

APPARATUS SERVICE DIVISION



WORLD-WIDE SERVICE

POWELL APPARATUS SERVICE DIVISION

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SERVICE ADVISORY # 002

Date: June 8, 1994

**To: PowlVac® Users
P.A.S.D. Service Technicians**

**From: Dennis R. Thonsgard
Manager Powell Apparatus Service Division**

Subject: Noryl Insulation on PowlVac® Breakers

We are receiving an increasing number of reports from our customers regarding the Noryl sleeving on the PowlVac® breaker primary stab bus. The reported problem is that of cracked sleeving. We are not receiving the same frequency of reports concerning the main bus on switchgear or bus duct.

The Noryl sleeving on the early model PowlVac® breakers has been found to be susceptible to chemical attack. Petroleum solvents are particularly destructive. The Noryl material becomes increasingly brittle as a result of this chemical attack. The common use of cleaners by maintenance personnel usually introduces the solvent to the insulating material. We recommend the use of denatured alcohol for cleaning the sleeving. An advisory decal is attached to each piece of equipment, stating this recommendation.

In the course of continual product design testing, we have recently retested the breaker and cell for 95 kV BIL withstand. This test was successful without the sleeving on the breaker runback bus. We now have confidence that the insulation is not necessary. The decision to insulate the bus on the original design, was made in anticipation of a minimal BIL margin at this point. This conservative over design feature was only recently retested without the sleeving.

We recommend that all cracked sleeving discovered during routine maintenance on the breaker run back bus, be removed. If one bar has suffered damage on a given breaker, the probability of others having been contaminated, is high. We have not encountered, nor do we anticipate, any compromise of breaker operation or safety.

If you or any of your engineering personnel have any reservations about cracked sleeving removal, we recommend the installation of 3M BB1 heat shrink insulation over the bars.

Our standard production model PowlVac will no longer be provided with insulation on the run back bus. We will however, offer epoxy insulation on this bus as an option.

Please call if you have any further questions.