

## QO™ Plug-On Neutral Connector Clamping Screws— Field Inspection and Remediation

Retain for future use.

### Safety Information

Read these instructions carefully and look at the equipment to become familiar with the device before trying to install, operate, service, or maintain it. The following special messages may appear throughout this bulletin or on the equipment to warn of hazards or to call attention to information that clarifies or simplifies a procedure.



The addition of either symbol to a “Danger” or “Warning” safety label indicates that an electrical hazard exists which will result in personal injury if the instructions are not followed.



This is the safety alert symbol. It is used to alert you to personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

#### **⚠ DANGER**

**DANGER** indicates a hazardous situation which, if not avoided, **will result in** death or serious injury.

#### **⚠ WARNING**

**WARNING** indicates a hazardous situation which, if not avoided, **could result in** death or serious injury.

#### **⚠ CAUTION**

**CAUTION** indicates a hazardous situation which, if not avoided, **could result in** minor or moderate injury.

#### **NOTICE**

**NOTICE** is used to address practices not related to physical injury. The safety alert symbol is not used with this signal word.

### Please Note

Electrical equipment must be installed, operated, serviced, and maintained only by qualified personnel. No responsibility is assumed by Schneider Electric for any consequences arising out of the use of this material.

A qualified person is one who has skills and knowledge related to the construction, installation, and operation of electrical equipment and has received safety training to recognize and avoid the hazards involved.

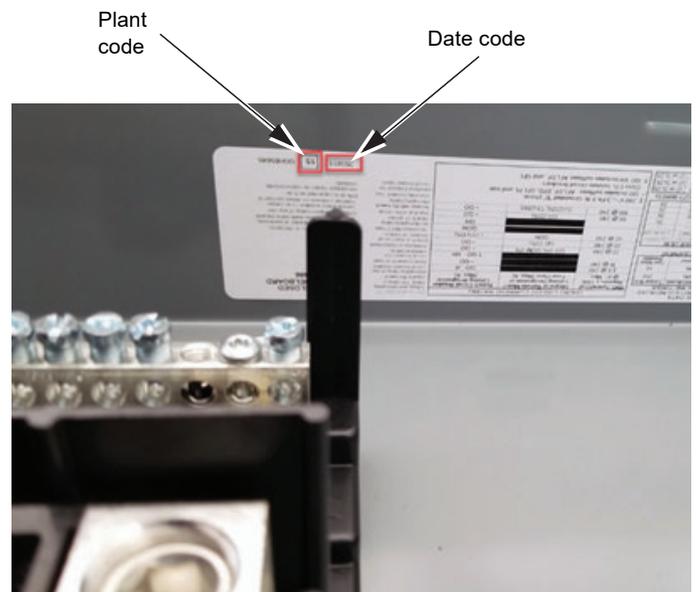
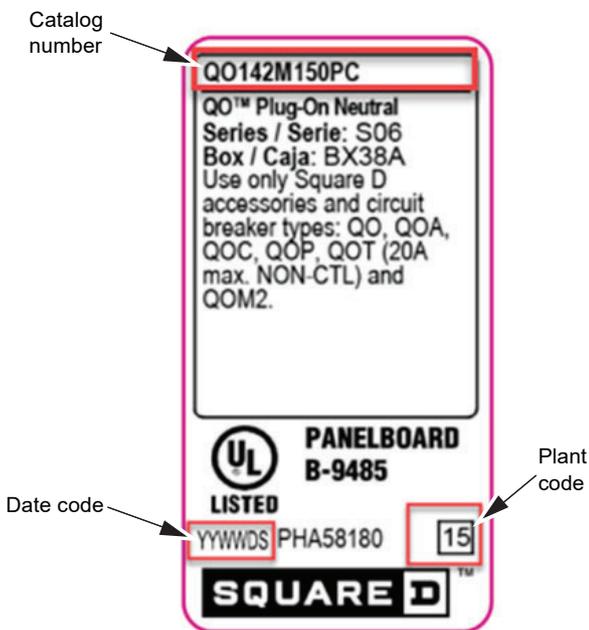
It is the responsibility of the qualified person performing this work to determine and acquire permits and inspections according to local code requirements.

