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# Reach Technology PoE5 Tester Revision A Control Card Upgrade

Reach PN: 41-0040-0B  
Revision A/01 and Revision A/02

August 31, 2021

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## 1. Identify a Revision “A” Control Card

When viewing the PoE5 Tester from the front, where the Ethernet ports are located, you will have visibility of the PN: 41-0040-0B Control Card Revision on the right side of the unit as shown in **Picture 1.1**.



**Picture 1.1 Control Card Revision Location**

If the control card revision contains “A/xx,” verify the unit’s serial number, which can be found on a label at the bottom of the unit, is on the [list of affected units](#). If it is, please continue to the next section to determine the control card’s operational state.

## 2. Determine the Condition of a Revision “A” Control Card

This section aims to determine whether the fan control circuit MOSFET (Q1) has been damaged on the Revision A/xx Control Card.

### 2.1. Equipment Needed

- ◆ PoE5 Tester 138W Power Supply (Reach PN: 30-0015-01)



Picture 2.1 PoE5 Power Supply

### 2.2. Verify Rear Fan Operation

When connecting a PoE5 Tester to a power supply, software kicks on the rear fans at an increased speed before returning to an idle speed. If your fan operation cannot be determined in an idle state, disconnect the power supply from the rear connector and reconnect the power supply to the power connector as shown in **Picture 2**.



Picture 2.2 Rebooting the Unit

After reconnecting the power supply connector to the unit, the fans *should* turn ON, emitting an audible whine and a burst of airflow from the rear of the unit. Check the results of the fan operation verification for guidance on the next steps in **Table 2.2**.

Fan Operation	Next Steps
OFF – Not Working	See <i>Section 3</i>
ON – Working	See <i>Section 4</i>

Table 2.2 Fan Condition Next Steps

### 3. Request a Return Merchandise Authorization (RMA)

Please complete an [RMA form](#) and submit it to [service@reachtech.com](mailto:service@reachtech.com). We will issue you an RMA number to return any units with fan operation issues.

**WARNING – Reach Technology will not accept units shipped to our facility without an approved RMA number. Packages received without an RMA number may be returned to the sender.**

### 4. Upgrade PoE5 Firmware to V1.1.1

Download “PoE5 Firmware Update Instructions” and Version 1.1.1 firmware, all contained in this [ZIP file](#). See file contents in **Picture 4.1** as shown below. Follow the firmware update instructions.

Name	Type
 ControllerApp_v1_11_20210616.bin	BIN File
 PairProcessor_v1_11_20210618.bin	BIN File
 PoE5_Firmware_Update_Instructions.pdf	Adobe Acrobat Document
 PortProcessor_v1_11_20210618.bin	BIN File

Picture 4.1 Zip Contents

### 5. Request a Revision “B/03” Control Card Upgrade Kit

Fill out the [form](#) or email [service@reachtech.com](mailto:service@reachtech.com) to request an upgrade kit. We will need your name, company name, email address, phone number, serial number of the affected unit, and your complete shipping address.

**WARNING – PoE5 Tester serial number identification will be required to be approved for the upgraded Revision “B/03” Control Card. Only one control card upgrade kit will be provided per serial number.**

## 6. Replace Control Card Revision “A” with Revision “B”

Once you receive the Revision “B” Control Card, you can remove and replace the Revision “A” Control Card using the steps covered in the following sections.

### 6.1. Tools Required

- ◆ Black Marker
- ◆ Red Marker
- ◆ #1 Phillips Screwdriver

### 6.2. Parts Required

- ◆ Reach PN: 41-0040-0B Revision “B/03”

### 6.3. Remove Top Cover

Use a #1 Phillips screwdriver to remove the ten screws (PN: 22-0126-00) from the top of the unit shown in **Picture 6.1**.



