Replacement of Live Parts

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Qualified Persons

⚠ WARNING

The equipment covered by this publication must be installed, operated, and maintained by qualified persons who are knowledgeable in the installation, operation, and maintenance of overhead electric power distribution equipment along with associated hazards. A qualified person is one who is trained and competent in:

- The skills and techniques necessary to distinguish exposed live parts from non-live parts of electrical equipment.
- The skills and techniques necessary to determine the proper approach distances corresponding to the voltage to which the qualified person will be exposed.
- The proper use of the special precautionary techniques, personal protective equipment, insulating and shielding materials, and insulated tools for working on or near exposed energized parts of electrical equipment.

These instructions are intended only for such qualified persons. They are not intended to be a substitute for adequate training and experience in safety procedures for this type of equipment.

Read this Instruction Sheet

Thoroughly and carefully read this instruction sheet before repairing your S&C Omni-Rupter Switch. Familiarize yourself with "Safety Information" on pages 3 and 4.

Retain this Instruction Sheet

This instruction sheet is a permanent part of your S&C Omni-Rupter Switch. Designate a location where you can easily retrieve and refer to this publication. The latest version is available online in PDF format at **sandc.com/Support/Product-Literature.asp**

Proper Application

⚠ CAUTION

The equipment in this publication must be selected for a specific application. The application must be within the ratings furnished for the equipment. Refer to S&C Specification Bulletin 765-31 for complete application information.

In most applications, these interrupter switches are capable of switching rated continuous load currents at full voltage. Consequently, no interlocking with secondary protective equipment is required.

Warranty

The warranty and/or obligations described in S&C's standard conditions of sale, as set forth in Price Sheet 150, plus any special warranty provisions, as set forth in the applicable product-line specification bulletin, are exclusive. The remedies provided in the former for breach of these warranties shall constitute immediate purchaser's or end user's exclusive remedy and a fulfillment of all seller's liability. In no event shall seller's liability to immediate purchaser or end user exceed the price of the specific product which gives rise to immediate purchaser's or end user's claim. All other warranties whether express or implied or arising by operation of law, course of dealing, usage of trade or otherwise, are excluded. The only warranties are those stated in Price Sheet 150, and THERE ARE NO EXPRESS OR IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. ANY EXPRESS WARRANTY OR OTHER OBLIGATION PROVIDED IN PRICE SHEET 150 IS GRANTED ONLY TO THE IMMEDIATE PURCHASER AND END USER, AS DEFINED THEREIN. OTHER THAN AN END USER, NO REMOTE PURCHASER MAY RELY ON ANY AFFIRMATION OF FACT OR PROMISE THAT RELATES TO THE GOODS DESCRIBED HEREIN, ANY DESCRIPTION THAT RELATES TO THE GOODS, OR ANY REMEDIAL PROMISE INCLUDED IN PRICE SHEET 150.

The seller's warranties do not apply if the switch is power operated using a switch operator of other than S&C manufacture.

Understanding Safety-Alert Messages

There are several types of safety-alert messages which may appear throughout this instruction sheet. Familiarize yourself with these types of messages and the importance of the various signal words, as explained below.

⚠ DANGER

"DANGER" identifies the most serious and immediate hazards which *will likely* result in serious personal injury or death if instructions, including recommended precautions, are not followed.

⚠ WARNING

"WARNING" identifies hazards or unsafe practices which *can* result in serious personal injury or death if instructions, including recommended precautions, are not followed.

⚠ CAUTION

"CAUTION" identifies hazards or unsafe practices which *can* result in minor personal injury or product or property damage if instructions, including recommended precautions, are not followed.

NOTICE

"NOTICE" identifies important procedures or requirements that, if not followed, *can* result in product or property damage if instructions are not followed.

Following Safety Instructions

If you do not understand any portion of this instruction sheet and need assistance, contact your nearest S&C Sales Office or S&C Authorized Distributor. Their telephone numbers are listed on S&C's website **sandc.com** Or call S&C Headquarters at (773) 338-1000; in Canada, call S&C Electric Canada Ltd. at (416) 249-9171.

NOTICE

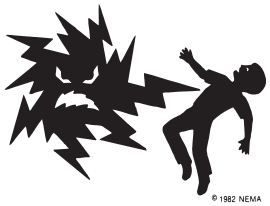
Thoroughly and carefully read this instruction sheet before repairing your S&C Omni-Rupter Switch.

Replacement Instructions and Labels

If you need additional copies of this instruction sheet, contact your nearest S&C Sales Office, S&C Authorized Distributor; S&C Headquarters, or S&C Electric Canada Ltd.

It is important that any missing, damaged, or faded labels on the equipment be replaced immediately. Replacement labels are available by contacting your nearest S&C Sales Office, S&C Authorized Distributor, S&C Headquarters, or S&C Electric Canada Ltd.

⚠ DANGER



Omni-Rupter Switches operate at high voltage. Failure to observe the precautions below will result in serious personal injury or death.

Some of these precautions may differ from company operating procedures and rules. Where a discrepancy exists, users should follow their company's operating procedures and rules.

1. **QUALIFIED PERSONS.** Access to switches and controls must be restricted only to qualified persons. See "Qualified Persons" on page 2.
2. **SAFETY PROCEDURES.** Always follow safe operating procedures and rules.
3. **PERSONAL PROTECTIVE EQUIPMENT.** Always use suitable protective equipment such as rubber gloves, rubber mats, hard hats, safety glasses, and flash clothing in accordance with safe operating procedures and rules.
4. **SAFETY LABELS AND TAGS.** Do not remove or obscure any of the "DANGER," "WARNING," "CAUTION," or *"NOTICE"* labels and tags. Remove tags ONLY if instructed to do so.
5. **ENERGIZED COMPONENTS.** Always consider all parts live until de-energized, tested, and grounded.
6. **LOAD-INTERRUPTER SWITCH POSITION.** Always confirm the open/close position of load-interrupter switches by visually observing the position of the blades. Switches may be energized from either side and with the blades in any position.
7. **MAINTAINING PROPER CLEARANCE.** Always maintain proper clearance from energized components.
8. **OPERATION.** Circuit making and breaking is involved in the normal operation of this interrupter switch and, as a result, "partway" opening or closing is undesirable. To operate, swing the operating handle through its full travel vigorously and without hesitation. See "Checking Operation" on page 17.

Before Starting

⚠ DANGER

De-energize and ground the Omni-Rupter switch at all six terminals before installing replacement parts.

Replacement Omni-Rupter parts are NOT designed to be installed with a hot stick, or on an energized switch.

Serious injury or death could result.

Below is a diagram of the replacement live parts. See Figure 1.

After performing any of the procedures in this instruction guide, proceed to "Checking Operation" on page 17 and perform the detailed inspections.

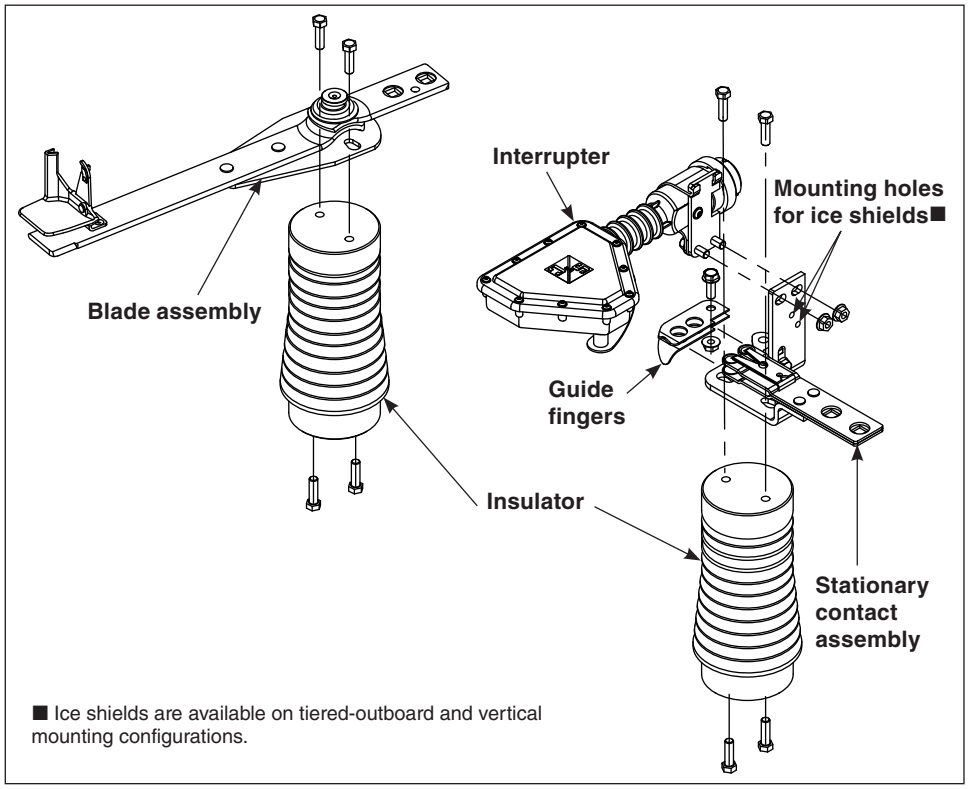


Figure 1. Omni-Rupter replacement insulators and live parts, 25 kV shown 14.4 kV similar.

NOTE: Omni-Rupter Switches with 14.4- and 25-kV Cypoxy™ Insulators use ⅜-inch hex head hardware for all live part connections. Switches with Porcelain ("-SP") or Silicone ("-K") insulators, or with 35-kV Cypoxy Insulators ("-Z3" Over-insulated) use ½-inch socket head hardware to mount the blade assembly to the insulator, and use ½-inch hardware for all other live part connections.

Tools Required:

- (2) 9⁄16-inch-open-end or combination wrench
- 5⁄16-inch-Hex-Key Wrench (Porcelain, Silicone Insulators, and 34.5-kV Cypoxy)
- ¾-inch-open-end or combination wrench
- (2) 7⁄16-inch-combination wrench (Ice Shields)
- Brush or applicator for lubricant
- Clean soft cloth.

Interrupter Replacement

If one interrupter requires replacement, S&C recommends replacing all three interrupters simultaneously.

Step 1

Operate the switch to the fully-closed position. Remove the two ⅜-inch-serrated flange nuts holding the existing interrupter to the stationary contact bracket. Remove the interrupter. (The bolts are integral to the interrupter clamp and should not be removed.) See Figure 2.

