

iN/ENCO®	Document Number	DCV-00452
	Date Released	Oct. 2020
	Revision Number/Security level	R05 S2
Retrofit G6-300 + InvencoLink GVR Encore 500S 700S (US) Installation Guide		

Retrofit G6-300 + InvencoLink GVR Encore 500S or 700S (US) Installation Guide

Kit Part Number:

**RF00017-XX, G6-300 GVR Encore 500S
or 700S, Black Kit**

**RF00060-XX, G6-300 GVR Encore 500S
or 700S, Colored Kit**



Document Number

DCV-00452

Date Released

Oct. 2020

Revision Number/Security level

R05 S2

Retrofit G6-300 + InvencoLink GVR Encore 500S 700S (US) Installation Guide

Release History

Version	Prepared by	Date	Change description
0	Michael Doh	31-Oct-19	Based on G6 US version (DCV-00214 R00); initial version for UL approval
1	Michael Doh	03-Dec-19	Kit and OPT + panel part numbers update
2	Michael Doh	04-Dec-19	Corrected OPT + panel part numbers and step 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	21-Oct-20	Added colored kit P/N: RF00060-XX

© 2020 by Invenco Group Limited

All rights reserved

No part of this document may be copied or reproduced in any form without prior written consent from Invenco.

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

Retrofit G6-300 + InvencoLink GVR Encore 500S 700S (US) Installation Guide**Contents**

Release History	2
1 Introduction	4
1.1 Tools Required	4
1.2 Installation Kit Contents	5
1.2.1 G6-300 Encore 500S or 700S, Black Retro-Fit Kit (RF00017-XX)	5
1.2.2 G6-300 Encore 500S or 700S Colored Retro-Fit Kit (RF00060-XX)	7
2 Safety & Compliance Information	9
2.1 Preliminary Precautions	9
2.2 Emergency Total Electrical Shut-Off	9
2.3 Total Electrical Shut-Off Before Access	9
2.4 Evacuation, Barricading and Shut-Off	9
2.5 Read the Manual	9
2.6 Follow the Regulations	10
2.7 Replacement Parts	10
3 Safety Symbols and Terminology	10
3.1 Prevent Explosions and Fires	10
3.1.1 No Open Flames	11
3.1.2 No Sparks - No Smoking	11
3.1.3 Working Alone	11
3.1.4 Working with Electricity Safety	11
3.1.5 Hazardous Materials	11
3.1.6 In an Emergency	11
3.1.7 Approvals	12
3.2 Computer Programs and Documentation	12
4 Installation Guide	13
4.1 Disassembly Procedure	13
4.2 Pre-Installation Procedure	31
4.2.1 Communications	31
4.2.2 Gasket Installation	31
4.3 Installation Procedure	33
4.3.1 Wiring Completion	46
5 First Power-Up	48

Retrofit G6-300 + InvencoLink GVR Encore 500S 700S (US) Installation Guide

1 Introduction

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

- G6-300 Encore 500S or 700S, Black
Kit Part Number: RF00017-XX
- G6-300 Encore 500S or 700S, Colored Kit
Kit Part Number: RF00060-XX

These Retro-Fit Kits can be installed into either Side A or Side B of a GVR Encore 500S or 700S dispenser;

- **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.** The process is covered in §4.2 Pre-Installation Procedure of this instruction, by reference to the instructions in that Kit.
- **For a double-sided installation, two of these Kits are required.**

1.1 Tools Required

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

- Gilbarco "CH 751" Key
- Gilbarco "GBCO" Key
- Philips #1 screwdriver
- Philips #2 screwdriver
- Flat 5mm screwdriver
- Side cutters
- Cable (zip) ties
- Pliers
- ¼", 5/16" Socket or Nut Driver
- #6, #8 & #10 Hex Socket or Nut Driver



WARNING

Do NOT use power tools if working on a fuel station forecourt.
Any spark could cause an explosion.

Retrofit G6-300 + InvencoLink GVR Encore 500S 700S (US) Installation Guide

1.2 Installation Kit Contents

1.2.1 G6-300 Encore 500S or 700S, Black Retro-Fit Kit (RF00017-XX)

Unpack the G6-300 Encore 500S or 700S Retro-Fit Kit (RF00017-XX) and check that all of 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 OPT (RP00017-XX):



PSU plate with cables (EZ0631):



Isolating Cover with captive screws (MZ0116):



Two of Gasket (MP0652):



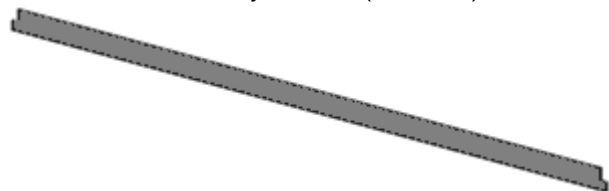
Thin, Black Gasket (MP0651):



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"

Thick, Grey Gasket (MP0653):



Retrofit G6-300 + InvencoLink GVR Encore 500S 700S (US) Installation Guide

- 2 MN0031 NUT, SEMS, #8-32 UNC
- 1 MF0046 FASTENER, CABLE CLIP
- MS0166 SCREW, #10-32 x 3/4", SERRATED
- 4 FLANGE
- 4 MN0027 NUT, K-LOCK, #10-32



EK0130
Ground Cable

Cables:

EK0124
Gilbarco Pump to Pump Adaptor



EK0139
Gilbarco E500S to InvencoLink



EK0131
Cat-5e, Flexible, YELLOW

Retrofit G6-300 + InvencoLink GVR Encore 500S 700S (US) Installation Guide

1.2.2 G6-300 Encore 500S or 700S Colored Retro-Fit Kit (RF00060-XX)

Colored RFK Hatch Panel with pre-installed G6-300 OPT (RP00060-XX):



PSU plate with cables (EZ0631):



Isolating Cover with captive screws (MZ0116):



Two of Gasket (MP0652):



Thin, Black Gasket (MP0651):



Sundry Parts:

- MS0101 SCREW, #6-20 x 1/2", HEX HEAD
- 10 1/4", SS410
- MS0149 SCREW #4-24 X 3/8", HI-LO
- 5 THREAD, PAN HEAD, PHILIPS #1, SS410
- MS0150 SCREW, SEMS, #6-20 X 3/8", TYPE
- 6 B, HEX HEAD 1/4", SS410, WASHER 3/4"

Thick, Grey Gasket (MP0653):



Retrofit G6-300 + InvencoLink GVR Encore 500S 700S (US) Installation Guide

- 2 MN0031 NUT, SEMS, #8-32 UNC
- 1 MF0046 FASTENER, CABLE CLIP
- MS0166 SCREW, #10-32 x 3/4", SERRATED
- 4 FLANGE
- 4 MN0027 NUT, K-LOCK, #10-32



EK0130
Ground Cable

Cables:

EK0124
Gilbarco Pump to Pump Adaptor



EK0139
Gilbarco E500S to InvencoLink



EK0131
Cat-5e, Flexible, YELLOW

Retrofit G6-300 + InvencoLink GVR Encore 500S 700S (US) Installation Guide

2 Safety & Compliance Information

This section introduces the hazards and safety precautions associated with installing, inspecting, maintaining or servicing the G6-300 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 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.

	Document Number	DCV-00452
	Date Released	Oct. 2020
	Revision Number/Security level	R05 S2
Retrofit G6-300 + InvencoLink GVR Encore 500S 700S (US) Installation Guide		

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.

Retrofit G6-300 + InvencoLink GVR Encore 500S 700S (US) Installation Guide

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.

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


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).
- 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).

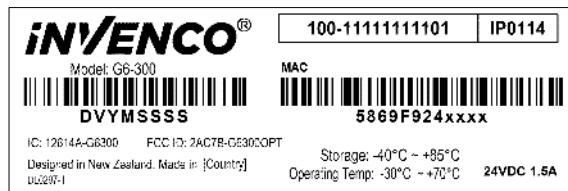
	Document Number	DCV-00452
	Date Released	Oct. 2020
	Revision Number/Security level	R05 S2
Retrofit G6-300 + InvencoLink GVR Encore 500S 700S (US) Installation Guide		

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 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.

Retrofit G6-300 + InvencoLink GVR Encore 500S 700S (US) Installation Guide

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.

4.1 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
- CRIND Control Board & Mounting Bracket

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. 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. (Fig 1.1)

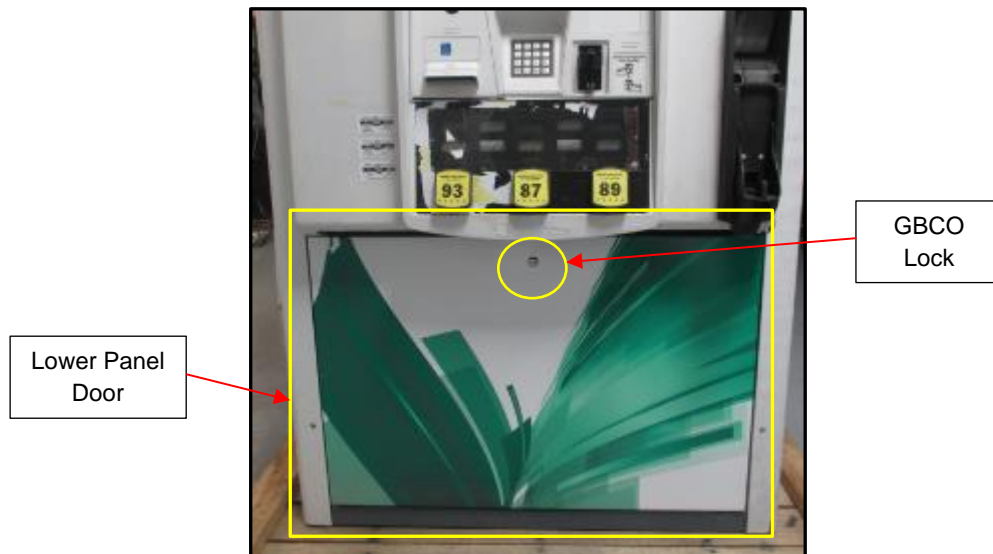
Retrofit G6-300 + InvencoLink GVR Encore 500S 700S (US) Installation Guide

Fig 1.1 – Location of Panel Door and Lock

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. (Fig 1.3)

