



Pequea Turbo Tedder

Model TT6000

Operator's Manual



THIS MANUAL MUST BE READ AND UNDERSTOOD BEFORE ANYONE OPERATES THIS MACHINE!

*Manual# 990027
Revised 02/2009*

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: _____

TABLE OF CONTENTS

Introduction	2
Intended Use	2
Serial Number	2
Specifications	2
Safety	3
Power Source Safety	3
Safety Decals and Reflectors	4
Hitching	5
Attaching to the Tractor	5
Transporting	6
Field Transport	6
Road Transport	6
Field Set-up	7
Tine Height Adjustment	7
Adjustments	8
Tine Pitch Adjustment	8
Axle Adjustments	9
General Operation	10
Folding for Transport	10
Lubrication and Maintenance	11
Gearbox Lubrication	11
General Lubrication	12
Grease Fitting Lubrication	13
PTO Lubrication	14
Electrical	15
Technical	16
Timing the Rotors	16
Replacing the Flotation Springs	17
Warranty	18

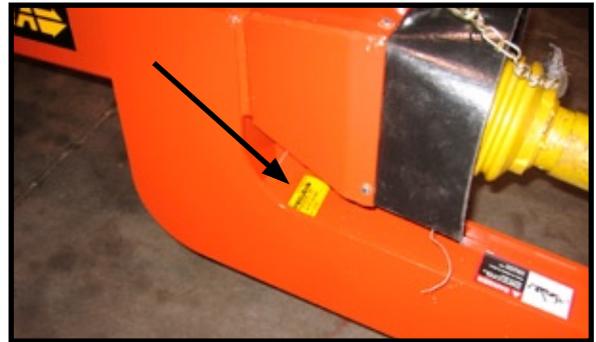
INTRODUCTION

Intended Use

The Pequea TurboTeddars are designed for evenly distributing and drying hay 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 tongue directly under the driveline. 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

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Specifications	TT2000	TT4000	TT6000
Working Width	9' 4"	18' 2"	27'
Transport Width	9' 10"	10' 6"	9'
Gearboxes	Sealed - Grease/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**!!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 folding or unfolding the tedder.



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



When transporting, never exceed a speed of 25 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.

SAFETY

Safety Decals and Reflectors

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. Shown below are some of the decals used on your tedder.

⚠ WARNING

Do not exceed this implement's maximum transport speed of 32km/h (20mph).
Exceeding this speed may result in loss of control during transport or braking and serious injury or death.

Transport only with a properly ballasted tractor and a properly attached safety tow chain. Do not transport with a motor vehicle. Reduce speed and use additional caution when on inclines, towing under adverse surface conditions, and turning.

IMPORTANT

To avoid machine damage, tilt cylinder must be extended before raising or lowering tedder.
Always clean hose ends prior to attaching to tractor.

⚠ CAUTION

To avoid serious injury:

- Read Operator's Manual before operating, servicing or repairing equipment. Follow all safety rules and instructions. (Manuals are available from your selling dealer)
- Never allow riders.
- Keep bystanders away from equipment during operation.
- Operate from tractor seat only.
- Keep all shields in place and good condition.
- Lower equipment to ground, stop engine, remove key and set brake before dismounting tractor.
- Never allow children or untrained persons to operate equipment.

⚠ CAUTION

Operate only with
540 rpm PTO

⚠ DANGER

Entanglement in rotating driveline can cause serious injury or death.
Keep all shields in place.
Avoid contact with rotating parts.

⚠ WARNING

PINCH POINT HAZARD
Keep Clear



⚠ WARNING

Avoid serious injury from hitch whipping up.
Tedder must be attached to tractor when operating hydraulics.

⚠ WARNING

To help prevent entanglement, stand clear of tines.
Disengage and shut off all engine power before adjusting tine height.

⚠ WARNING

THROWN OBJECTS

Do not operate near people. Debris can be thrown a long distance.

⚠ WARNING

Avoid serious injury from falling wings during service or transport. Install lock chains or cylinder locks before transporting or parking implement with wings raised.
Do not service or adjust with wings raised.
Make sure bystanders are clear before lowering wings.

⚠ WARNING

High-Pressure hydraulic oil leaks can penetrate skin resulting in serious injury, gangrene, or death.