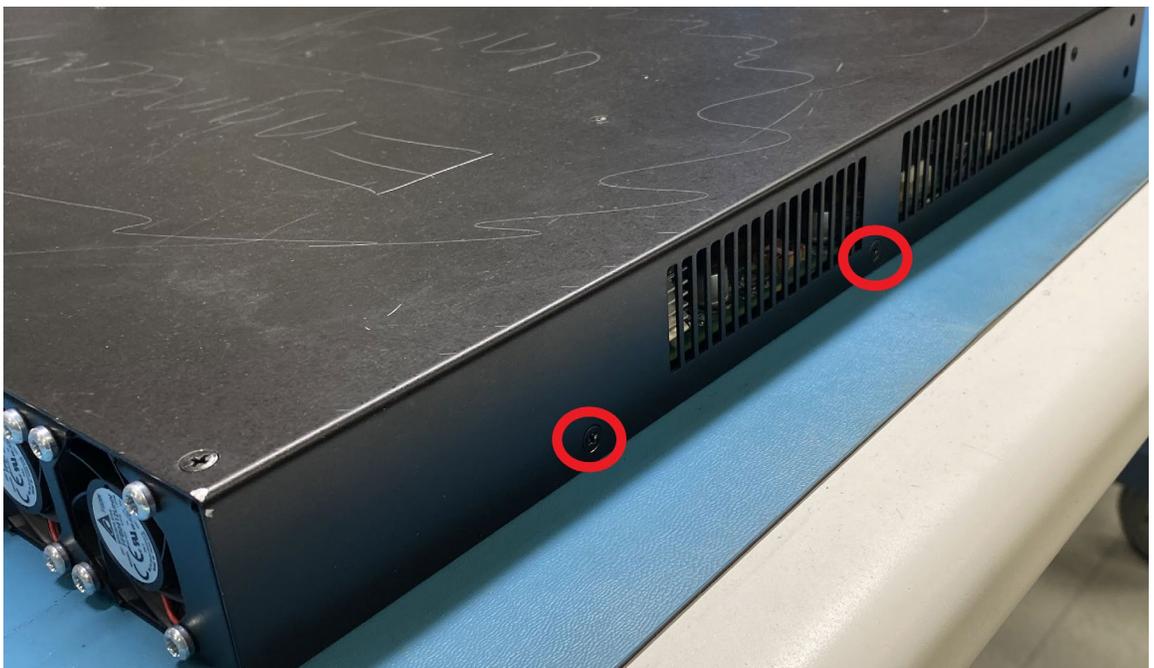
**Picture 6.1 Top Cover Screw Locations**

Remove the two screws (PN: 22-0126-00) from the right side of the top cover shown in **Picture 6.2**.



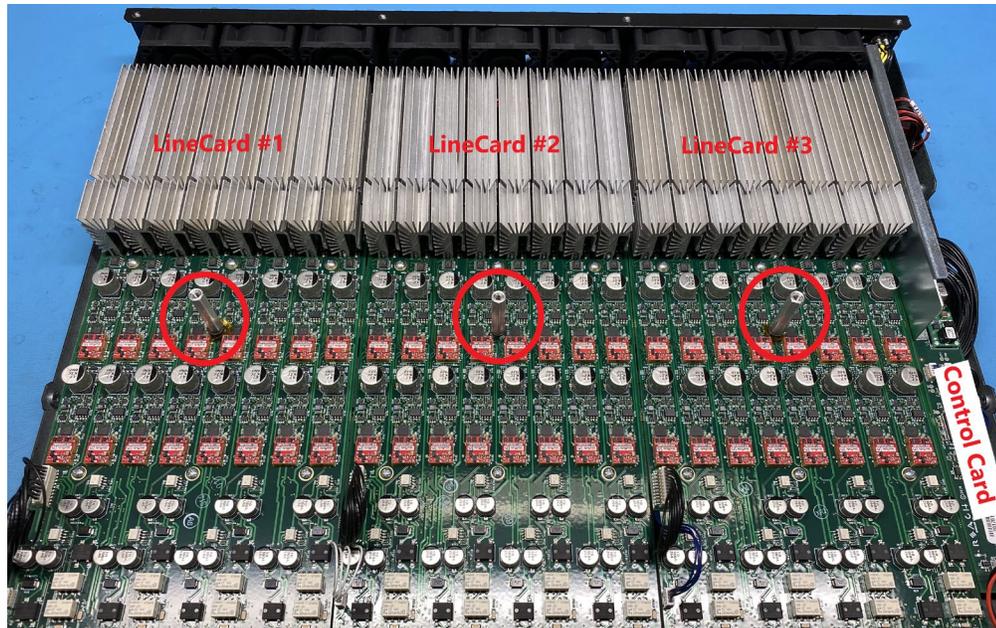
**Picture 6.2 Right Side Cover Screw Locations**

