

CBS ArcSafe®

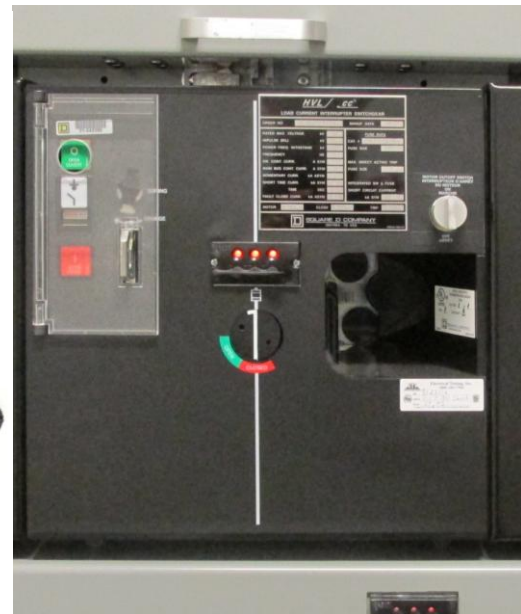
Distance Is Safety®

A Group CBS Company

Installation and Operation

RSA-27A

For Square D - HVL/cc Medium Voltage
Metal-Enclosed Switchgear
Load Interrupter Switch w/ Stored Energy Mechanism



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. 9/21/2016

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

Published and distributed by:
CBS ArcSafe®
2616 Sirius Road
Denton, Texas 76208

A division of:
GroupCBS, Inc.®
P.O. Box 1557
Gainesville, Texas 76241

Copyright CBS ArcSafe® 2013

Printed in the United States of America
Reproduction, adaptation, or translation without prior written permission is prohibited except as is allowed by law.

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.

This RSA consists of two parts: a Charge Assembly and a Close/Trip Assembly. These two components cannot be installed simultaneously, and one must be removed before installing the other.

1.1 Charge Assembly

1. Ensure that the breaker to be operated is free from obstructions that may interfere with proper installation of the RSA. Also ensure that the Close/Trip Assembly is not already installed.



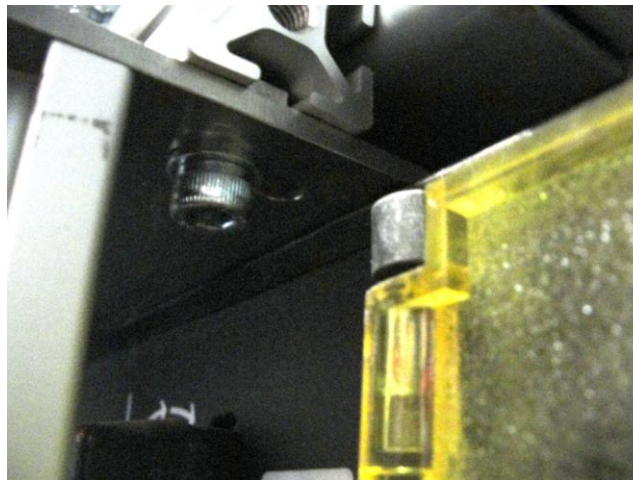
2. Rotate the operating adapter so that the arrows on the alignment stickers are pointing toward each other before installing the Charge Assembly. See the Operation section of the manual for specific instructions on operating the RSA.



- Place the RSA on the face of the breaker ensuring that the operating adapter is fully seated in the operating socket.



- Ensure the locators on the RSA are properly positioned, and seated flush against the breaker housing.



DANGER

If the RSA's operating adapter and locators are not properly seated, attempting to operate the breaker with the RSA may cause binding which can damage the RSA or the breaker mechanism.

Before operating, be sure that the operating adapter and locators are flush and that the operating adapter is at the proper depth. See 3.1.4 Locator Adjustment in the Adjustments section to adjust the locator depth for proper positioning of the operating adapter.

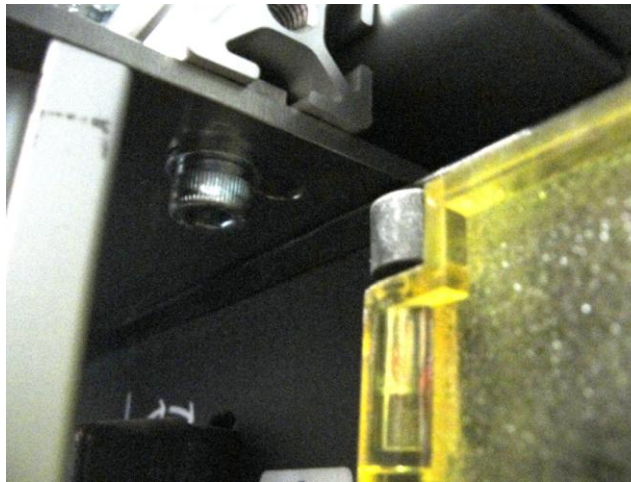
- Ensure the magnets are fully seated against the switchgear door and then turn the handles of the twist-lock magnets 180° to lock the RSA in place.
- The Charge Assembly of the RSA is now ready for operation. See Section 2: Operation for details.

