

CBS ArcSafe®

Distance Is Safety®

A Group CBS Company

Installation and Operation

RSA-45

For GE AKR-4/5-A-30/50



Distance *is* Safety®

WHAT STANDS
BETWEEN YOU AND
ARC-FLASH DANGER?

WE
DO.

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Rev. 5/27/2015

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 from the breaker by loosening the set screw found on the base of the handle and removing the washer located behind the handle.



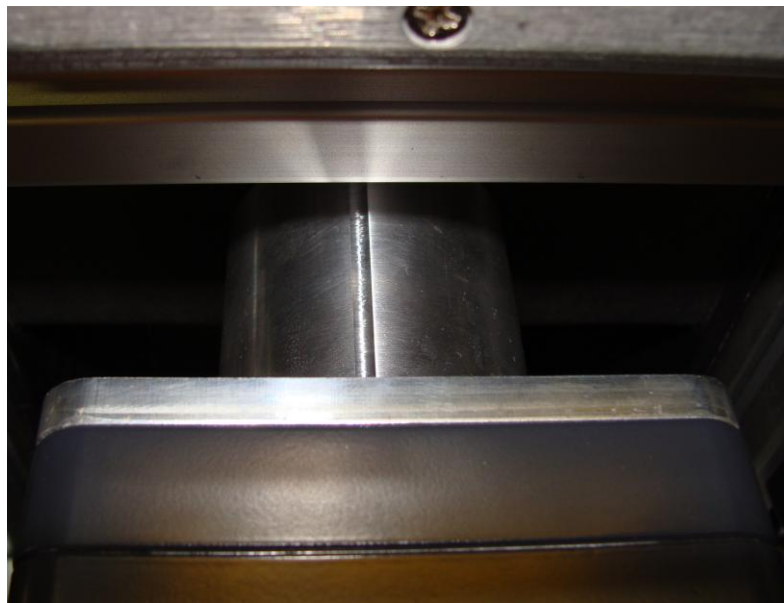
3. Install the provided collar onto the breaker shaft. Ensure that the two set screws on the collar are positioned on the flat sides of the shaft before tightening.



DANGER!

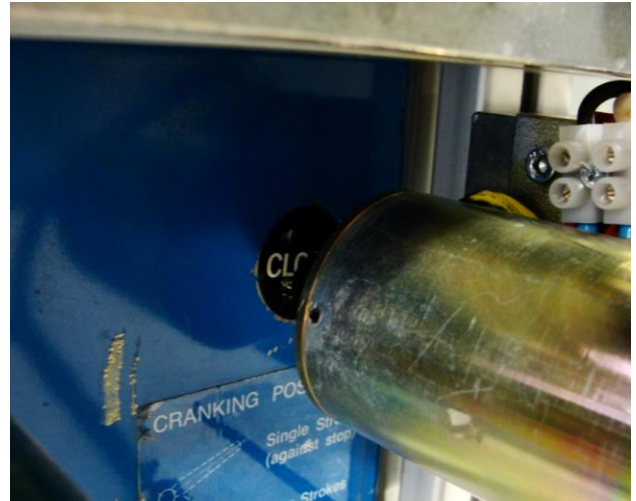
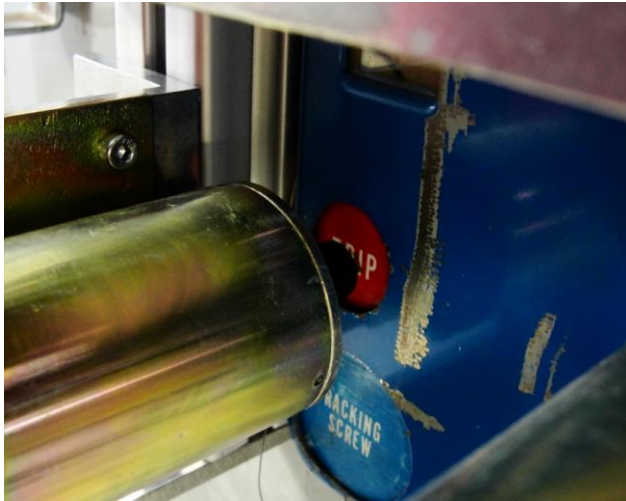
Installing the collar prior to operation is very important. Without this collar, the protruding shaft may become inserted into the breaker beyond its design limit, causing potential over travel of the mechanism resulting in damaged or broken components within the charging mechanism. Never operate the RSA-45 without the collar installed.

