



PROBELOK[®] Connector is the answer!



CAROLINA CO-OP AVOIDS ELBOW OVERHEATING

BY:
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Two old established Co-ops have merged together, Crescent Electric Co-op and Davidson Electric Membership Corporation, forming a new utility in North Carolina called Energy United. Our headquarters in Statesville is located just 32 miles north of Charlotte, NC. This close proximity makes our service area for residential homes very desirable. We serve many of the rapidly growing areas in the Piedmont of North Carolina including Statesville, Cornelius and Huntersville. (Huntersville is less than 15 miles from the Charlotte Airport.)



Our distribution voltage is 15kV with a maximum current of usually less than 160 amps in our underground developments. The rapid growth of our area naturally caused problems. One subdivision grew rapidly and loads increased quickly. Several interruptions occurred on 3-way junctions and loadbreak elbows in our switching cabinets. On removal and inspection of these products, it was very obvious that over-heating had occurred in the probe/connector area in some of the cabinets. To support this, we found discolored and extruded cable insulation. In most cases the material inside the bushing swelled causing a problem for the lineman to separate the elbow from the bushing. We concluded that the crimp barrel and probe connection possibly was never properly tongued, or they became loosened causing a high resistance connection which led to the over heating situation and eventual failure.

Due to several similar outages in one subdivision, we were concerned about the rest of these connections. We infrared tested the remaining junctions and found many other hot spots. We have made several changes. One of them was switching to the Hubbell 15kV elbow with the ProbeLok® Connector. Testing done by Hubbell indicated the crimp barrel/elbow probe threaded connection, loosened one full turn, would adequately carry up to 200 amps, and not overheat. We have replaced all the junctions and installed over 80 Hubbell elbows with PROBELOK Connectors. We feel that with this change, we have eliminated a weak link in our distribution system but most importantly, also will provide more reliable service to our customers. ■



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NOTE: Because Hubbell has a policy of continuous product improvement, we reserve the right to change design and specifications without notice.

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