


iNVENCO®	Document Number	DCV-00207
	Date Released	Dec. 2016
	Revision Number/Security level	R01 S2
Retrofit G7+InvencoLink GVR Encore 500S (US) Installation Guide		

Retrofit G7+InvencoLink GVR Encore 500S (US) Installation Guide

Kit Part Number: 6002-0001-8801

	Document Number	DCV-00207
	Date Released	Dec. 2016
	Revision Number/Security level	R01 S2
Retrofit G7+InvencoLink GVR Encore 500S (US) Installation Guide		

Release History

Version	Prepared by	Date	Change description
0	Adam Crocker	November 2016	Initial version to be approved by UL
1		December 2016	Added information for installing extra gaskets (MP0651, MP0652)

© 2016 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



Document Number

DCV-00207

Date Released

Dec. 2016


Revision Number/Security level

R01 S2

Retrofit G7+InvencoLink GVR Encore 500S (US) Installation Guide

Contents

Release History	2
1 Introduction	4
1.1 Tools Required	4
1.2 Installation Kit Contents	5
2 Safety & Compliance Information	6
2.1 Preliminary Precautions	6
2.2 Emergency Total Electrical Shut-Off	6
2.3 Total Electrical Shut-Off Before Access	6
2.4 Evacuation, Barricading and Shut-Off	6
2.5 Read the Manual	6
2.6 Follow the Regulations	7
2.7 Replacement Parts	7
3 Safety Symbols and Terminology	7
3.1 Prevent Explosions and Fires	7
3.1.1 No Open Flames	8
3.1.2 No Sparks - No Smoking	8
3.1.3 Working Alone	8
3.1.4 Working with Electricity Safety	8
3.1.5 Hazardous Materials	8
3.1.6 In an Emergency	8
3.1.7 Approvals	9
3.1.8 Laser Warning	9
3.2 Computer Programs and Documentation	9
4 Installation Guide	10
4.1 Disassembly Procedure	10
4.2 Pre-Installation Procedure	23
4.3 Installation Procedure	24
4.3.1 Wiring Completion	38
5 First Power-Up	39

	Document Number	DCV-00207
	Date Released	Dec. 2016
	Revision Number/Security level	R01 S2
Retrofit G7+InvencoLink GVR Encore 500S (US) Installation Guide		

1 Introduction

The documentation provides some basic guidelines for installing the Optic 12 / G7 Outdoor Payment Terminal (OPT) system.

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

- **For a single-sided installation, or if this Kit will be installed into Side A (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 6009-0008-8801 (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 G7 OPT:

- Gilbarco "CH 751" Key
- Gilbarco "GBCO" Key
- Philips #1 screwdriver
- Philips #2 screwdriver
- Flat 5mm screwdriver
- Side cutters
- Cable (zip) ties
- Pliers
- ¼" Socket or Nut Driver



WARNING

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

Retrofit G7+InvencoLink GVR Encore 500S (US) Installation Guide

1.2 Installation Kit Contents

Unpack the Retro-Fit Kit and check that all of the parts listed below are present.

RFK Panel with pre-installed G7 OPT (MZ0104):



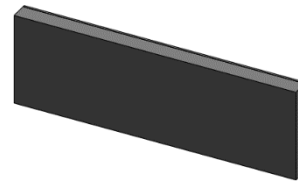
PSU plate with cables (EZ0409):



One of Gasket (MP0651):



Two of Gasket (MP0652):



Sundry Parts (FK0007):

Comprising:

- 10 MS0101 SCREW, #6-22 x 1/2", HEX HEAD 1/4", SS410
- 5 MS0149 SCREW #4-24 X 3/8", HI-LO THREAD, PAN HEAD, PHILIPS #1, SS410
- 3 MS0150 SCREW, SEMS, #6-20 X 3/8", TYPE B, HEX HEAD 1/4", SS410, WASHER 3/4"
- 2 MN0029 #8-32 LockNut

Optional Parts:


- 2 IA0015 Exciter

Cable Kit (IA0042):



Comprising (clockwise from top left):

- EK0124 Gilbarco Pump to Pump Adaptor
- EK0139 Gilbarco E500S to InvencoLink
- EK0129 Cat-5e, Flexible, RED
- EK0131 Cat-5e, Flexible, YELLOW

	Document Number	DCV-00207
	Date Released	Dec. 2016
	Revision Number/Security level	R01 S2
Retrofit G7+InvencoLink GVR Encore 500S (US) Installation Guide		

2 Safety & Compliance Information

This section introduces the hazards and safety precautions associated with installing, inspecting, maintaining or servicing the G7 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 G7/Optic 12 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-00207
	Date Released	Dec. 2016
	Revision Number/Security level	R01 S2
Retrofit G7+InvencoLink GVR Encore 500S (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.

	Document Number	DCV-00207
	Date Released	Dec. 2016
	Revision Number/Security level	R01 S2
Retrofit G7+InvencoLink GVR Encore 500S (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-00207
	Date Released	Dec. 2016
	Revision Number/Security level	R01 S2
Retrofit G7+InvencoLink GVR Encore 500S (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

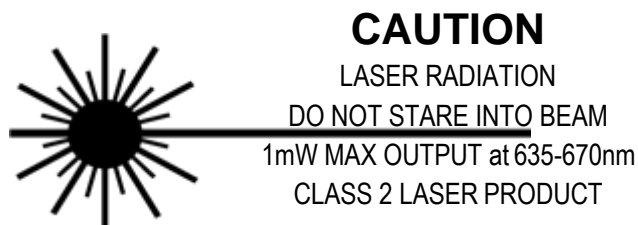
Invenco develops and maintains its hardware and software products using industry-standard quality processes, and is audited by various bodies.

The Invenco G7 Modules have a UL File Reference of MH61528 and carry labels similar to this:




3.1.8 Laser Warning

Some modules of the G7 OPT may incorporate a barcode reader. The barcode reader incorporates a laser aiming system. The Laser has a Class 2 output power to IEC 60825-1:2007 / ANSI Z136.1



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.

	Document Number	DCV-00207
	Date Released	Dec. 2016
	Revision Number/Security level	R01 S2
Retrofit G7+InvencoLink GVR Encore 500S (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)

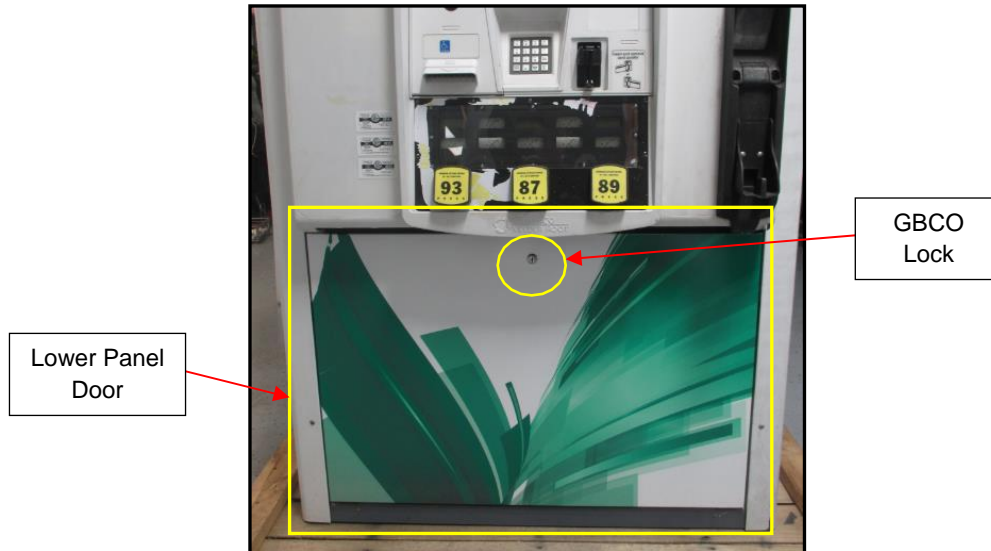
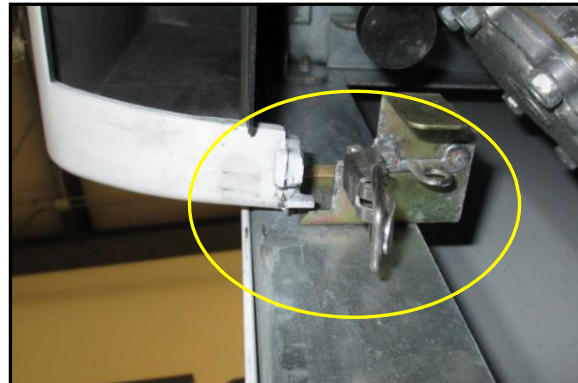
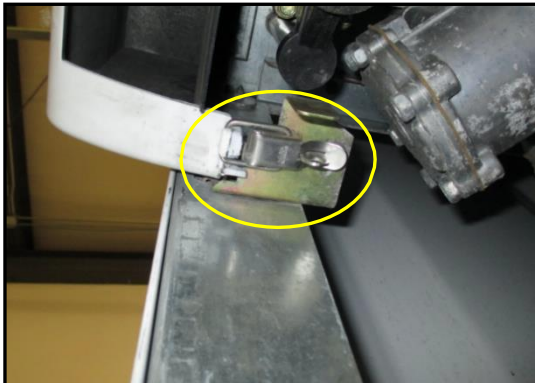
Retrofit G7+InvencoLink GVR Encore 500S (US) Installation Guide

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)

