PEQUEA

Pequea Turbo Tedder

Model TT4000

Operator's Manual

THISMANUALMUSTBEREADANDUNDERSTOODBEFOREANYONEOPERATESTHISMACHINE!

Manual# 990024
Revised 05/2025

YOU MUST FILL OUT YOUR WARRANTY REGISTRATION TO ACTIVATE YOUR WARRANTY AND TO QUALIFY FOR PARTS AND SERVICE!!

To the Owner;

Thank-You for choosing a quality product from Pequea Machine, Inc. We strive to give you the best equipment and the best level of service of any company. With a little care and maintenance this machine will do your work for you for many years. In this manual, we make an effort to get you better acquainted with the machine so you can achieve maximum performance. We design and build all of our equipment with the end user in mind so we welcome any suggestions or ideas for improvement. Please note that it is within our rights to make changes or improvements to our equipment without updating the equipment that was manufactured before the change took place.

Please take a few minutes to fill out the area below. This information will be valuable to you when ordering parts or requesting service from your dealer.

Dealer Name:_____

Dealer Phone Number:_____

Service Manager/Technician:_____

Model# and Description:_____

Serial Number:_____

Date of Purchase:_____

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INTRODUCTION

Intended Use

The Pequea TurboTedders are designed for evenly distributing hay and forage crops only. Pequea will not cover under warranty a tedder that has been used outside of these crops.

Serial Number

The tedder's serial number can be found on the rear of the main frame of the machine. Please use this number when requesting service, seeking information, or ordering parts. For the operator's convenience, space to record the serial number, model number, purchase date, and dealer has been provided inside the front cover of this manual.

Specifications

Specifications	TT2000	TT4000	TT6000
Working Width	9' 4"	18' 2"	27'
Transport Width	9' 10"	10' 6"	9'
Gearboxes	Sealed/Oil Bath		
Rotors	2	4	6
Arms Per Rotor	7		
Arm Construction	Round Tubular		
PTO/HP Recommended	30	35	55
Weight	700	1350	3000
Spindle Size	1-3/8"		
Hub	4-Bolt w/ Tapered Bearings		
Wheels	4-Bolt Heavy Duty, Painted		
Tires	18.5 x 8		
Hydraulic Requirement	800psi	1000psi	1200psi

!!SAFETY FIRST!!

This symbol precedes specific safety instructions throughout this manual. When reading the manual, pay close attention to the information that follows this symbol.

FAILURE TO FOLLOW INSTRUCTIONS IN THIS MANUAL COULD RESULT IN PERSONAL INJURY OR DEATH. READ ENTIRE MANUAL BEFORE OPERATING THE TEDDER.

Keep hands, feet and clothing away from the machine's power take-off (PTO) shaft and any other moving parts until the machine has been shut down and the power source has been locked out.

Do not adjust, unclog, lubricate, or service the tedder until it has been shut down.

Support the tedder securely while working under it.

Be certain all bystanders and animals are a safe distance away before raising or lowering the rotors.

Never allow anyone to ride on the tractor or the tedder.

When transporting, never exceed a speed of 19 MPH and avoid sudden turns.

Be constantly aware of the ends of the machine to avoid collision with other objects.

When transporting the machine on public roads use the proper reflectors, lights, and slow moving vehicle signs required by local government agencies. Pequea will not be liable for any traffic violations.

Be sure to check all fasteners before and after every use, this is especially important when the tedder is new but is a good practice on any machinery with high vibration levels.

Be careful around hydraulic hoses and fittings. Never go near hydraulic leaks. High pressure leaks can puncture skin and cause serious injury or death!

Power Source Safety

Do not use a PTO shaft without a rotating shield in good working order. Make sure drive system safety shields are in place on both the tractor and the tedder.

Do not overextend the PTO Shaft

PTO shield chains must be attached to the tractor and/or the tedder to keep the shield from rotating.

Stay Clear of Rotating Drivelines

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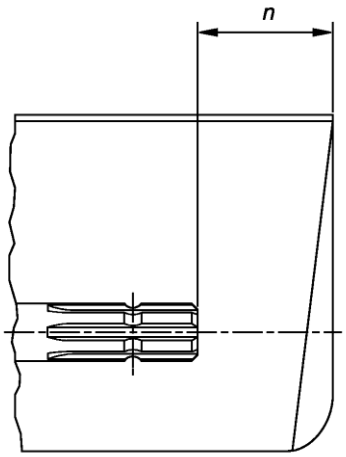

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Entanglement in rotating driveline can cause serious injury or death.

Keep tractor master shield and driveline shields in place at all times. Make sure rotating shields turn freely.

Wear close fitting clothing. Stop the engine and be sure that PTO driveline is stopped before making adjustments, connections, or cleaning out PTO driven equipment.

Do not install any adapter device between the tractor and the primary implement PTO drive shaft that will allow a 1000 rpm tractor shaft to power a 540 rpm implement at speeds higher than 540 rpm.

