

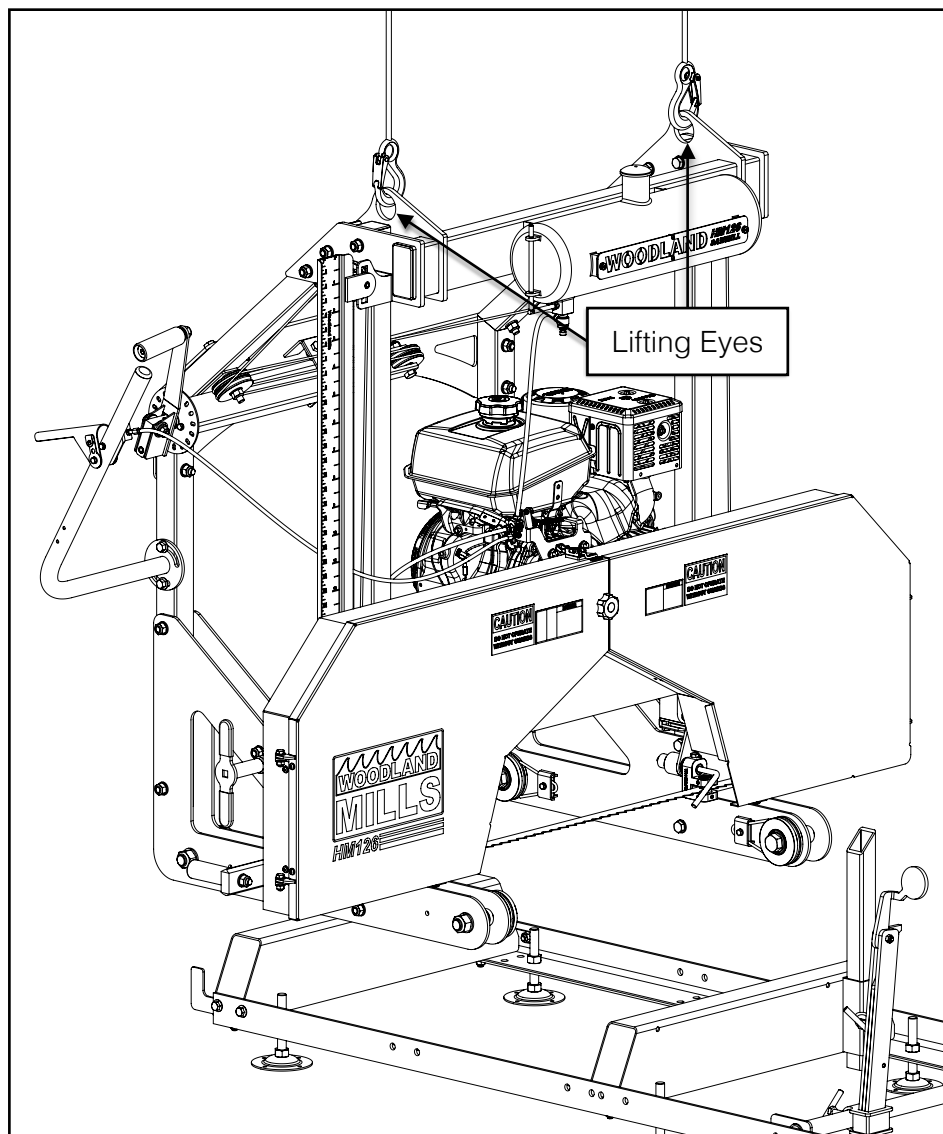
4. PLACING THE HEAD ON THE TRACK



At this point, most of the sawmill head bolts should only be hand tight. They will be fully tightened when the head is on the track and has settled in to a true and square state. There are two methods in which the sawmill head can be lifted onto the track assembly:

METHOD 1

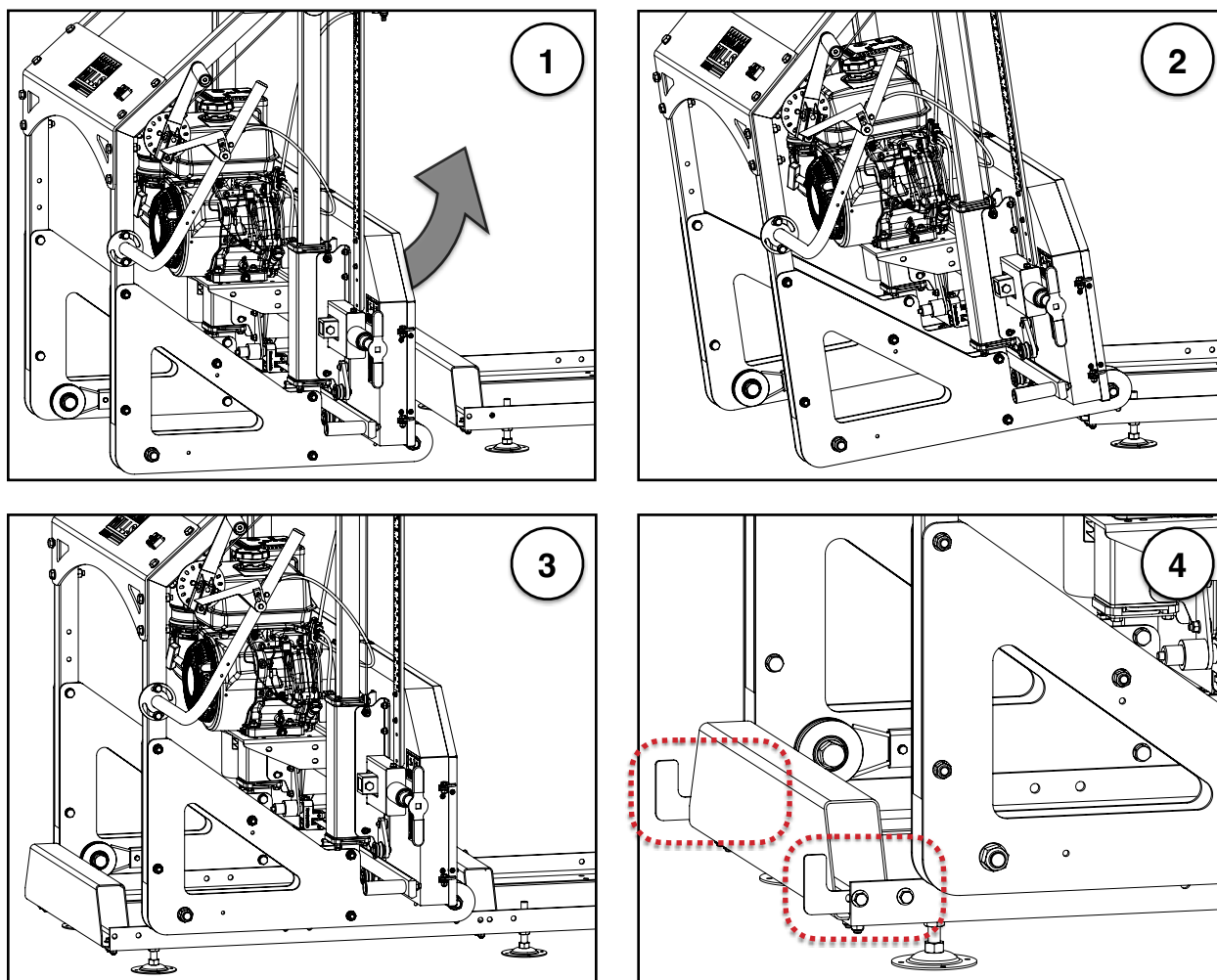
If a tractor or forklift is available, the head can be lifted onto the track with a lifting strap or chain with a minimum rating of 1000 lb. [450 kg]. Attach the lifting strap/chain to the lifting eyes, raise the head up, and rest it on the track so that the grooves in the carriage wheels fit around the track rails. Two people are recommended for this procedure.



METHOD 2

At least two people are required for this step. Start by removing the two (2) carriage stops from one end of the track. The head can be walked over to the track until positioned behind it (**Figure 1**). Once in this position, tilt the head backwards so that the front two wheels are off the ground. Walk the head forward while the grooves in the two front carriage wheels ride along the track rails (**Figure 2**). Next, using at least two people, lift up the back end of the sawmill head and walk it forward until both rear carriage wheels are seated on the track (**Figure 3**).

Finally, reattach the two (2) carriage stops to the inner faces of the track rails (**Figure 4**).



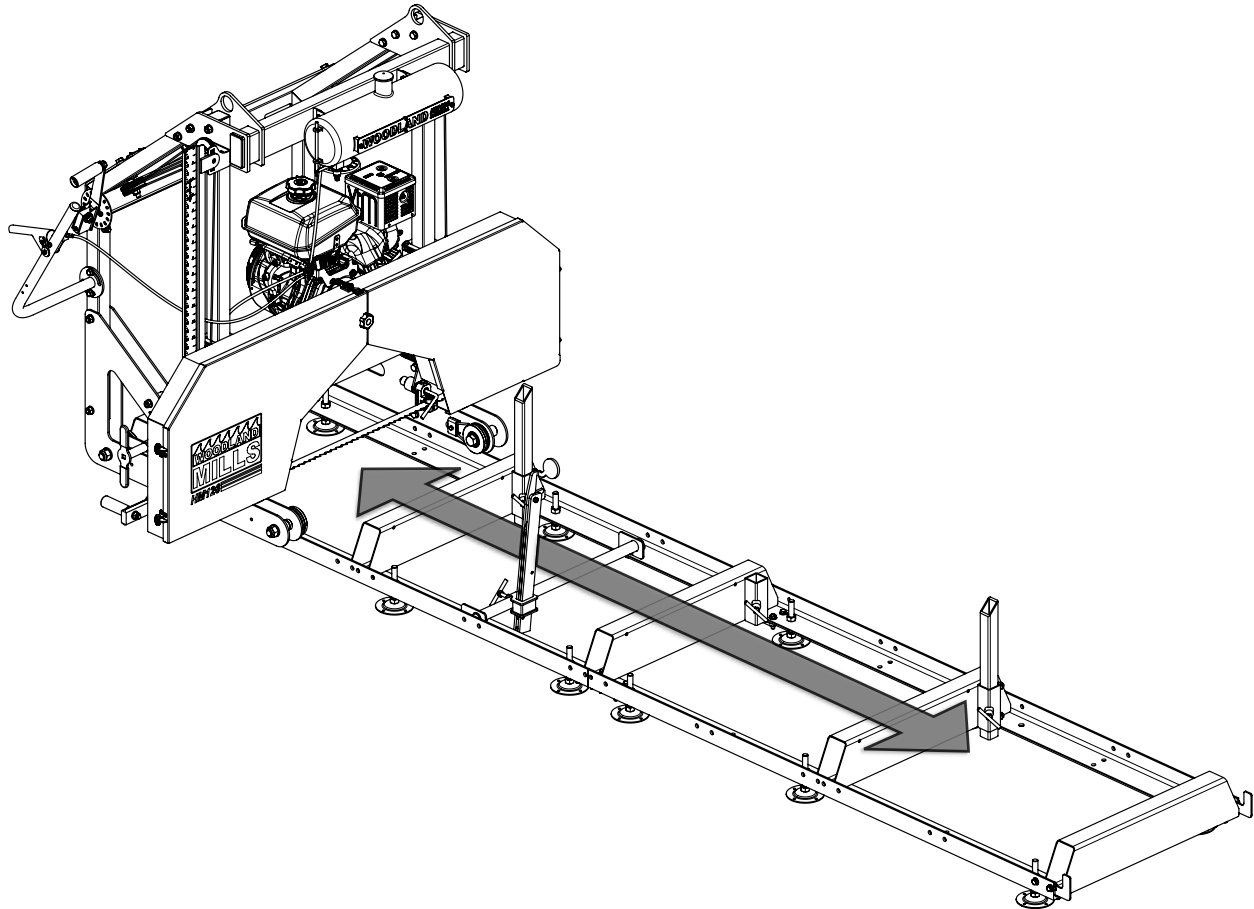
With the sawmill head assembly now resting on the track, grab hold of the one side of the cross beam and perform a shake-down of the head. Shaking the head will help settle the components into their proper position that may have become misaligned either due to tolerances during the assembly process or when the saw head was set on the track.

Afterwards, tighten all of the saw head bolts, post and cross beam hardware.



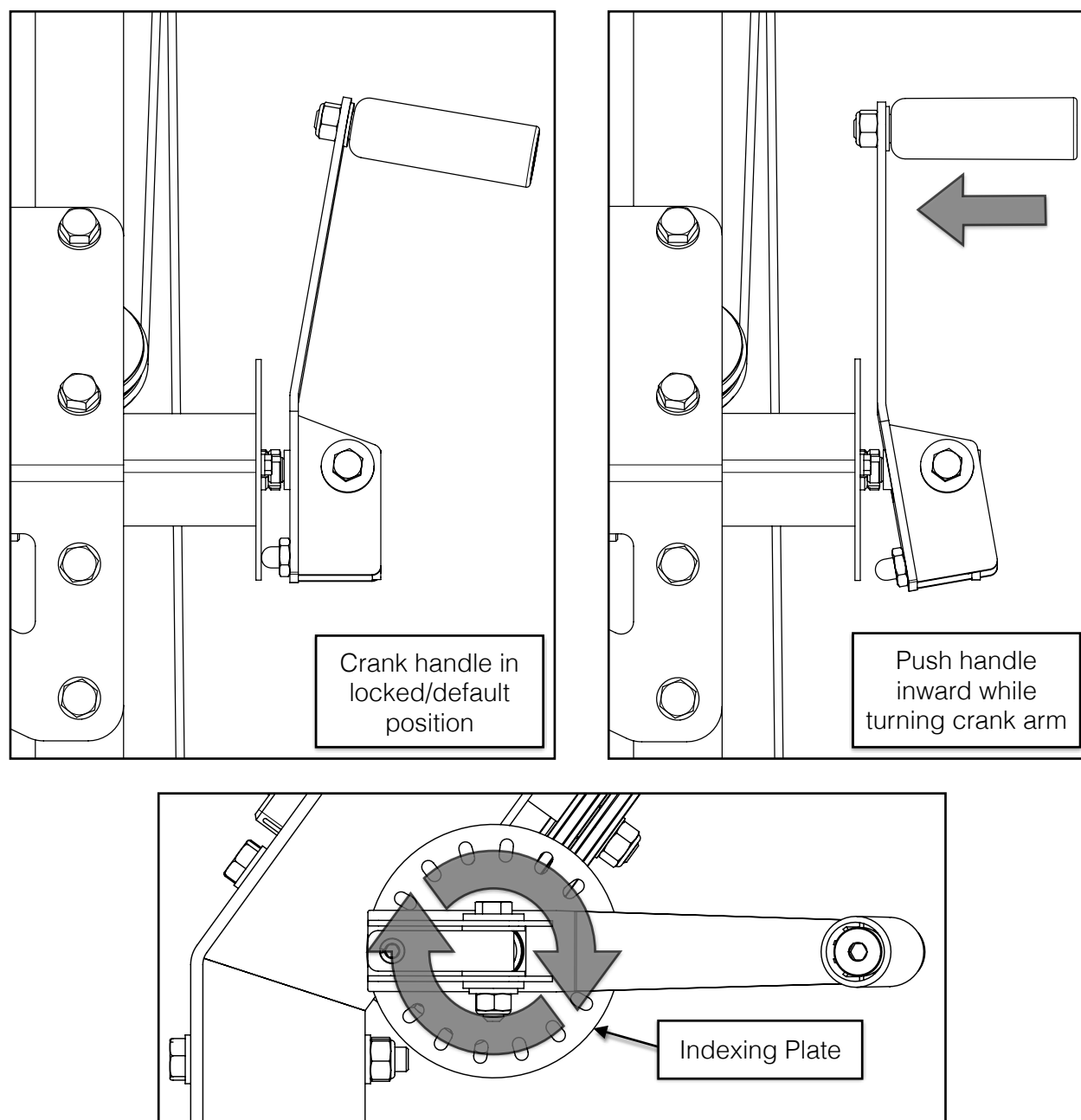
ROLLING THE SAWMILL HEAD ASSEMBLY

Roll the sawmill head assembly along the full length of the track to ensure it moves freely. If it binds or is difficult to push it is likely the track is not square, straight, and/or level. Make the necessary adjustments to the track and roll the head assembly again. Repeat the track adjustments until the head rolls freely.



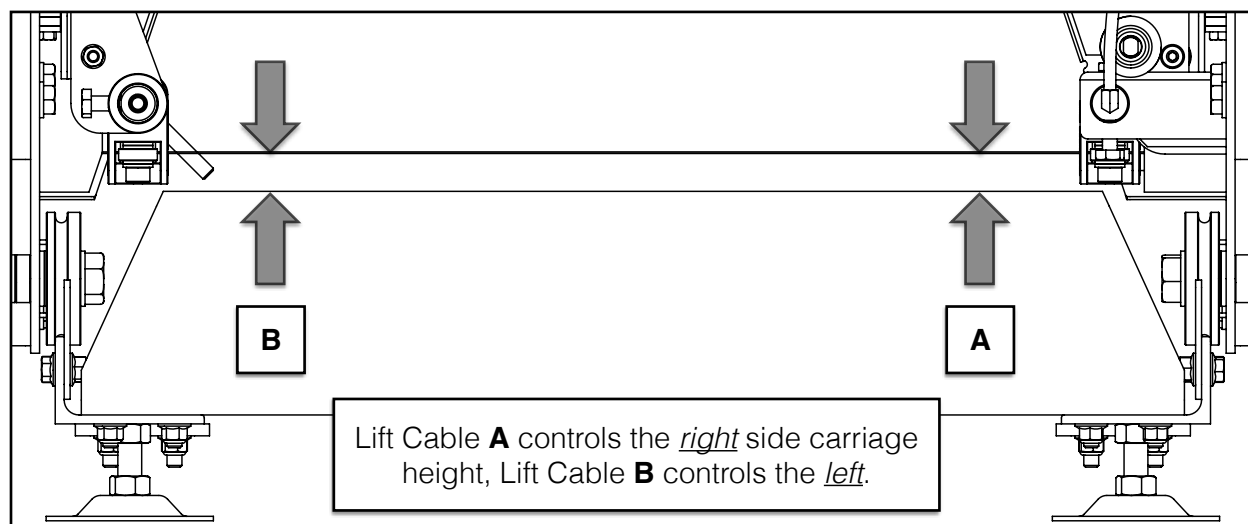
RAISING & LOWERING THE SAWHEAD

The lift mechanism is equipped with a self-locking, spring-loaded crank arm that prevents the head from lowering during cuts. When winding the head up or down, the operator pushes the handle towards the mill as the crank arm is turned. When the desired cut depth is reached, releasing the handle will lock the arm into one of the slots in the indexing plate.



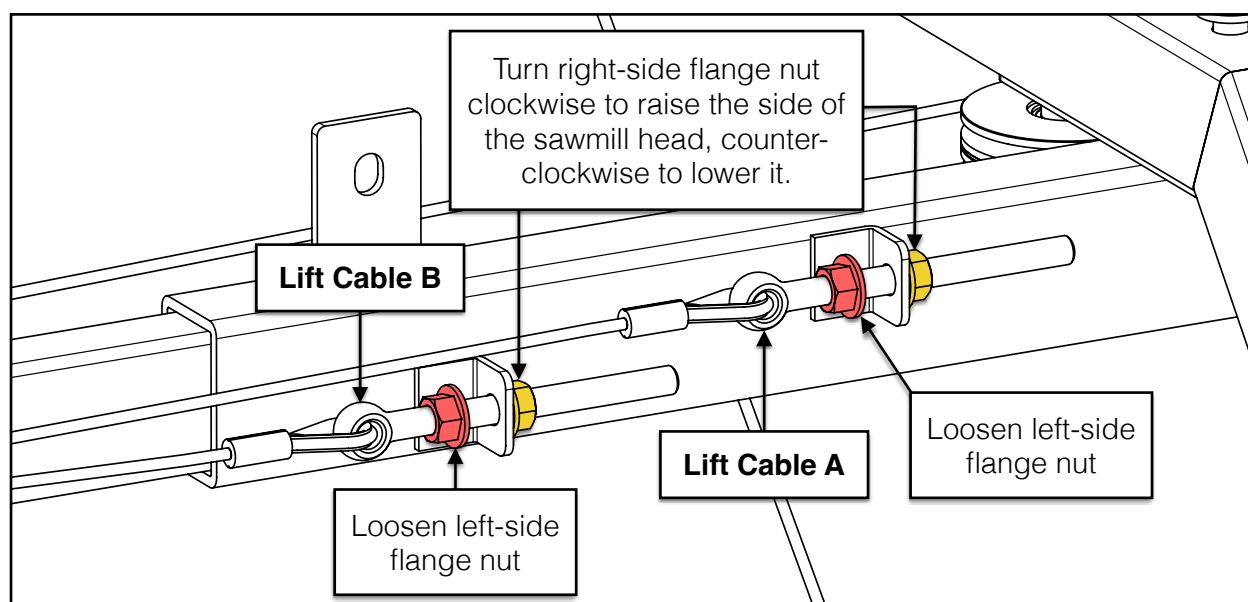
LEVELLING THE SAWMILL HEAD ASSEMBLY

Using a tape measure, measure the distance from the blade to the top of the log bunk on both the left and right side. The distance should be equal. If the measurements are not equal, adjust the lift cable ends under the lift mechanism sub-assembly to either raise or lower one side.



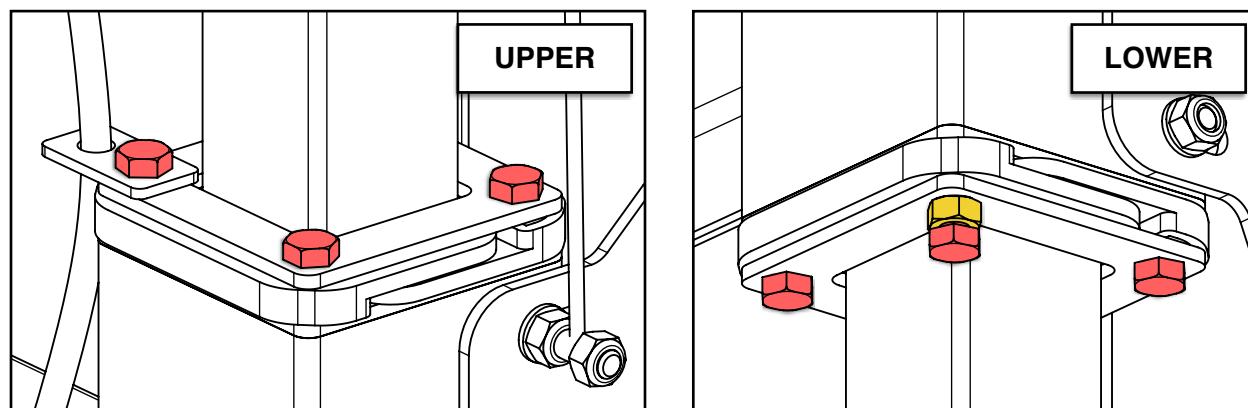
Loosen the left-side flange nuts on the lift cable eyebolts first. Turn the right-side flange nuts clockwise to raise one side of the sawmill head assembly, or counter-clockwise to lower it. Double-check the blade height as discussed in the previous step.

Once the measurements on both sides are equal and the sawmill head is level, tighten the left-side flange nuts securely against lift mechanism brackets.



ADJUST THE POST SLEEVE BUSHINGS

Once the sawmill head assembly is level, loosen the eight (8) hex bolts (4 top, 4 bottom) just enough so the bushings can be pushed forwards and backwards. Do this for both sides of the sawhead.

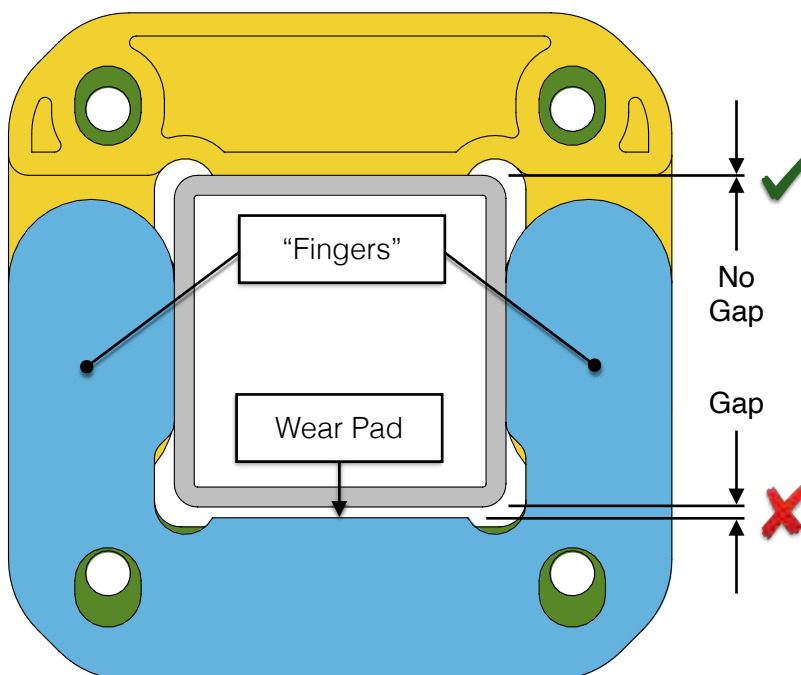


Push the bushings together (front-to-rear) so that there is no gap between the bushing wear pads and the front/rear faces of the post as shown below.