4. Rotate the RSA coupler shaft until the indexing mark is at the top.

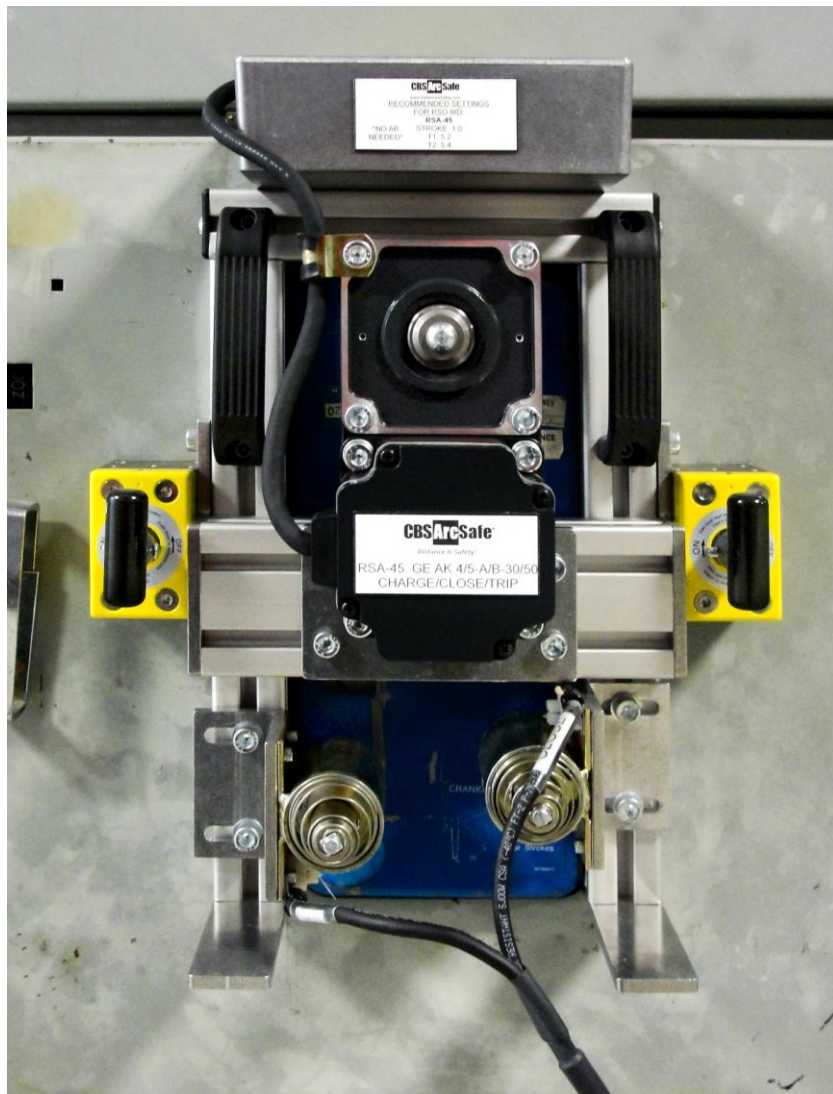


5. Place the RSA on the face of the breaker ensuring that the coupler fits over the handle shaft and the frame sits flush against the cabinet.

6. Ensure that the TRIP and CLOSE solenoids are aligned with the pushbuttons.



7. Secure the RSA to the breaker by turning the handles of the two magnets 180 degrees clockwise. 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, and
4. The four pin threaded type will attach to the cable connecting to the two solenoids.
5. Exit the arc flash boundary
6. Turn the power switch on the RSO-IIID to the ON position.
7. 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.
8. Once the timers have been properly set, press and release the CHARGE/CLOSE button to charge the breaker.
9. To close the breaker, press and release the CLOSE button.
10. To trip the breaker, press and release the 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.