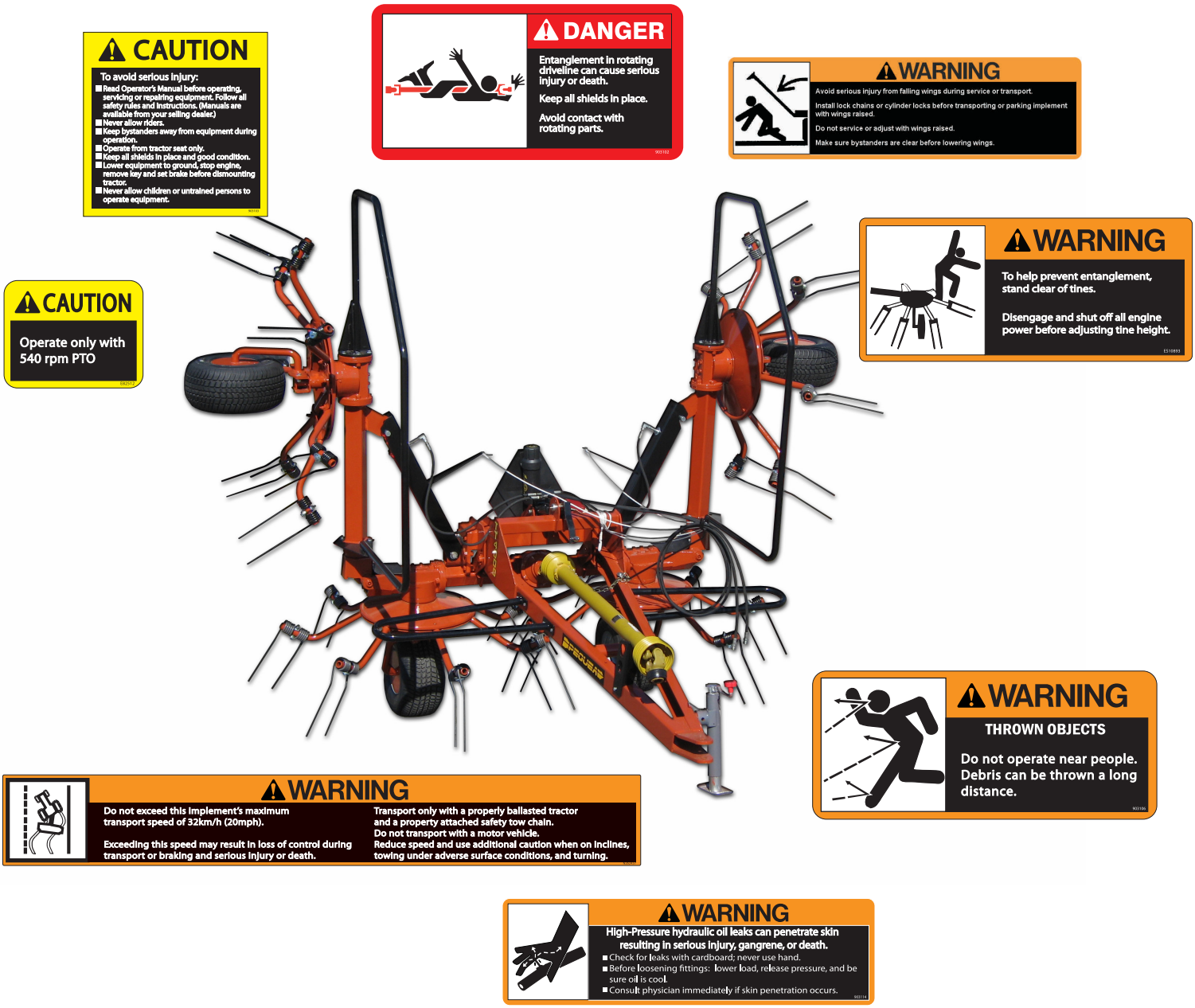
Do not install any adapter device that results in a portion of the rotating implement shaft, tractor shaft, or the adapter to be unguarded. The tractor master shield shall overlap the end of the splined shaft and the added adaptor device as outlined in the table.

PTO Type	Diameter	Splines	n ± 5 mm (0.20 in.)
1	35 mm (1.378 in.)	6	85 mm (3.35 in.)
2	35 mm (1.378 in.)	21	85 mm (3.35 in.)
3	45 mm (1.772 in.)	20	100 mm (4.00 in.)

SAFETY

Safety Decals

Safety decals and reflectors are for the safety of yourself and others and must be heeded at all times. If any decals are missing, faded, or damaged in any way, please contact your dealer for replacements immediately.



HITCHING

Attaching to the Tractor

Figure 1

Figure 2

Figure 3

Crank the jack up or down to align the draw bar with the hitch (Figure 1).

When attaching to the draw bar always use a draw bar pin with a safety clip (Figure 2) to ensure that the tedder doesn't bounce off of the tractor.

After attaching the tedder, crank the jack down until all the weight rests on the tractor drawbar, then swing the jack up into the transport position. (Figure 3)

Always use a tractor that is at least twice as heavy as the tedder. When operating on a side hill the tractor could slide down hill.

