Installation and Operation

CBS ArcSafe®

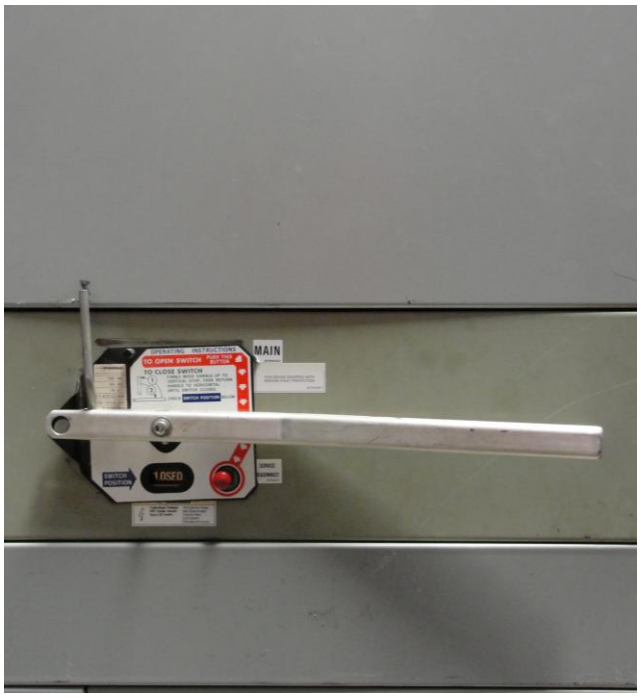
Distance Is Safety®

A Group CBS Company

RSA-135A

For Eaton/Cutler-Hammer/Pringle:

Pringle Switch - QA-CBC: Above 2500A (Includes 3000 & 4000A); Current Vintage; Straight Handle (Black Or Bare Aluminum) Only, With Shunt Trip, 90° Of Handle Travel,



Distance is Safety®

WHAT STANDS BETWEEN YOU AND ARC-FLASH DANGER? WE DO.

2616 Sirius Road | Denton, TX 76208 | (877) 4-SAFETY | www.cbsarcsafe.com

Rev. 11/5/2014

More Products by CBS ArcSafe®

RRS-1 – *Universal Remote Racking System (Rotary)*

The CBS ArcSafe® RRS-1 is a universal remote racking system capable of remotely installing and removing rotary style draw out circuit breakers without requiring any modification to the existing switchgear. Operation of the simple to use RRS-1 is quite intuitive and requires only minimal setup. When used properly, the RRS-1 allows technicians to remain outside of the arc flash boundary during the potentially dangerous racking operation.

RRS-2 – *Universal Remote Racking System (Non-Rotary)*

The CBS ArcSafe® RRS-2 is a universal remote racking system capable of remotely installing and removing non-rotary style draw out circuit breakers without requiring any modification to the existing switchgear. Operation of the simple to use RRS-2 is quite intuitive and requires only minimal setup. When used properly, the RRS-2 allows technicians to remain outside of the arc flash boundary during the potentially hazardous racking operation.

RRS-3 – *Application Specific Remote Racking System (Rotary And Non-Rotary)*

The CBS ArcSafe® RRS-3 product line is made up of various application specific remote breaker racking devices. Each standalone system allows service personnel to remotely install and remove a particular type of circuit breaker safely while stationed safely outside of the arc flash boundary during the potentially dangerous operation. The lightweight and compact design of the RRS-3 systems makes them ideal for hard to access areas where space is at a premium.

RRS-4 – *PLC Based Universal Remote Racking System (Rotary)*

The CBS ArcSafe® RRS-4 universal remote racking system is an updated PLC based version of the best selling RRS-1. The dual mode, source programmable, PLC based control system offers two different operating modes to choose from based on user preference or the application. The RRS-4 is capable of remotely installing and removing rotary style draw out circuit breakers without requiring any modification to the existing switchgear, allowing users to remain outside of the arc flash boundary during the potentially hazardous racking operation.

RSA – *Remote Switch Actuator*

The CBS ArcSafe® Remote Switch Actuator (RSA) product line is made up of various application specific remote operating devices. These products allow service personnel to remotely perform all aspects of an operation for a particular type of electrical equipment from outside the arc flash boundary – reducing or eliminating the possibility of serious injury or death resulting from an arc flash.

