

# CBS ArcSafe®

*Distance Is Safety®*

A Group CBS Company

Installation and Operation

## RSA-9B

For GE LimitAmp Medium Voltage Controller  
CR194 and CR7160/7161 Series



**Distance is Safety®**

WHAT STANDS  
BETWEEN YOU AND  
ARC-FLASH DANGER?

**WE  
DO.**

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Rev. 10/17/2018

## 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

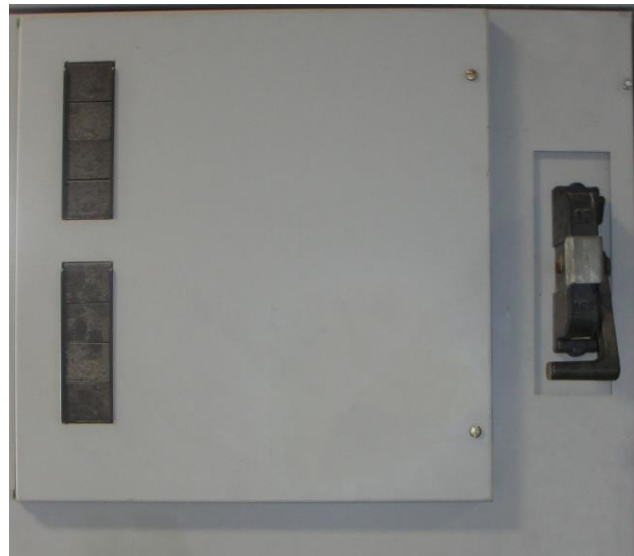
## DANGER!

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 there are no obstructions around the switch handle that will interfere with RSA installation as shown below.



2. For the RSA-9B to operate the switch, the low voltage door must be opened to make room for the mounting of the RSA on the switchgear. (If no low voltage door is present, disregard step two and proceed to step three.)



- Place the RSA-9B onto the cabinet as seen in the image. Verify that the switch handle is between the forks of the motor arm



- Confirm that the location of the lower locator is flush against the base of the switch, as seen in the image below on the left. This will ensure proper alignment of the RSA-9B on the switch. Adjustments may be made by loosening the two bolts shown on the right and sliding the locator up or down, until the proper location is achieved.



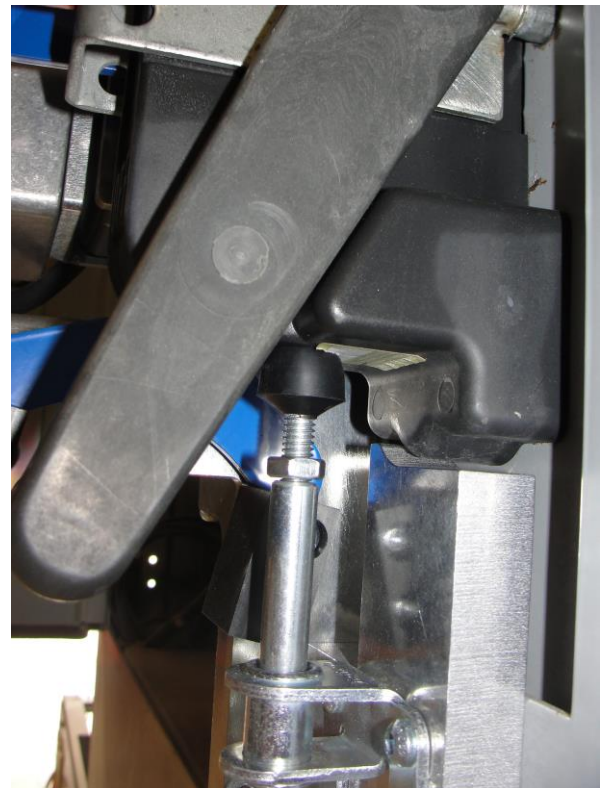
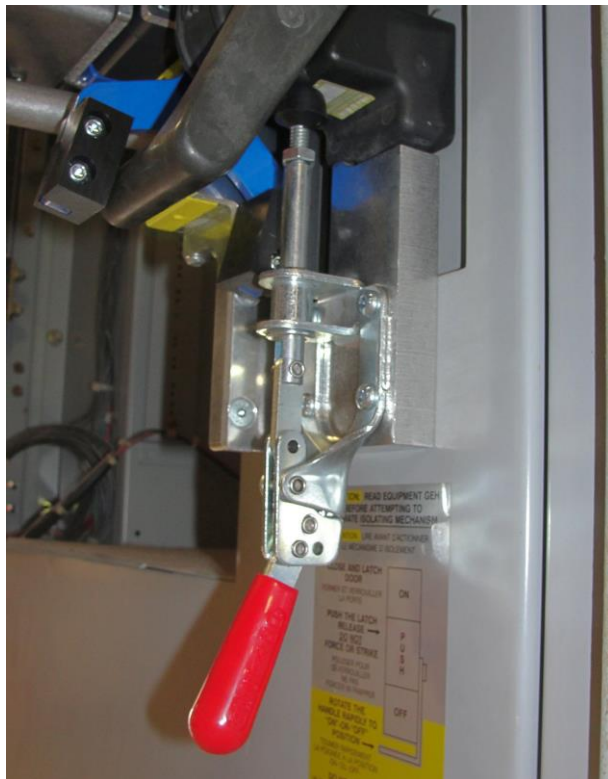


