



Wood Chipper

Model CX350

Operator's Manual



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

*Manual# 990023
Revised 08/2012*

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

Pequea Chippers are designed to chip natural, untreated wood only. Materials that are processed may contain chemicals or biproducts that could corrode the machine, damage the blades, or spontaneously combust. Pequea will not cover under warranty any chipper that has been used for anything besides natural wood.

Serial Number

The chipper's serial number is located on the inside of the base. This number helps us to track changes and improvements and must be mentioned when ordering parts or requesting service. For your convenience, a space has been provided inside the front cover of this manual to record the serial number, model number, purchase date, and dealer name.



Figure 1

Specifications



| Specifications | CX350 | CX355 | CX550 | CX551 | CX556 |
|-----------------------|-----------------------------------|---------|---------------------------|-----------|---------|
| Chip Opening | 3 x 5.5 in. | | 5.5 x 8 in. | | |
| Drive System | PTO | Engine | PTO | | Engine |
| Engine | N/A | 10HP | N/A | | 27HP |
| Transport | 3 Point Hitch | Trailer | 3 Point Hitch | | Trailer |
| HP Required | 16 | N/A | 35+ | | N/A |
| Rotor Size | 65 lbs. | 65 lbs. | 165 lbs. | | |
| Knives | (2) 2.5 x 3.25 x 5/16 in. | | (4) 2.5 x 3.25 x 5/16 in. | | |
| Knife Bolts | 3/8" Recessed Head Hardened Bolts | | | | |
| Feed System | Manual | | | Hydraulic | |
| Hydraulic Requirement | N/A | | | 6 GPM | N/A |
| Feed Roller | N/A | | | 15" | |
| Hopper Opening | 25 x 18 in. | | 28 x 28 in. | | |
| Feed Height | 38" | | 41" | 21" | 26" |
| Weight (lbs.) | 375 | 425 | 650 | 775 | 1175 |

SAFETY



Do not operate this machine until this manual has been read and fully understood; serious injury or death can occur if these safety warnings are ignored!



Never allow more than one person to operate this machine at a time. If two people are working together it will increase the chance of your workmate engaging the machine or causing you to fall into the machine.



Wood is much harder than human flesh! If your hand is ever near the chipping or feeding area serious injury can occur. NEVER place your hands on the machine while it is chipping.



Never place your hands or feet on or near the machine while it is engaged.



Never place your hands or feet on or near the material while it is feeding.



DO NOT wear loose clothing, jewelry, or anything that can catch a branch that is feeding into the chipper.



DO NOT stand directly in front of the infeed hopper when loading material into the hopper; always load from the side of the hopper. This will not allow any part of your body to be pulled into the machine.



Always wear safety hearing protection, eyewear, gloves, and long pants when operating the chipper.



Never place your hands beyond the opening of the hopper while the chipper is running.



Never allow children, disabled, or untrained persons to operate the chipper.



Do not operate the chipper near bystanders, public roads, or anywhere that the debris may travel far enough to injure another person.



Never move the chipper while it is running.



Shut off the tractor and allow the chipper to come to a complete stop before removing any debris.

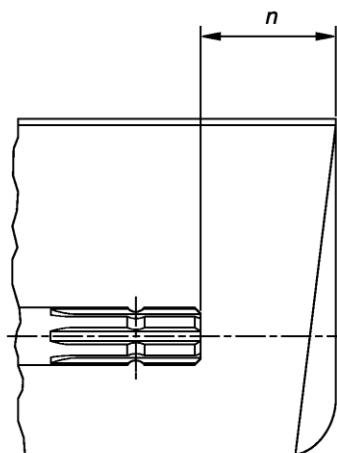


Never perform any maintenance or repair while the chipper is running.

Stay Clear of Rotating Drivelines



TS1644-UN-22AUG95



H96219-UN-29APR10

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 | $n \pm 5 \text{ mm (0.20 in.)}$ |
|----------|-------------------|---------|---------------------------------|
| 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.) |

INSPECTION AND SET-UP

- Follow the instructions in the lubrication section of this manual to make sure the chipper is greased properly. The initial grease is applied at the factory, but a routine maintenance schedule is the user's responsibility.
- Check all bolts and nuts to make sure everything is tight. All hardware is checked at the factory, but sometimes it will vibrate loose during shipment. Also check all fasteners periodically between uses. A wood chipper produces high vibration levels which can cause hardware to loosen.
- Check the position of the knives in relation to the chip anvil. The recommended setting is 1/32" between the anvil and the closest knife. You may notice the rotor has a slight wobble which will cause one of the knives to run closer than the other. This is normal. See page 7 for instructions on adjusting the anvil depth.
- Check the length of the PTO shaft. Some tractor 3-point hitch arms are shorter and require a shorter PTO shaft. To determine whether your shaft needs to be cut down to fit you will need to connect the 3-point arms to the chipper, connect the PTO shaft to both the tractor and chipper, and slowly raise the 3-point hitch. Watch closely to make sure that the PTO shaft does not fully retract. If it does, you will need to remove it and cut it down accordingly. If the PTO shaft is not fitted properly it can "bottom out" and cause damage to the PTO shaft or the chipper.

