

Replacing rims on Ferguson tractors

By Robert Sybrandy

PART 1 - FRONT RIMS

Now that all Ferguson tractors are nearly 50 years or older, there is sometimes a need to replace rusted out or badly bent front rims. One usually has two choices: find good used ones or buy new ones.

19" rims

The standard rim, part # 180 367 M91, supplied on the TE and TO-20 models is for a 4.00 x 19" tire. These 19" rims were identical to the rims used on the Ford 8N, part # 8N-1015-A. They were an option on later US models but remained the standard rim on the British FE-35 model. While MF/AGCO no longer supplies this part number there are replacement options. Used Ford or Ferguson rims are available from salvage yards and dealers. After-market suppliers such as Dennis Carpenter Ford, Steiner, Valu-Bilt and others offer both new replacement wheels, at about \$90, and replacement rim blanks to rebuild your old wheels. To rebuild a wheel you must remove the center from your old wheel and then weld it to the new rim. At around \$40, the cost of a rim blank is slightly less than half the cost of a complete wheel. If you have a good wheel center and the ability to weld, this may be an option.

16" rims

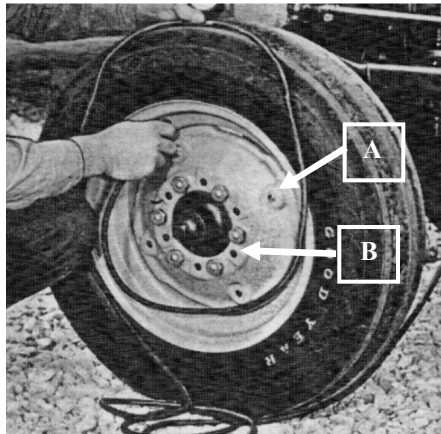
The optional wheel for the TE and TO-20 models and the standard rim for the TO-30, TO/MF-35, and F-40 models were equipped with a 6.00 x 16 tire. The earliest version of this wheel originally available for the TE and TO-20 did not have the four wheel weight mounting holes. If you plan on using front wheel weights you'll want the later version with the wheel weight mounting holes.

16" Aftermarket rims

If you can't find good used rims, you are faced with a number of options. I've done some research on this and have come to the conclusion that no one other than Massey Ferguson/AGCO offers anything that matches the original front wheels. MF/AGCO dealer prices are also reasonable when compared to the "will fits" from other sources.

Wheel weight mounting holes

I am critical of the after-market wheels currently available. Most have square rather than round holes for the four wheel weight mounting holes. The exception I found was the



This photo of a Ferguson tractor shows the correct rim configuration. Note the four round holes (A) for mounting wheel weights on the inside of the rim. The area around the hole is raised to the outside of the rim. (B) shows one of the 12 mounting holes that are finished on both sides so that the rims can be reversed and still have a flat surface against the hub.

version Dennis Carpenter Ford sells for the 8N, NAA and later Fords. All of the after-market wheels I looked at had the raised area around the wheel weight mounting hole dished in. The original Ferguson, Massey Ferguson (and even Ford wheels) have this area dished out or raised to the outside or face of the wheel.

Hub mounting bolt holes

All of the after-market wheels in the 4" or 4.5" rim widths have only 6 bolt holes in the bolt circle. They have the raised surfaces where the other 6 holes should be but they are not drilled and finished. The original Ferguson, MF and Ford wheels have 12 holes in the mounting bolt circle. The 12 holes allow the wheel to be reversed to provide additional front wheel spacing as explained in the operator's manual.

MF part numbers

The original MF part number for the 16" wheel was 195 638 M91 which was replaced by 506 020 M91, and again replaced by the current part

number 535 448 M91. The last part number is the one I used to replace a rim on my TO-20. While the contour of the dished surface of the center is slightly different, it is very close to the original: round holes with raised surfaces facing out for the wheel weight mounting holes, 12 holes in the lug nut circle with the proper raised surfaces allowing reverse mounting and the correct "offset."