Attach the PTO shaft to the tractor. Make sure the locking balls in the splined coupling are operational and that the PTO shaft locks securely on the tractor output shaft. NOTE: **Be sure to push the PTO stand down against the tongue to avoid damage to the PTO shaft shielding.**

The TT4000 tedder is equipped with hydraulic cylinders for the transport adjustments. There are two hoses that supply a manifold that is attached to the front cylinder (located between the tongue and the center input gearbox). These two hoses should be connected to a double acting valve at the rear of the tractor. The hoses arrive at the dealership with a male 1/2" NPT pipe thread on the tractor end of each hose. Consult your tractor dealer or the tractor owner's manual for the correct size hydraulic coupling to match the remotes on the tractor.

TRANSPORTING

Field Transport

Never allow any riders on the tractor or the tedder.

Remain fully aware of the width of the tedder in relation to objects you are passing.

Never travel at speeds of more than 12 MPH in the field.

Road Transport

Adhere to the suggestions for field transport listed above.

ALWAYS FOLLOW LOCAL TRAFFIC LAWS IN REGARDS TO THE TRANSPORTING OF FARM EQUIPMENT. PEQUEA WILL NOT BE HELD LIABLE FOR FINES INCURRED DUE TO TRAFFIC VIOLATIONS.

Do not exceed 19 MPH on any public road. Excessive speeds on the two center tires combined with common road obstructions can cause failures.

Be sure the SMV (slow moving vehicle) Symbol is visible from the rear of the machine as shown in Figure 4.

The transport lock must be locked into position (Figure 5) in order to guarantee the wing sections do not fall during transport. Failure to properly lock the wings could result in personal injury or a third party injury.

Never travel on the road at night. Your tedder is not equipped with lights.

Figure 4

Figure 5

FIELD SET UP

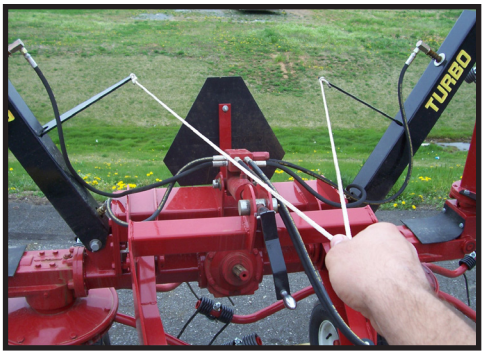


Figure 6

To lower the wings into tedding position pull the tractor hydraulic valve in the direction that retracts the lift cylinders. When the cylinders are fully retracted pull the rope (Figure 6) to remove the transport locks from the cylinder pins. Once the locks have cleared the pins push the valve in the opposite direction, lowering the wings down to the ground. Be sure that nobody is around the tedder or the tractor as the wings are lowering; the tines or the arms can seriously injure anybody that it comes into contact with.

NEVER RUN THE PTO WHILE THE TEDDER IS IN THE TRANSPORT POSITION! THIS CAN CAUSE DAMAGE TO THE JOINTS AND ALSO POSES A PERSONAL INJURY HAZARD.

When the wings lower to the ground the front cylinder shown in figure 7 should retract, tilting the tine arms toward the ground. Next, adjust the tine to ground clearance by rotating the handle shown in figure 7 until there is 1-2” clearance between the ground and the bottom of the tine (Figure 8). The condition of the field will determine the proper tine height. The flatter the field is the higher the tines can be set (based on an average of 2-4” stubble). Always keep the tines adjusted as high as possible. While it is impossible to eliminate all contact with the ground, try to keep it at a minimum as this not only wears the tines, it also contaminates your hay with dust and creates unnecessary wear on your other harvesting equipment.

