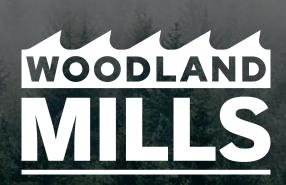
# WC46 PTO WOOD CHIPPER



# **OPERATOR'S MANUAL**





### TABLE OF CONTENTS

TABL	E OF CONTENTS	1
INTR	ODUCTION	3
INTE	NDED USE	3
SAFE	TY, WARNING & INFORMATION SYMBOLS	4
SAFE	TY GUIDELINES	5
R	DTATING DRIVELINES	6
PE	ERSONAL SAFETY	7
W	ORK AREA	8
тс	OOL USE AND CARE	9
TECH	INICAL SPECIFICATIONS	10
i.	OVERALL DIMENSIONS—OPERATING STATE	11
ii.	OVERALL DIMENSIONS—STORED STATE	12
iii.	3-POINT HITCH DIMENSIONS	13
COM	PONENT LISTS	14
тс	D-SCALE HARDWARE	15
	BOLTS & SCREWS	15
	WASHERS	17
	NUTS	18
ASSE	MBLY	19
1.	TOOLS REQUIRED	19
2.	UNPACKING	20
	A. UNBOXING THE CRATE	20
	B. LOWER HITCH	21
	C. CONNECTING ROD	22
	D. UPPER HITCH	23
	E. SETTING THE MOUNTING BASE	24
3.	INFEED CHUTE	27
	A. TOP PANEL	27
	B. SIDE PANELS AND BOTTOM PANEL	28
	C. EDGE BAR	29
	D. CONTROL ARM	31
	E. CONTROL ARM LINKAGE	33
	DISCHARGE CHUTE	
	MING THE PTO SHAFT	
	FIND THE SHORTEST DISTANCE	
2.	SEPARATE PTO HALVES	38

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3.	ATTACH THE PTO SHAFT	38
4.	DETERMINE IF TRIMMING IS REQUIRED	38
5.	TRIM THE PTO SHAFT	40
6.	REASSEMBLE THE PTO SHAFT	40
OPEF	RATION	41
1.	PRE-START UP CHECKLIST	41
2.	START UP	42
3.	INFEED ROLLER CONTROL	43
4.	DISCHARGE CHUTE	45
5.	CHIPPING	46
6.	STOPPING	46
MAIN		47
RI	EPLACING BLADES	47
BL	ADE SHARPENING	49
SE	ETTING THE BED PLATE GAP	50
A	DJUSTING THE HYDRAULIC PUMP BELT TENSION	54
RI	EPLACING THE HYDRAULIC PUMP BELT	55
A	DJUSTING THE CONTROL ARM	56
G	REASING	57
	BEARINGS & OUTPUT SHAFT	57
	PTO SHAFT	58
STOF	RAGE	59
TROU	JBLESHOOTING	60
REPL	ACEMENT PARTS ORDERING	61
	ODED ASSEMBLY VIEWS	
	OMPLETE ASSEMBLY	
	ASE	63
LC	OWER FLYWHEEL HOUSING BELT GUARD	64
LC	OWER FLYWHEEL HOUSING	65
FL	YWHEEL	66
	FEED CHUTE	
	SCHARGE CHUTE	
	YDRAULIC LINES	
	ONTROL VALVES	
	TO SHAFT	
PART	TS LIST	72
NOTE		70



### INTRODUCTION

Congratulations on your purchase and welcome to Woodland Mills! This manual gives you the necessary information about your machine so you will be able to use it properly. The entire manual must be read and understood before you start using the machine. If any questions should arise that are not covered by this manual, please contact Woodland Mills Inc.

#### OWNER'S RECORD

Please take a moment to record the following information about your wood chipper. If you need to call for assistance, please be ready to provide your model and serial numbers. This information will allow us to help you more quickly when you call.

#### MODEL NUMBER

SERIAL NUMBER

DATE OF PURCHASE

This machine is designed for certain applications only. We strongly recommend that this machine is not modified and/or used for any application other than that for which it was designed. If you have any questions relative to a particular application, DO NOT use the machine until you have first contacted us to determine if it can or should be performed on the product.

For technical questions and replacement parts, please contact Woodland Mills Inc.

### INTENDED USE

Woodland Mills wood chippers are designed for acreage owners to aid in chipping natural, untreated wood only. Materials that are processed may contain chemicals or by-products that could corrode the machine or damage it, resulting in safety concerns.



### **SAFETY, WARNING & INFORMATION SYMBOLS**

Throughout this operator's manual and on the wood chipper, there are safety, warning, and information symbols. Please heed and obey all warnings.

Symbol	Description
	Refer to instruction/operator's manual
	Wear eye protection
	Wear a face shield
	Wear ear protection
	Wear protective gloves
	General warning
	Sharp element warning
	Moving parts warning
	Flying debris warning
	Stand clear warning

\*\*Look for symbols in the upper-right corner of each page throughout the manual.\*\*



### SAFETY GUIDELINES

### **\*\*SAVE THESE INSTRUCTIONS\*\***

- Do not operate this machine until this manual has been read and fully understood; serious injury or severe machine damage could occur if these safety warnings are ignored.
- Never allow more than one person to operate this machine at one 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.
- If your hand is ever near the chipping or feeding area, serious injury could occur.
- 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 wood chipper.
- DO NOT stand directly in front of the infeed chute when loading material into the hopper; always load from the side of the hopper. This will help prevent any part of your body from being pulled into the machine.
- Always wear safety hearing protection, eye wear, gloves, and long pants when operating the wood chipper.
- Never place your hands beyond the opening of the hopper while the wood chipper is running.
- Never allow children, disabled, or untrained persons to operate the wood chipper.
- Do not operate the wood chipper near bystanders, public roads, or anywhere that debris may travel far enough to injure another person.
- Never move the wood chipper while it is running.
- Shut off the tractor and allow the wood chipper to come to a complete stop before removing any debris.
- Never perform any maintenance or repair while the wood chipper is running.



#### **ROTATING DRIVELINES**

### \*\*STAY CLEAR OF ROTATING DRIVELINES\*\*



- 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 spin freely.
- Wear close-fitting clothing.
- Shut off the engine and be sure the PTO driveline has 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 would 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.



### **WARNING!**

Read and understand all instructions. Failure to properly follow the instructions listed below may result in serious injury or death.



## WARNING!

The warnings, cautions, and instructions discussed in this instruction manual cannot cover all possible conditions or situations that could occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product but must be supplied by the operator.

### PERSONAL SAFETY

- **Stay alert**, watch what you are doing and use common sense when operating a power tool. Do not use a power tool when you are tired or under the influence of drugs, alcohol, or medication. A moment of inattention while operating power tools may result in serious personal injury.
- **Dress properly.** Do not wear loose clothing, dangling objects, or jewelry. Keep your hair, clothing, and gloves away from moving parts. Loose clothes, jewelry, or long hair can be caught in moving parts. Air vents often cover moving parts and should be avoided.
- Use safety apparel and equipment. Use safety goggles or safety glasses with side shields that comply with current national standards, or when needed, a face shield. Use a dust mask in dusty work conditions. This applies to all persons in the work area. Also use non-skid safety shoes, a hardhat, gloves, dust collection systems, and hearing protection when appropriate.
- **Do not over reach.** Keep proper footing and balance at all times.
- **Remove adjusting keys or wrenches** before connecting to the power supply or turning on the tool. A wrench or key that is left attached to a rotating part of the tool may result in personal injury.
- Never remove or install blades, conduct any maintenance, or make any other adjustments while the tractor engine is running. Always shut the engine off, remove the ignition key, and disconnect the PTO shaft prior to carrying out any of the aforementioned procedures. Consult your tractor's manual for safe shutdown procedures to prevent accidental ignition.



### WORK AREA

- Keep work area clean, free of clutter and well lit. Cluttered and dark work areas can cause accidents.
- Do not use your wood chipper where there is a risk of causing a fire or an explosion; e.g. in the presence of flammable liquids, gasses, or dust. Power tools create sparks which may ignite the dust or fumes.
- Keep children and bystanders away while operating a power tool. Distractions can cause you to lose control, therefore, visitors should remain a safe distance from the work area.
- Be aware of all power lines, electrical circuits, water pipes and other mechanical hazards in your work area, particularly those hazards below the work surface hidden from the operator's view that may be unintentionally contacted and cause personal harm or property damage.
- Be aware of your surroundings. Using power tools in confined work areas may put you dangerously close to cutting tools and rotating parts.



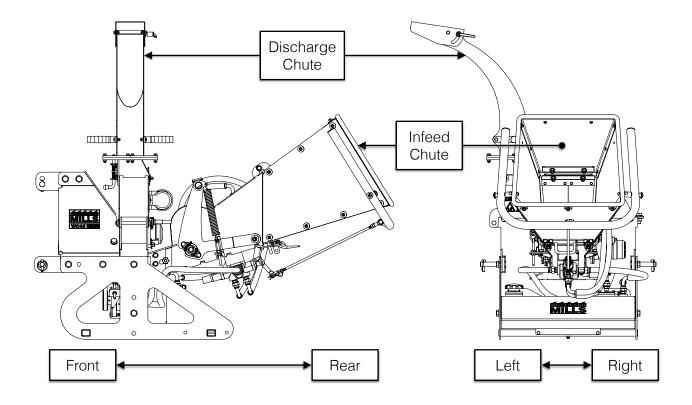
### TOOL USE AND CARE

- Always be sure the operator is familiar with proper safety precautions and operation techniques before using machine.
- **Do not force the tool.** Tools do a better and safer job when used in the manner for which they are designed.
- **Turn off the tractor engine** and disconnect the PTO shaft before servicing, adjusting, installing accessories or attachments, or storing. Such preventive safety measures reduce the risk of starting the power tool accidentally.
- Storing the wood chipper. When the wood chipper is not in use, store it in a dry, secure place or keep it well covered and out of reach of children. Inspect the wood chipper for good working condition prior to storage and before re-use.
- Maintain your wood chipper. It is recommended that the general condition of the wood chipper be examined before it is used. Keep your wood chipper in good repair by adopting a program of conscientious repair and maintenance in accordance with the recommended procedures found in this manual. If abnormal vibration or noise occurs, turn the wood chipper off immediately and have the problem corrected before further use.
- Keep blades sharp and clean. Properly maintained wood chipper blades are less likely to bind and make feeding-in brush easier.
- **Cleaning and Lubrication.** Use only soap and a damp cloth to clean your wood chipper. Many household cleaners are harmful to plastic and rubber components on the wood chipper.
- Use only accessories that are recommended by the manufacturer for your model. Suitable accessories for another wood chipper may create an injury risk when used on this wood chipper.
- Always operate the machine with all safety devices and guards in place and in working order. DO NOT modify or make changes to safety devices. DO NOT operate the machine if any safety devices or guards are missing or inoperative.
- Never leave wood chipper running unattended.
- Never use the equipment to chip brush with trunks exceeding 4" [102 mm] in diameter or for any purpose other than chipping brush as described in this manual.



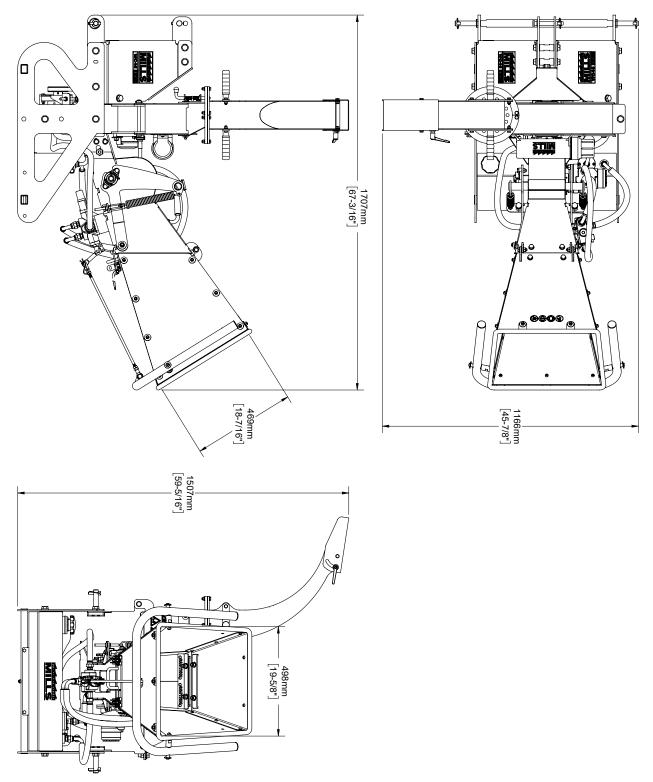
### **TECHNICAL SPECIFICATIONS**

Component	WC46 Specification
Drive System	РТО
Transport	3-Point Hitch
Minimum HP Required (at PTO)	15 hp
In-Feed System	Hydraulic
Hydraulic Oil	ISO 32 / AW 32 (ISO 46 / AW 46 for warmer climates)
Hydraulic Tank Volume	4.5 gal [17 L]
Hydraulic Requirement (Tractor)	None. Self contained.
PTO Shear Bolt	M8 X 50 mm Class 8.8 [5/16-18 X 2 in Grade 5] Hex Bolt
Blade Quantity and Dimensions	Four (4); 5.71 X 2.72 X 5/16 in [145 X 69 X 8 mm]
Blade Hardware	M10 X 35 mm Flat Head, M10 Lock Nuts - Class 10.9
Infeed Roller Diameter	5-5/16 in [134 mm] at Tooth Tip
Infeed Chute Dimensions (W x H)	19-5/8 X 18-7/16 in [498 X 469 mm]
Product Weight	592 lb [269 kg]
Product Shipping Weight	703 lb [319 kg]





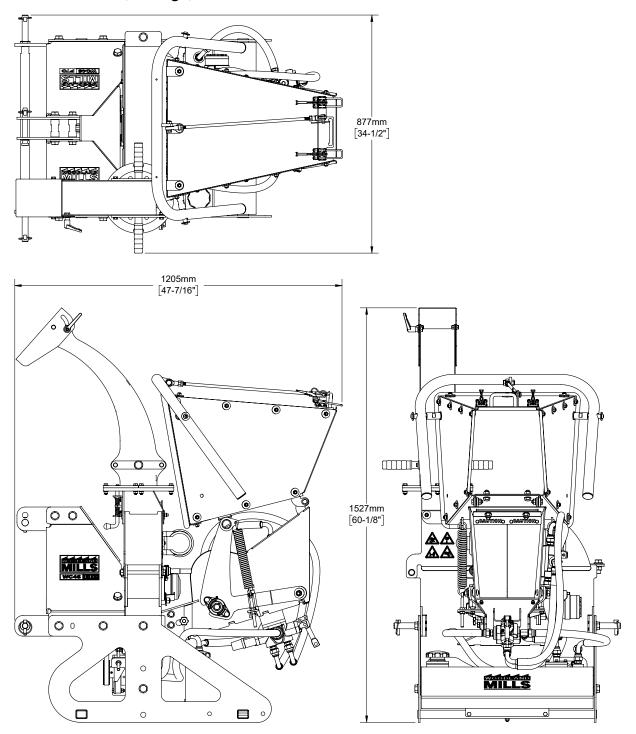
### i. OVERALL DIMENSIONS—OPERATING STATE





### ii. OVERALL DIMENSIONS-STORED STATE

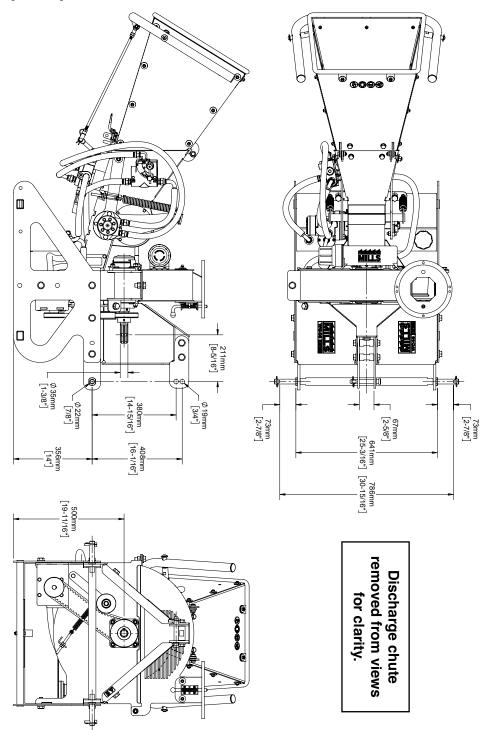
The discharge chute must be rotated so that it is angled towards the left side of the chipper in order to allow room for the infeed chute to be flipped upward when the machine is in its stored state. See section, *Storage*, for more information.