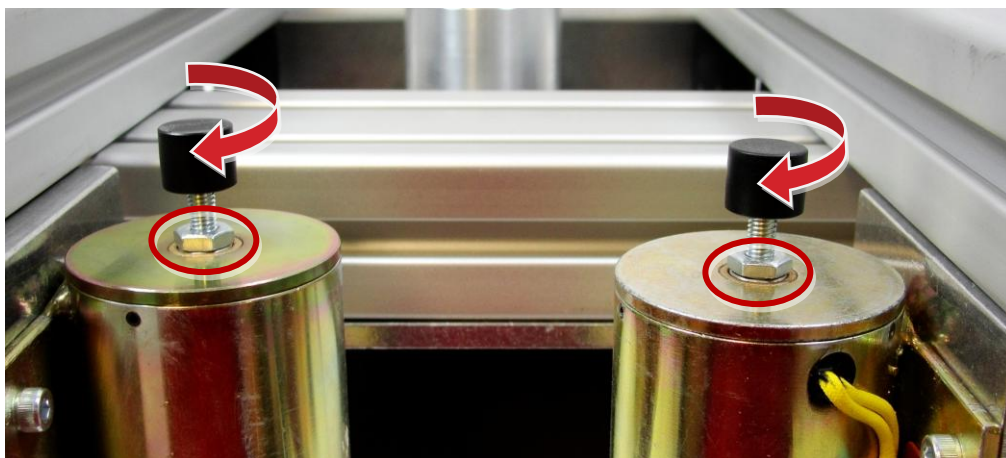
3.1 Plunger Depth Adjustment

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.



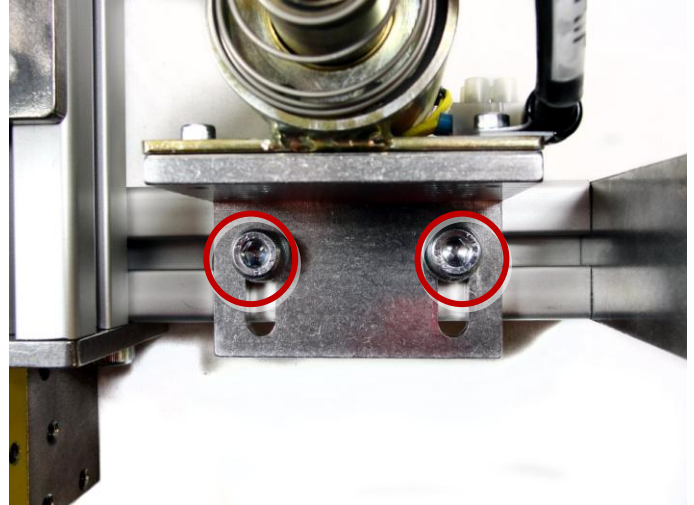
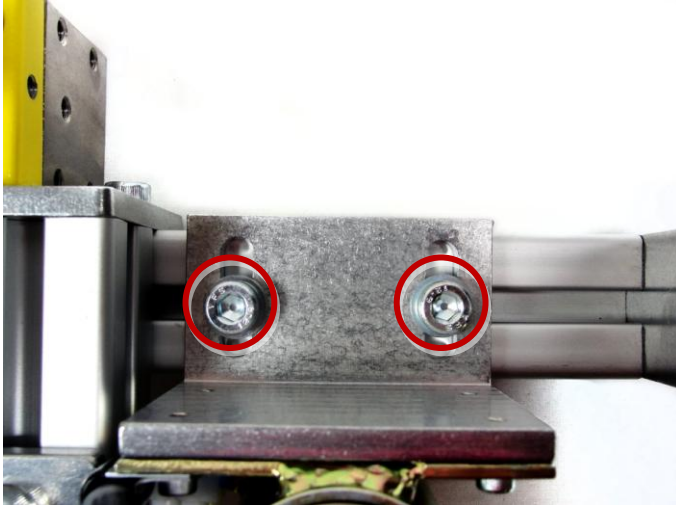
2. To decrease the solenoid plunger depth, loosen the nut on the solenoid plunger, and turn the black end clockwise. Test the depth by operating the plunger with the RSO, and re-tighten the nut.



