



Tractor Tools Power Harrow Assembly Guide

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R2MTZ-135 & 170 Power Harrow Assembly Guide

Scope and Purpose

This guide is limited to the MTZ-135 & 170 power harrow sold by Tractor Tools Direct. The guide covers models manufactured in 2014 and forward.

This manual is a guide to aid in the assembly and startup of the power harrow models listed above. Consult the operations manual for instructions on usage, service and safety.

Introduction

The photograph in figure 1 shows a R2 MTZ-170 power harrow assembled completely from the front. Figure 2 shows detail from the rear of the unit.

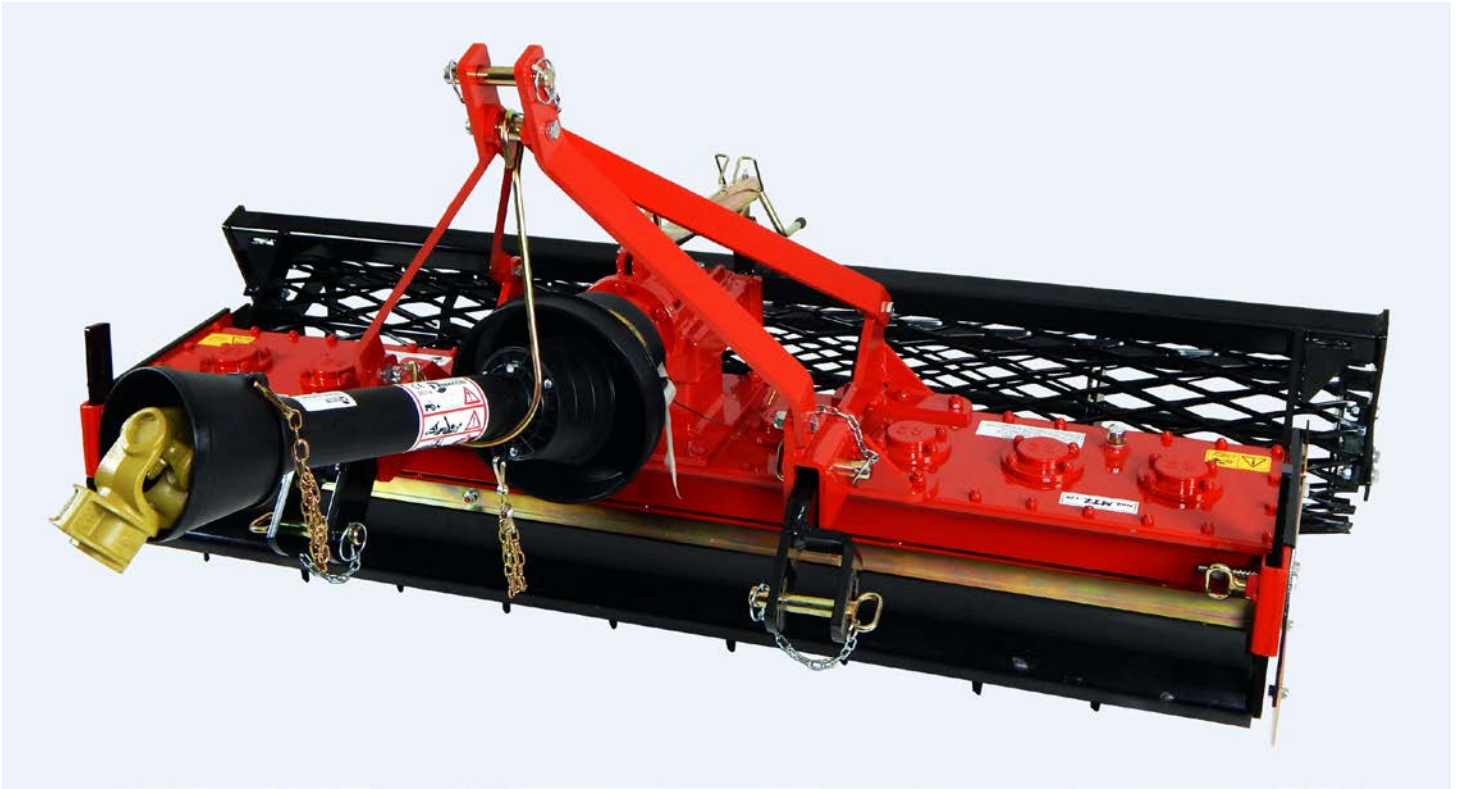


Figure 1 assembled R2 MTZ-170 power harrow front view



Figure 2 rear of power harrow



Figure 3 R2 MTZ-170 power harrow in box as shipped

The power harrow will arrive in a corrugated box on a pallet. The model MTZ 170 weighs about 588 pounds in the box. You will need a forklift to unload it from the back of the truck and move it safely.

Unboxing

Remove the smaller unattached parts from the box by hand.



Figure 4 what is in the box

If you have a hoist or safe means to lift the unit out of the box, a lift point is provided as shown in figure.



Figure 5 lift point on power harrow