### iii. 3-POINT HITCH DIMENSIONS

The WC46 wood chipper has a Category 1, 3-point hitch system that is designed to work with tractors rated at 15-30 PTO horsepower. Top link pin is  $\frac{34}{19}$  [19 mm] diameter and the lift arm pins are  $\frac{78}{12}$  [22 mm] diameter.



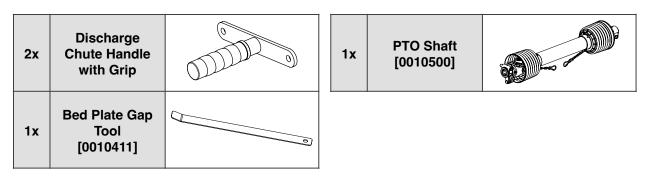


## **COMPONENT LISTS**

Verify all component and hardware quantities are correct prior to assembling the wood chipper.

1x	Connecting Rod [0009844]	01	1x	Infeed Chute Bottom Panel Assembly	
2x	Lower Hitch Pin [0001738]		1x	Round Edge Bar [0010334]	
2x	Lower Hitch Arm [0009838]		1x	Control Arm [0010335]	
2x	Upper Hitch Plate [0007029]		2x	Control Arm Spacer [0008193]	000
2x	Upper Hitch Bushing [0009856]		1x	Linkage Rod Assembly	(C)34
1x	Upper Hitch Pin [0001156]	OD	1x	Clevis Pin 10 mm [0004749]	$\bigcirc$
3x	Linch Pin [0004705]		1x	Hairpin Cotter Pin [0004760]	
1x	Infeed Chute Top Panel Assembly		1x	Discharge Chute Nozzle [0009674]	and the second sec
1x	Infeed Chute Right Side Panel [0010327]		1x	Discharge Chute Assembly	
1x	Infeed Chute Left Side Panel [0010328]		2x	Discharge Chute Retainer [0001720]	





### **TO-SCALE HARDWARE**

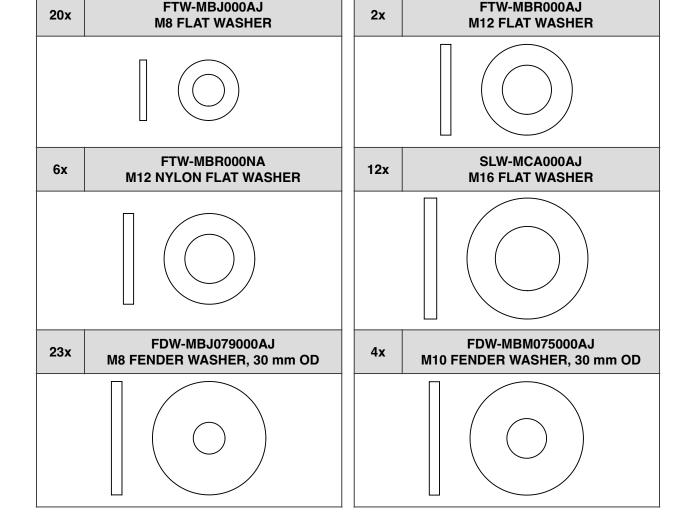
BOLTS & SCREWS

Hardware graphics are printed at 1:1 scale for ease of identification. Simply place the hardware over the image in the tables to verify it is the correct size.

4x	HHB-MBJ080FCJ	M8 X 1.25 X 25 mm HEX BOLT			
6x	HHB-MBJ090FCJ	M8 X 1.25 X 35 mm HEX BOLT			
1x	HHB-MBM090FCJ	M10 X 1.5 X 35 mm HEX BOLT			
4x	HHB-MCA100FCJ	M16 X 2 X 45 mm HEX BOLT			



4x	HHB-MCA105FCJ	M16 X 2 X 50 mm HEX BOLT		
4x	SNC-MBJ080FCJ	M8 X 1.25 X 25 mm CARRIAGE BOLT		
19x	BHS-MBJ073FCM	M8 X 1.25 X 18 mm BUTTON HEAD SCREW		
4x	BHS-MBM075FCT	M10 X 1.5 X 20 mm BUTTON HEAD SCREW, THREADLOCKER		
2x	HFH-MBR095FCM	M12 X 1.75 X 40 mm FLAT HEAD SCREW		
2x	HHS-MBM057069AJ	M10 X 1.5 X 20 mm HEX HEAD SHOULDER SCREW		



### **WASHERS**

**SCALES** 

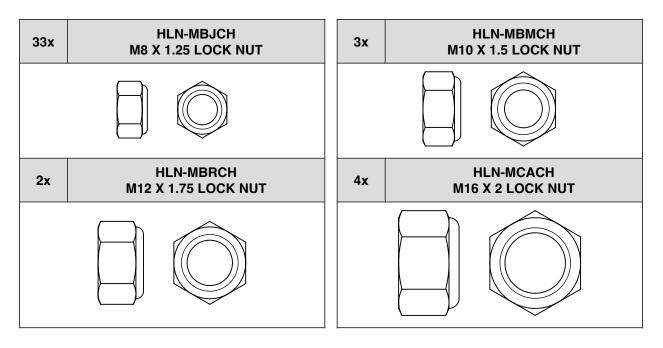
# **CENTIMETRES / MILLIMETRES INCHES**

Ruler scales are also provided below to double-check bolt and screw lengths when necessary.





NUTS





### ASSEMBLY

### 1. TOOLS REQUIRED

ΤοοΙ	Specification
Wrench/Socket	13 mm (2X)
Wrench/Socket	16 mm (2X)
Wrench/Socket	17 mm
Wrench/Socket	24 mm or Adjustable Wrench
Wrench	27 mm or Adjustable Wrench
Hex Key	Set of Metric Hex Keys (e.g. 2-10 mm)
Hacksaw*	Any metal-cutting saw (Sawzall, etc.)

\* Only if PTO shaft requires trimming. See <u>TRIMMING THE PTO SHAFT</u> section for more detail.

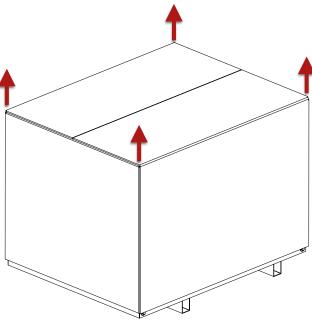
· · ·



### 2. UNPACKING

A. UNBOXING THE CRATE

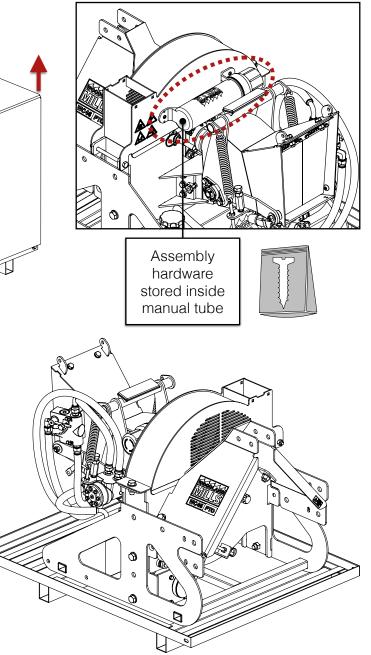
Unpack the contents of the crate by first cutting the nylon strapping and then remove the cardboard top and sides. Remove the four (4) M8 hex bolts and nuts located at each bottom corner of the crate and then lift it off the skid. Discard the top portion of the crate.



Remove all the loose components from the skid (infeed chute panels, control arm, edge bar, control arm linkage, discharge chute, discharge chute handles, PTO shaft) and set them to the side. Leave the wood chipper on the skid.

Hardware for assembly is stored inside the manual tube.

Note that the wood chipper is shipped dry (i.e. no hydraulic fluid). See the <u>**TECHNICAL</u>** <u>**SPECIFICATIONS**</u> section for the volume and type of oil required.</u>



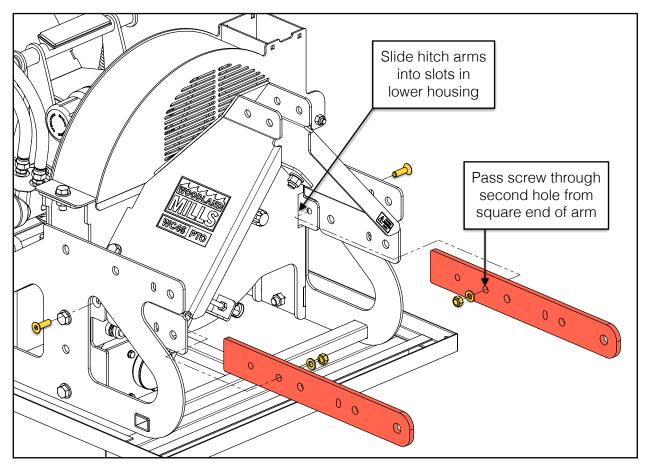


#### B. LOWER HITCH

Before the chipper can be raised to its final operating height, the lower hitch arms and upper hitch plates need to be installed. Use the components and hardware listed in the table below to first assemble the lower hitch arms to the chipper.

2x	M12 X 40 mm Flat Head Screw	2x	M12 Lock Nut	
2x	M12 Flat Washer	2x	Lower Hitch Arm	

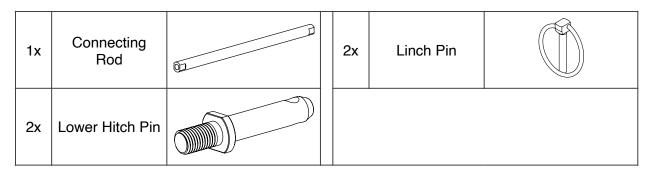
Slide each of the lower hitch arms into the rectangular slots in the lower flywheel housing. Use one (1) M12 X 40 mm flat head screw, one (1) M12 flat washer, and one (1) M12 lock nut to secure each arm. Ensure the screws are threaded through the second hole from the *square end* of the hitch arm. Fully tighten the hardware.



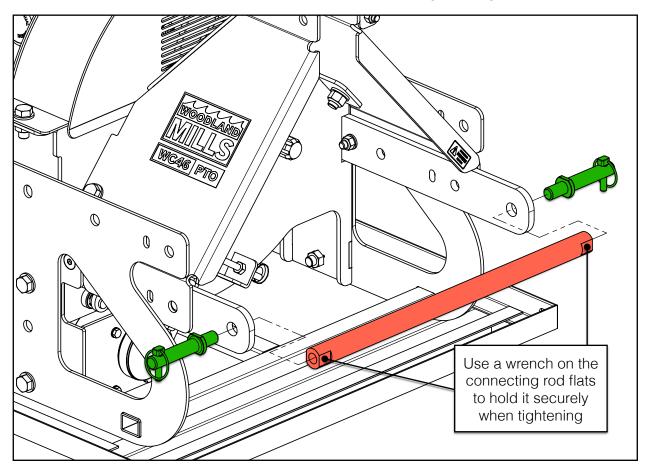


### C. CONNECTING ROD

Using the components listed in the table below, assemble the connecting rod between the lower hitch arms.



Position the connecting rod between the two (2) lower hitch arms and then thread one (1) lower hitch pin into each end, securing it to the arms. The flats at both ends of the connecting rod will accommodate a  $1-\frac{1}{8}$  in [28 mm] wrench to prevent it from rotating when tightened.



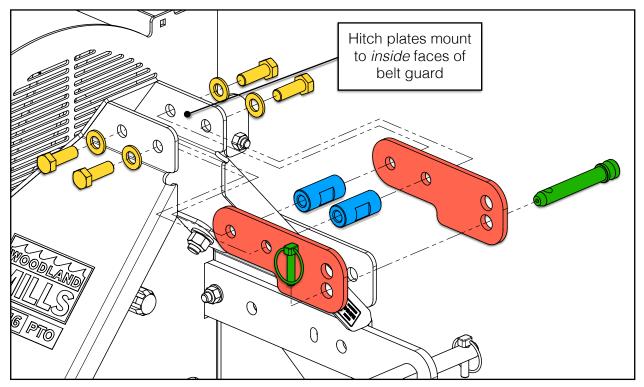


### D. UPPER HITCH

Using the hardware and components listed in the table below, assemble the upper hitch plates to the belt guard.

4x	M16 X 45 mm Hex Bolt	2x	Upper Hitch Plate	
4x	M16 Flat Washer	1x	Upper Hitch Pin	M
2x	Upper Hitch Bushing	1x	Linch Pin	

Assemble the plates to the belt guard using four (4) M16 X 45 mm hex bolts, four (4) M16 flat washers, and two (2) hitch bushings. The upper hitch plates mount to the *inner faces* of the belt guard with the bushings between them.



When tightening the hardware, hold the bushings still with an adjustable or 15/16 in [24 mm] wrench and turn the hex bolts with a second wrench or ratchet. Fully tighten all the hardware.



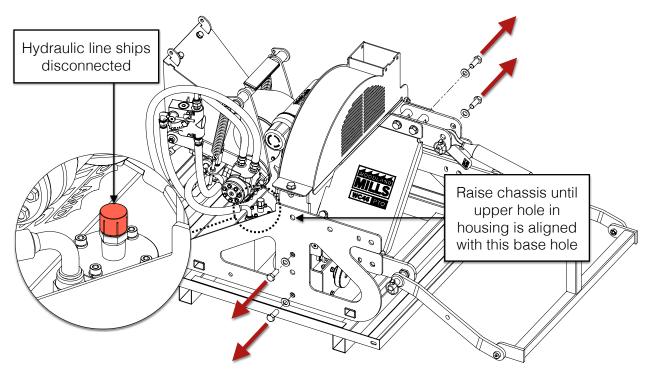
### E. SETTING THE MOUNTING BASE

With the hardware listed in the table below, connect the lower hitch arms to the base after lifting the chassis.

4x	M16 X 50 mm Hex Bolt	4x	M16 Lock Nut	
8x	M16 Flat Washer			

With the wood chipper still resting on the skid, attach the tractor's 3-point hitch and raise it until the base barely lifts off the skid—not more than an  $\frac{1}{8}$  in [3 mm].

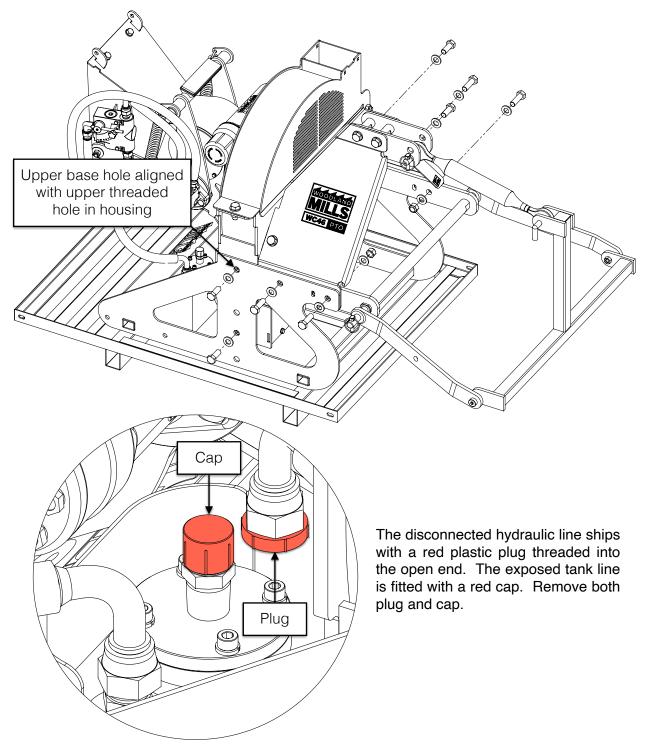
Remove the four (4) M16 X 40 mm hex bolts and M16 flat washers (2 per side) that connect the base assembly to the lower flywheel housing and the now-separated base assembly will drop back down onto the skid.



