

Bierer Grounds Inspection/Testing Process

Inspection of Grounding Assemblies will comply with the following:

- ASTM F855 Assembly/Construction Specification
 - ASTM F2249 In Service Test Method Specification
1. Visually inspect Ground or Jumper and all clamps. Look for:
 - a. Approved cable, crimp and heat shrink application.
 - b. Any significant damage to the cable jacket, strands showing, cracks in the heat shrink, damaged ferrule or ferrule threads, gouges or any physical damage to the clamp components.
 - c. Feel for internal knotting, kinked or weak feeling internal stranding in the conductor.
 - d. Snug ferrule to jacket connection, no excessive spacing showing a large gap of the strands.
 2. (Plug Ferrule Assemblies) Wire brush connection points on the clamp jaw and where the ferrule contacts the clamp.

If re-installing a conductor to a clamp, place the clamp in a vice and insert the Ferrule end into the clamp under the strain relief straps and into the eyebolt. Make sure the Ferrule lays straight in the grooves in the clamp. Also make sure the end of the ferrule is even with the edge of the outside groove toward end of clamp.

3. While ensuring the ferrule is aligned and straight in the grooves, loosen clamp bolt and re-torque to 28 ft/lbs.
4. Ensure the strain relief saddle clamp is snug but not overtightened, install any new ones with stainless steel bolts.
5. Inspect the locking nut, spacer and washer positioning and tightness. There are no torque requirements on the ferrule nut.
6. Visually inspect for any pullout of conductor from the ferrule and crimp connection. Perform a dimensional measure per the ferrule specification if appearance is suspect.

7. For grounds requiring a strain relief, ensure it is installed and not missing or damaged.
8. Test Ground or Jumper Assembly using the Bierer GT400 or GT600 Grounds Tester. Check the voltage drop of the Ground or Jumper. Use the Bierer chart for voltage drop acceptance/fail readings for the appropriate amperage and assembly length.
9. If test fails, check all connections to make sure you are getting a good connection.
10. Date and initial the test label with 2 years from their scheduled month and place it in the area at the end of the heat shrink. Now the Grounding or Jumper Assembly is ready for use.