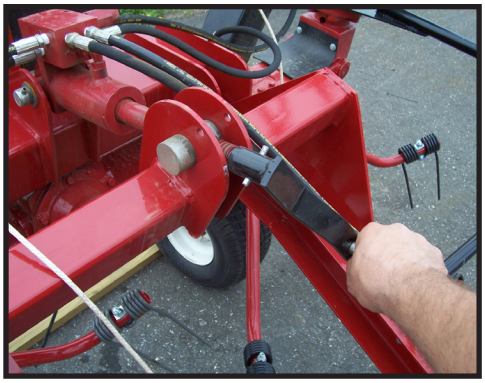


Figure 7

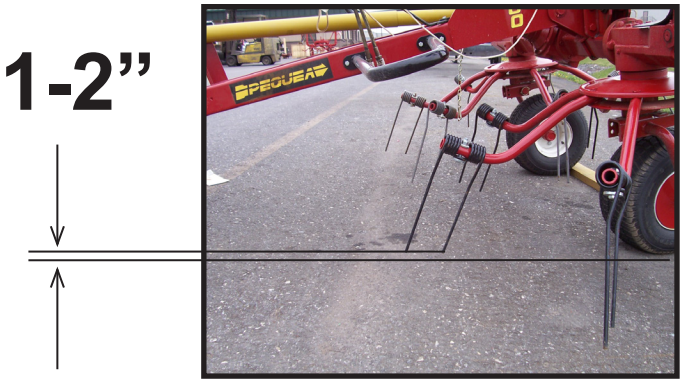


Figure 8

ADJUSTMENTS

Tine Height Adjustments

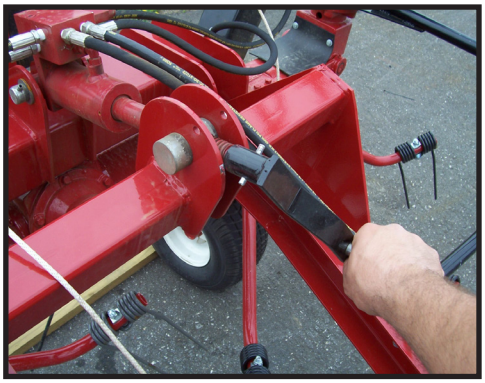


Figure 9

Figure 10

The tine height adjustments can be made by turning the handle shown in Figure 9.

Turn the handle clockwise to raise the tine height.

Turn the handle counter clockwise to lower the tine height.

Generally, the tines should be around 1-2 inches from the ground for most crops. However, the stubble size can change where the optimum setting should be as well as the moisture content of the hay crop.

IT IS UP TO THE OPERATOR TO DETERMINE WHAT THE BEST POSITION SHOULD BE.

DO NOT ADJUST THE TEDDER UNLESS THE TRACTOR IS OFF AND THE PTO SHAFT IS DISCONNECTED. ALWAYS ADJUST THE MACHINE BY YOURSELF; A SECOND PERSON INCREASES THE CHANCE OF AN ACCIDENT.

ADJUSTMENTS

Tine Pitch Adjustments

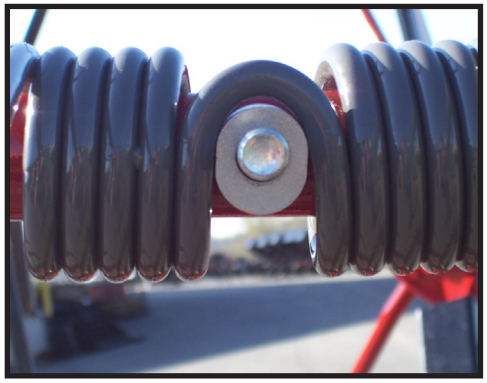


Figure 11

Figure 12

The tine pitch (the angle at which the tine comes off of the time arm) can be adjusted by turning the eccentric spacer washer. The spacer position in Figure 11 will give the tine a less aggressive position as shown in Figure 12.

The spacer position as shown if Figure 13 will give the tine a more aggressive position as shown in Figure 14.

A more aggressive tine position will throw the crop higher.

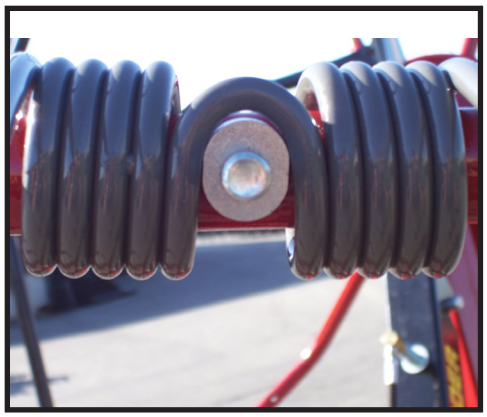


Figure 13

Figure 14

ADJUSTMENTS

Axle Adjustments

The angle of the axles can be adjusted to raise or lower the whole machine. This will allow you to tilt the tedder forward more and get a more aggressive tedding action. The tedders are set at the factory to run in the less aggressive position (shown at right). To adjust to the higher position you will need to pick the tedder up off the ground using a hoist or a lift. With the tedder's weight supported properly with blocks, remove the 1/2" bolt, pull the axle forward to meet the second hole, and reinsert bolt. Repeat the process for all the axles.

The axles can also be set on an angle. This allows you to ted the edge of a field and the tedder will throw the hay in further away from the fence, field edge, etc. The picture at right shows the adjustment assembly. Pull the small lever to the right to pull the positioning pin out of the adjustment bracket. Swing the axle assembly in the desired direction and release the lever to lock the positioning pin into the proper hole. Repeat the process for all the axles. Example: When driving along the left side of a fence or field edge, you will want to swing your axles to the right.

GENERAL OPERATION


DO NOT BEGIN OPERATION UNLESS ALL OF THE SAFETY BULLETINS HAVE BEEN READ.

Once all of the adjustments and initial set up instructions have been followed the tedder is ready to operate in the field.

Connect the PTO shaft from the tedder to the tractor by pulling the spring collar back and sliding the shaft yoke onto the 6 splined tractor PTO shaft. Slide the shaft forward until it stops and then pull back slowly until the balls snap into the ball groove on the tractor shaft.


DO NOT RUN THE PTO UNLESS THE LOCKING BALLS ARE ENGAGED. THE SHAFT COULD SLIDE OFF DURING OPERATION AND CAUSE SERIOUS INJURY OR EVEN DEATH.