With the base separated, use the tractor's 3-point hitch to raise the chipper chassis up until the uppermost threaded holes in the side of the flywheel housing are aligned with the uppermost base holes.

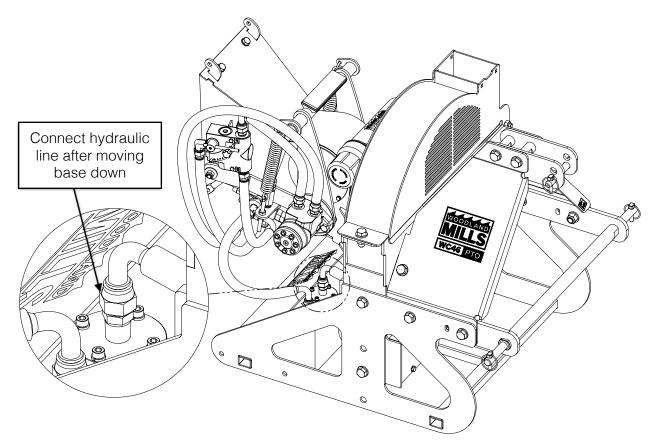


With the holes aligned, reinstall the four (4) M16 X 40 mm hex bolts and M16 flat washers. Then install four (4) M16 X 50 mm hex bolts, eight (8) M16 flat washers, and four (4) M16 lock nuts to secure the lower hitch arms to the base. Fully tighten all the hardware after the hardware is installed.





Connect the hydraulic line to the tank that originates from the pump beneath the lower flywheel housing and securely tighten the fitting.



With the base secure and hydraulic line connected, slide the crate skid out from under the wood chipper and discard it.



## **WARNING!**

The hydraulic tank ships empty from the factory. The user must add the recommended hydraulic fluid per the table in the section, *TECHNICAL SPECIFICATIONS*, prior to using the chipper.



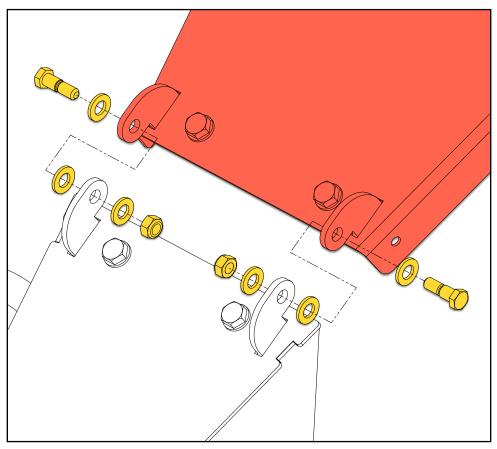
### 3. INFEED CHUTE

#### A. TOP PANEL

Assemble the infeed chute top panel to the lower flywheel housing using the components and hardware listed in the table below. Note that the infeed chute top panel and hinge bracket come pre-assembled.

2x	M10 X 15 X 20 mm Shoulder Bolt	6x	M12 Nylon Flat Washer	
2x	M10 Lock Nut	1x	Infeed Chute Top Panel	

Fasten the top panel to the lower flywheel housing using two (2) M10 X 15 X 20 mm shoulder screws, six (6) M12 nylon flat washers, and two (2) M10 lock nuts to form the hinge. Tighten the hardware enough so that the hinge moves with some effort but not too tight that the nylon washers are crushed.



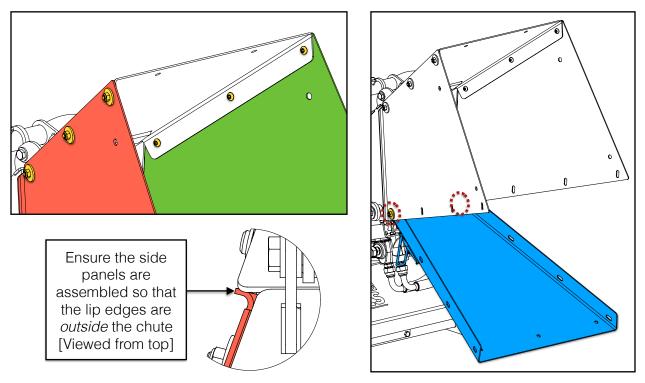


#### B. SIDE PANELS AND BOTTOM PANEL

With the top panel bolted to the hinge, assemble each side panel to the sides of the top panel using the M8 X 18 mm button head screws, M8 lock nuts, and M8 fender washers. Use a hex key for the screws and a socket/wrench for the lock nuts.

8x	M8 X 18 mm Button Head Screw	1x	Infeed Chute Right Side Panel	
8x	M8 Lock Nut	1x	Infeed Chute Left Side Panel	
8x	M8 X 30 mm Fender Washer	1x	Infeed Chute Bottom Panel	

Install three (3) screws per side along the top edge. Do not fully tighten the screws. Be sure to assemble the screws with the heads on the inside of the chute pointing outwards. Next, install the bottom panel using only the first bolt per side as shown below (right). This will allow it to swing up to join the side panels in the coming steps. Note that the infeed chute bottom panel and latches come pre-assembled.





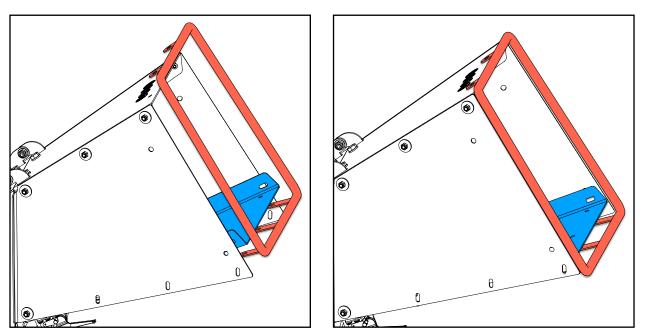
### C. EDGE BAR

Assemble the round edge bar to the infeed chute using the hardware listed below.

11x	M8 X 18 mm Button Head Screw	11x	M8 X 30 mm Fender Washer	
11x	M8 Lock Nut	1x	Infeed Chute Round Edge Bar	

The round edge bar is designed to add additional strength to the infeed panels as well as act as a rounded edge, eliminating branches from getting caught on the edge of the infeed panels.

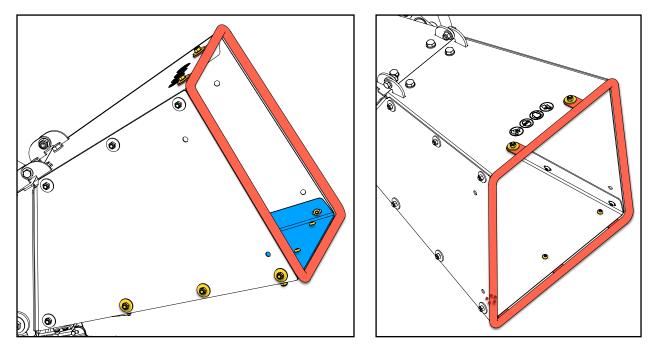
Swing the bottom panel up and fit the top and bottom tabs of the round edge bar over the outside faces of the top and bottom panels as shown below.





With the edge bar in place, assemble the panels to the edge bar. Use a hex key for the button head screws and a socket/wrench for the lock nuts. Install the remaining eleven (11) M8 X 18 mm button head screws, M8 lock nuts, and M8 X 30 mm fender washers as shown below to secure the panels and edge bar in place.

Fully tighten *all* the infeed chute screws.





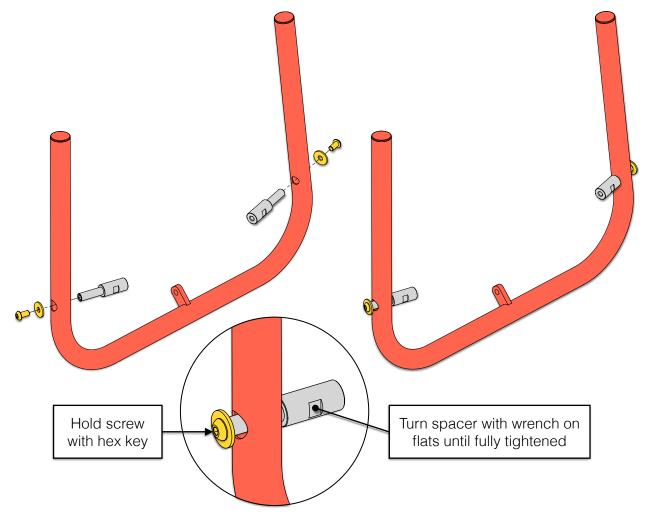
#### D. CONTROL ARM

The large red infeed control arm is attached to the infeed chute using the hardware below.

4x	M10 X 20 mm Button Head Screw with Threadlocker	2x	Control Arm Spacer	
4x	M10 X 30 mm Fender Washer	1x	Control Arm	

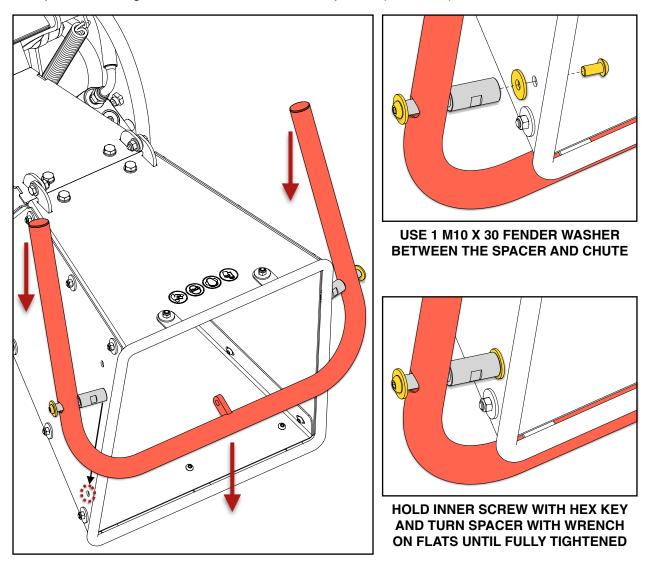
Insert the control arm spacers into the holes in the control arm and secure each with one (1) M10 X 20 button head screw and one (1) M10 X 30 mm fender washer

When tightening the hardware, hold button head screw still with a 6 mm hex key and turn the spacer with a <sup>3</sup>/<sub>4</sub> in [19 mm] wrench using the flats milled into each side. Fully tighten all the hardware. The spacers will sit loose in the control arm once fully tightened—this is normal.





While holding the control arm by the spacers, slide it down over the top of the infeed chute until the spacers are aligned with the holes in the side panels (below left).



With the spacers aligned with the holes in the infeed chute side panels, place one (1) M10 X 30 mm fender washer between the spacer and side panel, and then secure it with one (1) M10 X 20 mm button head screw from inside the infeed chute. Repeat for the other side.

When tightening the two (2) inner button head screws, hold the button head screw inside the infeed chute still with a 6 mm hex key and turn the spacer with a <sup>3</sup>/<sub>4</sub> in [19 mm] wrench. Fully tighten the hardware on both sides.

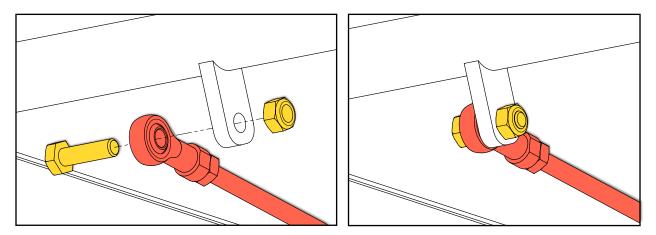


#### E. CONTROL ARM LINKAGE

With the control arm fastened to the infeed chute, the linkage assembly can now be connected between it and the hydraulic directional control valve.

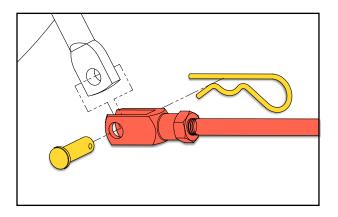
1x	M10 X 35 mm Hex Bolt	1x	Control Arm Linkage Assembly	() ) ) ) ) ) ) ) ) ) ) ) ) ) ) ) ) ) )
1x	M10 Lock Nut	1x	10 mm Clevis Pin	$\bigcirc$
		1x	Hairpin Cotter Pin	

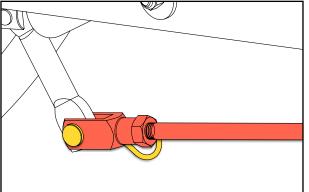
Fasten the rod end bearing to the red control arm with the M10 X 35 mm hex bolt and M10 lock nut as shown below.



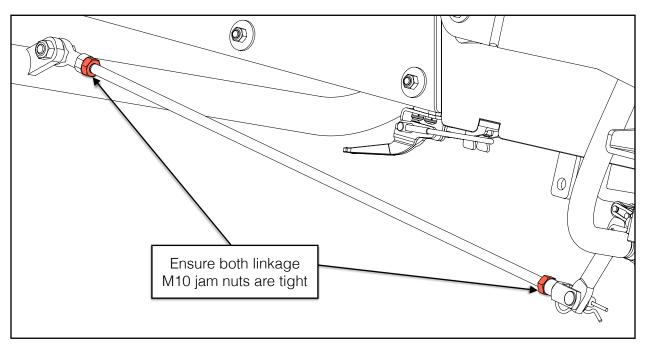


On the opposite end of the linkage, secure the clevis rod end to the the hydraulic directional control valve actuator using the clevis pin and hairpin cotter pin.





Once the linkage has been assembled, ensure both M10 jam nuts are tight.



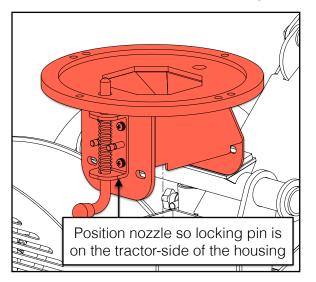


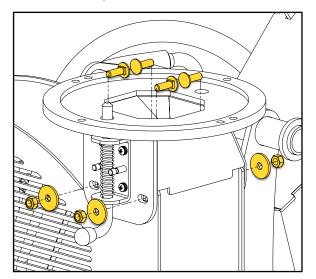
#### 4. DISCHARGE CHUTE

The discharge chute comes partially assembled. With the components and hardware listed below, assemble the discharge chute to the upper flywheel housing.

4x	M8 X 25 mm Carriage Bolt	4x	M8 X 30 mm Fender Washer	
6x	M8 X 35 mm Hex Head Bolt	1x	Nozzle	e e e e e e e e e e e e e e e e e e e
4x	M8 X 25 mm Hex Head Bolt	1x	Discharge Chute Assembly	A CONTRACTOR
14x	M8 Lock Nut	2x	Retainer	
20x	M8 Flat Washer	2x	Handle with Grip	(e Milling

Slide the nozzle over the upper flywheel housing exhaust. Secure it to the housing using the four (4) M8 X 25 mm carriage bolts, M8 fender washers, and M8 lock nuts. The carriage bolts are assembled from inside the housing, pointing outward. Fully tighten all the hardware.



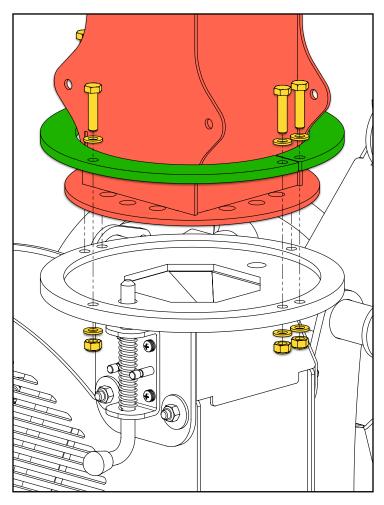




Set the discharge chute into the recess in the top of the nozzle.

Secure the chute to the nozzle using the two (2) retainers with six (6) M8 X 35 mm hex bolts, twelve (12) M8 flat washers, and six (6) M8 lock nuts.