- Check for leaks with cardboard; never use hand.
- Before loosening fittings: lower load, release pressure, and be sure oil is cool.
- Consult physician immediately if skin penetration occurs.

HITCHING

Attaching to the Tractor



Figure 1



Figure 2

Crank the jack up or down to align the tractor draw bar with the hitch.

The tedder hitch is bolted on and can be adjusted up or down to accommodate various drawbar heights (Figure 1). Select a height that keeps the tedder chassis level when it is connected to the tractor.

When attaching to the draw bar always use a draw bar pin with a safety clip 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 remove the jack and place it in the transport position. (Figure 2)

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 TT6000 is equipped with hydraulic cylinders to fold the machine for transport. The hoses should be connected to a double acting valve at the rear of the tractor. The slotted holes on the side of the tongue (Figure 1) are storage holes for the hoses

Connect the wiring plug from the tedder into the female plug end on the tractor. If your tractor is not equipped with this plug you will need to have it installed by your dealer. Never travel on public roads without proper lighting.

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 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 25 MPH on any public road. Excessive speeds 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 3.

Keep a close eye on the tedder wings when transporting on the road or in the field. A leaky valve in the tractor's hydraulic system will cause the tedder to slowly unfold. If this occurs, you will want to disconnect the hydraulics before transporting. Figure 4 shows the wings supported properly for transport and the safety chains attached.

Be sure to use the lights when traveling on the road at night.



Figure 3



Figure 4

FIELD SET UP

To lower the tedder into tedding position engage the hydraulics for the tilt cylinder first to raise the wings off of the chassis then engage the main hydraulics to unfold the wings. Be sure that nobody is around the tedder or the tractor as the wings are lowering. The tines and arms can cause serious injury to anybody that it comes into contact with. Make sure that the hitch is attached to the tractor and the pin is installed when the wings are lowering. If the hitch is not properly attached to the tractor the weight of the rotors when it is unfolding could cause the hitch to whip up causing serious personal injury or damage to equipment.



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.



The tine height adjustments can be made by turning the handle shown in Figure 6.

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 length or crop moisture content can change where the optimum setting will be.

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



Figure 5

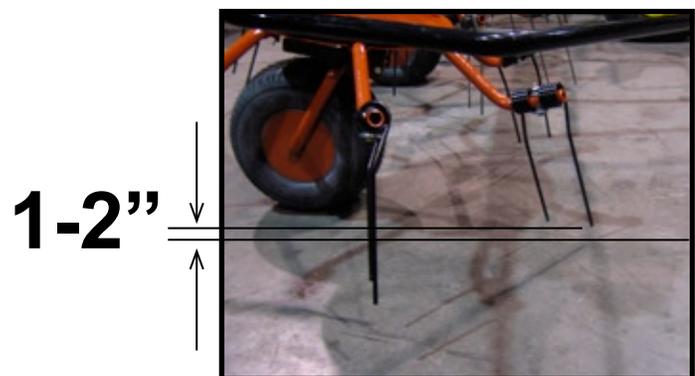


Figure 6

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 7



Figure 8

The tine pitch (the angle of the tine in relation to the tine arm) can be adjusted by reversing the eccentric spacer washer. The spacer position in Figure 7 will give the tine a less aggressive position as shown in Figure 8.

The spacer position shown in Figure 9 will give the tine a more aggressive position as shown in Figure 10.

A more aggressive tine position will throw the hay higher.

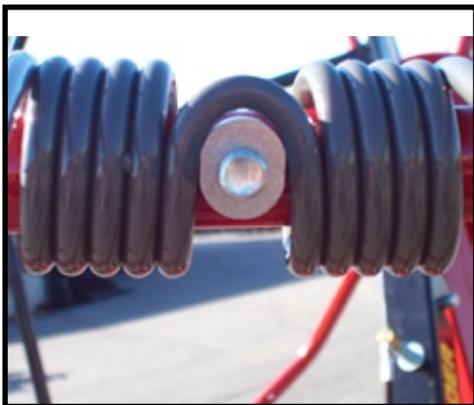


Figure 9



Figure 10

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 in the transport mode, remove the 1/2" bolt, pull the axle forward to meet the second hole, and reinsert bolt. Repeat for all axles.