Remove the two screws (PN: 22-0126-00) from the left side of the top cover shown in **Picture 6.3**.



**Picture 6.3 Left Side Cover Screw Locations**

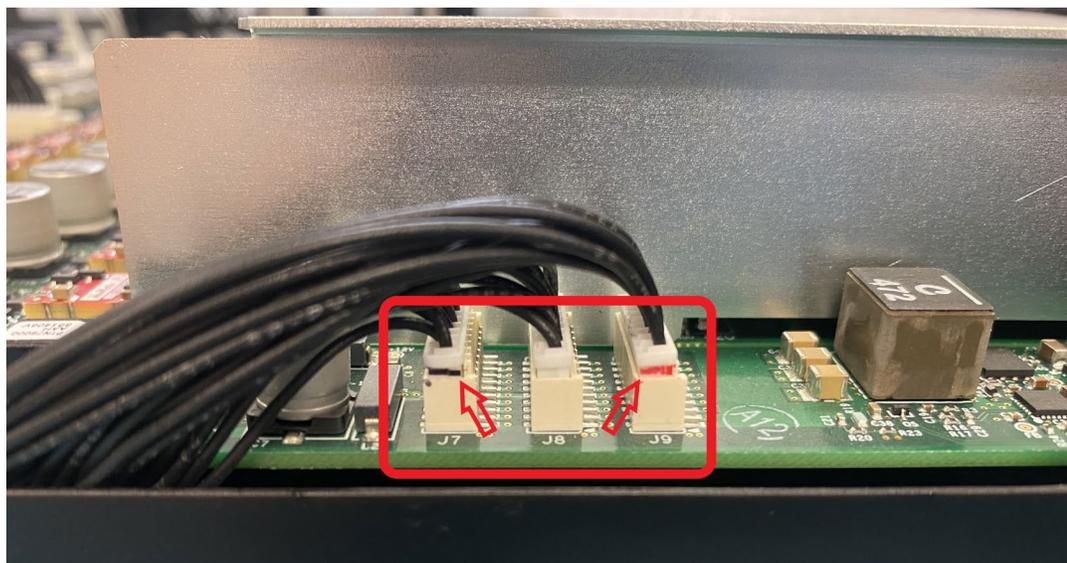
Carefully lift the top cover and set it aside. If any of the standoffs for the top cover loosened during the removal of the top cover, ensure they get hand tightened before continuing. **Picture 6.4** shows the three standoffs. Ensure they are securely threaded into the bottom cover.



**Picture 6.4 Cover Standoffs and Card Locations**

#### **6.4. Mark Line Card Cables**

There are three black wire bundles connected to “J7-9” on the Control Card. Use a black marker to identify the connector in the “J7” location. Use a red marker to identify the connector in the “J9” location. Use **Picture 6.5** as a reference. You will use these when you reinstall the new control card later in the procedure.

