



Pequea Turbo Rake

Models TR8, TR10, TR12

Operator's Manual



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

Manual# 990030
Revised 10/2008

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 wheel rake 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 rake 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 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
Rake Serial Number	2
Specifications	2
Safety	3
Safety Decals and Reflectors	4
Hitching	5
Transporting	6
Operation	7
Adjustments	8
Ground Pressure	8
Windrow Width	8
Hitch	9
Return Spring Tension	9
Lubrication	10
General Lubrication	10
Transport Wheel Bearings	12
Rake Wheel Bearings	12
Optional Accessories	13
Kicker Wheel	13
Torque Specifications	14
Warranty	15

INTRODUCTION

Thank-You for choosing the Pequea Turbo Rake. Your rake is the result of years of research and development work. This Operator's Manual will familiarize the operator with the safety and operation of the machine. Included are complete instructions for safe and efficient operation, lubrication, and maintenance procedures. Understanding and following these procedures will result in years of maximum performance from your Pequea Rake.

Read entire manual before operating. Failure to follow the instructions outlined in this manual may result in personal injury and/or damaged equipment, and could void the warranty.

Rake Serial Number

The rake's serial number can be found on the frame brace on the left side 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. A second serial decal similar to the one pictured is hidden on the bottom of the main frame tube.



All pictures and instructions in this manual assume that the right and left side of the machine are that of someone standing behind the rake facing forward.

Specifications

SPECIFICATIONS	TR8	TR10	TR12
Raking width	16-19'	18-21'	20-23'
Windrow width range	2-6'		
Number of wheels	8	10	12
Rake wheel diameter	55"		
Tines per wheel	40 - .273 (7mm) dia. Tines		
Rake wheel hubs & bearings	Greaseable - Tapered roller bearings		
Rake wheel suspension	Independent compression spring - 1 per arm		
Rake wheel arms	Independent arms (1 per wheel) with greaseable bushing at pivot		
Rake wheel pressure adjustment	Tightener bolt (1 per spring)		
Wheel arm beam ground clearance	36"		
Frame ground clearance	26"		
Transport folding control	Double hydraulic cylinders		
Transport tires	205/75-15 Load Range "D" Tire		
Transport width	8' 9"		
Transport height	6' 8"		7' 9"
Weight (lbs.)	1150	1315	1490

SAFETY



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 RAKE.



Keep hands, feet, and clothing away from all moving parts.



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



Be constantly aware of the location of the ends of the rake 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.



Stop the tractor engine, remove ignition key, and allow all mechanisms to stop before cleaning, adjusting, or lubricating the machine.



Stay clear of the rake when raising or lowering the rake wheel beams to avoid injury from the rake tines.



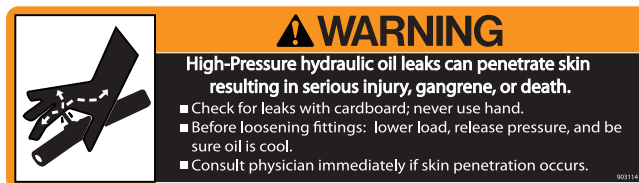
Stay clear of hydraulic lines, they may be under extreme pressure or heat. Never go near a hydraulic leak until the pressure has been relieved and the leaking has stopped. A high pressure hydraulic leak can easily penetrate your skin and cause serious injury, gangrene or death.

We at Pequea Machine, Inc. try to provide safety shield and guards wherever possible, however, it is impossible to shield every area that could be dangerous. We will not be responsible for carelessness and misuse of any of our equipment.

SAFETY

Safety Decals and Reflectors

Decals and reflectors are for the protection of yourself and others. If they are missing, faded, or not readable, get replacements from your dealer immediately. Shown below are some of the warning decals



HITCHING



Check tires to make sure they are inflated to the correct pressure. Recommended pressure is written on the sidewall of the tire.



Check lug bolts. Bolts should be torqued to 65 - 75 ft. lbs.



Perform a quick visual check of all hardware on the rake. Vibrations from normal use can cause bolts to loosen, especially on new machinery.

Align the hole in the tractor draw bar with the hole in the rake tongue and insert an approved hitch pin. Lock the hitch pin with a safety clip to insure it cannot work its way out.

