Antenna/Tower Reliability

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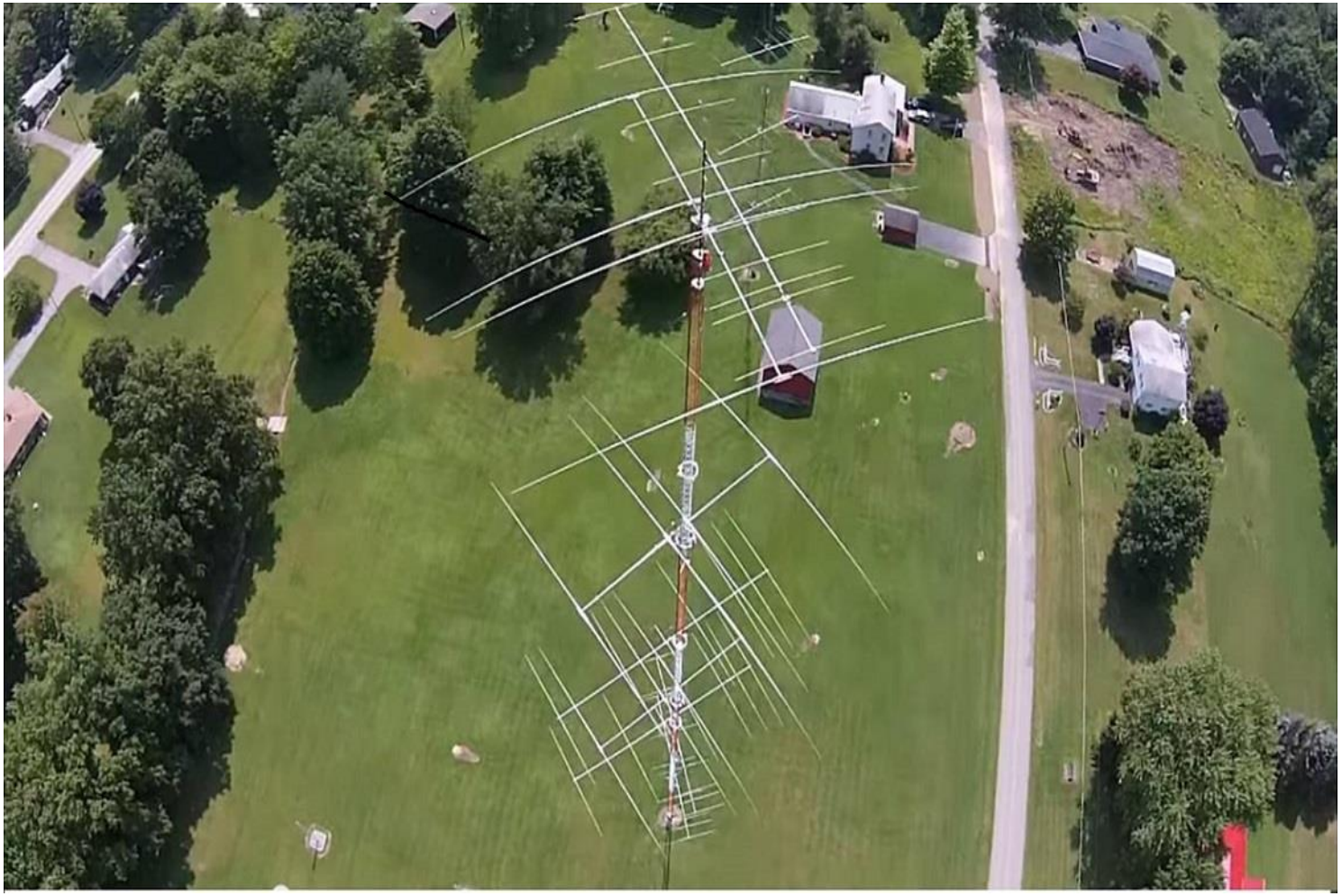
- Use quality materials (don’t be a cheap ham!)
- Do it right the first time
- Perform regular inspections
- Be safe when working on antennas and towers
- Is it K3LR approved?



