

# PosiCharge™ GSE Spare Kit PCBA Controller III Installation Instructions



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<https://www.posicharge.com/>

**A NOTE ABOUT CUSTOMER SUPPORT**

Please make sure to have the information ready below to ensure superior service, and have it available when contacting Ampure Customer Service. The serial number can be found on the nameplate rating label on the left side of the unit.

**Customer Support:**            [service@posicharge.com](mailto:service@posicharge.com)  
1-866-767-4242

**Parts:**                            [orders@posicharge.com](mailto:orders@posicharge.com)

**For ProCore Chargers:**

1. Problem description, including any fault codes
2. Data download from the charger, including charge logs and fault logs
3. Failed charger SKU number and serial number
4. Failed module SKU number and serial number
5. Customer name, for our reference
6. Ship to company name
7. Ship to company address
8. Ship to contact name
9. Ship to contact phone number

**For Other Posicharge Chargers:**

1. Charger model, SKU #, and serial number
2. Problem description, including any fault codes
3. How you diagnosed the problem
4. Customer name, for our reference
5. Ship to company name
6. Ship to company address
7. Ship to contact name
8. Ship to contact phone number

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## 1 – SAFETY PRECAUTIONS–READ BEFORE USING

The ground support equipment (GSE) (charger power station[s] and power server: the unit) is designed with user safety as the highest priority. Operation and maintenance, however, must comply with all local codes; and the following safety precautions must be read and observed.

### 1.1 – Symbol Usage

Take special note, throughout this manual, of the information marked with the following symbols:



#### **DANGER**

Indicates information about safety practices necessary to prevent personal injury or death.



#### **WARNING**

Indicates information about safety practices necessary to prevent fire or equipment overheating.



#### **CAUTION**

Indicates information about safety practices necessary to prevent shock hazard or possible damage to the equipment during installation and service.



#### **NOTE**

Indicates helpful information for installation or usage but does not contain personnel or equipment safety-related information.

### 1.2 – Safety Instructions



#### **CAUTION**

#### **BEFORE YOU BEGIN**

- Read all instructions and cautionary markings on the Industrial PosiCharge Assembly.
- Make sure that you also read the IMPORTANT SAFETY INSTRUCTIONS on pages 2 and 3.
- Be sure to leave these instructions with the installed unit for future reference.
- Only qualified personnel should install, use, or service the unit.
- Read and understand these manufacturer's instructions and your employer's safety practices manual.

**DANGER****ELECTRIC SHOCK CAN KILL**

- Touching live electrical parts can cause fatal shocks or severe burns.
- The battery terminals are always electrically live, and the output circuit is live whenever the battery is connected or being charged.
- The input power circuitry and internal circuits are live whenever input power is on.
- An incorrectly installed or improperly grounded charger is a hazard.
- The unit must be grounded properly with a grounding conductor of a size equal to or larger than that recommended by local electrical codes or the Intelligent Fast-Charging System Ground Support Equipment (GSE) Installation Guide.
- Do not touch the uninsulated portion of the output battery connector or an uninsulated battery terminal.
- Do not remove the cover(s). Only qualified service personnel may remove the cover(s) on the unit. There are no user serviceable parts inside. Refer all servicing to qualified service personnel. Opening, or attempting to install or repair, the system by anyone other than qualified service personnel voids the warranty.
- Disconnect the battery charger from the input power and battery connections before servicing the unit. Lock out/tag out input power according to OSHA 29 CFR 1910.147.
- Do not use/service/repair it when it is in standing water.
- Before disconnecting the battery, stop charging by pressing the Stop button on the front panel of all power stations. Power stations are designed to stop an electric charge automatically, in the event of a hot disconnection, to minimize arcing or burning of the charger connections.
- The charging leads must be capable of the full-rated current of the DVS, and inspected frequently for wear, cuts, and abrasion. Do not use worn, damaged, undersized, or poorly spliced cables.
- The DVS power connector may be damaged by misuse or abuse. Frequently inspect the connector for cracking, pitting of contacts, fraying of wires, or signs of connector fatigue. Should any indication be present, immediate replacement of the connector will be necessary.
- Do not wear rings, watches, necklaces, tie clips, or conductive jewelry when working with batteries, as a short circuit through conductive jewelry may cause severe burns.



**DANGER****BATTERY GASES AND ELECTROLYTES CAN BE HAZARDOUS**

- Charging batteries produces fumes and gases that may be hazardous.
- Charging batteries may leak corrosive electrolytes that can cause skin and eye irritation, and damage equipment and clothing. Avoid contact, and follow the battery manufacturer's recommended practices for cleaning the battery pack.
- Thoroughly wash all items brought into contact with the battery electrolyte with a solution of baking soda and water.
- Batteries produce explosive gases. Do not smoke, perform operations that cause sparking, or have an ignition source near batteries.
- Ventilate the area to prevent the buildup of fumes and gases.

