

**Horn Ring Reinforcement and Repair**

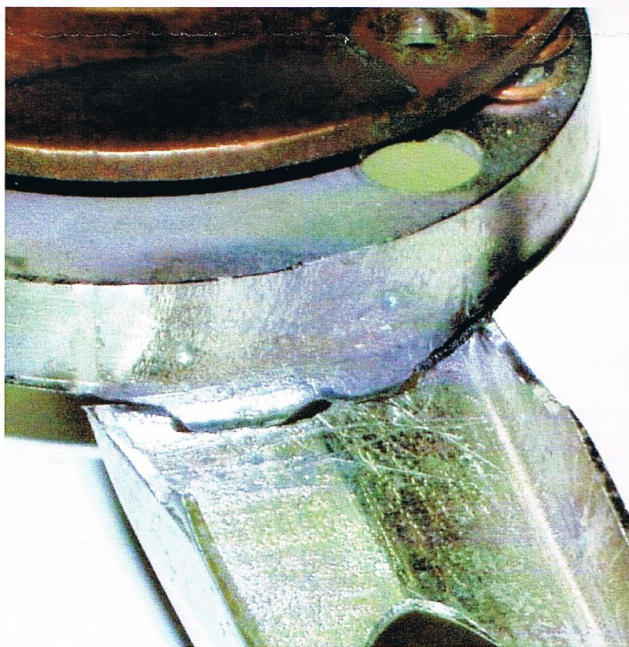
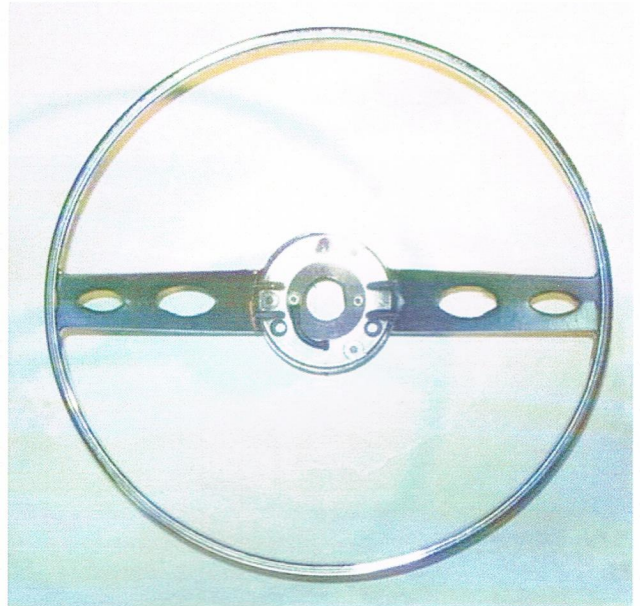
By John Logan

This project was inspired by Byron Golfin, who, at the last United in French Lick, asked me how I would I repair the broken horn ring that was taped to a steering wheel I just bought from Ranney Dohogne. I thought about it while driving my Tiger home and here is what I came up with.

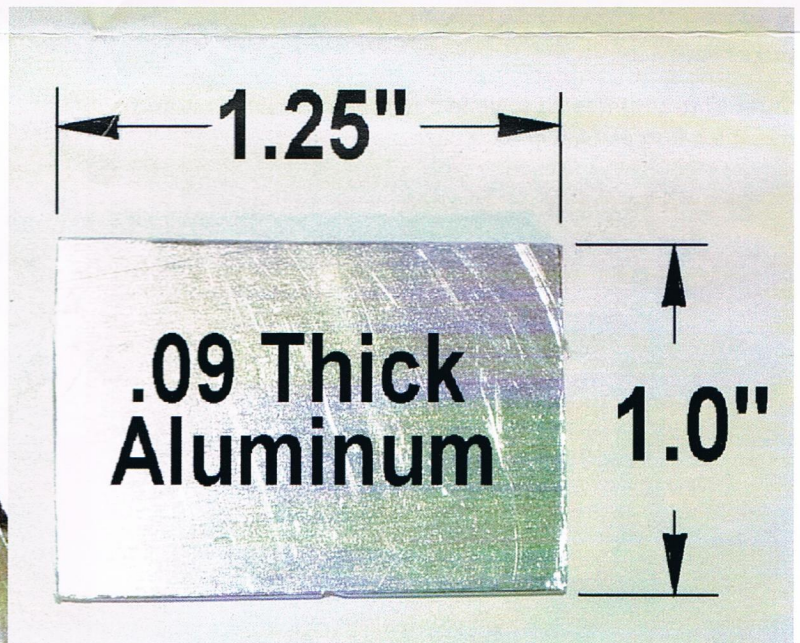
In 1982, Steve Finberg, a member from the past, wrote a very good article for the Rootes Review on repairing a horn ring with fiberglass at both ends of the spokes. Because a lot of our members have joined since that time and a lot of horn rings have been broken, I decided to describe a slightly different process using aluminum reinforcements and the magical **J-B WELD** cold weld compound.