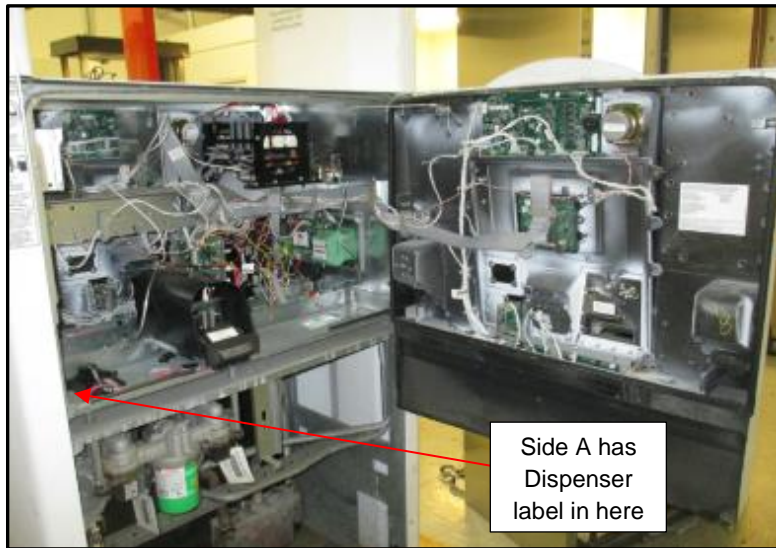
Retrofit G6-300 + InvencoLink GVR Encore 500S 700S (US) Installation Guide

Fig 1.3 – Main Dispenser Door in fully opened position

6. Unfasten the cable clips holding the Monochrome Display assembly cables, and unplug the cables. (Fig 1.4)

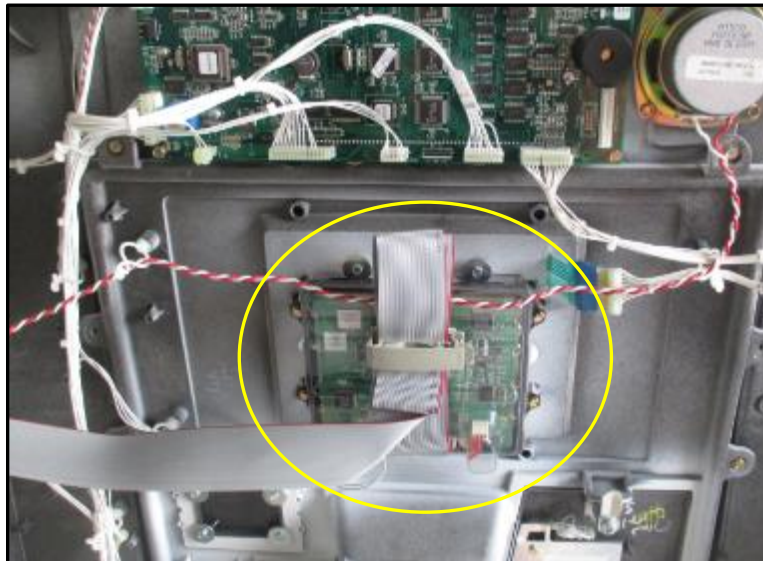


Fig 1.4 – Location of Monochrome Display

Retrofit G6-300 + InvencoLink GVR Encore 500S 700S (US) Installation Guide

7. Unplug the Customer Keypad and Card Reader assembly cables. (Fig 1.5a and 1.5b)

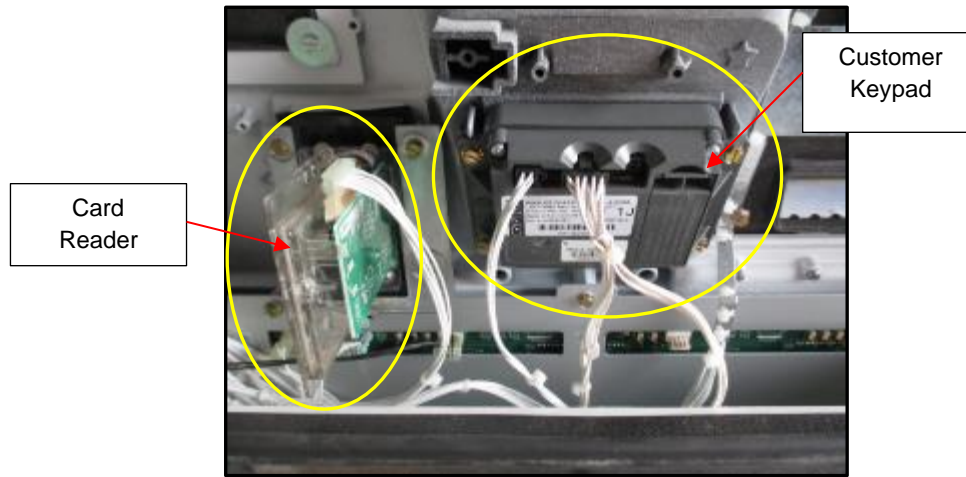


Fig 1.5a – Encore 500S Location of Card Reader and Customer Keypad

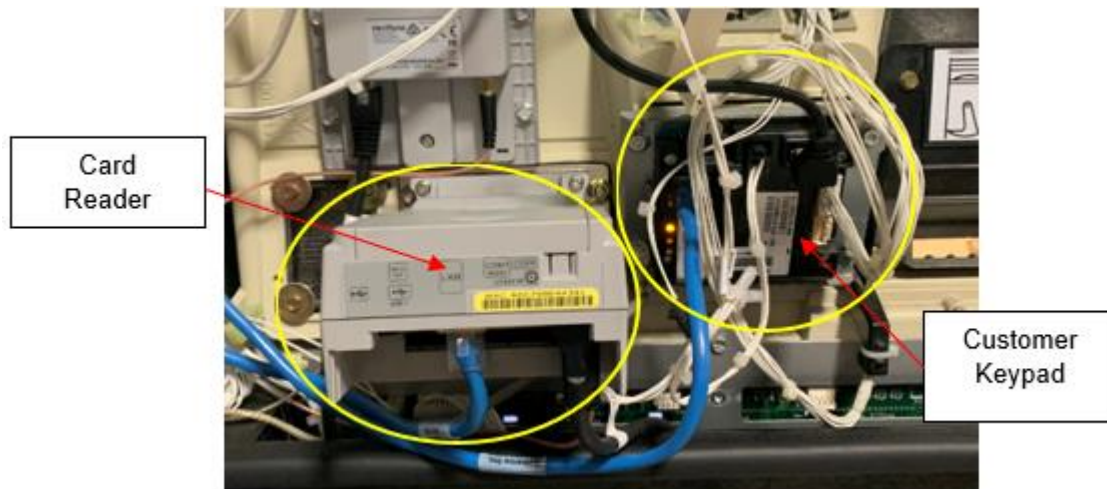


Fig 1.5b – Encore 700S Location of Card Reader and Customer Keypad

8. Remove and discard the three ¼" screws that fasten the ADA keypad plate to the dispenser door (if present). (Fig 1.6)

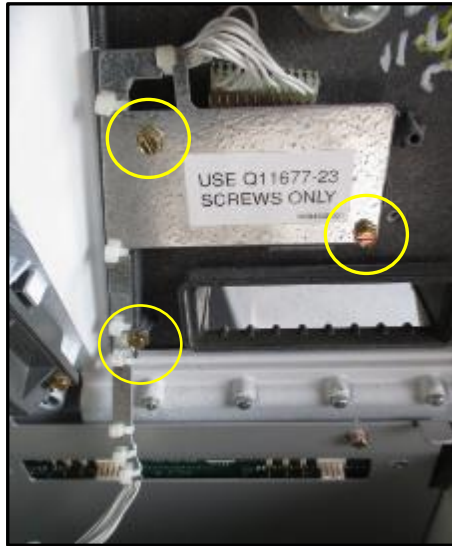
Retrofit G6-300 + InvencoLink GVR Encore 500S 700S (US) Installation Guide

Fig 1.6 – Location of ADA Keypad Plate screws

9. Unplug the ADA keypad (if present). (Fig 1.7)

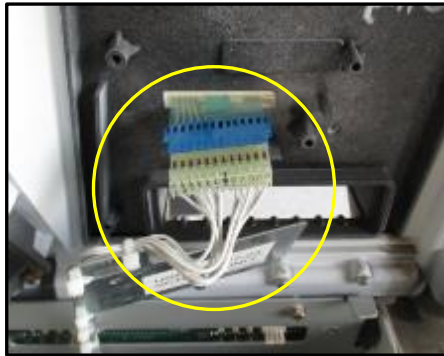


Fig 1.7 – Location of ADA keypad cable assembly

10. Unplug the Softkey cable assembly from both the Softkeys and the Door Node at terminal position P2106 (If present). (Fig 1.8)

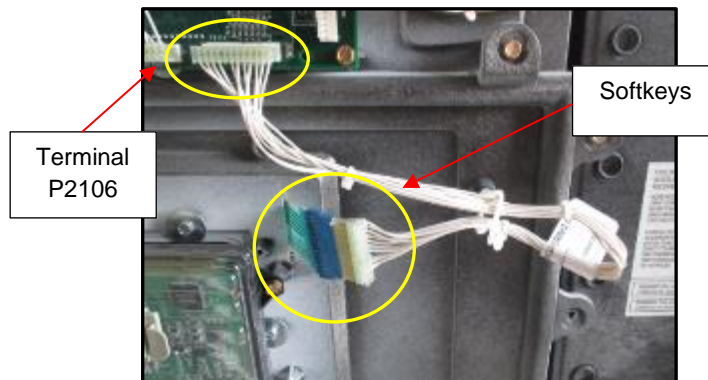
Retrofit G6-300 + InvencoLink GVR Encore 500S 700S (US) Installation Guide

Fig 1.8 – Location of Softkey cable assembly

- 11.** 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. (Fig 1.9a and 1.9b)

