

Part 21 (PAR)

Event # 50371

Rep Org: ABB, INC	Notification Date / Time: 08/15/2014 11:00 (EDT)
Supplier: ABB, INC	Event Date / Time: 08/15/2014 (EDT)
	Last Modification: 09/12/2014
Region: 1	Docket #:
City: FLORENCE	Agreement State: Yes
County:	License #:
State: SC	
NRC Notified by: DAVID BROWN	Notifications: SILAS KENNEDY R1DO
HQ Ops Officer: JEFF ROTTON	GEORGE HOPPER R2DO
Emergency Class: NON EMERGENCY	MICHAEL KUNOWSKI R3DO
10 CFR Section:	JACK WHITTEN R4DO
21.21(d)(3)(i) DEFECTS AND NONCOMPLIANCE	PART 21 GROUP EMAIL

NOTICE OF DEVIATION REGARDING K-LINE CIRCUIT BREAKER SECONDARY CLOSE LATCH

The following information was excerpted from a facsimile received from ABB, Inc:

"This letter provides notification of a failure to comply with specifications associated with a secondary close latch, part number 716610K01, used in K-Line 225/800 and 1600/2000 amp electrically operated Model 7 circuit breakers. This does not affect previous models of these same breakers that have not been upgraded to include the interlocking primary and secondary close latches. It also does not affect manually operated Kline breakers or K3000/4000 circuit breakers. Information is provided as specified in 10CFR21 paragraph 21.21(d)(4).

"Notifying individual: Jay Lavrinc, Vice President & General Manager, ABB (Medium Voltage Service), 2300 Mechanicsville Road, Florence, SC 29501

"Identification of the Subject component: ABB part number 716610K01 secondary close latch. This secondary close latch is used on new legacy K-Line Model 7 electrically operated circuit breakers. It is also used during breaker refurbishments when a secondary close latch is required to be replaced because of damage or wear. The secondary close latch is available as a component part and is also used in K-Line Model 7 up-grade kits.

"If a breaker is sent in for refurbishment the primary and secondary latches are replaced unless it is required in the customer PO that they not be replaced unless they are damaged or worn.

"Nature of the deviation: During outgoing inspection a breaker went trip free during the operational phase of the testing procedure. The inspector found that the cam attached to the top of the secondary close latch, 716610K01, was not properly riveted in place. The head of the rivet was not pushed down flush against the side of the cam. Since the rivet was not seated properly, the other end of the rivet did not project through the other side of the latch

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and therefore the bradded end of the rivet was not deformed in a manner to sufficiently apply the required holding force to keep the cam in its proper and secure operating position.

"Corrective actions include:

- a. Perform 100% inspection all part number 716610K01 secondary close latches in inventory to identify the nonconforming latches. (Action complete)
- b. Trained inspectors and breaker assemblers on identifying this condition (Action Complete)
- c. Contact primary vendor to investigate cause and correct on future orders. (Action Complete)
- d. Verified that this is the only assembly with bradding that this vendor provides. (Action complete)
- e. Notification of the potential existence of this deviation to affected customers (Action to be completed by 18 August 2014)

"Affected Customers: Constellation Energy, DTEEnergy, Entergy Operations, Exelon Corporation

"Recommendations: It is recommended that affected Licensees that have received latches that were identified as having been provided from parts that fall under this notification take the following actions:

"If the latch is in their inventory as a component, in a kit or in a breaker that is not currently in use it is suggested that the secondary trip latch be inspected for this condition. Inspection should include visual inspection of the rivets to confirm they are properly seated and bradded and physical manipulation of the cam to determine that it is securely held in place in the assembly.

"If a suspect latch is installed in a breaker that is currently installed and energized we recommend that at their next maintenance cycle, the secondary close latch in the breaker be inspected for this condition.

"We currently cycle Kline breakers that are refurbished approximately 55 close/open operations before they ship from the Florence facility. New breakers get at least that many operations or more. If a breaker has shipped out of the Florence facility during this period it is unlikely that the breaker would get through inspection without failing with a latch that is improperly riveted. ABB cannot guarantee that no latch on a breaker that shipped is affected but we do not see it as a likely occurrence with the testing that the breaker is subjected to prior to shipment. There have been no field failures reported that were attributed to this manufacturing issue."

