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Retro-Fit G6-300 + InvencoLink GVR Encore 300 or 500 (US) Installation Guide		

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Kit Part Number: RF00026-XX



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Release History

Version	Prepared by	Date	Change description
0	Michael Doh	31-Oct-19	Based on DCV-00459; initial version for UL approval
1	Michael Doh	02-Dec-19	Kit and OPT + panel part numbers update
2	Michael Doh	04-Dec-19	Corrected OPT + panel part numbers
3	Michael Doh	05-Dec-19	Corrected typing errors
4	Michael Doh	20-Mar-20	Added Encore 500 and updated kit part number
5	Michael Doh	02-Apr-20	Additional Encore 500 related updates and corrections
6	Michael Doh	17-Apr-20	Corrections and Power Y cable part number clarification.

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1 Introduction

The documentation provides some basic guidelines for Retro-Fitting the G6-300 Outdoor Payment Terminal (OPT) in a Gilbarco Encore 300 or 500 dispensers.

This Retro-Fit Kit can be installed into either Side-A or Side-B of a GVR Encore 300 or 500 dispensers;

- **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 Retro-Fit 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.**

1.1 Tools Required

The following tools are required to Retro-Fit the G6-300:

- Philips #2 screwdriver
- Flat 5mm screwdriver
- Side cutters
- Cable (zip) ties
- Needle nose pliers
- #8 Socket or Nut driver
- ¼" Socket or Nut Driver
- 5/16" Socket or Nut Driver
- Wire stripper
- Crimping tool (suitable for 18 AWG wire)
- UL/cUL listed crimp-on fork connectors/terminals



WARNING

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

Any spark could cause an explosion.

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1.2 Installation Kit Contents

Unpack the Encore 300 or 500 Retro-Fit Kit (RF00026-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.

G6-300 mounted on the Retro-Fit Kit Door assembly (RP00026-XX):



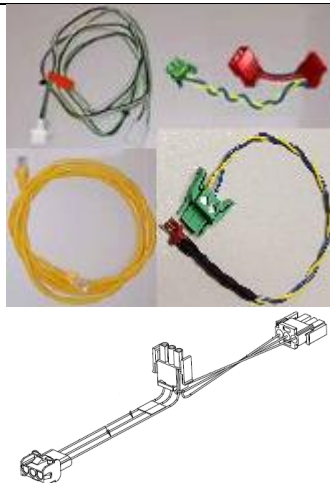
Power Supply Unit (PSU) mounted on Plate assembly (EZ0631):



PSU plate mounting nuts (MN0029)
#8-32 UNC, external star washer, Zinc plated SEMS nut – Quantity: 2



Cables:



Comprising (clockwise):

- EK0124 GVR Pump to PSU Adaptor, 1.0m
- EK0140 GVR to InvencoLink, 1.0m
- EK0139 GVR 500/S to InvencoLink 0.2m
- EK0131 Cat-5e, Flexible, 2.5m, YELLOW

497-0514570 (or EK0208) GVR Encore 300/500 pump conversion power Y cable

Note:

For Encore 300, EK0140 will be used, for the Encore 500, EK0139 instead.



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Fasteners kit (FK0014):

- 4 x MS0147: #6-32 x 5/16", pan head, Philips #2, SS410, AN ext washer SEMS machine screws
- 1 x MN0029: #8-32 UNC, external star washer, Zinc plated SEMS nut

Optional Speaker Kit (SK0001) - If the dispenser has an existing intercom speaker connected

Comprising (left to right):

- EA0011 Speaker, Encore 300, G6
- EI0354 Terminal Spade Female 4.87mm
- EI0355 Terminal Spade Female 2.79mm
- 4 x MN0057 Nut, #8-32 UNC SS304





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2 Safety & Compliance Information

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

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 effected units
- A total electrical shut-off of the affected unit(s)

2.5 Read the Manual

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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.

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 Retro-Fit Kits on your installation. Using parts other than genuine Invenco replacement parts could create a safety hazard and violate local regulations.

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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.

3.1.1 No Open Flames



Open flames from matches, lighters, welding torches or other sources are not permitted, as they 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 vapor. 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.



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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).

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

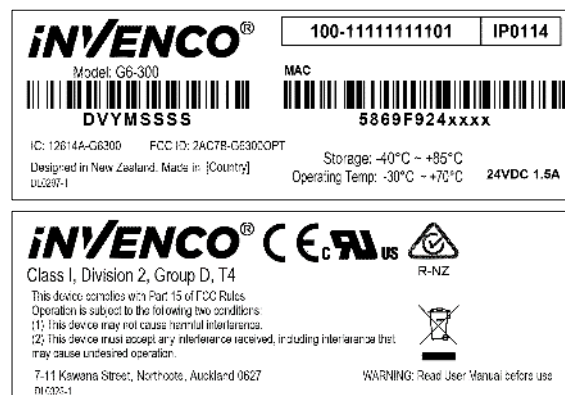
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3.1.7 Approvals

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 References of E469526 and E480135 and carries labelling similar to this:



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

3.2 Computer Programs and Documentation

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

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4 Installation Guide

1. Please ensure all safety procedures are followed per requirement by the customer before installing the Retro-Fit Kit.
2. Remove power to Dispenser 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 an access door replacement. The access door will be removed from the dispenser's main door and replaced with another access door with the OPT 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 the Gilbarco CRIND components including:

- The CRIND Panel Door with components (card reader, printer, etc.)
- The Sale/Volume Display (to be re-used)
- The CRIND logic, regulator, and CPU boards with wire assemblies

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 to remove other CRIND related cable assemblies. Unplug these as needed 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.

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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. Using a '751' key, unlock the access doors on both the Side-A and Side-B (If present) of the dispenser. (Fig 2.1)



Fig 2.1 – Access door and lock location

Retro-Fit G6-300 + InvencoLink GVR Encore 300 or 500 (US) Installation Guide**3. Identify the Side-A of the dispenser.**

Note: *Because the serial tag is printed on both sides and there may not be a J-Box, there is often not an apparent marker to identify the Side-A of the dispenser on the Encore 300 or 500 without first opening the dispenser. The easiest method is to open the access door and observe the jumper positions of at the top left corner on the backside of the main displays.*

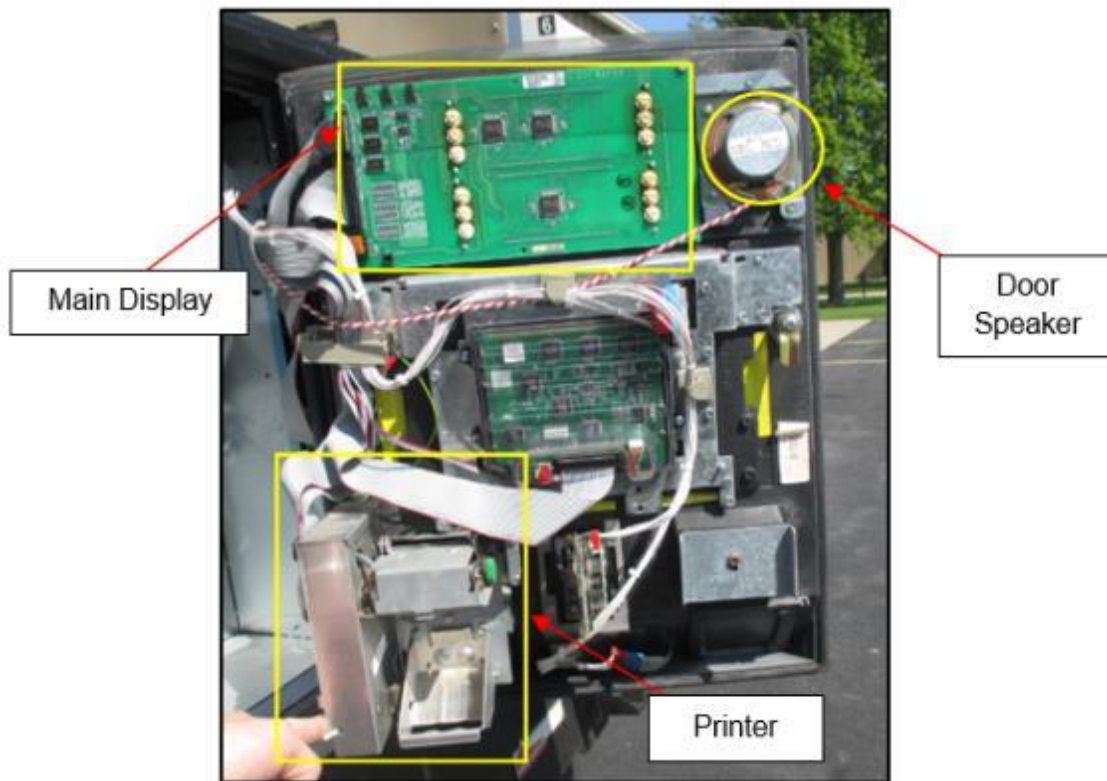


Fig 2.2a – Inside of access door

For the Encore 300:

The Side-A will have a jumper in position JP1. The Side-B will have no jumper in position JP1. (Fig. 2.2b, c)

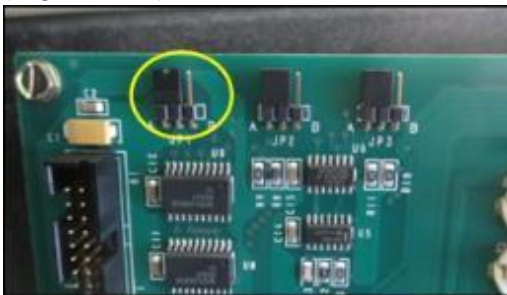


Fig 2.2b – Jumper present at JP1 (Side-A)

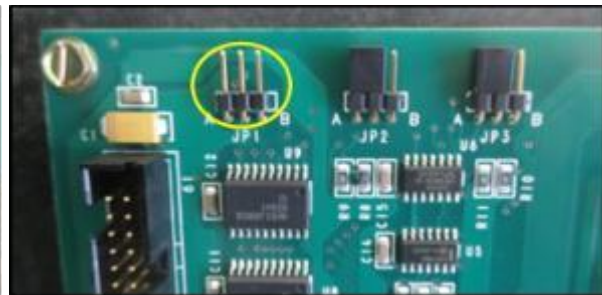


Fig 2.2c – No Jumper at JP1 (Side-B)

Retro-Fit G6-300 + InvencoLink GVR Encore 300 or 500 (US) Installation Guide**For the Encore 500:**

Identify side A by locating the jumper. The jumper is on the side B main display, on the J5 jumper terminal (Fig. 2.2d).



