Rain Shield

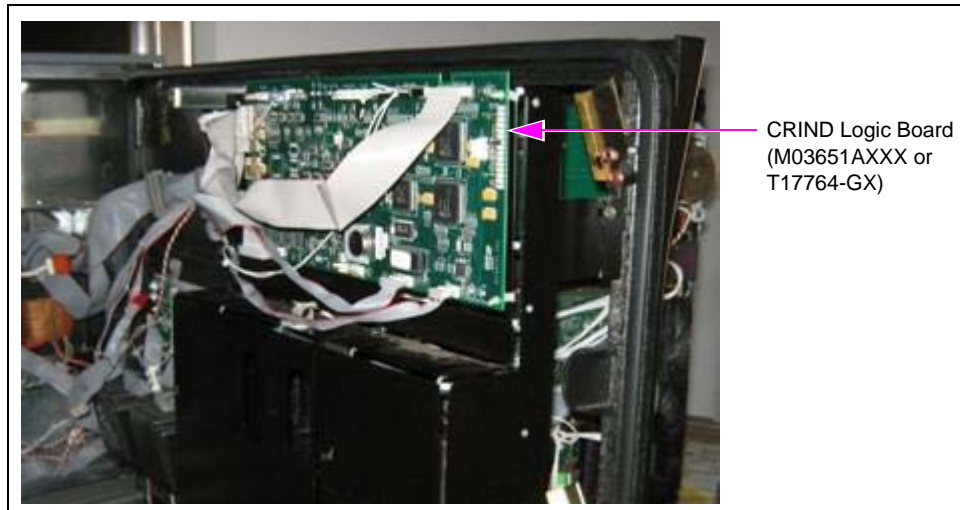


Installing Printer Converter Board (M10216A001)

To install the printer converter board, proceed as follows:

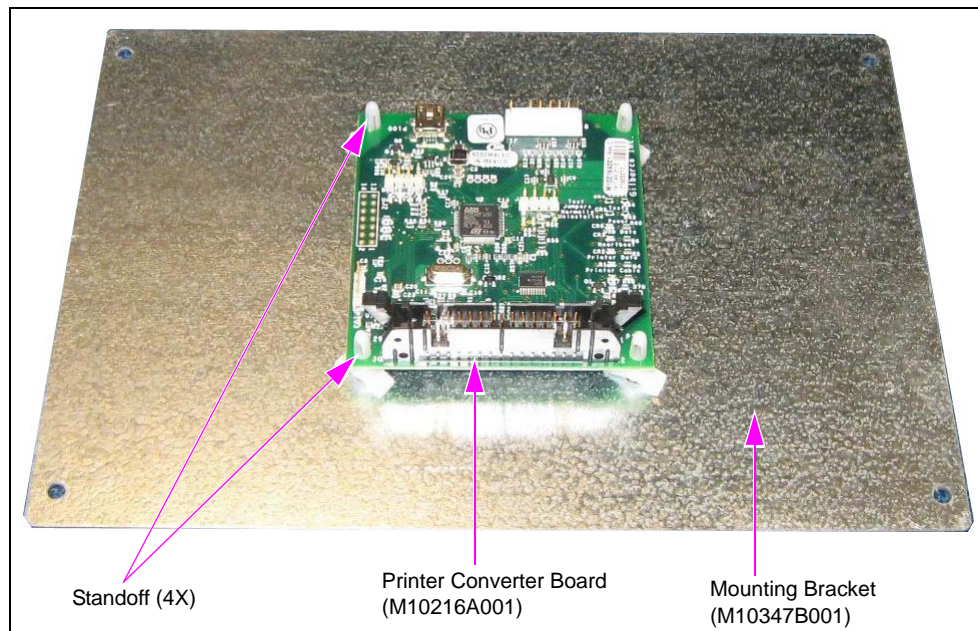
- 1 Disconnect the cables and remove the CRIND Logic Board (M03651AXXX or T17764-GX).

Figure 21: Removing CRIND Logic Board



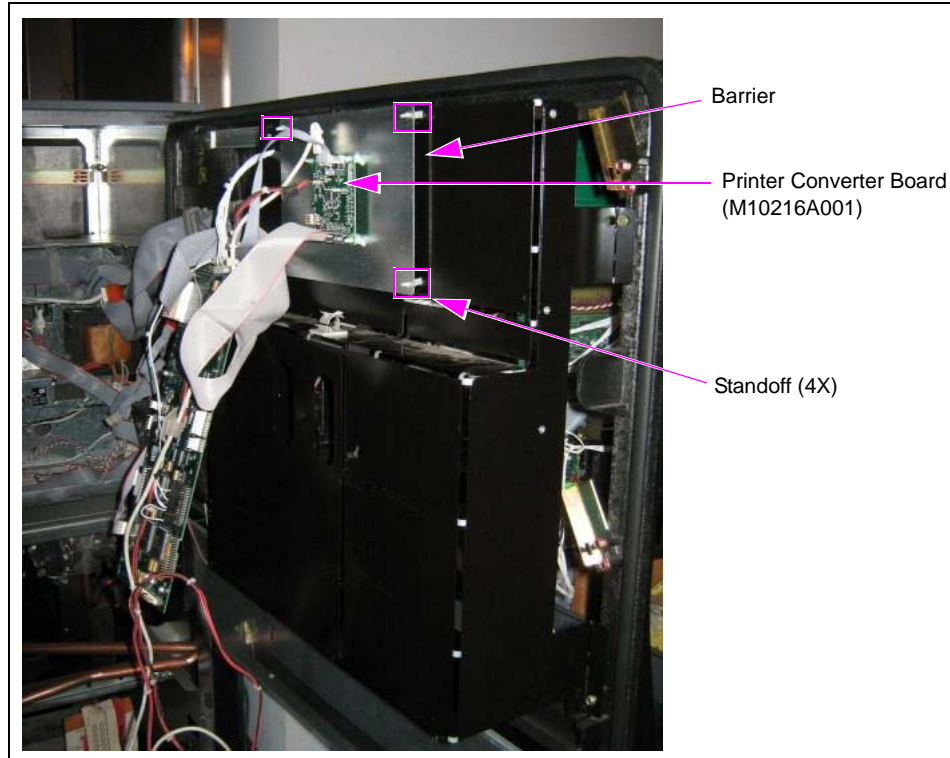
- 2 Preassemble the printer converter board to the Mounting Bracket (M10347B001) using the four standoffs provided (see [Figure 22](#)).

Figure 22: Preassembling Printer Converter Board to Mounting Bracket



- 3 Mount the printer converter board/mounting bracket assembly to the barrier where the CRIND logic board was previously mounted, using the four standoffs.