The bushing side “fingers” naturally push inwards so as they wear, continuous pressure is applied to each side of the carriage post.

However, the front & rear wear pads on the bushings do not self-adjust. As a gap appears over time due to wear, simply loosen two (2) bolts on one side and push the bushing towards the post until they are flush again.

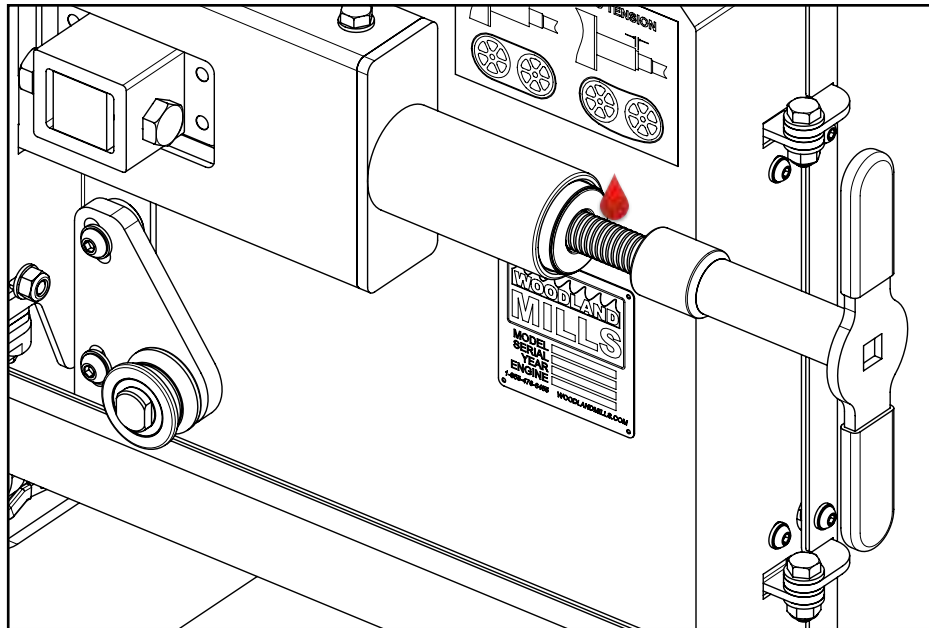
The bushing holes are slotted to allow for this future adjustment.



With the wear pads flush with the posts, tighten all the hex bolts and spray the posts with a water resistant silicone lubricant such as **“WD-40 Water Resistant Silicone Spray”** or **“3-in-One Silicone Spray Lubricant.”**

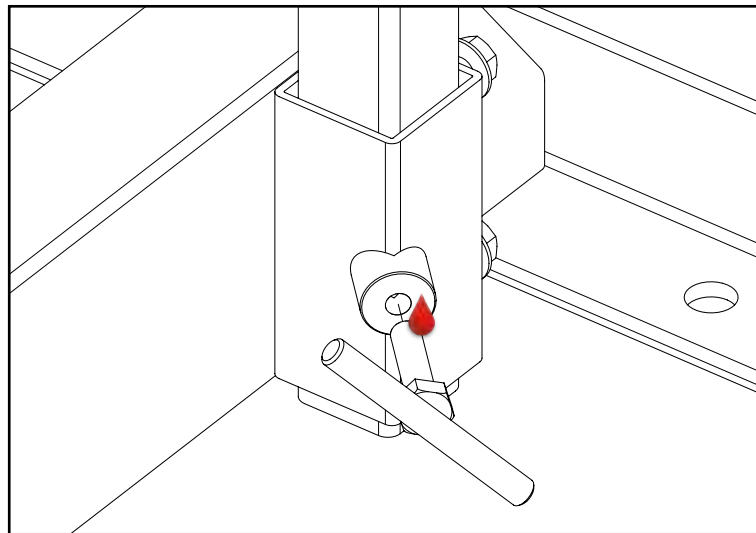
GREASING THREADS

Add waterproof grease to the tension handle threads and to the mating thrust bearing face prior to use.



****Note: It is very important to take the tension off the blade by turning the tension handle in the counter-clockwise direction when the sawmill is not in use. Failure to do so will result in flat spots on the rubber belts. These flat spots will cause the mill to vibrate excessively during subsequent uses.****

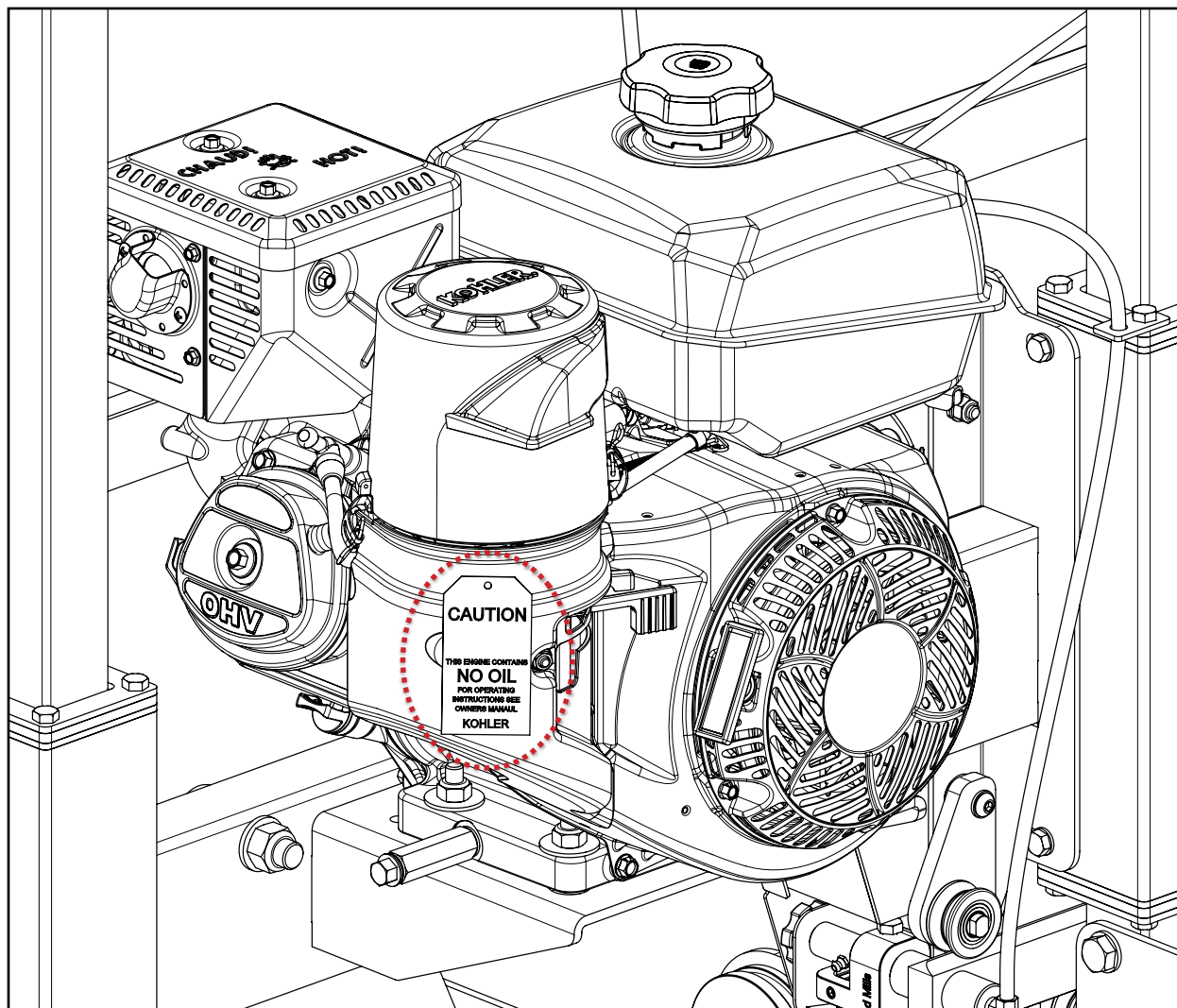
Add grease to all T-bolt threads on the sawmill track: three (3) on the bunks and one (1) on the log clamp assembly.



ENGINE OIL

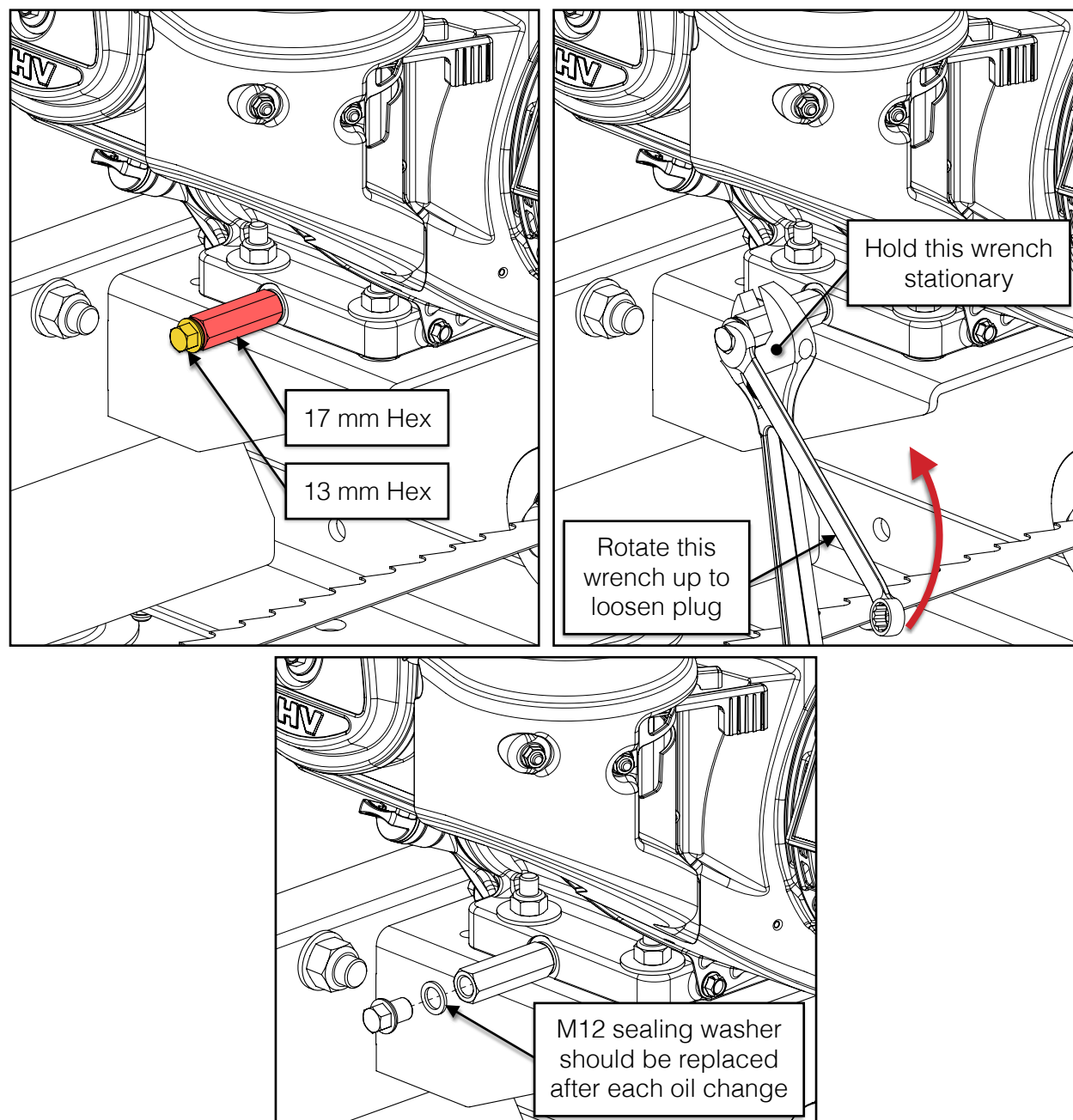


Refer to the engine manual before using your sawmill. Please note that the engine does not contain any gasoline or engine oil when it is shipped. Furthermore, the engine is equipped with an oil alert system, meaning that if the crankcase oil level is low or empty, the power is cut to the spark plug and it will not start.



When changing the engine oil, follow the instructions on the next page.

The engine comes with a brass oil drain extension to make oil changes easier. When removing the drain plug, use a wrench to hold the brass extension stationary while a second wrench loosens the plug. Failure to follow this procedure could damage the threads in the aluminum engine block and void the warranty.



Repeat the process in reverse to re-install the drain plug. Remember to hold the brass extension stationary with a second wrench when tightening the plug.

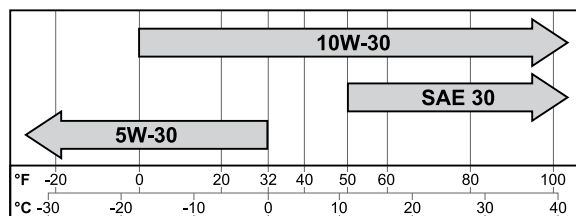
PRE START-UP CHECKLIST



1. Fill the engine with high octane (low ethanol) premium gas only. Never run low grade gasoline in the sawmill.
2. Fill the engine with oil using the table below based on your engine model and operating air temperatures:



Engine	Model	Horsepower	Capacity	
			US Quarts (qt)	Litres (L)
Kohler	CH270	7 hp	0.63	0.6
➔ Kohler	CH395	9.5 hp	1.16	1.1
➔ Kohler	CH440	14 hp	1.16	1.1



****Note: Engines are not equipped with a clutch reduction system, therefore, reference to this in the Kohler manual can be ignored. The engine is also equipped with an oil alert system that will prevent the engine from starting if the oil level is low.****

3. **Do not run lubricant for the initial 30 minutes of milling.** Run the blade dry to break-in the belts. After the belts have been broken-in, the below lubricant can be used:



34°F [1°C] and warmer: Water with 1 tsp [5 ml] of liquid dish soap per tank.

32°F [0°C] and colder: Winter windshield washer fluid.

****Never use diesel fuel or other chemicals as they will prematurely deteriorate the rubber belts and can stain the wood.****



4. Test the **blade tracking** to ensure the blade band is centred on both band wheels.



5. Check blade tension to ensure it is **fully tensioned**. Refer to the label on the back of the blade guard near the tension handle.



6. Ensure the wire loop on the dashboard hour meter has been cut so it will record the hours of use on the machine.



7. To start the engine and begin milling: turn the choke and gas on. Pull the engine cord or turn key (electric-start engine models only). Once the engine starts, turn the choke off slowly and let the engine warm up for 1 minute. ***Always mill at full throttle.***



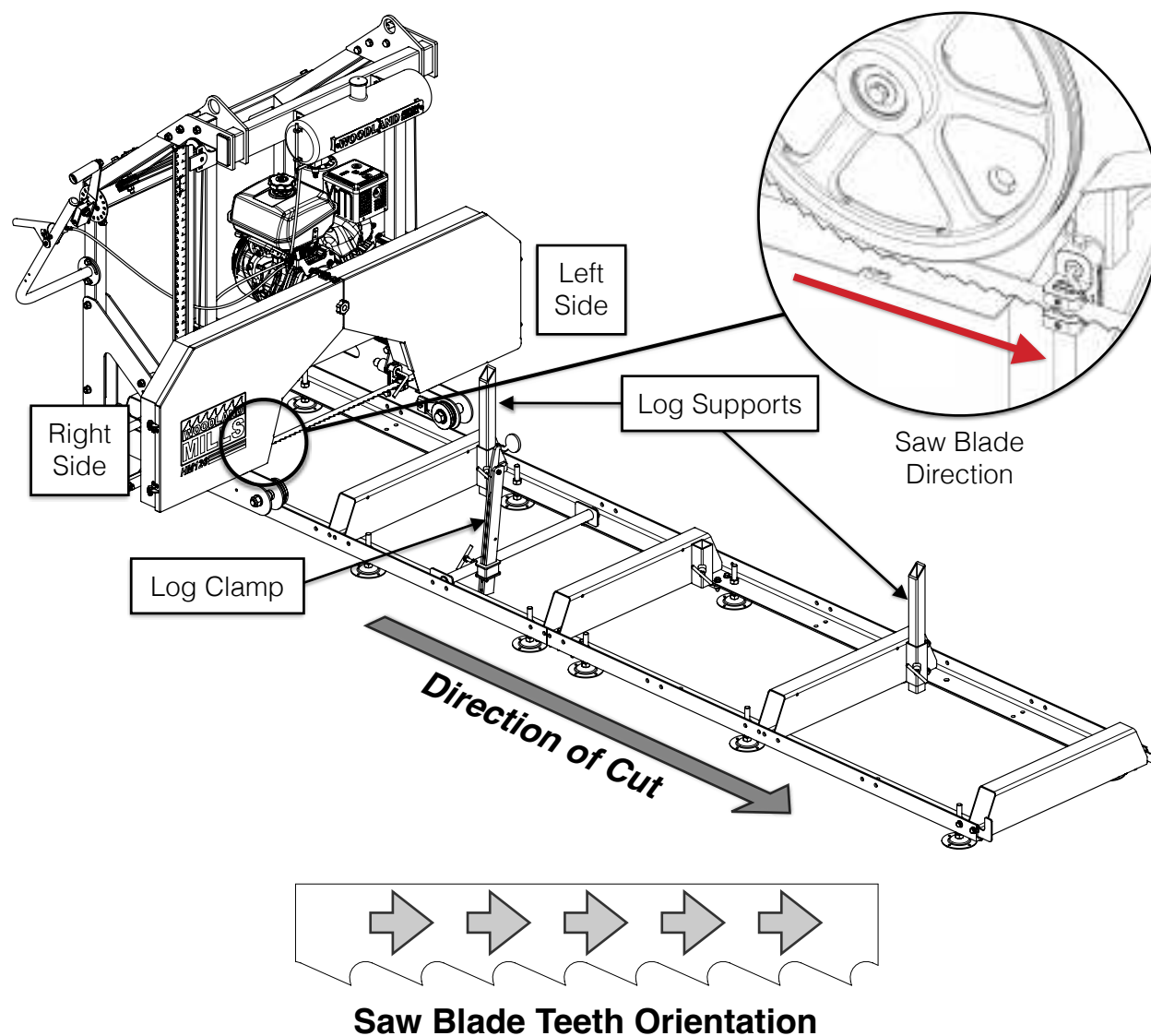
8. After the first hour of use, inspect the drive belt tension and adjust if required. Refer to the operator's manual for detailed tensioning instructions.



SAWMILL SET-UP PROCEDURES

DIRECTION OF CUT

Always cut in the direction shown below. The log clamp is located to the right side of the log with the log supports on the left. Failure to cut in this direction can cause the log to come loose and possibly cause damage or injury.



Always ensure the saw blade teeth are orientated such that they are cutting *into* the wood and not being dragged backwards across it. Some blade manufacturers ship their saw blades inside out (backwards) due to manufacturing processes and they must be flipped prior to installation.

****Please follow the instructions throughout the SAWMILL SET-UP PROCEDURES section. Failure to do so may result in poor sawing performance, damage or injury.****

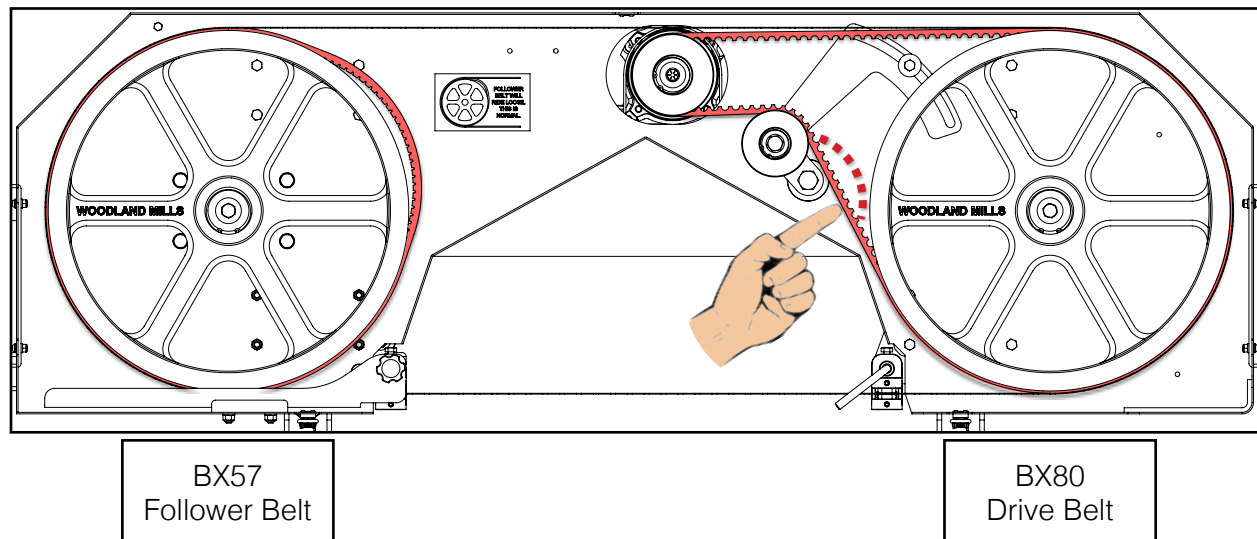
DRIVE BELT TENSION



Make sure the blade is under proper tension when setting the drive belt tension. This ensures the belt is fully seated into the pulley grooves when the deflection is checked. See section, BLADE TENSION, for more information.



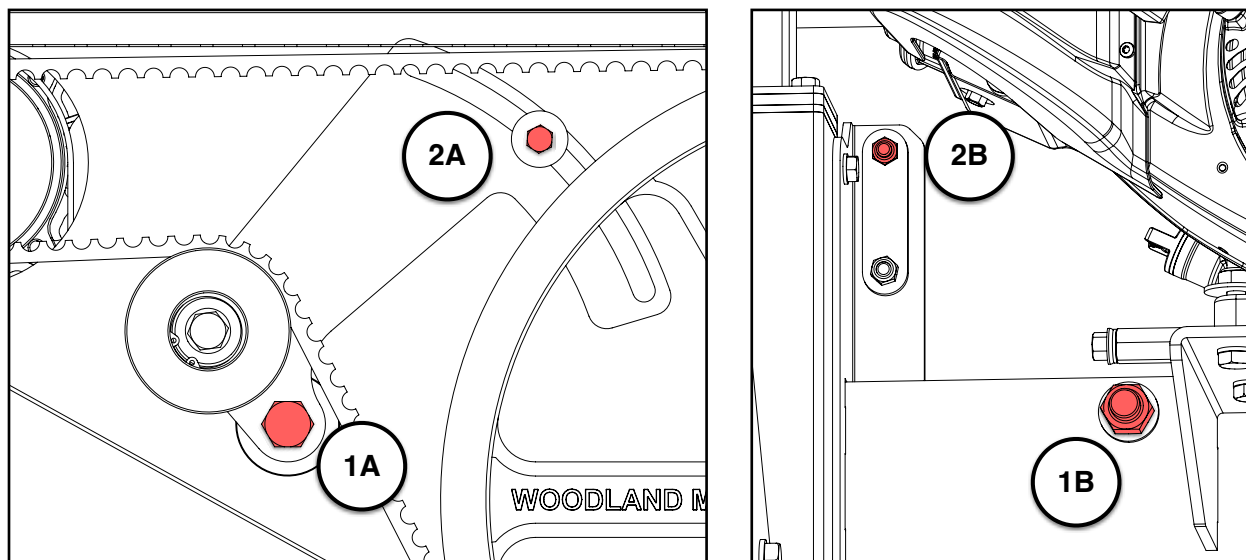
To check the drive belt tension, push against it firmly and measure the deflection. There should be no more than ¼ in [6 mm] of movement. If the belt deflection exceeds this amount it will need to be tightened as described below.