Figure 11

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 in the center, or straight position. 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.

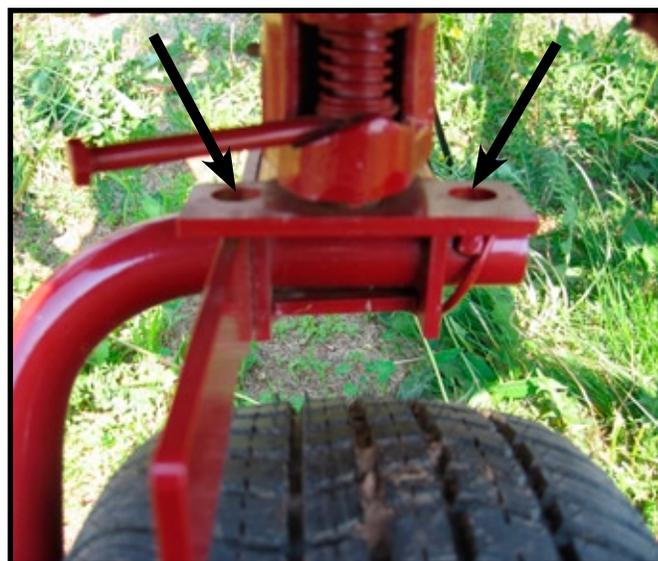


Figure 12

GENERAL OPERATION



DO NOT BEGIN OPERATION UNTIL ALL OF THE SAFETY WARNINGS HAVE BEEN READ AND UNDERSTOOD!

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

Connect the tedder PTO shaft 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 engage 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 DEATH.

The PTO speed should never exceed 540 rpm. Generally, 450 rpm 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.

Folding for Transport

When tending, the transport wheels can swivel and are spring loaded to support the weight of the chassis. The springs will be compressed and the wheels locked in the straight position when the tedder is folded up for transport. NOTE: Be sure to have the wheels relatively straight before folding so the locks can engage properly! Figure 13 shows the transport lock properly engaged.

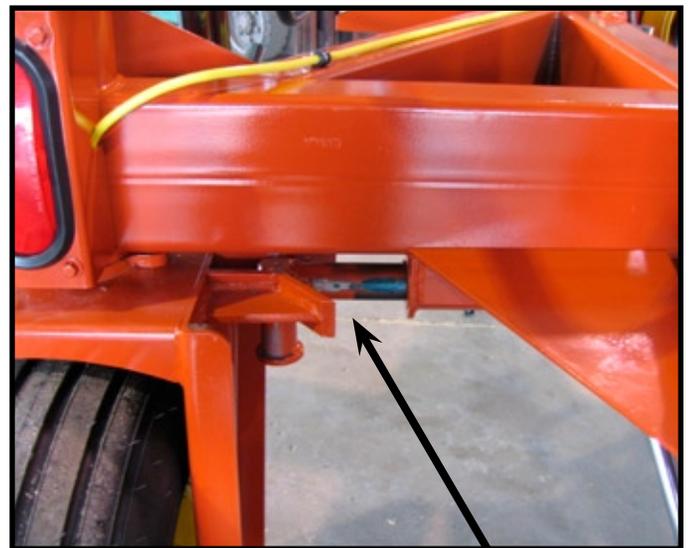


Figure 13

Transport lock

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 14

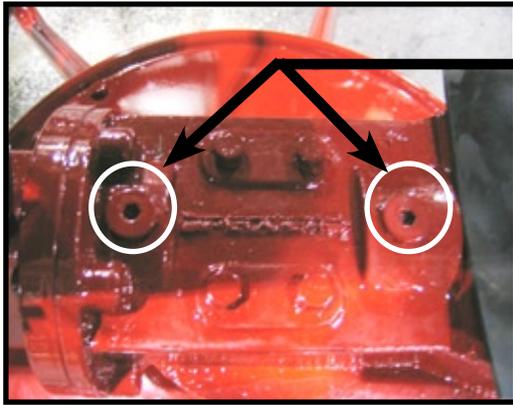
OIL FILL PLUG

OIL DRAIN PLUG

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 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