**WARNING****IMPROPER INSTALLATION CAN CAUSE FIRE**

- Do not place the unit on, over, or near combustible surfaces.
- Do not place the unit near flammable items.
- Do not block the air intake to, or exhaust from the unit. Allow a minimum of 6" of clearance around the unit.
- Do not block airflow to the unit.
- Replace blown fuses only with the same type and rating of fuse.
- Do not overload the building wiring. Be sure that the utility power service is properly sized, rated, and protected to handle this unit. Use the unit only with the circuits provided, with the minimum wire size specified in the installation guide.

**CAUTION****ELECTROSTATIC DISCHARGE PRECAUTIONS**

- Electronic circuits are sensitive to damage from electrostatic discharge (ESD).
- Persons servicing this equipment should be trained in proper techniques for avoiding ESD damage to electronic circuits.
- Wear an appropriate ESD wrist strap connected to the equipment chassis, as a minimum, when handling circuit boards.

## 2 – INTRODUCTION

The PCBA Controller Gen III (Figure 1) and Display board (Figure 2) will be replacing the PCBA Gen II. This is for product enhancements and changes to the selection in programming.

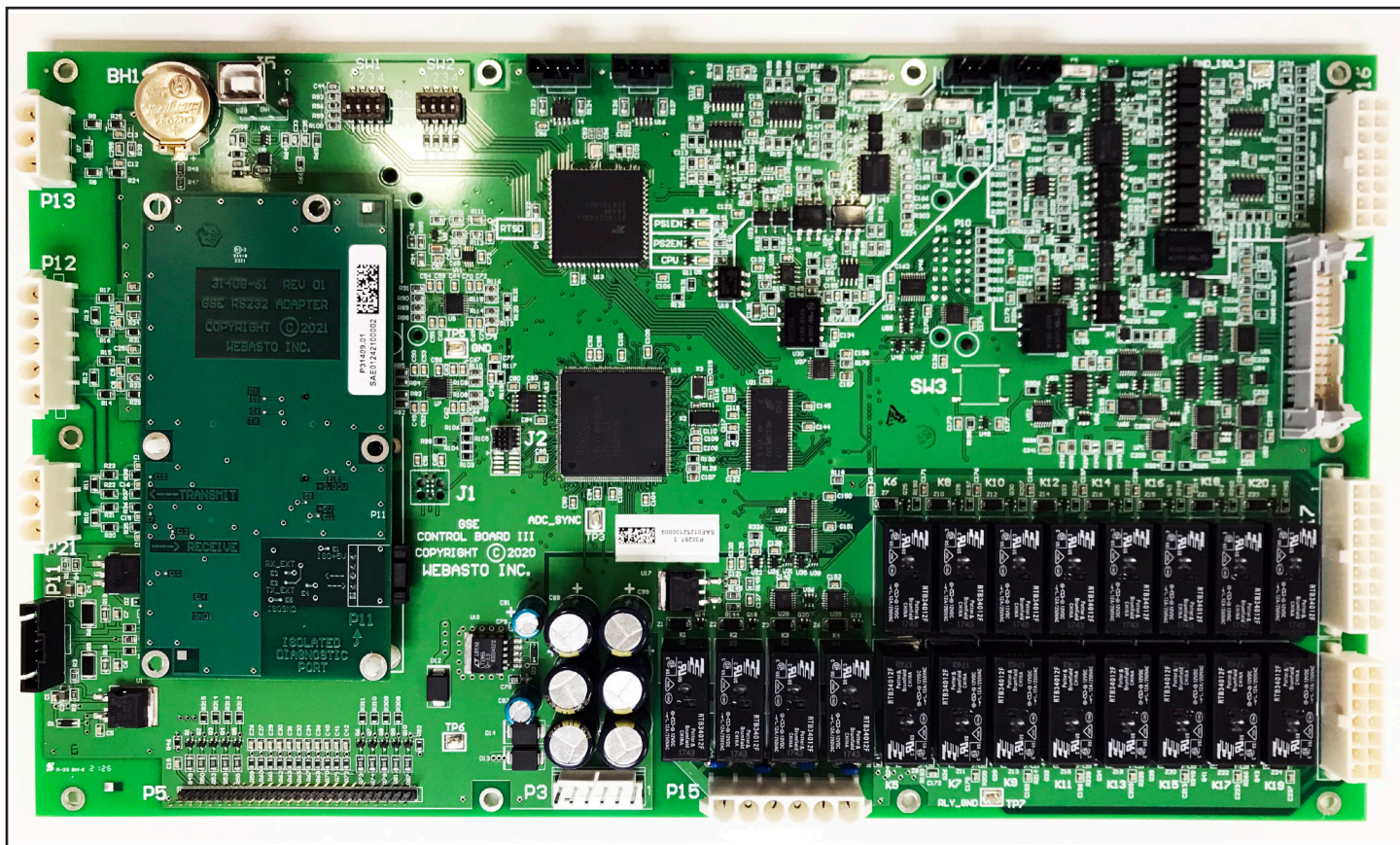


Figure 1 – PCBA Controller Board

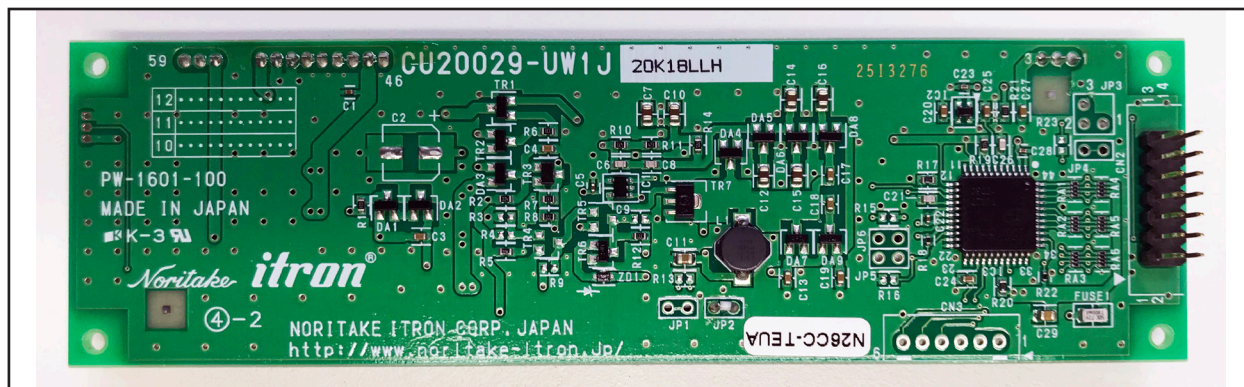


Figure 2 – Display Board



