HM126 PORTABLE SAWMILL

9.5 and 14 Horsepower Models

OPERATOR'S MANUAL

HM126-MY2021-EN: Rev D
Publication Date: 03-May-2021

WOODLAND MILLS

DISCOVER THE WOODLAND™

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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 sawmill. 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 sawmills are designed for acreage owners to aid in the milling of natural, untreated wood with the mill firmly supported on the ground. 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 there are safety, warning, and information symbols. Please heed and obey all warnings.

Symbol	Description
	Refer to instruction/operator's manual
	Wear protective gloves
	Wear safety footwear
	Wear eye protection
	Wear a face shield
	Wear a mask
	Wear ear protection
	Lift point
	Lockout electrical power (electric sawmills only)
	General warning
	Electricity warning
	Instructions are different for electric sawmills. Refer to electric sawmill manual addendum for electric sawmill-specific instructions.
	Instructions do not pertain to electric sawmills. Instructions can be skipped and ignored when working with an electric sawmill.

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

SAFETY GUIDELINES

****SAVE THESE INSTRUCTIONS****

WARNING!

Read and understand all instructions. Failure to follow all instructions listed below may result in electric shock, fire, and/or serious injury.

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.

WARNING!

Only operate the engine in a well ventilated area. Carbon Monoxide (CO) produced by the engine during use can kill. Do not use indoors, near windows, or in other sheltered areas.

NOTE: All Federal and State laws and any regulation having jurisdiction covering the safety requirements for use of the machine take precedence over the statements in this manual. Users of this machine must adhere to such regulations.

WORK AREA

- **Keep work area clean, free of clutter and well lit.** Cluttered and dark work areas can cause accidents.
- **Do not use your sawmill 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 alert of your surroundings.** Using power tools in confined work areas may put you dangerously close to cutting tools and rotating parts.

INTERNAL COMBUSTION ENGINE SAFETY

WARNING!

Internal combustion engines present special hazards during operation and fuelling. Read and follow the warning instructions in the engine Owner's Manual and the safety guidelines below. Failure to follow the warnings and safety standards could result in severe injury or death.

- **DO NOT** run the machine indoors or in an enclosed area such as a deep trench unless adequate ventilation, through such items as exhaust fans or hoses, is provided. Exhaust gas from the engine contains poisonous carbon monoxide gas (CO); exposure to carbon monoxide can cause loss of consciousness and may lead to death.
- **DO NOT** smoke while operating the machine.
- **DO NOT** smoke when refuelling the engine.
- **DO NOT** refuel a hot or running engine.
- **DO NOT** refuel the engine near an open flame.
- **DO NOT** spill fuel when refuelling the engine.
- **DO NOT** run the engine near an open flame.
- **ALWAYS** refill the fuel tank in a well-ventilated area.
- **ALWAYS** replace the fuel tank cap after refuelling.
- **ALWAYS** check the fuel lines and the fuel tank for leaks and cracks before starting the engine. Do not run the machine if fuel leaks are present or the fuel lines are loose.
- **ALWAYS** avoid contact with hot fuel, oil, and exhaust fumes.

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 which 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, hardhat, gloves, dust collection systems, and hearing protection when appropriate.
- **Do not overreach.** 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 make blade guide adjustments, remove or install blades, or conduct any other maintenance or make any other adjustments while the engine is running.** Always shut the engine off, remove the ignition key, and turn the engine off before carrying out any of the aforementioned procedures. Consult your engine manual for safe shutdown procedures to prevent accidental ignition.

TOOL USE AND CARE

- **Always** be sure the operator is familiar with proper safety precautions and operation techniques before using machine.
- **Never touch** the engine or muffler while the engine is on or immediately after it has been turned off. These areas get extremely hot and can cause burns.
- **Always** close the fuel valve on the engine when the machine is not in use.
- **Do not force the tool.** Tools do a better and safer job when used in the manner for which they are designed.
- **Never use the sawmill** with a malfunctioning switch or throttle. Any power tool that cannot be controlled with the switch is dangerous and must be repaired before using.
- Turn off the engine and place the switch in the locked or off position before servicing, adjusting, installing accessories or attachments, or storing. Such preventive safety measures reduce the risk of starting the power tool accidentally.
- Secure logs with the log screw clamping device instead of with your hand or another individual's help. This safety precaution allows for proper tool operation using both hands.
- **Storing sawmill.** When the sawmill is not in use, store it in a dry, secure place or keep well covered and out of the reach of children. Inspect the sawmill for good working condition prior to storage and before re-use.
- **Maintain your sawmill.** It is recommended that the general condition of the sawmill be examined before it is used. Keep your sawmill in good repair by adopting a program of conscientious repair and maintenance in accordance with the recommended procedures found in this manual. If any abnormal vibrations or noise occurs, turn the sawmill off immediately and have the problem corrected before further use.
- **Keep saw blades sharp and clean.** Properly maintained bandsaw blades are less likely to bind and are easier to control.
- **Cleaning and Lubrication.** Use only soap and a damp cloth to clean your sawmill. Many household cleaners are harmful to plastic and rubber components on the sawmill.
- **Use only accessories that are recommended** by the manufacturer for your model. Accessories that may be suitable for another sawmill may create a risk of injury when used on the sawmill.
- **Always** operate 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 machine if any safety devices or guards are missing or inoperative.
- **Never leave sawmill running unattended.**
- **Coiled blades can spring apart with considerable force and unpredictably in any direction.** Always deal with coiled blades, including those packaged in boxes, with the utmost care.
- **Never use the equipment to cut anything other than lumber** or for any purpose other than cutting lumber as described in this manual.

EQUIPMENT OPERATION

1. Wear heavy-duty work gloves, ANSI-approved goggles behind a full face shield, steel-toed work boots, hearing protection, and a dust mask.
2. Operate only with assistance.
3. Cut-off branches from the lumber to be processed.
4. Place the lumber to be cut on the track supports.
5. Clamp the lumber firmly in place using the included log clamps and supports.
6. Fill the lubrication tank with clean water. Add no more than a teaspoon of liquid dish soap per full tank. The soap helps keep the blade clean(er) when excess pitch builds up.
7. Start and operate the engine according to the provided engine manual.
8. Depress the throttle to bring the blade up to speed—the throttle should be fully depressed while the saw is under load.
9. Roll the head assembly slowly along the track and against the lumber to make the cut.
10. Trim off the rounded sides of the log.
11. When the log is squared-off, boards or posts can be cut to standard or custom specifications.
12. To prevent accidents, turn off the engine and disconnect its spark plug wire after use. Wait for the engine to cool, clean external parts with a clean cloth, then store the equipment out of children's reach.

WARNING!

To avoid death or serious injury, do not cut lumber containing embedded foreign objects such as nails, metal fragments, etc.

WARNING!

The operator and any assistants must stay clear of the front and back of the blade whenever the engine is on.

MAINTENANCE

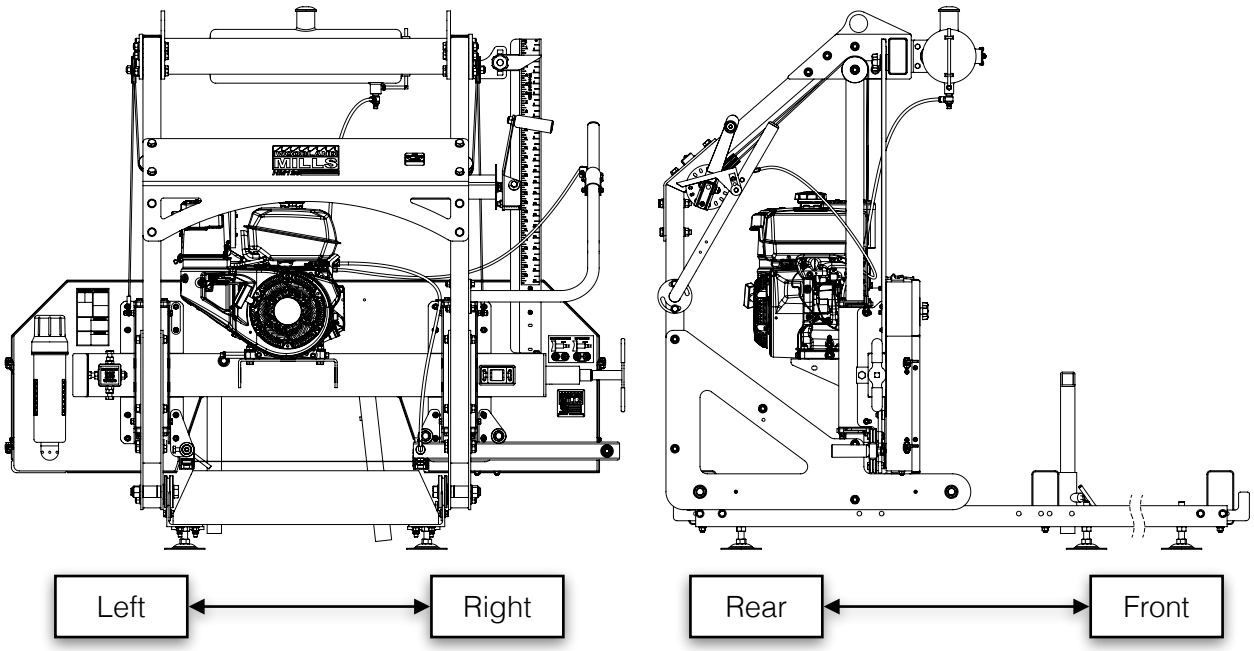
Proper and routine maintenance is critical to operator safety, achieving good milling results, and to prolong the life of your investment.

- **Band Wheel Bearings** — Inspect before use to ensure they are not worn. Bearings are sealed and do not need to be greased.
- **Blade Guide Bearings** — Inspect before use for excessive grooves or scoring in the bearing case. Replace if necessary.
- **Blade Tension** — Grease threads of tensioning T-handle when dry or as required. Use multi-purpose, extreme-pressure grease.
- **Log Clamps** — Spray the cam mechanism with dry silicone spray frequently.
- **Belts** — Periodically check the condition and wear of the drive and idler belt. Ensure that the blade does not ride on the band wheels.
- **Drive Belt** — Periodically check the tension of the drive belt.
- **Carriage Posts (Front)** — Spray posts before use with a silicone spray lubricant such as "WD-40 Water Resistant Silicone Spray," "3-in-One Silicone Spray Lubricant," or "Jig-A-Loo."
- **Band Wheel Guards** — Routinely remove any build-up of sawdust that may collect inside the band wheel guards.
- **Lubrication Tank** — Fill with clean water. Add a teaspoon of liquid dish soap if pitch builds up on the blade. In winter months windshield washer fluid can be used. Do not leave water in tank if temperature falls below 32°F [0˚C].
- **Blade Lubricant** — Never use diesel fuel or kerosene as blade lubricant. These substances lead to premature wear of your belts and poor sawing performance. For winter operation, replace the water with windshield washer fluid.
- **Engine** — Check the engine oil level before each use and maintain the engine per the instructions set out by the engine manufacturer in the engine manual. The engine is equipped with an oil alert system and will not start without adding oil before starting.
- **Lifting Cables** — Before, during, and after operation, regularly inspect the cables for any wear or kinks. Ensure that the cables are in perfect condition. Oil the coiled part of the cable often to prevent premature wear. Replace with new cables as necessary.

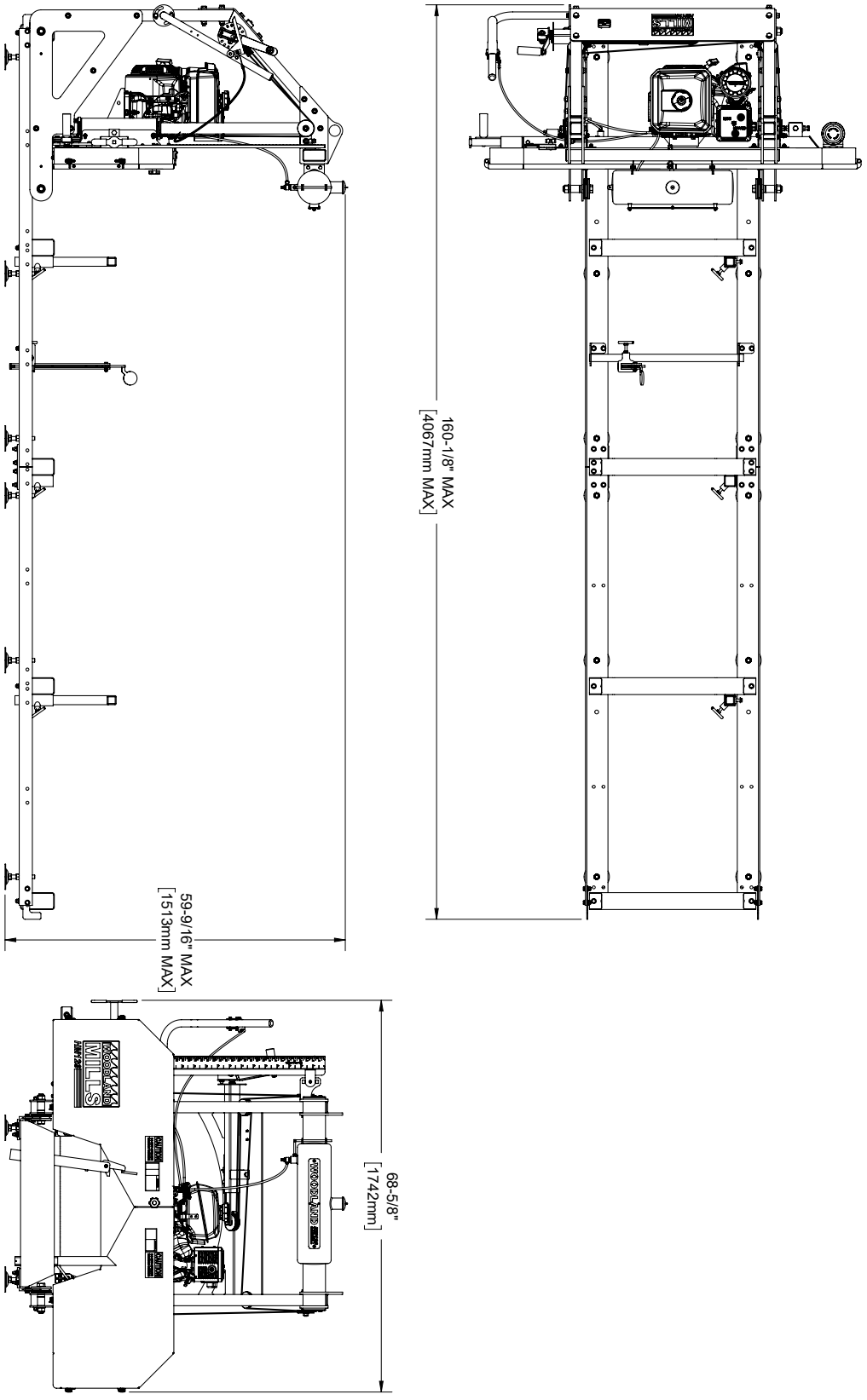
TECHNICAL SPECIFICATIONS

The HM126 sawmill comes in two variants: the ***HM126-9.5*** that utilizes a 9.5 horsepower engine and the ***HM126-14*** with a 14 horsepower engine and adjustable blade guide. Both versions are assembled and operated in the same manner. Pictures and graphics used in this manual display the HM126-14 sawmill but the instructions still apply to both.

Item	HM126-9.5 Specification	HM126-14 Specification
Gasoline Engine	9.5 hp Kohler Command Pro	14 hp Kohler Command Pro
Max Log Diameter	26 in [660 mm]	
Max Board Width	24 in [610 mm]	
Max Board Thickness	7 in [178 mm]	
Blade Size	1-¼ x 144 in [32 mm x 3657 mm]	
Track Length	153-½ in [3900 mm]	
Track Width	30-½ in [775 mm]	
Track Height Adjustability (top of bunk)	7-⅞ to 10-⅝ in [200 to 270 mm]	
Product Weight	751 lb [341 kg]	771 lb [350 kg]
Shipping Weight	935 lb [424 kg]	955 lb [433 kg]



OVERALL DIMENSIONS



ASSEMBLY

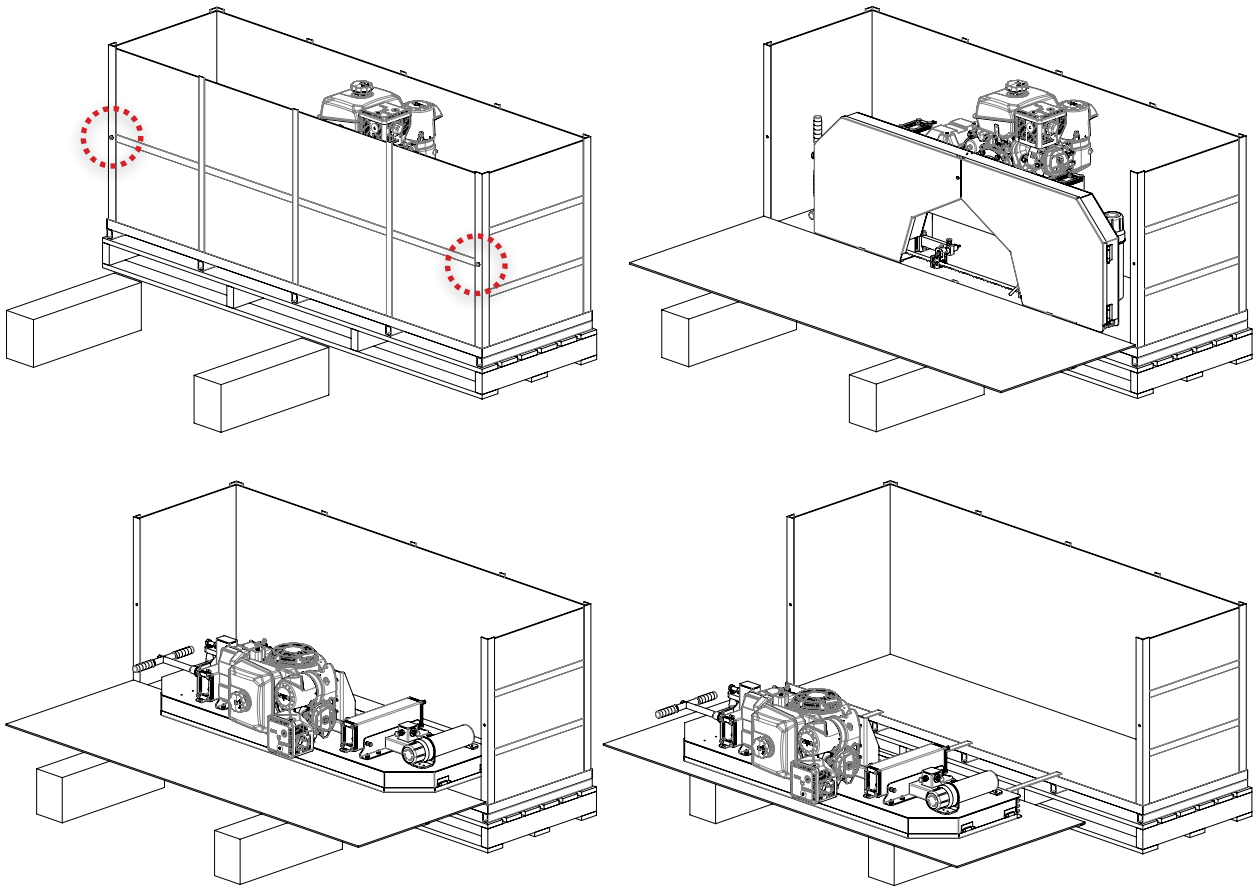
1. TOOLS REQUIRED

Tool	Specification
Wrench/Socket	7 mm (2X)
Wrench/Socket	10 mm (2X)
Wrench/Socket	13 mm (2X)
Wrench/Socket	14 mm (2X)
Wrench/Socket	15 mm (2X)
Wrench/Socket	16 mm (2X)
Wrench/Socket	17 mm (2X)
Wrench/Socket	18 mm (2X)
Wrench/Socket	19 mm (2X)
Wrench	24 mm or Adjustable Wrench (2X)
Wrench	30 mm or Adjustable Wrench (2X)
Hex Key	3 mm
Hex Key	4 mm
Phillips Head Screwdriver	No. 2
Tape Measure	Standard Inch/Metric Tape Measure

During several of the assembly steps, more than one socket or wrench of the same size may be required to assemble the hardware. A socket or box wrench in combination with an adjustable wrench can be utilized if multiple same size tools are in limited supply.

2. UNPACKING

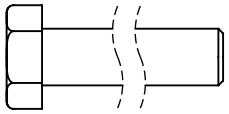
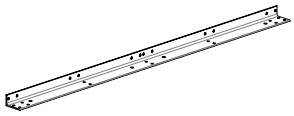
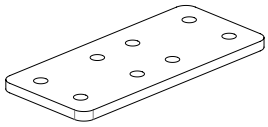
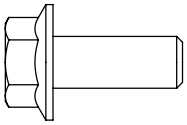
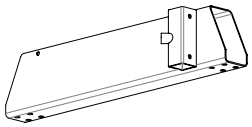
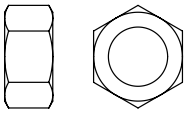
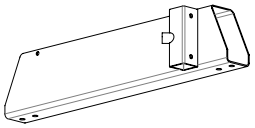
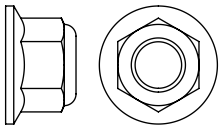
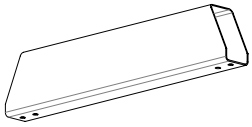
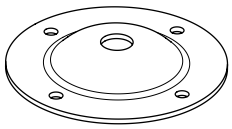
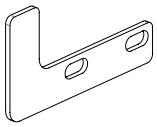
Unpack the contents of the crate except for the sawhead and the two long boxes in the bottom that contain the sections of track. Unfasten the two (2) M8 bolts/nuts on the front of the crate using a socket/wrench. Place two (2) 6-8 in [150-200 mm] tall support blocks in front of the crate, bend the front of the crate down, and then lay the cardboard wall over it. Carefully rotate the sawhead down onto the cardboard and support blocks and slide it out of the crate as shown below.



The two long track boxes can now be removed and the crate discarded.

3. TRACK

Assemble the track with the provided components and hardware listed in the table below. It is important to assemble and level the track on a firm foundation before tightening all of the hardware and should ideally be 3-½—4 in [90—100 mm] off the ground. This will allow for easy cleanup of sawdust and log support height adjustments.

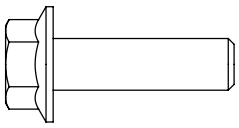
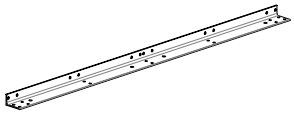
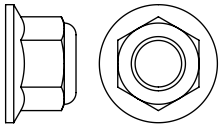
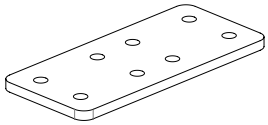
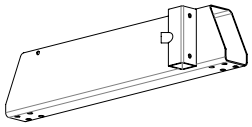
12x	M16 X 120 mm Hex Bolt		4x	Track Rail	
16x	M10 X 35 mm Flanged Hex Bolt		2x	Reinforcement Plate	
24x	M10 X 25 mm Flanged Hex Bolt		1x	Centre Bunk*	
36x	M16 Hex Nut		2x	Mid Bunk	
40x	M10 Flanged Lock Nut		2x	End Bunk	
12x	Levelling Foot Base		4x	Carriage Stop	

* Centre bunk incorporates four (4) mounting holes at each end

If a Woodland Mills sawmill trailer was purchased with this sawmill, skip this track assembly section and follow the track assembly instructions in those manuals.

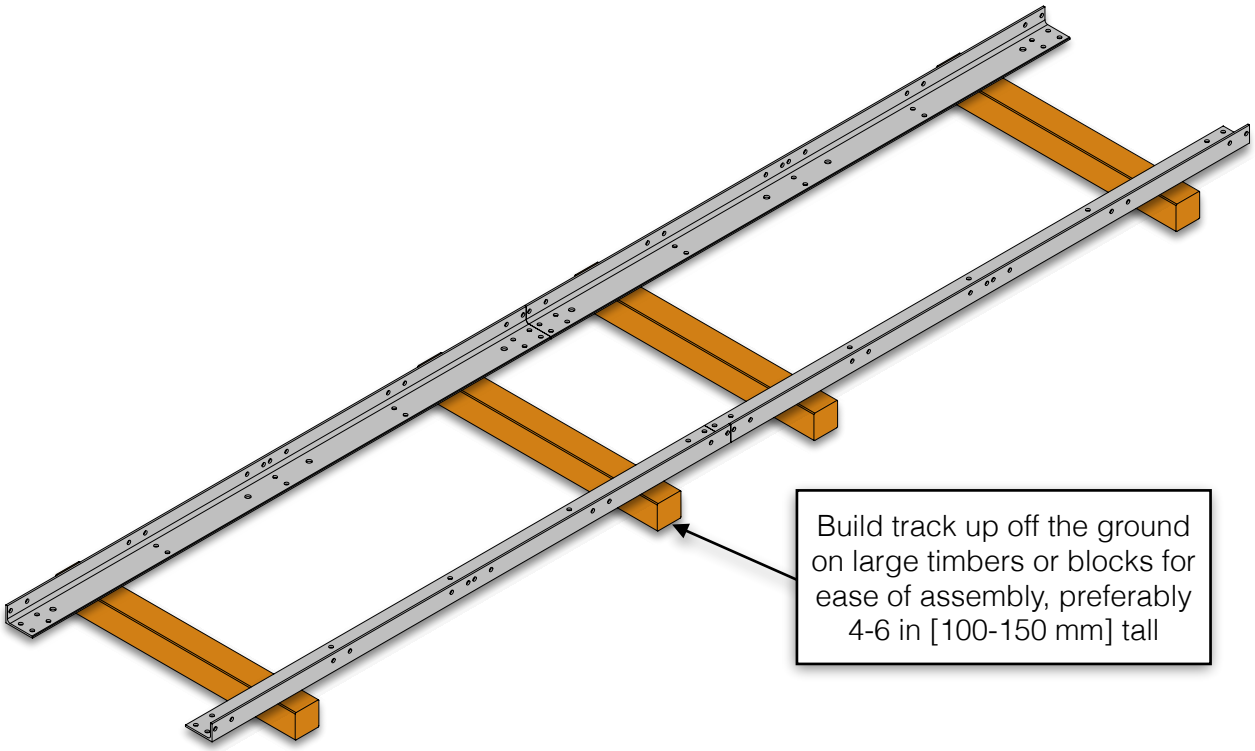
RAILS & CENTRE BUNK

Assemble the centre bunk over the joint between both pairs of track rails using the components and hardware listed in the table below.

16x	M10 X 35 mm Flanged Hex Bolt		4x	Track Rail	
16x	M10 Flanged Lock Nut		2x	Reinforcement Plate	
			1x	Centre Bunk*	

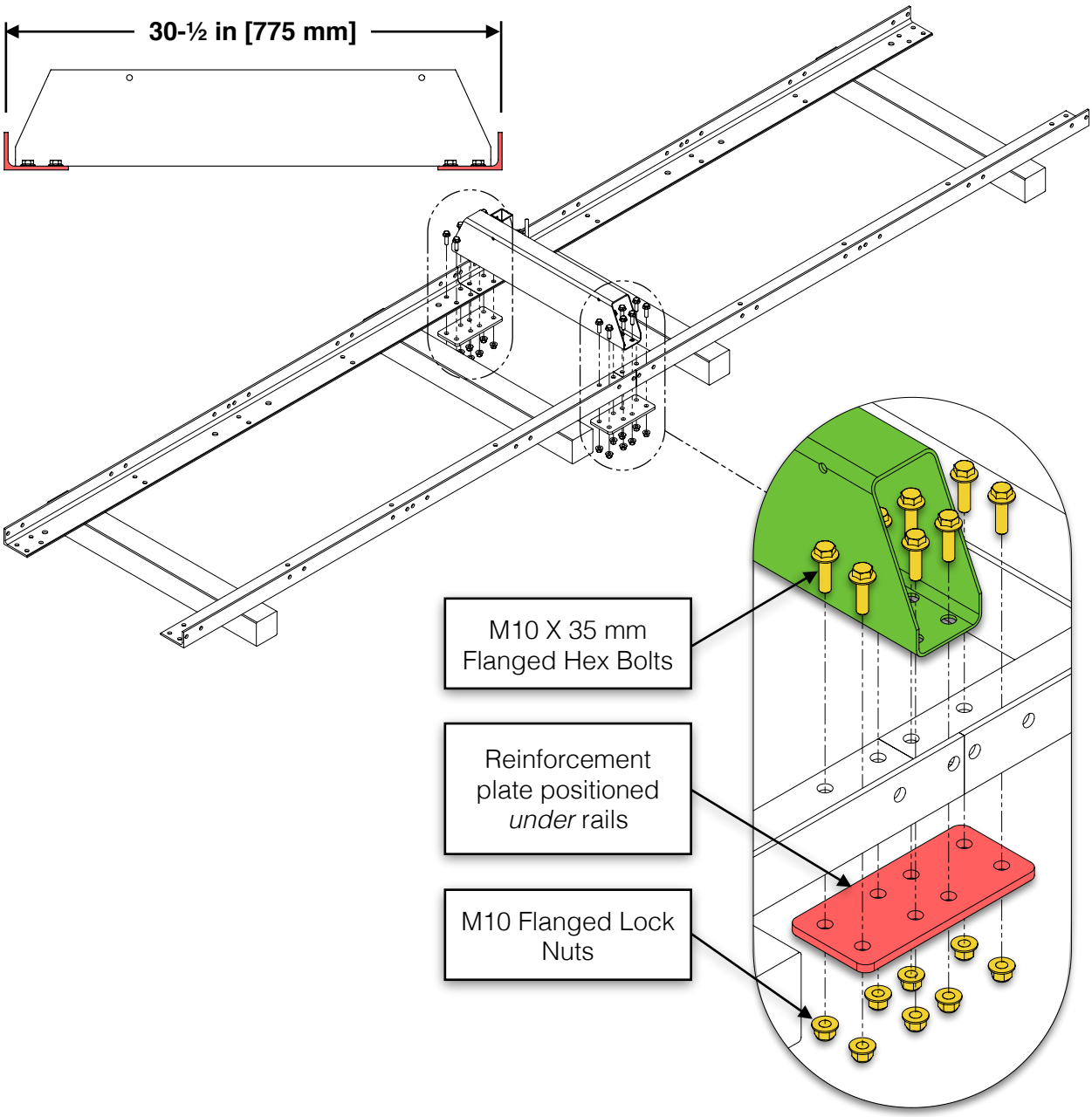
* Centre bunk incorporates four (4) mounting holes at each end.

First, set the four (4) track rails on top of four pieces of lumber of equal height. It is ideal to keep the rails at least 4-6 in [100-150 mm] off the ground for ease of assembly..



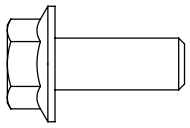
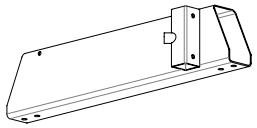
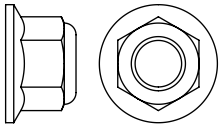
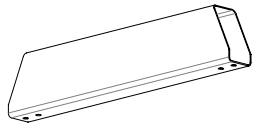
Next, assemble the centre bunk over the rail joints with a reinforcement plate *under* the rails on both the left and right sides. Use eight (8) M10 X 35 mm flanged hex bolts and M10 flanged lock nuts per side.

Keep the outer faces of the rails 30-½ in [775 mm] apart but do not fully tighten the hardware. Snug the bolts enough so that minor adjustments to the track width can be made once all the bunks are assembled to the rails.