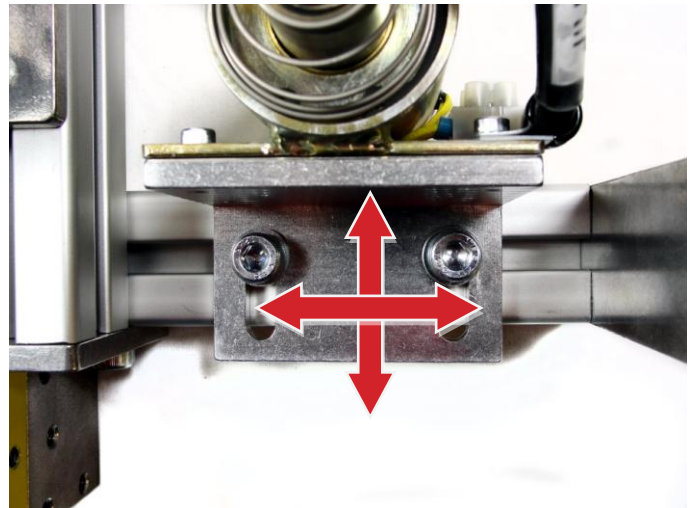
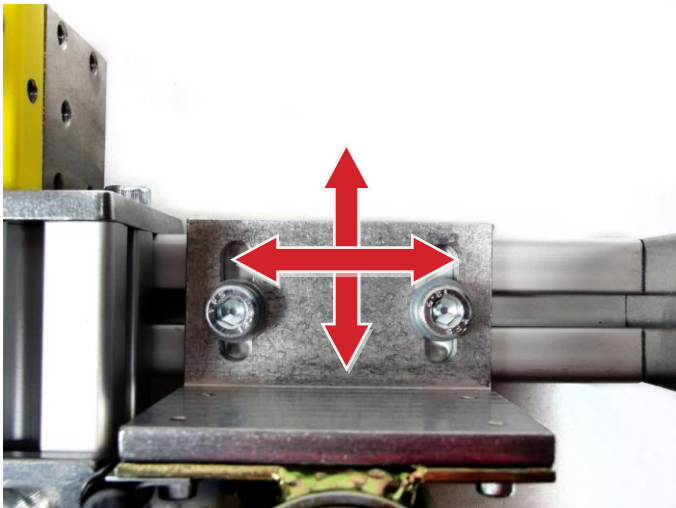
3.2 Solenoid Position Adjustment

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 each solenoid mount in place, as shown.



2. Install the RSA, as described in the Installation section of this manual.
3. Slide each solenoid assembly as required to properly align the solenoid with the center of its applicable button.

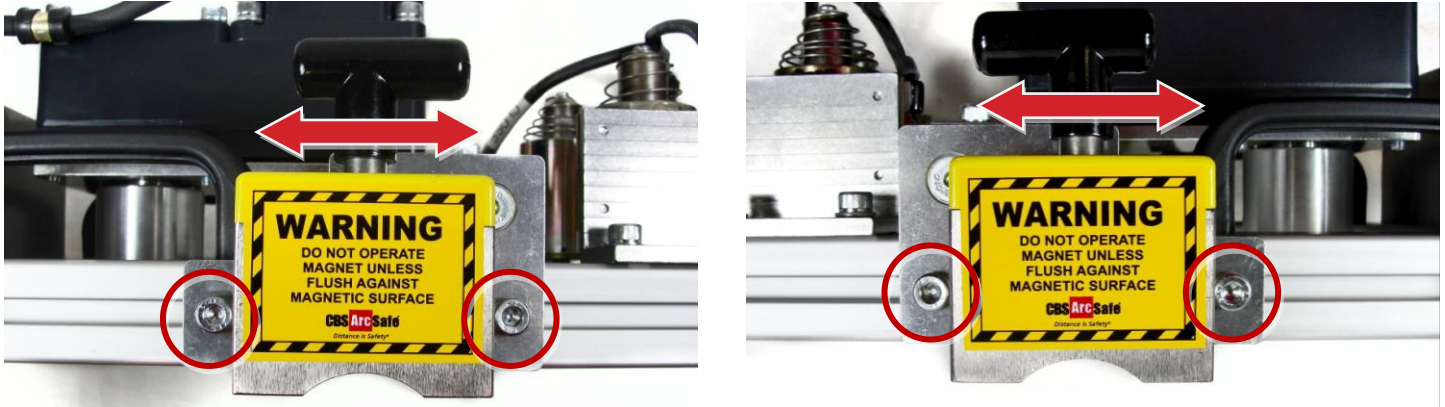


4. Re-tighten any loosened bolts.

3.3 Motor Position Adjustment

The location of the motor on the RSA can be adjusted in order to accommodate slight equipment differences.

1. Loosen the two bolts on each side of the motor mount, as indicated.



2. Install the RSA, as described in the Installation section of this manual.
3. Slide the motor assembly as required to achieve proper fit of the RSA onto the breaker.
4. Re-tighten the bolts loosened previously.



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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).