

Rebuilding the original Ford 8n front bumper.

Almost everyone recognizes the original Ford front bumper. It's easy to spot as it drops towards the front to make room for the hand crank. Like most of these bumpers they've been out there some 60 years now and are starting to show their age. This is my photo journal of rebuilding my first one. This bumper was later sold to help cover the cost of 32" tires and wheel for my 1940 9n. I have a couple more to repair and will do them the same way.



This is my bumper as I received it. The top bar is bent, the 2nd one down is missing, the bottom bar is bent, and the main bar is sprung so the bumper is too wide to line up with the axle bolt holes.



From this view we can see that even the upright pieces are bent. Considering the number of bent parts I think it's best to disassemble the bumper, straighten out each part, and re-assemble.



I first ground the rivet heads off then punched the rivets out leaving the center welded piece. In this view the frame has been heated and straightened, the uprights have been heated and straightened as has one of the cross pieces. This is a job for an oxy-acetylene torch outfit as mapp and propane fueled torches will not get hot enough to do the trick. The metal has to be heated past dull red approaching a bright color to bend easily. Note the main piece is 1/2" thick and requires substantial heat to turn red.



Since I was missing a bar I had to buy steel. The size of this piece is 1.5" x 3/8" and was special order. I had to buy 20' stick or pay a substantial cutting fee. I bought the stick and decided I'd rather make 2 bars verses trying to straighten out a badly bent one. In order to bend steel with any kind of control the use of a mandrel is almost mandatory. I found a mandrel on my parts shelf. By driving out 1 stud bolt I could mount this in the vice and use it to bend on. This is only a picture as the end of the bar is finished. When I bent the pieces they were cut long and bent first to match the center and corners and only at the end were the ends marked and cut.



This bending requires some skill as you heat a small area and bend, move a little and repeat. While time consuming it's obvious what can be produced. Start by getting the center bent correctly then move on to one side and keep checking. The difference between an ok job and an excellent one is the patience to keep re-working the part until it's right. None of these parts were produced right the first time. Once the center and the corners fit I marked and trimmed the ends to match the existing bars.



Once the bars were properly bent I tacked welded them on from the back and drilled the existing rivet holes through. Care needs to be taken to ensure the new bars are centered over the old holes. Once the holes were drilled I knocked the bars back off and cleaned up the tack welded areas.

In order to rivet you need a backer block, a punch, a heavy bench, and a 3rd arm. This is a backer block I bought on eBay along with a pound of rivets. The rivets are standard round head 5/16" dia shank. The length should be 1.25" but I was only able to find 1.5". I trimmed the rivets to length using an abrasive cutoff wheel in a hand held air tool. The rivet will be slipped through the hole and this block holds the head while the other end is "bucked" or mushroomed over.



The next piece is used for bucking the rivets (mushrooming over). These tools are sometimes found in old hardware stores or you can make one like I did. Use a chisel as they are high carbon steel which makes for a better tool. I cut the end off the chisel and drilled a 1/2" hole in the end. I later shaped it a little using small Dremel stones on a Dremel tool. My tool does not produce an exact round rivet head but its closer than just using a hammer.



Armed with the tools I used a steel sawhorse and big vice as the base and clamped the bumper assembly in a position that allowed for the rivet head to set in the backer block on a hard surface. Then I clamped everything that I could to hold the joint tight before riveting. Once all clamped up you heat the end of the rivet to red the place the bucking tool over the end and drive the rivet tight against the back. I also had a second person helping to hold everything together. This process called bucking produces a rivet head on the backside. It took me several attempts to get it right and I just cut the heads off and started over until they were right. With a little practice it gets easier to produce good joints. The biggest problem is keeping the joint tight while the rivet head is being set.



I also did not like the way the bolt tabs matched up to the front axle. I used an abrasive cutoff wheel mounted in an air tool and cut a slit in the mounting tabs then bent them until they matched the front axle. Once adjusted I welded them back up and dressed them up with grinders.



Here's the finished bumper prior to painting. The ends can be fine tuned at this point to make sure they all line up.



And from another angle. The difference between ok and great is willingness to keep taking it apart and starting over until it's right.



Here's the final product and it looks like new.



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