⚠ CAUTION

DO NOT loosen the interrupter clamp screw or remove the upper housing of the interrupter. There are no serviceable parts inside the interrupter.

Step 2

Lubricate the surface of the stationary contact bracket with Penetrox® A or Burndy equivalent. Align the replacement interrupter with the slotted holes on the stationary contact bracket. Make sure the interrupter shunt arm is between the auxiliary return arm and the shunt contact. See Figure 3. Thread the new flange nuts onto the interrupter clamp bolts and hand-tighten.

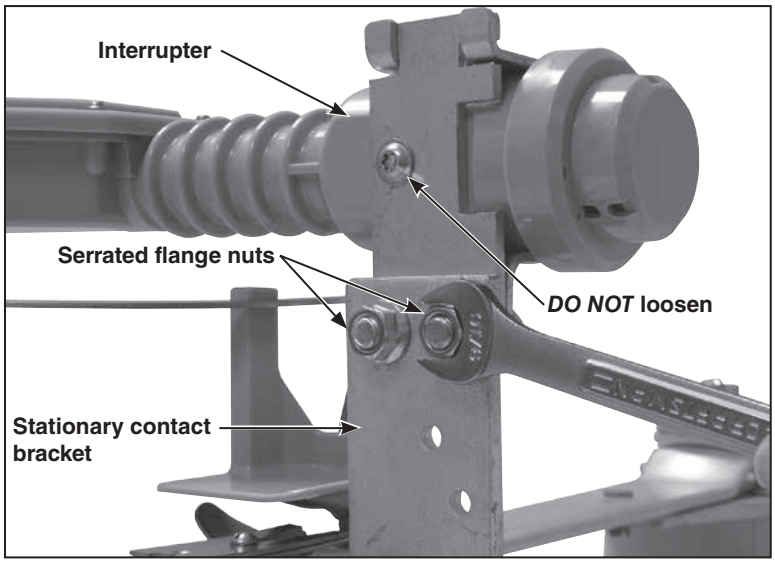


Figure 2. Remove the serrated flange nuts holding the interrupter to the bracket. Remove the interrupter.

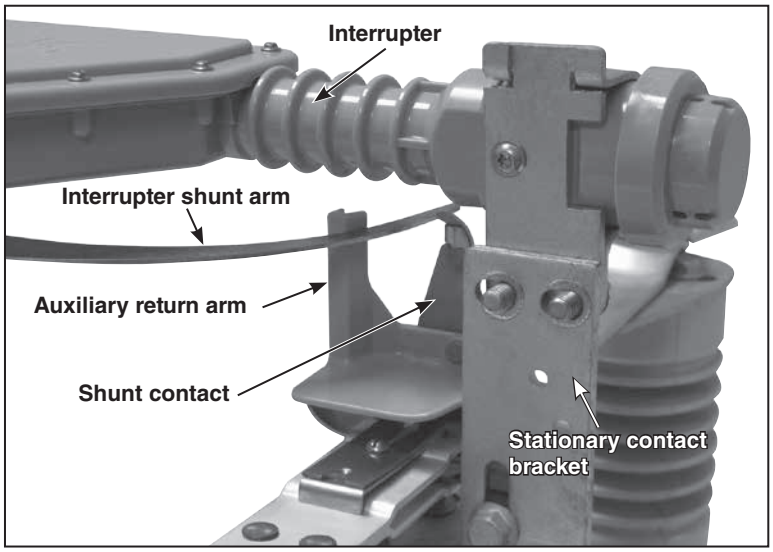


Figure 3. Align the replacement interrupter with the holes on the bracket. Make sure the shunt arm is between the auxiliary return arm and the shunt contact.

Step 3

Check that there is approximately ⅛-inch clearance between the interrupter shunt arm and the auxiliary return arm. See Figure 4. Fully tighten the serrated flange nuts to 40 ft.-lbs.

Step 4

Slowly close and open the switch several times and verify that the conditions shown in the "Checking Operation" section on page 17 have been met.

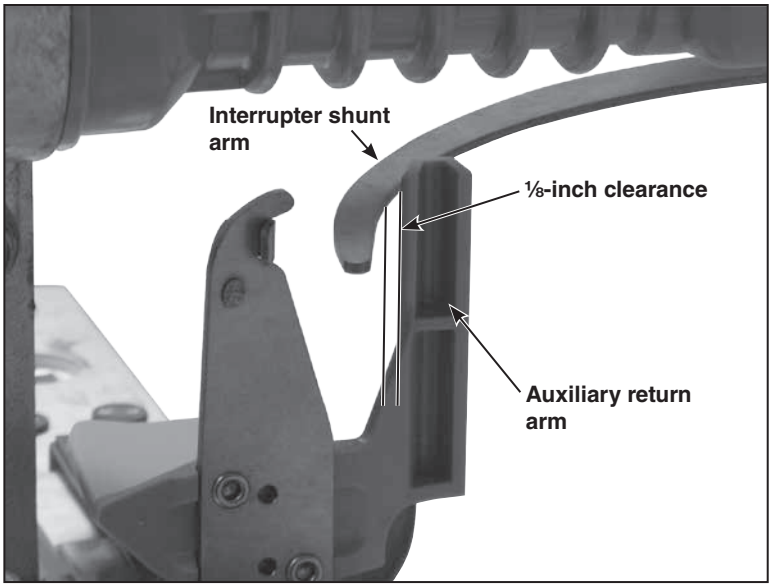


Figure 4. Check for clearance between interrupter shunt arm and auxiliary return arm. Fully tighten the serrated flange nuts to 40 ft.-lbs.

Blade Assembly Replacement

Step 5

Operate the switch to the open position. (If desired, lock the operating handle in the open position, or the hookstick handle to avoid moving the switch out of the "OPEN" position while performing the replacement.) Remove the high-voltage conductors from the hinge-end terminal pad.

Step 6

Depending on the voltage and insulator material of the Omni-Rupter Switch, the bolts holding the blade assembly to the insulator may be held captive under the hinge joint of the articulating terminal pad. See Figure 5. With an open-ended or hex key wrench, loosen the bolts securing the blade assembly to the insulator. Lift the blade assembly to provide room for completely removing the bolts if necessary. See Figure 6.

Clean the surface of the insulator with a soft cloth. See Figure 16 on page 13.

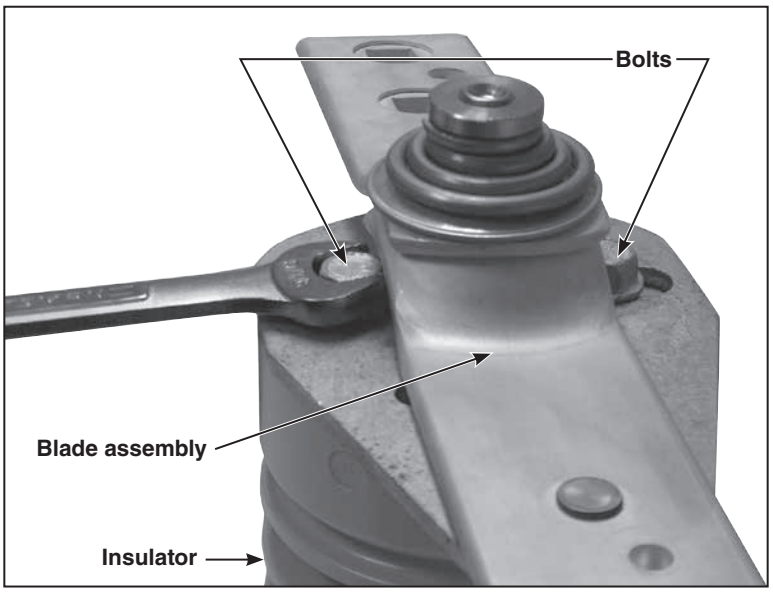


Figure 5. Loosen the bolts securing the blade assembly to the interrupter.

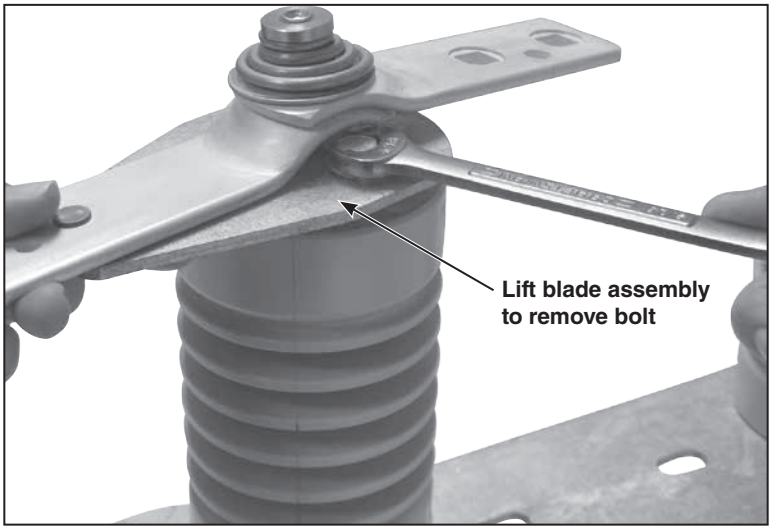


Figure 6. Lift the mounting plate to fully loosen the bolts.

Step 7

Insert the new bolts into the mounting plate of the new blade assembly. Align the bolts into the threaded holes on the top of the interrupter, and hand thread them into the threaded holes. See Figure 7. Lift the blade assembly while tightening the bolts until the bolts are low enough to engage with a open-ended wrench as seen in Figure 6. Fully tighten the bolts.

Step 8

Clean the grease off of the button contacts of the stationary jaw contact with a soft cloth. See Figure 8. Lubricate the jaw contacts and blade with a light coating of Shell Gadus® S2 U1000 2 Lubricant or equivalent.

NOTICE

Omni-Rupter Switches specified with the optional harsh environment contacts (Catalog Number Suffix "-C") have graphite impregnated blades which are greaseless and self-lubricating. **DO NOT** apply grease to the blade contacts.

Step 9

Slowly close and open the switch several times and verify that the conditions shown in the "Checking Operation" section on page 17 have been met.

Step 10

Clean and re-prepare the jumper and terminal pad before reinstallation. Instructions for preparing terminal pads may be found in the appropriate Omni-Rupter Switch installation manual.