### 3 – TOOLS NEEDED

Make sure to follow all instructions when installing the PCBA controller and the display to the main station and substations.

Refer to your installation manuals for proper opening of the main panel.



Figure 3 – 5/16-in PCBA Nut Driver



Figure 4 – 1/4-in Display Nut Driver



Figure 5 – Standoffs Needle Nose Pliers



Figure 6 – 1/8-in Hex Wrench

## 4 – PREINSTALLATION

Be sure to follow all instructions when installing the PCBA controller and the display to the main station and substations. Refer to your installation manuals for proper opening of the main panel.

### 4.1 – Remove the AC Input

Perform a LOTO to safely remove AC input from service.

1. Disconnect the battery charger from the input power and battery connections before servicing the unit.
2. Lock out/tag out the input power according to OSHA 29 CFR 1910.147.



Figure 7 – LOTO (Lockout / Tagout) Tag

## 5 – UNLPLUG ANY VEHICLES

Unplug all vehicles from the primary and auxiliary chargers.



Figure 8 – Chargers with Luggage Loader

### 5.1 – Rest the Unit

Allow 30 minutes for the unit to discharge prior to servicing, then test components to confirm it is properly discharged.



Figure 9 – Timer



## 6 – REMOVAL

### 6.1 – Open the Charger Door

Remove the three screws on the front door of the DVS Power Station using a 1/8-in Hex wrench.