RSO – *Remote Switch Operator*

During a remote operation, the CBS ArcSafe® RSO functions as both the power supply and user interface for the device being remotely operated by the user. When paired with an applicable CBS ArcSafe® device, this portable standalone system allows service personnel to remotely perform a racking or switching procedure from outside the arc flash boundary – reducing or eliminating the possibility of injury or death resulting from an arc flash

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Gainesville, Texas 76241

1 Installation

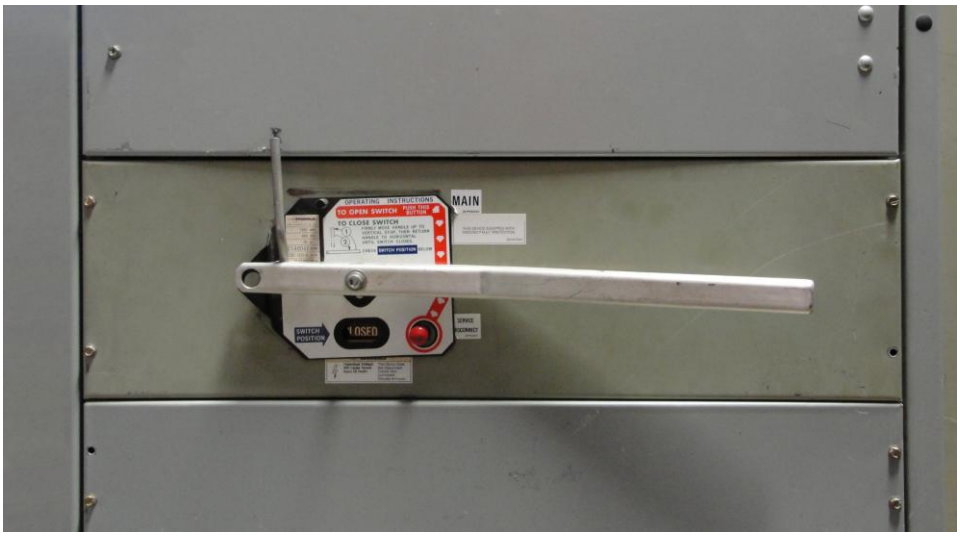
DANGER!

Before servicing any breaker, make sure that it matches the breaker discussed. If the breaker does not match the breaker described above, please call CBS ArcSafe® for more information.

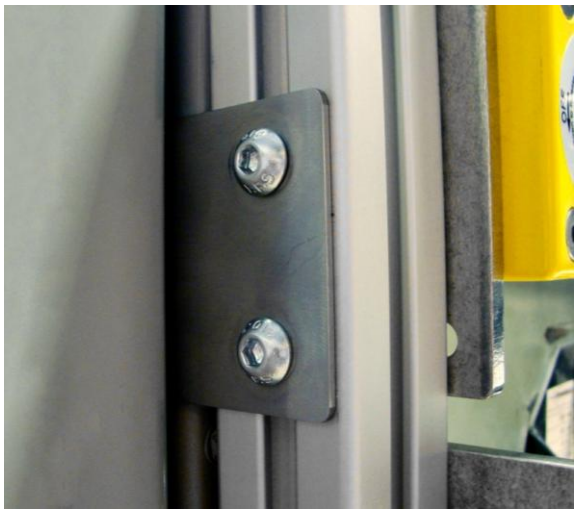
ATTENTION!

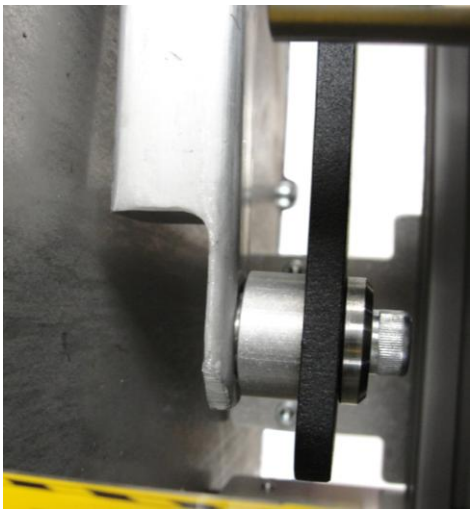
The location of certain items such as mimic bus, stickers, and/or placards may interfere with the proper installation of the RSA. Please remove or reposition these items before installing the RSA.