Figure 23: Mounting Printer Converter Board/Mounting Bracket Assembly

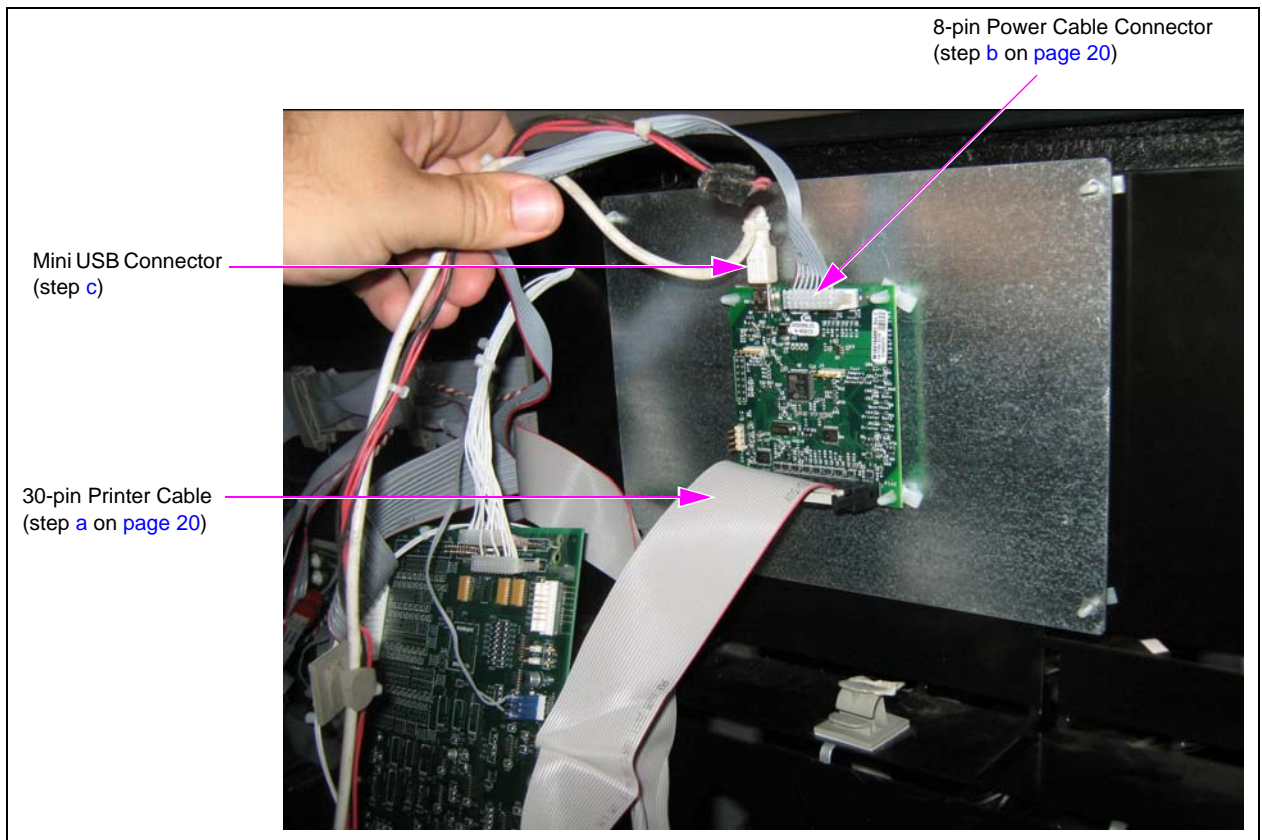


- 4 Connect the cables to the printer converter board as follows (see [Figure 24](#) on [page 21](#)):
 - a Connect the 30-pin printer cable (previously connected to P257 on the CRIND logic board) to P102 on the printer converter board and squeeze the connector latches to ensure proper connection.
 - b Connect the 8-pin power cable (previously connected to P266 on the CRIND logic board) to the J1 connector on the printer converter board.

- c** Connect the mini USB connector from the M06745A001 Cable to P100 connector on the printer converter board.

Note: The other end of the USB cable must be connected to the USB port on the EMV display mounted on the CIM door. Other connectors from the M06745A001 Cable will not be used. The additional cable connections must either be removed or bundled.

Figure 24: Connections to Printer Converter Board



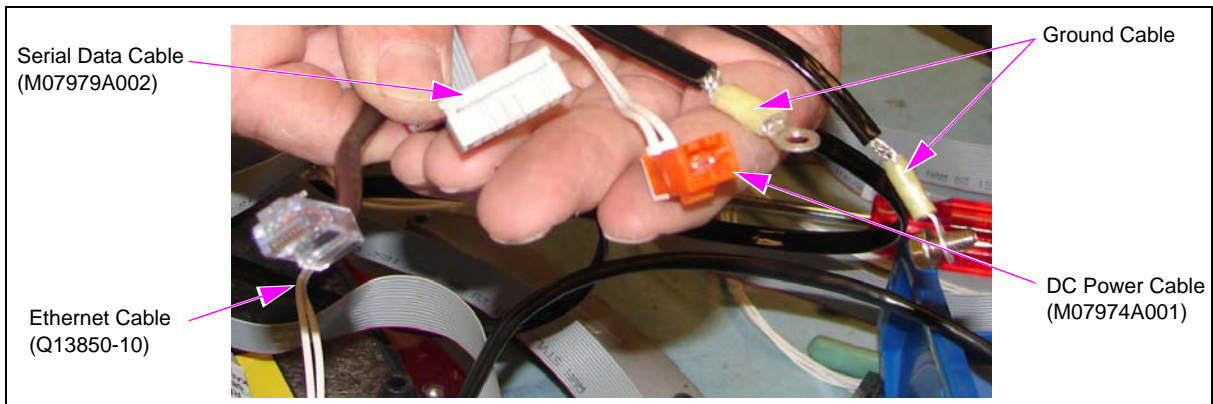
IMPORTANT INFORMATION

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.

Connecting Cables from FlexPay EMV CRIND Door

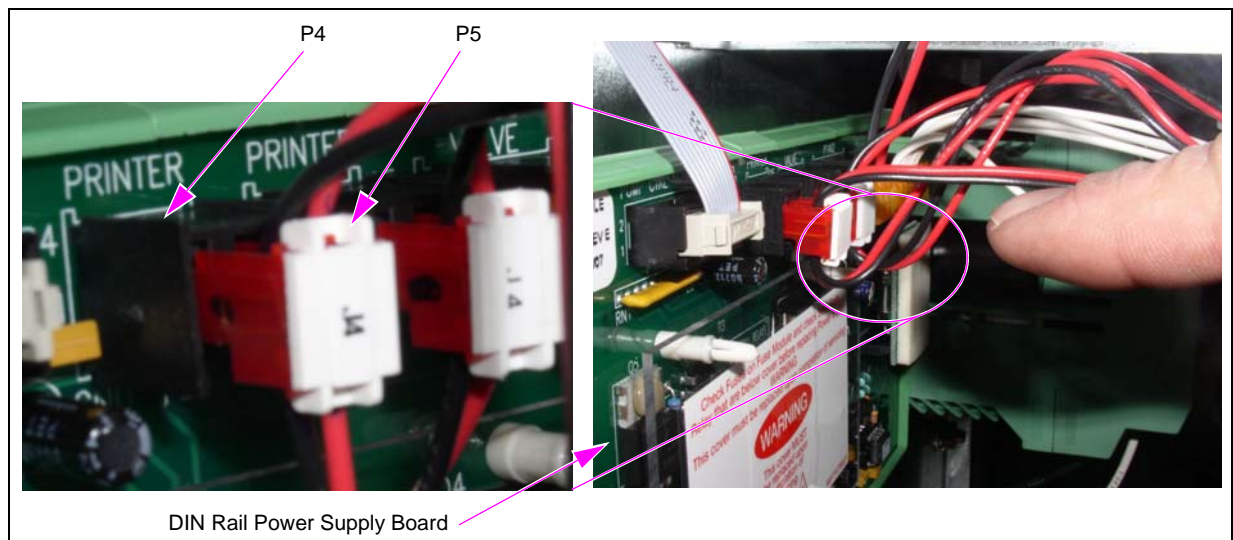
To connect the cables from the FlexPay EMV CRIND door, proceed as follows:

Figure 25: Cables from SIP Board/FlexPay EMV CRIND Door



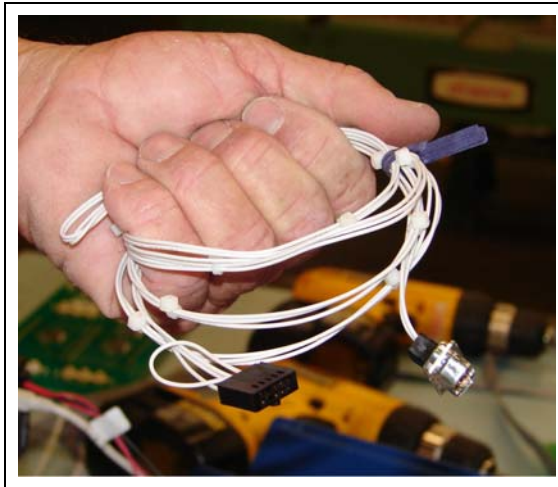
- 1 Connect the Serial Data Cable (M07979A002) from the SIP board on the FlexPay EMV CRIND door to the HIP assembly.
- 2 Connect the DC Power Cable (M07974A001) from the SIP board to the respective connector on the Power Cable (M07973A003) on the HIP assembly (P301A/P301B to J301A/J301B).
- 3 For Encore 300 units, connect the Printer Power Cable (M06745A001) to the respective connector on the power cable on the HIP assembly (PRT A and PRT B).
- 4 For Encore 500 units, connect the 24 V connector cable to P4 and P5 on the DIN rail power supply board [use the existing 24 V connector/DIN rail power supply (see [Figure 26](#))].