⚠ WARNING

DO NOT apply excessive load to the terminal pads.

The jumper connections should be in-line with and level to the terminal pad bolt holes before securing the jumper fasteners to the terminal pad. Large pull-off forces may misalign the blades with the stationary contacts and prevent proper closing.

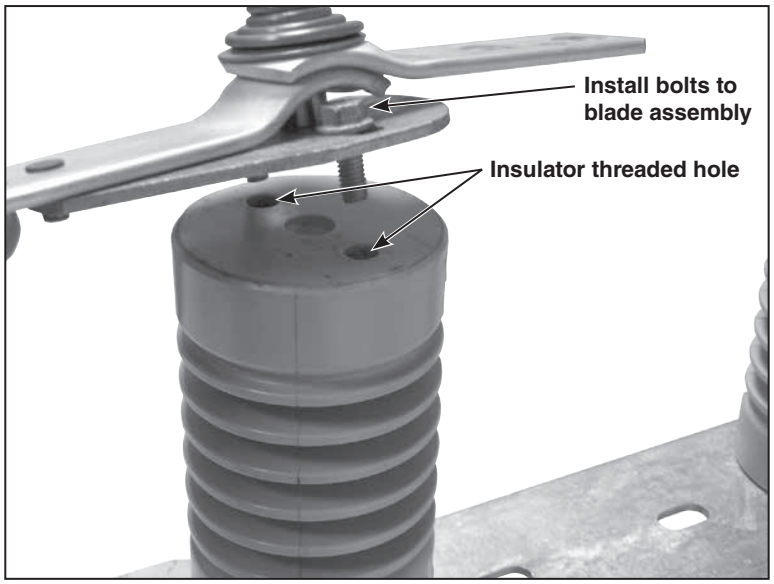


Figure 7. Insert the new bolts into the mounting plate. Hand-tighten the bolts until they are low enough to engage with a wrench.

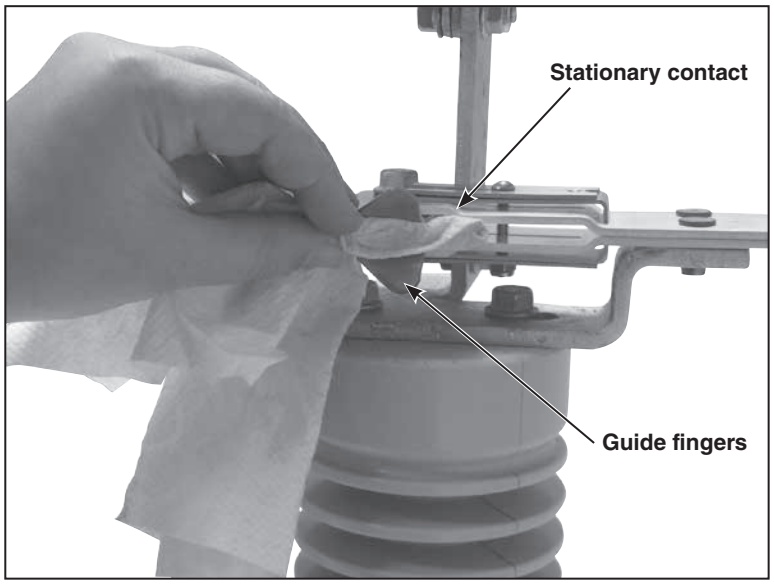


Figure 8. Clean the contact surfaces. Lubricate if necessary.

Guide Finger (Arcing Contacts) Replacement

Step 11

Operate the switch to the open position. (If desired, lock the operating handle in the open position, or the hookstick handle to avoid moving the switch out of the "OPEN" position while performing the replacement.)

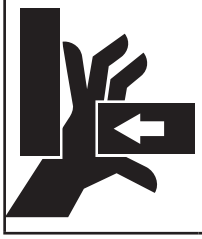
Step 12

Loosen and remove the ⅜-inch bolt and serrated flange nut securing the guide fingers to the guide finger mounting bracket. See Figure 9.

Step 13

Remove the guide fingers, one at a time, by angling them and pulling them from between the stationary contact buttons. See Figure 10. ***DO NOT loosen or remove the contact spring adjustment pin.***

⚠ WARNING



Pinch hazard.

Jaw contacts are under spring pressure.

Use care when removing guide fingers.

⚠ CAUTION

DO NOT loosen or remove the contact pin. Contact pressure is set and calibrated at the factory. Loosening or removing the contact pin will cause uneven contact pressure, arcing and damage to the switch, and will necessitate replacement of the ENTIRE stationary contact assembly.

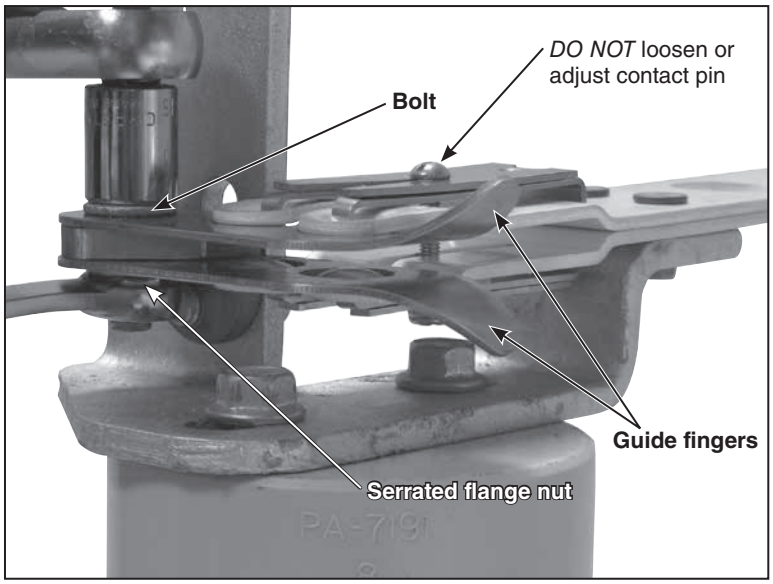


Figure 9. Remove the serrated flange nut securing the guide fingers to the mounting bracket.

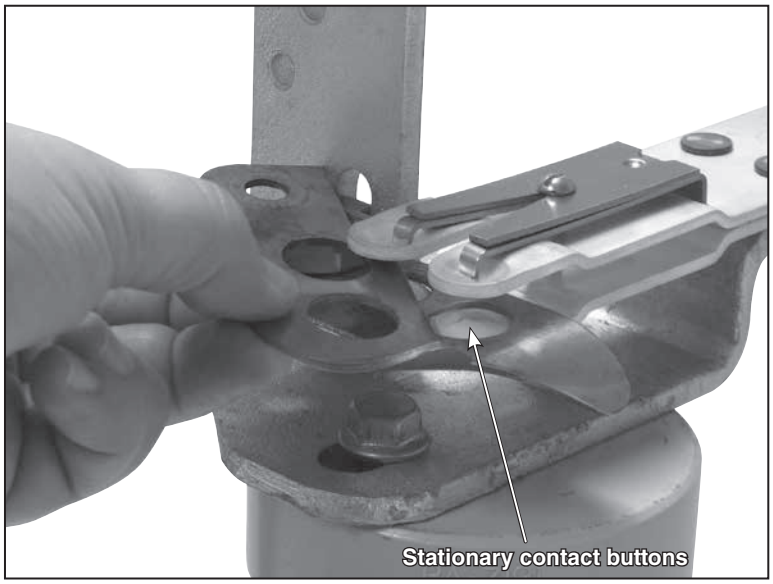


Figure 10. Remove the guide fingers.

Step 14

Clean the grease off of the button contacts of the stationary jaw contact with a soft cloth. See Figure 11. Lubricate the jaw contacts and blade with a light coating of Shell Gadus® S2 U1000 2 Lubricant or equivalent.

NOTICE

Omni-Rupter Switches specified with the optional harsh environment contacts (Catalog Number Suffix "-C") have graphite impregnated blades which are greaseless and self-lubricating. **DO NOT** apply grease to the blade contacts.

DO NOT use a wire brush or other abrasive to clean the contacts.

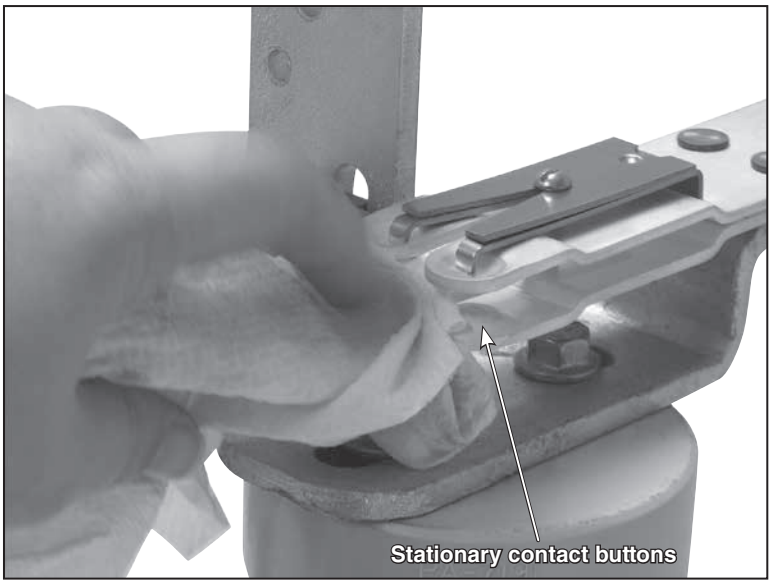
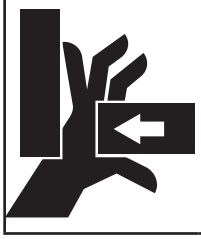


Figure 11. Clean the contacts with a soft cloth. Lubricate the contacts.

⚠ WARNING



Pinch hazard.

Jaw contacts are under spring pressure.

Use care when installing guide fingers.