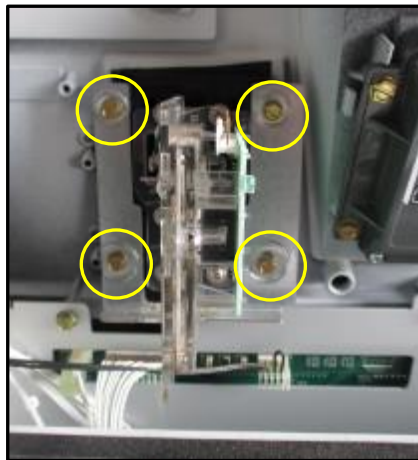


Fig 1.9a – Encore 500S Location of Card Reader plate screws

Retrofit G6-300 + InvencoLink GVR Encore 500S 700S (US) Installation Guide



Fig 1.9b – Encore 700S Location of Card Reader plate screws

12. Remove and discard the three #6-3/8" sheet-metal screws that fasten the PPU assembly to the door. (Fig 1.10)

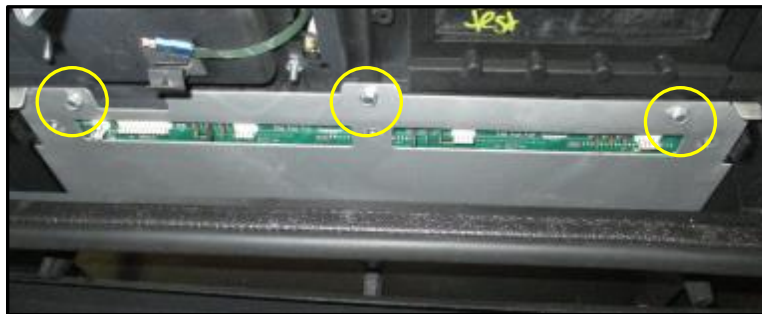


Fig 1.10 – Location of PPU Panel screws

13. 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. (Fig 1.11 a,b,c)



Fig 1.11 – Grade Button

Lock Tab location

Flathead on Lock Tab

Retrofit G6-300 + InvencoLink GVR Encore 500S 700S (US) Installation Guide

- b. Firmly lift up on the buttons to remove them.
 - c. Set the buttons aside. They will be re-installed later in the process.
- 14.** Remove the Product ID Overlay to expose screws. (Fig 1.12)
- Note:** Removing the Product ID Overlay will render it unusable. A new overlay will need to be applied during the installation process.

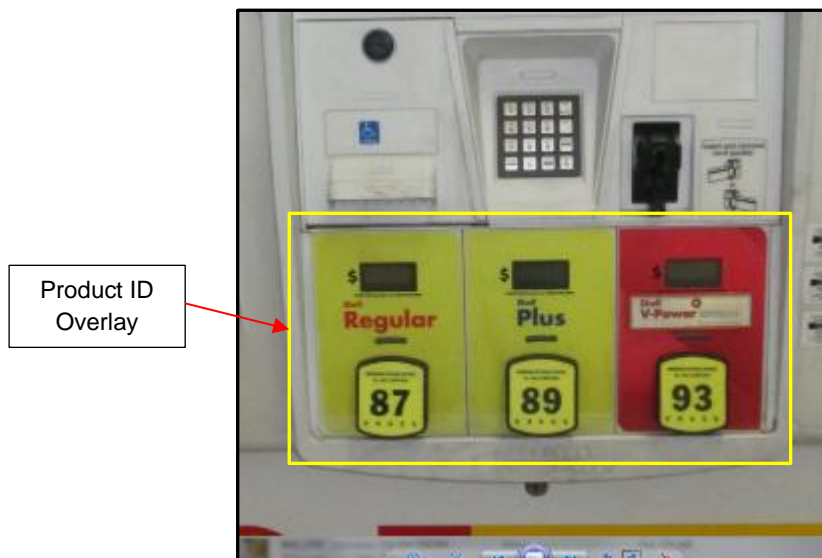


Fig 1.12 – Location of Product ID Overlay

- 15.** Remove and discard the top five fastening screws on the Product ID Plexi-Bezel on the front of the Dispenser Door. (Fig 1.13)

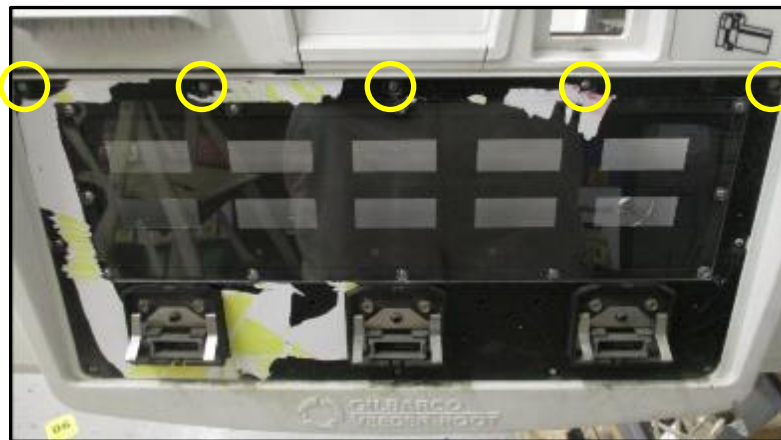


Fig 1.13 – Location of fastening screws on Product ID Plexi-Bezel

Retrofit G6-300 + InvencoLink GVR Encore 500S 700S (US) Installation Guide

- 16.** 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. (Fig 1.14)

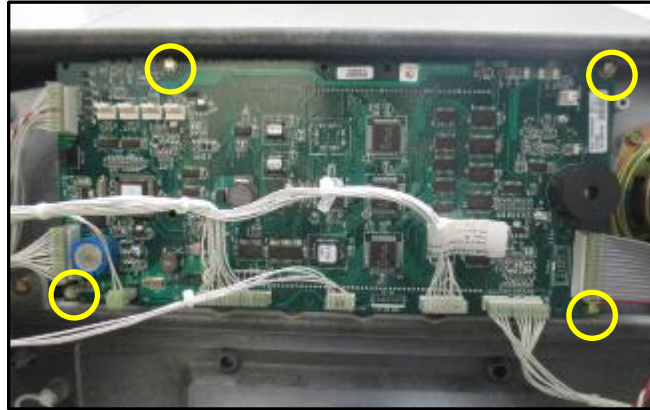


Fig 1.14 – Location of Door Node screws

- 17.** 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. (Fig 1.15)

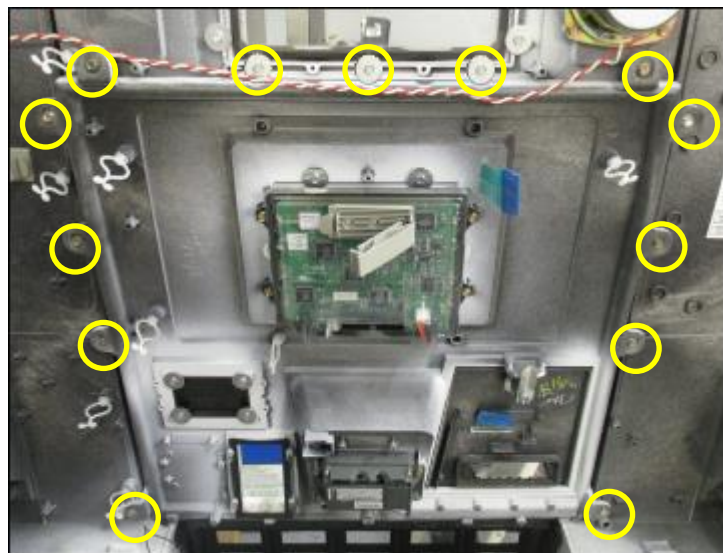


Fig 1.15 – Location of CIM Panel screws

Retrofit G6-300 + InvencoLink GVR Encore 500S 700S (US) Installation Guide

18. Remove the CIM Panel along with any remaining attached components. These can be discarded. They will not be reinstalled. (Fig 1.16 a,b)

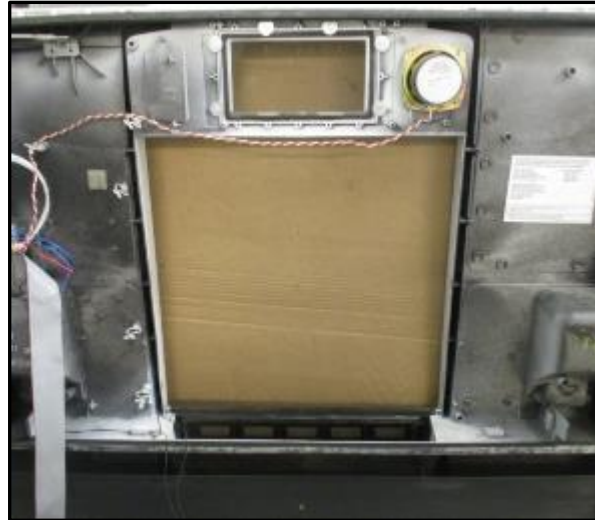


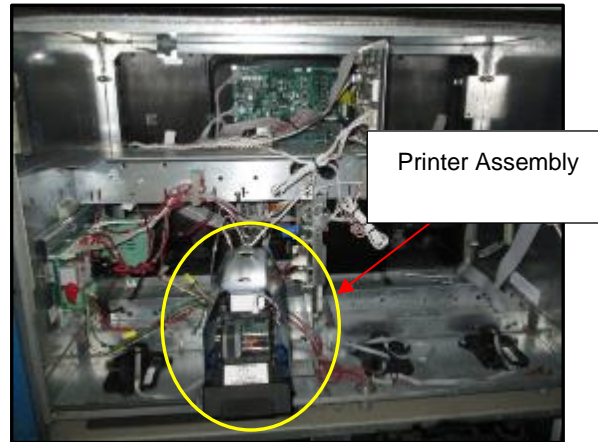
Fig 1.16a – Dispenser Door after CIM removal



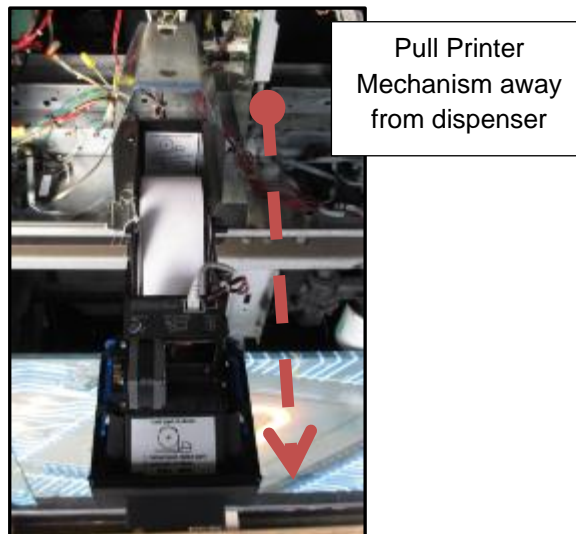
Fig 1.16b – CIM Panel with components after removal