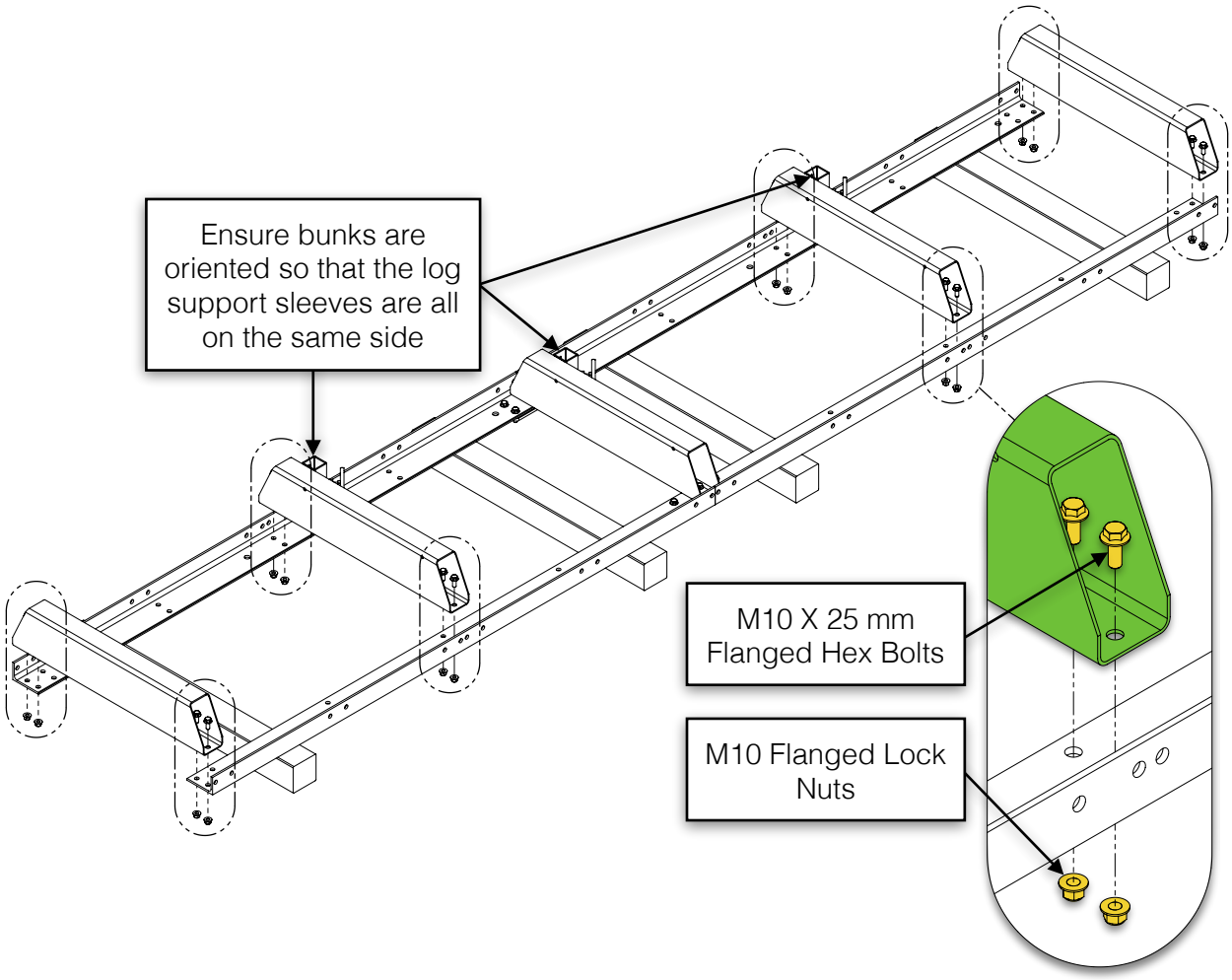


MID & END BUNKS

Assemble the mid and end bunks in the locations shown using the components and hardware listed in the table below.

16x	M10 X 25 mm Flanged Hex Bolt		2x	Mid Bunk	
16x	M10 Flanged Lock Nut		2x	End Bunk	

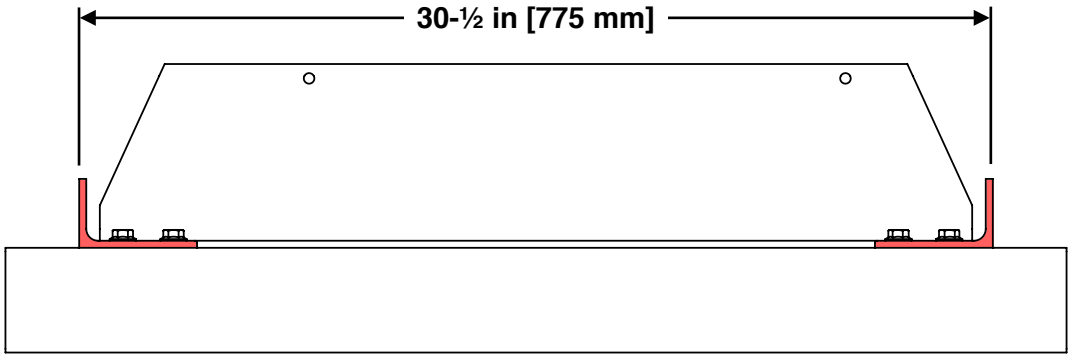
Use sixteen (16) M10 X 25 mm flanged hex bolts and M10 flanged lock nuts (4 per bunk) at all end & mid bunk locations. Snug the hardware in the same manner as the centre bunk.



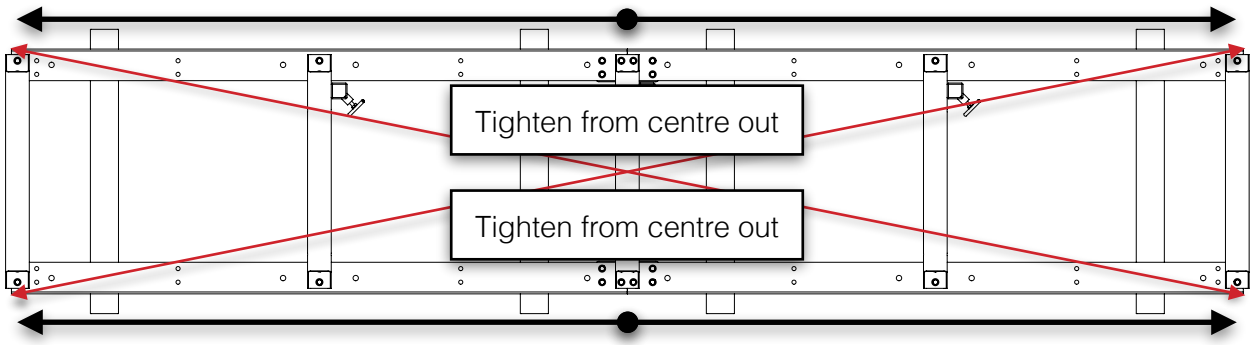
SQUARING THE TRACK AND SETTING THE WIDTH

The assembled track measures 30-½ in [775 mm] wide when measuring from the outside faces of the rails.

With the bunk hardware connections only snug-tight, the rails can be moved in or out as needed until the proper width is achieved along the entire length of the track.



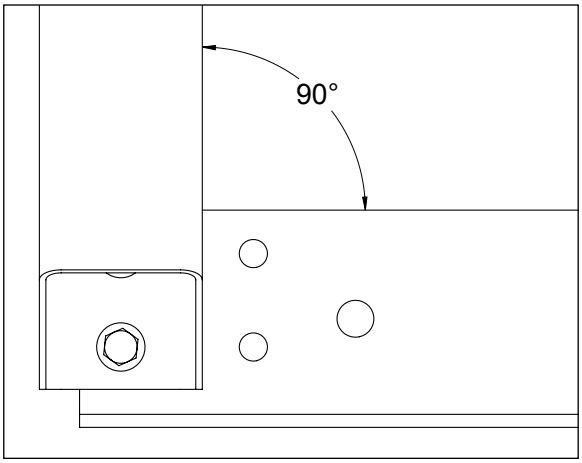
When the width is uniform along the full track length, check it for square by measuring diagonally from rail tip-to-rail tip as shown with the **red arrows** below.



Ensure the end bunks are square to the rails.

Once the width is correct and the track square, tighten all sixteen (16) M10 X 25 mm and sixteen (16) M10 X 35 mm flanged hex bolts and their nuts ***working from the centre out towards the ends*** as shown with the **black arrows** above.

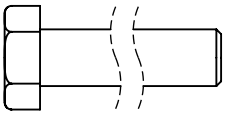
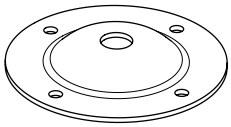
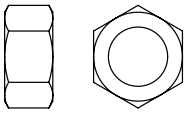
Double-check the track width and squareness after tightening. Readjust if necessary.



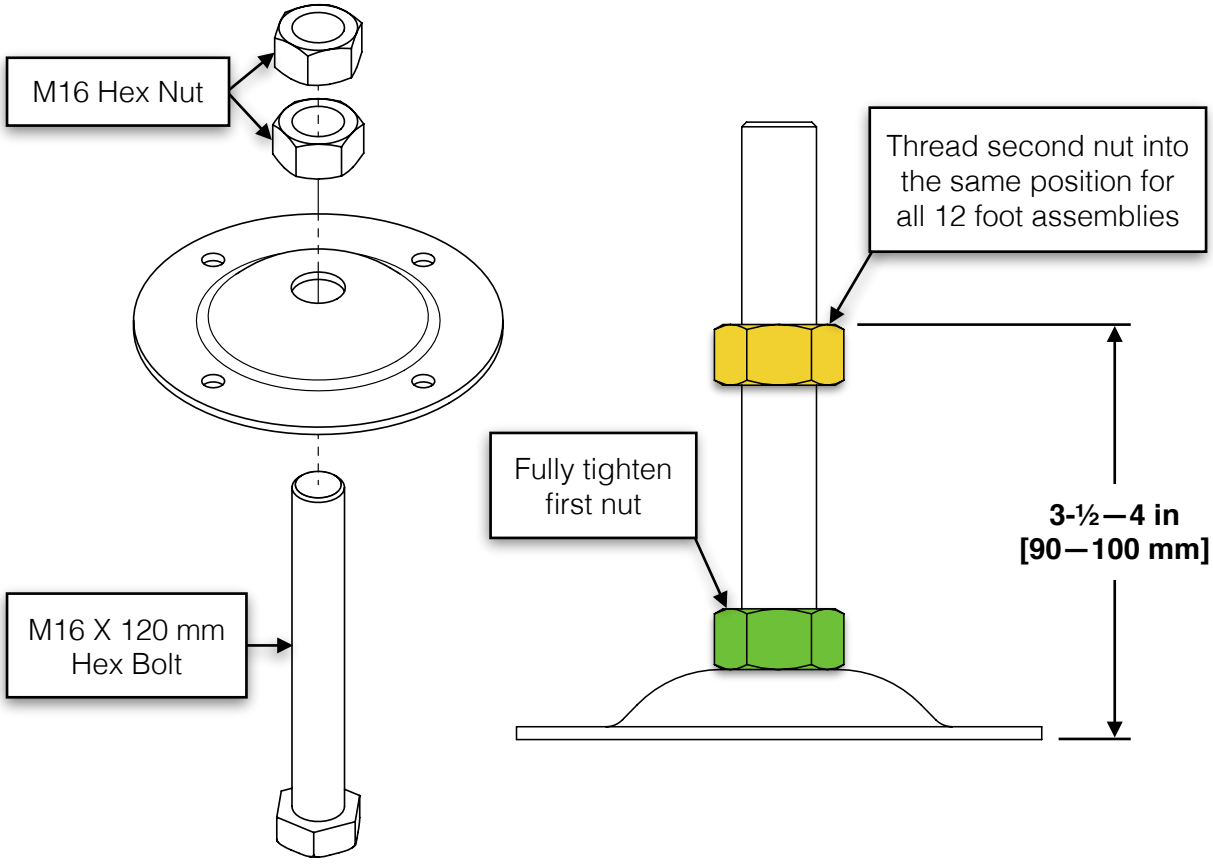
END BUNKS SQUARE TO RAILS

LEVELLING FEET

Assemble the levelling feet using the components and hardware listed in the table below.

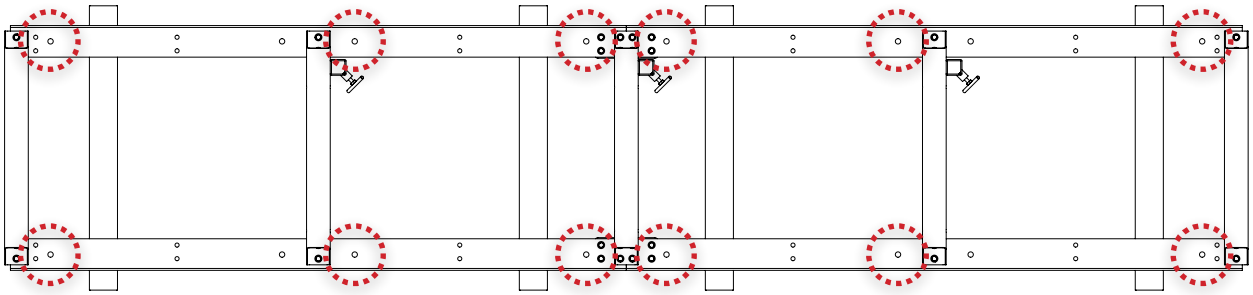
12x	M16 X 120 mm Hex Bolt		12x	Levelling Foot Base	
36x	M16 Hex Nut				

Assemble twelve (12) sets of levelling feet, each one with a levelling foot base, an M16 X 120 mm hex bolt, and two (2) M16 hex nuts. A third hex nut will secure the foot assembly to the rail on the next page.

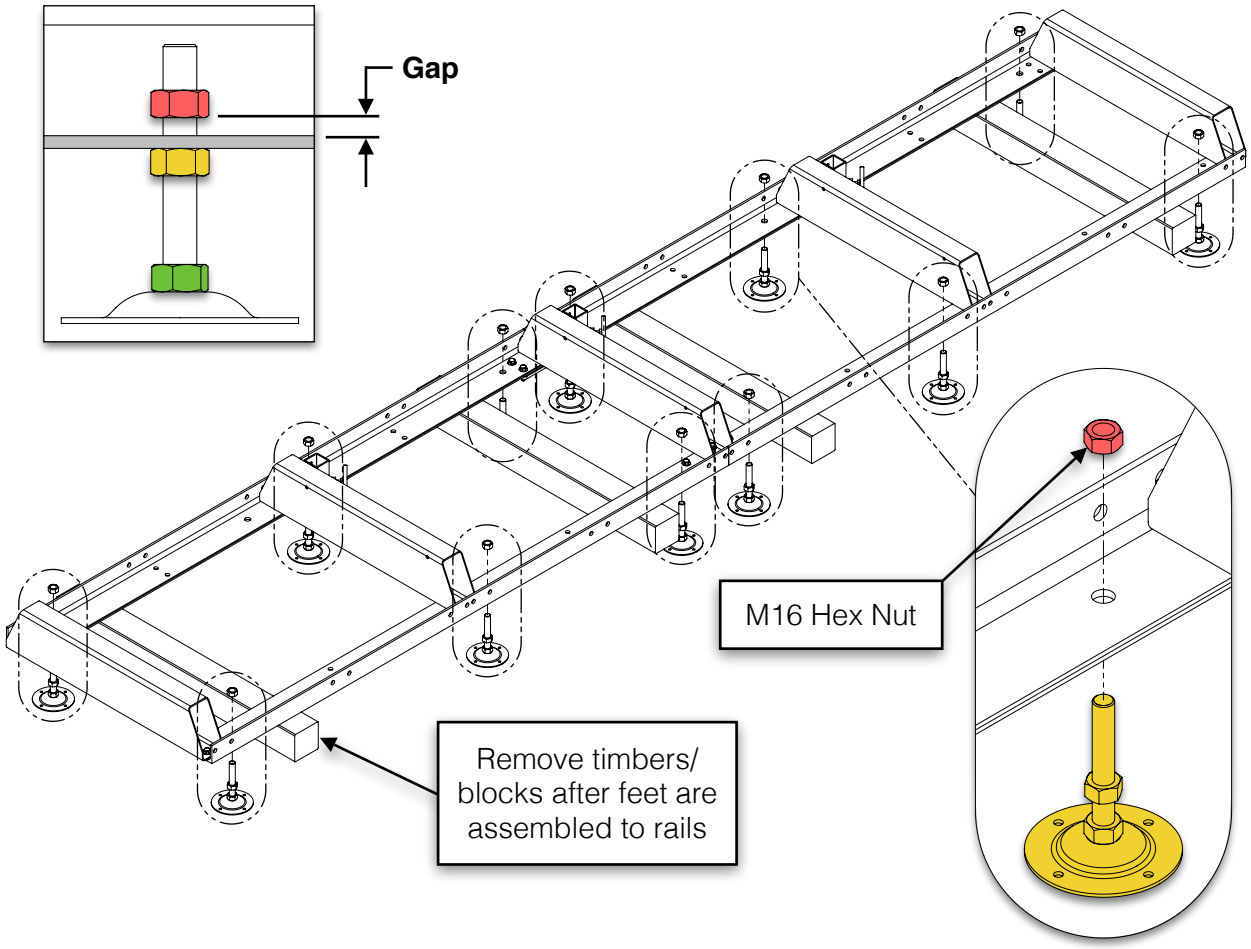


Fully tighten the bottom nut and position the second nut roughly 3-½—4 in [90—100 mm] from the bottom of the foot base. Ensure the position of the second nut is the same for all twelve (12) levelling foot assemblies.

Attach the twelve (12) levelling feet assemblies to the rails at the locations shown below.



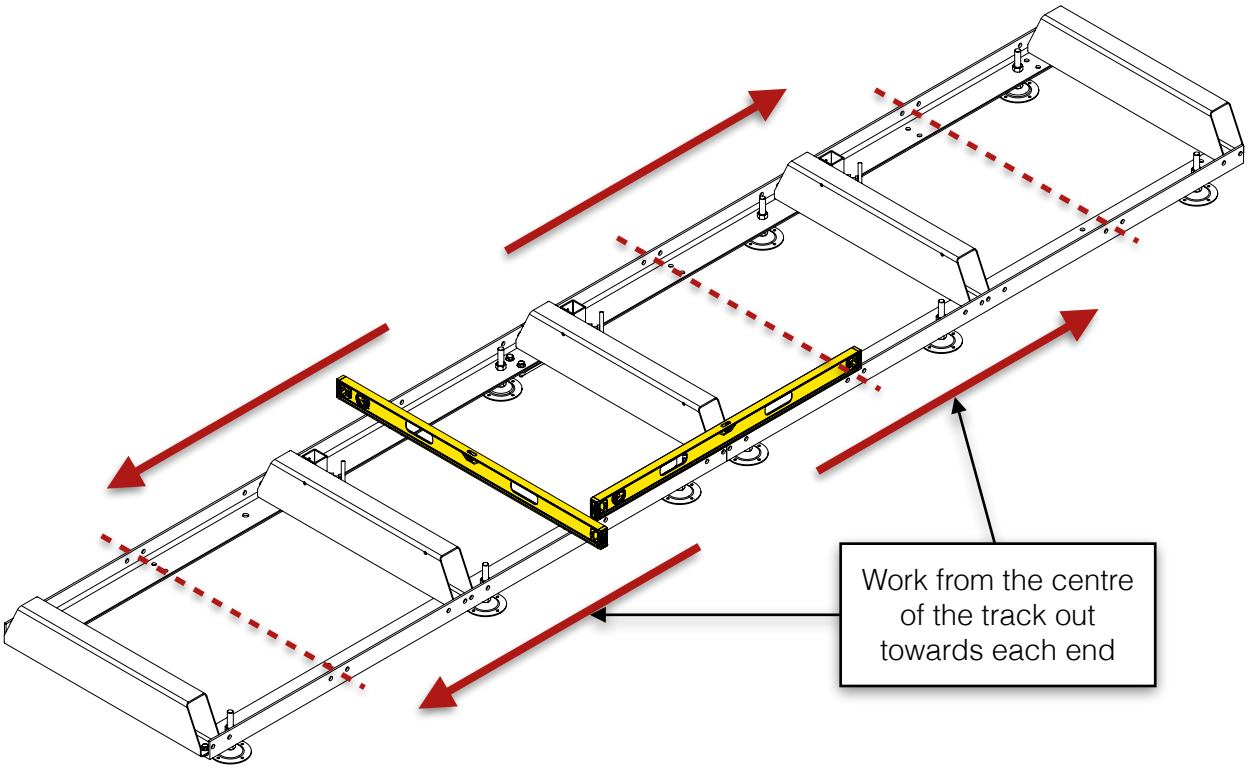
Assemble the levelling feet up through the bottom of the rails and thread an M16 hex nut onto each of the M16 X 120 mm hex bolts. Do not tighten the nut. Leave it loose enough so a noticeable gap exists between the nut and the rail to allow for track levelling in a later step.



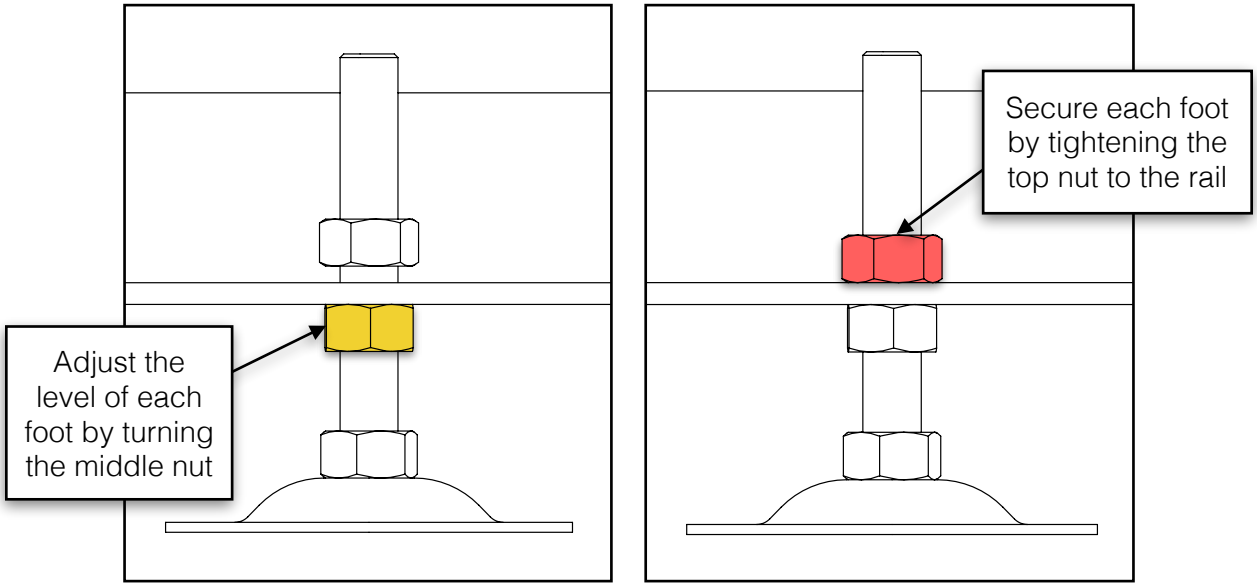
With the feet loosely assembled to the rails, remove the timber/block supports so the full weight of the track is resting on middle nuts of the levelling feet.

LEVELLING THE TRACK

Working from the middle of the track out towards each end, check the rails for level lengthwise *along* the rails and widthwise *across* the rails.

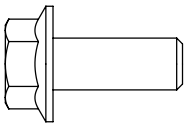
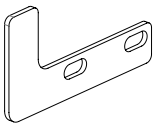
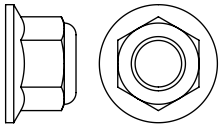


Turn the middle nut on each foot to fine-tune the level. Once level, secure each foot to the rail by tightening the M16 top nut.

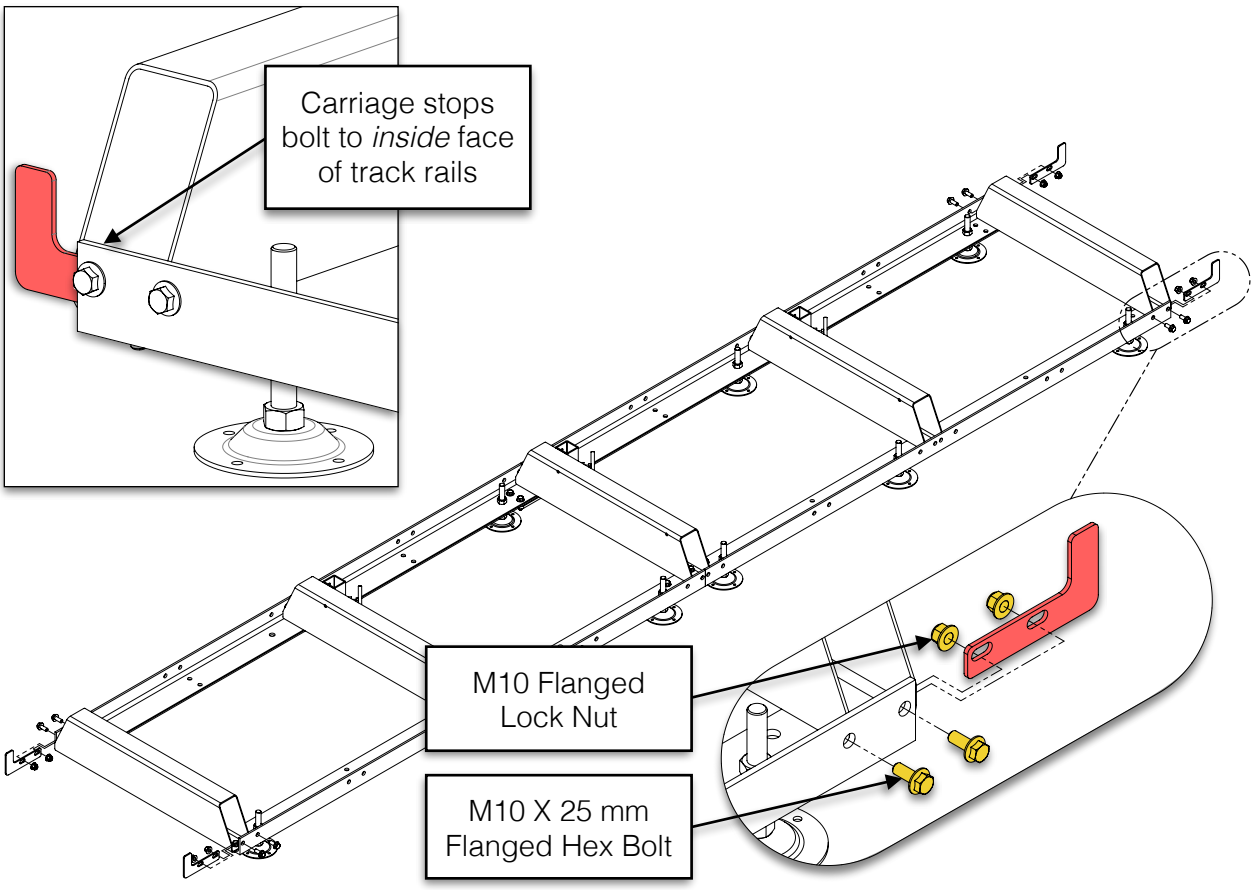


CARRIAGE STOPS

Assemble the carriage stops to the *inside* face of the rails using the components and hardware listed in the table below.

8x	M10 X 25 mm Flanged Hex Bolt		4x	Carriage Stop	
8x	M10 Flanged Lock Nut				

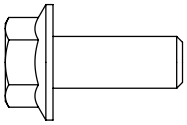
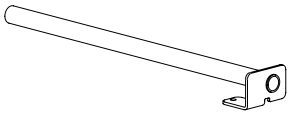
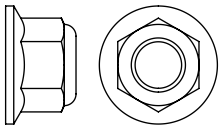
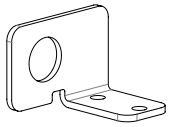
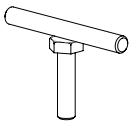
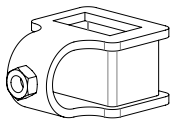
Use two (2) M10 X 25 mm flanged hex bolts and M10 flanged lock nuts to assemble each carriage stop to the *insides* of the track rails.



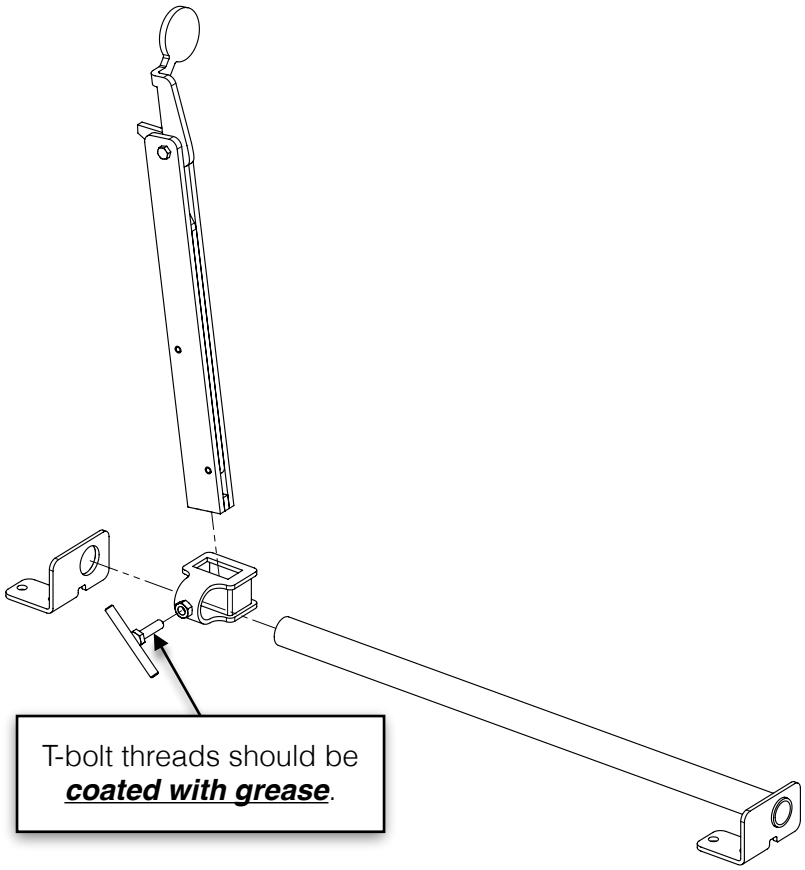
Leave the carriage stops off one end if the sawmill head will be manually lifted onto the track. See section *PLACING THE HEAD ON THE TRACK (METHOD 2)*.

LOG CLAMP

Assemble the log clamps using the components and hardware listed in the table below.