Figure 26: Connecting 24 V Connector Cable



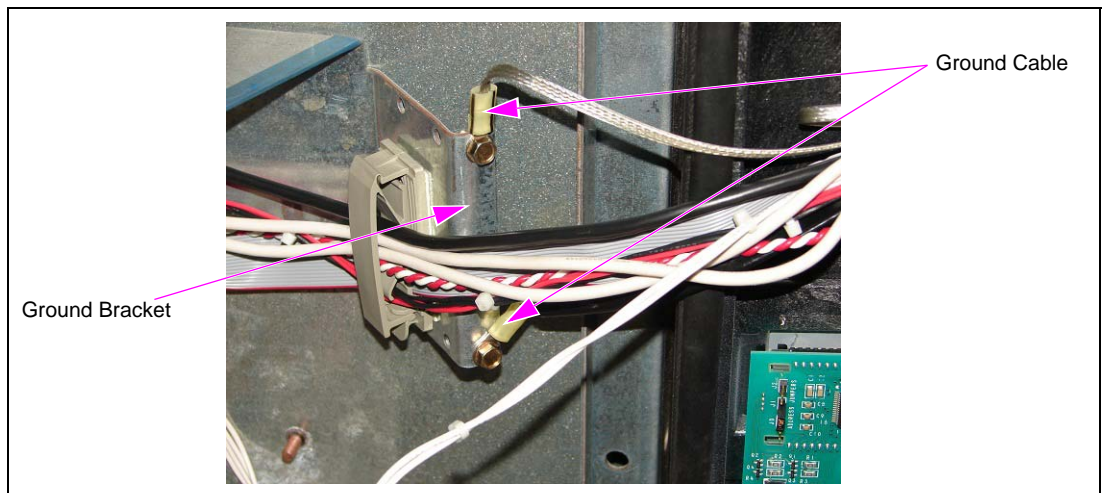
- 5 Connect the Ethernet® Cable (Q13850-10) from COM 5 port on the SPOT display to the respective port on the HIP assembly (A or B).
- 6 Connect the M07970A001 Cable from COM 1 port on the SPOT display unit to the base electronics on side A of the Encore 500 unit (to J1111).
Note: This is applicable only for Encore 500/500 S/S E-CIM.

Figure 27: M07970A001 Cable



- 7 Connect the ground cable for the printer and SPOT display to the ground bracket on the CD module.

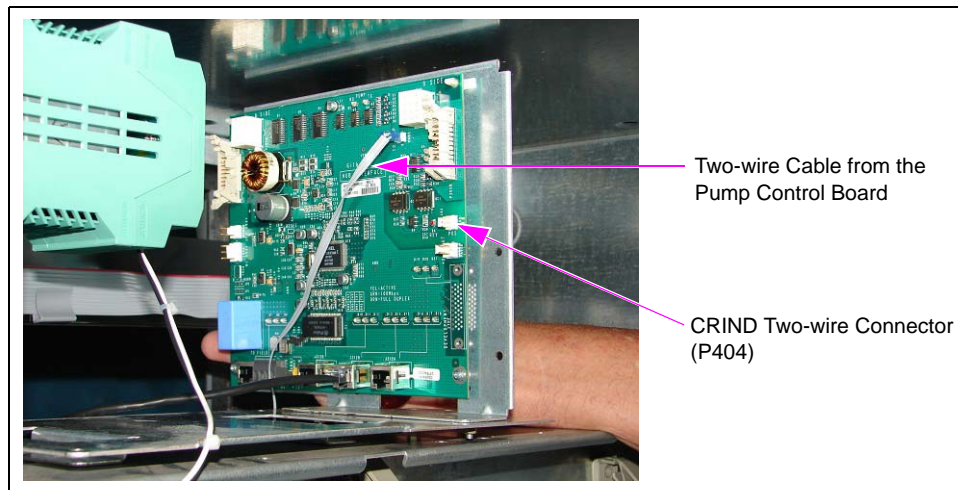
Figure 28: Connecting Ground Cable to Ground Bracket



- 8 For Encore 500 units, connect the CRIND two-wire cable from J404 to P404 on the HIP assembly (see [Figure 29](#)).

Note: If you are using G-SITE® or Passport® Point of Sale (POS) system, connect the two-wire cable from J403 on the pump control board to P403 on the HIP assembly.

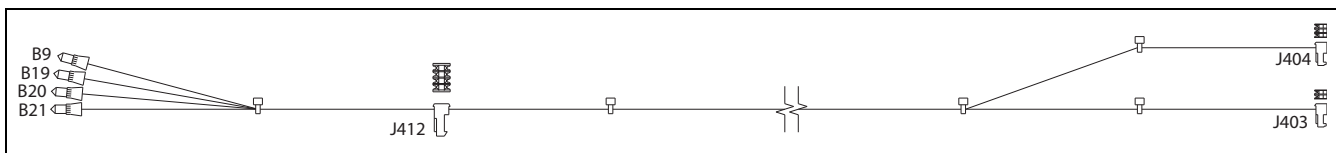
Figure 29: Connecting CRIND Two-wire Cable from Pump Control Board to HIP Assembly



- 9 For Encore 300 units, connect the EMV Two/Four-wire Cable (M10326A001) from J404 to P404 on the HIP assembly (see [Figure 30](#)).

Note: If you are using G-SITE or Passport POS system, connect the EMV two/four-wire cable from J403 to P403 on the HIP assembly.

Figure 30: EMV Two/Four-wire Cable



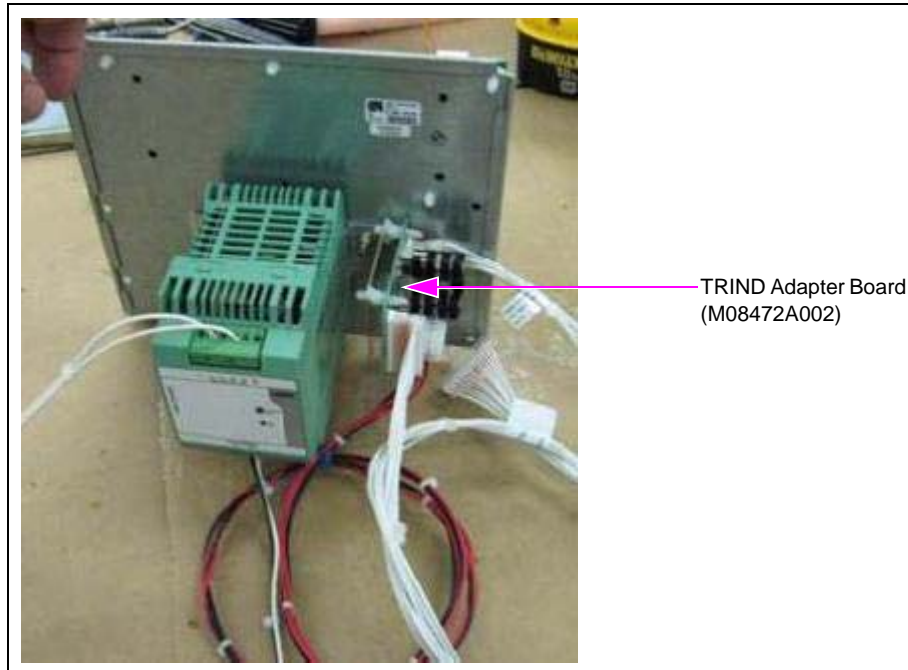
Installing the FlexPay EMV CRIND Retrofit Kit in Encore 300/500 units is now complete.

Installing FlexPay EMV Retrofit Kit with Existing TRIND Option

To install the FlexPay EMV Retrofit Kit with existing TRIND option, proceed as follows:

- 1 Locate the TRIND Adapter Board (M08472A002) mounted on the HIP assembly as shown in [Figure 31](#).