Retrofit G6-300 + InvencoLink GVR Encore 500S 700S (US) Installation Guide

19. Locate the Printer Assembly.

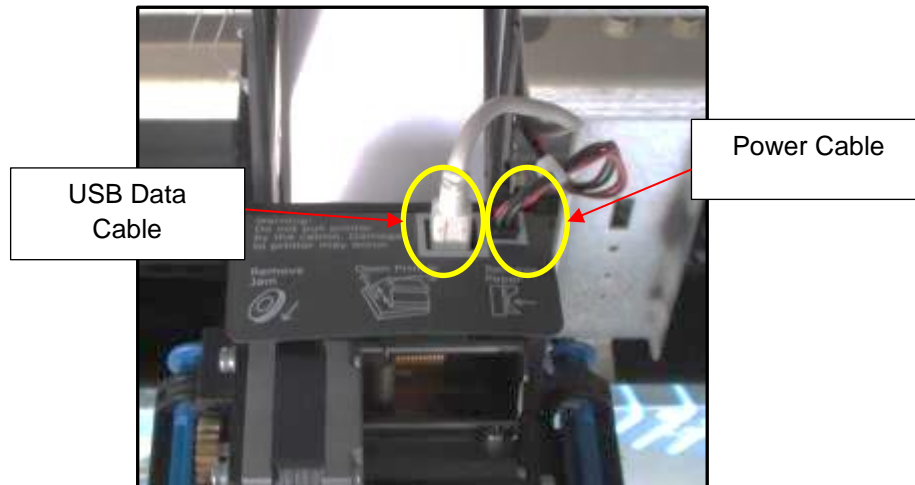


20. Pull the Printer Mechanism fully forward.

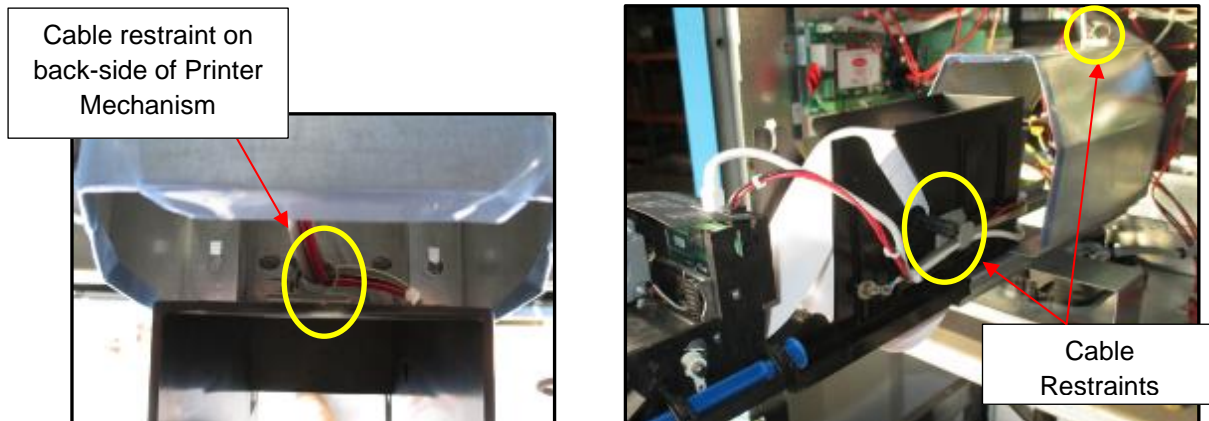


Retrofit G6-300 + InvencoLink GVR Encore 500S 700S (US) Installation Guide

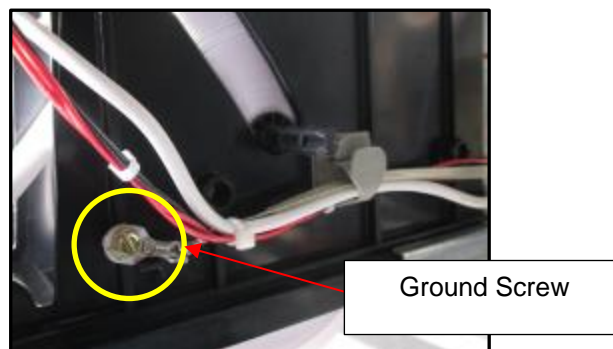
- 21.** Unplug both the power cable and the USB data cable.



- 22.** 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.

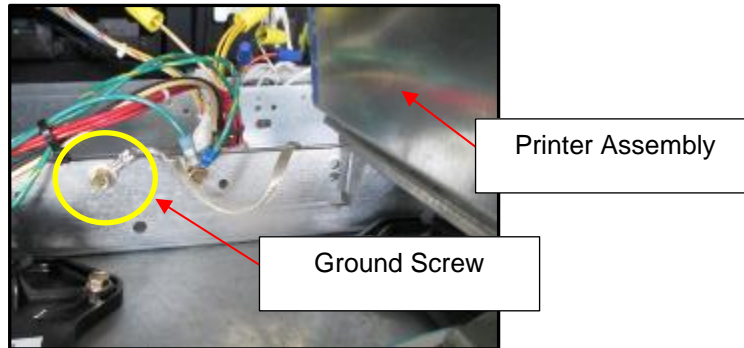


- 23.** Remove the Ground Screw located on the side of the Printer Mechanism. The screw can be discarded; it will not be re-installed.

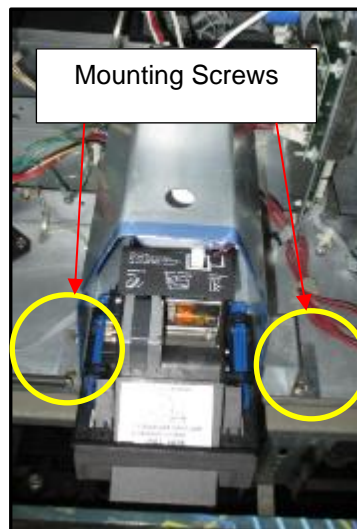


Retrofit G6-300 + InvencoLink GVR Encore 500S 700S (US) Installation Guide

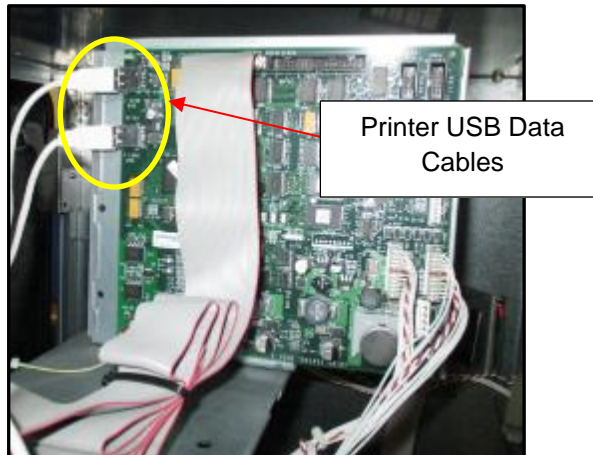
24. Pull the Printer Cables through the back of the Printer Assembly and lay them inside the Electronics Cavity.
25. Remove the Ground Screw located on the Electronics Cavity Interior Channel, left of the Printer Assembly. The Printer Assembly's Ground Screw is separate and by itself from other grounding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



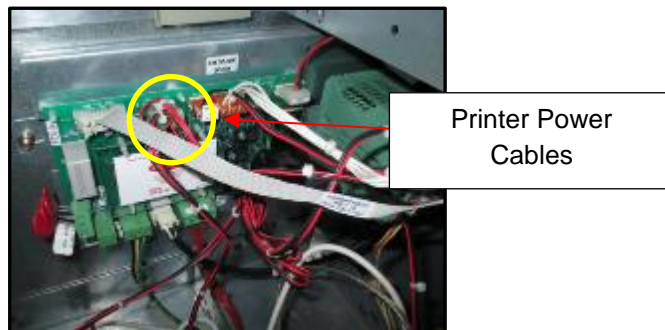
26. Slide the printer assembly back, so that it does not tip over when the mounting screws are removed in the next step.
27. Remove the four mounting screws that are fastening the Printer Bracket to the Electronics Cavity Frame. Remove the Printer Assembly and screws. They can be discarded; they will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



28. 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:
 - a. If the threads in the holes are intact, start and then tighten the screws in the holes.
 - b. 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.
29. Unplug the USB cable from terminals P3120 for Side-A (P3122 for Side-B) CRIND Control Node, which is located on the Upper Electronics Mount Rail.

Retrofit G6-300 + InvencoLink GVR Encore 500S 700S (US) Installation Guide

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



31. Remove the Printer Cables from the Dispenser. Unfasten any cable restraints necessary and re-fasten them after the printer cables are removed.
32. **For a double-sided installation, repeat steps 1-31 for Side-B (if present).**

Note: The Encore 500-S communicates certain data amongst several dispenser components via a LON cable assembly, commonly referred to as LON Headers. The LON cables need to be connected to each necessary component in a "loop" or "Ring" setup, which is a network topology that is set up in a circular fashion in such a way that they make a closed loop. In most cases the necessary components that the LON loop is connected to are: the CPU Board, the CRIND Control Node, and both Door Nodes. The CRIND Control Node is going to be removed from the loop during this disassembly procedure, which will create an "opening" in the loop. This "opening" needs to be closed in order for the components to communicate. Follow the steps 33-35 to correctly remove the components and close the opening in the loop.