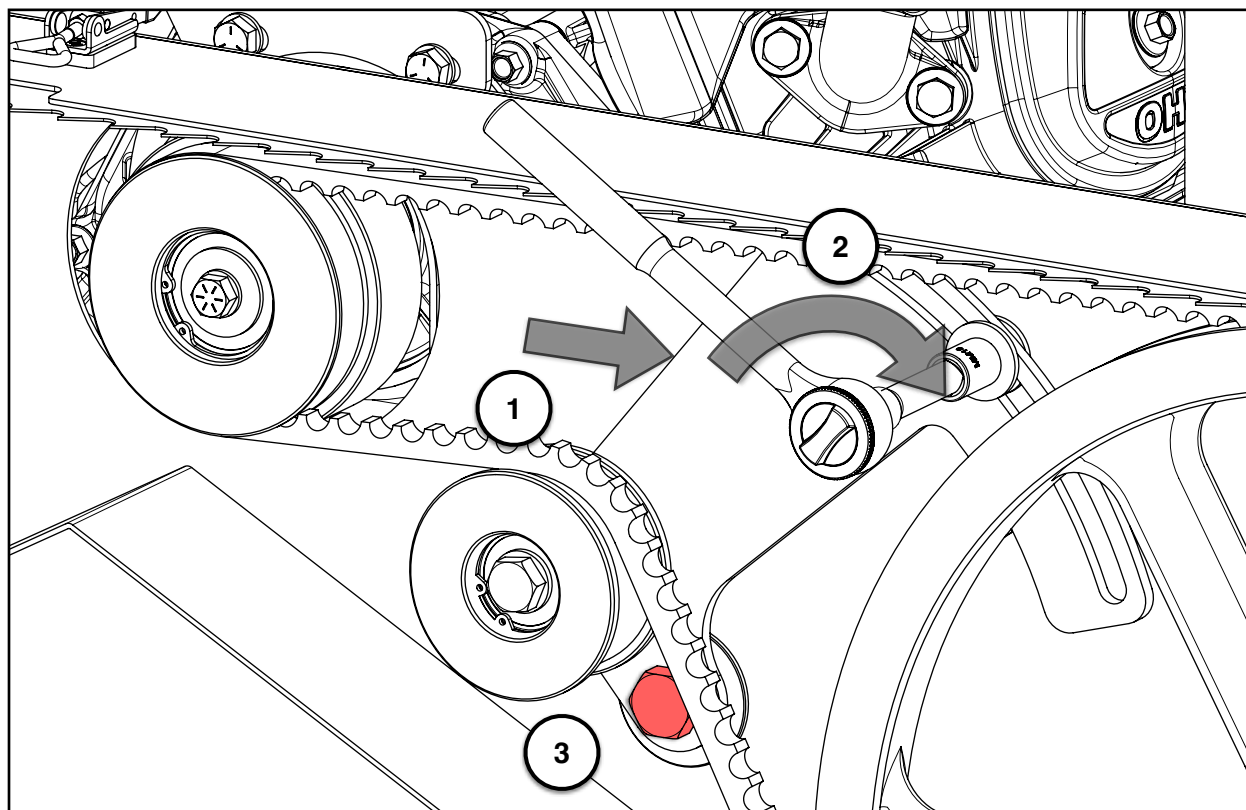
****Never attempt to adjust the belt tension with the engine running. As a safety precaution, remove the spark plug cap.****

Start by loosening the M16 hex bolt (1A) and lock nut (1B) that secure the belt tensioner mechanism to the sawhead. Then loosen the M8 bolt (2A) in the curved slot—its nut (2B) is secured in place by an anti-rotation device and does not require a second wrench or socket.

****Only loosen the bolts approx. one turn—do not remove them.****

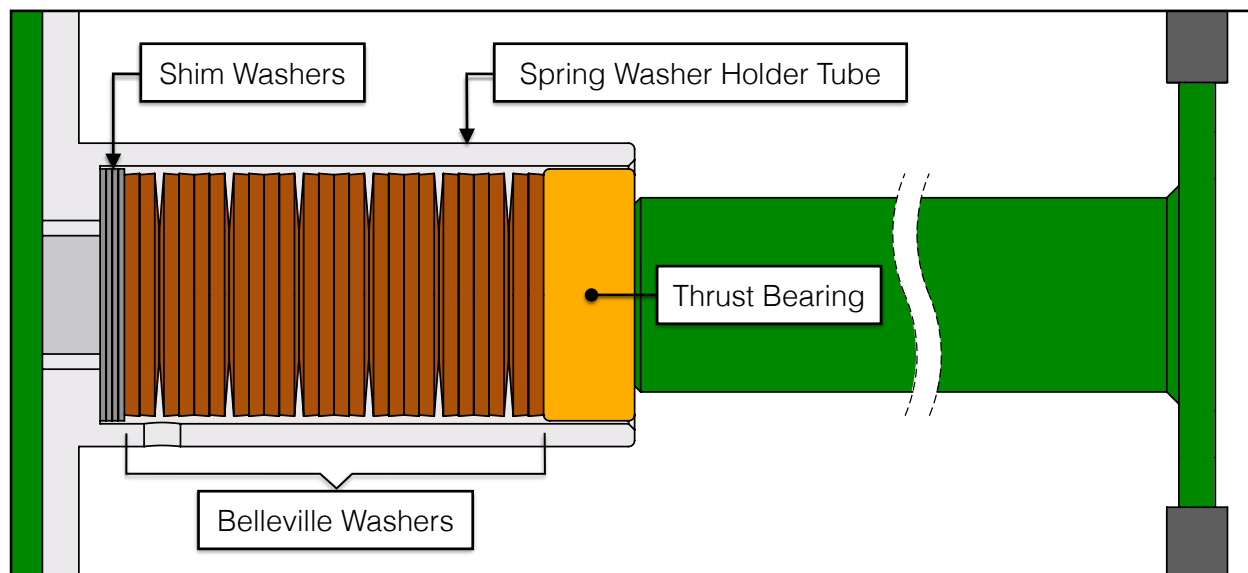


Once both bolts are loose, firmly push the belt tensioner towards the band wheel until the belt is tight (#1), then tighten the upper bolt in the curved slot in a clockwise direction using a 13 mm socket (#2). Re-check the belt tension to ensure a maximum of $\frac{1}{4}$ in [6 mm] deflection and then tighten the M16 bolt and lock nut when the deflection is correct (#3).



BLADE TENSION

The 2020 and newer Woodland Mills sawmills use an ACME threaded rod for blade tensioning mounted within an assembled stack of Belleville washers for blade cushioning. This combined assembly allows for predictable and repeatable tensioning throughout all temperature ranges with minimal wear and maintenance.



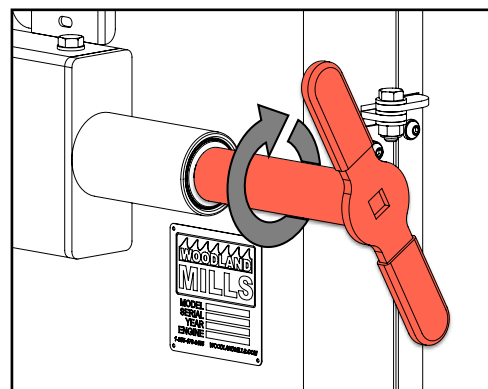
Below is a table comparing the positive and negative effects of low and high blade tension.

Low Tension 2→2-½ Turns	Recommended Tension 2-½→3 Turns	High Tension 3→3-½+ Turns
<ul style="list-style-type: none"> Unpredictable tracking 	<ul style="list-style-type: none"> Holds tracking properly 	<ul style="list-style-type: none"> Accelerated belt wear
<ul style="list-style-type: none"> Wavy cuts 	<ul style="list-style-type: none"> Cuts accurately. Optimal blade life 	<ul style="list-style-type: none"> Unpredictable tracking
<ul style="list-style-type: none"> Blades rely more on guides 	<ul style="list-style-type: none"> Optimal bearing life 	<ul style="list-style-type: none"> Overheated blades. Blade breakage
	<ul style="list-style-type: none"> Optimal belt life 	<ul style="list-style-type: none"> Accelerated bearing wear

TENSIONING METHOD

Count Turns: Spin the tension handle to remove slack in the blade and snug the handle up to the thrust bearing. From this point, 2-½ to 3 full turns will put the blade tension within the recommended range.

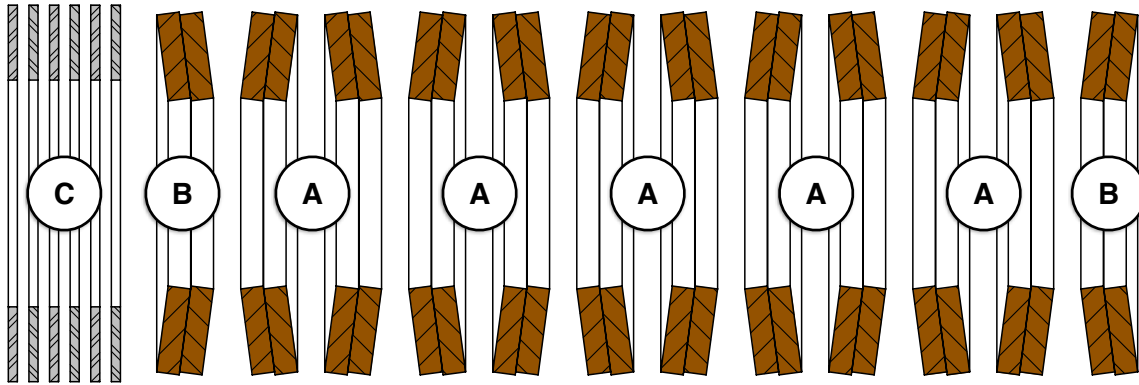
This will account for wear and settlement without any future calibration.





BELLEVILLE WASHER STACK

If the spring washer holder is removed for maintenance (e.g. greasing or replacement), ensure the twenty-four (24) Belleville washers inside are oriented and installed as shown below. There are five (5) groups of four washers (4)—each containing two (2) opposing nested pairs **A**—with a single nested pair **B** at each end. There may also be up to six (6) shims **C** installed on the left (inner) end of the stack.

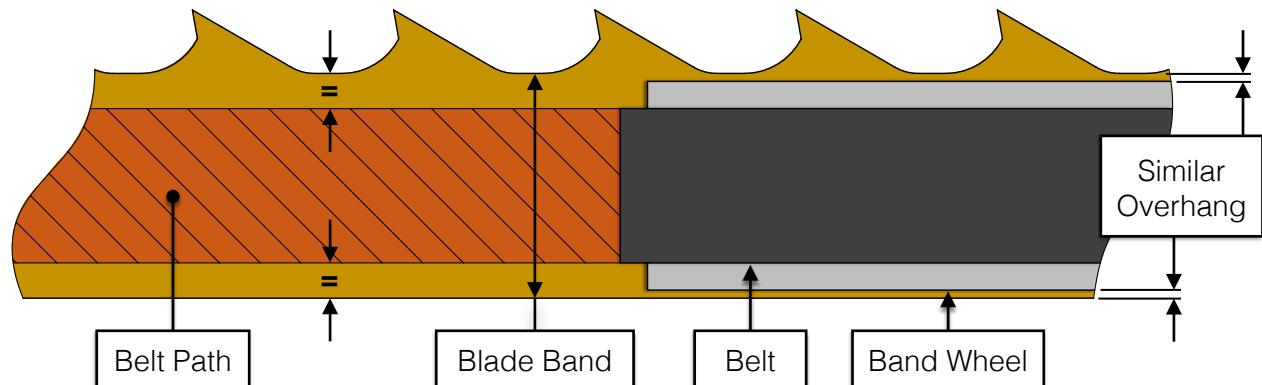




BLADE TRACKING

Blade tracking is the fine-tuning of the band wheel angles to “hold” the blade during cutting. This “hold” position maintains the blade’s location during most sawing conditions, with the guide bearings and blocks acting as occasional supports. A properly tracked sawmill will hold the band portion of the blade centred on the belts without any guides in contact with the blade.

This image shows the “ideal position” with the blade band centred on the belts & band wheels.



Precise measurements are not required to centre the blade band with the belts & band wheels. Visually confirming the front and back of the blade overhang a similar amount is adequate.

What Happens when Tracking is “Off?”

- ▶ Excessive blade guide bearing wear
- ▶ Wavy cuts caused by uneven tension within the blade
- ▶ Overheating blades / blade breakage
- ▶ Excessive belt wear
- ▶ Blade will not stay on the belts

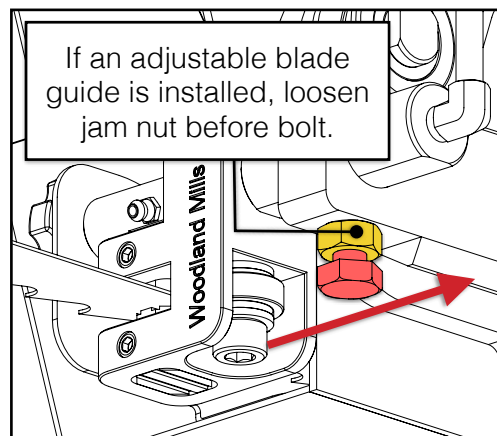
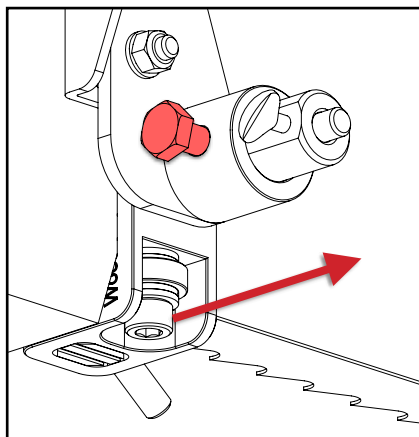
Important Points:

- ▶ Tracking testing can only be made with a blade installed.
- ▶ Tracking testing is done under full blade tension. A fully tensioned blade is when the tension handle is snugged to the thrust bearing and then rotated a further 2-½ to 3 full turns.
- ▶ Tracking *adjustments* are made at three (3) turns off full blade tension.
- ▶ The blade should run in the same location on both the follower and drive-side belts.
- ▶ Guide assemblies should *always* be pushed all the way back, clear of the back of the blade. Nothing should ever be in contact with the blade when testing or making tracking adjustments.
- ▶ The following test and adjustments should only be attempted with drive and follower belts that are in good repair and keeping the blade up off the cast iron band wheels.
- ▶ Tuning the blade tracking is a process of testing and adjusting—re-testing and adjusting—re-testing and adjusting. The number of cycles is determined by how far off the tracking was at the start of the process.
- ▶ Please see the following pages for testing and adjustment procedures.



TEST PROCEDURE

1. Always wear safety gloves and eyewear. Never attempt to adjust the blade tracking with the engine running. Remove the spark plug cap as a safety precaution.
2. Loosen the blade guide assemblies, push them back as far as possible, and secure. This will ensure the guide blocks and bearings will not touch the blade during the test.

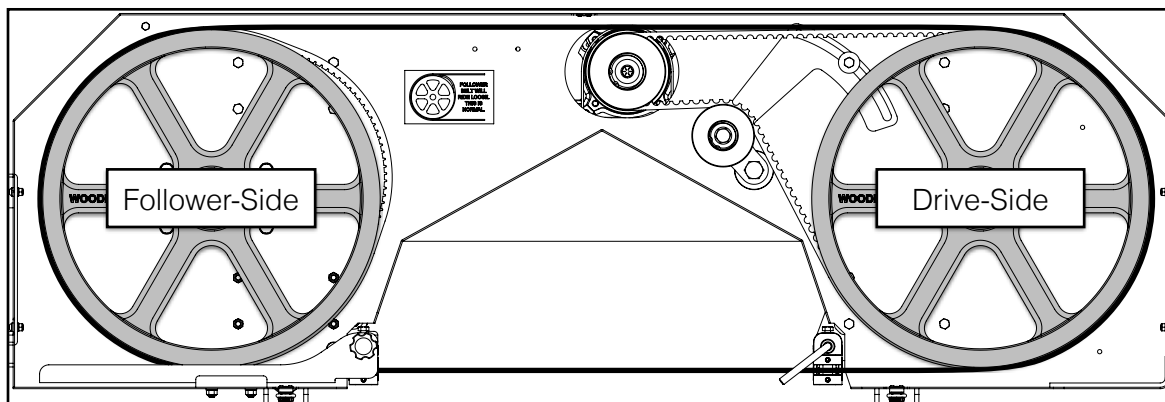


3. Install a blade if one is not already installed.
4. Fully tension the blade by snugging the tension handle to the thrust bearing and rotate it a further 2-½ to 3 full turns.
5. Start rotating the band wheels by hand in the direction of cut observing how the blade moves *forward* or *rearward* on the belts to find its “hold” position.

****If the blade looks as if it is going to come off during hand rotations—STOP—and proceed to the Follower-Side or Drive-Side Adjustment as required.****

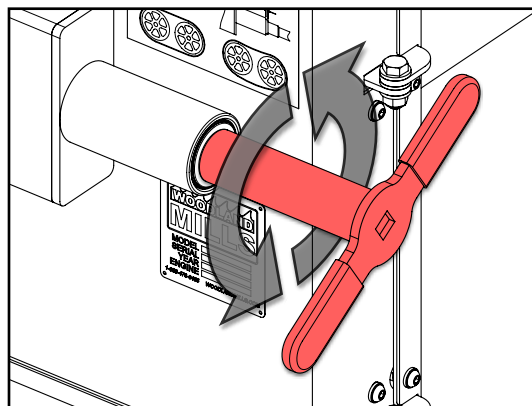
Important Points Before Making Adjustments:

- ▶ Start adjusting the side that is furthest out of spec first.
- ▶ Since adjustments made to one side can affect the other side, always adjust one side first, rerun this test procedure, then adjust the other side if needed.
- ▶ Because ¼ turn adjustment increments are recommended, it is common to run this test a few times between multiple adjustments before correct tracking is achieved.



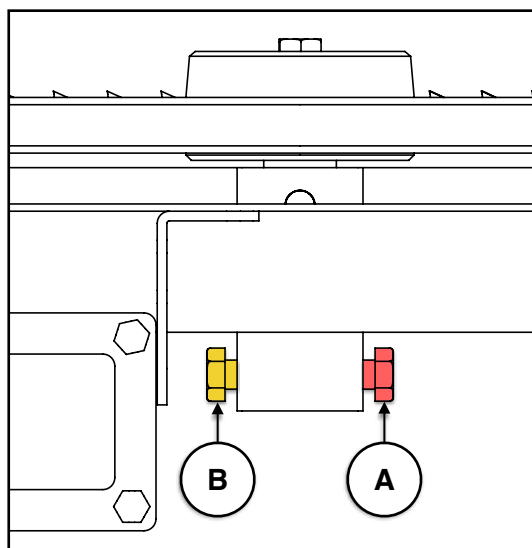


FOLLOWER-SIDE ADJUSTMENT



1. Back off the blade from full tension by three (3) full turns of the tension handle.

****Ensure blade guides are still pushed back and clear of the blade.****



2. Adjust the blade position:

FORWARD

To move the blade *forward* on the belt:

- i. Loosen the right-side bolt (A) ¼ turn.
- ii. Tighten the left-side bolt (B) to clamp the follower shaft back in place.

—OR—

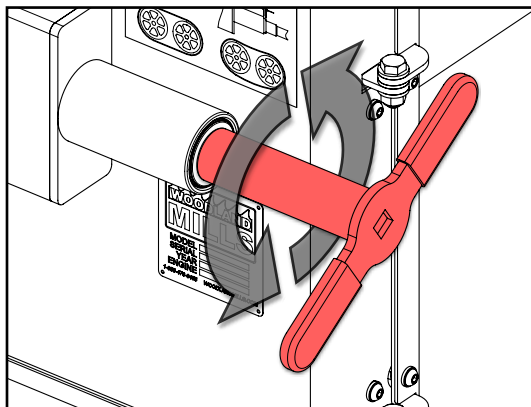
REARWARD

To move the blade *rearward* on the belt:

- i. Loosen the left-side bolt (B) ¼ turn.
- ii. Tighten the right-side bolt (A) to clamp the follower shaft back in place.

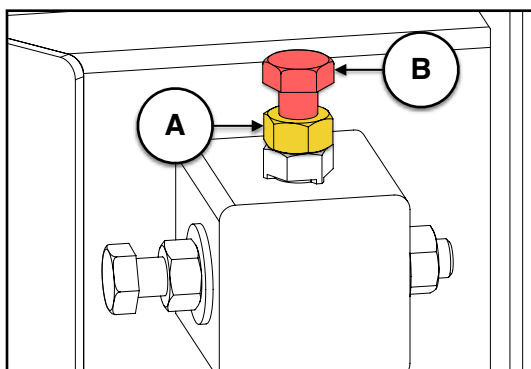
3. Repeat the **Test Procedure** to see if further adjustment is needed.
4. Repeat the follower-side adjustment steps and test procedure as many times as necessary until the blade is tracking properly.

DRIVE-SIDE ADJUSTMENT

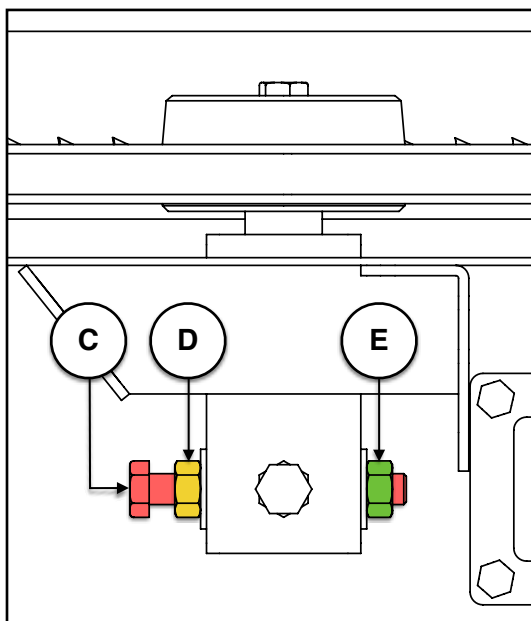


1. Back off the blade from full tension by three (3) full turns of the tension handle.

****Ensure blade guides are still pushed back and clear of the blade.****



2. Loosen the jam nut (A) on the upper bolt.
3. Loosen the upper bolt (B) ½ turn.



4. Adjust the blade position:

FORWARD

To move the blade *forward* on the belt:

- i. Hold the horizontal bolt (C) stationary with a wrench.
- ii. Loosen the right-side nut (E) ¼ turn.
- iii. tighten the left-side nut (D).

—OR—

REARWARD

To move the blade *rearward* on the belt:

- i. Hold the horizontal bolt (C) stationary with a wrench.
- ii. Loosen the left-side nut (D) ¼ turn.
- iii. tighten the right-side nut (E).

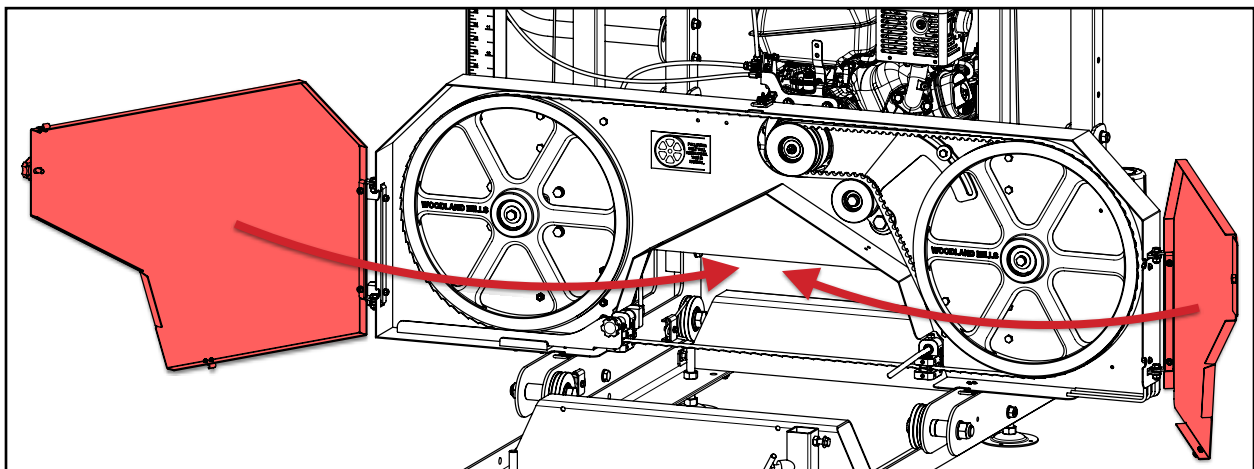
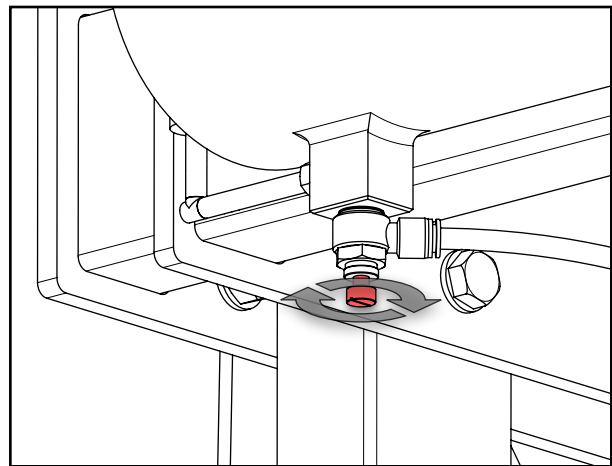
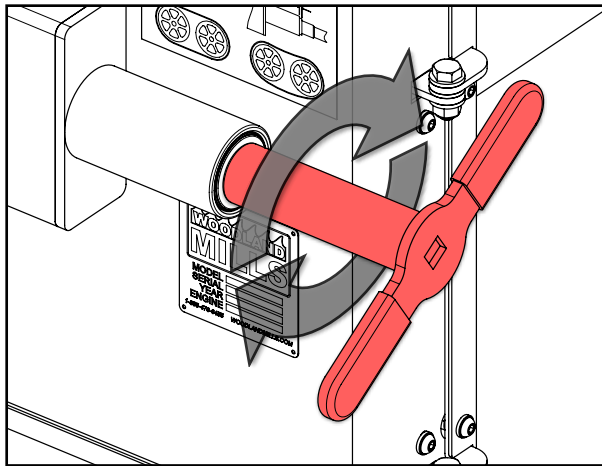
5. Re-tighten the upper bolt (B) followed by the upper jam nut (A).
6. Repeat the **Test Procedure** to see if further adjustment is needed.
7. Repeat the drive-side adjustment steps and test procedure as many times as necessary until the blade is tracking properly.