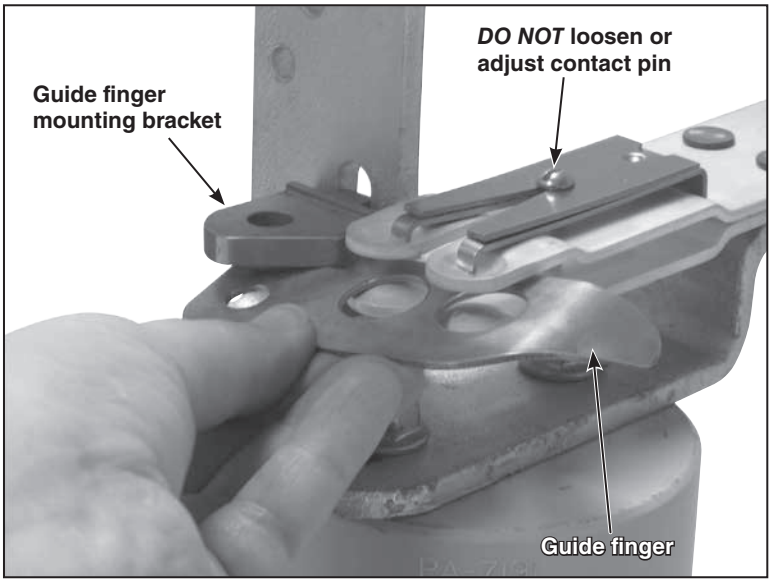


Figure 12. Install the guide fingers.

Step 15

Insert the upper and lower replacement contacts, one at a time, between the contact buttons. The ends should curve away from the guide finger mounting bracket. Then align the notched end of the contact finger with the mounting bracket. See Figure 12 and Figure 13 on page 12. Secure with the included new ⅜-inch-serrated head bolt and serrated flange nut. Tighten to 40 ft.-lbs.

Step 16

Slowly close and open the switch several times and verify that the conditions shown in the "Checking Operation" section on page 17 have been met.

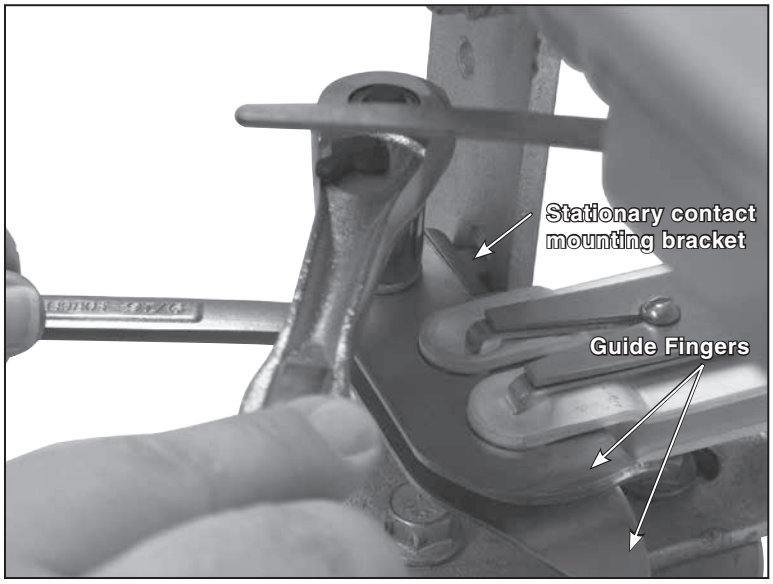


Figure 13. Align the contact fingers with the mounting bracket. Tighten to 40 ft.-lbs.

Stationary Contact Assembly Replacement

Step 17

Open the switch. Remove the high-voltage conductors from the terminal pad of the stationary contact assembly(s) requiring replacement. If the existing interrupter is to be reused, remove it per the instructions in Step 1 on page 6 and retain it and its hardware in a protected area.

Step 18

Remove the inner bolt holding the stationary contact support bracket to the insulator. See Figure 14. (Hardware specifications vary depending on the insulator material.) Then loosen the bolt beneath the contact assembly. ***DO NOT loosen or remove the contact spring adjustment pin.*** Slide the assembly in until the bolt is no longer captive beneath the contact pin and loosen it until the stationary contact support bracket can be removed from the insulator. See Figure 15 on page 13.

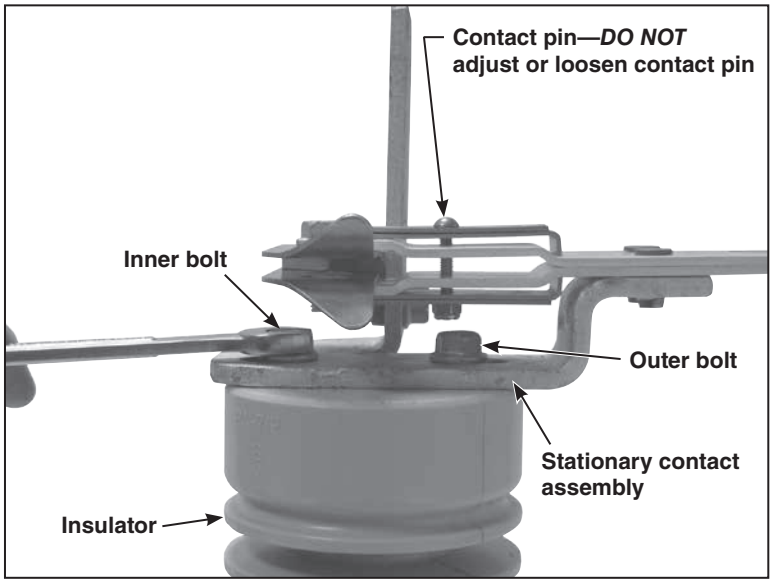


Figure 14. Remove the inner bolt.

⚠ CAUTION

DO NOT loosen or remove the contact pin. Contact pressure is set and calibrated at the factory. Loosening or removing the contact pin will necessitate replacement of the ENTIRE stationary contact assembly. Operating a switch with incorrect contact pressure may cause arcing and damage to the switch.

Step 19

Clean the surface of the insulator with a soft cloth. See Figure 16.

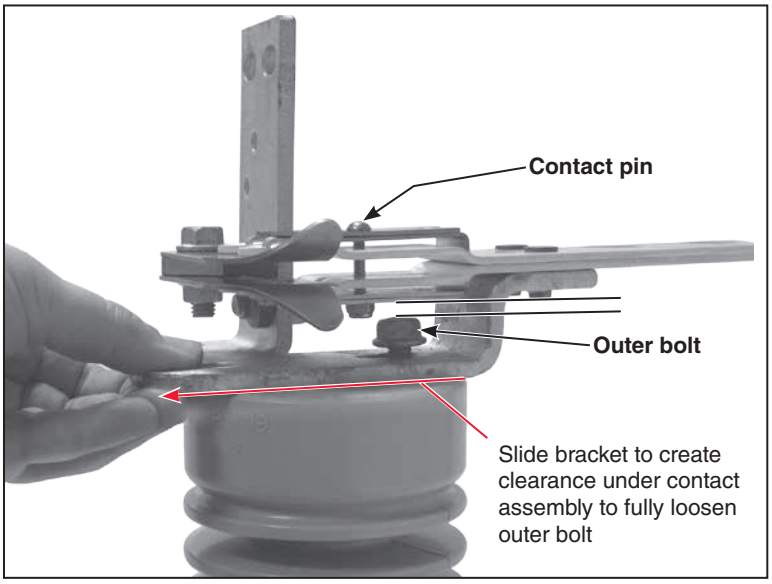


Figure 15. Loosen the outer bolt. Slide the contact assembly until the bolt is clear of the contact pin.

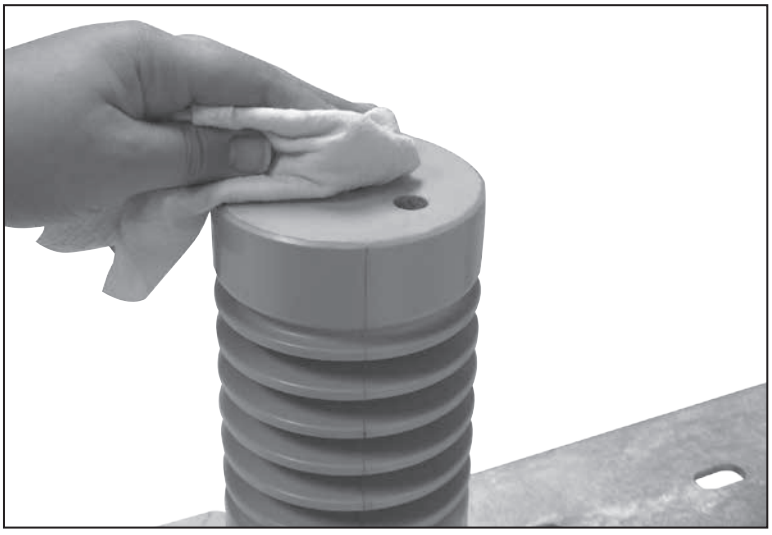


Figure 16. Clean the insulator.

Step 20

Place the new stationary contact assembly on the insulator. Align the hole closest to the terminal pad with the threaded hole on the insulator. See Figures 17 and 18. (Depending on the insulator material, the bolt may be pre-installed to the stationary contact support bracket and held captive under the contact assembly to facilitate installation.) ***DO NOT loosen or remove the contact pin.*** Tighten the bolt until there is enough clearance underneath the contact pin to slide the stationary contact support bracket so that the threaded hole for the inner bolt aligns with the slotted hole in the bracket.

⚠ CAUTION

DO NOT loosen or remove the contact pin. Contact pressure is set and calibrated at the factory. Loosening or removing the contact pin will cause uneven contact pressure, arcing, and damage to the switch, and will necessitate replacement of the ENTIRE stationary contact assembly.

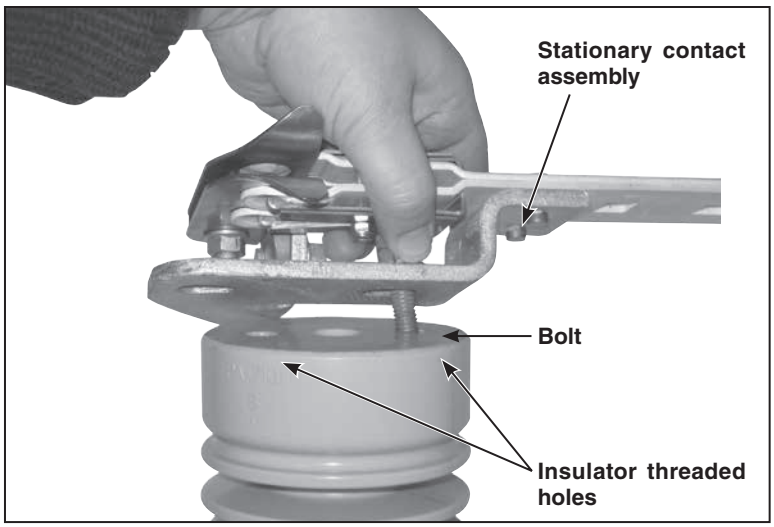


Figure 17. Align the outer bolt and hand-tighten until there is enough clearance to slide the mounting bracket.

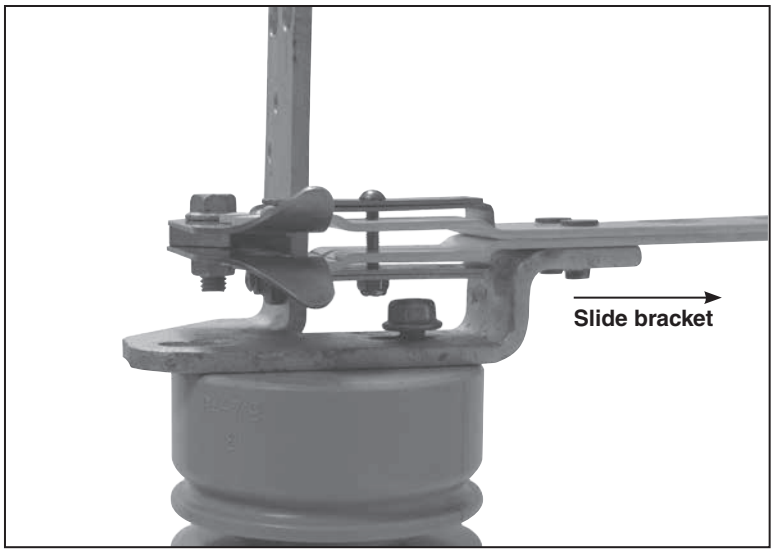


Figure 18. Slide the bracket until both holes align with the threaded hole on the insulator.

Step 21

Install the inner stationary contact support bracket mounting bolt as shown in Figure 19. Torque to 40 ft.-lbs.

Step 22

Install the interrupter according to the instructions starting in Step 2 on page 6.

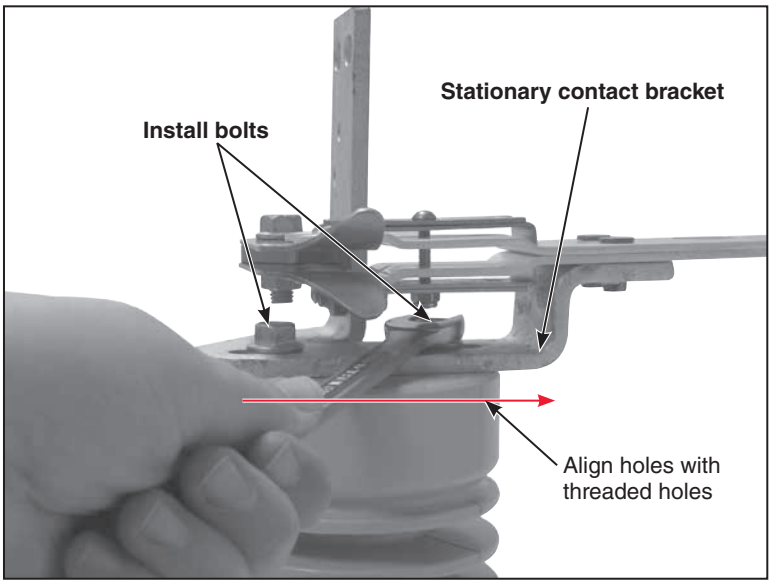


Figure 19. Install the bolts.

Installing Ice Shields (Vertical and Tiered-Outboard Mounting Configuration)

Ice shields are installed on the stationary contact support bracket. See Figure 20. When replacing the stationary contact assembly, the ice shields can be reused if they are in good condition. If there is excessive dirt or debris on the upper surface of the ice shield, it can be cleaned with a mild soap and water solution.

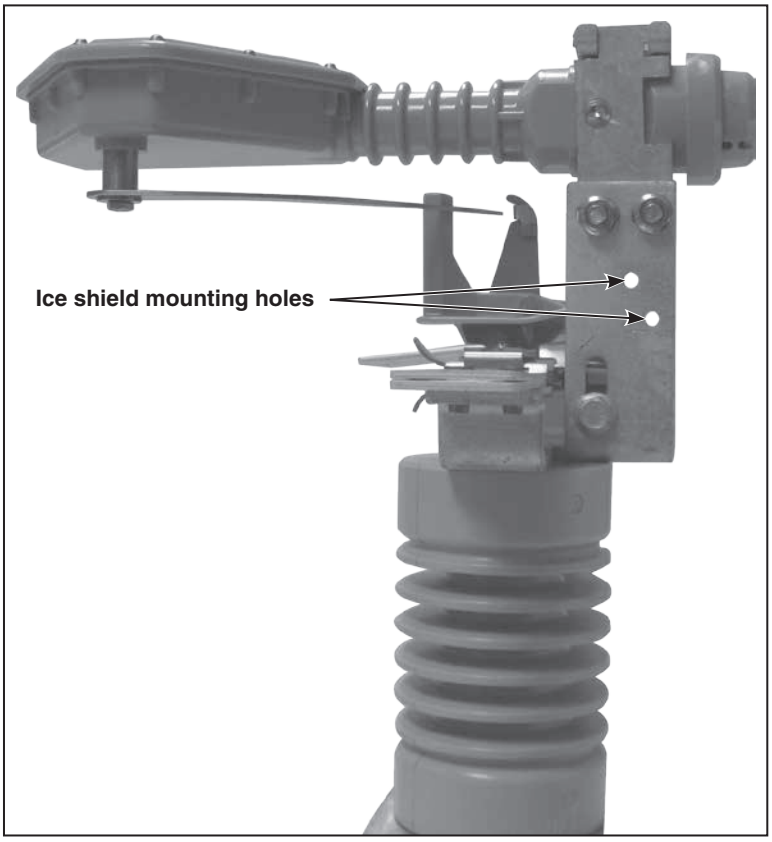


Figure 20. Mounting holes for ice shields.

Step 23

For switches in the tiered-outboard mounting configuration:

Install the ice shield to the stationary contact support bracket so that the flat shield is over the stationary contact assembly, using the two ¼-inch-stainless-steel hex head cap screws, flat washers and hex head nuts provided. See Figure 21.

Make sure that there is at least a ¼-inch gap between the ice shield and the interrupter end gap.

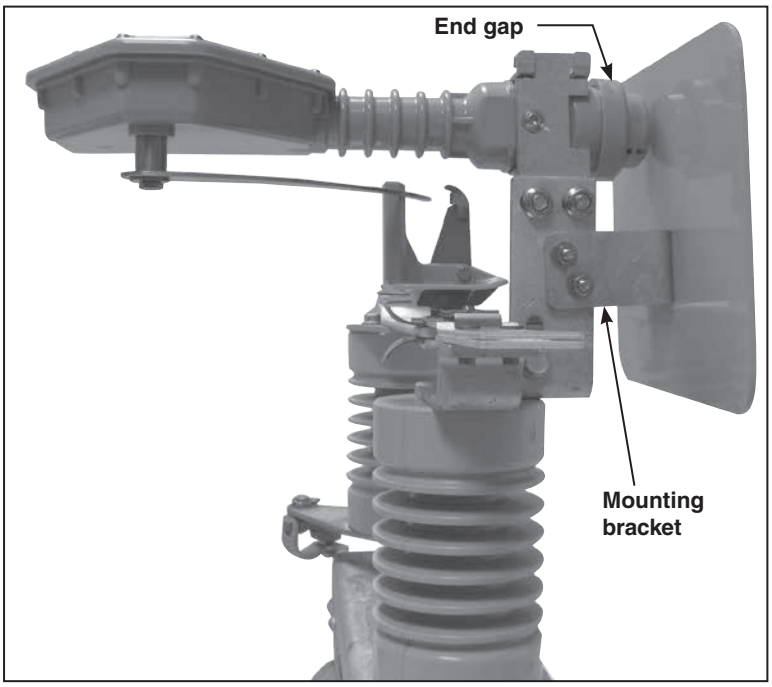


Figure 21. Ice shield, tiered-outboard mounting configuration.

For switches in the vertical mounting configuration:

Remove the jumper connector from the stationary contact end terminal pad, or install the ice shield BEFORE re-installing the connector after stationary contact assembly replacement. See Figure 22.

Install the ice shield over the stationary contact assembly so that the flat shield is over the stationary contact assembly, using the two ¼-inch-stainless-steel hex head cap screws, flat washers and hex head nuts provided.

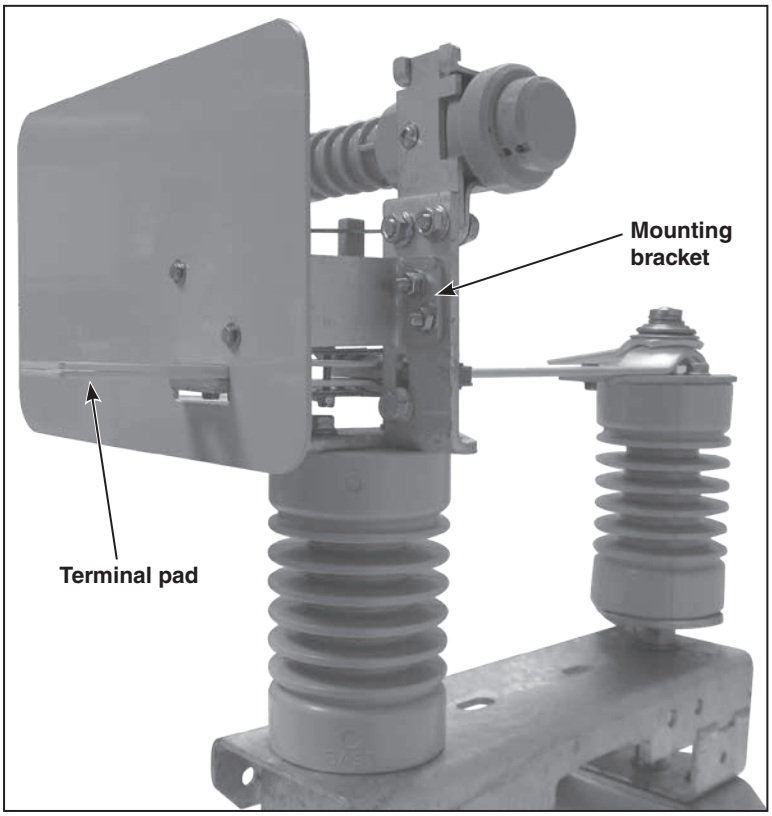


Figure 22. Ice shield, vertical mounting configuration.

Checking Operation

Step 24

Open and close the interrupter switch by swinging the handle slowly through its full travel. Check to be sure that the following conditions exist:

a. With the operating handle as far as it will go in the closing direction, all main contacts of the interrupter switch are in the fully-closed position. See Figure 23.

b. With the operating handle as far as it will go in the opening direction, the switch blades are 90 degrees from the closed position. See Figure 24.

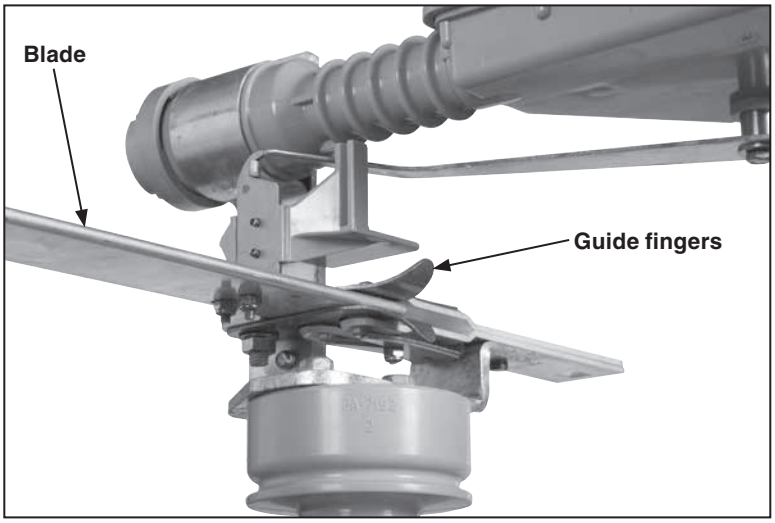


Figure 23. Blade and contact assembly in the fully-closed position.

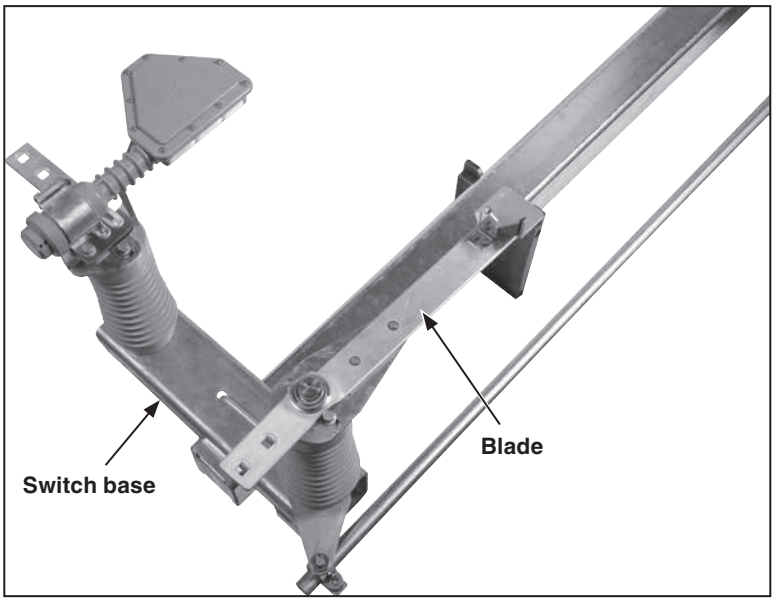


Figure 24. Blade at 90 degrees from switch base position.

Step 25

Check the following on each phase.

a. Open and close the switch and examine the interrupter and blade alignment. The interrupter and interrupter shunt arm must be parallel to the sweep of the blade. See Figure 25.

b. Slowly open the switch. The following conditions should be met:

- As the blades move towards the open position, the operating cam shunt contact should engage the interrupter shunt arm on the copper-bronze contact surface of the shunt contact. See Figure 26.
- When the blade reaches its full travel the interrupter shunt arm will be released and will quickly snap back to its closed position and reset for the next operation. See Figure 25.

c. Slowly close the switch. The following conditions should be met:

- The interrupter shunt arm should be guided into position by the curved back of the shunt contact. See Figure 27.

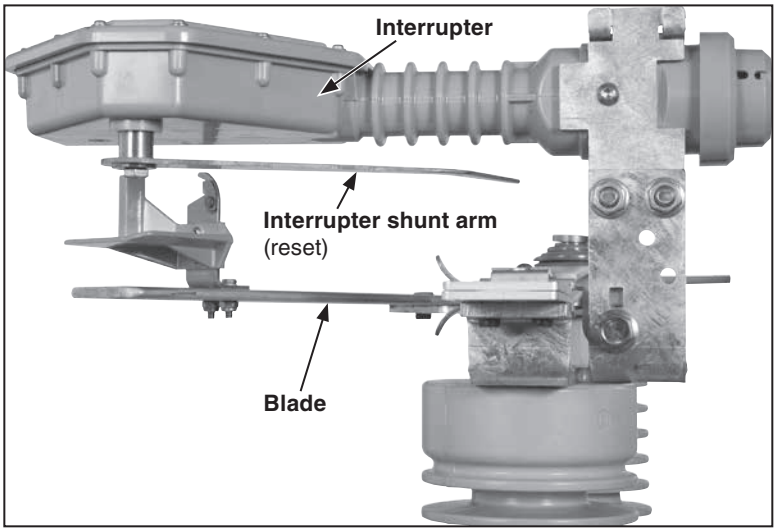


Figure 25. Interrupter and interrupter shunt arm is parallel to the sweep of the blade.

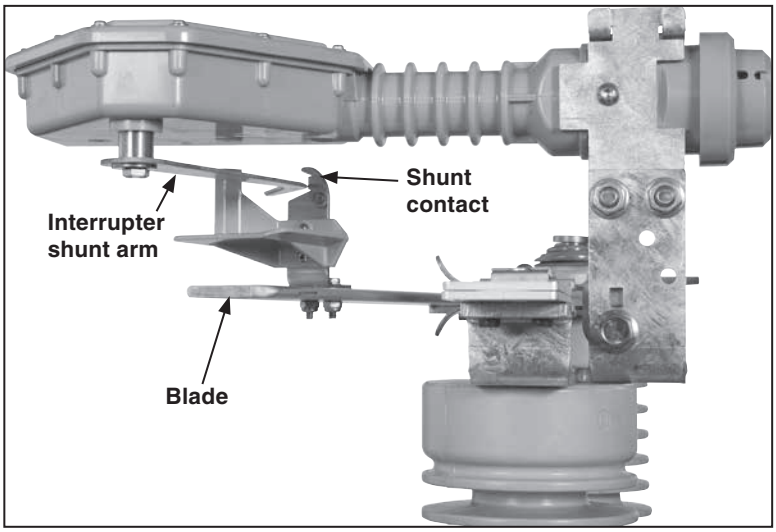


Figure 26. Shunt contact should engage the interrupter shunt arm on the copper-bronze contact surface of the shunt contact.

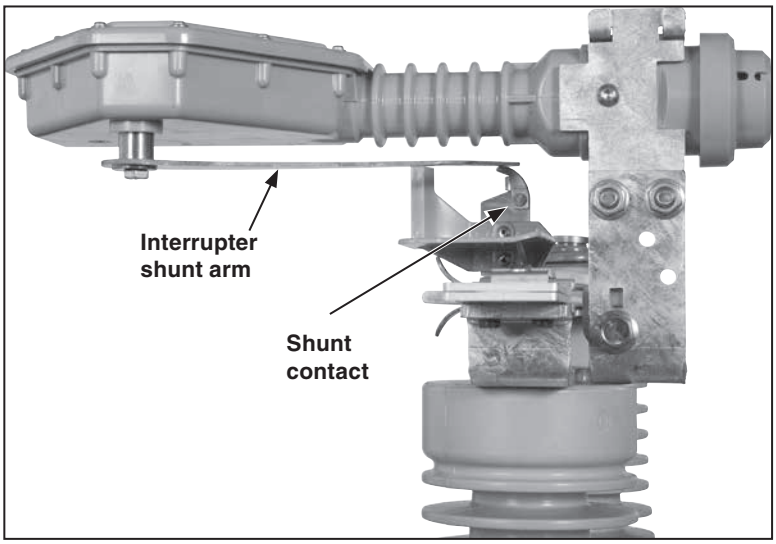


Figure 27. Interrupter shunt arm will be guided into position by the shunt contact.

- When the interrupter is fully-closed, the interrupter shunt arms are resting against or no more than ⅛-inch away from the auxiliary return arm of the multipurpose operating cam. See Figures 28 and 29.
- The blade should move into the jaw contact guide fingers on center and rests against the closed gap. See Figure 30.

NOTICE

If any of the conditions described above cannot be achieved, it is likely that damage was sustained during shipping or storage. Contact the nearest S&C Sales Office for assistance.

NOTICE

Omni-Rupter Switches specified with the optional harsh environment contacts (Catalog Number Suffix "-C") have graphite impregnated blades which are greaseless and self-lubricating. **DO NOT** apply grease to the blade contacts.

If blade adjustment is necessary:

- To adjust the penetration of the blade into the closed stop, loosen the hardware holding the blade assembly to the insulator and push the blade against the closed stop. Retighten the screws to 40 ft.-lbs.

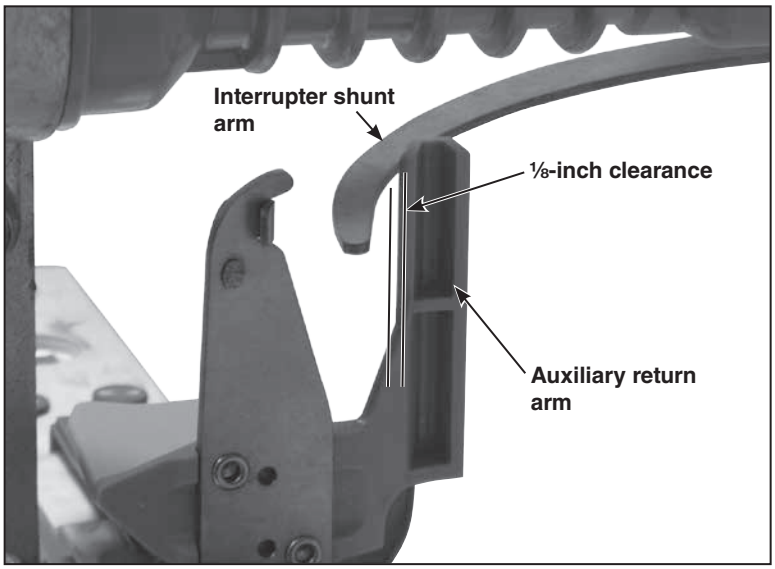


Figure 28. Check for ⅛-inch clearance between the interrupter shunt arm and the auxiliary return arm.

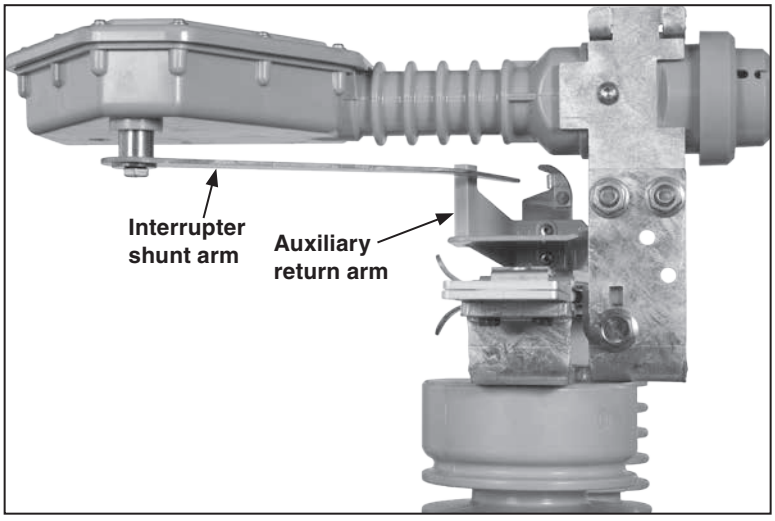


Figure 29. The interrupter shunt arm should be resting against, or no more than ⅛-inch away from the auxiliary return arm.

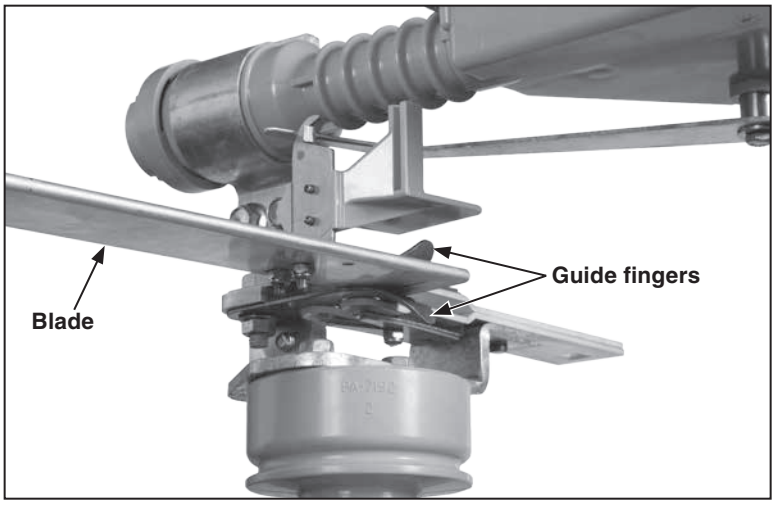


Figure 30. During closing, make sure the blade enters the guide fingers on center.

Retrofitting "R3" or Previous Catalog Number Revision Omni-Rupter Switches with "R4" Pole-Units

The blade mounting hole orientation has changed between the "R3" and previous catalog revisions of the Omni-Rupter Switch and the "R4" catalog number revision. Spacer adapters must be installed to change the hole pattern of the insulators when retrofitting an "R4" pole-unit onto a previous catalog number ("R3" or earlier) revision switch.

Retrofitting the Blade Assembly

Step 26

With the switch in the open position, and the high-voltage conductors removed, remove the two ⅜-inch bolts that secure the existing blade to the rotating insulator using a 9⁄16-inch box wrench. Note which set of insulator threaded holes the blade was mounted to. Remove the old blade and discard, or recycle. See Figure 31.

If necessary, clean the surface of the insulator with a soft cloth.

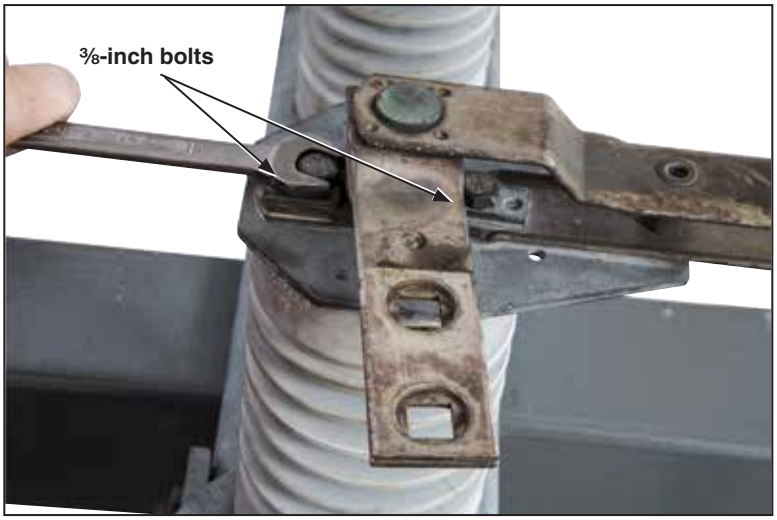


Figure 31. Remove the bolts securing the blade to the insulator. Clean insulator if necessary.

Step 27

Align the spacer adapter mounting holes with the holes on top of the rotating insulator that the existing blade was mounted on. See Figure 32.

The spacer adapter is used to change the bolt pattern of the insulator to allow installation of the replacement ("-R4") blade. The mounting holes in the spacer adapter are oversized to allow for 5 degrees of over-travel in the blade rotation which ensures that the blades fully contact the jaw contacts when closed. When installing the spacer adapter:

For 14.4-kV switches, hand-thread the two ⅜-inch bolts into the mounting bosses. Rotate the spacer adapter ***clockwise*** and hold the spacer adapter firmly in place against the bolts before tightening to 12 ft.-lbs. with a 9⁄16-inch wrench.

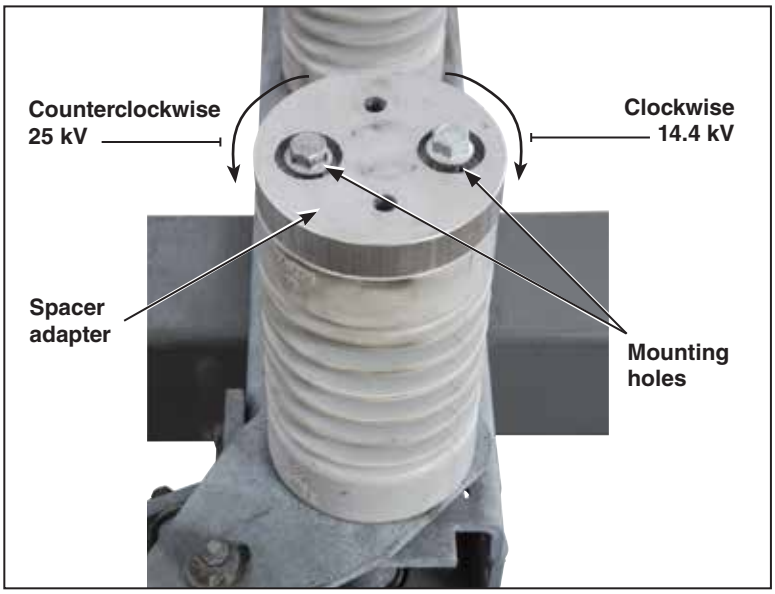


Figure 32. Rotate the spacer adapter clockwise for 14.4-kV switches and counterclockwise (anti clockwise) for 25-kV switches.

For 25-kV switches, hand-thread the two ⅜-inch bolts into the mounting bosses. Rotate the spacer adapter ***counterclockwise*** and hold the spacer adapter firmly in place against the bolts before tightening to 12 ft.-lbs. with a 9⁄16-inch wrench.

Completely countersink the bolts within the recessed mounting holes in the spacer adapter. See Figure 33.

Figure 33. Align the spacer adapter with the holes in the insulator and tighten.

Step 28

Insert the two ⅜-inch stainless-steel bolts and stainless-steel flat washers into the mounting plate of the new blade assembly. Align the bolts with the threaded holes on the spacer adapter and hand-thread them into the threaded holes. See Figures 33 and 34. Depending on the voltage and insulator material of the Omni-Rupter Switch, the bolts may be held captive under the hinge joint of the terminal pad after tightening. Lift the blade assembly while tightening the bolts until the bolts are low enough to engage with an open-ended wrench as seen in Figure 34. Tighten with a 9⁄16-inch wrench to 16 ft.-lbs.

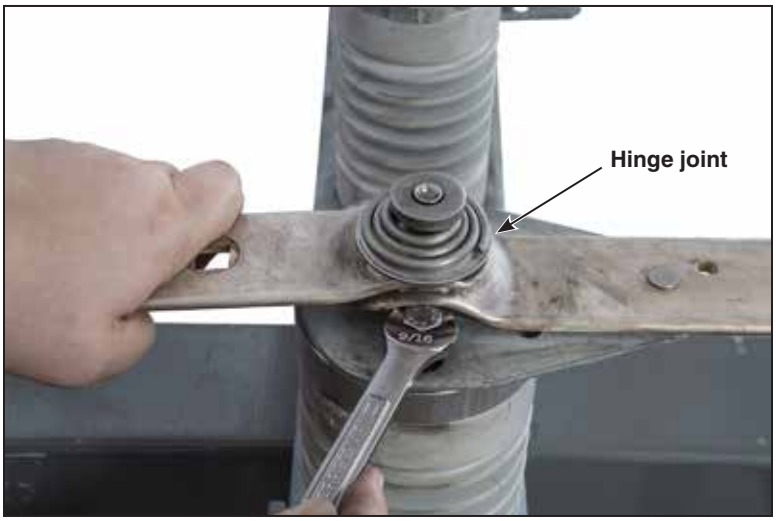


Figure 34. Install the new blade onto the threaded holes on the spacer adapter.

Retrofitting the Jaw-Contact Assembly

Step 29

Remove the two hex head cap screws and flat washers that secure the interrupter bracket and stationary contact to the insulator. See Figure 35. (Hardware specifications will vary depending on voltage and insulator material.) Discard or recycle the old jaw contact assembly and interrupter.

If necessary, clean the surface of the insulator with a soft cloth.

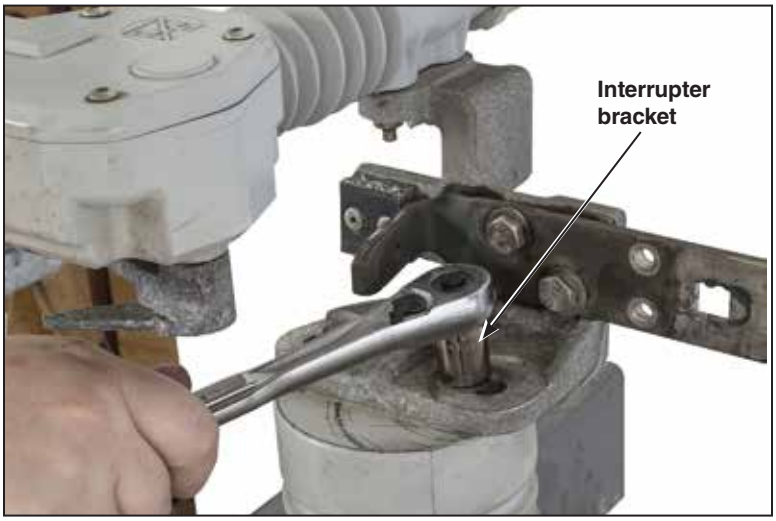


Figure 35. Remove the cap screws and washers securing the interrupter bracket to the insulator.

Step 30

Remove the two ⅜-inch insulator mounting bolts used to secure the insulator to the pole weldment. Position the spacer adapter between the pole weldment with the recesses facing the pole weldment. Align the insulator with the mounting holes on the spacer adapter and secure the spacer adapter and insulator with two ⅜-inch × 2-inch galvanized bolts and tighten with a 9⁄16-inch socket wrench to 12 ft.-lbs. See Figure 36.

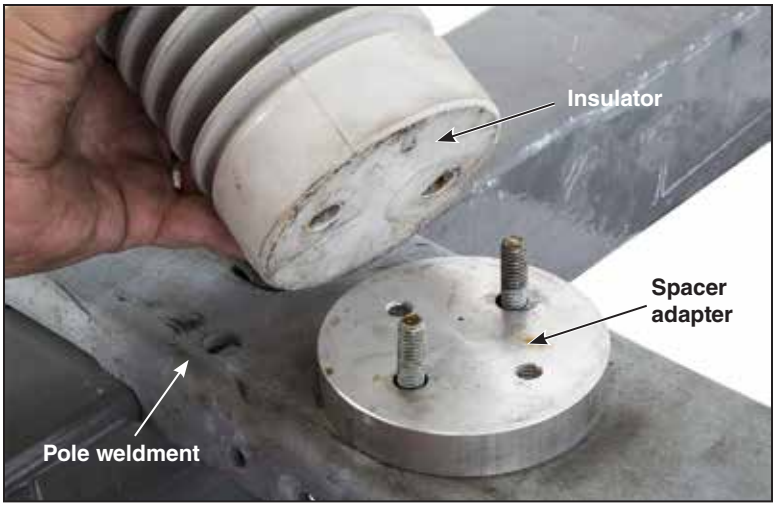


Figure 36. Remove the insulator. Align the spacer adapter with the holes on the pole weldment, with the mounting hole recesses facing down. Align insulator with the mounting holes, and secure with bolts.

Step 31

Place the new stationary contact assembly on the insulator. Align the hole closest to the terminal pad with the threaded holes on the insulator. See Figures 37 and 38. (Depending on the insulator material, the bolt may be pre-installed to the stationary contact support bracket and held captive under the contact assembly to facilitate installation.) *Do not loosen or remove the contact pin.* Tighten the bolt until there is enough clearance underneath the contact pin to slide the stationary contact support bracket so that the threaded hole for the inner bolt aligns with the slotted hole in the bracket.

⚠ CAUTION

DO NOT loosen or remove the contact pin. Contact pressure is set and calibrated at the factory. Loosening or removing the contact pin will cause uneven contact pressure, arcing, and damage to the switch, and will necessitate replacement of the ENTIRE stationary contact assembly.

Fully tighten the bolts to 12 ft.-lbs.

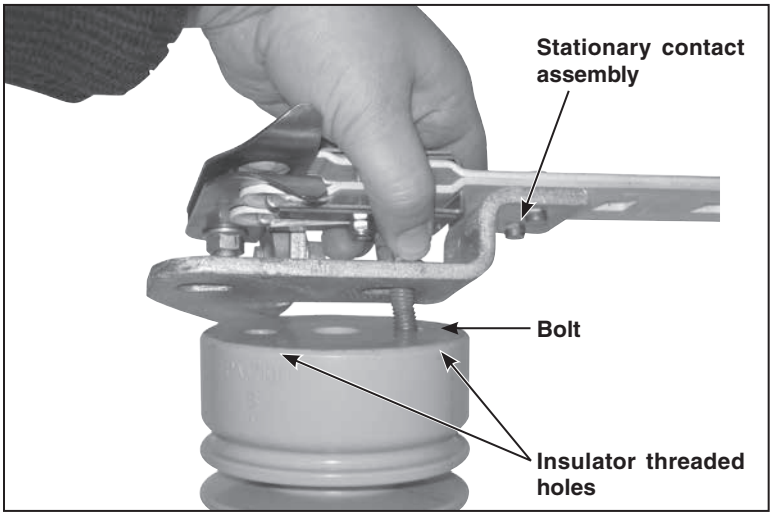


Figure 37. Align the outer bolt and hand-tighten until there is enough clearance to slide the mounting bracket.

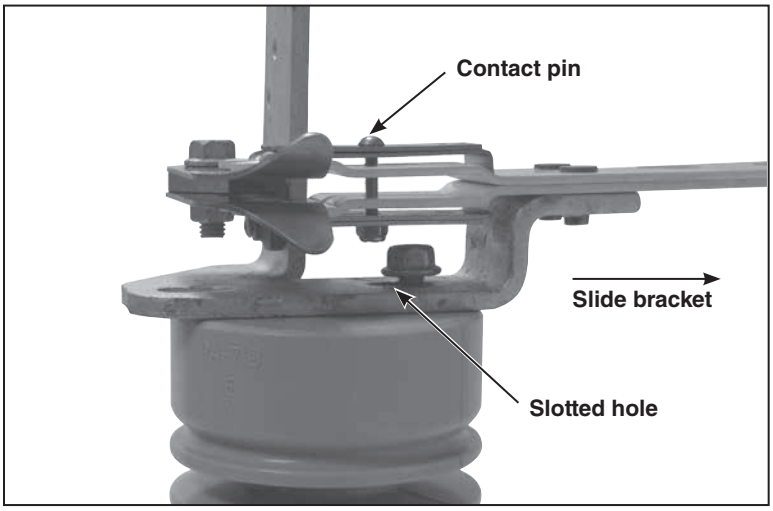


Figure 38. Slide the bracket until both holes align with the threaded hole on the insulator.

Step 32

Fully-tighten the inner stationary contact support bracket mounting bolt as shown in Figure 39. Torque to 40 ft.-lbs.

Install the interrupter according to the instructions starting in Step 2 on Page 6.

Step 33

Lubricate the jaw contacts and the blade with a light coating of Shell Gadus® S2 U1000 2 Lubricant or equivalent.

NOTICE

Omni-Rupter Switches specified with the optional harsh environment contacts (Catalog Number Suffix "-C") have graphite impregnated blades which are greaseless and self-lubricating. **DO NOT** apply grease to the blade contacts.

Step 34

Clean and prepare the jumper and terminal pads before re-installing the switch. Instructions for preparing terminal pads may be found in the appropriate Omni-Rupter Switch installation manual.

⚠ WARNING

DO NOT apply excessive load to the terminal pads.

The jumper connections should be in-line with and level to the terminal pad bolt holes before securing the jumper fasteners to the terminal pad. Large pull-off forces may misalign the blades with the stationary contacts and prevent proper closing.

Step 35

Slowly close and open the switch several times and verify that the conditions shown in the "Checking Operation" section starting on page 17 have been met.

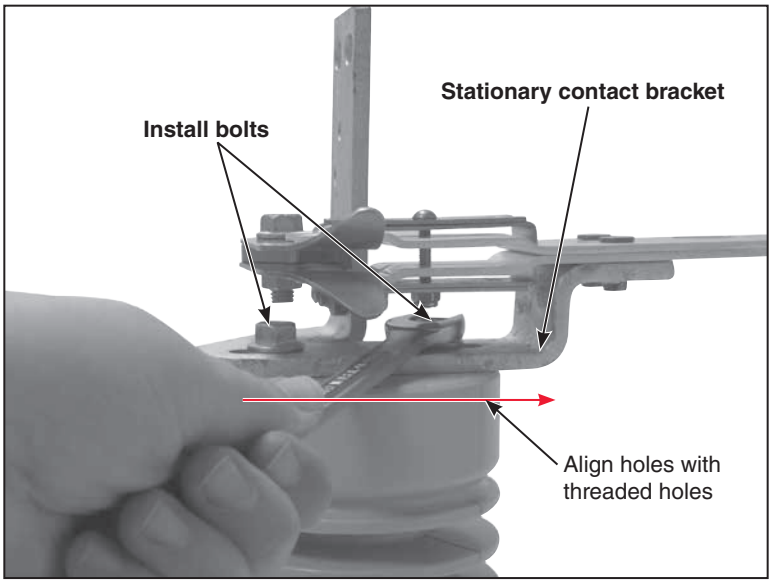


Figure 39. Install the bolts.

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