33. Identify the CRIND Control Node located on the upper electronics rail inside of the electronics cavity, and the CPU Board mounted below. (Fig 1.17)

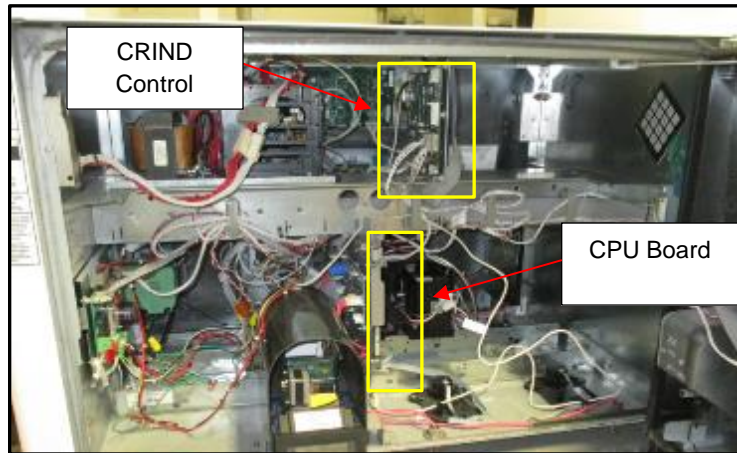
Retrofit G6-300 + InvencoLink GVR Encore 500S 700S (US) Installation Guide

Fig 1.17 – Location of CRIND Control Node and CPU Board

- 34.** There are two LON terminal locations on the CRIND Control Node. Locate which LON Cable directly connects the CRIND Control Node and the CPU Board. Unplug this cable from both boards and discard it. It will not be re-installed. (Fig 1.18 a,b,c,d)

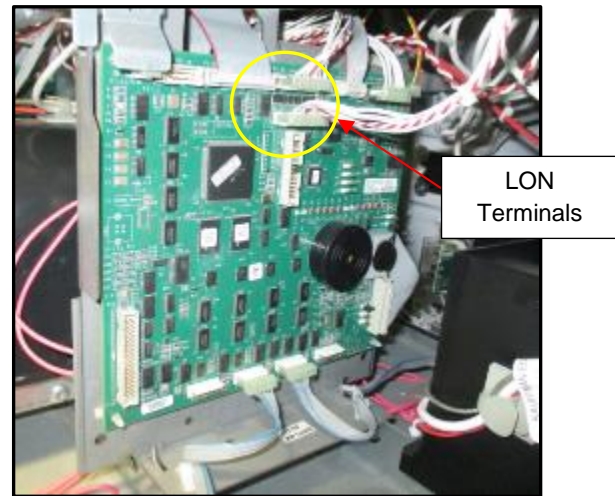


Fig 1.18a,b – LON Terminals, CRIND Control Node (left) & CPU Board (right)

Retrofit G6-300 + InvencoLink GVR Encore 500S 700S (US) Installation Guide

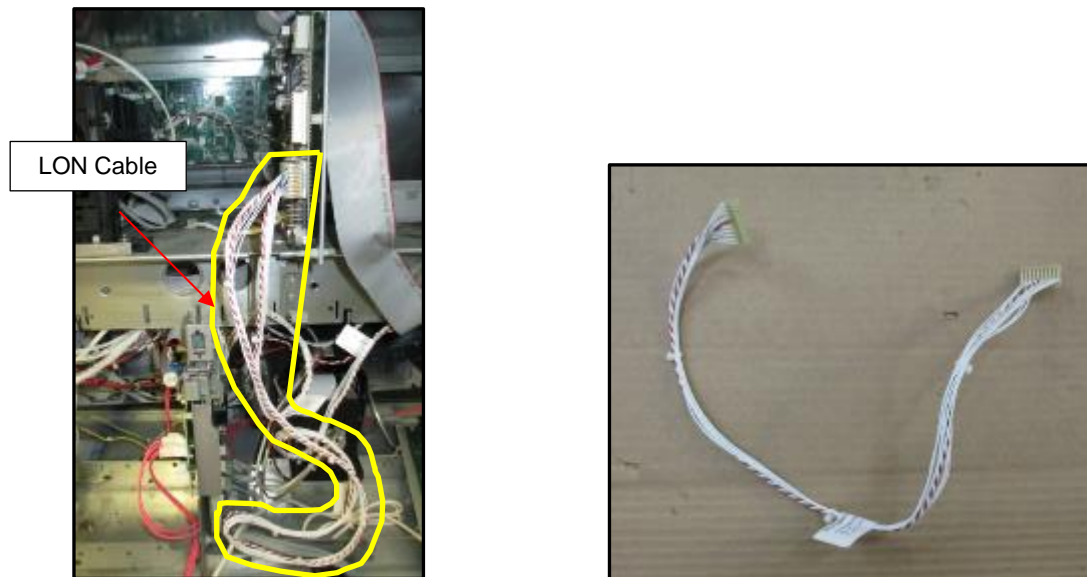
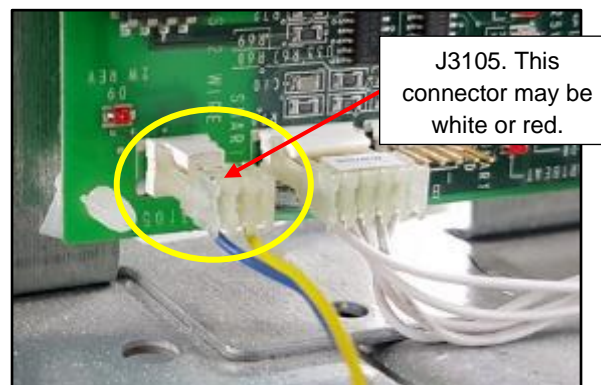


Fig 1.18c,d – LON Cable before (left) & after (right) removal

35. Unplug the remaining LON Cable from the CRIND Control Node and plug it in the now open LON terminal on the CPU Board.
36. Unplug J3105 from the CRIND Control Node. Mark this cable for later use during RFK installation.



37. Unplug every remaining cable attached to the CRIND Control Node.
38. Remove the CRIND Control Node by using a pair of needle nose pliers and squeeze the plastic standoffs (4) that the board is mounted on. The CRIND Control Node can be discarded. It will not be re-installed. (Fig 1.19)

Retrofit G6-300 + InvencoLink GVR Encore 500S 700S (US) Installation Guide

Fig 1.19 – CRIND Control Node after removal

- 39.** Remove and discard the three 9/32" nuts that are fastening the CRIND Control Bracket to the upper electronics rail in the electronics cavity. (Fig 1.20)

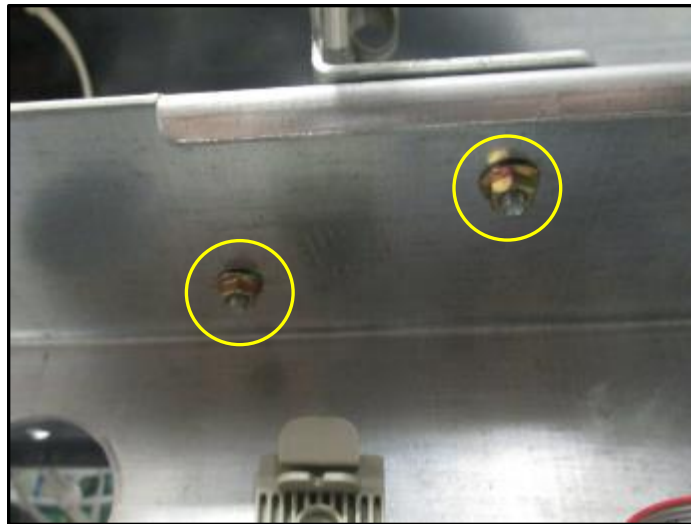


Fig 1.20 – Location of CRIND Control Bracket nuts

- 40.** Remove the CRIND Control Bracket from the dispenser. It can be discarded. It will not be re-installed. (Fig 1.21)

Retrofit G6-300 + InvencoLink GVR Encore 500S 700S (US) Installation Guide

Fig 1.21 – CRIND Control Bracket after removal

- 41.** The disassembly process is complete. The dispenser is now ready for the Installation procedure to begin.

Retrofit G6-300 + InvencoLink GVR Encore 500S 700S (US) Installation Guide

4.2 Pre-Installation Procedure

4.2.1 Communications

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 **MUST** first be installed.

The approved communications methods are listed below.

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 (EZ0631) and apply the communications method selected from the table above, following the installation instructions supplied with that Kit (DCV-00465).

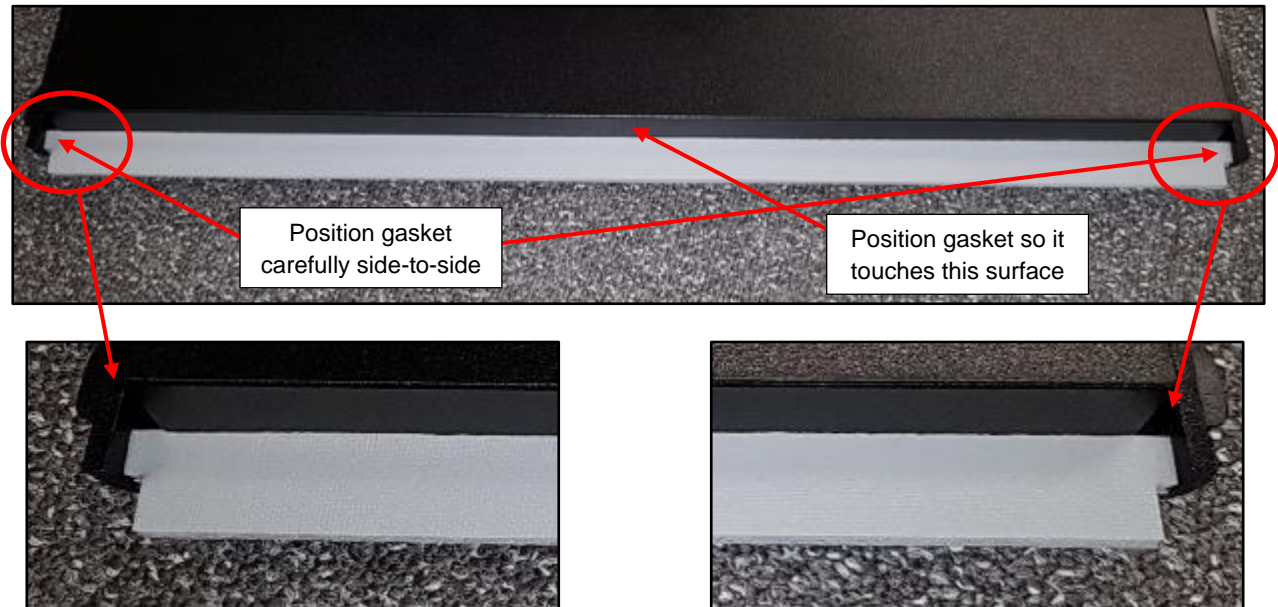
4.2.2 Gasket Installation

The RP00017-XX (for black RFK panel) and RP00060-XX (for colored RFK panel) need to have a gasket installed before it can be placed into the dispenser.

