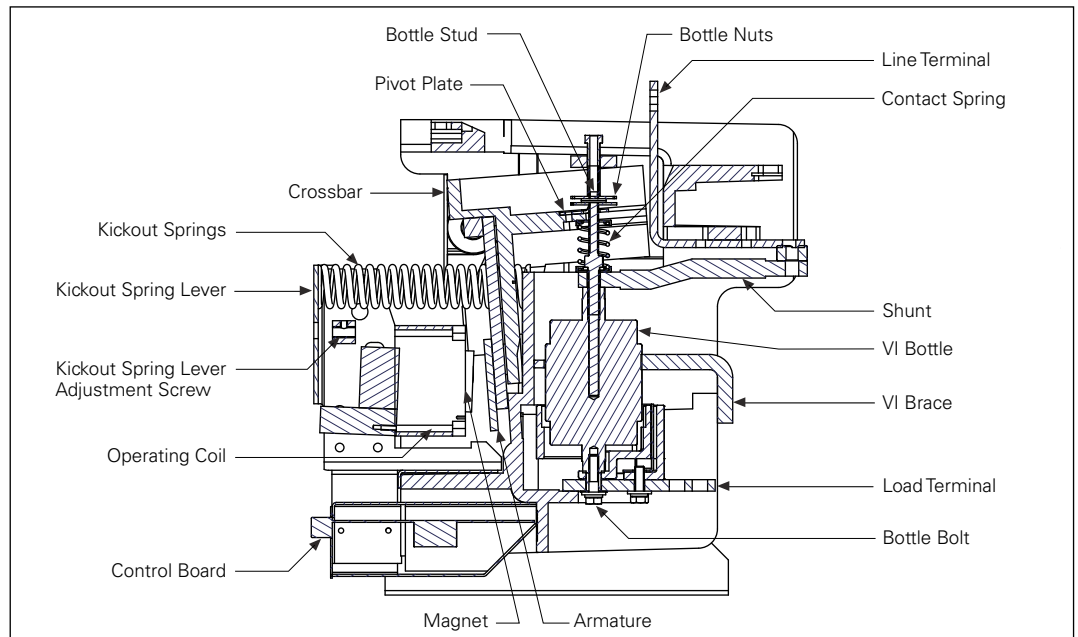


# Vacuum interrupter replacement SLN018, SL12, SL15, and SJ contactors



**Figure 1. Open Contactor**

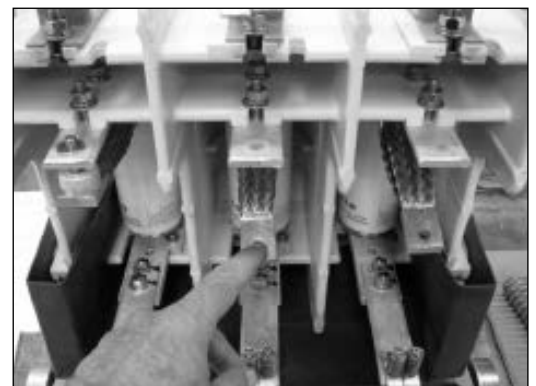
**⚠ DANGER—HAZARDOUS VOLTAGE**

**READ AND UNDERSTAND THESE INSTRUCTIONS BEFORE ATTEMPTING REPLACEMENT OF VACUUM INTERRUPTERS. THIS EQUIPMENT SHALL BE INSTALLED AND SERVICED ONLY BY QUALIFIED ELECTRICAL PERSONNEL. A QUALIFIED PERSON IS ONE WHO IS FAMILIAR WITH THE CONSTRUCTION AND OPERATION OF THIS EQUIPMENT AND WHO IS AWARE OF THE HAZARDS INVOLVED.**

**Vacuum interrupter subassembly replacement**

If it becomes necessary to replace vacuum interrupters, proceed as follows:

1. De-energize the contactor. Remove to a workbench.
2. Remove the top barrier assembly (four hex-head bolts, Classic Ampgard® only).
3. Unbolt the shunts on the line side of the bottles. See **Figure 2**.



**Figure 2.**



*Powering Business Worldwide*

4. Remove control transformer primary fuses (Classic Ampgard only).
5. Remove the hollow screw above each interrupter.
6. Remove the bottle nuts from the top stems, using a screwdriver as shown in **Figure 3**. Set aside the screws, nuts, and washers.



**Figure 3.**

7. Remove the two 5/16-inch bolts attaching each bottle subassembly. Set bolts aside.
8. Withdraw the interrupter subassemblies from the contactor chassis, pulling the bottom end out first so that the top stud clears the rear frame of the chassis. The contact springs are loose at this point and should be captured and stored. The bottle subassembly consists of the interrupter, shunt, and related hardware. See **Figure 1**.
9. Remove the old pivot plate from the crossbar. Retain hardware.
10. Loosen and remove the bottle bolt that holds the copper conductor to the bottom of the interrupter. Retain the shim from under the copper conductor and the copper spacer.

