

Case Study 30

Preventing Moisture Ingress with Desiccant Breathers

Background

One of the largest electrical companies in the United States has a fleet of trucks for daily transformer maintenance. One truck was designed to transport new oil to transformer locations throughout a major metropolitan city in the Midwest. One of these trucks included a large reservoir to hold new oil that would be unloaded through a diaphragm pump and hose distribution system. Initially Northeast Filter was contacted to provide portable filter housings to clean up the new oil of particulates before their fill phase.

But there was a problem with this design of the truck. The overall weight of the truck with a full reservoir of oil was so high that it did not pass *Department of Transportation* regulations. The large reservoir had to be removed. The new design would pump oil directly from 55-gallon drums instead. The new design corrected the weight issue and the oil pump functioned properly but fluid analysis of the dielectric oil coming out of the drums (before filtration) was not meeting spec.

Solution

Northeast Filter inspected the new truck design and observed that the drums were vented directly to atmosphere without any moisture or solid particulate barrier. NFC recommended a desiccant breather with absolute particle retention to prevent moisture and particle ingress into the drums while they pumped dielectric oil from them. The customer moved forward with drum adapters for each barrel eliminating the possibility of moisture or particulate ingress into their new oil which corrected the issue and brought the oil back into spec. The customer was so pleased with the breather results that they also installed them on each oil drum in their lube room.

