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Retrofit G6-300 / G6-400 + InvencoLink / PIB GVR Encore 500S 700S (US & Canada) Installation Guide		

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Kit Part Number: RF00034-XX



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Release History

Version	Prepared by	Date	Change description
0	Michael Doh	31-Oct-19	Based on the US version (DCV-00452 R00; initial version for UL approval
1	Michael Doh	02-Dec-19	Kit and OPT + panel part numbers update
2	Michael Doh	04-Dec-19	Corrected OPT + part numbers and steps numbers in install procedure
3	Michael Doh	05-Dec-19	Typing errors corrected
4	Michael Doh	06-Apr-20	Updated kit part number format and included 700S dispenser
5	Jojie Adigue	03-Feb-21	Change the power supply P/N from EZ0632 to EZ0704.
6	Shibani Joshi	25-Aug-22	Changed MN0031 to MN0029
7	Shibani Joshi	17-Jan-23	Added content for G6-400 OPT installation and updated PSU to EZ0853 with the two power cable connections.
8	Shibani Joshi	06-Sep-23	UL Comments addressed, Added instructions and information about the revised panel assembly, Pump Interface Board (PIB) install procedure added.+ Instructions about the Omnia board + Added EK0270 and steps to connect M07957A016 to the 3 button aux keypad tail + Added content about the Non-CRIND dispensers
9	Michael Doh	17-Dec-23	UL comments addressed

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Invenco has taken great effort to verify the accuracy of this document but assumes no responsibility for any technical inaccuracies or typographical errors



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1 Introduction

The documentation provides some basic guidelines for installing the G6-300 / G6-400 Outdoor Payment Terminal (OPT) system.

- This Retro-Fit Kit can be installed into either Side A or Side B of a GVR Encore 500S or 700S dispenser (CRIND or Non-CRIND);
- **For a double-sided installation, two of these Kits are required.**

IMPORTANT NOTE: The installer must review the entire installation guide prior to starting any work on the dispenser. If the construction of the dispenser in the installation guide does not match the construction of the dispenser being retrofitted, then do not proceed with the installation and contact customer service.

In particular, check for the following:

- An earlier revision of these Retrofit kits may not have the InvencoLink DC power cable fitted on the PSU assembly. If this is the case, stop the installation and contact technical support to obtain the correct matching revision of the kit.
- The Encore 500S or 700S dispenser must have the Omnia board present. This must be checked at the start of the installation, at steps 6 & 7 of the Disassembly Procedure (section 4.1).


Note: There are images with the OPT fitted during the installation procedure throughout the document. Depending on which kit you are installing, it could be the G6-300 or the G6-400 OPT. Refer to the below images to identify the OPT you are working with:



G6-300 OPT



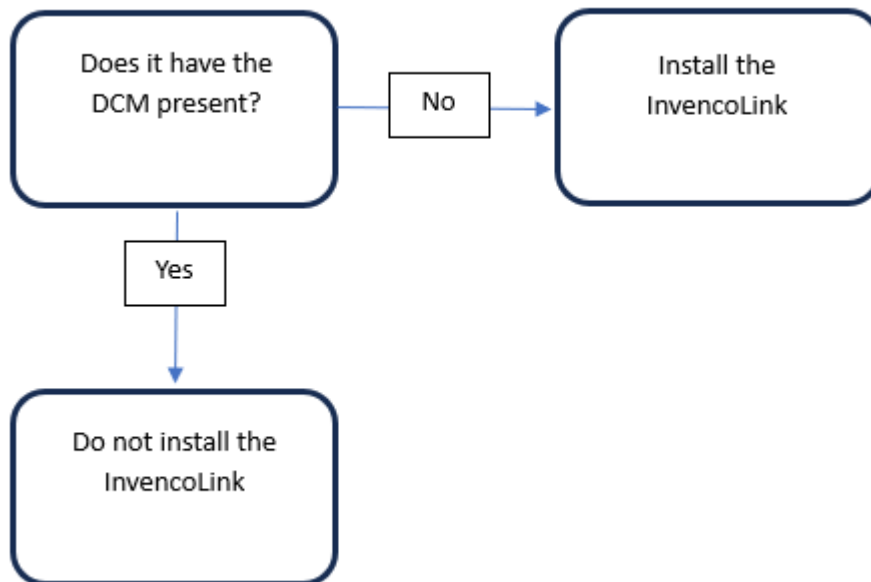
G6-400 OPT

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Invenco Link

This installation MAY require the pre-installation of UL Listed by Report Retrofit Kit Part Number RF00033-XX (InvencoLink) before installation into the dispenser. The process is covered in §4.2.1 Pre-Installation Procedure of this instruction, by reference to the instructions in those Kits.

Note: Check if the DCM is present in the dispenser, on the opposite side of the Omnia board. If it is, then DO NOT install the InvencoLink. If it is not present, follow steps to install the InvencoLink. This must be checked at the start of the installation, at step 6 of the Disassembly Procedure (section 4.1). Refer to the below flowchart for further reference:



If required, for a single-sided installation, or if this Kit will be installed into Side One (i.e. the first side installed) of a double-sided installation, it requires the pre-installation of UL Listed by Report Retrofit Kit Part Number RF00033-XX (InvencoLink Converter) before installation into the dispenser.

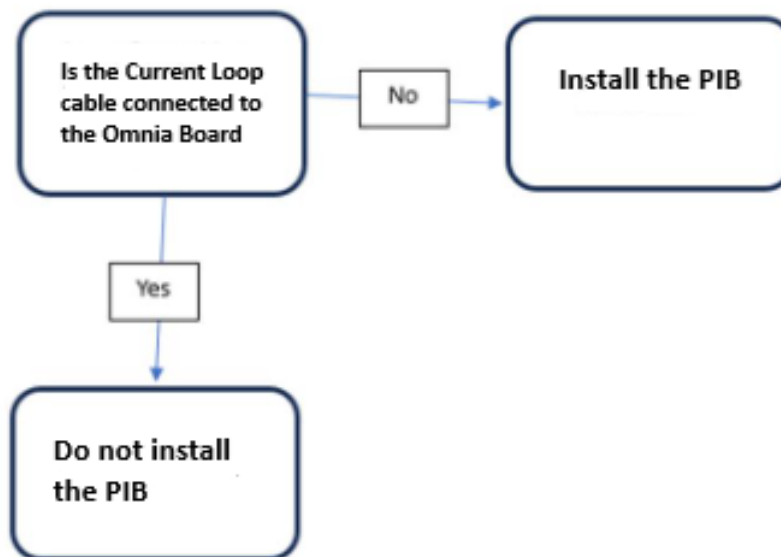
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Pump Interface Board


This installation MAY require the pre-installation of UL Listed by Report Retrofit Kit Part Number RF00100-XX (Pump Interface Board) before installation into the dispenser. The process is covered in §4.2.2 Pre-Installation Procedure of this instruction, by reference to the instructions in those Kits.

Note: The PIB is only required if there is no Current Loop Cable connection from the dispenser to the Omnia Board as per the Disassembly Process. This must be checked at the start of the installation, at step 7 of the Disassembly Procedure (section 4.1).

Refer to the below flowchart for further reference:



If required, for a single-sided installation, or if this Kit will be installed into Side One (i.e. the first side installed) of a double-sided installation, it requires the pre-installation of UL Listed by Report Retrofit Kit Part Number RF00100-XX (Pump Interface Board) before installation into the dispenser.

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1.1 Tools Required

The following tools are required to mount the G6-300 / G6-400 OPT:

- Gilbarco “CH 751” Key
- Gilbarco “GBCO” Key
- Philips #1 screwdriver
- Philips #2 screwdriver
- Flat 5mm screwdriver
- Side cutters
- Cable (zip) ties
- Pliers
- ¼” . 5/15” Socket or Nut Driver
- #6, #8 & #10 Hex Socket or Nut Driver
- T10 Torx driver



WARNING

Do NOT use power tools if working on a fuel station forecourt.

Any spark could cause an explosion.

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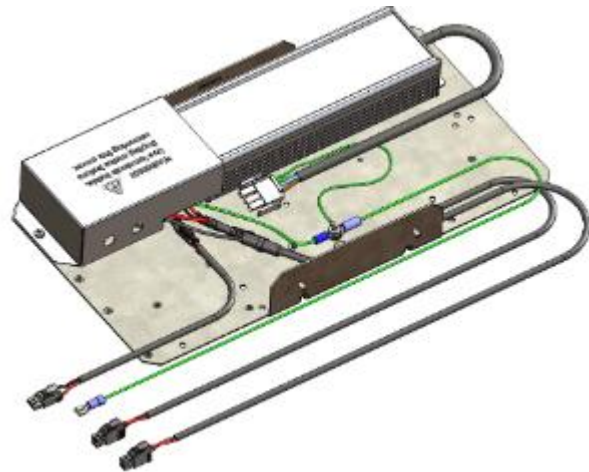
1.2 Installation Kit Contents

Unpack the G6-300 / G6-400 Encore 500S or 700S Retro-Fit Kit (RF00034-XX) and check that all the parts listed below are present. Also refer to the pre-installation procedure (section 4.2.1) relating to the communication method parts.

RFK Hatch Panel with pre-installed G6-300 / G6-400 OPT (RP00034-XX):



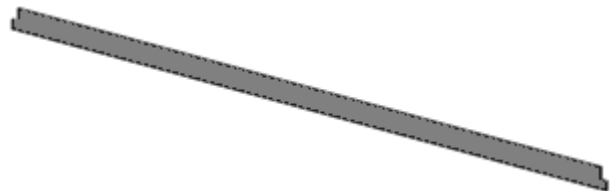
PSU plate with cables (EZ0853):



Isolating Cover with captive screws (MZ0349)



Thick, Grey Gasket (MP0653):



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Sundry Parts:

- 10 MS0101 SCREW, #6-20 x 1/2", HEX HEAD 1/4", SS410
- 5 MS0149 SCREW #4-24 X 3/8", HI-LO THREAD, PAN HEAD, PHILIPS #1, SS410
- 6 MS0150 SCREW, SEMS, #6-20 X 3/8", TYPE B, HEX HEAD 1/4", SS410, WASHER 3/4"
- 2 MN0029 NUT, K-LOCK, 8-32 UNC, 11/32" AF, ZINC PLATED
- 1 MF0046 FASTENER, CABLE CLIP
- 4 MS0166 SCREW, #10-32 x 3/4", SERRATED FLANGE
- 4 MN0027 NUT, K-LOCK, #10-32
- 4 MS0323 SCREW, SEMS, PLASTITE 48-2, #4-20, 1/2", T10, SS

Cables:



EK0124
Gilbarco Pump to Pump Adaptor



EK0139
Gilbarco E500S to InvencoLink



EY0131
Cat-5e, Flexible, YELLOW




EK0270 – Intercom Speaker
Cable (CABLE ADAPTOR, G7 AL
SPKR/INTERCOM, 0.5m)



EK0130
Ground Cable



M07957A016
3-Button keypad ECIM cable

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2 Safety & Compliance Information

This section introduces the hazards and safety precautions associated with installing, inspecting, maintaining or servicing the G6-300 / G6-400 OPT. Before proceeding, check the relevant hazard and safety information. Fire, explosion or electrical shock could occur and cause death or serious injury if these safe service procedures are not followed.

2.1 Preliminary Precautions

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

2.2 Emergency Total Electrical Shut-Off

Locate the forecourt emergency fuel shut-off valves and electrical isolation breakers. Understand how to use these, should they be required. Locate the switch or circuit breakers that shut-off all power to all fuelling equipment and dispensing devices.

2.3 Total Electrical Shut-Off Before Access

Any procedure requiring access to electrical components or the electronics of a pump/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 the G6-300 /G6-400 OPT.


2.4 Evacuation, Barricading and Shut-Off

Any procedures requiring accessing a pump/dispenser head requires the following three actions:

- An evacuation of all unauthorized persons and vehicles
- Using safety tape or cones as barricades to the affected units
- A total electrical shut-off of the affected unit(s)

2.5 Read the Manual

Read, understand and follow this manual and any other labels or related materials supplied with the equipment. If you do not understand a procedure, call an Invenco Authorized Service Centre or Invenco Service Officer. It is imperative to your safety and the safety of others to understand the procedures before beginning work.

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2.6 Follow the Regulations

Regulations in OSHR (Occupational Safety and Health Regulations), national, state and local codes, including customer requirements 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 and may affect the safe use and operation of the equipment.

2.7 Replacement Parts

Use only genuine Invenco replacement parts and retrofit kits on your installation. Using parts other than genuine Invenco replacement parts could create a safety hazard and violate local regulations.

3 Safety Symbols and Terminology



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 hazard. 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: Designates a hazard or unsafe practice which may result in minor injury, property or equipment damage.

Working With Fuels and Electrical Energy

3.1 Prevent Explosions and Fires

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

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3.1.1 No Open Flames



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

3.1.2 No Sparks - No Smoking



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

3.1.3 Working Alone

It is highly recommended that someone who is capable of rendering first aid be present during servicing. Be familiar with Cardiopulmonary Resuscitation (CPR) methods if you are working with or around high voltages. This information is available from the First Aid training providers. 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 Tag-out/Lockout procedures. If you are not familiar with this requirement, refer to information in the relevant manual and OSHA documentation.

3.1.4 Working with Electricity Safety

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 Tag-out/Lockout requirements. Station employees and service contractors need to understand and comply with this program completely to ensure safety while equipment is down.

For US: Follow all applicable requirements in NFPA 30, 30A and 70, and those of the Local Authority Having Jurisdiction for electrical wiring.

For Canada: Follow all applicable requirements in Canadian Electrical Code (CE Code), CSA C22.1.

3.1.5 Hazardous Materials

Some materials present inside electronic enclosures may present a health hazard if not handled correctly. Be sure to clean hands after handling equipment. Do not place any equipment in mouth.

3.1.6 In an Emergency

Compile the following information in case of emergency:

- Location of accident (e.g. address, front/back of building, etc).
- Nature of accident (e.g. possible heart attack, struck by a vehicle, burns, etc).
- Age of victim (e.g. baby, teenager, middle-age, elderly).