FILL PLUGS

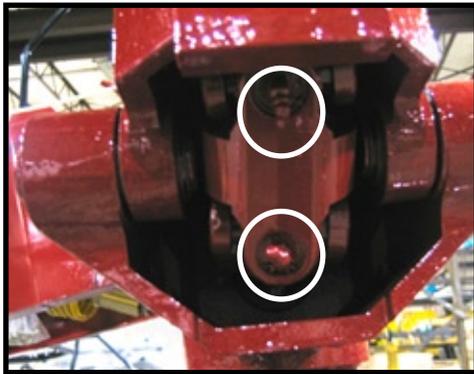
The rotor gearboxes are packed at the factory with Castrol NLGI #2 Pyroplex Grease. This is a grease with a high resistance to water and will not dry out or become caked. Check the gearboxes periodically to make sure the gears are coated with grease and add more as needed. There are two fill plugs located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

Figure 15

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.

General 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 have (2) center crosses with grease fittings. These should be lubricated every 20 hours.



All of the pivot points have a grease fitting and a bronze bushing. This should always be visibly wet with grease. Grease as needed.

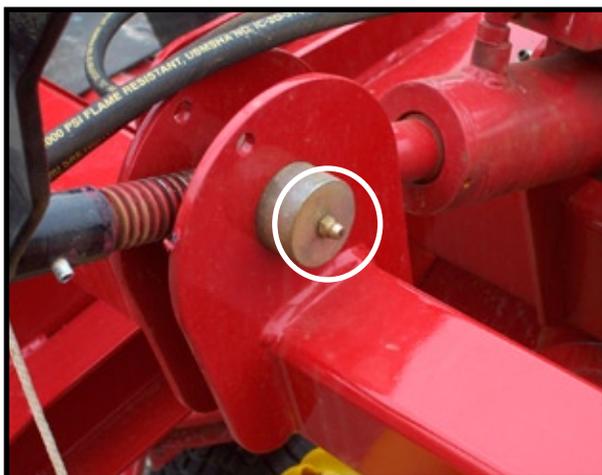
LUBRICATION AND MAINTENANCE



The wheel bearings are sealed bearings and should be greased periodically but can be overgreased. Once per season should be adequate.



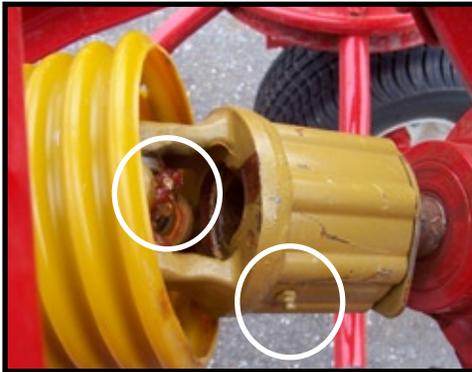
The transport lock slide should be greased regularly and should be kept visibly wet with grease. The sliding shaft should be cleaned periodically to prevent buildup that would prevent it from sliding smoothly.



The cylinder nut 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 yokes should be greased every 8 hours.



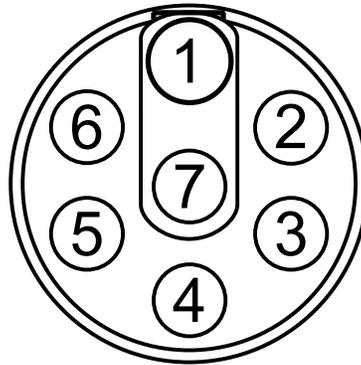
The plastic PTO shielding should be lubricated at all times. If the shield feels tight when it is extended and retracted then lubricate as necessary.

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
- All Fasteners

ELECTRICAL

Your tedder is equipped with lights to be used when transporting on public roads. Make sure the wiring and the lights are kept fully functional at all times. Shown below is the wiring diagram for the 7-pin connector plug and the color code used for all Pequea equipment and trailers. The drawing is shown looking at the back side of the plug insert. NOTE: this is showing the full wiring schematic for this type of plug. The tedder only uses four of these wires; #1, #3, #5, & #6.