Chip Chute

The CX350 chip discharge has two positions. The chippers are assembled at the factory with the chute positioned as shown in Figure 2 but can be changed easily by removing the four bolts that attach it to the rotor housing.



Figure 2



Figure 3

OPERATION

Startup

- Place tractor transmission in neutral and set the parking brake, then turn the tractor engine off.
- Connect the 3 pt. hitch linkages to the chipper and secure them with safety snap pins.
- Adjust the top link so that the chipper sits level.
- Connect the pto shaft to the tractor. Be sure that the balls are set in the ball groove of the tractor pto shaft. Make sure that the pto safety chains are attached to both the tractor and the chipper to keep the protective PTO shield from rotating.
- Make sure the chip discharge chute is turned in a safe direction.
- Start tractor engine and hold the engine rpm's at a strong idle. Engage the pto slowly. If the tractor is running at a high speed when you engage the PTO you could damage the drive belt or the PTO shaft. After the rotor is spinning freely raise the tractor rpm's until the pto speed is around 540 rpm's.
- With the chipper now running at full speed you may begin chipping. Start by feeding small diameter branches until you get better acquainted with the machine and its operation, then you may begin feeding larger pieces.

Chipping tips

- Feed the blunt end of the branch in first.
- Trim the side limbs that won't fit into the hopper before you feed the chipper. Remember that this is a gravity feed chipper and it will not feed itself if there are side limbs that do not fit through the chip opening. If you have a branch that will not feed properly you may need to turn it or remove it from the hopper and trim some of the limbs off. Never force a branch through! Your hands could slip and get into the blades.
- Feed smaller material into the hopper from the side of hopper so that debris doesn't fly back at you.
- If you have a lot of dry material try to mix in some green (fresh) limbs with the dry. The moisture in the green wood will lubricate and cool the knives. Chipping only dry wood will cause the knives to heat up. A hot knife will lose its edge much quicker.

MAINTENANCE & SERVICE

Belt tension

The belt tension is relatively maintenance free. The spring loaded idler will keep constant pressure on the belt during use. However, there is a slight adjustment by tightening or loosening the eye bolt, increasing or decreasing the spring tension.

Replacing the belts

Follow these steps to replace the drive belt. The CX350 chipper uses (1) B-58 belt.

- Remove the idler spring to release the tension on the belt.
- Remove the bolts that attach the bearings and slide the shaft forward.
- Replace the belt and bolt the bearings back into position. Reinstall the idler spring. Be sure to put the safety shield back on.



Figure 4

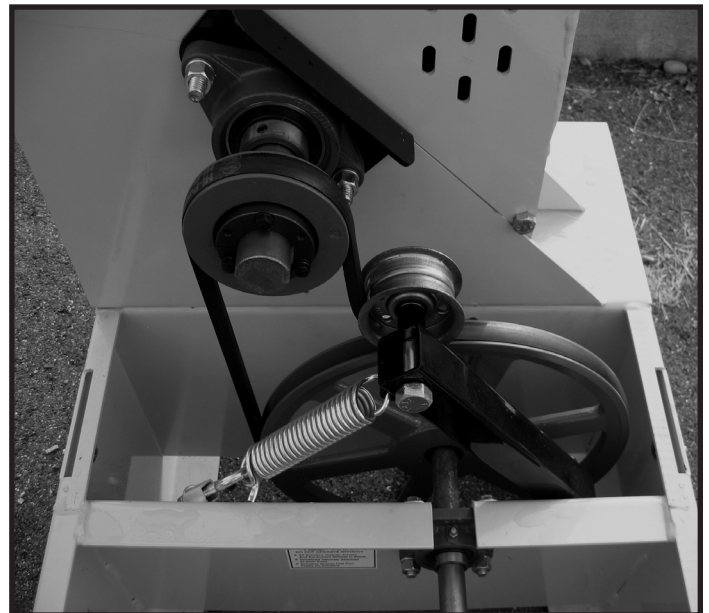


Figure 5

Shield has been removed to show detail. All shields must be on at all times during operation!!

MAINTENANCE & SERVICE

Knives

The performance of the chipper will depend largely on the condition of the knives. If the knives are dull or damaged you will create a lot of unnecessary stress on the whole machine. The knives are reversible and can easily be reversed or replaced by removing the two 3/8 bolts. (Figure 7) We recommend that the knives be resharpened by a precision sharpening service to retain the proper angle. The angle of the cutting edge should be 45 degrees. It is good to keep an extra set of knives on hand to use while the other set is being sharpened.

