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Retrofit Pump Interface Board (US & Canada) Installation Guide		

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Kit Part Number: RF00100-XX



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Release History

Version	Prepared by	Date	Change description
0	Shibani Joshi	November 2021	Initial release.
1	Shibani Joshi	April 2022	Added text box for color indication in section 4.1, step 8.
2	Shibani Joshi	July 2023	Added the Encore kits
3	Shibani Joshi	November 2023	Added MS0147 screw and MN0041 Nut to the kits content and added procedure for installing the PIB in an Encore dispenser. Added RF00034-XX G6-300/G6-400 Encore 500/700S Painted (US & Canada) kit to the table.
4	Michael Doh	31-Nov-2023	Removed the G7 kit references and Encore document references in install steps 6 and 7.

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1 Introduction

The documentation provides some basic guidelines for adding the Pump Interface Board (PIB) into a Retro-Fit Kit during the process of installing that Retro-Fit Kit into various dispensers.

Note: One of the following specific “UL Listed by Report Retrofit Kits” must be installed at the same time as this kit:

UL Report Number	Kit Part Number	Retro-Fit Kit Description
MH61528	RF00020-XX	Wayne Ovation 1 with G6-300, BLACK (US & Canada)
MH61528	RF00047-XX	Wayne Ovation 1 with G6-300, Painted (US & Canada)
MH61528	RF00021-XX	Wayne Ovation 1, with G7 15 inch SDC, BLACK (US & Canada)
MH61528	RF00048-XX	Wayne Ovation 1, with G7 15 inch SDC, Painted (US & Canada)
MH61528	RF00046-XX	G6-300 – Wayne Ovation 2, Black (US)
MH61528	RF00057-XX	G6-300 – Wayne Ovation 2, Color (US)
MH61528	RF00022-XX	G7 15 inch (SDC, APC, UPC, NFC) - Wayne Ovation 2, Black (US)
MH61528	RF00059-XX	G7 15 inch (SDC, APC, UPC, NFC) - Wayne Ovation 2, Painted (US)
MH61528	RF00034-XX	G6-300/G6-400 Encore 500/700S Painted (US & Canada)

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

1.1 Tools Required

The following tools are required to mount the Pump Interface Board:

- Philips #1 screwdriver
- Small flat-bladed screwdriver



WARNING

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

Any spark could cause an explosion.

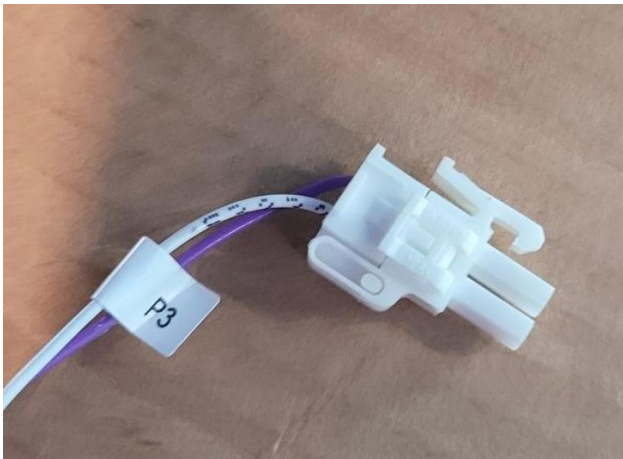
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1.2 Installation Kit Contents

1 x Pump Interface Board (EZ0618)



Current Loop Cable for Wayne Ovation Pumps (EK0243):



1 x CABLE ASSY, EARTH, 8G RING TO 8G RING, 16awg, 0.5m (EK0155)



2 x USB cables (EK0207)

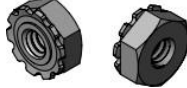
Sundry Parts
1 x MS0143 6-32 x 1/4" machine screw

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2 x MS0147 SCREW, SEMS, 6-32X5/16" (only 1 will be used).



