Coded Note Number: **Y2510**
Revision: **C003**
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Title: **2000HRC 5KV CIRCUIT BREAKER CSI INSPECTION FOR REFURBISHED BREAKERS**

This revision history is provided for convenience and does not alleviate the supplier's responsibility with understanding and complying with the full coded note.
Change from Revision C002 – Editorial change to reformat to current standard.
Bolded font indicates changed/added content.
[*Text deleted*] inserted in the document indicates the removal of content.

Vendor is to demonstrate the below listed attributes during in-process inspection by NNS source inspector. The breakers will be inspected in accordance with CVN 68 Class Depot Maintenance Requirement 324-02:

1. Source Inspection will inspect & measure the following using CVN 68 CLASS DEPOT MAINTENANCE REQUIREMENT 324-02.

    1.1. CHARGING OPERATING MECHANISM (FIGURE 4)

    NOTE: The ratchet gear and charging pawl are not accessible for direct measurement.

    1.1.1. With the breaker open and the closing springs discharged, insert the manual charging handle on the charging bell crank (3).

    NOTE: The motor roller should be at 9 o'clock as viewed from the right side of the operating mechanism. If the motor crank is not horizontal, rotate the motor armature with a non-metallic rod through the hole in the motor bell and carefully nudging near the top of the commutator. Avoid touching the armature wires or motor brushes. As an alternative method, insert the manual charging handle on the charging bell crank (3). Move the charging handle in the upward direction until the motor roller is at 9 o'clock as viewed from the right side of the operating mechanism.

    1.1.2. Raise the manual charging handle and release, allowing it to rest. Allow the weight of the charging handle to rest on the charge crank.
    1.1.3. Check that the motor roller is free.
    1.1.4. Check clearance at point "A" for minimum of 0.009 inch to maximum 0.060 inch using feeler gauges.

    1.2. MAGNETIC LATCH TRIP (FIGURE 7)

1.2.1. Locate the magnetic latch trip device on the front right side of the breaker base pan.

1.2.2. With the breaker open, and the springs discharged, check the trip clearance at point "A" (distance between trip pin and trip link adjusting screw). The clearance should be 1/16 inch (minimum) to 3/16 inch (maximum).

1.2.3. If an under voltage device is installed, depress the manual hold-in button. Insert inspection pin at point "A" to check clearance.

1.3. ELECTRICAL LOCKOUT DEVICE (FIGURE 9)

1.3.1. With the breaker open, the racking mechanism indexed to test or connect position and the springs discharged, manually charge the closing springs. Do not defeat the lockout.

1.3.2. Attempt to close breaker by depressing the manual close button. The breaker should not close.

1.3.3. Defeat the lockout by moving the lockout manual defeator lever (Piece 14 of figure 9) to the right, continue to hold the manual defeator lever and depress the manual close button, the breaker should close.

1.4. MAIN AND ARCING CONTACTS (FIGURE 10A AND 10B) (INSPECT FOR CONTACT PRESSURE, AND ALIGNMENT)

NOTE: Measurement of contact pressure can be accomplished by using the GO-NO GO gauge.

1.4.1. Determine proper contact pressure for each phase as follows (utilize the Go/No Go gauge):

1.4.1.1. Defeat the undervoltage trip and/or a lockout device if the circuit breaker is equipped with these attachments.

1.4.1.1.1. Manually charge the closing springs. Manually close the breaker. Using a 6” scale Measure the dimension “A” on Figure 10B. This is the contact wipe. Verify that the dimension “A” is 1-1/2 ± 1/32 inches.

1.4.1.1.2. Discharge closing springs and trip the breaker open. The breaker is now open, the closing springs are discharged and it is safe to measure the remaining contact adjustment measurements.

1.4.2. With the circuit breaker open and springs discharged, insert the arcing contact GO/NO-GO 199367-B gauge into the gap at point “A” (Figure 10A). If the GO end of the gauge is accepted the contact pressure is not excessive. Remove the GO end and attempt the NO-GO end of the gauge. Acceptance of the NO-GO end indicates excessive contact wear of the stationary arcing contacts.

1.4.3. Insert the main contact GO/NO-GO gauge 199367-A into the gaps at point “B” individually (Figure 10A). If the GO end of the gauge is accepted, the contact leaf spring pressure is not excessive. Remove the gauge and insert the NO-GO end at point “B”. Acceptance of the NO-GO gauge indicated excessive wear of the stationary main contacts.

1.4.4. Check main contact alignment by inserting the main contact alignment gauge 199866-A between points “B”. The gauge should not touch the two outside fingers, but should freely slide past the two inside fingers (8) until the steps in the gauge prohibit from entering past this point.

1.5. UNDER VOLTAGE TRIP DEVICE (FIGURE 11)

1.5.1. Manually charge the closing springs. Defeat the undervoltage using a defeator plate. Measure the separation between the tripping screw (16) and the trip pin (17). This gap is indicated as “B” on Figure 11.

1.5.1.1. The measurement “B” should be 1/32 inch minimum to 1/16 inch maximum.

1.5.1.2. Manually close the breaker to discharge closing springs. Loosen the defeator plate to allow the uv to trip the breaker open.