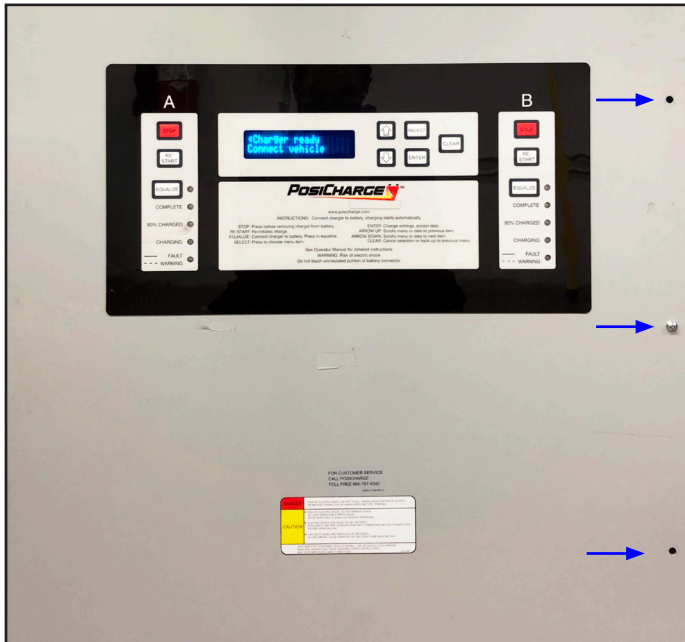


Figure 10 – Power Station Door

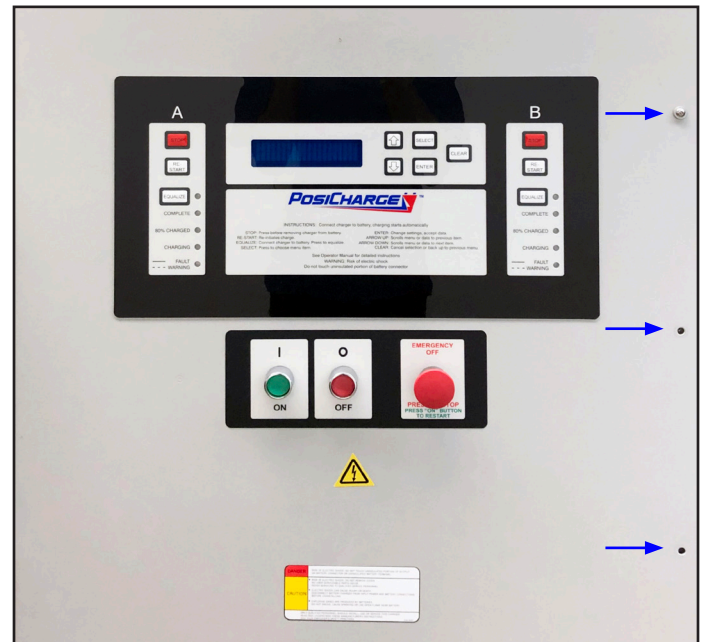


Figure 11 – Power Station Door with Switch Panel

### 6.2 – Control Board

Behind the door you will locate the controller board.

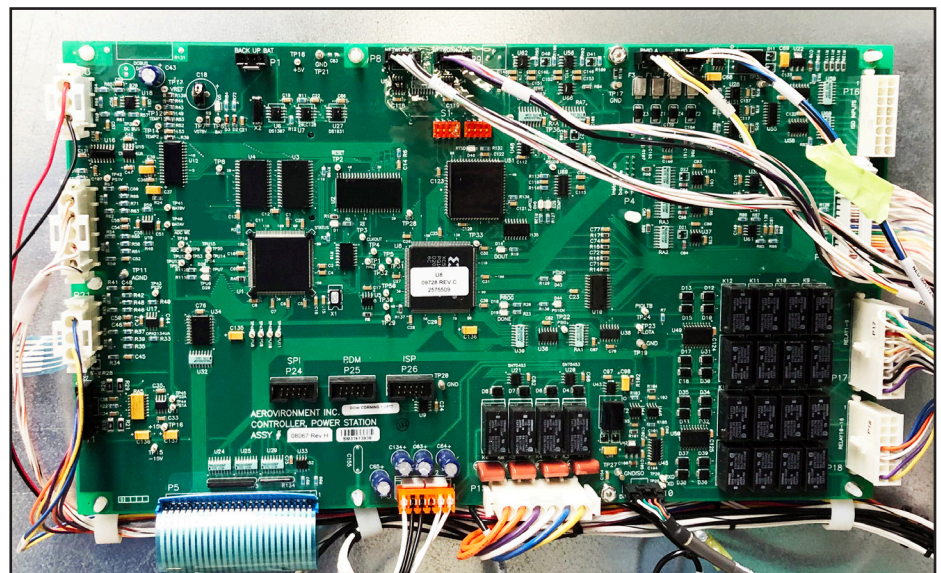


Figure 12 – PCBA Controller Mounted on the Door



### 6.3 – Remove the Connector

Tag and remove connectors - P3, P5, P6, P7, P8, P9, P10, P11, P12, P13, P14, P15, P16, P17, P18, P21.