Use only good quality materials

- Name-brand connectors only

Use only good quality materials

- Only use good quality tape

Use only good quality materials

- Consider pre-made cables

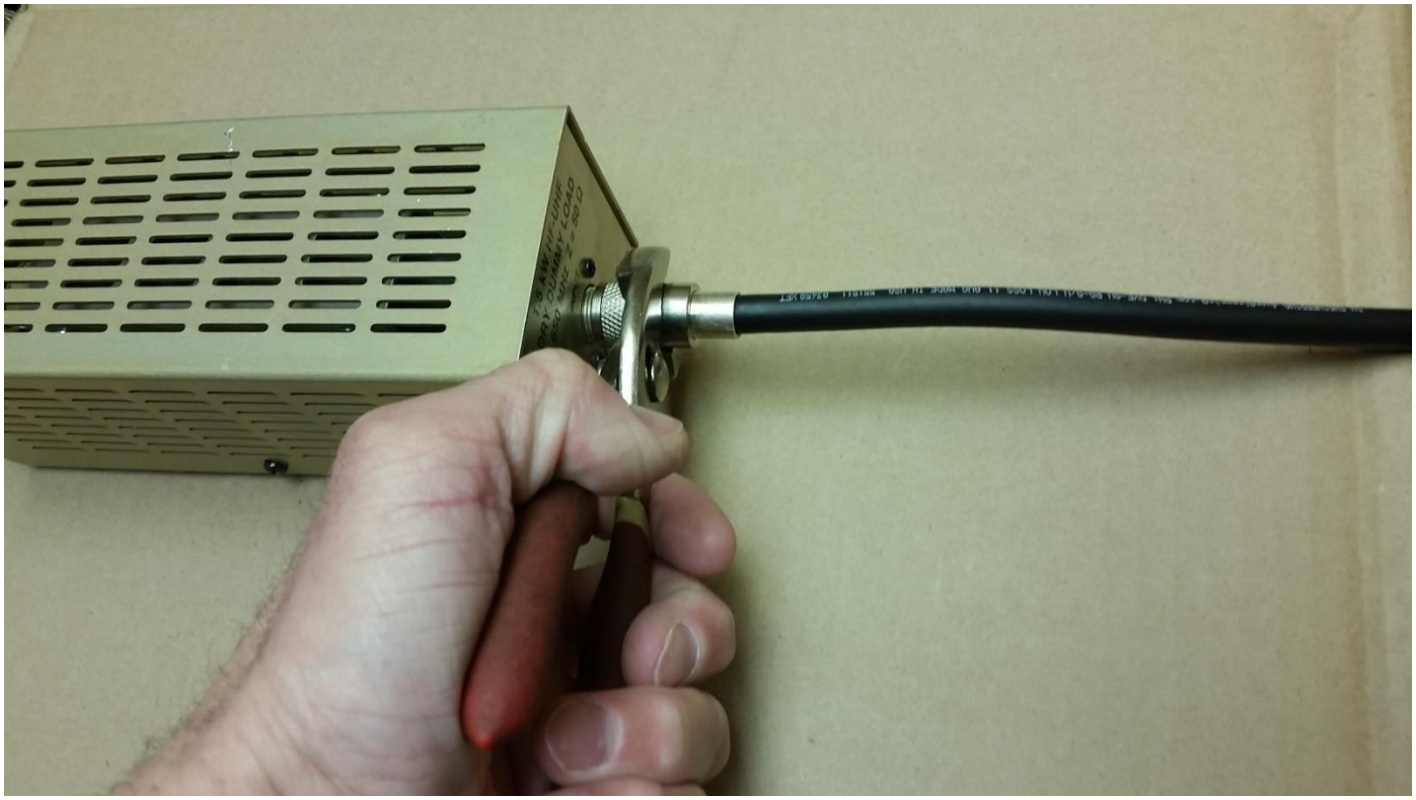
When soldering PL259's, don't be afraid to use a big iron and get the connector hot – the solder must flow. Just keep everything straight in-line and be sure to let it cool down completely before you move it. That way the center dielectric will harden back up. I let mine sit about 10 minutes after soldering before doing anything with it.


Weller
D-550
240/325 WATTS

Moisture is coax's worst enemy. All outdoor connections must be properly sealed. Here's a proven method to keep connections dry.

Weatherproofing connections

- First, tighten with pliers. Finger-tight is not good enough.



Weatherproofing connections

- One wrap of 88 tape. And always cut the end when taping. Never pull/tear the end or you'll end up with a tail.

Weatherproofing connections

- Add a layer of mastic.

Weatherproofing connections

Weatherproofing connections

- Two wraps of 88 tape. Overlap each layer by ½ the width of the tape.

- There are two tips in the next photo.