Figure 31: HIP Assembly

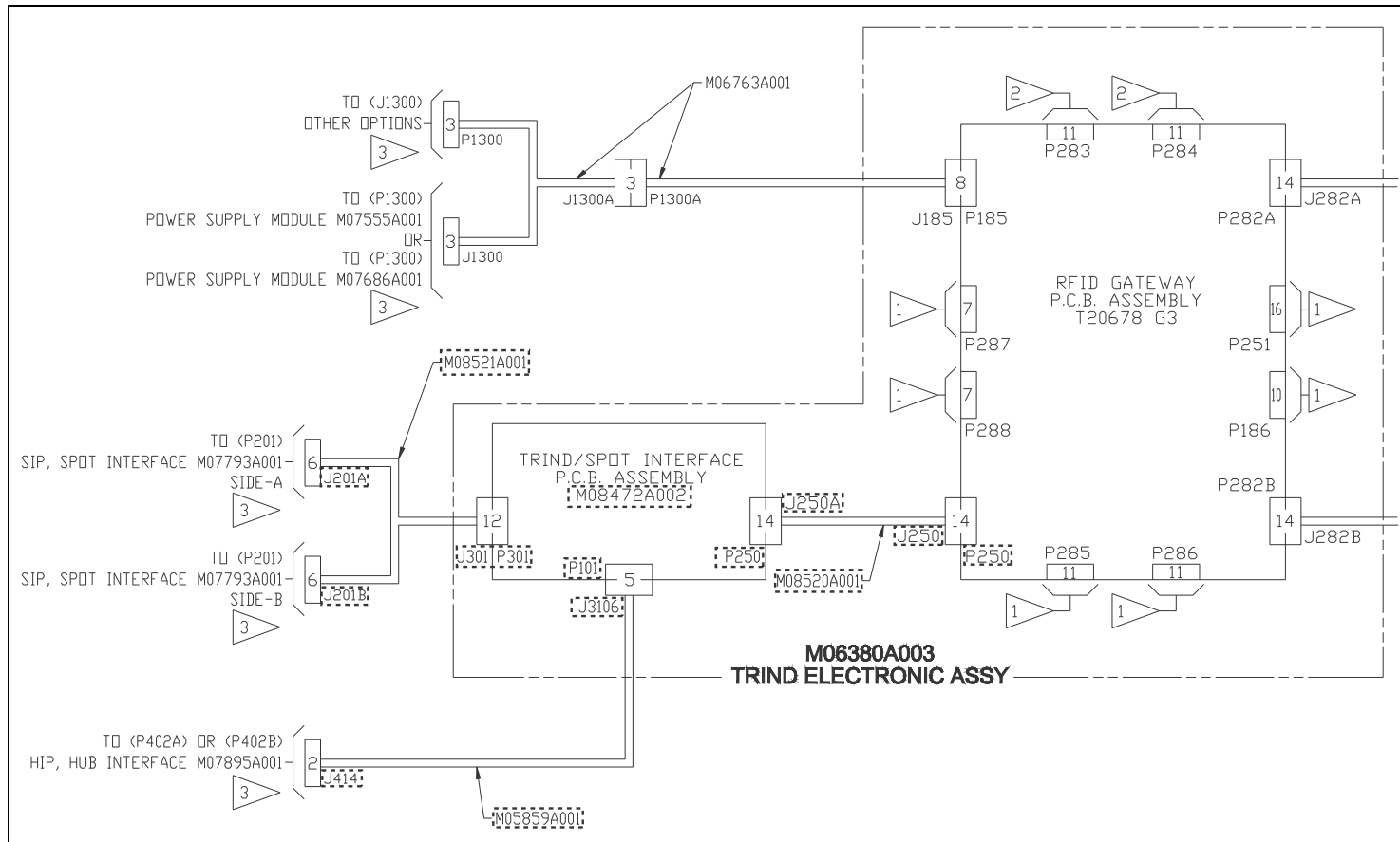


- 2 Connect the cables from the TRIND adapter board as follows (see [Figure 32](#) on [page 26](#)):
 - a Route the M05859A001 Cable to the HIP board, and connect the J414 to P402A or P402B on the HIP board.
 - b Route the M08520A002 Cable to the TRIND Gateway Board (T20678-G3) and connect the J250 to P250 on the gateway board.
 - c Route the M08521A001 Cable to the SIP Board (M07793A001) mounted on side A door and side B door. Connect the J201A connector to P201 on the SIP board mounted on side A door. Connect the J201B connector to P201 on side B door.
- 3 Connect the two cables marked M07948A002 to each door assembly by plugging the end with COM 2 and COM 4 connectors to the EMV display connectors marked with the same designation. Plug the connectors on the other end of the J103 and J105 cable, and into the P103 and P105 connectors respectively on the SIP board.

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.

Figure 32: TRIND/SPOT Interface Board (M08472A002) Connections



Installing the FlexPay EMV Retrofit Kits with existing TRIND option is now complete.

Completing Installation

After all connections are made and the unit is ready to power up, proceed as follows:

- 1 Reinspect all the connections and cable routing before applying power.
- 2 Apply power to the unit at the breaker panel.

Appendix: Installing Call Button

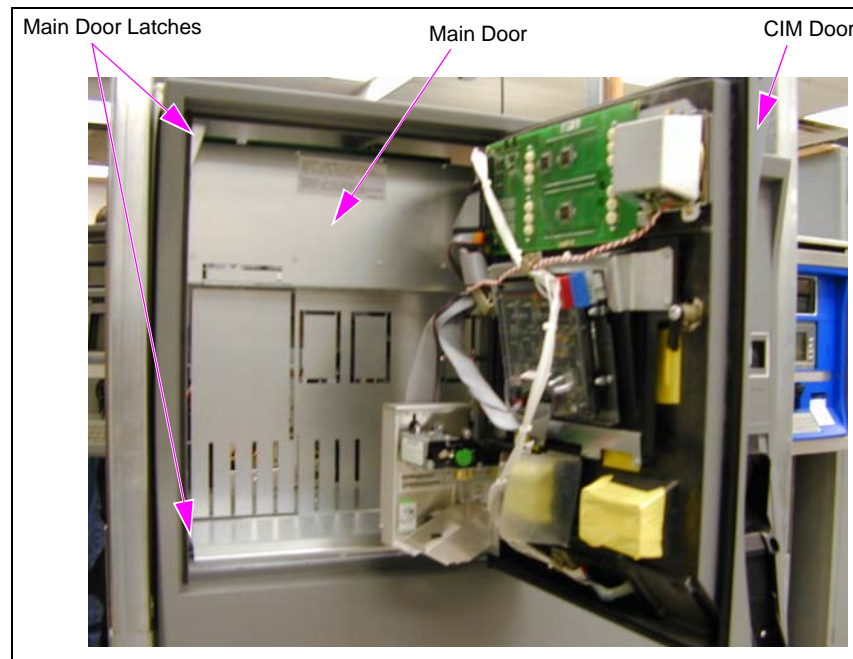
For details on cable connections, refer to “[Encore 500 Cable Block Diagrams](#)” on [page 36](#). For system cabling, refer to *MDE-3804 Encore and Eclipse Start-up/Service Manual*.

Preparing for Installation of Electronic Call Button

Note: The Electronic Call Button Retrofit Kit (M03059K001) requires speakers to be installed either inside or outside the dispenser. For details on speaker installation, refer to MDE-3970 Speaker Retrofit Kit Manual.

- 1 Read all instructions and observe all safety precautions during kit installation.
- 2 Remove power to the unit using the main breaker. For details on removing system power, refer to *MDE-3804 Encore and Eclipse Start-up/Service Manual*.
- 3 Open the CIM door (see [Figure 33](#)) using the key. Perform this step on both sides of the dispenser.
- 4 Disengage the main door latches and open the main door (see [Figure 33](#)). Perform this step on both sides of the dispenser.

Figure 33: Encore Unit with CIM Door Opened



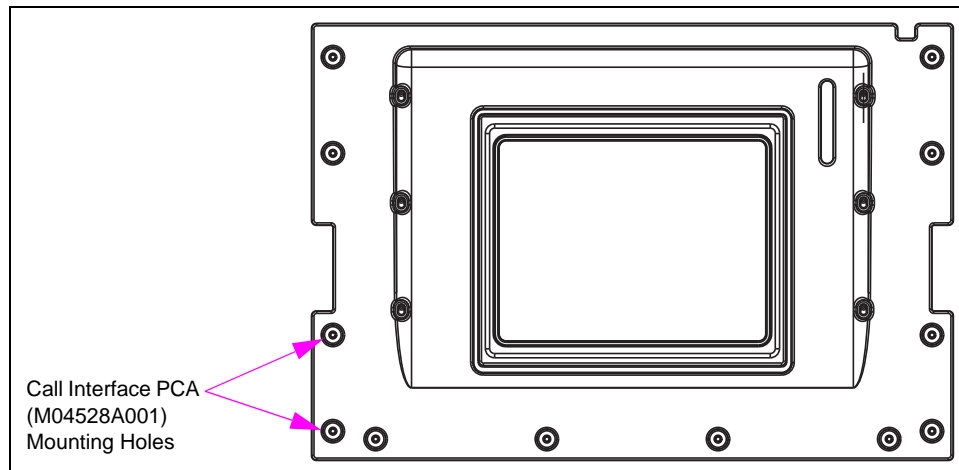
Installing Electronic Call Button

To install the electronic call button, proceed as follows:

- 1 From the rear of the CIM door, locate the two Circuit Board Supports (Q10651-02) mounting holes on the left side of the Back Display Bezel [M02164B001 (see [Figure 34](#))].