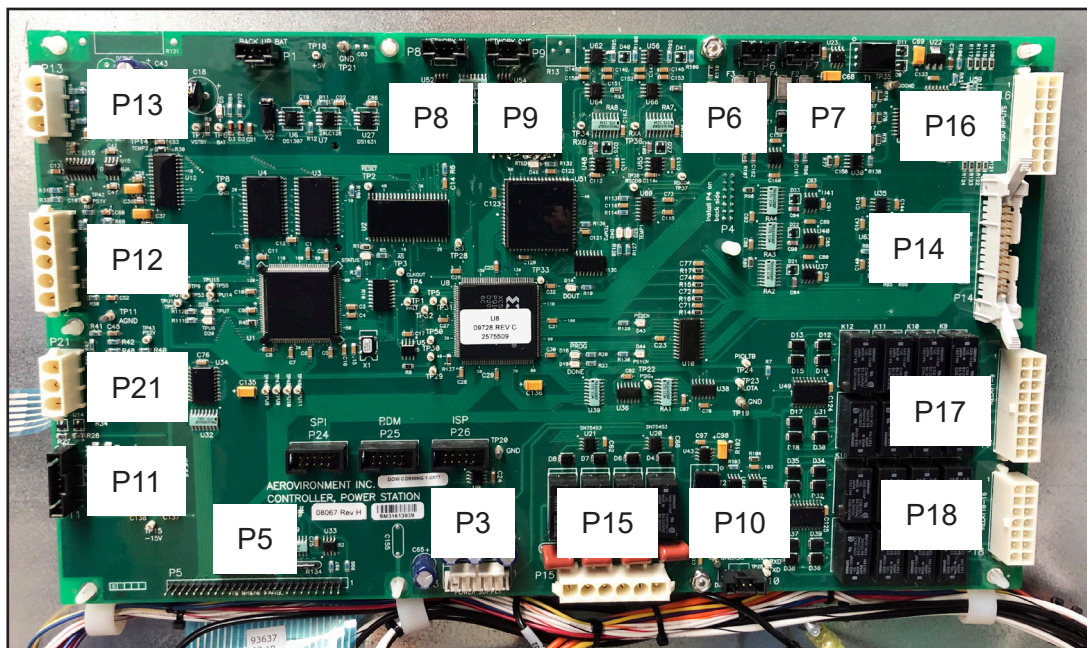


Figure 13 – PCBA Controller with Connector Information

### 6.4 – Remove the Nuts

Remove two nuts using the 5/16-in nut driver or a socket.

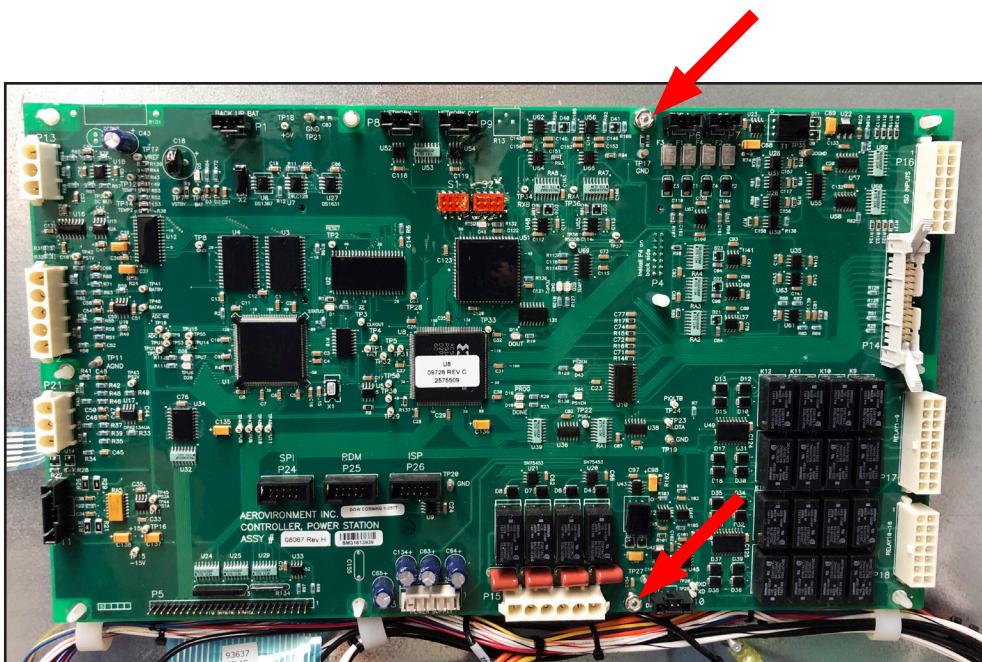


Figure 14 – PCBA Controller with Nut Placement

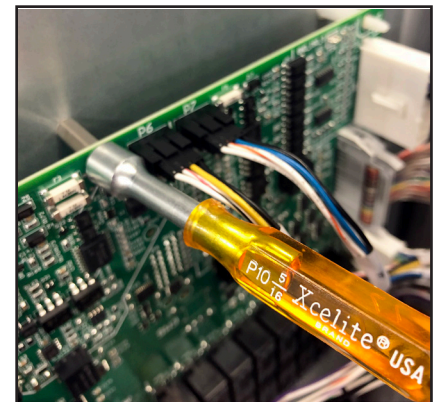


Figure 15 – 5/16-in Nut Driver



## 6.5 – Remove the PCBA from the Standoffs

Location the eight standoffs and press the tabs inward to release the PCBA.