As an alternative, you can simply cut the sides off the box and attach the top link hitch point and back up the tractor, hitch up and lift it off the pallet.

Assembly

The attachment points for the lift arms on the tractor are installed so that they face down as shown.



Figure 6 lower lift arm attachment points

The frame that the top link attaches to bolts on as shown.

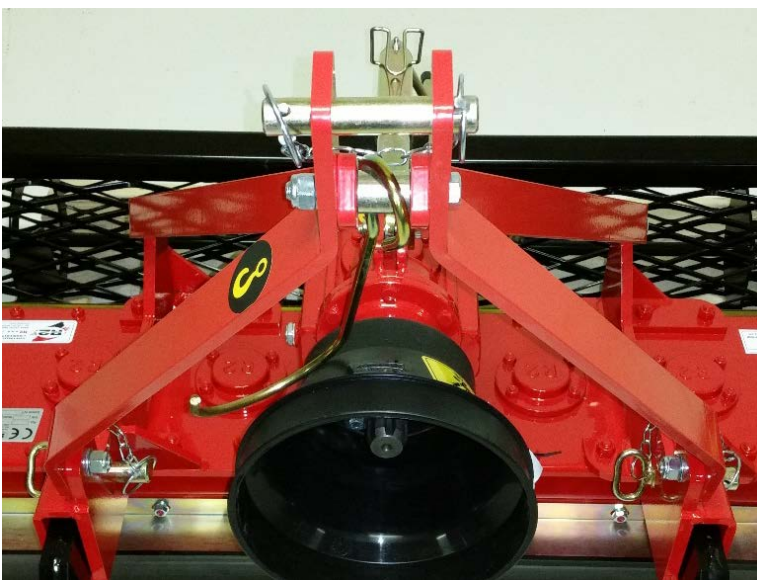


Figure 7 top link attachment point

Driveline

The driveline PTO has a shear bolt to protect the power harrow should you find a stump or large stone. Replace with only the same size and grade of bolt. Note that the bolt is metric. A grade “8.8” in metric is a low strength soft bolt. Do not use a grade “8” SAE (English) because it is a hardened type. Do not use a bolt that is stronger than the gear teeth in your gearbox.



Figure 8 driveline with shear bolt



Figure 9 metric shear bolts grade “8.8”

The shear bolt end is installed on the gearbox, opposite the tractor end. Before installing the PTO driveline, it may be necessary to cut the PTO to length to match your tractor. Drivelines ship long to accommodate larger tractors having longer lift arms. Consult the video or printed manual on our website on the power harrow page

located under the manuals tab.