5. The location of the upper locator should be flush against the top of the switch, as seen in the image to the right. The upper locator may be adjusted by loosening the four bolts and sliding the locator up or down until the proper location is achieved.

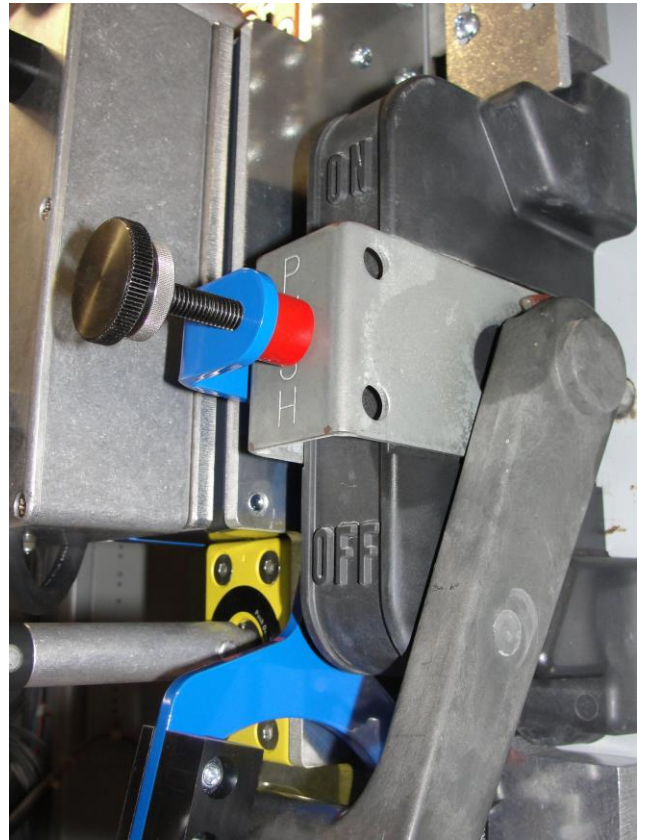
Now, turn the handle of each of the two twist lock magnets 180 degrees clockwise to secure the RSA-9B into place.