Matching dimensions

You need to try to match wheel dimensions when selecting replacement wheels. Offset, which is the distance the hub mounting surface is to the left or right of center from the middle of the rim, is critical because it will determine how close the inner edge of your tire will be from the outside edge of the spindle housing. Offset on the original 16" wheel was approximately 1.8". Rim width is the distance between the inner edges of the bead mounting surface. This was approximately 4 to 4.5" on the original 16" wheel. The bolt circle is the diameter of a circle that connects the centers of the lug nut holes. This is 6" for all of the wheels. The pilot is the diameter of the hole in the center of the wheel. This is 4-5/8" for all of the wheels. I suggest taking your old wheel along when you are looking for replacement wheels. You will need to remove the tire to check dimensions. Diameters can be checked by standing your wheel next to or on top of the replacement. Then lay them next to each other on a flat surface, inside edge down, and check rim width. Earlier wheels were 4" wide, later this was increased to 4.4". You can match the offset by measuring the distance from the flat surface to inner edge of the pilot hole. While this is not the same as the offset dimension, it will give you a dimension that you can use to match a replacement to the original. You may find wheels from Ford or other makes of tractors or machinery as well as original Ferguson wheels that have matching dimensions.

Costs

The current MF replacement wheel should cost you around \$47 through a MF or AGCO dealer, though that de-

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depends if he is bumping his parts prices or not. Many dealers bump their prices 10-20% above the suggested list to cover shipping or just give a margin they feel comfortable with. New after-market replacement wheels will cost between \$42 and \$60, plus shipping but may not have the correct wheel weight mounting holes or the correct number of lug nut holes.

Ordering from your dealer

A suggestion about ordering from your MF/AGCO dealer may save you money. If the dealer orders the part for you as a "special or emergency" order you may expect to pay the shipping. If you tell the dealer you can wait for the part until he sends in a "stock order" there should be no shipping charge. Dealers usually get free shipping on parts orders for "stock." Most dealers do at least one stock order a month any many do them every week.

Ford rims

There are Ford parts, both original and "replacement" that can be used to replace Ferguson wheels. Some 16" wheels used on the NAA and later models are identical to the Ferguson wheel. Don't overlook them when looking for used wheels. There are new replacement wheels from New Holland to replace the 16" 8N wheel, original part number 8N-1015-C, for approximately \$110. This wheel was originally equipped with a 5.50 x 16 tire but will also accommodate a 6.00 x 16 tire. Some parts books in-

correctly indicate the wheel size as 5.50 x 15. There is a notation that the original part is not intended for heavy front end loads such as with loaders. The original part number did not have wheel weight holes and only 6 lug nut holes. Dennis Carpenter Ford sells a replacement wheel that matches this original part number. A heavier duty wheel that is suitable for heavy front end loads and loader work was sold as part number 8N-1015-D. This wheel is listed as suitable for 6.00 or 6.50 x 16 tires and retails for approximately \$68. I have not seen either of the new wheels currently being supplied by New Holland and do not know if they have 6 or 12 lug nut holes or if they have the correct wheel weight holes.

My conclusion

I believe the new front wheel from MF/AGCO is the best alternative to a good used wheel.

PART 2 - REAR RIMS

Original Rear Rims

Rear rims on TO-20/30/35 and F-40 tractors were zinc plated. When repainting or restoring these tractors, most owners do not have the ability to get them re-plated or dipped.

The question then becomes: what paint color and type should one use to try and duplicate the zinc-look? A matte finish silver paint is the best alternative. It closely approximates the original zinc coating. This finish

was also the same as used on the 9N/2N/8N, NAA and other Ford models, at least through the 100 series.

Differences between Ferguson and Ford rear rims

There is a distinct difference between the original Ferguson/Massey Ferguson rear rims and those on Fords. All the replacement rims I have seen duplicate the Ford-style. The valve stem hole on Ferguson/MF rim is on the side closest to the bolt loops while the Ford-style rims have the hole on the side farthest away from the bolt loop.

Also, the bolt loops on the Ferguson/MF rims are formed in a rounded shape in order to accommodate the Ferguson/MF-style rim bolt which has a nub on the under side of the head. The head is also rounded but has two flat sides that can be gripped with the Ferguson wrench.

The rim bolts on the Ford-style rear rims have a standard carriage bolt head and are square on the back with a rounded head. The Ferguson/MF bolt can be used with the replacement or Ford-style rim. However the bolts sometimes want to spin when you try to loosen or tighten them. Therefore you need to grip the head with another wrench when loosening or tightening them.

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