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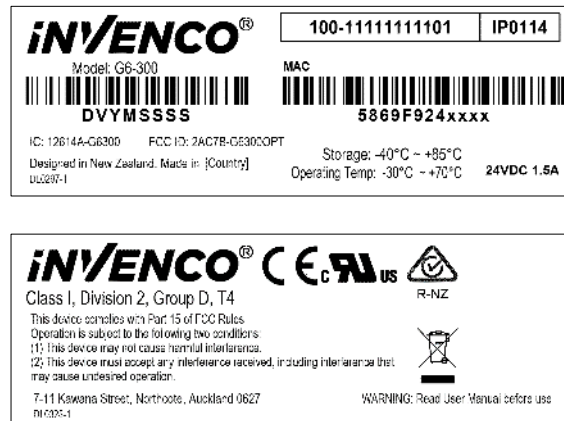
- Whether or not victim has received first aid (e.g. stopped bleeding by application of pressure etc).
- Whether or not victim has vomited (e.g. if swallowed or inhaled something etc).

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

3.1.7 Approvals

Invenco develops and maintains its hardware and software products using industry-standard quality processes, and is audited by various bodies.


The Invenco G6-300 / G6-400 has UL File Reference of E469526 and E480135 and carry labelling similar to this:



The Invenco Retro-Fit Kit has UL File Reference of MH61528.

3.2 Computer Programs and Documentation

All Invenco Group Ltd. computer programs (including software on discs and within memory chips) and documentation are copyrighted by, and shall remain the property of, Invenco Group Ltd. Such computer programs and documents may also contain trade secret information. The duplication, disclosure, modification, or unauthorized use of computer programs or documentation is strictly prohibited, unless otherwise licensed by Invenco Group Ltd.

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4 Installation Guide

1. Please ensure all safety procedures are followed per requirement by the customer before installing the retrofit kit.
2. Remove power to Pump and follow the OSHA Lock-out/Tag-out procedures.



WARNING

Failure to turn off the unit during 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 of the unit and during kit installation.

3. This installation will require various panel replacements. The panels will be removed from the door and replaced with pre-built panels with the OPT modules pre-fitted.
4. The guide covers disassembly procedure for the CRIND and the Non-CRIND variations of the Encore 500S and 700S dispensers.

4.1 Disassembly Procedure

Before installation of the equipment can take place, the existing electronic payment assembly must be removed from the dispenser. This section covers the removal of these components including:

- CIM panel and attached components (Display, Keypad, etc)
- Card Reader and Plate

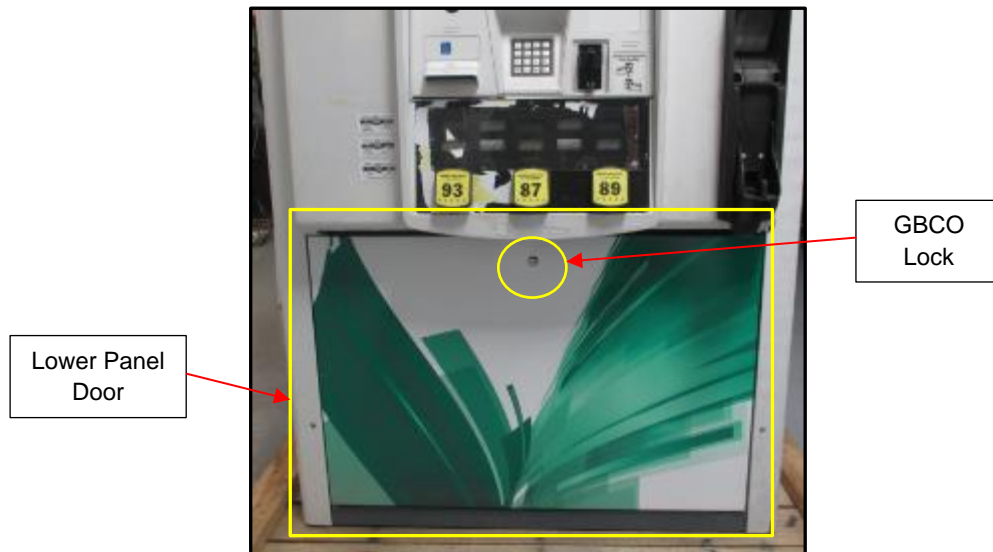
Note: Throughout this disassembly procedure there are many cable assemblies that will be unplugged and will not be reused. It is up to the discretion of the installer whether to remove these cables or position them inside of the dispenser cavity in as to not cause obstruction.

Note: It may be necessary to unplug a cable assembly on various boards such as the totalizer board or Door Node to remove other CRIND related cable assemblies. Unplug these cables as necessary and re-plug them in immediately afterwards. It is recommended that the installer of this kit marks each unplugged cable after it is unplugged to make it is easier to identify them when it comes time for re-installation.

1. At the main disconnect panel, disconnect all power to the dispenser and the pump servicing the dispenser. Tag all disconnected breakers to prevent others from reconnecting power.
2. Identify the A Side of the dispenser.

Note: For the purposes of this manual, Side A of the dispenser refers to the side with the weights & measures tag on the inside of the electronics cabinet. You may need to open both doors to determine which is Side A. See steps 3-5 below.

3. Identify the type of dispenser (CRIND or Non-CRIND) you are working with based on the images below. Unlock and remove the panel door with the "GBCO" key. Set it aside. Do not discard the lower door. It will be re-installed later during the installation procedure.

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Location of Panel Door and Lock (for CRIND dispenser)



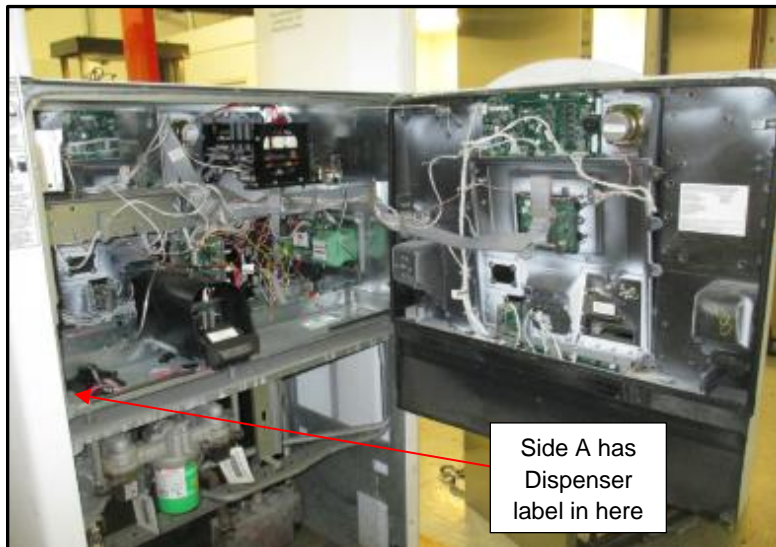
Location of Panel Door and Lock (for Non-CRIND dispenser)

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4. Undo the lower door latch located underneath the left-hand side of the Main Dispenser Door.



5. Unlock the main dispenser door lock located on the upper left-hand side of the Main Dispenser Door using the "CH 751" key. Open the door until it locks into its fully open position.



Side A has
Dispenser
label in here

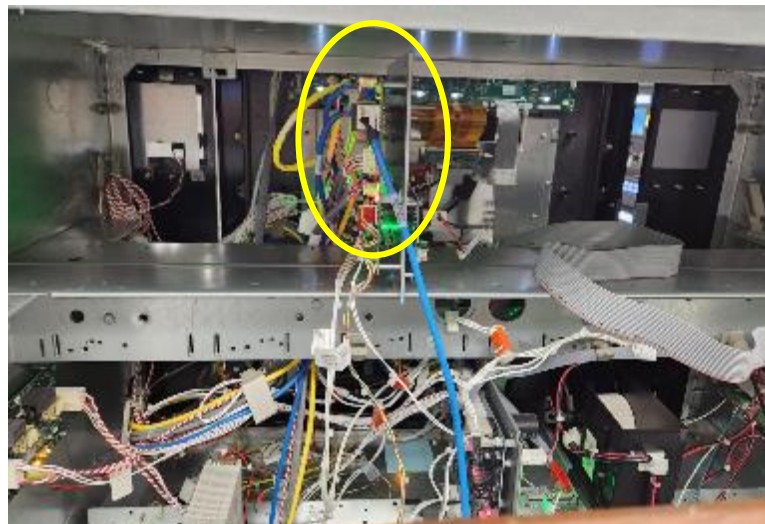
Main Dispenser Door in fully opened position (for CRIND dispenser)

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Main Dispenser Door in fully opened position (for Non-CRIND dispenser)

6. Identify the Omnia board located in the dispenser, and check for the presence of the DCM, which if present, will be located on the back of the Omnia board. If the DCM is not present, the Invenco Link must also be installed, as per the introduction section.

Omnia board location:



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DCM:

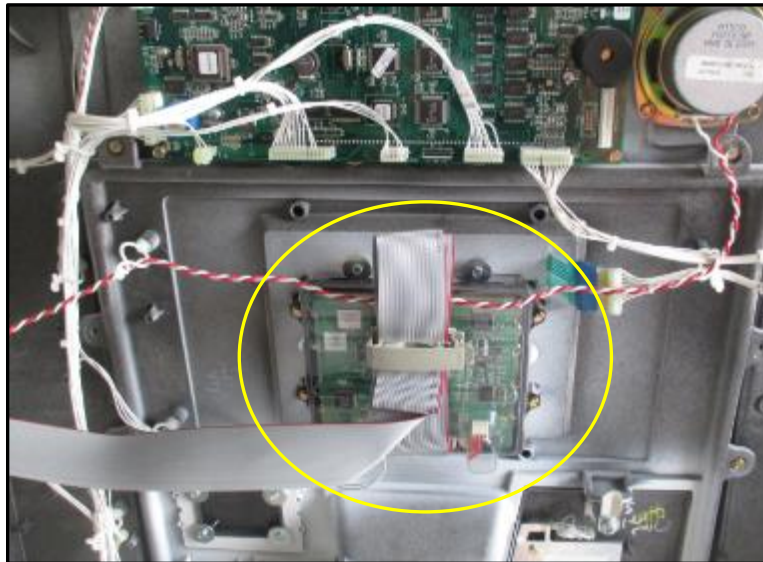


7. Identify the P300 connector on the Omnia board and check for the presence of 2-wire connection from the dispenser (i.e. if there is a cable connected to P300 but the other end is not connected, the connection is not present). If this connection is not present, the Pump Interface Board must also be installed, as per the introduction section.



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8. **For the CRIND dispenser:** Unfasten the cable clips holding the Monochrome Display assembly cables and unplug the cables.



Location of Monochrome Display

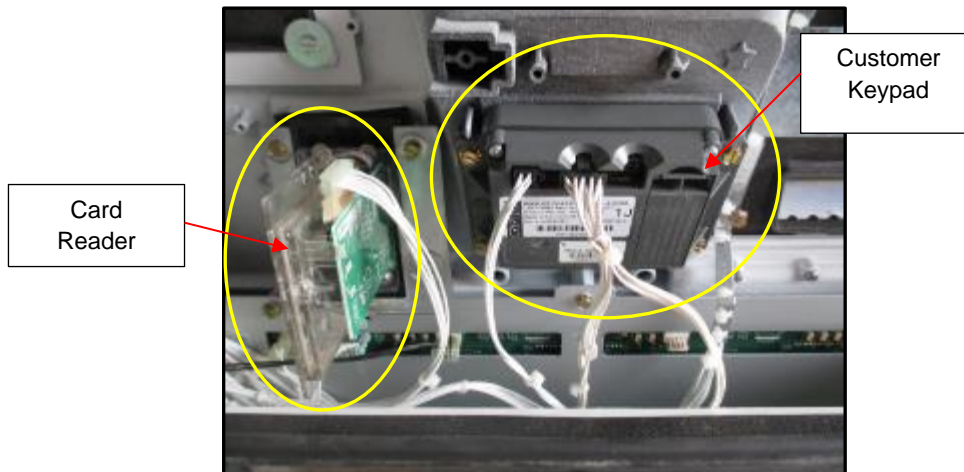
For the Non-CRIND dispenser: The inside of the dispenser door will look like below.



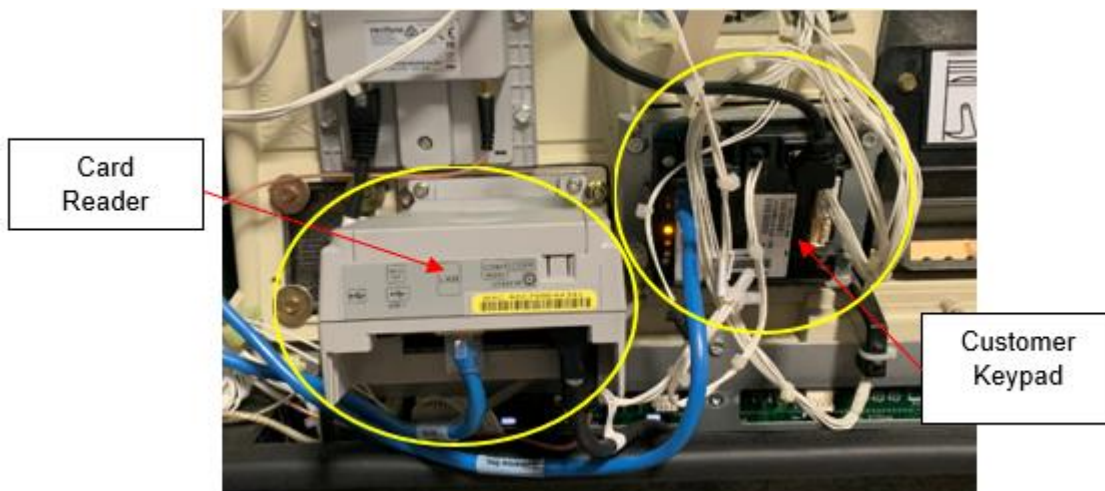
Non-CRIND dispenser door on the inside.

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9. **For the CRIND dispenser:** Unplug the Customer Keypad and Card Reader assembly cables.