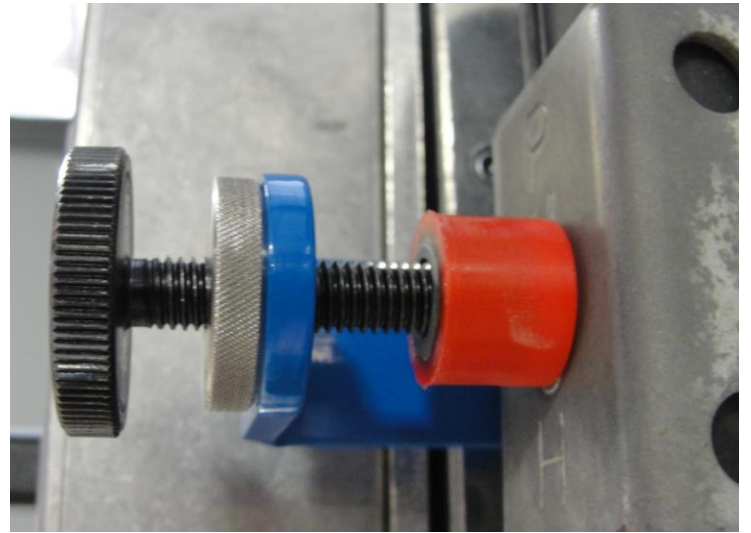
6. Once the locators have been properly adjusted and the magnets engage, operate the lower toggle clamp by pushing it downward until the rubber end is pressed securely against the base of the switch. Adjustments may be made to the length of the toggle switch by threading the bumper in or out as required.



7. Raise the interlock defeat arm until it is over the latch release, as seen in the image to the right.



8. Next, screw the thumbscrew on the interlock defeat arm until it depresses the interlock completely. Verify that the interlock is fully disengaged by inspecting the base of the switch (left image below). Once the latch release has been compressed, thread in the stainless steel knurled locking nut until it is flush against the interlock defeat arm to lock the thumbscrew into place (right image below).



## 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-I AR are fully charged or that the unit is plugged into AC power.

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

1. Ensure that the RSA is properly installed. See the Installation Section for detailed instructions.
2. Plug the RSO-I AR into the motor control box on the RSA.
3. Exit the arc flash boundary
4. Turn the power switch the RSO-I AR to the ON position.
5. Ensure that the Auto Retract (AR) function is set according to the placard on the RSA.
6. If the switch is ON and needs to be turned OFF, press and hold the "TRIP" button on the RSO-I AR until the switch has been opened.
7. If the switch is OFF and needs to be turned ON, press and hold the "CLOSE" button on the RSO-I AR until the switch has been closed





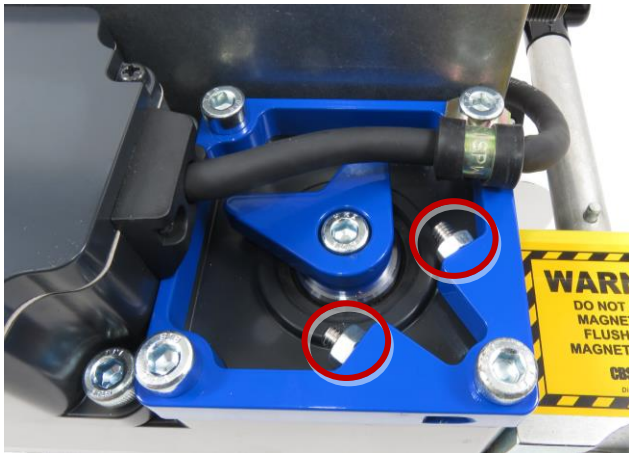
## 3 Adjustments

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 Travel Adjustment

The travel distance for the motor may be adjusted to account for differences in the operator handle. **ONLY PERFORM THIS ADJUSTMENT ON DE-ENERGIZED EQUIPMENT TO PREVENT POSSIBLE INJURY.**

1. Install the RSA on the operator handle as described in the Installation section.
2. Loosen the nut on each of the two travel stops, then back out each stop screw using a 3mm allen key.



3. With the charging handle and RSA operator arm fully at rest in the OFF position, screw in the resting travel stop towards the stop cam until it contacts as shown. Tighten the lock nut afterwards to hold it in place.





4. Move the charging handle and RSA operator arm fully to the ON position, then screw in the travel stop until the stop contacts the cam as shown. Tighten the lock nut afterwards to hold it in place











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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).