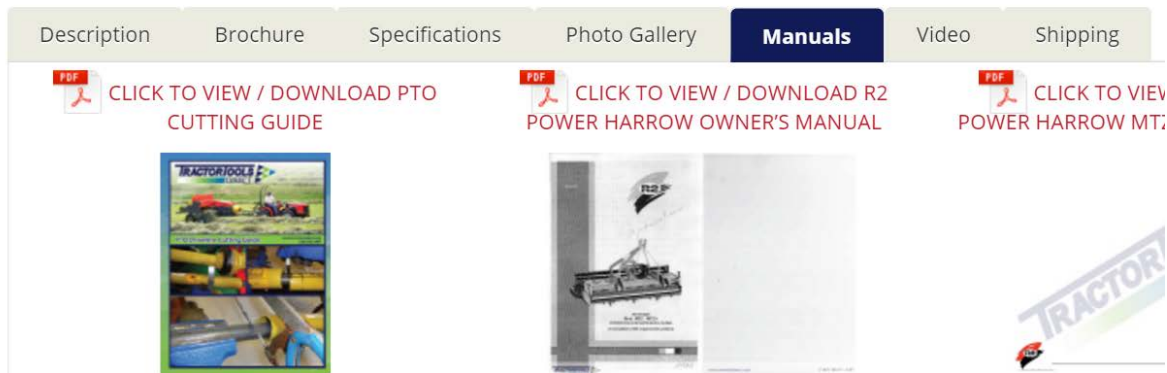


Figure 10 manuals are on the website with the implement

Once the PTO driveline is the correct length grease both ends before installing as it is easier when it is off the implement.

The manual included with the driveline details cutting, lubrication and service procedures.

Lubrication

The top gearbox uses conventional gear oil. EP 90, 80W-90 or 85W-140 being the easiest to find. Fill from the top vent if needed. The oil should show in the lower glass window just to the top. Do not overfill.

When cleaning the machine, take care not direct sprays of water at the top vents. It is possible that water could enter the gearboxes through top vents if a pressure washer or a direct stream of water is aimed toward the vent.



Figure 11 top gearbox with vent and sight-glass window

The lower gear unit is filled to 2 cm (.8") deep with NLGI Type "0" (zero) grease. It is checked after the unit has been running long enough to warm the lower gear case. Type "0" grease is about the consistency of mustard at room temperature. Check with the machine level. Only add grease if needed. The machine comes grease in the lower unit. Do not use standard tube grease (NLGI #2) as it is not a liquid grease.

There is a decal near the fill/check point on the lower unit.

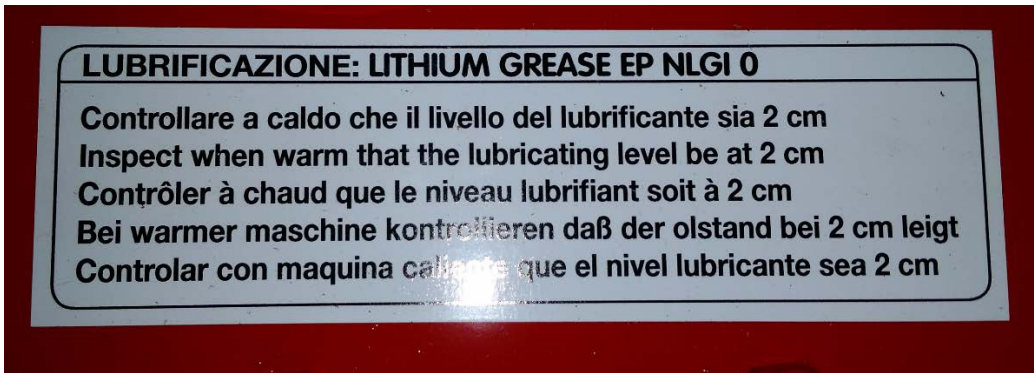


Figure 12 decal for grease type and level for lower unit.

The NLGI type 0 grease is not usually stocked in stores, but it is easy to order online.

Do a Google search for “John Deere corn head grease” and it will likely take you to this link:

<http://www.greenpartstore.com/John-Deere-Special-Purpose-Corn-Head-Gun-Grease-AN102562.html>

It will be many years before you are likely to need to add grease under normal usage of the machine.

[Read the Operators Manual](#)

This guide only covers getting the *machine* ready to use. The operator’s manual prepares the *person* to be ready to use the machine in a safe and productive way. Simple things like lifting the unit before turning a corner may not be obvious to an untrained operator, but could damage the machine. Never let anyone operate the machine without first having read the operators manual. If you lose the manual, you can download one from our website.