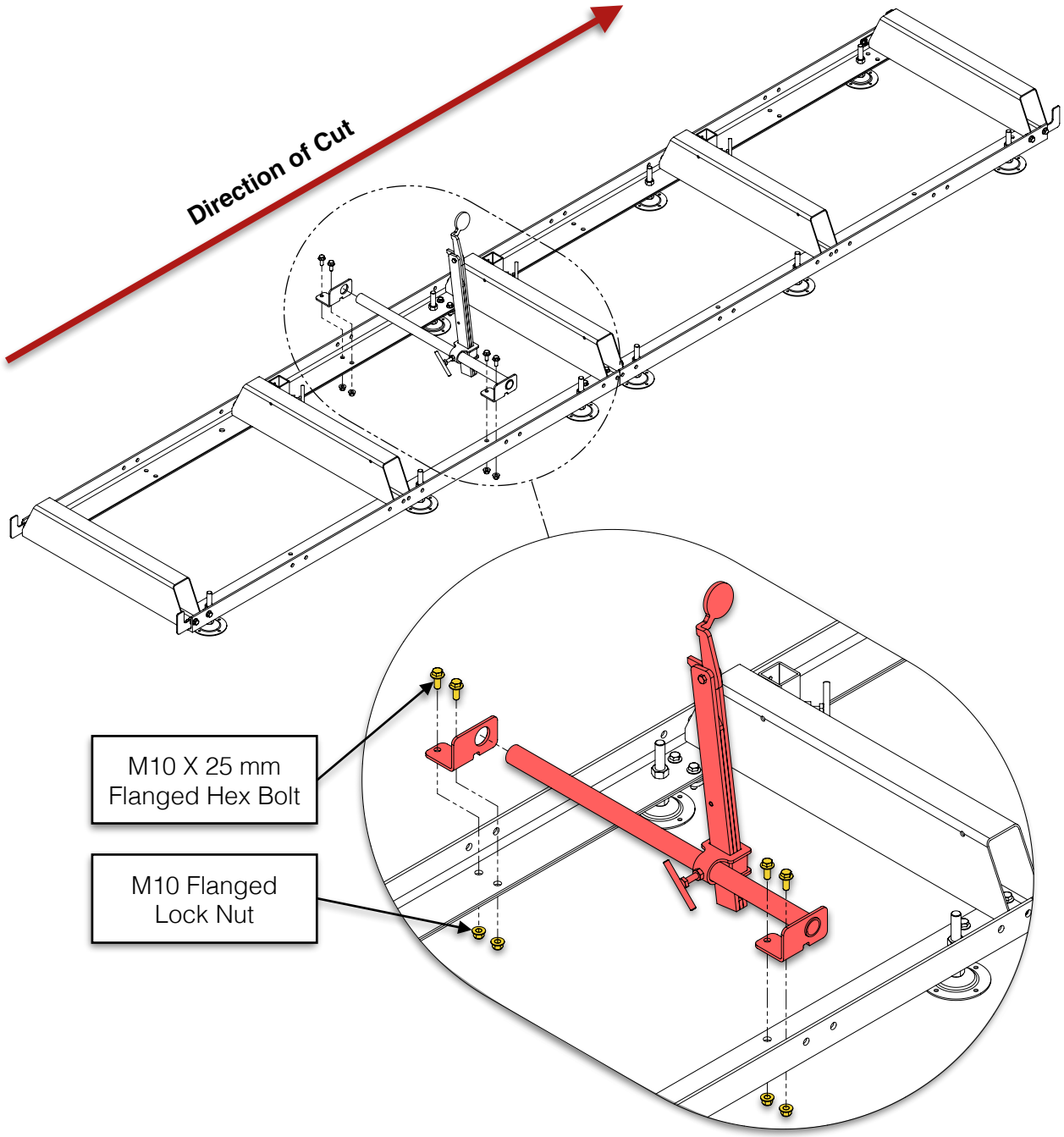
4x	M10 X 25 mm Flanged Hex Bolt		1x	Log Clamp Shaft/Bracket Weldment	
4x	M10 Flanged Lock Nut		1x	Log Clamp Shaft Bracket	
1x	M10 X 40 mm T-Bolt		1x	Log Clamp Receiver	

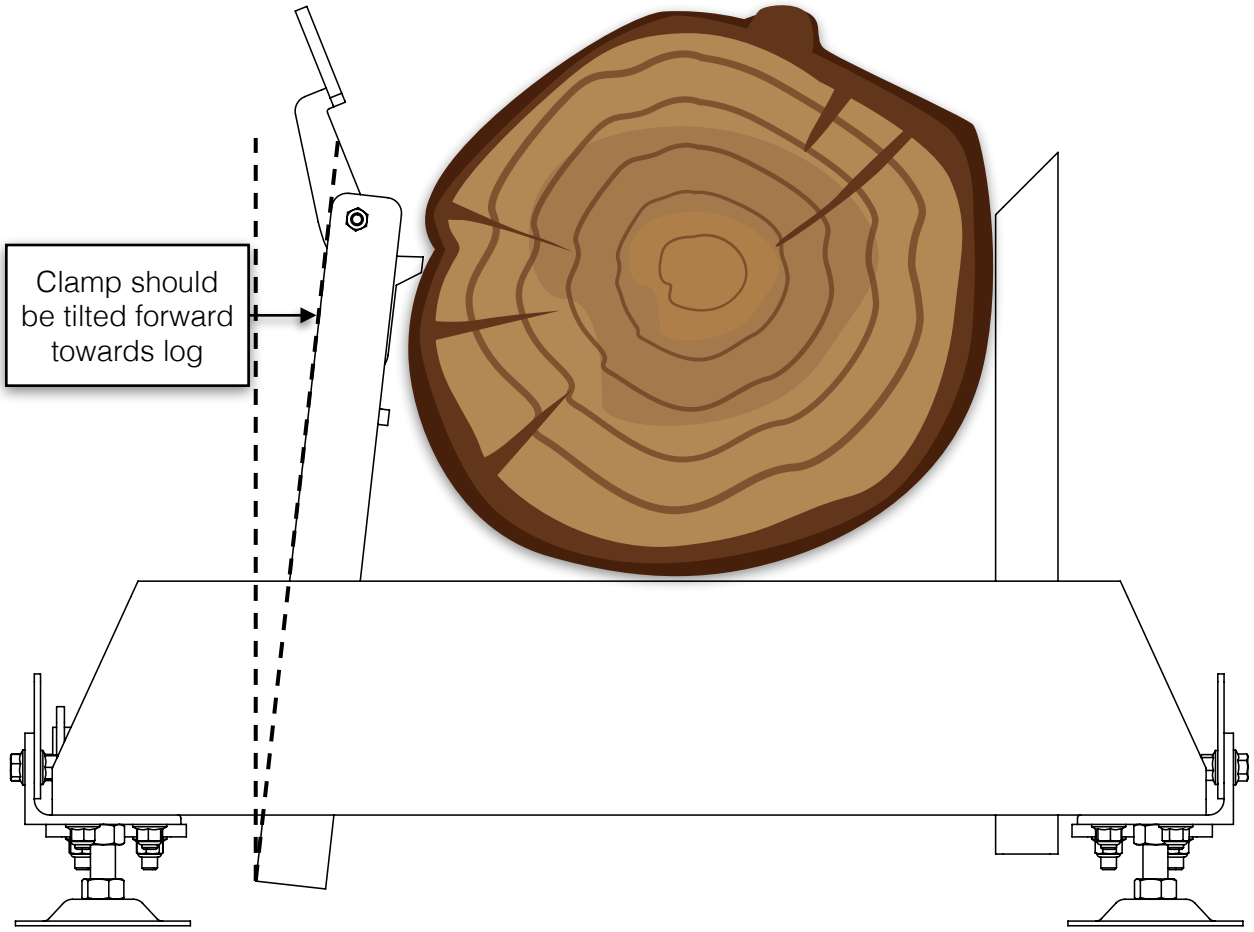
Slide the log clamp receiver with T-bolt over the shaft. Slide the log clamp into the receiver so that it angles away from the shaft weldment. Slide the shaft bracket over the end of the shaft.



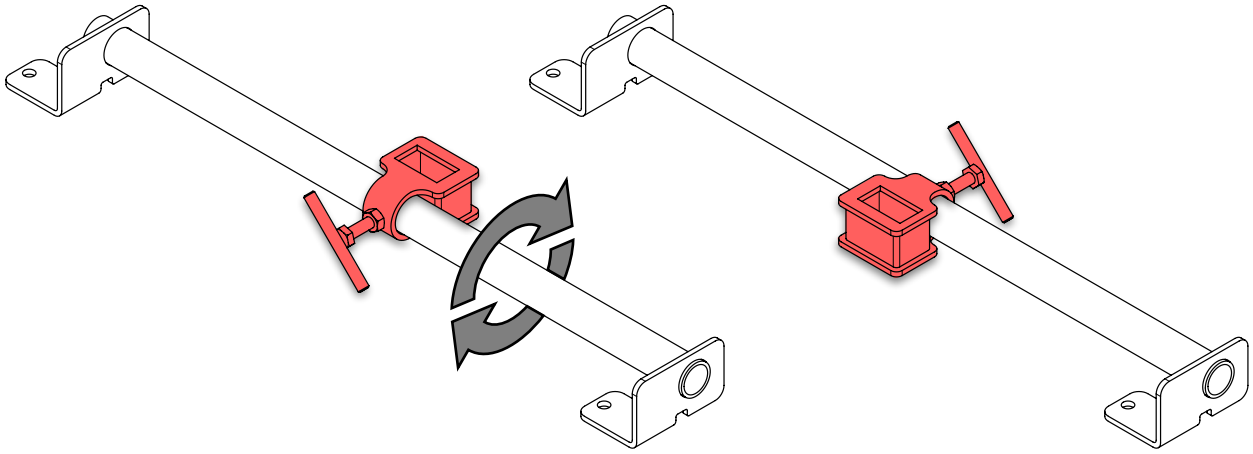
Attach the log clamp assembly to the rails as shown below using four (4) M10 X 25 mm flanged hex bolts and M10 flanged lock nuts.

Note that there are multiple locations along the track where the log clamp can be bolted. Depending on how many track sections are being used, select a log clamp position that will secure the log firmly against a minimum of two log supports.



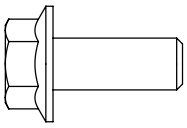
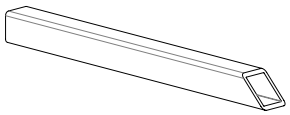
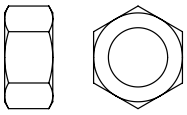
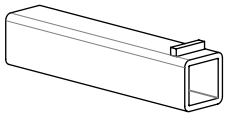


Ensure the log clamp tilts *towards* the log when clamping. If it tilts *away* from the log, remove the log clamp from the receiver, loosen the T-bolt, reverse the receiver on the shaft by rotating it 180°, and retighten the T-bolt. Insert the log clamp back into the receiver.

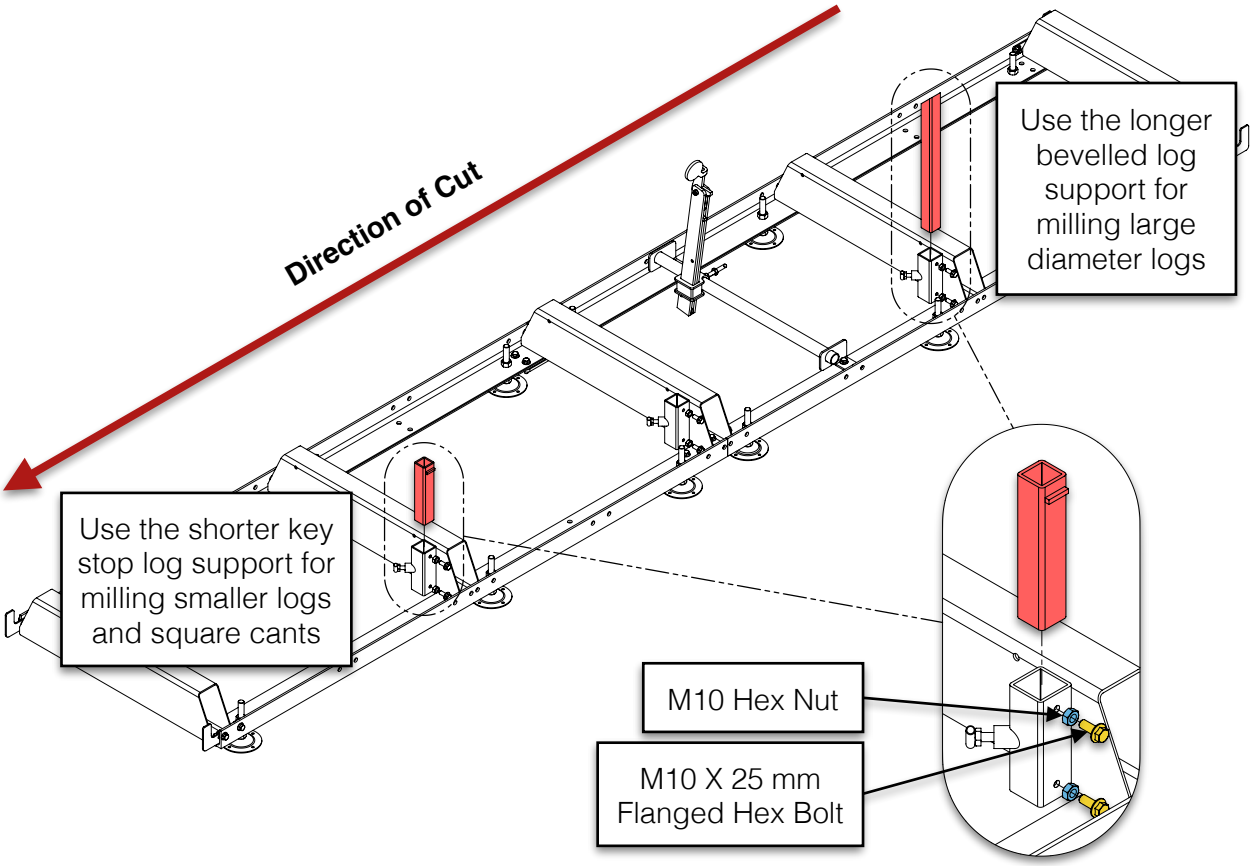


LOG SUPPORTS

Assemble the log supports to the centre and mid bunks using the components and hardware listed in the table below.

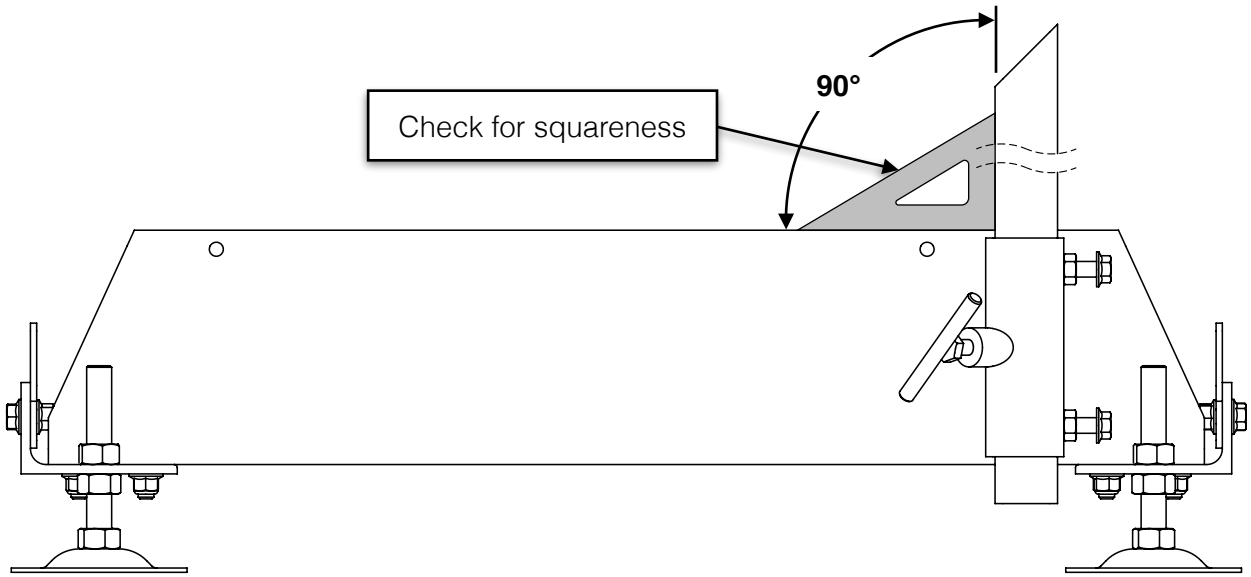
6x	M10 X 25 mm Flanged Hex Bolt		2x	Bevelled Log Support	
6x	M10 Hex Nut		2x	Key Stop Log Support	

Assemble six (6) M10 X 25 mm flanged hex bolts and six (6) M10 hex jam nuts (2 each per bunk) into the threaded holes in the sleeves on the centre bunk and both mid bunks. These bolts are not used to secure the log supports—they help square the log support to the top face of the bunk if necessary. See next page for directions.

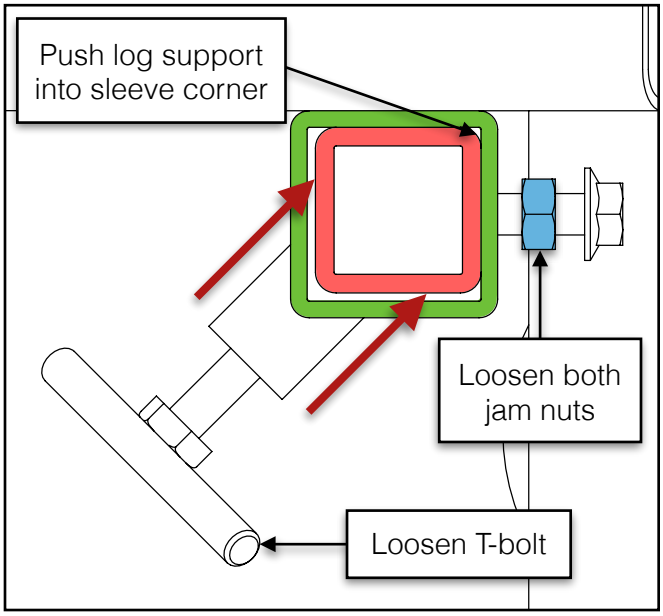


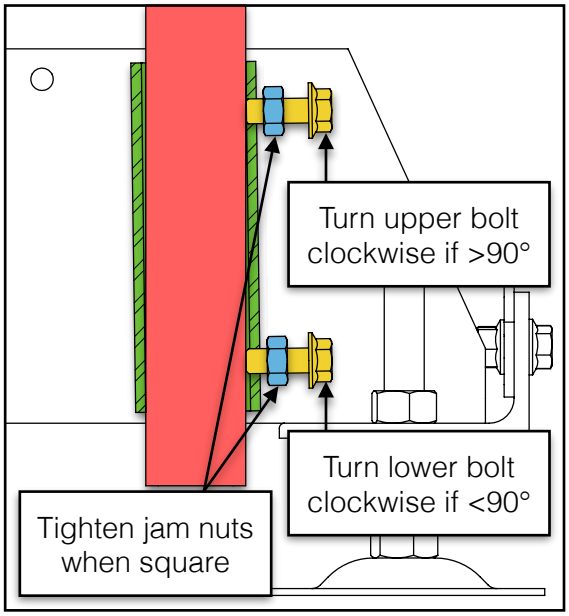
The log supports can be installed into any of the sleeves on the centre or mid bunks.

If the log support is not square (90°) to the top surface of the bunk when the T-bolt is tightened, the two (2) M10 X 25 mm flanged hex bolts can adjust the angle.



Loosen the T-bolt and push the log support into the corner of the bunk sleeve **making sure neither bolt protrudes into the sleeve**. Check for squareness. If the angle is less than 90°, turn the bottom bolt clockwise until the support is square with the bunk. If the angle is greater than 90°, turn the top bolt clockwise until the support is square with the bunk.



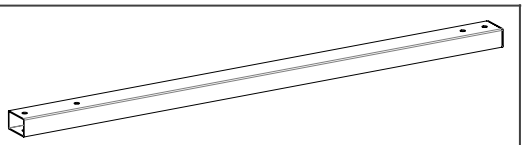


Once the log support is square with the top of the bunk, tighten both jam nuts. Secure the log support with the T-bolt. Repeat the process for the centre and mid bunks as necessary.

4. SAWMILL HEAD ASSEMBLY

The sawmill head assembly is built in multiple steps. Follow the sub-sections below using the parts table at the top of each sub-section to gather the necessary components for each step.

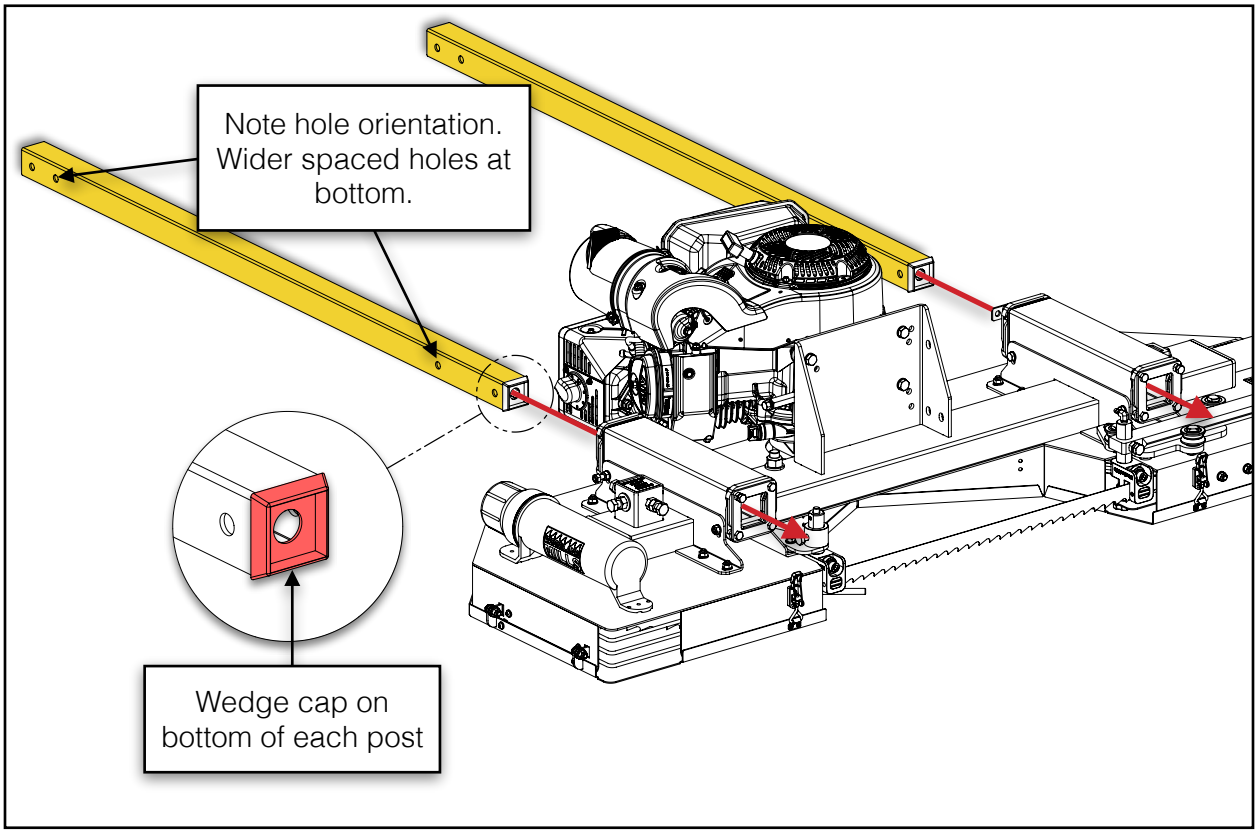
FRONT POSTS

2x	Front Post	

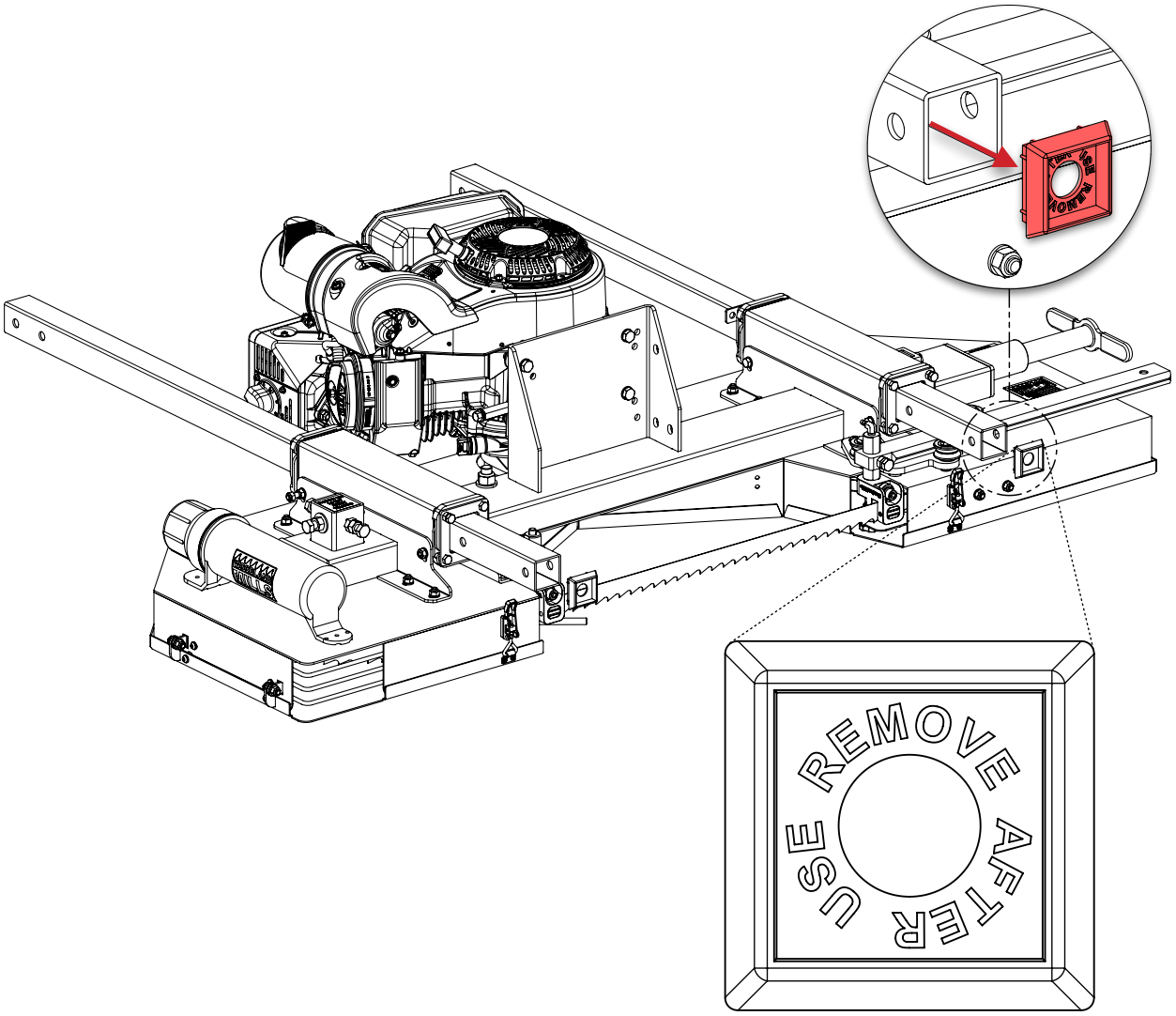
With the sawhead resting approximately 6 in [150 mm] above the ground, slide the two (2) front posts through the *top* of the post sleeves—do *not* assemble them from the bottom.

There are wedge-shaped caps on the bottom of each post to help aid the assembly of the posts through the nylon post sleeve bushings.

****Orient both posts so the holes are facing sideways.****

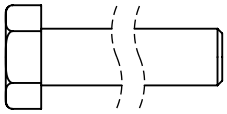
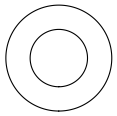
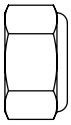
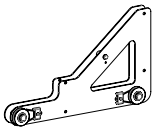


Remove the wedge-shaped caps from the bottom of both posts. They are only required for front post assembly.

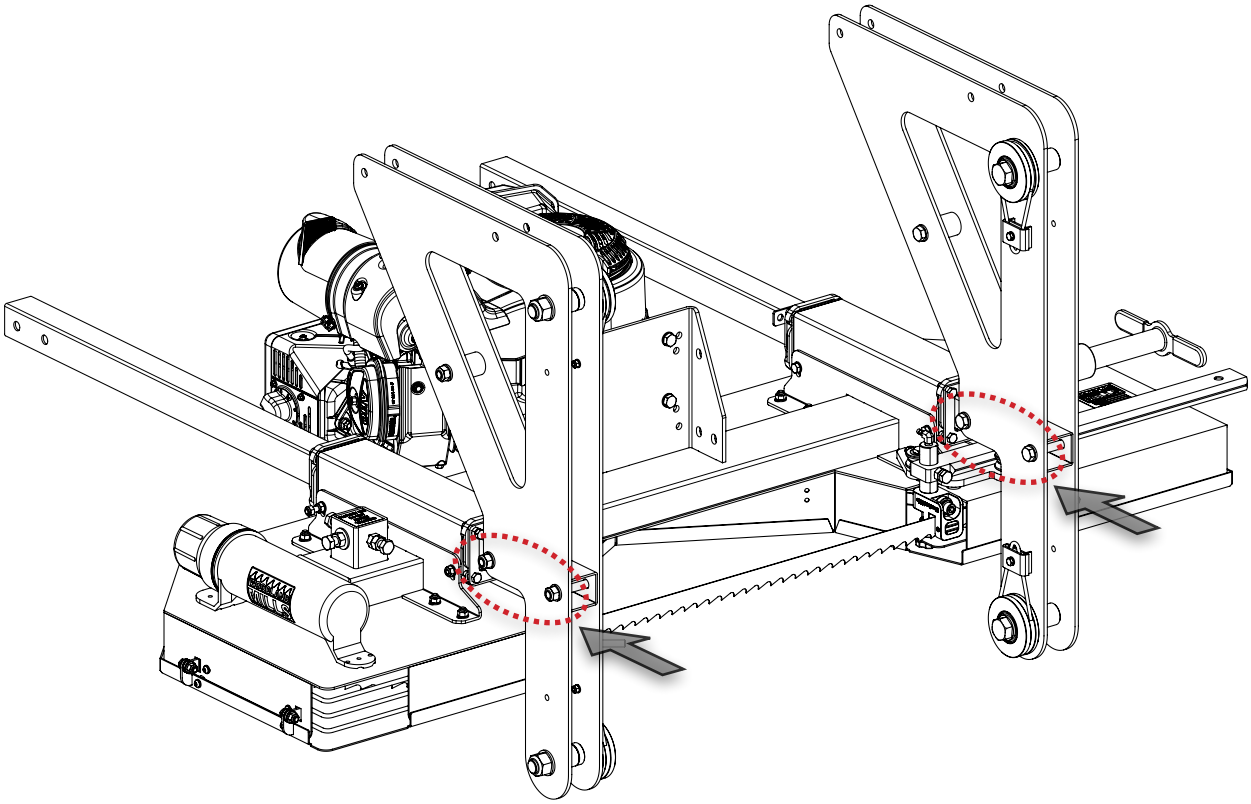


CARRIAGE LEGS

The carriage leg sub-assemblies come loosely assembled from the factory. Final tightening of these bolts will be done in a later step. See the ***CARRIAGE LEG, WHEEL, AND SWEEPER*** exploded view for a more detailed part breakdown.

4x	M12 X 80 mm Hex Bolt		4x	M12 Flat Washer	
4x	M12 Lock Nut		2x	Carriage Leg Sub-Assembly	

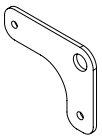
Attach the two (2) carriage leg sub-assemblies to the front posts with four (4) M12 X 80 mm bolts, flat washers, and lock nuts. Be sure the bolts point outward and the carriage wheels are positioned on the inside of the legs. Snug these four (4) M12 bolts just enough so that the plates are flush to the posts but do not fully tighten them. Push the posts all the way up until the carriage leg plates contact the post sleeves.