Remove the jack from the hitch and place onto the storage position. (Figure 1)

Connect hydraulic hoses to a double acting valve on the tractor.



Figure 1

TRANSPORTING



Never travel at speeds of more than 20 MPH



Remain fully aware of the width of the rake in relation to the objects you are passing, either stationary or moving.

Make sure the rake wheels are up in the transport position and locked with chains (Figure 2) to keep the arms from falling down into traffic in case of a hydraulic failure.

Follow all local regulations for moving agricultural equipment on public roads, especially those related to lights, reflectors, SMV (slow moving vehicle) symbols and safety markers

Never travel on public roads at night. Your rake is not equipped with lights.



Figure 2

OPERATION



Check for proper assembly and adjustment and make sure that all bolts are tightened. Recheck all bolts after a few hours of operation as bolts can loosen up on new machinery. Check wheel lug bolts upon delivery and periodically thereafter.

Unhook the safety chains (Figure 2) from the wheel arms and lower the rake arms into the raking position. The wings will lower to the ground and then spread outward to form the 'V'.



Keep bystanders and animals clear of the spreading wings. Serious injury can occur from being hit by either the rake wheels or the rake beam.

Begin raking at a low ground speed until you are comfortable with the rake and then increase your speed as desired. On good level ground you will be able to make a clean sweep at speeds up to 10MPH. If the fields are rough you will want to stay in the 5-8MPH range.

If you are raking a field that requires you to lift the wheels when you come to the end of a row you will want to use the lift stops. (Figure 3) This will limit the travel when you raise the wings up off the ground. This is particularly important when you are raking on a side hill.

When raking a large volume of hay the hay may tend to "ball up" and clog up in the back of the rake as it exits the "V". If this happens, you can engage the hydraulics momentarily to open up the back of the "V". Keep driving until it unclogs and then close up the "V" again. This function is a Pequea exclusive and allows you to unclog the rake without getting off the tractor.

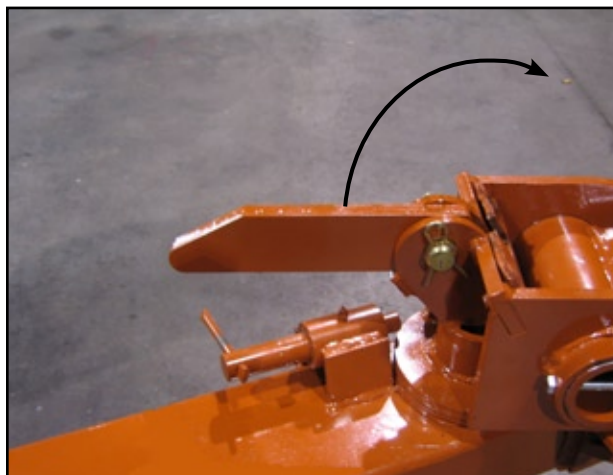


Figure 3

ADJUSTMENTS

Ground Pressure

Rake wheel ground pressure can be adjusted by tightening or loosening the nut on the threaded spring rod. Do not tighten the nuts where the rod attached to the welded bracket on the arm. These nuts must be kept loose so the spring rod can float freely in the slot.



Figure 4

Windrow Width

The threaded swivel stops are used to adjust the windrow width and the angle of the raking wheels



Figure 5

The pivot adjustment on the rear raking wheel can also be used to adjust the width and consistency of the windrow.



Figure 6

ADJUSTMENTS

Hitch

The clevis hitch can be moved up or down to accommodate various draw bar heights. Simply remove the two bolts that attach the hitch and move to the desired position.



Figure 7

Return Spring Tension

The wing return spring tension is adjusted by tightening the nut on the eye bolt. The purpose of this spring is to pull the rake arms in parallel to the rake frame before folding up for transport.



Figure 8

LUBRICATION

General Lubrication

Proper lubrication on all the hinge points and bearings will greatly increase the life and the performance of the rake. This section shows the location of some of the grease fittings on the Turbo Rake. All of the grease points listed below should be greased daily during normal use and before and after storage and after power washing. On the sleeve type bearings, grease until it oozes out around the pivot shaft, then wipe off all excess grease to keep from collecting dust and chaff.