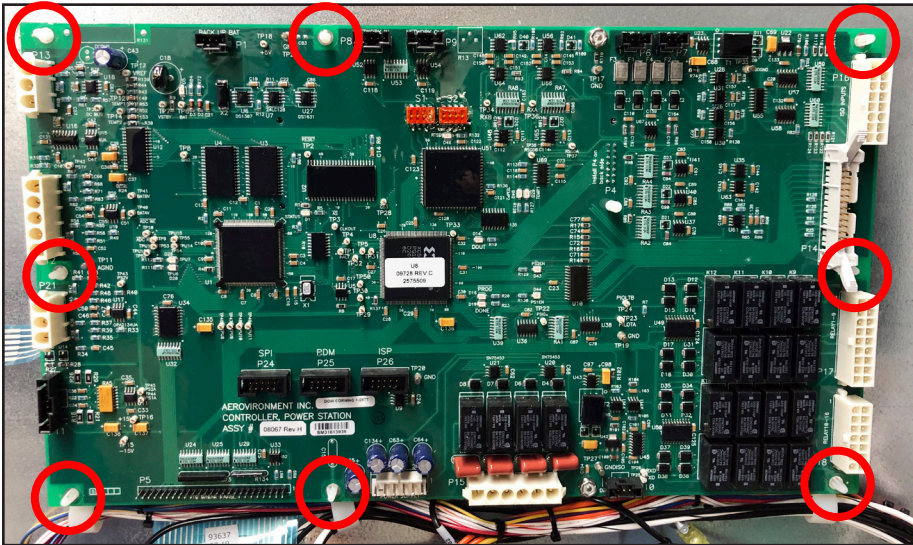


Figure 16 – PCBA with Standoff Location

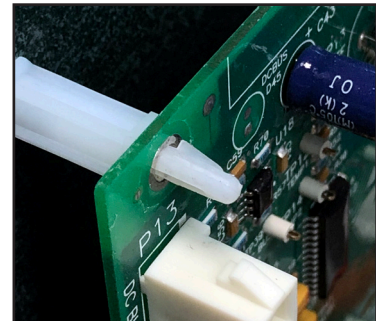


Figure 17 – Standoff

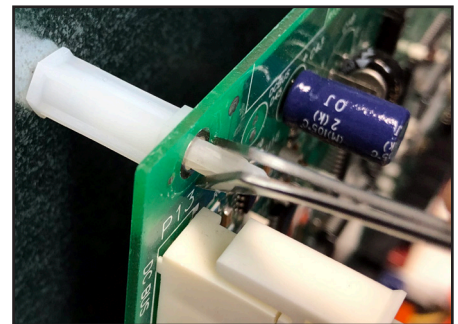


Figure 18 – Removal Tool for Standoff

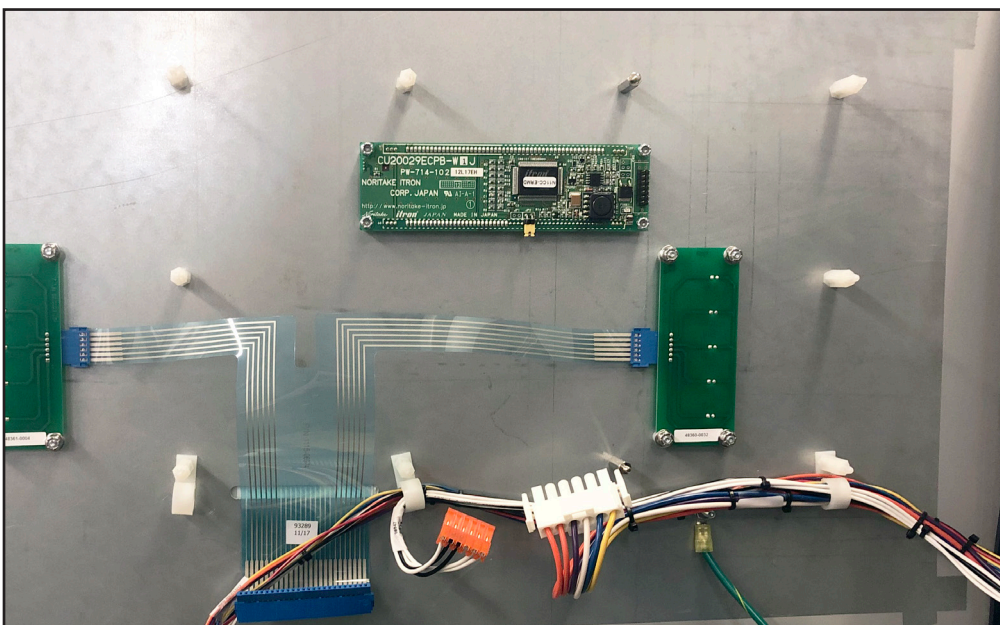


Figure 19 – Back Door with PCBA Removed



## 6.6 – Remove Display Board

Remove the four nuts using the 1/4-in nut driver holding the display.

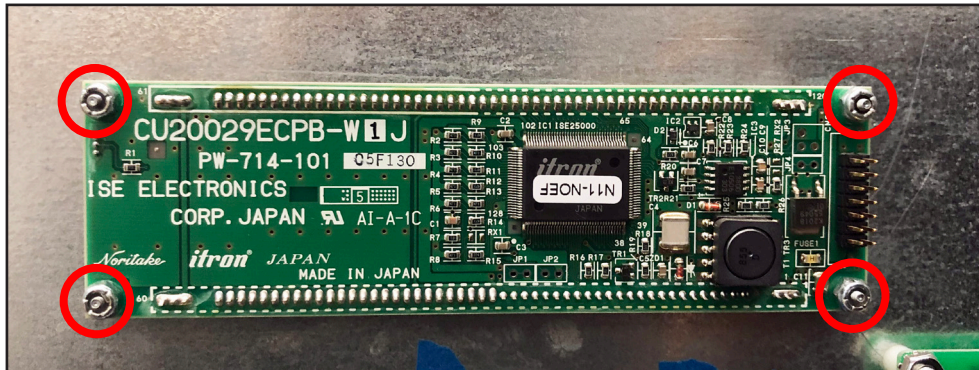


Figure 20 – Display with Nut Location

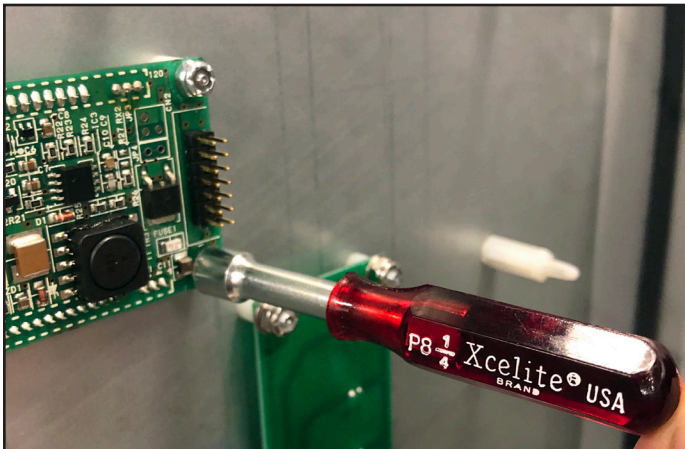


Figure 21 – 1/4-in Nut Driver



Figure 22 – Back Door with Display Removed

### NOTE:

New washer and nuts in kit for installation of new display.

