



## Safety Message of the Day for IMEA Members



### Q & A Safety Message

**Q:** Are mechanical jumpers that we call “macs considered insulated, and are they safe to touch?

**A:** No is the short answer to both questions. The effectiveness of the insulation of a mac, which is technically known as an insulated temporary bypass jumper, depends on the storage conditions, use, testing and application. Each employer should perform a hazard assessment of mechanical jumpers and develop a use policy for them. In most cases, macs are untested for the performance of their insulating qualities. Even when tested, macs are considered to be like rubber or plastic insulation – brush contact only. Most employers don't have macs tested since they are not allowing contact and isolate them with additional blankets or rubber if they are in contact with a pole or another conductive surface. OSHA is silent on macs and testing. ASTM F2321 has an acceptance electrical test for manufacturers that many test labs use for in-service testing of mechanical bypass jumper insulation. ASTM F2321 4.2 qualifies macs as “insulated to temporarily protect personnel from brush or accidental contact only.” Most consultants agree that macs should be insulation-tested, that testing is a condition of use for limited insulating quality, and that exposure is “don't touch” or brush contact only. Many lineworkers know of instances where macs lying on a crossarm began smoking, which is indicative of their insulating qualities. Many more lineworkers have had the opportunity to brush against a mac from the pole and have found the insulation to be somewhat less than effective.