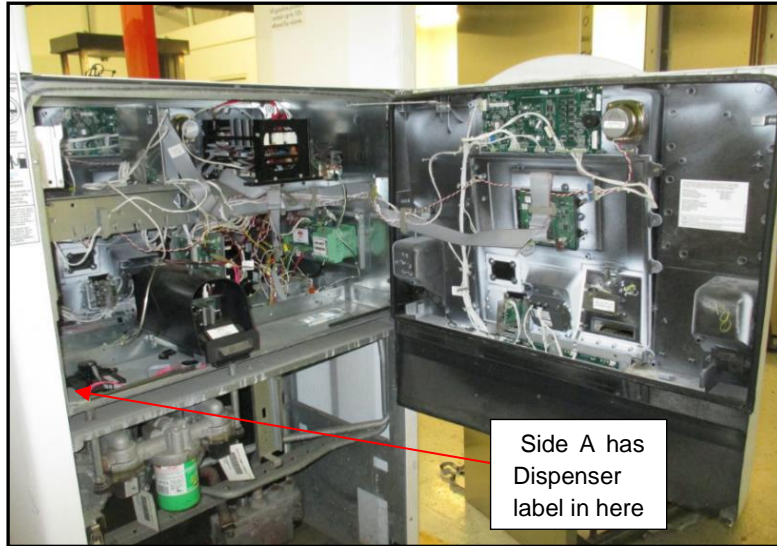
Retrofit G7+InvencoLink GVR Encore 500S (US) Installation Guide

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)

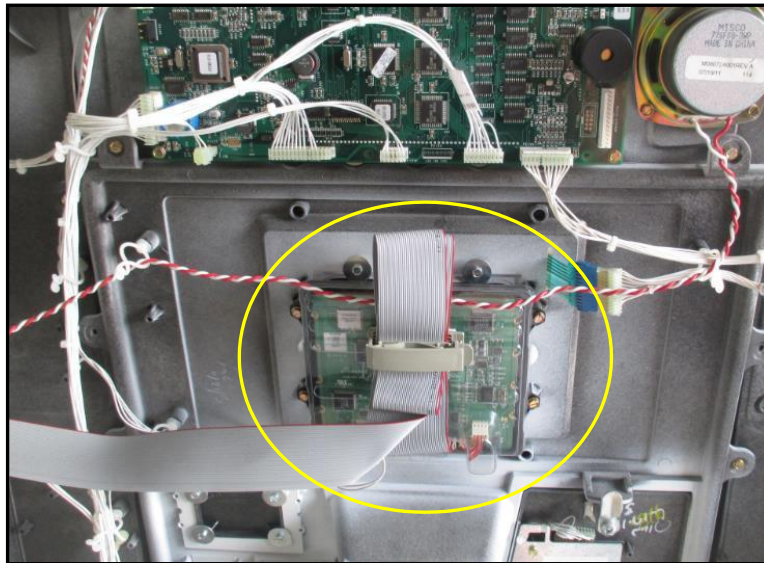


Fig 1.4 – Location of Monochrome Display

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

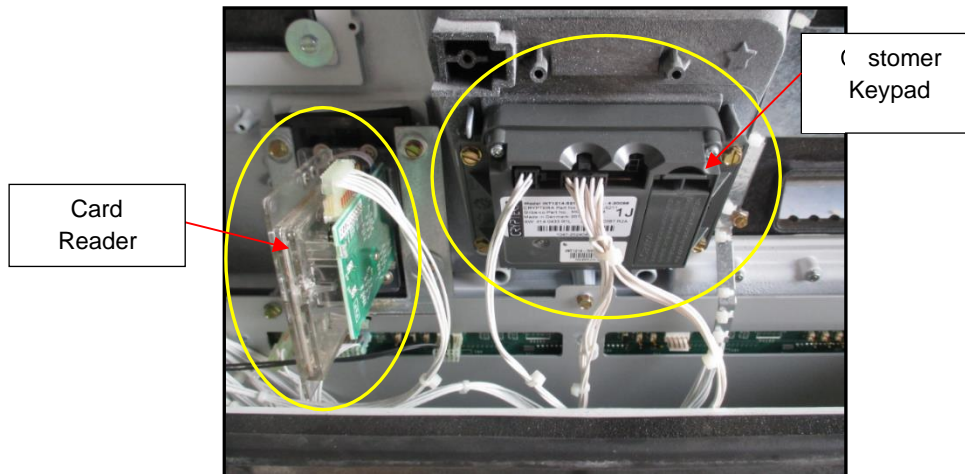
Retrofit G7+InvencoLink GVR Encore 500S (US) Installation Guide

Fig 1.5 – 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)

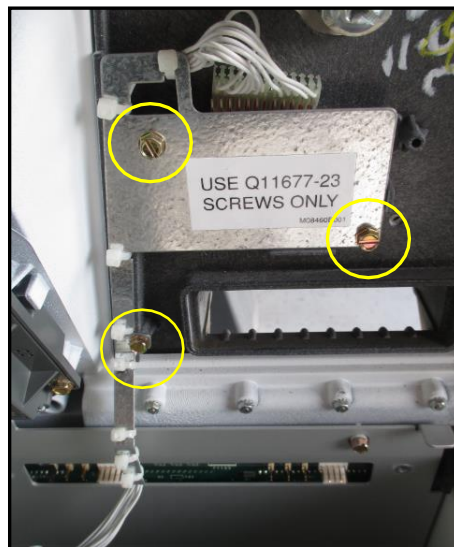


Fig 1.6 – Location of ADA Keypad Plate screws

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

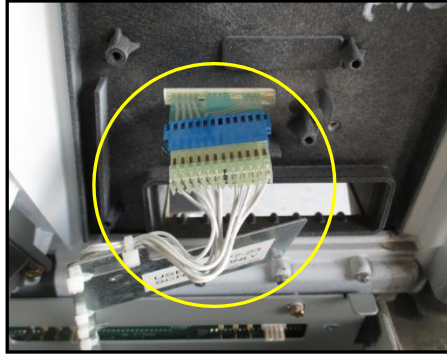
Retrofit G7+InvencoLink GVR Encore 500S (US) Installation Guide

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)

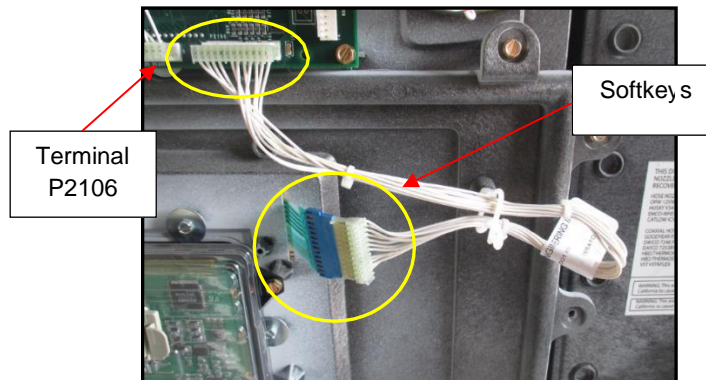


Fig 1.8 – Location of Softkey cable assembly

- 11.** Remove and discard the four #6 sheet-metal screws that fasten the card reader plate to the door 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 1.9)

Retrofit G7+InvencoLink GVR Encore 500S (US) Installation Guide

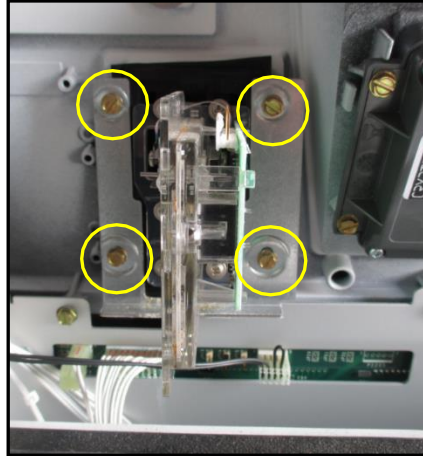


Fig 1.9 – Location of Card Reader plate screws

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

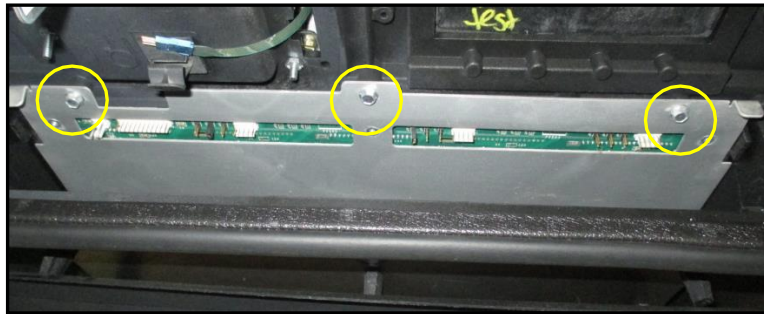
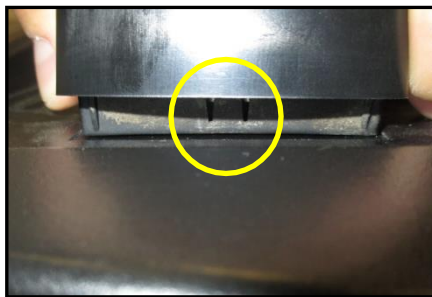


Fig 1.10 – Location of PPU Panel screws

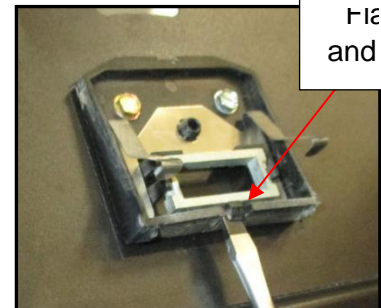
13. Remove the Grade Select buttons (Note the order of grades for when they are later re-installed).
 - a. Use a small flathead screwdriver to gently push in the lock tab located on the bottom side of the grade select buttons. (Fig 1.11 a,b,c)



Fig 1.11 – Grade Button



Lock Tab location



Flathead on Lock Tab

Flat head
and lock tab

- b. Firmly lift up on the buttons to remove them.
 - c. Set the buttons aside. They will be re-installed later in the process.