TRACKING RUN-IN

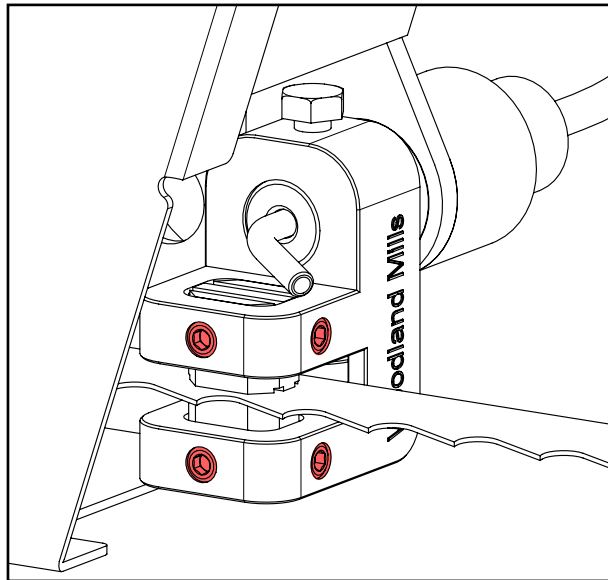
Once the band wheel angles have been tuned and the blade's "hold" position is correct as per the test procedure:

1. Fully tension the blade by snugging the tension handle to the thrust bearing and rotate it a further 2-½ to 3 full turns.
2. Disable lubrication by closing the valve on the tank.
3. Close and latch the band wheel housing doors.
4. Start the engine.
5. Take the engine slowly up to half throttle for fifteen (15) seconds, then full throttle for an additional fifteen (15) seconds, and then turn the engine off and wait for the blade to stop spinning.
6. Open the band wheel housing doors and confirm the tracking settings have held.
7. Bring the guides forward into place and set as per the following section, **BLADE GUIDE ADJUSTMENT**.

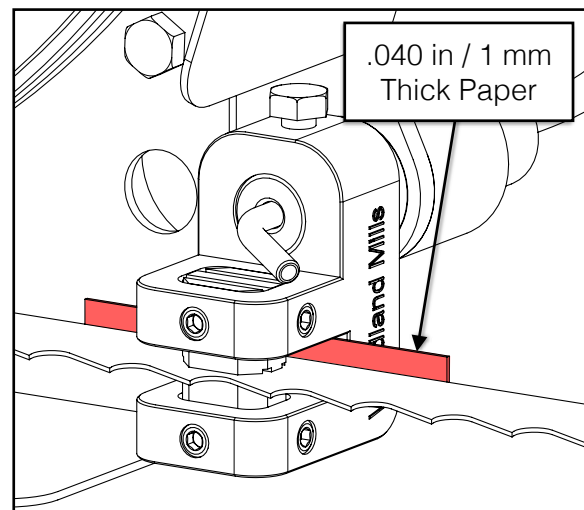
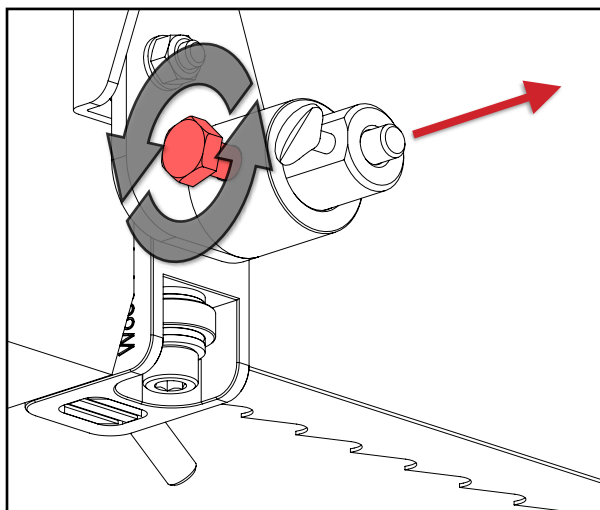


BLADE GUIDE ADJUSTMENT

Never attempt to adjust the guide blocks or the guide bearing with the engine running. As a safety precaution, remove the spark plug cap. It is also advised to confirm that the blade is tracking properly before performing the steps below. Blade tracking is covered in the **BLADE TRACKING** section. Using a 4 mm hex key, loosen the blade guide blocks on both the left and right sides. They should be free to slide up and down.

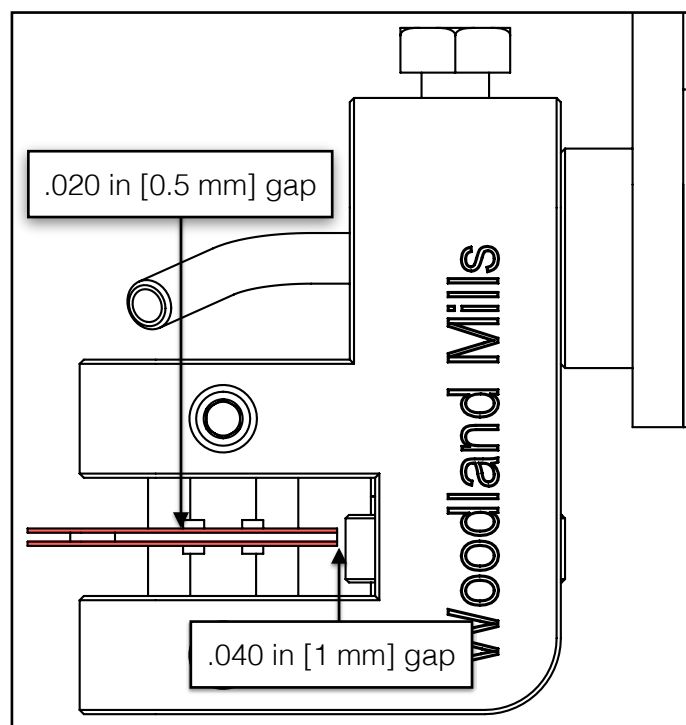
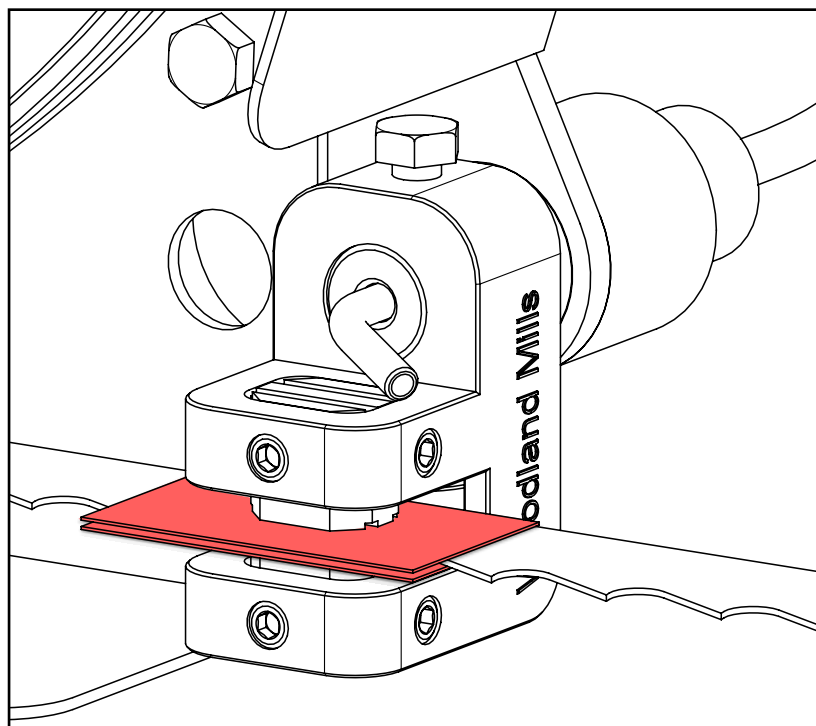


Loosen the blade guide assembly bolts on both guide block holders so that the round shaft is free to slide back and forth. Position it so that there is a thick paper-sized gap (.040 in or 1 mm) between the bearing and the back of blade. Re-tighten the bolt against the flat on the shaft to secure the assembly into position.



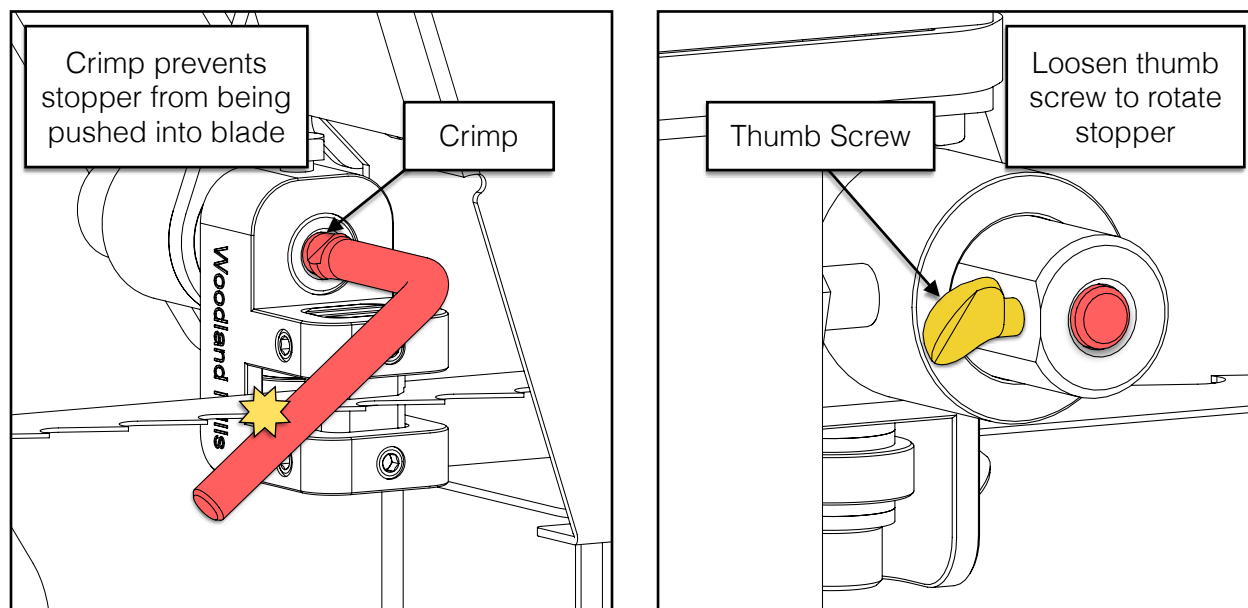


Using a feeler gauge or thick piece of paper (.020 in / 0.5 mm), place it between the blade and both guide blocks and then tighten the set screws.

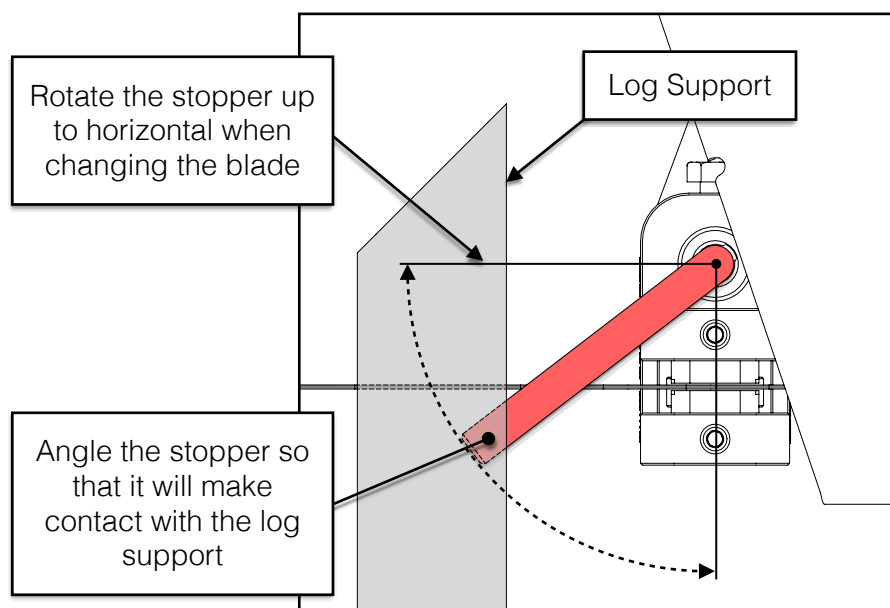


BLADE STOPPER ADJUSTMENT

The drive-side guide block holder is equipped with a blade stopper. The stopper prevents the blade from running into the log supports during a cut. There is a crimp on the stopper shaft that also prohibits it from being pushed backwards into the blade. The angle of the stopper is adjusted by loosening the thumb screw located at the rear of the guide block holder shaft.



Angle the stopper so that it will make contact with the log support as shown below. The sawhead may have to be *lowered*—or the log support *raised*—to verify contact between the two prior to making cuts. Note: rotate the stopper up to horizontal when changing the blade.



Steps:

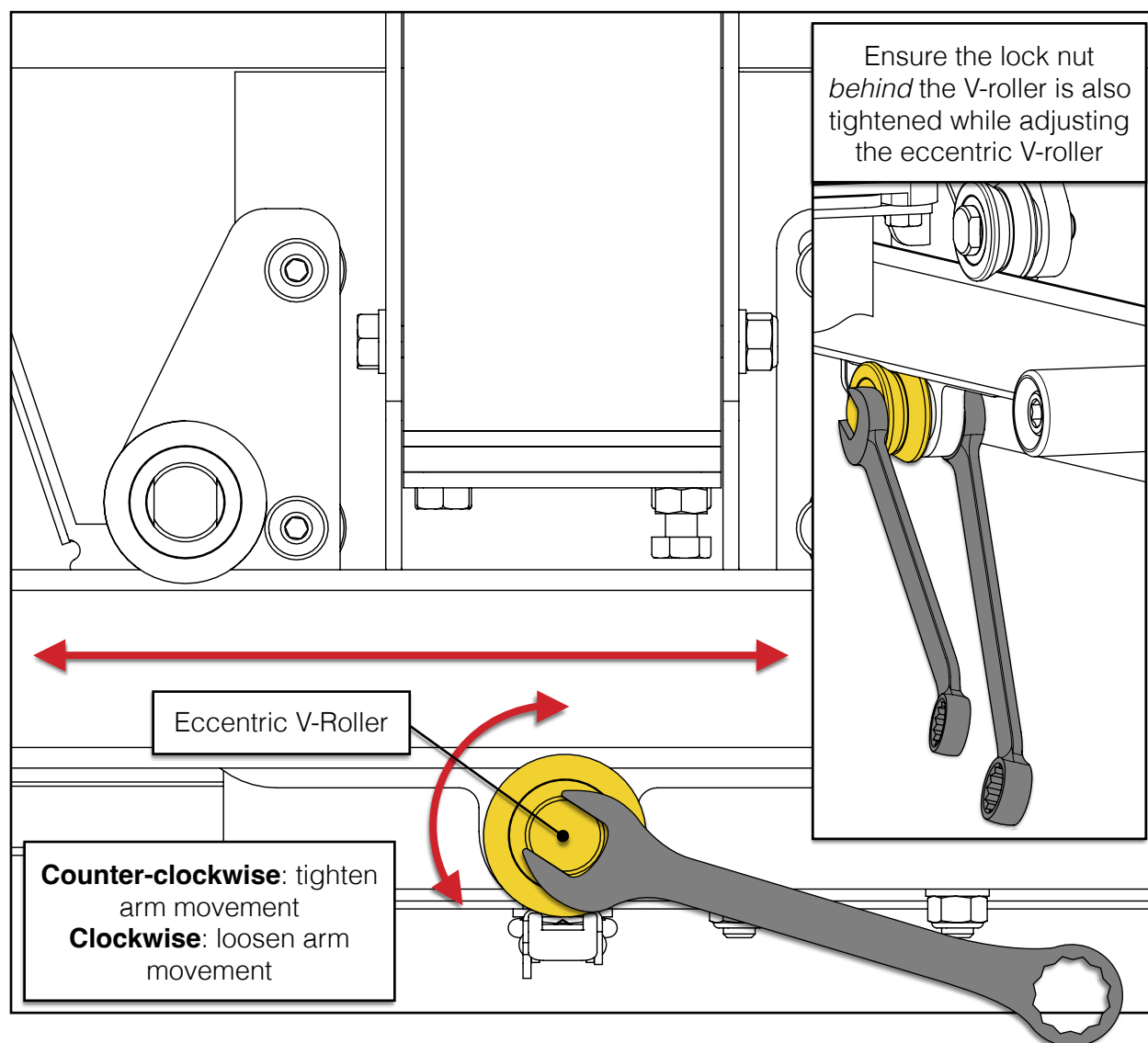
1. Loosen the thumb screw.
2. Set the stopper angle.
3. Tighten the thumb screw.

ADJUSTABLE BLADE GUIDE CALIBRATION

14 hp Sawmill Owners (Optional on 9.5 hp Sawmills)

ECCENTRIC V-ROLLER ADJUSTMENT

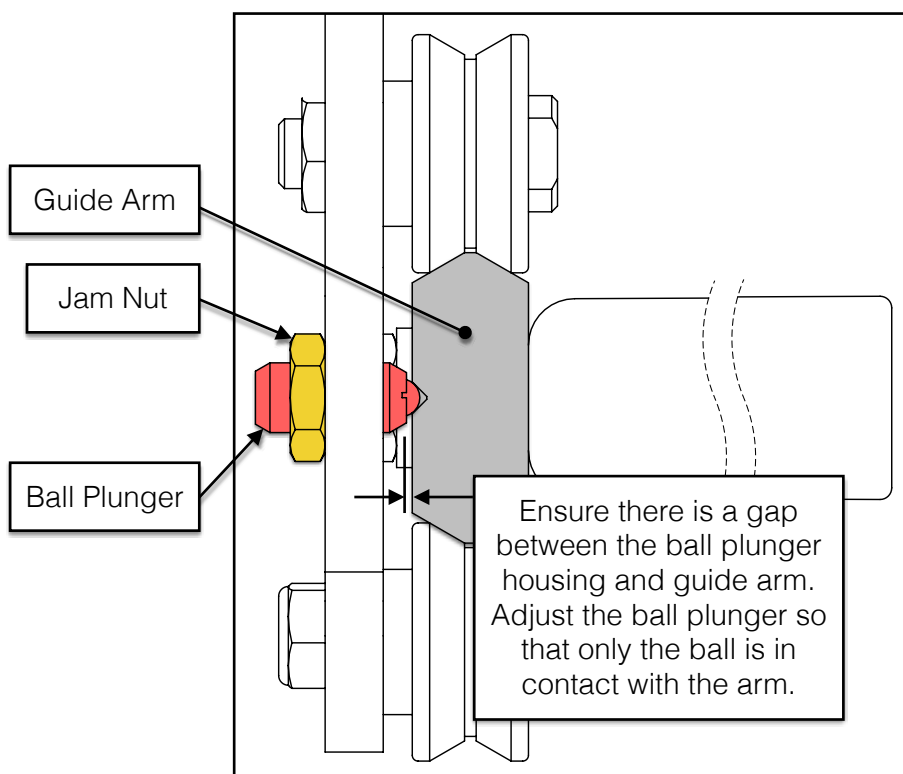
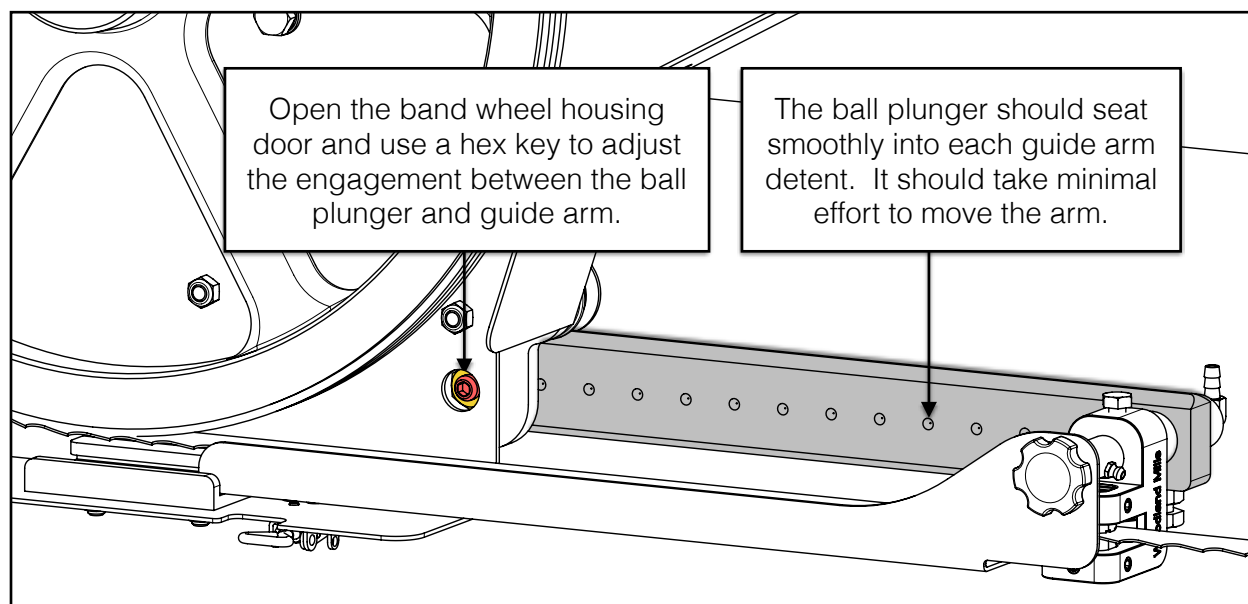
Slide the adjustable blade guide (ABG) arm in and out to check that it moves smoothly between the V-rollers. If it feels too loose or too tight, adjust the bottom eccentric roller using a wrench. Turning it counter-clockwise will tighten the arm movement; turning it clockwise will loosen the movement.



****Some components removed for clarity.****

BALL PLUNGER ADJUSTMENT

If extending and retracting the guide arm is still difficult after adjusting the eccentric V-roller, the ball plunger may require adjustment. Slide a wrench between the band wheel housing and ABG carriage and loosen the ball plunger jam nut.

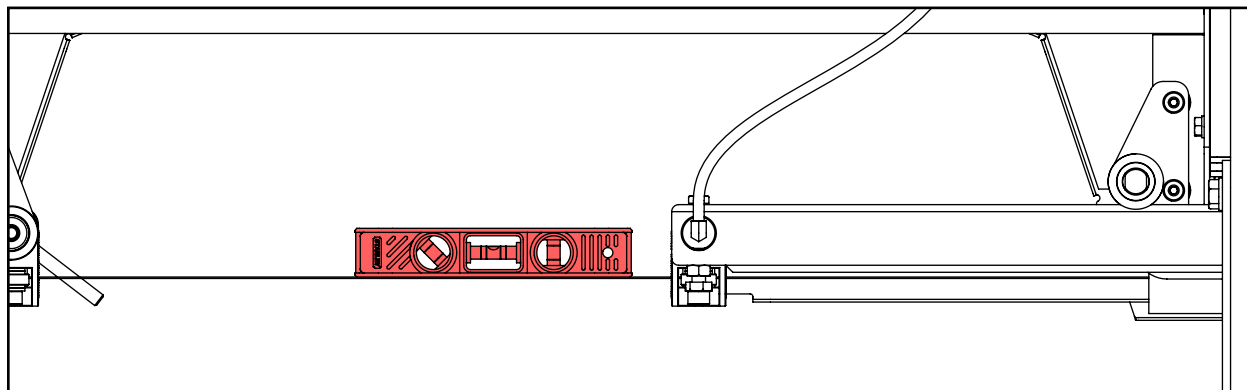


After adjusting the ball plunger, slide the guide arm in and out a few times to verify the movement feels smooth and that there is positive engagement between the ball plunger and guide arm detents. If not, adjust the ball plunger with the hex key again and repeat the process until satisfied.

Once the guide arm is moving well, tighten the ball plunger jam nut.

CARRIAGE & GUIDE ARM ADJUSTMENT

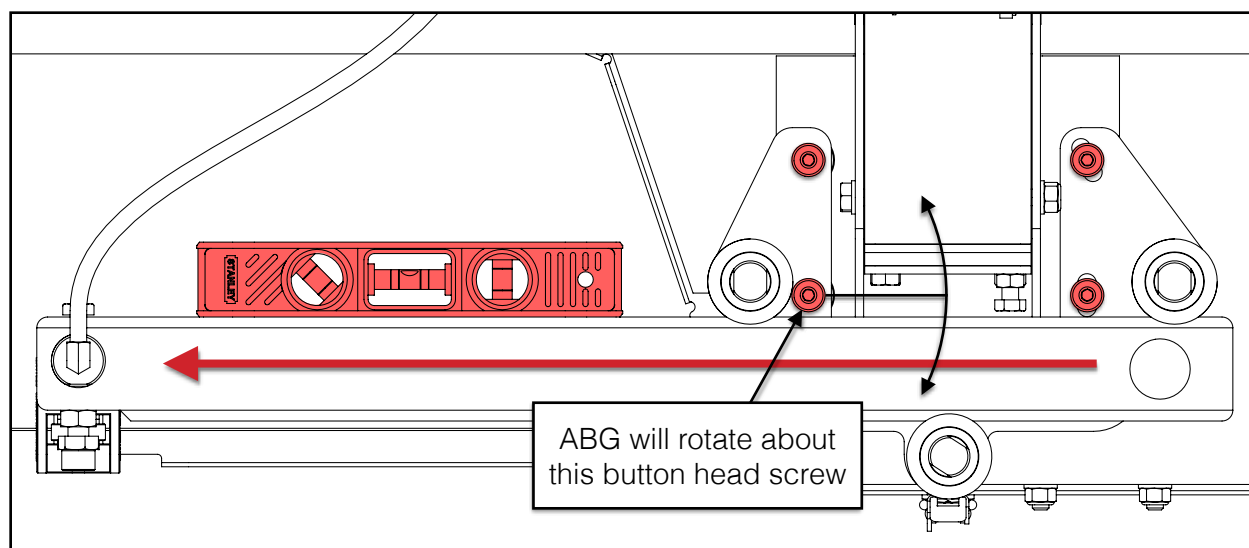
If the guide arm does not extend parallel with the blade, apply full tension to the blade and place a spirit level on the blade to check its level.