The PTO speed should never exceed 540 rpm’s. Generally, 450 rpm’s and a 6 mph ground speed is a comfortable operating setting. Crop conditions and field conditions will ultimately determine the settings for the tedder and the tractor.

LUBRICATION AND MAINTENANCE

NEVER PERFORM ROUTINE MAINTENANCE, REPAIRS OR INSPECTIONS ON ANY PIECE OF EQUIPMENT UNLESS THE TRACTOR IS SHUT OFF AND DISCONNECTED FROM THE MACHINE.

IT IS ALWAYS BETTER TO WORK WITH ANOTHER PERSON WHEN MAINTAINING OR SERVICING A PIECE OF EQUIPMENT. ACCIDENTS CAN BE PREVENTED AND HELP CAN BE ATTAINED EASIER WHEN ANOTHER PERSON IS AVAILABLE TO HELP.

Gearbox Lubrication

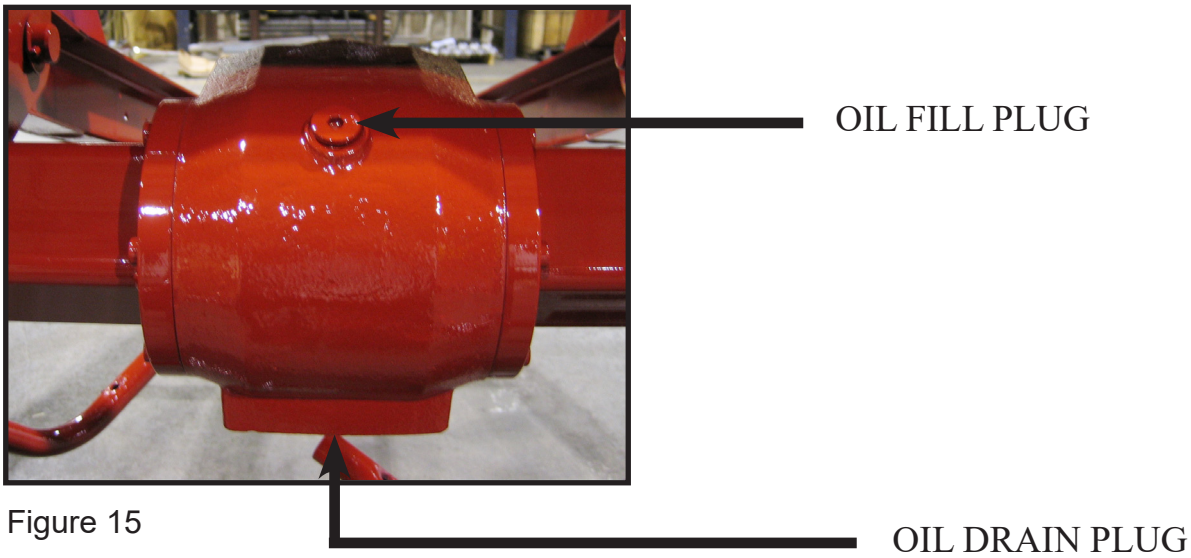
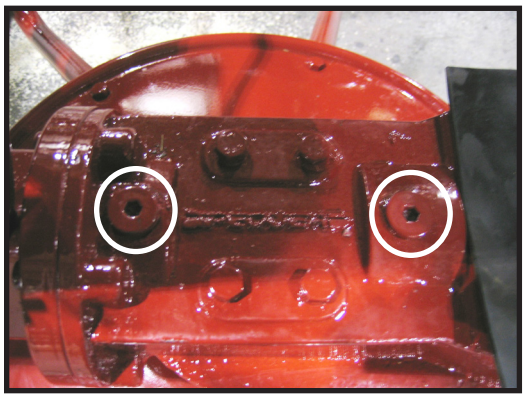


Figure 15

The oil in the center gearbox should be drained out and replaced every year. When refilling the gearbox, remove the fill plug and fill up to the fill hole using a 80W-90 gear oil. Check the oil level periodically throughout the season to insure that it remains full at all times.

Be sure to properly dispose of any used oil or grease! Do not pour directly onto the ground!

LUBRICATION AND MAINTENANCE



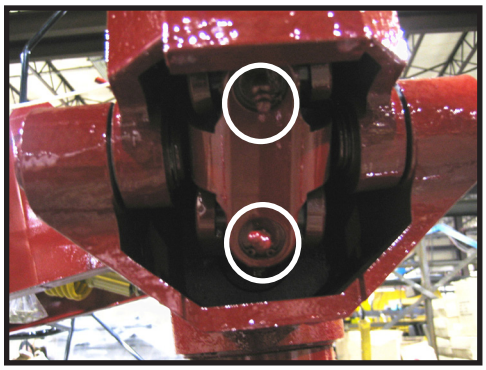
The rotor gearboxes are packed at the factory with Castrol NLGI #2 Pyroplex Grease. This is a grease with a high resistance to water and will not dry out or become caked. Check the gearboxes periodically to make sure the gears are coated and add more as needed. There are two fill plugs located on the top of each rotor gearbox. Remove both plugs when filling the gearbox so the air can escape.