* * * UPDATE FROM DAVID BROWN TO JOHN SHOEMAKER ON AT 1654 EDT ON 9/12/14 * * *

The following information was received from ABB Inc. via email;

"This amendment is being issued to correct 2 errors in the original notification:

- 1. This 'secondary close latch' was mistakenly referred to as a 'secondary trip latch' in Section 7 [of the report].
- 2. The manner in which the problem was detected was described improperly as a breaker 'went trip free' when in fact, the breaker 'failed to close'. This is from Section 5 [of the report].

"This [amendment] letter is being submitted to ensure accurate information has been reported. There have been no reported field failures and affected customers have been notified."

For questions, contact;
David Brown
QA Engineer, ABB Inc.
Ph: (843) 413-4782

Notified R1DO (Jackson), R2DO (Shaeffer), R3DO (Riemer), R4DO (Azua), and Part 21 Group via email.

HOO Hoc

From: David C. Brown <david.c.brown@us.abb.com>
Sent: Friday, September 12, 2014 4:54 PM
To: HOO Hoc
Cc: Victor H. Romano
Subject: ABB, Inc. (Florence, SC) - Amended Copy of Previously Submitted Part 21 Notification
Attachments: Part 21 - Secondary Close Latch - Amendment.pdf

Good afternoon,

Attached is a color copy of an amendment to a Part 21 Notification we previously submitted, dated 15 August 2014. This amendment is being issued to correct 2 errors in the original notification:

1. This "secondary close latch" was mistakenly referred to as a "secondary *trip* latch" in Section 7.
2. The manner in which the problem was detected was described improperly as a breaker "went trip free" when in fact, the breaker "failed to close". This is from Section 5.

This letter is being submitted to ensure accurate information has been reported. There have been no reported field failures and affected customers have been notified.

Thanks,



David C Brown
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September 12, 2014

Document Control Desk
U. S. Nuclear Regulatory Commission
Washington, DC 20555-0001
FAX 301-816-5151

Subject: Amendment to Previously Submitted Notification: 10CFR Part 21 Notification of Deviation
re. K-Line Circuit Breaker Secondary Close Latch

This letter is being submitted to correct two administrative errors in the Part 21 Notification submitted on August 15, 2014.

1. This letter provides notification of a failure to comply with specifications associated with a secondary close latch, part number 716610K01 (see Figure 1), used in K-Line 225/800 and 1600/2000 amp electrically operated Model 7 circuit breakers. This does not affect previous models of these same breakers that have not been upgraded to include the interlocking primary and secondary close latches. It also does not affect manually operated Kline breakers or K3000/4000 circuit breakers. Information is provided as specified in 10CFR21 paragraph 21.21(d) (4).

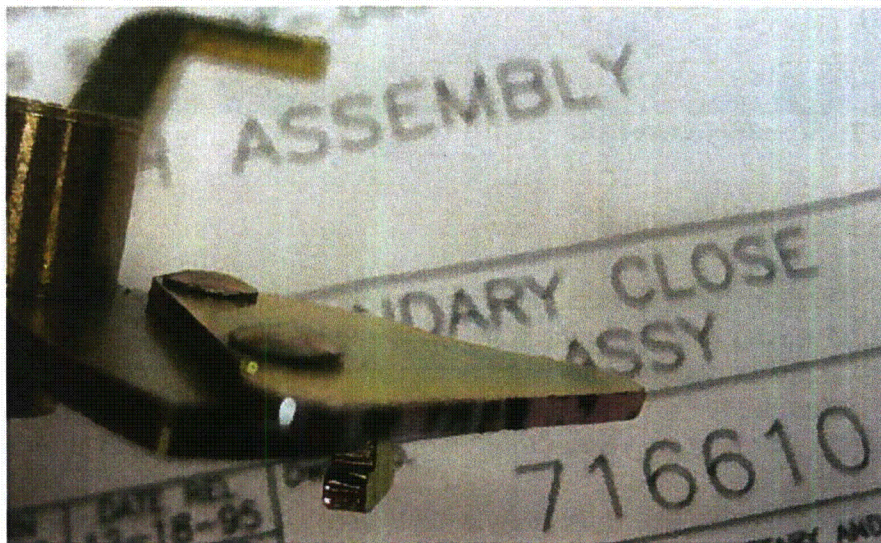


Figure 1 – Secondary Close Latch

2. Notifying individual: Jay Lavrinc, Vice President & General Manager, ABB (Medium Voltage Service), 2300 Mechanicsville Road, Florence, SC 29501
3. Identification of the Subject component: ABB part number 716610K01 secondary close latch. This secondary close latch is used on new legacy K-Line Model 7 electrically operated circuit breakers. It is also used during breaker refurbishments when a secondary close latch is required

ABB Inc.