## Introduction

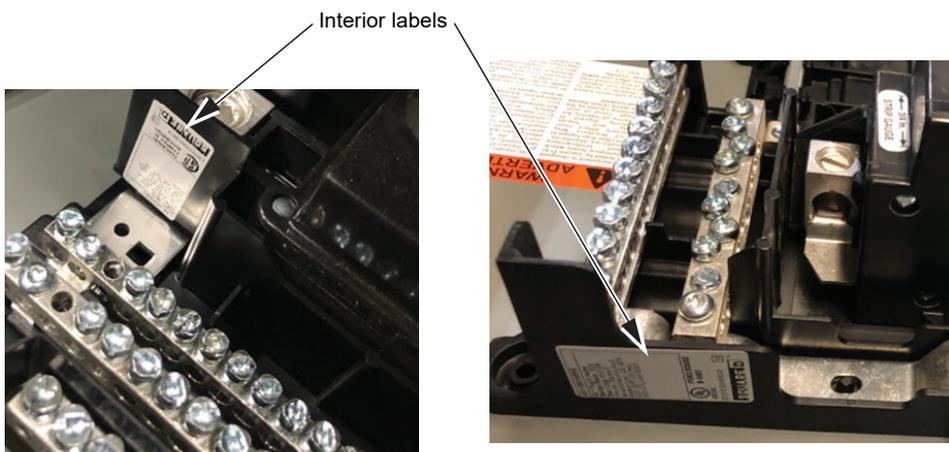
This bulletin contains instructions for evaluation and potential remediation of QO plug-on neutral (PoN) interiors used in Square D™ brand or Schneider Electric™ 100 through 225 A QO main lugs and main circuit breaker indoor and outdoor load centers with UL® or CSA® markings. Manufacturing date codes are February 1, 2020, through January 12, 2022, using date codes YYWWDS where YY = year, WW = week, D = day, and S = shift. 200561 through 220233 with Plant Code 15 are affected.

The date and plant codes can be found on the interior assembly label or box label (see Figure 1). The interior assembly label is located on the top of the plastic mains base inside of the enclosure as shown in Figure 2. The box label is located on one of the enclosure interior side walls, as shown in Figure 3.

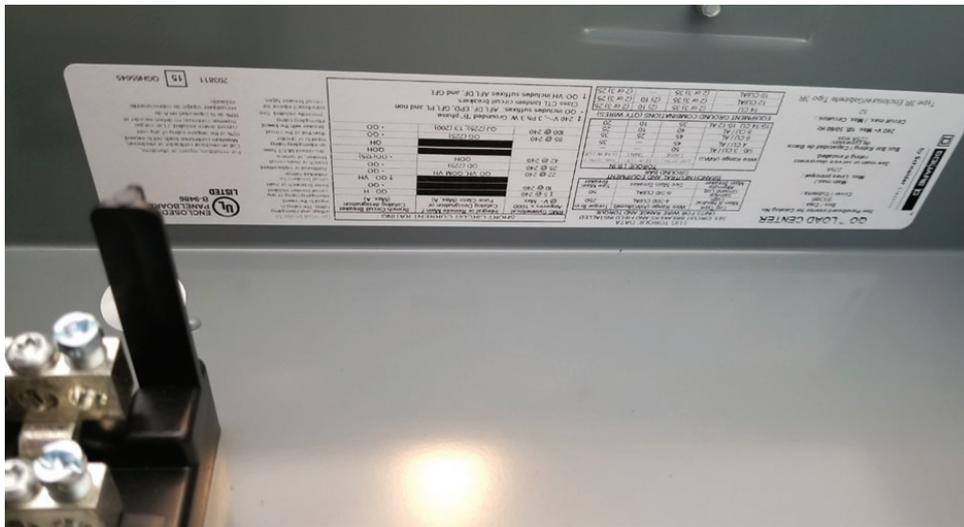
**Figure 1 – Interior Assembly Labels**



**Figure 2 – Common Locations for Interior Label**



**Figure 3 – Box Label Common Location**



## Tools Required

- Properly rated voltage sensing device
- #2 square head Robertson® screwdriver
- Magnetic T-20 Torx® screwdriver
- Torque wrench calibrated to 25 lb-in. (2.8 N•m) with T-20 Torx screwdriver tip
- Two green dot sticker labels with legend “Inspected PRB-236759”, provided. Alternate black permanent marker, if label is not available.