Loosen the four (4) button head screws just enough to the carriage can rotate. The carriage will rotate about the lower-left screw as shown below.

Fully extend the guide arm and set the level on top of the arm.

Rotate the ABG carriage and guide arm until it matches the blade level so both are parallel. Slide the guide arm in-and-out to verify that the gaps between the guide blocks and the blade are uniform. See previous section, **BLADE GUIDE ADJUSTMENT**, for more information.



Once the ABG is properly adjusted, fully tighten the four (4) button head screws on the carriage.



SAWMILL MAINTENANCE

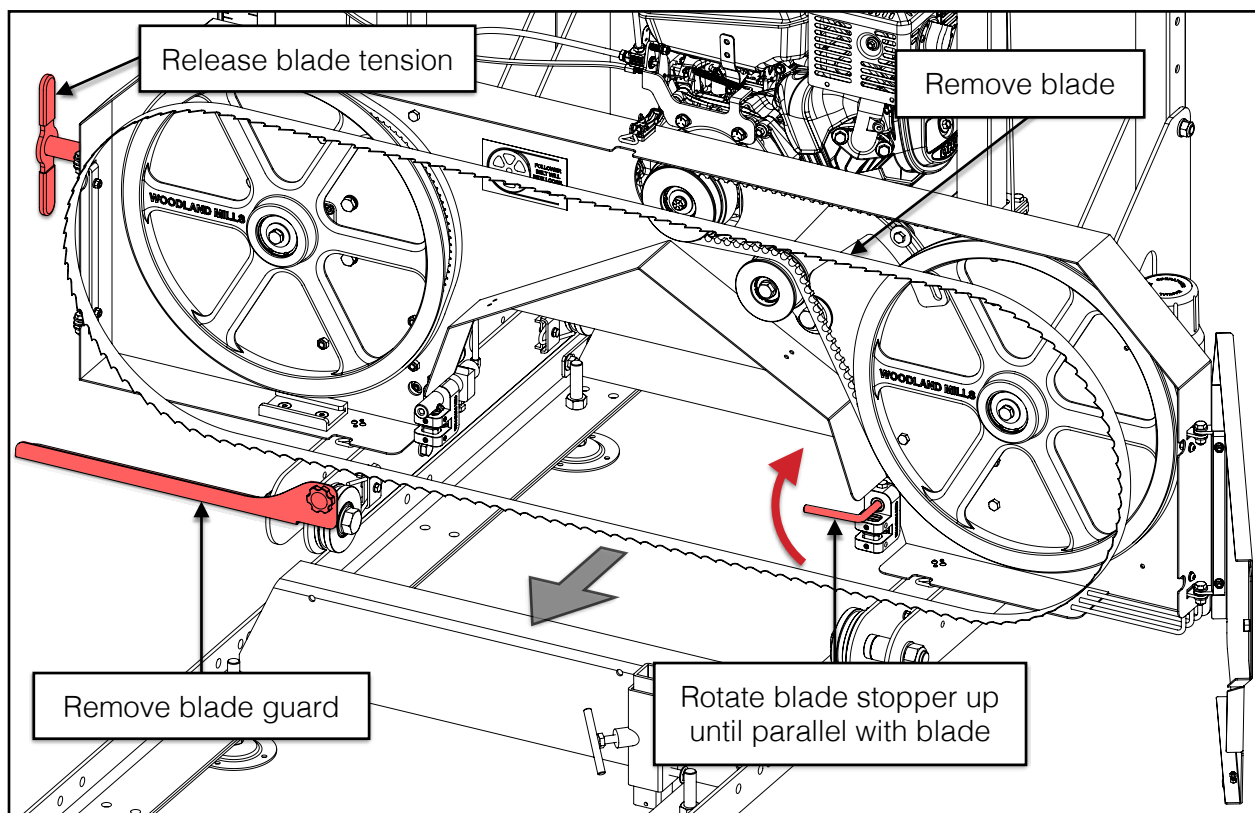
CHANGING THE BLADE

Never attempt to change the blade with the engine running. As a safety precaution, remove the spark plug cap. Gloves and safety glasses must be worn when changing the blade.

Follow these steps to remove an old/worn blade from the sawmill:

1. Turn the belt tension handle counter-clockwise to release the tension from the blade until it is loose.
2. Open the band wheel housing doors.
3. Remove the yellow blade guard [14 hp sawmills models only].
4. Rotate the blade stopper up on the drive-side guide block holder.

The blade is now sufficiently loose and can be easily pulled straight out the front.



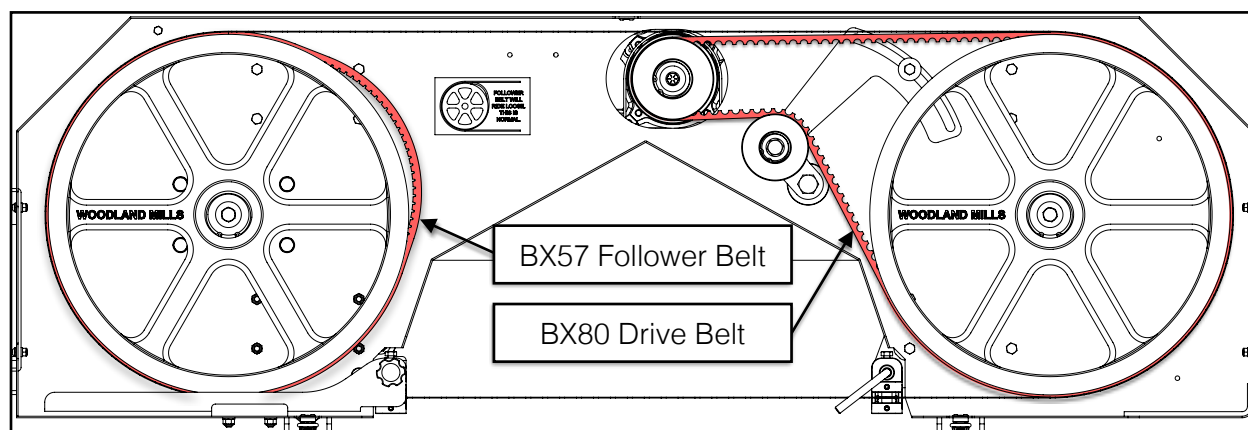
Install a new blade following the reverse order of steps and then set the proper blade tension. The tracking should not have to be adjusted after changing blades. See section, **ADJUSTING THE FOLLOWER SIDE TRACKING**, for more information.



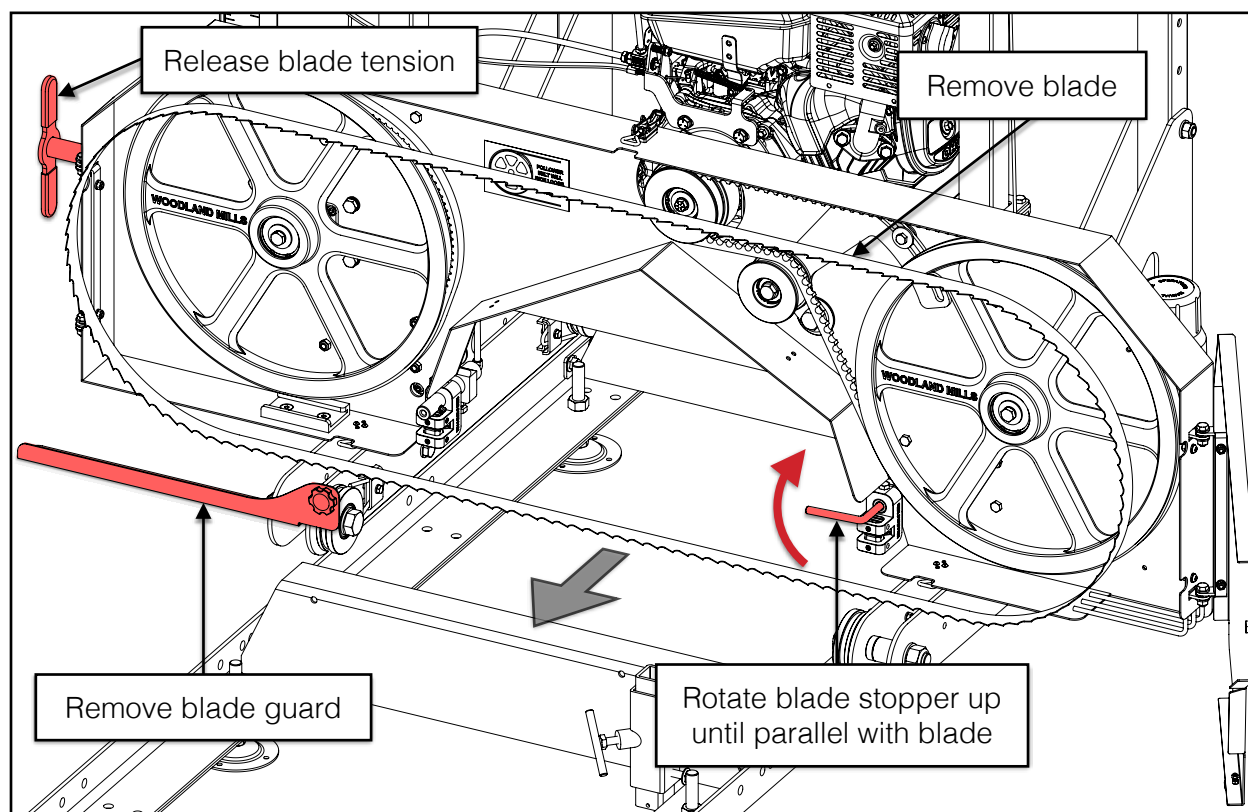
REPLACING BELTS



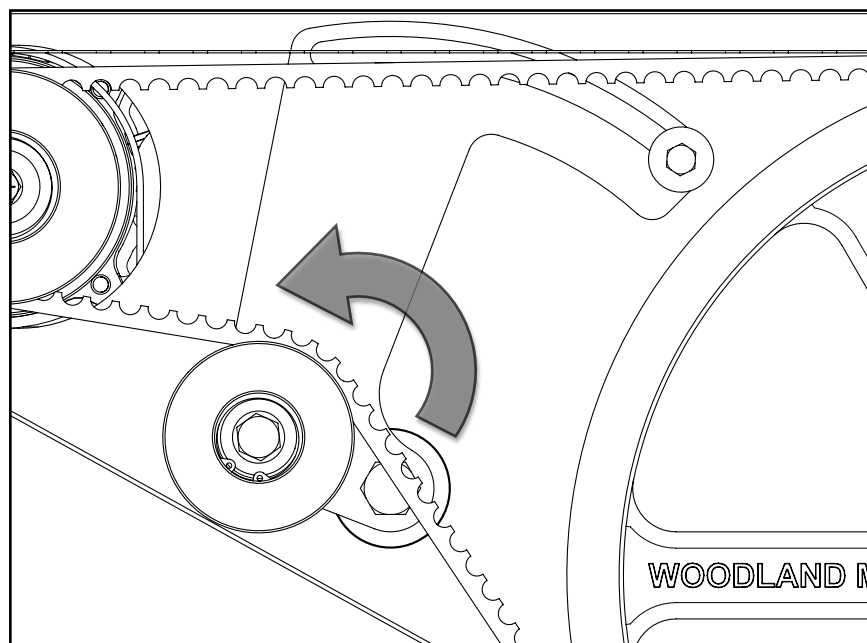
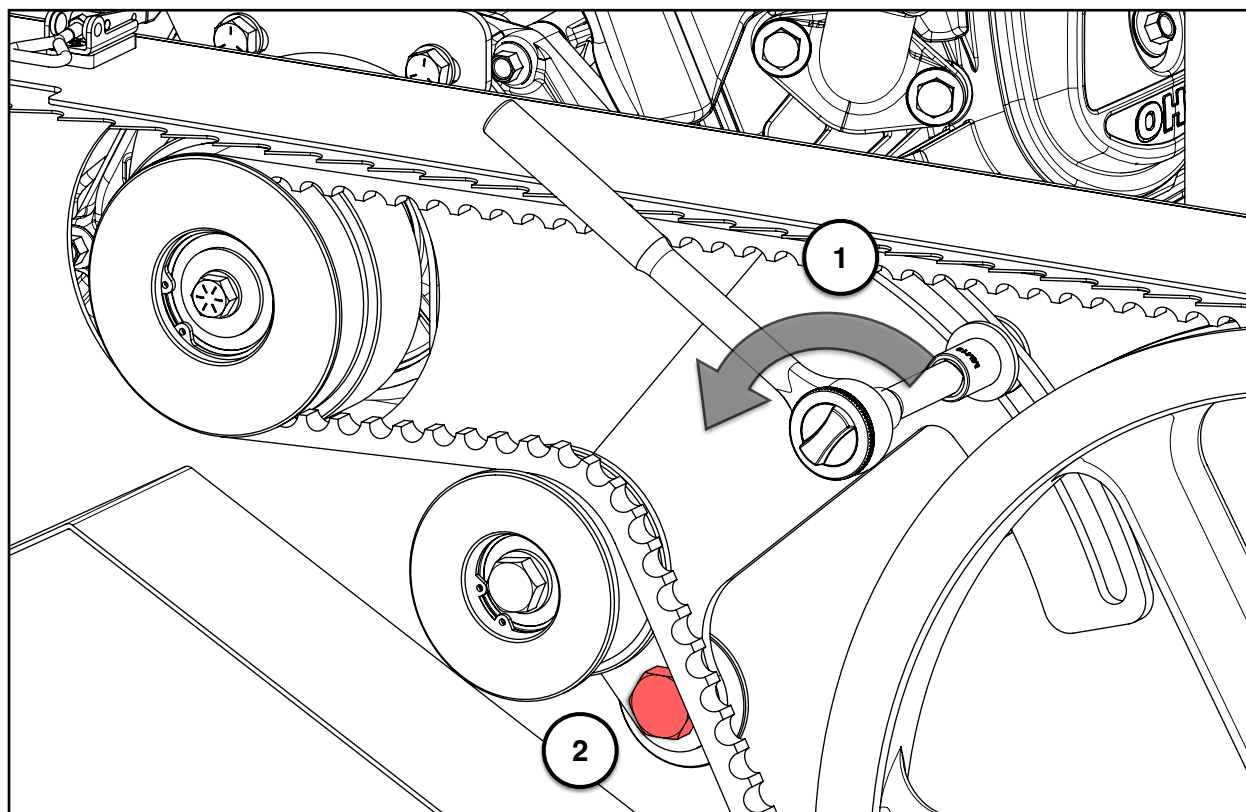
Never attempt to replace the belts with the engine running. As a safety precaution, remove the spark plug cap. Gloves and safety glasses must be worn when replacing the belts. There are two V-belts on the sawmill: a BX80 cogged belt on the drive side and a BX57 cogged belt on the follower side. The BX57 belt fits *loose* on the follower band wheel—this is normal.



First, remove the blade following the procedure outlined in section, **CHANGING THE BLADE**.



Next, remove the tension from the drive belt by loosening the M8 hex bolt (#1) and the M16 hex bolt (#2) by approximately one (1) turn—do not remove the bolts.

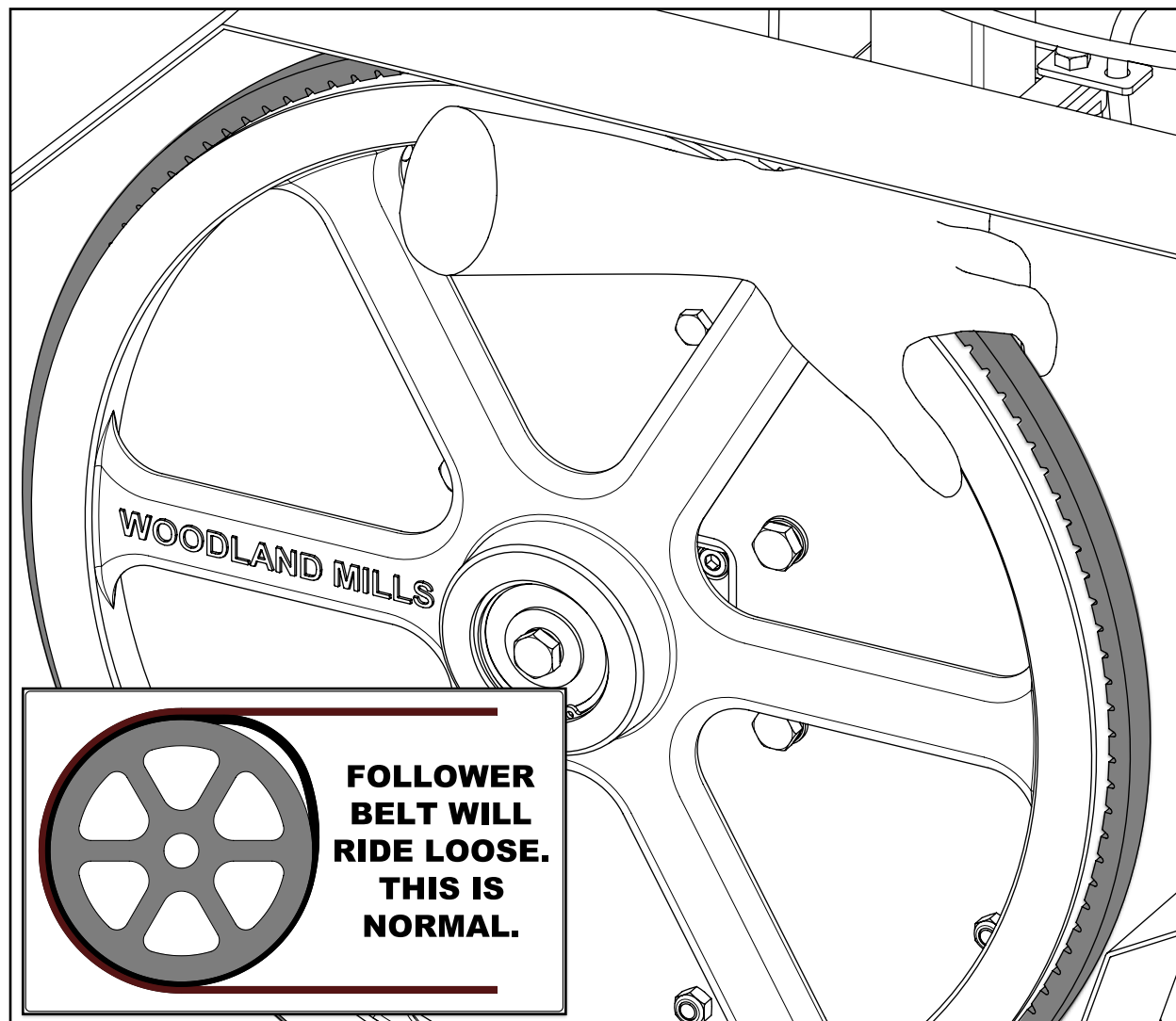


Once both bolts are loose, the belt tensioner will rotate counter-clockwise until the idler pulley comes to rest on the band wheel housing. The belt can now easily be removed by hand and a new belt installed.

Tension the belt following the same procedure as outlined in section, **DRIVE BELT TENSION**.



The BX57 follower belt is replaced simply by pulling it off and installing a new one by hand. The belt fits loose enough on the band wheel to allow for this. There is no need to remove the band wheel from the shaft.



The blade can now be re-installed, band wheel housing doors closed, and proper blade tension set.

****Note that blade tracking should not have changed after replacing the belts. The RapidChange™ blade system maintains the band wheel angle while the blade is removed. Refer to section, BLADE TRACKING, for more information.****



TROUBLESHOOTING

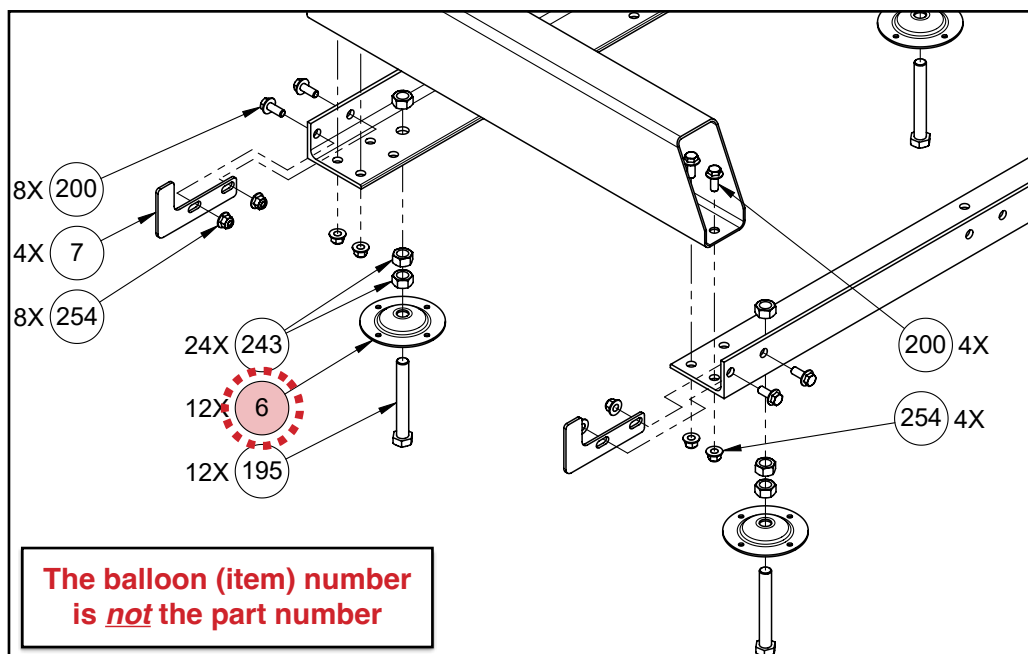
Problem/Issue	Possible Causes	Resolution Options
Producing wavy cuts	<ol style="list-style-type: none"> 1. Inadequate blade tension. 2. Improper blade guide set up. 3. Improper blade tracking. 4. Sap build up on blade. 5. Dull blade. 6. Pushing mill too quickly. 	<ol style="list-style-type: none"> 1. Tighten blade. Refer to page 77. 2. Gap between guide blocks and blade are incorrect. Refer to page 84. 3. Adjust blade tracking. Refer to page 79. 4. Install new blade. Refer to page 90. Always use blade lubricant. 5. Install new blade. Refer to page 90. 6. Slow feed rate down and push head slower through log.
Last board is tapered or narrow in middle	<ol style="list-style-type: none"> 1. Track is not level. 	<ol style="list-style-type: none"> 1. Track needs to be checked for level and adjusted so it is square. Track should also be set up on a firm, sturdy base so deflection does not occur from heavy logs or the sawmill head.
Blade dulls quickly	<ol style="list-style-type: none"> 1. Logs are not clean. 2. Foreign objects in log. 	<ol style="list-style-type: none"> 1. Logs may contain dirt/sand causing blades to wear prematurely. 2. Tree may contain nails, staples, old fencing etc.
Blade comes off band wheels	<ol style="list-style-type: none"> 1. Inadequate blade tension. 2. Improper blade guide set up. 3. Improper blade tracking. 4. Belts are worn. 5. Dull blade. 6. Pushing mill too quickly. 7. Too much water on blade. 8. New belts not dressed. 9. Belt tensioner idler pulley not adjusted properly. 	<ol style="list-style-type: none"> 1. Tighten blade. Refer to page 77. 2. Gap between guide blocks and blade are incorrect. Refer to page 84. 3. Adjust blade tracking. Refer to page 79. 4. Install new belts. Refer to page 91. 5. Install new blade. Refer to page 90. 6. Slow feed rate down and push head slower through log. 7. Valve on water tank is letting out too much water. Reduce flow by turning dial on valve. 8. Run the sawmill without lubrication for 30 minutes in order to dress new belts sufficiently before adding water for lubrication. Refer to page 73 (#3). 9. Call Woodland Mills Technical Support.
Blades are breaking	<ol style="list-style-type: none"> 1. Too many blade sharpenings. 2. Inadequate blade tension. 3. Improper blade guide set up. 4. Improper blade tracking. 5. Pushing mill too quickly. 	<ol style="list-style-type: none"> 1. Replace blade. Refer to page 90. 2. Binding between guide blocks when blade is too loose. Tighten blade. Refer to page 77. 3. Gap between guide blocks and blade are incorrect. Refer to page 84. 4. Adjust blade tracking. Refer to page 79. 5. Slow feed rate down and push head slower through log.
Blade is slowing down or stopping when milling	<ol style="list-style-type: none"> 1. Inadequate blade tension. 2. Improper drive belt tension. 3. Pushing mill too quickly. 	<ol style="list-style-type: none"> 1. Tighten blade. Refer to page 77. 2. Belts are worn or too loose. Replace. Refer to page 91. 3. Slow feed rate down and push head slower through log.
Mill is not cutting or cutting very slowly	<ol style="list-style-type: none"> 1. Dull blade. 2. Blade is on backwards. 	<ol style="list-style-type: none"> 1. Install new blade. Refer to page 91. 2. Remove blade and flip it inside out. The teeth should be facing in the direction of the log supports.