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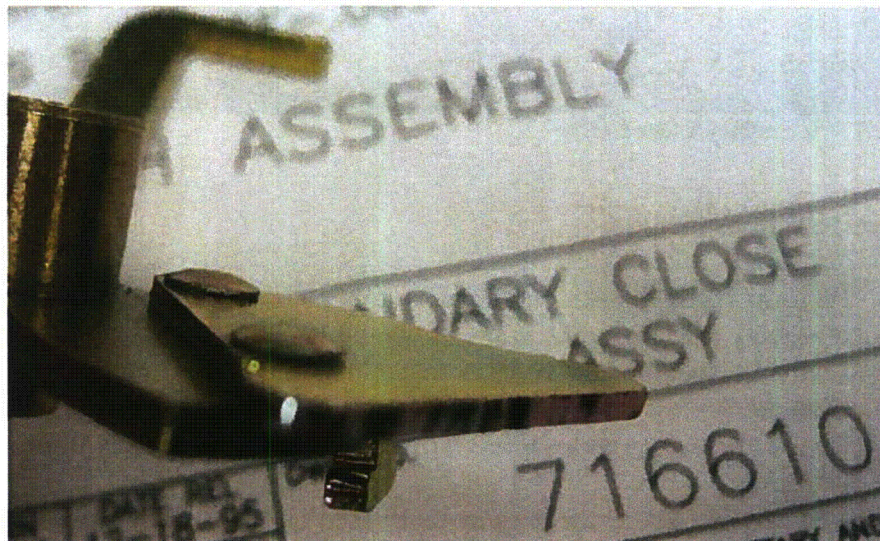


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ABB Inc.



to be replaced because of damage or wear. The secondary close latch is available as a component part and is also used in K-Line Model 7 up-grade kits.

4. If a breaker is sent in for refurbishment the primary and secondary latches are replaced unless it is required in the customer PO that they not be replaced unless they are damaged or worn.
5. Nature of the deviation:

During outgoing inspection a breaker failed to close during the operational phase of the testing procedure. The inspector found that the cam attached to the top of the secondary close latch, 716610K01, was not properly riveted in place. The head of the rivet was not pushed down flush against the side of the cam. Since the rivet was not seated properly, the other end of the rivet did not project through the other side of the latch and therefore the bradded end of the rivet was not deformed in a manner to sufficiently apply the required holding force to keep the cam in its proper and secure operating position. (see Figure 2)

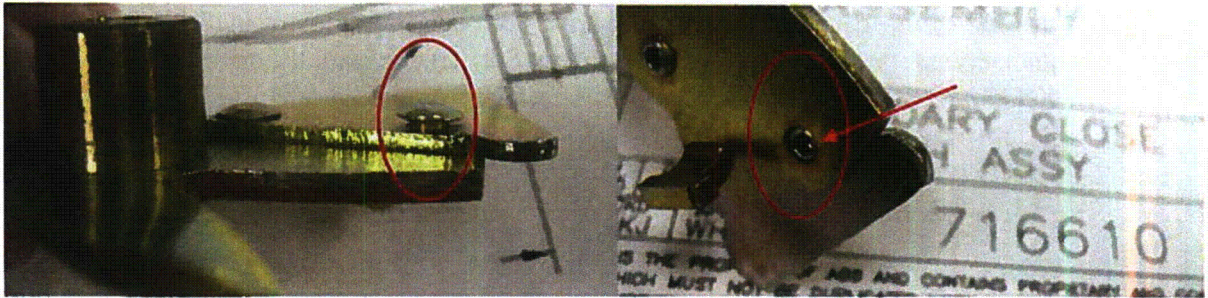


Figure 2 – Secondary Close Latch

6. Corrective actions include:
 - a. Perform 100% inspection all part number 716610K01 secondary close latches in inventory to identify the nonconforming latches. (Action complete)
 - b. Trained inspectors and breaker assemblers on identifying this condition (Action Complete)
 - c. Contact primary vendor to investigate cause and correct on future orders. (Action Complete)
 - d. Verified that this is the only assembly with bradding that this vendor provides. (Action complete)
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Affected Customers:

- Constellation Energy
- DTE Energy
- Entergy Operations
- Exelon Corporation

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