

Supplement To Inspection & Maintenance Recommendations

Restoring Pad-Mounted Switchgear Following Immersion In Flood Waters

1. Perform restoration functions in pad-mounted switchgear guided by the recommendations and procedures contained in Federal Pacific Instruction Bulletin IB-1A-800, including cleaning materials lubrication, and the recommendations and procedures contained in this supplement.
 2. If the switchgear has been submerged above the level of the switch or fuse-mounting interrupters, it is recommended that the equipment is replaced.
 3. If the switchgear has NOT been submerged above the level of the switch or fuse-mounting interrupters, the following cleaning recommendations also apply. The criteria for acceptability presented below are based on evaluation of the component after the unit has been thoroughly dried.
 - a. After cleaning, inspect all insulators and bushings and make certain that there is no surface damage, including any imbedded permanent discoloration, or cracks. All damaged, discolored or cracked insulators must be replaced.
 - b. After cleaning, inspect all barriers and make certain there is no surface damage, including any imbedded permanent discoloration or warping. All discolored barriers must be replaced. Warped barriers must be inspected to make certain that correct "Electrical Clearances" as specified in the similarly titled table in Section 7 on Page 3 of IB-1A-800.
 - c. After cleaning and drying, inspect all metallic components of the switches and fuse mountings for corrosion. Operating components such as door latching mechanisms, springs, probes, switchblades, contacts, bus, ground studs and ground bars, and hardware items such as nuts, bolts, washers etc. displaying corrosion must be replaced. Apply lubrication ONLY to those areas and specific locations identified in Federal Pacific Instruction Bulletin IB-1A-800.
 - d. Verify that all bolts remain torqued for tightness and circuit continuity.
 - e. Replace instruction manuals and any damaged or obscured nameplates, ratings labels and hazard alerting signs (DANGER, WARNING and CAUTION) of the pad-mounted switchgear.
 - f. Verify the integrity of terminators in accordance with the terminator manufacturer's recommendations.
 - g. Verify the integrity of SML-20 components and end fittings, SMU-20 and DBU fuse units/refill units and SML-4Z fuse holders in accordance with the fuse manufacturer's recommendations
- h. BEFORE RETURNING THE SWITCHGEAR TO SERVICE:**
- i. With the equipment de-energized, perform one or two mechanical operations of each switch and fuse mounting to verify correct operation and alignment as described in Federal Pacific Instruction Bulletin IB-1A-110 or IB-2A-210, as applicable.
 - ii. Verify the integrity of the insulation system in the equipment by applying high potential testing in accordance with applicable industry standards and the utility standard operating practices.
 - iii. As the combined effect of having many components submerged in water, which will be polluted with heavy levels of contamination and where there is the potential for hidden damage or hazards to go unnoticed, it is recommended that the unit be energized by a means that

is initiated from a location OTHER THAN by operating the components such as switches and fuses in the specific switchgear unit being returned to service.

4. For reference, on components that have already been submerged, tap water can be used to remove gross deposits of debris or contamination.

Cleaning materials described in Federal Pacific Instruction Bulletin IB-1A-800 must be used for detail cleaning of referenced components.

5. If there is any doubt or suspect about any component, it should be replaced. If there are any

questions or if replacement parts and materials are needed, contact Federal Pacific at 276-466-8200.

6. Units submerged above the interrupters and removed from service, require detailed inspection of the interrupters to make certain there is no debris lodged in the interrupter or other hidden damage that can prevent correct operation of the circuit interruption process when the switchgear is subsequently returned to service and operated under normal duty of switching and interrupting rated currents.



WARNING

DO NOT ALLOW WATER TO ENTER THE INTERRUPTER ON THE SWITCHES OR FUSE MOUNTINGS. WATER ACCUMULATING INSIDE THE INTERRUPTER MAY PREVENT CORRECT OPERATION OF THE INTERRUPTER, WHICH MAY RESULT IN EQUIPMENT DAMAGE, PERSONAL INJURY OR DEATH.