2 x MN0041 NUT, SEMS, #6-32 UNC, EXTERNAL STAR WASHER, SS304 (only 1 will be used).



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2 Safety & Compliance Information

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

2.1 Preliminary Precautions

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

2.2 Emergency Total Electrical Shut-Off

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

2.3 Total Electrical Shut-Off Before Access

Any procedure requiring access to electrical components or the electronics of a pump/dispenser requires total electrical shut-off of that unit. Understand the function and location of this switch or circuit breaker before inspecting, installing, maintaining, or servicing the Pump Interface Board.

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

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

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2.6 Follow the Regulations

Regulations in OSHR (Occupational Safety and Health Regulations), national, state and local codes, including customer requirements must be followed. Failure to install, inspect, maintain or service this equipment in accordance with these codes, regulations and standards may lead to legal citations with penalties and may affect the safe use and operation of the equipment.

2.7 Replacement Parts

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

3 Safety Symbols and Terminology



This safety alert symbol is used in this manual and on warning labels to alert you to a precaution which must be followed to prevent potential personal safety hazard. Obey safety directives that follow this symbol to avoid possible injury or death.

Signal Words

These signal words used in this manual and on warning labels tell you the seriousness of particular safety hazards. The precautions below must be followed to prevent death, injury or damage to the equipment:



DANGER: Alerts you to a hazard or unsafe practice which will result in death or serious injury.



WARNING: Alerts you to a hazard or unsafe practice that could result in death or serious injury.



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

Working With Fuels and Electrical Energy

3.1 Prevent Explosions and Fires

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

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3.1.1 No Open Flames



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

3.1.2 No Sparks - No Smoking



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

3.1.3 Working Alone

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

3.1.4 Working with Electricity Safety

Ensure that you use safe and established practices in working with electrical devices. Poorly wired devices may cause a fire, explosion or electrical shock. Ensure that grounding connections are properly made. Take care that sealing devices and compounds are in place. Ensure that you do not pinch wires when replacing covers. Follow OSHA Tag-out/Lockout requirements. Station employees and service contractors need to understand and comply with this program completely to ensure safety while equipment is down.

For USA: 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.

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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.

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 Pump Interface Board has UL File References of E469526 and E480135 and carries a label similar to this:



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

3.2 Computer Programs and Documentation

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

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4 Installation Guide

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



WARNING

Failure to turn off the unit during installation of the kit may cause injury or bodily harm from electrical shock. Ensure that all power to the unit is switched off before opening the door of the unit and during kit installation.

4.1 Installation Procedure

1. Select a PSU Plate Assembly. The part number of the PSU Plate Assembly may vary depending on the Retro-Fit Kit into which the Pump Interface Board is being installed.



Style 1 -For G6



Style 2 For G7



Style 3 For G6 / G7 (C1D2)

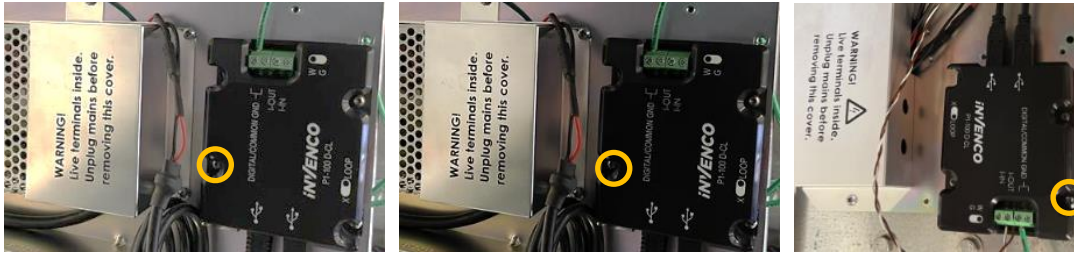
2. For Ovation Pumps:

- a. Take the Pump Interface Board and place it as shown onto the PSU Plate, ensuring that it is aligned with one hole in the Plate. Ensure to place it on top of the terminal cover.