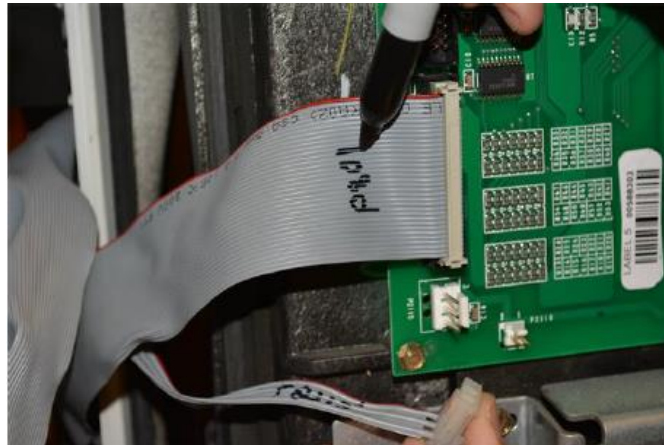
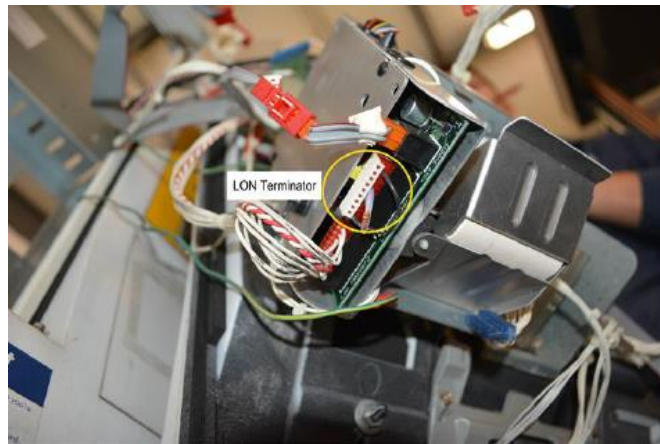
Fig 2.2d – Jumper present at JP5 (Side-B)

4. For Encore 300:

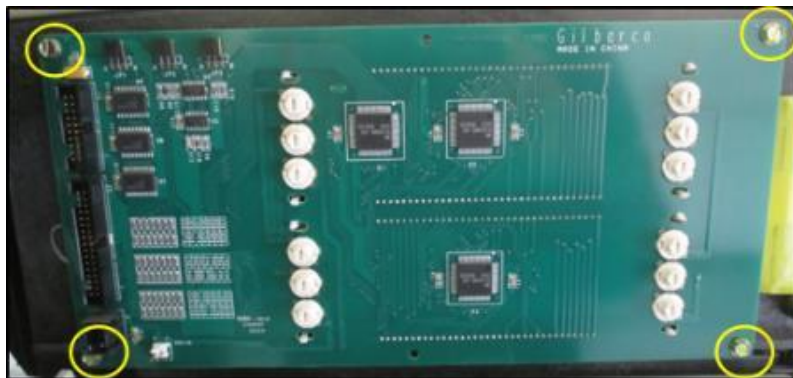
- a. Mark the following cables connected on the main display board for later reconnection (Fig 2.3a): P804A, P801, P2115.
- b. Then, with the exception of the printer and the speaker, unplug each cable that is plugged into every component present on the backside of the Side-A access door. Set the marked cables aside for later reconnection.

For Encore 500:

- a. If uninstalling from a 500 dispenser with a LON cable harness, remove the LON terminator from the Printer (if present) and retain (Fig 2.3b).
- b. Track the LON cable from the printer to the main display on the access door, remove the LON connection on the main display on the access door and replace with the retained LON terminator.
- c. Mark the following cables connected on the main display for later reconnection (Fig 2.3a): LON Header 1 (P2109), LON Header 2 (P2112), PPU (P2101), +9.4VAC (P2115), and Manager Keypad (A-Side Only) (P2108).
- d. Then, with the exception of the printer and the speaker, unplug each cable that is plugged into every component present on the backside of the Side-A access door. Set the marked cables aside for later reconnection.

Retro-Fit G6-300 + InvencoLink GVR Encore 300 or 500 (US) Installation Guide**Fig 2.3a – Marking the cables****Fig 2.3b – LON terminator from the printer**

5. Remove the Side-A main display. Do not discard the Main Display. It will be re-installed.
 - a. Remove the 1/4" hex head screws (4) on the main display.(Fig 2.4)
These screws will not be re-used and can be discarded.

**Fig 2.4 – 1/4" hex head screws on main display**

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- b. Pull the main display from the access door.

Caution: Use care when placing display aside to avoid scratching the LCD glass.

6. Unfasten every cable restraint/zip-tie that may be present on the Side-A access door (depending on the variant, there may be several). (Fig 2.5)

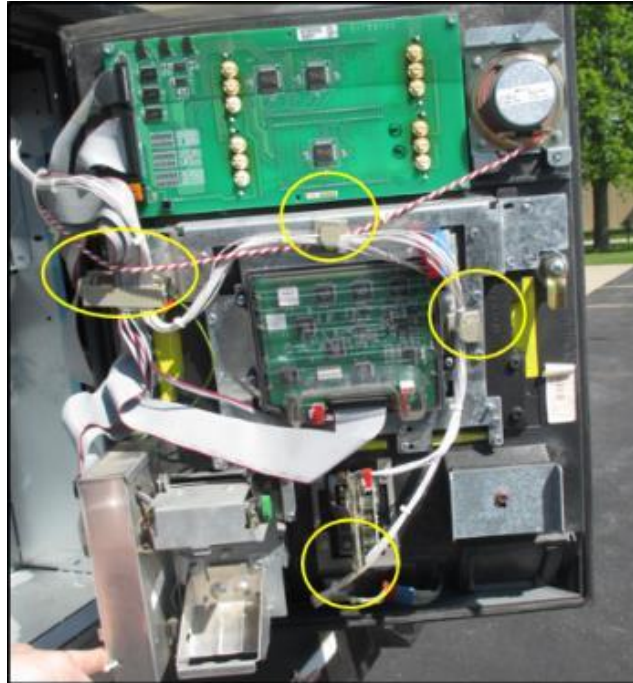


Fig 2.5 – Various cable restraints

7. Unplug the printer cables and wiring from the A-Side.
- a. Using a nut driver, remove the 5/16" hex head bolts (3) located on the backside of the printer. (Fig 2.6a)

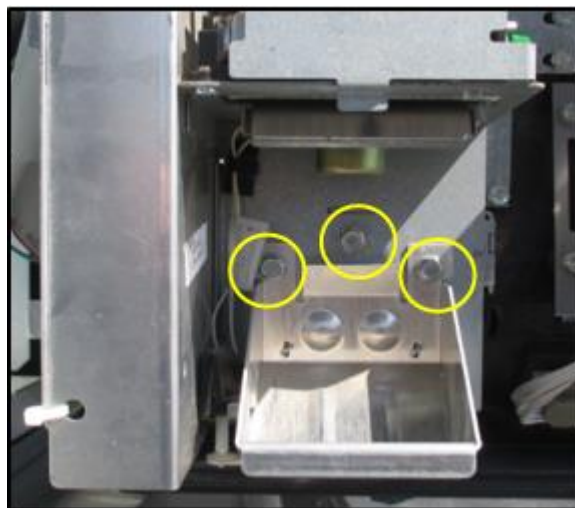


Fig 2.6a – Location of printer bolts

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- b. Pull the printer away from the door.
- c. For Encore 300 and Encore 500 without a LON cable harness: Unplug both cables attached to the printer by releasing latch tabs. Using a nut driver, remove the 1/4" ground nut, and remove and set aside the ground wire for re-use. (Fig 2.6b)

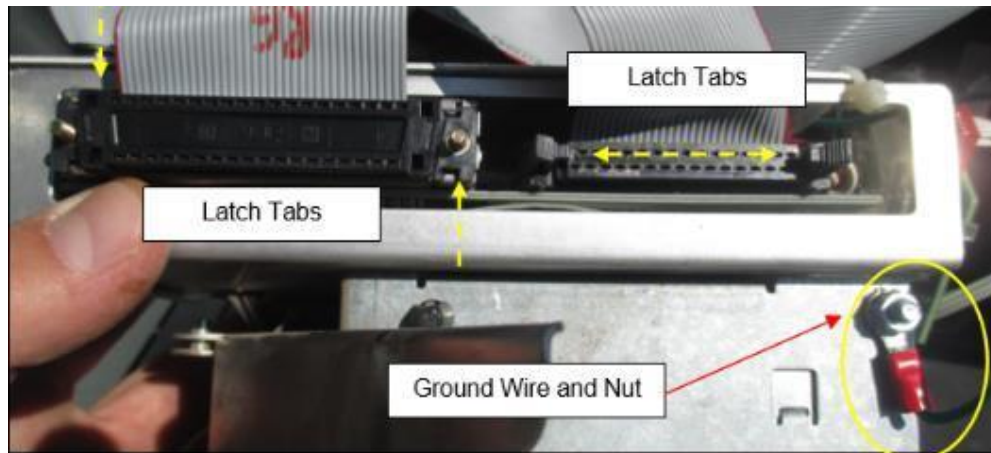


Fig 2.6b – Remove Printer cables and ground wire

For the Encore 500 with the LON cable: Unplug the LON cable and power cable connected to the printer (Fig 2.6 c), instead of the latch tabs above.

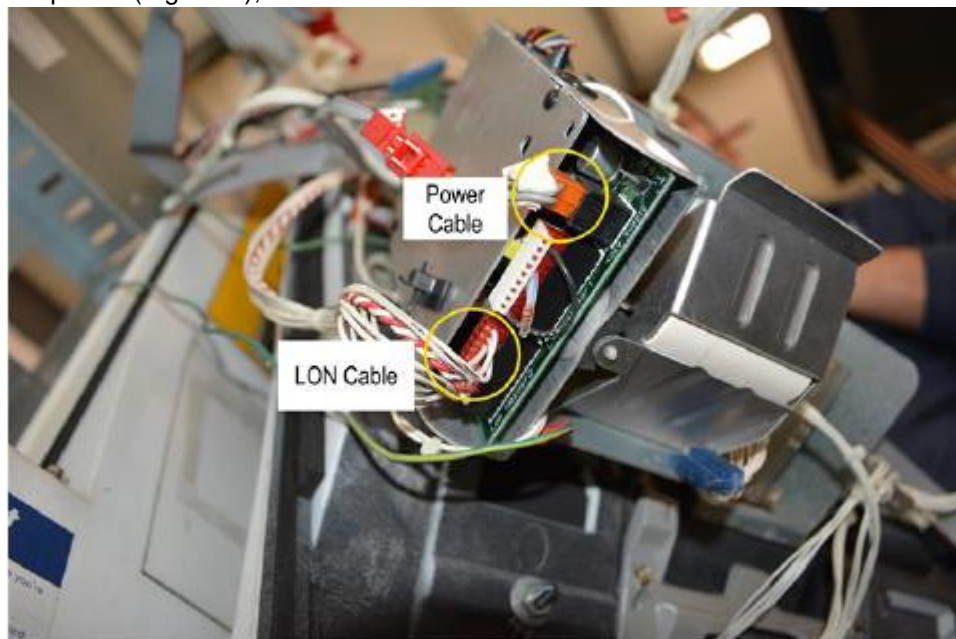


Fig 2.6c – Remove LON cable and Power Cable

- d. The printer assembly, ground nut and the 5/16" bolts can be discarded. They will not be re-used.