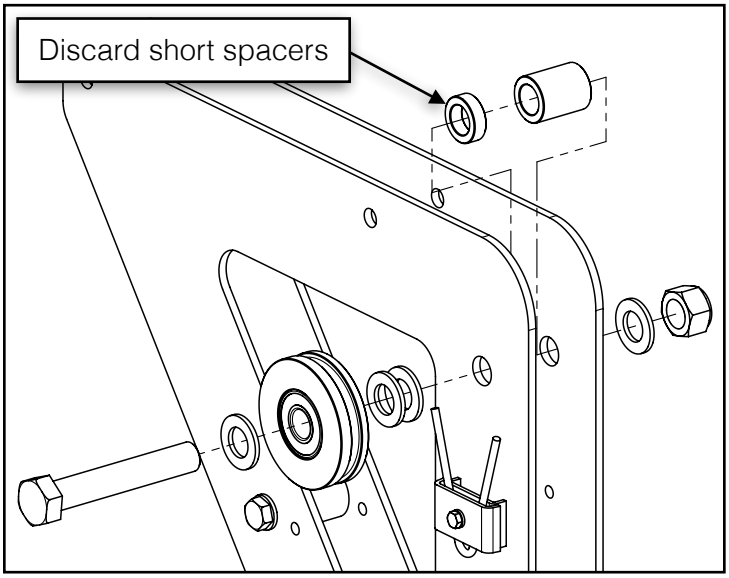
HEAD LOCK-DOWN PLATES

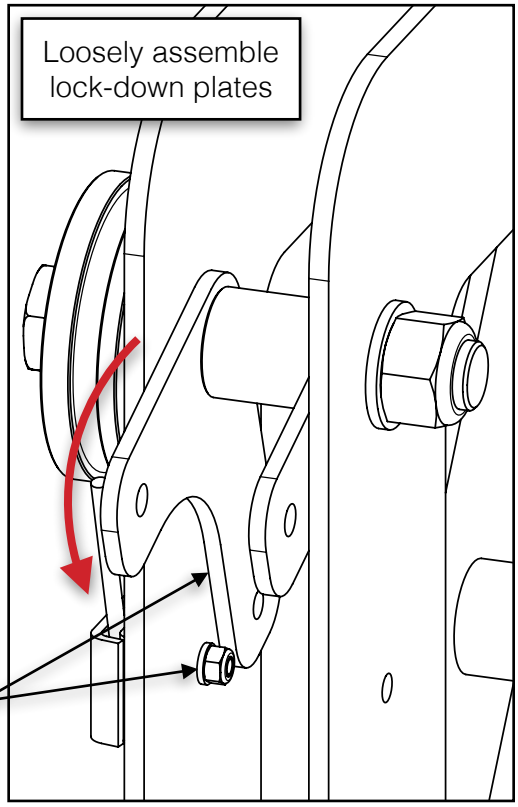
Woodland Mills sawmill trailer owners only

If a Woodland Mills sawmill trailer was purchased with this sawmill, the head lock-down plates can be loosely installed prior to standing the sawhead upright. The lock-down plates come with the sawmill trailers and are not included with the sawmill.

8x	Head Lock-Down Plate	

Disassemble each carriage wheel and discard the short spacers as they are no longer necessary. Assemble one (1) lock-down plate on each side of the long spacers—between the carriage legs—and then reassemble the carriage wheels. Do not fully tighten the carriage wheel bolts.



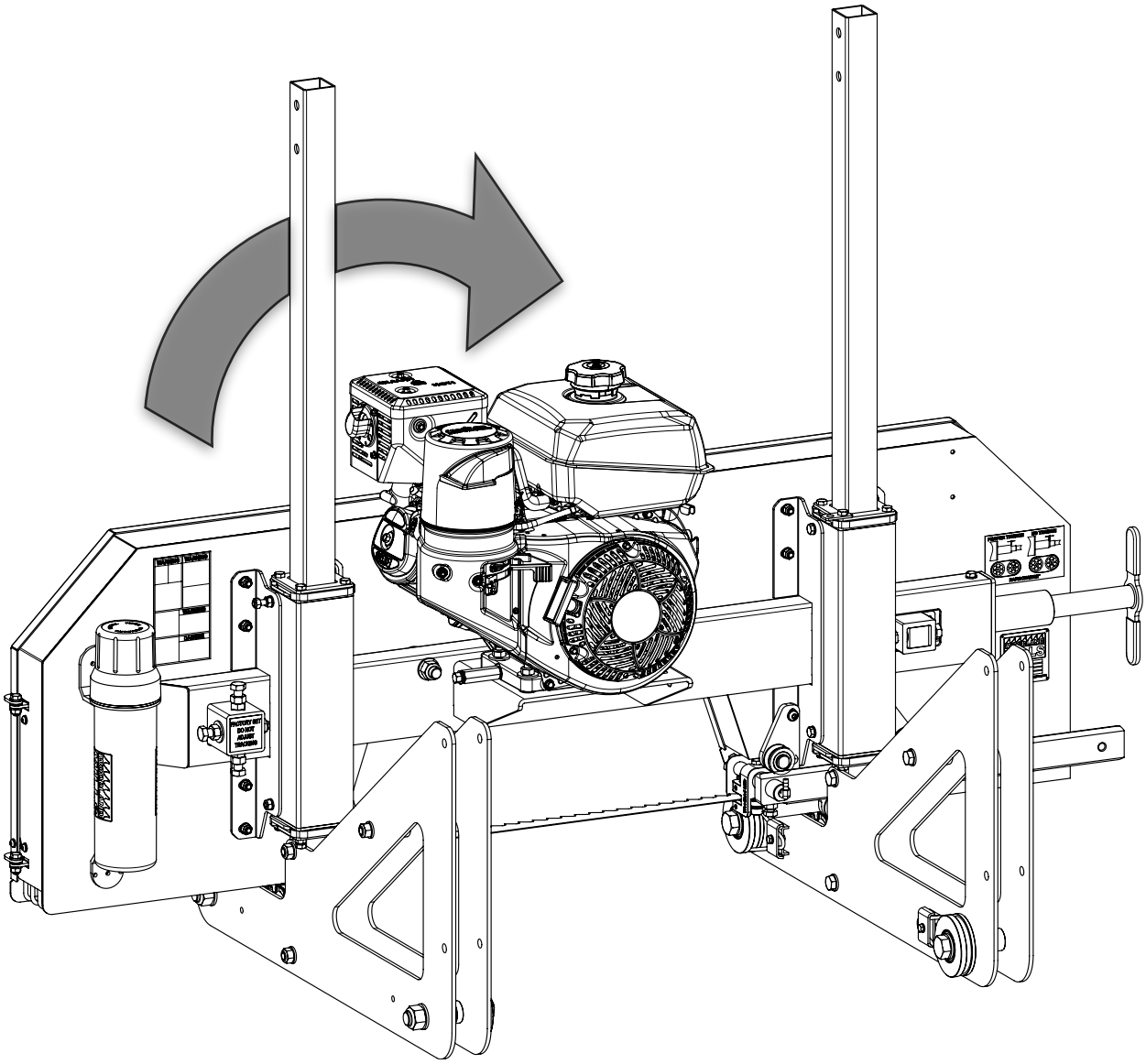


Ensure the longer lock-down plate leg will sit above the wheel sweeper nut when the sawhead is stood upright. This lets the lock-down plates swivel up inside the carriage legs avoiding possible damage until the sawhead is ready to be set on the track.

See section, ***HEAD LOCK-DOWN PLATES***, in the sawmill trailer Operator Manuals to complete the lock-down plate installation once the sawmill is on the trailer.

STANDING THE SAWHEAD UPRIGHT

With the help of another person, stand the sawhead upright by rotating it around the rounded profiles at the front of the carriage legs. Do not set the sawhead on the track until instructed to do so later in the assembly process.



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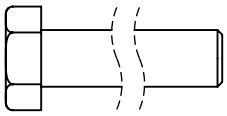
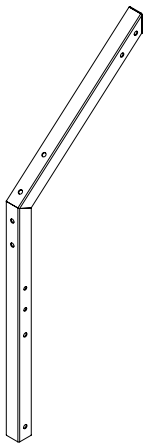
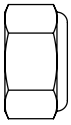
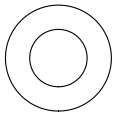
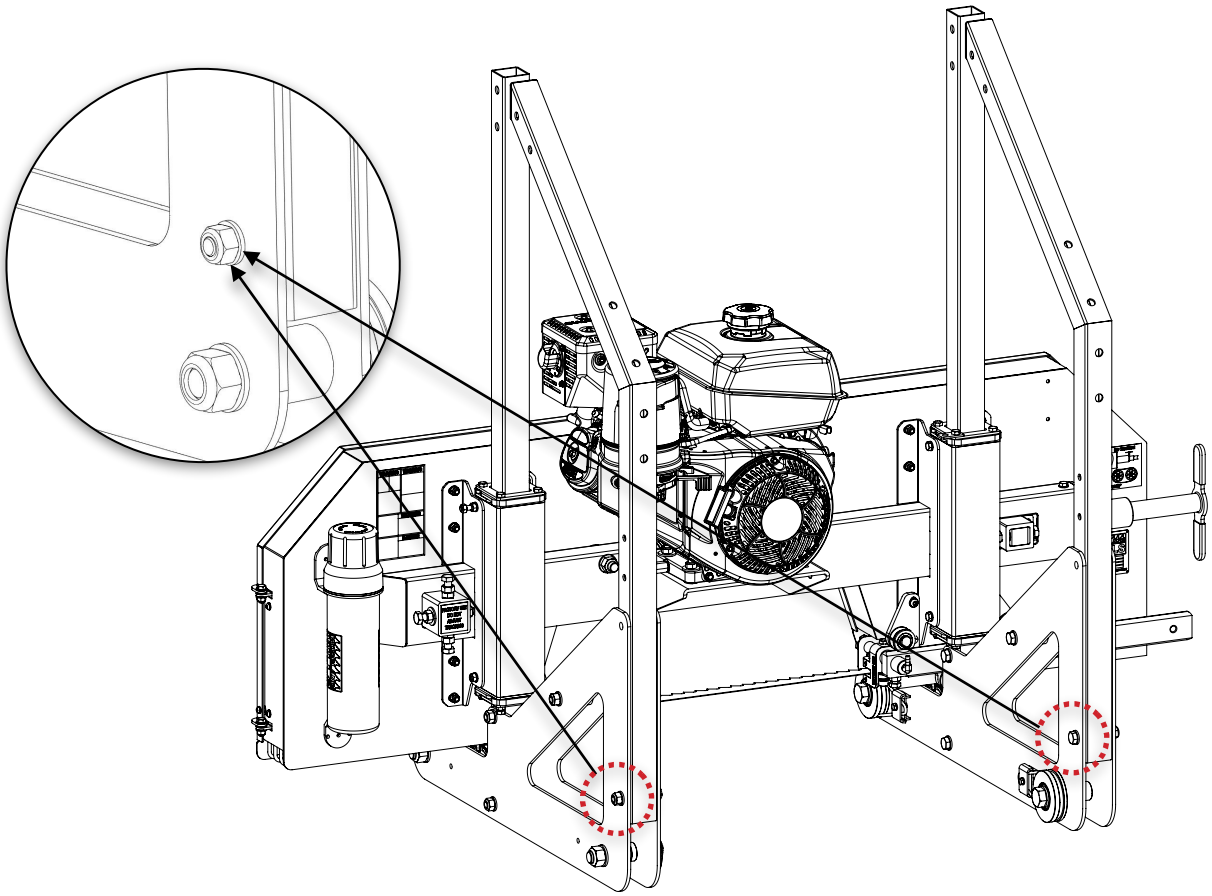
REAR POSTS

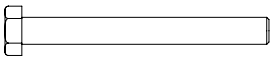
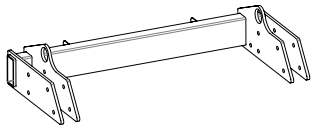
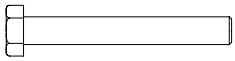
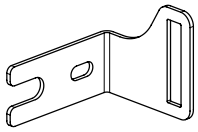
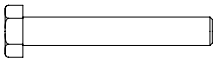
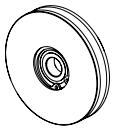
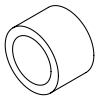
Using the hardware listed below, attach the rear posts between the carriage leg plates using one (1) M12 X 80 mm bolt, two (2) flat washers, and one (1) lock nut per post.

2x	M12 X 80 mm Hex Bolt		2x	Rear Post	
2x	M12 Lock Nut				
4x	M12 Flat Washer				



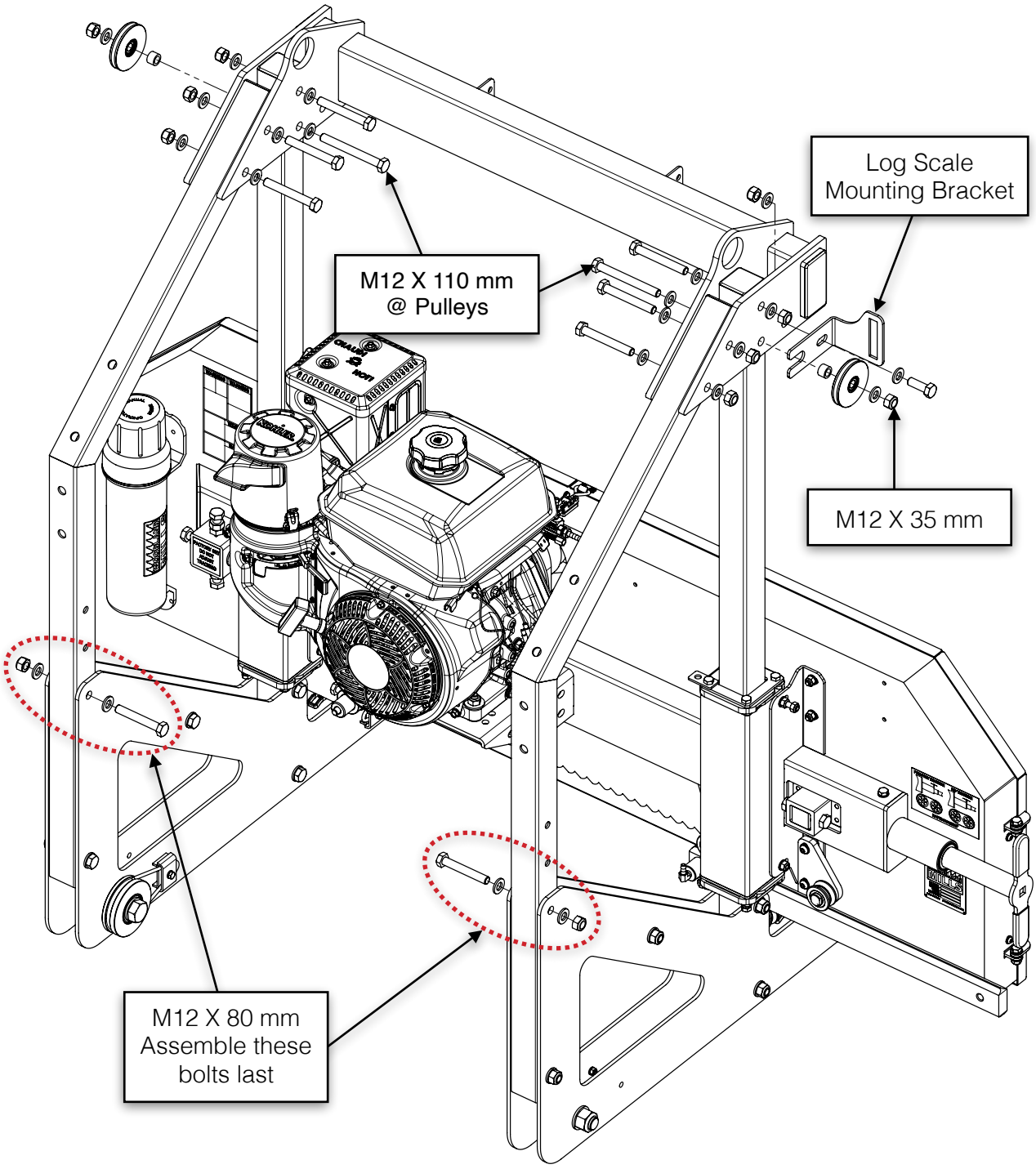
CROSS BEAM

With the hardware listed below, assemble the cross beam to the carriage posts.

2x	M12 X 110 mm Hex Bolt		1x	Cross Beam	
6x	M12 X 90 mm Hex Bolt		1x	Log Scale Mounting Bracket	
2x	M12 X 80 mm Hex Bolt		2x	Pulley	
1x	M12 X 35 mm Hex Bolt		2x	Spacer [12 mm Lg]	
11x	M12 Lock Nut				
22x	M12 Flat Washer				

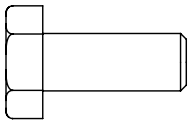
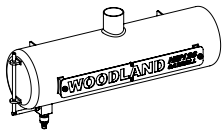
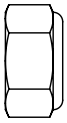
With the help of a second person, slide the cross beam over the carriage posts. Use six (6) M12 X 90 mm bolts and two (2) M12 X 110 mm bolts (with pulleys and spacers) to fasten it in place. Be sure to install the log scale mounting bracket on the right-side behind the pulley. Install all bolts so they are pointing outward. Use an M12 flat washer under every bolt head and lock nut.

Finally, install two (2) M12 X 80 mm bolts at the top of each carriage leg. Do *not* fully tighten these bolts at this time.

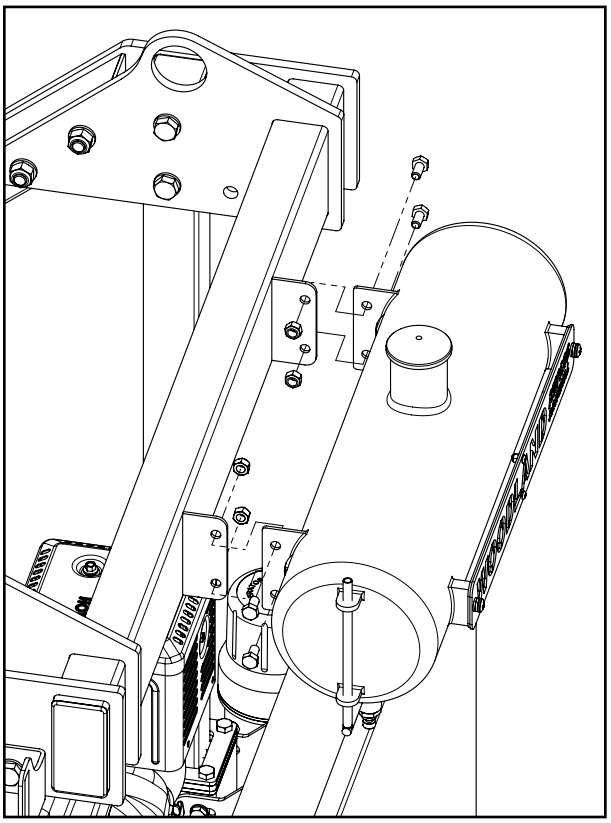

Log Scale
Mounting Bracket
M12 X 110 mm
@ Pulleys
M12 X 35 mm
M12 X 80 mm
Assemble these
bolts last

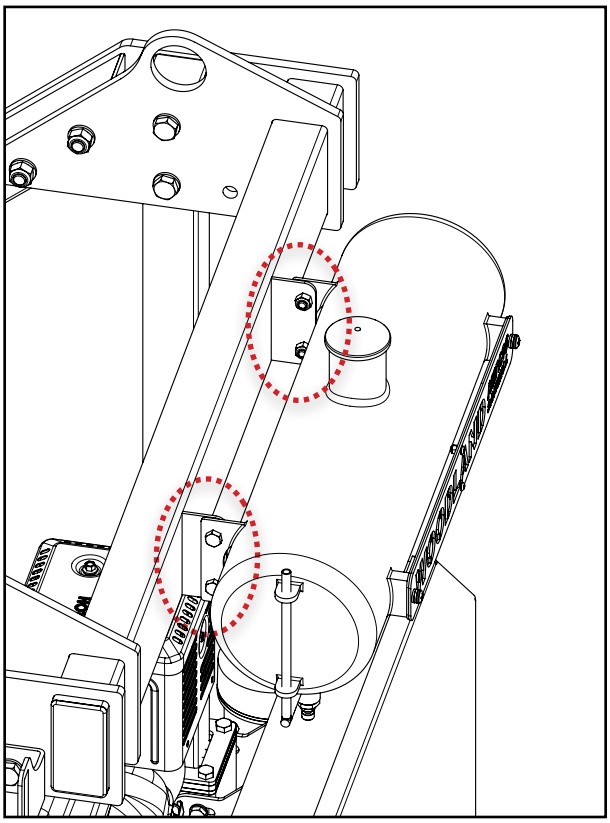
LUBRICATION TANK

With the hardware listed below, assemble the lubrication tank to the front of the cross beam.

4x	M8 X 16 mm Hex Bolt		1x	Lubrication Tank	
4x	M8 Lock Nut				

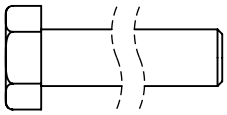
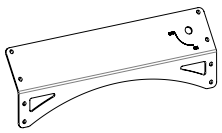
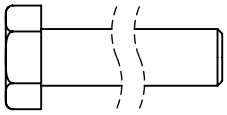
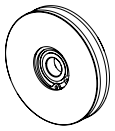
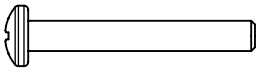
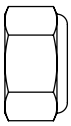
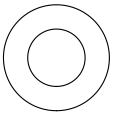
Assemble the lubrication tank to the cross beam with four (4) M8 X 16 mm bolts and lock nuts. Ensure the bolts point inward.



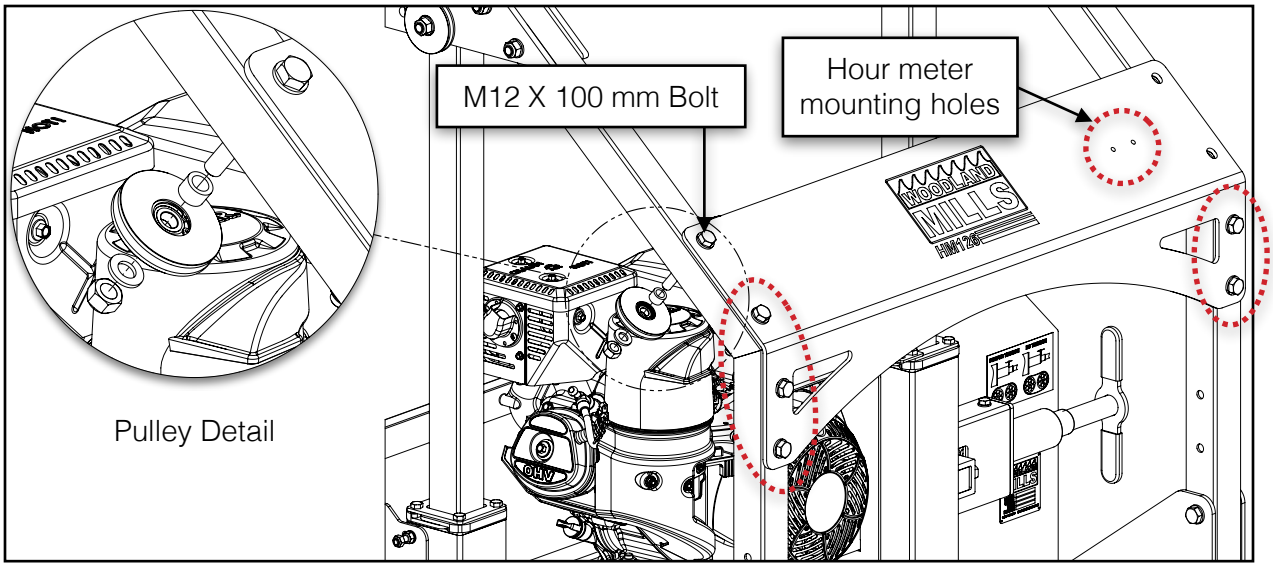


DASHBOARD & HOUR METER

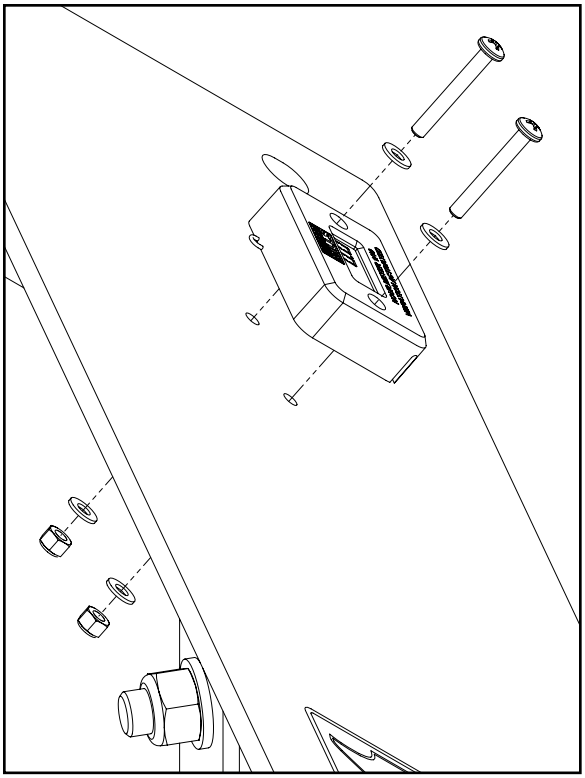
With the hardware listed below, assemble the dashboard to the rear carriage posts.

1x	M12 X 100 mm Hex Bolt		1x	Dashboard	
5x	M12 X 80 mm Hex Bolt		1x	Pulley	
2x	M4 X 30 mm Pan Head Screw		1x	Spacer [12 mm Lg]	
6x	M12 Lock Nut		1x	Hour Meter	
2x	M4 Lock Nut				
12x	M12 Flat Washer				
4x	M4 Flat Washer				

Assemble the dashboard to the rear carriage posts with five (5) M12 X 80 mm bolts and one (1) M12 X 100 mm bolt (with pulley and spacer) as illustrated on the next page. Use an M12 flat washer under every bolt head and lock nut. Do *not* fully tighten these bolts at this time.



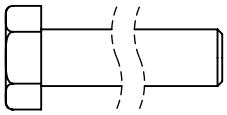
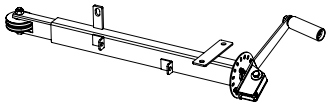
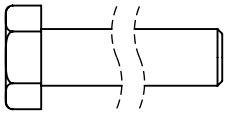
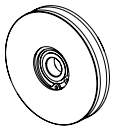
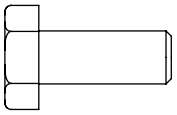
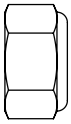
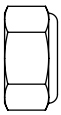
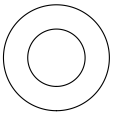
Assemble the hour meter to the right-side of the dashboard through the two (2) small holes. Use two (2) M4 X 30 mm pan head screws, four (4) flat washers (2 per screw), and two (2) lock nuts. Once the entire sawmill has been assembled, snip the wire loop at the top of the meter with either a razor or sharp knife. This will activate the meter to start measuring the vibration of the machine, recording the hours of use on the engine.



Cut wire loop on hour meter after sawmill is assembled

LIFT MECHANISM

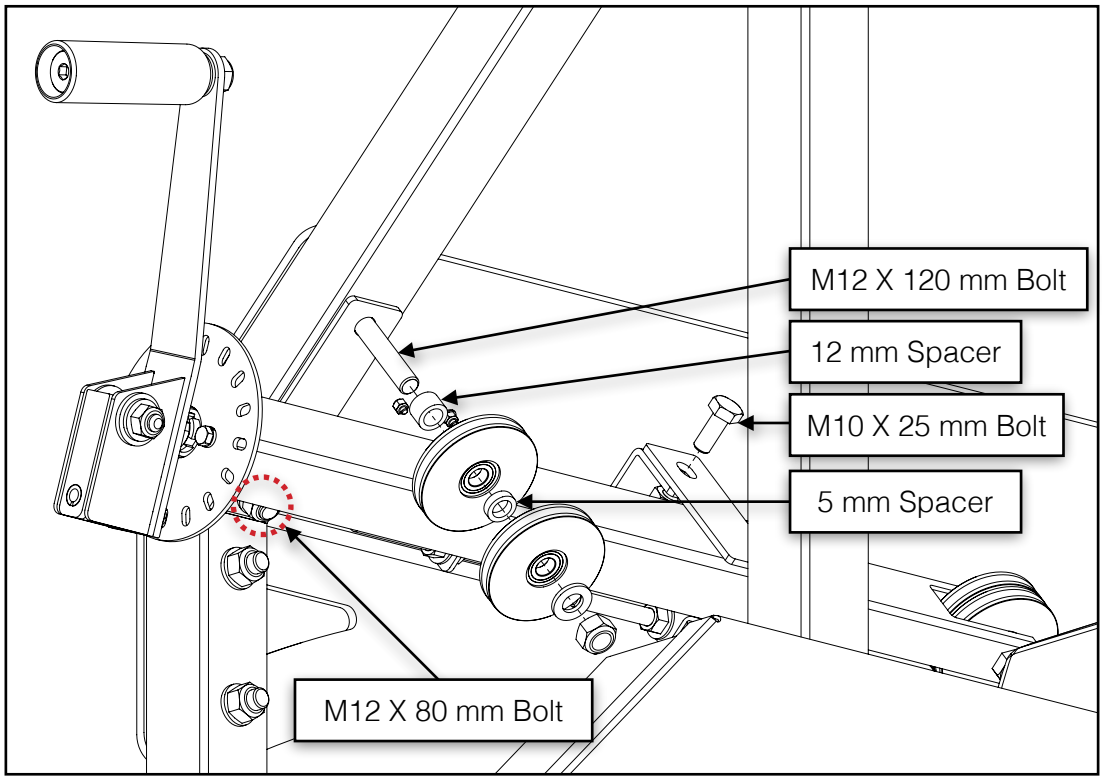
With the hardware listed below, assemble the lift mechanism to the carriage.

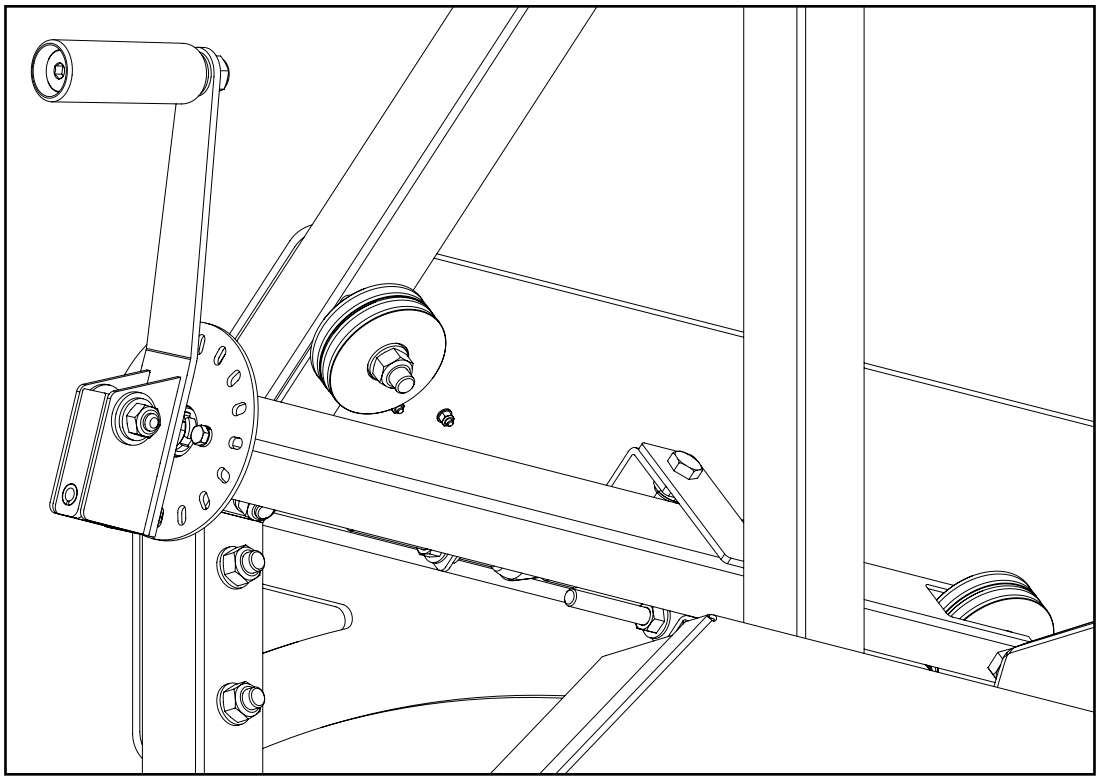
1x	M12 X 120 mm Hex Bolt		1x	Lift Mechanism Sub-Assembly	
1x	M12 X 80 mm Hex Bolt		2x	Pulley	
1x	M10 X 25 mm Hex Bolt		1x	Spacer [12 mm Lg]	
2x	M12 Lock Nut		1x	Spacer [5 mm Lg]	
1x	M10 Lock Nut				
4x	M12 Flat Washer				

Attach the lift mechanism assembly to the underside of the right-rear carriage post as shown on the next page.

