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Technical Bulletin

No. 212

PROCEDURE FOR REPLACING SIDE MOUNTED H.V. BUSHING

Tools Required:

- 9/16" Wrench
- Pump Suitable for use with Dielectric Fluid
- Storage Drum

Safety Precautions:

1. **PRIOR TO PERFORMING THIS PROCEDURE MAKE SURE THAT THE T/R SET IS DE-ENERGIZED AND LOCKED OUT USING THE PROPER INTERLOCK SEQUENCE.**
2. **A SEPARATE SOLID GROUND CONNECTION MUST BE MADE TO THE HIGH VOLTAGE BUS CONDUCTOR THAT FEEDS THE PRECIPITATOR. THIS IS ESSENTIAL SINCE REMOVING THE HIGH VOLTAGE BUSHING WILL ALSO REMOVE THE INTERNAL GROUND SWITCH CONNECTION. IF A SEPARATE EXTERNAL GROUND CONNECTION IS NOT MADE, LETHAL VOLTAGES MAY EXIST WITHIN THE T/R SET.**

Other Precautions:

1. Make sure that the lid of the T/R set and other surfaces are clean of dirt, flyash, water or other contaminants prior to opening the T/R set. Once the T/R lid is removed, care should be taken not to introduce any contaminants into the dielectric fluid.
2. It will be necessary to lower the dielectric fluid level to perform this procedure. A clean dry container should be used to temporarily store the fluid. If there are any questions concerning the type of fluid in the T/R set, check the dielectric nameplate on the side of the tank. Safety Data Sheets (SDS) can be obtained on all of our dielectric fluids from NWL.

Procedure:

1. Using a 9/16" wrench, remove the cover clamps on the lid of the T/R set. When all the clamps are off, remove the lid.

2. Connect the pump between the T/R set and the storage drum. Lower the dielectric fluid level to just below the side mounted H.V. bushing. Care should be taken to try to keep as much of the secondary coils under the fluid as possible.
3. Reach inside the tank and disconnect the BNC connector at the end of the H.V. bushing lead wire. Remove the precipitator bus conductor on the outside of the H.V. bushing.
4. Using the 9/16" wrench, remove the four nuts that hold the bushing mounting plate to the tank. Carefully remove the mounting plate and slide the bushing out.
5. Remove the bushing lead wire from the bottom of the old bushing and connect to the bottom of the new bushing. Slide the new bushing and gasket into the tank and reassemble the mounting plate. Tighten the mounting nuts to 15 ft-lbs.
6. Reconnect the BNC bushing lead wire and the precipitator bus conductor.
7. Pump the dielectric fluid from the storage drum back into the T/R set. Place the hose in a horizontal position at the top of the fluid to minimize the amount of air bubbles introduced into the tank.
8. Check for any leaks.