Retrofit G7+InvencoLink GVR Encore 500S (US) Installation Guide

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.

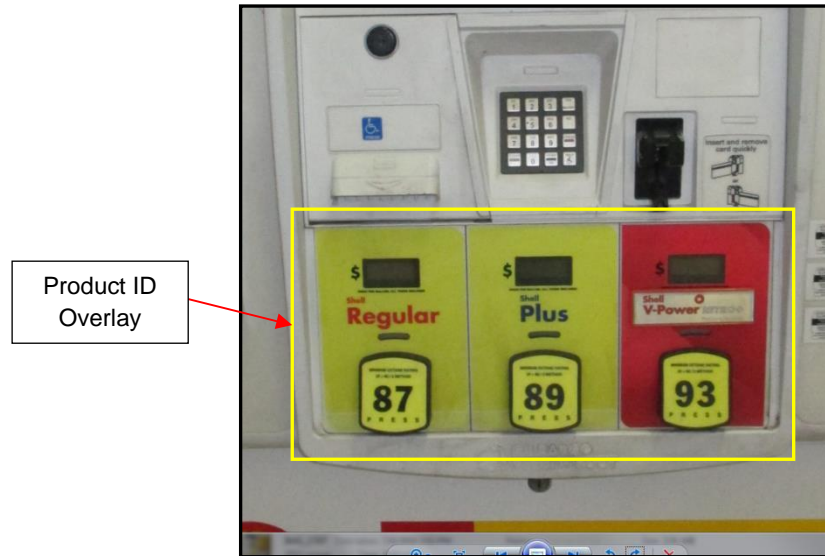


Fig 1.12 – Location of Product ID Overlay

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)

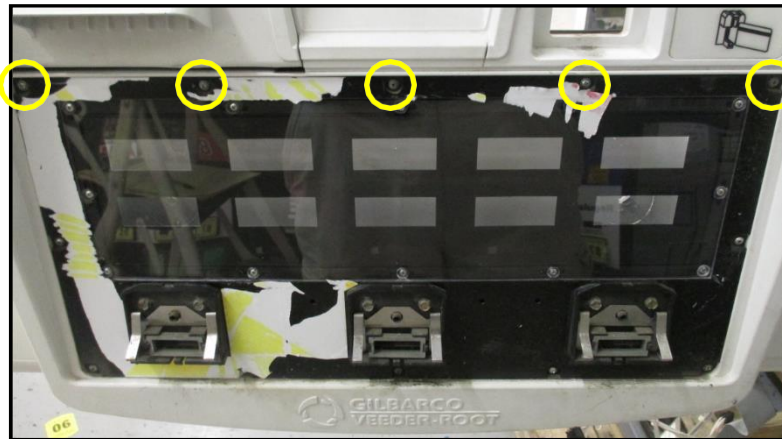


Fig 1.13 – Location of fastening screws on Product ID Plexi-Bezel

Retrofit G7+InvencoLink GVR Encore 500S (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)

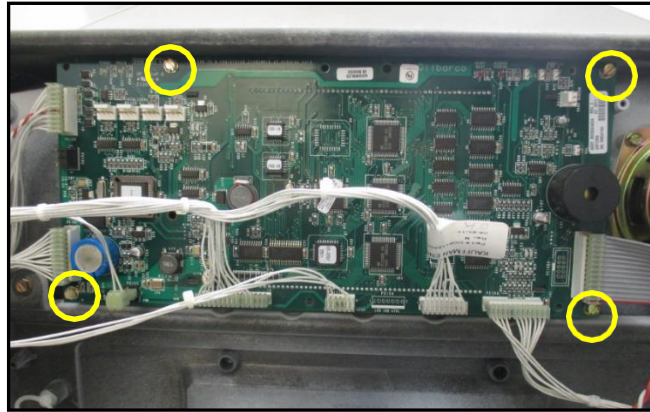


Fig 1.14 – Location of Door Node screws

- 17.** Remove and discard the three #6 self-tapping screws and washers immediately below the CIM panel Display Window, and the 10 #6-22 x 1/2" self-tapping screws fastening the CIM panel to the Dispenser Door. (Fig 1.15)

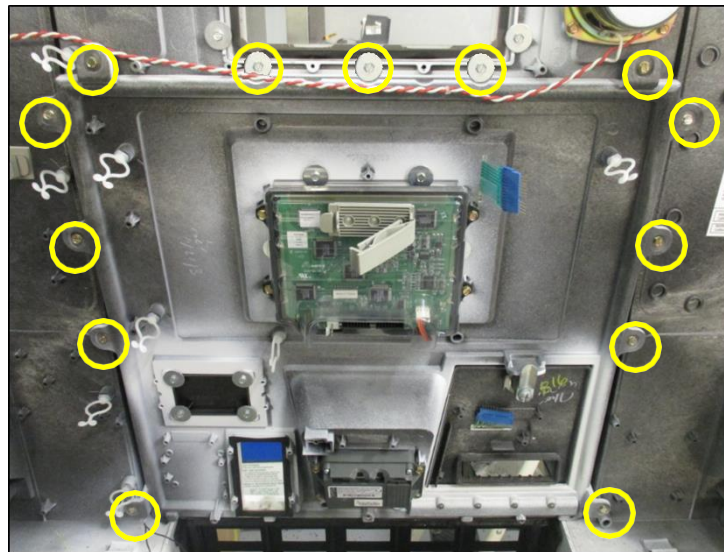
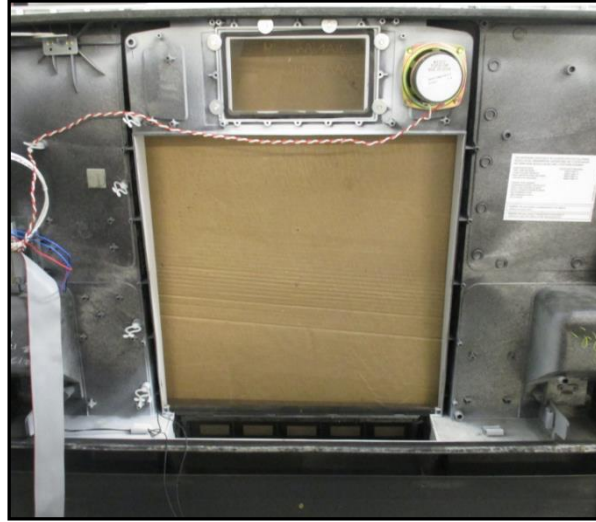


Fig 1.15 – Location of CIM Panel screws

- 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)

Retrofit G7+InvencoLink GVR Encore 500S (US) Installation Guide**Fig 1.16a – Dispenser Door after CIM removal****Fig 1.16b – CIM Panel with components after removal****19. For a double-sided installation, repeat steps 1-18 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 20-22 to correctly remove the components and close the opening in the loop.

Retrofit G7+InvencoLink GVR Encore 500S (US) Installation Guide

20. 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)

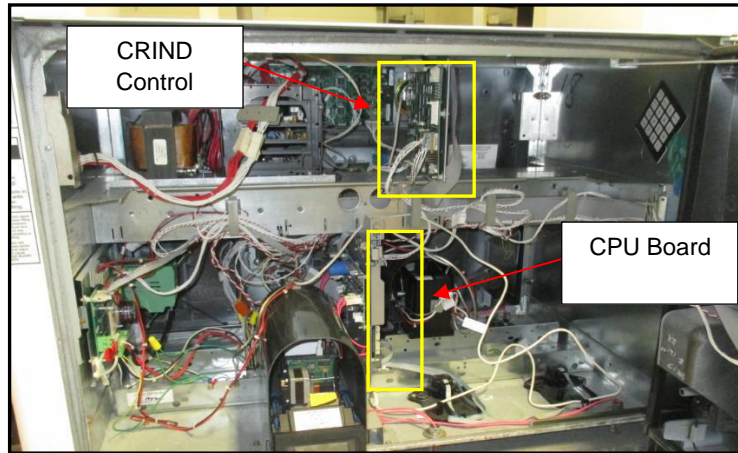


Fig 1.17 – Location of CRIND Control Node and CPU Board

21. 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)

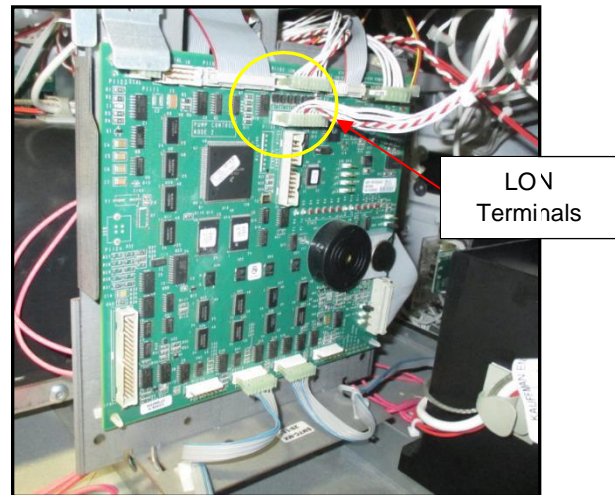
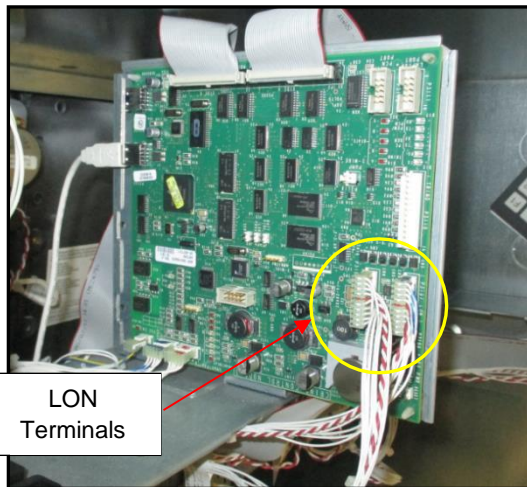


