

DEH41704 INSTRUCTIONS

Power Break® II Circuit Breaker

Charging Handle Repair Kit : SPHANDLER

Introduction

This manual describes the replacement procedure for a PBI charging handle. This procedure should be performed by a trained ABB Field Technician only. Figure 1 shows the charging handle being replaced.



Figure 1

Kit contents and Tools:

Each interlock kit contains a replacement handle assembly, snap ring and gag screw with washers. Use the following procedure to perform the handle replacement.

Tools required are shown below in Figure 2. Red Grease is also required to lubricate moving parts



Figure 2

WARNING: Before installing, turn the breaker OFF, disconnect it from all voltage sources, and discharge the closing springs.

AVERTISSEMENT: Avant d'installer, mettre le disjoncteur en position OFF, le déconnecter de toute tension d'alimentation, et décharger les ressorts d'armement

1. Remove the front fascia cover by first unscrewing the 4 screws in the corners. Note: the screws are retained in the cover. See Figure 3. To lift the cover off, crank the breaker handle down until one click is heard. While holding the handle carefully, lift the escutcheon cover out and upward. If the handle is broken, carefully use pliers to grab the remaining section to crank.



Figure 3

2. Charge spring fully by manually cranking on the handle until the charge flag drops. Install the spring gag screw with washers provided until hand tight. See Figure 4

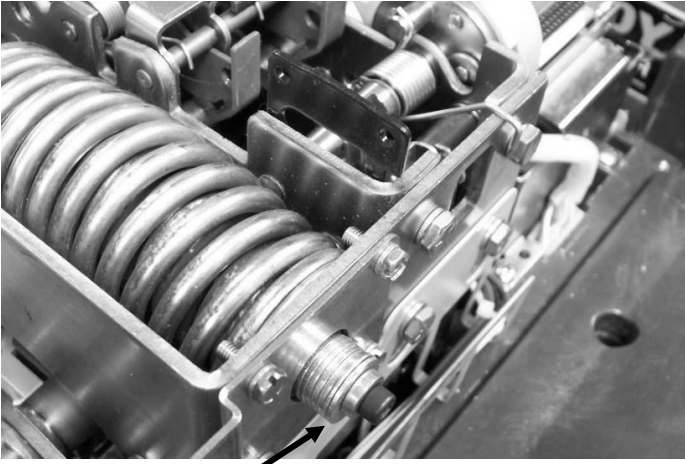


Figure 4

3. Remove the trip unit on the right side by pulling on the release lever under the carrier plate and lifting the trip unit. See Figure 5



Figure 5

4. Use the retaining ring pliers to remove the retaining ring from the center shaft of the handle. See Figure 6.



Figure 6

5. Use the Phillips screwdriver to loosen but do not remove the 3 handle screws. See Figure 7.



Figure 7

6. Use the needle nose pliers to disengage the spring. See Figure 8.



Figure 8

7. Continue to loosen the 3 screws. Carefully remove the handle from the mechanism. See Figure 9

NOTE: Retain loose spring, spacer and screws which may fall into the breaker.

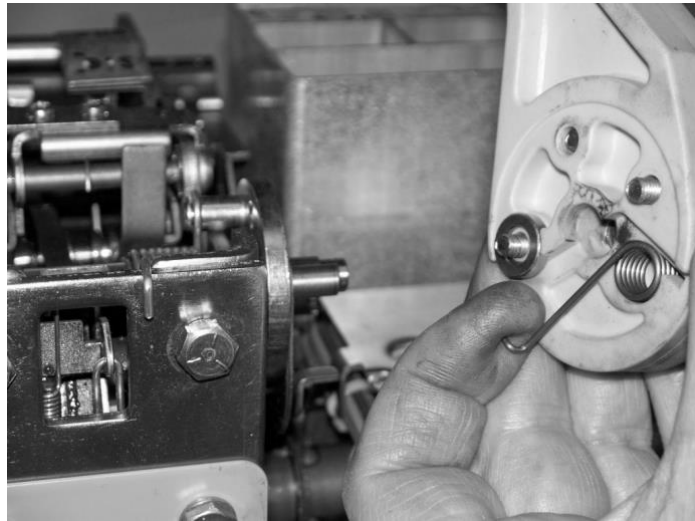


Figure 9

8. Remove the stainless steel pin by applying a slight CCW rotational force on the handle plate and pulling out the pin. See Figure 10 and 11.

