



INSTRUCTIONS FOR INSTALLATION  
OF CLOSE LATCH ANTI-SHOCK SPRING IN HK MECHANISM  
(USED IN BREAKERS LESS THAN 1000 MVA)

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1. GENERAL

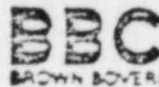
- 1.1 For general circuit breaker instructions refer to the appropriate Brown Boveri Instruction Bulletin.
- 1.2 The breaker must be removed from the switchboard.
- 1.3 Since the spring is to be installed on the underside of the breaker, the breaker must either:
  - 1.3.1 Be lifted off the floor a sufficient distance, and supported for safety, so there is access to the underside.
  - 1.3.2 Remove the barriers and arc chutes so the breaker can be turned on its side or back for access to the underside.  
(See par. 3.3 before positioning the breaker on its back)
- 1.4 The breaker closing springs can be charged electrically or mechanically, but if charged electrically, the toggle switch should be turned off after each charge operation.

2. PARTS REQUIRED

- One (1) spring 162374-A
- One (1) cotter pin 53113-F6

3. INSTALLATION

- 3.1 Position the breaker for access to the underside per 1.3.1 on 1.3.2 above.
- 3.2 Charge the closing springs and install the slow close bracket per the appropriate breaker instruction bulletin. Pull the manual close lever to discharge the springs to partially close the breaker.
- 3.3 Manually trip the breaker. Check at the underside of the mechanism that the closing springs are "UP" so that the 1" dia. pin X 4 7/8" long with cotter pins at each end can be moved out to clear the close spring. With the breaker in some positions, particularly on its back, the crank at the hex. shaft will sometimes rotate too far when the manual trip is made after the slow close which prevents the 1" dia. pin from clearing the close spring. If this condition exists, see 3.4.
- 3.4 Do this operation only if the 1" dia. pin will not clear the close spring as described in 3.3. Repeat the slow close operation but before pushing the manual trip an approximately 3/4 X 1 X 9 in. long wood block should be temporarily installed to prevent overtravel of the closing springs. This block is placed vertically, between the truck and the closing spring crank, on the motor side of the breaker, and taped temporarily to hold in place. The springs will now hold in the "UP" position when the breaker is manually tripped. Make sure to remove the wood block after installing the close latch anti-shock spring.



- 3.5 Viewing the mechanism from the rear, remove the right (motor side) side cotter pin in the 1" dia. X 4 7/8" long pin. Tap the pin lightly toward the left approximately 1 1/2" until the 13/16 long X 1 1/8 dia. bushing on the pin can be removed.
- 3.6 Install the close latch anti-shock spring with the spring hook toward the rear of the breaker, the "L" shaped end of the spring on the top of the 3/4 dia. X 4 7/8 long pin with the 1 5/8 long spring end toward the motor side and the coil spring over the 1 3/8 dia. hub of the close latch. The final step is to push the hook end of the spring up and toward the left to hook over the 1/4" wide close latch.
- 3.7 While holding the 13/16 long bushing in place, tap the 1" dia. pin back to its original position. Install a new cotter pin.
- 3.8 Remove the wood block if it was installed per par. 3.4.
- 3.9 Complete the slow close operation by completing the manual charge operation. Remove the slow close bracket.
- 3.10 Close and trip the breaker several times to check its operation.
- 3.11 Reposition the breaker on the floor in its normal position.
- 3.12 If removed, reinstall the arc chutes and barriers per the appropriate breaker instruction bulletin.