Wiring Schematic for 7-Pin Wiring Plug

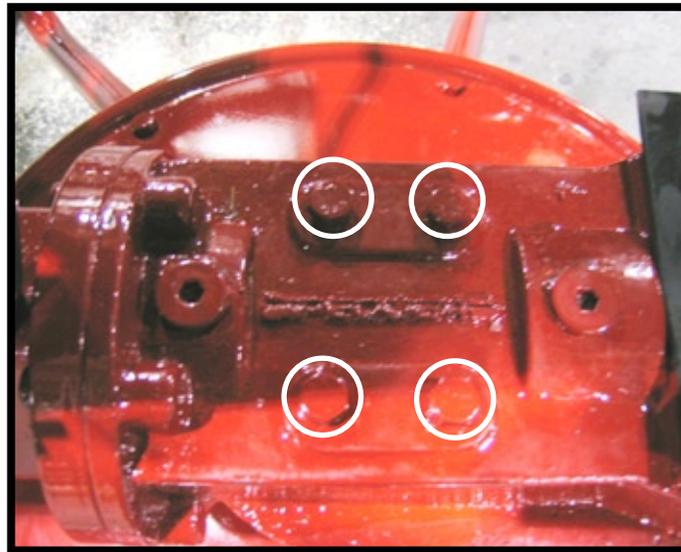
Position	Function	Wire Color
1	Ground	White
2	Spare Circuit	
3	Left Turn Signal	Yellow
4	Auxiliary	Red
5	Right Turn Signal	Green
6	Running Lights	Brown
7	Electric Brakes	Black

TECHNICAL

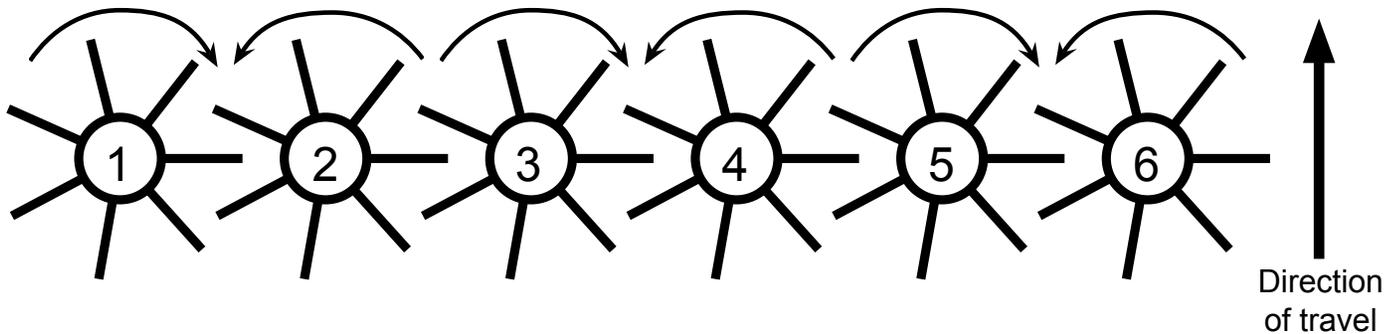
Timing the Rotors

The rotor gears are set 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 (Figure 20) 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 tine arms on the next rotor and re-tighten the bolts.



Proper timing is the most critical where the hay is being pushed back between two rotors.
 Example: Correct timing is more critical between rotors 1 and 2, less critical between 2 and 3.



TECHNICAL

Replacing the Flotation Springs

The flotation springs are located inside the mounting stem of the transport wheels. (The large wheels on the chassis). These wheels are also designed to carry the weight of the chassis when the tedder is in the working mode. The springs may need to be replaced periodically if they become weakened and no longer provide the desired amount of assistance. If so, follow the directions below to replace.

- Lift the tedder with a hoist or a lift to take all the weight off of the transport wheels.
- Use two clamps to hold the cap onto the spring tube.
- Remove the bolts from the cap and slowly release the clamps until the spring is fully extended and there is no more force on the clamp.

Replace the spring and put the cap back on.

FAILURE TO FOLLOW THESE INSTRUCTIONS COULD RESULT IN PERSONAL INJURY AS A RESULT OF THE CAP BEING LAUNCHED BY THE SPRING WHEN THE BOLTS ARE BEING REMOVED.



IMPORTANT: Raise tedder with lift or hoist and apply clamping force to the cap while removing the bolts.

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.



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