Figure 16

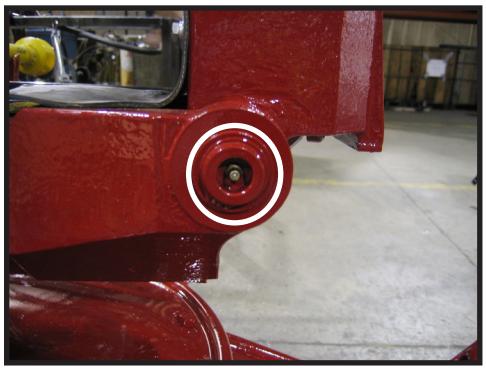
The grease in the rotor gearboxes can seep out as the spindle flexes. Do not be alarmed, this is normal. The seal is flexible, so when the spindle flexes it can cause a small gap which allows oil to seep out between the seal and the spindle assembly.

Grease Fitting Lubrication

When a grease point has specific hourly frequency, 1 full pump should be sufficient lubrication. Always use a grease that is rated for high temperatures commonly found in a bearing.



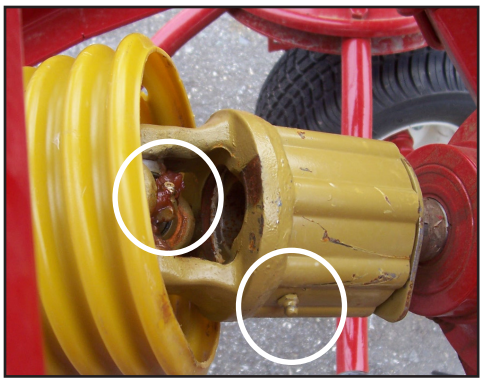
The double u-joints by the wing pivot areas have (2) center crosses with grease fittings. These should be lubricated every 20 hours.



Both of the wing sections of the TT4000 have a grease fitting and a bronze bushing at the pivot point. It should always be visually wet with grease. Grease as needed.

LUBRICATION AND MAINTENANCE

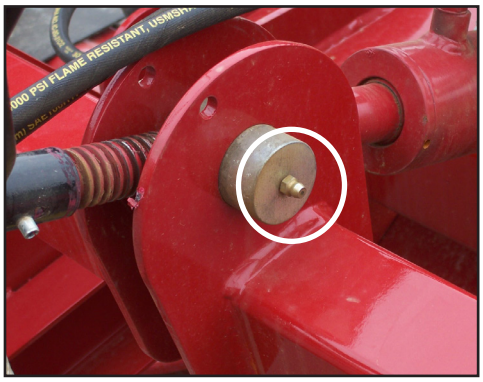
PTO Shaft Lubrication



The radial pin clutch and the center cross in the pto yoke should be greased every 8 hours.

The front center cross should also be greased every 8 hours.

The pto guarding should be lubricated at all times. If the shield feels tight when it is extended and retracted then lubricate as necessary.



The cylinder nut should always be visually wet with grease. Grease as needed.

LUBRICATION AND MAINTENANCE

As is the case with any piece of new equipment, periodically check for loose bolts and nuts. Paint and parts settling after the initial vibrations are common and can cause bolts or nuts to loosen. Check the following parts frequently:

- Lug Bolts
- Tines & Tine Arms
- Guards
- Hydraulic Fittings

Wheel Bearings

Adjust wheel hub bearings after 100 acres and once each season thereafter. Jack up the tedder to remove the weight from the wheel(s). Remove hub cap and cotter pin. Torque wheel hub slotted nut to 35 ft. lbs. while rotating the hub. Loosen the nut (Figure 17) one flat plus enough to install the cotter pin (Figure 18) 1/6 turn minimum, 1/3 turn maximum.