## Inspection and Remediation of Plug-on Neutral Connector Joints

### Precautions

**⚠ DANGER**

**HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH**

- Apply appropriate personal protective equipment (PPE) and follow safe electrical work practices. See NFPA 70E, CSA Z462, or NOM-029-STPS.
- This equipment must only be installed and serviced by qualified electrical personnel.
- Turn off all power supplying this equipment before working on or inside equipment.
- Always use a properly rated voltage sensing device to confirm power is off.
- Replace all devices, doors and covers before turning on power to this equipment.

**Failure to follow these instructions will result in death or serious injury.**

**⚠ WARNING:** This product can expose you to chemicals including Lead and lead compounds, which are known by the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.co.gov](http://www.P65Warnings.co.gov)

1. Turn off all power supplying the load center.
2. Remove screws securing the load center cover (indoor load center, see Figure 4, A) or trim (outdoor load center, see Figure 4, B) and retain screws and cover for re-assembly. Remove load center cover or trim.

**Figure 4 – Indoor and Outdoor Load Centers (Examples)**

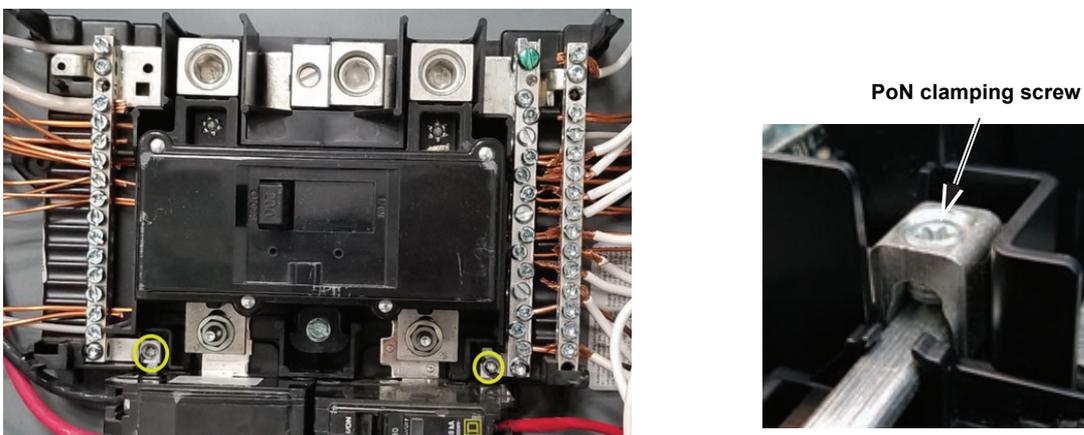


3. Using a properly rated voltage sensing device, verify the absence of voltage.
4. Verify if manufacturing plant code is 15, that the catalog number is on the affected list (see Annex) and the date code is between 200561 and 220233 (February 1, 2020—January 12, 2022). See Figures 1–3.

**NOTE:** If the plant code, catalog number, and date code are not inside this scope, no remediation is necessary; re-install cover (indoor) or trim (outdoor) using screws removed in step 2 and proceed to step 9.

5. Locate the plug-on neutral (PoN) connector clamping screws securing the connector to the PoN bars on the mains base of the load center. Mains bases will have two PoN connector clamping screws. These screws are silver colored, Torx head screws. See Figure 5.

**Figure 5 – Neutral Connector Clamping Screw Locations**



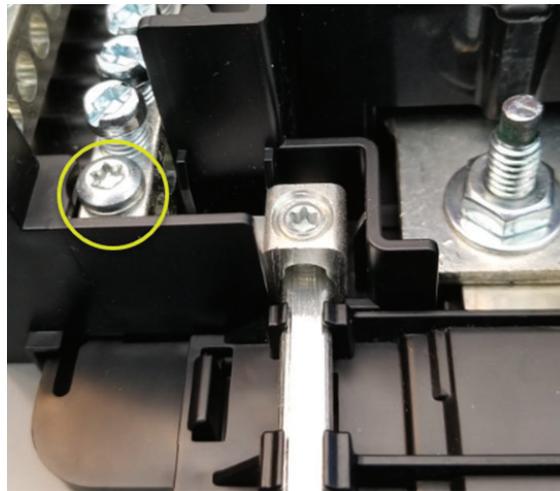
6. Check the joints of the neutral connectors for evidence of degradation due to overheating (burns or plating discoloration) or evidence of plastic base overheating (melting).