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8. Disconnect the speaker wiring (If present).
 - a. Use a side cutter to cut the existing speaker wiring close to the speaker terminals, as indicated by the blue line in Fig 2.7 below:

**Fig 2.7 – Cut the speaker wiring**

- b. Do not discard the wiring. Mark and set it inside the dispenser's main door out of the way to be re-installed during the installation procedure.
9. Undo both latches located on the left-hand side of the dispenser's main door. Open the main door. (Fig 2.8 a, b)

**Fig 2.8a – Location of main door latches****Fig 2.8b – Latch in open position**

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10. Use the door prop that is stored towards the bottom of the main door to lock the main door into the open position. (Fig 2.9 a, b, c)

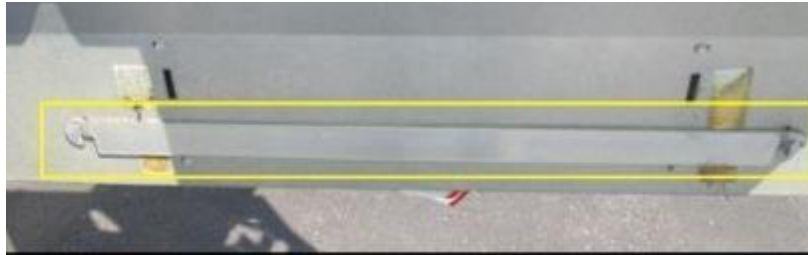


Fig 2.9a – Door prop located at bottom of main door



Fig 2.9b – Door prop inserted in prop position

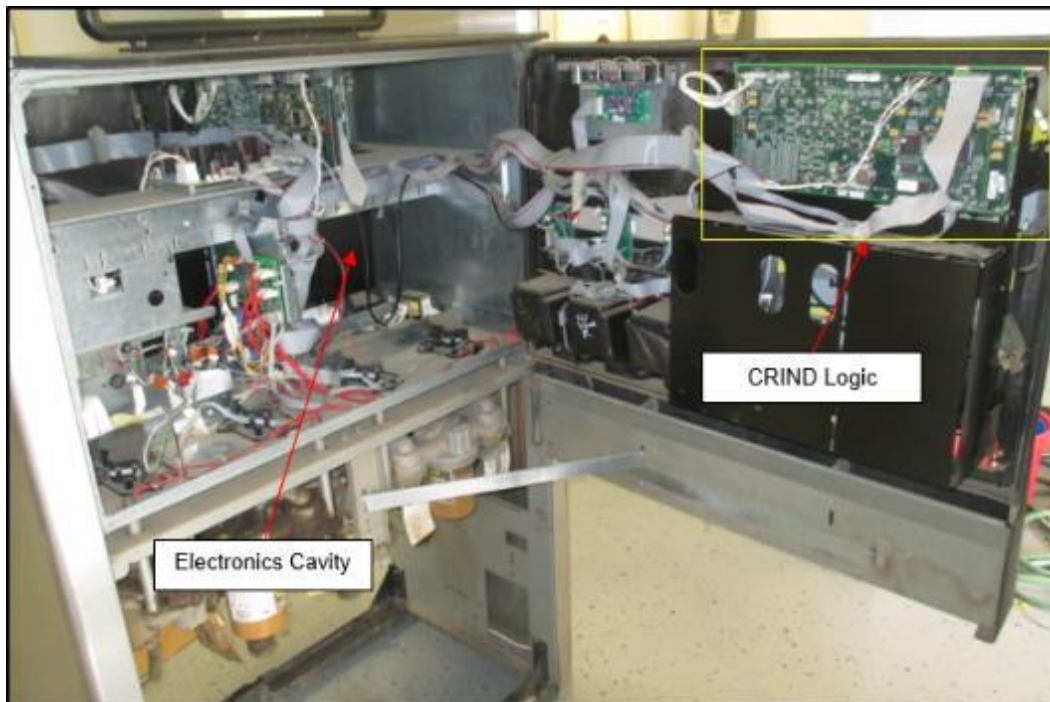


Fig 2.9c – Door in fully opened and locked position

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Caution: Removing the access door may require assistance from another individual.

When the two hinge screws are removed, gravity will cause the door to fall, possibly resulting in injury or damage to important components.

- Make sure that the access door is fully closed.
- Using a nut driver, remove the 5/16" hex head screws (2) located along the top ridge of the main door.
- Using a small flathead screwdriver and needle nose pliers, lift the hinge pin upwards to remove it from the door.

Note: If the hinge pin is resistant to force, apply a general-purpose penetrating oil to lubricate the area.

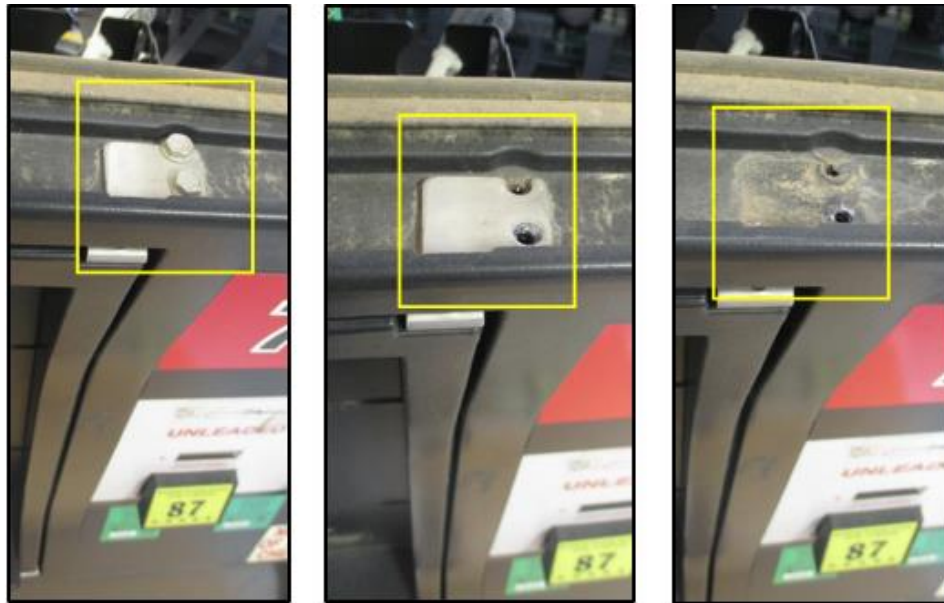


Fig 2.10 a, b, & c – Location and removal of the upper hinge pin and screws

- Set the hinge and the hex head screws aside. Do not discard the hinge or screws, they will be re-installed during the installation procedure (Fig 2.11)



Fig 2.11 – Upper hinge pin and screws

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- e. Carefully open the access door and tilt the top forward and lift the door upwards to remove it. The access door along with any remaining attached components can be discarded. They will not be re-installed.

Note: *The bottom hinge pin can be displaced during the removal of the door. Take care to either remove and retain the pin separately, or ensure that the pin remains in place throughout the installation, as it will be required to re-install the new door assembly back in place.*

- 12. For the Encore 300 only**, remove the CRIND logic board located on the top right-hand corner of the inside of the Side-A main door.

- a. Unplug all cables connected to the board terminals. (Fig 2.12)



Fig 2.12 – Logic board with cabling plugged in

- b. Remove the logic board by using a pair of needle nose pliers and squeeze the plastic standoffs (6) that the logic board is mounted on. (Fig 2.13)

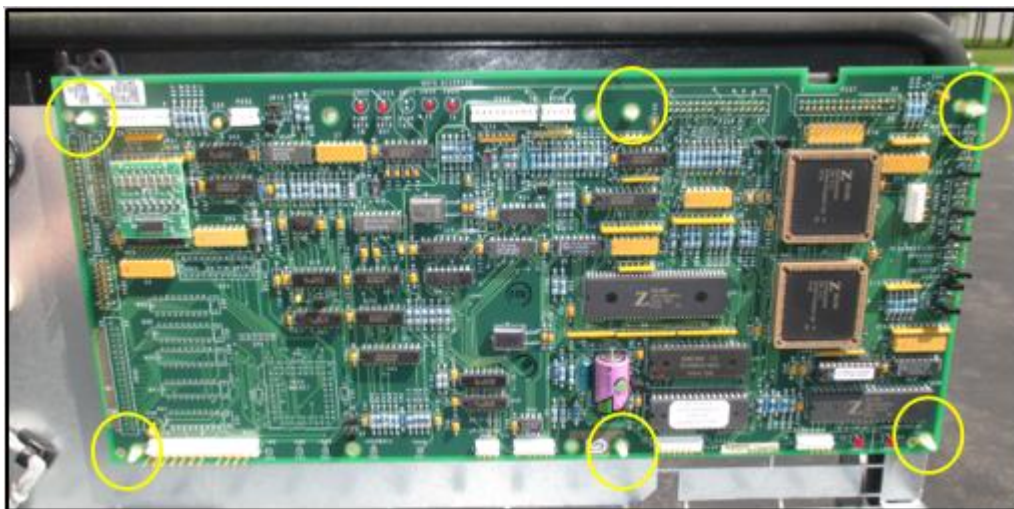


Fig 2.13 – Location of plastic standoffs

- c. The CRIND logic board can be discarded. It will not be re-installed.

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13. Repeat steps 4-12 for the Side-B of the dispenser (if present). Then proceed to step 14.

14. For the Encore 300:

Remove the CRIND regulator and Monochrome CPU boards.

- a. Identify the regulator and CPU boards located on the top side of the upper board bracket inside the electronics cabinet (when viewed from the Side-A).