1. Place the RP00017-XX or RP00060-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 RP00017-XX or RP00060-XX as shown, taking care that the edge of the gasket is touching the surface, before pressing the gasket onto RP00017-XX or RP00060-XX.

If you are gentle, you can reposition the gasket before pressing it down properly.



Retrofit G6-300 + InvencoLink GVR Encore 500S 700S (US) Installation Guide

5. Then fold the gasket over the bottom edge of RP00017-XX or RP00060-XX and press it down to form ensure it's in full contact.



6. Once the gasket has been installed, take care when handling RP00017-XX or RP00060-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 RP00017-XX or RP00060-XX, proceed to §4.3 Installation Procedure.

Retrofit G6-300 + InvencoLink GVR Encore 500S 700S (US) Installation Guide

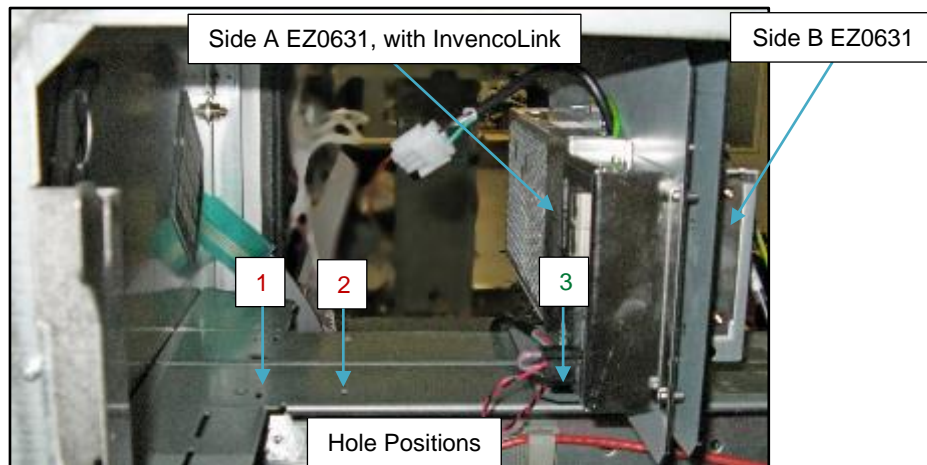
4.3 Installation Procedure

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 EZ0631 PSU Plate assembly. For Side A this is the PSU Plate Assembly that has just had the InvencoLink converter installed.



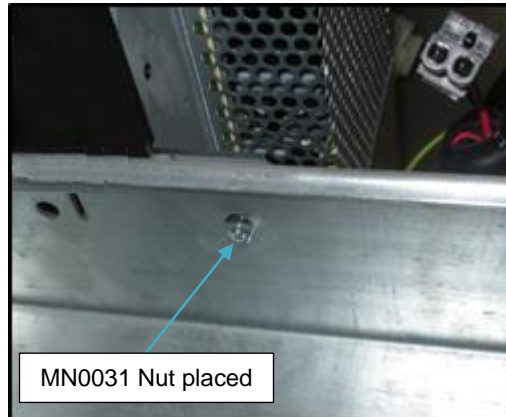
- a. Mount the EZ0631 PSU Plate Assembly on the upper electronics rail.
 - i. For Side A, in the third set of holes from the left side of the dispenser as shown.
 - ii. For Side B, beside the Side A assembly, back to back in the next holes, as shown:



Looking from the B-Side of the dispenser

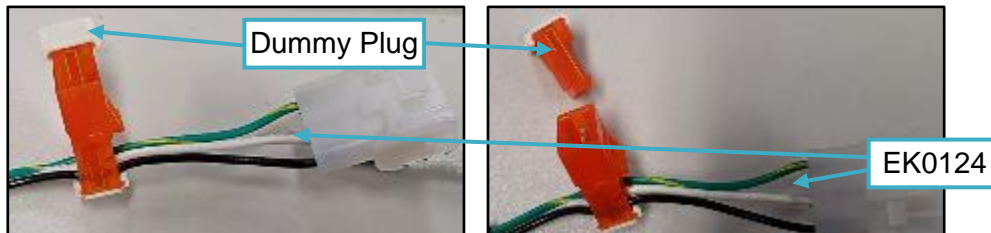
- b. Place an MN0031 #8 LockNut on each stud and tighten with a 5/16” nut driver. Note you will need to place one nut from each side of the dispenser.

Retrofit G6-300 + InvencoLink GVR Encore 500S 700S (US) Installation Guide



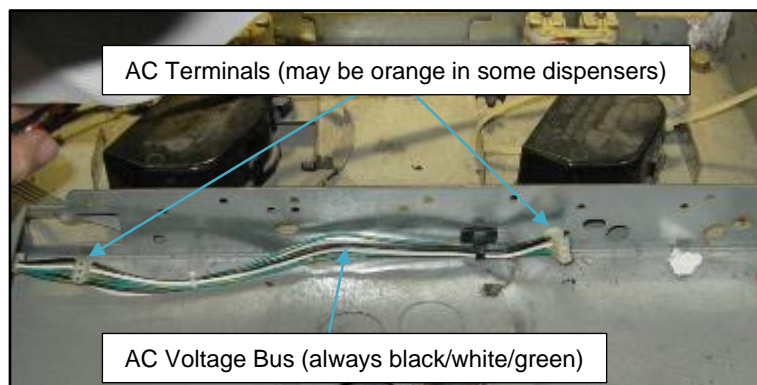
2. Cable EK0124 has three connectors at one end and a single connector at the other end.

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

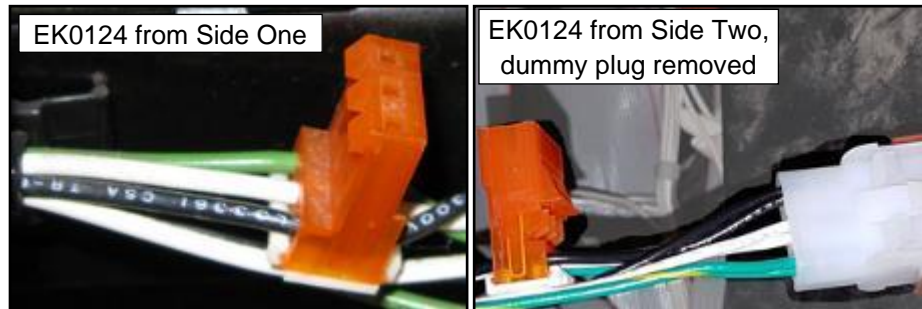


Unplug and discard the female dummy plug from the three-connector end of EK0124.

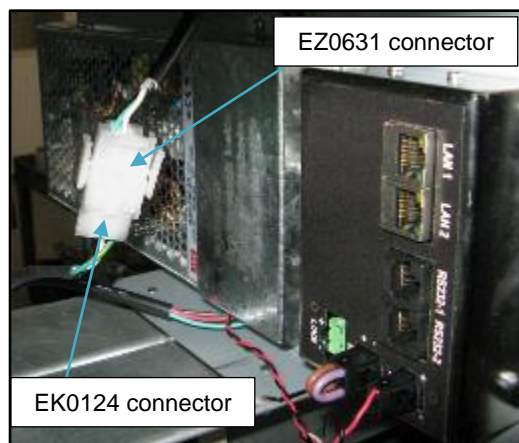
- a. For Side A, plug the now-exposed male orange connector into an available AC terminal port on the AC voltage cable bus assembly in the dispenser, typically located somewhere along the bottom of the electronics cavity.
- b. For Side B, plug the now-exposed male orange connector into the available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



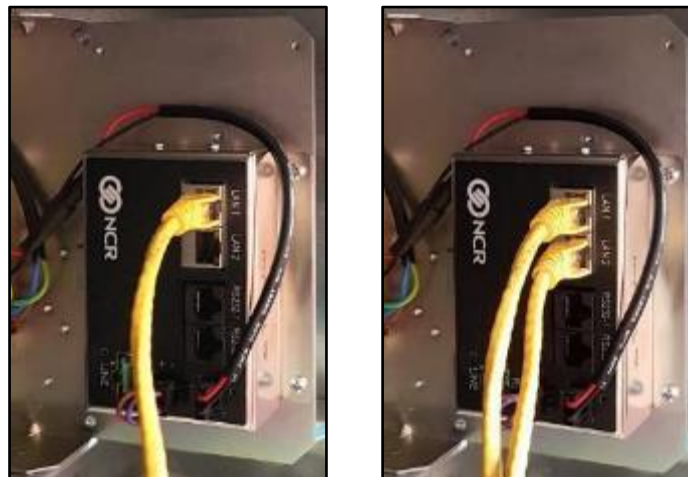
Note: There are several points of connection along the pre-existing AC voltage cable bus assembly in the dispenser. Locate an unused terminal port. Do not unplug an occupied port.

Retrofit G6-300 + InvencoLink GVR Encore 500S 700S (US) Installation Guide

3. Connect the large white plug at the single-connector end of EK0124 into the AC power connector on the EZ0631 PSU Plate Assembly.

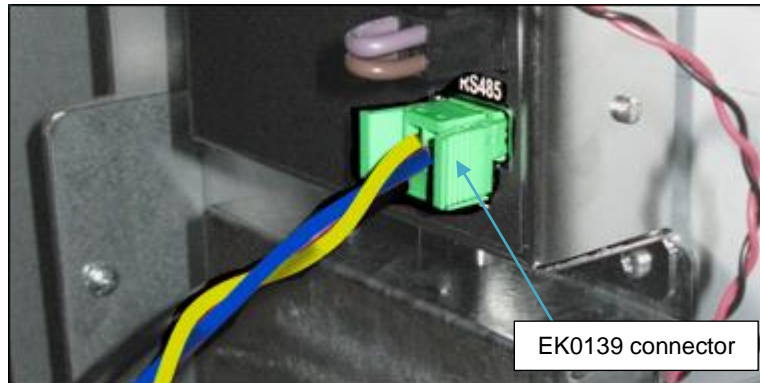


4. Plug the EK0131 YELLOW patch cable into the LAN-1 socket on the InvencoLink converter. If doing Side B, then plug the cable into the LAN-2 socket.