Note: [Figure 34](#) is used to illustrate where the circuit board supports and Call Interface PCA (M04528A001) must be installed. Display bezel varies based on the type of display used in the dispenser.

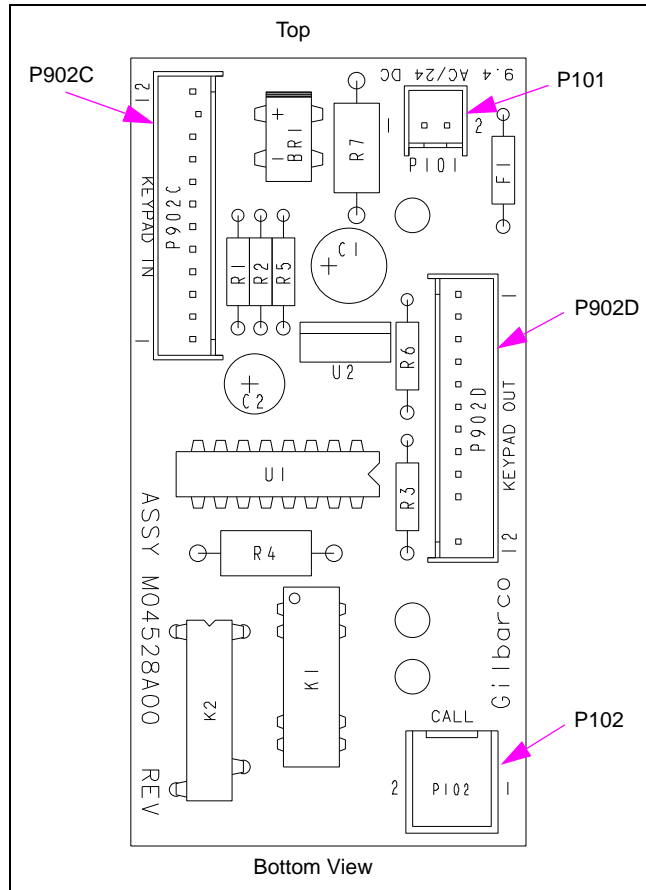
Figure 34: Back Display Bezel View from Rear of CIM Door



- 2 Use the following criteria to determine the type of fasteners that must be used to secure the call interface PCA:
 - If the dispenser contains a monochrome display, use the two Self-tapping Hexagonal-head Screws (Q11677-24).
 - If the dispenser contains a single-line CRIND produced before January 2003, use the two circuit board supports.
 - If the dispenser contains a single-line CRIND produced after January 2003, screws or circuit board supports are not required.
- 3 Obtain the two circuit board supports and two self-tapping hexagonal-head screws from the kit. Check the PCA mounting holes (see [Figure 34](#)) in the bezel to determine whether the supports or self-tapping hexagonal-head screws are required to secure the PCA to the bezel.
 - If the circuit board supports are used, insert the supports and proceed to step 4 on [page 29](#).
 - If the screws are used, proceed to step 5 on [page 29](#).
 - If no supports or screws are required, secure the PCA to the bezel using the orientation shown in [Figure 35](#) on [page 29](#).

- 4 Position the PCA onto the supports using the top and bottom orientation shown in [Figure 35](#) and proceed to step 6 on [page 30](#).

Figure 35: Call Interface PCA



- 5 Position the PCA onto the bezel using the top and bottom orientation shown in [Figure 35](#) and secure the PCA to the bezel using two self-tapping hexagonal-head screws.

- 6 Locate the door node PCA (see Figure 36) and unplug the jack J2115 of Main Display Backlight Power Cable [M00614A005 (see Figure 37 on page 31)].

Figure 36: Examples of Door Node 3 PCA Connections

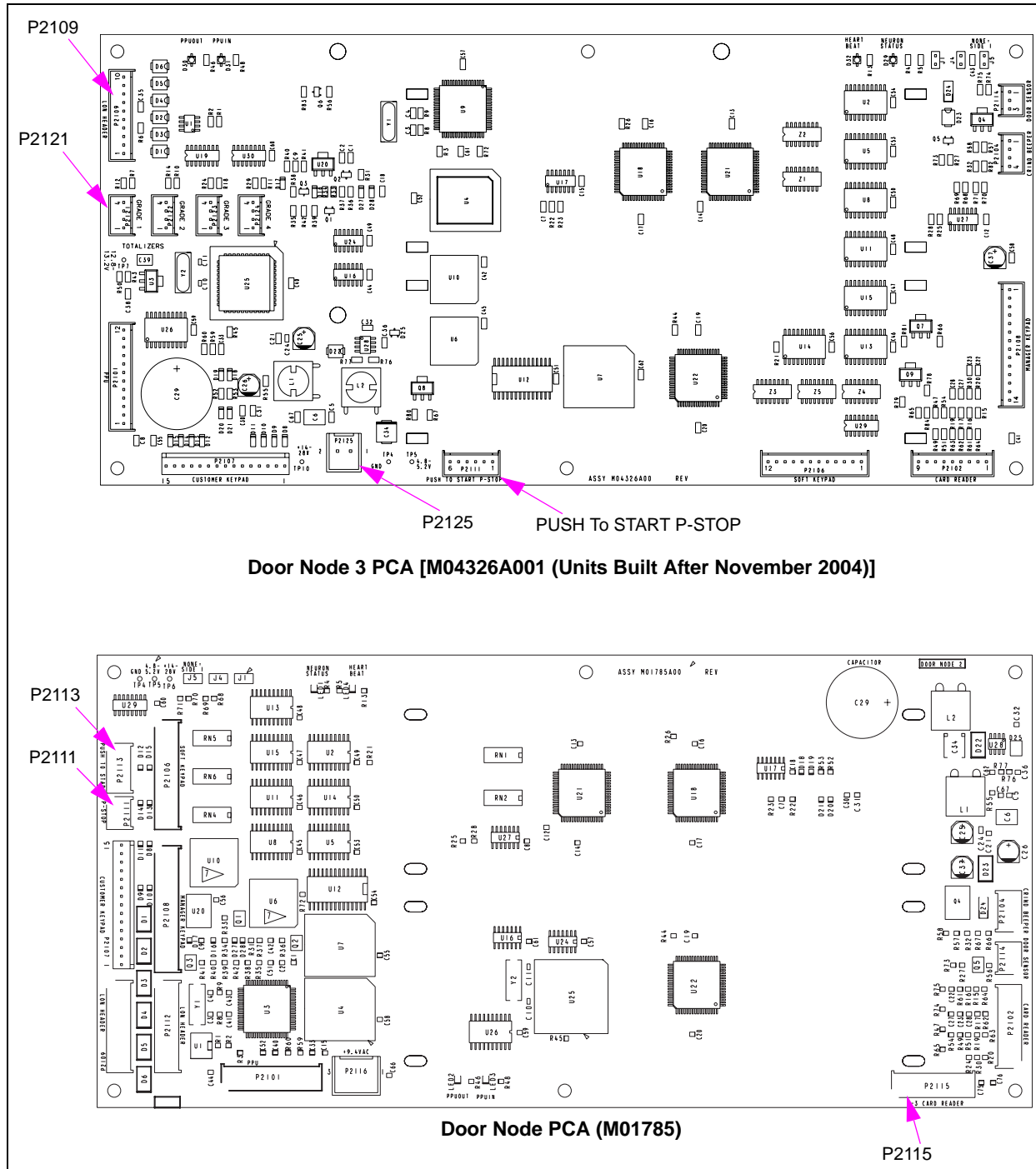
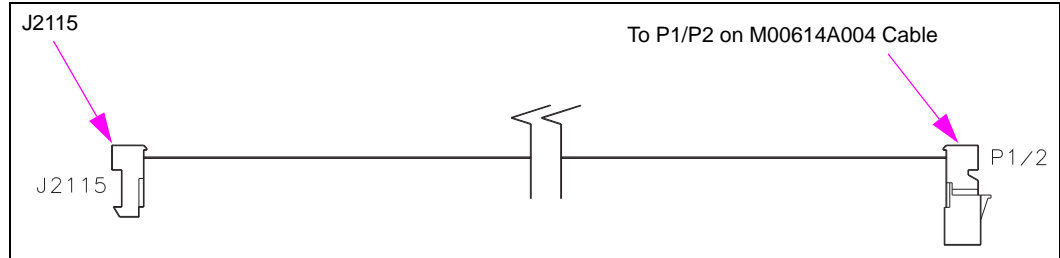
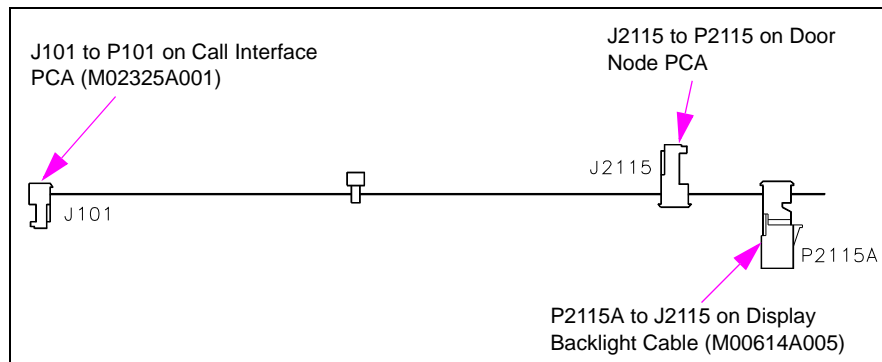