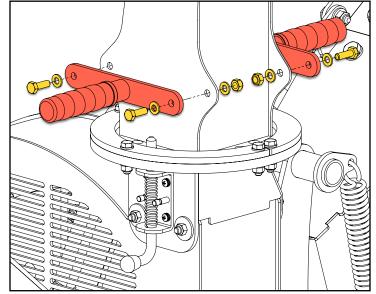
Fully tighten all the hardware.



Assemble the handles—one on each side of the discharge chute.

Secure each handle to the chute using two M8 X 25 mm hex bolts, four (4) M8 flat washers, and two (2) M8 lock nuts.

Fully tighten all the hardware.





# TRIMMING THE PTO SHAFT

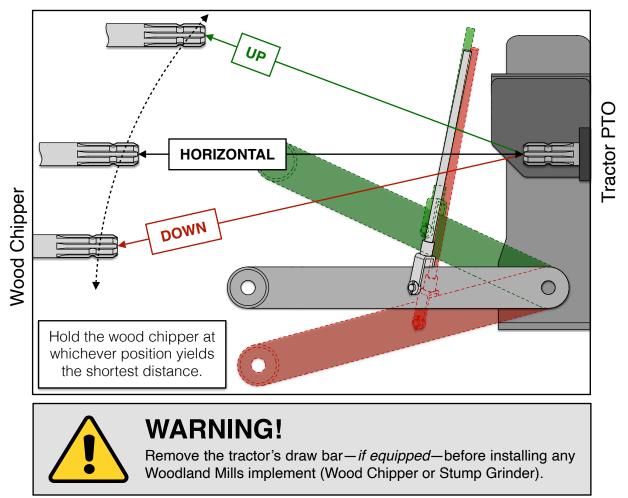
The PTO shaft may need to be trimmed depending on the tractor size and configuration. Follow the 6 steps below to ensure the PTO shaft is fitted correctly, and trimmed if necessary.

#### 1. FIND THE SHORTEST DISTANCE

- 1. Attach the wood chipper to the tractor's 3-point hitch. Do not install the PTO shaft yet.
- 2. Measure the distance between the splined shafts on the tractor PTO and the wood chipper with the 3-point hitch in the following positions:
  - i. All the way Down
  - ii. In-Line / Horizontal
  - iii. All the way Up

Whichever position yields the *shortest* distance, *hold the wood chipper at that position for the next step*.

\*\*Note: if the wood chipper shaft cannot be positioned in-line or below the tractor PTO due to the size of the tractor relative to the wood chipper, take two (2) measurements instead: 1 at the lowest and 1 at the highest 3-point hitch position.\*\*

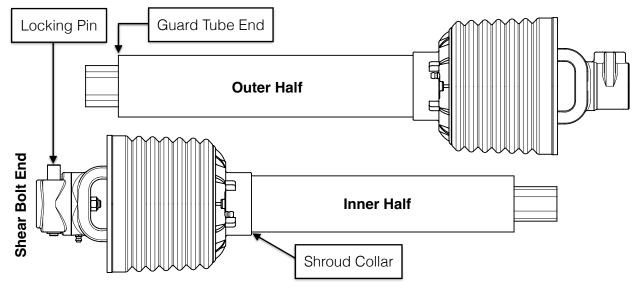


0010322-M-EN: Rev D



#### 2. SEPARATE PTO HALVES

Pull the PTO shaft apart until it is two separate halves: inner and outer.



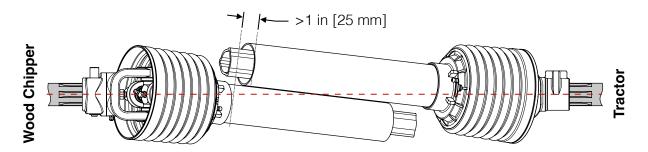
#### 3. ATTACH THE PTO SHAFT

Attach the shear bolt end to the wood chipper and the outer half to the tractor as separate pieces.

#### 4. DETERMINE IF TRIMMING IS REQUIRED

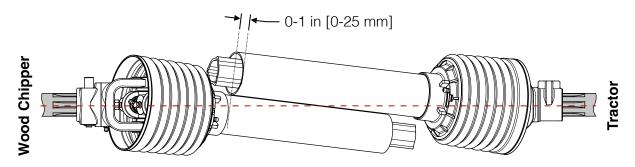
Hold the shafts parallel. Use tape or tie the shaft halves together with string if necessary to get proper measurements. Three possible scenarios can exist.

Scenario 1. If the distance between the shroud collar and the guard tube end is greater than 1 in [25 mm], the PTO shaft does not require trimming. Remove the PTO shaft from the tractor and wood chipper and proceed to Step 6.

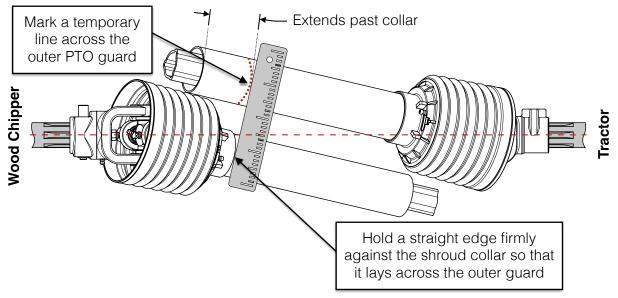




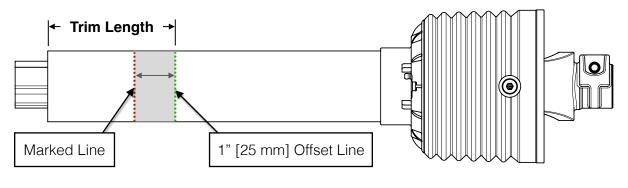
*Scenario 2.* If the distance between the shroud collar and the guard tube end is *between 0 and* 1 in [25 mm], the PTO shaft requires a 1 in [25 mm] trim. Proceed to Step 5 using 1 in [25 mm] as the "Trim Length".



*Scenario 3.* If the guard tube end extends past the shroud collar, hold a straight edge firmly against the shroud collar so that it lays across the outer guard. Mark the position on the outer guard.



Measure 1 in [25 mm] past the marked line to the guard tube end to determine the trim length. This is the "**Trim Length**" by which the PTO shaft needs to be trimmed. Proceed to Step 5.

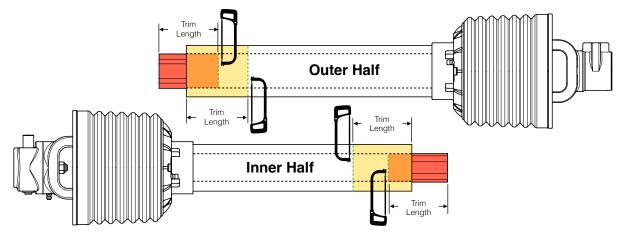


0010322-M-EN: Rev D



#### 5. TRIM THE PTO SHAFT

Remove both halves of the PTO shaft from the tractor and wood chipper. Trim **both** outer plastic guards and **both** inner triangular steel shafts by the "**Trim Length**". Trim the plastic guards first, taking care not to cut into the triangular shafts inside. Then trim **both** triangular steel shafts by the "**Trim Length**". File burrs as necessary.



#### 6. REASSEMBLE THE PTO SHAFT

- 1. Slide the halves back together, ensuring they telescope in-and-out freely.
- 2. Slide the shear bolt end onto the wood chipper. Install the other end on the tractor.
- 3. Raise and lower the 3-point hitch, ensuring there is a 1 in [25 mm] minimum gap between the shroud collar and guard tube end throughout the entire lifting range.



# OPERATION

#### **1. PRE-START UP CHECKLIST**

i. Fill the hydraulic tank with hydraulic oil per the table below:

Model	Cap		
Woder	Gallons (gal)	Litres (L)	Hydraulic Oil
₩C46	4.5	17	
WC68	5	18.9	
WC88	5	18.9	ISO 32, ISO 46,
TF46 PRO	3.2	12	AW 32, AW 46
TF68 PRO	5	18.9	
TF810 PRO	5	18.9	

ii. Attach the wood chipper to your tractor and take the appropriate measurements to trim the PTO shaft. Refer to section *TRIMMING THE PTO SHAFT* for detailed instructions.

\*\*Note: Failure to do so may result in severe damage to the implement and is <u>not</u> covered under warranty.\*\*

- iii. Check the gap between the bed plate and blades by using the Bed Plate Gap Tool (<sup>1</sup>/<sub>8</sub> in [3 mm]). Refer to section <u>SETTING THE BED PLATE GAP</u> for detailed instructions.
- iv. The wood chipper has three (3) bearings fitted with Zerk fittings for greasing. The PTO shaft is equipped with seven (7) Zerk fittings. The PTO shaft and all bearings come pregreased and do not require greasing on initial start-up. Refer to section <u>GREASING</u> for detailed maintenance instructions.
- v. Check the bolts on each of the four flywheel blades ensuring the torque is set to 40 ft•lb [54 N•m].

#### 2. START UP

The following steps in the sub-section below (*a*. through *i*.) are a summarization of the steps necessary to safely and properly operate the wood chipper. Please follow the references to other sections that provide further detail into the step being performed.

- a. Place the tractor transmission in neutral, set the parking brake, then turn the tractor engine off.
- b. Connect the 3-point hitch linkages to the wood chipper and secure them with linch pins.
- c. Adjust the top link of the 3-point hitch so that the wood chipper sits level.
- d. Connect the PTO shaft to the tractor with the shear bolt end of the PTO on the wood chipper. Make sure the PTO safety chains are attached to both the tractor and the wood chipper to keep the protective PTO safety cover from rotating.
- e. Rotate the discharge chute towards a safe direction and lock it in place with the springloaded latch and indexing holes. Adjust the chip deflector to the desired position based on how far they should be thrown.
- f. Push the red control arm all the way in until it stops, then pull it out one click to ensure the infeed roller is in the neutral position.
- g. Start the 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 the PTO is engaged, you could damage the hydraulic pump belt or break the shear bolt on the PTO shaft. After the rotor is spinning freely increase the tractor RPM's until the PTO speed is 540 RPM. Most tractor tachometers commonly indicate this with a line and/or text.
- h. **Push** the red control arm away from the operator <u>at the top of the arm</u> until it stops (forward position). This will start the infeed roller rotating. Set the infeed roller control to the desired speed.
- i. With the wood chipper now running and the infeed roller rotating, it is safe to begin chipping. Start by feeding smaller diameter branches until better acquainted with the machine and its operation. Once comfortable, begin feeding in larger pieces. Adjust the infeed roller control as necessary to regulate the infeed rate of the branches.



# WARNING!

To avoid serious injury or death, do not chip brush containing embedded foreign objects such as nails, wire, metal fragments, etc. The operator and any assistants must always stay clear of the infeed chute of the wood chipper whenever it is running.



#### 3. INFEED ROLLER CONTROL

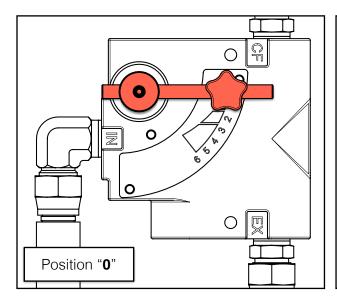
The valve that controls the wood chipper's infeed roller speed is located to the right of the infeed chute.

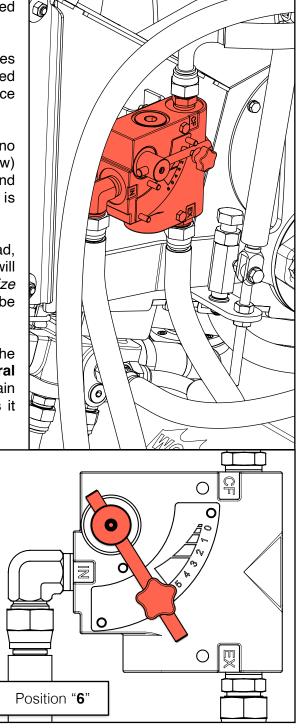
Rotating the valve arm as shown in the pictures below will increase or decrease the roller speed without load and will create a pulsating action once loaded with a branch.

The number "**0**" (left image below) represents no infeed roller rotation while "**6**" (right image below) represents full speed. To maximize productivity and performance, chipping at full infeed speed is recommended.

If the tractor is unable to keep up with the workload, rotating the valve arm throughout its range will create a pulsating action—*dependent on branch size and workload*—that will allow larger material to be chipped when horsepower is limited.

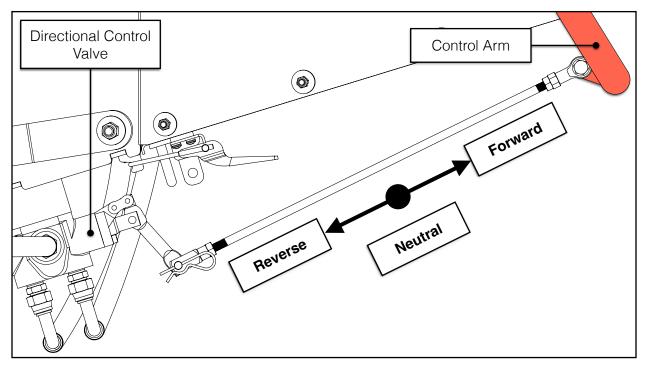
This pulsating action can also be created using the red control arm by switching the chipper into **neutral** —which allows the tractor and flywheel to regain speed—and then switching back into **forward** as it works through larger material.







The infeed roller can be set to three (3) different rotation settings—*forward*, *neutral* and *reverse*—by pushing or pulling the red control arm. The *forward* position pulls branches into the wood chipper; *neutral* stops the roller from rotating; and *reverse* pushes the branches back out the wood chipper towards the operator. The diagram below illustrates the 3 positions:



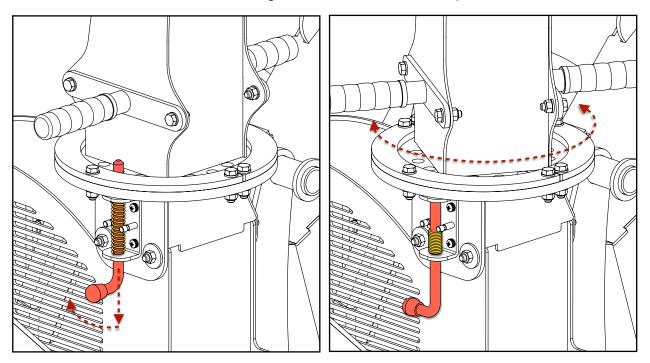
To change the speed of the infeed roller, place the red control arm in the *neutral* position. This stops the infeed roller from rotating. The speed control valve can now be moved to the desired position/speed. Reengage the infeed roller via the control arm.

See maintenance section, <u>ADJUSTING THE CONTROL ARM</u>, if the control arm feels too loose or stiff, or if it falls into neutral or reverse unexpectedly.

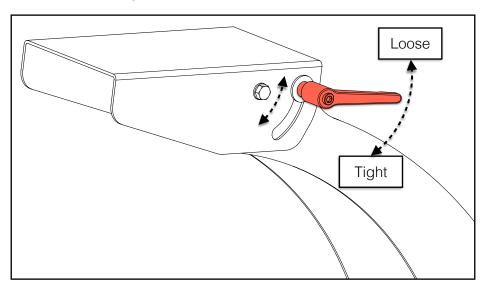


#### 4. DISCHARGE CHUTE

To rotate the discharge chute, push down on the spring-loaded locking pin all the way and twist it 90° to temporarily lock it in the open position. The discharge chute is now free to rotate a full 360°. Using the handles, rotate it to the desired position and then twist the locking pin back 90° so that it extends into the closest locking hole to secure the chute in position.



The chip deflector easily adjusts to regulate the distance the chips are thrown. Rotate the handle counterclockwise to loosen the deflector, adjust the deflector to the desired angle, then re-tighten the handle by rotating it clockwise to secure the deflector.