**Evaluation:**

**If there is evidence of degradation on neutral connector joints, the full interior must be replaced. Identify the catalog number shown in the interior label (Figure 1) and contact Schneider Electric Technical Support: 1-888-778-2733, options 2, 1, and 4. It is important to continue with the process in step 7 to secure neutral connections until interior is replaced.**

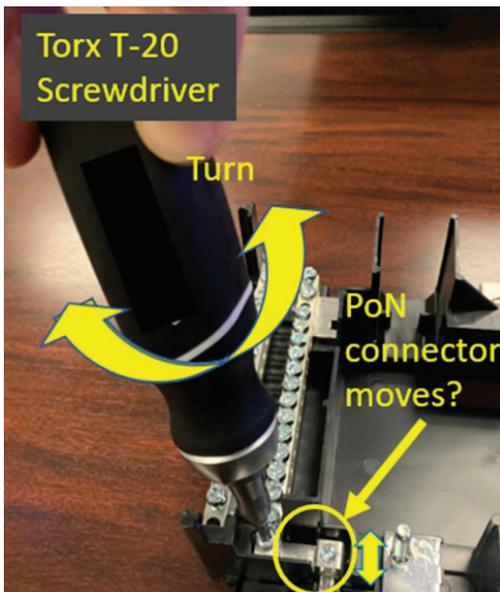
7. Loosen left bottom neutral bar screw.
  - a. Use a T-20 screwdriver to loosen the left bottom neutral bar screw **one full turn counterclockwise** (see Figure 6).

**Figure 6 – Left Bottom Neutral Bar Screw**



- b. Use the screwdriver to turn the left neutral bar screw alternating clockwise and counterclockwise, while inspecting for movement on the PoN connector. See Figure 7.

**Figure 7 – Inspect for Movement on the Left PoN Connector**



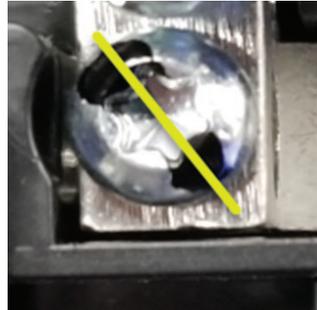
**Evaluation:**

If the PoN connector **DOES NOT MOVE**, the clamping screw has proper clamping force. **DO NOT** tighten the clamping screw, as it may damage the connector.

**USING THE TORQUE WRENCH** tighten the left bottom neutral bar screw to 25 lb-in. (2.8 N•m) and add a mark with the black permanent marker. See Figure 8.

Go to step 8.

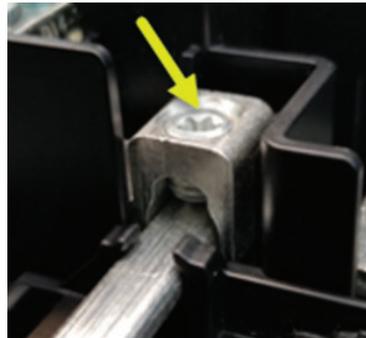
**Figure 8 – Apply Mark after Tightening Left Bottom Neutral Bar Screw**



If the PoN connector **DOES MOVE**, the clamping screw in the PoN connector must be tightened.

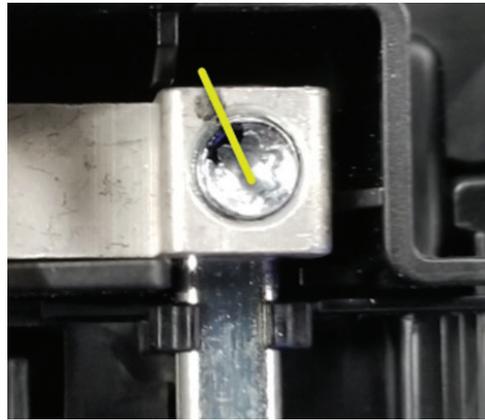
- a. Loosen the left PoN clamping screw by turning it 1/4 turn, counterclockwise. See Figure 9.