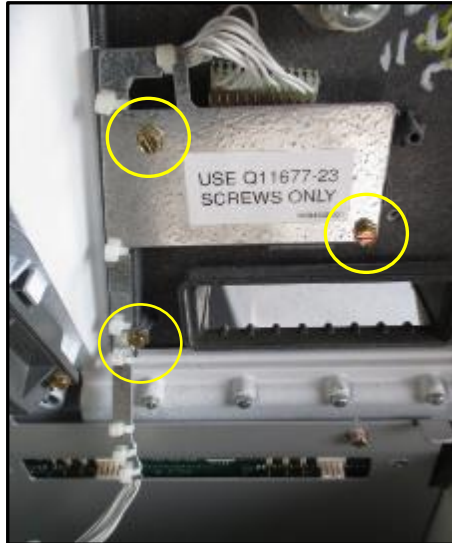
Encore 500S Location of Card Reader and Customer Keypad



Encore 700S Location of Card Reader and Customer Keypad

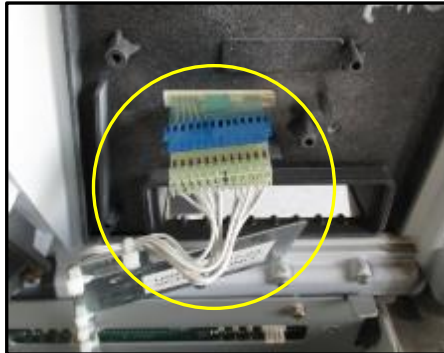
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- 10. For the CRIND dispenser:** Remove and discard the three ¼" screws that fasten the ADA keypad plate to the dispenser door (if present).




Location of ADA Keypad Plate screws

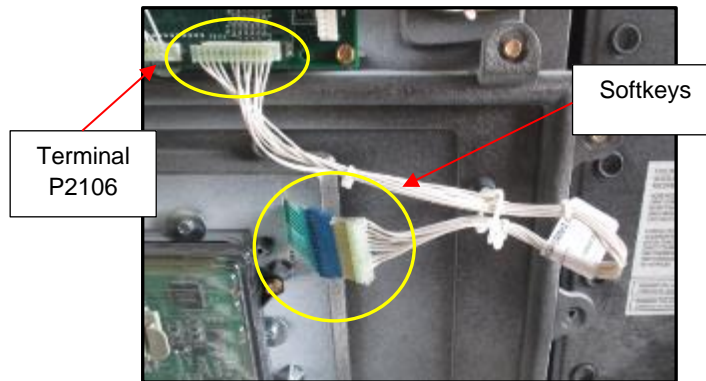
- 11. For the CRIND dispenser:** Unplug the ADA keypad (if present).



Location of ADA keypad cable assembly

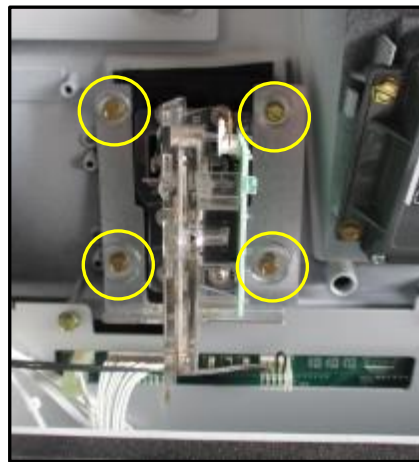
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- 12. For the CRIND dispenser:** Unplug the Softkey cable assembly from both the Softkeys and the Door Node at terminal position P2106 (If present).



Location of Softkey cable assembly

- 13. For the CRIND dispenser:** Remove and discard the four sheet-metal screws that fasten the card reader plate to the door (Encore 500S: #6; Encore 700S: 5/16") and remove the card reader and plate from the dispenser door. The card reader plate can be discarded. It will not be re-installed.



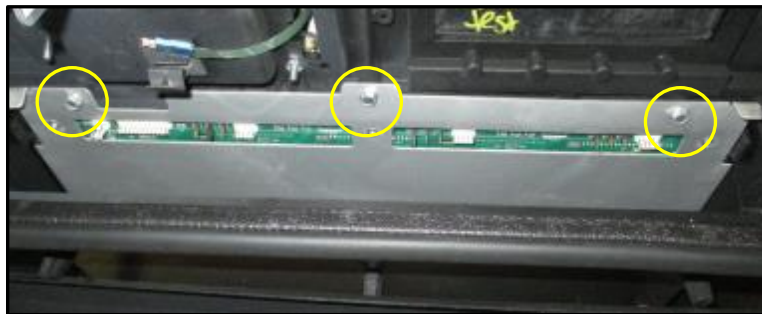
Encore 500S Location of Card Reader plate screws

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Encore 700S Location of Card Reader plate screws

14. Remove and discard the three #6-3/8" sheet-metal screws that fasten the PPU assembly to the door.



Location of PPU Panel screws

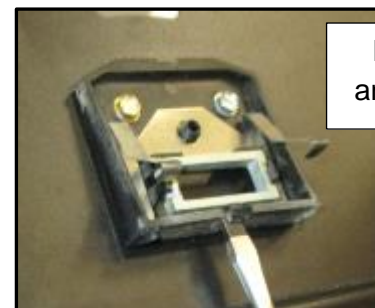
15. Remove the Grade Select buttons (Note the order of grades for when they are later re-installed).
 - a. Use a small flathead screwdriver to gently push in the lock tab located on the bottom side of the grade select buttons.



Grade Button



Lock Tab location

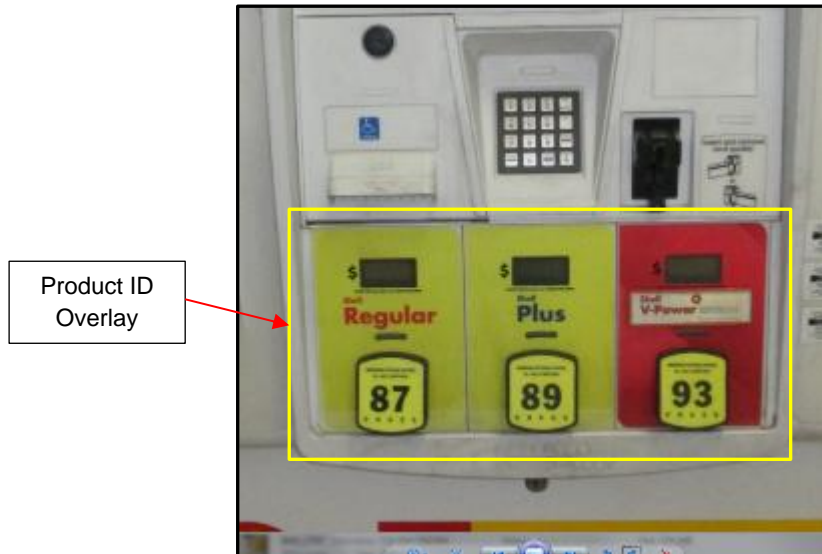


Flat head
and lock tab

Flathead on Lock Tab

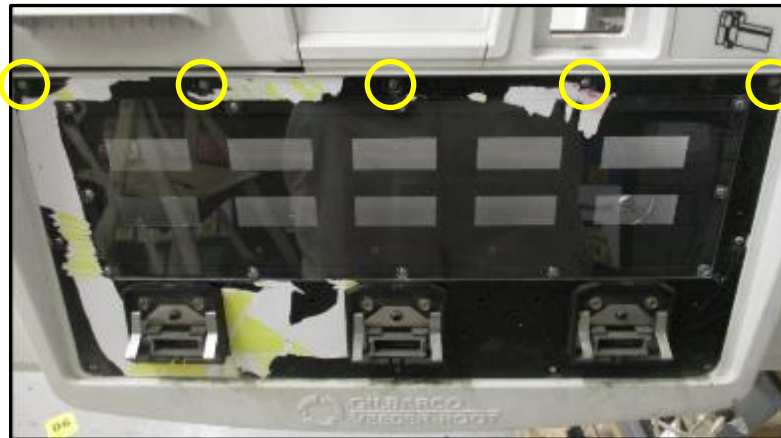
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- b. Firmly lift up on the buttons to remove them.
 - c. Set the buttons aside. They will be re-installed later in the process.
- 16.** Remove the Product ID Overlay to expose screws.
- Note:** Removing the Product ID Overlay will render it unusable. A new overlay will need to be applied during the installation process.



Location of Product ID Overlay

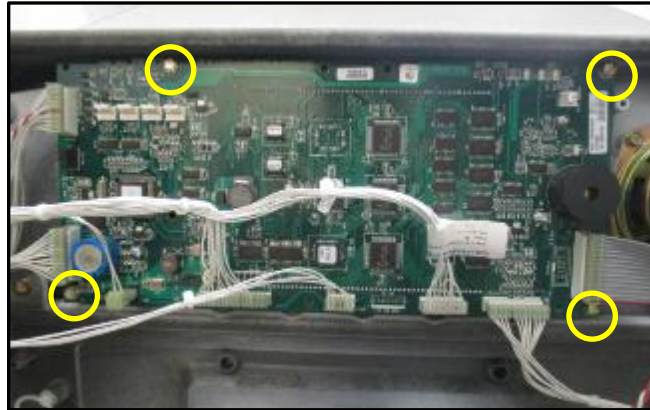
- 17.** Remove and discard the top five fastening screws on the Product ID Plexi-Bezel on the front of the Dispenser Door.



Location of fastening screws on Product ID Plexi-Bezel

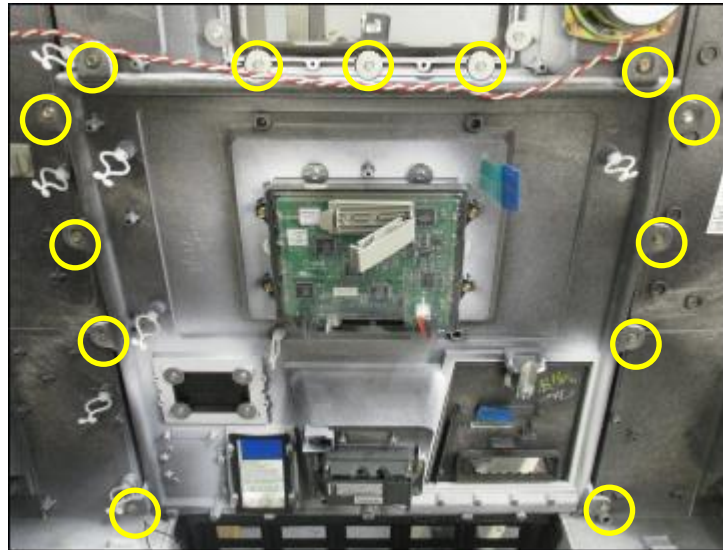
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- 18.** Remove the four #6-3/8" sheet-metal screws fastening the Door Node to the back side of the Dispenser Door. Save these screws for later re-use during installation. Carefully set the Door Node inside the electronics cavity out of the way. Use a soft anti-static cloth to protect the electronics and displays from damage. Undo any necessary cable restraints that may be present.



Location of Door Node screws

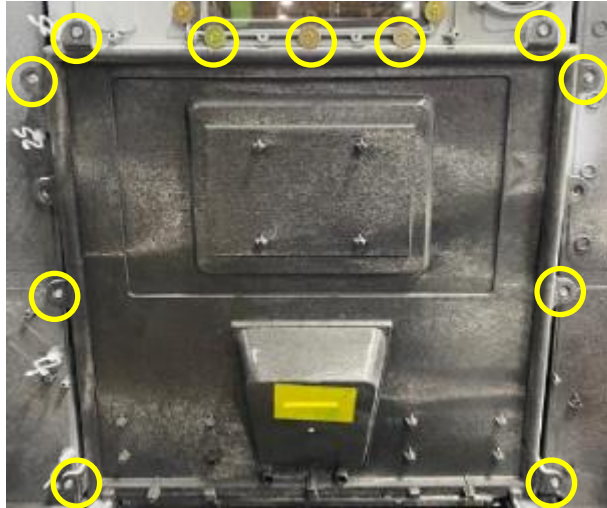
- 19. For the CRIND dispenser:** Remove and discard the three #6 self-tapping screws and washers immediately below the CIM panel Display Window, and the 10 #6-1/2" self-tapping screws fastening the CIM panel to the Dispenser Door.



Location of CIM Panel screws on the CRIND dispenser

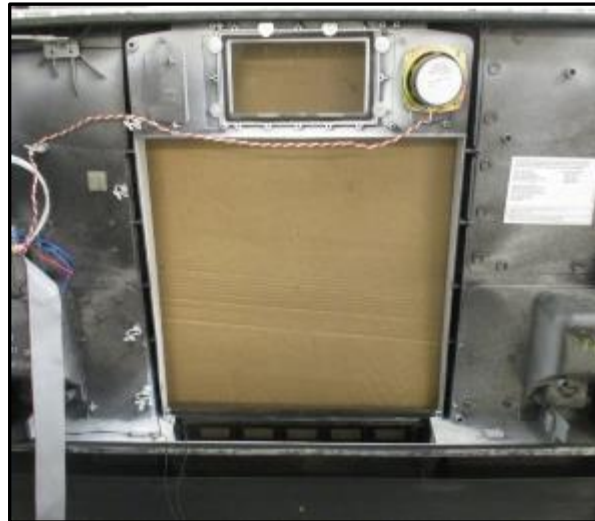
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For the Non-CRIND dispenser: Remove and discard the three #6 self-tapping screws and washers immediately below the CIM panel Display Window, and the 8 #6-1/2" self-tapping screws fastening the CIM panel to the Dispenser Door.




Location of CIM Panel screws on the Non-CRIND dispenser

- 20.** Remove the CIM Panel along with any remaining attached components. These can be discarded. They will not be reinstalled.