#### 5. CHIPPING

Keep your face and body away from the feed opening. Do not over reach. Keep proper balance and footing at all times. The wood chipper is designed to chip a variety of materials into a more readily decomposing or handled condition. The following guidelines can be used to help you get started. Please read and follow all safety instructions in this manual. Failure to operate the wood chipper in accordance with the safety instructions **MAY RESULT IN PERSONAL INJURY!** 

- Ensure the wood chipper is at full operating speed before starting to chip material.
- Select limbs up to 4 in [102 mm] in diameter. Trim side branches that cannot be bent enough to feed into the wood chipper infeed chute. Hold small diameter branches in a bundle and feed simultaneously.
- Feed brush from the side of the infeed chute rather than from the front. Step aside to avoid being hit by brush moving into the wood chipper.
- Never lean into the infeed chute or extend any parts of your body inside the infer chute to push objects further into the wood chipper. Use another stick or branch.
- Do not use hand tools to push brush into the wood chipper. They can go through the wood chipper and cause injury or damage to the wood chipper.
- Place branches, butt end first, into the wood chipper infeed chute until it contacts the infeed roller. Once the infeed roller makes contact with the branches, it will pull the material inwards.
- **NOTE**: The wood chipper blades dull with use and require periodic sharpening and sometimes replacing. Refer to the section under service and maintenance, "Sharpening Wood Chipper Blades," for further instructions.

#### 6. STOPPING

Do not leave the wood chipper unattended or attempt any inspection/service unless the PTO is disengaged and the tractor engine is turned off. Allow time for the wood chipper to come to a complete stop. To stop the wood chipper, follow the steps below:

- 1. Move the tractor throttle to the SLOW/IDLE position.
- 2. Disengage the PTO lever and turn off the tractor engine.
- 3. Allow time for the wood chipper to come to a complete stop.

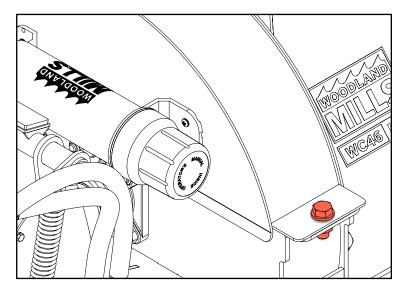
**NOTE**: The flywheel continues to spin for some time after the engine or tractor has been turned off. The flywheel has stopped spinning when noise and/or machine vibration are no longer detectable. The PTO shaft will also no longer be spinning.



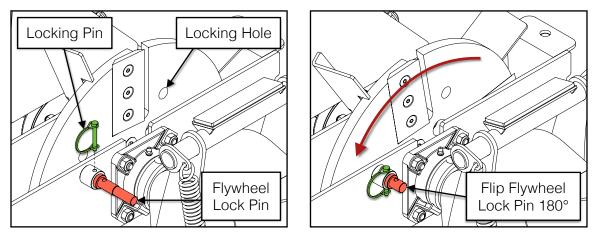
### MAINTENANCE REPLACING BLADES

Follow these steps when replacing blades. The WC46 wood chipper uses four (4) reversible hardened steel blades. Each blade is 5.71 X 2.72 X 5/16" [145 X 69 X 8 mm] in size.

- 1. If installed, disconnect the PTO shaft from the tractor for safety.
- Open the upper flywheel housing using a 24 mm socket/wrench by removing the M16 X 40 mm bolt and flat washer securing the upper and lower housings together.



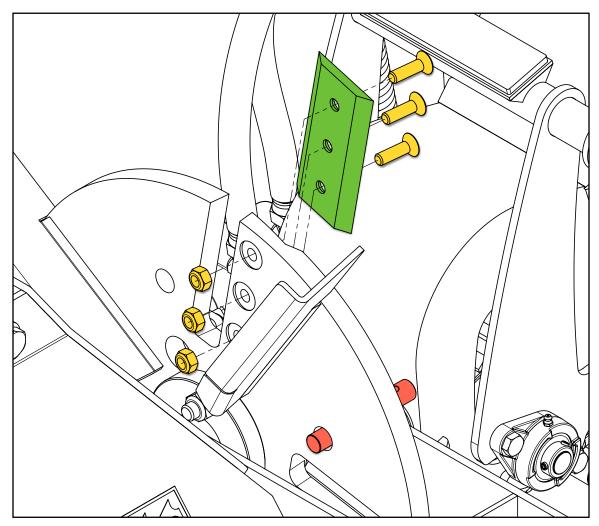
3. With the flywheel exposed, manually rotate it so that one of the four (4) locking holes in the flywheel (near the front of the blade) approximately lines up with the flywheel lock pin at the rear of the housing. Remove the small locking pin from the flywheel lock pin and flip the flywheel lock pin around 180°, passing it through the housing and into the locking hole in the flywheel. Reinstall the smaller locking pin to the flywheel lock pin.



Upper flywheel housing removed from images for clarity.



4. Remove the three (3) M10 X 35 mm flat head bolts and M10 lock nuts that fasten the blade to the flywheel using a hex driver on the bolts and a socket/wrench on the lock nuts. <u>Take care not to drop the hardware into the lower flywheel housing</u>. However, should this occur, a telescoping pen magnet can be used to retrieve them.



- 5. Repeat Steps 3 & 4 above to remove the remaining three blades. If this is the first time the blades have been removed following either the original wood chipper purchase or a recent blade sharpening, the blades can be reversed to utilize the other cutting edge. Or, the entire blade can be removed and sharpened or it can be replaced with a new blade. Torque the M10 X 35 mm flat head bolts to 40-45 ft•lb [54-60 N•m] when installing blades. Always replace the M10 lock nuts with a new set when changing or reversing blades. Refer to section, **BLADE SHARPENING** for blade sharpening instructions
- Once the blades have been reversed or new blades installed, proceed to section, <u>SETTING THE BED PLATE GAP</u>, to properly set the spacing between the blades and bed plate.



#### **BLADE SHARPENING**

The wood chipper blades will dull, making chipping difficult and cause your tractor to labour. It is recommended to sharpen the blades every 25-50 hours of operation. The WC46 wood chipper uses four (4) hardened steel blades. The blades are reversible and can be sharpened on both sides. Follow the below steps to sharpen the blades.

- 1. Follow the steps from the previous section, <u>**REPLACING BLADES**</u>, to safely remove the blades from the flywheel.
- 2. Hand-grind the angled edges of the blade at 33° (see diagram below) using a whetstone or have them sharpened by a professional. A pedestal style bench grinder will likely yield poor results if not used properly. If sharpened quickly or aggressively on a bench grinder, the blade edge can get too hot and change colour, thus removing the heat treating-properties from the steel. Use short grinding times and cool frequently with water. Remove an equal and consistent amount of material from each blade to maintain proper balance when reassembled to the flywheel.



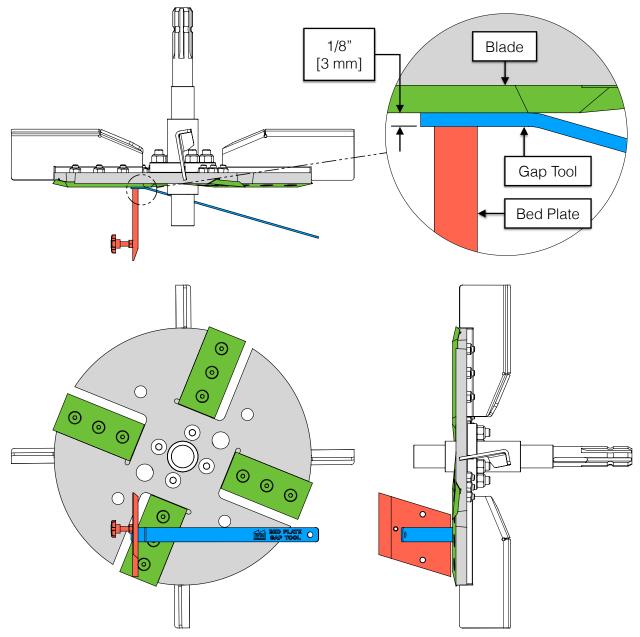
**Blade Profile** 

- 3. Reinstall the sharpened blades on the flywheel and torque the M10 X 35 mm flat head bolts to 40-45 ft•lb [54-60 N•m]. Always replace the lock nuts with new hardware when changing or reversing the blades.
- Once the blades have been sharpened, proceed to the next section, <u>SETTING THE</u> <u>BED PLATE GAP</u>, to properly set the spacing between the newly sharpened blades and the bed plate.



#### SETTING THE BED PLATE GAP

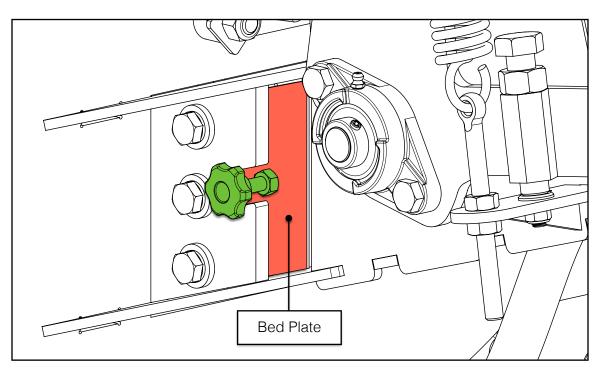
The bed plate (also known as the *anvil plate*) is located on the left side of the flywheel housing (while facing the infeed chute). For ideal chipping performance, the gap between the bed plate and blades should be set using the *Bed Plate Gap Tool* (½ in [3 mm]).



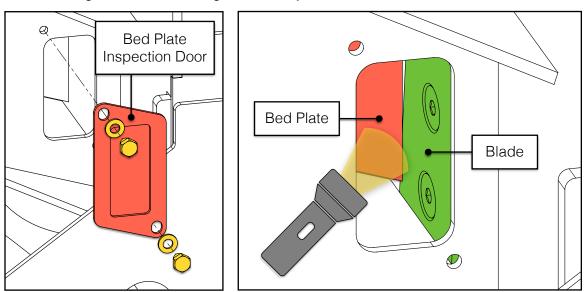
This graphic illustrates how the gap tool interfaces with the bed plate and blades in order to achieve uniform spacing. Some components removed for clarity.

Follow the steps on the next page to set the gap correctly. Failure to set the proper gap can lead to poor chipping performance and/or clogging.



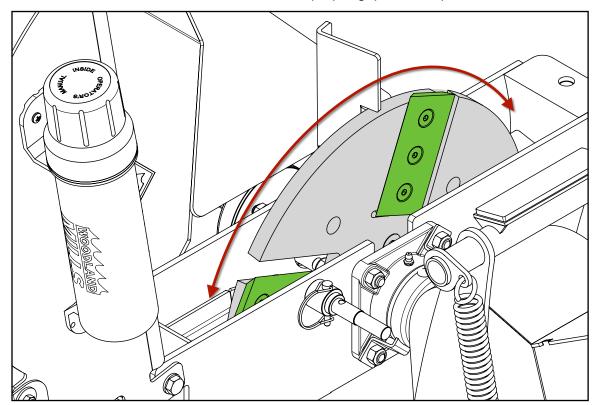


- 1. Disconnect the PTO shaft from the tractor for safety.
- 2. Open the upper flywheel housing using a 24 mm socket/wrench.
- 3. Remove the two (2) M8 X 10 mm hex bolts securing the bed plate inspection door located on the right-side of the lower infeed housing. With the bed plate inspection door removed, a clear view of the bed plate and its relationship to the blades can be seen. Use a flashlight for better viewing if necessary.

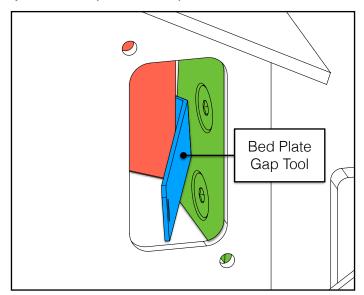




4. Rotate the flywheel so that the first blade is aligned with the bed plate. Take note of the gap between the two and continue to check the remaining blades relative to the bed plate—*taking note of which blade is closest*. Position this closest blade at the bed plate as this is the blade that will be used to set the proper gap with the provided tool.

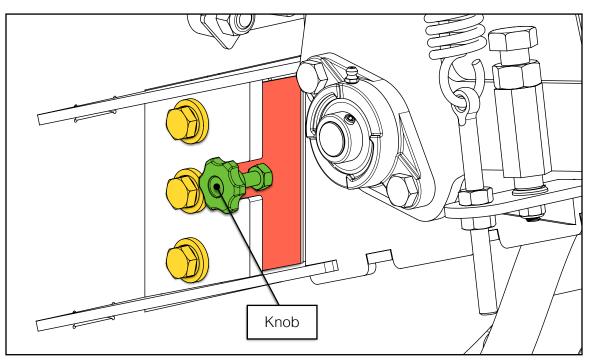


5. Place the bed plate gap tool between the bed plate and blade. Verify that the gap is consistent vertically from the top of the bed plate to the bottom.





6. Loosen the three (3) bed plate M10 X 25 mm hex bolts enough so that the bed plate is free to slide in and out. This movement will increase or decrease the gap between the bed plate and the cutting edge of the blade.



Slide the bed plate by gripping the knob and adjust its position so that it touches the bed plate gap tool. Ensure the gap is uniform along the entire edge of the blade.

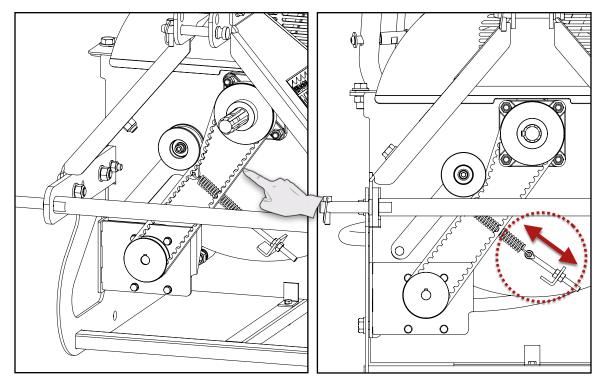
- 7. Snug the three (3) bed plate bolts once the gap has been set correctly for the blade closest to the bed plate.
- 8. Rotate the flywheel by hand again, checking the gap at each blade. The bed plate gap tool should still fit between the bed plate and blade along the entire length of the blade.
- 9. Once the bed plate gap is set, torque the three (3) M10 X 25 mm bed plate hex bolts to 40 ft•lb [54 N•m].
- 10. Close the upper flywheel housing and secure it to the lower housing by reinstalling the M16 X 40 mm bolt and flat washer.
- 11. Reinstall the bed plate inspection door and torque the two (2) M8 X 10 mm hex bolts to 225 in•lb [25 N•m].



#### ADJUSTING THE HYDRAULIC PUMP BELT TENSION

Check the condition and tension of the hydraulic pump belt after every 30 hours of operation. The belt is self-tensioning via an extension spring. The amount of tension can be adjusted by following these steps:

- 1. If installed, disconnect the PTO shaft from the wood chipper for safety and to allow rotation of the belt and pulleys.
- 2. Check the belt tension by pressing on it with your finger (see "*Checking Belt Tension*" below). There should not be any free slack in the belt. It should be under firm tension.
- 3. If the belt requires more tension, the eyebolt connected to the spring can be adjusted by moving the M8 hex nuts (see "*Adjusting Belt Tension*" below). This will stretch the spring and increase the belt tension until the proper tension is achieved.



**Checking Belt Tension** 

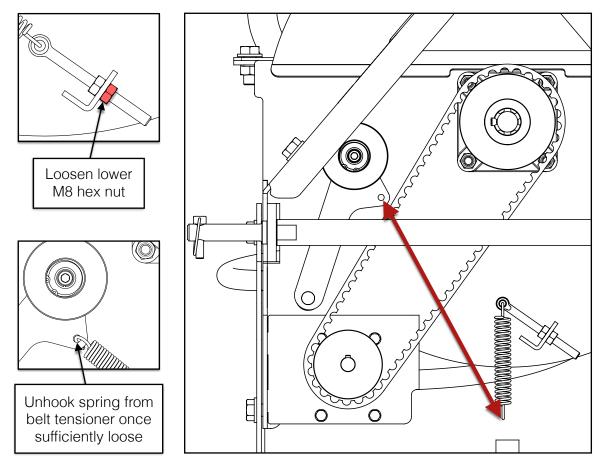
**Adjusting Belt Tension** 



#### **REPLACING THE HYDRAULIC PUMP BELT**

Check the condition and tension of the hydraulic pump belt after every 30 hours of operation. If the infeed roller is not rotating, or it is rotating slowly, the belt could be slipping. A squealing noise may also be heard. In either case, these conditions can occur due to a worn belt or improper belt tension (see the previous section, <u>ADJUSTING THE HYDRAULIC PUMP BELT</u> <u>TENSION</u>). To replace a worn belt, follow the steps below:

- 1. If installed, disconnect the PTO shaft from the wood chipper for safety.
- Loosen the lower M8 hex nut that secures the eyebolt to the steel bracket until sufficient tension has been removed from the spring allowing it to be unhooked from the belt tensioner. The belt tensioner can now be swung up out of the way allowing for removal of the belt from the pulleys.