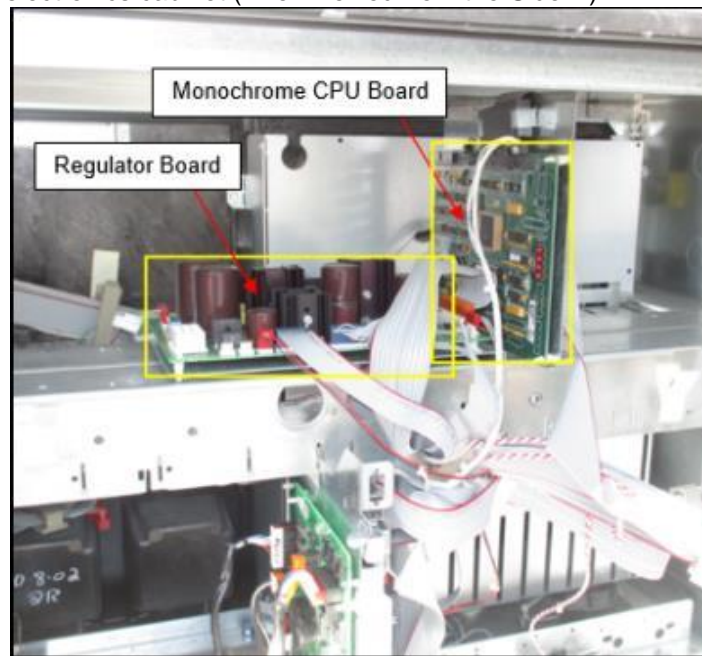


Fig 2.14a – Location of the CRIND Regulator and Monochrome CPU Boards (as viewed from Side-A)

- b. Unplug all cables connected to the regulator and CPU board terminals.
- c. Remove the four #8 nuts on the underside of the shelf that retain the steel bracket holding the Regulator and CPU boards. (Fig 2.14b)

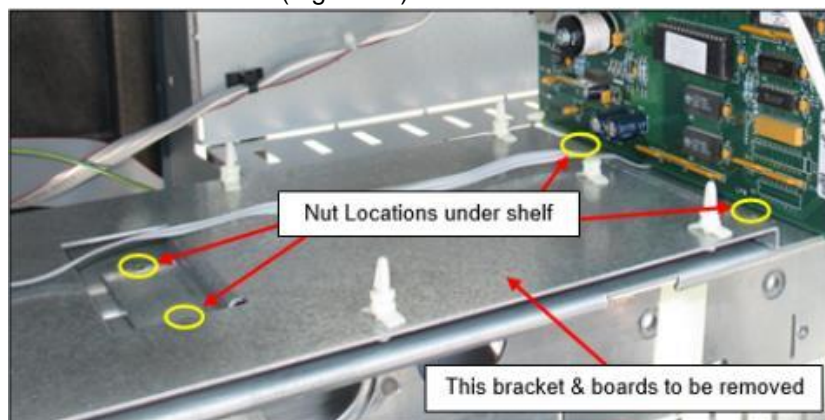


Fig 2.14b – Location of nuts under shelf (Regulator board not shown for clarity)

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- d. The regulator and CPU boards and associated bracket can be discarded. They will not be re-installed.

For the Encore 500:

Remove the CRIND control node.

NOTE: The Encore 500 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 Main Displays. 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 below steps to correctly remove the components and close the opening in the loop.

- a. Identify the CRIND Control Node located on the upper electronics rail inside of the electronics cavity, and the CPU Board located in the center of the electronics cabinet. (Fig 2.15a)

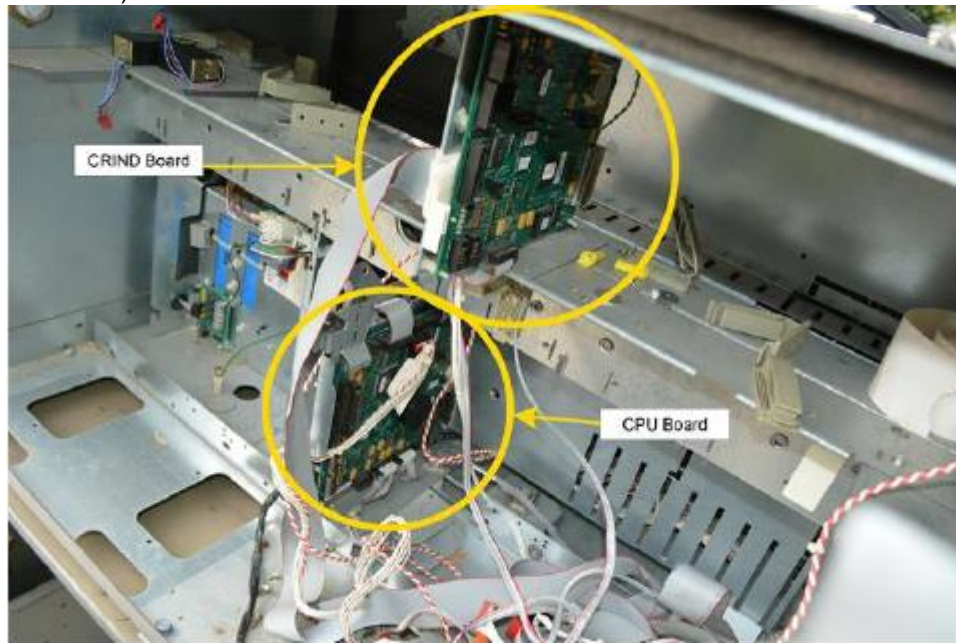


Fig 2.15a – Location of the CRIND Control Node and CPU Board

- b. 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.

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- c. Unplug the remaining LON Cable from the CRIND Control Node and plug it in the now open LON terminal on the CPU Board.
- d. Disconnect the Comm Two Wire from the CRIND control node board (Fig 2.15b). Mark this cable for later use during RFK installation.



Fig 2.15b – Comm Two Wire from the CRIND control node board

- e. Unplug every remaining cable attached to the CRIND Control Node.
- f. 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 2.15c)



Fig 2.15c – CRIND Control Node after removal

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- g. 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 2.15d)

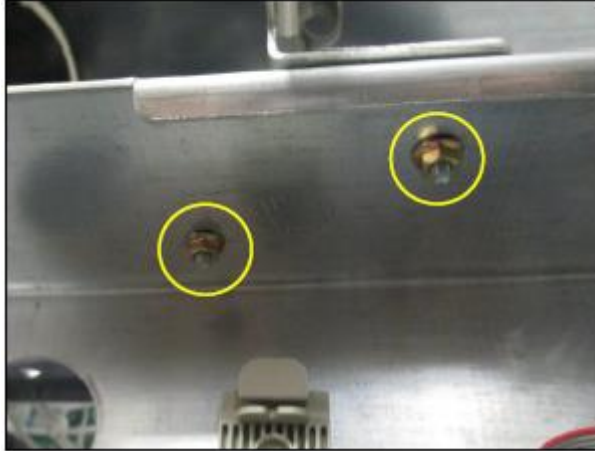


Fig 2.15d – Location of the CRIND Control Bracket nuts

- h. Remove the CRIND Control Bracket from the dispenser. It can be discarded. It will not be re-installed. (Fig 2.15e)

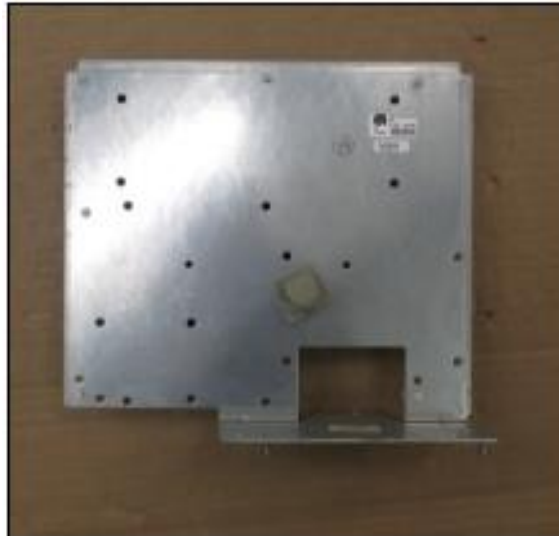


Fig 2.15e – CRIND Control Bracket after removal

- 15. For the Encore 300 only**, unplug the 4-wire CRIND communications cable assembly. Typically, this is located lying on the bottom of the electronics cabinet (underneath the board bracket). (Fig 2.16). Mark the disconnected connectors for re-connection during the installation.

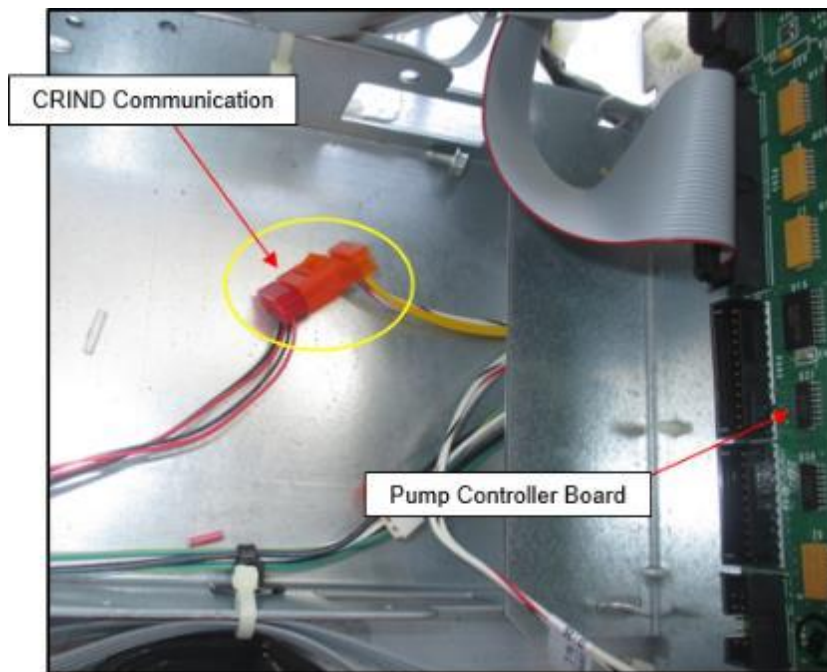
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Fig 2.16 – Location of 4-wire CRIND communication wires

- 16.** Pull away any unplugged and unwanted cable assemblies off from Side-A and set them aside to be discarded, or, set them inside the dispenser's electronics cavity. Unfasten any cable restraints that may be present (there may be several cable restraints present).

Note: *Not every cable that is being fastened using the cable restraints will be removed. There are several cable assemblies that pertain to dispenser functionality (grade select, nozzle switch, etc.) that will remain.*

- 17.** Re-fasten any cable restraints for remaining cable assemblies.
- 18.** Repeat steps 16 & 17 for the Side-B (if present).
- 19.** The disassembly process is complete. The dispenser is now ready for the Installation procedure to begin.

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4.2 Pre-Installation Procedure

4.2.1 Communications

This Retro-Fit Kit does not include a communications method for the Outdoor Payment Terminal. 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 method is 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 §4.2.2 & §4.2.3 procedures and then subsequently §4.3 Installation Procedure.

For Side-A (i.e. the first side), select the PSU mounted on 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 Main (Sales/Volume) Display

Install the Main (Sales/Volume) Display saved from the previous access door to the RP00026-XX Retro-Fit Kit Door assembly. This procedure should be completed for the Retro-Fit Kit door assemblies for both sides of the dispenser, if necessary.

1. Acquire the pre-assembled RP00026-XX Retro-Fit Kit Door assembly and set it on a stable platform to install the Main (Sales/Volume) Display.
2. Install the Main (Sales/Volume) Display onto the RP00026-XX Retro-Fit Kit Door assembly using the four supplied MS0147 #6-32 Philips head screws, using the Philips #2 screw driver.

Note: The Main (Sales/Volume) Display taken from Side-A must go back onto Side-A of the dispenser. The same applies for Side-B.



Fig 3.1 – Main (Sales/Volume) Display installed. This photo shows Side-A

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4.2.3 Speaker (Optional)

This pre-installation procedure only applies if the previous access door had an intercom speaker fitted, and is required for continued intercom function. Apply this procedure to both Side-A and Side-B as required.

1. Remove the blanking panel only (the existing gasket is left in place) from the Retro-Fit Kit Door assembly (RP00026-XX).
 - a. Identify the blanking panel (Fig 3.2 a) and remove the #8 SEMS hex nuts (4) mounting the blanking panel (Fig 3.2 b). Keep and set aside the nuts for re-use during the speaker fitting.



