



**PowIVac Circuit Breaker; “Main” or “Closing” Spring Assembly Removal Procedure**

The following instructions outline the procedure for removing the “Main” or “Closing” spring assembly on PowIVac standard and replacement breakers equipped with standard “PowIVac stored energy” spring charge mechanisms. This procedure is applicable for most ratings and models of these breakers. Refer to the specific PowIVac Instruction Bulletins for further details.

**Important:** This procedure does not apply to Powell breakers equipped with “PVCB” or “AT” type stored energy mechanisms. Please refer to applicable Powell instruction bulletins for instructions pertaining to these breaker types.

**IMPORTANT SAFETY NOTES:**

All breakers must be removed from service prior to performing any maintenance. Before any adjustments, servicing, parts replacement, or any other act is performed requiring physical contact with the electrical working components or wiring of this equipment, the POWER SUPPLY MUST BE DISCONNECTED.

Only qualified personnel should attempt performing maintenance on any power circuit breaker.

**WARNING**

WHEN ANY MAINTENANCE PROCEDURE REQUIRES THE OPENING OR CLOSING OF THE CIRCUIT BREAKER OR THE CHARGING OF ANY OF THE STORED-ENERGY MECHANISM SPRINGS, EXERCISE EXTREME CAUTION TO MAKE SURE THAT ALL PERSONNEL, TOOLS, AND OTHER OBJECTS ARE KEPT WELL CLEAR OF THE MOVING PARTS OR THE CHARGED SPRINGS. FAILURE TO DO THIS MAY CAUSE SERIOUS DAMAGE OR INJURY TO THE CIRCUIT BREAKER OR PERSONNEL.

**Tools Required For Performing This Procedure:** ⇒

Standard Wrench Set • Socket Set • “Removable Type” Thread-Locking Compound

**IMPORTANT** Please carefully review and understand all steps before initiating this procedure.

**Caution:** Extreme care must be taken when removing or handling a compressed main spring assembly. The stored mechanical energy released when a main spring assembly violently decompresses can cause serious injury or death.

**The procedure for removing the “Main”, or “Closing” spring assembly is as follows:**

1. With the main closing spring Discharged and the circuit breaker contacts Open, remove the ½” bolt at the top of the spring rod, together with the flat washer and lock washer.
2. Remove the right-angled bracket, by unfastening the two ¼” attachment bolts from the rear frame.
3. Remove the spacer from below the bracket.
4. Rotate the bracket 90°, and re-position it on top of the spring yoke.
5. Place the spacer on top of the bracket with the flat washer above it.
6. Re-insert the ½” bolt and fully tighten until the main spring tension is taken off the connecting rods.

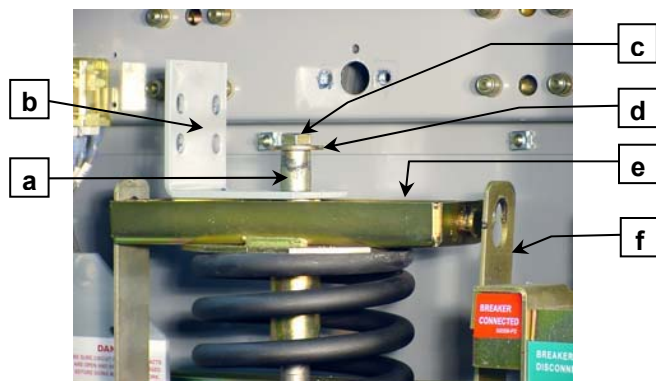
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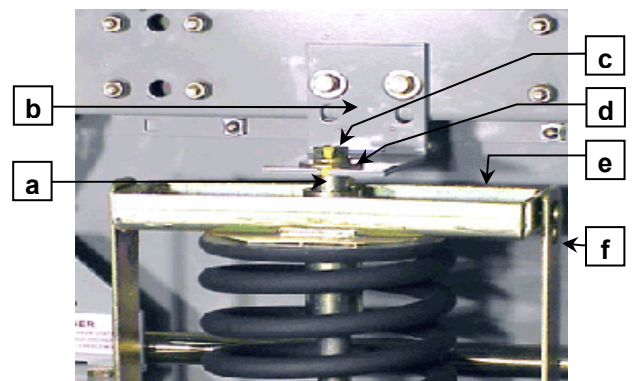
7. With a slight rocking motion of the main closing spring assembly, the connecting rods (Figure 1) can now be unhooked from the spring yoke pins and the main closing spring assembly can be removed.
8. Perform the above steps in reverse order to re-install the main spring assembly back on the breaker.

**Important:** Apply removable thread locking compound to the ½” bolt prior to re-installing the main spring assembly on the breaker.



**Figure 1. Main Closing Spring Assembly (Compressed for Removal)**

- a. Spacer
- b. Bracket
- c. ½” x 1¼” Bolt
- d. Flat Washer
- e. Spring Yoke
- f. Connecting Rod



**Figure 2. Main Closing Spring Assembly, (installed)**

- a. Spacer
- b. Bracket
- c. ½” x 1¼” Bolt
- d. Flat Washer
- e. Spring Yoke
- f. Connecting Rod

**END OF PROCEDURE**