**Figure 9 – Left PoN Clamping Screw**



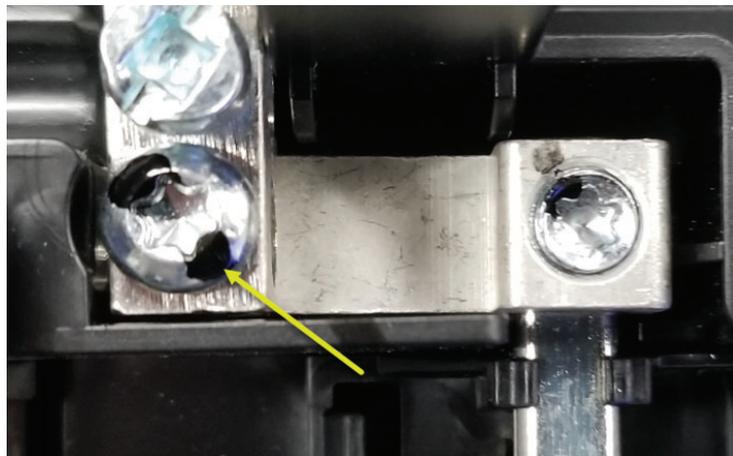
- b. Tighten the clamping screw 1/4 turn at a time, verifying for movement after each 1/4 turn, until the connector does not move anymore. When the connector will not move anymore, apply a mark with the black permanent marker, between the connector and clamping screw. See Figure 10.

**Figure 10 – Tighten Clamping Screw: Apply Mark after Movement Stops**



- c. USING THE TORQUE WRENCH, RE-TIGHTEN the left bottom neutral bar screw to 25 lb-in. (2.8 N•m). Add mark to the left bottom neutral bar screw with black permanent marker. See Figure 11.

**Figure 11 – Apply Marking**



**NOTICE**

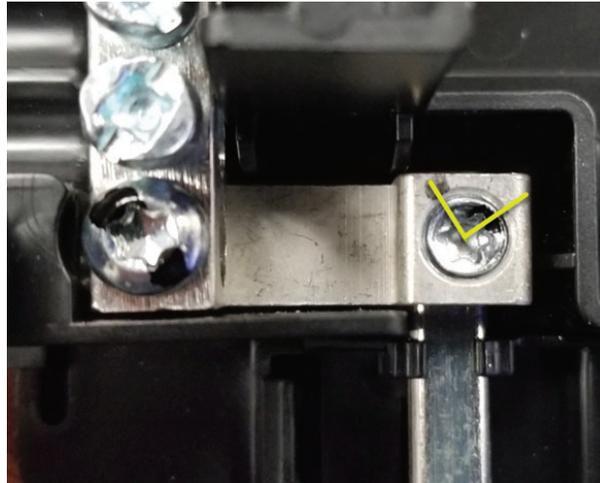
**HAZARD OF EQUIPMENT DAMAGE**

Do not overtighten clamping screws. After the clamping screw has made contact with the plug-on neutral bar, do not tighten the screws to more than 25 lb-in. (2.8 N•m), if using a torque wrench.

**Failure to follow these instructions can result in equipment damage.**

- d. Use the mark on the clamping screw as a reference to tighten an additional 1/4 turn clockwise (see Figure 12). Alternate: use torque wrench to torque clamping screw to 25 lb-in. (2.8 N•m).

**Figure 12 – Tighten Additional 1/4 Turn after Connector does Not Move**

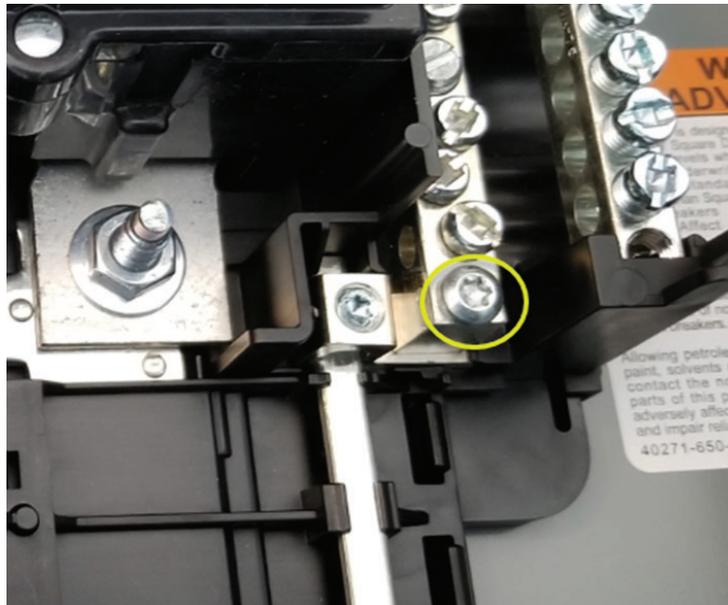


Remediation is complete for the left connector.

