

Nuclear Parts Operations

Replacement GE7700 Motor Control Center Buckets

Background

As manufacturers exit the market and components become obsolete, Westinghouse continues to develop reverse-engineered solutions for drop-in form, fit and function replacements.

Vintage Motor Control Centers (MCC) continue to lose original manufacturer (OEM) support as they face significant obsolescence challenges. In response, Westinghouse has designed our replacement MCC buckets to be a 100-percent form, fit and function replacement of the current installed base.

Description

Westinghouse designs and qualifies MCC bucket replacements to meet our clients' original qualification basis in mild or harsh environments.

Components undergo thermal/radiation aging, seismic, HELB/LOCA, and electro-magnetic compatibility qualification testing at a Westinghouse facility in order to provide parts that will perform according to their intended safety functions.

Westinghouse is the industry-leader in tackling obsolescence challenges. We have retrofitted numerous non-original Westinghouse designs and developed a compatible and qualified substitute for the GE7700 MCC bucket. The old GE7700 bucket can simply be removed and replaced with the qualified Westinghouse bucket.



MCC replacement bucket suitable for GE7700

Westinghouse is also now manufacturing replacements for the original GE7700 male and female terminal blocks. These terminal blocks use improved materials that are better suited for harsh environments. Male terminal blocks are installed in all replacement MCC buckets and are compatible with existing female terminal blocks in the MCC structure.



Westinghouse Replacement Terminal Blocks

Individual components can also be replaced in lieu of a complete MCC bucket replacement. Utilizing the Westinghouse switch plate design, new Westinghouse Molded Case Circuit Breakers (MCCBs) can be installed in the existing MCC buckets, replacing obsolete GE MCCBs while using the existing installed doors.



Westinghouse Molded Case Circuit Breakers (MCCBs) in place of obsolete GE MCCBs via our proprietary switch plate design



Replacement GE7700 Motor Control Center Bucket

Benefits

Drop-in replacement MCC buckets require minimal engineering time upon delivery and installation onsite while reducing maintenance costs.

Minimizing time from receipt inspection to installation, Westinghouse has the ability to:

- Set breakers and overload relays specific to plant requirements.
- Provide terminal block numbering and labeling specific to plant requirements.
- Offer field advisory support during installation.
- Provide pre-wired and labeled field wiring harnesses for auxiliary connections.
- Offer witness testing to eliminate the need for onsite duplicate testing.

Additionally, Westinghouse utilizes common parts across the MCC bucket lines to drive down cost while managing obsolescence.

Deliverables

Westinghouse customers will receive a like-for-like MCC bucket with performance and test data, as well as a bill of material, wiring diagram and technical manual upon final delivery. Test and performance data include a certified factory acceptance test report and qualification data package.

Experience

Westinghouse has more than 40 years of operating experience and is the original equipment manufacturer for MCC replacement buckets, custom designs and upgrades.

- Westinghouse MCC replacement buckets are tested through our rigorous 10 CFR 50 Appendix B quality assurance program.
- Westinghouse performs rigorous testing and inspection on every component within each MCC bucket.
- Westinghouse MCC replacement buckets are qualified for harsh environments per IEEE 323-1974.
- Westinghouse performs the environmental qualification at the Westinghouse New Stanton facility.
- Westinghouse engineers and technicians have more than 50 years of experience providing electrical equipment for safety-related applications in the nuclear industry.
- Westinghouse has successfully delivered replacement buckets for both PWR and BWR nuclear power plants.



Westinghouse Replacement GE7700 Size 4 FVR