**⚠ CAUTION**

**AT NO TIME DURING THE INSTALLATION OF THE NEW INTERRUPTER SHOULD TORQUE BE APPLIED TO THE MOVING END OF THE INTERRUPTER. INTERNAL DAMAGE MAY RESULT IF TORQUE IS APPLIED. THE USED INTERRUPTERS SHOULD BE DESTROYED. DESTROYING THE INTERRUPTERS WILL ENSURE THAT THEY ARE NOT LATER CONSIDERED NEW AND INSTALLED IN ANOTHER CONTACTOR.**

11. Install the new pivot plate (provided with the new interrupter kit) on the crossbar.
12. Fasten the previously removed copper conductor to the new interrupter with the shim between the mold frame and the copper conductor. The bottle spacer is installed between the interrupter and the copper conductor. Do not tighten the bolt at this time.
13. Preset the shunt by bending the free end in a smooth curve to touch the stud, then release.

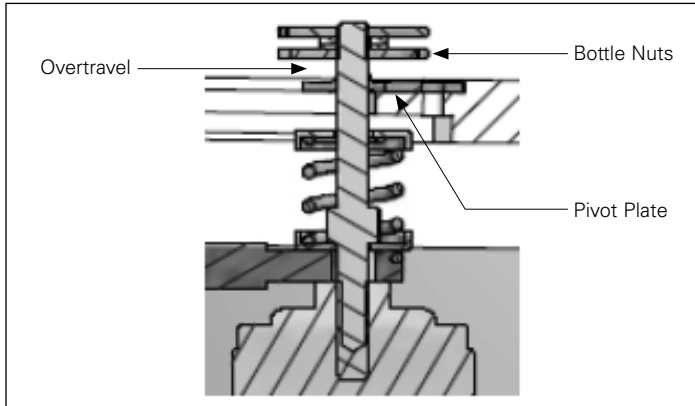
14. Install contact springs and cups onto the top stems, with cup on top, flange down. See **Figure 4**.



**Figure 4.**

15. Insert bottle subassemblies into chassis, putting top end in first and guiding the bottle stud into the slot in the pivot plate. Check to confirm that the spring and cup are between the interrupter and the crossbar.
16. Bolt the subassembly to the chassis, using the 5/16-inch bolts, two per pole.
17. Align the interrupter on the copper conductor (the bottle bolt is loose) until the stud does not rub or touch the slot in the hole in the pivot plate. Tighten the bottle bolt. See **Figure 3**. Check alignment again to make sure it was maintained while tightening.
18. Attach shunts to the line side conductor.
19. Recheck to make sure that the bottle studs remain clear of the pivot plate. In particular, make certain that the shunts have a slight bow downward (from **Step 12**) and do not push the bottle studs against the pivot plate. If they do touch the pivot plate, loosen the shunts from the line side conductor and repeat **Step 12** before refastening.
20. Close the contactor by applying rated voltage from an isolated power source, using adequate care against electrical shock.
21. Install two bottle nuts, plus the two flat washers previously removed, onto the center pole bottle stud. Both bottle nuts must have their threaded flanges facing UP.

22. Turn the center pole bottle nuts clockwise until they are  $0.120 \pm 0.005$  inches from the pivot plate. This is the overtravel gap. See **Figure 5**. Lock the bottle nuts with a screwdriver inserted from the front of the frame molding, turning the screwdriver counter-clockwise with the blade fitted from a notch in one bottle nut across to a notch in the other bottle nut. See **Figure 3**.



**Figure 5. Closed Contactor**

23. De-energize the coil and remove the power source.
24. Note and record the length of the kickout springs. Loosen the set screw that locks the kickout spring adjusting screw, then loosen the kickout spring adjusting screw until the contacts of the center pole barely touch, using a volt-ohmmeter or test light as an indicator of touch and open.
- Note:** Whenever adjusting the kickout spring lever, put your free hand over the kickout springs as a precaution.
25. With the contactor in this position and the center contacts just touching, install and adjust the bottle nuts (and spacing washers) on the other two poles so that these two poles make contact simultaneously with the center pole when checked with a meter or test light. Lock the bottle nuts as before.
26. Install the hollow screws through the guide bar onto the three bottle studs.
27. Tighten the kickout spring adjusting screw back to the original compressed length of the kickout springs. Check that the armature rests firmly against its stop on the molded frame. When a screwdriver is pushed against the bottom end of the armature in the open position, the armature must not move. If it does, the kickout springs should be tightened further to push the armature to a solid position. Re-tighten set-screw. Do not overtighten.
28. Install control transformer primary fuses (Classic Ampgard).
29. Install top barrier assembly (Classic Ampgard).

**Eaton**  
1000 Eaton Boulevard  
Cleveland, OH 44122  
United States  
Eaton.com

© 2014 Eaton  
All Rights Reserved  
Printed in USA  
Publication No. IB48083 / Z15482  
August 2014



Eaton is a registered trademark.

All other trademarks are property  
of their respective owners.