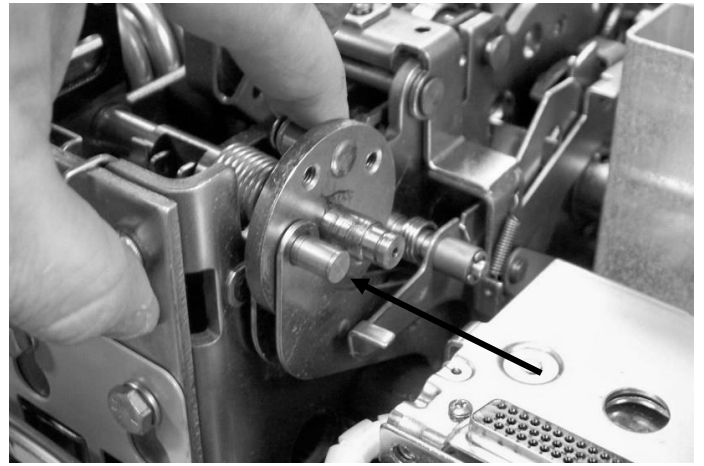


Figure 10



Figure 11

9. Carefully remove handle link by lifting the link out. See Figure 12.

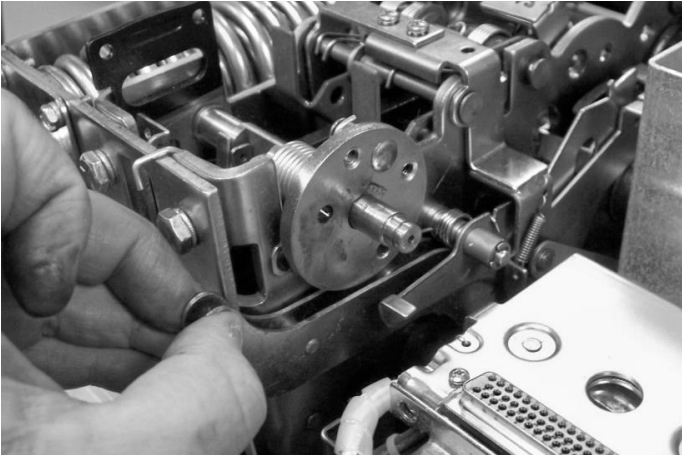


Figure 12

10. Repeat steps 5 through 8 on the replacement handle kit provided as shown in Figure 13.



Figure 13

11. Apply Red Grease to the handle link pin head as shown in Figure 14. Top side of links goes toward mech. Pin is loose....retained only by interference with the mechanism side frame.

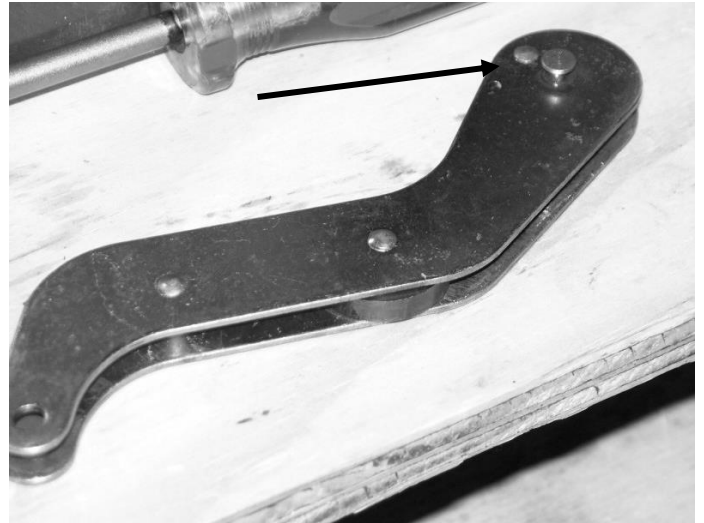


Figure 14

12. Install link and pin as shown in figure 15. Apply a slight CCW rotational force on the handle plate to assist in installing the pin.