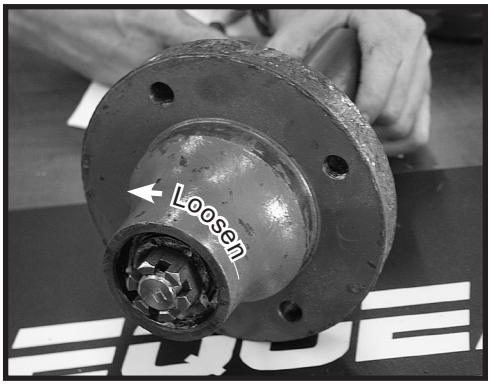


Figure 17

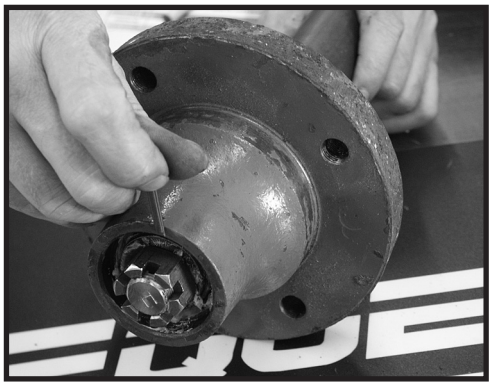


Figure 18

TECHNICAL

Hydraulic Routing

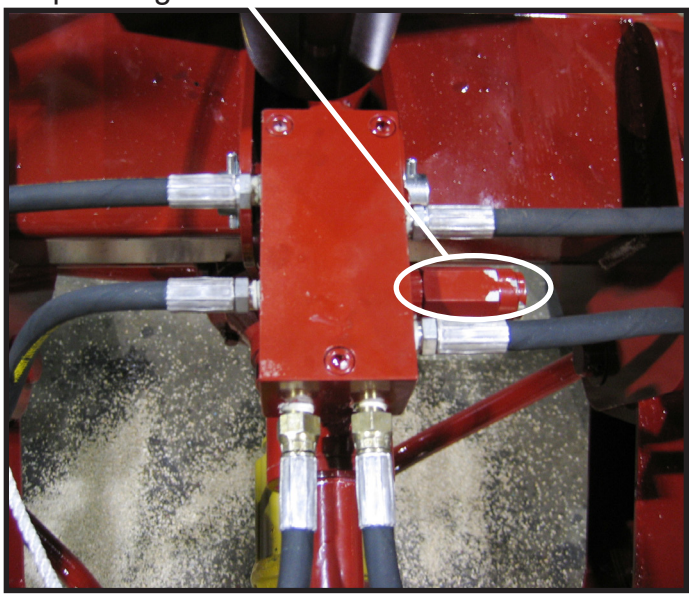
The hydraulic fold/tilt system on your tedder is a complex operating sytem set up to fold and tilt the tedder with only one set of hoses attached to the tractor. Shown below is the manifold block that operates these two functions in sequence. The sequencing valve is set from the factory, but will need to be adjusted slightly for a tractor with a higher hydraulic pressure. If you encounter a problem in which the tilt cylinder will not engage, you are operating on a high pressure and will need to adjust the pressure setting on the valve. To do this, you need to remove the end cap from the valve using a 5/16 hex wrench. You will see the adjustment screw inside the valve. Adjust the screw clockwise using a 1/4” hex wrench until you get the desired results. You should not have to tighten more than a full turn except in an extremely high pressure system. Be sure to put the end cap back on before applying any hydraulic pressure.

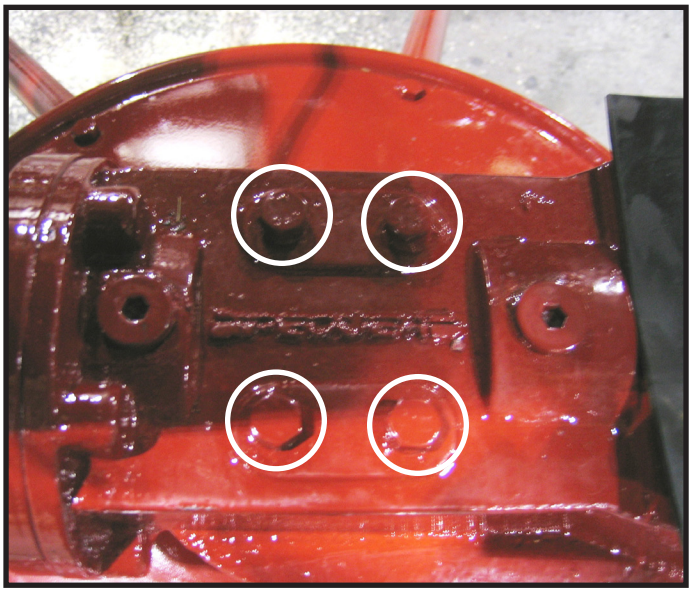
Timing the Rotors

The rotor gears are timed at the factory and should not need to be serviced or retimed. If something does happen that causes the gears to come out of time you can follow the steps below to retime;

- Loosen the 4 metric bolts on the top of the gearbox (bottom right photo). Only loosen the bolts until you can turn the rotor and feel that the gears are no longer meshing. DO NOT REMOVE THE BOLTS!
- Turn the rotor until its tine arms are centered between the two tine arms on the next rotor and retighten the bolts. Retighten the bolts to 56 ft lb (75 N.M.). The bolts are M10-1.5 x 40mm Gr 10.9.

Sequencing Valve





WARRANTY

Pequea Machine's Limited Warranty

Pequea Machine Company warrants to the original Purchaser all Machinery, Equipment, or Trailers manufactured by it, to be free from defects in material and workmanship under normal use and service. Its obligation under this Warranty shall be limited to replacement or repair of any parts thereof, free of charge to the original Purchaser, at its place of business, provided, however, that the part(s) to be replaced or repaired, shall within one (1) year after delivery to the original Purchaser, be demonstrated to be defective; which determination shall be made by the Company. The said components or parts must be returned through the Selling dealer or distributor directly to the Company with all transportation charges prepaid. Notice of defect shall be furnished in writing to the Seller and to the agent through whom the machinery was received, disclosing in full all known defects and failure in operation and use, and reasonable time shall be given to the Seller to remedy any such defects and failures. Failure to make such trial or give such notice shall be deemed an absolute acceptance by the Buyer and satisfaction in full of this Limited Warranty.

