



Tractor Tools TS51 Drum Mower Assembly Guide

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TS51 Drum Mower Assembly Guide

Contents

Scope and Purpose	1
Initial Steps	1
Setting the Mower to the Extended or Compact Position.....	3
Attaching the 3-point Hitch Assembly to the Drum Unit.....	4
PTO Driveline Installation.....	4
Curtain and Guard Installation.....	6
Figure 1 - crate with one side removed.....	2
Figure 2 - drum unit on floor ready for assembly	2
Figure 3 - remove hardware for jack stand installation	2
Figure 4 - drive pin into stand.....	3
Figure 5 - stand goes into pipe.....	3
Figure 6 - bolts and lock pin to change between compact and extended positions	3
Figure 7 - remove pin from the central pivot point.....	4
Figure 8 - align holes and push pin through	4
Figure 9 - install the washer and nut.....	4
Figure 10 - driveline that goes from the tractor to the mower	4
Figure 11 - install the clutch end onto the gearbox.....	5
Figure 12 - pivot restrictor plate, handle, and washer.....	5
Figure 13 - clamp holds guard in place.....	5
Figure 14 - blade change tool and pin with locking ring	5
Figure 15 - curtain guard frame components.....	6
Figure 16 - attaching the rear frame.....	6
Figure 17 - alignment feature for guards	6
Figure 18 - front extension frame assembly	6
Figure 19 – orientation of frame guard tubes.....	7
Figure 20- fit and secure the curtain over the frame.....	7

Scope and Purpose

This guide is limited to the TS51 drum mower by Terra sold by Tractor Tools Direct. This guide is limited to assembly of the mower. Please consult the owner’s manual for operation and safety related information.

Initial Steps

The easiest way to access the mower components is to remove one side of the crate as shown below. This allows for parts to be slid out of the crate if a loader is not available. A loader or forklift can lift the parts out if you would prefer to save the crate.

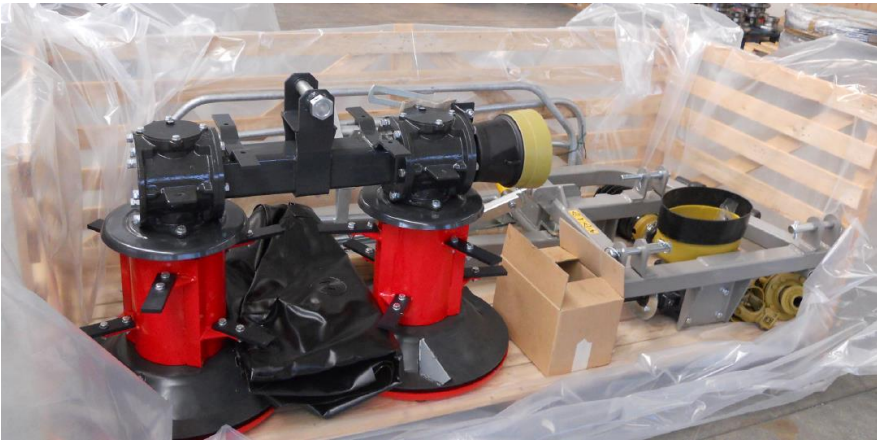


Figure 1 - crate with one side removed

Remove the drum unit (shown in Figure 2 below) from the crate and place it on the ground. Leave room on the side with the PTO spline for positioning and attaching the 3-point hitch assembly.



Figure 2 - drum unit on floor ready for assembly

Lift the 3-point hitch assembly out of the crate by connecting it to the tractor. First back the tractor up to the crate and hook the lift arms of the tractor to the two lower hitch pins. Raise the lift arms so that the hitch assembly is a few inches off the ground. Pick up the upper end of the hitch assembly to rotate it up and connect the top link.

Open the hardware bag marked 3.026.0006. Locate the roll pin, the plastic cap, and the pin with retaining clip as shown below.



Figure 3 - remove hardware for jack stand installation

Insert the jack stand through the supporting pipe on the 3-point hitch frame as shown below. The stand supports the mower when it is not attached to the tractor. Lock the stand in place with the retaining clip pin and drive the roll pin through the stand. Drive the plastic cap onto the top of the stand. Be gentle as to not break the cap.