## 7 – INSTALL

### 7.1 – Install the Display Board

Use the washer and nuts from the display kit and install the new display board to the back of the door as shown in figure 24. Make sure the pins of the display board are on the right side.



Figure 23 – Back Door with Display Removed

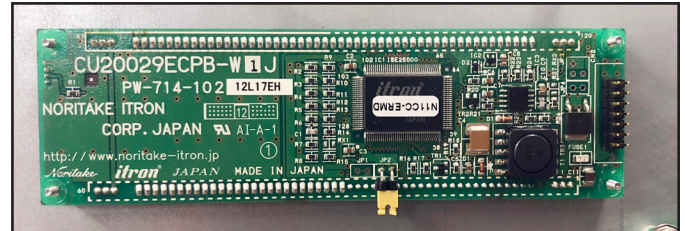


Figure 24 – Display Inserted to Back Door

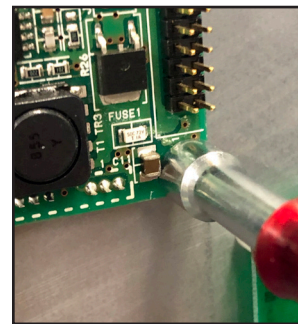


Figure 25 – 1/4-in Nut Drive



## 7.2 – Install the PCBA

Place the board on the back of the door. Snap the board into the standoffs, then screw on the nuts. Afterwards add all connectors using the connector location as per figure 27.