**Why Sunbeam Horn Rings Break**

The hub end of the horn ring is a very poor design. The spokes have very thin notched sections at their highest bending moment, so it's a wonder that some have lasted as long as they have. The reproductions that I've seen are much stronger in that area. Fix or reinforce both spokes at the hub even though only one side is broken. If the spoke is broken on the ring side or if the ring is broken, it's probably not worth fixing.



**A Cracked Spoke**

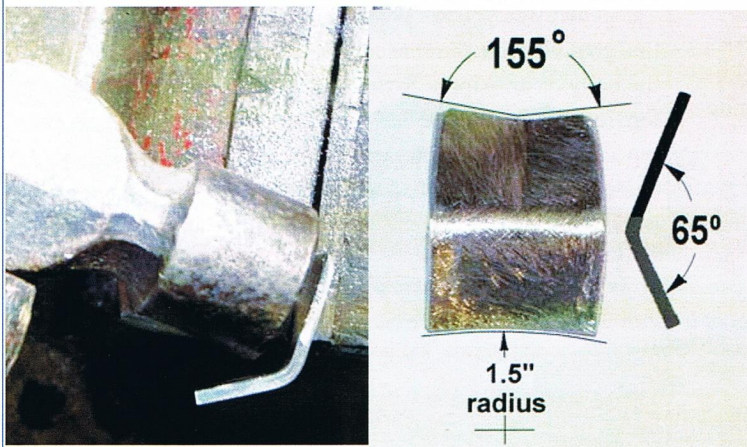


**Reinforcement Blanks**

**Making the Reinforcements**

I made the reinforcements out of .09" X 1.0" aluminum stock because it's easy to bend. You could also use steel. By cutting them longer than needed it is easier to hold them while bending.

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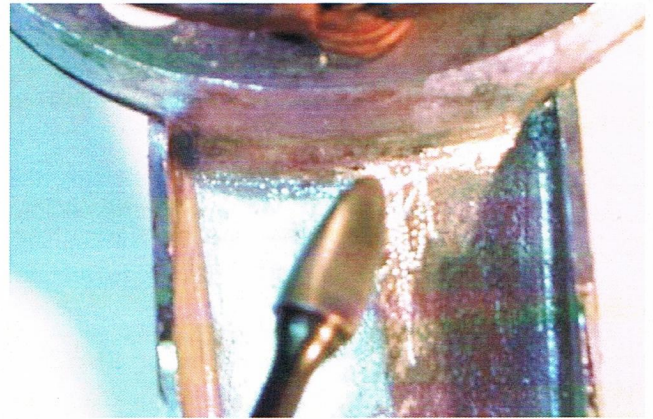
## Bending the Reinforcement

### Bending Dimensions

You can bend the reinforcements to these dimensions to match the surfaces of the spoke with a ball peen hammer and a vise. The **J-B Weld** will fill in minor miss-matches.

### Trimming the Reinforcements

Once you have the reinforcements bent to match the spokes, trim them so that they don't cover the oval holes or extend beyond the hub. You can do this with a hack saw or a band saw as shown here.



## Cleaning the surfaces

The surfaces of the hub, spokes and reinforcements must be clean and roughed up so that the **J-B Weld** will stick. The ring may have become distorted after breaking so before gluing, make sure everything is straight and that the ring is parallel with the contact plate mounting face. Apply **J-B Weld** to both surfaces and tighten a small clamp into the center of the reinforcements.

## The Completed Repair

When installing the ring to the wheel, check the clearance and operation. You can file away interferences and shim it with a washer or two between the contact plate and the steering wheel mounting surface.

