

Case Study:

GE Magne-Blast Medium Voltage Circuit Breaker Repair Tech



Objective

- Repair GE Magne Blast medium voltage circuit breaker with the absolute shortest amount of downtime possible for a metropolitan utility company.

Solutions

- The Quad Plus Shop Manager worked with the customer to develop a new procedure for removing and transporting only the trip shaft bearing linkage of their GE industrial circuit breaker to the Quad Plus Breaker Lab, allowing for an expedited repair.

Results/Benefits

- GE Magne-Blast Medium Voltage Circuit Breakers were restored to working order.
- The customer avoided the time and expense of multi-person crews and the large equipment necessary to remove the entire breaker from the site.
- The customer did not have to obtain, transport, and install a spare breaker from another location, which significantly reduced the overall cost of the project.
- Downtime for this repair was kept to the absolute minimum possible.
- Once all breakers were repaired in this manner, the customer did not experience major outages due to failure-to-trip situations.

Trip Shaft Bearing Replacement in GE Magne Blast Medium Voltage Breaker for Large Metropolitan Utility Company

Background

A utility company in a large metropolitan area reported that the trip shaft bearings seized in the mechanism of a GE Magne-Blast medium voltage circuit breaker. The result was numerous failure-to-trip situations, which led to bus lockouts and major service interruptions to the metropolitan area utility customers. There was a clear need for urgent repair.

Quad Plus Solution

The Quad Plus Shop Manager worked closely with the customer to develop a Method of Procedure to replace the trip shaft bearings in the mechanism without having to remove the mechanism from the breaker or remove the breaker from the customer's site. This specialized procedure was necessary to expedite the industrial circuit breaker repair, as the customer could only tolerate the shortest amount of downtime.

To complete the new procedure, our Shop Manager provided training for the customer's electricians on the removal of the trip shaft bearing linkage. That way, the linkage could be brought immediately to our shop for bearing replacement, and returned to the customer quickly to be reinstalled in their medium voltage circuit breaker.

The result was a breaker that could be put back into service with minimal downtime, ensuring the failure-to-trip problem was solved. The customer was spared the time and expense of transporting backup breakers from another location to put in use while the original breaker was being repaired, as the malfunctioning breaker was out of service for such a short period of time.



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