1.2 Close/Trip Assembly Installation

1. Ensure that the breaker to be operated is free from obstructions that may interfere with proper installation of the RSA. Also ensure that the Close/Trip Assembly is not already installed.



2. Ensure the locators on the RSA are properly positioned, and seated flush against the breaker housing.



3. Ensure that the solenoids are centered over the push-buttons located on the breaker.
4. Check that the twist-lock magnets are fully seated against the switchgear door and then turn the handles 180° to lock the RSA in place.

The Close/Trip Assembly of the RSA is now ready for operation. See Section 2: Operation for details.

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 desired RSA Assembly is properly installed. See the appropriate Installation Section for detailed instructions.
2. Connect the cables from the RSO-IIID to the installed RSA component.
3. Turn the power switch on the RSO-IIID to the ON position.

2.1 Charge Assembly

1. 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.
2. Ensure that the Auto-Retract (AR) function is set according to the instructions on the setting placard for the RSA. For detailed information on the AR function see the RSO-IIID instruction manual
3. Exit the arc flash boundary
4. Press and hold the CHARGE/CLOSE button to actuate the charging arm and charge the mechanism
5. After the mechanism is charged, remove the Charge Assembly, and then install the Close/Trip Assembly as described in Section 1.2.



2.2 Close/Trip Assembly

1. Exit the arc flash boundary.
2. Press and hold the CLOSE button to close the breaker.
3. Press the TRIP button 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 Charge Assembly Adjustments

This section illustrates the various operational adjustments possible with the Charge Assembly. Be sure to remove the Close/Trip Assembly and install the Charge Assembly before attempting any of these adjustments.

3.1.1 Magnet Depth Adjustment

The depth of the magnets on the RSA can be adjusted in order to avoid interference from items mounted to the switch door.

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



2. Slide the magnet left or right as necessary to position it so it adequately avoids any obstructions.
3. Re-tighten the bolts.

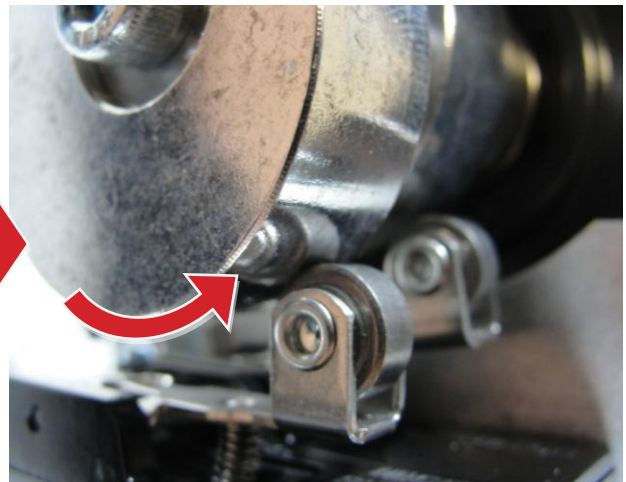
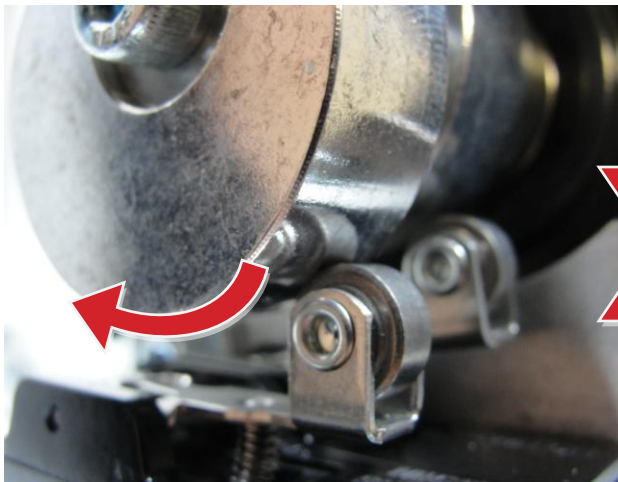
3.1.2 Travel Adjustment

The travel length for the motor may be adjusted to avoid damage to the operator handle.