**REPEAT steps to determine if the right clamping screw is loose and must be tightened.**

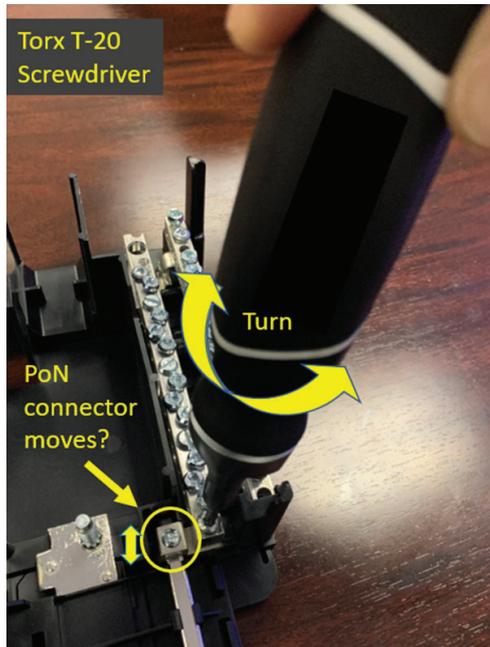
8. Loosen right bottom neutral bar screw.
  - a. Use a T-20 screwdriver to loosen the right bottom neutral bar screw **one full turn counterclockwise** (see Figure 13).

**Figure 13 – Right Bottom Neutral Bar Screw**



- b. Use the screwdriver to turn the right neutral bar screw alternating clockwise and counterclockwise, while inspecting for movement on the PoN connector. See Figure 14.

**Figure 14 – Inspect for Movement on the Right PoN Connector**



**Evaluation:**

If the PoN connector **DOES NOT MOVE**, the clamping screw has proper clamping force. **DO NOT** tighten the clamping screw, as it may damage the connector.

**USING THE TORQUE WRENCH** tighten the right bottom neutral bar screw to 25 lb-in. (2.8 N•m) and add a mark with the black permanent marker. See Figure 15.

Go to step 9.

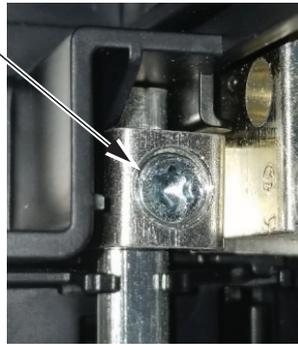
**Figure 15 – Apply Mark after Tightening Right Bottom Neutral Bar Screw**



If the PoN connector **DOES MOVE**, the clamping screw in the PoN connector must be tightened.

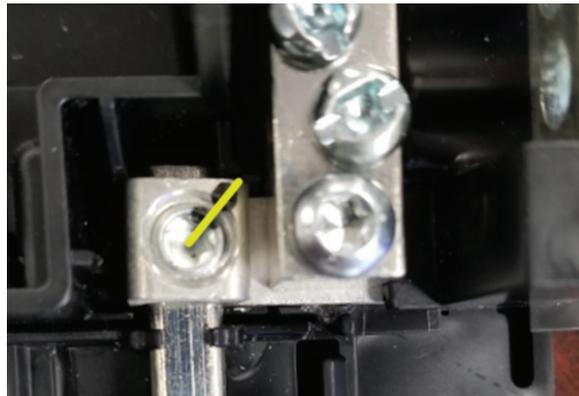
- a. Loosen the right PoN clamping screw by turning it 1/4 turn, counterclockwise. See Figure 16.

