

GEMCO Switches

Background

A number of nuclear power plant control rooms were outfitted with Gemco® Series 404 rotary selector switches as part of the original design. After years of operation, the original plastic parts and springs in the installed base are starting to experience failures. In particular, the pins on the spring return disks, and the disks themselves, may break due to the stress of springs constantly pulling at the plastic parts. Further, the leaf springs that provide the contact closures may weaken, allowing just a slight movement of the switch handle to cause a contact state change.

Description

The Westinghouse replacement switch is a form, fit and functional replacement for the original Gemco switch that was supplied until 2005. The Westinghouse switches include materials that help the switches perform longer than the existing Gemco switches. Changing to the new switches will help minimize the failures that have surfaced during the life of the original Gemco switch assemblies.

The spring return disks and rotors are now made from stainless steel. The more robust steel pins and disks will function with a lower risk of breakage, a problem that occurred over time with the plastic parts of the Gemco switches.



Westinghouse replacement switch

Benefits

The Westinghouse replacement switches present a full range of functionality, including the following:

- Spring return to center from the left and right positions
- Maintained in all positions
- A combination of spring return and maintained positions

Operators can provide up to twelve 30-degree switch positions, as well as two position switches with 60-degree throw. This functionality matches the original Gemco catalog cam tables.

Because the Westinghouse switches are dimensionally identical to the original Gemco switches, they will fit the existing mounting hole in the module or control panel. The new switches utilize the same type of electrical connection as the original switches, so no re-termination of wiring is required. Once the existing switch has been disconnected from the module wiring and removed using site procedures, the new Westinghouse switch can be easily installed and tested per plant procedures.