Anvil

The depth of your anvil will also affect the performance of your chipper. The anvil is also reversible. Follow these steps to adjust the anvil. (Figure 8)

- Loosen the two 1/2" bolts that clamp the anvil in position.
- Open the top of the rotor housing so you can watch the distance between the knives and anvil.
- Move the anvil to within 1/32" of the closest knife using the 3/8" adjustment rods. The knife depth may vary a little as you turn the rotor. This is normal.
- Retighten the bolts to secure the anvil.

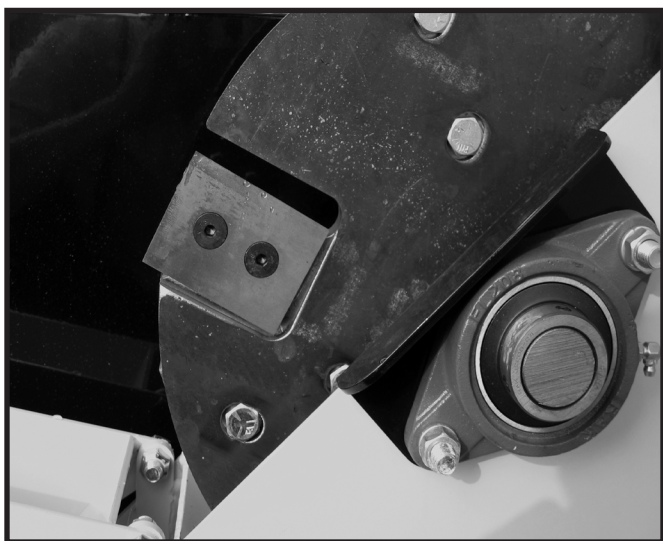


Figure 6

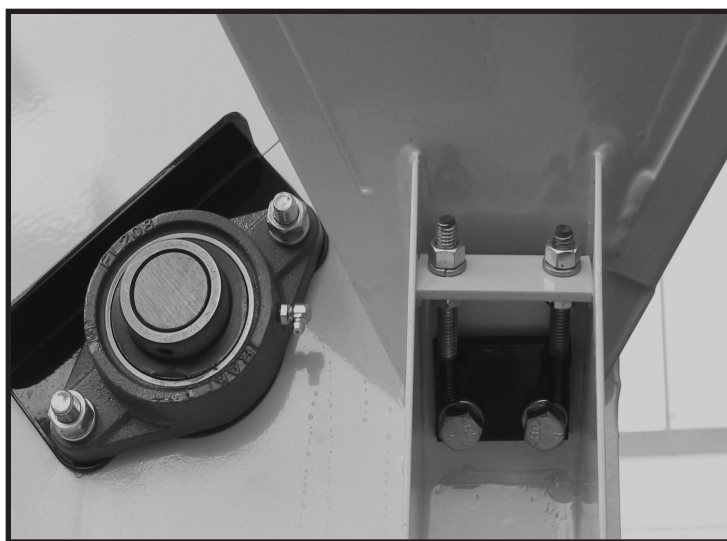


Figure 7

LUBRICATION

Bearings

The CX350 chipper has four bearings. Figures 8 & 9 show the bearings on the input shaft where the PTO shaft attaches. These bearings should be greased lightly every 8 hours of use. Be sure to wipe all the dirt off of the fitting before greasing.



Figure 8

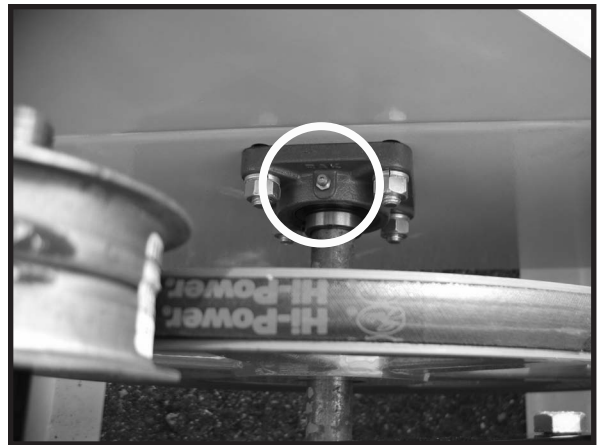


Figure 9

Figures 10 & 11 show the rotor shaft bearings. These should also be greased lightly every 8 hours. When greasing a sealed bearing, be careful that you do not over grease or the grease will push the rubber seal away and expose the bearing to dirt and moisture.



Figure 10



Figure 11

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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