



General Electric Company  
175 Curtner Ave., San Jose, CA 95125

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United States Nuclear Regulatory Commission  
Washington, DC 20555

**Subject:** Possible Failure of GE Model AMH 4.76-250 Circuit Breakers to Latch Closed

This letter provides information concerning the possible failure of GE Model AMH 4.76-250 circuit breakers to latch closed due to an inability to maintain the gap between the manual trip rod and the trip paddle. These devices were originally manufactured by GE and supplied to licensees for balance-of-plant applications. Since the specific applications and associated safety functions of potentially affected circuit breakers are not known to GE-NE, we have transferred information pursuant to 10CFR Part 21.21(b) to those licensees known to be affected. However, since we cannot assure ourselves that all end-users have been notified, we are also providing the information to the NRC for appropriate action.

GE Model AMH 4.76-250 horizontal drawout circuit breakers were manufactured between 1967 and 1975 by the GE Switchgear Department in Philadelphia, PA and Burlington, IA, and are currently supported by GE Electrical Distribution and Control (GE-ED&C), Philadelphia Operation.

In late July 1996, a licensee reported failures of AMH 4.76-250 circuit breakers to latch closed. A failure investigation was completed in September 1996. This was considered to have been an isolated incident until similar failures were reported by another licensee in mid-November 1996.

The results of the failure investigation indicated that a weak trip shaft reset spring can result in the inability to maintain the gap between the manual trip rod and the trip paddle. The weak spring allows the paddle to strike the buffer pad on the breaker frame with sufficient force to deform the paddle, thus reducing the gap. Loss of the gap can prevent the trip latch from remaining in the reset position during a closing operation, causing the breaker not to latch closed. Licensee reports and testing by GE indicate that the failure to latch may not repeat regularly. Even in circuit breakers where the gap has been reduced to nearly zero, failures are intermittent.

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If the condition remains undetected, the continued bending and readjustment of the paddle will result in failure of the paddle and/or its support. This could result in loss of the ability to manually trip the breaker.

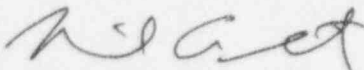
Licensees known to have GE Model AMH 4.76-250 circuit breakers have been advised that any circuit breaker that will not maintain the trip shaft to paddle gap should be evaluated for this possible failure mode.

GE-ED&C Philadelphia Operation has prepared a modification kit to address the failure. This modification includes a redesign of the trip paddle and its associated support, as well as the spring discharge link. In testing, this redesign has eliminated bending of the manual trip paddle in circuit breakers with a weak trip shaft reset spring.

GE-ED&C Philadelphia Operation intends to issue a Service Advise Letter (SAL) to describe the failure mode and aid in troubleshooting suspected circuit breakers. The SAL is scheduled to be issued by April 30, 1997.

If you have any questions, please call me at (408) 925-1019.

Sincerely,



Michael A. Smith, Manager  
Safety Evaluations Project

cc: G. C. Cwalina (NRC-NRR/DISP/PSIB)  
K. R. Naidu (NRC-NRR/DISP/PSIB)  
H. J. Neems (GE-NE)  
G. W. Sanders (GE-NE)  
N. C. Shirley (GE-NE)  
J. A. Steininger (GE-NE)  
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