Problem/Issue	Possible Causes	Resolution Options
Mill is vibrating excessively	<ol style="list-style-type: none"> 1. Log is not clamped securely. 2. Belts are deformed. 3. Band wheel bearing issue. 4. Pushing mill too quickly. 5. Loose bolts. 6. Post sleeve bushings worn. 	<ol style="list-style-type: none"> 1. Ensure log is clamped firmly resting on log bunks and against log supports. 2. Belts may have flats in them from leaving blade tension tight when not in use. Replace them. Refer to page 91. 3. Inspect and replace the band wheel bearings if worn. 4. Slow feed rate down when milling. 5. Check all bolts to ensure they are tight. 6. Adjust the post sleeve bushings or replace them. Refer to page 69.
Adjustable blade guide arm is difficult to move or too loose	<ol style="list-style-type: none"> 1. Eccentric V-roller not adjusted properly. 2. Ball plunger over-engaged or not enough engagement. 3. Guide arm is not parallel with blade. 	<ol style="list-style-type: none"> 1. Adjust the bottom eccentric V-roller clockwise to loosen the guide arm or counter-clockwise to tighten the guide arm movement. Refer to page 87. 2. Adjust the ball plunger. Refer to page 88. 3. Rotate the adjustable blade guide carriage until parallel with the blade. Refer to page 89.
Sawhead difficult to raise or lower	<ol style="list-style-type: none"> 1. Sawhead not level. 2. Front posts not lubricated. 	<ol style="list-style-type: none"> 1. Level the sawhead by adjusting the lift cable ends under the lift mechanism. Refer to page 68. 2. Spray front posts with water resistant silicone lubricant.

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				
Item	Quantity		Part No.	Description
	14 hp	9.5 hp		
1	4	4	0001073	TRACK RAIL, 58.5 mm TALL
2	2	2	0001075	LOG BUNK, END
3	2	2	0001080	LOG BUNK, MID
4	1	1	0001084	LOG BUNK, CENTER
5	2	2	0001072	REINFORCEMENT PLATE, 90 X 200 mm
6	12	12	0001071	LEVELLING FOOT BASE
7	4	4	0001055	CARRIAGE STOP
8	1	1	0001062	LOG CLAMP SHAFT AND BRACKET WELDMENT

Record the part number (e.g. 0001071, HHB-MBM080FCJ, etc.) from 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.

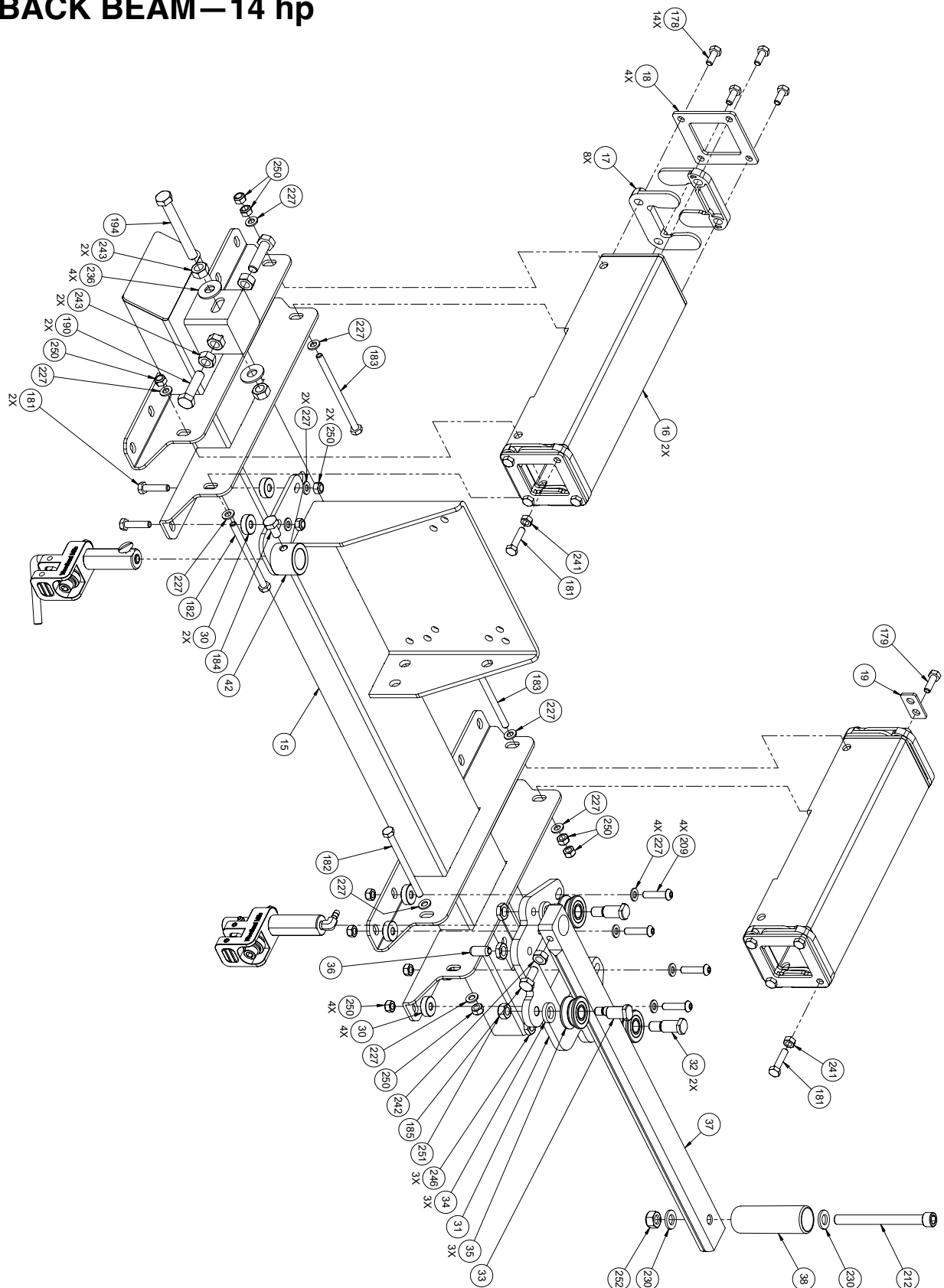
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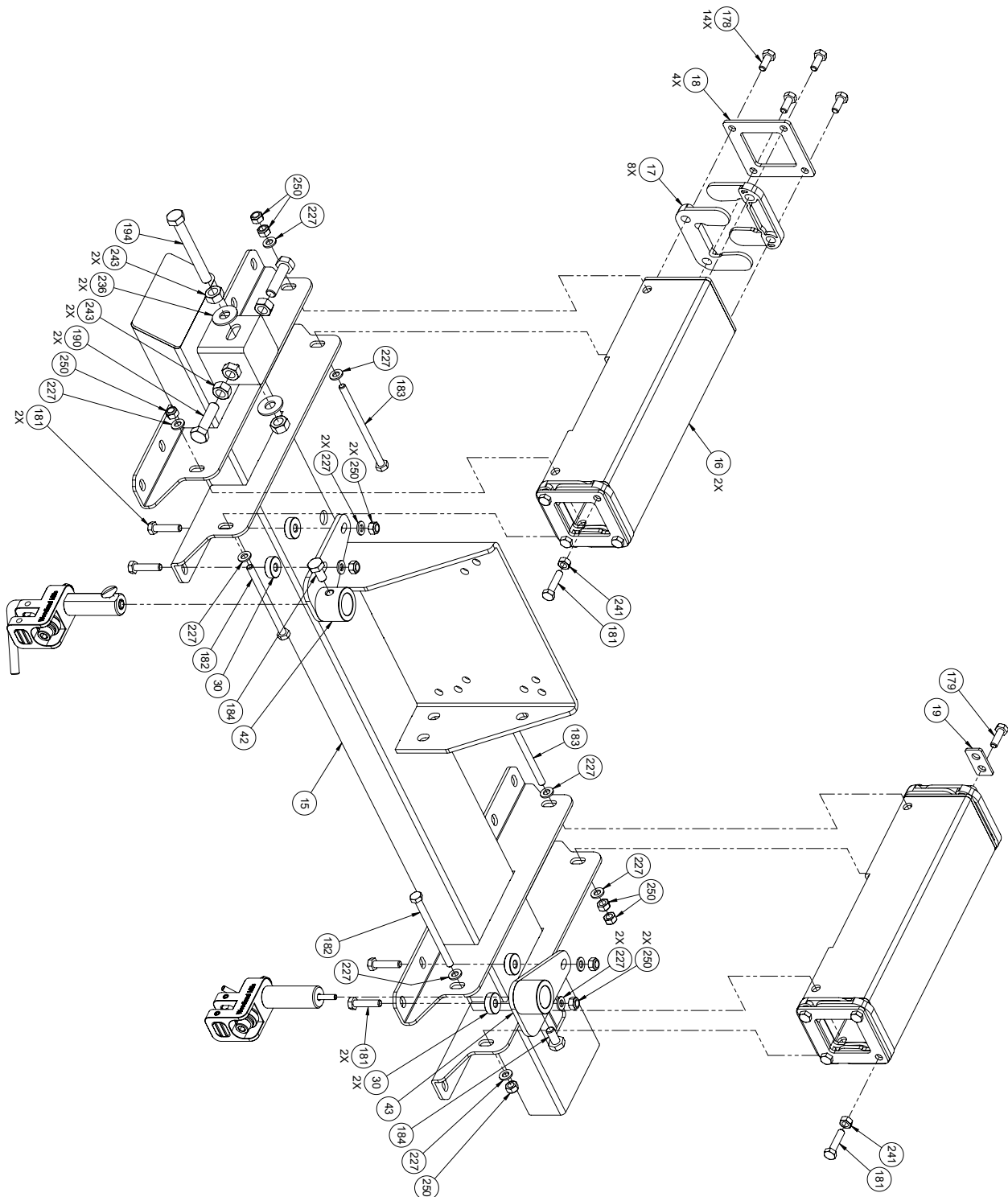