Use one (1) M12 X 120 mm bolt (including the pulleys and 2 spacers—5 mm spacer *between* pulleys) and one (1) M12 X 80 mm bolt. Use an M12 flat washer under each bolt head and lock nut. Fasten the centre tab to the inside of the dashboard using an M10 X 25 mm bolt and nut.

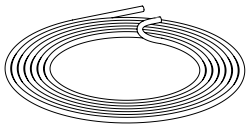
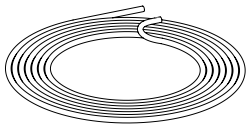
Do *not* fully tighten these bolts at this time.


M12 X 120 mm Bolt
12 mm Spacer
M10 X 25 mm Bolt
5 mm Spacer
M12 X 80 mm Bolt



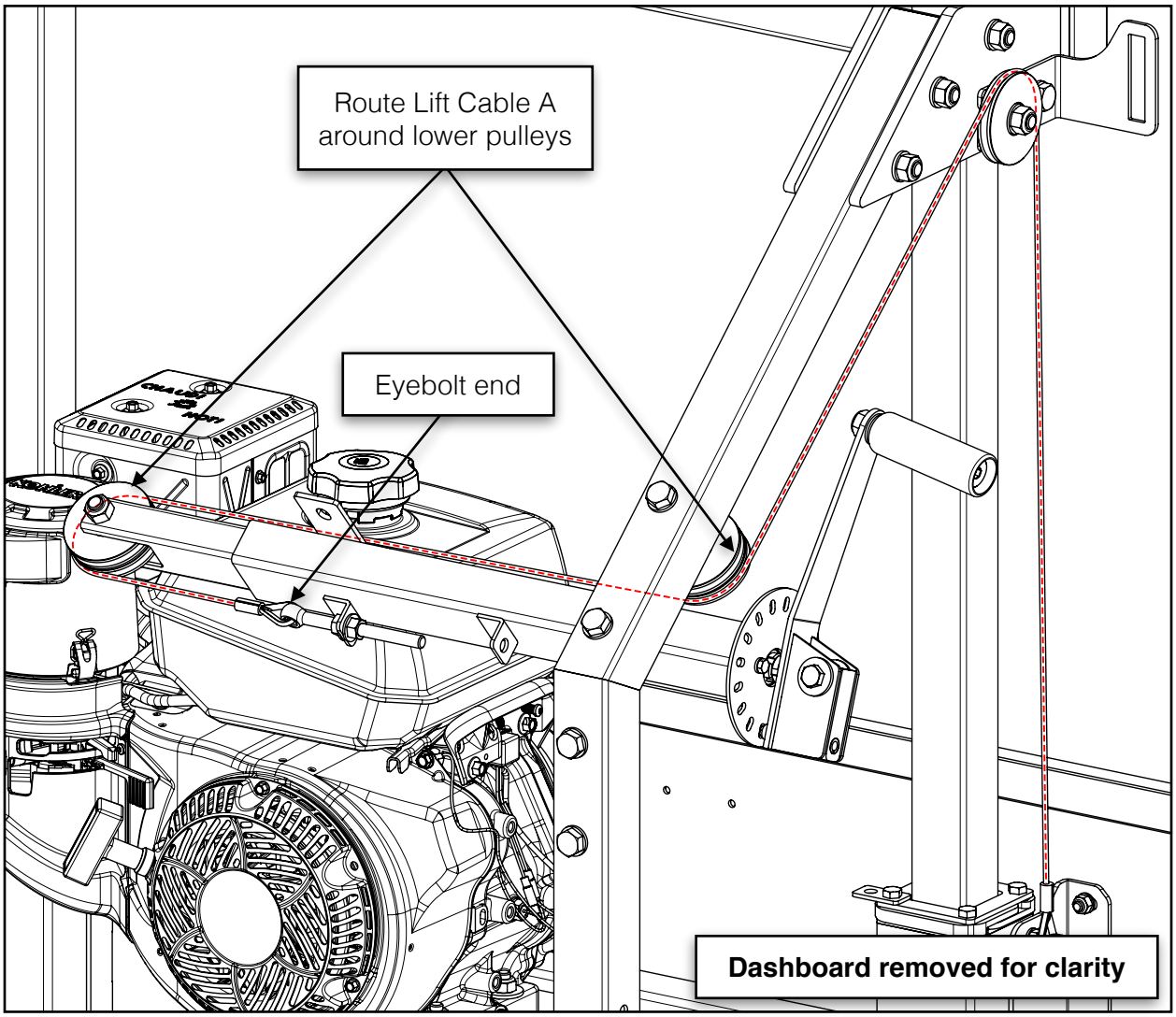
LIFT CABLE ROUTING

Route the lift cables listed below.

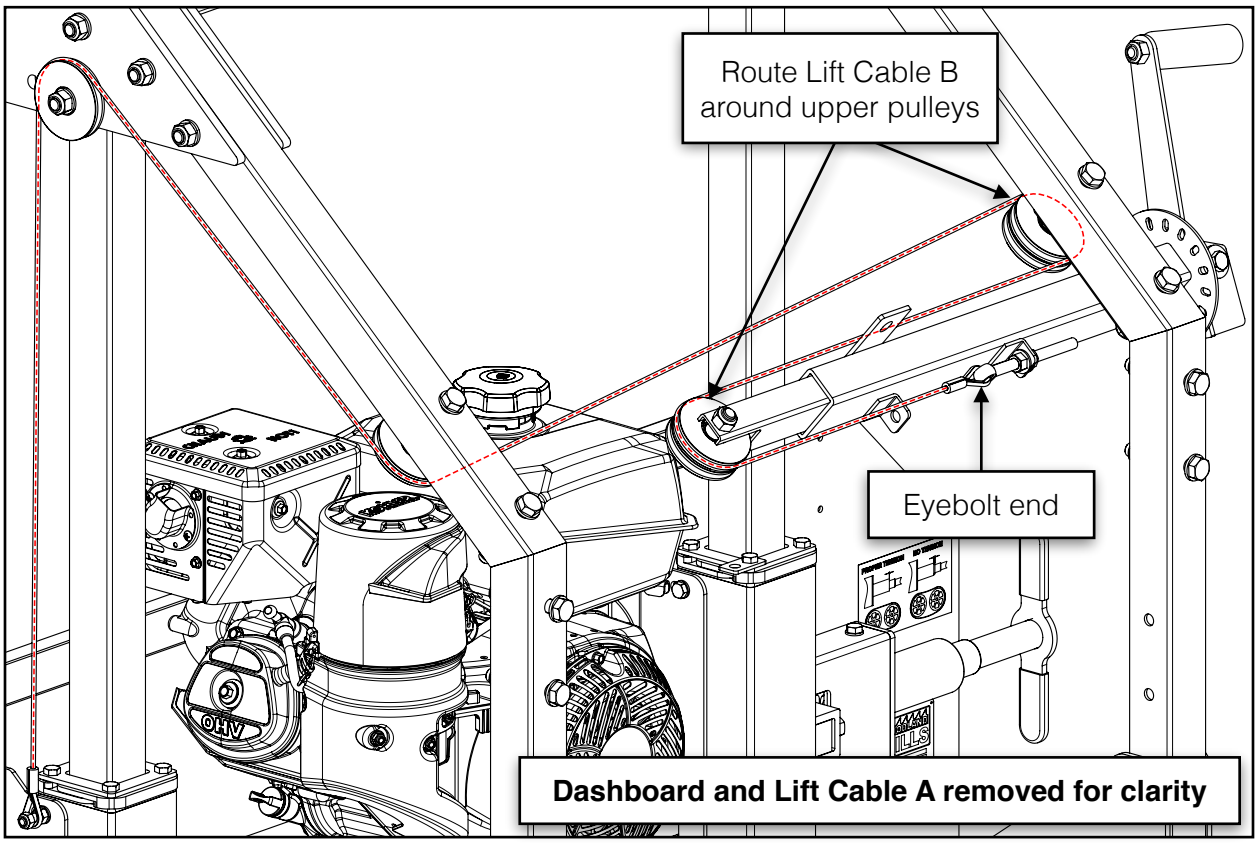
1x	Lift Cable A [Right Side]		1x	Lift Cable B [Left Side]	

Each wire rope lift cable comes connected to the back beam at one end and a threaded eyebolt with two (2) M10 flange nuts at the other end. The cable lengths are unique to each side so do not swap them.

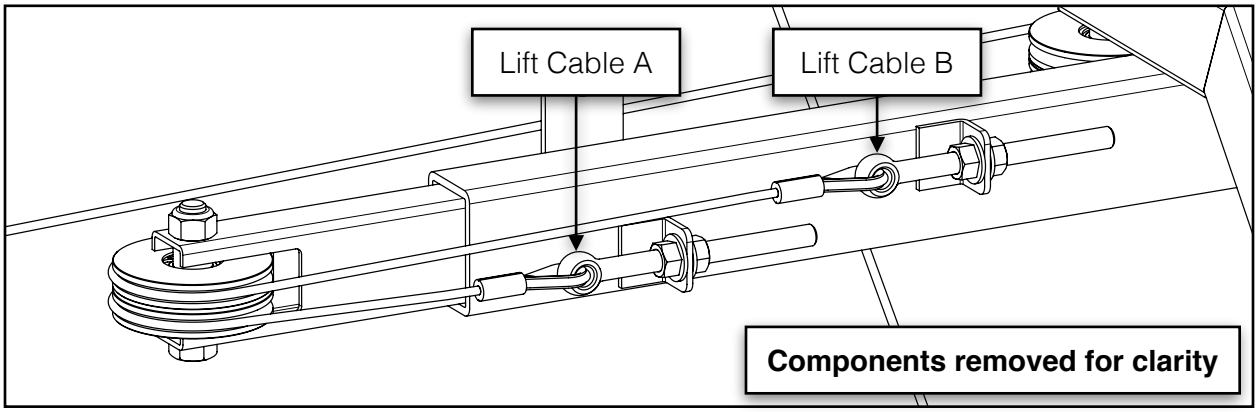
Route lift cable A (right side) as shown below.



Route lift cable B (left side) as shown below.

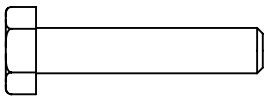
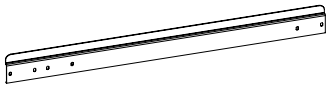
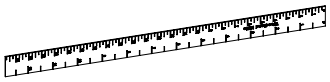
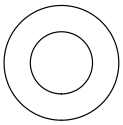
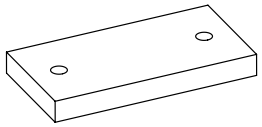
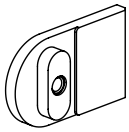
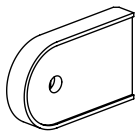
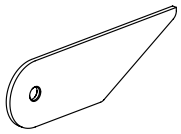
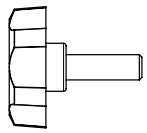


Unthread one (1) M10 flanged nut from each eyebolt, then insert the eyebolt into the bracket on the bottom side of the lift mechanism housing. Secure the eyebolt to the bracket with the M10 flange nut that was removed, sandwiching the bracket between both flange nuts. Repeat the process for the other lift cable. Do not fully tighten this hardware.

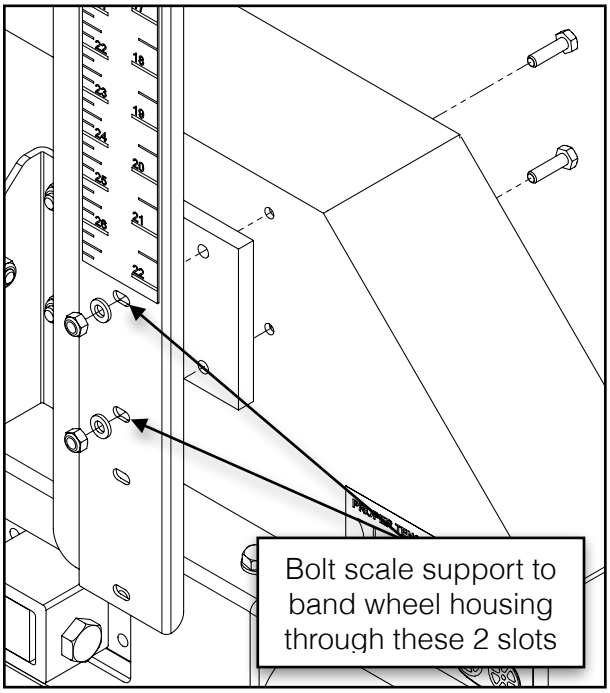


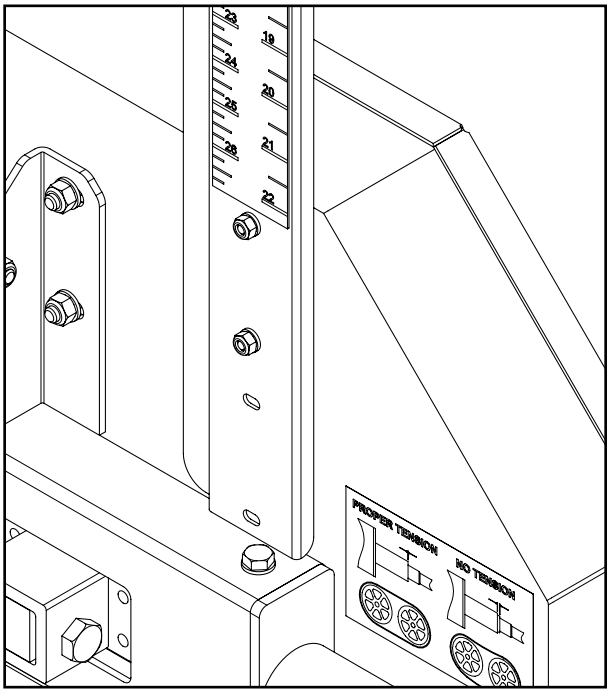
LOG SCALE

With the hardware listed below, assemble the log scale components.

2x	M6 X 22 mm Hex Bolt		1x	Scale Support	
2x	M6 Lock Nut		1x	Magnetic Scale [White]	
2x	M6 Flat Washer		1x	Magnetic Scale [Yellow]	
			1x	Scale Support Spacer Plate	
			1x	Scale Indicator Arrow Bracket [Rear]	
			1x	Scale Indicator Arrow Bracket [Front]	
			1x	Scale Indicator Arrow	
			1x	M8 X 25 mm Knob	

Bolt the scale support and spacer plate to the band wheel housing with two (2) M6 X 22 mm bolts, flat washers, and lock nuts as shown below.

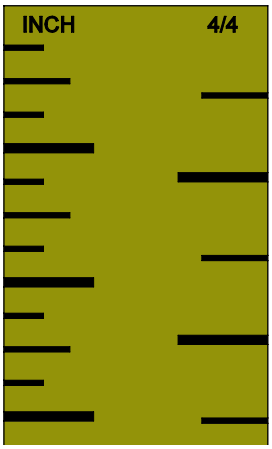


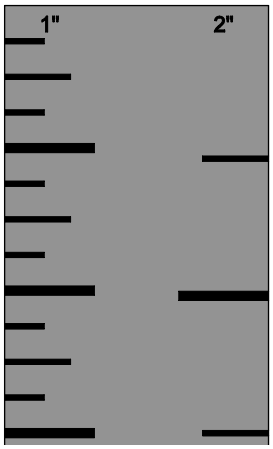


Note: the sawmill comes with two (2) different magnetic scales: one yellow, one white. Each with two different graduations down the left and right sides.

Yellow Scale

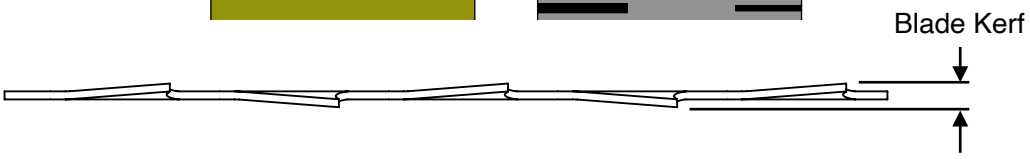
The left side is an inch scale, with the large graduations spaced at 1 in. The right side is "*four quarter*" (4/4) which mills the lumber ⅛ in oversize to allow for finish planing on each side after drying.





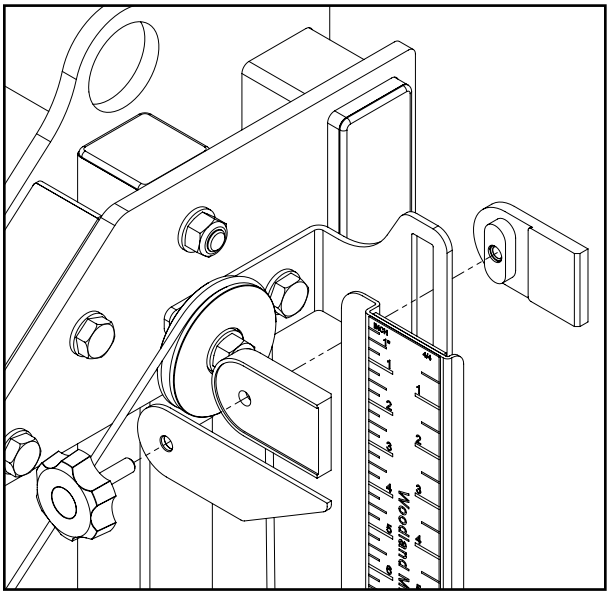
White Scale

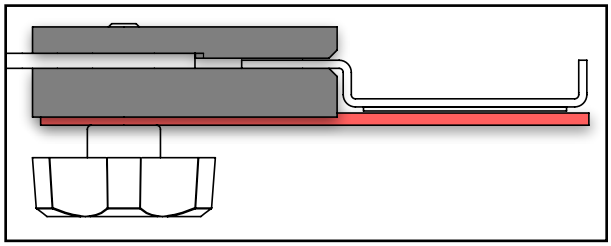
The left side is an inch scale, with the large graduations spaced at 1 in + blade kerf. The right side is also an inch scale, except the large graduations are spaced at 2 in + blade kerf.

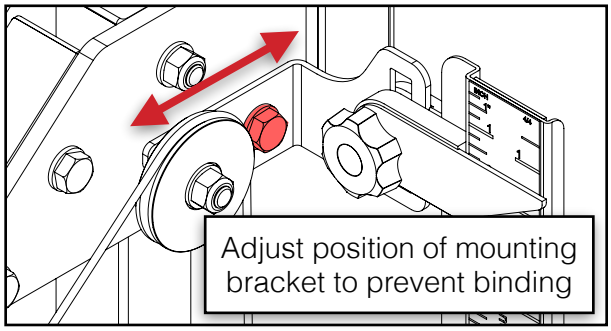


The graduations on the white magnetic scale make allowances for the blade kerf. On the yellow magnetic scale the kerf is not accounted for in the measurements.

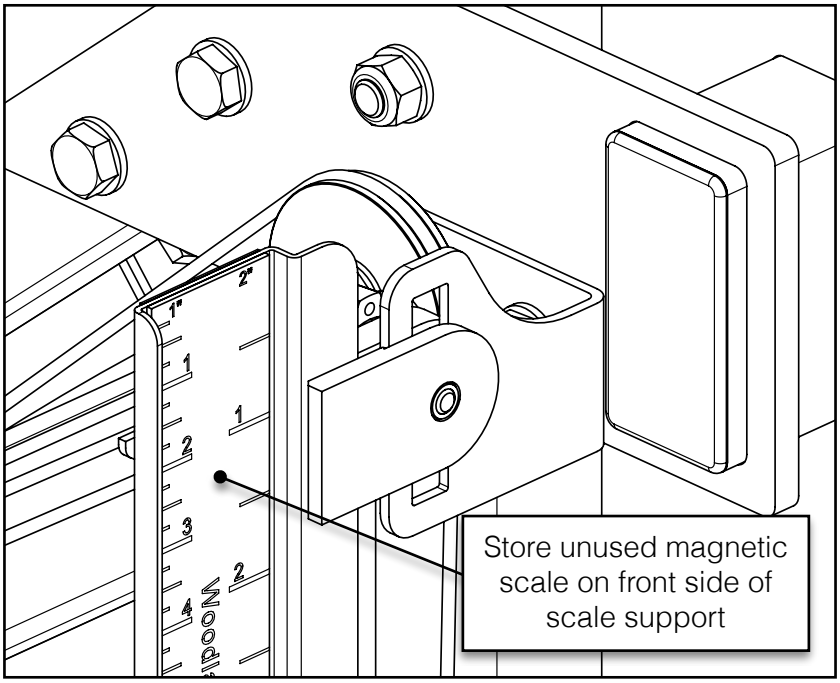
Assemble the indicator arrow brackets and arrow to the log scale mounting bracket using the M8 threaded knob. Adjust the position of the mounting bracket forwards or backwards if the arrow locking plates bind on the log scale bracket as the sawhead is raised and lowered.





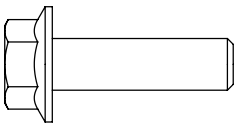
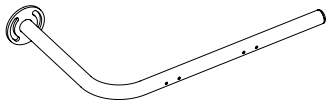
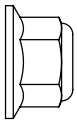


Store the other magnetic scale on the front side of the scale support when not in use.

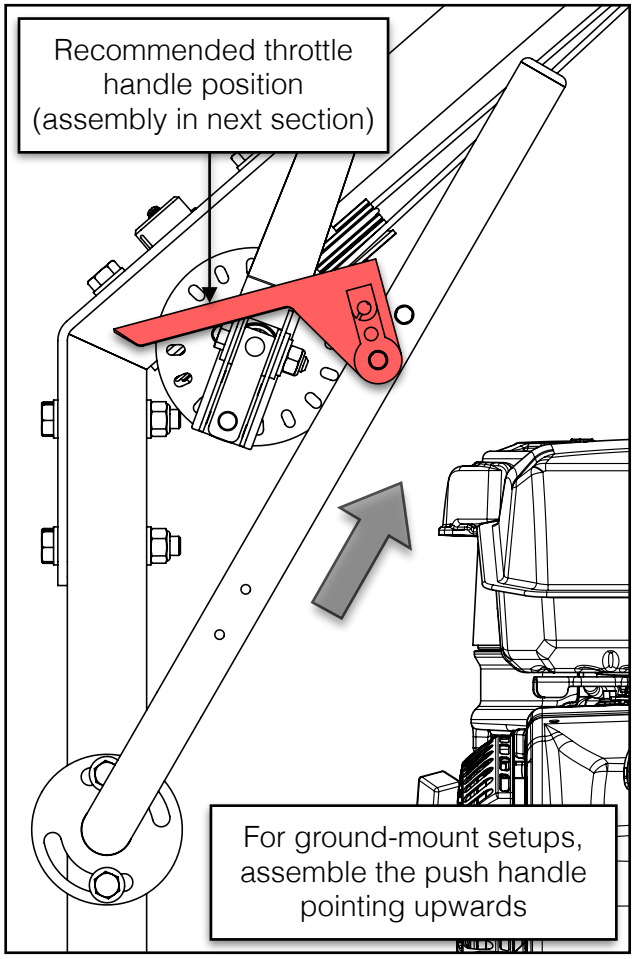


PUSH HANDLE

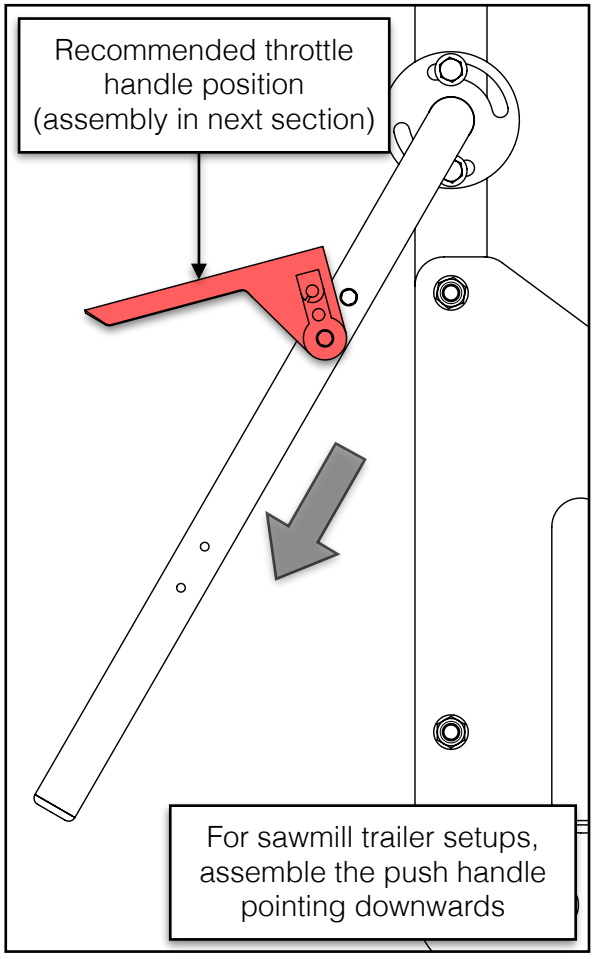
With the hardware listed below, assemble the push handle to the right rear carriage leg.

2x	M10 X 70 mm Flanged Hex Bolt		1x	Push Handle	
2x	M10 Lock Nut				

The push handle is installed in an upward position when the sawmill is ground-mounted (**below-left**). Or it can be rotated 180° if the sawmill is high above the ground on a sawmill trailer or on a purpose-built stand (**below-right**).

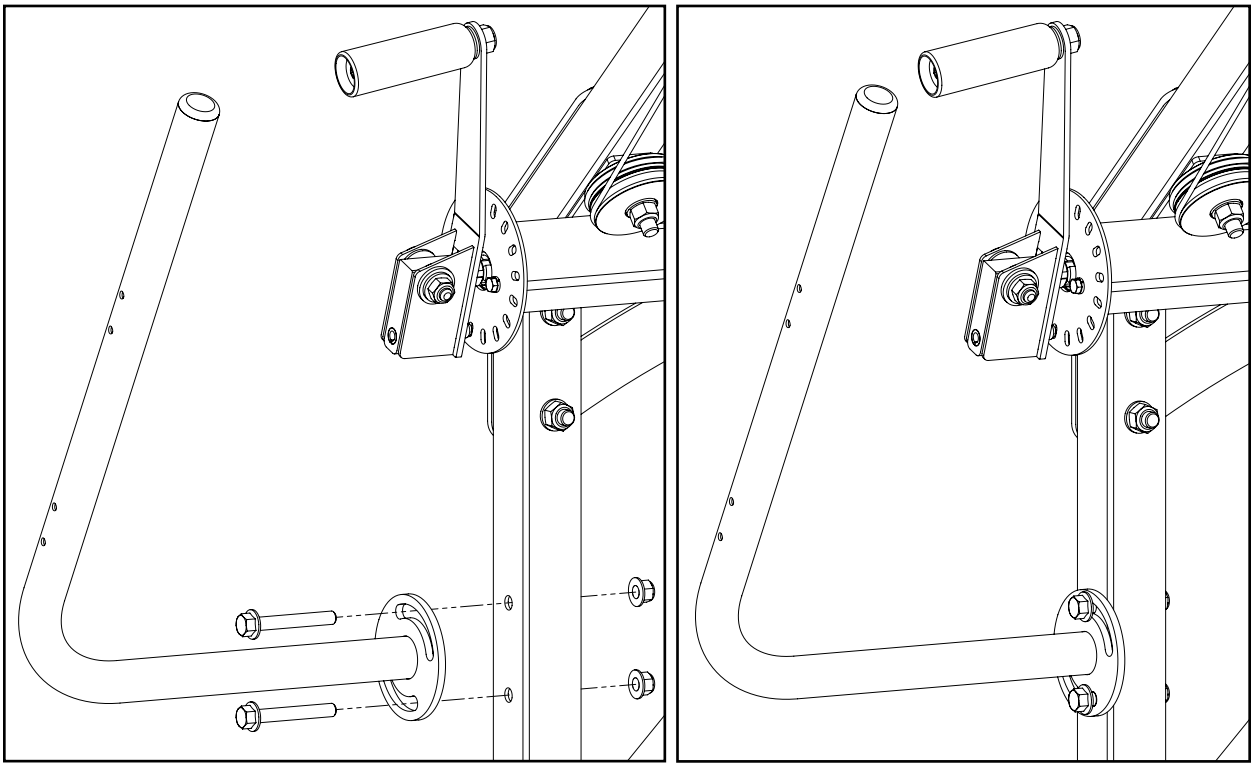


Ground-Mount Push Handle and Throttle Handle Recommended Position



Sawmill Trailer Push Handle and Throttle Handle Recommended Position

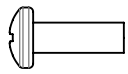
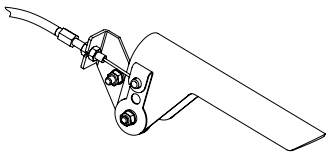
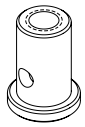
When a desired push handle orientation has been decided upon, attach the push handle to the side of the post using two (2) M10 X 70 mm bolts and M10 flanged lock nuts as shown below. Fully tighten these bolts.



The push handle can be adjusted/rotated forwards or backwards to suit the ergonomics of the operator in either ground-mount or sawmill trailer configurations.