Fig 3.2a –Blanking panel

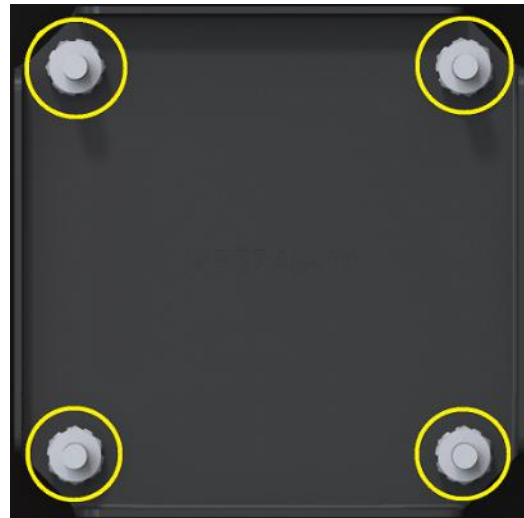


Fig 3.2b –Hex nuts on the blanking panel

- b. Remove the blanking panel. (this part can be discarded)
2. On top of the existing spacer nuts, insert another set of the MN0057 nuts as additional spacer. (Fig 3.3). Check and ensure that all nuts are tightened.

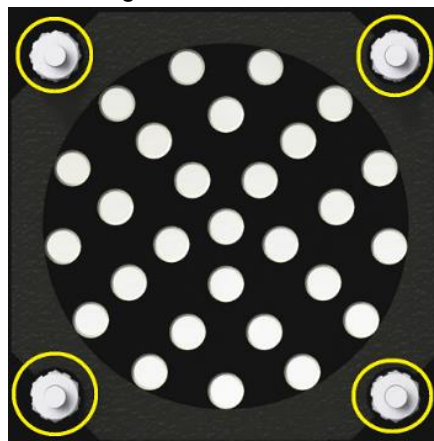


Fig 3.3 – spacer nuts

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3. Mount the new speaker (EA0011) on the Retro-Fit Kit Door assembly (RP00026-XX)
 - a. Place the speaker over the same area and the pillars that the blanking panel was mounted on (Fig 3.4a). Ensure that the speaker is seated correctly over the existing gasket. Ensure the orientation is such that the terminals are located at the vertical lower end (Fig 3.4b)

**Fig 3.4a****Fig 3.4b**

- b. Re-use the retained #8-32 SEMS hex nuts from step 1(a) above to secure the speaker in place. Ensure that the nuts are sufficiently tightened all the way to the spacer level.

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4.3 Installation Procedure

This section follows from the Pre-Installation procedure above, and assumes the dispenser is still open.

1. Install the EZ0631 pre-assembled PSU Plate assembly on both sides A and B. For Side-A, this is the PSU Plate Assembly that has just had the InvencoLink DSP232 installed.
 - a) Mount the PSU Plate Assembly on the upper electronics rail in the third (for Side-A) and fourth (for Side-B) set of holes from the left side of the dispenser as viewed from Side-B.

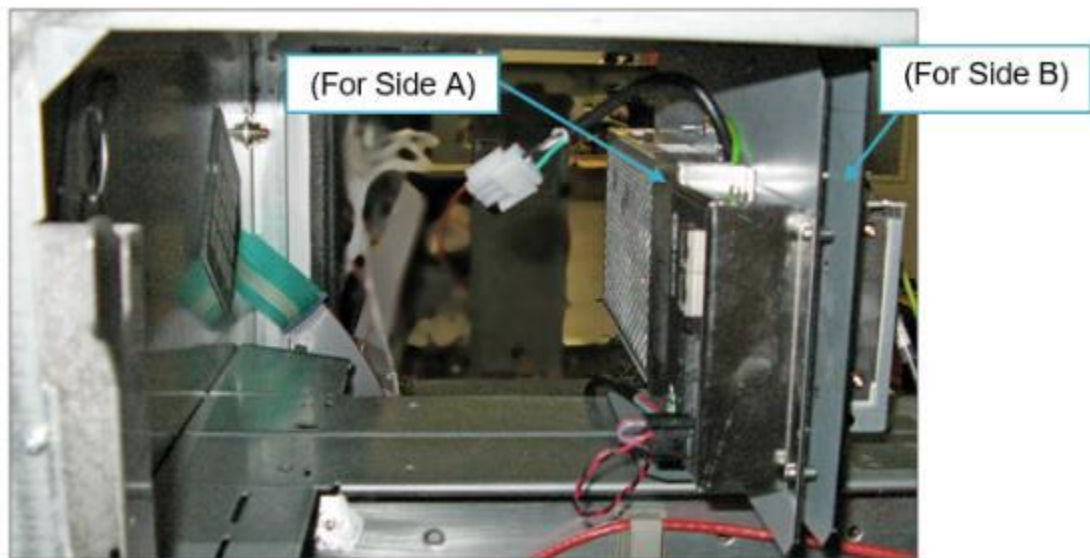


Fig 4.1 – PSU Plate assembly mounting (Shown from Side-B)

- b) Fasten the two MN0029 #8-32 locking nuts on the underside of each of the power supply assembly to secure it to the upper electronics rail.



Fig 4.2 – Nuts for PSU Plate assembly (One side only shown)

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2. Cable EK0124 has three connectors at one end and a single connector at the other end. EK0124 is supplied with a “dummy plug” for safety in some installations (see figure 4.3a). Unplug and discard the female dummy plug from the three-connector end of EK0124 (applied to both cables for double sided installation).

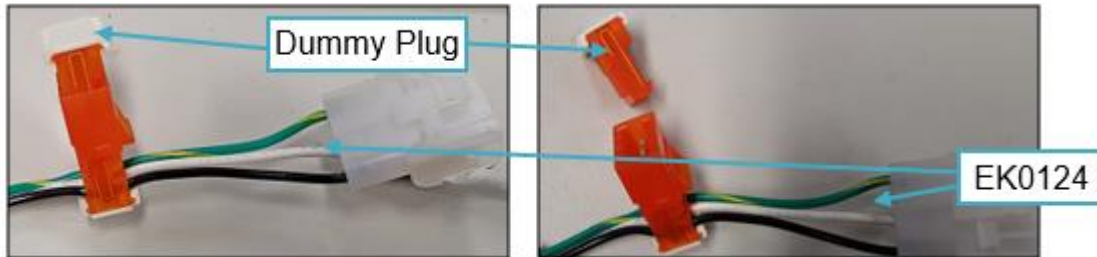


Fig 4.3a – Dummy plugs in EK0124 cable

Connect the large white female plug on the single connector end of EK0124 into the corresponding white connector on the PSU Plate assembly (EZ0631). Do this for both sides A and B.

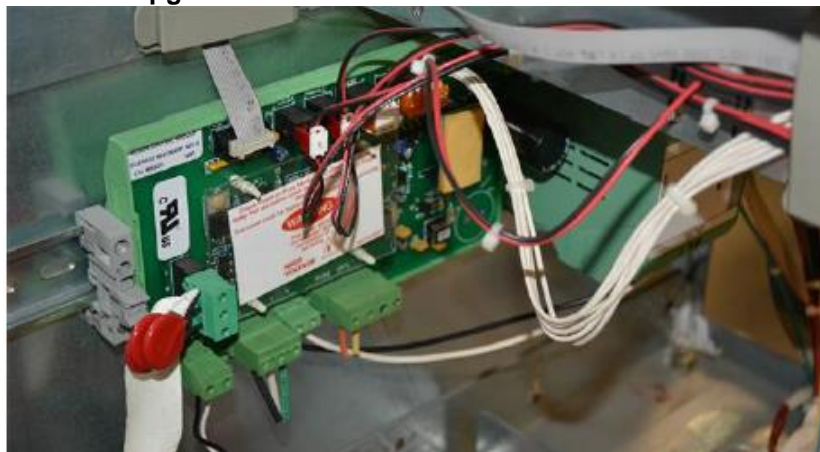


Fig 4.3b – Connecting EK0124 to the PSU mounted on Plate assembly

3. Wiring in the Power Supply to the Pump Power Distributor for the First (Side A) PSU

Identify the correct power distributor assembly:

- **Power Control Module upgraded distributor**

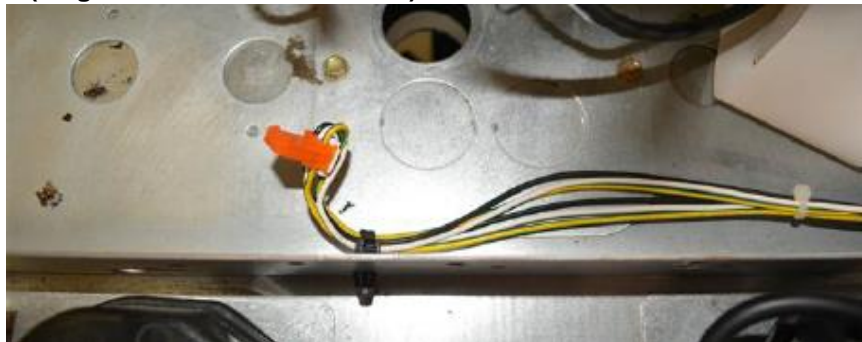


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- **AC Terminal Board**



- **AC Bus Line (single cable bus connections)**



Follow the correct wiring steps for the corresponding power distributor assembly.

Power Control Module:

- Install the Y cable 497-0514570 (or EK0208) to the GVR Pump to PSU Adaptor cable (EK0124) that was previously installed in step 2.
- Cut off the far female end of the Y cable as close to the connector as possible.

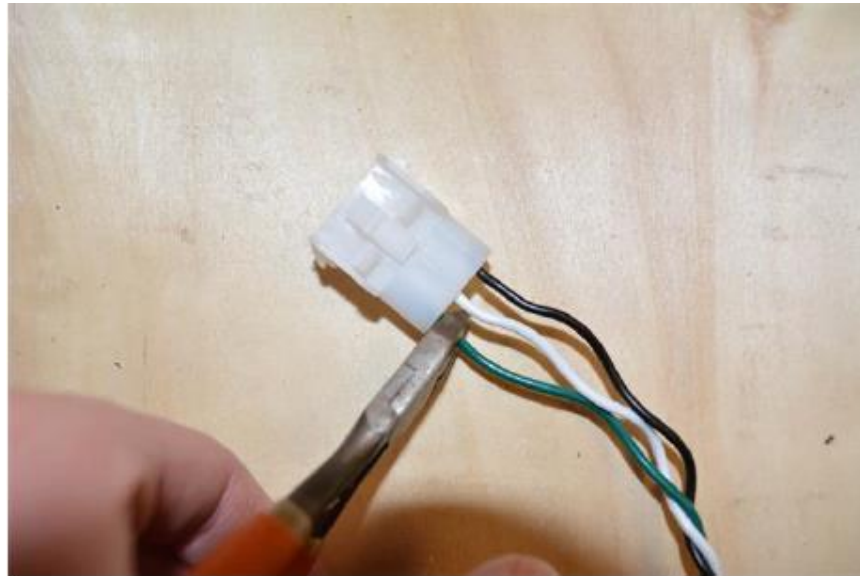
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Fig 4.4a – Far female end of the Y cable

- c. Strip the wires and crimp on a UL/cUL Listed crimp on fork connector/terminal to the green ground wire.
- d. Identify the P1 terminal on the Power Control Module.