1. Ensure that the Switch to be operated is free from obstructions that may interfere with proper installation of the RSA



2. Place the RSA over the handle on the switch. Ensure that the switch actuator arm is fully seated in the handle actuator on the RSA, and that the cabinet locators (below left) and the handle locator (below right) are fully seated.
    a. The handle adapter on the RSA can be manually rotated to match the switch position as needed.

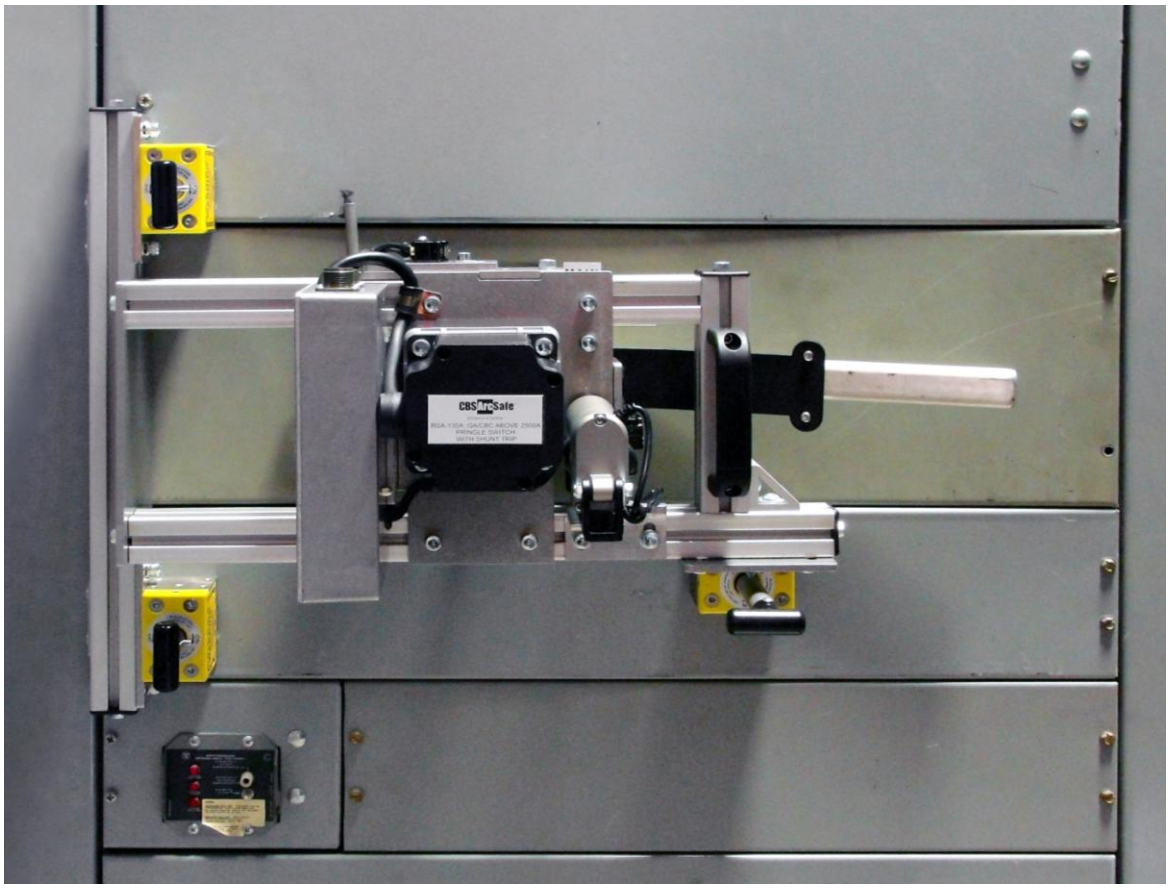




3. Ensure the button actuator is positioned properly over the shunt trip button on the front of the switch.

4. Ensure the magnets are fully seated against the switch cover and then turn the handles of the twist-lock magnets 180° to lock the RSA in place.

The RSA is now ready for operation.



2 Operation

ATTENTION!

Please ensure that all cables are clear of moving parts. Failure to do so may result in damage to cables and/or actuator.

ATTENTION!

Please ensure that the batteries to the RSO-IIID are fully charged or that the unit is plugged into AC power.

For detailed instructions on the operation of the RSO-IIID please see the RSO-IIID Manual.