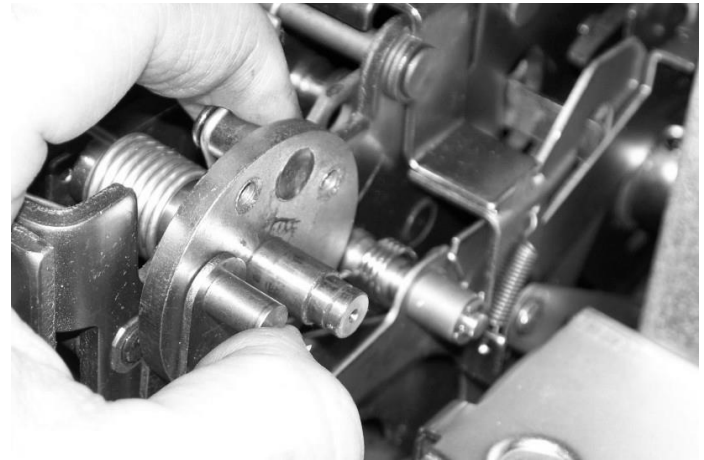


Figure 15

13. Carefully slide handle onto the pivot pin being cautious not to lose the hardware. Align the SS pin into the center of the torsion spring on the handle. See Figure 16.

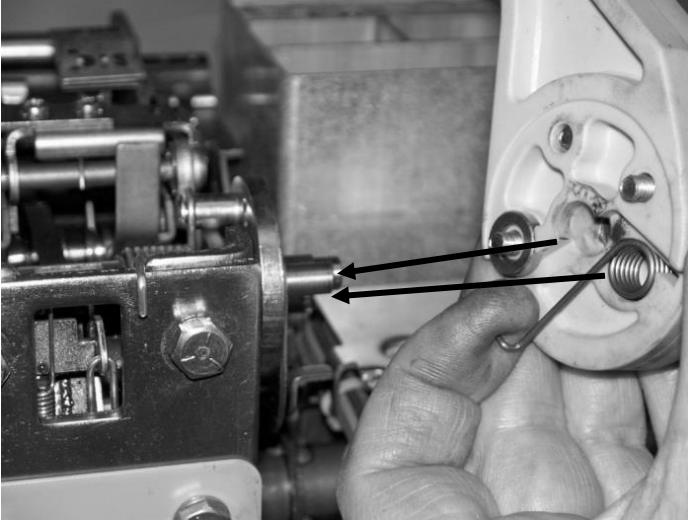


Figure 16

14. Start the 3 Phillips screws then using the hook pull the torsion spring to hook onto the handle link. See Figure 17.

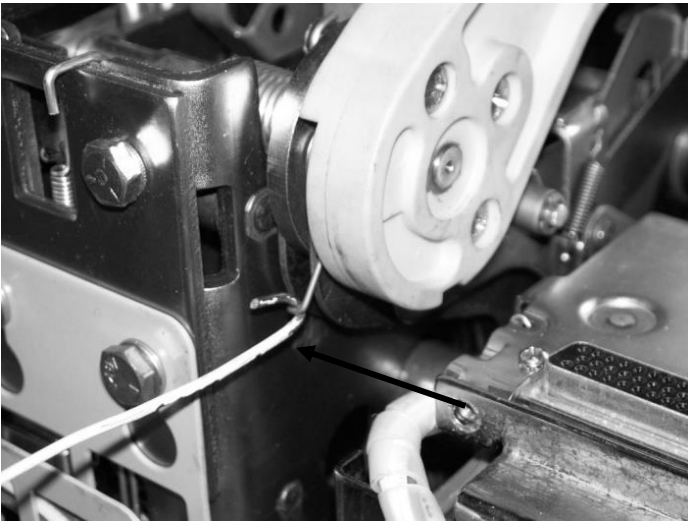


Figure 17

15. Use the retaining ring pliers to install the new retaining ring supplied with the kit onto the center shaft. See Figure 18. Tighten the 3 screws to a torque of 25-35 in-lbs.



Figure 18

16. Check that the handle moves and pin engages ratchet. Note that the handle is not going to move very far as the breaker is at full charge.
17. Remove gag screw installed in step 2.
18. Reinstall trip unit removed in step 3.
19. Push the close button to close the breaker then push the open button to open the breaker.
20. Verify the breaker charges fully with the newly installed handle.
21. Push the close button to close the breaker then push the open button to open the breaker.
22. Reinstall cover as removed in step 1 by cranking the handle until 1 click is heard. Hold handle in this position and slide cover over handle.