

As previously communicated in 2018 and amended in 2019

## **IMPORTANT PRODUCT NOTICE**

Reference: Padmount switchgear maintenance advisory

Dear Valued Eaton Customer,

Some Eaton customers have experienced field failures of Cooper Power series type MOST, RVAC, VFI, and PST padmount switchgear related to high moisture levels within the dielectric fluid. High or increasing moisture levels may be indicative of a tank or tank cover seal integrity issue that allows air/moisture ingress into the tank. In some cases, high moisture content may shorten equipment life, particularly in colder temperatures where moisture in the fluid may condense, reducing the dielectric performance of the fluid.

### **WARNING!**

Use of this equipment with dielectric fluid that does not meet minimum requirements for dielectric strength or exceeds maximum moisture content could result in internal flashovers and tank rupture that will damage the equipment and could cause personal injury.

#### **Customer Impact:**

This notice pertains to Cooper Power series fluid-filled type MOST, RVAC, VFI and PST family switchgear.

#### **Required Customer Action**

To assure trouble-free operation of Eaton's Cooper Power series fluid-filled padmount switchgear, a regular schedule of close visual inspection and dielectric fluid testing is required:

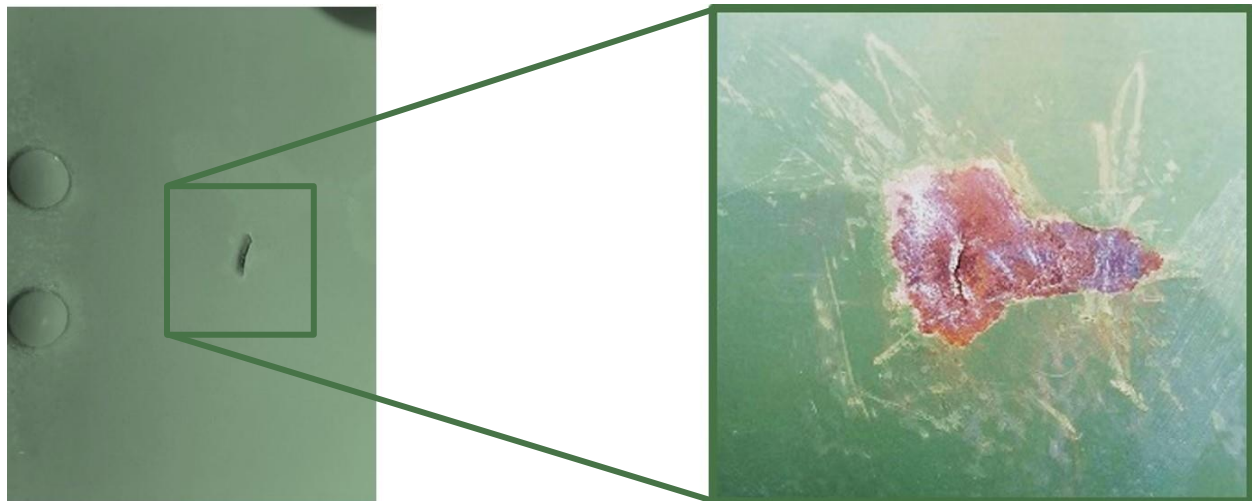
- Dielectric fluid should be initially tested within two years of receipt of the equipment. That test will yield information required to establish a baseline reference for observing trends in the dielectric fluid's moisture level.
- After the initial dielectric fluid testing and close visual inspection, the switchgear should be maintained every two years. Each scheduled maintenance of the switchgear should include a close visual inspection, a dielectric fluid level check, and dielectric fluid testing as described in the appropriate Eaton manual (listed below).
- If no maintenance records exist, dielectric fluid analysis and close visual inspection must be performed immediately.

The maximum acceptable dielectric fluid moisture level for operation is as follows (when sampled at  $\geq 15^{\circ}\text{C}$  ( $59^{\circ}\text{F}$ ) fluid temp):

- Mineral Oil: 35 PPM
- FR3: 600 PPM
- E200: 1200 PPM

Eaton recommends that any Cooper Power series fluid-filled padmount switchgear with a dielectric fluid moisture level above the maximum acceptable level be immediately de-energized and appropriate actions be taken to reduce the moisture level. This can be accomplished by dielectric fluid reprocessing to dry the fluid, or replacement of the fluid. In addition to correcting the moisture levels in the dielectric fluid, it is necessary to identify the cause or source of the moisture ingress.

Eaton further recommends a close visual inspection of tank covers for fluid-filled padmount switchgear. The tank covers must be free of chipped paint or corrosion. If chipped paint or corrosion is found the area must be scraped or brushed to remove loose paint to expose cracks or holes in the cover. If a crack or hole is found, the switchgear must be immediately de-energized and appropriate actions taken to replace the cover and verify the dielectric fluid as indicated above. Cracked or chipped paint on the cover indicate high stress. Even if no hole or crack is present, covers exhibiting cracked or chipped paint should be replaced.



Before Scraping

After Scraping



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Further recommendations and instructions for padmount switchgear maintenance can be found in Eaton manuals:

- [MN285002EN](#) Type PST Model-9 Automatic Source Transfer Switchgear with iST Control; Installation, Operation and Maintenance Instructions
- [MN285005EN](#) Type RVAC, Fluid-Insulated Vacuum Switchgear; Installation, Operation and Maintenance Instructions
- [MN285006EN](#) Type VFI, Fluid-Insulated Switchgear; Installation, Operation and Maintenance Instructions
- [MN285014EN](#) Type MOST Fluid-Insulated Switchgear; Installation, Operation and Maintenance Instructions
- [MN285015EN](#) Type PST Model 6 Automatic Source Transfer Switchgear with iST Control; Installation, Operation and Maintenance Instructions

These documents have been revised to reflect the change in recommended service interval from six years to two years. These web pages contain the latest versions.

[Pad-mounted Source Transfer \(PST\) System Resources](#)  
[Pad-mounted RVAC Vacuum-Break Switch Resources](#)  
[VFI Vacuum Fault Interrupter Switchgear Resources](#)  
[Pad-mounted MOST Oil Switch Resources](#)

Should you need replacement parts, please contact your Eaton sales representative for further assistance.

Thank you for your understanding and cooperation.

*Eaton's Power Systems Division*

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