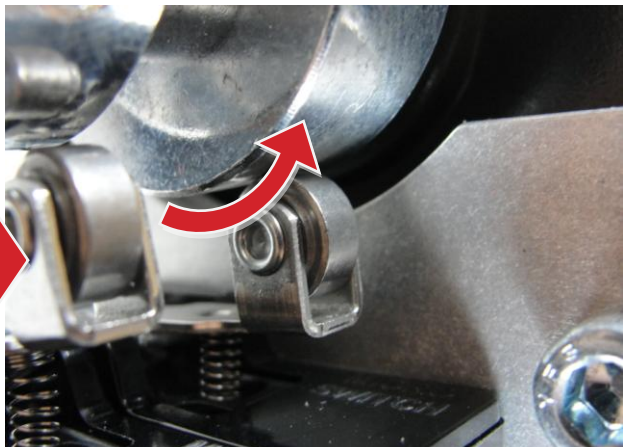
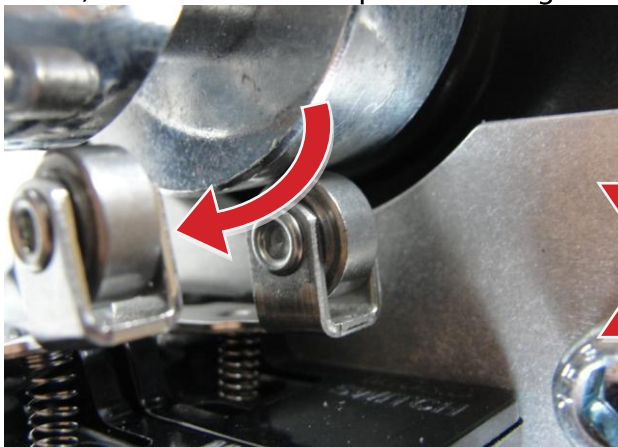
1. Install the RSA on the face of the breaker as described in the Installation section.
2. Loosen the lock screws on the backs of the two switch cams.



3. With the RSA operator arm in the OPEN position, rotate the outer limit switch cam until the limit switch is undepressed and clicks slightly, then rotate the cam back onto the switch until another slight click is heard, and the switch is depressed. Re-tighten the lock-screw on the cam.



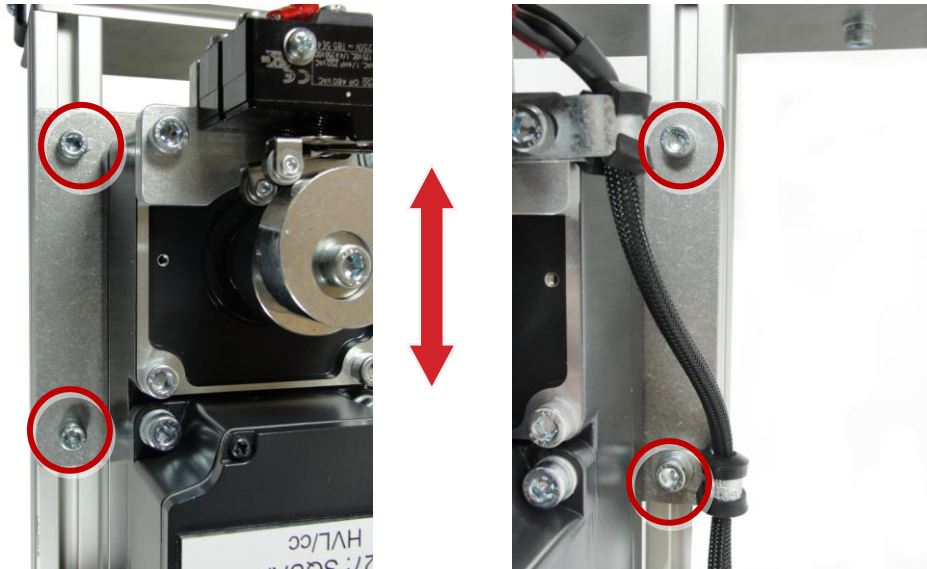
4. With the RSA operator arm in the CLOSED position, rotate the inner limit switch cam until the limit switch is undepressed and clicks slightly, then rotate the cam back onto the switch until another slight click is heard, and the switch is depressed. Re-tighten the lock-screw on the cam.



3.1.3 Operator Position Adjustment

The position of the handle operator on the RSA can be adjusted slightly to accommodate differences in handle layout.