**Figure 16 – Right PoN Clamping Screw**



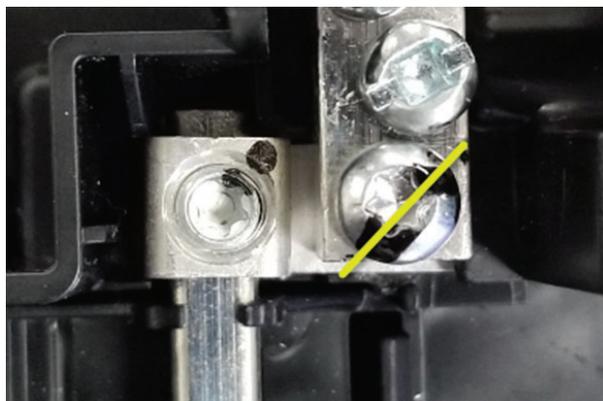
- b. Tighten the clamping screw 1/4 turn at a time, verifying for movement after each 1/4 turn, until the connector does not move anymore. When the connector will not move anymore, apply a mark with the black permanent marker, between the connector and clamping screw. See Figure 17.

**Figure 17 – Apply Marking**



- c. USING THE TORQUE WRENCH, RE-TIGHTEN the right bottom neutral bar screw to 25 lb-in. (2.8 N•m). Add mark to the right bottom neutral bar screw with black permanent marker. See Figure 18.

**Figure 18 – Apply Marking**



## NOTICE

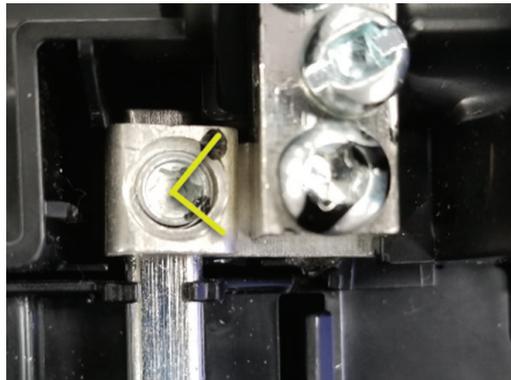
### HAZARD OF EQUIPMENT DAMAGE

Do not overtighten clamping screws. After the clamping screw has made contact with the plug-on neutral bar, do not tighten the screws to more than 25 lb-in. (2.8 N•m), if using a torque wrench.

**Failure to follow these instructions can result in equipment damage.**

- d. Use the mark on the clamping screw as a reference to tighten an additional 1/4 turn clockwise (see Figure 19). Alternate: use torque wrench to torque clamping screw to 25 lb-in. (2.8 N•m).

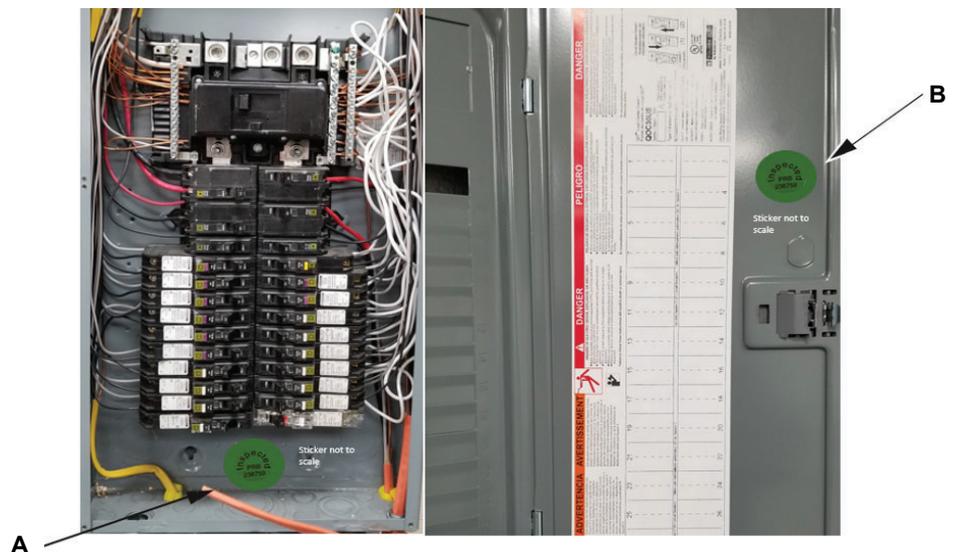
**Figure 19 – Tighten Additional 1/4 Turn after Connector does Not Move**



**Remediation is complete for the right connector.**

9. After completing inspection and/or remediation of both connectors, use the provided green dot sticker labels “**Inspected PRB-236759**” and place them in both locations inside the box (A) and on the back of the cover door (B). Alternate: If the green dot labels are not available, use a black permanent marker and write the legend “**Inspected PRB-236759**”. If the permanent marker is used during remediation, the contractor is to return at the earliest possible date to place a green dot at location (B) only.