Fig 1.18a,b – LON Terminals, CRIND Control Node (left) & CPU Board (right)

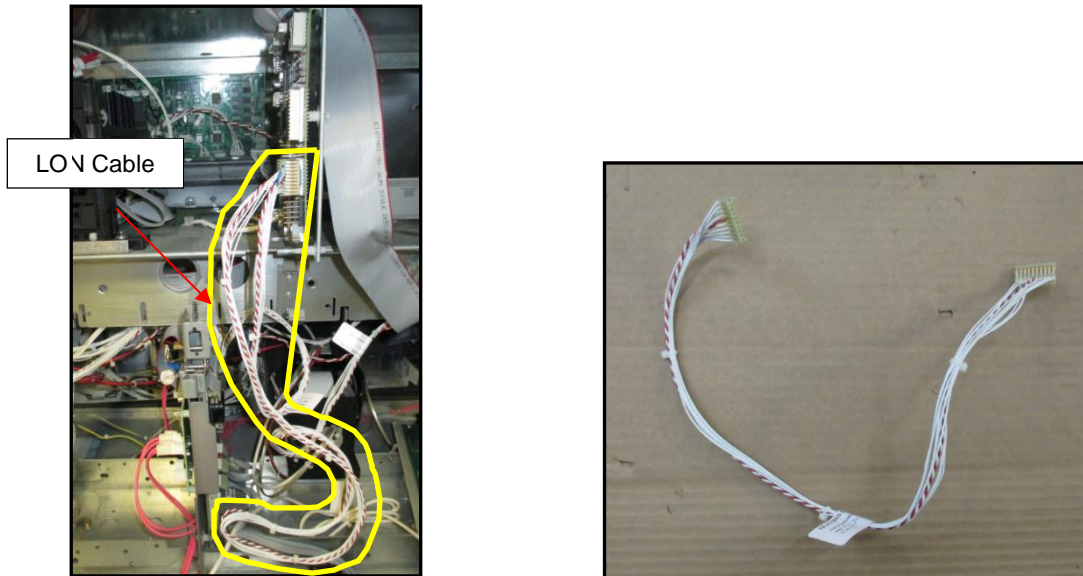
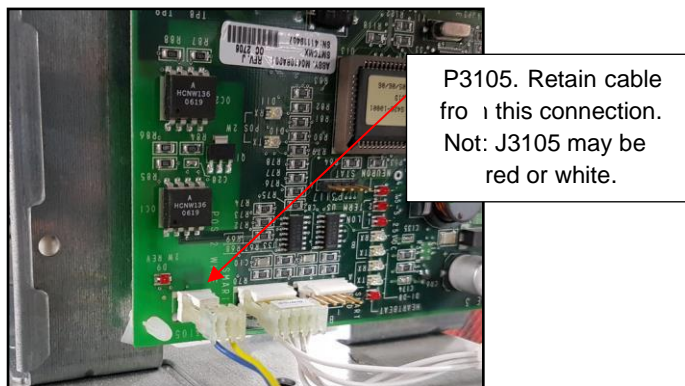
Retrofit G7+InvencoLink GVR Encore 500S (US) Installation Guide

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

22. Unplug the remaining LON Cable from the CRIND Control Node and plug it in the now open LON terminal on the CPU Board.
23. Unplug every remaining cable attached to the CRIND Control Node. Mark the blue/yellow cable on P3105 (has connector J3105) for later reconnection during installation.



24. 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 G7+InvencoLink GVR Encore 500S (US) Installation Guide

Fig 1.19 – CRIND Control Node after removal

- 25.** 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)

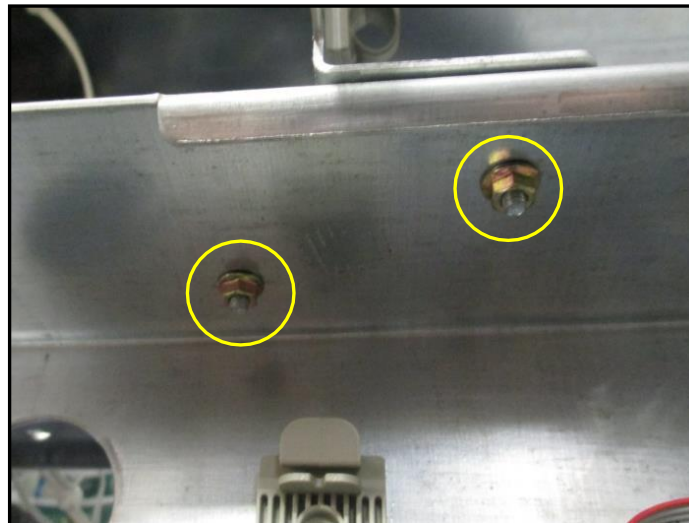



Fig 1.20 – Location of CRIND Control Bracket nuts

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

	Document Number	DCV-00207
	Date Released	Dec. 2016
	Revision Number/Security level	R01 S2
Retrofit G7+InvencoLink GVR Encore 500S (US) Installation Guide		

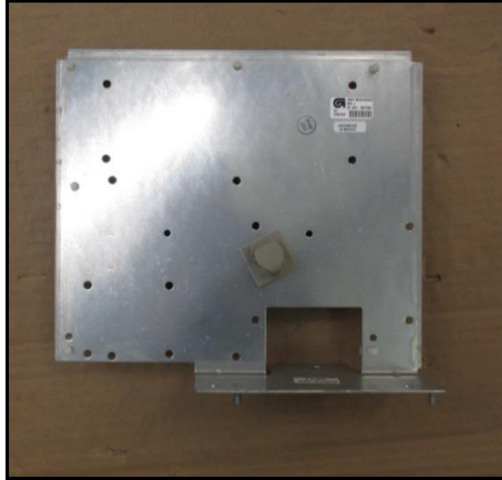



Fig 1.21 – CRIND Control Bracket after removal

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

	Document Number	DCV-00207
	Date Released	Dec. 2016
	Revision Number/Security level	R01 S2
Retrofit G7+InvencoLink GVR Encore 500S (US) Installation Guide		

4.2 Pre-Installation Procedure

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	6009-0008-8801	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 and apply the communications method selected from the table above, following the installation instructions supplied with that Kit.

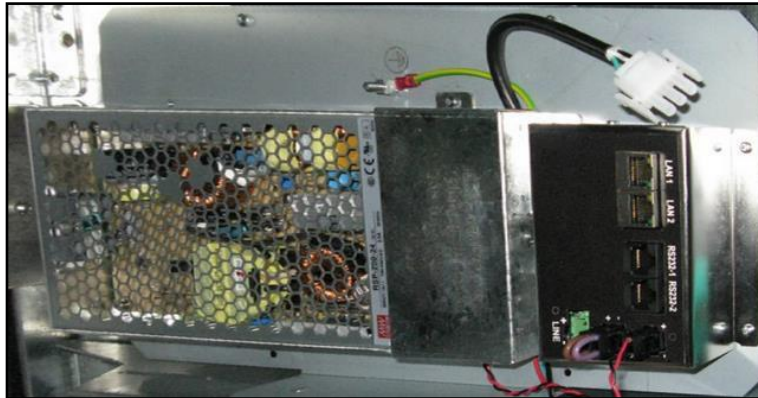
Once the communications method has been installed onto the PSU Plate Assembly, proceed to §4.3 Installation Procedure.

Retrofit G7+InvencoLink GVR Encore 500S (US) Installation Guide

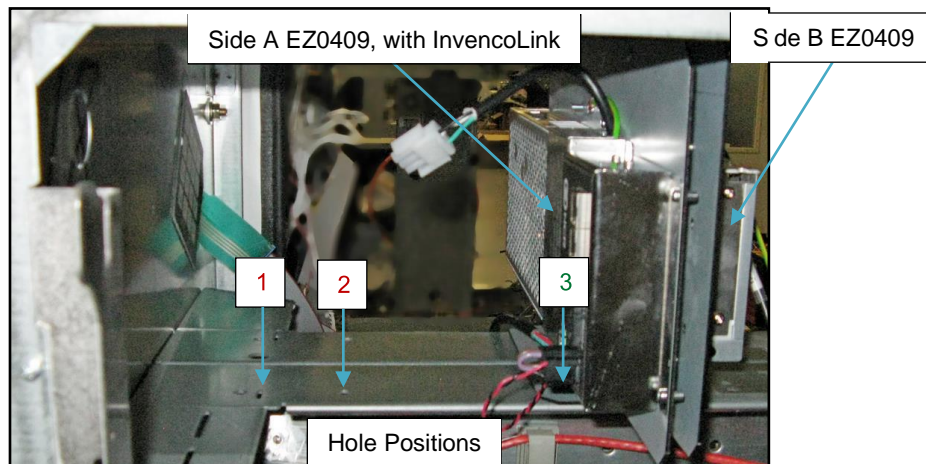
4.3 Installation Procedure

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 EZ0409 PSU Plate assembly. For Side A this is the PSU Plate Assembly that has just had the InvencoLink converter installed.