Dispenser Door after CIM removal

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CIM Panel with components after removal (CRIND dispenser)

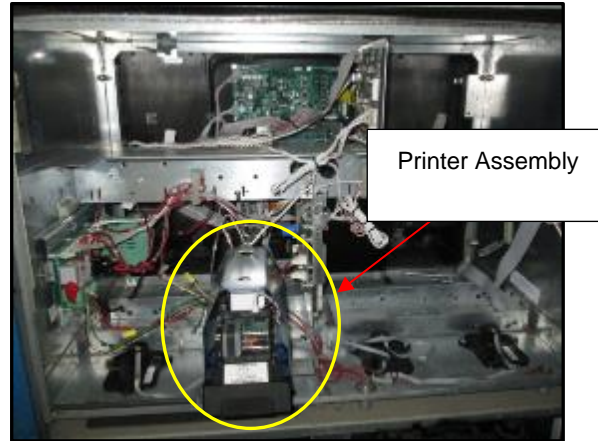


CIM Panel with components after removal (Non-CRIND dispenser)

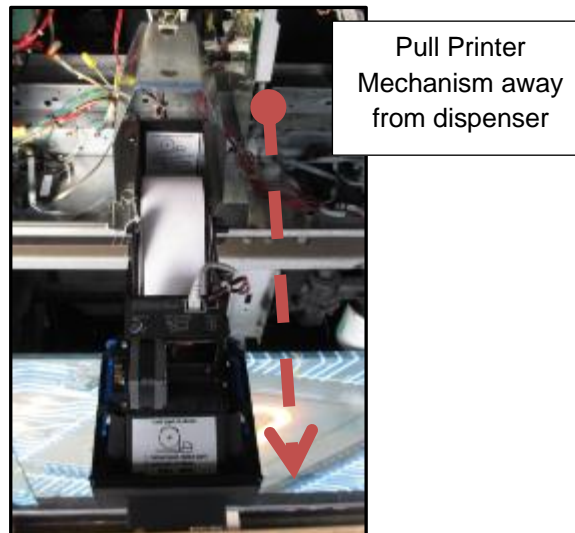
For the **CRIND dispenser**, follow the below Printer disassembly steps (21-33).
For the **Non-CRIND dispenser**, go to step 34.

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21. Locate the Printer Assembly.

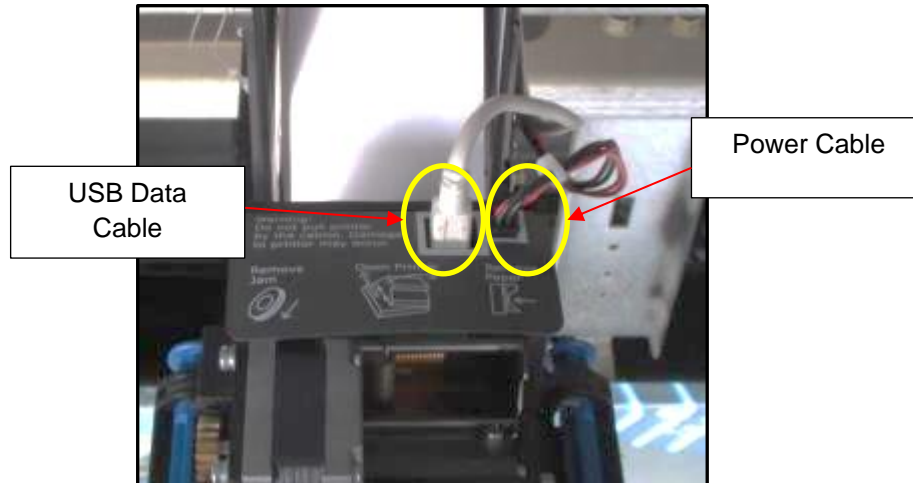


22. Pull the Printer Mechanism fully forward.

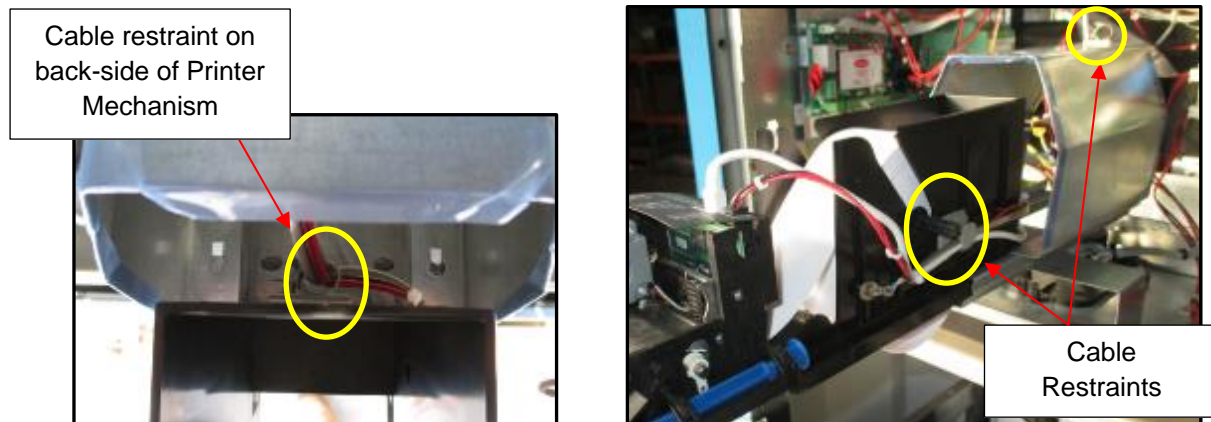


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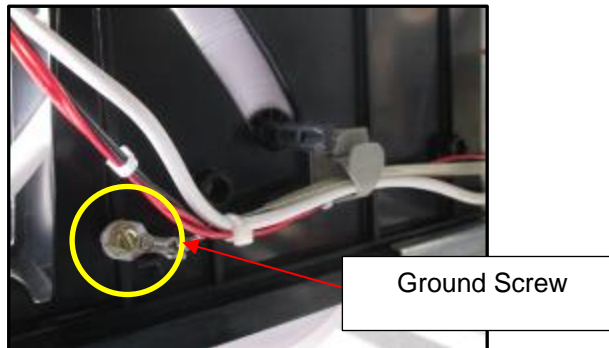
23. Unplug both the power cable and the USB data cable.



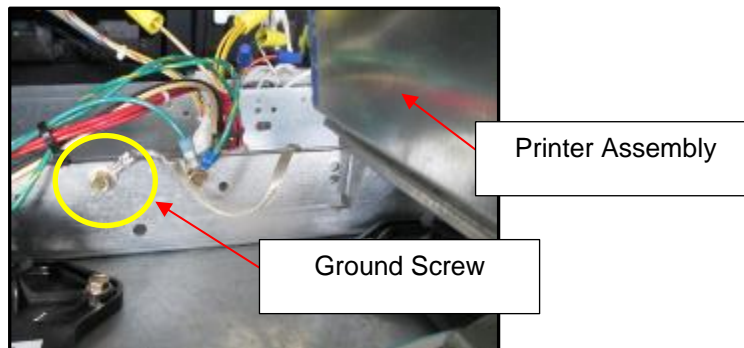
24. Unfasten the cable restraints on the Printer Assembly. There is one on the top of the Printer Shield, one on the side of the Printer Mechanism, and one on the back-side of the Printer Mechanism.



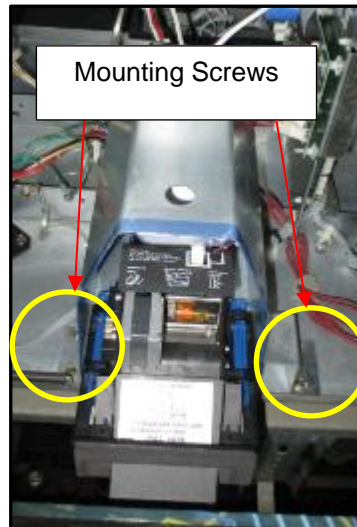
25. Remove the Ground Screw located on the side of the Printer Mechanism. The screw can be discarded; it will not be re-installed.

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- 26.** Pull the Printer Cables through the back of the Printer Assembly and lay them inside the Electronics Cavity.
- 27.** Remove the Ground Screw located on the Electronics Cavity Interior Channel, left of the Printer Assembly. The Printer Assembly's Ground Screw is separate and by itself from other grounding locations inside the Dispenser. The screw can be discarded; it will not be re-installed.



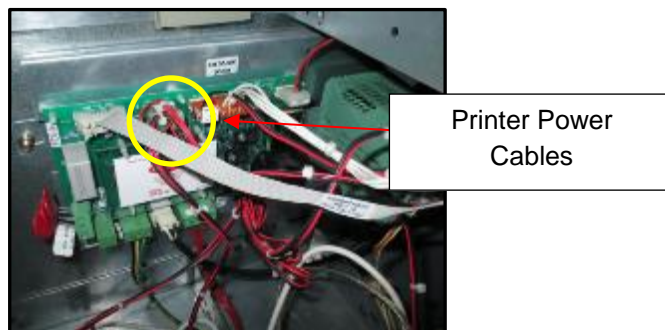
- 28.** Slide the printer assembly back, so that it does not tip over when the mounting screws are removed in the next step.
- 29.** Remove the four mounting screws that are fastening the Printer Bracket to the Electronics Cavity Frame. Remove the Printer Assembly and screws. They can be discarded; they will not be re-installed.

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- 30.** The four holes for the printer mounting must be plugged after its removal. Use the supplied four MS0166 #10-32 x 3/4" screws for this purpose:
- If the threads in the holes are intact, start and then tighten the screws in the holes.
 - For any of the holes where the threads are stripped, place an MN0027 #10-32 nut onto the screw from the outside of the cabinet, and use it to tighten the MS0166 screw.
- Note: you may not need all four nuts.

31. Follow the USB cable from the Printer and unplug the other end of that USB cable.


32. Unplug the printer's power cable from the Power Supply Assembly terminal P4 for Side-A (P5 for Side-B).



33. Remove the Printer Cables from the Dispenser. Unfasten any cable restraints necessary and re-fasten them after the printer cables are removed.

34. For a double-sided installation, repeat steps 1-33 for Side-B (if present).

35. The disassembly process is complete. The dispenser is now ready for the Installation procedure to begin.

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4.2 Pre-Installation Procedure

4.2.1 Install the InvencoLink

This Retro-Fit Kit does not include a communications method for the OPT. When this Retro-Fit Kit is being installed on Side A (i.e. the first side) of the dispenser, a communications method MAY first need to be installed as per the note in the Introduction section of this manual, as repeated below.

Note: Check if the DCM is present in the dispenser, on the opposite side of the Omnia board. If it is, then DO NOT install the InvencoLink. If it is not present, follow steps to install the InvencoLink. This must be checked at the start of the installation, at step 6 of the Disassembly Procedure (section 4.1).

If it is confirmed that the Invenco Link needs to be installed, then follow the procedure outlined in the rest of this section. Otherwise proceed to §4.3 Installation Procedure.

UL Report Number	Kit Part Number	Retro-Fit Kit Description
MH61528	RF00033-XX	InvencoLink DSP232

For Side B (i.e. the second side), you MUST have Side A (i.e. the first side) already installed, and you may then proceed to §4.3 Installation Procedure.

For Side A (i.e. the first side), select the PSU Plate Assembly from this Retro-Fit Kit package (EZ0853) and apply the communications method selected from the table above, following the installation instructions supplied with that Kit (DCV-00465).



PSU Assembly with the InvencoLink

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4.2.2 Install the Pump Interface Board (PIB)

When this Retro-Fit Kit is being installed on Side A of the dispenser, a Pump Control method MAY first need be installed as per the note in the Introduction section of this manual, as repeated below.

Note: The PIB is only required if there is no dispenser Current Loop Cable connected to the Omnia Board as per the Disassembly Process. This must be checked at the start of the installation, at step 7 of the Disassembly Procedure (section 4.1).

If it is confirmed that the Pump Interface Board needs to be installed, then follow the procedure outlined in the rest of this section. Otherwise proceed to §4.3 Installation Procedure.


The approved Pump Control methods are listed below.

UL Report Number	Kit Part Number	Retro-Fit Kit Description
MH61528	RF00100-XX	Pump Interface Board (PIB)

For Side A, select the PSU Plate Assembly from this Retro-Fit Kit package and apply the Pump Control method selected from the table above, following the installation instructions supplied with that Kit. Once the Pump Control method has been installed onto the PSU Plate Assembly, proceed to §4.3 Installation Procedure.



PSU Plate Assembly + PIB

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If both the PIB and the InvencoLink have been installed:

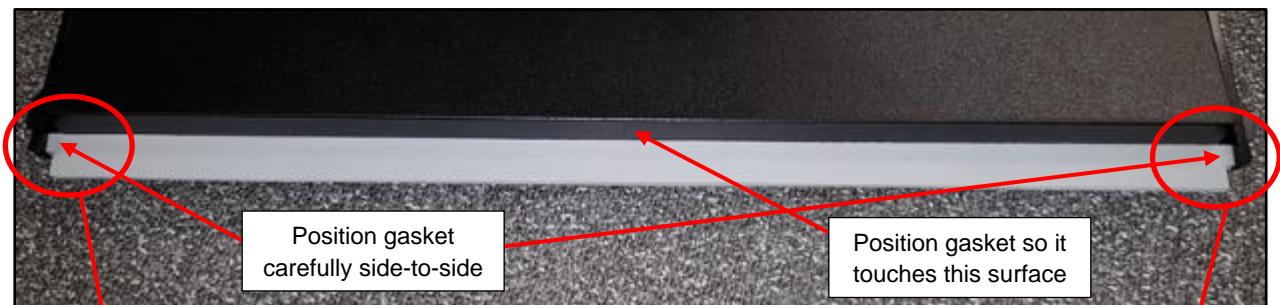


PSU Plate Assembly + PIB + InvencoLink

4.2.3 Gasket Installation

The RP00034-XX RFK panel needs to have a gasket installed before it can be placed into the dispenser.

1. Place the RP00034-XX panel face-up on a clean, soft surface.
2. Locate the MP0653 gasket (it's the pale grey one about 1/8" thick).
3. Peel the backing paper from MP0653 to expose the adhesive.
4. Line up the gasket along the bottom edge of RP00034-XX as shown, taking care that the edge of the gasket is touching the surface, before pressing the gasket onto RP00034-XX.
If you are gentle, you can reposition the gasket before pressing it down properly.

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5. Then fold the gasket over the bottom edge of RP00034-XX and press it down to form ensure it's in full contact.



6. Once the gasket has been installed, take care when handling RP00034-XX not to damage the new gasket as it's very soft.

Once both the communications method has been installed onto the PSU Plate Assembly, and the gasket has been installed on RP00034-XX, proceed to §4.3 Installation Procedure.