**Figure 20 – Inspected PRB-236759 Identification Mark**



10. Re-install the load center cover (indoor) or trim (outdoor) using screws retained in step 2. Torque screws to 20 lb-in. (2.3 N•m).

<b>⚠ WARNING</b>
<b>HAZARD OF OVERHEATING OR FIRE</b>
Do not energize the equipment if damaged during service. If during the remediation service any of the parts are damaged (cracked, deformed, stripped, or other), the full interior must be replaced. Identify the catalog number shown in the interior label (Figure 1) and contact Schneider Electric Technical Support: 1-888-778-2733, options 2, 1, and 4.
<b>Failure to follow these instructions could result in death or serious injury.</b>

11. Re-energize the load center.

## Annex

The below Annex contains a listing of plug-on neutral load centers affected by this remediation.

QO Plug-on Neutral Catalog Numbers				
CQO112L100PGC	CQO160M100PC	QO124L125PQGCVP	QO140L200PG	QP60200
CQO112M100PC	CQO160M150PC	QO124L200PG	QO140M200P	
CQO112M60PC	CQO160M200PC	QO124M100P	QO140M200PC	
CQO116L100PGC	QO112L125KPCA	QO124M100PC	QO140M200PCBE	
CQO116M100PC	QO112L125PG	QO124M100PCVP	QO140M225P	
CQO116M60PC	QO112L125PGC	QO124M125P	QO142L225PG	
CQO124L125PGC	QO112L125PWG	QO124M150P	QO142L225PGC	
CQO124M100PC	QO112L125VPCA	QO124M200P	QO142L225PQG	
CQO124M100PCD	QO112L200PG	QO124M200PWG125	QO142M150PC	
CQO124M60PC	QO112M100P	QO130L125PG	QO142M200P	
CQO132L125PGC	QO112M100PC	QO130L125PQG	QO142M200PC	
CQO132L200PGC	QO116M125PG	QO130L200PG	QO142M200PCVP	
CQO132M100PC	QO116M100P	QO130L200PGC	QO142M200PQ	
CQO132M100PCD	QO116M100PC	QO130L200PQG	QO142M200PCVP	
CQO132M125PC	QO120L125PG	QO130L200PWG	QO142M225P	
CQO132M200PC	QO120L125PGC	QO130M150P	QO154L225PG	
CQO140L125PGC	QO120L125PWG	QO130M150PC	QO154L225PGC	
CQO140L200PGC	QO120M100P	QO130M200P	QO154L225PQG	
CQO140M100PC	QO120M100PC	QO130M200PC	QO154M200P	
CQO140M125PC	QO120M150P	QO130M200PQ	QO154M200PC	
CQO140M150PC	QO120M200P	QO132L125PG	QO154M200PQ	
CQO140M200PC	QO124L125PG	QO132M100P	QO160M200PC	
CQO140M200PCD	QO124L125PGC	QO132M100PCVP	QP24100	
CQO142L225PGC	QO124L125PGCVP	QO132M125P	QP32100	
CQO160L225PGC	QO124L125PQG	QO132M150P	QP40200	

OEM QO Plug-on Neutral Interiors
QON124L200PDL
QON120L125PI
QON124L200PI
QON130L200PI
QON130L200PDL
QON142L225PI
QON112L200PI
QON154L225P

Electrical equipment must be installed, operated, serviced, and maintained only by qualified personnel. No responsibility is assumed by Schneider Electric for any consequences arising out of the use of this material.

Schneider Electric USA, Inc.  
 800 Federal Street  
 Andover, MA 01810 USA  
 888-778-2733  
[www.se.com/us](http://www.se.com/us)

Schneider Electric and Square D are trademarks and the property of Schneider Electric SE, its subsidiaries, and affiliated companies. All other trademarks are the property of their respective owners.

© 2022 Schneider Electric All Rights Reserved