Fig 4.4b – P1 terminal on the Power Control Module

- e. Attach the corresponding leads on the adapter cable to the P1 two prong connector.

Note: Do not unplug the connector until the line and neutral terminals are identified. White corresponds to neutral and black corresponds to live.

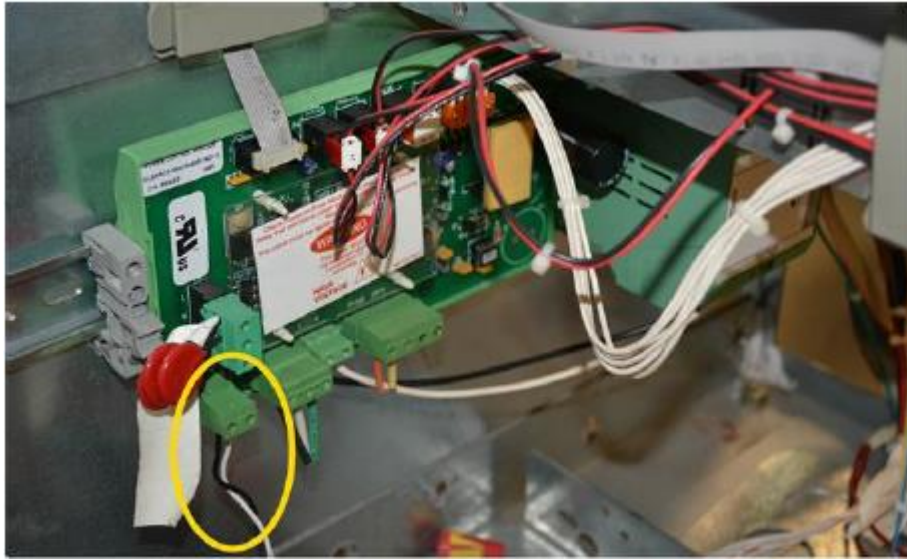
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Fig 4.4c – P1 two prong connector

- f. Unscrew a bolt with attached ground. Add the new ground wire to floor of electric cabinet and re-tighten bolt.



Fig 4.4d – Bolt with attached ground

AC Terminal Board:

- a. Install the Y cable 497-0514570 (or EK0208) to the GVR Pump to PSU Adaptor cable (EK0124) that was previously installed in step 2.
- b. Unplug the main AC power cable from the AC Terminal Board and retain for reassembly.

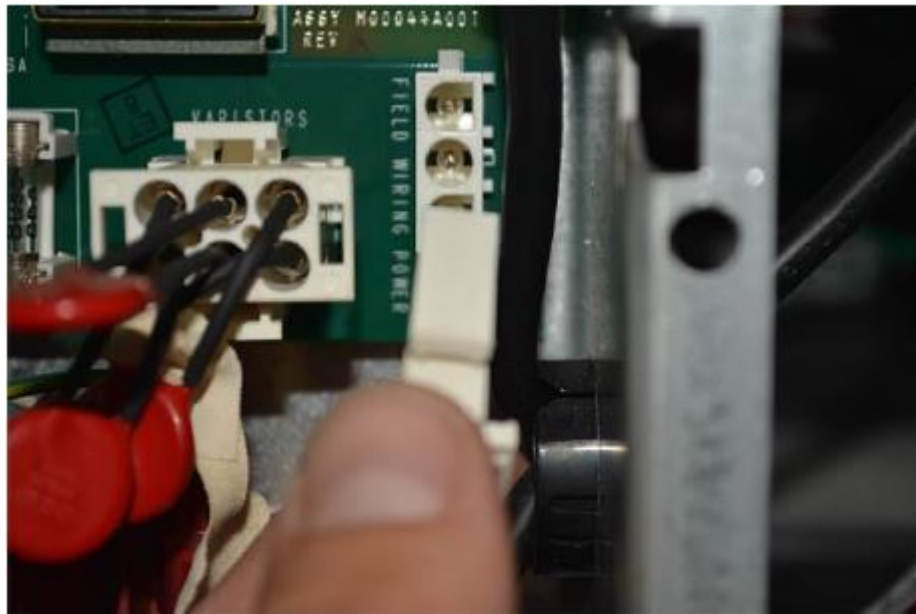
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Fig 4.4e – main AC power cable on the AC Terminal Board

- c. Plug in the middle connector of the Y cable to the AC Terminal Board.

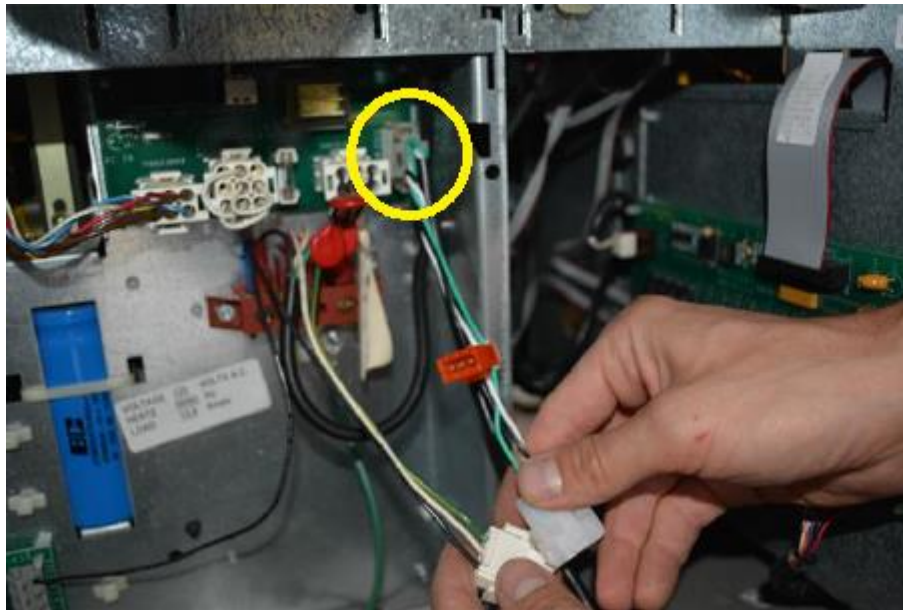


Fig 4.4f – Middle connector of the Y cable plugged in the AC Terminal Board

- d. Attach the main AC power line previously unplugged from the AC board to the Y cable's far end pigtail.

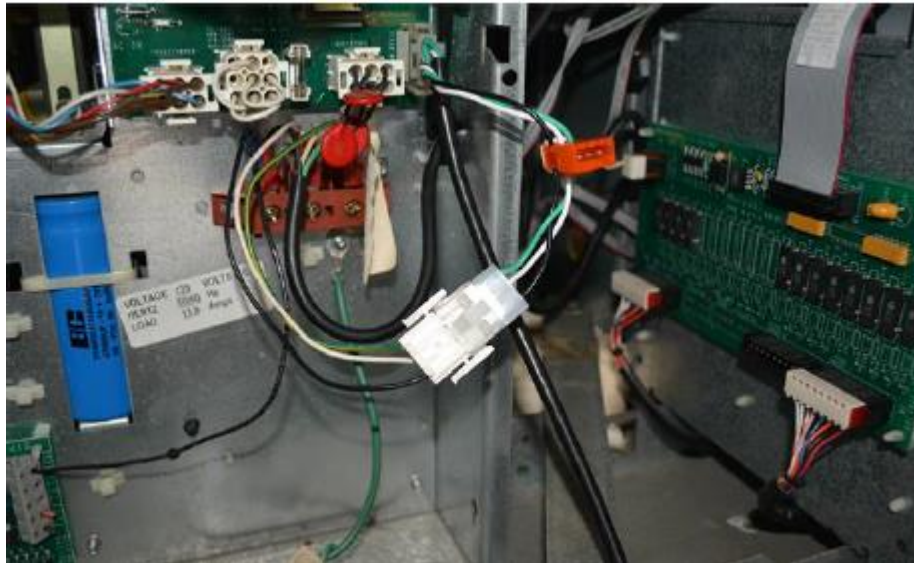
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Fig 4.4g – main AC power line attached to the Y cable

AC Bus Line:

- a. Plug the male orange connector of the previously installed EK0124 to an available connector on the Encore AC Voltage Bus which can be found typically running along the bottom of the electronics cavity.

Note: There are several points of connection along the pre-existing AC Voltage Bus in the dispenser. Locate an unused connector. Do not unplug an occupied connector.

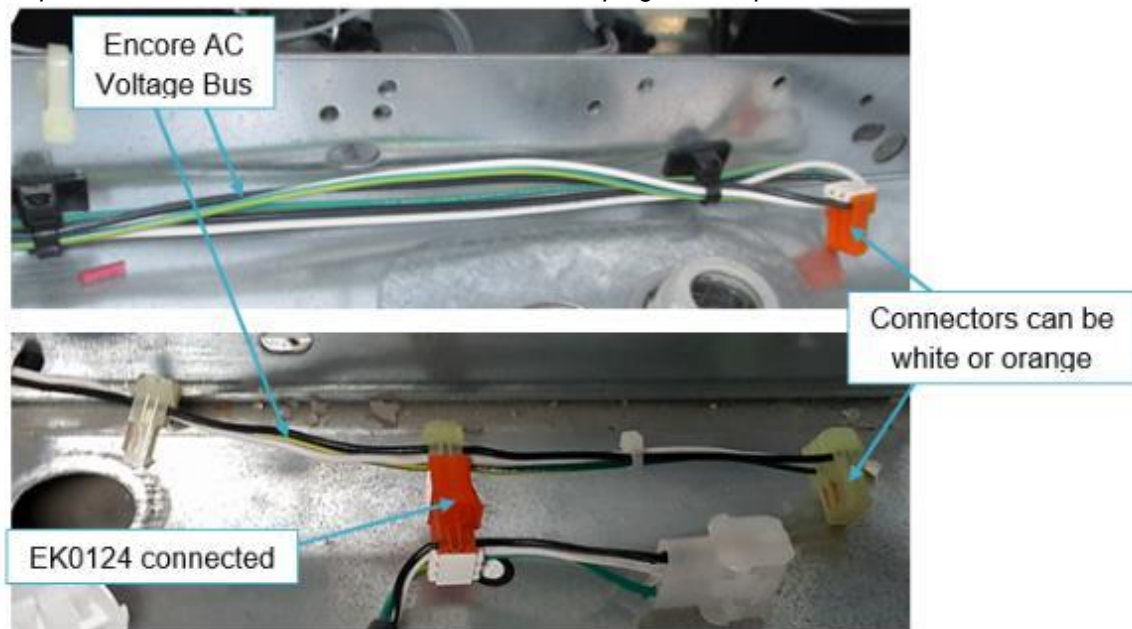


Fig 4.4h – Connecting EK0124 to AC Bus Line

Retro-Fit G6-300 + InvencoLink GVR Encore 300 or 500 (US) Installation Guide**4. Wiring in the Power Supply to the Pump Power Distributor for Second Installed (B Side) PSU**

For Side-B, plug the male orange connector of the previously installed EK0124 cable to the orange female connector of the EK0124 cable installed for Side-A.