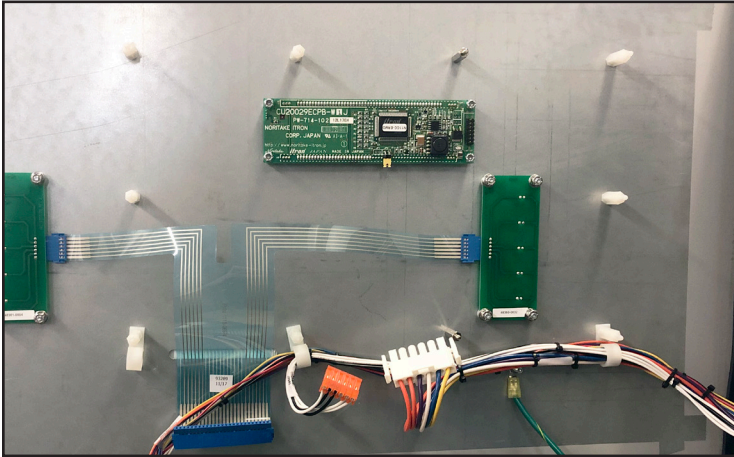


Figure 26 – Display Installed on the Back Door

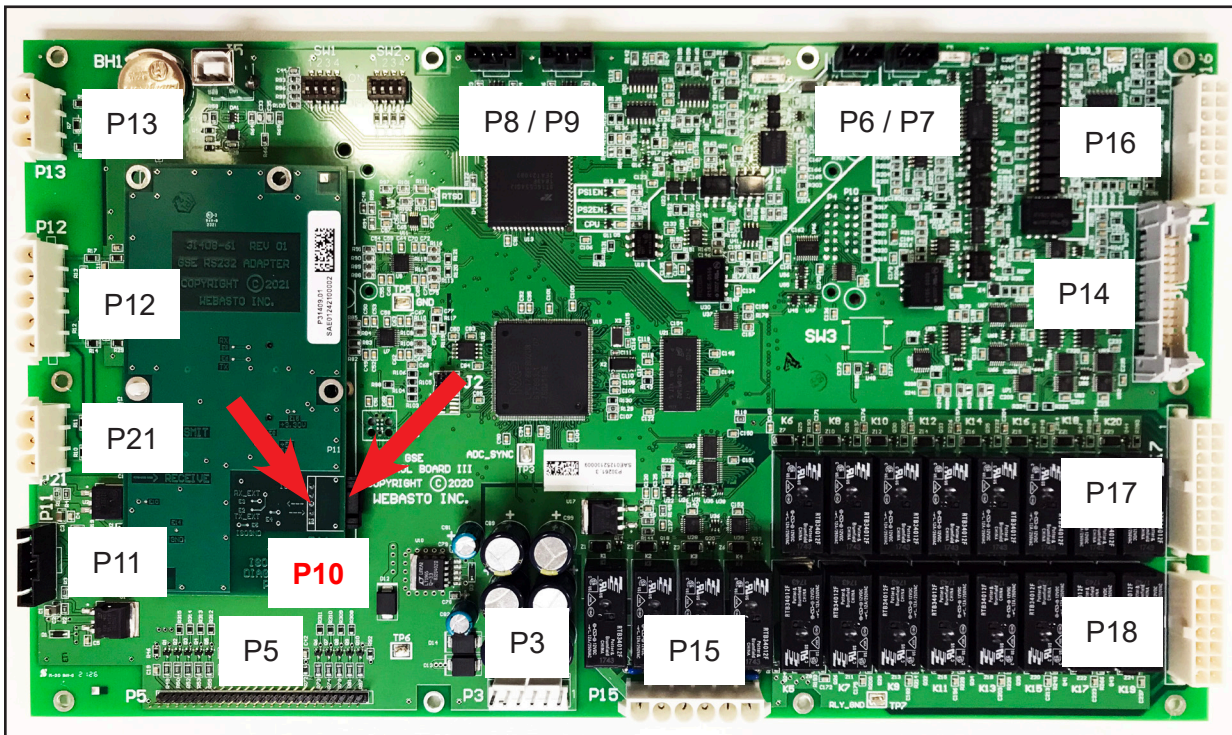


Figure 27 – New PCBA Board with Connector Information

### NOTE:

P10 has been relocated the red arrow shows the new location.

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1333 S Mayflower  
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