- First, tape your cables with 88 tape – no tiewraps. Tiewraps can smash the coax and they will eventually fail due to weathering.

- Second, always put a barrel at the top of your tower if the feedpoint is out of reach. Makes antenna removal much easier.

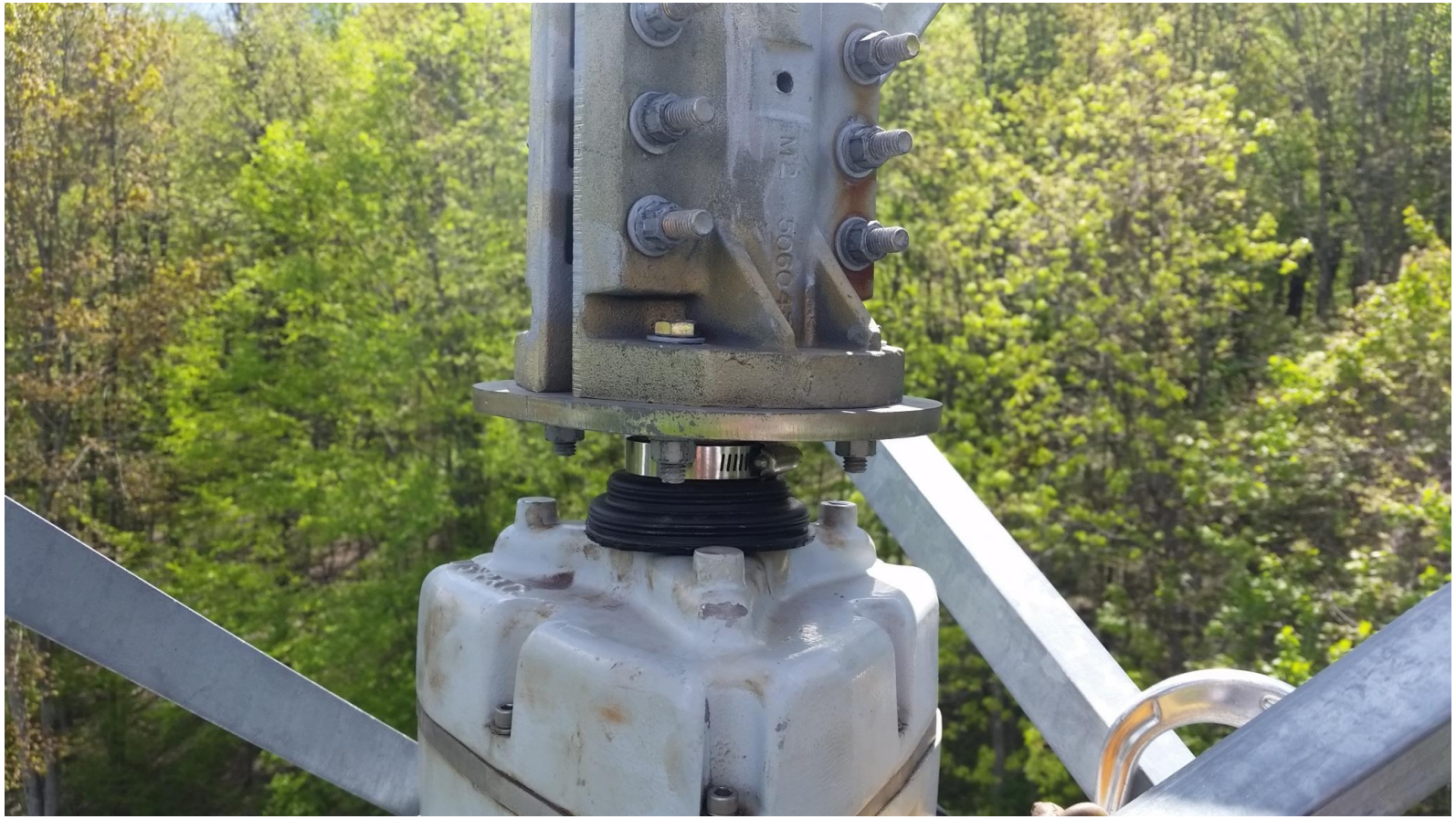
Use a piece of split loom if there's a concern about cables rubbing.

Waterproofing a bearing

- Does your antenna sometimes not turn in the cold weather? It might be ice in your thrust bearing. Make a boot out of one of these.

Waterproofing a bearing

It can also keep the water out of an Orion 2800’s top bearing.