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- b. Peel off the backing to the VHB tape from the back of the PIB and align with the screw hole and apply.
- c. Take one MS0143 Screws from the Pump Interface Board Retro-Fit Kit package and insert them into the top left hole on the Pump Interface Board.



Ovation Pumps

- d. Tighten the screw carefully to secure the terminal cover and Pump Interface Board in place. You may need to jiggle the parts a little to get a nice alignment.

3. For Encore Pumps:

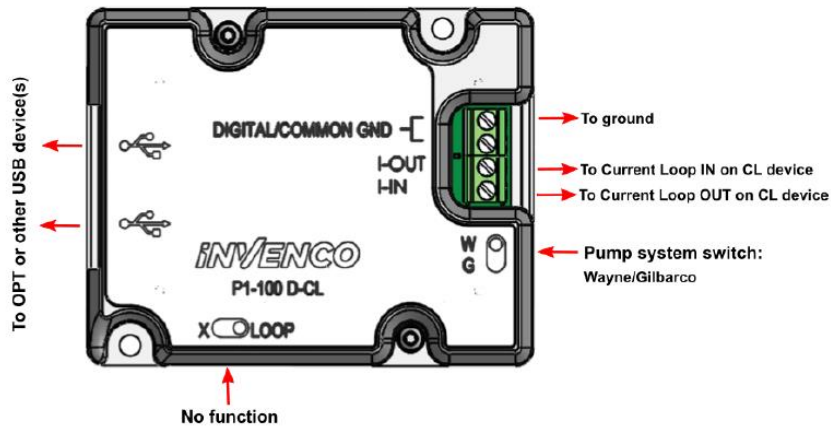
- a. Take the Pump Interface Board and place it as shown on the Style 3 for G7 (C1D2) PSU Plate.
- b. Peel off the backing to the VHB tape from the back of the PIB and align with the screw hole and apply.
- c. Take one MS0147 Screw from the Pump Interface Board Retro-Fit Kit package and insert it into the top right hole on the Pump Interface Board.



- d. Tighten the screw carefully with an MN0041 nut on the back. to secure the Pump Interface Board in place.

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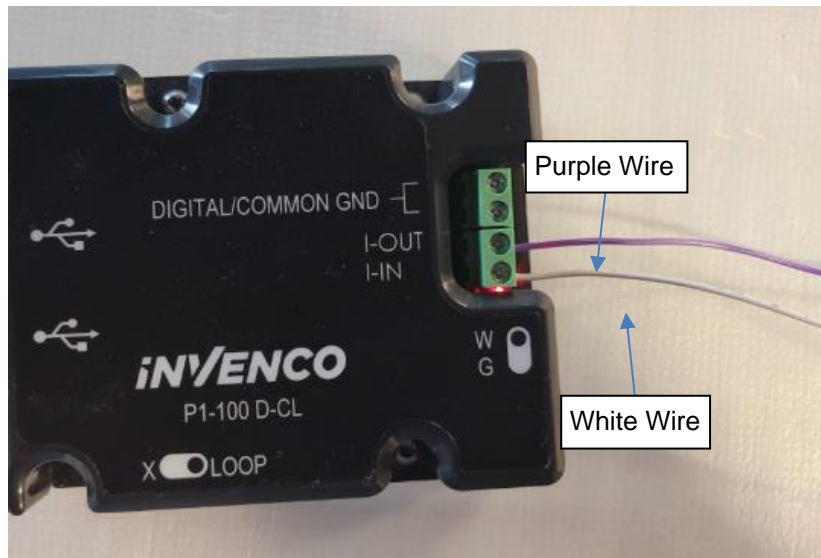
4. Insert the two USB cables (EK0207) into the USB Connectors on the left hand side of the Pump Interface Board.