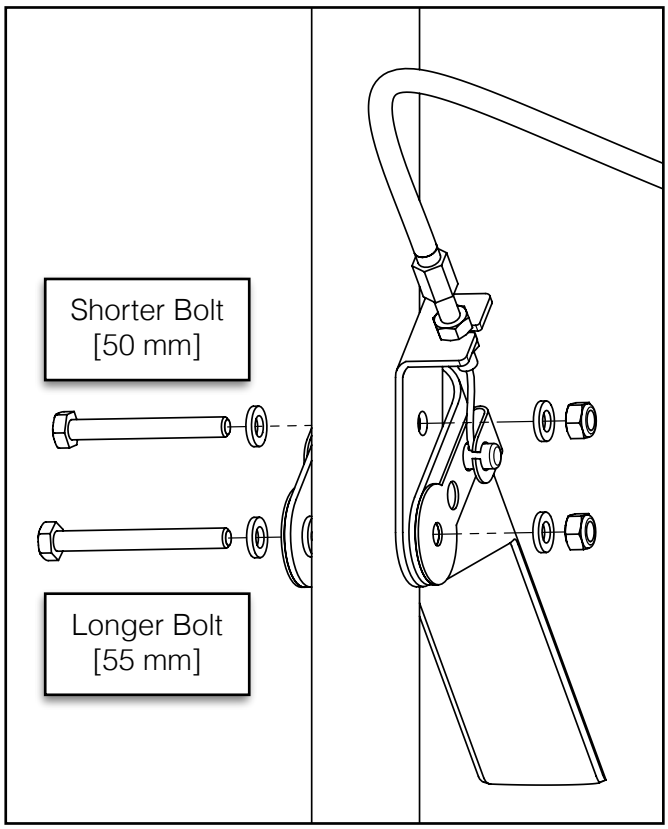
THROTTLE HANDLE AND CABLE

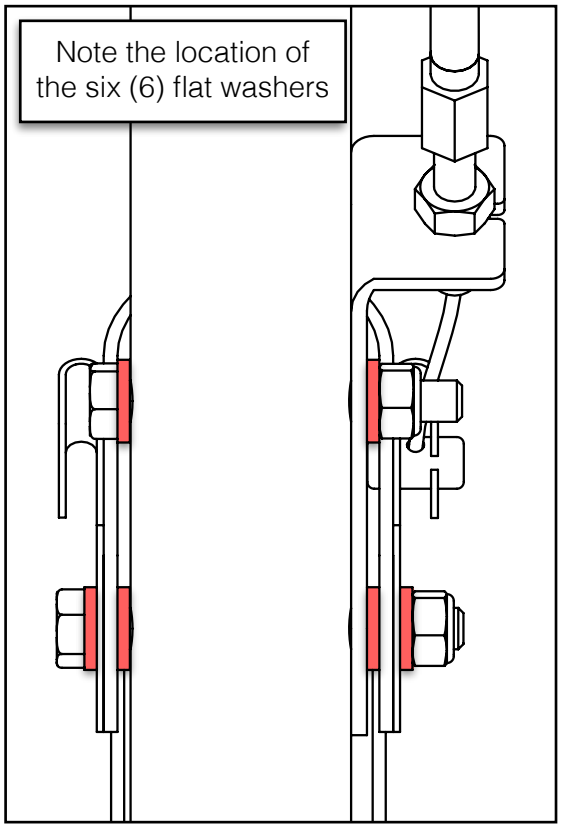
Use the hardware listed below to assemble the throttle handle to the push handle and route the throttle cable to the engine.

1x	M4 X 12 mm Phillips Pan Head Screw		1x	Throttle Handle Assembly	
1x	Throttle Cable Barrel Clamp				

The throttle handle comes loosely pre-assembled. The hardware needs to be unthreaded from the throttle handle prior to assembly. There are two (2) M6 hex bolts, two (2) lock nuts, and six (6) flat washers.

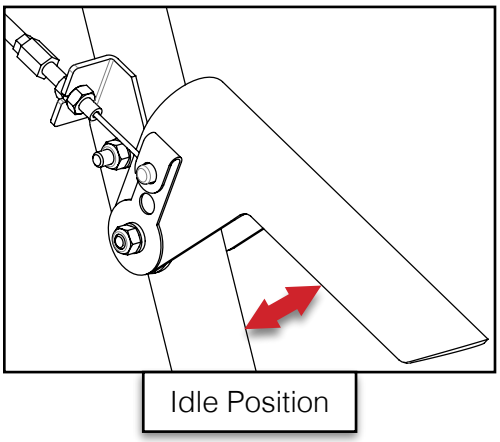
Assemble the throttle handle to the uppermost pair of holes in the push handle.

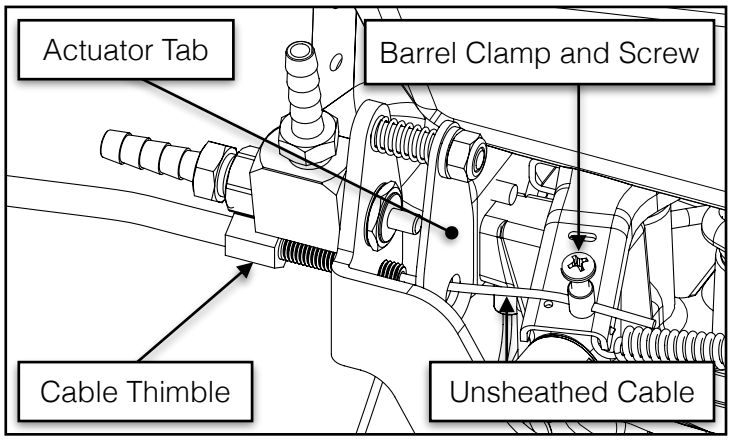




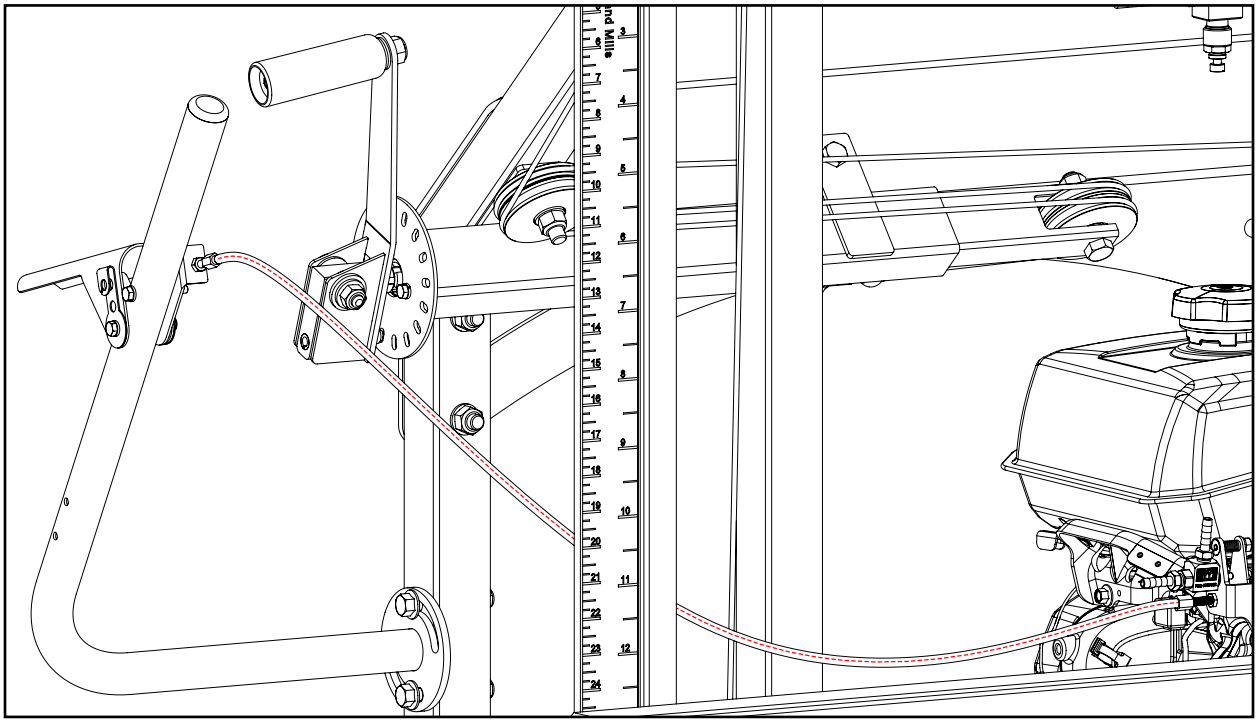
With the throttle lever in the idle position (fully open), route the cable between the log scale bracket and the front-right carriage post. Pass the cable through the thimble in the auto-lube bracket and pull the unsheathed portion of the cable through the hole in the actuator tab, then to the engine.

Next, route the unsheathed end of the cable through the hole in the barrel clamp, pull it tight while ensuring the throttle handle is still fully open, and then tighten the M4 Phillips pan head screw to secure it in place. This will take the slack out of the cable.



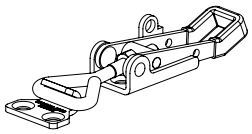


The assembled throttle handle and routed cable should now match the image below.

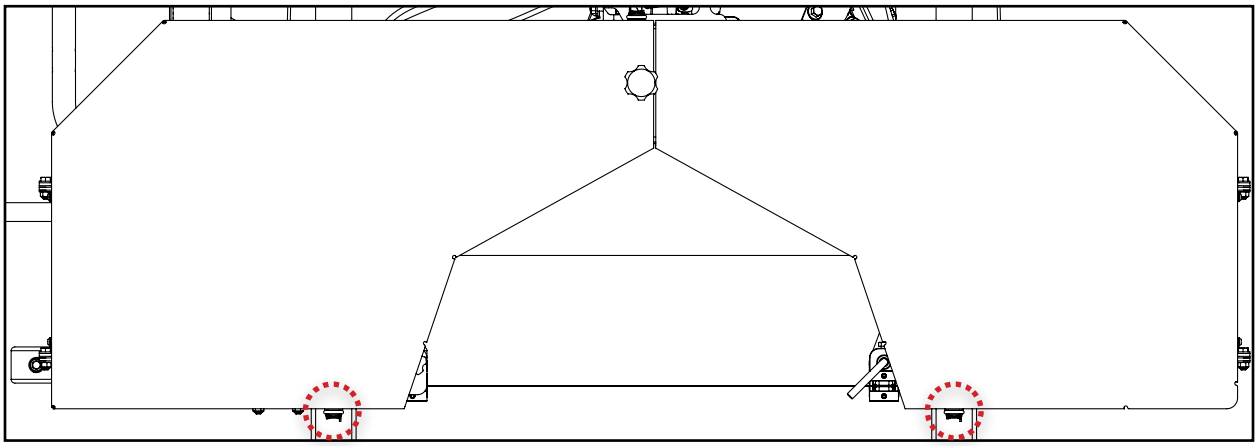


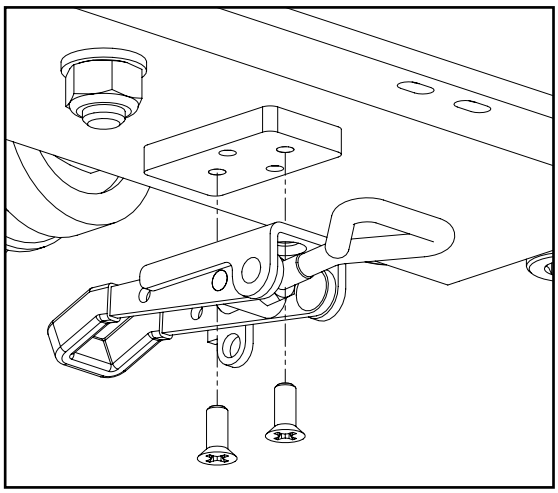
BAND WHEEL DOOR LATCHES

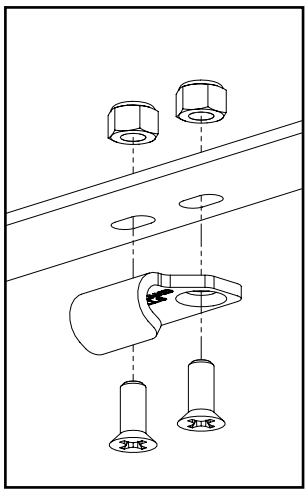
Using the hardware listed below, assemble the two (2) bottom band wheel door latches.

8x	M4 X 10 mm Phillips Flat Head Screw		2x	Latch	
4x	M4 Lock Nut				

Use two (2) M4 X 10 mm flat head screws per latch. Assemble the latches to the pre-installed spacers on the bottom of the band wheel housing. On each band wheel door, install the hook-shaped catch using two (2) M4 X 10 mm flat head screws with lock nuts.



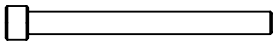
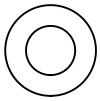
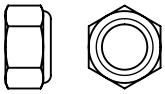
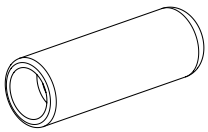




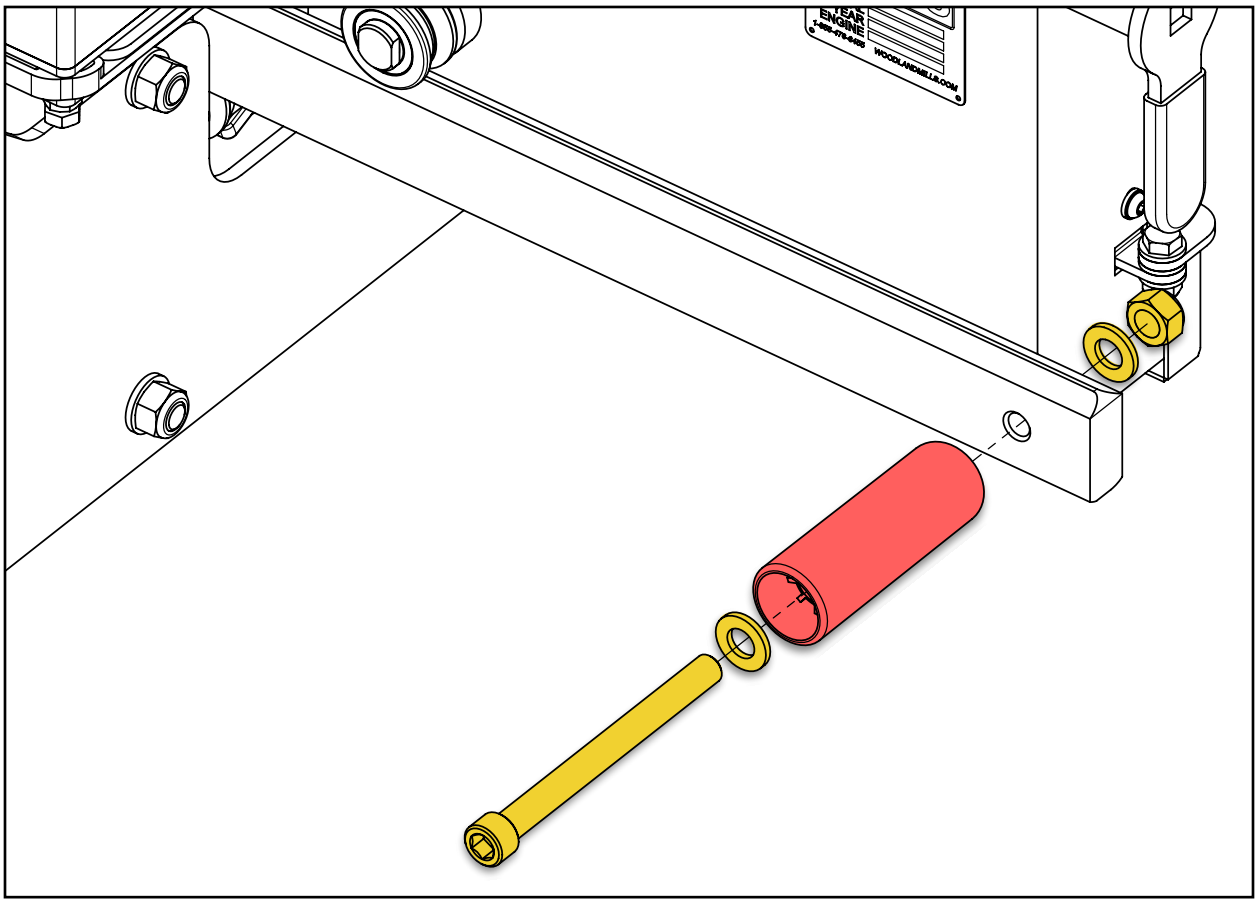
ADJUSTABLE BLADE GUIDE HANDLE

For 14 horsepower models only.

Using the hardware listed below, assemble the handle to the aluminum adjustable blade guide arm.

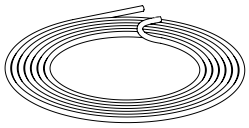
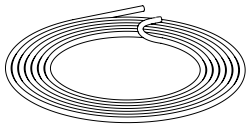
1x	M12 X 130 mm Socket Head Cap Screw		2x	M12 Flat Washer	
1x	M12 Lock Nut		1x	Handle Grip	

Assemble the handle by passing the M12 X 130 mm socket head cap screw through one (1) M12 flat washer and the handle, and thread it into the aluminum blade guide arm. Then secure it on the back side of the arm using the other M12 flat washer and M12 lock nut.



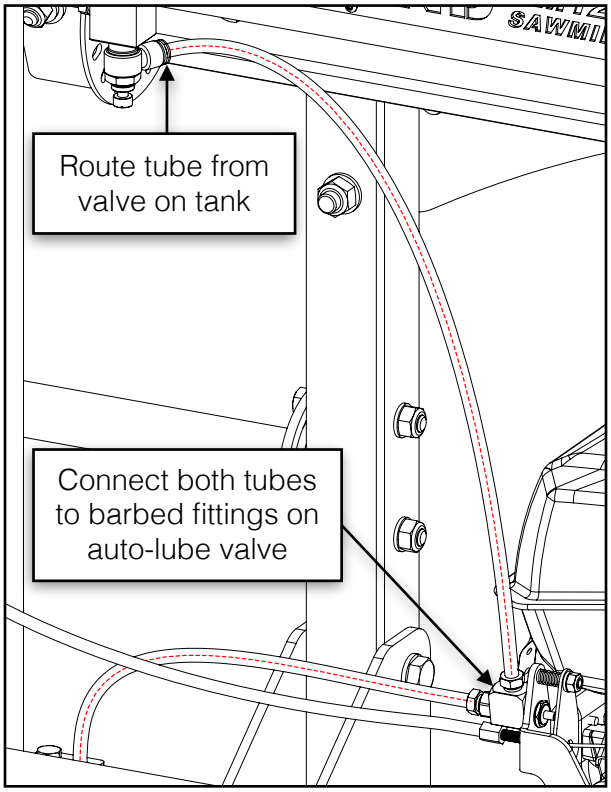
LUBRICATION TUBING

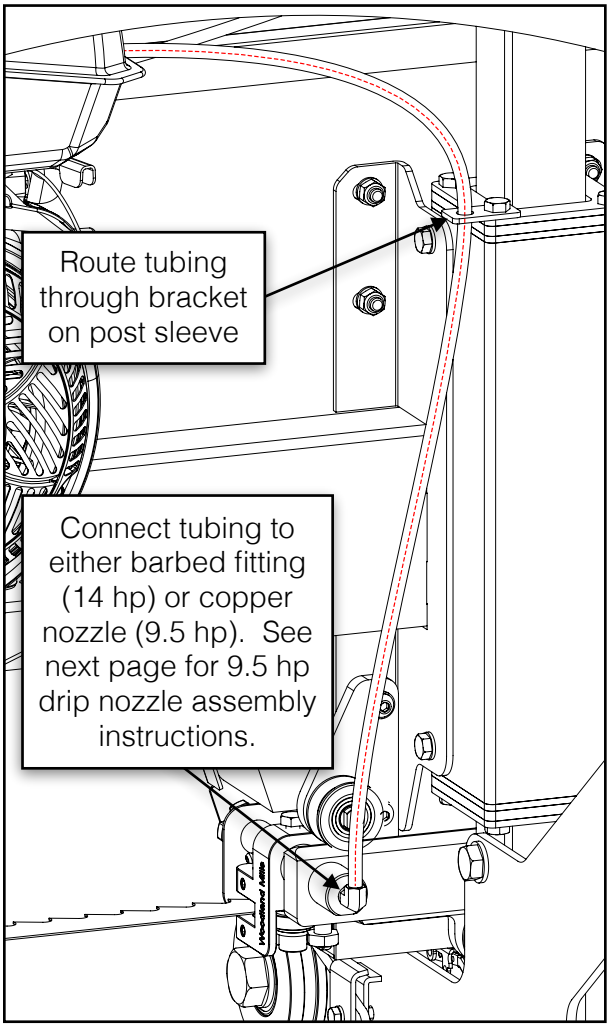
Use the tubing listed in the table below to complete the routing for the lubrication system.

1x	Tubing: Tank-to-Valve [Short]		1x	Tubing: Valve-to-Guide Block [Long]	

Route the shorter *tank-to-valve* tubing from the blue ring fitting on the tank to the vertical barbed fitting on the auto-lube valve.

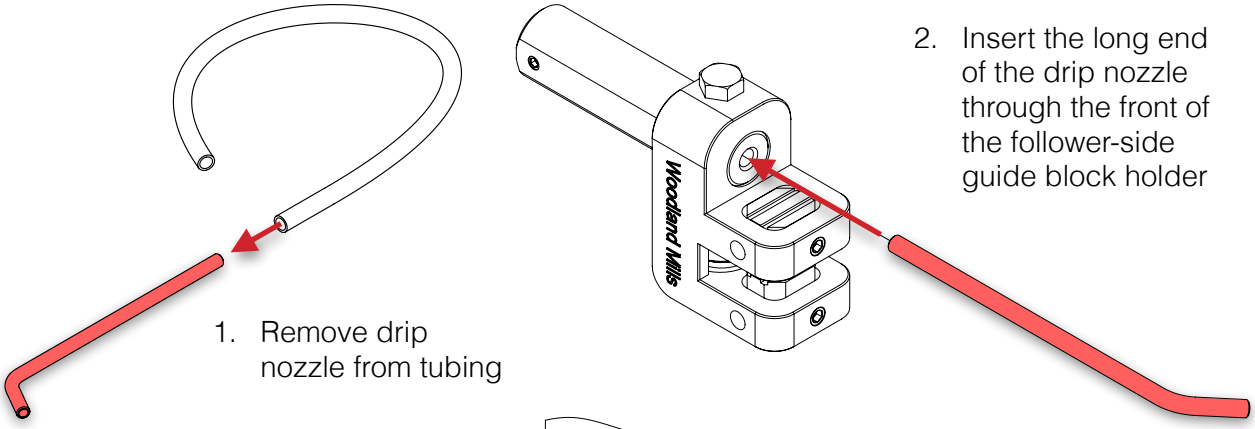
Route the longer *valve-to-guide block* tubing from the horizontal barbed fitting on the auto-lube valve, down through the bracket on the post sleeve, then to either the barbed fitting (14 hp) or the copper drip nozzle (9.5 hp) on the guide block holder shaft.





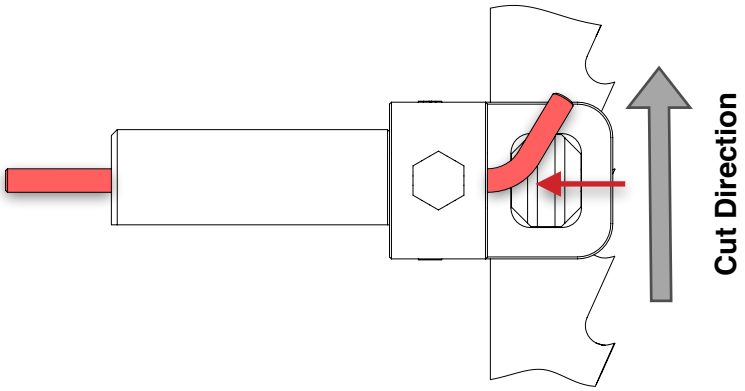
For 9.5 horsepower models only. However, if the optional adjustable blade guide kit was purchased for the 9.5 hp sawmill, ignore these steps.*

The copper drip nozzle comes assembled to the shorter *valve-to-guide-block* tubing. Remove the tubing from the copper drip nozzle and assemble it into the *follower-side* guide block holder as shown below. Other sawmill components have been removed for clarity.

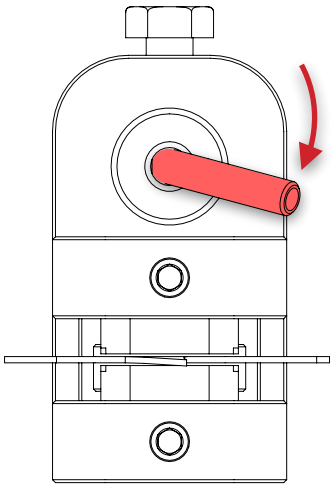


1. Remove drip nozzle from tubing

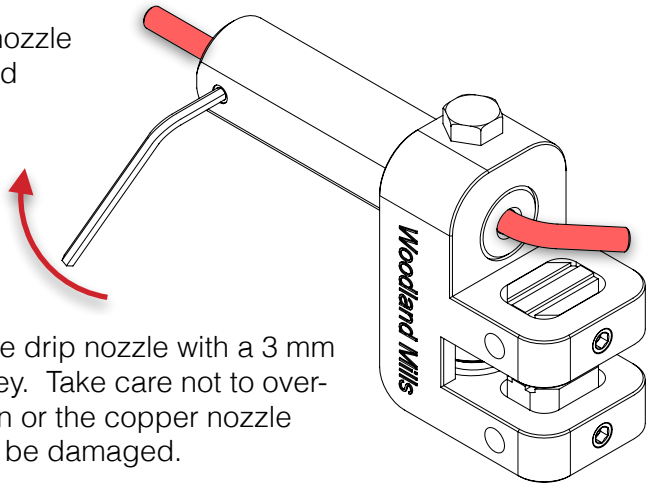
2. Insert the long end of the drip nozzle through the front of the follower-side guide block holder



3. Ensure the drip nozzle is pushed far enough through the guide block holder shaft so that the water will drip onto the blade.



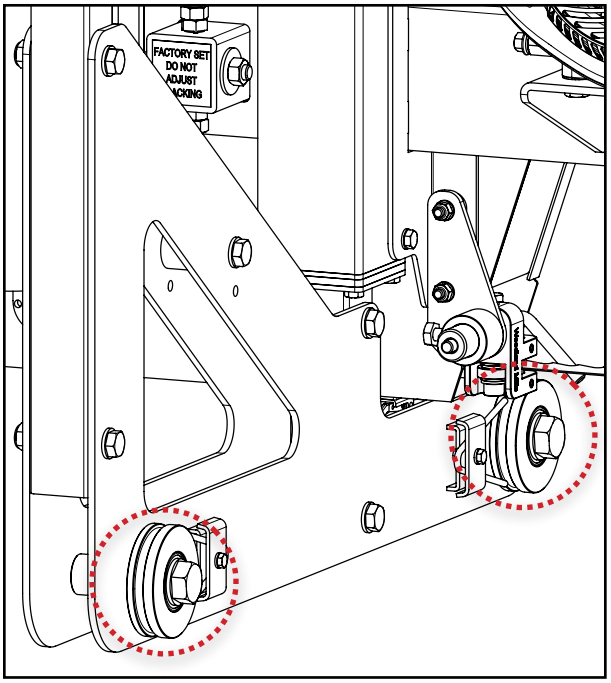
4. Tilt drip nozzle downward

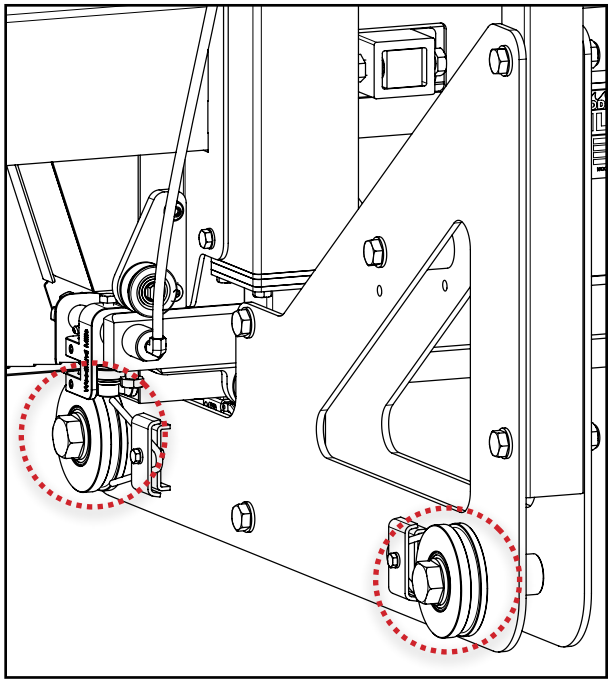


5. Secure drip nozzle with a 3 mm hex key. Take care not to over-tighten or the copper nozzle could be damaged.

TIGHTEN CARRIAGE WHEEL BOLTS

Tighten the four (4) M20 X 120 mm bolts that fasten the carriage wheels to the carriage side plates.



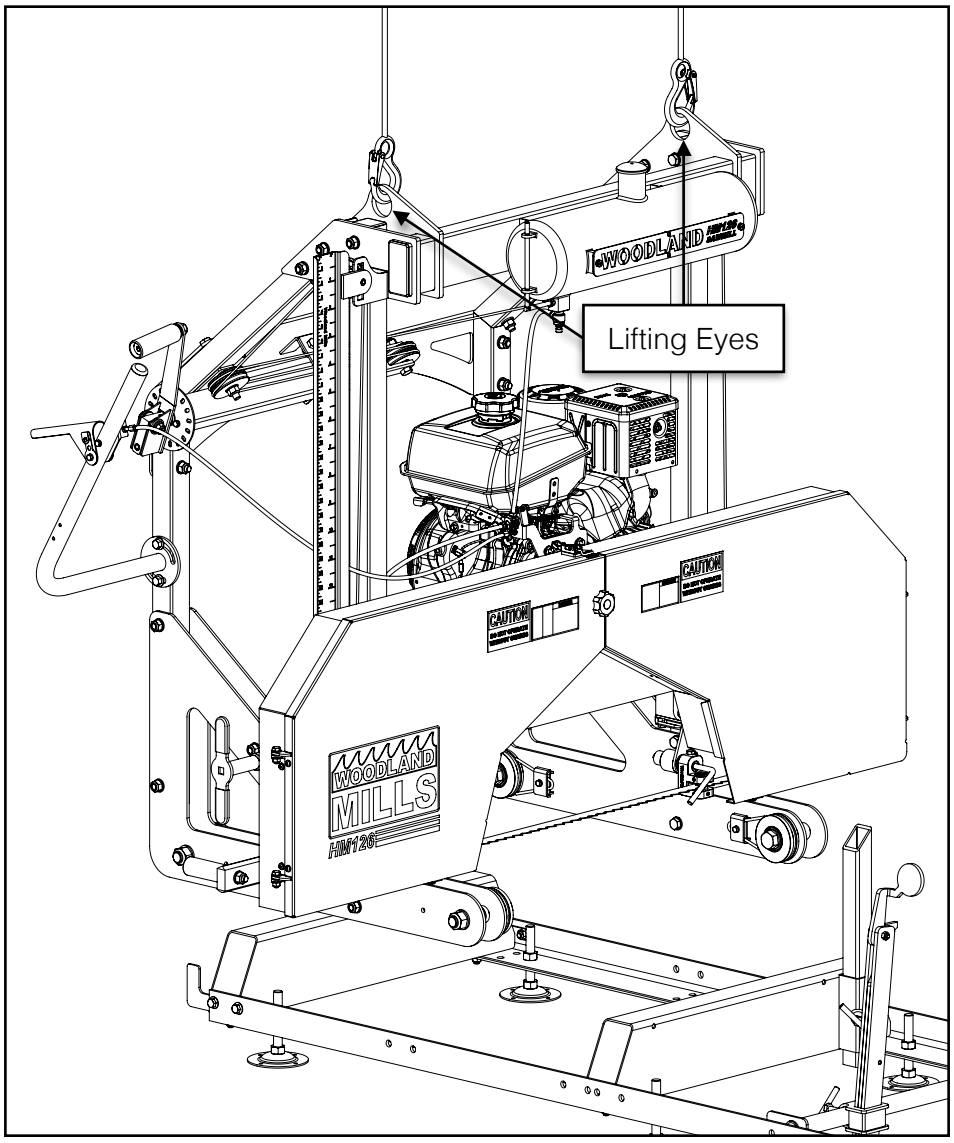


5. PLACING THE HEAD ON THE TRACK

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

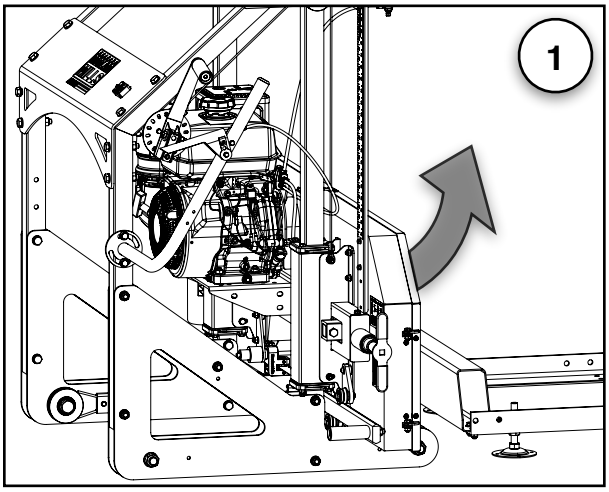
If a tractor or forklift is available, the head can be lifted onto the track with a lifting strap or chain with a minimum rating of 1000 lb. [450 kg]. Attach the lifting strap/chain to the lifting eyes, raise the head up, and rest it on the track so that the grooves in the carriage wheels fit around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

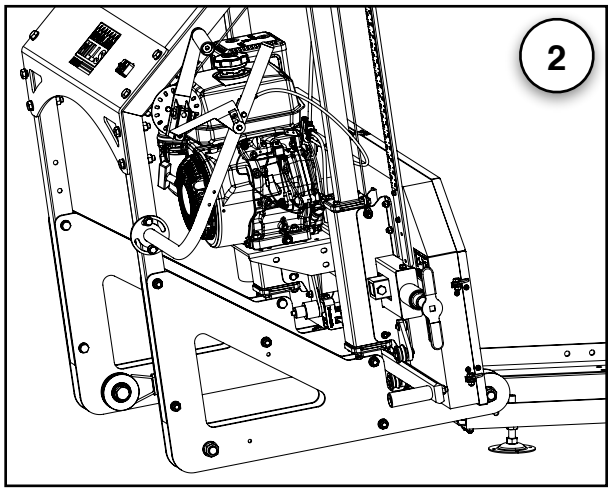


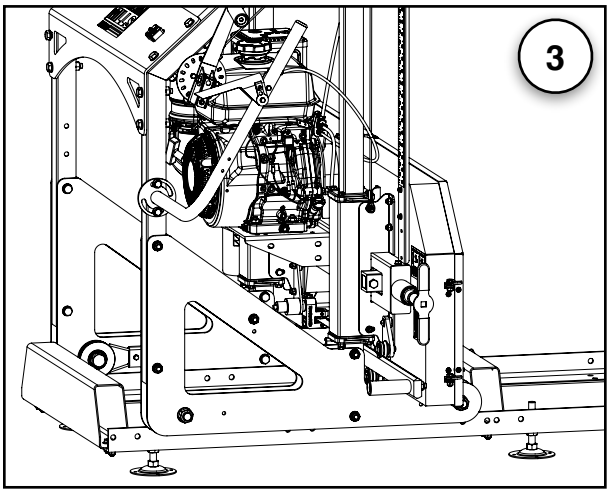
METHOD 2

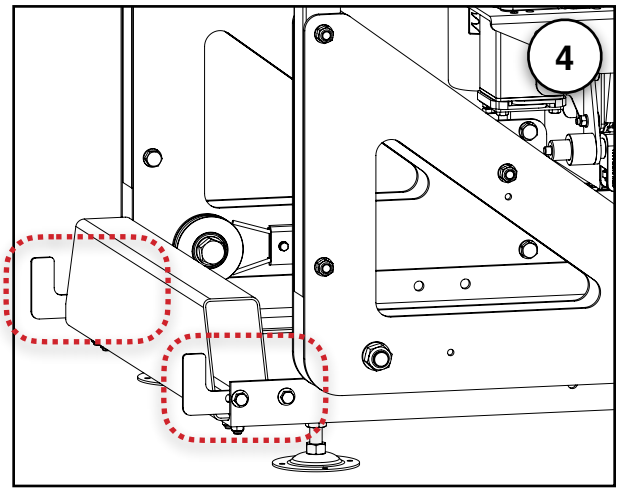
At least two people are required for this step. Start by removing the two (2) carriage stops from one end of the track. The head can be walked over to the track until positioned behind it (**Figure 1**). Once in this position, tilt the head backwards so that the front two wheels are off the ground. Walk 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**).