The bolts in a TB3 can seize up. Apply anti-seize before installation or swap out the bolts with stainless (and maybe still use anti-seize?)

Notice all the blue stuff? You should also use a lubricant on all stainless hardware. Blue Locktite is a good choice. It lubricates, locks, yet can still be removed later.

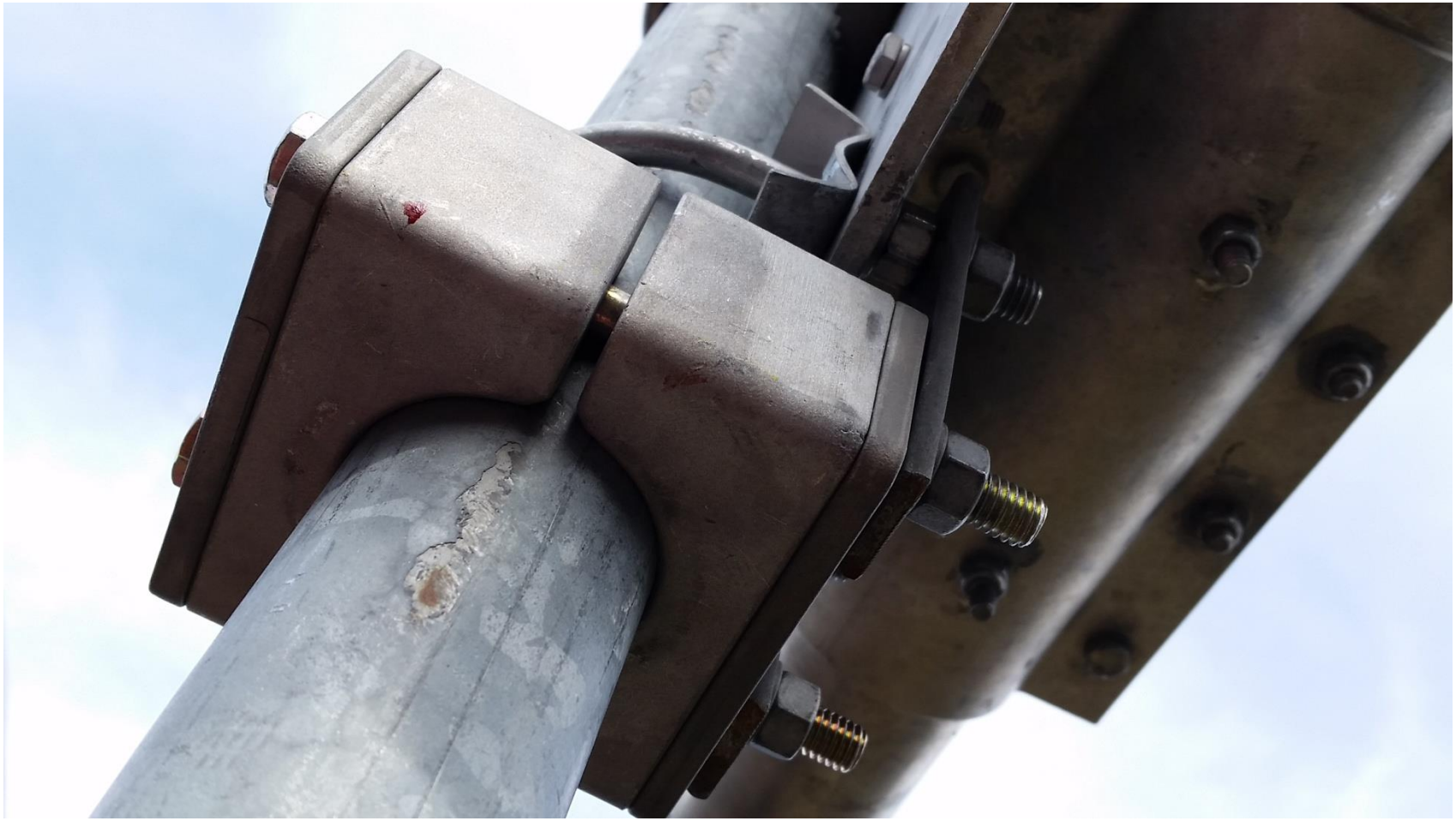
Also, when installing a Rohn tower, use anti-seize on the leg joints. It's conductive and makes the inevitable disassembly much easier.