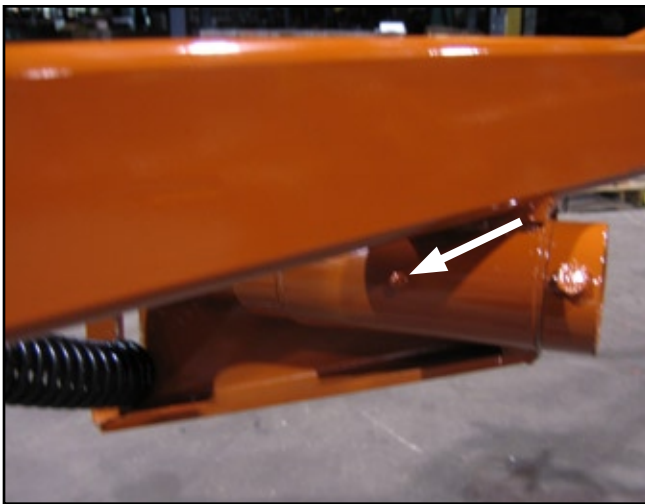


Figure 9 Individual Wheel Pivot

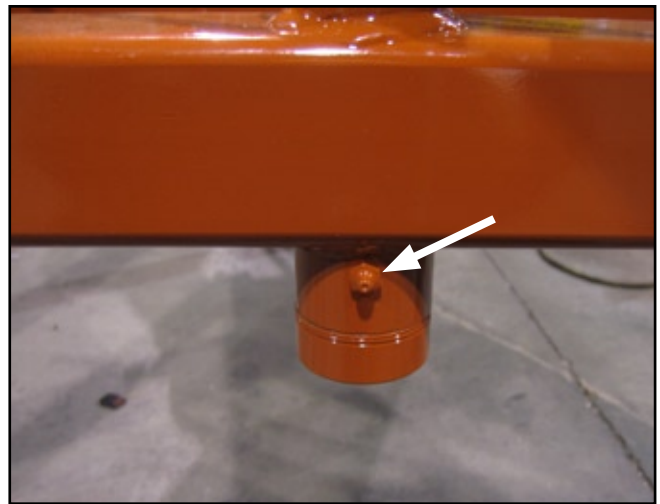


Figure 10 Cylinder Pivot (Frame)

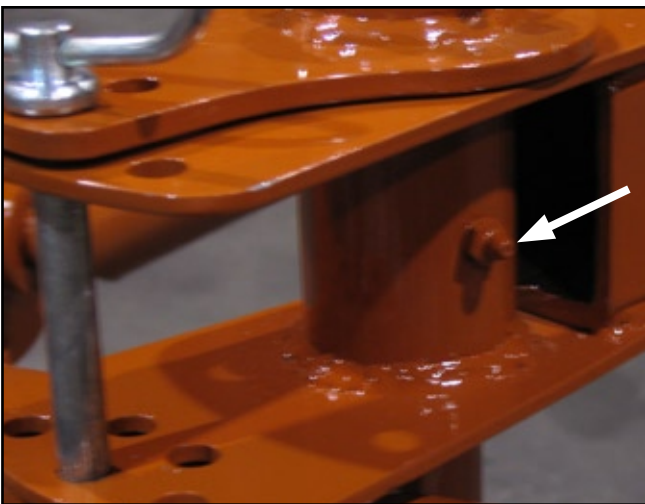


Figure 11 Rear Wheel Pivot

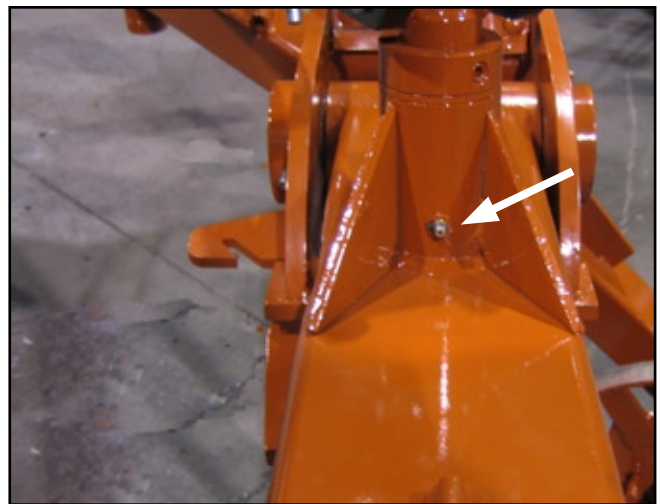


Figure 12 Cylinder Pivot (Wing)