Figure 5 - stand goes into pipe



Figure 4 - drive pin into stand

Setting the Mower to the Extended or Compact Position

The mower is designed to be used with both larger and smaller tractors. There are two positions in which the mower can be configured to work optimally with different sized tractors - a “compact” and an “extended” position. The compact position is for tractors with a rear wheel width of up to 54”, while the extended position is used with tractors with wheels that are more than 54” in width.

The 3-point hitch assembly comes in the narrow position to allow it to fit inside the shipping crate. To change to the extended setting, remove the two bolts shown below and extend the arm. The lock pin must be released and held up until its hole has moved out from under it. The lock pin will snap into the next hole when the arm has reached the extended position. Reinstall the two bolts.

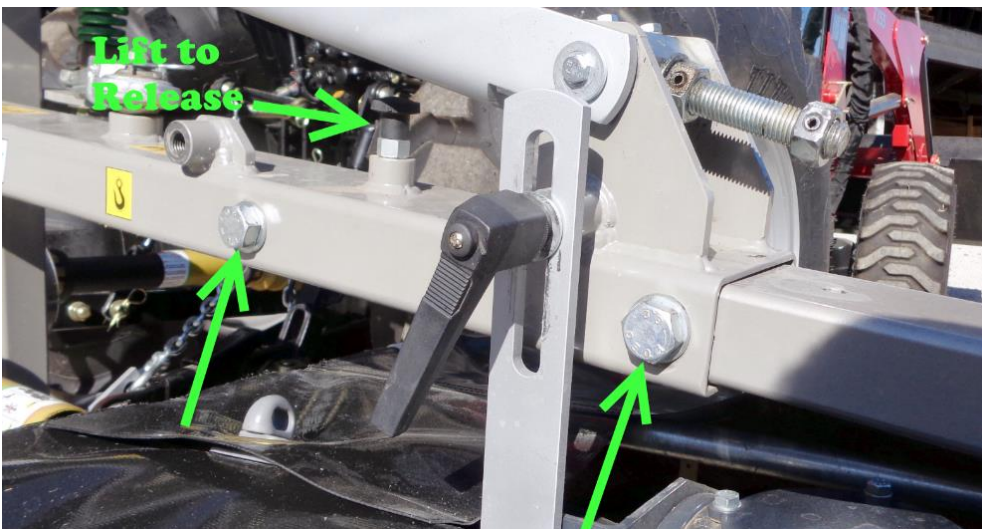


Figure 6 - bolts and lock pin to change between compact and extended positions

Attaching the 3-point Hitch Assembly to the Drum Unit

Take the pin out from the central pivot point on the drum unit as shown below. Coat the length of the pin with grease. Bring the 3-point hitch into alignment with the holes on the drum unit. Do not use a hammer to drive the pin through. Doing so can easily damage the plastic bushing. Use the top link to control the angle and the lift arms to control the height.

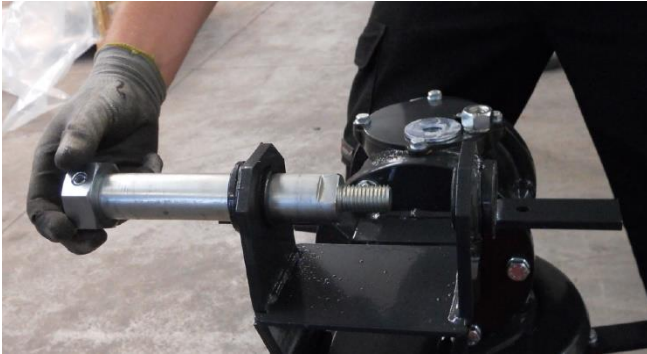


Figure 7 - remove pin from the central pivot point



Figure 8 - align holes and push pin through

Install the washer and nut on the pin and tighten, leaving it loose enough to allow the pin to turn freely.