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4.3 Installation Procedure

This section follows from the Disassembly procedure above, and assumes the pump is still open. References to “left-hand” and “right-hand” are as viewed into the pump on the Side you’re working on.

1. Install the EZ0853 PSU Plate assembly. For Side A this is the PSU Plate Assembly that has just had the InvencoLink converter AND/OR the PIB installed.



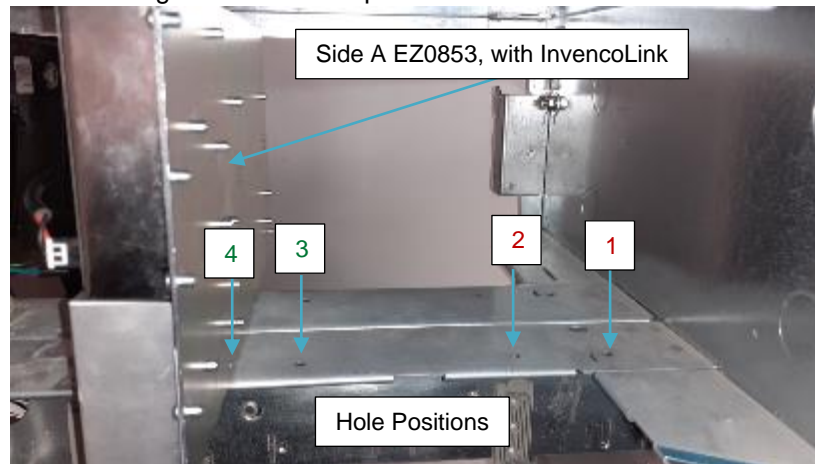
PSU with the InvencoLink Converter



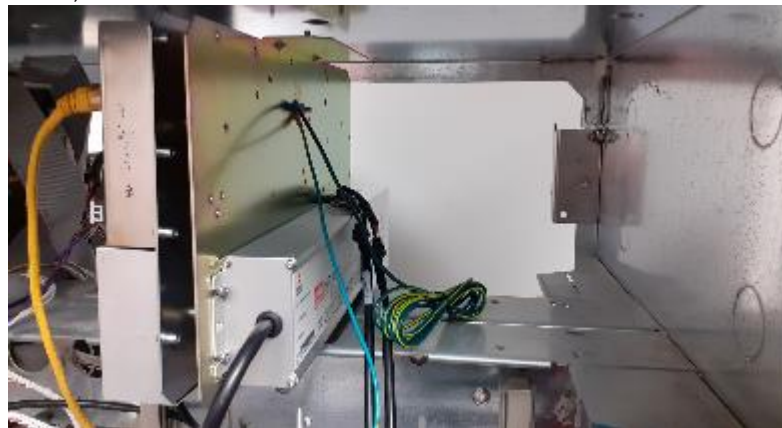
PSU with the PIB

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- a. Mount the EZ0853 PSU Plate Assembly on the upper electronics rail.
- i. For Side A Power Supply, when viewed from side B, it's in the fourth set of holes from the right side of the dispenser as shown.



- ii. For Side B Power Supply, beside the Side A assembly, back to back in the next holes, as shown:



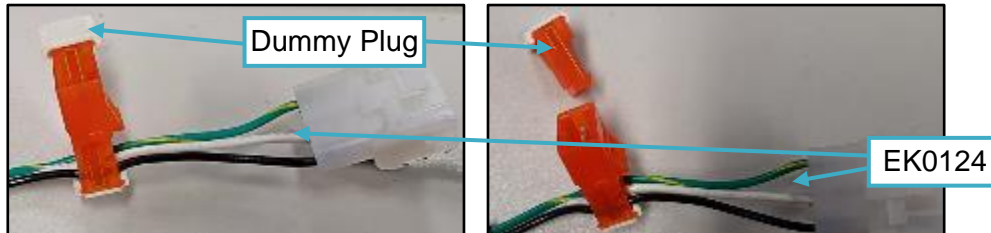
- b. Place an MN0029 nut on each stud and tighten with a 5/16" nut driver. Note you will need to place one nut from each side of the dispenser.



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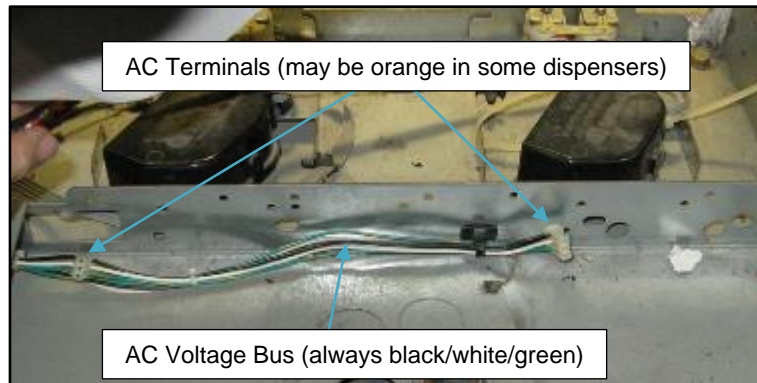
2. Cable EK0124 has three connectors at one end and a single connector at the other end.

EK0124 is supplied with a “dummy plug” for safety in some installations. The plug looks like this:

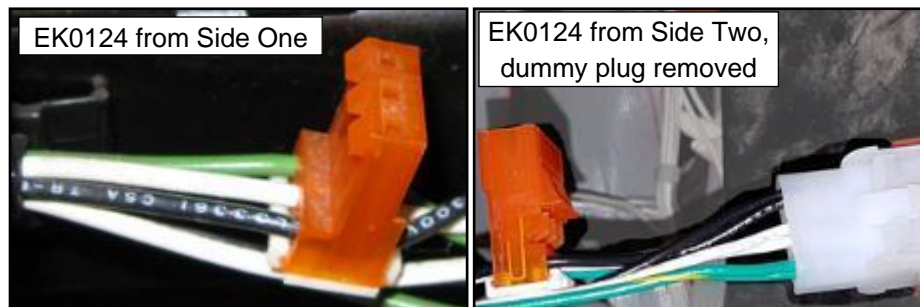


Unplug and discard the female dummy plug from the three-connector end of EK0124.

- a. For Side A, plug the now-exposed male orange connector into an available AC terminal port on the AC voltage cable bus assembly in the dispenser, typically located somewhere along the bottom of the electronics cavity.
- b. For Side B, plug the now-exposed male orange connector into the available orange female connector on the EK0124 from Side A.

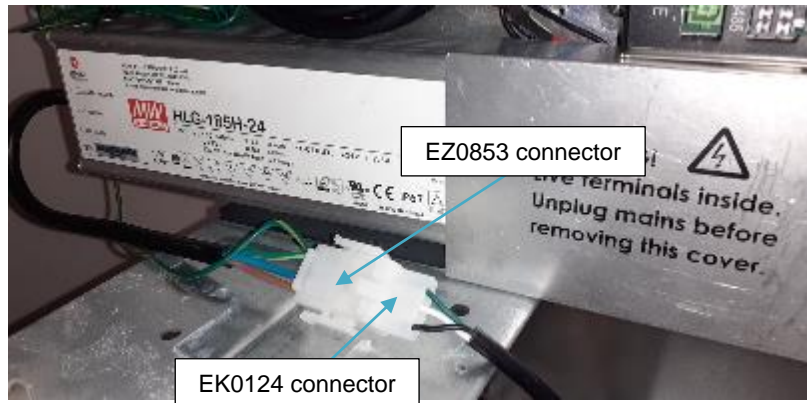


Note: There are several points of connection along the pre-existing AC voltage cable bus assembly in the dispenser. Locate an unused terminal port. Do not unplug an occupied port.



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3. Connect the large white plug at the single-connector end of EK0124 into the AC power connector on the EZ0853 PSU Plate Assembly.



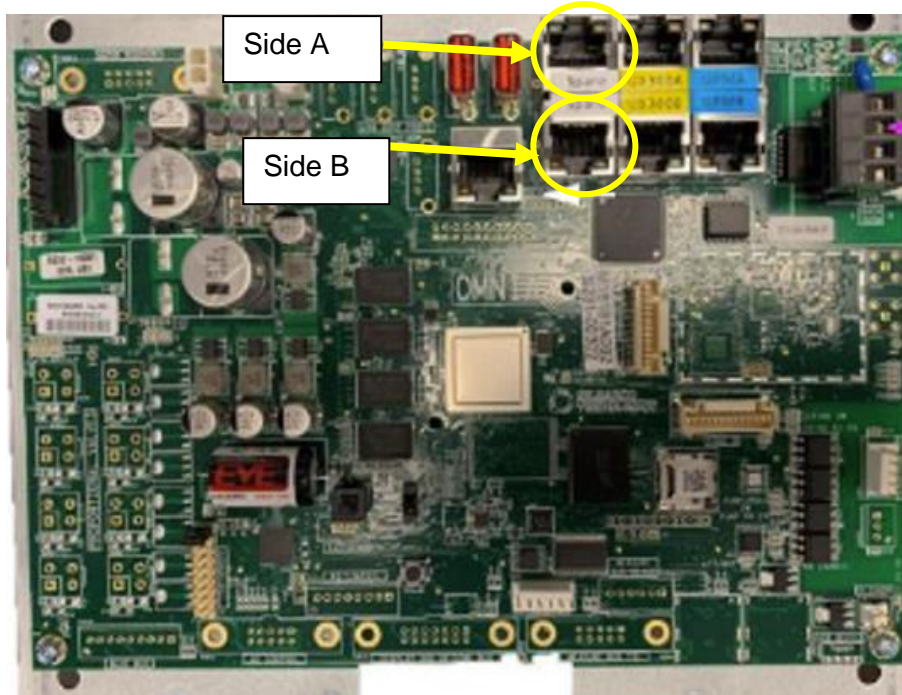
4. **Ethernet cable connection:**

If the Invenco Link is being installed: Plug the EK0131 YELLOW patch cable into the LAN-1 socket on the InvencoLink converter. If doing Side B, then plug the cable into the LAN-2 socket.

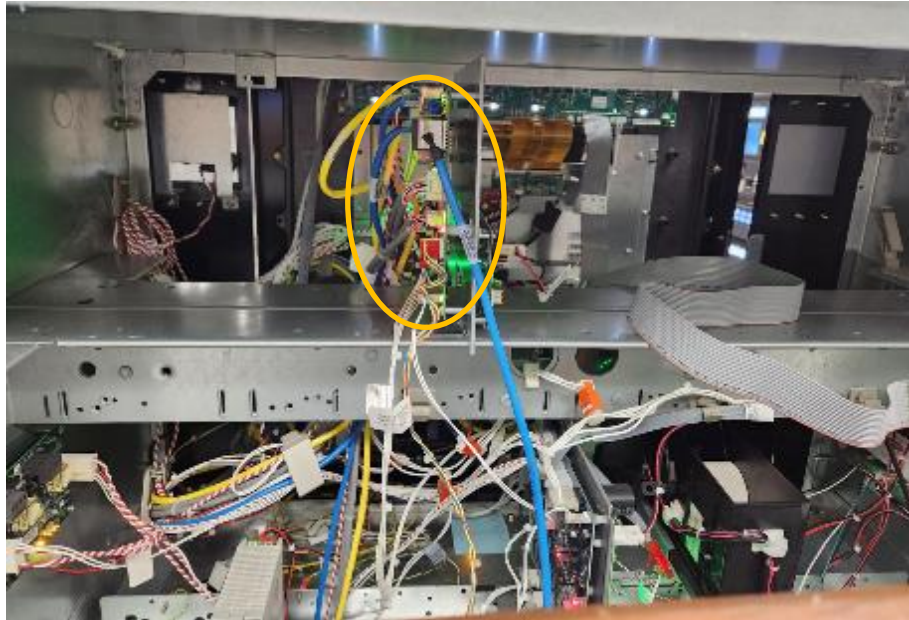


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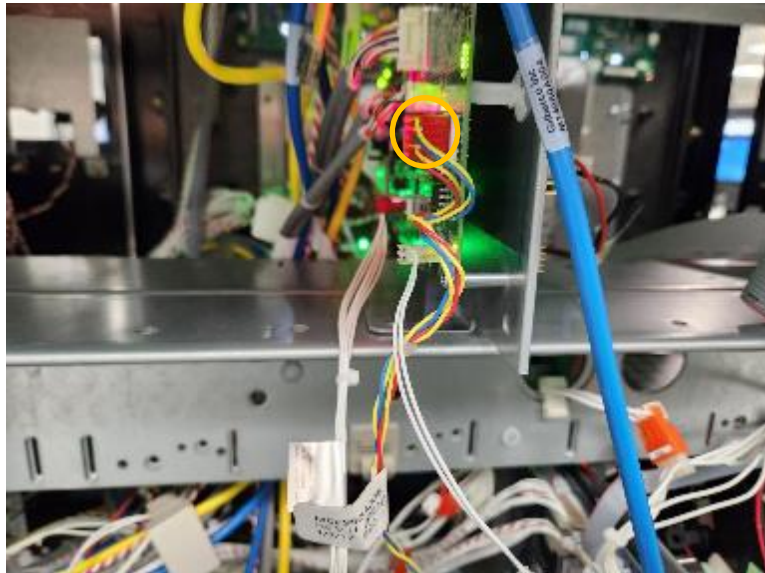
If the Invenco Link is NOT being installed: Plug the EK0131 YELLOW patch cable into the LAN socket on the Omnia board. The top connector for side A and bottom connector for side B as indicated below. (Omnia board is located on the upper rail, as per step 6 of the Disassembly procedure (section 4.1).