- Tidbits

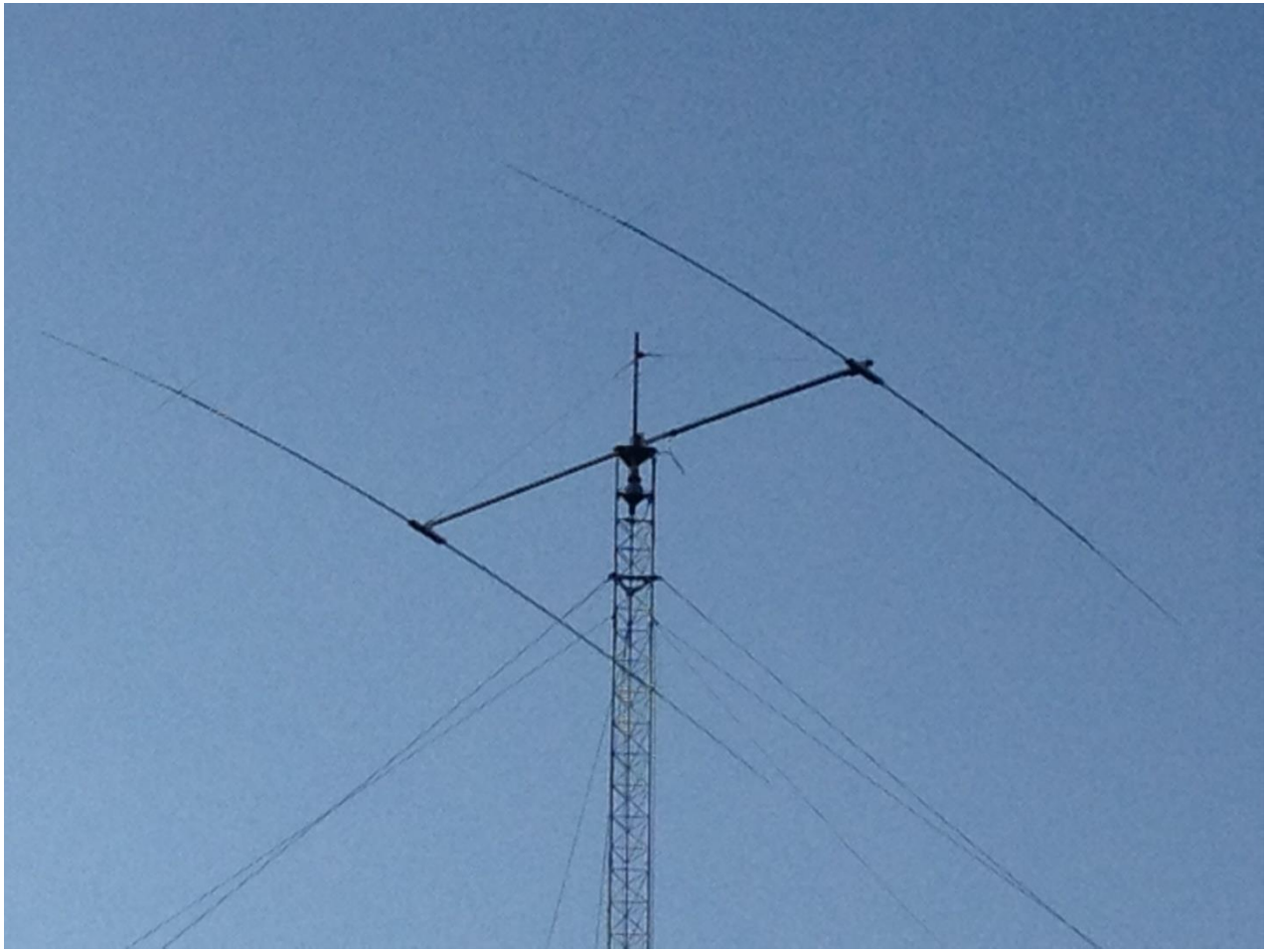
Does your rotor or antenna slip on the mast? You can add a secondary clamp which will help out your U-bolts. It's better than drilling/pinning the mast.