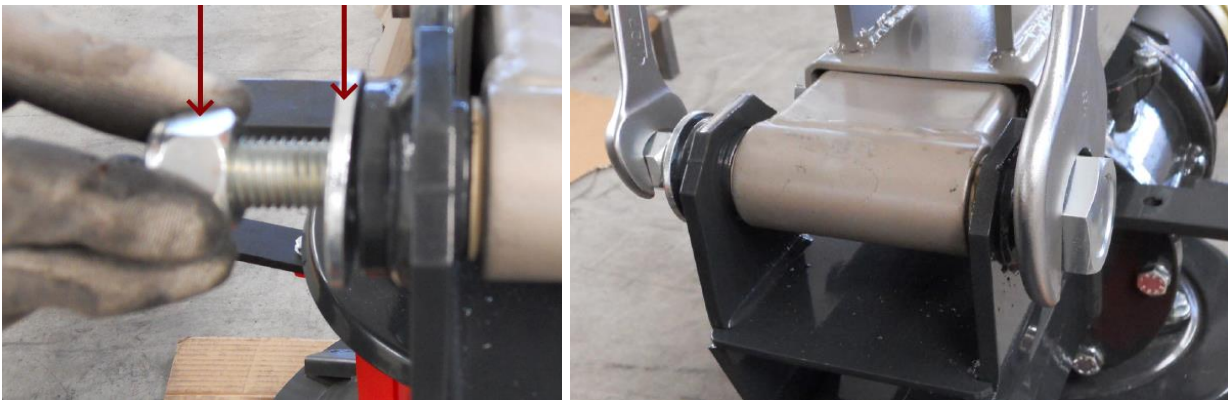


Figure 9 - install the washer and nut

PTO Driveline Installation

Apply grease to the PTO splines on the tractor and the machine before installing the PTO drivelines. Scrape away any paint that may be inside the female spline receptacle on the driveline if it interferes with easy installation. The driveline shown in Figure 10 below is the one that runs between the tractor and the mower.



Figure 10 - driveline that goes from the tractor to the mower

The larger clutch end of this driveline is attached to the mower. Retract the locking ring on the clutch end and slide it onto the spline until it locks with a snap.



Figure 11 - install the clutch end onto the gearbox

Locate the second PTO driveline. Install the end with the black flexible cover to the 90 degree gearbox, and the opposite end to the drum unit. Secure the cover to the gearbox using the provided worm gear/hose clamp as in Figure 13. Install the pivot restrictor handle with washer as shown in Figure 12.

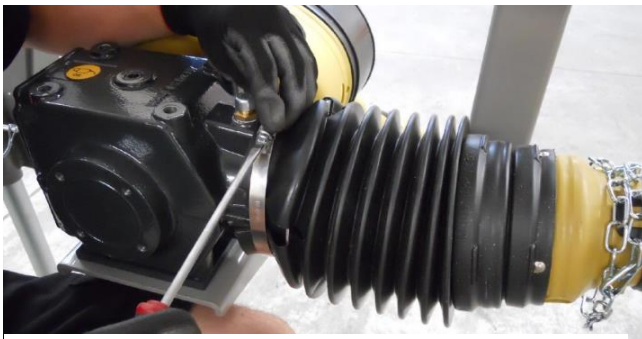


Figure 13 - clamp holds guard in place

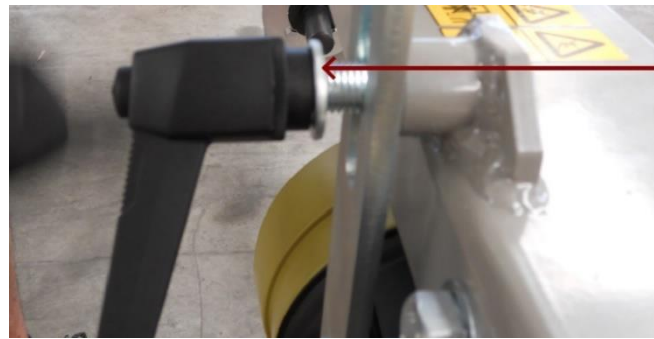


Figure 12 - pivot restrictor plate, handle, and washer

Install the blade change tool in the slots as shown in Figure 14. Attach the pin with the locking ring at the bottom.



Figure 14 - blade change tool and pin with locking ring

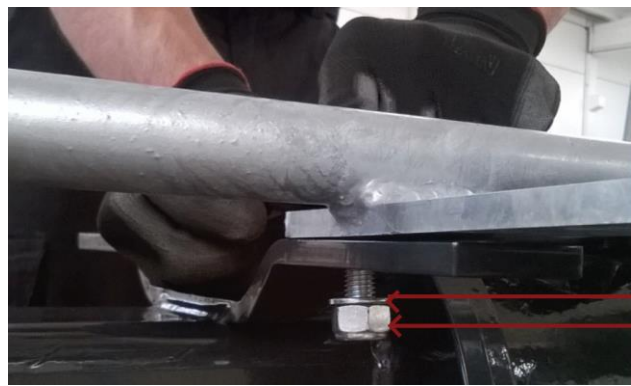
Curtain and Guard Installation

Gather the three guard frames and the six shorter pipes.