- a. Mount the EZ0409 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 (when looking from the B Side) 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

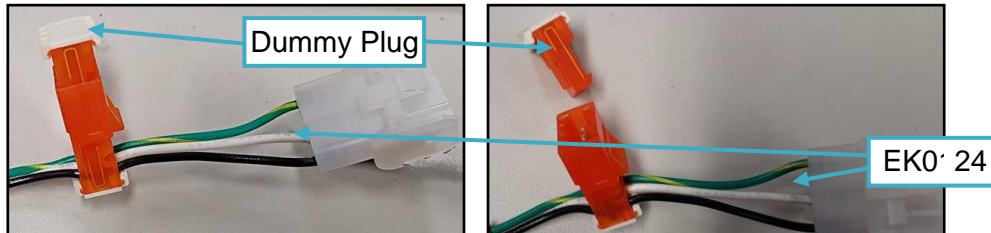
- b. Place an MN0029 #8 LockNut on each stud and tighten with a 5/16" nut driver. Note you will need to place one nut from each side of the dispenser.

Retrofit G7+InvencoLink GVR Encore 500S (US) Installation Guide



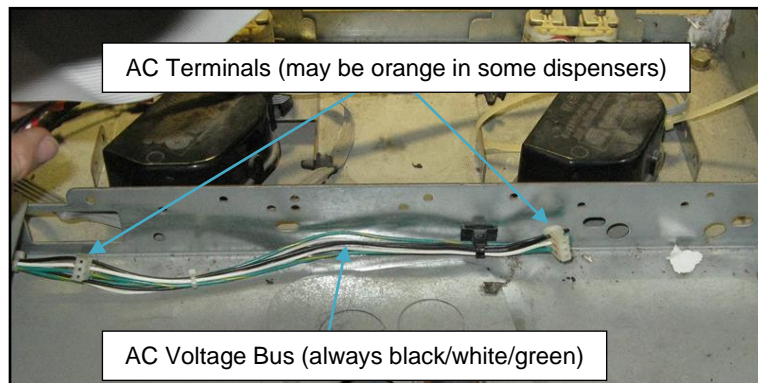
2. Cable EK0124 has three connectors at one end and a single connector at the other end.

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



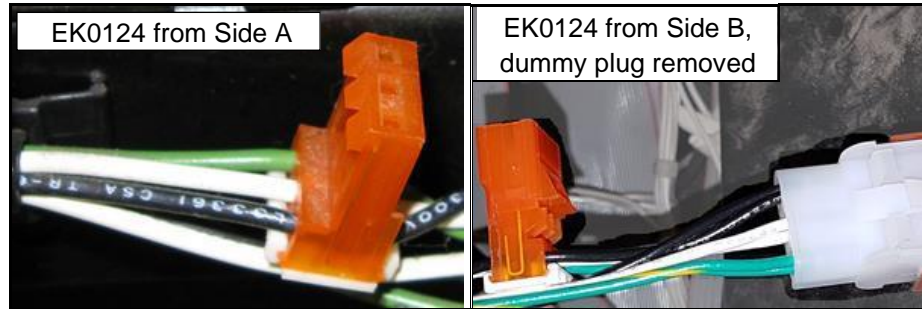
Unplug and discard the female dummy plug from the three-connector end of EK0124.

- 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.
- For Side B, plug the now-exposed male orange connector into the available orange female connector on the EK0124 from Side A.

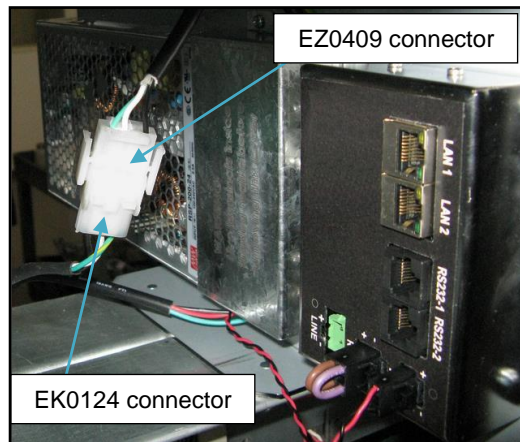


Note: There are several points of connection along the pre-existing AC voltage cable bus assembly in the dispenser. Locate an unused terminal port. Do not unplug an occupied port.

Retrofit G7+InvencoLink GVR Encore 500S (US) Installation Guide



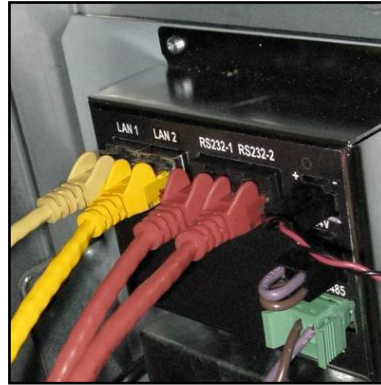
3. Connect the large white plug at the single-connector end of EK0124 into the AC power connector on the EZ0409 PSU Plate Assembly.



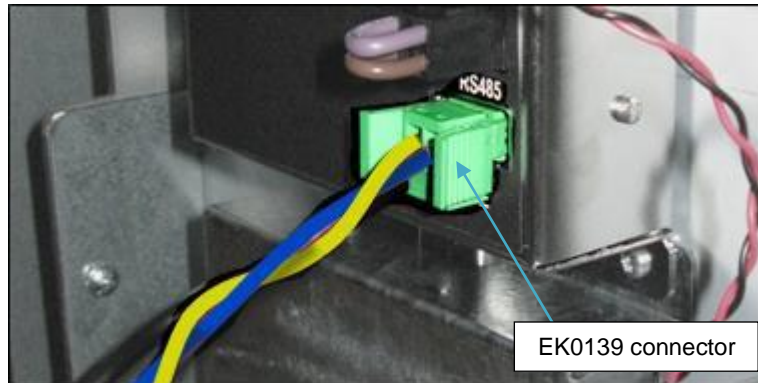
4. Plug the EK0129 RED patch cable into the RS232-1 socket on the InvencoLink converter. If doing Side B, then plug the cable into the RS232-2 socket.



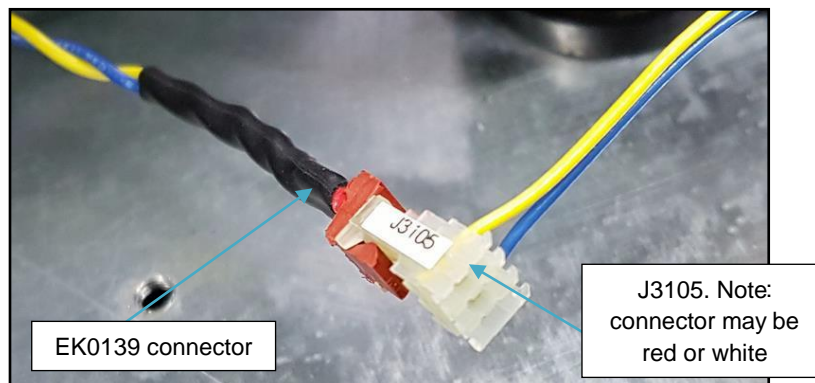
5. Plug the EK0131 YELLOW patch cable into the LAN-1 socket on the InvencoLink converter. If doing Side B, then plug the cable into the LAN-2 socket.

Retrofit G7+InvencoLink GVR Encore 500S (US) Installation Guide**6. For Side A only:**

- a. install the Green connector on EK0139 into the "LINE" socket on InvencoLink converter on EZ0409.

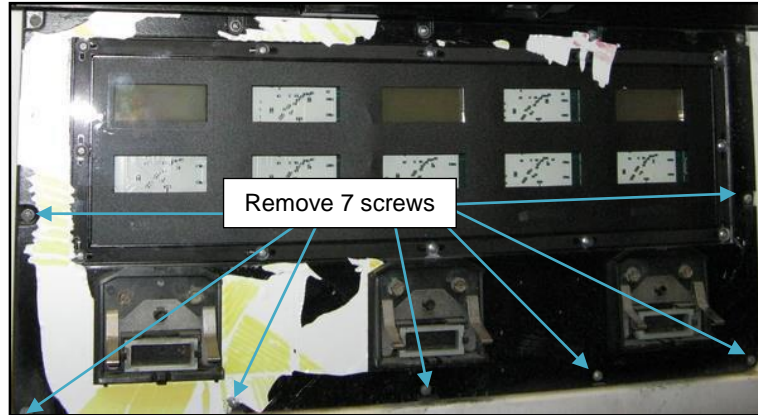


- b. Install the other end of EK0139 (small, 3-pin connector) into the J3105 pump communications connector that was marked in disassembly step 23, using the below pictures. The connectors are polarized for correct connection. Do not force them – they only go together one way, as shown:

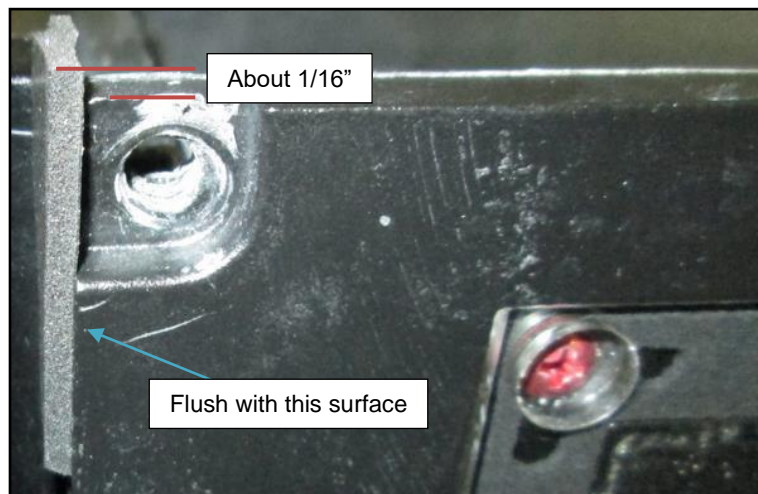


Retrofit G7+InvencoLink GVR Encore 500S (US) Installation Guide

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



8. Ease the top of the PPU panel forwards out of the dispenser door about an inch or so.
9. 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):