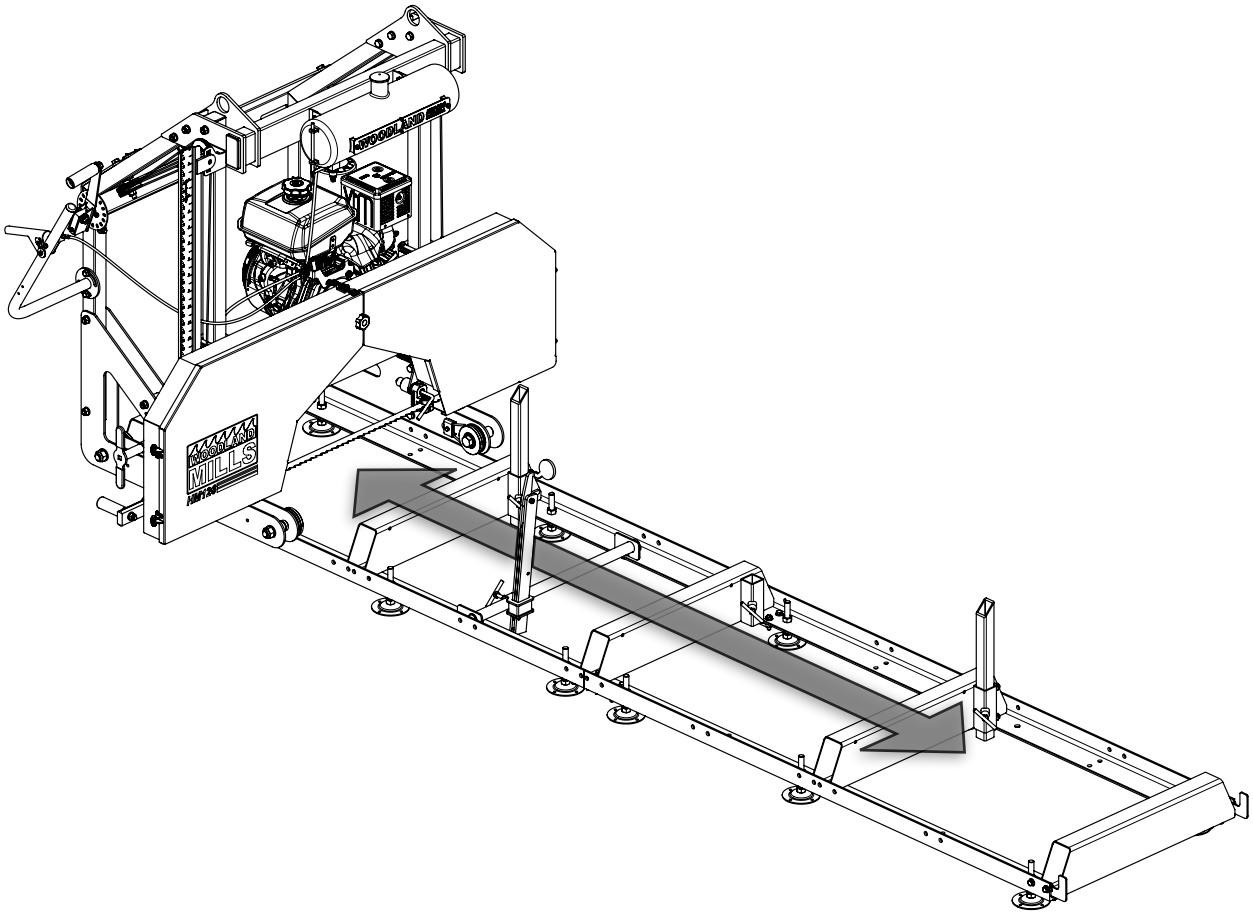


With the sawmill head assembly now resting on the track, grab hold of the one side of the cross beam and perform a shake-down of the head. Shaking the head will help settle the components into their proper position that may have become misaligned either due to tolerances during the assembly process or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

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

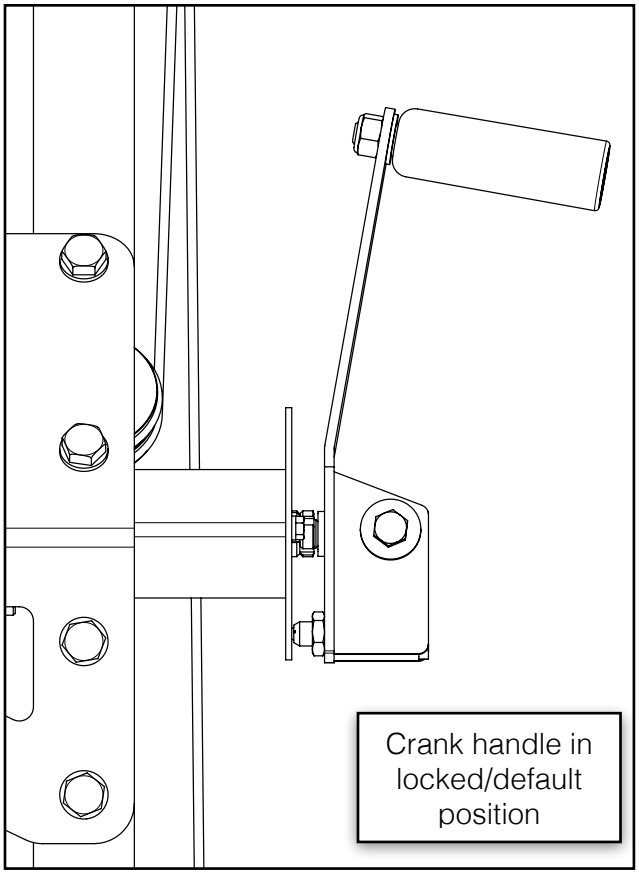
ROLLING THE SAWMILL HEAD ASSEMBLY

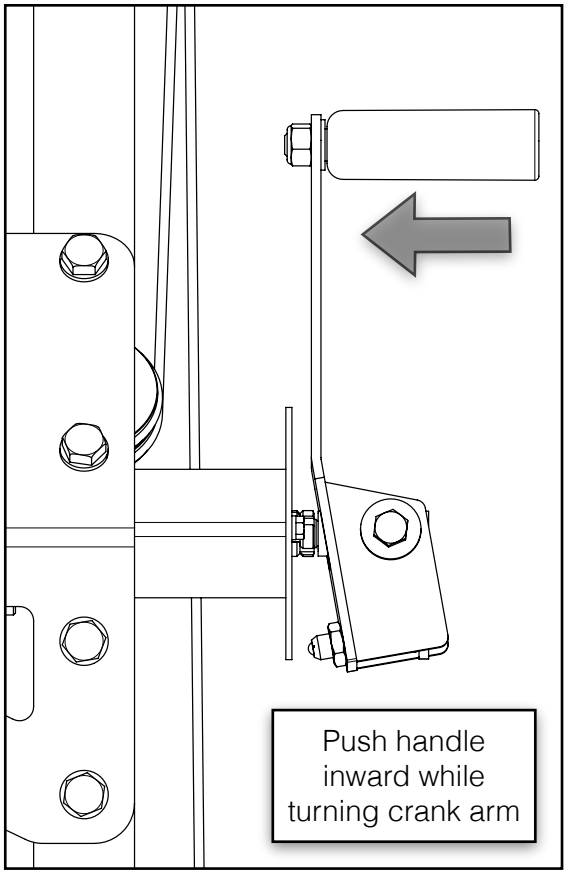
Roll the sawmill head assembly along the full length of the track to ensure it moves freely. If it binds or is difficult to push it is likely the track is not square, straight, and/or level. Make the necessary adjustments to the track and roll the head assembly again. Repeat the track adjustments until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

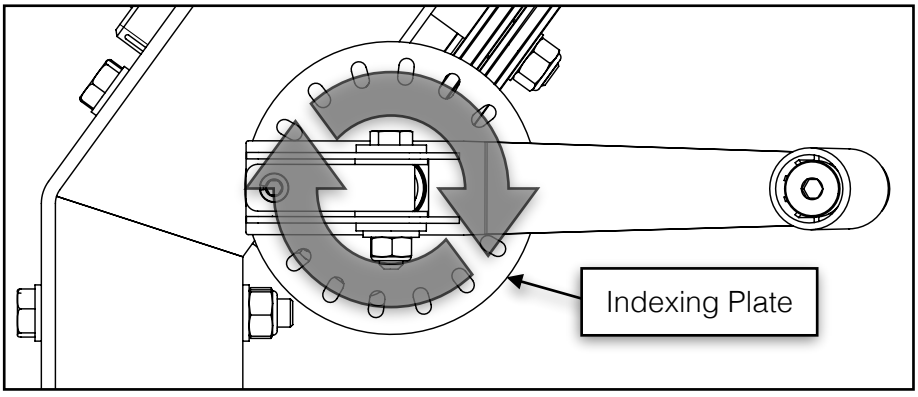


RAISING & LOWERING THE SAWHEAD

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.

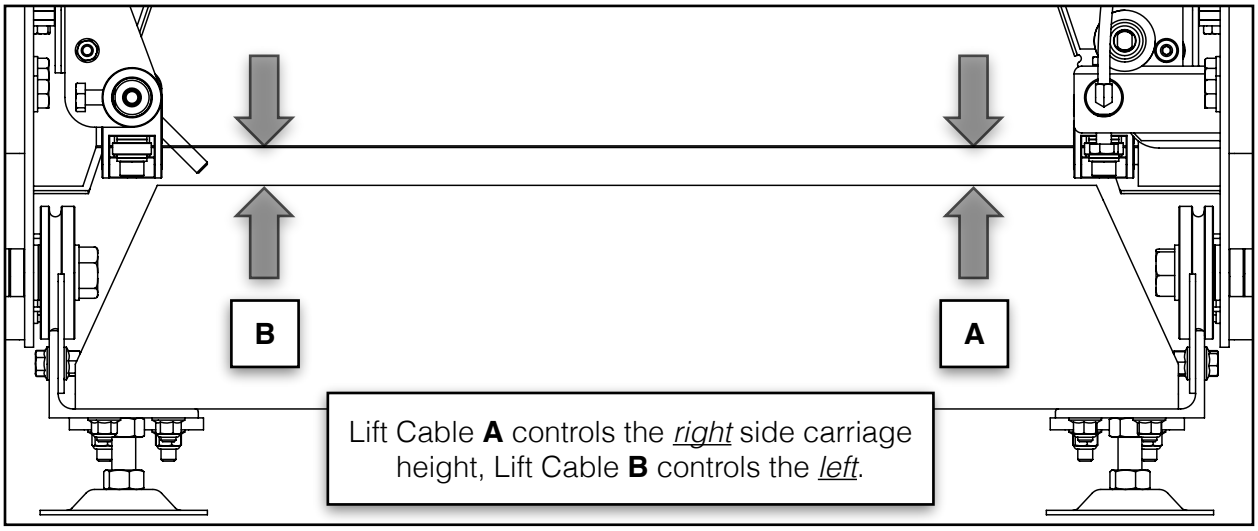






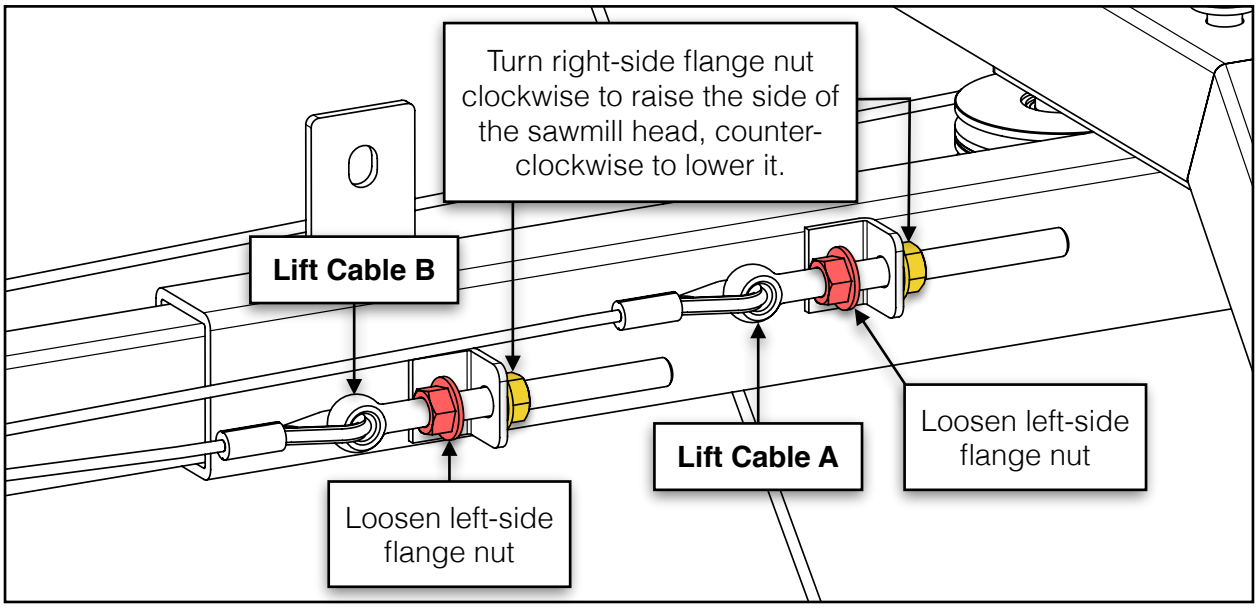
LEVELLING THE SAWMILL HEAD ASSEMBLY

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.



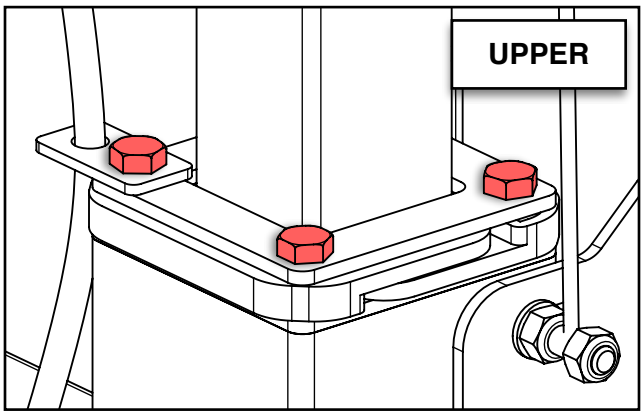
Loosen the left-side flange nuts on the lift cable eyebolts first. Turn the right-side flange nuts clockwise to raise one side of the sawmill head assembly, or counter-clockwise to lower it. Double-check the blade height as discussed in the previous step.

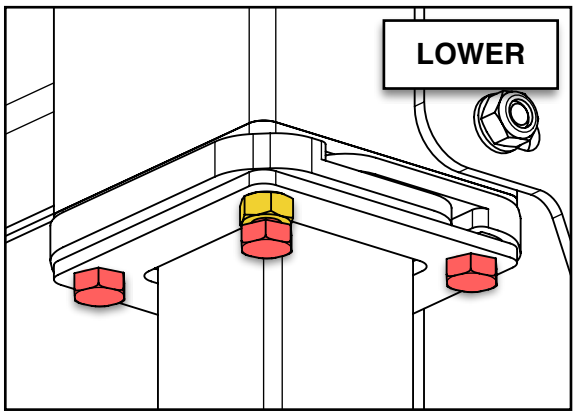
Once the measurements on both sides are equal and the sawmill head is level, tighten the left-side flange nuts securely against lift mechanism brackets.



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.



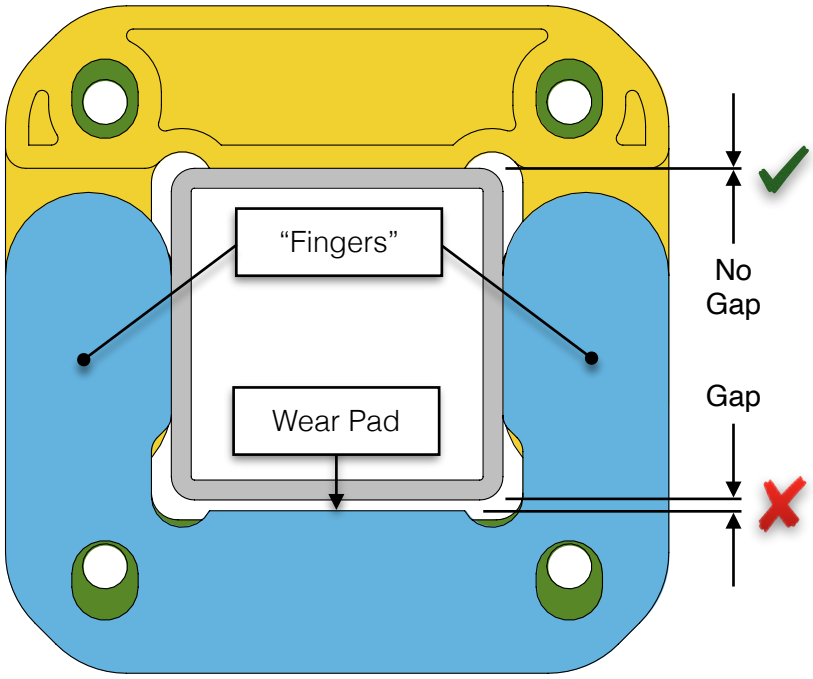


Push the bushings together (front-to-rear) so that there is no gap between the bushing wear pads and the front/rear faces of the post as shown below.

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.

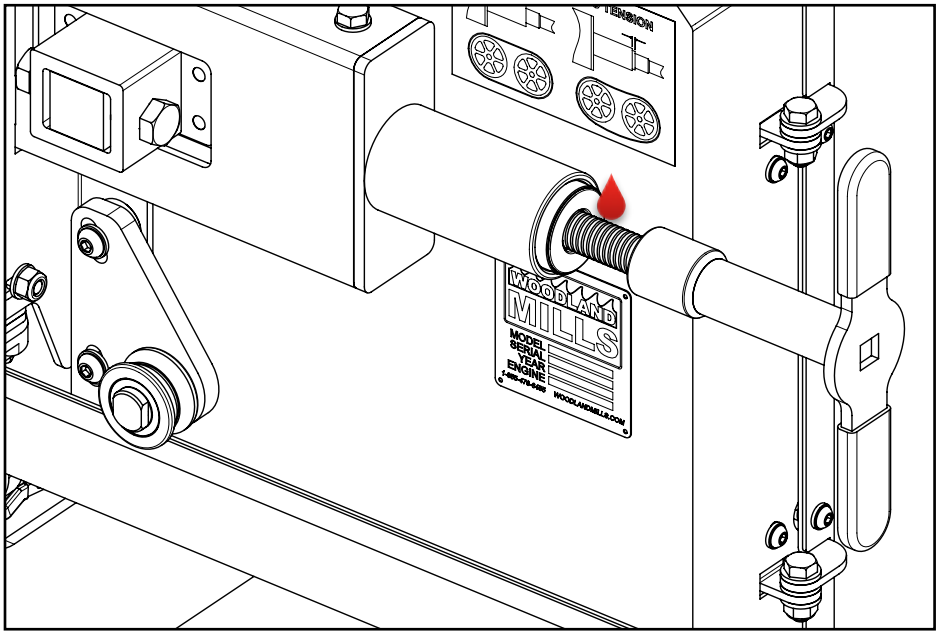
The bushing holes are slotted to allow for this future adjustment.



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***."

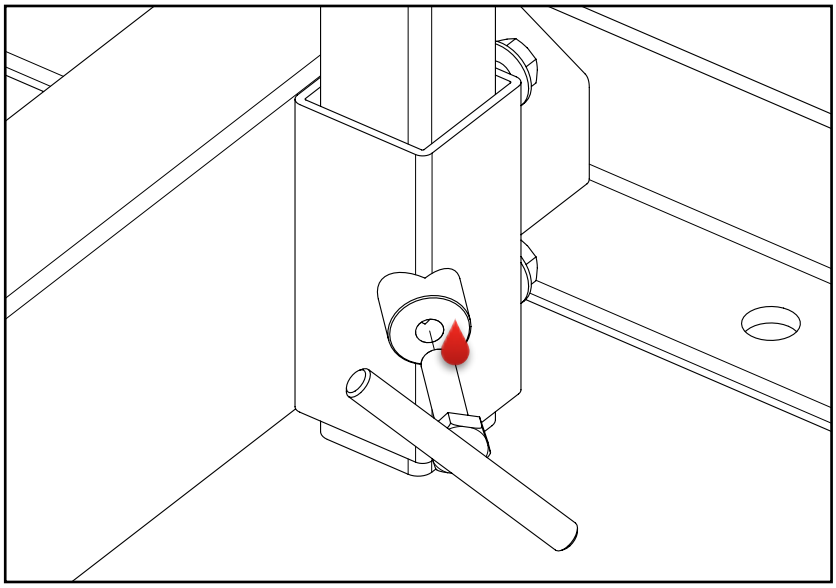
GREASING THREADS

Add waterproof grease to the threads of the blade tension T-handle and to the mating bearing face prior to use.



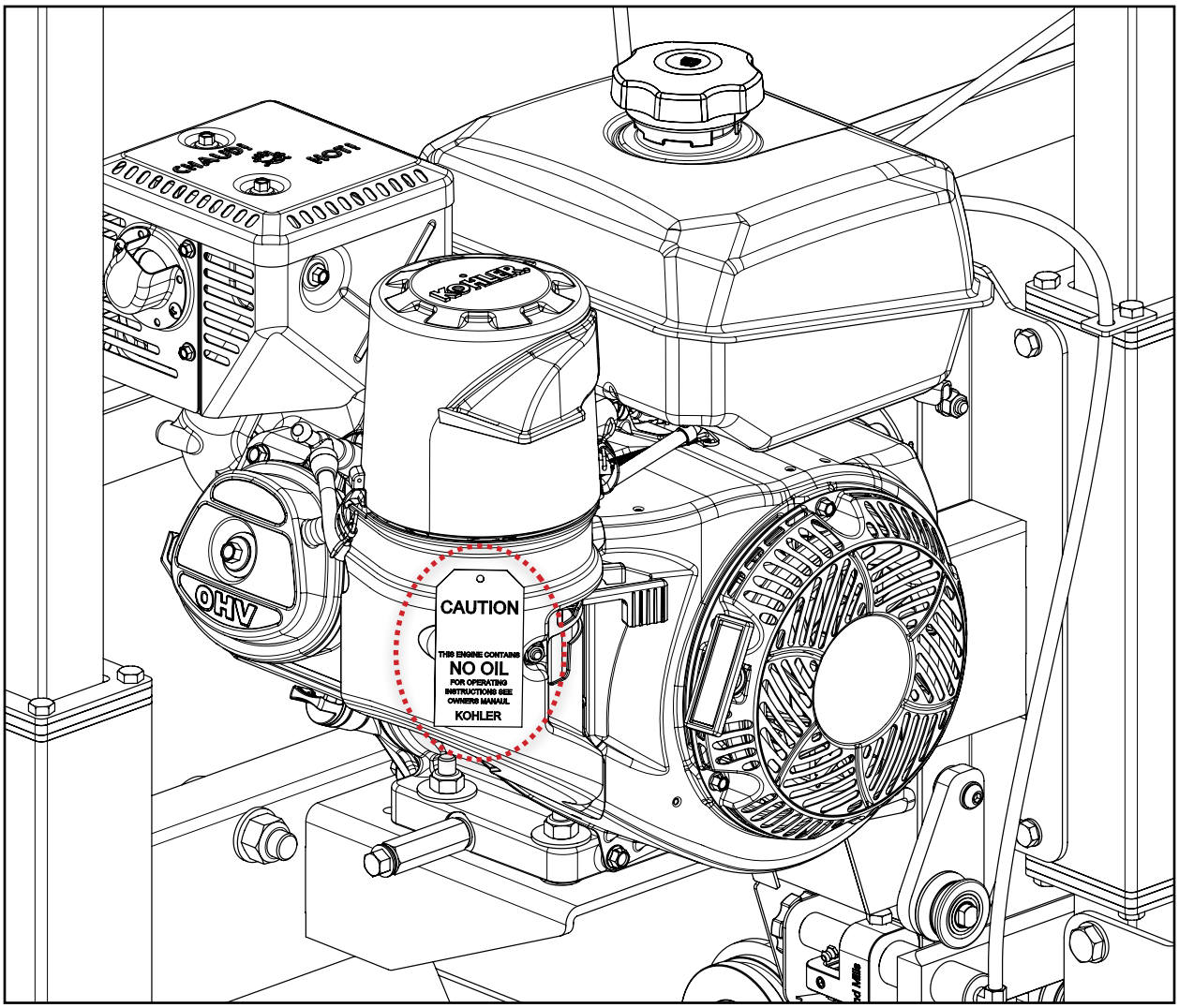
****Note: It is very important to take the tension off the blade by turning the T-handle in the counter-clockwise direction when the sawmill is not in use. Failure to do so will result in flat spots on the rubber belts. These flat spots will cause the mill to vibrate excessively during subsequent uses.****

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



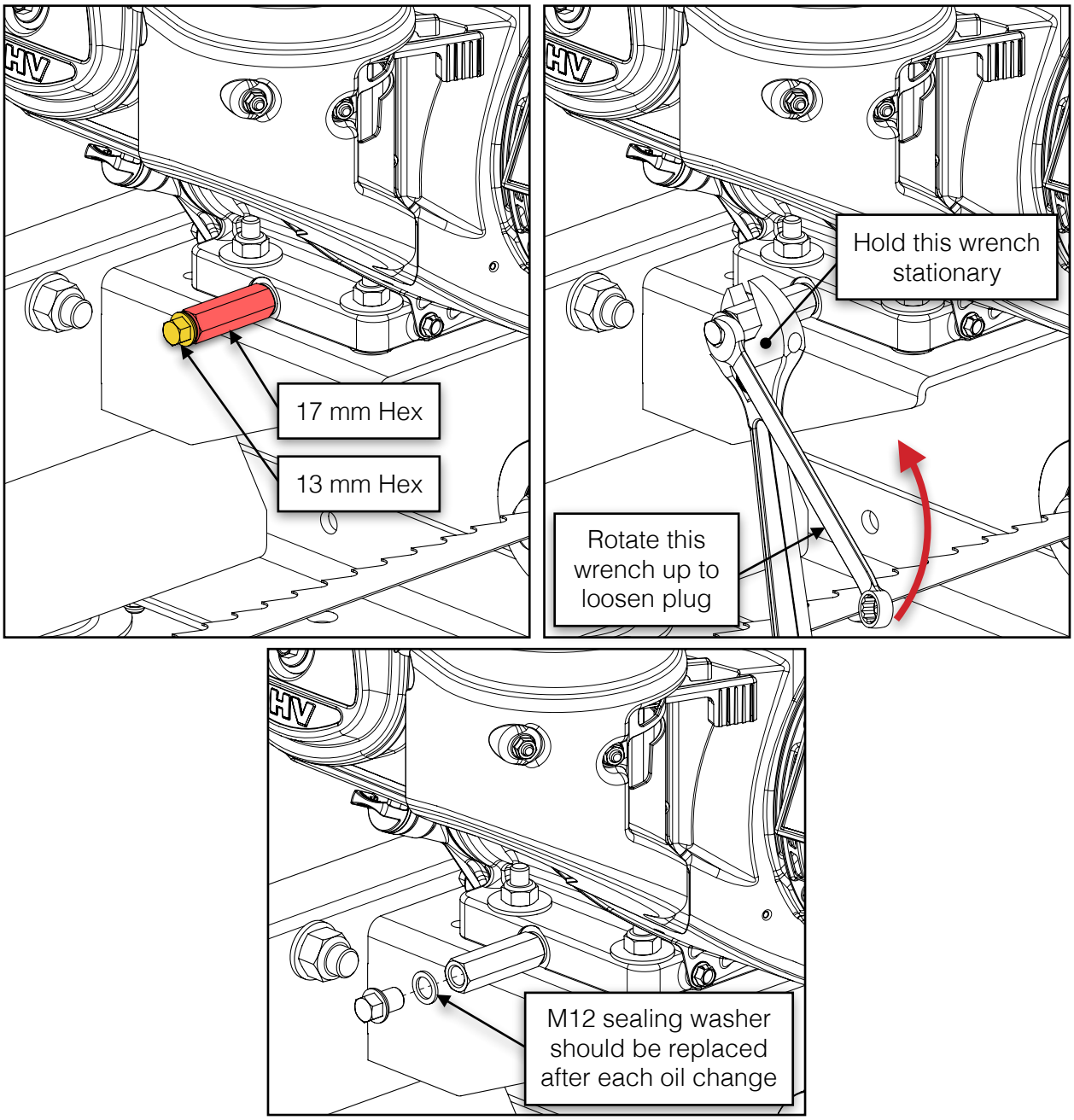
ENGINE OIL

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.