Figure 37: Main Display Backlight Power Cable

- 7 For units built before November 2004, obtain the Call Interface Cable [M02802A001 (see [Figure 38](#))] from the kit and connect the cable as follows:
- Insert the jack J101 (see [Figure 38](#)) into the plug P101 (see [Figure 35](#) on [page 29](#)) on the Call Interface PCA (M02325A001).
 - Insert the jack J2115 (see [Figure 38](#)) into the plug P2115 (see [Figure 36](#) on [page 30](#)) on the door node PCA.
 - Insert the plug P2115A (see [Figure 38](#)) into the jack J2115 (see [Figure 37](#)) on the main display backlight power cable.

Figure 38: Call Interface Cable

- 8 For units built before November 2004, obtain the Keypad to Call Cable [M02803A001 (see [Figure 39](#))] from the kit and connect the cable as follows:
- Insert the jack J902C (see [Figure 39](#)) into the plug P902C (see [Figure 35](#) on [page 29](#)) on the Call Interface PCA (M02325A001).
 - Insert the jack J902 (see [Figure 39](#)) into the plug P902B (see [Figure 40](#) on [page 32](#)) on the Options Keypad (M01109B003).

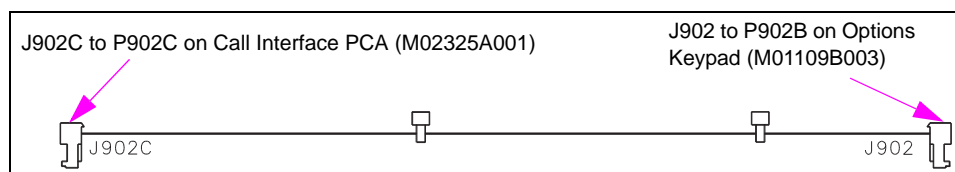
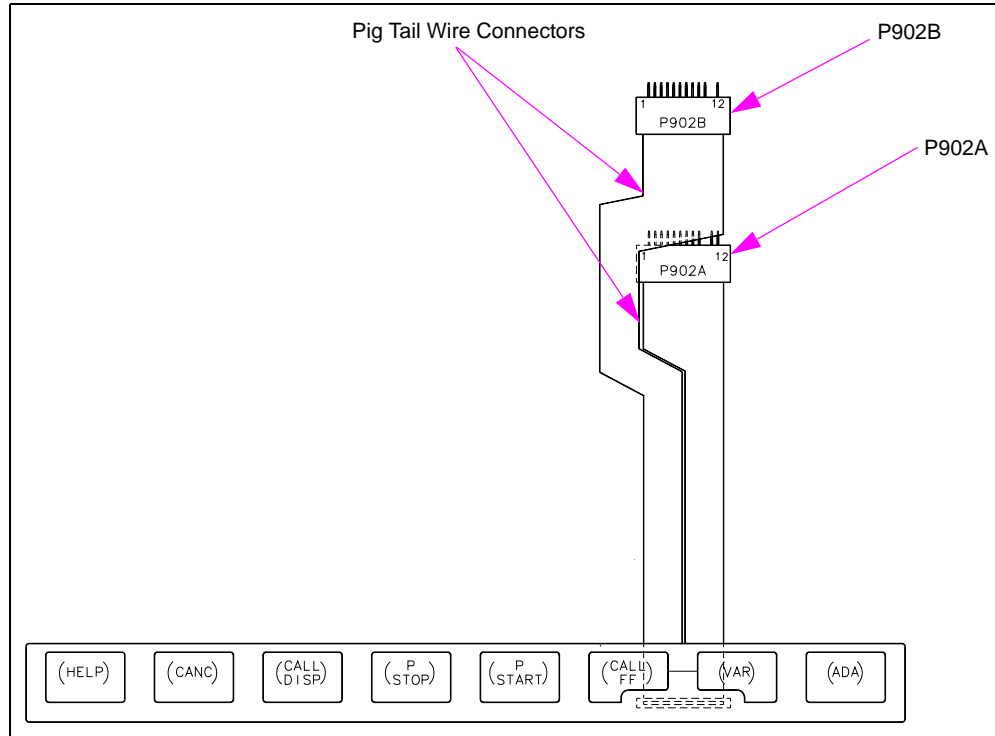
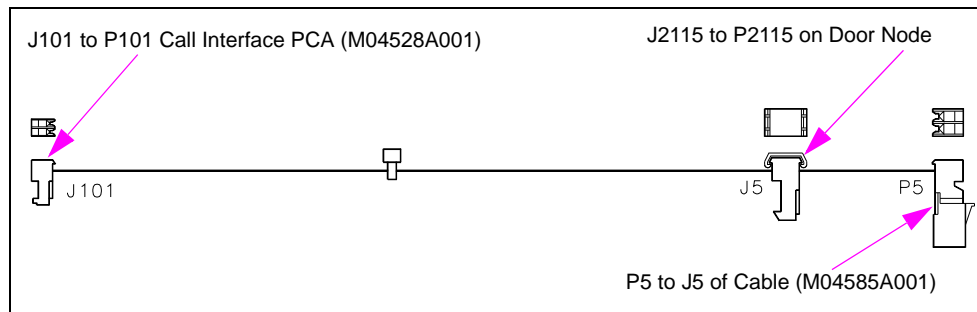
Figure 39: Keypad to Call Cable (M02803A001)

Figure 40: Miscellaneous Options Keypad (M01109B003)



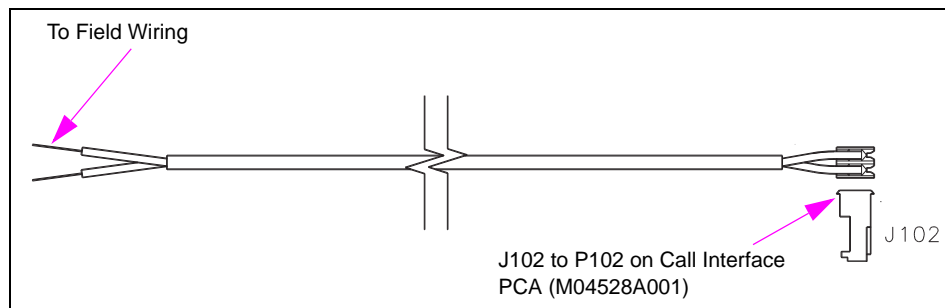
- 9 For units built after November 2004, obtain the Call Interface Cable [M04687A001 (see [Figure 41](#))] from the kit and connect the cable as follows:
 - Insert the jack J101 (see [Figure 41](#)) into the plug P101 (see [Figure 35](#) on page 29) on the Call Interface PCA (M04528).
 - Insert the jack P5 (see [Figure 41](#)) into the plug J5 on the Door Node PCA Cable (M04585A001).
 - Insert the plug J5 (see [Figure 41](#)) into the jack on the display monochrome graphic.