5. Set the Pump system switch according to the pump that the Pump Interface Board is being installed into:
Set to W for the Wayne Ovation 1 and Ovation 2 pumps
Set to G for the Encore pumps
6. Obtain the Current Loop Cable according to the pump that the Pump Interface Board is being installed into:
Current Loop Cable for **Ovation 1/ Ovation 2 Pumps** (EK0243)- Purple and White
Skip this step for the **Encore Pumps** (addressed in the Encore Installation Guide)
7. For the **Ovation 1/ Ovation 2 Pumps**, connect the Current Loop Cable to the I-OUT and I-IN terminals on the right hand side of the Pump Interface Board (Insert the cable ends into the terminals and screw them tight). Ensure the correct colored wire is fitted to the correct terminal as per the below image.

Skip this step for the **Encore Pumps** (addressed in the Encore Installation Guide)

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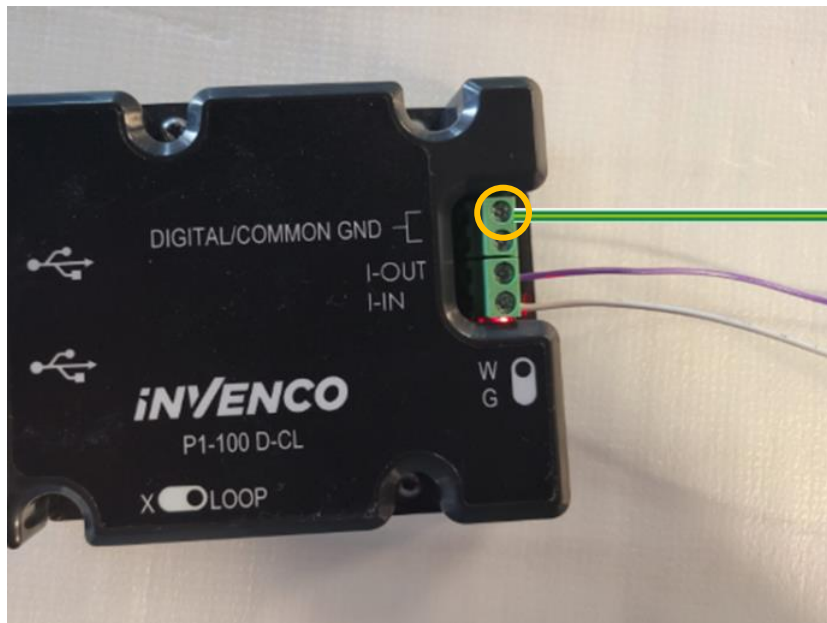
Current Loop Cable for Ovation 1/ Ovation 2 Pumps.

8. Locate the Ground Cable (EK0155) and cut off one of the ends.

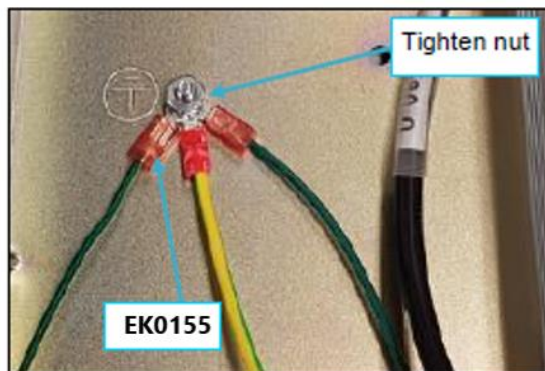


9. Strip the wire and connect this end to the ground terminal on the PIB

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10. Connect the other end (which is the loop terminal) to the PSU ground stud by unscrewing the nut and re-tightening after placing the loop terminal over the stud.



Note: For the G7 kits, there will be one less ground wire connected.

11. The installation of the Pump Interface Board is now complete. Discard the packaging for the Pump Interface Board and refer to the installation instructions for the particular OPT Retro-Fit Kit with which you were working.