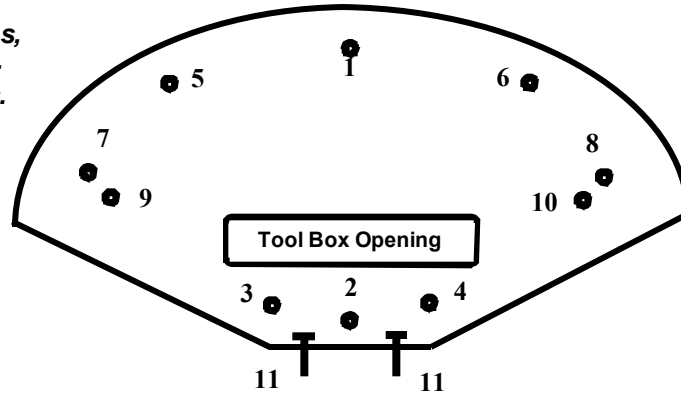


# Fender Mounting Hardware

By Robert Sybrandy & Paul Nelson

**Applications:** All Fergusons, MH-50, & all early MF models with clam shell fenders.



**Note:** \* Some early TE-20s used regular 3/8" flat washers (original MF # 355 619 X1. The current number is 709 173 78).

Models	1	2	3	4	5	6	7	8	9	10	11
TE/TEA-20/TO-20/30	R	R	R	R	A	A	C	C	C	C	D
TO-35/F-40/MH-50 & all early MF tractors with clam shell fenders.	R	R	R	R	A	A	B or C	B or C	B or C	B or C	D

	Hex Head Bolt	Hex Head Nut	Flat Washer *	Lock Washer	Rivet
<b>A</b>	3/8" x 7/8" NF (MF # 353 537 X1)	3/8" NF (Current MF # 709 234 34) (Original MF # 353 431 X1)	3/8" (small - SAE) (Current MF # 30303PF) (Original MF # 353 756 X1)	3/8" (Current MF # 31364AF) (Original MF #353 434 X1)	
<b>B</b>	3/8" x 1-3/8" NF (MF # 353 541 X1)	(same as above)	(same as above)	(same as above)	
<b>C</b>	3/8" x 1-1/8" NF (MF # 353 539 X1)	(same as above)	(same as above)	(same as above)	
<b>D</b>	5/8" x 6-1/8" NF (MF # 353 648 X1)	5/8" NF (Current MF # 353 427 V1) (Original MF # 353 427 X1)		5/8" (MF # 353 433 X1)	
<b>R</b>					3/8" x 7/16"

## Notes on Hardware

### Rivets

Replacing original fender rivets is difficult. However, they are available from Steiner Tractor Co. (part # ABC437). Some use the 7/8" bolt (see A above) instead. Others have used 3/8" carriage bolts, grinding the square shaft under the head to fit the hole, then grinding and buffing the head to resemble the shape of the rivet head. Another alternative is a "round head, ribbed-neck bolt." It is similar to a carriage bolt that has a splined neck just below the head instead of a square neck. This is the same style of bolt as used to bolt the instrument console to the upper steering column on the TO-20/30. These bolts are available from industrial hardware suppliers.

### Bolt Lengths

Harry Ferguson is reported to have been very particular about bolt lengths, which, at the time, were available in lengths of 1/16" increments. This may help explain why Ferguson fender bolts (as were most bolts on his tractors) such precise lengths. There is a story in which Harry was inspecting implements that had been assembled for a demonstration. He admonished the assistant about the engineering standard that the fellow had been taught and was supposed to be adhered to. The standard was that the end of the bolt should extend no more than two or three threads beyond the end of the nut once the washer had been installed.

and the bolt tightened to the appropriate torque. Ferguson allegedly demanded that the assistant replace all the bolts that were too long according to this standard. This standard may help explain the very precise lengths of fender bolts that were used on Ferguson tractors.

### **Hardware Quality**

Bolts and nuts that Ferguson used for fenders were Grade 5. Today this grade is denoted by three lines or hash marks radiating out from the center of the bolt.

### **Head Sizes on 5/8" Bolts**

Head sizes on 5/8" bolts used to attach the fender frames to the axles were originally 1-1/16" so that one end of the Ferguson wrench could be used on them. Today it is difficult to find bolts with a 1 1/16" head, however 5/8" NF nuts with a 1-1/16" head are still available from dealers who handle TISCO parts (# 353 427 X1) or from suppliers like Dennis Carpenter Ford (part # 33806-S7)

### **Installing the 5/8" Bolts**

If you use the correct length 5/8" fender bolts (6-1/8") you can slip them through the holes in the mounting bracket and into the axle holes *after* you have placed the tool box

in position. However, if the bolts are longer, be sure to slip them through the holes in the mounting bracket *before* inserting the tool box between the fender and the frame. Otherwise they can't be slipped into place.

### **Hardware Finish**

Bolts, nuts and washers used by Ferguson had a gold-color anodized finish, sometimes referred to as "yellow cadmium" or "zinc + gold dichromate." This finish is being phased out by manufacturers because of environment regulations and the additional costs of such plating. Today you may have to settle for hardware with a silver finish known as zinc chromate. However, hardware in the "yellow" finish is generally available in Grade 8 quality if you are willing to pay the premium price.

John Deere dealers stock some "yellow" hardware in Grade 5. However, they are reportedly phasing that finish out in favor of a black, chemically created finish.

One of the original suppliers to Ferguson was Rockford. You can still get Rockford hardware from industrial suppliers, such as Grainger or Fastenal, in the silver finish. Most suppliers today have lengths in only 1/4" increments.