

Hazardous 3rd Party Modified Circuit Breakers

MSHA has been made aware of a hazardous condition that may exist in 600 volt and 1000 volt circuit breakers. This includes all frame sizes. The circuit breakers may appear to be new or rebuilt, but they have been changed from the manufacturer's original design. These mining circuit breakers, originally manufactured by Eaton Cutler-Hammer, may have been purchased either directly from the 3rd party or through a mining supply company. There is evidence that some of these circuit breakers have been modified by a 3rd party rebuilder with knock-off 600 volt and 1000 volt covers. The covers are of unknown construction and were not manufactured by Eaton. The labeling affixed to the breakers was also reproduced by the 3rd party rebuilder in an effort to make the circuit breakers look new and legitimate.

Because these covers do not meet manufacturer specifications, it is possible that they will not contain an event within any of these circuit breakers, such as a phase to phase fault or a grounded phase. In addition, the frames that the 1000 volt covers were assembled onto may only be rated at 600 volts. Also, the frames used for both 600 volt and 1000 volt have been rebuilt and may contain parts, such as tips and springs, of unknown origin and specifications. Because of the potential for injury from the failure these circuit breakers can cause, they must be removed from service in a timely manner.

The simplest way to determine if you have one of these circuit breakers installed or in your supply house is to run your finger nail down the square portion of the cover where the circuit breaker handle is installed (See illustration below). If the cover is very smooth in this area, you probably have one of the hazardous circuit breakers. If the circuit breaker is in use, it must be removed from service. After the breaker has been removed or if a breaker is found in supply, contact Mr. Tom Grace of Eaton/Cutler-Hammer at 412-418-2169 for further instructions on how to dispose of the breaker. You may also contact Mr. Grace by email at tomagrace@eaton.com.

As an interim precaution, until the breakers can be replaced, all affected breakers that trip due to any possible fault condition will require a certified electrician to test the cable with a meter for ground faults or phase to phase faults. All faults will be corrected prior to resetting the breaker. If no faults are detected with the meter or after all faults are corrected, the electrician should move to the side of the breaker and wear work gloves which are in good condition before attempting to reset the breaker. All other personnel who energize or deenergize these circuit breakers during normal use should also wear work gloves which are in good condition while performing these duties. Mine operators should inform miners of the hazards involved with these breakers and instruct all unauthorized miners to avoid travel in areas where these breakers are located.



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