1. Loosen the four bolts on the operator plate.



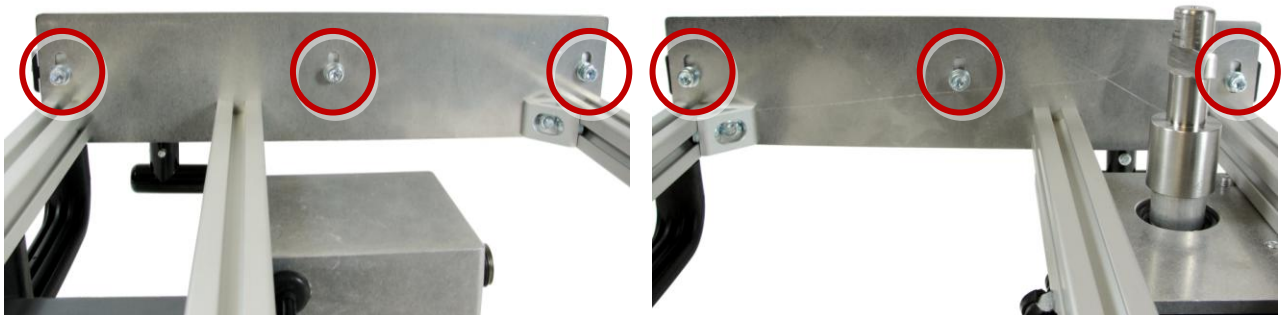
2. Slide the operator up or down as required to achieve proper alignment.
3. Install the RSA as described in the Installation section to ensure that the parts align as desired.
4. Re-tighten the bolts loosened in Step 1.

3.1.4 Locator Adjustment

ATTENTION

The locator depth on this RSA is very important for achieving proper alignment of the RSA's operating mechanism to the breaker operating mechanism. Ensure the locators are properly adjusted before attempting to operate the RSA.

1. Loosen the three bolts on each locator plate.



2. Slide each locator up or down as required to achieve proper alignment of the RSA actuator.
3. Install the RSA as described in the Installation section to ensure that the parts align as desired. Ensure that the actuator on the RSA seats fully in its socket on the breaker, and that the magnets are seated flush against their mounting surfaces.
4. Re-tighten the bolts loosened in Step 1.

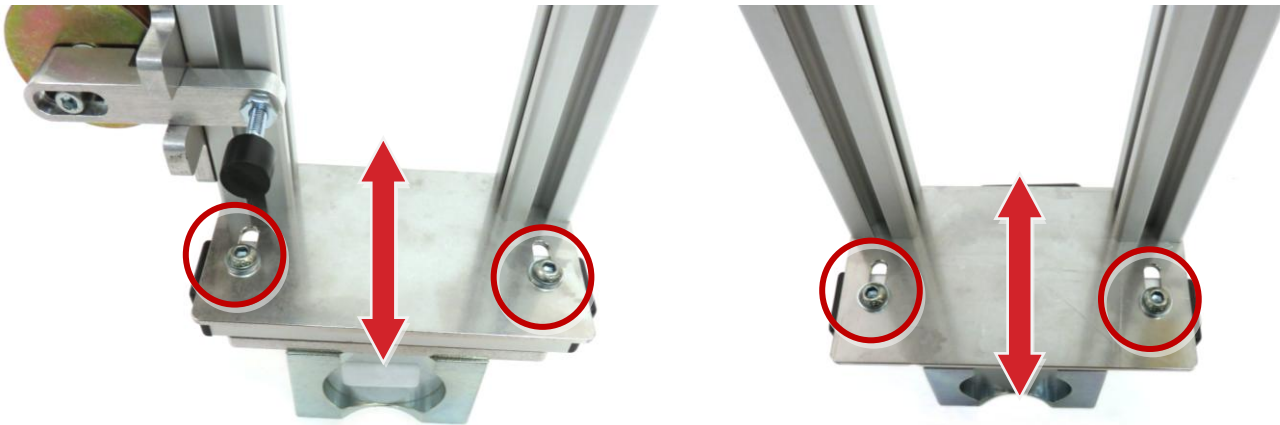
3.2 Close/Trip Assembly Adjustments

This section illustrates the various operational adjustments possible with the Close/Trip Assembly. Be sure to remove the Charge Assembly and install the Close/Trip Assembly before attempting any of these adjustments.

3.2.1 Locator Position

The locator on this RSA can be adjusted to accommodate minor equipment differences.