Figure 41: Call Interface Power Cable [M04687A001 (After November 2004)]



- 10 For units built after November 2004, obtain the Keypad to Call Cable [M02803A001 (see [Figure 39](#) on [page 31](#))] from the kit and connect the cable as follows:
 - Insert the jack J902C (see [Figure 39](#) on [page 31](#)) into the plug P902D (see [Figure 35](#) on [page 29](#)) on the Call Interface PCA (M04528A001).
 - Insert the jack J902 (see [Figure 39](#) on [page 31](#)) into the Start/Call/Stop Keypad (M01735B001).
- 11 Obtain the Call Button Cable [M01233A002 (see [Figure 42](#))] from the kit and insert the jack J102 into the plug P102 (see [Figure 35](#) on [page 29](#)) on the Call Interface PCA (M04528A001).

Figure 42: Call Button Cable



- 12 Obtain the Call Interface Cable (M04687A002) from the kit and insert the jack J102 into the plug P102 (see [Figure 35](#) on [page 29](#)) on the call interface PCA. Run the field wiring end of the cable to the back side of the dispenser. For an illustration of the call button cable run, see [Figure 43](#) to [Figure 46](#) on [page 35](#).

Figure 43: Rear View of Encore CIM Door with Call Button Cabling

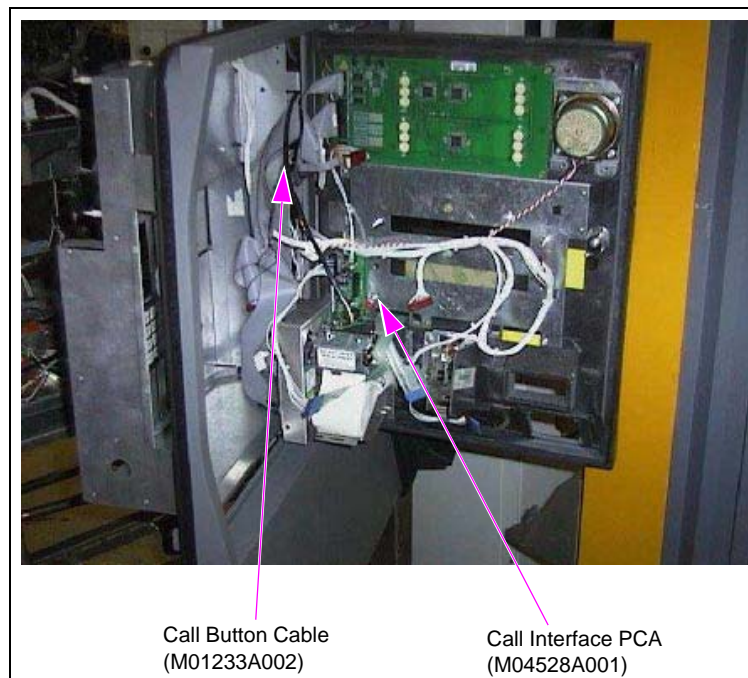


Figure 44: Rear View of Encore Main Door with Call Button Cable Run

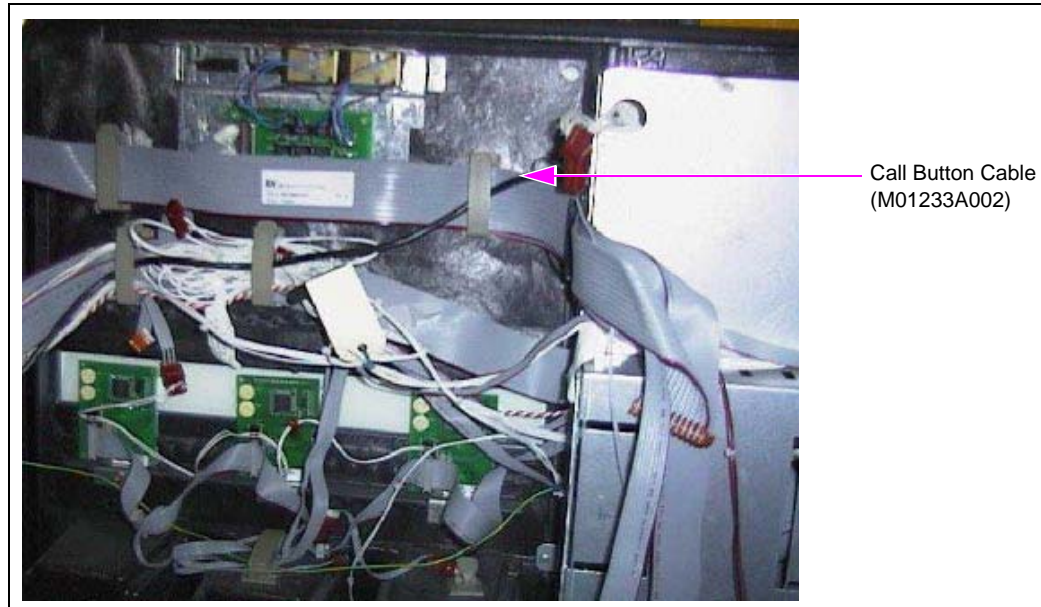
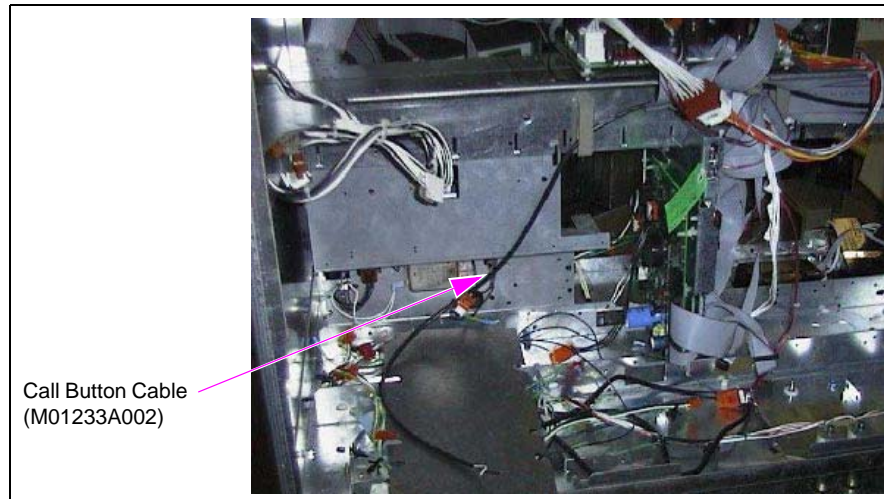


Figure 45: Encore Top Electronics Shelf with Call Button Cable Run



Figure 46: Encore Bottom Electronics Shelf with Call Button Cable Run



- 13 Properly route and dress the newly installed cabling so that door obstruction and cable pinching do not occur.

Activating Electronic Call Button

The electronic call button is activated when power is restored to the dispenser.

Completing Installation of Electronic Call Button

To complete the installation of the electronic call button, proceed as follows:

- 1 Provide a conduit connection from the auxiliary Junction Box (J-box) to a separate conduit stub (connection hardware and stub furnished by installing contractor) on the foundation. Connect to the auxiliary J-box.
Note: Installer's procedures and materials for connection between the auxiliary J-box and stub must comply with the National Fire Protection Association (NFPA 70®) and The National Electrical Code (NEC). Call button wiring must not share the same conduit as the dispenser power wiring.
- 2 Connect external speaker wires (furnished by installer) to internal speaker wires and call button wires in the auxiliary J-box based on the requirements of the third-party intercom system.
Note: Third-party intercom system must be equipped to intercept and interpret the call signal through the communications (two-wire) loop. Call button circuit is normally open.
- 3 Turn on the third-party intercom system and test the call button and speaker to ensure proper operation and installation. Press the call button to produce an audible beep or other signal.
- 4 Inform the station personnel of operating procedures and purpose of the call button.
- 5 Turn on power to the unit.
- 6 Close and secure all doors.
- 7 Install the CIM door graphics.
- 8 Clean up the work site. Remove all the tools and materials that must be discarded.