1. Ensure that the RSA is properly installed. See the Installation Section for detailed instructions.
2. Connect the cables from the RSO-IIID to the RSA.
3. Turn the power switch on the RSO-IIID to the ON position.
4. Program the settings for the RSA into the RSO-IIID. These settings can be found on the placard on the RSA. For more information on programming the RSO-IIID please refer to the RSO-IIID Technical Manual.
5. Ensure that the Auto-Retract (AR) function is set according to the instructions on the setting placard on the RSA. For detailed information on the AR function see the RSO-IIID instruction manual
6. Exit the arc flash boundary
7. Once the timers have been properly set press the CHARGE/CLOSE button to actuate the switch arm and charge the switch mechanism, and then close the switch.
8. Press the TRIP button to trip the switch with the shunt trip button.

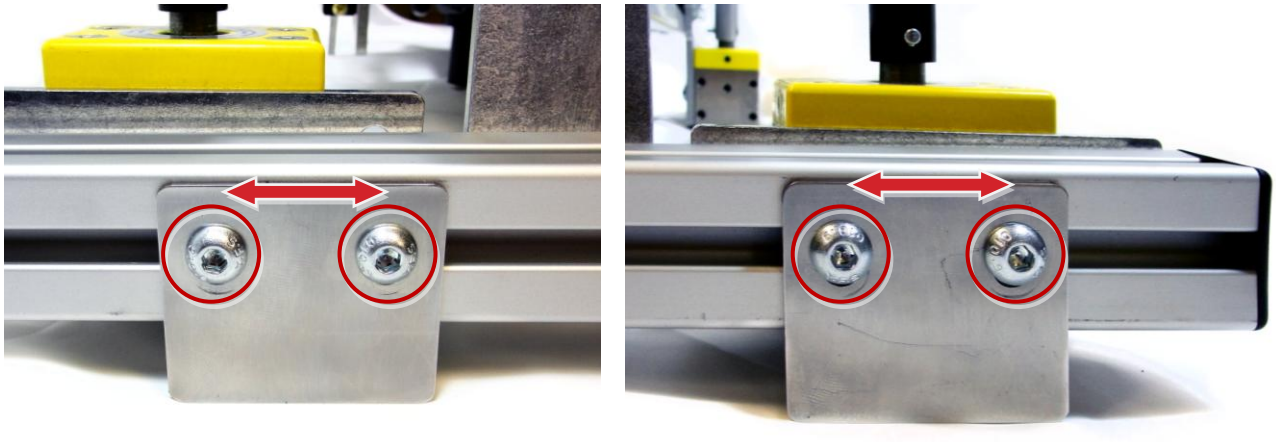
3 Adjustments

The RSA comes adjusted from the factory to fit most common configurations, and should not need to be adjusted in most cases. However, if adjustments do need to be performed, it is recommended that they be done on de-energized and isolated equipment to prevent possible damage or injury.

3.1 Cabinet Locator Adjustment

The locator on the RSA can be adjusted to accommodate some differences in the depth of the switch.

1. Loosen the two bolts on each locator tab as shown.



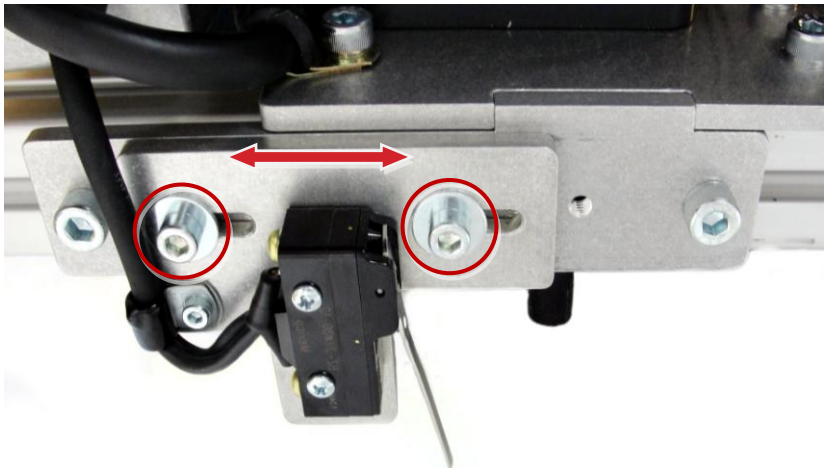
2. Attach the RSA as described in the Installation section.
3. Slide the locator to the desired position along the extrusion.
4. Re-tighten the bolts from Step 1.

3.2 Switch Travel Limits

The RSA has travel stops on it to prevent over-travel and damage of the handle operator during operation.

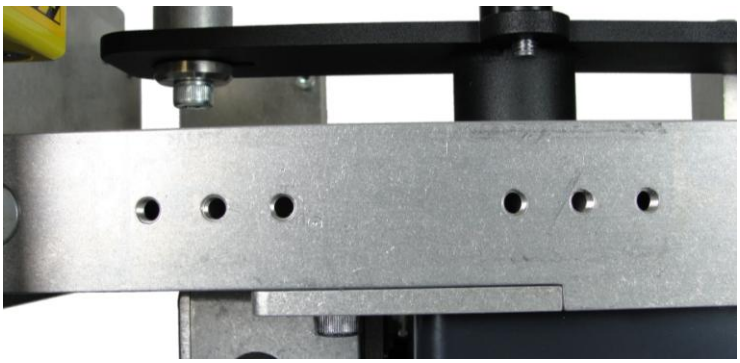
3.2.1 CHARGE Travel Limit

1. Loosen the two bolts on the limit switch plate as shown.



2. Rotate the RSA's actuator arm to match the CHARGED position of the switch. Install the
3. Slide the limit switch plate up to the RSA's actuator arm until a slight audible click is heard.

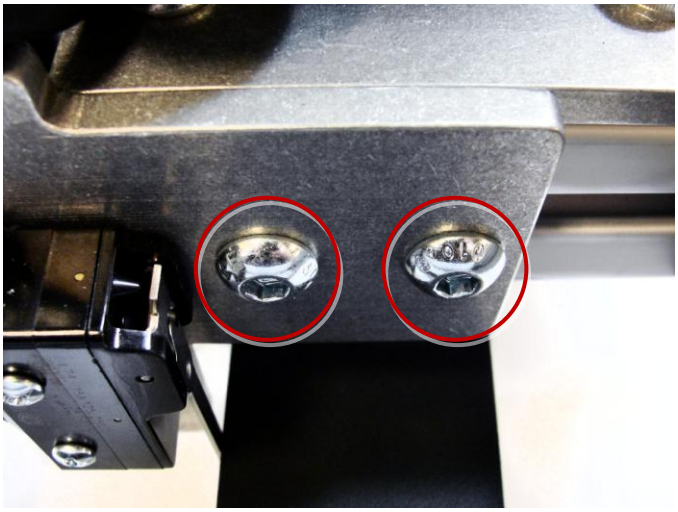
4. If the slots alone do not provide sufficient room to adjust the travel stop as needed, remove both bolts indicated in Step 1 to access a set of alternative holes in the switch plate. Then, reposition the limit switch adjustment slots over the set of holes which will provide the desired adjustment range, replace the screws, and continue adjustment.



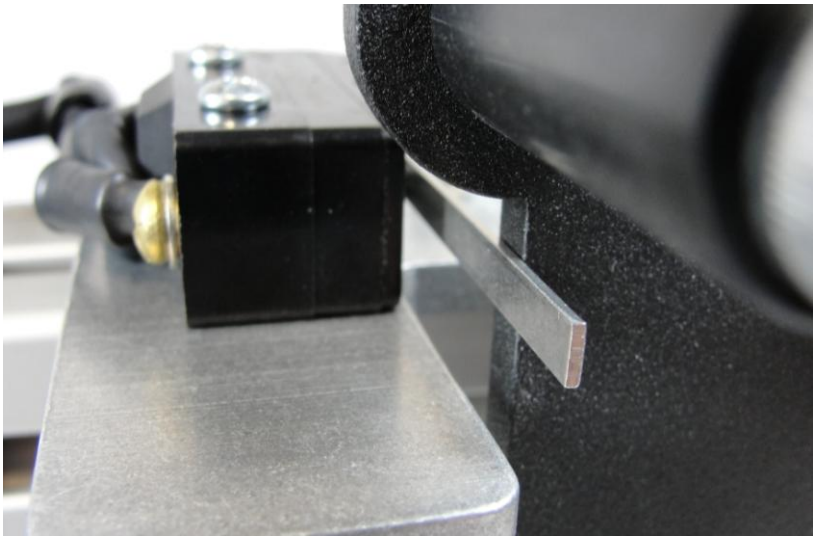
5. Re-tighten the bolts from Step 1.

3.2.2 CLOSE Travel Limit

1. Loosen the two bolts on the limit switch plate as shown.



2. Attach the RSA as described in the Installation section.
3. Rotate the RSA's actuator arm to match the CLOSED position of the switch.
4. Slide the limit switch plate up to the RSA's actuator arm until a slight audible click is heard.

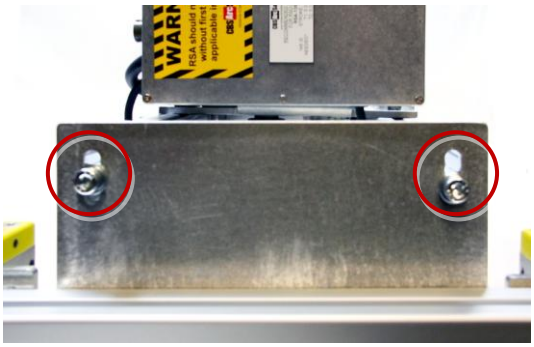


5. Re-tighten the bolts from Step 1.

3.3 Operator Depth

The operator on the RSA can be adjusted to accommodate some differences in the depth of the switch housing.

1. Loosen the two bolts on the left end of the actuator plate, as well as the two bolts on the magnet located on the opposite side of the RSA.

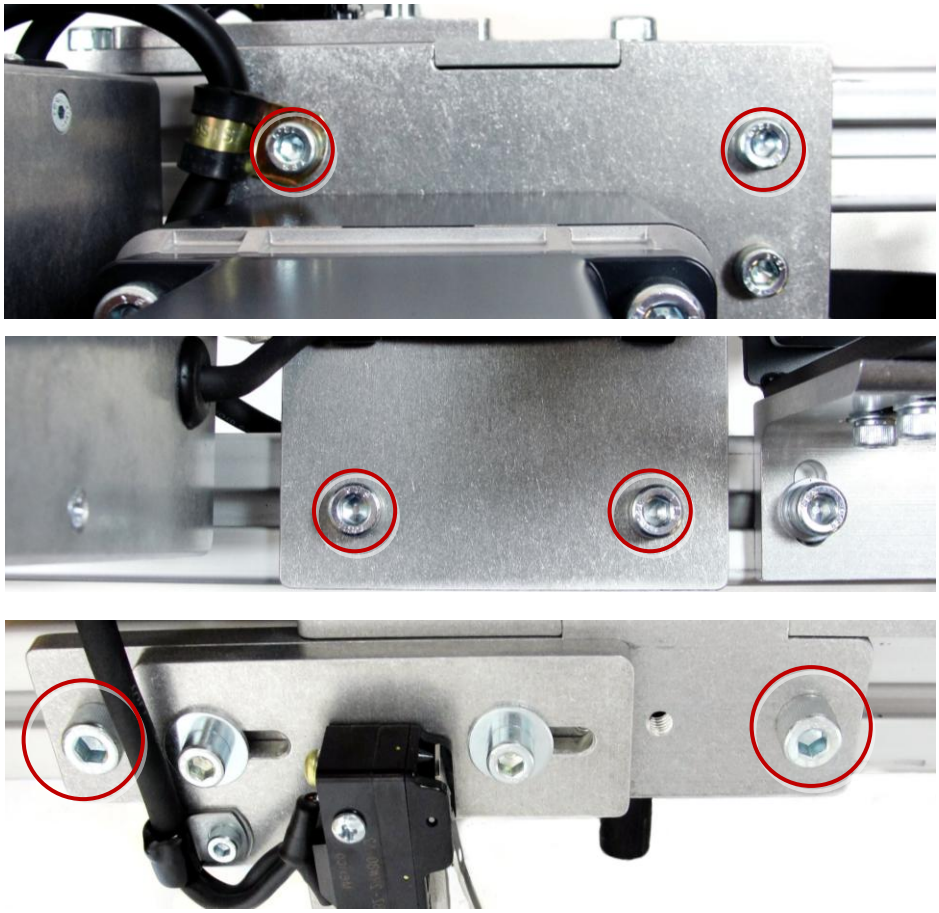


2. Attach the RSA as described in the Installation section.
3. Slide the operator in or out so the RSA is properly aligned and positioned on the switch.
4. Re-tighten the bolts from Step 1

3.4 Motor Position

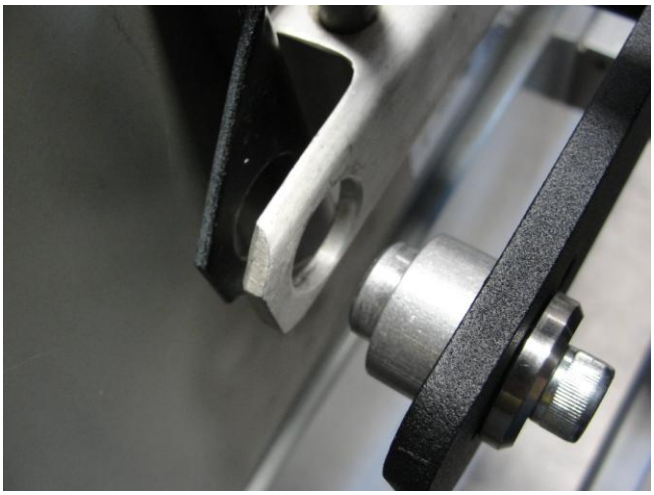
The motor mount on the RSA can be adjusted to accommodate differences in the switch dimensions.

1. Loosen the four bolts on the motor mount plate, and the two bolts from the CHARGED position limit switch plate as indicated below.



2. Attach the RSA as described in the installation section.

3. Slide the motor assembly as required so the handle locator and the handle adapter are properly positioned.



4. Also ensure that the central nut on the switch handle fits into the opening on the RSA handle actuator. If these to not fit, continue adjusting until both the handle locator and the nut fit into their respective locations.
5. If the Trip button actuator interferes with positioning the motor assembly, follow the instructions for adjusting the trip button actuator horizontally under section 3.5 Trip Button Actuator Position Adjustment.
6. Re-tighten all six bolts loosened in Step 1.

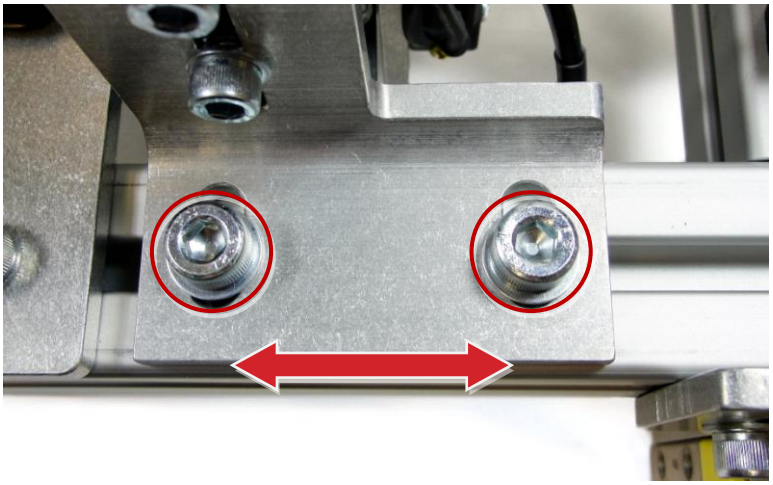
3.5 Trip Button Actuator Position Adjustment

The position of the trip button actuator can be adjusted as needed to properly align with the shunt trip button on the switch.

3.5.1 Horizonal Adjustment

To adjust the horizontal alignment of the shunt trip switch:

1. Loosen the two bolts on the plate for the shunt trip linear actuator, as shown.

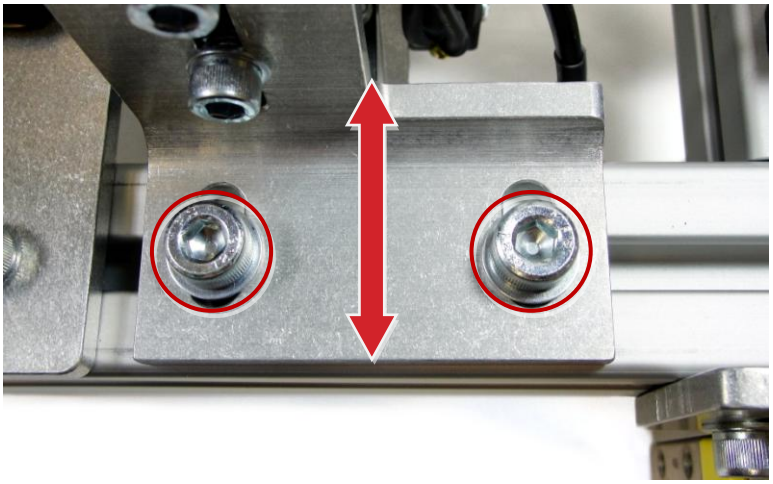


2. Slide the actuator left or right to align the button actuator as needed.
3. If positioning is restricted by the handle actuator assembly, follow the instructions in section 3.4 Motor Position to adjust the motor actuator.
4. Re-tighten any loosened bolts when finished.

3.5.2 Vertical Adjustment

To adjust the veritcal alignment of the shunt trip switch:

1. Loosen the two bolts in the on the plate for the shunt trip linear actuator, as shown.

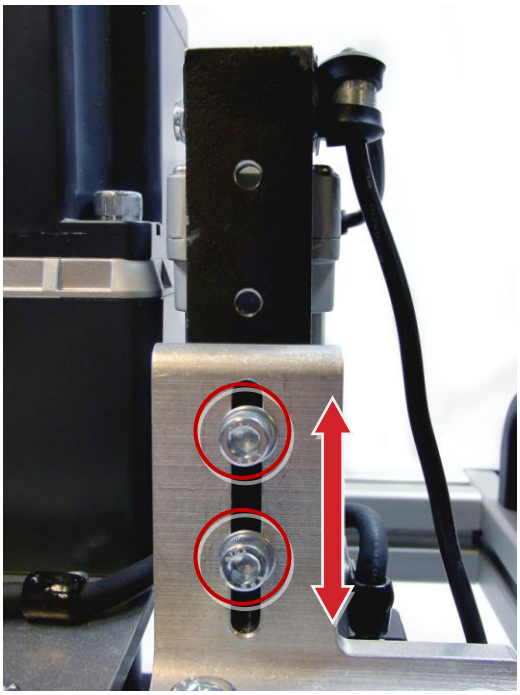


2. Slide the actuator up or down to align the button actuator as needed.
3. Re-tighten any loosened bolts when finished.

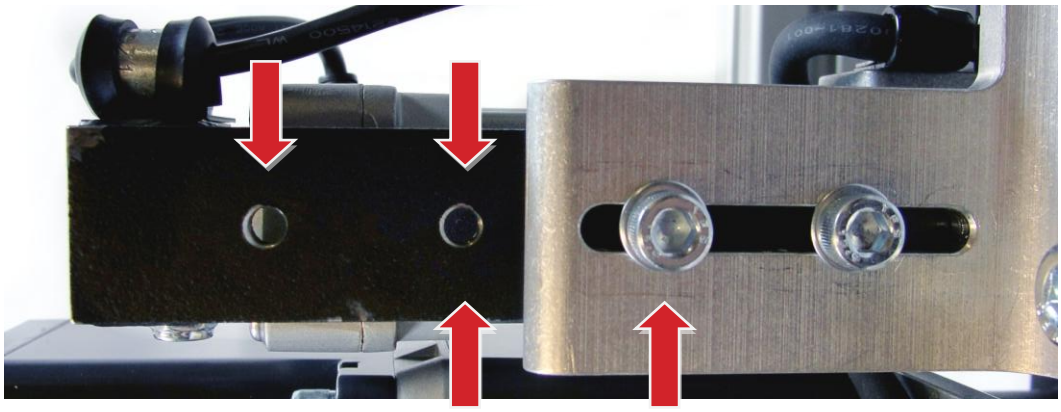
3.5.3 Depth Adjustment

To adjust the depth of travel for the shunt trip actuator button:

1. Loosen the two bolts in the on the plate for the shunt trip linear actuator, as shown.



2. Slide the actuator left or right to align the button actuator as needed.
3. If the slots alone do not provide sufficient room to adjust the travel stop as needed, remove both bolts indicated in Step 1 to access a set of alternative holes in the actuator plate. Then, reposition the adjustment slot over the set of holes which will provide the desired adjustment range, replace the screws, and continue adjustment.



4. Re-tighten any loosened bolts when finished.

Notes

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DANGER!

Ensure that personnel using this equipment are adequately trained in the operation of the switchgear they are planning to work with; that they are correctly stationed outside the arc flash boundary; and that they comply with all applicable Federal, State, Local, and In-house safety regulations and procedures. Attention should be given to distance, angle, and personal protective equipment (PPE).