Fig 4.5 – Connections for EK0124's – Side-B

5. Install the Yellow EK0131 Cat-5e cable into terminal "LAN1" for Side-A ("LAN2" for Side-B) on the InvencoLink Converter.



Fig 4.7– Connecting EK0131 to the InvencoLink Converter (Side-A)



Fig 4.8– Connecting EK0131 to the InvencoLink Converter (Both Sides-A and -B)

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6. For the comm cable connection, follow the appropriate procedure below for the Encore 300 or Encore 500:

Encore 300

Locate the CRIND comm. connector pair disconnected in Section 4.1 Step 15. Insert the Red connectors of EK0140 to re-join the connection.

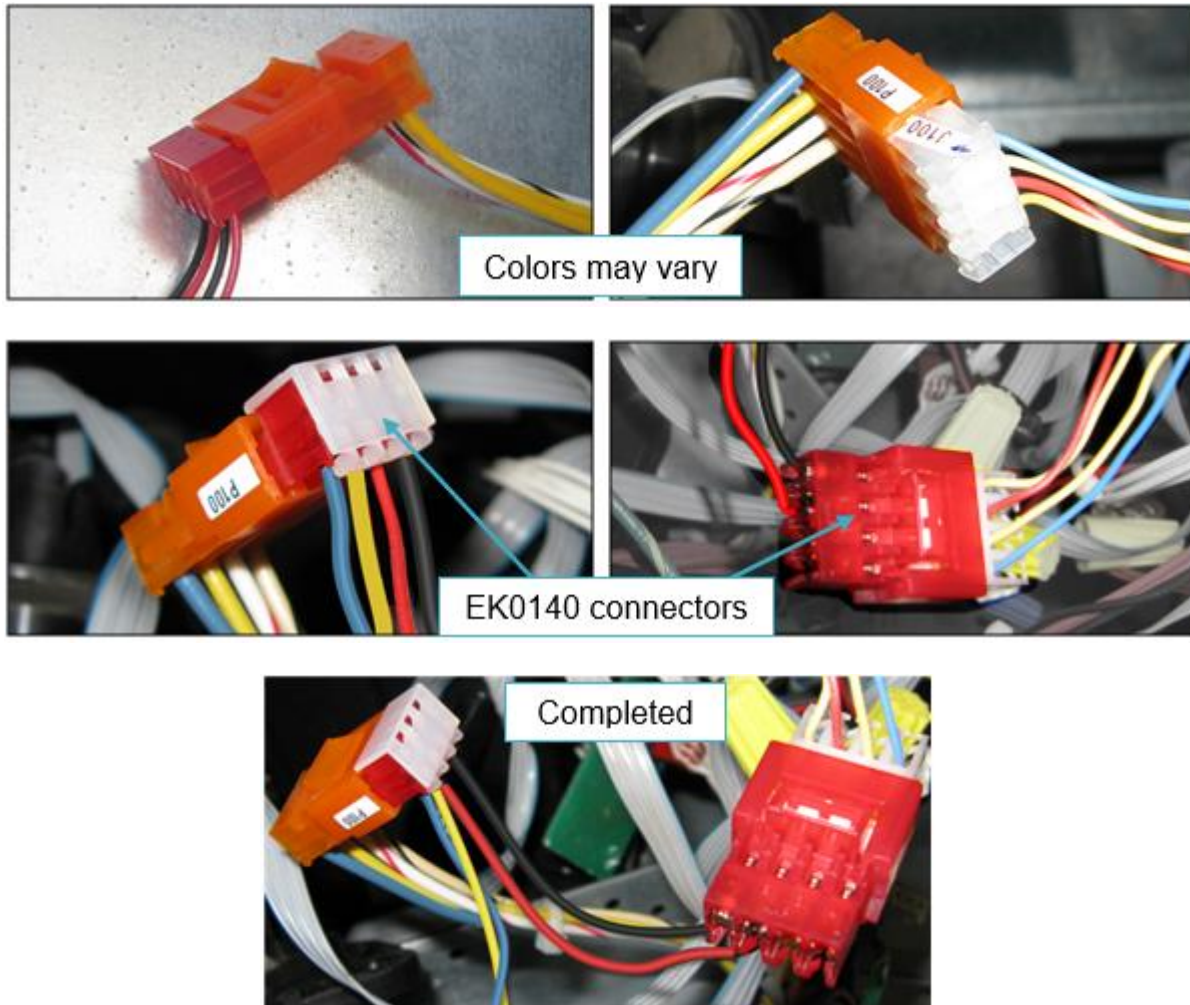


Fig 4.9– Connecting EK0140 into the CRIND Comms

Encore 500

Plug in the EK0139 Comm adaptor cable to the Comm Two Wire that was disconnect from CRIND control node board in the disassembly step 14 (Encore 500 section, step d)

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7. For Side-A only, Plug the Green connector of EK0139 or EK0140 into the LINE socket on the InvencoLink converter.



Fig 4.10– Connecting EK0140 to the InvencoLink Converter

8. Mount the RP00026-XX Retro-Fit Kit Door assembly to the dispenser's main door.
- Align the bottom door hinge opening on the Retro-Fit Kit door over the lower hinge pin on the dispenser's main door.



Fig 4.11 – Base of Retro-Fit Kit Door seated over lower hinge pin

- Align the top door hinge opening on the Retro-Fit Kit door with the top hinge pin opening on the dispenser's main door.
- Re-install the upper hinge pin that was retained from the disassembly procedure.
- Secure the upper hinge pin using the two 5/16" hex head screws retained from the disassembly procedure.

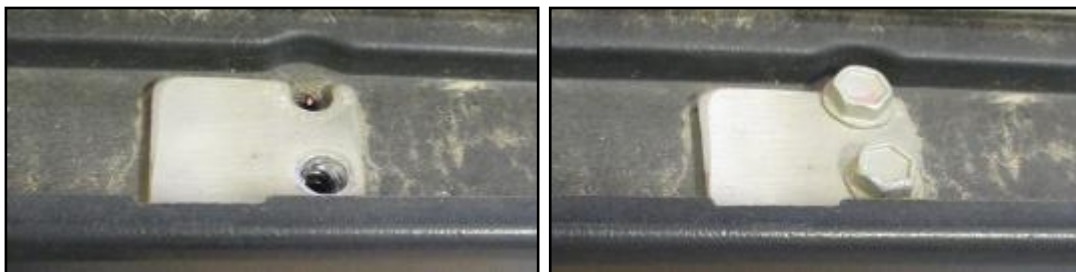


Fig 4.12 – Hinge pin installed, and screws inserted and tightened

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9. Feed the Yellow EK0131 Ethernet cable, and the pre-installed Black DC power cable and Green/Yellow earth cable through the indicated slot on the dispenser's main door. Use the existing cable-retention clip to secure the cables.

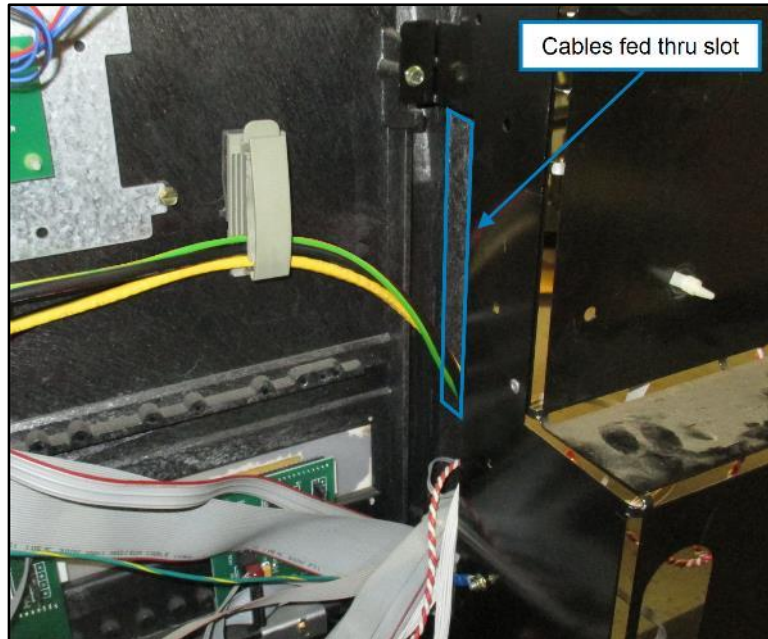


Fig 4.13– Feeding and Securing cables for OPT

10. Install the ground wire removed from the printer in the disassembly process onto the threaded ground stud on the RP00026-XX Retro-Fit Kit Door assembly using the MN0029 #8-32 UNC SEMS nut.

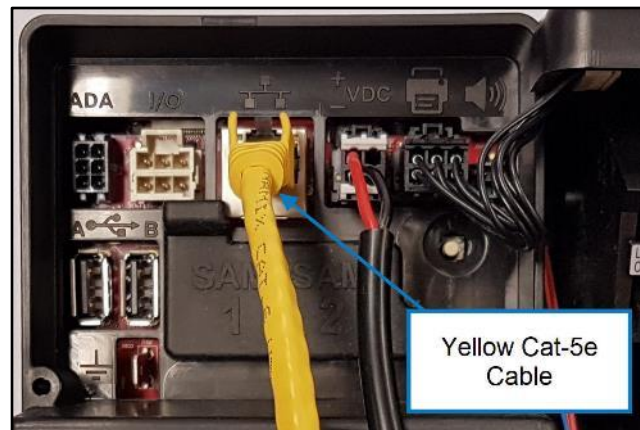


Fig 4.14– Installing ground wire onto RP00026-XX Retro-Fit Kit Door assembly

11. Take the cable ends previously coiled into the cavity in the dispenser and connect them to the G6-300:
 - a. Plug the Black low-voltage DC cable from the PSU Plate assembly into the OPT:

Retro-Fit G6-300 + InvencoLink GVR Encore 300 or 500 (US) Installation Guide**Fig 4.15– Connecting the DC cable**

- b. Connect the EK0131 Yellow Cat-5e cable into the correct socket on the OPT. The port number on the InvencoLink for the cable (e.g. LAN-1) must match the side you're working on (e.g. Side-A):

**Fig 4.16– Connecting EK0131 Yellow Cat-5e Cable**

- c. Clip the Green (or Green-Yellow) Earth cable from the PSU Plate assembly (EZ0631) onto the ¼" tab on the OPT:

**Fig 4.17– Connecting the earth cable to the OPT**

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12. Gather all of the cables that are attached to the OPT unit, including the Green/Yellow Earth that was installed in Step 11 and arrange them neatly with a cable-tie:

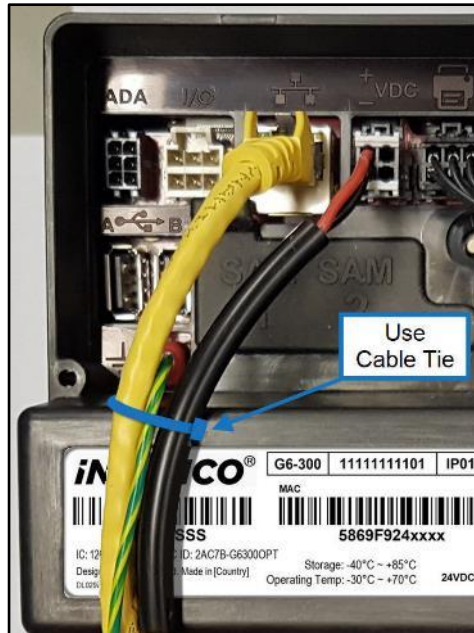


Fig 4.18– Check cable is gathered and tied

13. Wiring connection to the new speaker (**optional**).

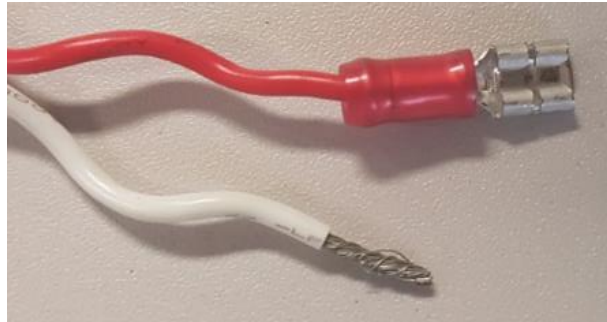
Note: This step only applies if the speaker is required and has been mounted on the RP00026-XX Retro-Fit Kit Door assembly as per the pre-installation procedure in section 4.2.3.

- Identify the end of the wiring that was disconnected from the existing speaker in step 8 of section 4.1
- Using the wire stripper, strip 8mm of the wire insulation from the end (Fig 4.19a)

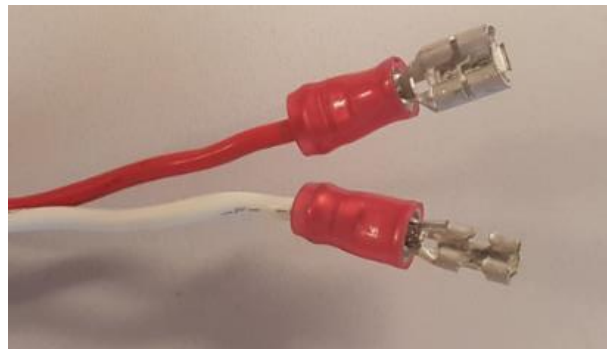


Fig 4.19a

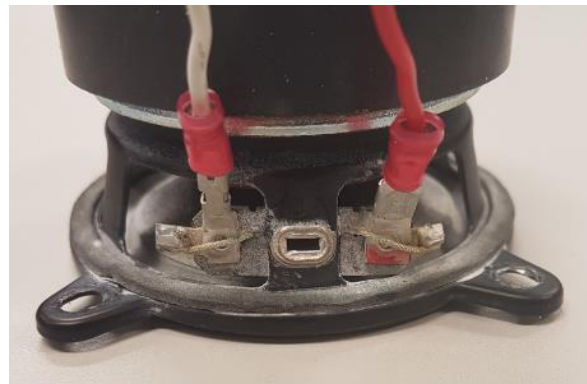
- Using the crimping tool, crimp the Terminal Spade Female 4.76mm (EI0354) to the red wire (Fig 4.19b)

Retro-Fit G6-300 + InvencoLink GVR Encore 300 or 500 (US) Installation Guide**Fig 4.19b**

- d. Using the crimping tool, crimp the Terminal Spade Female 2.79mm (EI0355) to the white wire (Fig 4.19c)

**Fig 4.19c**

- e. Connect the crimped Terminal Spade Female connectors to the terminals on the new speaker (Fig 4.19d). Check and ensure that the spades are locked in place reliably.

**Fig 4.19d**

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- 14.** Re-install the Main (Sales/Volume) display cables that were previously marked from step 4 of the disassembly procedure in section 4.1.

Encore 300:

P804A, P801, P2115.

Encore 500:

LON Header 1 (P2109), LON Header 2 (P2112), PPU (P2101), +9.4VAC (P2115), and Manager Keypad (A-Side Only) (P2108).

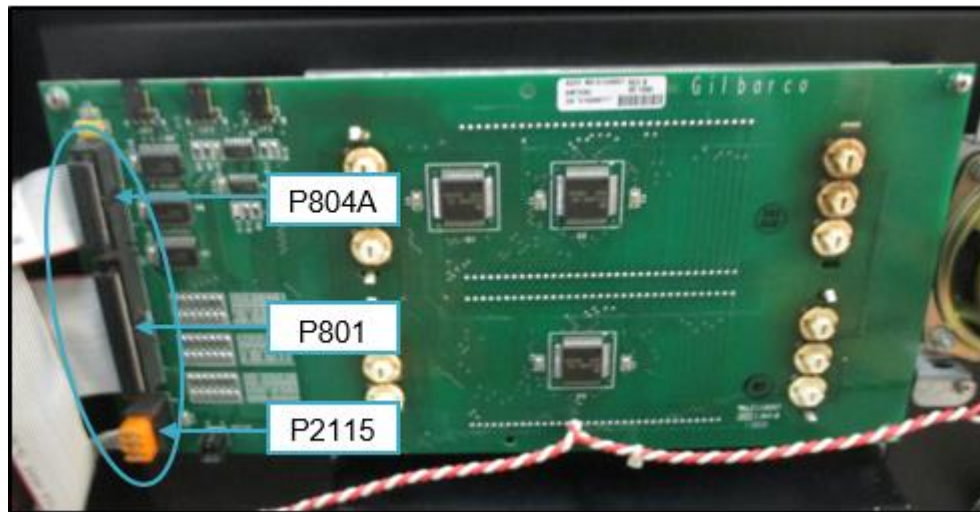


Fig 4.20– Re-installing the Main (Sale/Volume) Display cables

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15. With the RP00026-XX Retro-Fit Kit Door assembly fully opened, feed excess cabling into the electronics cavity so that the majority of the cables' slack will be fastened to the inside of the dispenser's main door. Re-use any existing cable restraints that may be present. It may be necessary to use zip-ties or additional cable restraints to secure the loose wiring. These must be provided by the installer.

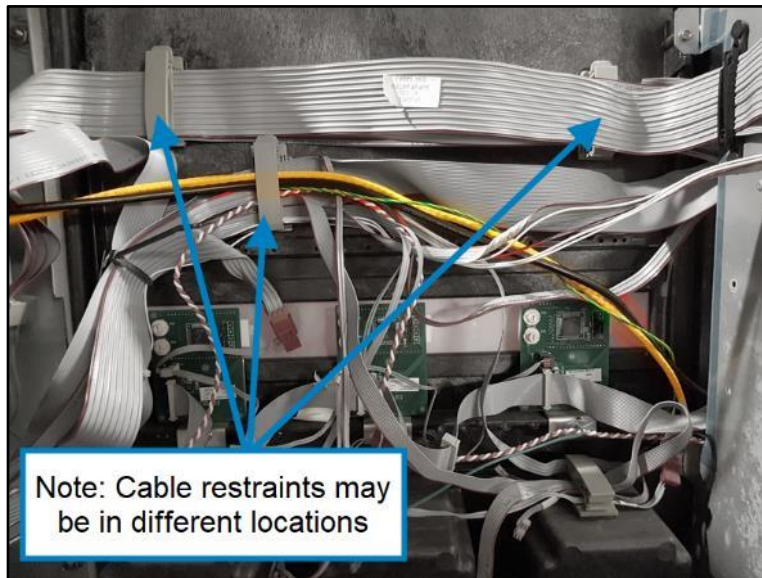


Fig 4.21– Securing excess cables

16. Remove and re-stow the door prop in the dispenser's main door.
17. Gently close the dispenser's main door (take care that the RP00026-XX Retro-Fit Kit Door assembly does not swing excessively) and push both main door latches into the lock position.


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Fig 4.22 – Latching the dispenser's main door

- 18.** If necessary, load paper into the OPT following the advice in the next section.
- 19.** Close the RP00026-XX Retro-Fit Kit Door assembly gently, ensuring no cables are pinched or snagged. If any cables will be pinched re-arrange them before continuing.
- 20.** When the door is fully shut, lock it using the "751" key.



Fig 4.23 – Completed OPT installation

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	Date Released	Apr 2020
	Revision Number/Security level	R06 S2
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21. Repeat steps 7 through 20 for the Side-B (if present).



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

22. Test dispenser and OPT operation, following the advice in the next section

23. Installation of the Retro-Fit Kit is now complete.

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5 First Power-Up

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

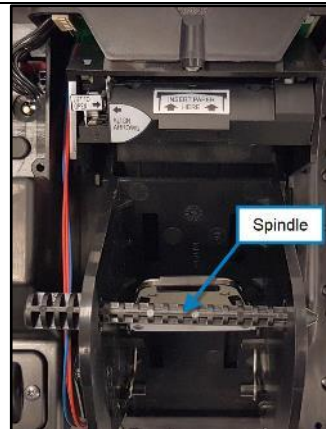
The terminal will display the following screen whilst attempting to connect to the LAN. This screen will persist until a connection can be made (Note: reported Firmware version may vary):



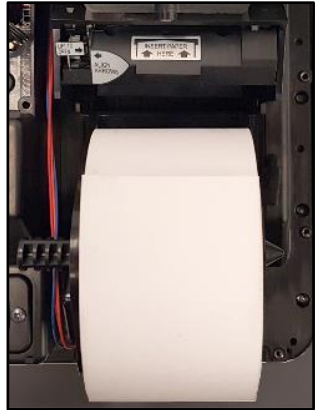



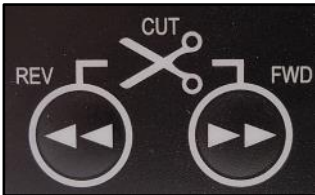
If the terminal is successful in connecting to the LAN, it will display the following screen and the rest of the start-up sequence will continue:



The following steps describe the paper loading procedure.

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)	

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3.	<p>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.</p>	
4.	<p>Insert the cut edge of the paper into the slot as shown by the label. Note: Insert until the printer grips and feeds automatically.</p>	
5.	<p>The photo shows the paper loaded correctly.</p>	
6.	<p>Paper-feed buttons are located on the top of the terminal.</p>  <p>Press either button to move the paper forward or back.</p> <p>Press both buttons together to cut the paper.</p>	
7.	<p>Use the paper-feed buttons to advance the paper through the terminal until it appears at the paper exit chute. Cut the paper using both paper-feed buttons, then remove the cut length from the chute.</p>	