Installing the electronic call button is now complete.

Encore 500 Cable Block Diagrams

Following are the cable block diagrams for Encore 500:

Figure 47: Encore 500 Cable Block Diagram (M00284)

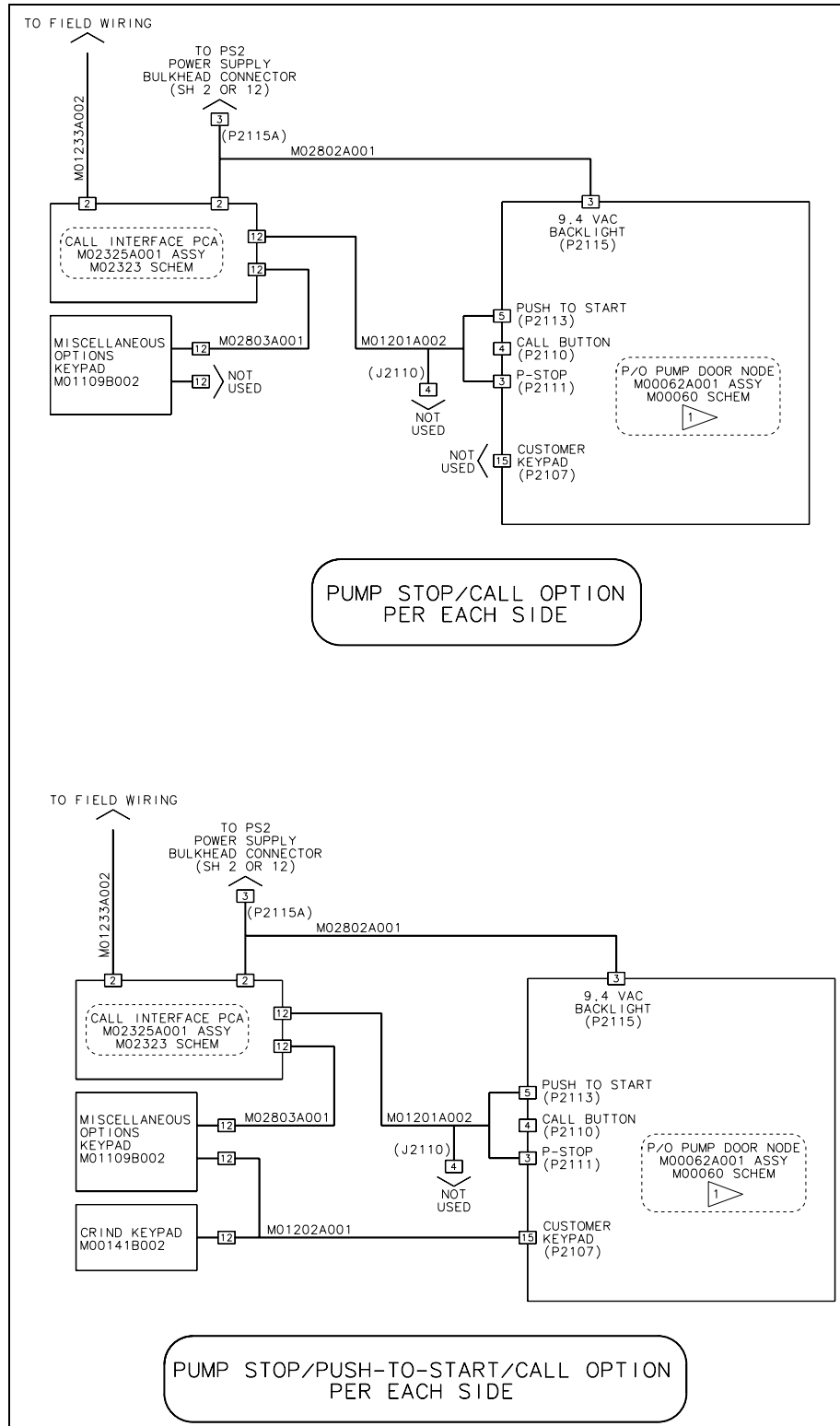
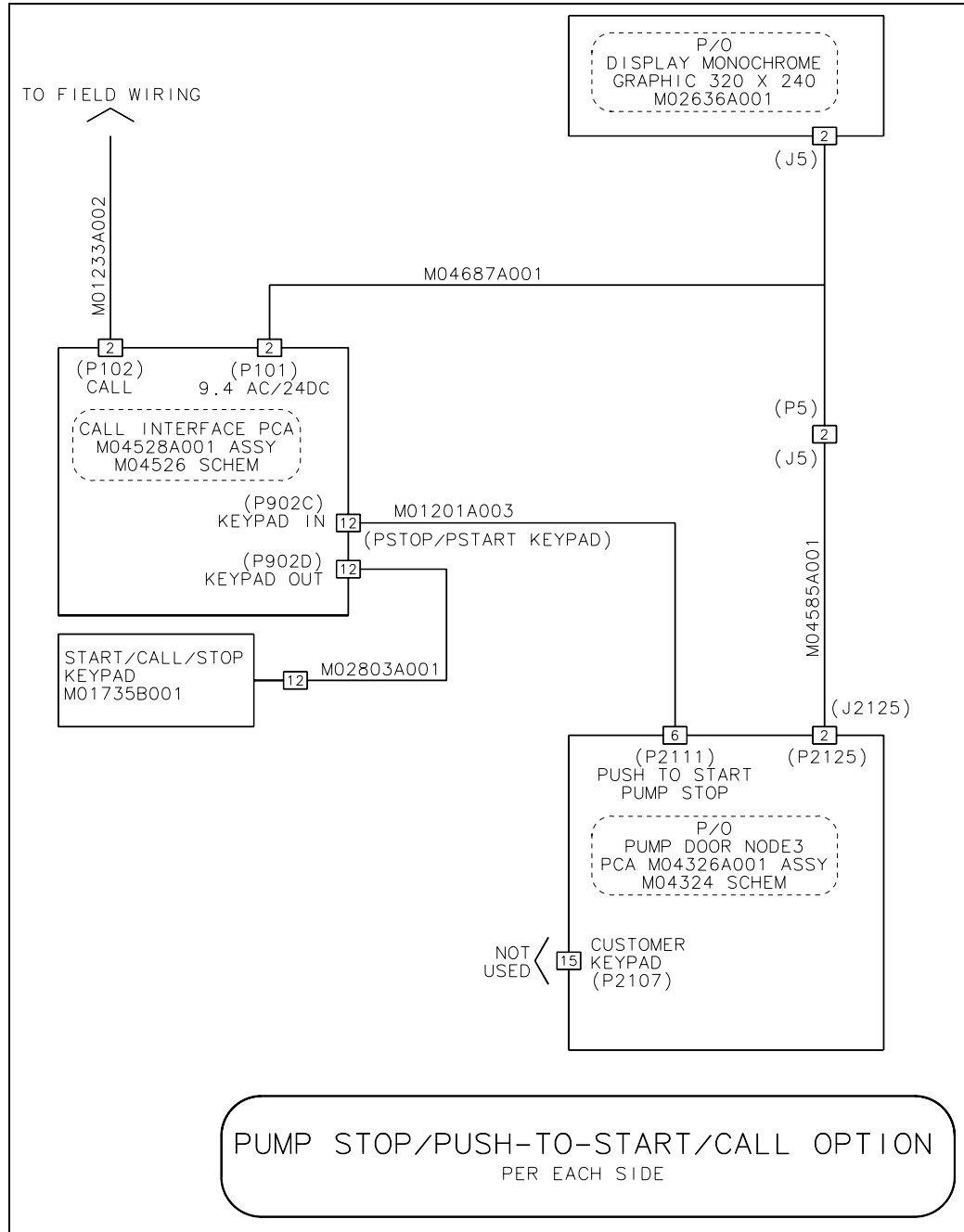


Figure 48: Encore 500 Cable Block Diagram (M04455)



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MDE-4844F FlexPay™ EMV® CRIND® Retrofit Kit (EPK EMV ENC3 and EPK EMV ENC5) Installation Instructions
for Encore® 300/500 · August 2014