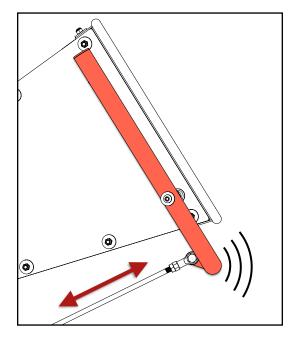


 Install the new belt around the pulleys first and then reinstall the spring. Re-tension the spring by tightening the lower M8 hex nut on the eyebolt. Refer to the previous section, <u>ADJUSTING THE HYDRAULIC PUMP BELT TENSION</u>, for instructions on how to properly re-tension the belt.

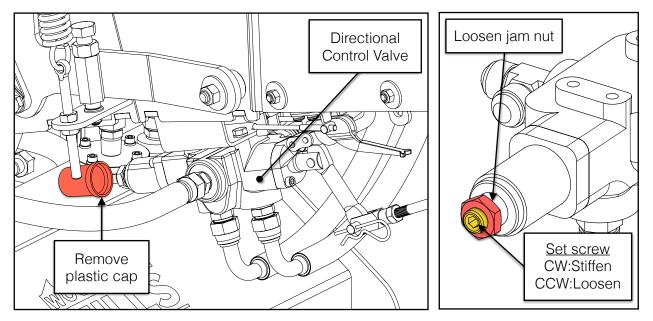


#### ADJUSTING THE CONTROL ARM

If the movement of the red control arm feels too stiff or too loose, or if it falls into neutral or reverse unexpectedly, it can be adjusted via the directional control valve.



Unscrew the plastic cap from the back of the directional control valve (located under the infeed chute), exposing the jam nut and set screw.



Loosen the jam nut with a 22 mm [ $\frac{7}{8}$  in] wrench. Use a 6 mm hex key and turn the set screw *clockwise to stiffen* the movement of the arm, *counter-clockwise to loosen* it. Tighten the jam nut and replace the cap after the control arm movement feels satisfactory.

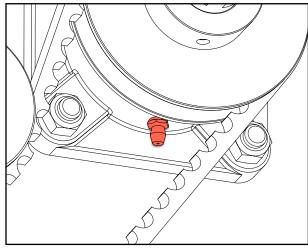


#### **GREASING** BEARINGS & OUTPUT SHAFT

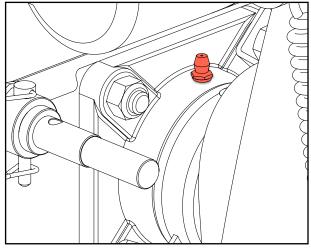
The wood chipper has three (3) grease points with Zerk fittings: two (2) flywheel bearings and one (1) infeed roller bearing. Check each grease point prior to use and add grease as needed.

Also, periodically brush grease onto the wood chipper's output shaft for ease of PTO shaft assembly & removal, to prevent rust buildup, and to prevent the two shafts from seizing together.

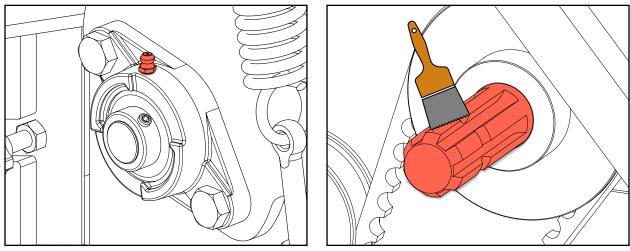
#### \*\*Warning: These 3 grease points come pre-greased from the factory. <u>Do not add grease</u> <u>to the Zerk fittings on a new wood chipper</u>. Over-greasing can damage the bearing seals.\*\*



Front Flywheel Shaft Bearing



**Rear Flywheel Shaft Bearing** 



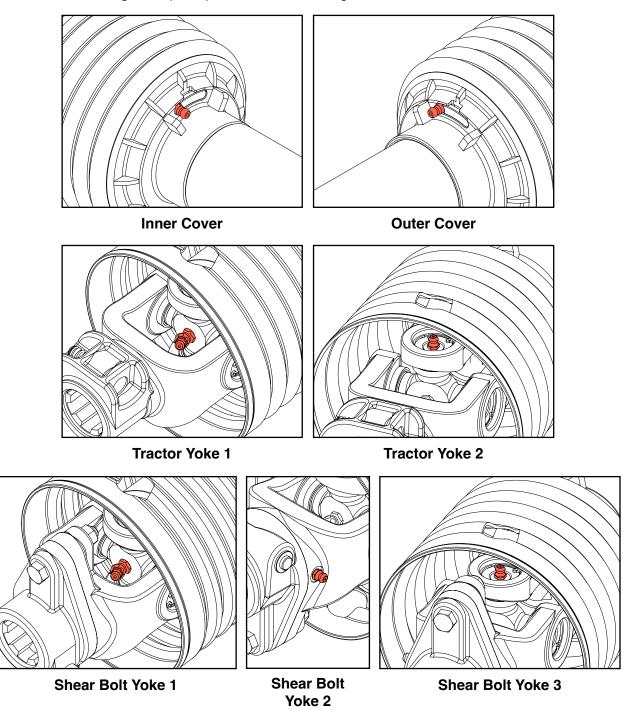
**Infeed Roller Bearing** 

**Output Shaft** 



#### PTO SHAFT

The PTO shaft has seven (7) grease points that are accessible from the outside: one (1) on each of the inner and outer guards, two (2) on the tractor yoke, and three (3) on the shear pin yoke. Check each grease point prior to use and add grease as needed.

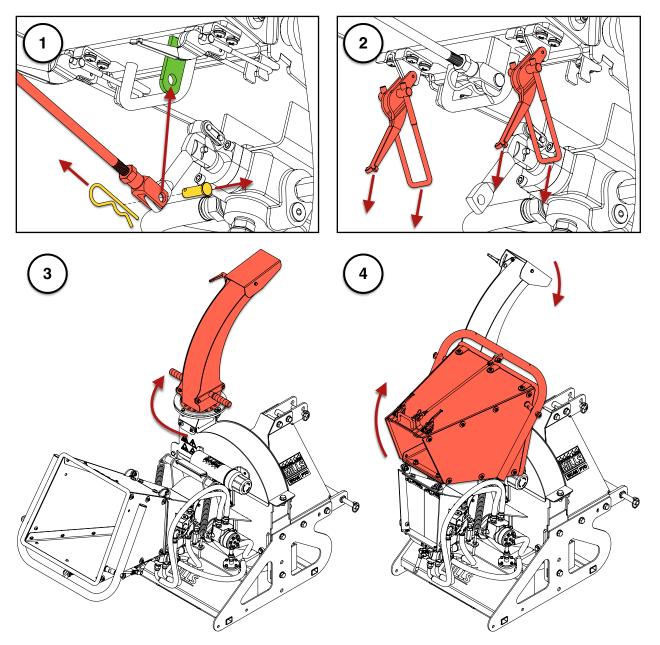




# STORAGE

When the wood chipper is not in use, it can be stored to utilize a smaller footprint to save space. Follow these steps to put the wood chipper in its storage state:

- 1. Disconnect the control bar linkage from the directional control valve and reconnect it to the tab on the underside of the infeed chute bottom panel.
- 2. Disengage the two (2) latches on the underside of the infeed chute bottom panel.
- 3. Rotate the discharge chute so that it is angled towards the left side of the machine.
- 4. Swing the infeed chute up until it is resting on the swingarm. Tilt the deflector down.





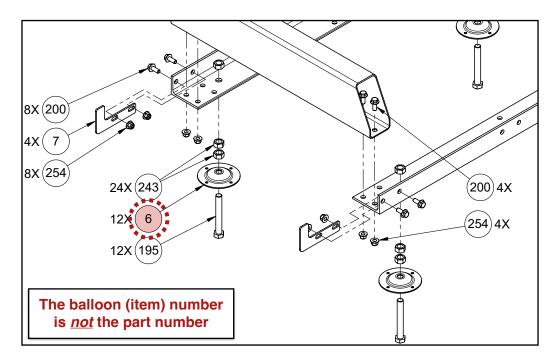
# TROUBLESHOOTING

Problem/Issue	Possible Causes	Resolution Options
Brush is feeding too slowly	<ol> <li>Infeed roller control set too low.</li> <li>PTO RPM below 540.</li> <li>Blades are dull.</li> <li>Improper bed plate gap.</li> </ol>	<ol> <li>Increase infeed roller control to a higher value. Refer to page 43.</li> <li>Adjust tractor RPMs to 540 at output.</li> <li>Reverse, sharpen, or replace blades. Refer to page 47 &amp; page 49.</li> <li>Re-set bed plate gap. Refer to page 49.</li> </ol>
Brush exiting discharge chute is stringy	<ol> <li>Blades are dull.</li> <li>Brush is excessively sappy.</li> </ol>	<ol> <li>Reverse, sharpen, or replace blades. Refer to page 47 &amp; page 49.</li> <li>Clean blades and bed plate.</li> </ol>
Excessive clogging	<ol> <li>Blades are dull.</li> <li>Improper bed plate gap.</li> <li>PTO RPM below 540.</li> </ol>	<ol> <li>Reverse, sharpen, or replace blades. Refer to page 47 &amp; page 49.</li> <li>Re-set bed plate gap. Refer to page 50.</li> <li>Clean blades and bed plate.</li> <li>Adjust tractor RPMs to 540 at output.</li> </ol>
Hydraulic pump belt slipping or squeaking	<ol> <li>Belt tension not set properly.</li> <li>Belt is old/worn.</li> </ol>	<ol> <li>Adjust belt tension. Refer to <u>page 54</u>.</li> <li>Replace belt. Refer to <u>page 55</u>.</li> </ol>
Excessive noise coming from flywheel bearings	<ol> <li>Bearings not sufficiently lubricated.</li> <li>Bearings are worn.</li> </ol>	<ol> <li>Grease bearings. Refer to <u>page 57</u>.</li> <li>Replace bearings. Please contact Woodland Mills for bearing replacement instructions.</li> </ol>
Red control arm falls into neutral or reverse	<ol> <li>Directional control valve not adjusted properly.</li> </ol>	<ol> <li>Adjust directional control valve set screw. Refer to page 56.</li> </ol>



## **REPLACEMENT PARTS ORDERING**

When ordering replacement parts, first locate the balloon number(s) from the appropriate *exploded assembly view* as shown in the example below:



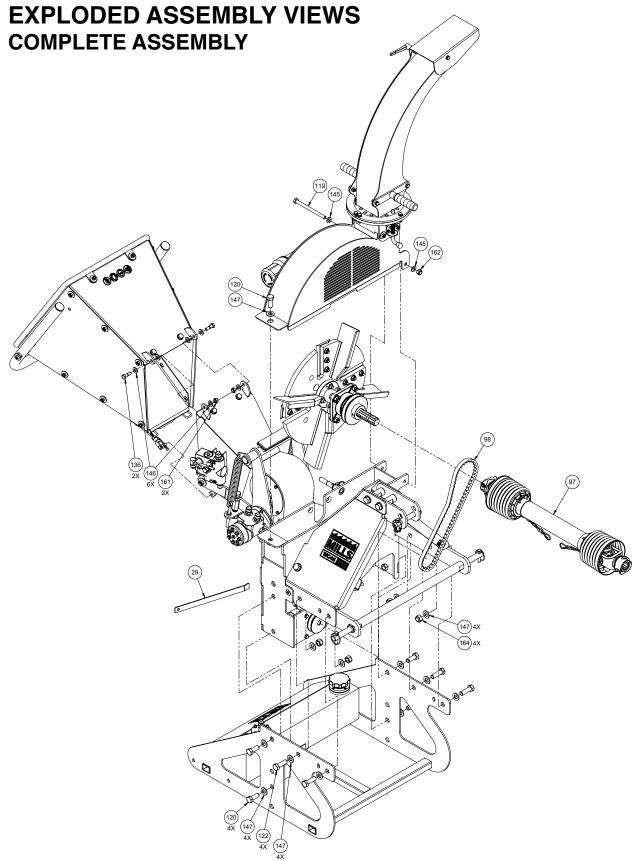
Next, turn to the *Parts List* section and locate the balloon number in the "Item" column:

PARTS LIST						
	Quantity					
Iten	14	hp	9.5 hp	Part No.	Description	
1	4	4	4	0001073	TRACK RAIL, 58.5 mm TALL	
2	2	2	2	0001075	LOG BUNK, END	
4	2	2	2	0001080	LOG BUNK, MID	
4	1	1	1	0001084	LOG BUNK, CENTER	
•	2	2	2	0001072	REINFORCEMENT PLATE, 90 X 200 mm	
6		2	-12	0001071	LEVELLING FOOT BASE	
7	4	4	4	0001055	CARRIAGE STOP	
8	1	1	1	0001062	LOG CLAMP SHAFT AND BRACKET WELDMENT	

Record the part number (e.g. 0001071, HHB-MBM080FCJ, etc.) in the "Part No." column.

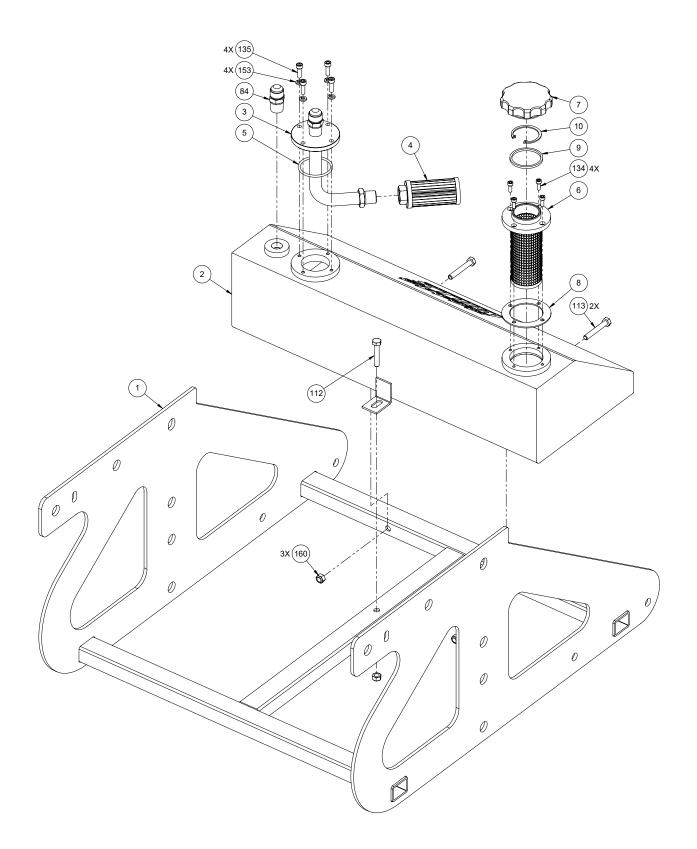
Contact Woodland Mills through the website or via phone/email. If possible, include the invoice or sales number from the purchased product so an associated account can be located. If the account has multiple addresses on file, please indicate to which address the replacement part(s) will be shipped.