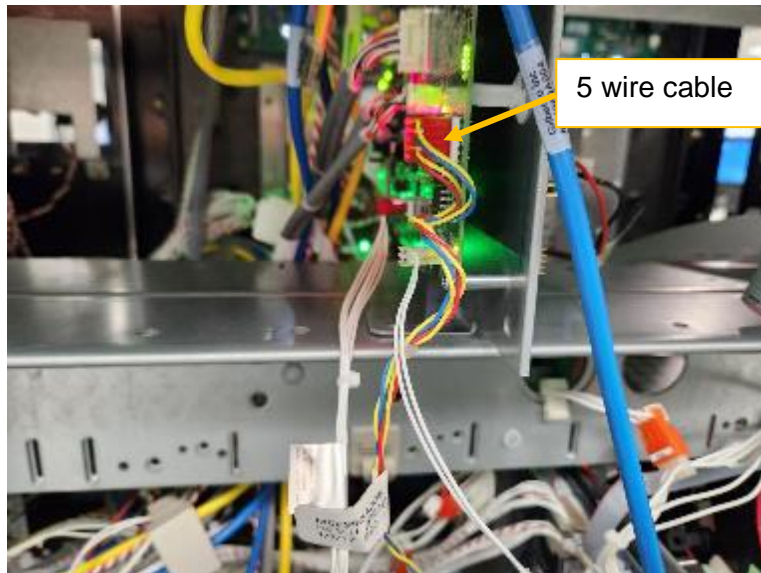
5. This step applies only if the PIB is being installed (Side A only):
 - a. Identify the Omnia Board.

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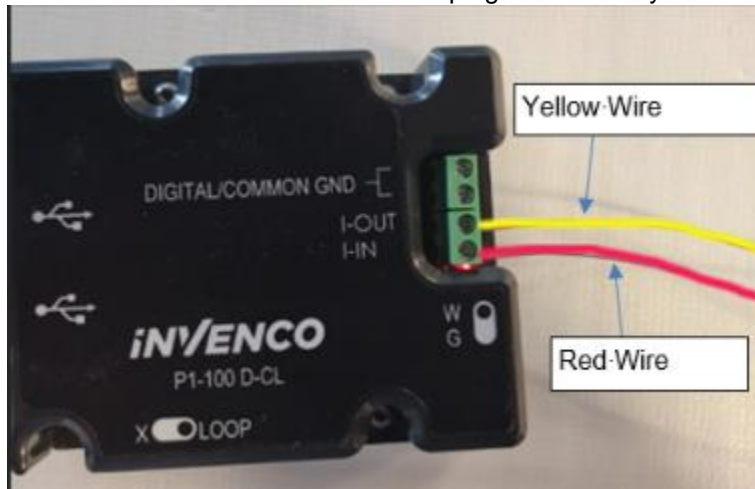
- b. Find the below connector, P300.



- c. Find the 5 wire cable that is connected to the connector.

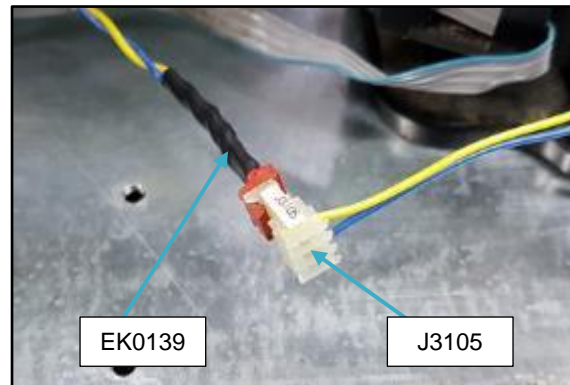
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- d. Trace the other end of this cable and plug the red and yellow wires to the PIB as below:



6. This step applies only if the InvencoLink is being installed (Side A only):

- a. Look for the blue/yellow 2-wire communication cable in the dispenser (one end goes to the dispenser conduit, the other end with J3105 connector loose). Install the end of the brown connector on EK0139 into the J3105 at the end of the blue/yellow 2-wire cable. The connectors are polarized – they only go together one way:

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- b. Install the green connector on EK0139 into the “LINE” socket on InvencoLink converter on EZ0853.



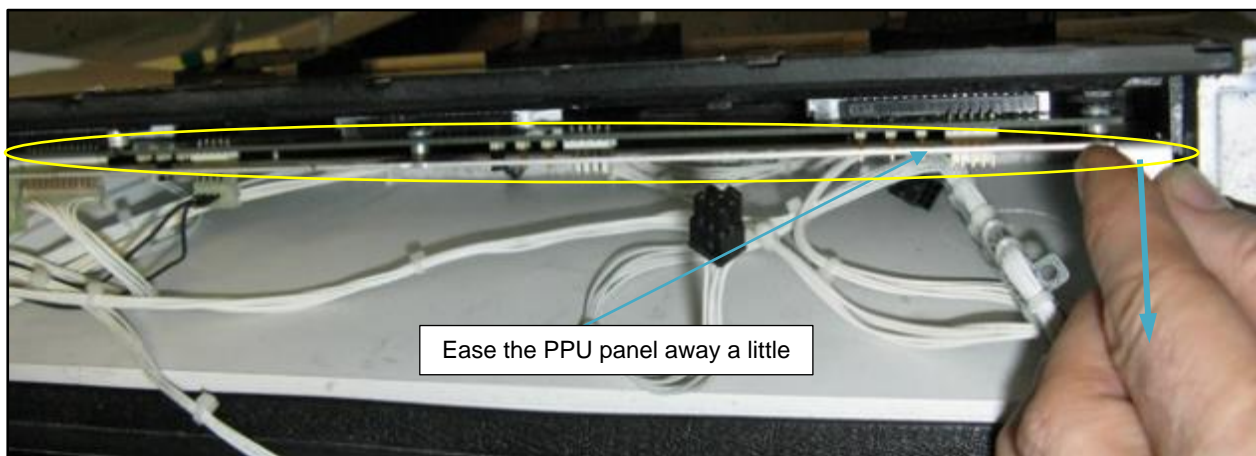
7. Acquire pre-assembled RP00034-XX RFK Hatch Panel containing the G6-300 / G6-400 OPT.



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To avoid damaging the pump door plastic in the following steps where screws are being placed into the Encore 500S or 700S pump door, it is very important to start each screw by hand, ensuring you use the existing thread.
DO NOT USE any type of powered tool to tighten the screws.

8. Ease the PPU circuit board back a little to enable the lower edge of the RFK Hatch Panel to sit properly:



9. Have a couple of MS0101 hex-headed screws, and the nut driver handy. Hold the top edge of the RFK Hatch Panel, and carefully place the bottom edge of the RFK Hatch Panel into the opening in the Encore 500S or 700S pump door from inside.



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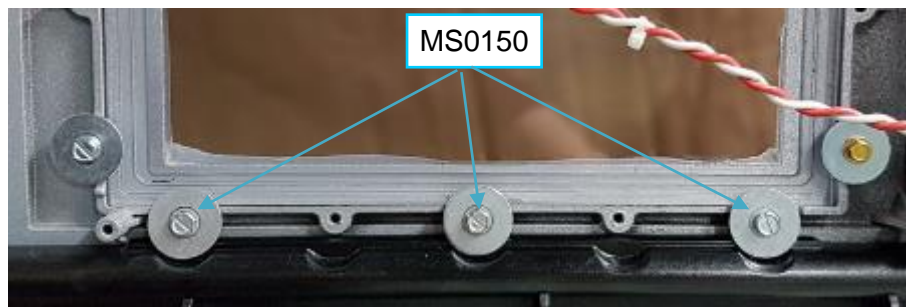
10. Ease the RFK Hatch Panel gently into the gap until it is vertical against the screw bushes on the Encore 500S or 700S pump door. Take care not to rip or rub the soft foam gasket along the bottom edge of the RFK Hatch Panel. Also, be careful not to pinch any wires.



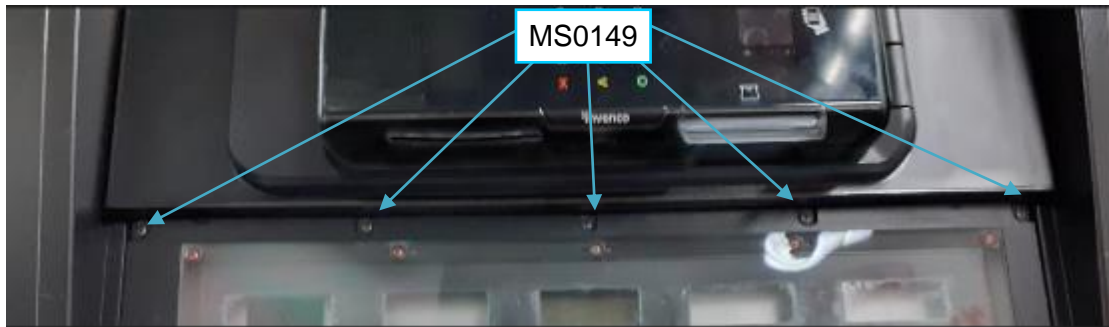
11. Insert the two MS0101 screws ready from Step 9 into bushes on either side of the RFK Hatch Panel. If there are any bushes stripped or split or otherwise unusable discontinue the retro-fit process and contact technical support for advice. Tighten the screws with a 1/4" nut driver.

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12. Place the remaining eight MS0101 screws into the other bushes around the RFK Hatch Panel. If there are any bushes stripped or split or otherwise unusable discontinue the retro-fit process and contact technical support for advice.
Tighten all screws with a 1/4" nut driver.
13. Place three MS0150 #6-20 X 3/8", washer-headed screws in the three locations underneath the CIM display window. Tighten the screws using a 1/4" nut driver:



14. Through the front of the pump door insert and tighten five MS0149 Philips screws along the top edge of the PPU panel.

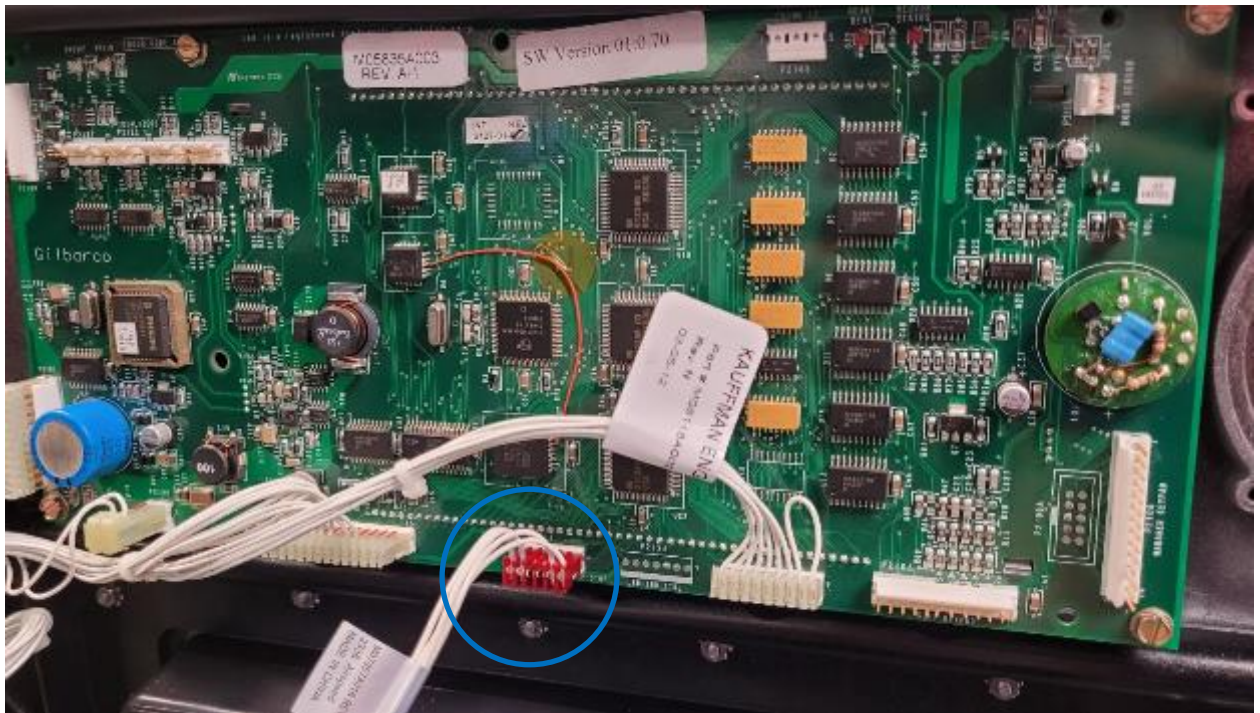
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15. Press the PPU circuit board gently back into place against the Encore 500S or 700S pump door, then insert three MS0150 hex-headed screws. Tighten the screws with a ¼" nut driver.



16. Identify the M07957A016 cable from this install kit and connect the J2111 connector to the Money / Volume board as shown below, and connect the other end of it (connector J905) to the 3 button aux keypad tail.

