Fabricating 16" Front Wheels for Ford 9N and 2N Tractors

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The topic comes up frequently of locating 16" wheels for the early Ns. I made a set recently; here is how I did it. Find a set of 16" standard ag wheels. You could probably also use automotive wheels. The normal rim width is 4.5" for a 5:50x16 ag tire. Carefully cut the centers out of the 16" wheels and take the material back to just the rim part. Clean the rim up with grinders. I use both a hard wheel and soft wheel, the soft wheel being a plastic backer plate with sandpaper discs.

The original wheels on the early N's are 3” x 19”. The rim usually rusts out but the wheel center is usually still good. Find a couple of bad wheels to provide the centers. Once you know the id of the 16" rims you are using, measure and mark the id in the wheel you are about to cut up.

The cut should be made very carefully. I measured it then spun the wheel to create the mark as its critical that its centered with the hub bearings. IMPORTANT; You do not want the new center undersized which would cause lots of filling and create difficulty assembling. I scribed a line for the id needed and cut to the outside of it. I'd rather grind the center to fit than fill it with weld. Cut out the center. I'm using a 9n front spindle, axle, and hub as a tool mounted in a bench vise. You could do it on the tractor but there is risk of fire with fuel stored on the tractor not to mention the potential for significant comsetic damage using a cutting torch around your tractor.

Clean up the new center being careful to follow the scribe. You want a round center that is not undersized.

Test fit the new center to the rim. Hopefully it's a snug fit and it needs a little persuasion with a hammer to go on. It's ok to have to grind a little more off to make it fit. Spin the rim and use a stationary object next to the side of the rim and watch for run-out (rim moving side to side). Check the rim for run out up and down. Check the rim for offset, this is the space created behind the rim. You don't want your tires to rub on the spindles. This is the most critical part of the project; the more time you spend getting the rim to run true the better it's going to perform. The difference between ok and great if the willingness to take it apart and start over if needed. You may need to take the rim off and rotate it 180 degrees and start over for better results.

Here's a picture showing the clearance between the rim and the spindle. Your number may be different and it's dependent on the width of the rim and the size of the tire you are going to mount. This photo is my tractor with a 5:50x16 tire on a 4.5" rim. Once you are happy with the offset and the runout make a couple small tacks and check the runout again. Do this until you have 4 or 5 tacks around the rim.

Once it’s tacked in place go about welding the rim using normal best practices. Weld 2" or 3" welds then move 180 degrees away and weld there. Alternate between that and the different sides so that you do not heat one area more than the others so as to minimize warpage. After fabricating these I learned that the tube valve stem hole was centered between lug bolt holes on factory rims.

Prep and paint as desired.

Mount your tires on the rims and the rims on the tractor.