



The following recommendations should be used for field service and maintenance of Inertia Engineering's LineBOSS outdoor gang operated switchgear.

Frequency of inspection will be a function of atmospheric contamination, frequency of operation, fault current exposure etc. A suitable program must be established and followed by the user accordingly. If a switch cannot be maintained on a periodic basis, its service life and operation may be affected. It is recommended that switches be opened and closed several times in order to clean the contacts and free the moving parts whenever it is necessary to operate it for any reason. Live line servicing and maintenance procedures may be used.

The following procedures are recommended for maintaining de-energized switches.

- Switch contacts:
 - § Switches, which become difficult to operate should have grease applied to the top and bottom of the rotating contact blade where it links with the stationary contact jaws. The contact surfaces should be cleaned prior to the application of new grease. The contacts are “self wiping” and will transfer the new grease upon several switch operations.
 - § Switch contacts are lubricated at the factory with Mobil 28 lubricating grease. Other grease formulations such as Chevron FM NLGI Grade 2 and Molykote 33 grease or other non-sulfur containing greases can be used.
 - § Switch contact jaws and mating blades should be inspected for pitting. Pitting spurs can be removed with a fine file or sandpaper (not emery).
 - § Switch contact assemblies are replaceable and are purchased as a rotating and stationary single-phase kit.
- Insulators:
 - § Check for arc damage, tracking, soot, or other contamination or debris from wildlife or the environment. Clean the insulators if necessary.
- Control mechanism:
 - § Inspect operating handle and control rod guides to verify that they have not been damaged, and that the operating handle mounting bolts are tight. Replace components that have been damaged. Fiberglass control rods should be replaced when excessive “blooming” or exposed stringy fibers are observed as the insulation capability of the rod is compromised when this type of degradation occurs.
- Switch attachments:

- § Arc horns:
- Arc horns are non-spring, non-loadbreak stainless steel arms which should be visually inspected for excessive wear at the interface between the stationary “pre-strike” arm, and the rotating blade “pre-strike” arm. Any arm with less than one-half of its original diameter remaining at any point should be replaced.
- § Arch Whips:
- Arch Whips, or “Quick break whips” are Beryllium copper “spring” mechanisms which should be inspected to ensure that the whip is properly engaged with the catch when the switch is in the closed position. Whips should be replaced when 20% of the original length has eroded. Refer to installation and adjustment procedures for original whip lengths.
- § AmpRupter and AmpVac loadbreaks:
- Loadbreak interrupters should be inspected to ensure that the trip arm and catch arm are properly latched when the switch is closed (refer to the proper loadbreak type installation instructions). Interrupters that show signs of external arcing (black soot) on the external interrupter housing should be replaced.

Reference

ANSI C37.35.7 IEEE Guide for the Application and Installation, Operation and Maintenance of High Voltage Air Disconnecting and Load Interrupting Switches.