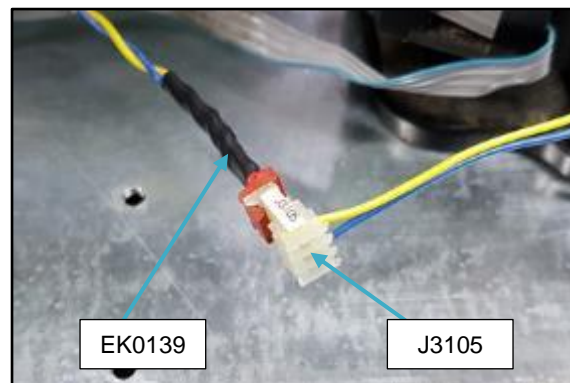


Retrofit G6-300 + InvencoLink GVR Encore 500S 700S (US) Installation Guide

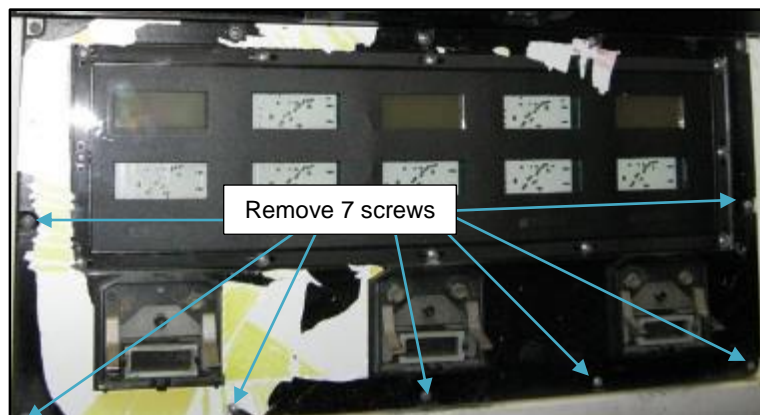
5. For Side A only:
- c. install the Green connector on EK0139 into the “LINE” socket on InvencoLink converter on EZ0631.



- d. Install the other end of EK0139 into the J3105 connector marked in Disassembly step 36. The connectors are polarised – they only go together one way:



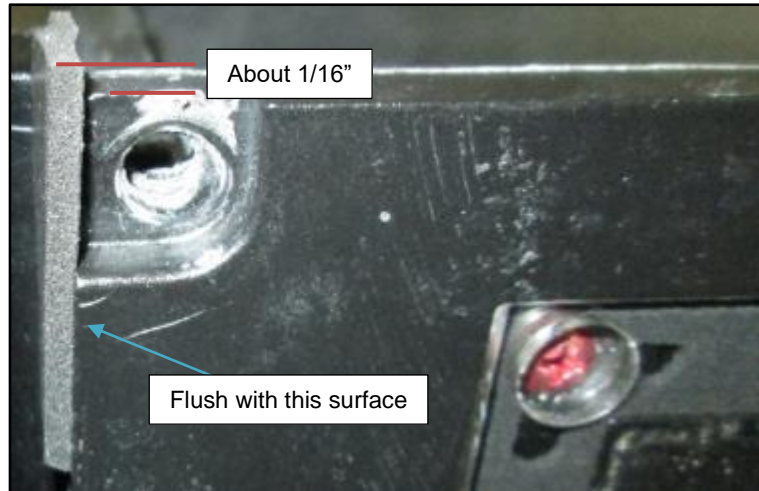
6. Unscrew the entire PPU panel by removing seven screws as shown. Keep the screws, they will be used to re-fit the PPU panel:



7. Ease the top of the PPU panel forwards out of the dispenser door about an inch or so.

Retrofit G6-300 + InvencoLink GVR Encore 500S 700S (US) Installation Guide

8. Remove the backing paper from each of the two MP0652 gaskets and apply them one to each side of the top of the PPU panel as shown (only one side is shown):



9. Gently flex the center top of the PPU panel forward, so that the two top corners can be eased back into place in the dispenser door without rubbing or otherwise damaging the gaskets just installed. The gaskets will become slightly compressed when you release the flex on the panel.
10. Reinstall and tighten the seven screws removed in step 6.
11. From inside the dispenser door, apply an MP0651 gasket across the top of the PPU panel as shown:



Note that the long part of the gasket goes on the back of the PPU panel, and the shorter part goes across the top of the PPU panel, between the vertical edges of the dispenser door opening.

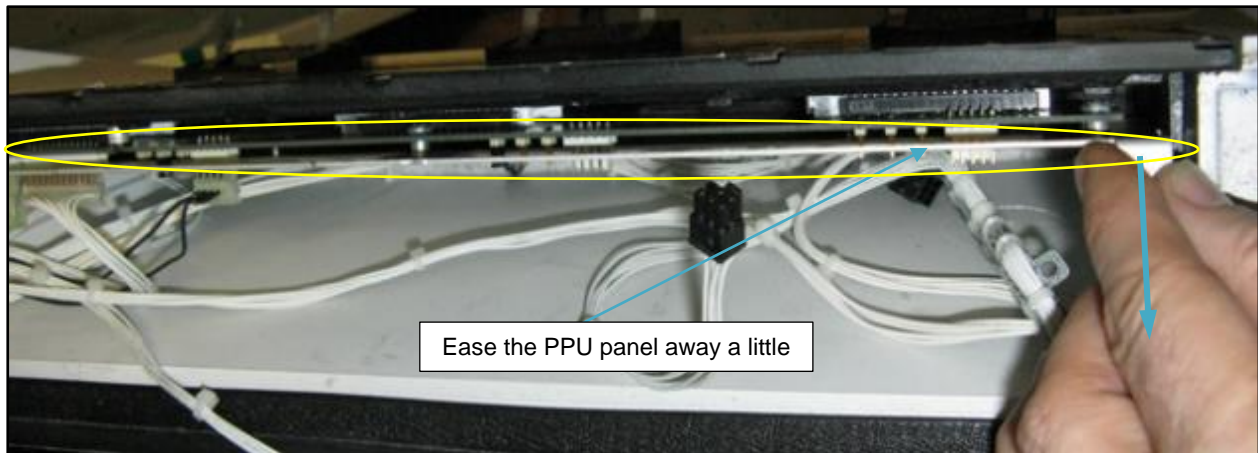
12. Acquire pre-assembled RP00017-XX (black) or RP00060-XX (colored) RFK Hatch Panel containing the G6-300 OPT.



Retrofit G6-300 + InvencoLink GVR Encore 500S 700S (US) Installation Guide

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.

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



14. 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.



15. 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.

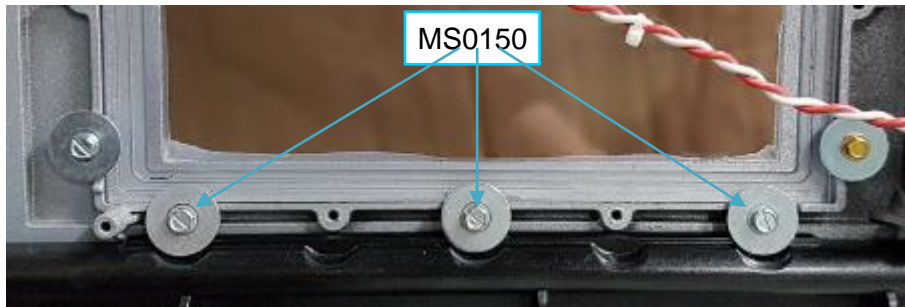
Retrofit G6-300 + InvencoLink GVR Encore 500S 700S (US) Installation Guide

16. Insert the two MS0101 screws ready from Step 14 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.

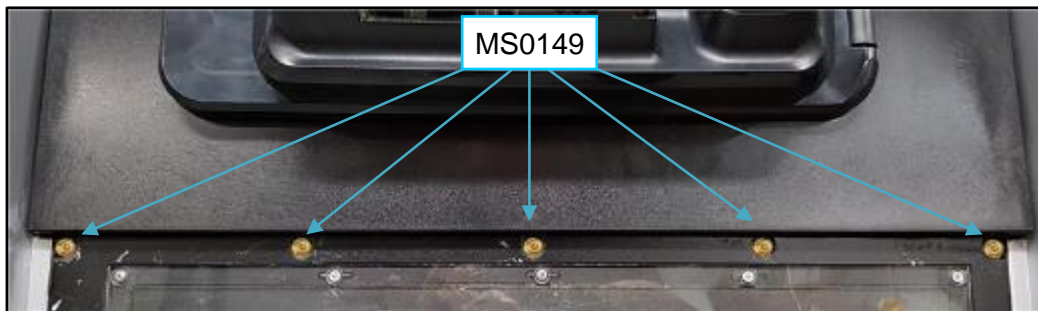


Retrofit G6-300 + InvencoLink GVR Encore 500S 700S (US) Installation Guide

17. 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 ¼" nut driver.
18. 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 ¼" nut driver:



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



20. 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.



21. 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 ¼"-headed screws from Disassembly Step 15 in the corner holes of the Door Node board. Tighten the screws with a ¼" nut driver.

Retrofit G6-300 + InvencoLink GVR Encore 500S 700S (US) Installation Guide

22. Gather the following cables:

- a. EK0131 Yellow patch cable
- b. Black DC and green/yellow earth cable pre-installed on EZ0631 PSU Plate Assembly

23. Route the three cables from Step 22 along underneath the electronics shelf to the right-hand side of the pump cabinet, then out along the right-hand side of the cabinet.