This Warranty does not cover, under any circumstances, any parts, components, or materials which, in the opinion of the Seller and Company, have been subjected to neglect, misuse, alteration, accident, or if repaired, with parts other than those manufactured by and obtained from Pequea Machine Company.

This Warranty does not cover components which are already covered by a separate Warranty provided by the supplier of said parts or components.

The Company's obligation under this Warranty is limited to repair or replacement, free of charge to the original Purchaser, of any part which in judgment of the Company is defective. This Warranty does not cover normal wear and tear.

THIS WARRANTY IS MADE EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY AND FITNESS FOR USE AND PURPOSE AND OF ALL OTHER OBLIGATIONS OR LIABILITIES ON ITS PART AND ANY IMPLIED WARRANTY. AND IT NEITHER ASSUMES NOR AUTHORIZES ANY OTHER LIABILITY IN CONNECTION WITH A SALE OF THIS MACHINE. THIS WARRANTY SHALL NOT APPLY TO THIS MACHINE OR TO ANY PART THEREOF WHICH HAS BEEN SUBJECT TO ACCIDENT, NEGLIGENCE, ALTERATION, ABUSE, OR MISUSE.

The Company makes no Warranty whatsoever in respect to accessories or parts not supplied by the Company. The term "original Purchaser" as used in this warranty, shall be deemed that person for whom the Machine, Equipment, or Trailer is originally supplied. This Warranty shall apply only within the boundaries of the continental United States.

Under this Warranty, the Company cannot guarantee that existing conditions beyond its control will not affect its ability to obtain materials or manufacture necessary replacement parts.

No one is authorized to alter, modify, or change the terms of this Warranty in any manner.

The Company warrants the Construction of the equipment sold herein and will replace at its expense for a period of (1) year from the date hereof, any parts which prove defective as determined under the terms of this Limited Warranty.

TORQUE SPECIFICATIONS

The torque chart below lists the standard torque values for all attachment hardware on the rake unless otherwise specified in this manual.

Standard Torque Chart

	GRADE 5 BOLTS		GRADE 8 BOLTS	
BOLT SIZE	TORQUE (DRY) FT.LBS.	LUBRICATED FT.LBS.	TORQUE (DRY) FT.LBS.	LUBRICATED FT.LBS.
1/4 20	8	6	12	9
1/4 28	10	7	14	10
5/16 20	17	13	24	18
5/16 24	19	14	27	20
3/8 16	30	23	45	35
3/8 24	35	25	50	35
7/16 14	50	35	70	50
7/16 20	55	40	80	60
1/2/2 13	75	55	110	80
1/2/2 20	85	65	120	90
9/16 12	110	80	150	110
9/16 18	120	90	170	130
5/8 11	150	110	210	160
5/8 18	170	130	240	180
3/4 10	260	200	380	280
3/4 16	300	220	420	310
7/8 9	430	320	600	450
7/8 14	470	350	670	500
1-8	640	480	910	680
1-14	720	540	1,020	760

TORQUE SPECIFICATIONS

Metric Torque Chart

		NEWTON METERS (NM)		*FOOT POUNDS (FT. LBS.)*	
BOLT SIZE & PITCH	**CLASS**	**PLATED**	**UNPLATED**	**PLATED**	**UNPLATED**
M4 x .70	8.8	3.10	2.20	2.30	1.65
M5 x .80	8.8	6.10	5.50	4.58	4.13
M6 x 1.00	8.8	10.40	9.50	7.80	7.13
M7 x 1.00	8.8	17.00	15.50	12.75	11.63
M8 x 1.25	8.8	25.00	23.00	18.75	17.25
M8 x 1.00	8.8	27.00	24.50	20.25	18.38
M10 x 1.50	8.8	51.00	46.00	38.25	34.50
M10 x 1.25	8.8	54.00	49.00	40.50	36.75
M10 x 1.00	8.8	57.00	52.00	42.75	39.00
M12 x 1.75	8.8	87.00	79.00	65.25	59.25
M12 x 1.50	8.8	92.00	83.00	69.00	62.25
M12 x 1.25	8.8	96.00	87.00	72.00	65.25
M14 x 2.00	8.8	140.00	125.00	105.00	93.75
M14 x 1.50	8.8	150.00	135.00	112.50	101.25
M16 x 2.00	8.8	215.00	195.00	161.25	146.25
M18 x 2.50	8.8	300.00	280.00	225.00	210.00
M20 x 2.50	8.8	430.00	390.00	322.50	292.50
M22 x 2.50	8.8	580.00	530.00	435.00	397.50
M24 x 3.00	8.8	740.00	670.00	555.00	502.50
M6 x 1.00	10.9	15.50	14.00	11.63	10.50
M8 x 1.25	10.9	37.00	34.00	27.75	25.50
M10 x 1.50	10.9	75.00	68.00	56.25	51.00
M12 x 1.75	10.9	160.00	117.00	97.50	87.75
M14 x 2.00	10.9	205.00	185.00	153.75	138.75
M16 x 2.00	10.9	310.00	280.00	232.50	210.00

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