Figure 15 - curtain guard frame components

Position the rear guard frame and fasten it with the hardware as shown in the following two photos.



Flat washer
D10
Hex_screw
M10x35

Figure 16 - attaching the rear frame

The front guard has an alignment protrusion that fits into the rear guard frame to keep them aligned. Insert this before fitting bolts and nuts.

Attach the front extension frame with six bolts and nuts. The hardware is installed with a washer on both sides.



Figure 17 - alignment feature for guards



Figure 18 - front extension frame assembly

The curtain is held away from the conditioner bars by steel tubes. See the diagram below for placement of clamps and tubes. The frame must be assembled as shown to prevent damage.

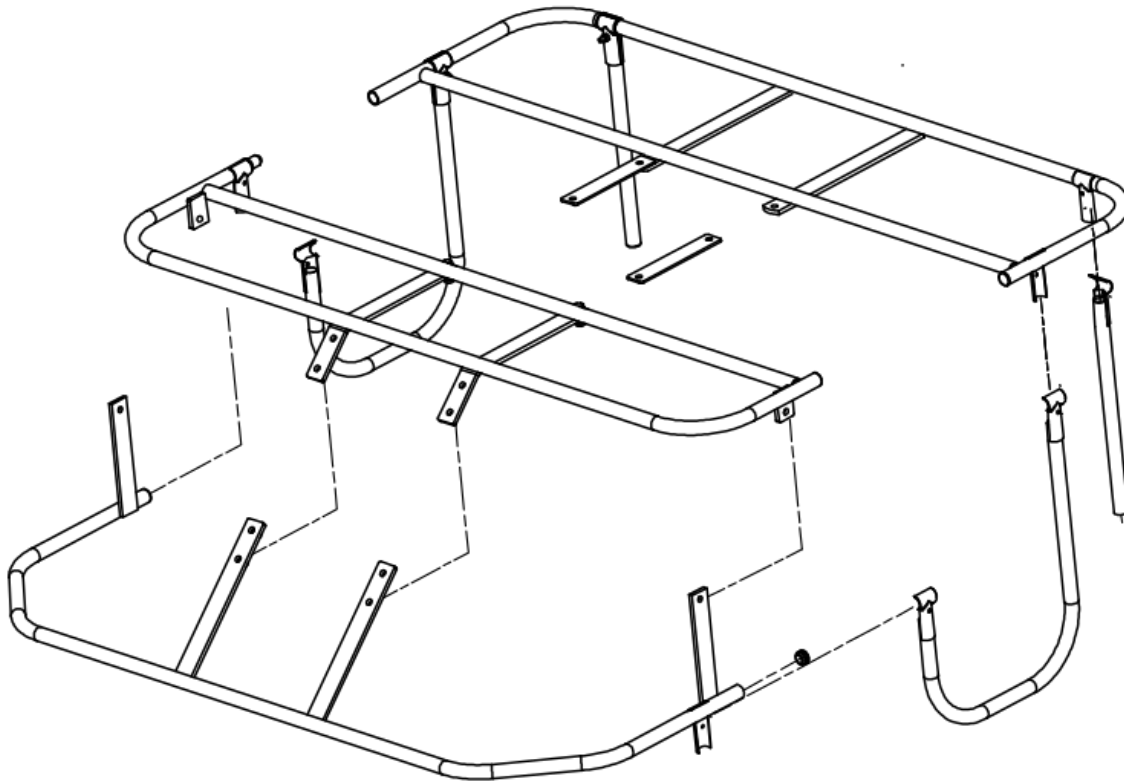


Figure 19 – orientation of frame guard tubes

The curtain frame tubes and clamps have holes that are used to secure the clamps and tubes in position using bolts and lock nuts. Do not operate the mower without the tubes in place as the curtain can contact the conditioner bars and become damaged.

Fit the curtain over the frame as shown below. Attach the white straps to the curtain frame to keep the curtain in place. Do not over-tighten the straps as they may fail. Find the tight position and then back off one hole.



Figure 20- fit and secure the curtain over the frame