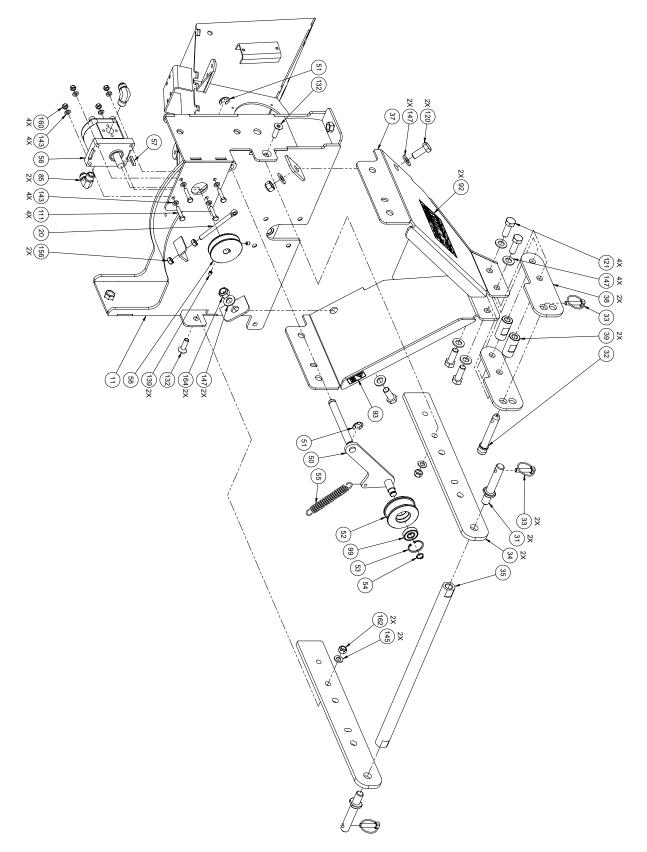


#### BASE



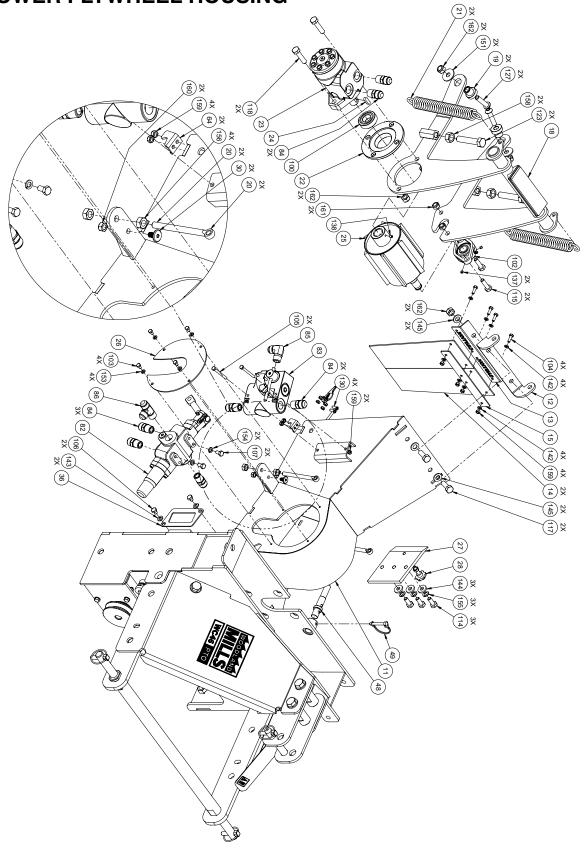


#### LOWER FLYWHEEL HOUSING BELT GUARD



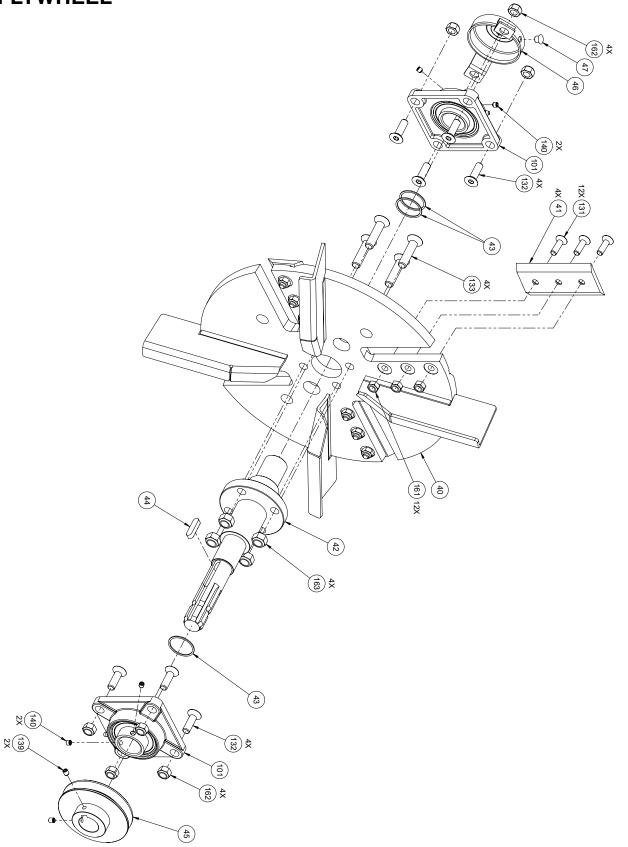


#### LOWER FLYWHEEL HOUSING



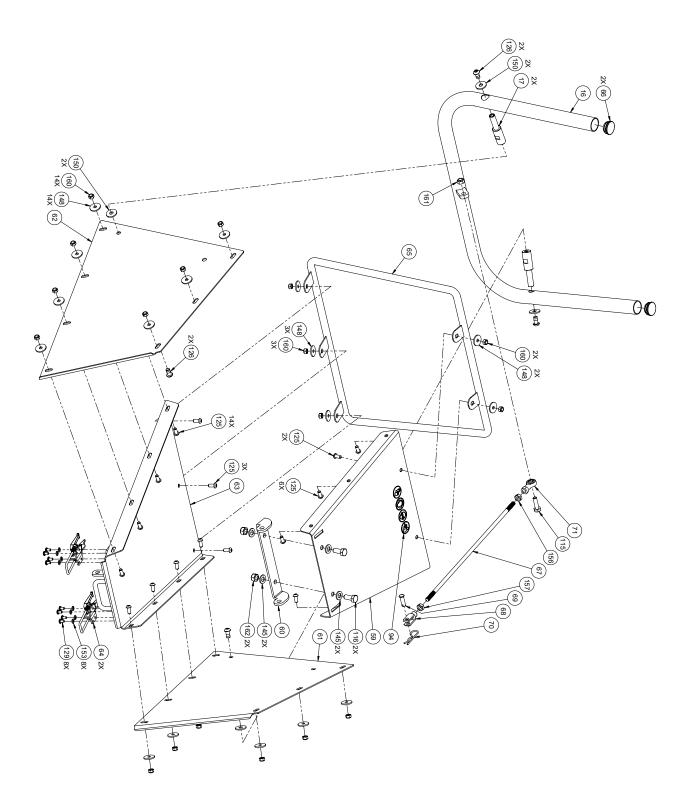
#### FLYWHEEL





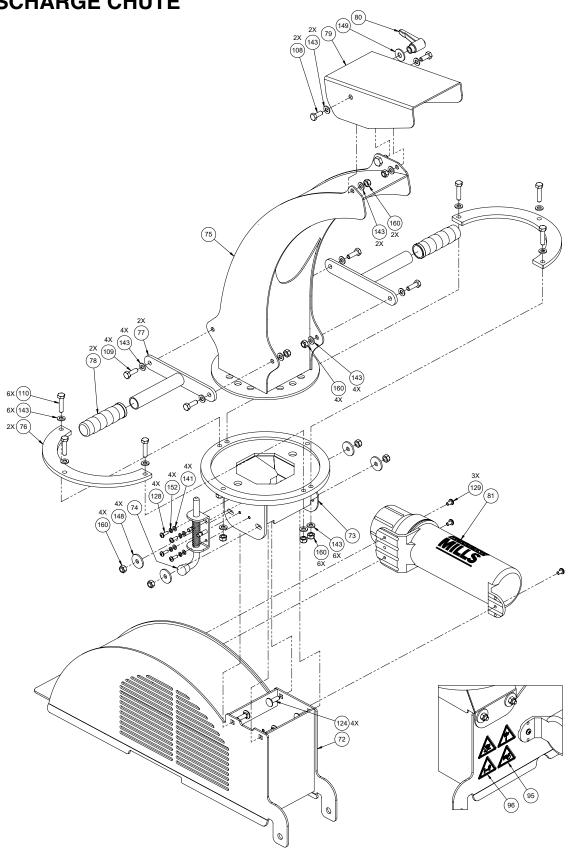


#### **INFEED CHUTE**



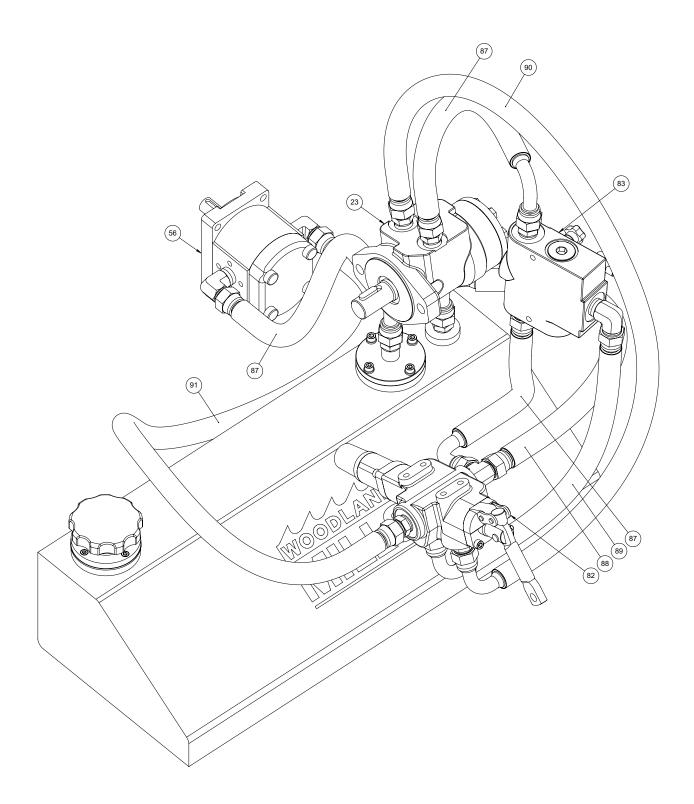


#### **DISCHARGE CHUTE**



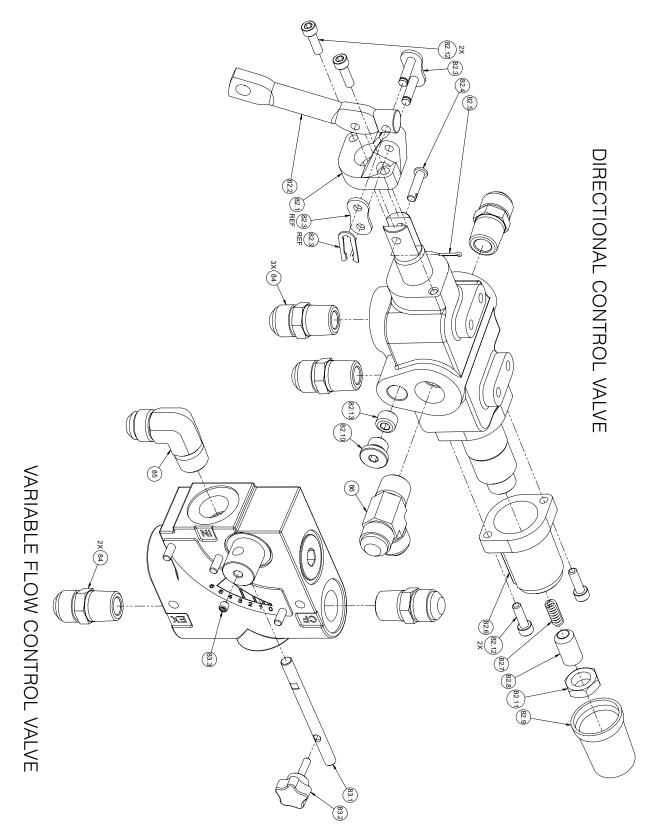


### **HYDRAULIC LINES**



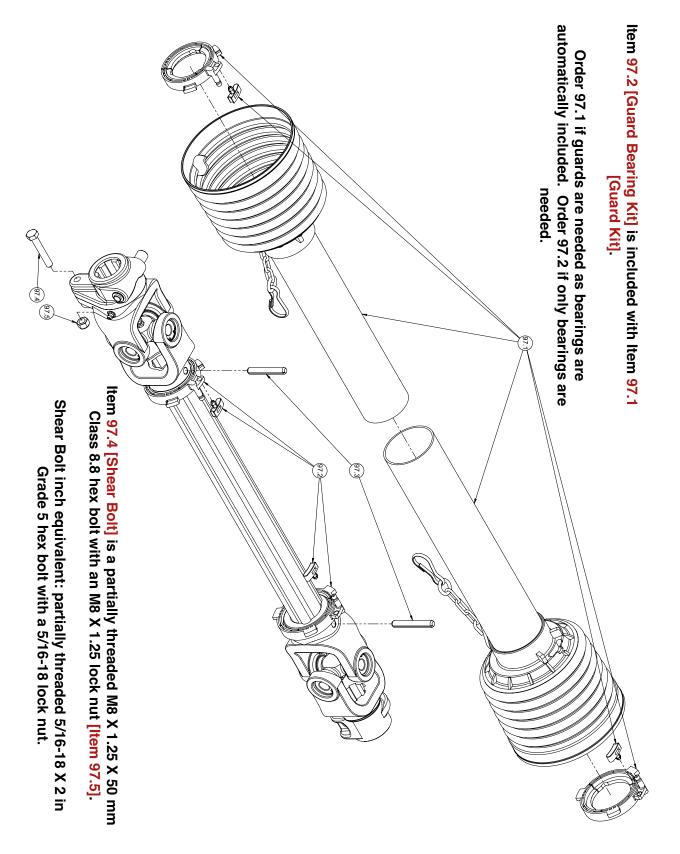


#### **CONTROL VALVES**





#### **PTO SHAFT**





# PARTS LIST

Item	Qty	Part No.	Description
1	1	0009841	BASE
2	1	0001739	HYDRAULIC TANK, 17 L [4.5 gal]
3	1	0001164	HYDRAULIC TANK INTAKE LINE
4	1	0001752	HYDRAULIC INTAKE FILTER, 1/2 NPT
5	1	0004841	O-RING, 50 mm ID / 57 mm OD, 3.5 mm THK
6	1	0005188	OIL SCREEN, 50 mm DIA X 120 mm LG SCREEN
7	1	0005183	OIL SCREEN CAP, 85 mm DIA, M48 X 2 THD
8	1	0005187	GASKET, OIL SCREEN, 55 mm ID
9	1	0005186	GASKET, OIL SCREEN CAP, 48 mm ID
10	1	0005185	RETAINING RING, INTERNAL, 46 mm BORE (48.5 mm GROOVE)
11	1	0010324	LOWER FLYWHEEL HOUSING
12	1	0001711	INNER HINGE, INFEED CHUTE
13	1	0001726	CURTAIN BRACKET
14	2	0001727	CURTAIN
15	1	0001728	CURTAIN PLATE
16	1	0010335	CONTROL ARM
17	2	0008193	CONTROL ARM SPACER
18	1	0010338	SWINGARM
19	2	0006493	SWINGARM PIVOT BUSHING, 10 mm SHOULDER
20	3	0006059	EYEBOLT, DIN444, M10 X 1.5, 120 mm LG
21	2	0001157	EXTENSION SPRING, HOOK ENDS, 33 mm OD, 5 mm DIA WIRE, 210 mm LG
22	1	0001179	HYDRAULIC MOTOR ADAPTER PLATE, 6205-2RS BEARING
23	1	0004861	HYDRAULIC MOTOR, CW, 154 cc [9.4 in3/rev], 2-HOLE 1/2 in NPT ALIGNED PORTS, 25 mm SFT
24	1	0004846	PARALLEL KEY, 8 X 7 mm, 25 mm LG
25	1	0001717	INFEED ROLLER
26	1	0001729	INFEED ROLLER COVER PLATE
27	1	0001730	BED PLATE, 126 X 103.6 X 9.4 mm
28	1	0001191	KNOB, MULTI-LOBE, 32 mm OD, M8 X 1.25, 30 mm LG, M8 WLD HEX NUT
29	1	0010411	BED PLATE GAP TOOL
30	2	0001733	STRIKE PLATE BOLT, 20 mm HEAD DIA, M8 X 1.25 THD
31	2	0001738	HITCH PIN, LOWER, CAT 1, M20 X 2.5, 7/8 in [22 mm] DIA, 3 in [75 mm] USEABLE LG
32	1	0001156	HITCH PIN, UPPER, CAT 1, 3/4 in [19 mm] DIA, 3-1/2 in [90 mm] USEABLE LG
33	3	0004705	LINCH PIN, 10 mm DIA, 38 mm USABLE LG, 45 mm LG
34	2	0009838	3-POINT HITCH LOWER ARM
35	1	0006864	CONNECTING ROD
36	1	0007106	INSPECTION WINDOW COVER
37	1	0009859	BELT GUARD
38	2	0007029	3-POINT HITCH UPPER ARM
39	2	0009856	UPPER HITCH BUSHING
40	1	0001744	FLYWHEEL
41	4	0001735	FLYWHEEL BLADE, 145 X 69 X 8 mm
42	1	0001745	FLYWHEEL SHAFT
43	3	0001734	SPACER, 40.6 ID X 46 OD X 1.5 mm LG
44	1	0004849	PARALLEL KEY, 10 X 8 mm, 40 mm LG
45	1	0001736	V-BELT PULLEY, 35 mm SHAFT, 125 mm DIA



Item	Qty	Part No.	Description
46	1	0001731	FLYWHEEL SHAFT COVER, UCF208 BEARING
47	1	0001795	FLYWHEEL SHAFT COVER PLUG
48	1	0001796	FLYWHEEL LOCKING PIN
49	1	0004728	LOCKING PIN, ROUND, 1/4 in DIA, 1-3/8 in USABLE LG, 2 in LG
50	1	0010996	BELT TENSIONER ARM
51	2	0004789	CIRCLIP, 16-24 mm SHAFT (15 mm GROOVE)
52	1	0001692	IDLER PULLEY, SINGLE BEARING, 25 mm WD, 80 mm DIA
53	1	0004816	RETAINING RING, INTERNAL, 40 mm BORE (42.5 mm GROOVE)
54	1	0004798	RETAINING RING, EXTERNAL, 17 mm SHAFT (16.2 mm GROOVE)
55	1	0001192	EXTENSION SPRING, HOOK ENDS, 21 mm OD, 3 mm DIA WIRE, 100 mm LG
56	1	0004869	HYDRAULIC GEAR PUMP, 10 mL/r, KEYED SHAFT
57	1	0004845	PARALLEL KEY, 6 X 6 mm, 32 mm LG
58	1	0001737	V-BELT PULLEY, 18 mm SHAFT, 90 mm DIA
59	1	0010325	INFEED CHUTE TOP PANEL
60	1	0001716	OUTER HINGE, INFEED CHUTE
61	1	0010328	INFEED CHUTE LEFT SIDE PANEL
62	1	0010327	INFEED CHUTE RIGHT SIDE PANEL
63	1	0010329	INFEED CHUTE BOTTOM PANEL
64	2	0001304	LATCH-STYLE TOGGLE CLAMP, SAFETY LOCK
65	1	0010334	ROUND EDGE BAR, INFEED CHUTE
66	2	0001781	PLASTIC END CAP, ROUND, 38 mm DIA
67	1	0008197	LINKAGE ROD, CONTROL ARM, 520 mm LG
68	1	0004834	CLEVIS ROD END, M10 X 1.5 THD, 10 mm ID, 10 mm JAW OPENING
69	1	0004749	CLEVIS PIN, 10 mm DIA, 24 mm USABLE LG, 30 mm LG
70	1	0004760	COTTER PIN, HAIRPIN, 10-16 mm CLEVIS, 3 mm WIRE DIA
70	1	0004888	ROD END BEARING, 10 mm, M10 X 1.5 FEM THD
72	1	0009671	UPPER FLYWHEEL HOUSING
72	1	0009674	DISCHARGE CHUTE NOZZLE, 260 mm DIA
74	1		· · · · · · · · · · · · · · · · · · ·
74	1	0001172	DISCHARGE CHUTE LOCK PIN ASSEMBLY, 12 mm DIA DISCHARGE CHUTE
		0001722	
76	2	0001720	DISCHARGE CHUTE RETAINER PLATE, 260 mm DIA
77	2	0001718	DISCHARGE CHUTE ROTATION HANDLE, 170 mm C-C
78			HANDLE GRIP, GROOVED, 26 mm ID, 108 mm LG
79	1	0001721	
80	1	0001786	HANDLE, ADJUSTABLE POS, 78 X 54 mm, M10 X 1.5 FEM THD
81	1	0001655	
82	1	0004872	DIRECTIONAL CONTROL VALVE, 1/2 NPT
82.1	1	0005487	
82.2	1	0005486	ACTUATOR, 82 mm LG, DIRECTIONAL CONTROL VALVE
82.3	1	0005477	MASTER LINK, NO. 60 CHAIN
82.4	1	0005482	CLEVIS PIN, 6 mm DIA, 20 mm USABLE LG, 25 mm LG
82.5	1	0005483	COTTER PIN, 2 mm DIA, 10 mm LG
82.6	1	0005494	
82.7	1	0005481	COMPRESSION SPRING, CLOSED GROUND ENDS, 8 mm OD, 1.5 mm DIA WIRE, 23 mm LG
82.8	1	0005489	ADJUSTMENT SCREW, M14 X 1.5, 25 mm LG, DIRECTIONAL CONTROL VALVE
82.9	1	0005488	CAP, DIRECTIONAL CONTROL VALVE
82.10	1	0007182	PRESSURE RELEASE PLUG, DIRECTIONAL CONTROL VALVE



Item	Qty	Part No.	Description
82.11	1	THN-MBYCC	HEX NUT, THIN, CLS 4, M14 X 1.5
82.12	4	SHC-MBE075FCP	SHCS, CLS 12.9, M6 X 1, 20 mm LG, FULL
82.13	1	FTS-MBY059GR	SET SCREW, FLAT TIP, GR 45H, M14 X 1.5, 10 mm LG
83	1	0004875	VARIABLE FLOW CONTROL VALVE, 1/2 in NPT, 0-16 gal/min
83.1	1	0007518	LEVER ARM, VARIABLE FLOW CONTROL VALVE
83.2	1	0007519	KNOB, MULTI-LOBE, 25 mm OD, M6 X 1, 20 mm LG
83.3	1	CPS-MBE051GR	SET SCREW, CUP POINT, GR 45H, M6 X 1, 6 mm LG
84	8	0005124	FITTING, ADAPTER, 1/2 in NPT MALE TO 7/8-14 UNF MALE
85	3	0005115	FITTING, ELBOW, 90°, 1/2 NPT TO 7/8-14 THD
86	1	0004911	FITTING, TEE, 1/2 NPT TO 7/8-14 (2X)
87	3	0003297	HYDRAULIC HOSE ASSEMBLY, STR AND ELB FITTINGS, 350 mm LG
88	1	0003298	HYDRAULIC HOSE ASSEMBLY, STR AND ELB FITTINGS, 500 mm LG
89	1	0003300	HYDRAULIC HOSE ASSEMBLY, STR AND ELB FITTINGS, 600 mm LG
90	1	0003303	HYDRAULIC HOSE ASSEMBLY, STR AND ELB FITTINGS, 1450 mm LG
91	1	0003302	HYDRAULIC HOSE ASSEMBLY, STR FITTINGS, 1850 mm LG
92	2	0010492	LABEL, WC46 W/ WOODLAND MILLS LOGO
93	1	0010603	LABEL, PTO 540 RPM WARNING LABEL
94	1	0010920	LABEL, CHIPPER MANDATORY SYMBOLS
95	1	0010921	LABEL, CHIPPER INFEED WARNING SYMBOLS
96	1	0010922	LABEL, CHIPPER DISCHARGE WARNING SYMBOLS
97	1	0010500	PTO SHAFT, SHEAR PIN, 4S-SERIES
97.1	1	0010540	GUARD KIT, PTO SHEAR BOLT, 4S-SERIES
97.2	1	0010541	GUARD BEARING KIT, PTO SHEAR BOLT, 4S-SERIES
97.3	1	0010542	TRIANGULAR YOKE PIN KIT, PTO SHEAR BOLT, 4S-SERIES
97.4	1	HHB-MBJ105PCJ	HEX HEAD BOLT, CLS 8.8, M8 X 1.25, 50 mm LG, 22 mm LG THD
97.5	1	HLN-MBJCH	LOCK NUT, CLS 8, M8 X 1.25
98	1	BX41	V-BELT, COGGED, BX41
99	1	6203-2RS	BALL BEARING, SEALED, 17 mm SFT, 40 mm HSG, 12 mm WD
100	1	6205-2RS	BALL BEARING, SEALED, 25 mm SFT, 52 mm HSG, 15 mm WD
101	2	UCF208	FLANGE BEARING, SQ, 4-BOLT, 40 mm SFT, 102 mm C-C
102	1	UCFL204	FLANGE BEARING, OVAL, 2-BOLT, 20 mm SFT, 90 mm C-C
103	4	HHB-MBE059FCJ	HEX HEAD BOLT, CLS 8.8, M6 X 1, 10 mm LG, FULL
104	4	HHB-MBE075FCJ	HEX HEAD BOLT, CLS 8.8, M6 X 1, 20 mm LG, FULL
105	2	HHB-MBE115PCJ	HEX HEAD BOLT, CLS 8.8, M6 X 1, 60 mm LG, 18 mm LG THD
106 107	2	HHB-MBJ059FCJ HHB-MBJ071FCJ	HEX HEAD BOLT, CLS 8.8, M8 X 1.25, 10 mm LG, FULL
107	2	HHB-MBJ0775FCJ	HEX HEAD BOLT, CLS 8.8, M8 X 1.25, 16 mm LG, FULL HEX HEAD BOLT, CLS 8.8, M8 X 1.25, 20 mm LG, FULL
108	4	HHB-MBJ080FCJ	HEX HEAD BOLT, CLS 8.8, M8 X 1.25, 25 mm LG, FULL
110	6	HHB-MBJ090FCJ	HEX HEAD BOLT, CLS 8.8, M8 X 1.25, 35 mm LG, FULL
111	4	HHB-MBJ095FCJ	HEX HEAD BOLT, CLS 8.8, M8 X 1.25, 40 mm LG, FULL
112	1	HHB-MBJ100FCJ	HEX HEAD BOLT, CLS 8.8, M8 X 1.25, 45 mm LG, FULL
113	2	HHB-MBJ110PCJ	HEX HEAD BOLT, CLS 8.8, M8 X 1.25, 55 mm LG, 22 mm LG THD
114	3	HHB-MBM080FCJ	HEX HEAD BOLT, CLS 8.8, M10 X 1.5, 25 mm LG, FULL
115	3	HHB-MBM090FCJ	HEX HEAD BOLT, CLS 8.8, M10 X 1.5, 35 mm LG, FULL
116	2	HHB-MBR085FCJ	HEX HEAD BOLT, CLS 8.8, M12 X 1.75, 30 mm LG, FULL
117	2	HHB-MBR090FCJ	HEX HEAD BOLT, CLS 8.8, M12 X 1.75, 35 mm LG, FULL
118	2	HHB-MBR105FCJ	HEX HEAD BOLT, CLS 8.8, M12 X 1.75, 50 mm LG, FULL
119	1	HHB-MBR215PCJ	HEX HEAD BOLT, CLS 8.8, M12 X 1.75, 160 mm LG, 30 mm LG THD
110	1		



Item	Qty	Part No.	Description
120	7	HHB-MCA095FCJ	HEX HEAD BOLT, CLS 8.8, M16 X 2, 40 mm LG, FULL
121	4	HHB-MCA100FCJ	HEX HEAD BOLT, CLS 8.8, M16 X 2, 45 mm LG, FULL
122	4	HHB-MCA105FCJ	HEX HEAD BOLT, CLS 8.8, M16 X 2, 50 mm LG, FULL
123	2	HHB-MCA135PCJ	HEX HEAD BOLT, CLS 8.8, M16 X 2, 80 mm LG, 38 mm LG THD
124	4	SNC-MBJ080FCJ	CARRIAGE BOLT, SQ NECK, CLS 8.8, M8 X 1.25, 25 mm LG, FULL
125	19	BHS-MBJ073FCM	BUTTON HEAD SCREW, CLS 10.9, M8 X 1.25, 18 mm LG, FULL
126	4	BHS-MBM075FCT	BUTTON HEAD SCREW, CLS 10.9, TL, M10 X 1.5, 20 mm LG, FULL
127	2	BHS-MBR105FCM	BUTTON HEAD SCREW, CLS 10.9, M12 X 1.75, 50 mm LG, FULL
128	4	PPH-MBA067FCE	SCREW, PPH, CLS 4.8, M5 X 0.8, 14 mm LG, FULL
129	11	PPH-MBE059FCE	SCREW, PPH, CLS 4.8, M6 X 1, 10 mm LG, FULL
130	4	PPH-MBE071FCE	SCREW, PPH, CLS 4.8, M6 X 1, 16 mm LG, FULL
131	12	HFH-MBM090FCM	SCREW, HFH, CLS 10.9, M10 X 1.5, 35 mm LG, FULL
132	10	HFH-MBR095FCM	SCREW, HFH, CLS 10.9, M12 X 1.75, 40 mm LG, FULL
133	4	HFH-MBW115FCM	SCREW, HFH, CLS 10.9, M14 X 2, 60 mm LG, FULL
134	4	SHC-MBA067FCP	SHCS, CLS 12.9, M5 X 0.8, 14 mm LG, FULL
135	4	SHC-MBE075FCP	SHCS, CLS 12.9, M6 X 1, 20 mm LG, FULL
136	2	HHS-MBM057069AJ	SHLDR SCREW, HEX HEAD, ALLOY, 11 X 15 mm LG SHLDR, M10 X 1.5 X 20 mm LG THD
137	2	KCS-MBE051GR	SET SCREW, KNURLED CUP POINT, GR 45H, M6 X 1, 6 mm LG
138	1	KCS-MBE055GR	SET SCREW, KNURLED CUP POINT, GR 45H, M6 X 1, 8 mm LG
139	4	KCS-MBJ059GR	SET SCREW, KNURLED CUP POINT, GR 45H, M8 X 1.25, 10 mm LG
140	4	KCS-MBK055GR	SET SCREW, KNURLED CUP POINT, GR 45H, M8 X 1, 8 mm LG
141	4	FTW-MBA000AJ	FLAT WASHER, M5
142	8	FTW-MBE000AJ	FLAT WASHER, M6
143	34	FTW-MBJ000AJ	FLAT WASHER, M8
144	3	FTW-MBM165AJ	FLAT WASHER, DIN7349, M10, 4 mm THK
145	12	FTW-MBR000AJ	FLAT WASHER, M12
146	6	FTW-MBR000NA	FLAT WASHER, M12, NYLON
147	21	FTW-MCA000AJ	FLAT WASHER, M16
148	23	FDW-MBJ079000AJ	FENDER WASHER, M8, 30 mm OD
149	1	FDW-MBM075000AJ	FENDER WASHER, M10, 26 mm OD
150	4	FDW-MBM079000AJ	FENDER WASHER, M10, 30 mm OD
151	2	FDW-MBR086000AJ	FENDER WASHER, M12, 37 mm OD
152	4	SLW-MBAAJ	SPLIT LOCK WASHER, M5
153	16	SLW-MBEAJ	SPLIT LOCK WASHER, M6
154	2	SLW-MBJAJ	SPLIT LOCK WASHER, M8
155	3	SLW-MBMAJ	SPLIT LOCK WASHER, M10
156	7	HXN-MBMCH	HEX NUT, CLS 8, M10 X 1.5
157	1	HXN-MBNCH	HEX NUT, CLS 8, M10 X 1.25
158	2	HXN-MCACH	HEX NUT, CLS 8, M16 X 2
159	10	HLN-MBECH	LOCK NUT, CLS 8, M6 X 1
160	44	HLN-MBJCH	LOCK NUT, CLS 8, M8 X 1.25
161	17	HLN-MBMCH	LOCK NUT, CLS 8, M10 X 1.5
162	19	HLN-MBRCH	LOCK NUT, CLS 8, M12 X 1.75
163	4	HLN-MBWCH	LOCK NUT, CLS 8, M14 X 2
164	6	HLN-MCACH	LOCK NUT, CLS 8, M16 X 2
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# NOTES


# WOODLAND