10. 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.
11. Reinstall and tighten the seven screws removed in step 7.
12. From inside the dispenser door, apply an MP0651 gasket across the top of the PPU panel as shown:



Retrofit G7+InvencoLink GVR Encore 500S (US) Installation Guide

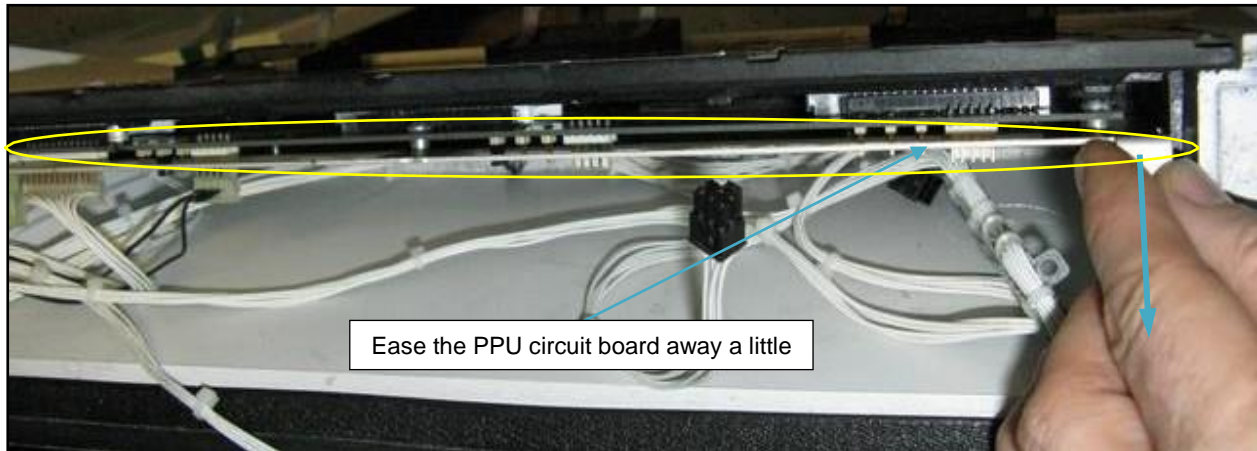
Note that the long part of the gasket goes on the back of the PPU panel, and the shorter part goes across the top of the PPU panel, between the vertical edges of the dispenser door opening.

13. Acquire pre-assembled MZ0104 RFK Door containing G7 OPT.



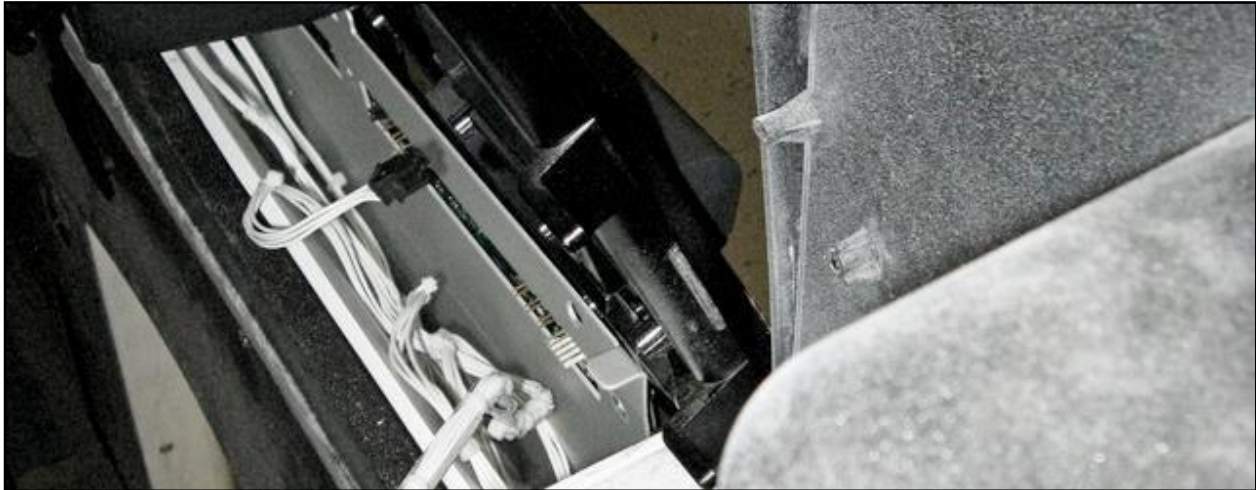
To avoid damaging the pump door plastic in the following steps where screws are being placed into the Encore 500S pump door, it is very important to start each screw by hand, ensuring you use the existing thread.
DO NOT USE any type of powered tool to tighten the screws.

14. Ease the PPU circuit board back a little to enable the lower edge of the RFK Door to sit properly:



Ease the PPU circuit board away a little

15. Have a couple of MS0101 hex-headed screws, and the nut driver handy.
Hold the top edge of the RFK Door, and carefully place the bottom edge of the RFK Door into the opening in the Encore 500S pump door from inside. Take great care not to damage any gaskets.

Retrofit G7+InvencoLink GVR Encore 500S (US) Installation Guide

16. Ease the RFK Door into the gap until it is vertical against the screw bushes on the Encore 500S pump door. Be careful not to pinch any wires.



Retrofit G7+InvencoLink GVR Encore 500S (US) Installation Guide

17. Insert the two MS0101 screws ready from Step 15 into bushes on either side of the RFK door. 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 ¼" nut driver.



18. Place the remaining eight MS0101 screws into as many of the other bushes around the RFK door as you can. 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.

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



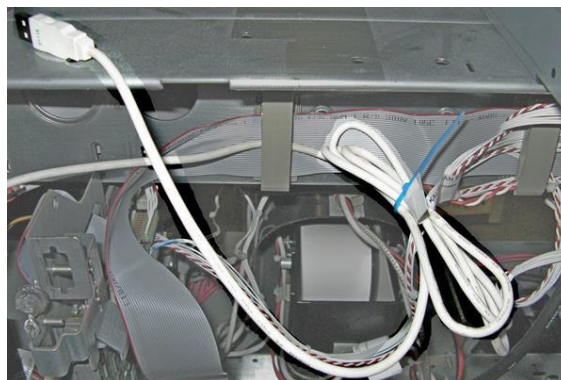
20. Press the PPU circuit board gently back into place against the Encore 500S pump door, then insert three MS0150 hex-headed screws. Tighten the screws with a ¼" nut driver.

Retrofit G7+InvencoLink GVR Encore 500S (US) Installation Guide

21. Take the Door Node from inside the Encore 500S cabinet and place it back onto the pump door in the correct position. Insert the four ¼"-headed screws from Disassembly Step 16 in the corner holes of the Door Node board. Tighten the screws with a ¼" nut driver.



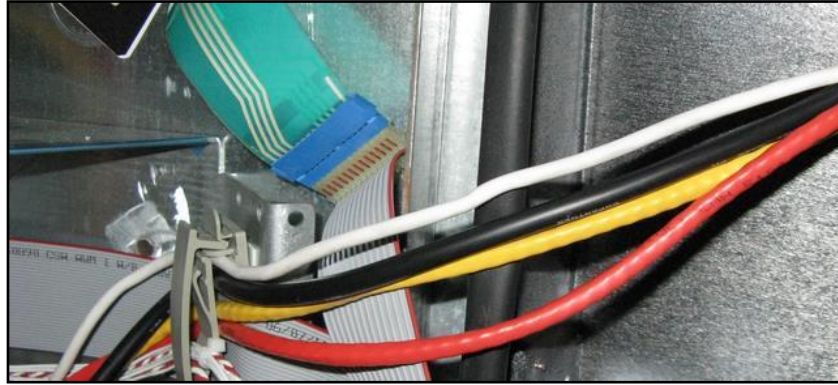
22. Undo the zip-tie (if present) that bundles the white printer cable that was previously disconnected:



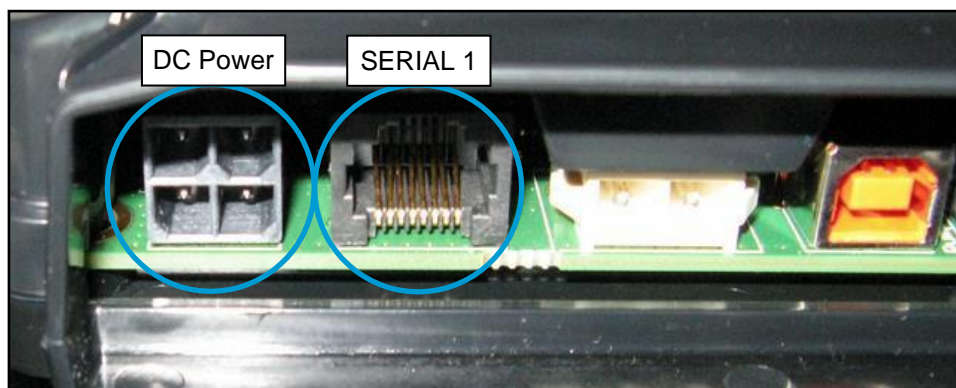
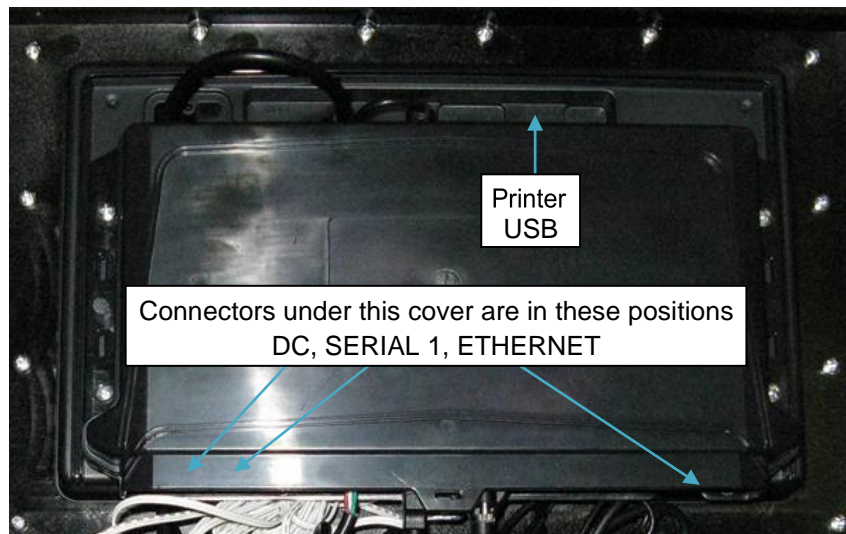
23. Gather the following cables:
- a. EK0129 Red patch cable
 - b. EK0131 Yellow patch cable

Retrofit G7+InvencoLink GVR Encore 500S (US) Installation Guide

- c. White printer cable (from step 22)
 - d. Black DC cable pre-installed on EZ0409 PSU Plate Assembly
24. Route the four cables from step 23 along underneath the electronics shelf to the right-hand side of the pump cabinet, then out along the right-hand side of the cabinet.

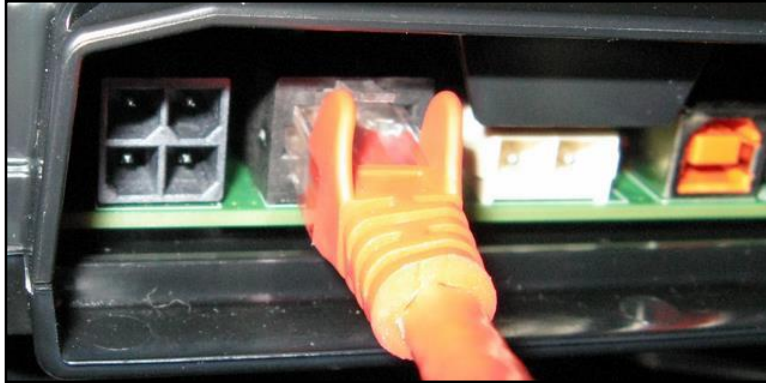


25. Locate the DC POWER and SERIAL 1 connectors on the RFK Door (use pictures below).



Retrofit G7+InvencoLink GVR Encore 500S (US) Installation Guide

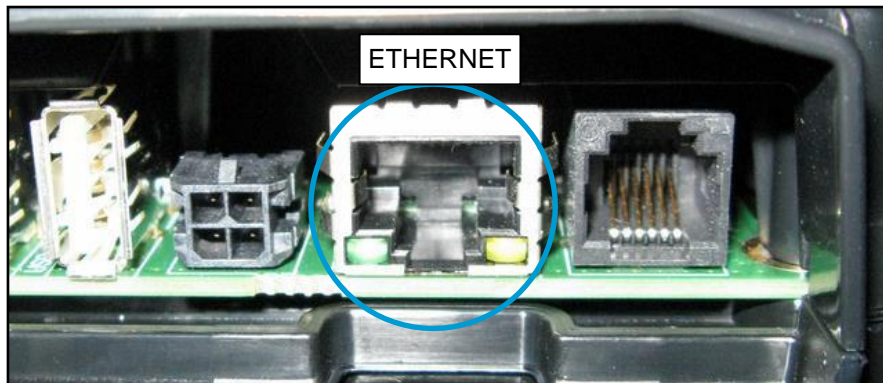
26. Plug the EK0129 RED patch cable (from Step 24) into the SERIAL 1 socket and ensure it clips into place.



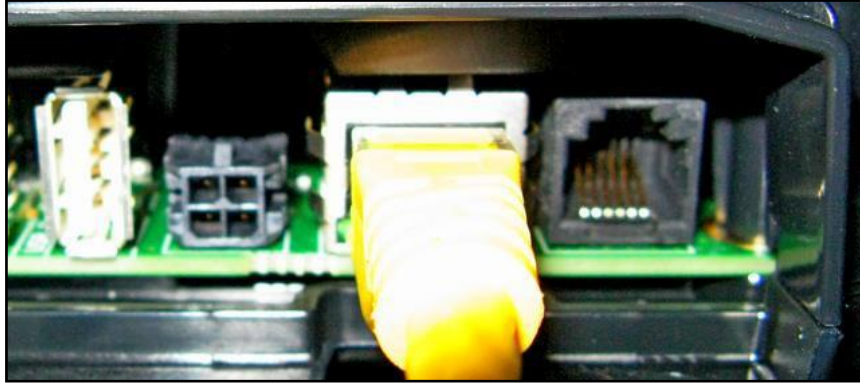
27. Plug the BLACK DC cable (from Step 24) into the DC POWER socket and ensure it clips into place.



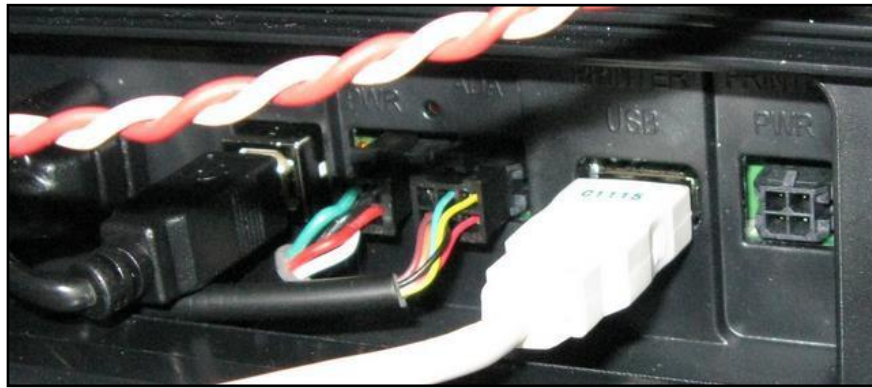
28. Locate the ETHERNET connector on the RFK Door (also use picture in Step 25).



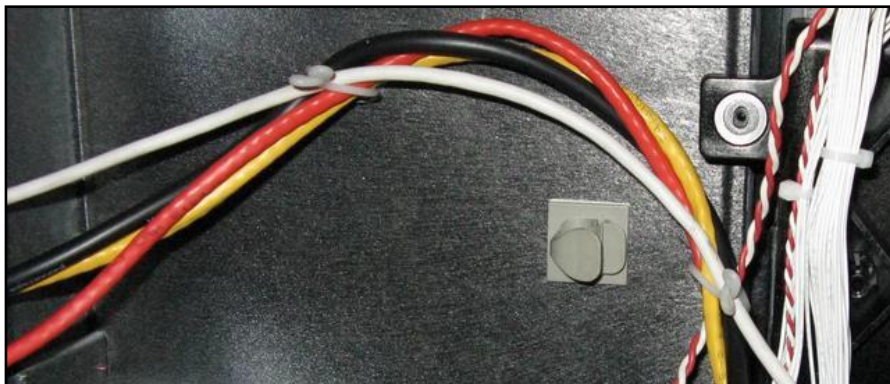
29. Plug the EK0131 YELLOW patch cable (from Step 24) into the ETHERNET socket and ensure it clips into place.

Retrofit G7+InvencoLink GVR Encore 500S (US) Installation Guide

30. Plug the WHITE Printer cable (from step 24) into the PRINTER USB socket on RFK Door (also use picture in Step 25).



31. Gather the RED, YELLOW, BLACK and WHITE cables from the above steps into a cable-retention clip on the left rear of the RFK Door and secure the clip. Draw any excess cable length back through the cable-retention clips in the pump cabinet and stow them neatly. Use zip-ties if necessary.



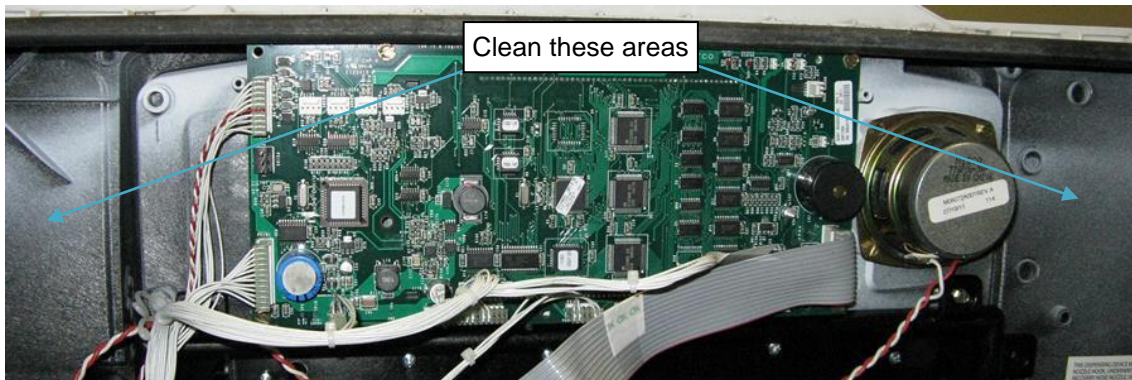
32. Replace the PPU selector buttons on the front of the Encore 500S Pump Door. Ensure you keep the same order as noted in Disassembly Step 13. For each button:
- Hook the top of the button over the top of the clip.
 - Swing the button downward until it sits on the clip.