1. Loosen the two bolts on the locator plate.

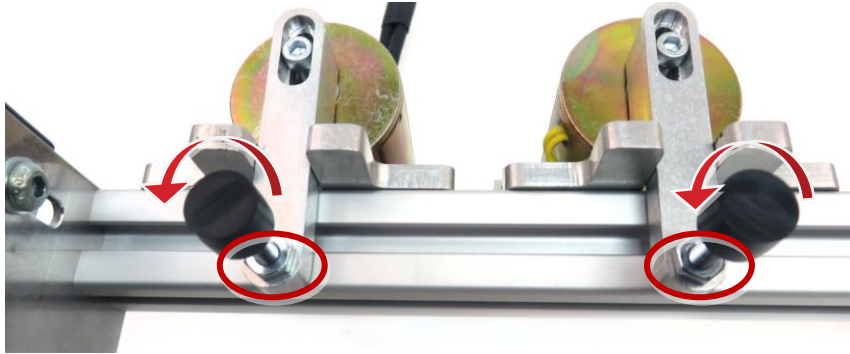


2. Slide the locator during installation to adequately adjust its position so the RSA aligns properly on the breaker.
3. Remove the RSA and re-tighten the bolts on the locator plate to lock it in place.

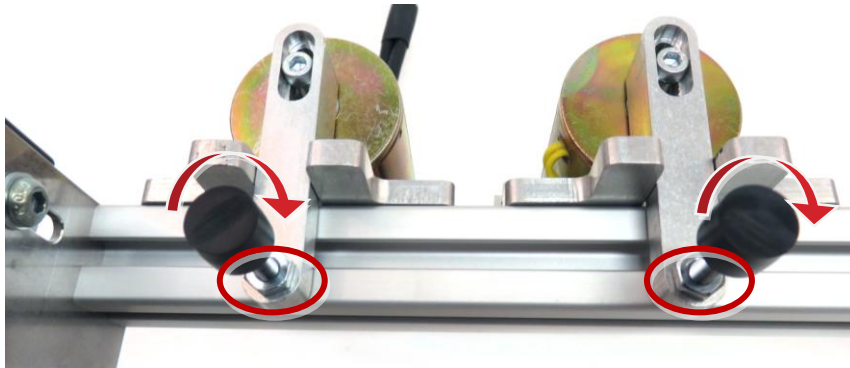
3.2.2 Plunger Depth Adjustment

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 plunger with the RSO, and re-tighten the nut.

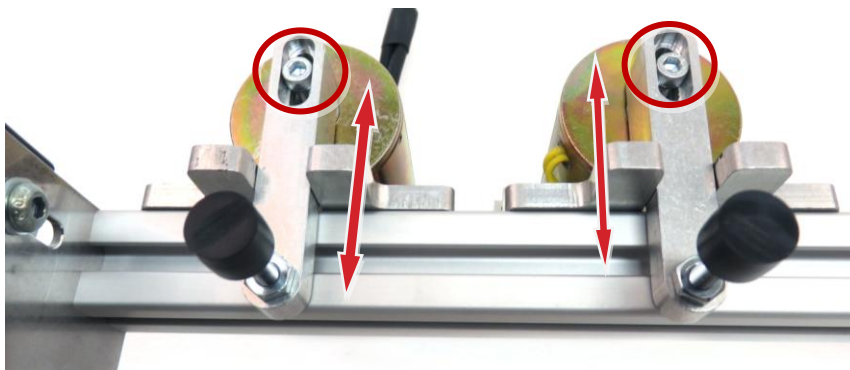


2. To decrease the solenoid plunger depth, loosen the nut on the solenoid plunger, and turn the black end clockwise. Test the depth by operating the plunger with the RSO, and re-tighten the nut.



3.2.3 Plunger Position Adjustment

1. Loosen the indicated screw on the plunger to be adjusted.



2. Slide the plunger left or right until the black plastic portion of the plunger arm is centered over the breaker pushbutton.
3. Re-tighten the screw(s) loosened in Step 1.

3.2.4 Solenoid Position Adjustment

The location of the solenoids on the RSA can be adjusted in order to ensure they make optimum contact with the breaker pushbuttons.

1. Loosen the bolts holding the solenoid mount in place, as shown.



2. Slide the solenoid assembly along the extrusion as required to properly align the solenoid with the center of the trip button.
3. Re-tighten any loosened bolts when adjustment is complete.



Distance Is Safety®

A Group CBS Company

RSA-27A
Installation and Operation

2616 Sirius Road
Denton, TX 76208
Tel: 877-4-SAFETY
Fax: 940-382-9435
Website: www.CBSArcSafe.com
Email: info@CBSArcSafe.com

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).