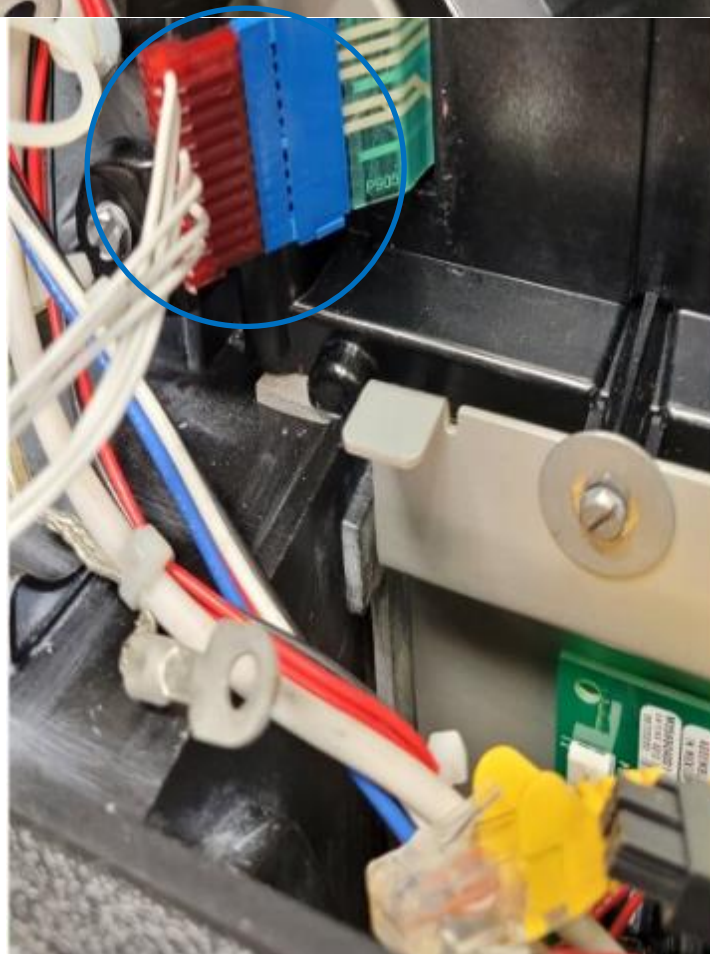
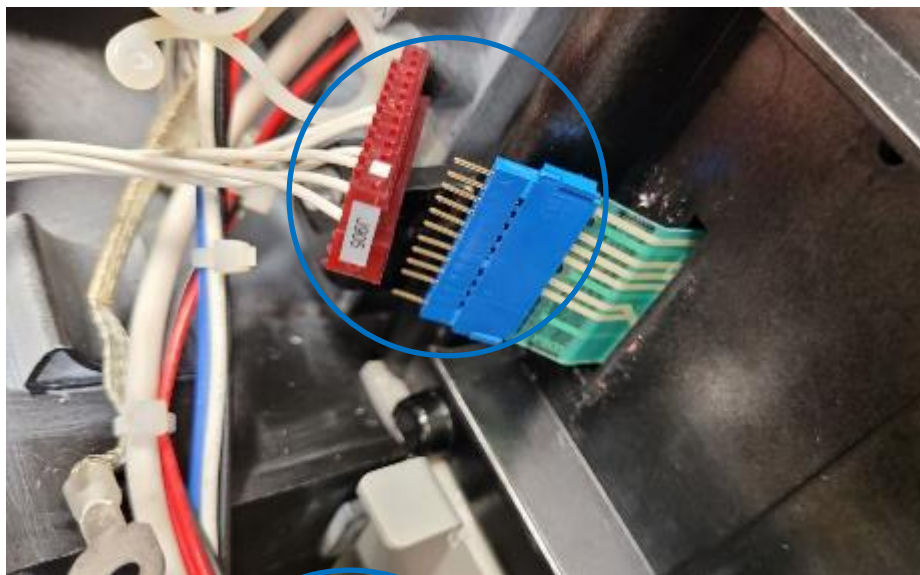
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M07957A016 cable connected on the Money / Volume board



3 button Aux Keypad tail

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M07957A016 cable connected to the 3 button Aux keypad tail.

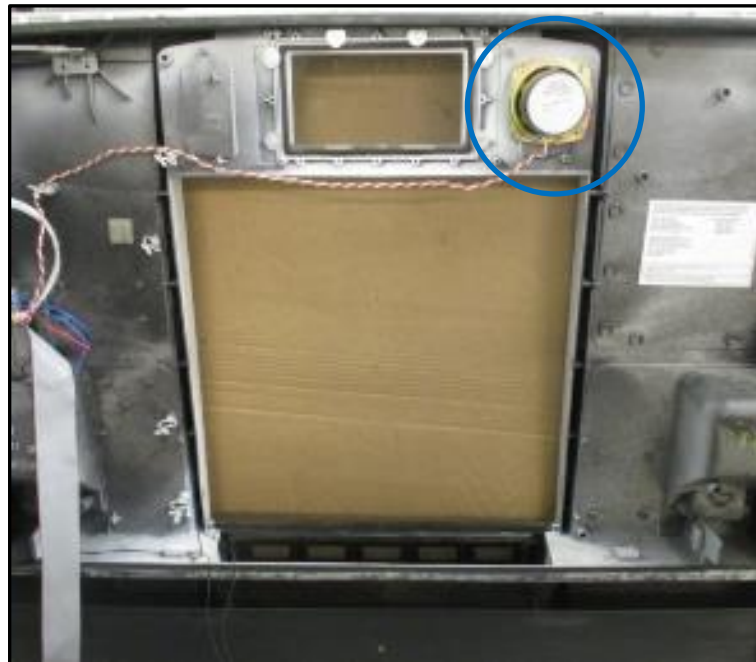
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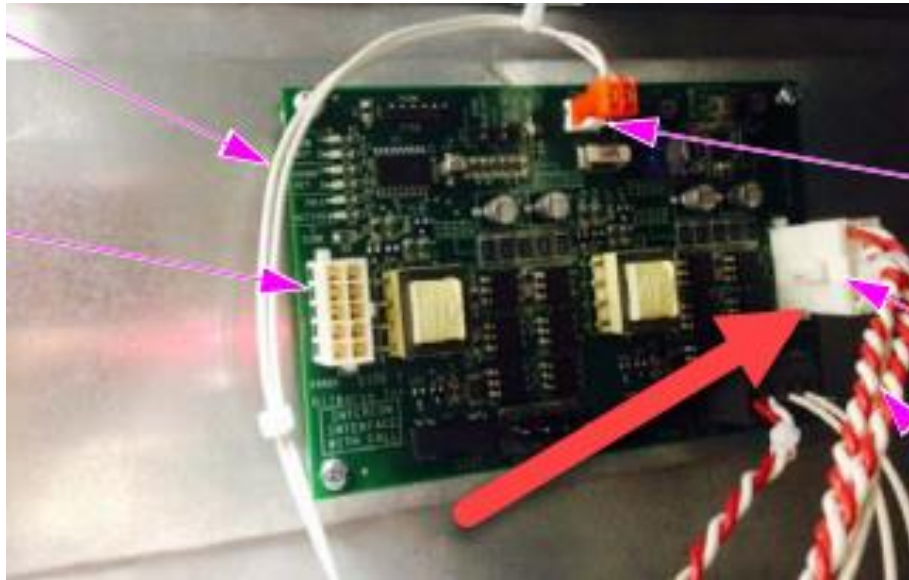
17. Take the Door Node from inside the Encore 500S or 700S cabinet and place it back onto the pump door in the correct position. Insert the four 1/4"-headed screws from Disassembly Step 18 in the corner holes of the Door Node board. Tighten the screws with a 1/4" nut driver.



18. Connect the P2 end of the EK0270 Speaker cable to one of the below:

NOTE: First identify if the intercom board is present. Follow the speaker cone wires to the other end to see it is connected to the intercom board as follows:

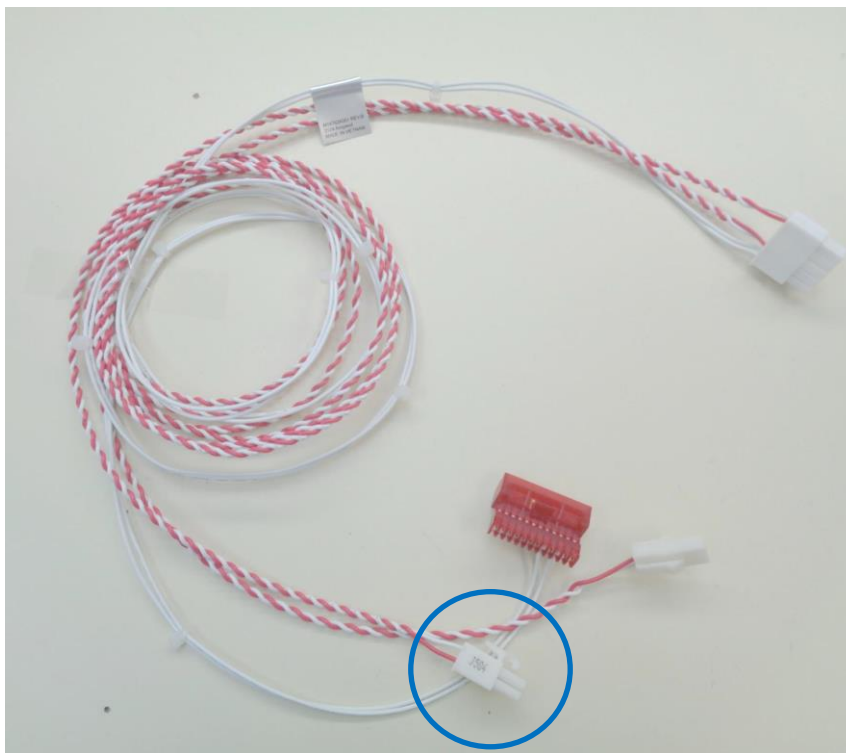


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- a. **Speaker cone without the intercom board:** Connect the EK0270 Speaker cable to the M09259A001 cable which is connected to the cone speaker on the dispenser.



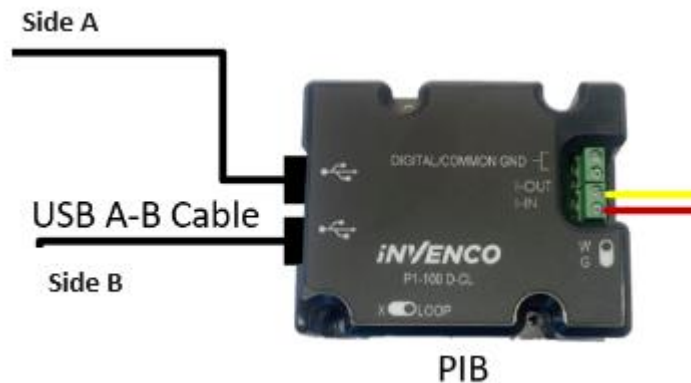
- b. **Intercom board present:** EK0270 will connect to the J504 connector on the M14762 cable assembly that will be present in the dispenser. The M14762 is connected to the intercom board and the speaker, identify this cable as per the image below:

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19. Gather the following cables:

- EK0131 Yellow patch cable (from Omnia board or Invenco Link)
- 2 x Black DC cables (1 only for the G6-300, leaving the other inside the dispenser.)
- green/yellow earth cable pre-installed on EZ0853 PSU Plate Assembly
- EK0270 Speaker intercom cable
- If the PIB is being installed, a USB cable for each of side A and B.
Ensure the correct corresponding USB cable from the PIB is routed to the correct side A or B as follows:



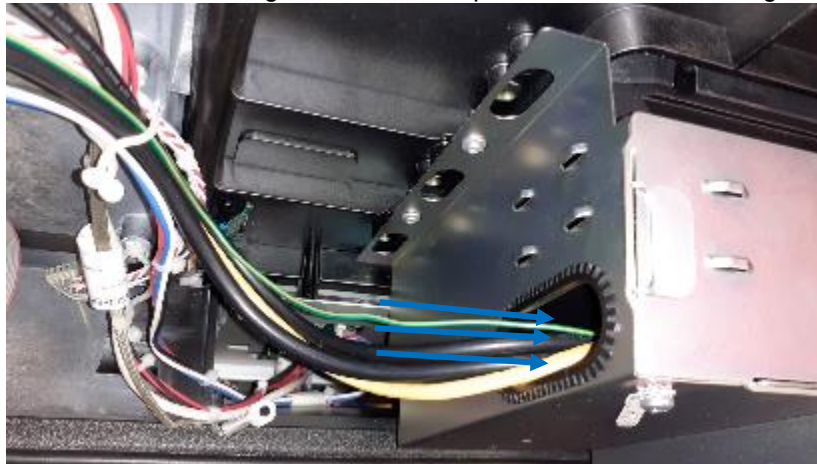
20. Route the cables from Step 19 along underneath the electronics shelf to the right-hand side of the pump cabinet, then out along the right-hand side of the cabinet.



21. Mount the metal shield MZ0349 using the four MS0323 screws and a T10 Torx driver. The torx should be between 0.55 to 0.60Nm.

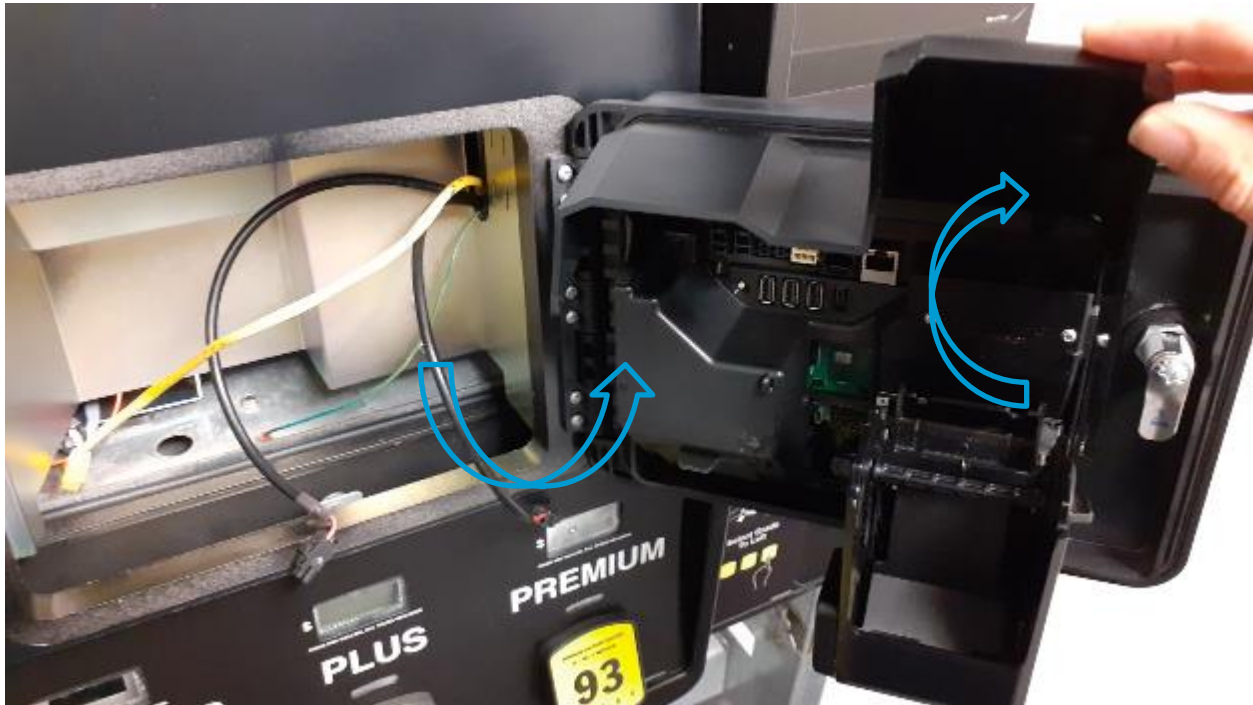
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Feed the cables through the side cable port as shown in the image below