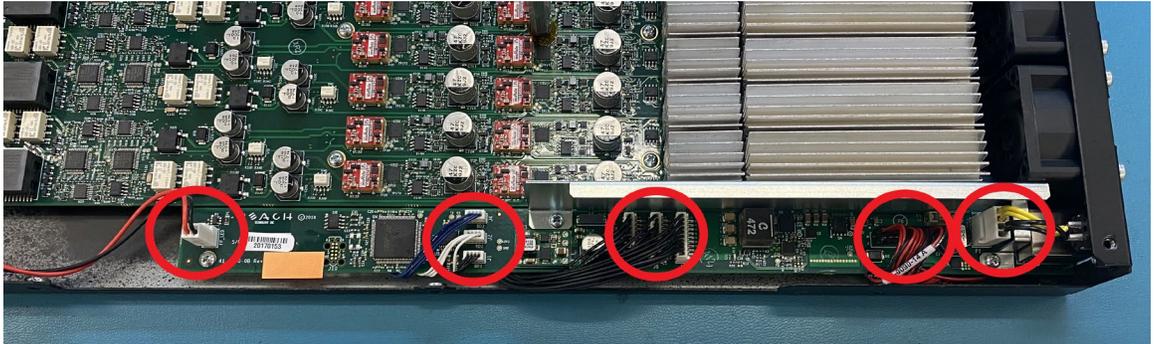


**Picture 6.5 Line Card Cable Marking Locations**

## 6.5. Disconnect Control Card Cables

Disconnect each of the cables from the control card as shown in **Picture 6.6**.

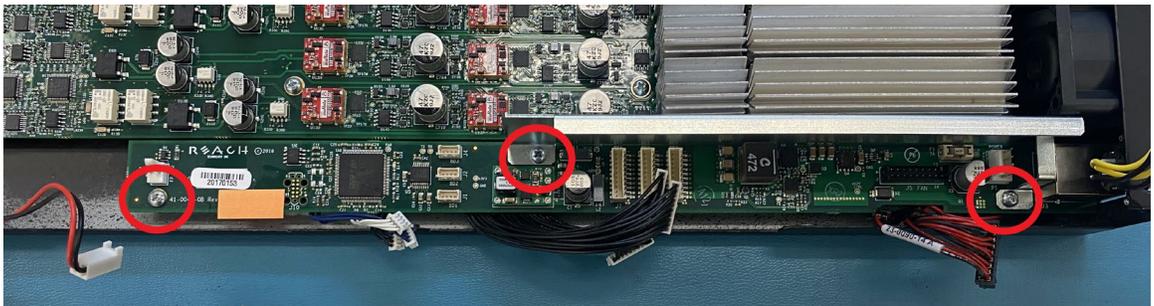
**WARNING** – Use caution when uninstalling connectors near the sheet metal baffle plate between the line card and control card.



**Picture 6.6 Control Card Connector Locations**

## 6.6. Remove Control Card Screws

Use a #1 Phillips screwdriver to remove the three screws (PN: 21-0126-00) holding the sheet metal baffle plate and control card as shown in **Picture 6.7**.



**Picture 6.7 Control Card Screw Locations**

Remove the sheet metal baffle plate and then remove the control card by gently sliding the rear Ethernet port toward the front of the chassis. See a directional reference in **Picture 6.8**.



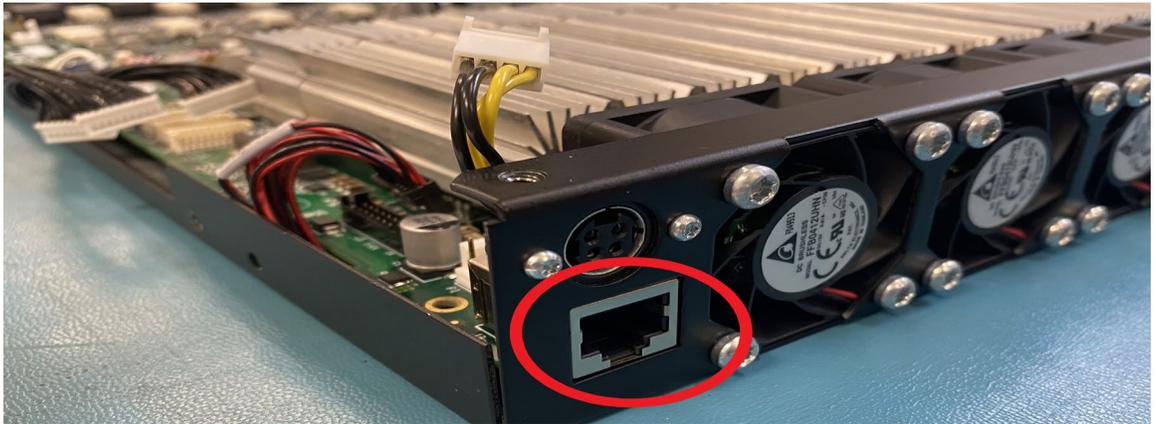
**Picture 6.8 Control Card Removal Direction**