BACK BEAM—14 hp



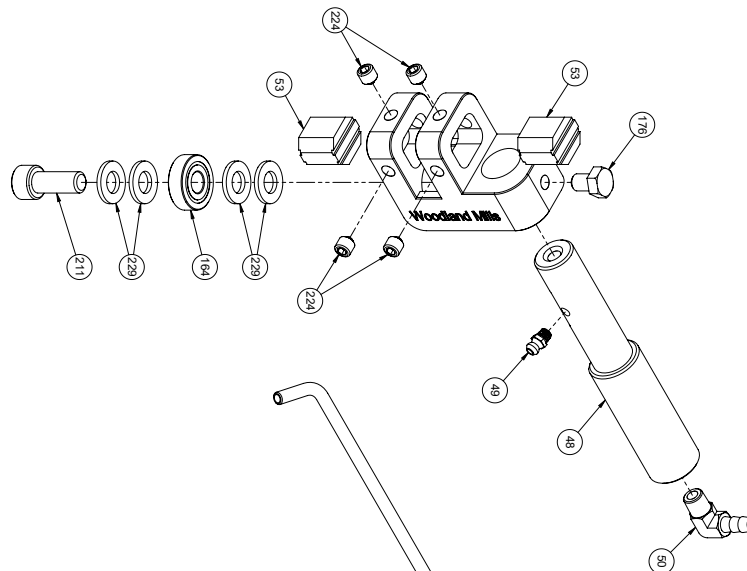


BACK BEAM—9.5 hp

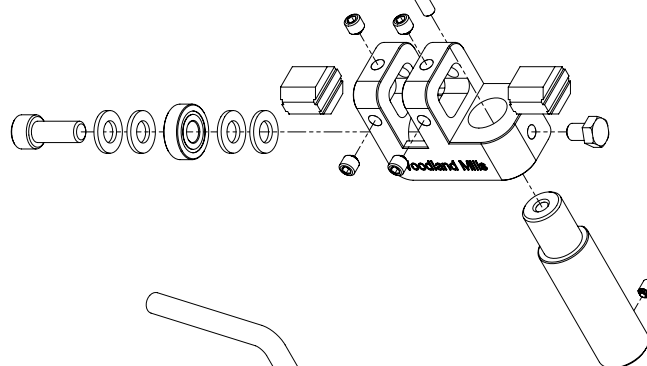




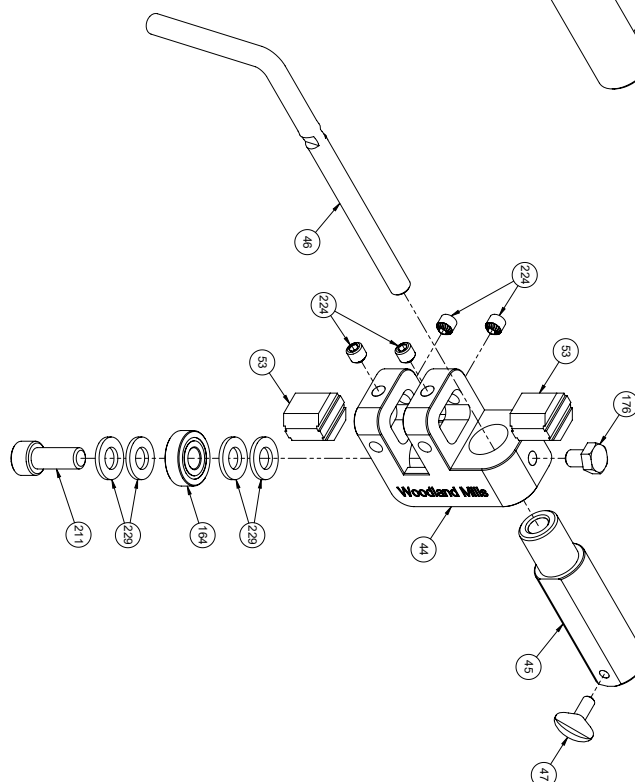
GUIDE BLOCK HOLDERS



Drip Nozzle
14 hp



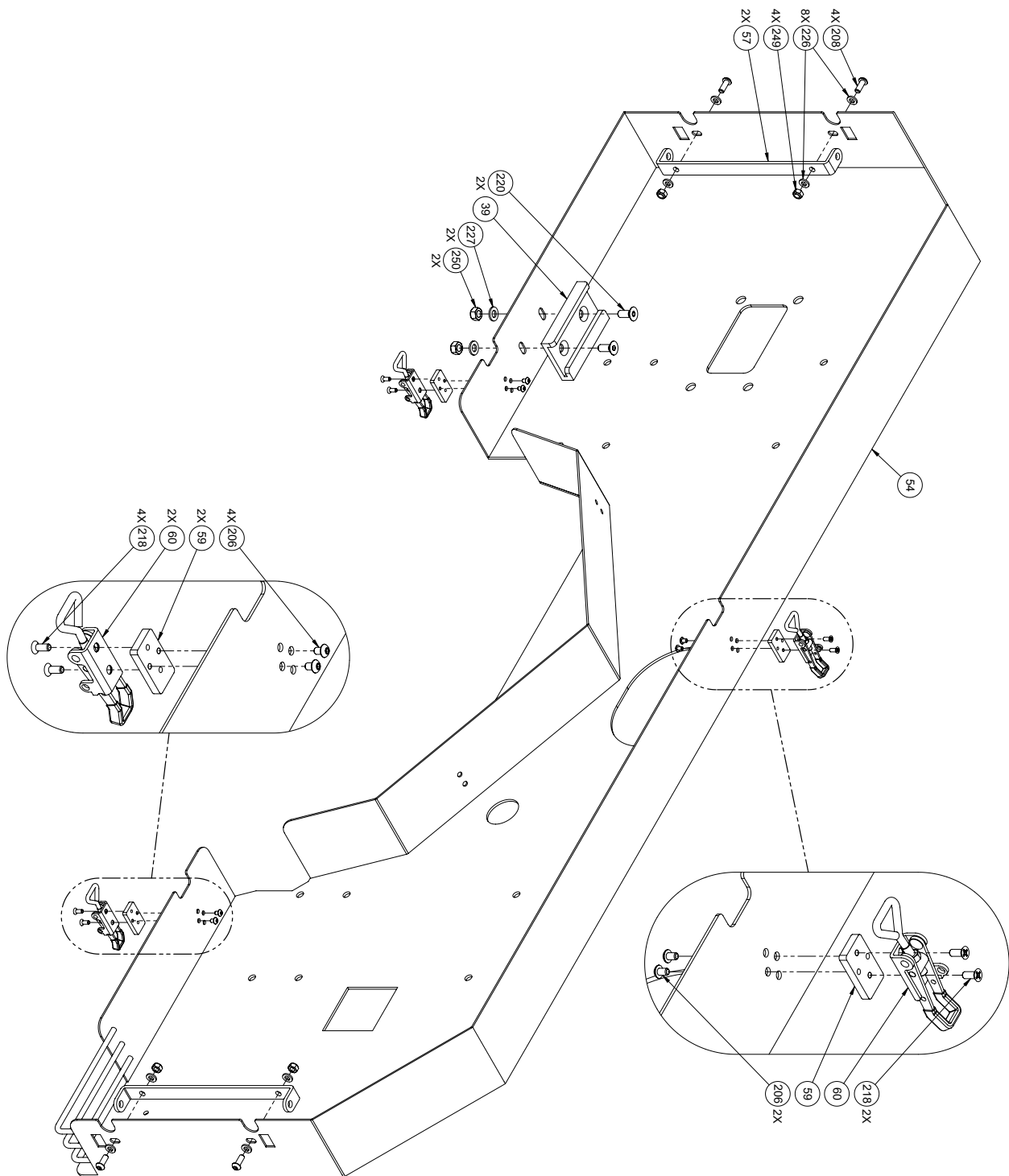
Drip Nozzle
9.5 hp



Blade Stopper
14 & 9.5 hp

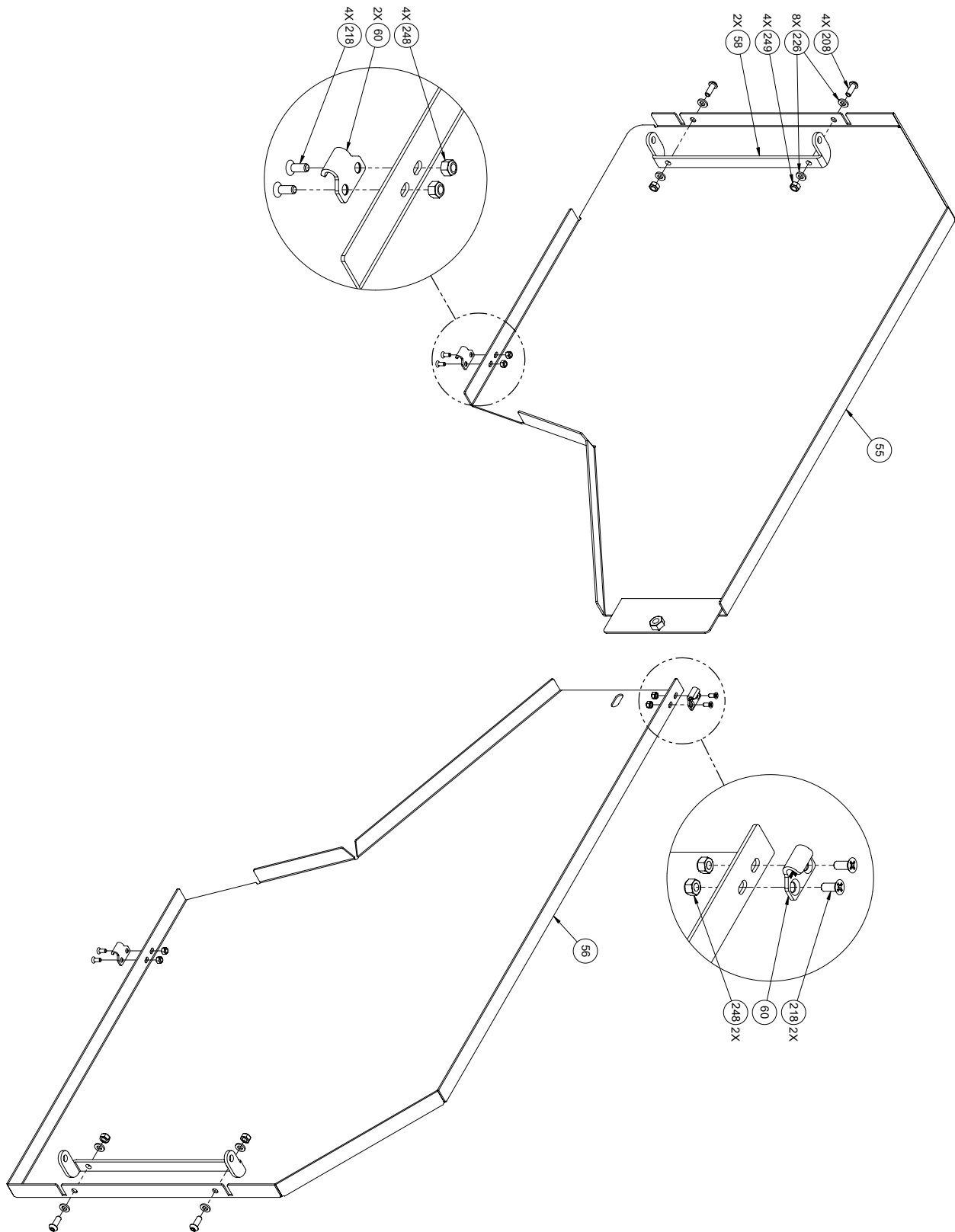


BAND WHEEL HOUSING



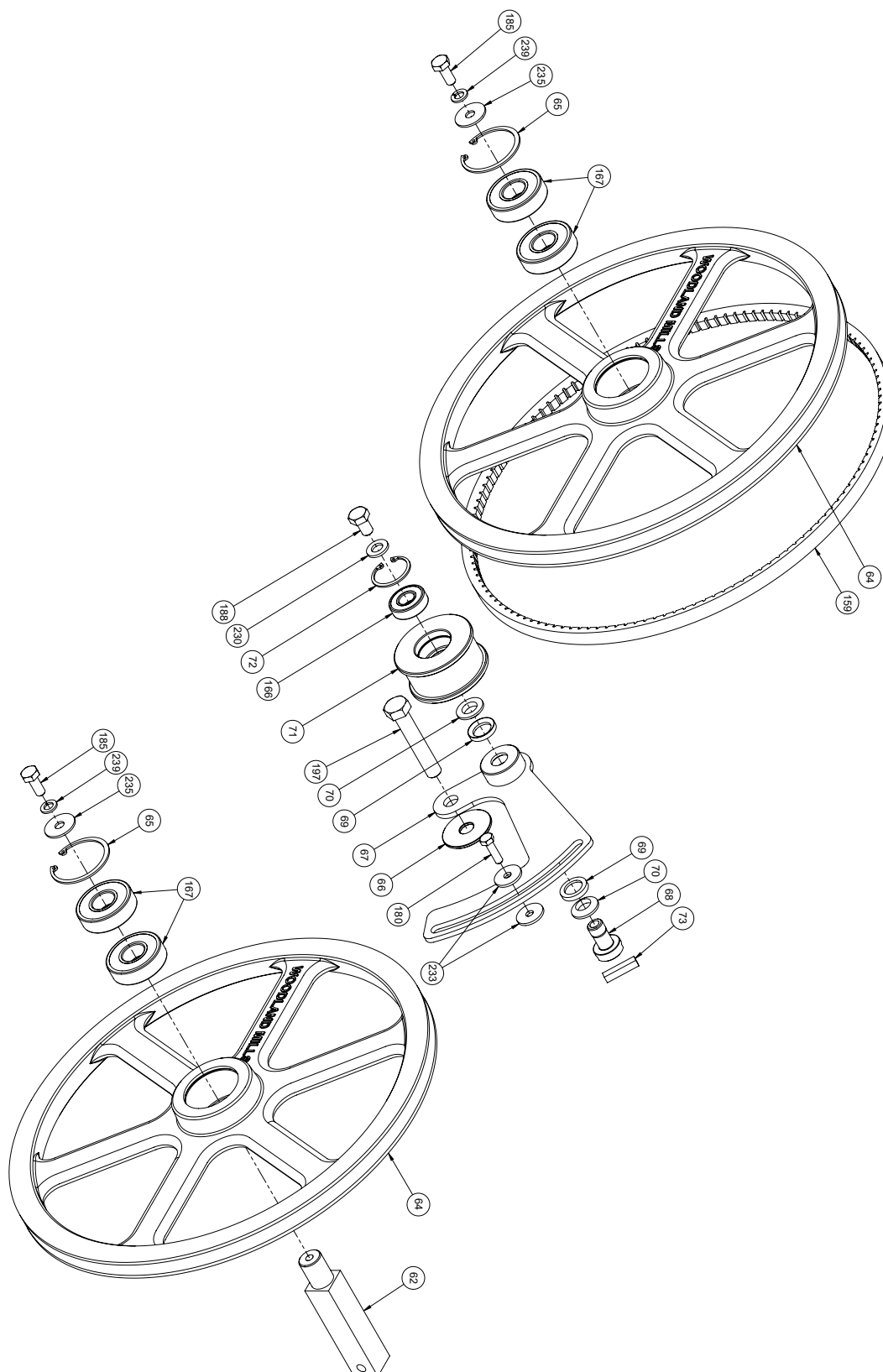


BAND WHEEL HOUSING DOORS



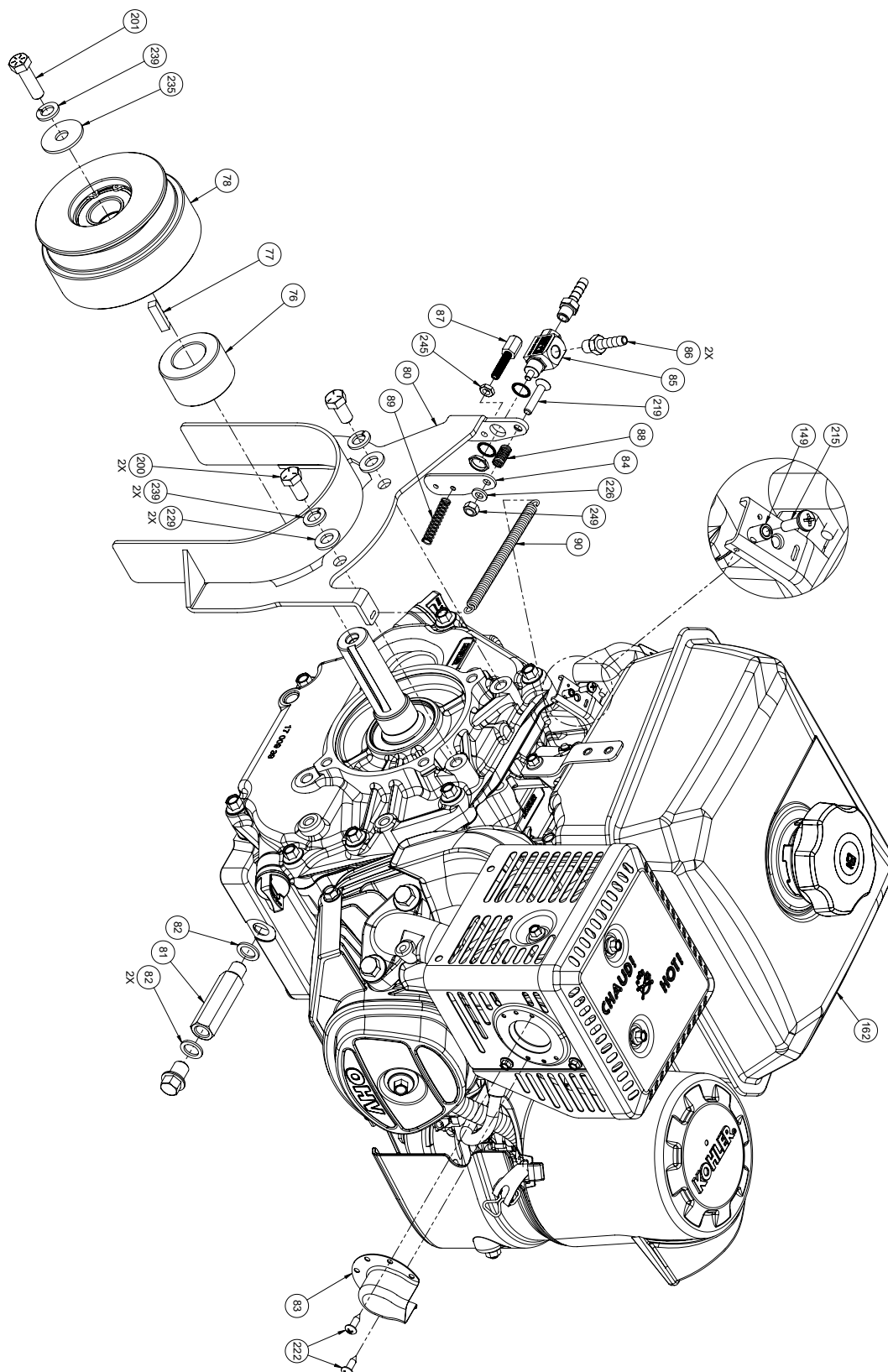


BAND WHEELS AND BELT TENSIONER



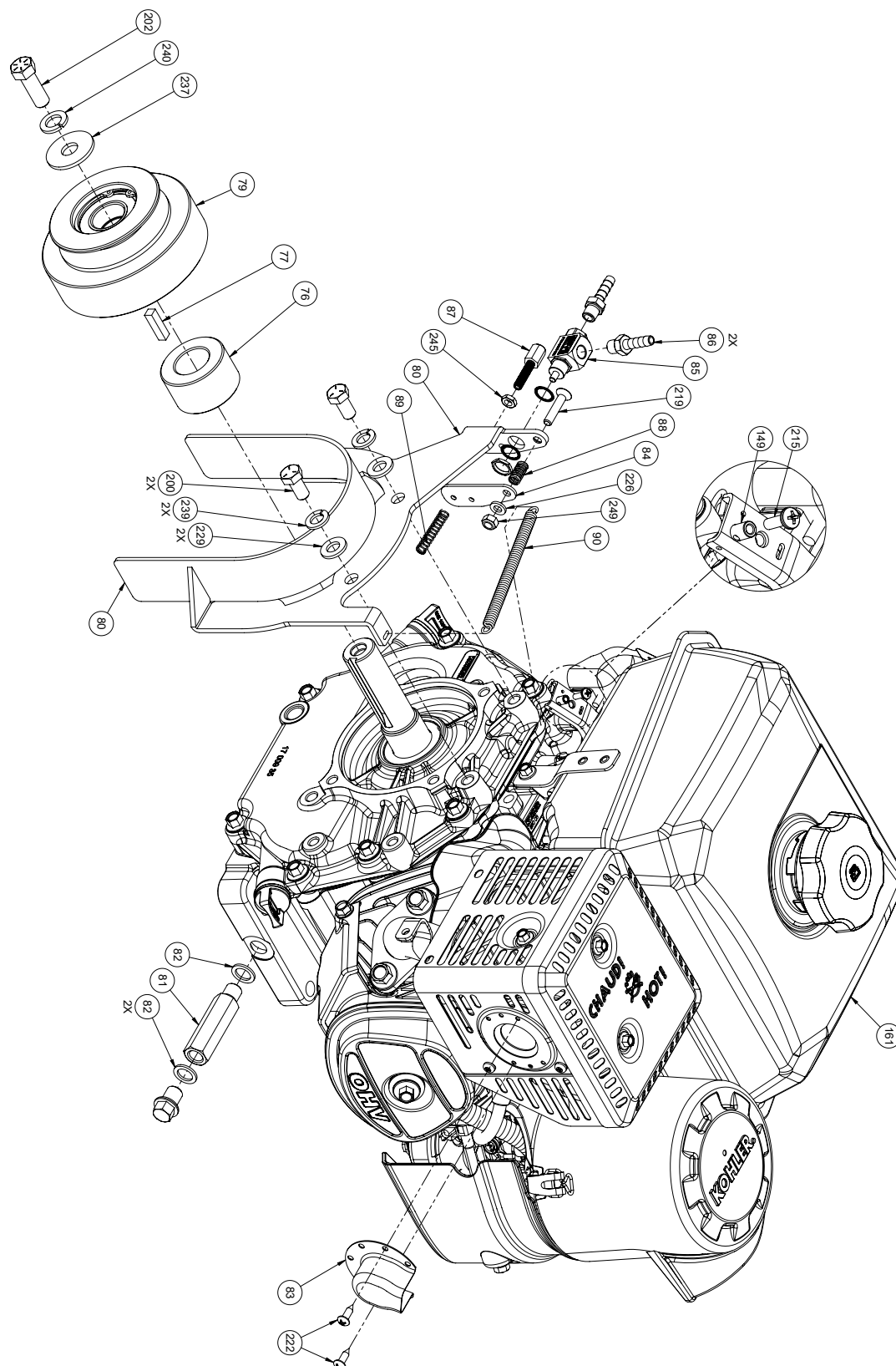


ENGINE COMPONENTS—14 hp





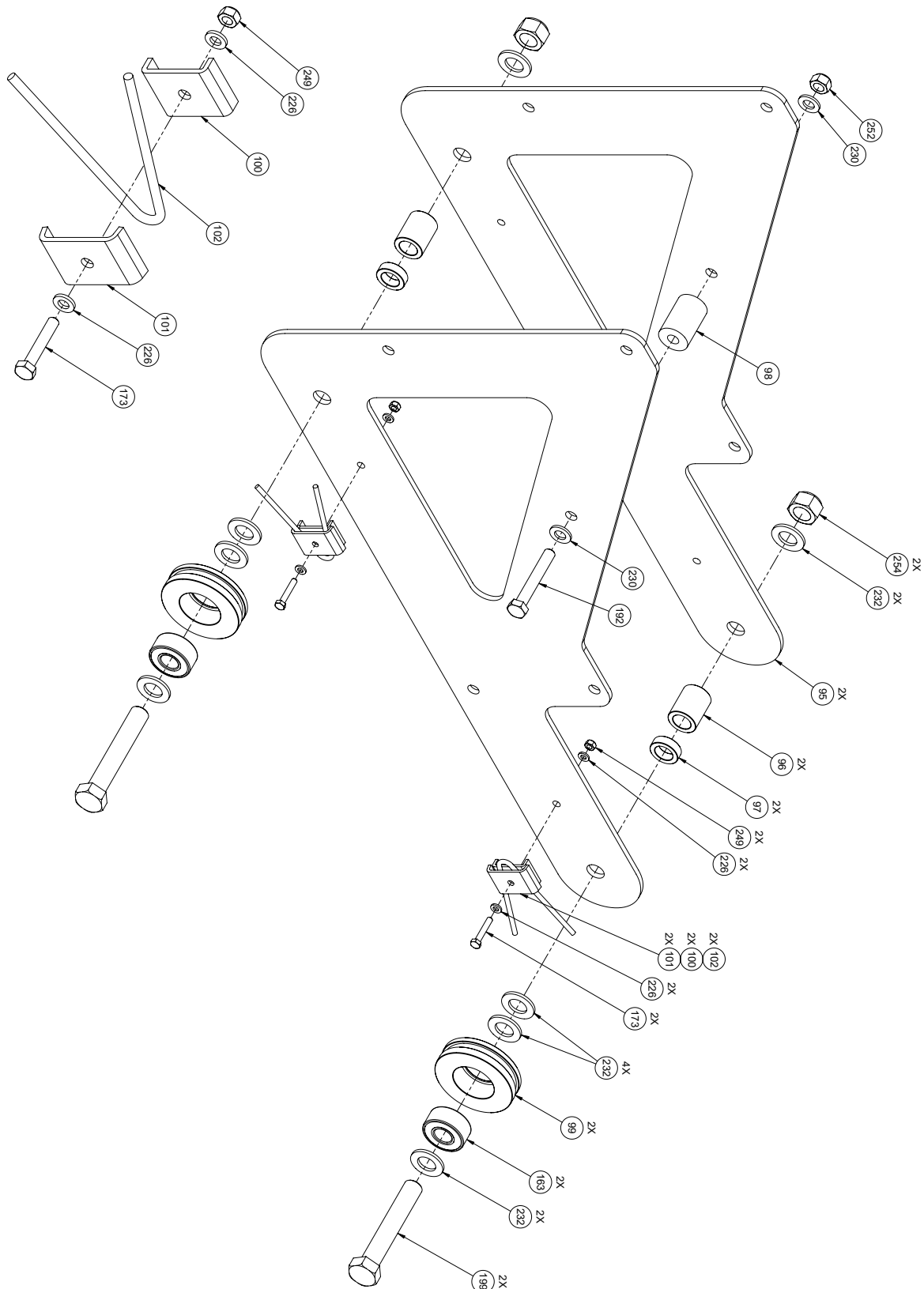
ENGINE COMPONENTS—9.5 hp



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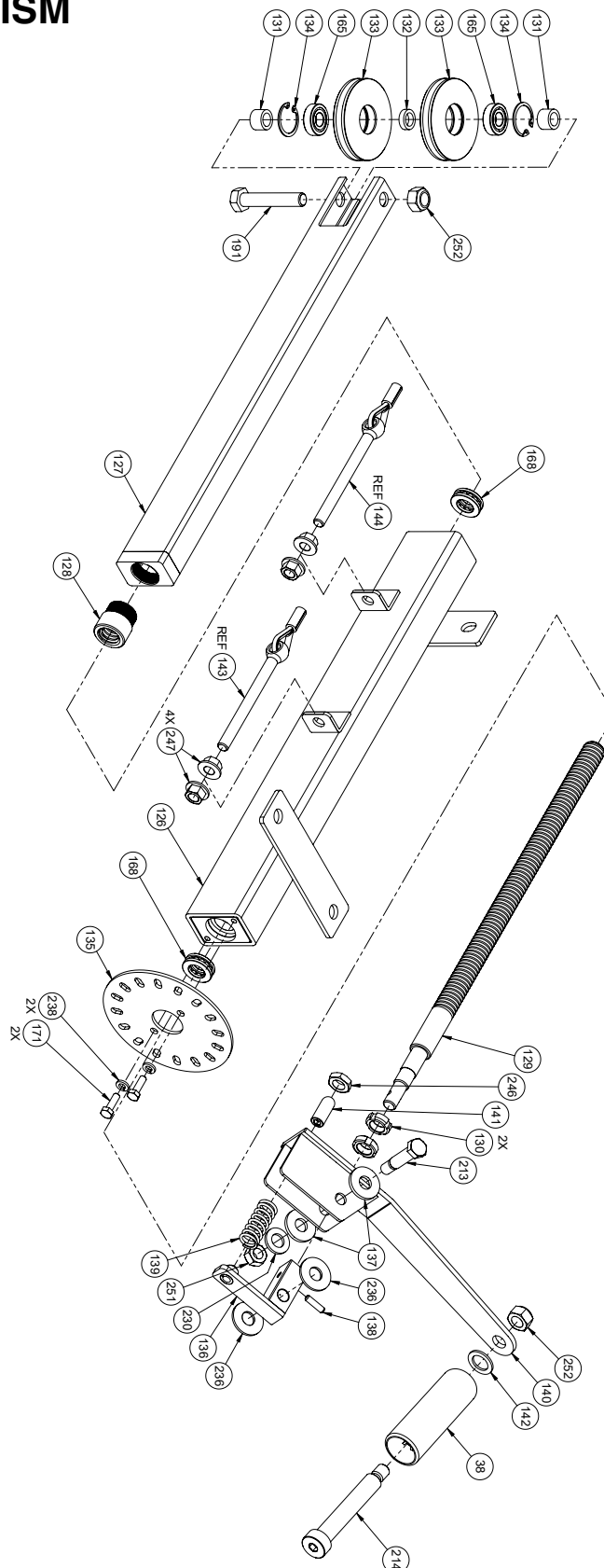


CARRIAGE LEG, WHEEL, AND SWEEPER



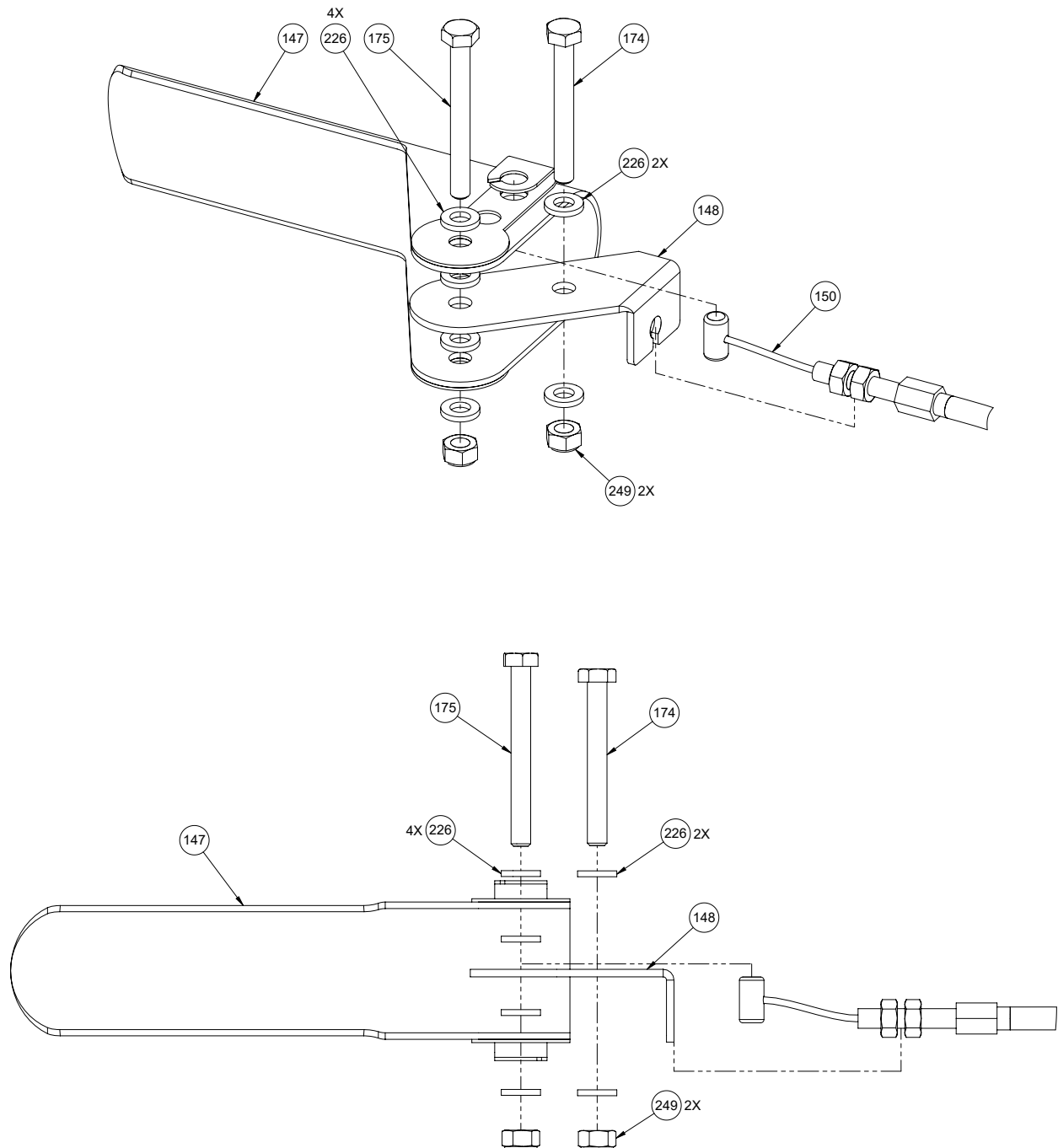


LIFT MECHANISM



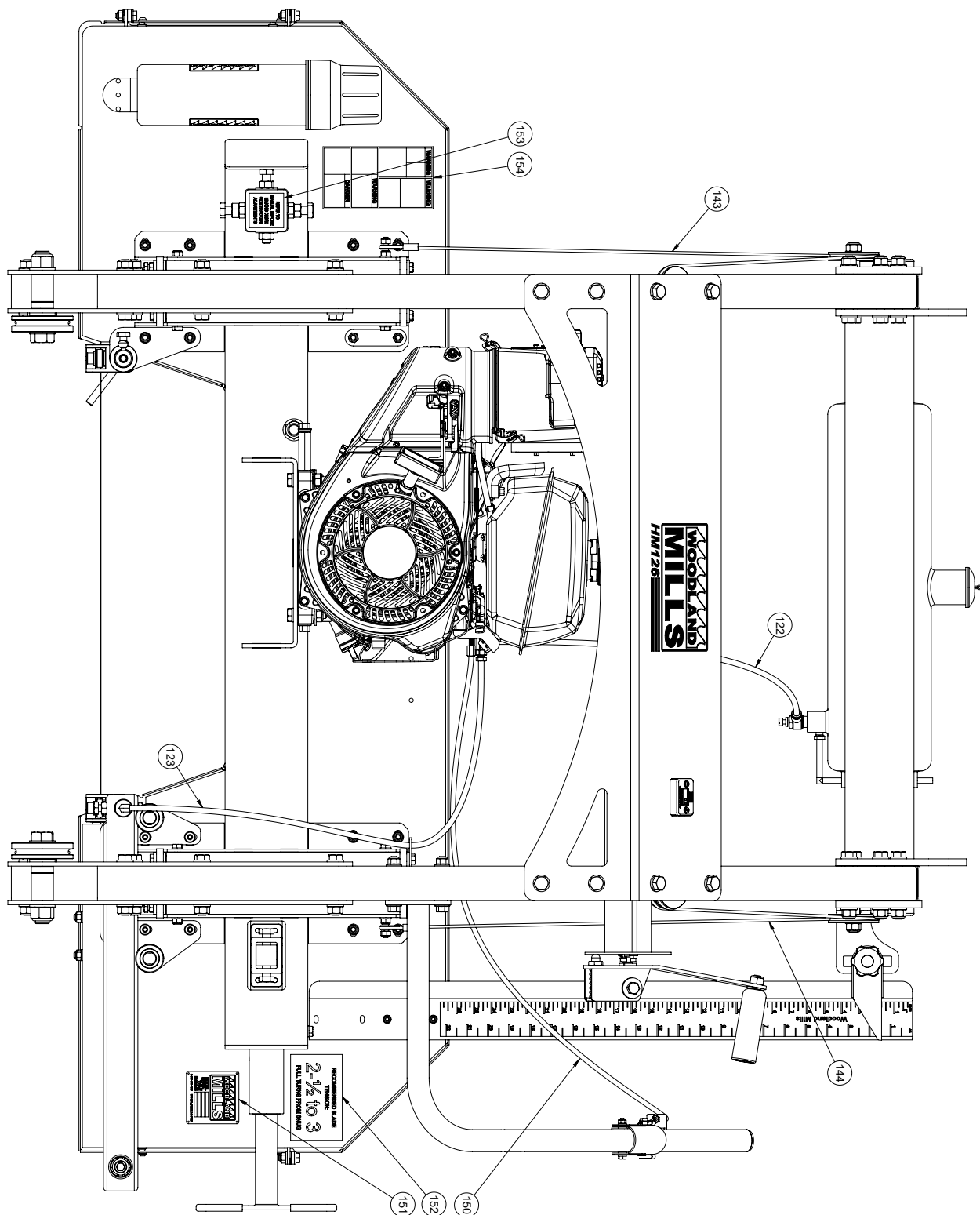


THROTTLE HANDLE





CABLES, TUBING & LABELS





PARTS LIST

Highlighted rows are items specific to HM126-14 (14 Horsepower) sawmill.

Item	Quantity		Part No.	Description
	14 hp	9.5 hp		
1	4	4	0001073	TRACK RAIL, 100 X 58.5 mm, 1950 mm LG
2	2	2	0001075	LOG BUNK, END
3	2	2	0001080	LOG BUNK, MID
4	1	1	0001084	LOG BUNK, CENTER
5	2	2	0001072	REINFORCEMENT PLATE, 90 X 200 mm
6	12	12	0001071	LEVELLING FOOT BASE
7	4	4	0001055	CARRIAGE STOP
8	1	1	0001062	SHAFT WELDMENT, QUICK-LOCK LOG CLAMP
9	1	1	0001069	MOUNTING BRACKET, QUICK-LOCK LOG CLAMP
10	1	1	0001061	RECEIVER, QUICK-LOCK LOG CLAMP
11	1	1	0001211	QUICK-LOCK LOG CLAMP
12	2	2	0001056	LOG SUPPORT, BEVELLED, 450 mm LG
13	2	2	0001465	LOG SUPPORT, KEY STOP, 190 mm LG
14	4	4	0001059	T-BOLT, M10 X 1.5, 40 mm LG
15	1	1	0001949	BACK BEAM
16	2	2	0001127	POST SLEEVE
17	8	8	0004235	POST SLEEVE BUSHING, U-SHAPED, 50 X 50 mm POST
18	4	4	0001126	POST SLEEVE LOCKING PLATE, 50 X 50 mm POST
19	1	1	0001020	LUBRICATION TUBING BRACKET, FLAT
20	1	1	0002052	RAPIDCHANGE MOUNTING PLATE, 160 X 100 mm
21	1	1	0002053	RAPIDCHANGE TENSION BLOCK, 160 X 100 mm
22	1	1	0002054	RAPIDCHANGE SHAFT SLEEVE
23	1	1	0005457	TENSION ROD, RAPIDCHANGE, TR18X3 THD, 220 mm LG
24	1	1	0002056	RAPIDCHANGE BACK PLATE, 160 X 100 mm
25	2	2	0002350	HEX BOLT, M12 X 1.25, 20 mm LG, 2.5 mm CHAMFER
26	1	1	0003116	SPRING WASHER HOLDER, RAPIDCHANGE, 120 X 50 mm
27	6	6	0002637	SPRING WASHER SHIM, 25 ID X 41.5 OD X 1 mm THK
28	24	24	0006088	BELLEVILLE WASHER, 20.4 ID, 40 OD, 2.5 THK, 3.45 mm TALL, 2111 lb WORKING LOAD
29	1	1	0005452	TENSION HANDLE, RATCHET MOUNT, OFFSET THD, 139 mm LG
30	6	4	0002023	SPACER, ADJUSTABLE BLADE GUIDE
31	1	-	0003529	ADJUSTABLE BLADE GUIDE ROLLER CARRIAGE, 41 mm X 120° ROLLERS
32	2	-	0003525	TRACK ROLLER SHAFT W/ HEAD, CONCENTRIC, M12 X 1.75 THD
33	1	-	0003527	TRACK ROLLER SHAFT W/ HEAD, ECCENTRIC, M10 X 1.5 THD
34	3	-	0003528	TRACK ROLLER SHAFT SPACER, 15 ID X 23 OD X 5 mm THK
35	3	-	0002657	TRACK ROLLER, V-GROOVE, 120°, 41 mm DIA X 20 mm WD
36	1	-	0002661	BALL-NOSE SPRING PLUNGER, HEX DRIVE, NON-LOCKING, M12 X 1.75, 26 mm LG
37	1	-	0002660	ADJUSTABLE BLADE GUIDE ARM, 120° TRACK ROLLERS, 575 mm LG
38	2	1	0004199	HANDLE, STRAIGHT, 35 mm DIA, 105 mm LG, M16 THRU
39	1	-	0002666	BLADE GUARD GUIDE, ADJUSTABLE BLADE GUIDE
40	1	-	0002665	BLADE GUARD, ADJUSTABLE BLADE GUIDE
41	1	-	0002667	KNOB, MULTI-LOBE, 38 mm OD, M8 X 1.25, 12 mm LG



Item	Quantity		Part No.	Description
	14 hp	9.5 hp		
42	1	1	0002022	GUIDE BLOCK HOLDER BRACKET, LEFT
43	-	1	0002020	GUIDE BLOCK HOLDER BRACKET, RIGHT
44	2	2	0001093	GUIDE BLOCK HOLDER
45	1	1	0001096	GUIDE BLOCK HOLDER SHAFT, BLADE STOPPER
46	1	1	0002759	SAW BLADE STOPPER, CRIMPED, 82.5 mm LG
47	1	1	0006891	THUMB SCREW, SPADE-HEAD, SST, M6 X 1, 10 mm LG
48	1	-	0002663	GUIDE BLOCK HOLDER SHAFT, DRIP NOZZLE, GUARD MOUNT
49	1	-	0002664	GREASE FITTING, STRAIGHT, 14 mm LG, M6 TPR THD, MODIFIED
50	1	-	0005116	FITTING, ELBOW, 90°, BARBED, 1/8 in NPT, 1/4 in HOSE
51	-	1	0001091	GUIDE BLOCK HOLDER SHAFT, DRIP NOZZLE
52	-	1	0001092	DRIP NOZZLE, 6 mm DIA
53	4	4	0001090	GUIDE BLOCK
54	1	1	0001951	BAND WHEEL HOUSING
55	1	1	0001952	BAND WHEEL DOOR, LEFT
56	1	1	0001953	BAND WHEEL DOOR, RIGHT
57	2	2	0001954	BAND WHEEL HOUSING INNER HINGE BRACKET
58	2	2	0001955	BAND WHEEL HOUSING OUTER HINGE BRACKET
59	3	3	0003161	LATCH SPACER
60	3	3	0002248	ADJUSTABLE DRAW LATCH
61	1	1	0001659	KNOB, MULTI-LOBE, 48 mm OD, M8 X 1.25, 17 mm LG
62	1	1	0001104	DRIVE SHAFT, 30 mm SQ, 125 mm LG, 25 mm DIA
63	1	1	0001993	FOLLOWER SHAFT, RAPIDCHANGE, 30 mm SQ, 108.5 mm LG, 25 mm DIA
64	2	2	0001105	BAND WHEEL, 19 in
65	2	2	0004820	RETAINING RING, INTERNAL, 62 mm BORE (65 mm GROOVE)
66	1	1	0002017	BELT TENSIONER SHAFT SPACER
67	1	1	0002643	BELT TENSIONER ARM
68	1	1	0002644	BELT TENSIONER IDLER SHAFT
69	2	2	0005282	LEVELLING WASHER, FEMALE, M16
70	2	2	0005283	LEVELLING WASHER, MALE, M16
71	1	1	0002645	IDLER PULLEY, SPHERICAL ALIGNMENT, 33 mm WD, 80 mm DIA
72	1	1	0004816	RETAINING RING, INTERNAL, 40 mm BORE (42.5 mm GROOVE)
73	1	1	0002646	PARALLEL KEY, 8 X 8 mm, 37 mm LG
74	1	1	0002019	NUT LOCKING PLATE
75	1	1	0001655	MANUAL TUBE
76	1	1	0001217	CLUTCH SPACER, 27 ID X 50.5 OD X 30 mm LG
77	1	1	0001137	PARALLEL KEY, 1/4 X 1/4 in, 1 in LG
78	1	-	0003930	CLUTCH ASSEMBLY, HEAVY-DUTY, 1 in [25.4 mm] SHAFT, 108 mm DIA PULLEY
79	-	1	0001823	CLUTCH ASSEMBLY, 1 in [25.4 mm] SHAFT, 87 mm DIA PULLEY
80	1	1	0007082	VALVE MOUNT BRACKET, 9.5 & 14 hp
81	1	1	0002079	OIL DRAIN EXTENSION, 56 mm LG, M12 X 1.5 THD
82	2	2	0006224	SEALING WASHER, M12
83	1	1	0001136	EXHAUST REDIRECT, 9.5 & 14 hp KOHLER ENGINES
84	1	1	0006978	VALVE ACTUATION TAB, 9.5 & 14 hp
85	1	1	0003452	STEM VALVE, 1/8 in NPT FEMALE, 1/8 in STEM TRAVEL
86	3	3	0005127	FITTING, ADAPTER, BARBED, 1/8 in NPT MALE TO 1/4 in HOSE
87	1	1	0001985	CABLE ADJUSTMENT SCREW, 2 mm CABLE, M6 X 1, 25 mm LG
88	1	1	0004982	COMPRESSION SPRING, CLOSED GROUND ENDS, 8.5 mm OD, 0.9 mm DIA WIRE, 27 mm LG



Item	Quantity		Part No.	Description
	14 hp	9.5 hp		
89	1	1	0005578	COMPRESSION SPRING, CLOSED GROUND ENDS, 7.49 mm OD, 0.81 mm WIRE DIA, 40 mm LG, 0.21 lb/mm
90	1	1	0005103	EXTENSION SPRING, HOOK ENDS, 8.5 mm OD, 1.5 mm DIA WIRE, 100 mm LG
91	1	1	0001123	SAW BLADE, 7/8 in PITCH, 165 TEETH, 1-1/4 WD X 144 LG X .042 in THK
92	2	2	0001135	FRONT POST, 50 X 50 mm, 1315 mm LG
93	2	2	0002067	BACK POST, 50 X 50 mm
94	2	2	0001660	PLASTIC END CAP, SQ, 50 X 50 mm
95	4	4	0001143	CARRIAGE SIDE PLATE
96	4	4	0001966	SPACER, 20.5 ID X 32 OD X 40 mm LG
97	4	4	0001967	SPACER, 20.5 ID X 32 OD X 10 mm LG
98	2	2	0001102	SPACER, 13 ID X 33.5 OD X 50 mm LG
99	4	4	0001037	CARRIAGE WHEEL
100	4	4	0001019	WHEEL SWEEPER INNER BRACKET
101	4	4	0001017	WHEEL SWEEPER OUTER BRACKET
102	4	4	0001018	WHEEL SWEEPER CABLE
103	1	1	0001139	CROSS BEAM
104	2	2	0001661	PLASTIC END CAP, RECT, 100 X 50 mm
105	1	1	0002096	LOG SCALE MOUNTING BRACKET
106	1	1	0002097	SCALE INDICATOR ARROW BRACKET, REAR
107	1	1	0002098	SCALE INDICATOR ARROW BRACKET, FRONT
108	1	1	0002099	SCALE INDICATOR ARROW
109	1	1	0002764	KNOB, MULTI-LOBE, 48 mm OD, M8 X 1.25, 25 mm LG
110	1	1	0002040	SCALE SUPPORT
111	1	1	0001038	SCALE SUPPORT SPACER PLATE
112	1	1	0003233	MAGNETIC SCALE, 27 in, YELLOW
113	1	1	0003235	MAGNETIC SCALE, 27 in, WHITE
114	1	1	0002034	LUBRICANT TANK, 10 L [2.6 gal], MANOMETER/NAMEPLATE MOUNT
115	1	1	0001132	TANK CAP
116	1	1	0005221	BEAD CHAIN, 3 mm BEAD, 140 mm LG
117	1	1	0002037	NAMEPLATE, HM126
118	1	1	0002038	NAMEPLATE BACKING
119	1	1	0005117	FITTING, ELBOW, 90°, BARBED, 6 mm ID TUBE, WHITE
120	1	1	0002809	SIGHT LEVEL TUBING, LUBRICATION TANK
121	1	1	0002691	LUBRICATION TUBING, TANK-TO-ELBOW, 2-3/16 in [55 mm] LG
122	1	1	0002692	LUBRICATION TUBING, TANK-TO-VALVE, 8 mm OD, 22-1/4 in [565 mm] LG
123	1	1	0002693	LUBRICATION TUBING, VALVE-TO-BLADE, 8 mm OD, 32-1/2 in [825 mm] LG
124	1	1	0002066	DASHBOARD
125	1	1	0002671	HOUR METER
126	1	1	0001120	LIFT MECHANISM HOUSING
127	1	1	0001121	LIFT MECHANISM EXTENSION ARM
128	1	1	0001048	BRONZE NUT, LH TR20X4 FEM THD, M27 X 1.5 MALE THD
129	1	1	0001134	LEAD SCREW, LH TR20X4 X 335 mm LG THD
130	2	2	0006079	SLOTTED NUT, ROUND, M14 X 1.5
131	6	6	0002812	SPACER, 12 ID X 18 OD X 12 mm LG
132	2	2	0002813	SPACER, 12 ID X 18 OD X 5 mm LG
133	7	7	0001099	WIRE ROPE PULLEY, 6001-2RS BEARING, 73 mm DIA
134	7	7	0004813	RETAINING RING, INTERNAL, 28 mm BORE (29.4 mm GROOVE)
135	1	1	0002520	CRANK HANDLE INDEX PLATE, 125 mm DIA, SST



Item	Quantity		Part No.	Description
	14 hp	9.5 hp		
136	1	1	0002632	SELF-LOCKING CRANK HANDLE ARM LUG
137	2	2	0002675	SPACER, 12.5 ID X 30 OD X 3.3 mm LG
138	1	1	0004777	SPRING PIN, SLOTTED, 5 mm DIA, 20 mm LG
139	1	1	0004975	COMPRESSION SPRING, CLOSED GROUND ENDS, 0.720 in OD, 0.096 in DIA WIRE, 1.750 in LG, 86 lb/in RATE
140	1	1	0002633	SELF-LOCKING CRANK HANDLE ARM
141	1	1	0006040	SET SCREW, FULL ROUND, M12 X 1.75, 30 mm LG
142	1	1	0004214	SPACER, 16.5 ID X 25 OD X 2 mm LG, NYLON
143	1	1	0003015	WIRE ROPE LIFT CABLE W/ EYEBOLT, LEFT, 4 mm DIA, 122.5 in [3110 mm] LG
144	1	1	0003016	WIRE ROPE LIFT CABLE W/ EYEBOLT, RIGHT, 4 mm DIA, 78 in [1980 mm] LG
145	1	1	0002068	PUSH HANDLE, ADJUSTABLE
146	1	1	0001662	PLASTIC END CAP, ROUND, 32 mm OD
147	1	1	0001021	THROTTLE HANDLE
148	1	1	0001024	THROTTLE HANDLE CABLE MOUNT, LEFT
149	1	1	0001112	THROTTLE CABLE BARREL CLAMP
150	1	1	0001117	THROTTLE CABLE, 70.5 in [1790 mm] LG CABLE, 60 in [1525 mm] LG SHEATH
151	1	1	0001839	LABEL, SERIAL NUMBER
152	1	1	0006993	LABEL, RECOMMENDED BLADE TENSION BY TURNS
153	1	1	0005688	LABEL, DRIVE-SIDE TRACKING
154	1	1	0002769	LABEL, DANGER/WARNING COLLAGE
155	1	1	0004646	LABEL, FOLLOWER BELT
156	2	2	0002766	LABEL, CAUTION: DO NOT OPERATE WITHOUT GUARDS
157	1	1	0002770	LABEL, DANGER: MOVING PARTS CUT/CRUSH
158	1	1	0002771	LABEL, DANGER: BANDSAW BLADE WILL CUT
159	1	1	BX57	V-BELT, COGGED, BX57
160	1	1	BX80	V-BELT, COGGED, BX80
161	-	1	CH395-3149	ENGINE, KOHLER COMMAND PRO HORIZONTAL, 9.5 hp
162	1	-	CH440-3149	ENGINE, KOHLER COMMAND PRO HORIZONTAL, 14 hp
163	4	4	5204-2RS	BALL BEARING, SEALED, ANG-CONT, DOUBLE ROW, 20 mm SFT, 47 mm HSG, 20.6 mm WD
164	2	2	6000-2RS	BALL BEARING, SEALED, 10 mm SFT, 26 mm HSG, 8 mm WD
165	7	7	6001-2RS	BALL BEARING, SEALED, 12 mm SFT, 28 mm HSG, 8 mm WD
166	1	1	6203-2RS	BALL BEARING, SEALED, 17 mm SFT, 40 mm HSG, 12 mm WD
167	4	4	6305-2RS	BALL BEARING, SEALED, 25 mm SFT, 62 mm HSG, 17 mm WD
168	2	2	51102	THRUST BEARING, SINGLE DIR, 15 mm SFT, 28 mm HSG, 9 mm WD
169	1	1	51204	THRUST BEARING, SINGLE DIR, W/ HSG, 20 mm SFT, 40 mm HSG, 14 mm WD
170	1	1	SLS-03-08	FLOW CONTROL VALVE, RA, 3/8 NPT, 8 mm QUICK-CONNECT TUBE
171	2	2	HHB-MBE075FCJ	HEX HEAD BOLT, CLS 8.8, M6 X 1, 20 mm LG, FULL
172	2	2	HHB-MBE080FCJ	HEX HEAD BOLT, CLS 8.8, M6 X 1, 25 mm LG, FULL
173	4	4	HHB-MBE090FCJ	HEX HEAD BOLT, CLS 8.8, M6 X 1, 35 mm LG, FULL
174	1	1	HHB-MBE105FCJ	HEX HEAD BOLT, CLS 8.8, M6 X 1, 50 mm LG, FULL
175	1	1	HHB-MBE110PCJ	HEX HEAD BOLT, CLS 8.8, M6 X 1, 55 mm LG, 18 mm LG THD
176	2	2	HHB-MBJ063FCJ	HEX HEAD BOLT, CLS 8.8, M8 X 1.25, 12 mm LG, FULL
177	4	4	HHB-MBJ071FCJ	HEX HEAD BOLT, CLS 8.8, M8 X 1.25, 16 mm LG, FULL
178	23	25	HHB-MBJ075FCJ	HEX HEAD BOLT, CLS 8.8, M8 X 1.25, 20 mm LG, FULL
179	5	5	HHB-MBJ080FCJ	HEX HEAD BOLT, CLS 8.8, M8 X 1.25, 25 mm LG, FULL
180	1	1	HHB-MBJ085FCJ	HEX HEAD BOLT, CLS 8.8, M8 X 1.25, 30 mm LG, FULL
181	4	6	HHB-MBJ090FCJ	HEX HEAD BOLT, CLS 8.8, M8 X 1.25, 35 mm LG, FULL



Item	Quantity		Part No.	Description
	14 hp	9.5 hp		
182	2	2	HHB-MBJ165PCJ	HEX HEAD BOLT, CLS 8.8, M8 X 1.25, 110 mm LG, 22 mm LG THD
183	2	2	HHB-MBJ185FCJ	HEX HEAD BOLT, CLS 8.8, M8 X 1.25, 130 mm LG, FULL
184	1	2	HHB-MBM075FCJ	HEX HEAD BOLT, CLS 8.8, M10 X 1.5, 20 mm LG, FULL
185	4	3	HHB-MBM080FCJ	HEX HEAD BOLT, CLS 8.8, M10 X 1.5, 25 mm LG, FULL
186	-	4	HHB-MBM100FCJ	HEX HEAD BOLT, CLS 8.8, M10 X 1.5, 45 mm LG, FULL
187	8	4	HHB-MBM105FCJ	HEX HEAD BOLT, CLS 8.8, M10 X 1.5, 50 mm LG, FULL
188	1	1	HHB-MBR075FCJ	HEX HEAD BOLT, CLS 8.8, M12 X 1.75, 20 mm LG, FULL
189	1	1	HHB-MBR090FCJ	HEX HEAD BOLT, CLS 8.8, M12 X 1.75, 35 mm LG, FULL
190	2	2	HHB-MBR100FCJ	HEX HEAD BOLT, CLS 8.8, M12 X 1.75, 45 mm LG, FULL
191	1	1	HHB-MBR120PCJ	HEX HEAD BOLT, CLS 8.8, M12 X 1.75, 65 mm LG, 30 mm LG THD
192	16	16	HHB-MBR135PCJ	HEX HEAD BOLT, CLS 8.8, M12 X 1.75, 80 mm LG, 30 mm LG THD
193	6	6	HHB-MBR145PCJ	HEX HEAD BOLT, CLS 8.8, M12 X 1.75, 90 mm LG, 30 mm LG THD
194	2	2	HHB-MBR155FCJ	HEX HEAD BOLT, CLS 8.8, M12 X 1.75, 100 mm LG, FULL
195	2	2	HHB-MBR165PCJ	HEX HEAD BOLT, CLS 8.8, M12 X 1.75, 110 mm LG, 30 mm LG THD
196	1	1	HHB-MBR175PCJ	HEX HEAD BOLT, CLS 8.8, M12 X 1.75, 120 mm LG, 30 mm LG THD
197	1	1	HHB-MCA145PCJ	HEX HEAD BOLT, CLS 8.8, M16 X 2, 90 mm LG, 38 mm LG THD
198	12	12	HHB-MCA175FCJ	HEX HEAD BOLT, CLS 8.8, M16 X 2, 120 mm LG, FULL
199	4	4	HHB-MCF175PCJ	HEX HEAD BOLT, CLS 8.8, M20 X 2.5, 120 mm LG, 46 mm LG THD
200	2	2	HHB-UBU017FGE	HEX HEAD BOLT, GR 5, 3/8-16, 3/4 in LG, FULL
201	1	-	HHB-UBV025FGJ	HEX HEAD BOLT, GR 8, 3/8-24, 1-1/4 in LG, FULL
202	-	1	HHB-UCA025FGJ	HEX HEAD BOLT, GR 8, 7/16-20, 1-1/4 in LG, FULL
203	34	34	FHH-MBM080FCM	HEX BOLT, FLANGED, CLS 10.9, M10 X 1.5, 25 mm LG, FULL
204	16	16	FHH-MBM090PCM	HEX BOLT, FLANGED, CLS 10.9, M10 X 1.5, 35 mm LG, 26 mm LG THD
205	2	2	FHH-MBM125PCJ	HEX BOLT, FLANGED, CLS 8.8, M10 X 1.5, 70 mm LG, 26 mm LG THD
206	6	6	BHS-MAW051FTA	BUTTON HEAD SCREW, CLS 10.9, M4 X 0.7, 6 mm LG, FULL
207	2	2	BHS-MAW059FCM	BUTTON HEAD SCREW, CLS 10.9, M4 X 0.7, 10 mm LG, FULL
208	8	8	BHS-MBE071FCM	BUTTON HEAD SCREW, CLS 10.9, M6 X 1, 16 mm LG, FULL
209	4	-	BHS-MBJ090FCM	BUTTON HEAD SCREW, CLS 10.9, M8 X 1.25, 35 mm LG, FULL
210	4	4	SHC-MBJ075FCP	SHCS, CLS 12.9, M8 X 1.25, 20 mm LG, FULL
211	2	2	SHC-MBM080FCP	SHCS, CLS 12.9, M10 X 1.5, 25 mm LG, FULL
212	1	-	SHC-MBR185FCP	SHCS, CLS 12.9, M12 X 1.75, 130 mm LG, FULL
213	1	1	HHS-MBM057090AJ	SHLDR SCREW, HEX HEAD, ALLOY, 11 X 35 mm LG SHLDR, M10 X 1.5 X 18 mm LG THD
214	1	1	SHS-MBR063145CP	SHLDR SCREW, SH, CLS 12.9, 16 X 90 mm LG SHLDR, M12 X 1.75 X 18 mm LG THD
215	1	1	PPH-MAW063FTA	SCREW, PPH, SST, M4 X 0.7, 12 mm LG, FULL
216	2	2	PPH-MAW085FCE	SCREW, PPH, CLS 4.8, M4 X 0.7, 30 mm LG, FULL
217	2	2	PPH-MBE067FCE	SCREW, PPH, CLS 4.8, M6 X 1, 14 mm LG, FULL
218	12	12	PFH-MAW059FCM	SCREW, PFH, CLS 10.9, M4 X 0.7, 10 mm LG, FULL
219	1	1	HFH-MBE085PCM	SCREW, HFH, CLS 10.9, M6 X 1, 30 mm LG, 18 mm LG THD
220	2	-	HFH-MBJ075FCM	SCREW, HFH, CLS 10.9, M8 X 1.25, 20 mm LG, FULL
221	1	1	HFH-MBM075FCM	SCREW, HFH, CLS 10.9, M10 X 1.5, 20 mm LG, FULL
222	2	2	PST-UBC015FAJ	SCREW, PPH, ST, NO. 10, 5/8 in LG
223	-	1	KCS-MBE055TA	SET SCREW, KNURLED CUP POINT, SST, M6 X 1, 8 mm LG
224	8	8	KCS-MBJ055TA	SET SCREW, KNURLED CUP POINT, SST, M8 X 1.25, 8 mm LG
225	4	4	FTW-MAW000AJ	FLAT WASHER, M4
226	35	35	FTW-MBE000AJ	FLAT WASHER, M6
227	26	23	FTW-MBJ000AJ	FLAT WASHER, M8



Item	Quantity		Part No.	Description
	14 hp	9.5 hp		
228	12	12	FTW-MBJ000NA	FLAT WASHER, M8, NYLON
229	18	18	FTW-MBM000AJ	FLAT WASHER, M10
230	58	56	FTW-MBR000AJ	FLAT WASHER, M12
231	1	1	FTW-MCA000AJ	FLAT WASHER, M16
232	16	16	FTW-MCF000AJ	FLAT WASHER, M20
233	2	2	FDW-MBJ079000AJ	FENDER WASHER, M8, 30 mm OD
234	4	4	FDW-MBM079000AJ	FENDER WASHER, M10, 30 mm OD
235	3	2	FDW-MBM083000AJ	FENDER WASHER, M10, 34 mm OD
236	4	4	FDW-MBR080000AJ	FENDER WASHER, M12, 31 mm OD
237	-	1	FDW-MBR086000AJ	FENDER WASHER, M12, 37 mm OD
238	4	4	SLW-MBEAJ	SPLIT LOCK WASHER, M6
239	9	8	SLW-MBMAJ	SPLIT LOCK WASHER, M10
240	-	1	SLW-MBRAJ	SPLIT LOCK WASHER, M12
241	2	2	HXN-MBJCH	HEX NUT, CLS 8, M8 X 1.25
242	7	6	HXN-MBMCH	HEX NUT, CLS 8, M10 X 1.5
243	4	4	HXN-MBRCH	HEX NUT, CLS 8, M12 X 1.75
244	36	36	HXN-MCACH	HEX NUT, CLS 8, M16 X 2
245	1	1	THN-MBECC	HEX NUT, THIN, CLS 4, M6 X 1
246	4	1	THN-MBRCC	HEX NUT, THIN, CLS 4, M12 X 1.75
247	4	4	FHN-MBMCH	HEX NUT, FLANGED, CLS 8, M10 X 1.5
248	10	10	HLN-MAWCH	LOCK NUT, CLS 8, M4 X 0.7
249	17	17	HLN-MBECH	LOCK NUT, CLS 8, M6 X 1
250	32	30	HLN-MBJCH	LOCK NUT, CLS 8, M8 X 1.25
251	7	6	HLN-MBMCH	LOCK NUT, CLS 8, M10 X 1.5
252	30	29	HLN-MBRCH	LOCK NUT, CLS 8, M12 X 1.75
253	1	1	HLN-MCACH	LOCK NUT, CLS 8, M16 X 2
254	4	4	HLN-MCFCH	LOCK NUT, CLS 8, M20 X 2.5
255	46	46	FLN-MBMCL	LOCK NUT, FLANGED, CLS 10, M10 X 1.5



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