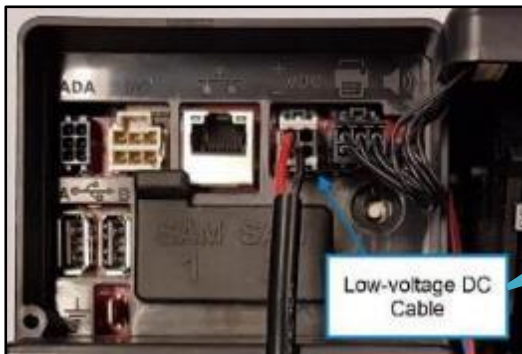


22. Take the five/six cable ends routed in Step 19 and connect them to the G6-300 / G6-400 OPT respectively:
Open the cover on the G6-400 unit to allow access to the connections

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- a. Plug the Black low-voltage DC cable from the EZ0853 PSU plate, into the OPT:
 - i. **For the G6-300:** Plug one of the DC cables into the OPT
 - ii. **For the G6-400:** Plug both the DC cables into the OPT



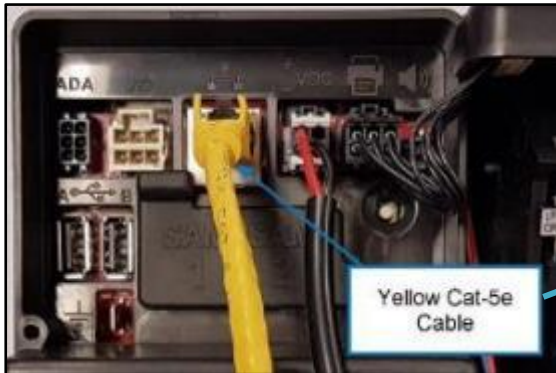
G6-300 OPT



G6-400 OPT

- b. Connect the EK0131 Yellow cable into the correct sockets on the OPT. The port numbers on the InvencoLink for each cable (e.g. LAN-1 from Invenco Link), or the correct side DCM must match the side you're working on (e.g. Side A):

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G6-300 OPT



G6-400 OPT

- c. Clip the green earth cable from the EZ0853 PSU plate onto the 1/4" tab on the OPT:



G6-300 OPT



G6-400 OPT

23. Connect the Speaker intercom cable EK0270 into the Audio Output on the G6-300/G6-400 OPT modules.



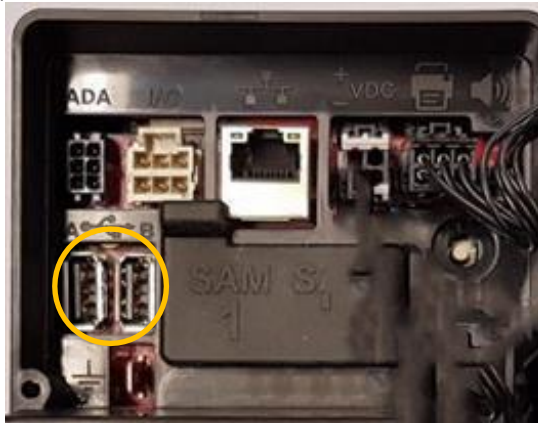
G6-300 OPT



G6-400 OPT

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24. **This step only applies if the PIB is being installed:** Identify the USB cable that was gathered and routed through in steps 19 and 20. Plug the routed end of the USB cable into a spare USB port on the G6-300 / G6-400. It can be any of the 2 USB ports (on the G6-300) or any of the 3 USB ports (on the G6-400) (Each of the two USB cables will need to be plugged into Side A and Side B).



G6-300 OPT



G6-400 OPT

25. Gather the YELLOW, BLACK, GREEN/YELLOW, Speaker Intercom, and the PIB USB (if applicable) cables from the above steps into a cable-tie on the upper left rear (as viewed from its rear) of the G6-300 / G6-400 OPT:



G6-300 OPT

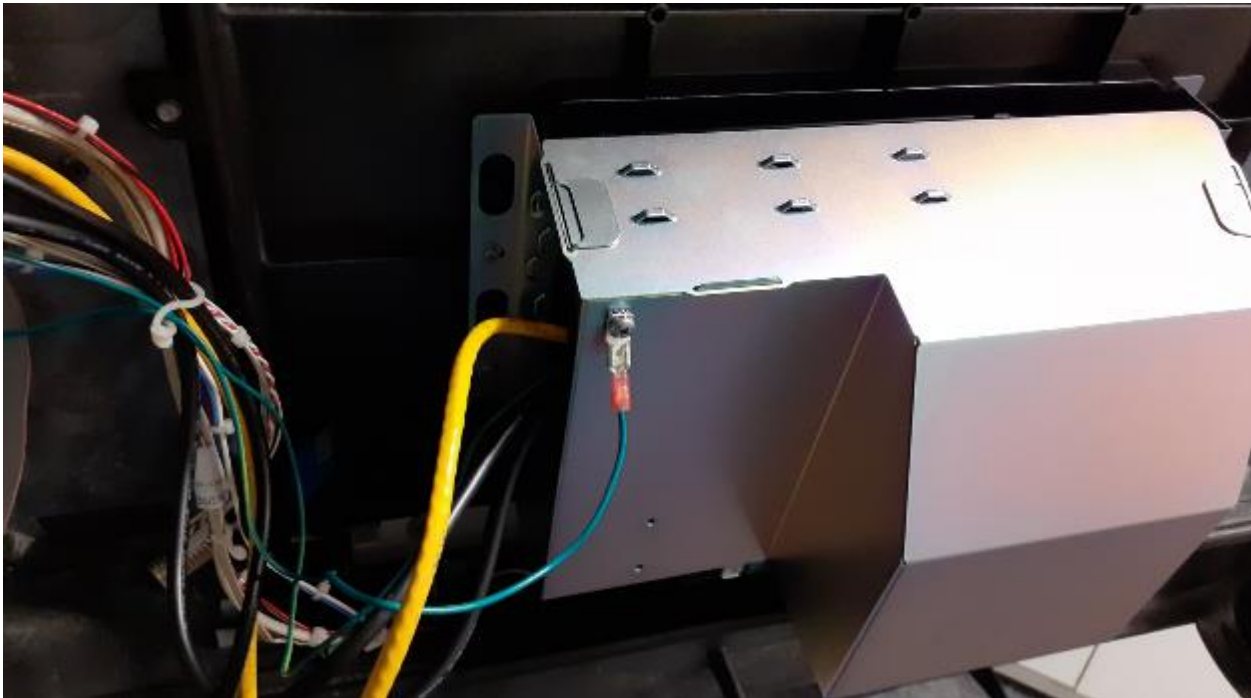


G6-400 OPT

For The G6-400 OPT: Close the cover on the G6-400 unit.

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26. Gather the cables and loop them together with a cable tie and check there is sufficient length to allow the G6-400 Hatch door to open and close without any hinderance.



27. Gather the cables together with cable ties as shown and ensure the pump door can open and close without any hinderance.



28. Plug the EK0130 Grounding Cable onto the tab on the left of the Isolating Cover:

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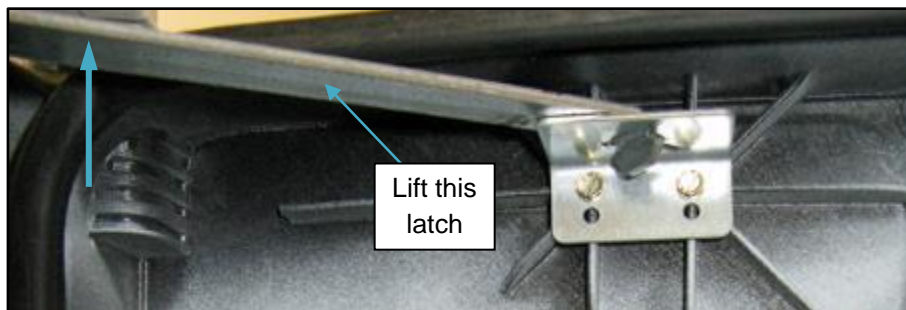
- a. Gather EK0130 into the loom of cables established in Step 19.
- b. Loosen the nut on the earth stud on the EZ0853 PSU Plate assembly, and secure the unconnected end of EK0130 under the nut. Re-tighten the nut, and ensure all the earth connections are secure:



- c. Gather any excess wire of EK0130 and tidy it into the loom.
29. Replace the PPU selector buttons on the front of the Encore 500S or 700S Pump Door. Ensure you keep the same order as noted in Disassembly Step 15. For each button:
- a. Hook the top of the button over the top of the clip.
 - b. Swing the button downward until it sits on the clip.
 - c. Press HARD on the bottom of the button until it snaps loudly into place. Mind your fingers!

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- 30. Tidy up any loose wiring, using cable ties to secure the wires.
- 31. For a double-sided installation, repeat steps 1-4 and 7-30.
- 32. Close up the dispenser. For each open Side:
 - a. Lift the Encore 500S or 700S Pump Door open-latch to release the door:

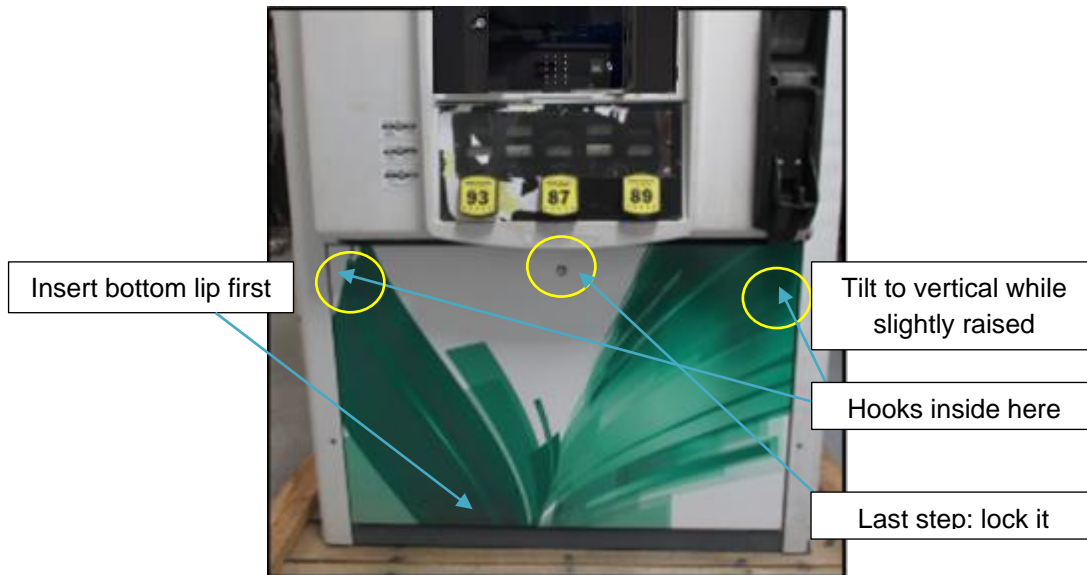


- b. Then close the Pump Door carefully, ensuring no cables are pinched. If cables will be pinched, re-open the Pump Door and secure and/or re-arrange the cables securely. Then continue closing the door.
 - c. Lock the top and re-latch the bottom of the door.



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33. Reinstall the panel below the door and lock it.
- Tilt the top of the panel outwards and insert its bottom lip first.
 - Bring the panel close to vertical, then lift it slightly to it slips over the upper hooks.
 - The press the panel closed and allow it to drop a little into place.
 - Finally, lock the panel with the “GBCO” key.




34. The installation procedure is now complete.

4.3.1 Wiring Completion

Ensure that all cables are tidy and cannot become snagged or pinched when the door of the cabinet is opened and closed.



WARNING – Local regulations may also require that the installation is electrically tested and certified BEFORE switch-on.

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5 First Power-Up

Once the installation is complete and the wiring is certified (if necessary), power may be applied. The G6-300 / G6-400 OPT takes a couple of minutes to complete its start-up phase, during which several information screens will be presented.

The terminal will display the following screen whilst attempting to connect to the LAN. This screen will persist until a connection can be made (Note: reported Firmware version may vary):

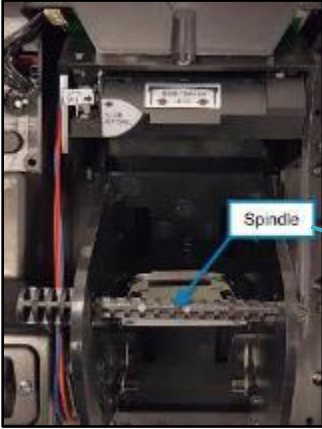
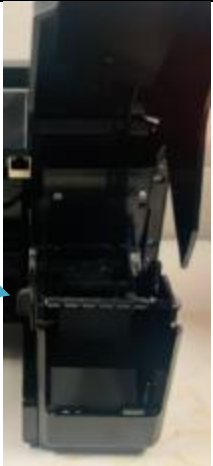

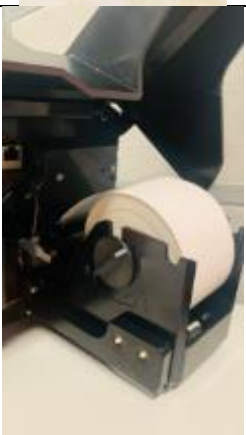




If the terminal is successful in connecting to the LAN, it will display the following screen and the rest of the start-up sequence will continue:



The following steps describe the paper loading procedure:

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Step	Description	Photo reference (G6-300)	Photo reference (G6-400)
1.	Ensure the paper roll has a neat cut edge.		
2.	Remove spindle from the paper holder position. Note orientation of the spindle (handle to left)		
3.	Insert roll in place – the paper tension flap is spring-loaded so you will need to apply some pressure. Insert the spindle through the middle of the roll to hold in place.		
4.	Insert the cut edge of the paper into the slot as shown by the label. Note: Insert until the printer grips and feeds automatically.		

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5.	<p>The photo shows the paper loaded correctly.</p>	
6.	<p>Paper-feed buttons are located on the top of the terminal.</p> <p>Press either button   to move the paper forward or back.</p> <p>Press both buttons together to cut the paper.</p>	 
7.	<p>Use the paper-feed buttons to advance the paper through the terminal until it appears at the paper exit chute.</p> <p>Cut the paper using both paper-feed buttons, then remove the cut length from the chute.</p>	 