Retrofit G7+InvencoLink GVR Encore 500S (US) Installation Guide

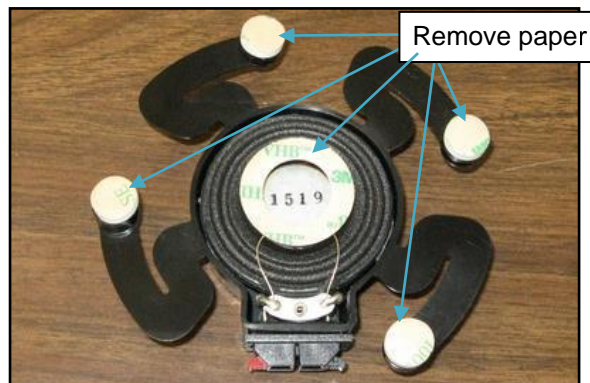
- c. Press VERY HARD on the bottom of the button until it snaps loudly into place. Mind your fingers!



33. If the customer has requested the installation of Exciters
 - a. Clean the inside top-right and top-left areas of the Encore 500S Pump Door with rubbing alcohol. Avoid getting the alcohol anywhere near the dispenser label.

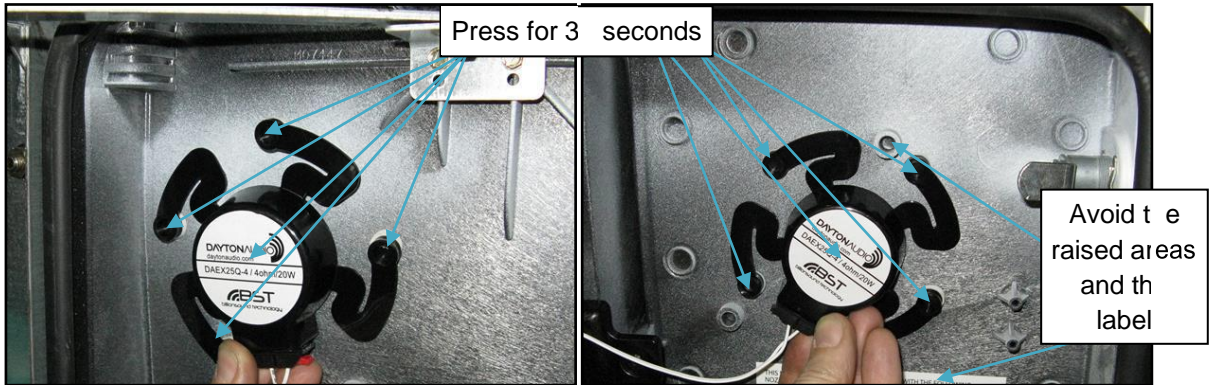


- a. Remove each IA0015 Exciter from its packaging.
- b. Carefully remove the craft paper backing from the four pads and the centre ring of each Exciter.

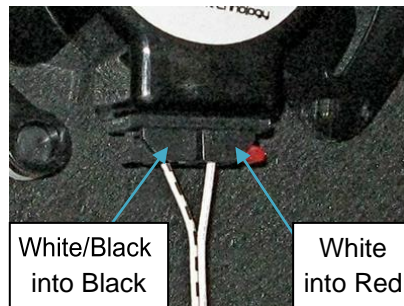


Retrofit G7+InvencoLink GVR Encore 500S (US) Installation Guide

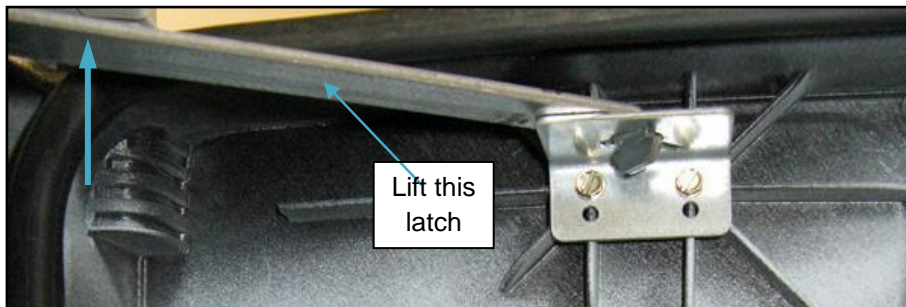
- c. Place each Exciter in turn in position on the inside of the Pump Door. Press gently on the rear of each Exciter in the five positions and hold pressure for at least thirty seconds to enable the adhesive to stick properly.



- d. There will be two 2-wire audio cables connected into the RFK Door, with their other ends left unconnected. Viewed from the inside of the Pump Door, connect the left-hand Exciter to the white audio cable marked RIGHT, and the right-hand Exciter to the white audio cable marked LEFT. Each cable must be connected such that the plain WHITE wire goes to the RED terminal, and the WHITE/BLACK wire goes to the BLACK terminal.

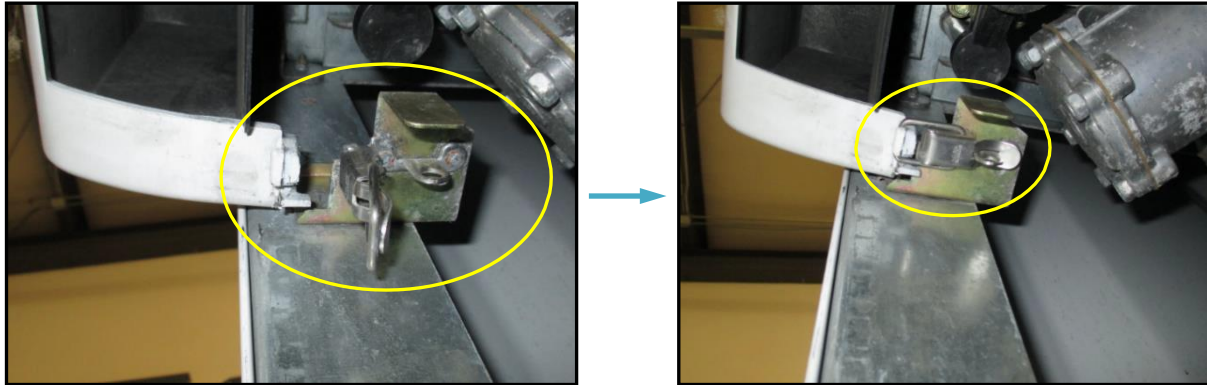


34. Tidy up any loose wiring, using cable ties to secure the wires.
35. For a double-sided installation, repeat steps 1-5 and 7-34.
36. Close up the dispenser. For each open Side:
 - a. Lift the Encore 500S Pump Door open-latch to release the door:

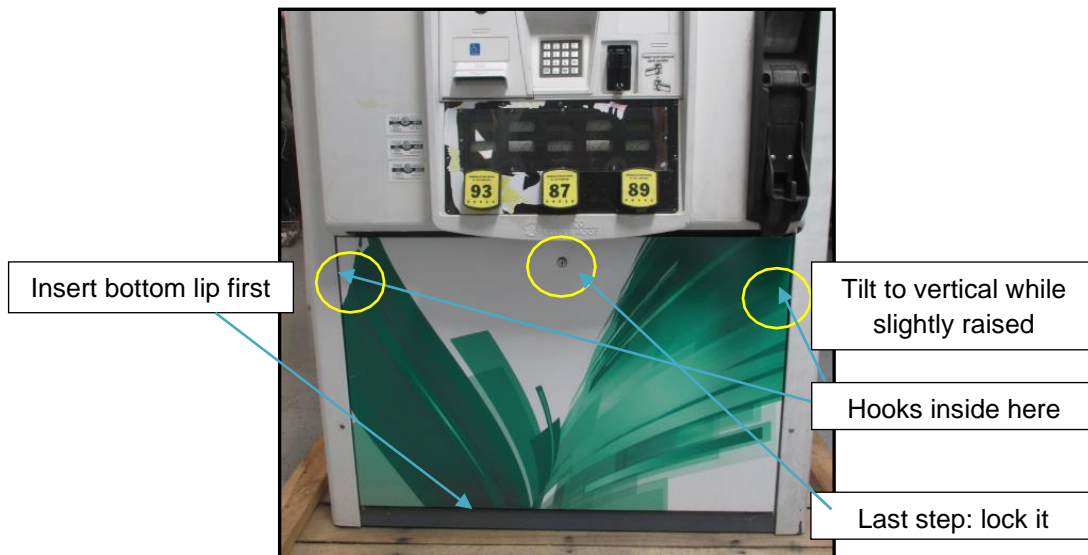


Retrofit G7+InvencoLink GVR Encore 500S (US) Installation Guide

- 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.



37. Reinstall the panel below the door and lock it. For each open Side:
 - a. Tilt the top of the panel outwards and insert its bottom lip first.
 - b. Bring the panel close to vertical, then lift it slightly to it slips over the upper hooks.
 - c. The press the panel closed and allow it to drop a little into place.
 - d. Finally, lock the panel with the "GBCO" key.




38. 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.

	Document Number	DCV-00207
	Date Released	Dec. 2016
	Revision Number/Security level	R01 S2
Retrofit G7+InvencoLink GVR Encore 500S (US) Installation Guide		

5 First Power-Up

Once the installation is complete and the wiring is certified (if necessary), power may be applied. The G7 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:



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:

