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R12

Retrofit G7 8 inch GVR Encore 300 300Q 500 or 500Q (MY) Installation Guide

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Kit Part Numbers	Brief Description
RF00013-XX	G7 8 inch Encore 300 or 500
RF00043-XX	G7 8 inch Encore 300Q or 500Q



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Release History

Version	Prepared by	Date	Change description
0	Hasan Uddin	3/7/2020	Draft
1	Michael Doh	17-Aug-2020	Initial review
2	Michael Doh	19-Aug-2020	Corrections, add 300Q 500Q variant kit
3	Michael Doh	10-Sep-2020	Added step to remove and clean the existing gasket in the pump
4	Hasan uddin	24-Sep-2020	Added step for E stop button dismantle procedure and highlight the transformer area.
5	Hasan uddin	29-Sep-2020	Touch up on E stop button dismantle procedure.
6	Michael Doh	30-Sep-2020	Revised wording relating to 300Q/500Q size A identification and refine E-stop button related procedure descriptions
7	Michael Doh	05-Oct-2020	Revised side A/B identification method
8	Hasan uddin	05-Oct-2020	Additional step on removing metal sheet on dismantle procedure.
9	Michael Doh	13-Oct-2020	Added MP1101 spacer
10	Michael Doh	22-Oct-2020	Added MW0063 washers
11	Michael Doh	27-Oct-2020	Corrected MW0063 part number typo
12	Michael Doh	14-Apr-2021	Updated PSU assembly part number



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1 Introduction

The documentation provides some basic guidelines for installing the G7 8 inch (G7-100 SDC-08) Outdoor Payment Terminal (OPT) system (Where the suffix -XX in the part numbers are any numbers or letters relating to optional configurations) in a Gilbarco Encore 300, 300Q, 500 or 500Q dispenser:

- G7 8 inch OPT system installation in Encore 300 or 500 dispenser
Kit part number: RF00013-XX
- G7 8 inch OPT system installation in Encore 300Q or 500Q dispenser
Kit part number: RF00043-XX

This Retro-Fit Kit can be installed into either Side-A or Side-B of a GVR Encore 300, 300Q, 500 or 500Q dispenser.

1.1 Tools Required

The following tools are required to Retro-Fit the G7 8 inch (G7-100 SDC-08) OPT:

- Philips #2 screwdriver
- Flat 5mm screwdriver
- Side cutters
- Cable (zip) ties
- Needle nose pliers
- #8 Socket or Nut driver
- 1/4" Socket or Nut Driver
- 5/16" Socket or Nut Driver
- Wire stripper
- Crimping tool (suitable for 18 AWG wire)
- Terminal blocks, 12-22 AWG, 0.315" pitch (UL and cUL/CSA Listed)



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

G7 8 inch (OPT) system installation in Encore 300 or 500 dispenser (RF00013-XX):

Unpack the G7 8 inch (G7-100 SDC-08) GVR Encore 300 or 500 Retro-Fit Kit (RF00013-XX) and check that all of the parts listed below are present.

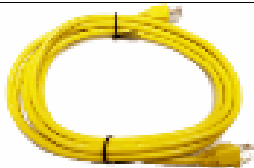
RFK panel with pre-installed G7 8 inch OPT (RP00013-XX):



Power Supply Unit (PSU) mounted on Plate assembly (EZ0703):



Faster kit (FK0045), consists of:
MN0029 #8-32 UNC, external star washer, Zinc plated SEMS nut – Quantity: 2



EY0131 Cat-5e, Flexible, 2.5m, YELLOW



EY0124 GVR Pump to Pump Adaptor, 1.0m

Retrofit G7 8 inch GVR Encore 300 300Q 500 or 500Q (MY) Installation Guide**G7 8 inch (OPT) system installation in Encore 300Q or 500Q dispenser (RF00043-XX):**

Unpack the G7 8 inch (G7-100 SDC-08) GVR Encore 300 or 500 Retro-Fit Kit (RF00043-XX) and check that all of the parts listed below are present.

RFK panel with pre-installed G7 8 inch OPT (RP00043-XX):



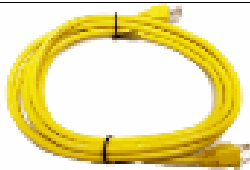
Power Supply Unit (PSU) mounted on Plate assembly (EZ0703):



Faster kit (FK0045), consists of:
MN0029 #8-32 UNC, external star washer, Zinc plated SEMS nut – Quantity: 2



EK0131 Cat-5e, Flexible, 2.5m, YELLOW



EK0124 GVR Pump to Pump Adaptor, 1.0m



MP1101 SPACER, EMERGENCY STOP, ENCORE 300/500Q, G7-8





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2 Safety & Compliance Information

This section introduces the hazards and safety precautions associated with installing, inspecting, maintaining or servicing G7 8 inch (G7-100 SDC-08) 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, 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 G7 8 inch (G7-100 SDC-08) 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 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.

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

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

3.1.5 Hazardous Materials


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

3.1.6 In an Emergency

Compile the following information in case of emergency:

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

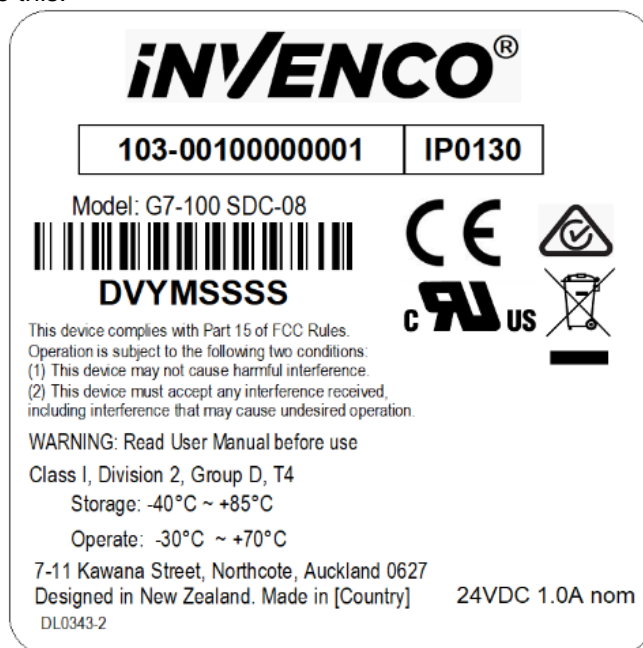
IMPORTANT: Oxygen may be needed at scene if gasoline has been ingested or inhaled. Seek medical advice immediately.

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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 G7 8 inch (G7-100 SDC-08) Modules have UL File References of E469526 and E480135 and carry labels similar to this:



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. Unlock the access doors on both the Side-A and Side-B (If present) of the dispenser. (Fig 2.1a, b)

**Fig 2.1a – Access door and lock location for Encore 300 or 500****Fig 2.1b – Access door and lock location for Encore 300Q or 500Q**

Retrofit G7 8 inch GVR Encore 300 300Q 500 or 500Q (MY) 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, 300Q, 500 or 500Q without first opening the dispenser. The easiest method is to open the access door and observe the transformer positions at the bottom right corner on the backside of the dispenser cabinet (Side B has the transformer, see Fig. 2.2b)*

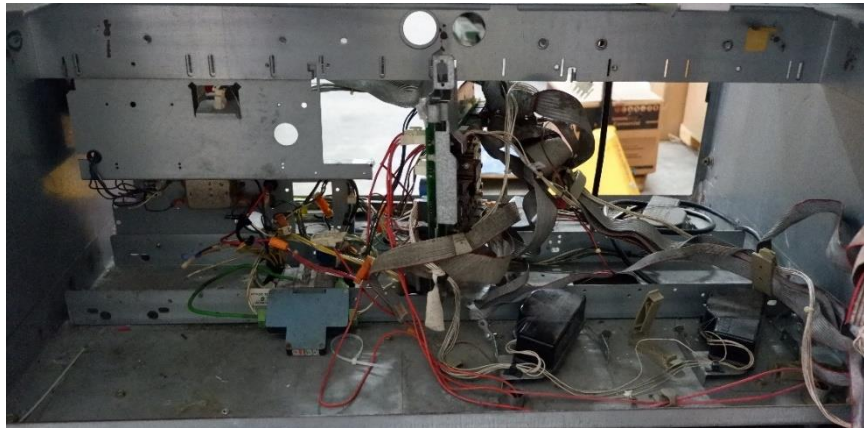


Fig 2.2a – Side A view.

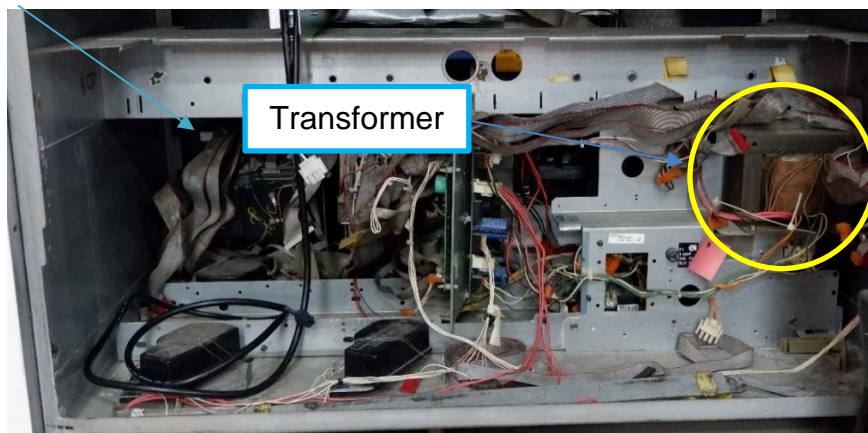


Fig 2.2b – Side B view.

4. Mark the cable connection for removal and reconnection later.**For Encore 300:**

- Mark the following cables connected on the main display board for later reconnection (Fig 2.3a): P804A, P801, P2115.
- 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.

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- 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).
- 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.
- 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).
- 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

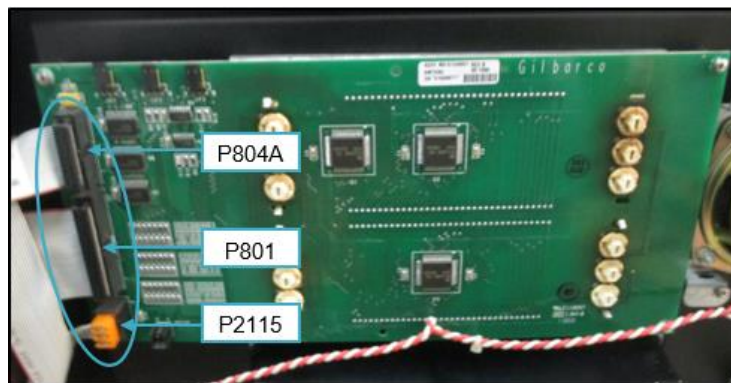


Fig 2.3 a – Marked cable.

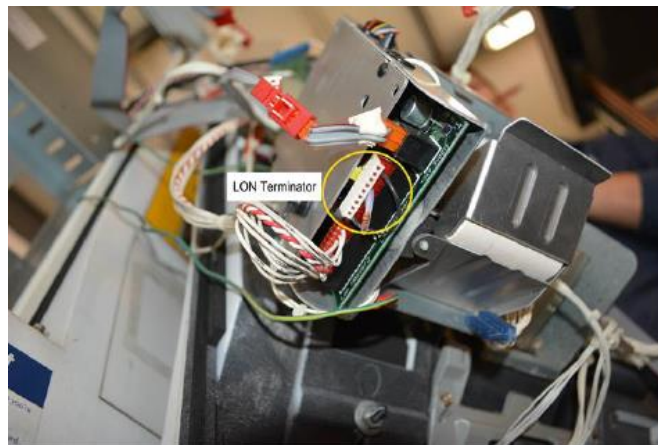


Fig 2.3b – LON terminator from the printer

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5. Remove the Side-A main display (for Encore 300 or 500) or the Totalizer display (for Encore 300Q or 500Q). Do not discard the Main or Totalizer displays. They will be re-installed.

For Encore 300 or 500:

- a. Remove the M6 hex head screws (4) on the main display. (Fig 2.3)
These screws will not be re-used and can be discarded.

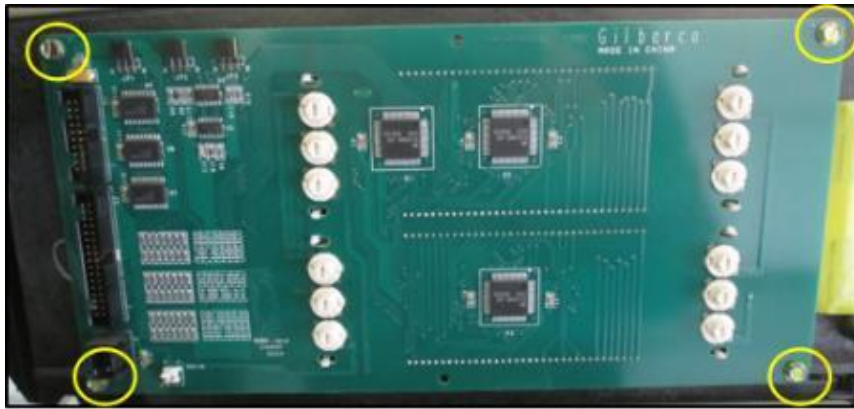


Fig 2.3c – M6 hex head screws on main display

- b. Pull the main display from the access door.
Caution: Use care when placing display aside to avoid scratching the LCD glass.

For Encore 300Q or 500Q:

- a. Remove the M6 hex head screws (2) on the totalizer display. (Fig 2.3)
These screws will not be re-used and can be discarded.

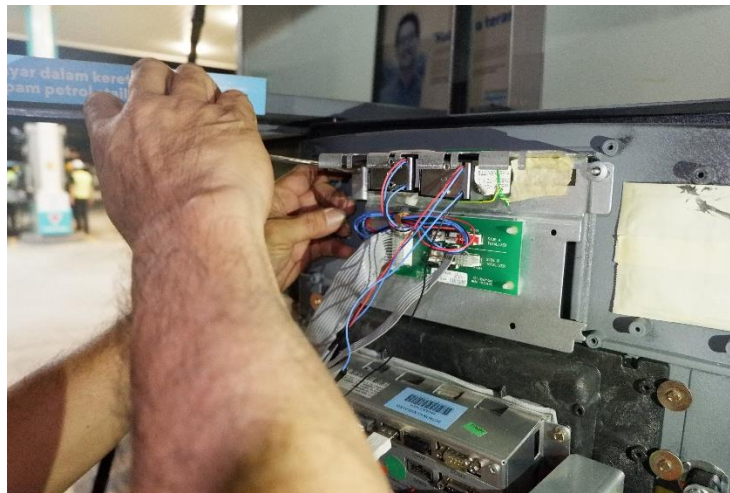


Fig 2.3 d – M6 hex head screws totalizer display

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- b. Pull the totalizer display from access door.

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

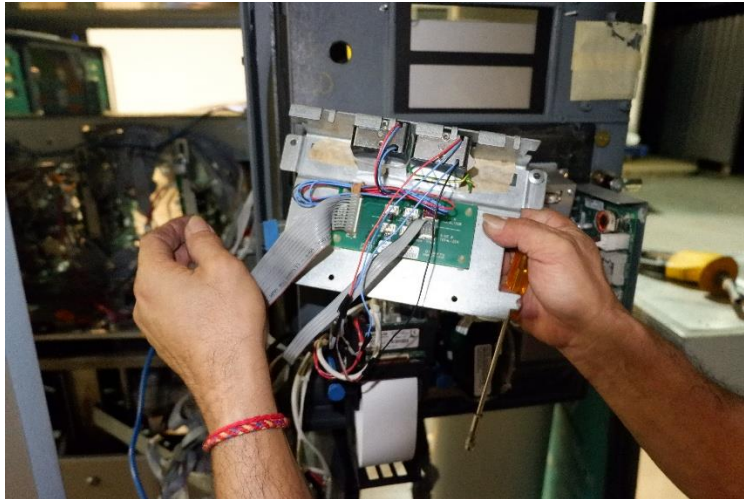


Fig 2.3e – Pull the totalizer display out

- c. Remove the existing Emergency stop button from the panel. Undo the screws securing the wiring to the Emergency stop button terminals and mark the wiring for reconnection later (Fig. 2.3f). Turn the red cap anti-clockwise (Fig 2.3g), and turn the lock fastener anti-clockwise (Fig 2.3h) to remove. Retain this Emergency stop button, as it will be used again on the new panel door.



Fig 2.3f –Remove the wiring from the Emergency stop button terminals and mark for later reconnection to the same retained Emergency stop button

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Fig 2.3g – Remove the red cap by turning it anti-clockwise.

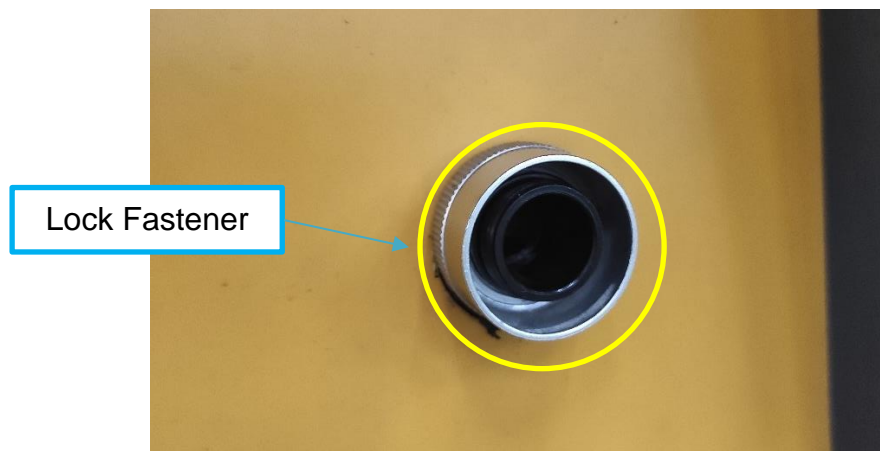


Fig 2.3h – Untighten the lock fastener by turning it anti clockwise.

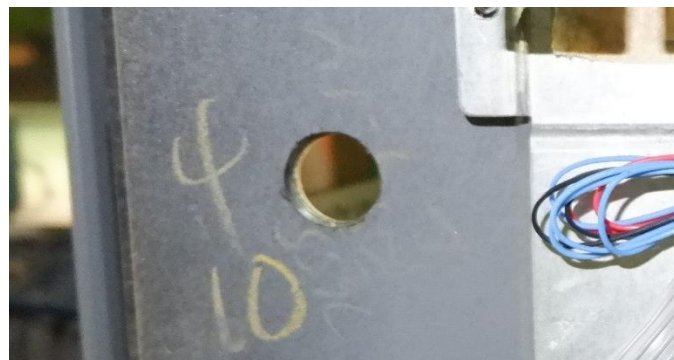


Fig 2.3i – Remove the Emergency stop button by pulling it out from behind of the panel door.

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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 2.4 a, b)



Fig 2.4 a – Various cable restraints

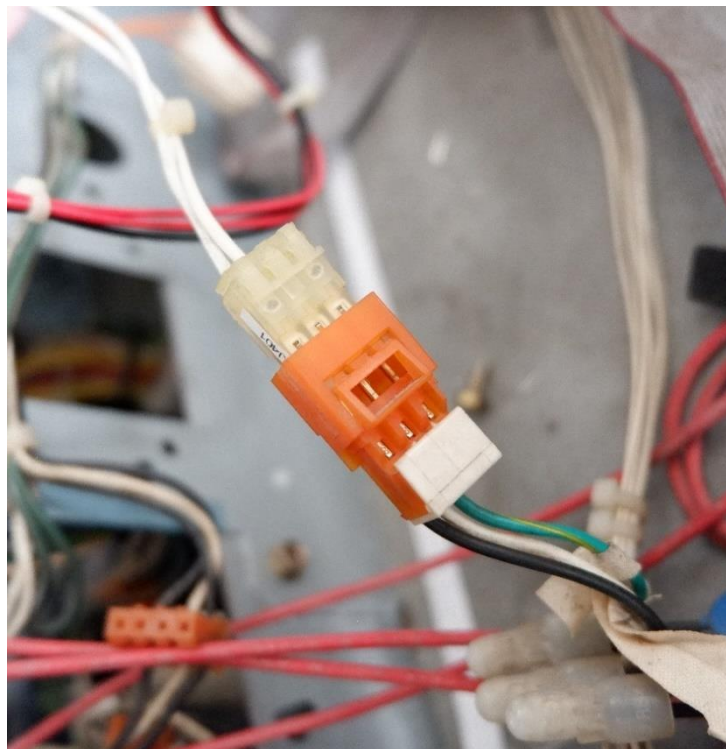


Fig 2.4 b – Various cable restraints

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7. Undo both latches located on the left-hand side of the dispenser's main door. Open the main door. (Fig 2.6a)

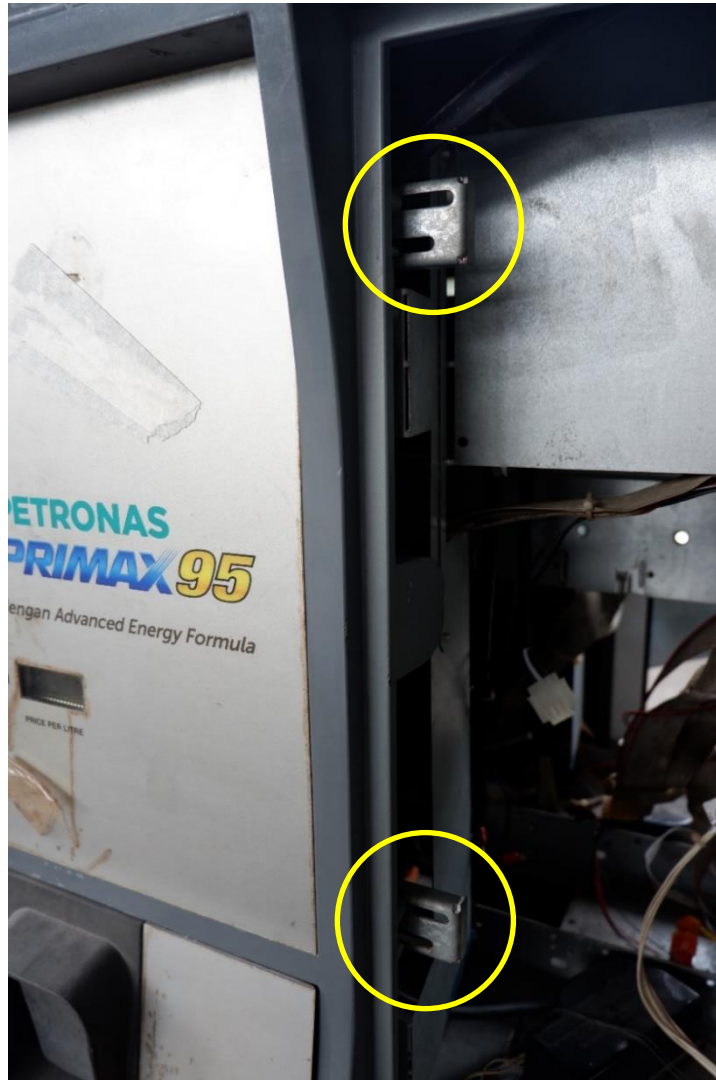


Fig 2.6a – Location of main door latches

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8. Use the door prop that is stored towards the bottom of the main door to lock the main door into the open position. (Fig 2.6 b, c)

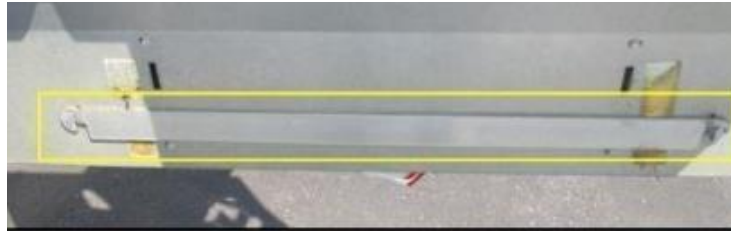


Fig 2.6 b – Door prop located at bottom of main door



Fig 2.6 c – Door prop inserted in prop position

9. For narrow body dispenser, metal sheet cover needs to be modified by cutting some area. This is for panel door clearance. (Fig 2.7 a, b, c)



Cutting Area

Fig 2.7 a– Area that need to cleared.

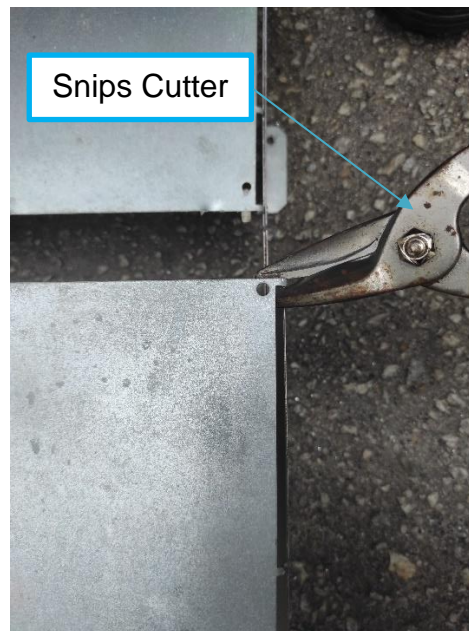
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Fig 2.7 b– Use a snips cutter to cut the joining point on the metal sheet cover.



Fig 2.7 c– Image after removing the interference area.

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- 10.** Remove the cables that are attached on the dispenser in the below shown position, on the right side of the dispenser. (Fig 2.8)
- a. Use T socket Wrench size 8mm to remove hex head screw. Do not discard the screws, they will be re-installed during the installation procedure.

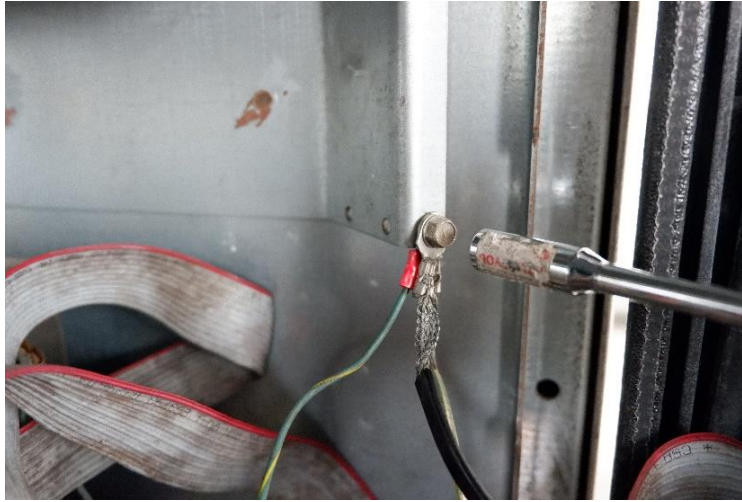


Fig 2.8 – Various cable restraints

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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.

- a. Make sure that the access door is fully closed.
- b. Using a nut driver, remove the M8 hex head screws (2) located along the top ridge of the main door.
- c. 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.*

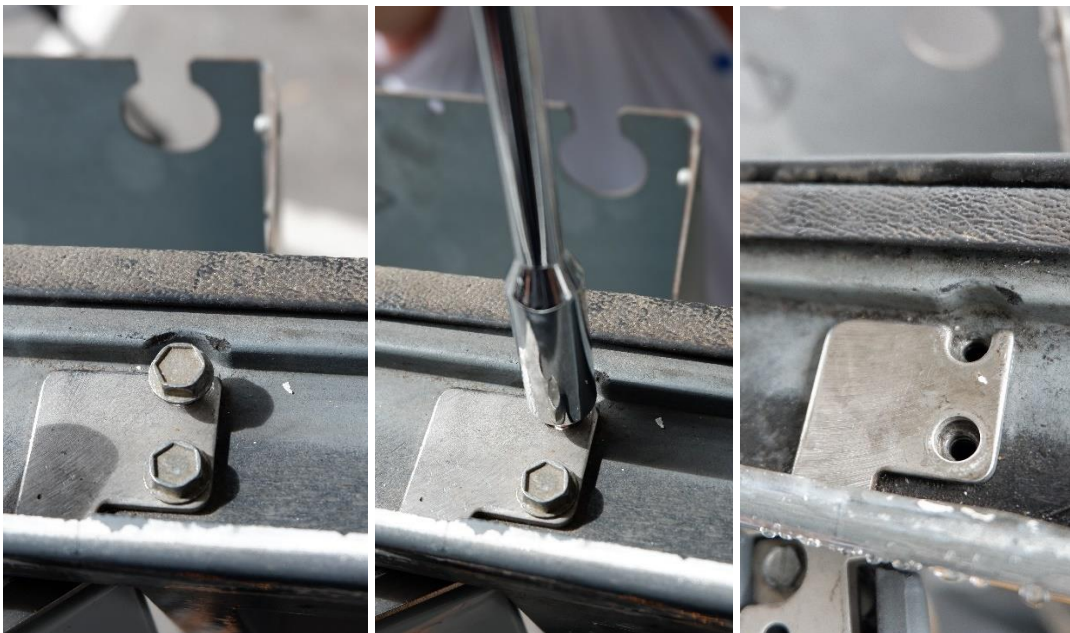


Fig 2.9 a, b, c – Location and removal of the upper hinge pin and screws

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.*

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- d. 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 2.9 d – Upper hinge pin and screws

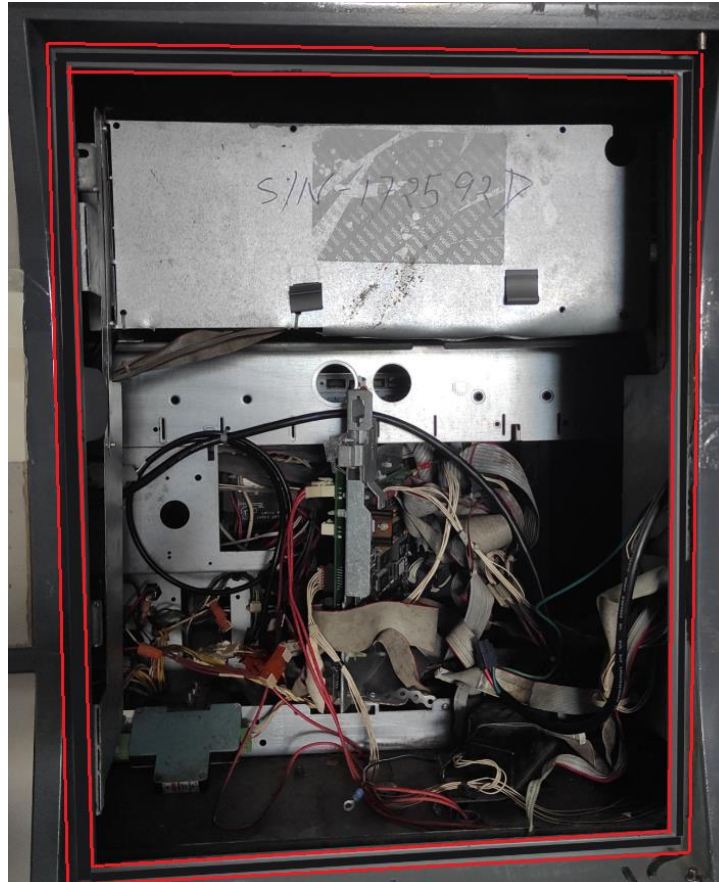
- e. Carefully open the access door and tilt the top forward and lift the door upwards to remove it. The access door along with any remaining attached components can be discarded. They will not be re-installed. (Fig 2.9 e)



Fig 2.9 e – Remove door from dispenser

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12. Carefully remove and existing gaskets fitted on the pump where the access door closed
Clean this area after the gasket removal so that there is no residue and surface is smooth.



13. **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.
- Unplug all cables connected to the board terminals. (Fig 2.10 a,b)

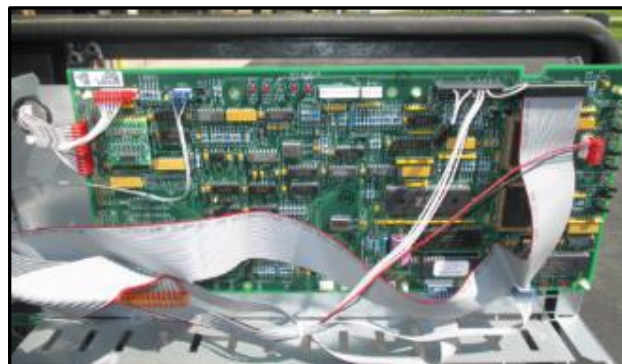


Fig 2.10 a – Logic board with cabling plugged in

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- 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 2.10 b)

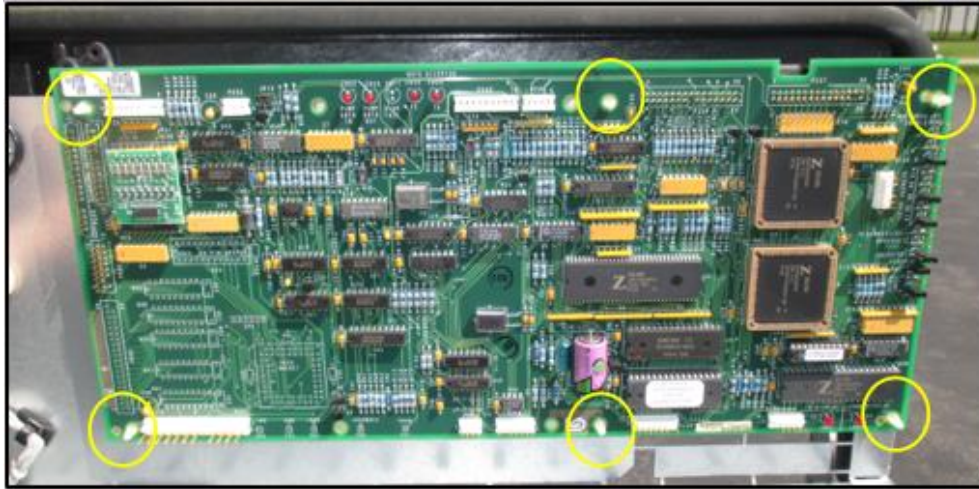


Fig 2.10 b – Location of plastic standoffs

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

14. Repeat steps 4-13 for the Side-B of the dispenser (if present). Then proceed to step 15.

15. 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).

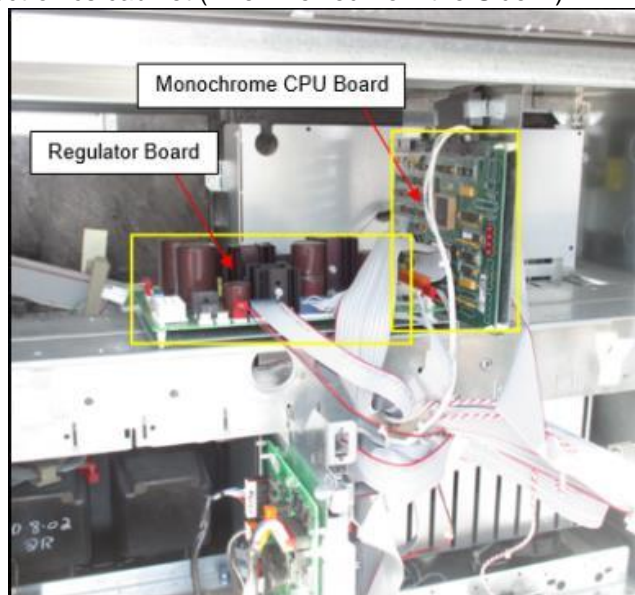


Fig 2.11a – Location of the CRIND Regulator and Monochrome CPU Boards (as viewed from Side-A)

Retrofit G7 8 inch GVR Encore 300 300Q 500 or 500Q (MY) Installation Guide

- 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 2.11b)

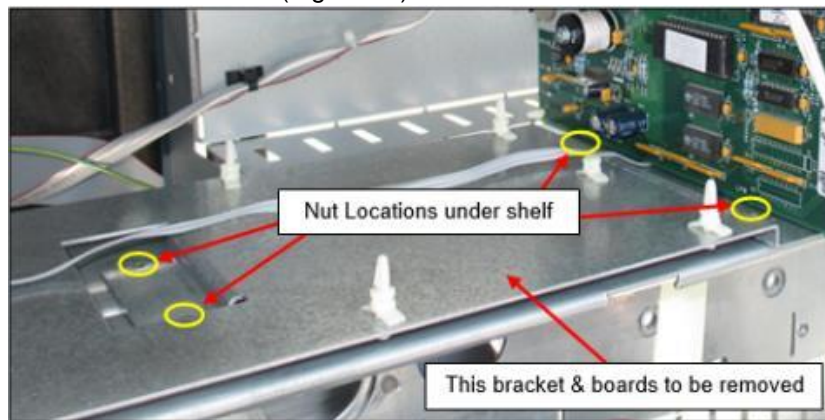


Fig 2.11b – Location of nuts under shelf (Regulator board not shown for clarity)

- 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 2.12a)

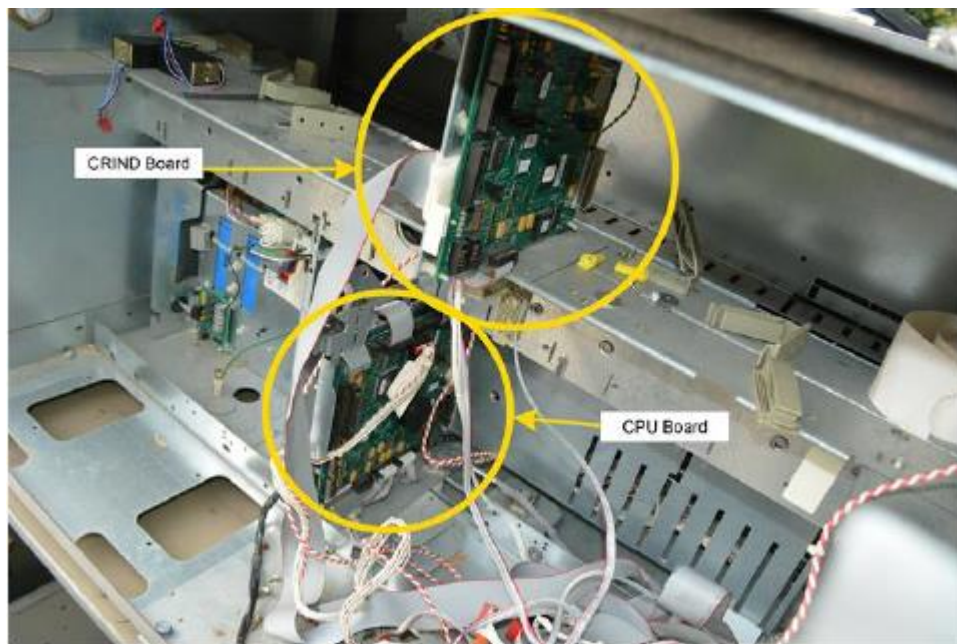
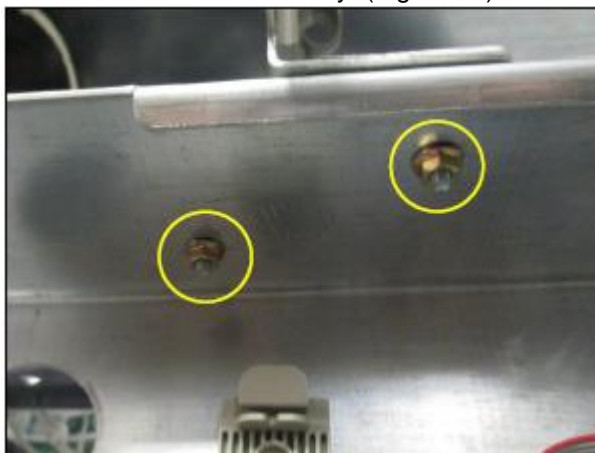
Retrofit G7 8 inch GVR Encore 300 300Q 500 or 500Q (MY) Installation Guide

Fig 2.12a – 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.
- 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. Unplug every remaining cable attached to the CRIND Control Node.
- e. 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 2.12c)

Retrofit G7 8 inch GVR Encore 300 300Q 500 or 500Q (MY) Installation Guide**Fig 2.12b – CRIND Control Node after removal**

- f. 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 2.12d)

**Fig 2.12d – Location of the CRIND Control Bracket nuts**

- g. Remove the CRIND Control Bracket from the dispenser. It can be discarded. It will not be re-installed. (Fig 2.12e)

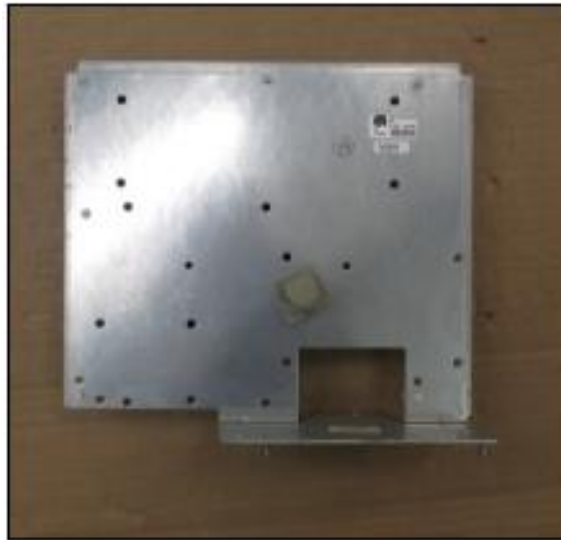
Retrofit G7 8 inch GVR Encore 300 300Q 500 or 500Q (MY) Installation Guide

Fig 2.12e – CRIND Control Bracket after removal

- 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.

Retrofit G7 8 inch GVR Encore 300 300Q 500 or 500Q (MY) Installation Guide

4.2 Installation Procedure

This section follows from the disassembly procedure above, and assumes the dispenser is still open.

1. Install the EZ0703 pre-assembled PSU Plate assembly.
 - a) Mount the PSU Plate Assembly on the upper electronics rail in the third (for Side-A) or fourth (for Side-B) set of holes from the left side of the dispenser as viewed from Side-B.

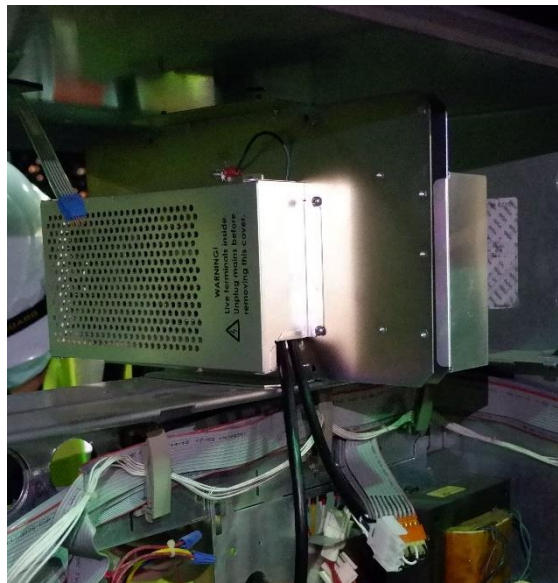


Fig 4.1 – PSU Plate assembly mounting (Shown from Side-B)

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



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

Retrofit G7 8 inch GVR Encore 300 300Q 500 or 500Q (MY) 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 (see figure 4.3). Unplug and discard the female dummy plug from the three-connector end of EK0124.

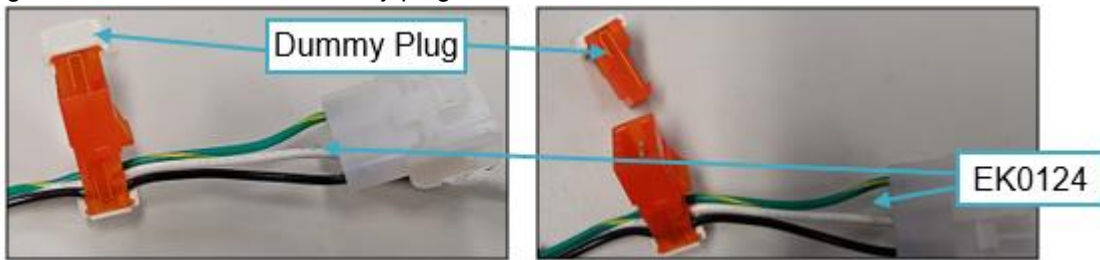


Fig 4.3 – Dummy plugs in EK0124 cable

- a. For Side-A, plug the now-exposed male orange connector 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.

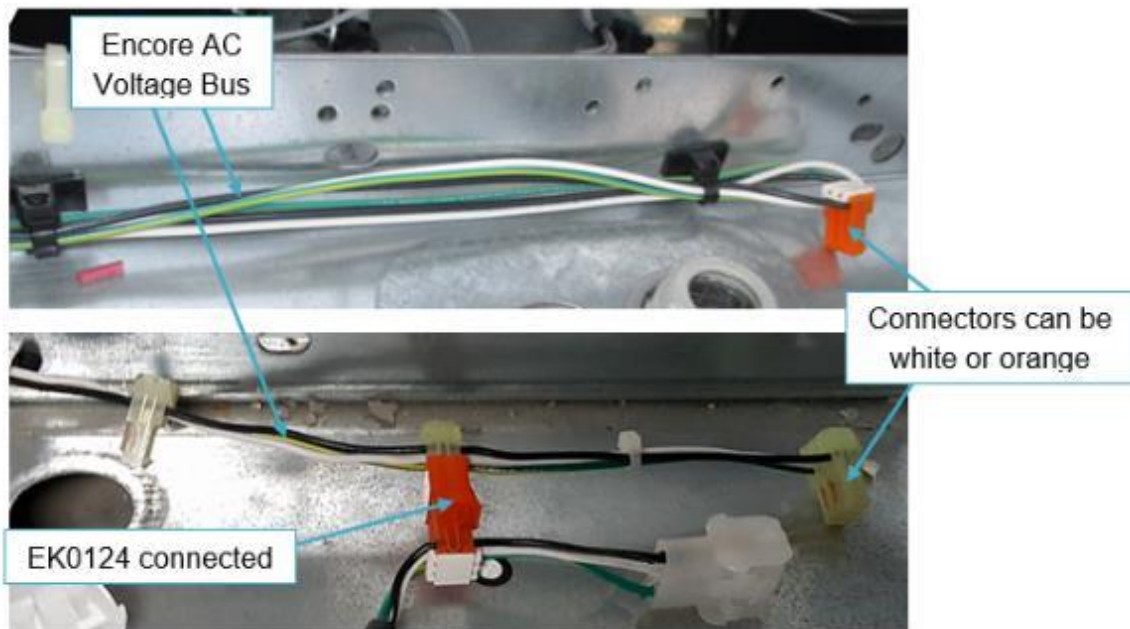


Fig 4.4 – Connecting EK0124 – Side-A

Retrofit G7 8 inch GVR Encore 300 300Q 500 or 500Q (MY) Installation Guide

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



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

3. Connect the large white female plug on the other end of EK0124 into the corresponding white connector on the PSU Plate assembly (EZ0703).

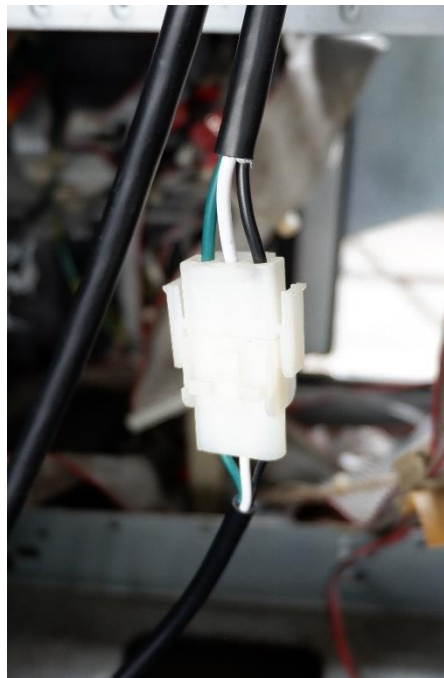


Fig 4.6 – Connecting EK0124 to the PSU mounted on Plate assembly

Retrofit G7 8 inch GVR Encore 300 300Q 500 or 500Q (MY) Installation Guide

4. Mount a new Retro-Fit Kit Door assembly (RP00013-XX) by aligning over the lower hinge pin on the dispenser's main door and re-Install the existing upper hinge and the hex head screws back that retained from the disassembly procedure. (Fig 4.7 a, b, c, d, e)



Fig 4.7 a – Base of Retro-fit Kit Door



Fig 4.7 b – Lower hinge pin position.

Retrofit G7 8 inch GVR Encore 300 300Q 500 or 500Q (MY) Installation Guide

Fig 4.7 c – Upper hinge pin.



Fig 4.7 d – Upper hinge pin after tightened.

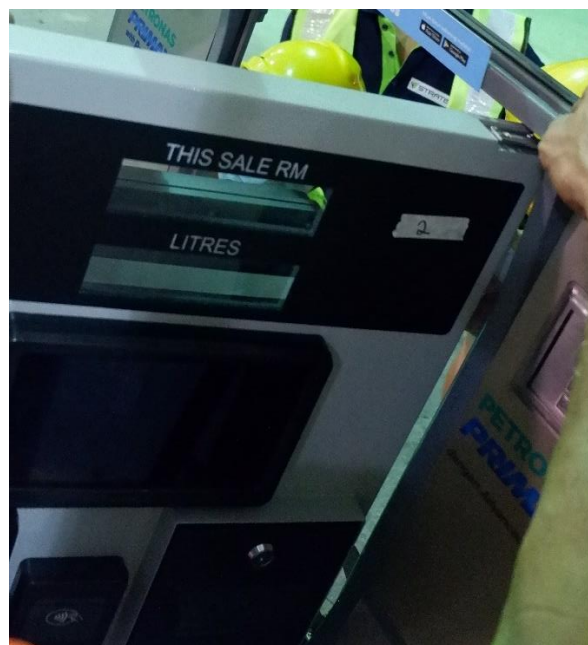


Fig 4.7 e – Upper hinge pin installed and screw inserted and tightened.

Retrofit G7 8 inch GVR Encore 300 300Q 500 or 500Q (MY) Installation Guide**5. For Encore 300 or 500 only:**

Temporarily remove the APC module mounted on the display module (SDC) by removing X4 MS0163-M4 x 16mm screws without unplugging the existing cables that are already fitted. (Fig 4.8)

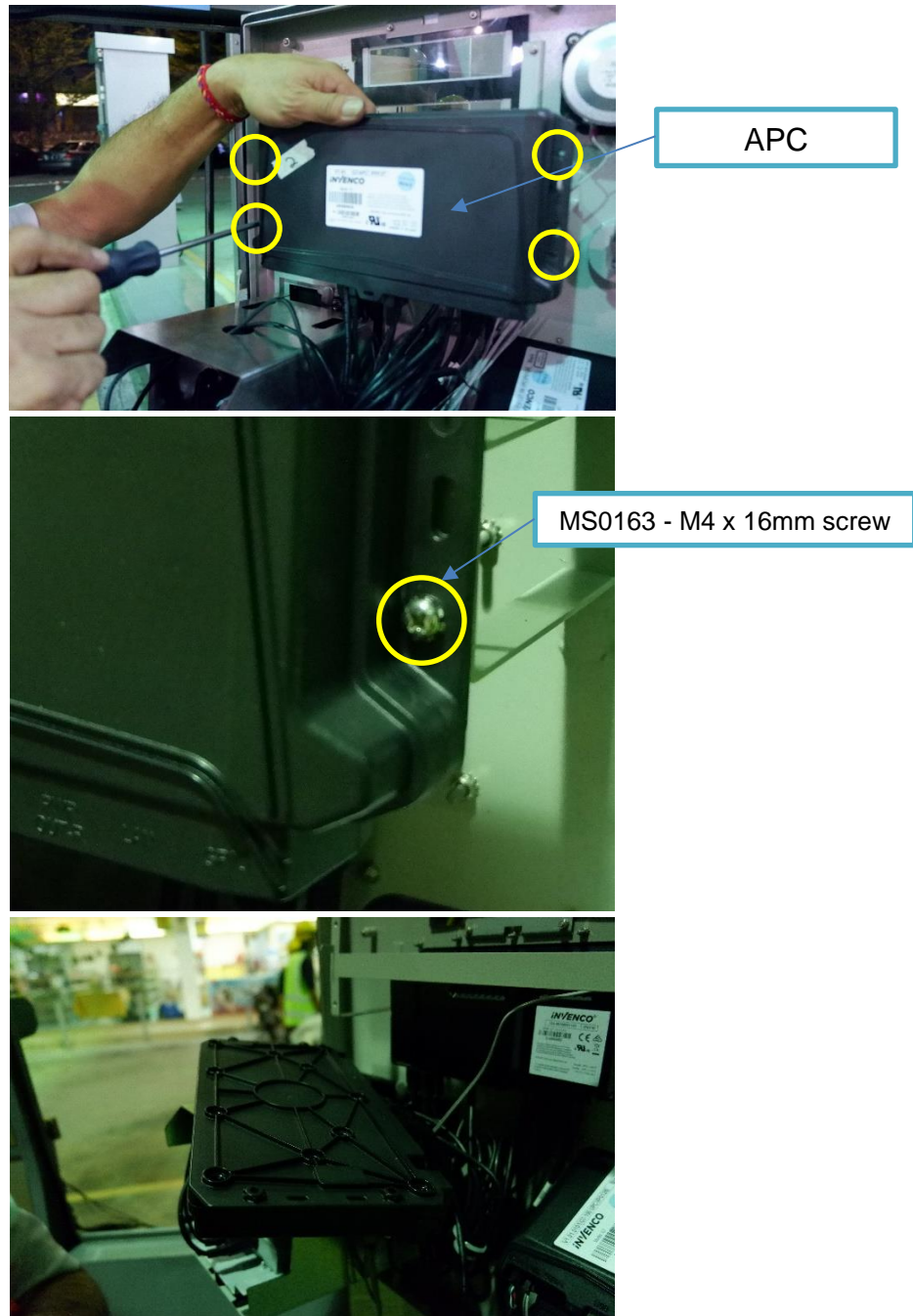


Fig 4.8 – Temporarily remove the APC module by removing MS0163 – X4 M4 x 16mm Pan head screw.

Retrofit G7 8 inch GVR Encore 300 300Q 500 or 500Q (MY) Installation Guide

6. Temporarily remove the main display or totalizer mounting screws and fit the existing emergency shutoff button (Encore 300Q or 500Q only)

For Encore 300 or 500 only:

Temporarily remove the X4 MS0246-M3 x 8mm Screws and X4 MW0063 Nylon insulating washers from the RP00013-XX Retro-Fit Kit Door assembly that are pre-fitted. (Fig 4.9a)

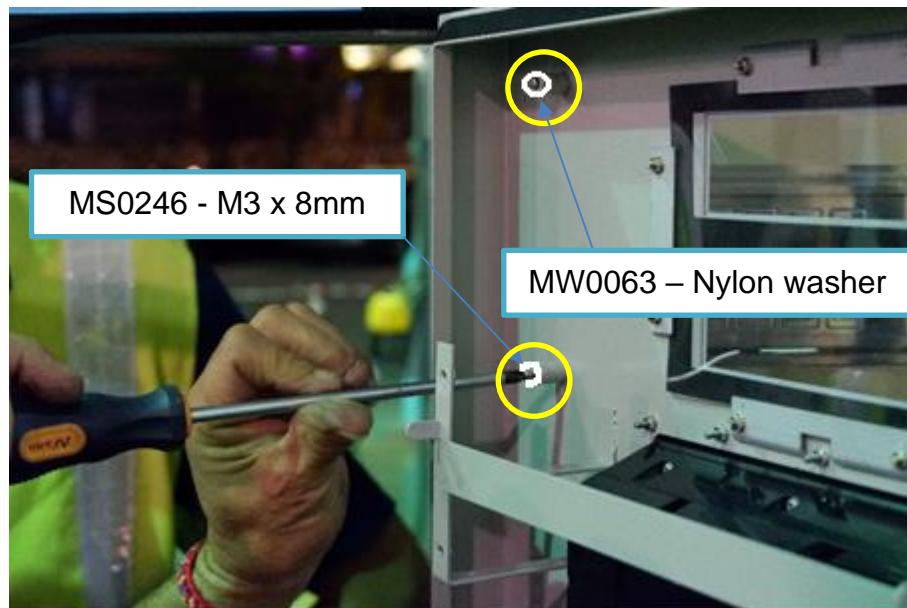


Fig 4.9a - Use a Philips screw driver to remove the screw.

Retrofit G7 8 inch GVR Encore 300 300Q 500 or 500Q (MY) Installation Guide**For Encore 300Q or 500Q only:**

Temporary remove the X2 MS0161-M4 x 8mm Screws pre-fitted on the RP00043-01 Retro-Fit Kit Door. (Fig 4.9b).

Install the existing Emergency stop button that was removed from the existing door (from step 5 of the disassembly procedure). Fit the MP1101 spacer in between the Emergency stop button and the new door panel (Fig. 4.9c). Fit the lock fastener by tuning it clockwise and then fit the red cap by turning it clockwise (Fig. 4.9d). Re-screw the wiring that was marked in the disassembly procedure to the emergency stop button terminals (Fig. 4.9e).

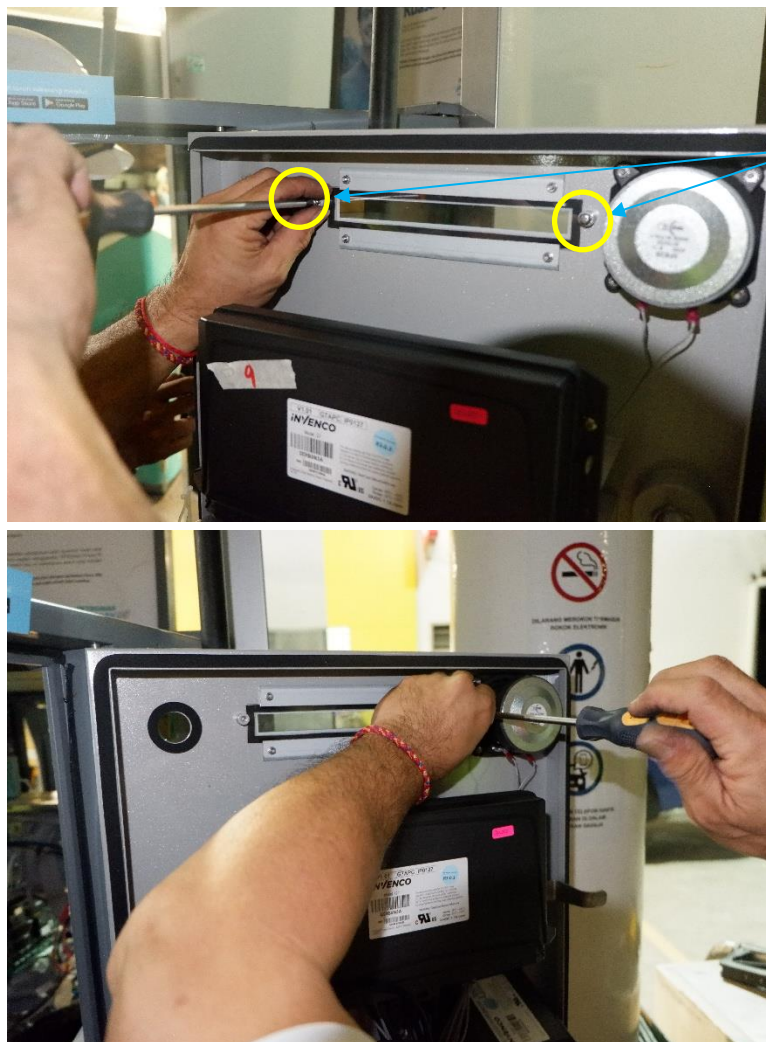


Fig 4.9b - Use a Philips screw driver to remove the screw.

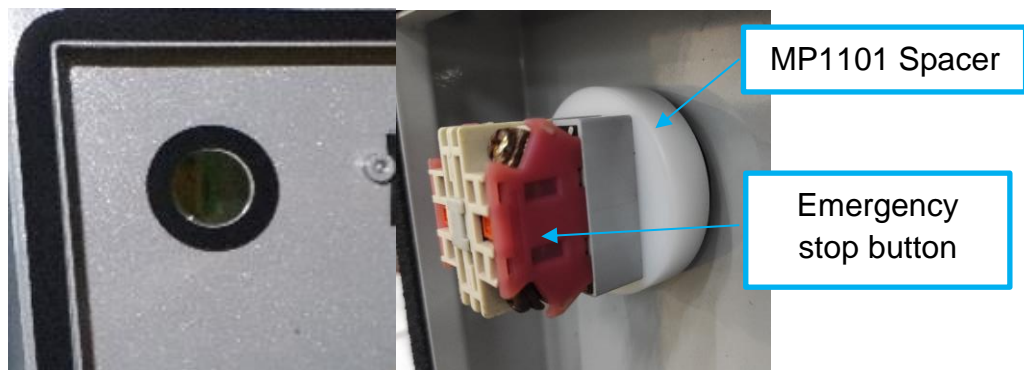
Retrofit G7 8 inch GVR Encore 300 300Q 500 or 500Q (MY) Installation Guide

Fig 4.9c – Install the retained emergency stop button on the new panel, over the MP1101 spacer

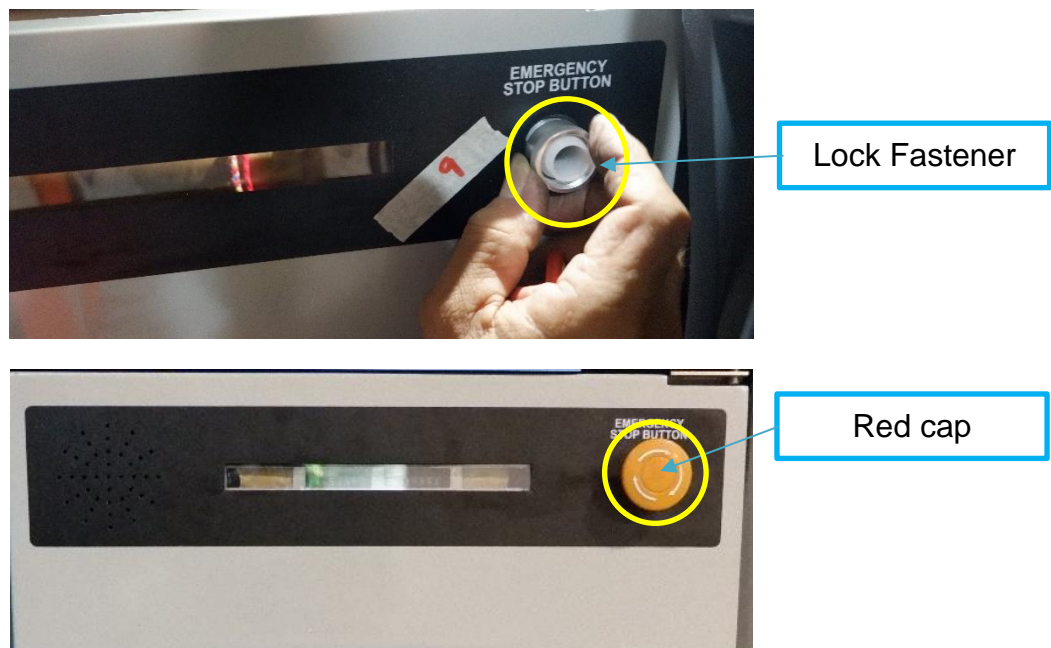


Fig 4.9d – Install the retained lock fastener and red cap by turning clockwise.



Fig 4.9e – Screw the previously marked wiring back on to the Emergency stop button.

Retrofit G7 8 inch GVR Encore 300 300Q 500 or 500Q (MY) Installation Guide

7. Install the main or totalizer display boards that were previously removed and retained.

For Encore 300 or 500 only:

Install the Sale/Volume Display board and cables that were previously dismantled and saved to the RP00013-XX RFK door assembly. Use the X4 MS0246-M3 x 8mm Screws and X4 MW0063 Nylon insulating washers that were temporarily removed in step 6 (Fig 4.10a) to screw the board in place, ensuring the nylon washers sit below the screws. Do not over tighten, as this could damage the board.

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

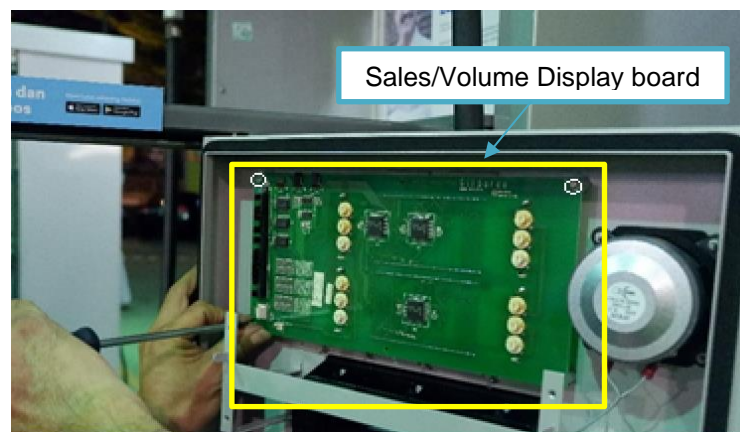
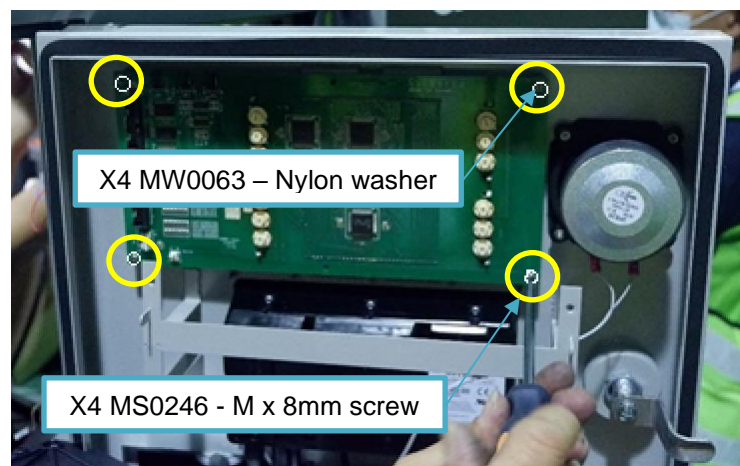


Fig 4.10a - Use a Philips screw driver to install the screws over the insulating washers.

Retrofit G7 8 inch GVR Encore 300 300Q 500 or 500Q (MY) Installation Guide**For Encore 300Q or 500Q only:**

Install the Totalizer display board and cable that previously dismantle from the previous Retro-Fit Kits to RP00043-XX Retro-Fit Kit. Use back the X2 MS0161-M4 x 8mm Screw that already remove previously in step 6. (Fig 4.10b)

Note: The Totalizer board taken from Side-A must go back onto Side-A of the dispenser. The same applies for Side-B.

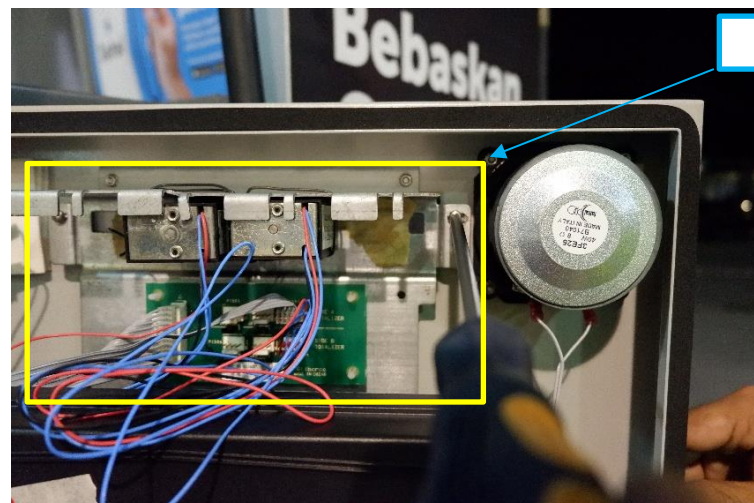
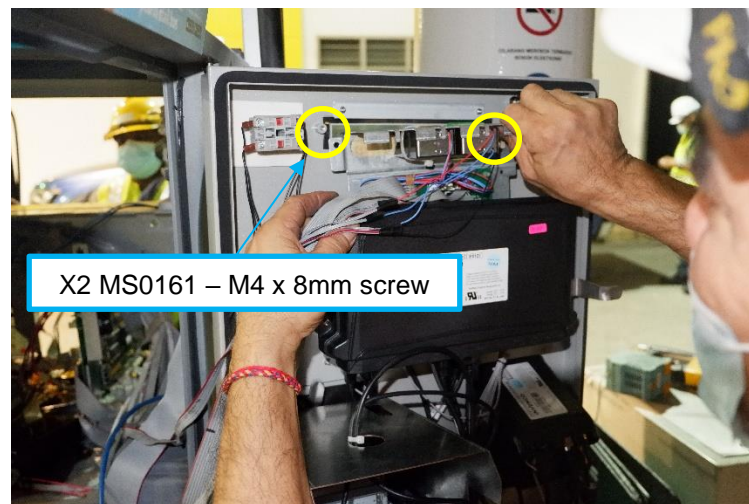


Fig 4.10b - Use a Philips screw driver to install the screw.

Retrofit G7 8 inch GVR Encore 300 300Q 500 or 500Q (MY) Installation Guide**8. For Encore 300 or 500 only:**

Re-install the APC module that was temporarily removed in step 5 by using X4 MS0163-M4 x 16mm Pan head screw. (Fig 4.11)

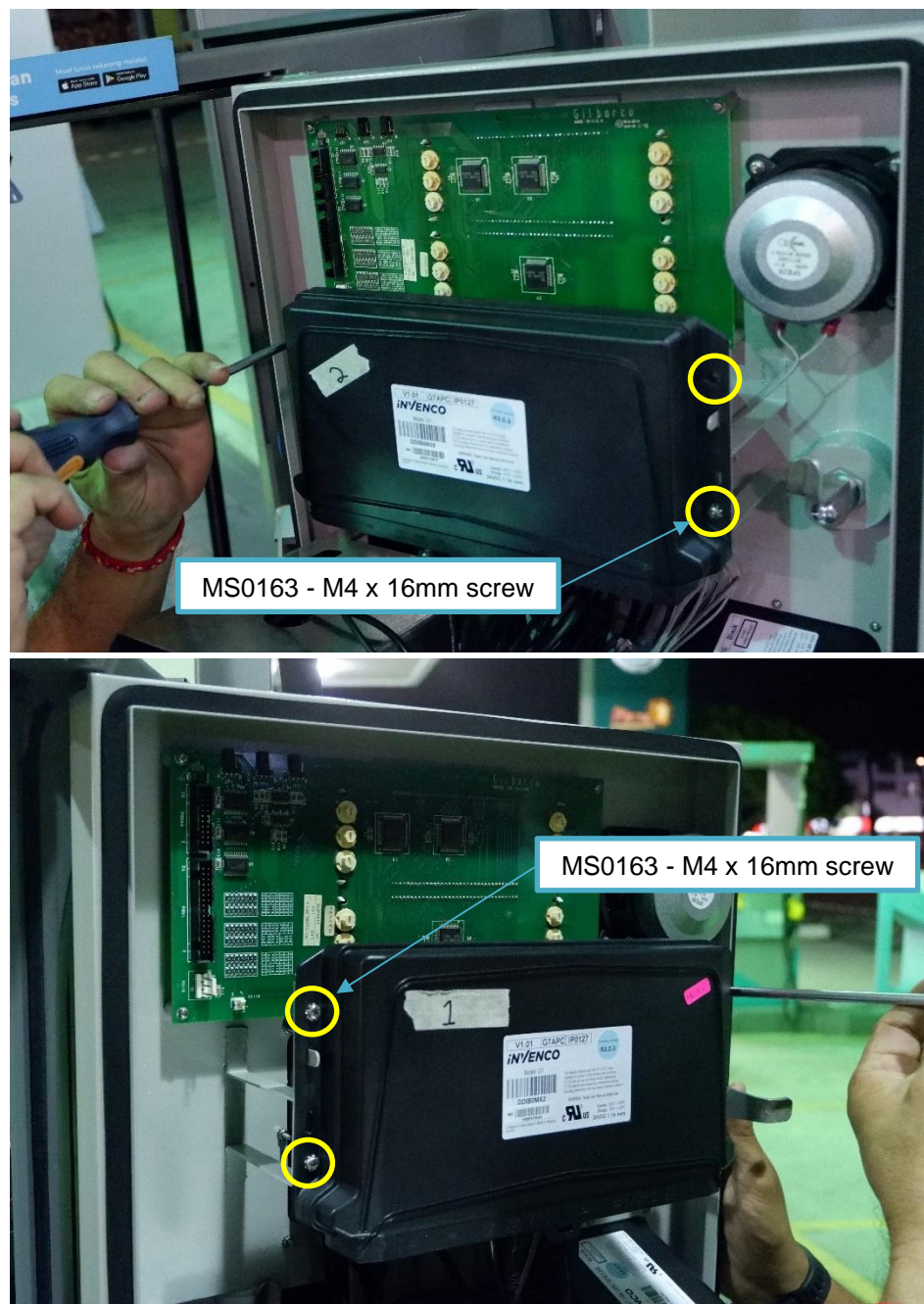


Fig 4.11 - Use a Philips screw driver to install the screw.

Retrofit G7 8 inch GVR Encore 300 300Q 500 or 500Q (MY) Installation Guide

9. Install the ground wire that is already pre-fitted on the RP00013-XX RFK door assembly to the dispenser on the previous position, refer to step 10 of the disassembly procedure. Re-install the M5 x 20mm hex head screw that was previously removed and saved during the disassembly procedure by using T socket Wrench size M5 x 20mm. (Fig 4.12)

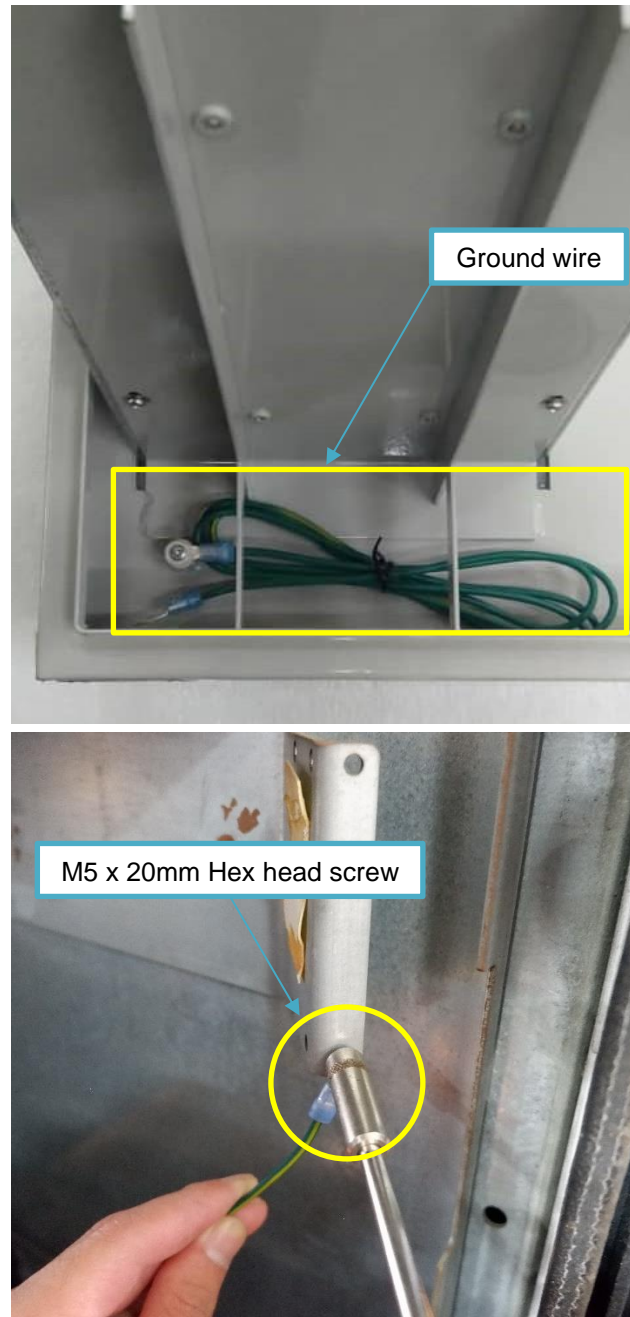


Fig 4.12 – Tighten the screw using T socket wrench size 8mm.

Retrofit G7 8 inch GVR Encore 300 300Q 500 or 500Q (MY) Installation Guide

- 10.** Plug the Black-low voltage DC cable from the PSU Plate assembly into socket on the APC module.
(Fig 4.13)

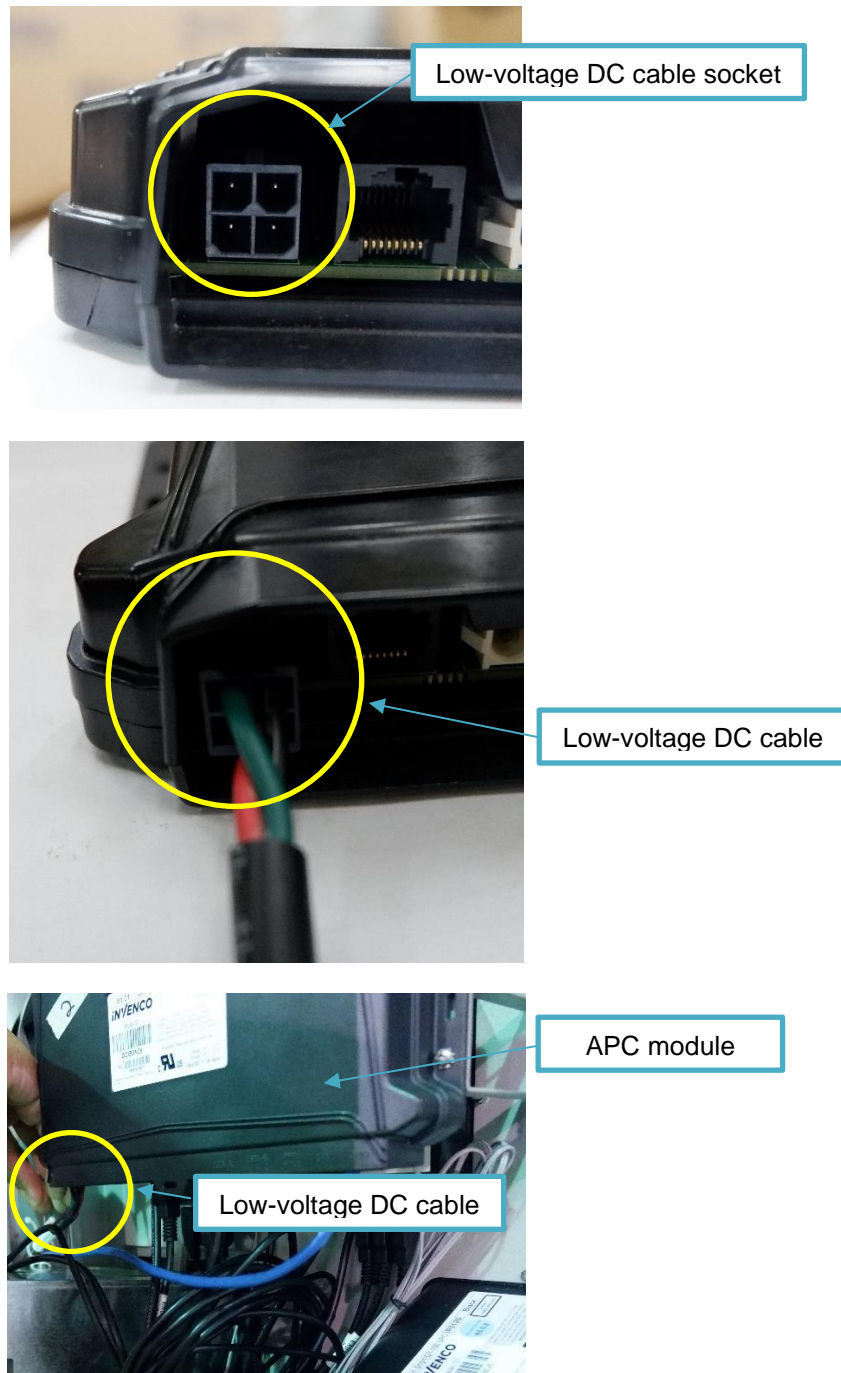


Fig 4.13 – Connecting the Low-voltage DC cable.

Retrofit G7 8 inch GVR Encore 300 300Q 500 or 500Q (MY) Installation Guide

11. Connect the Blue Cat-5e ethernet cable that is located inside the pump into the ethernet socket on the ether APC module. (Fig 4.14)

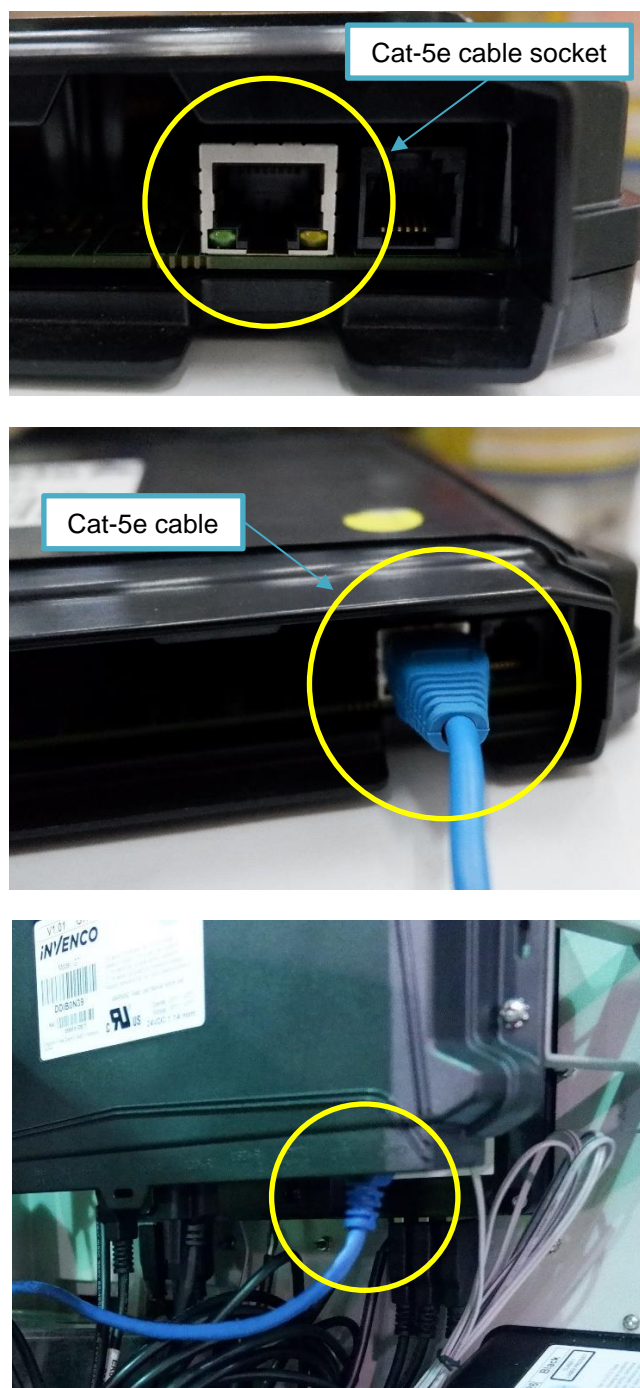


Fig 4.14 – Connecting the Cat-5e cable.

Retrofit G7 8 inch GVR Encore 300 300Q 500 or 500Q (MY) Installation Guide

12. Gather all of the cables that are attached to the G7 8 inch (G7-100 SDC-08) OPT modules, including the Green/Yellow Earth that was installed in Step 9 and arrange them neatly with a cable-tie. (Fig 4.15)

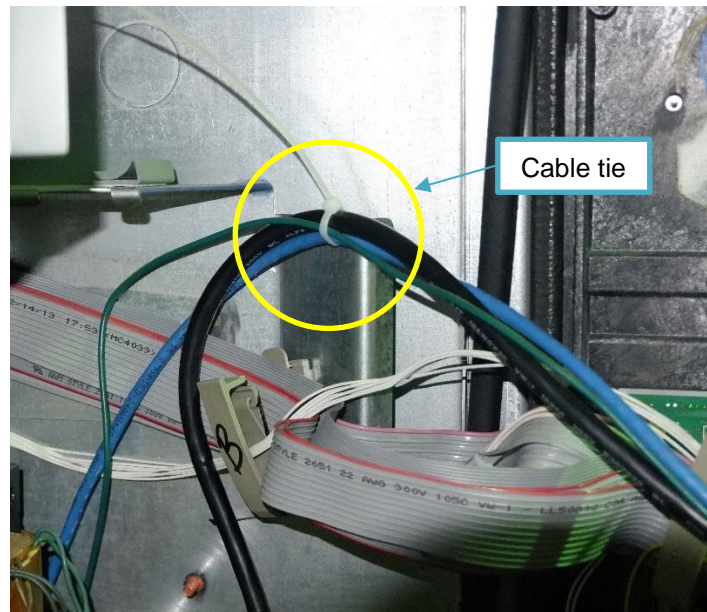
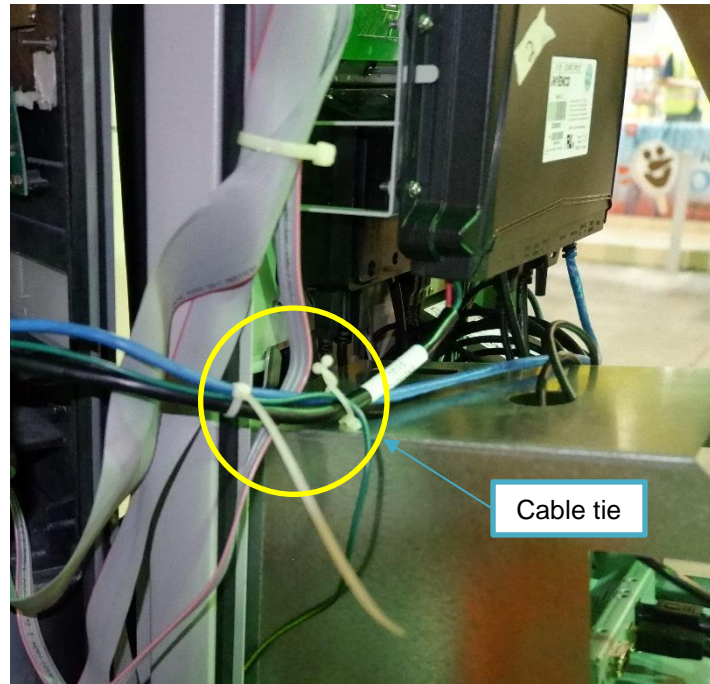


Fig 4.15 – Use cable tie for cable management.

Retrofit G7 8 inch GVR Encore 300 300Q 500 or 500Q (MY) Installation Guide**13. For Encore 300 or 500 only:**

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).

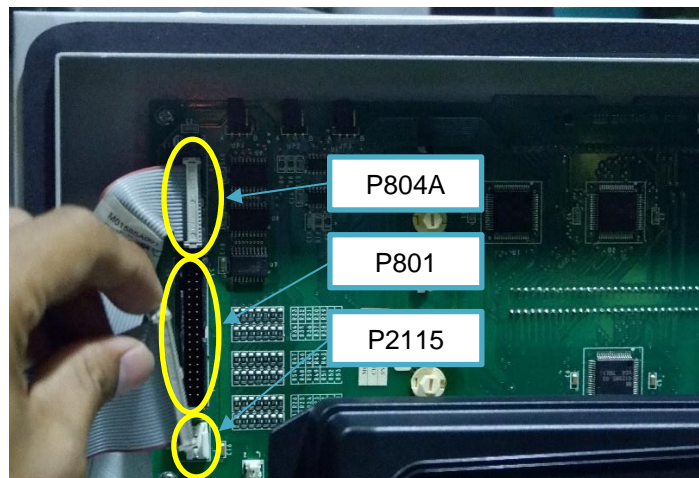
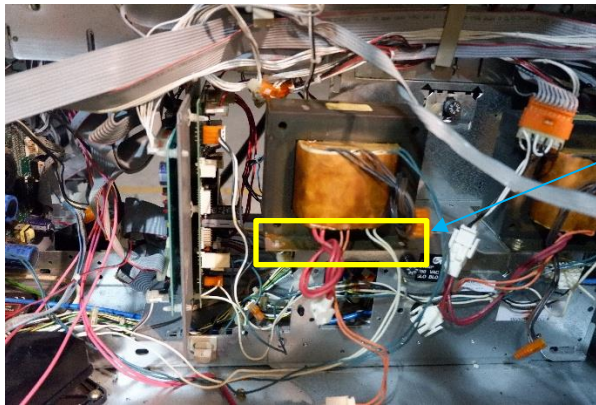


Fig 4.16 – Re-installing the sale/volume Display cables.

Retrofit G7 8 inch GVR Encore 300 300Q 500 or 500Q (MY) Installation Guide**14. For Encore 300Q or 500Q only:**

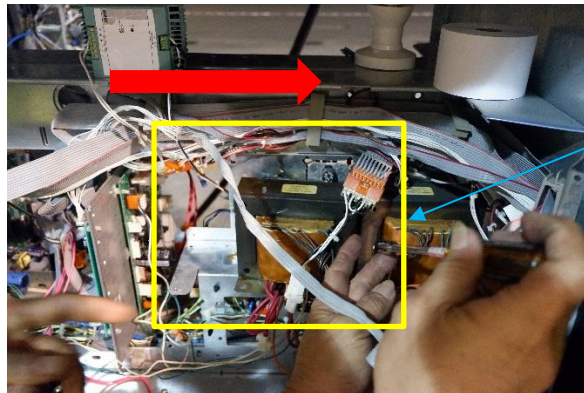
The existing dispenser has two transformers. One of the transformers need to be relocated to the right side direction to provide enough clearance space for the door when closing. (Fig 4.16 a, b, c, d, e)

- a. To move the transformer to the right side and bend the existing metal mounting to the top/down side. (Fig 4.17a)



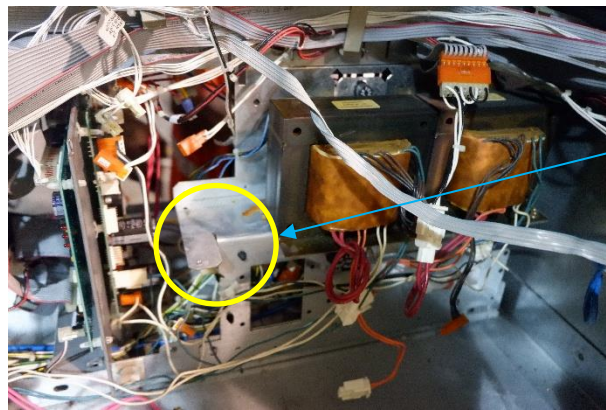
To open
these two
8mm hex
head screw.

Fig 4.17 a – Open this 2 screw using 8mm T Socket Wrench.



New location
for the
transformers
after move..

Fig 4.17 b – Re-install this screw after move to the right side.

Retrofit G7 8 inch GVR Encore 300 300Q 500 or 500Q (MY) Installation Guide

Bending point area.
12mm

Combination pliers

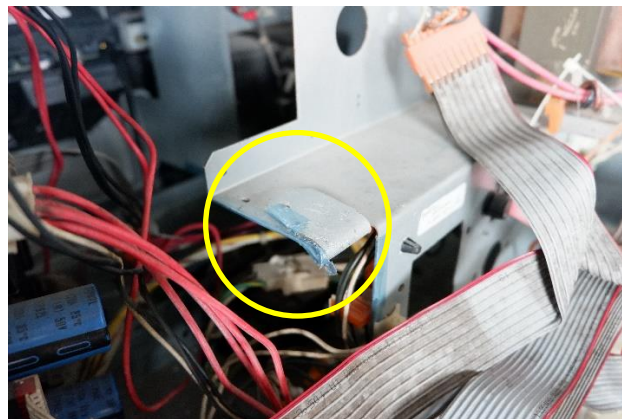
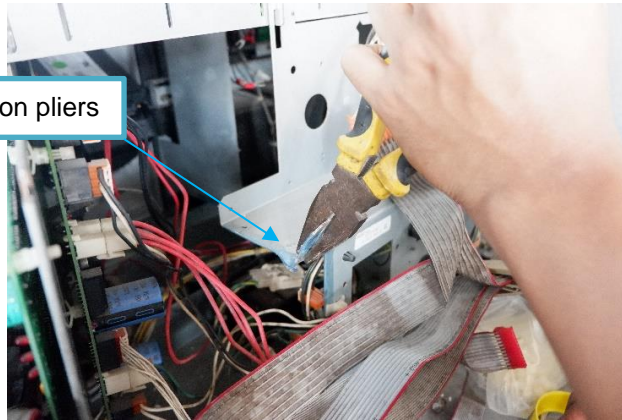


Fig 4.17 c – Bend the interfere point by using combination pliers

Retrofit G7 8 inch GVR Encore 300 300Q 500 or 500Q (MY) Installation Guide

15. The PCB board metal mounting bracket needs to be relocated. The purpose of this process is to provide enough clearance for the door when closing. (Fig 4.18 a, b, c, d, e)

- a. Unlock the locking point on the PCB metal mounting bracket. (Fig 4.18 a)

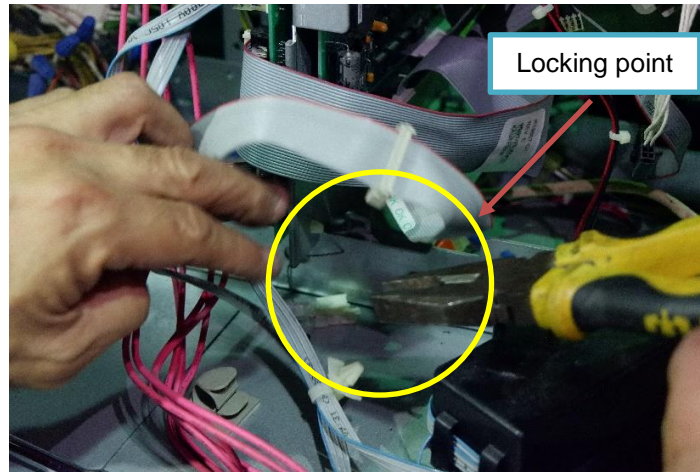


Fig 4.18 a – Unlock the locking point on the metal bracket by using a combination pliers.

- b. From A side on (Fig 2.2f), relocate the PCB metal mounting bracket one step to the right locking slot. (Fig 4.18 b, c)

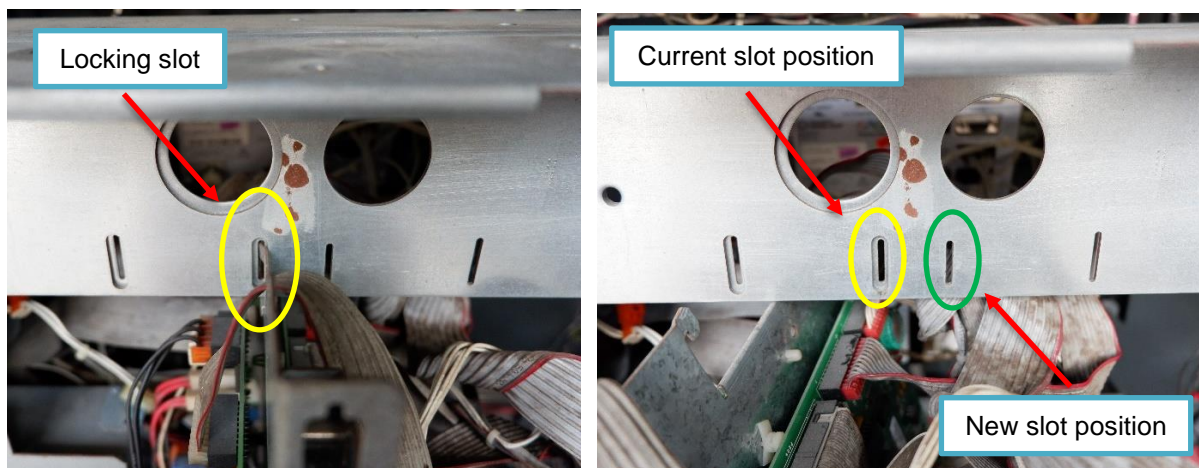


Fig 4.18 b – Relocate the PCB metal mounting bracket to the new position.

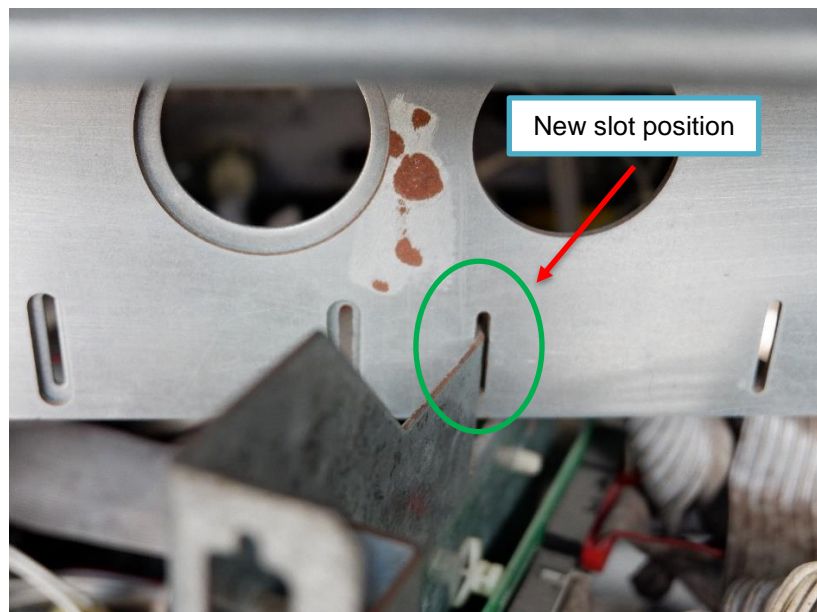
Retrofit G7 8 inch GVR Encore 300 300Q 500 or 500Q (MY) Installation Guide

Fig 4.18 c – Relocated the PCB board to the center position of dispenser.

- c. After relocating one step to the right, slightly turn PCB metal mounting from 90° angle to 135° angle. (Fig 4.18 d)

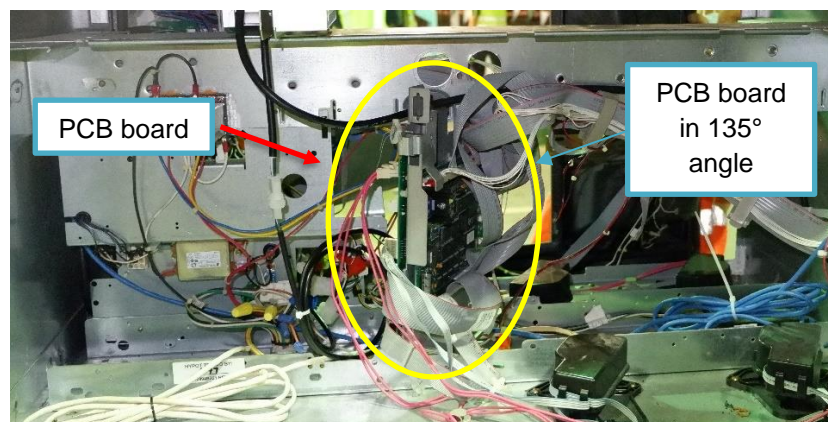


Fig 4.18 d – Turn the PCB board from 90° angle to 135° angle.

Retrofit G7 8 inch GVR Encore 300 300Q 500 or 500Q (MY) Installation Guide

- d. When the PCB board metal mounting has been moved to 135° angle position, the existing locking clip cannot be used anymore since the position for locking is offset from the original position. Use a Steel band 12mm and M4 x 15mm Pan head screw & fasteners as an alternative to lock the PCB metal mounting to the dispenser. (Fig 4.18 e)

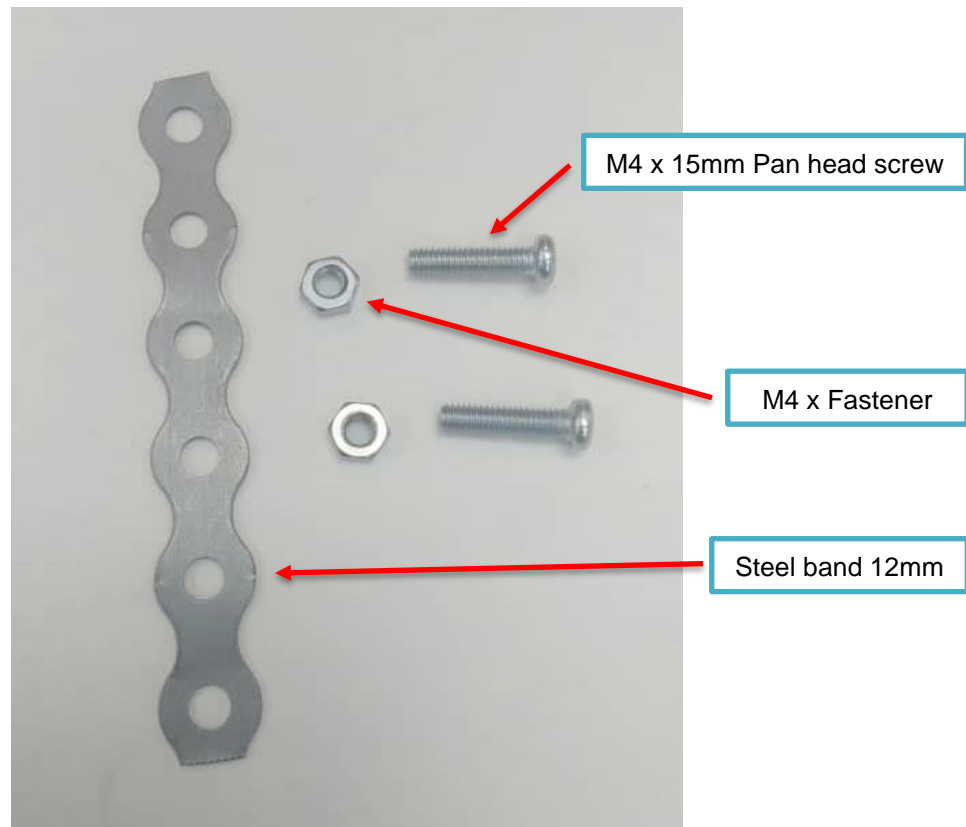


Fig 4.18 e – Alternative locking system for the PCB board metal mounting.

Retrofit G7 8 inch GVR Encore 300 300Q 500 or 500Q (MY) Installation Guide

- e. Install the steel band to the PCB board metal mounting using M4 x 15mm Pan head screw and fasteners to the nearest hole point. (Fig 4.18 f)

Note: Steel band and M4 x 15mm Pan head screw and fasteners are provided by the installer.

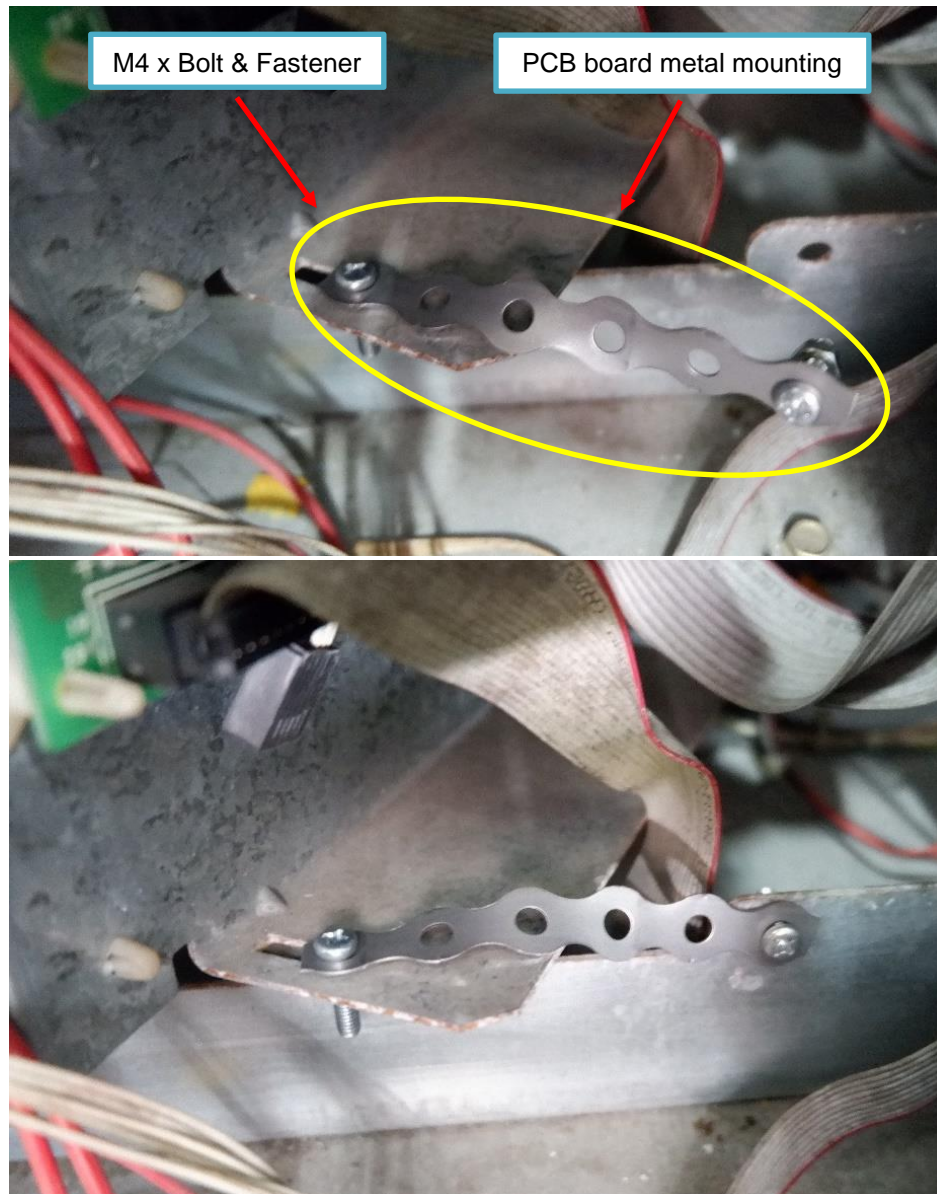


Fig 4.18 f – Tightened the screw and nuts by using Philips head screw driver and Wrench spanner, 7mm.

Retrofit G7 8 inch GVR Encore 300 300Q 500 or 500Q (MY) Installation Guide

- 16.** Part of an internal bracket in the dispenser on B side (fig 2.2 g) needs to be modify by bending the part to the top side. The purpose of this process is to provide panel door enough clearance when closing. (Fig 4.19)

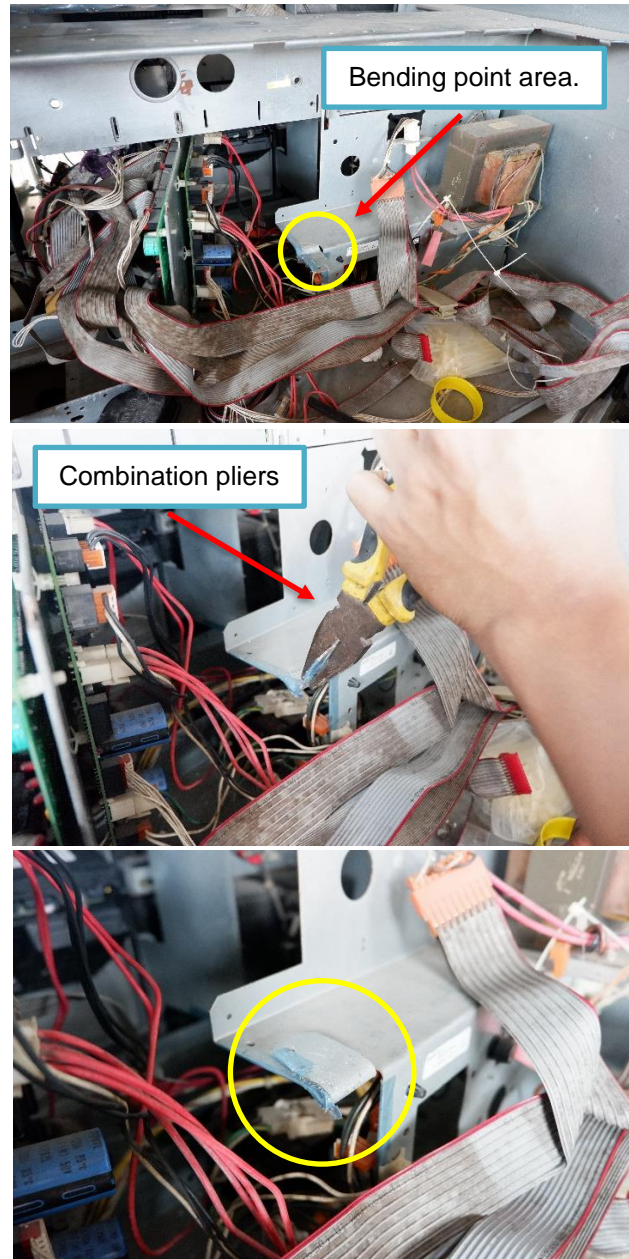


Fig 4.19 – Bend the interfere point by using the combination pliers.

Retrofit G7 8 inch GVR Encore 300 300Q 500 or 500Q (MY) Installation Guide

17. With the RP00013-XX or RP00043-XX Retro-Fit Kit Door assembly fully opened, manage the 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 cable-tie or additional cable restraints to secure the loose wiring. These must be provided by the installer. (Fig 4.20a, b)

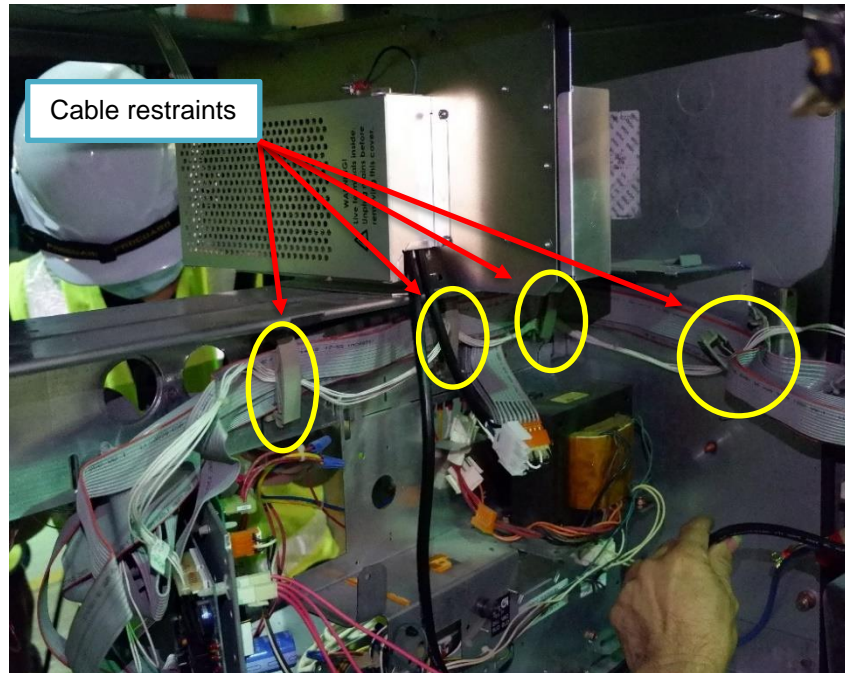


Fig 4.20a – Encore 300 or 500

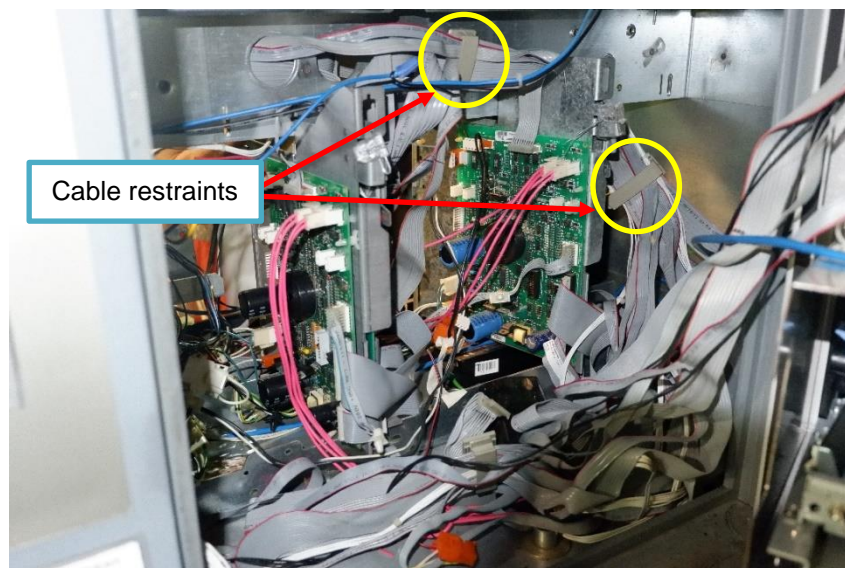


Fig 4.20b – Encore 300Q or 500Q

Retrofit G7 8 inch GVR Encore 300 300Q 500 or 500Q (MY) Installation Guide

- 18.** Remove and re-stow the door prop in the dispenser's main door. (Fig 4.21)



Fig 4.21 – Door Prop

- 19.** Close the dispenser's main door carefully (take care that the RP00013-XX or RP00043-XXX Retro-Fit Kit Door assembly does not swing excessively) and push both main door latches into the lock position. (Fig 4.22)

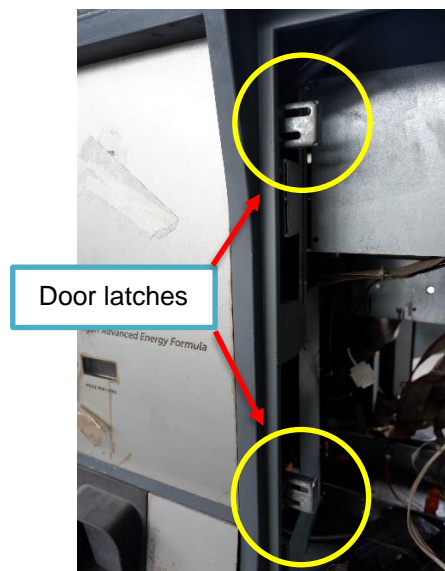
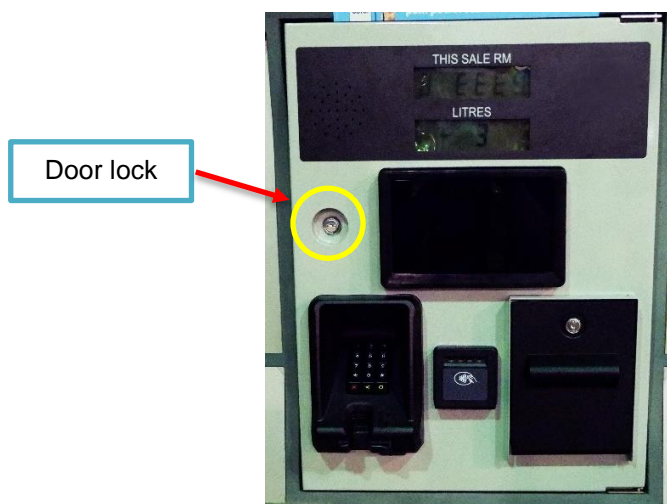


Fig 4.22 – Lock the latches into position

- 20.** Close the RP00013-XX or RP00043-XX Retro-Fit Kit Door assembly gently. Please ensure no cables are pinched or snagged. If any cables pinched, re-arrange them before continuing.
- 21.** When the door is fully shut, lock it using the new key provided with the new RFK door assembly.

Retrofit G7 8 inch GVR Encore 300 300Q 500 or 500Q (MY) Installation Guide**Fig 4.22a – Completed OPT installation for the Encore 300 or 500****Fig 4.22b – Completed OPT installation for the Encore 300Q or 500Q**


22. Repeat steps 5 through 21 for the Side-B (if present).



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

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

Installation of the Retro-Fit Kit is now complete.

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	Date Released	Apr. 2021
	Revision Number/Security level	R12
Retrofit G7 8 inch GVR Encore 300 300Q 500 or 500Q (MY) Installation Guide		

5 First Power-Up

Once the installation is complete and the wiring is certified (if necessary), power may be applied. The G7 8 inch (G7-100 SDC-08) OPT system 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:

