Installation and Operation

CBS ArcSafe®

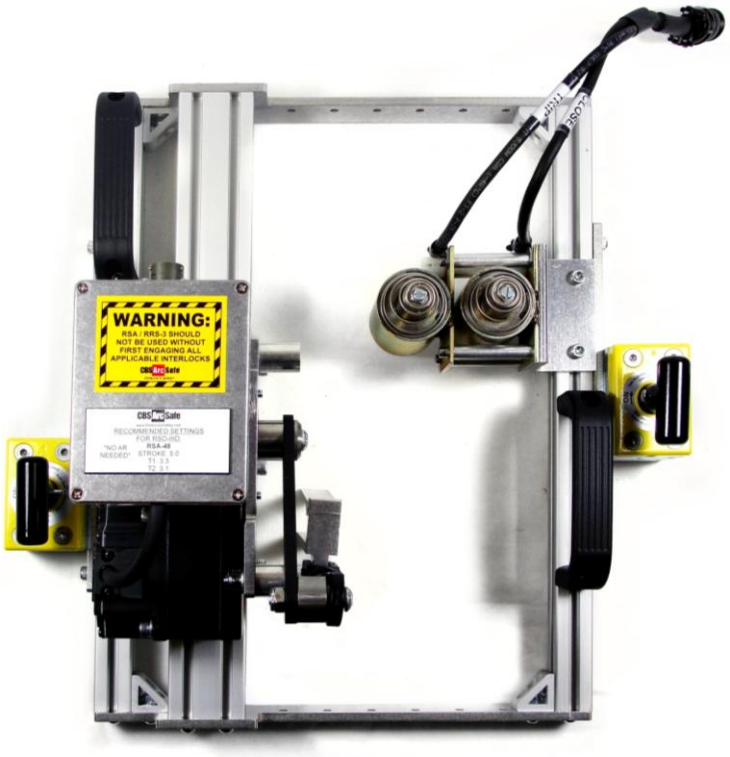
Distance Is Safety®

A Group CBS Company

RSA-48

For Eaton/Cutler Hammer Magnum DS/SB

(Door Closed, 800-4000A)



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. 5/7/2015

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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1 Installation

DANGER!

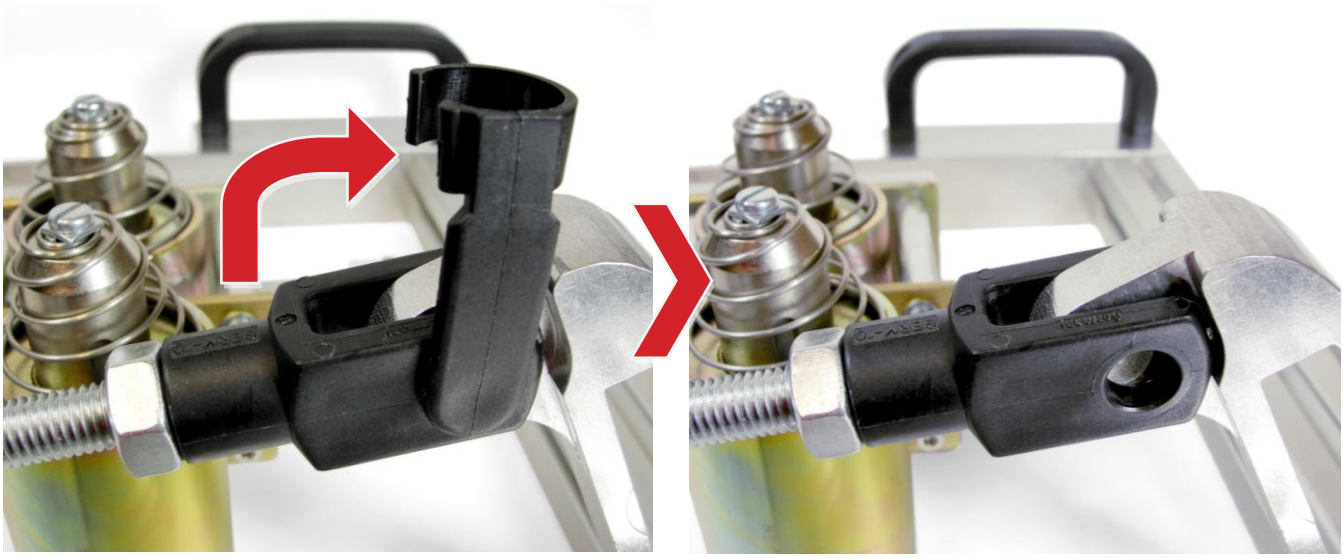
Before servicing any breaker, make sure that it matches the breaker discussed. If the breaker does not match the breaker described above, please call CBS ArcSafe® for more information.

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 breaker is free from any obstruction that may interfere with the proper installation of the RSA.

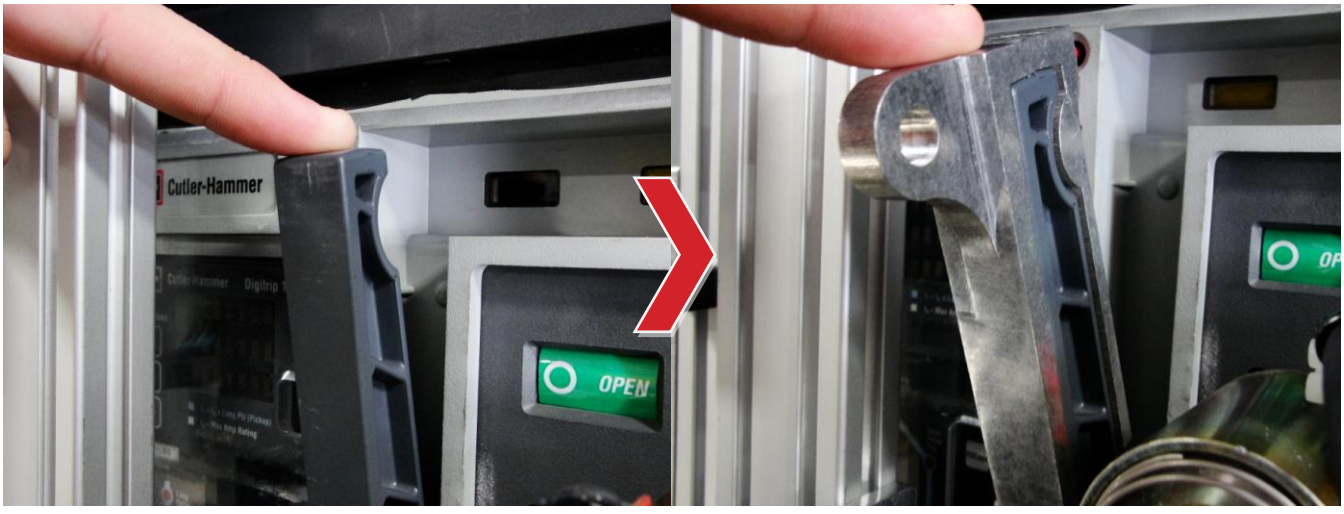
2. Remove the charging handle adapter from the RSA by removing the quick disconnect clevis pin. This will be re installed later.



3. Place the RSA on the face of the breaker as shown. The upper cross member of the RSA should rest on the upper edge of the breaker door escutcheon with the sides of the RSA flush on the edges of the escutcheon.

4. Ensure that the magnets are seated flush and contacting metal, and then secure the RSA to the breaker by turning the hande of each magnet 180 degrees clockwise.
5. Ensure that both solenoids are correctly aligned over the breaker pushbuttons as shown.

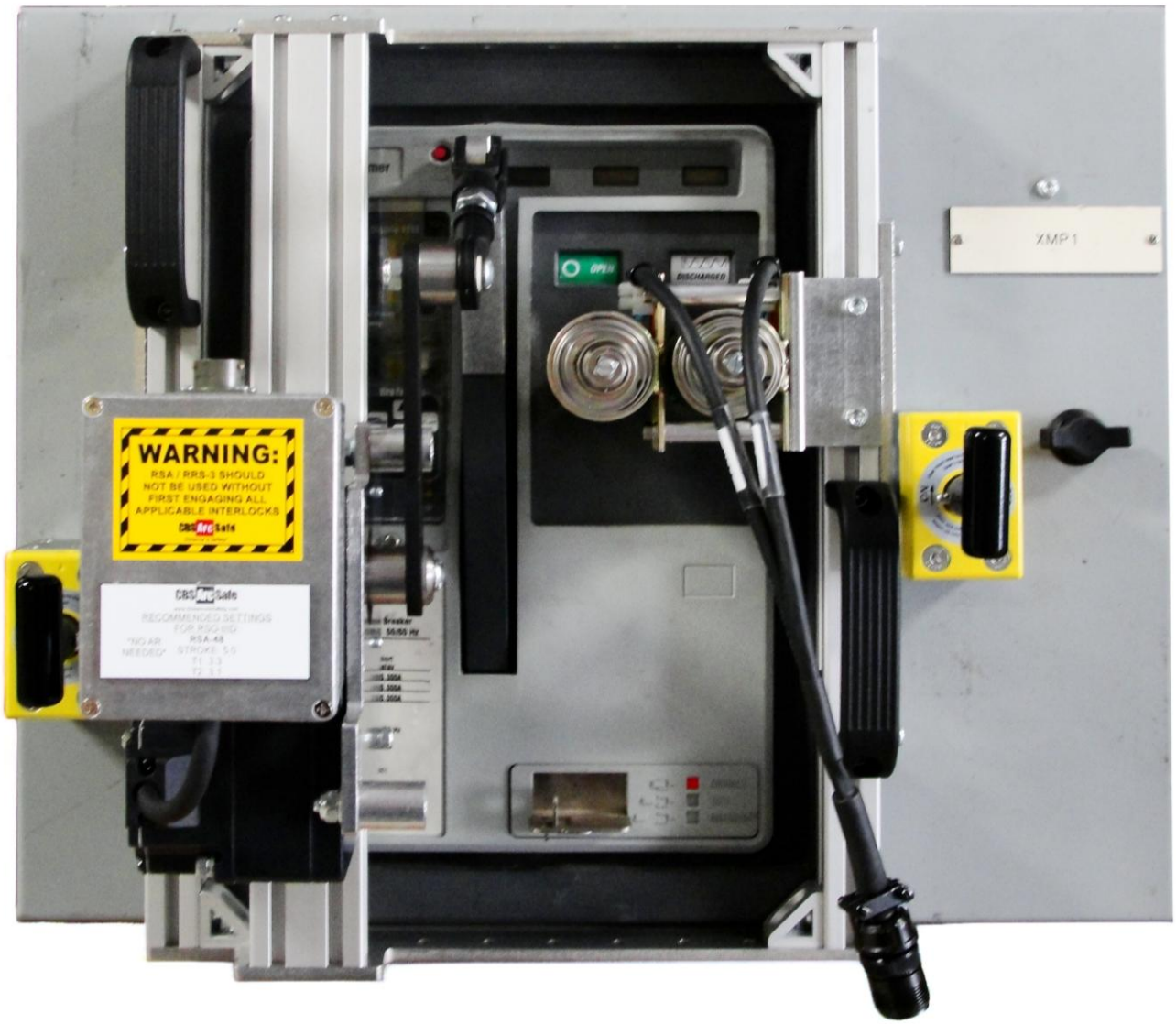
6. Place the charging arm adapter, removed in step 2, over the charging arm of the breaker. To do this pull out the charging arm slightly and slide the adapter over the arm.



7. Reconnect the charging arm adapter to the RSA-120 using the clevis pin from step 2.

8. Manually push the charging arm back to its resting position before beginning operation.

The RSA is ready for remote operations.



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. The three pin twist type cable will attach to the motor control box on the RSA.
4. Turn the power switch on the RSO-IIID to the ON position.
5. Ensure that the Auto-Retract (AR) function is set according to the placard on the RSA. For detailed instructions on the AR function see the RSO-IIID manual
6. 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.
7. Exit the arc flash boundary
8. Once the timers have been properly set press the CHARGE/CLOSE button to actuate the motor arm and charge the breaker.
9. Press CLOSE to close the breaker.
10. Press TRIP to trip the breaker.

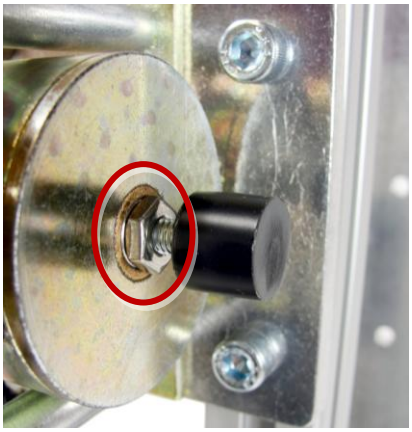
3 Adjustments

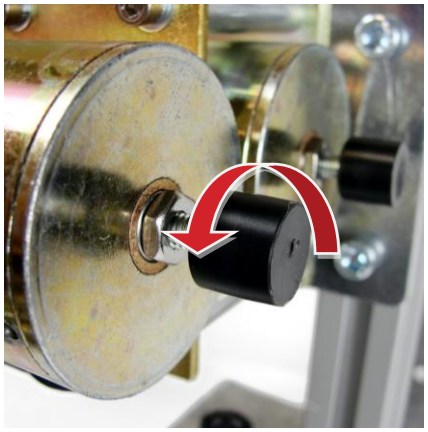
The RSA comes adjusted from the factory to fit most common configurations, and should not need to be adjusted in most cases. However, if adjustments do need to be performed, it is recommended that they be done on de-energized and isolated equipment to prevent possible damage or injury.

3.1 Plunger Depth Adjustment

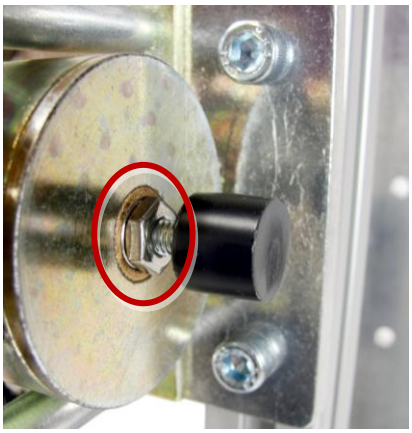
The operation depth of the solenoids on this RSA can be adjusted to accommodate differences in the button-press depth requirements.

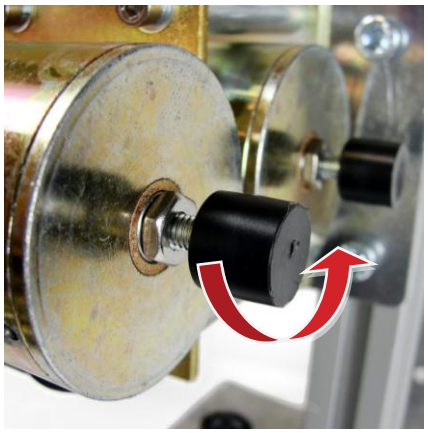
1. To increase the solenoid plunger depth, loosen the nut on the solenoid plunger, and turn the black end counter-clockwise. Test the depth by operating the appropriate plunger with the RSO, and re-tighten the nut.





2. To decrease the solenoid plunger depth, loosen the nut on the solenoid plunger, and turn the black end clockwise. Test the depth by operating the appropriate plunger with the RSO, and re-tighten the nut.



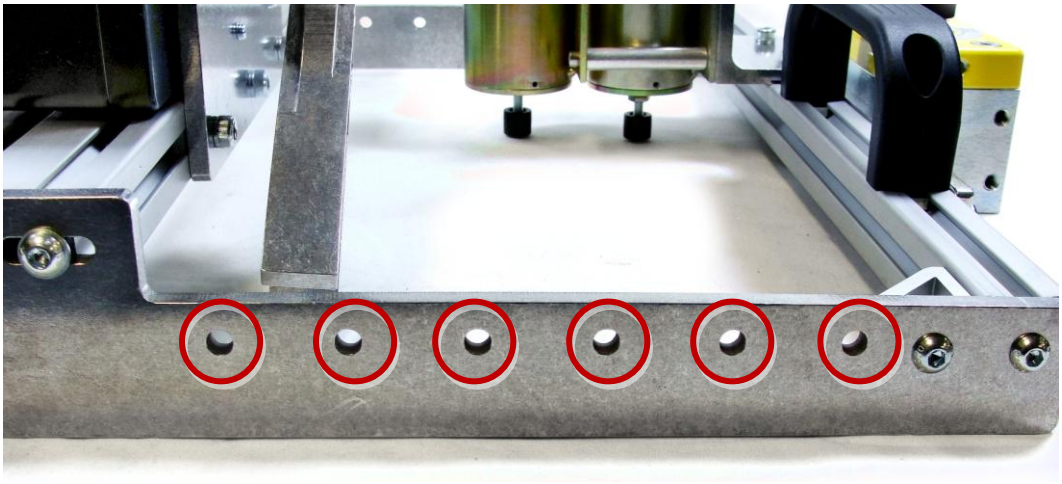


3.2 Magnet Adjustment

The location of the top magnet on the RSA can be adjusted in order to avoid interference from items mounted to the breaker door. Note: the RSA may come from the factory configured with the magnets mounted to the top and bottom, or the sides of the RSA. Contact CBS ArcSafe with any questions regarding magnet configuration.

1. Loosen the two bolts on each magnet plate, as shown below.

2. Slide the magnet left or right as necessary to position it so it adequately avoids any obstructions.
3. If additional flexibility is needed, remove the two bolts highlighted in Step 1, remove the two bolts holding the magnet in place, and mote the magnet to another set of holes in the magnet plate that will allow the magnet to clear any obstructions.
4. If there is inadequate room to mount the magnets to the sides of the RSA, they may be removed, and attached to the holes in the ends of the RSA, using the bolts removed from the magnet plate.



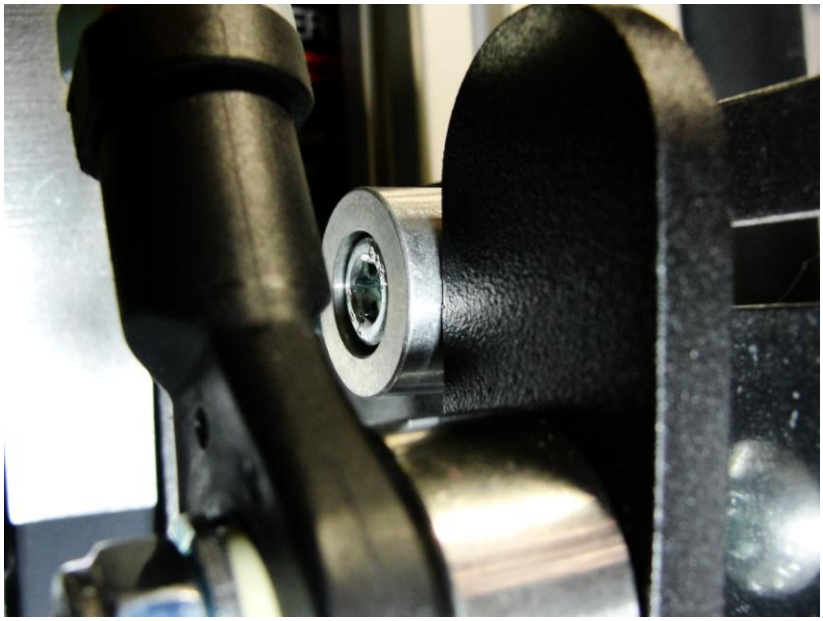
5. After moving or adjusting the magnets, make sure all bolts are tightened securely.

3.3 Travel Adjustment

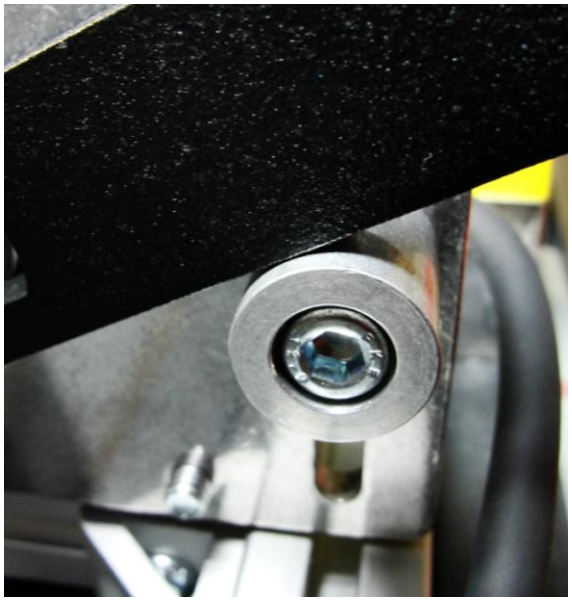
The travel length for the motor arm may be adjusted to avoid damage to the breaker.

1. Install the RSA on the face of the breaker as described in the Installation section.
2. Loosen the lock screws on the backs of the two travel stops.

3. Attach the RSA to a de-energized breaker according to the instructions in the Installation section.
4. With the breaker handle and RSA operator arm fully in the UP position, slide the upper travel stop up until it contacts the arm as shown, and tighten the bolt.



5. With the breaker handle and RSA operator arm fully in the DOWN position, slide the travel stop up until it contacts the arm as shown, and tighten the bolt.



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).