Here we give a Yaesu rotor some help

Here is a secondary clamp below the mast clamp of a 40M Yagi

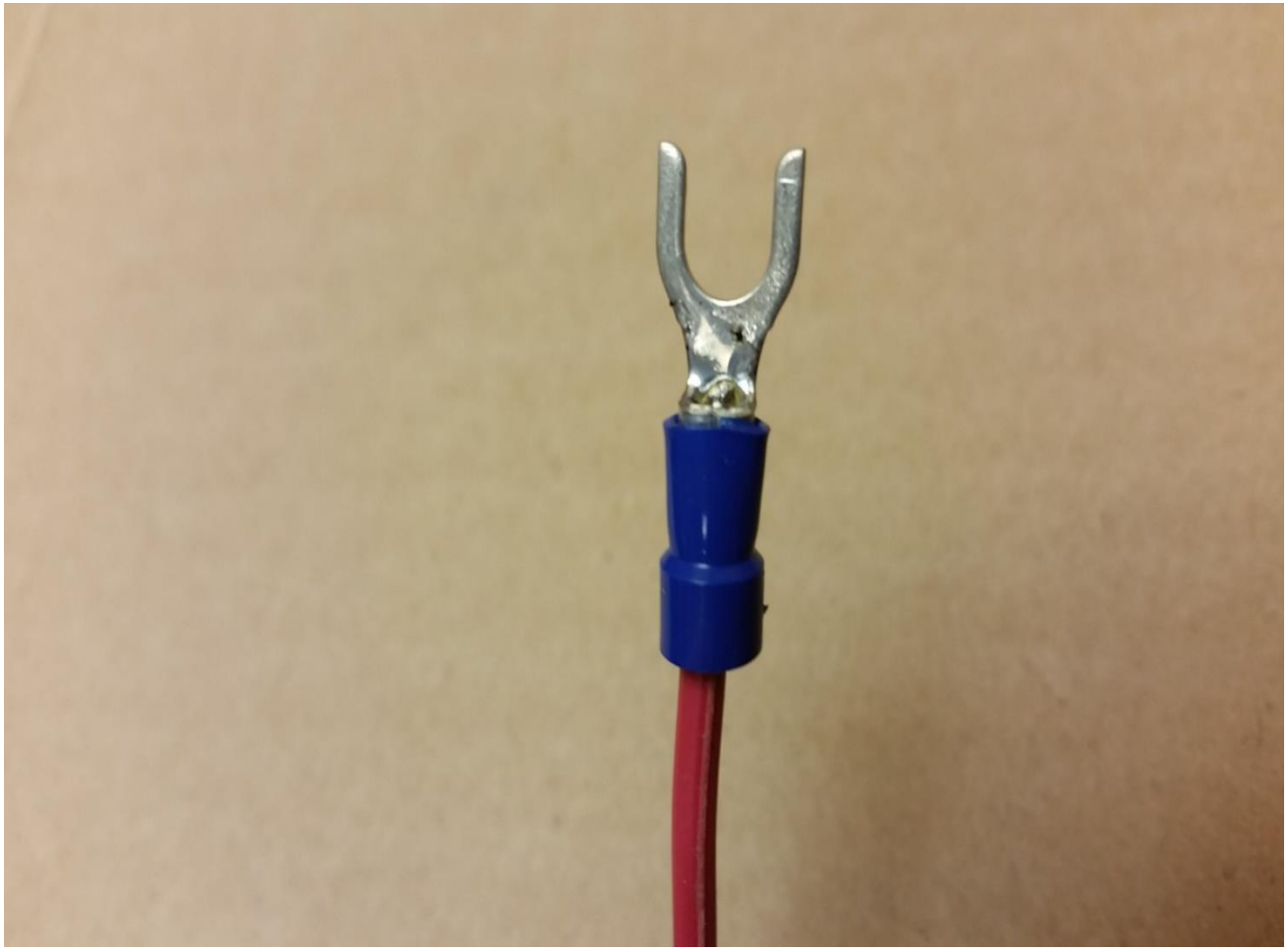


If the top section of your tower is above the top set of guys, the leg bolts MUST be tight and should be regularly checked. This is a point of great lateral stress and if the bolts loosen, the holes in the legs will elongate.



Do not over tighten anything on a Rohn tower leg. You could smash the leg (it can even split) and the tower will be compromised.

Solder all your crimps, otherwise the wire could pull out. If you're using insulated lugs, don't worry about melting the plastic.



Conductive paste

- Usable on all metal to metal joints, especially aluminum antenna joints.

Safety

- If hiring a tower crew, use only certified climbers
- Consider becoming a certified climber yourself
- www.comtrainusa.com www.citca4training.com
- Watch for powerlines
- Use proper climbing-safety gear
- Everyone wears a hardhat!

And above all, when climbing follow all safety rules!

NO SK’s