## 6.7. Insert the Revision “B” Control Card

Insert the upgrade kit Revision “B/03” Control Card (PN: 41-0040-0B Rev “B/03”) into the chassis as shown in **Picture 6.9** and carefully slide the Ethernet connector into the rear opening as shown in **Picture 6.10**.



**Picture 6.9** Installing the New Control Card



**Picture 6.10** Ethernet Connector Positioning

## 6.8. Install the Baffle Plate

Reinstall the baffle plate and tighten three screws with 2 in-lb (PN: 21-0126-00) to secure the baffle plate and control card to the PoE5 chassis. See **Picture 6.11** for reference.

**WARNING** – Ensure not to pinch all connectors and wires when tightening the three screws.



**Picture 6.11** Baffle Plate and Control Card Screw Locations

## 6.9. Connect the Cables

**WARNING** – Do not use excessive force when inserting cables into their connectors. Each connector can only be installed correctly in one direction. Improper installation may result in damaged connectors or damaged electrical components.

Connect the 2-pin LED cable to the “FP\_LED” location on the control card. Connect the 18-pin fan cable to the “Fan J5” location on the control card. Connect the 4-pin power cable to the “P1” location on the control card. See all locations in **Picture 6.12**.



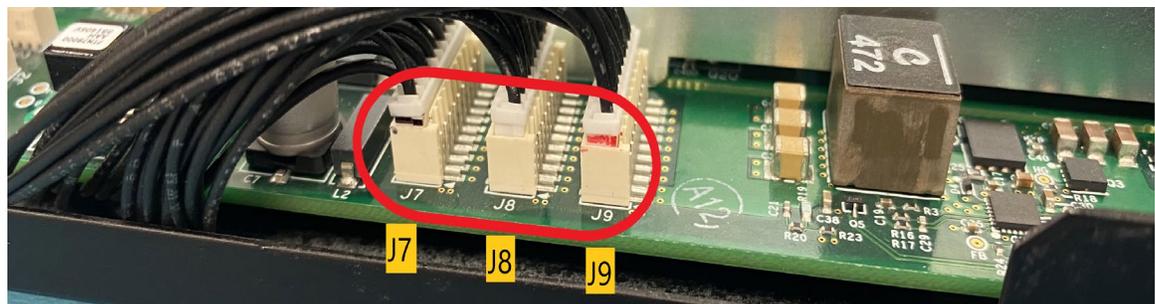
**Picture 6.12 Fan, LED, and PWR Connection Locations**

Connect the three 4-pin line card cables to the control card. The black 4-pin cable connects to “BD1” or “J1” location. The white 4-pin cable connects to the “BD2” or “J2” location. The blue 4-pin cable connects to the “BD3” or “J4” location. See **Picture 6.13** for reference.



**Picture 6.13 Line Card 4-pin Cable Locations**

Connect the 10-pin line card cable with the **BLACK** marking to the “J7” location. Connect the 10-pin **UNMARKED** cable to the “J8” location. Connect the 10-pin **RED** cable to the “J9” location. See **Picture 6.14** for reference.