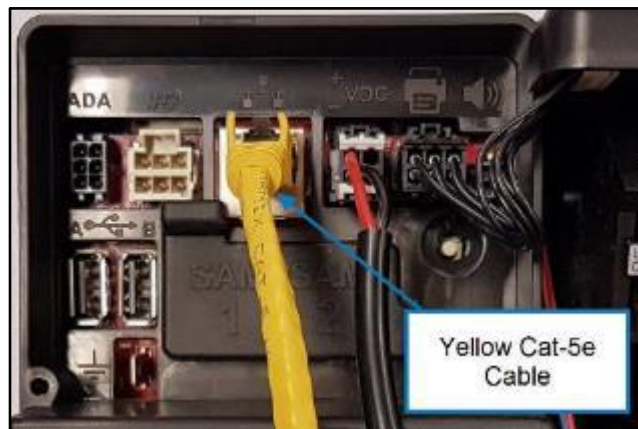


24. Take the three cable ends routed in Step 23 and connect them to the G6-300 OPT:

- a. Plug the Black low-voltage DC cable from the EZ0631 PSU plate, into the OPT:

Retrofit G6-300 + InvencoLink GVR Encore 500S 700S (US) Installation Guide

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



- c. Clip the green earth cable from the EZ0631 PSU plate onto the 1/4" tab on the OPT:



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

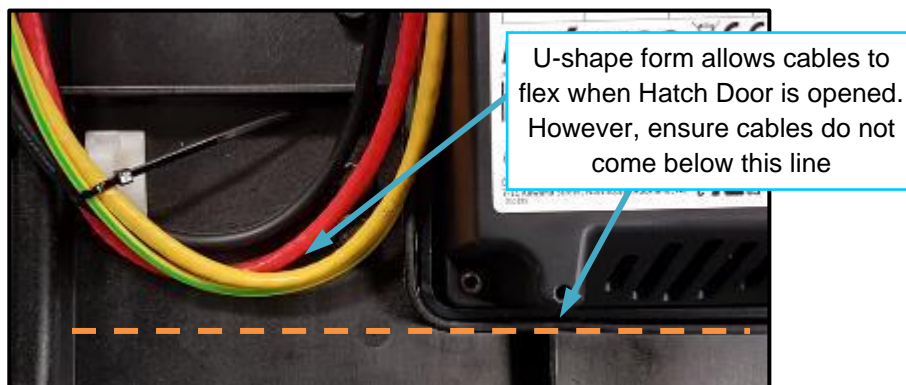
Retrofit G6-300 + InvencoLink GVR Encore 500S 700S (US) Installation Guide



26. Place an MF0046 cable clip beneath the rib on the RFK Hatch Panel as shown:

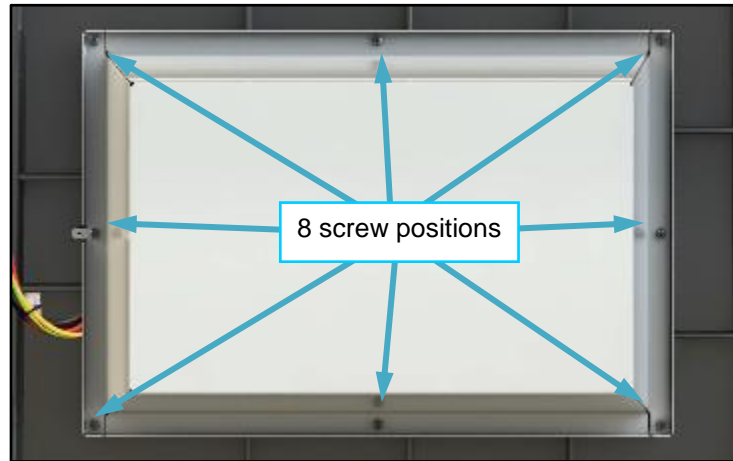


27. Further gather the cables and secure them to the cable clip using a cable-tie, taking care to form a U-shape as shown:



Retrofit G6-300 + InvencoLink GVR Encore 500S 700S (US) Installation Guide

28. Draw any excess cable length back towards the pump door hinge, and re-secure them with the cable clip (shown in the photo in Step 23) located there.
29. Install the MZ0116 Isolating Cover over the rear of the G6-300 OPT, onto the RFK Hatch Door.
 - a. Place the cover with the ground tab to the left over the G6-300 OPT, ensuring that no cables are snagged.
 - b. MZ0116 has captive screws for attachment. Insert and tighten the eight captive screws into the Stand-Offs on the RFK Hatch Door:



- c. Plug an EK0130 Grounding Cable onto the tab on the left of the Isolating Cover:



- d. Gather EK0130 into the loom of cables established in Step 23.
 - e. Loosen the nut on the earth stud on the EZ0631 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:

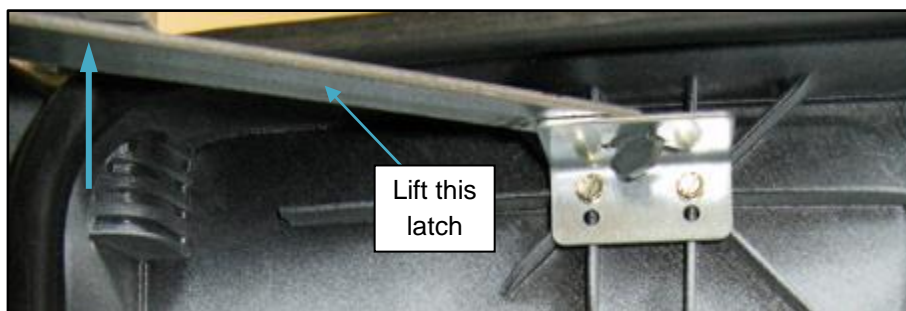
Retrofit G6-300 + InvencoLink GVR Encore 500S 700S (US) Installation Guide



- f. Gather any excess wire of EK0130 and tidy it into the loom.
30. 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 13. 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!

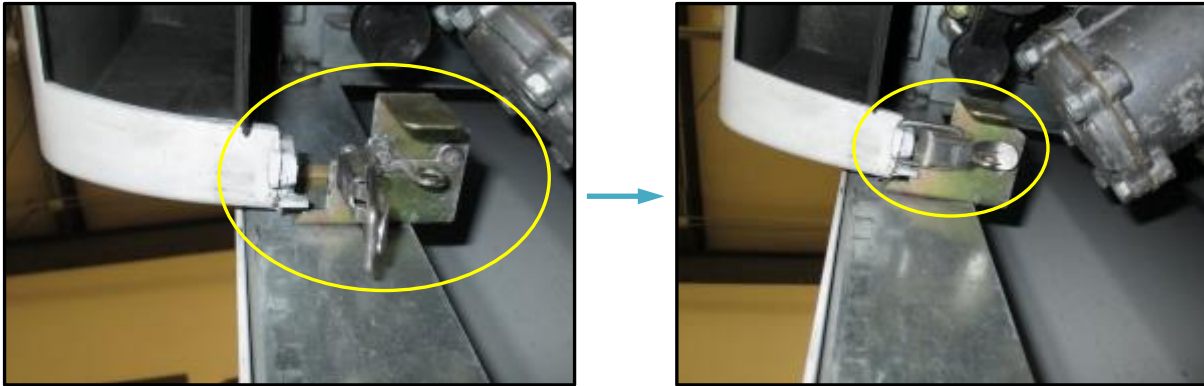


31. Tidy up any loose wiring, using cable ties to secure the wires.
32. For a double-sided installation, repeat steps 1-5 and 7-31.
33. Close up the dispenser. For each open Side:
 - a. Lift the Encore 500S or 700S Pump Door open-latch to release the door:

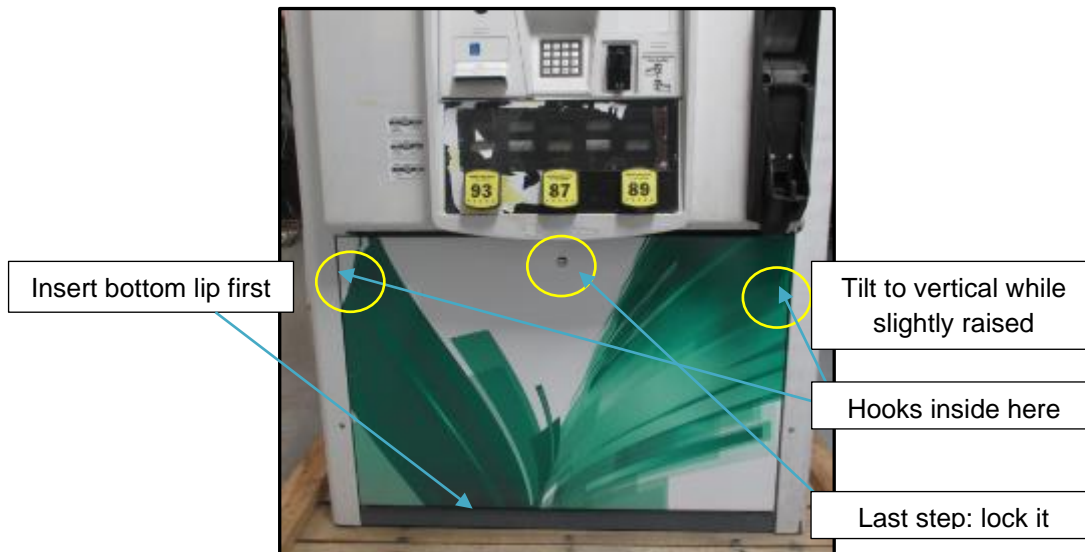


Retrofit G6-300 + InvencoLink GVR Encore 500S 700S (US) Installation Guide

- 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.



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



35. 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.

iN/ENCO®	Document Number	DCV-00452
	Date Released	Oct. 2020
	Revision Number/Security level	R05 S2
Retrofit G6-300 + InvencoLink GVR Encore 500S 700S (US) Installation Guide		

	Document Number	DCV-00452
	Date Released	Oct. 2020
	Revision Number/Security level	R05 S2
Retrofit G6-300 + InvencoLink GVR Encore 500S 700S (US) Installation Guide		

5 First Power-Up

Once the installation is complete and the wiring is certified (if necessary), power may be applied. The G6-300 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):

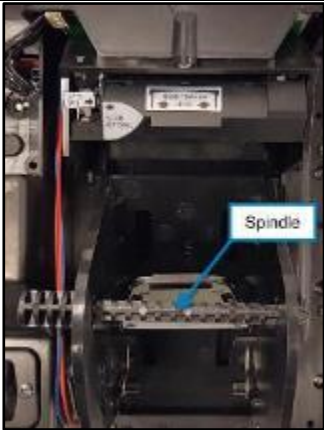




If the terminal is successful in connecting to the LAN, it will display the following screen and the rest of the start-up sequence will continue:



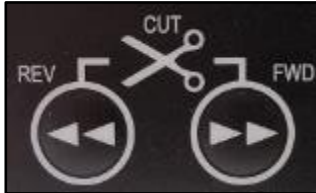


Retrofit G6-300 + InvencoLink GVR Encore 500S 700S (US) Installation Guide

The following steps describe the paper loading procedure.

Step	Description	Photo reference
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.	

Retrofit G6-300 + InvencoLink GVR Encore 500S 700S (US) Installation Guide

5.	The photo shows the paper loaded correctly.	
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>	