LUBRICATION CONT'D

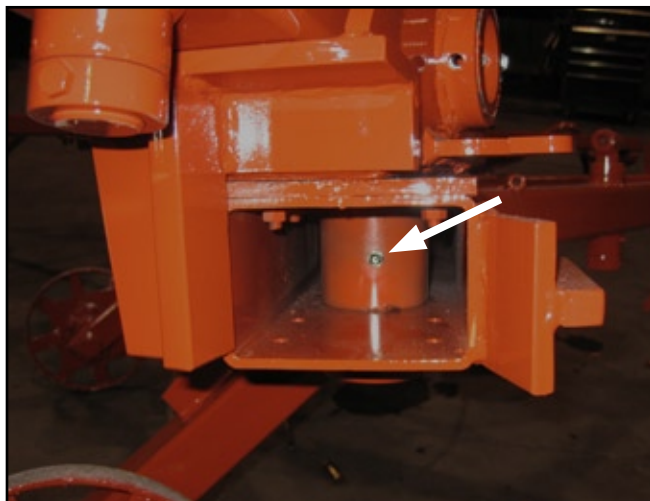


Figure 13

Rake Beam Pivot

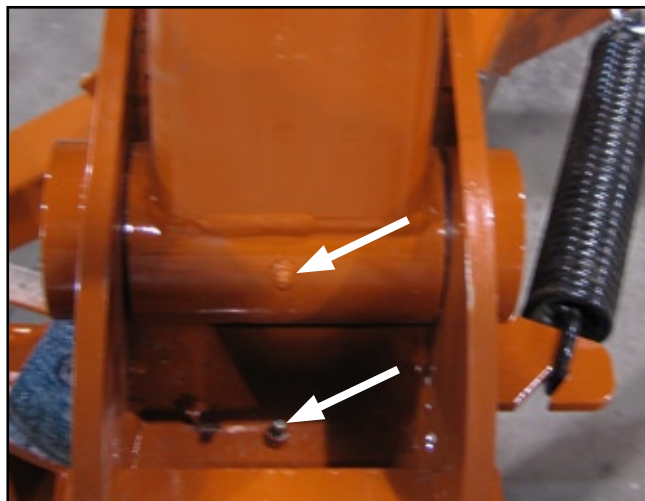


Figure 14

Foldup Pivot and Wear Plate

Keep the adjustment stop screw wet with grease. Clean up any dust or chaff that is sticking to the threads



Figure 15

Windrow Width Adjustment Stop

LUBRICATION

Transport Wheel Bearings

The wheel bearings should be repacked at the beginning of each season and checked periodically during the season.

Rake Wheels Bearings

There are two tapered bearings on each of the rake wheel spindles. These bearings should also be checked periodically and repacked and/or cleaned whenever necessary. Replace any damaged or missing dust caps to avoid contaminating the bearings with dust and chaff.

OPTIONAL ACCESSORIES

Kicker Wheel Option

Pequea offers a kicker wheel attachment to be mounted on the back of the rake. The kicker wheel will move the hay that lays below the center of the rake and does not get touched by the two main rake beams. If you are raking hay that is not completely dry and you do not use the kicker wheel the moisture will become trapped as the other hay is being thrown on top.

TORQUE SPECIFICATIONS

Shown below is the torque chart for U.S. standard bolt sizes. All hardware on the Pequea Turbo Rake should be tightened to these specs unless noted otherwise.

BOLT SIZE	GRADE 5 BOLTS		GRADE 8 BOLTS	
	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

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.

NOTES



200 Jalyn Drive
P.O. Box 399
New Holland PA 17557

Phone: 717-354-4343
Fax: 717-354-8843
E-mail: pequea@pequeamachine.com
www.pequeamachine.com