**Picture 6.14 Line Card 10-pin Cable Locations**

## 6.10. Install Top Cover

Place the top cover on the unit with the four screw locations toward the rear of the unit. Use a #1 Phillips screwdriver to install the ten screws (PN: 22-0126-00) into the top of the unit as shown in **Picture 6.15**.



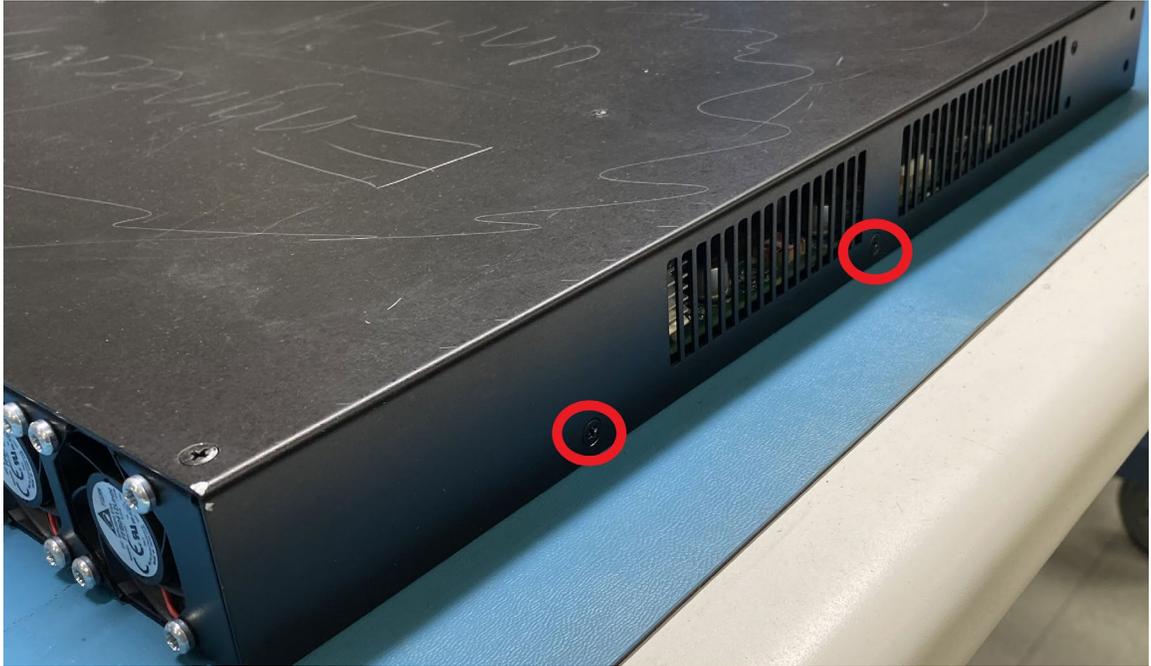
**Picture 6.15 Top Cover Screw Locations**

Install two more screws (PN: 22-0126-00) into the right side of the top cover as shown in **Picture 6.16**.



**Picture 6.16 Right Side Cover Screw Locations**

Install the remaining two screws (PN: 22-0126-00) into the left side of the top cover as shown in **Picture 6.17**.



**Picture 6.17 Left Side Cover Screw Locations**

### **6.11. Return Revision A Controller Cards**

Once you have completed the replacement, we would appreciate it if you would return the Revision A Controller Card to Reach Technology. Using the RMA assigned to your upgrade kit please ship the control card to:

NOVANTA CORPORATION  
ATTENTION: SHEILA DAVIS  
4600 CAMPUS PLACE  
MUKILTEO, WA 98275  
USA

### **Thank You For Your Support**

We are confident these steps will reduce the risk of future field failures. Reach Technology will always stand behind our products and work closely with our valued customers in the event issues are discovered. We appreciate your support.

### **Questions?**

Have more questions? Please contact [service@reachtech.com](mailto:service@reachtech.com) or call our team at 503-675-6464.