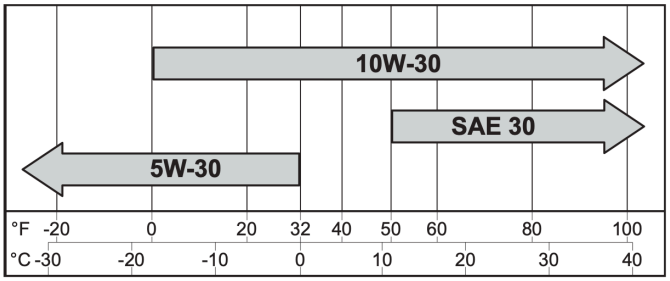


Repeat the process in reverse to re-install the drain plug. Remember to hold the brass extension stationary with a second wrench when tightening the plug.

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:

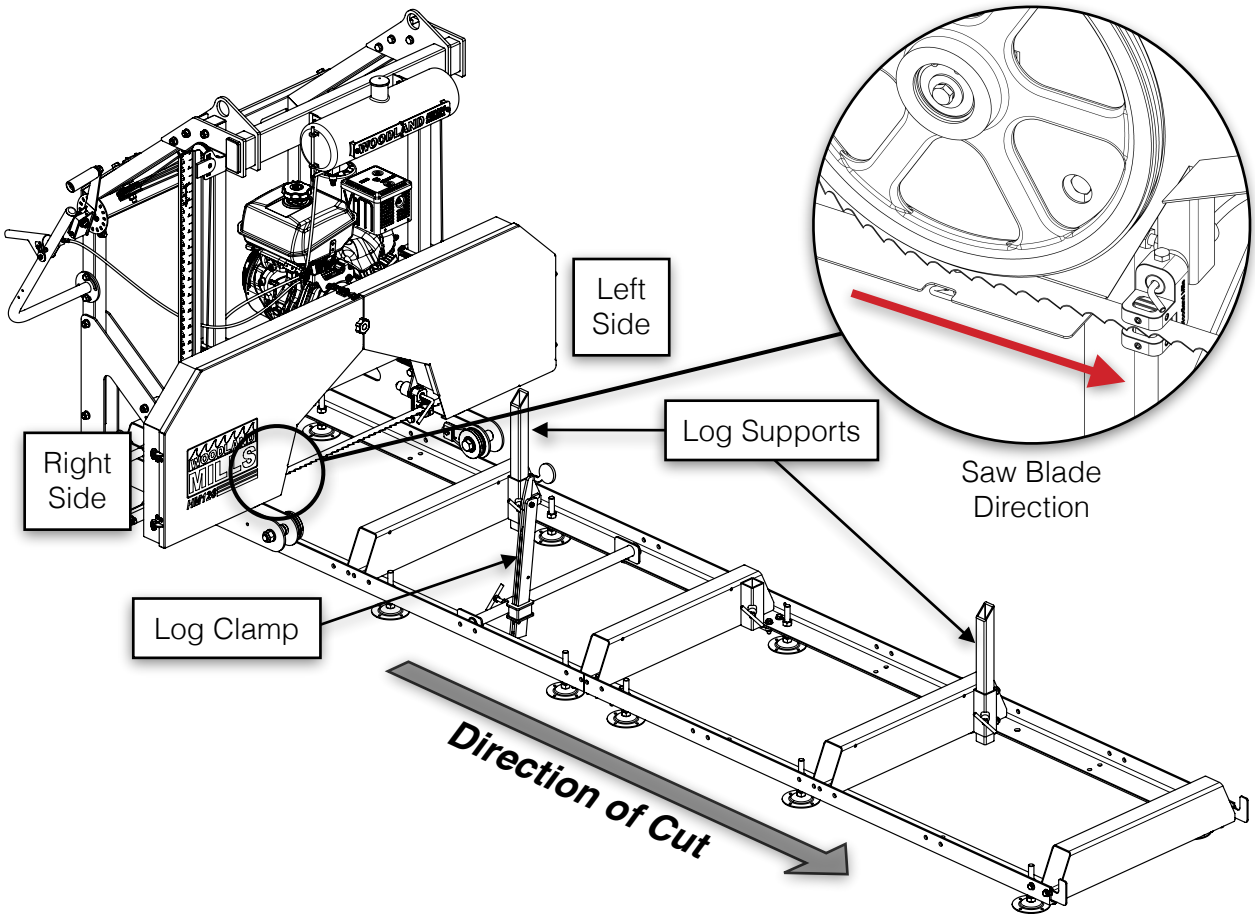
   34°F (1°C) and warmer: Water with 1 tsp (5 mL) of liquid dish soap per tank.
   32°F (0°C) and colder: Winter windshield washer fluid.

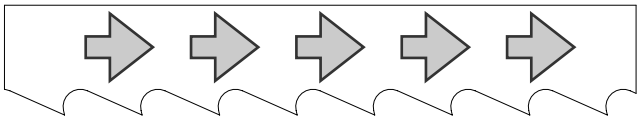
****Never use diesel fuel or other chemicals as they will prematurely deteriorate the rubber belts and can stain the wood.****

4. Check blade tension to ensure it is fully tensioned. Refer to the label on the back of the blade guard near the blade tensioning T-handle.
5. Ensure the wire loop on the dashboard hour meter has been cut so it will record the hours of use on the machine.
6. 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***.
7. 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.





Saw Blade Teeth Orientation

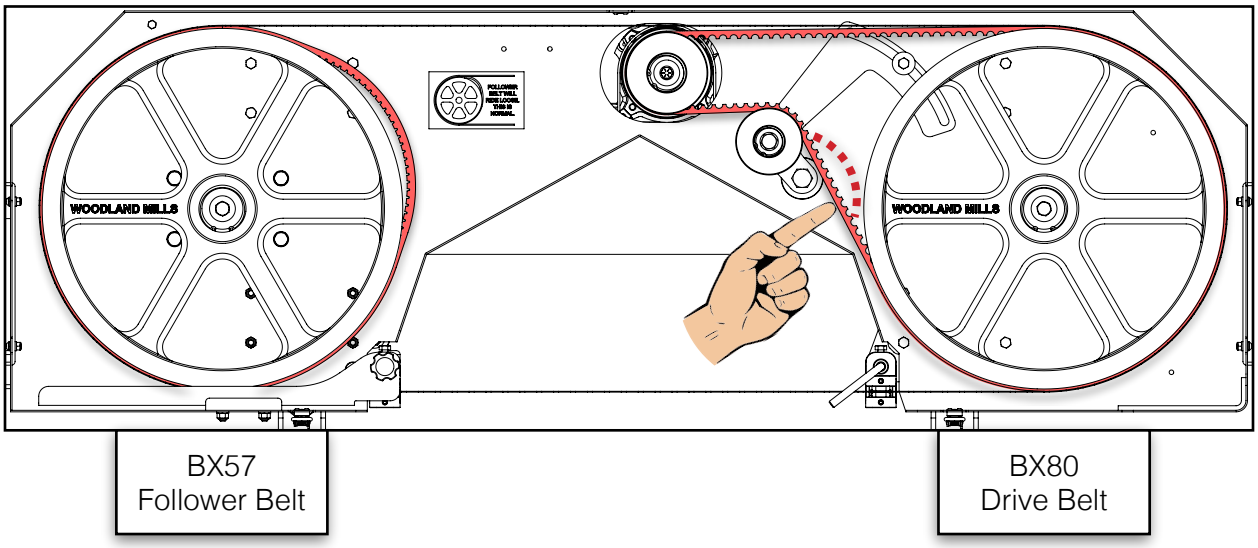
Always ensure the saw blade teeth are orientated such that they are cutting *into* the wood and not being dragged backwards across it. Some blade manufacturers ship their saw blades inside out (backwards) due to manufacturing processes and they must be flipped prior to installation.

****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.

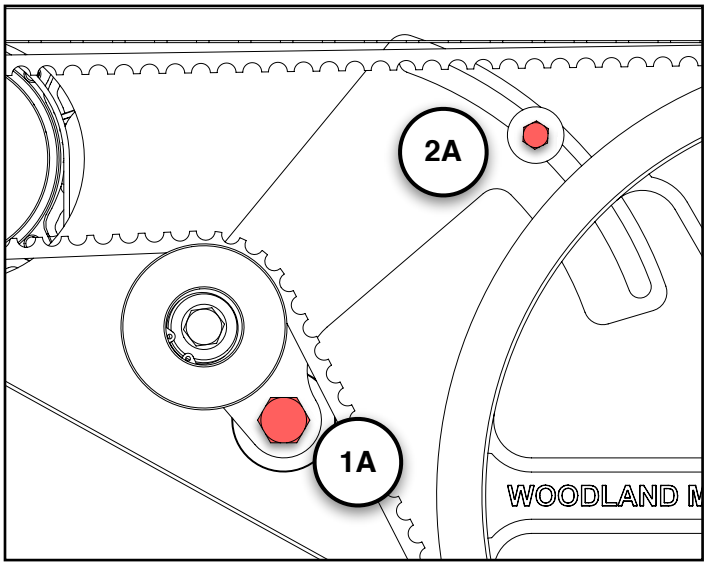
To check the drive belt tension, push against it firmly and measure the deflection. There should be no more than ¼ in [6 mm] of movement. If the belt deflection exceeds this amount it will need to be tightened as described below.

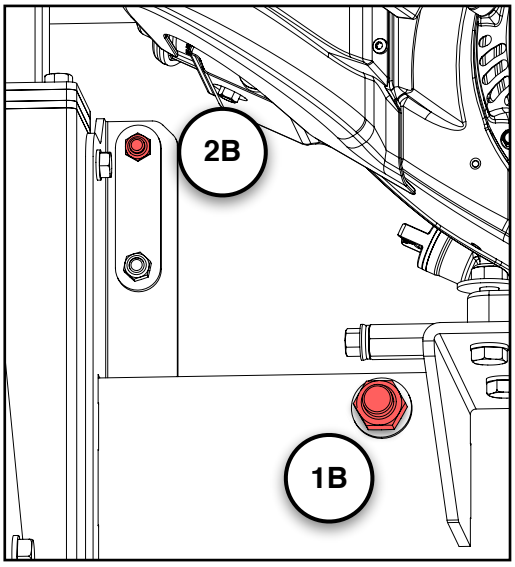


****Never attempt to adjust the belt tension with the engine running. As a safety precaution, remove the spark plug cap.****

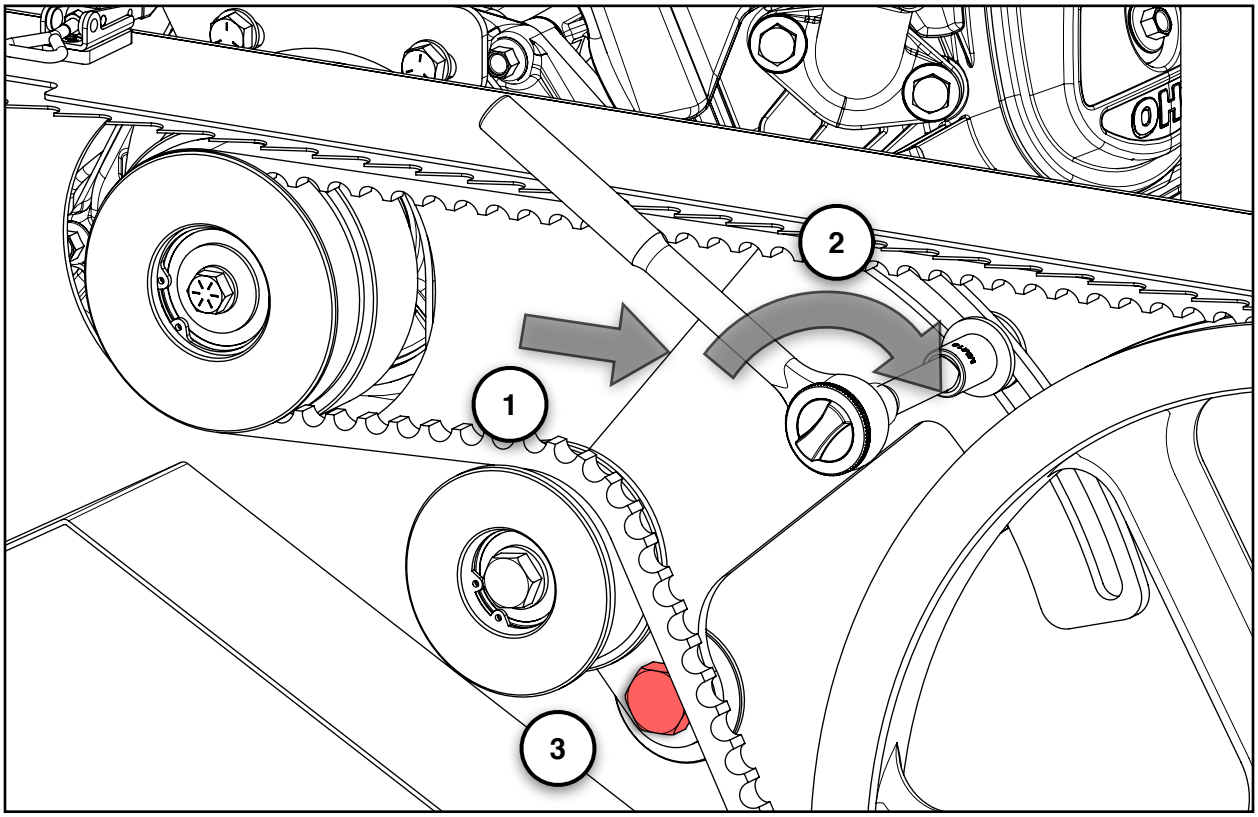
Start by loosening the M16 hex bolt (**1A**) and lock nut (**1B**) that secure the belt tensioner mechanism to the sawhead. Then loosen the M8 bolt (**2A**) in the curved slot—its nut (**2B**) is secured in place by an anti-rotation device and does not require a second wrench or socket.

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



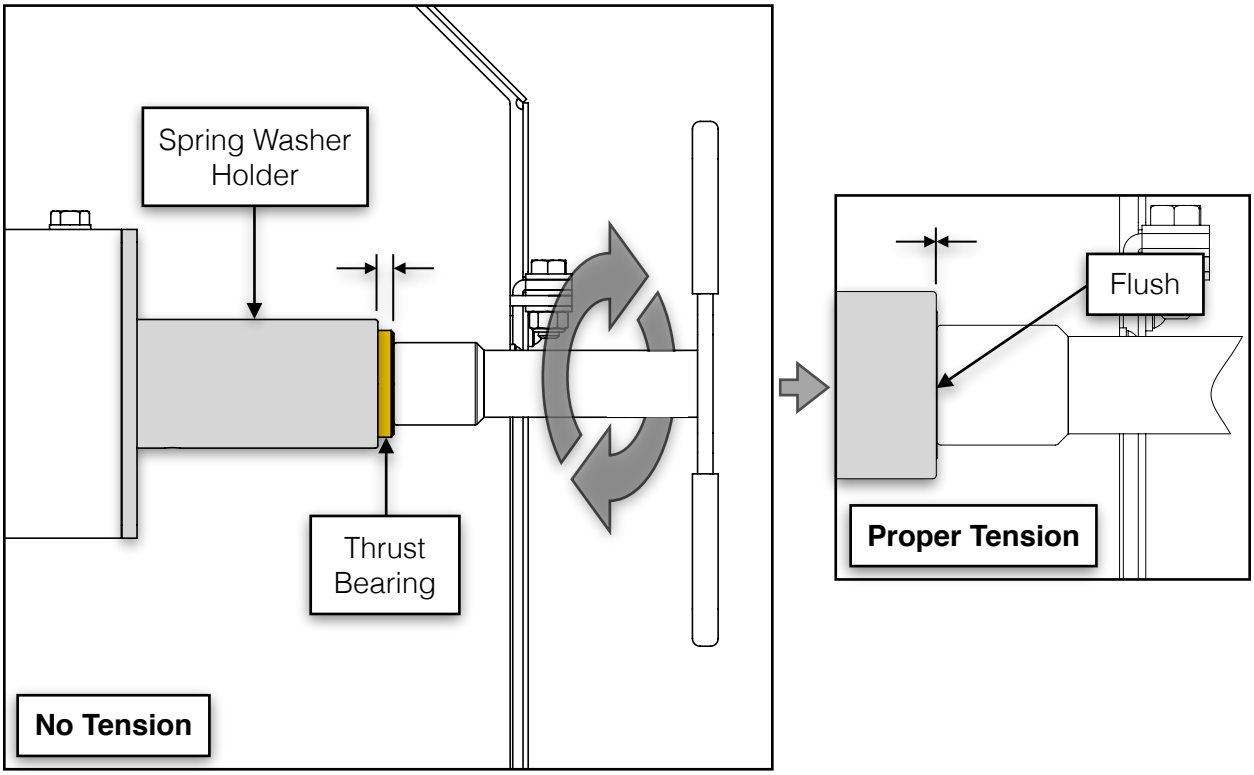


Once both bolts are loose, firmly push the belt tensioner towards the band wheel until the belt is tight (**#1**), then tighten the upper bolt in the curved slot in a clockwise direction using a 13 mm socket (**#2**). Re-check the belt tension to ensure a maximum of ¼ in [6 mm] deflection and then tighten the M16 bolt and lock nut when the deflection is correct (**#3**).

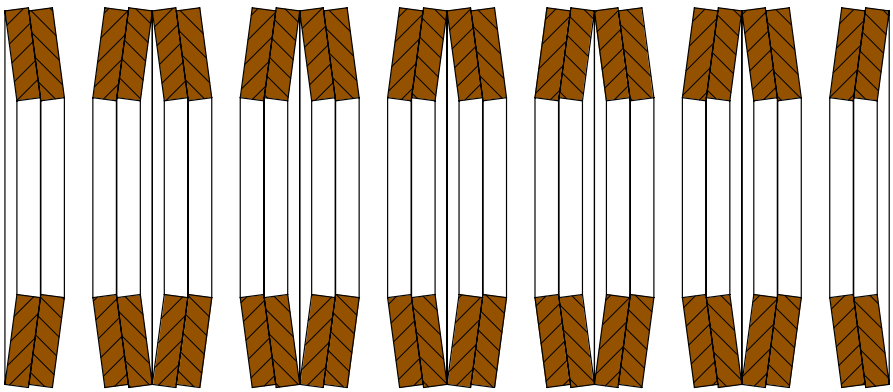


BLADE TENSION

Proper blade tension is achieved when the thrust bearing is flush with the outer face of the spring washer holder after turning the T-handle clockwise.

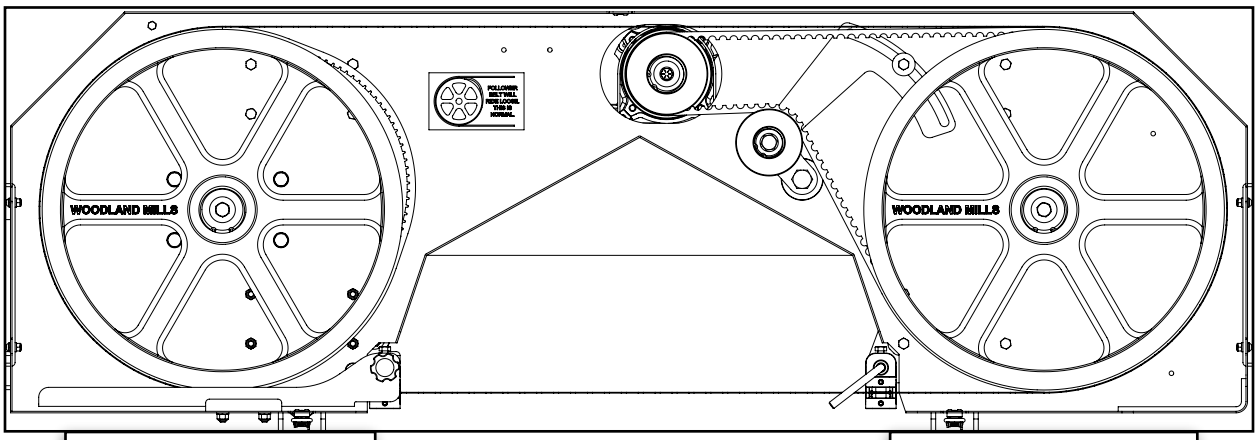


If the spring washer holder is removed for maintenance (e.g. greasing or replacement), ensure the twenty-four (24) Belleville washers inside are oriented and re-installed as shown in the graphic below. There are five (5) groups of four (4)—each made up of two (2) opposing nested pairs—with a separate nested pair at each end.

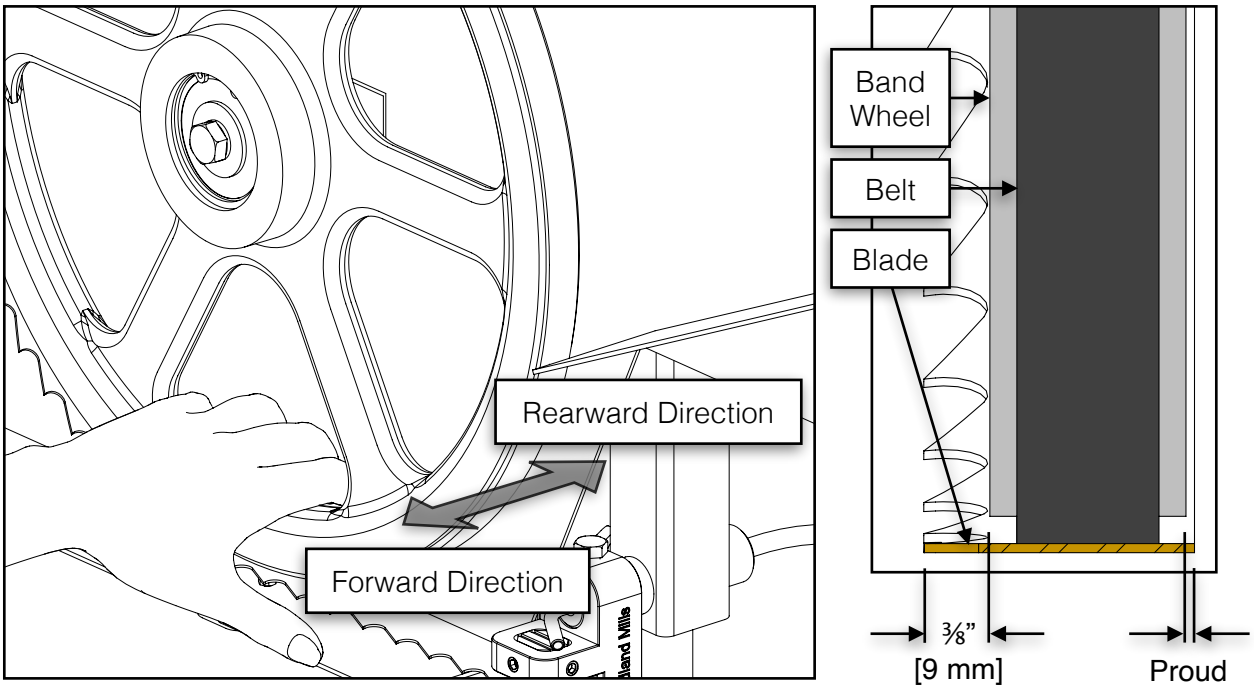


BLADE TRACKING

Never attempt to adjust the blade tracking with the engine running. As a safety precaution, remove the spark plug cap. Gloves and safety glasses should be worn when working with the blade as it is extremely sharp.

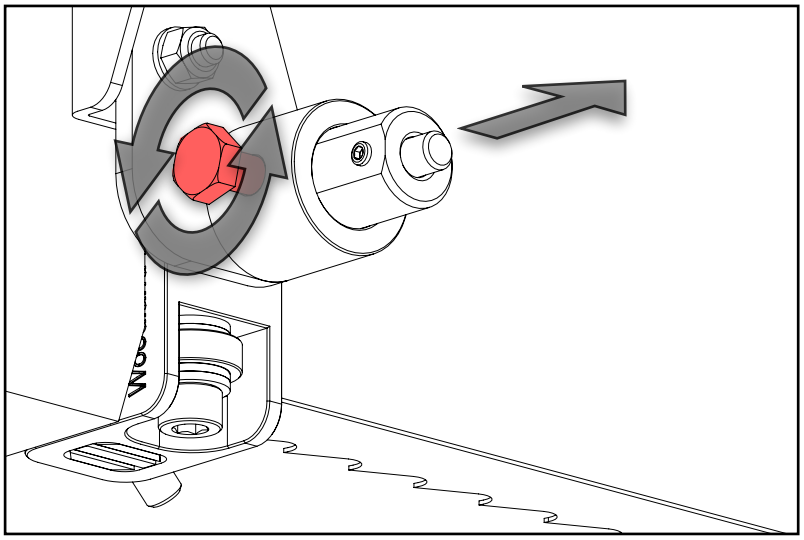


The blade should run with the same tooth-to-front band wheel face distance on both the drive and follower sides: ~⅜ in [9 mm] ideally. The back of the blade will be just proud [~.04 in / 1 mm] of the rear face of the band wheel at this distance and can be a quicker check than using a tape measure or scale. If an adjustment on either side is required, the steps on the following pages detail the procedure.

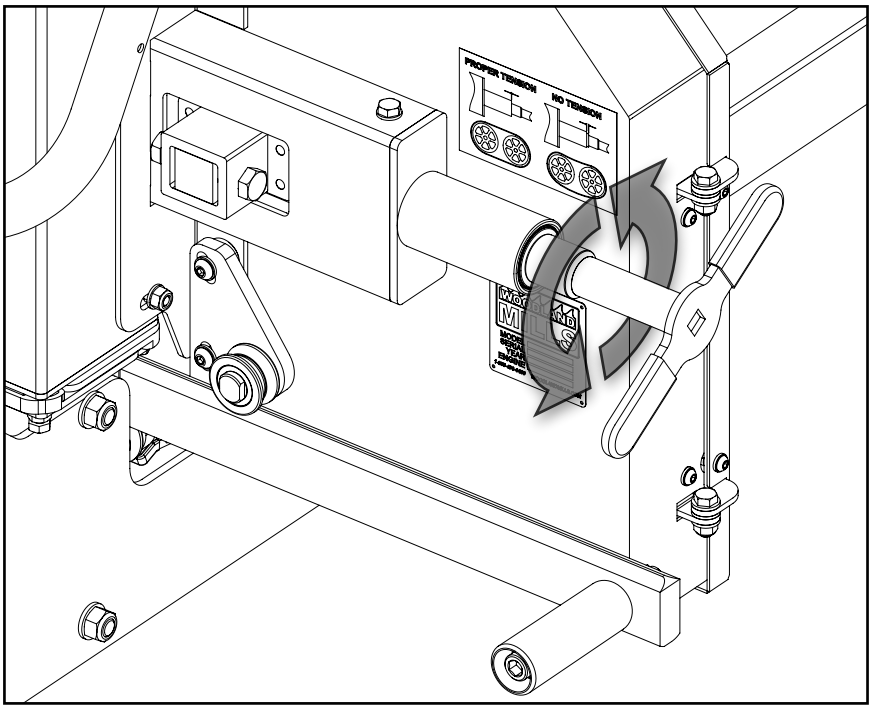


REDUCING THE BLADE TENSION

Loosen the blade guide holder assembly bolt using a socket/wrench. The shaft should now be free to slide rearward and out of the way. Perform this step on both blade guide assemblies. This ensures the guide bearings will not influence the tracking of the blade whilst being adjusted.



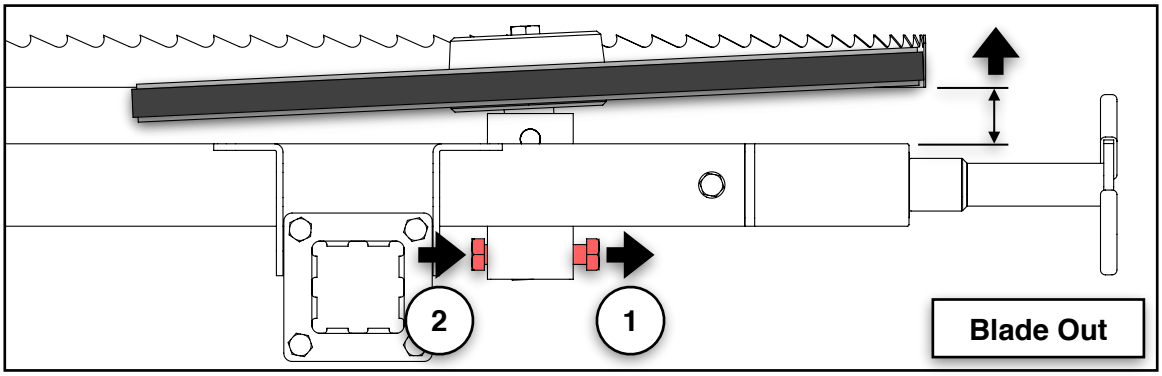
Take some tension off the blade by turning the tension handle in the counter-clockwise direction one full turn from its fully-tensioned position.



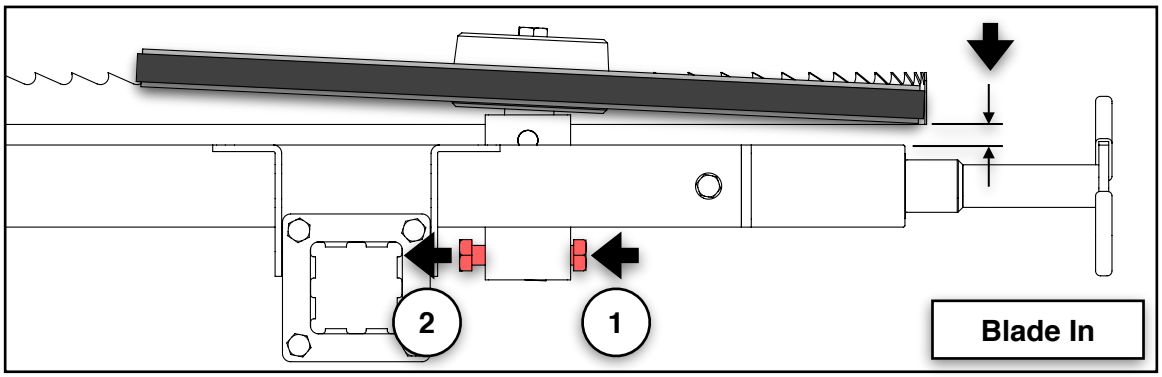
ADJUSTING THE FOLLOWER SIDE TRACKING

The follower side band wheel shaft is connected to the RapidChange™ blade system. Once the tracking is set, it maintains these settings even without a blade on the sawmill, allowing for quick and simple blade/belt changes. The two (2) bolts at the rear of the follower shaft are used to adjust the pitch angle of the band wheel to track the blade.

To move the blade ***forward***—or ***out***—on the band wheel, start with the right-hand bolt by turning it *counter-clockwise* (**#1**) so that it moves ***out*** from the sawmill. Turn it ½ turn then snug the left-hand bolt by turning it *clockwise* (**#2**) to fix the follower band wheel shaft in plate.



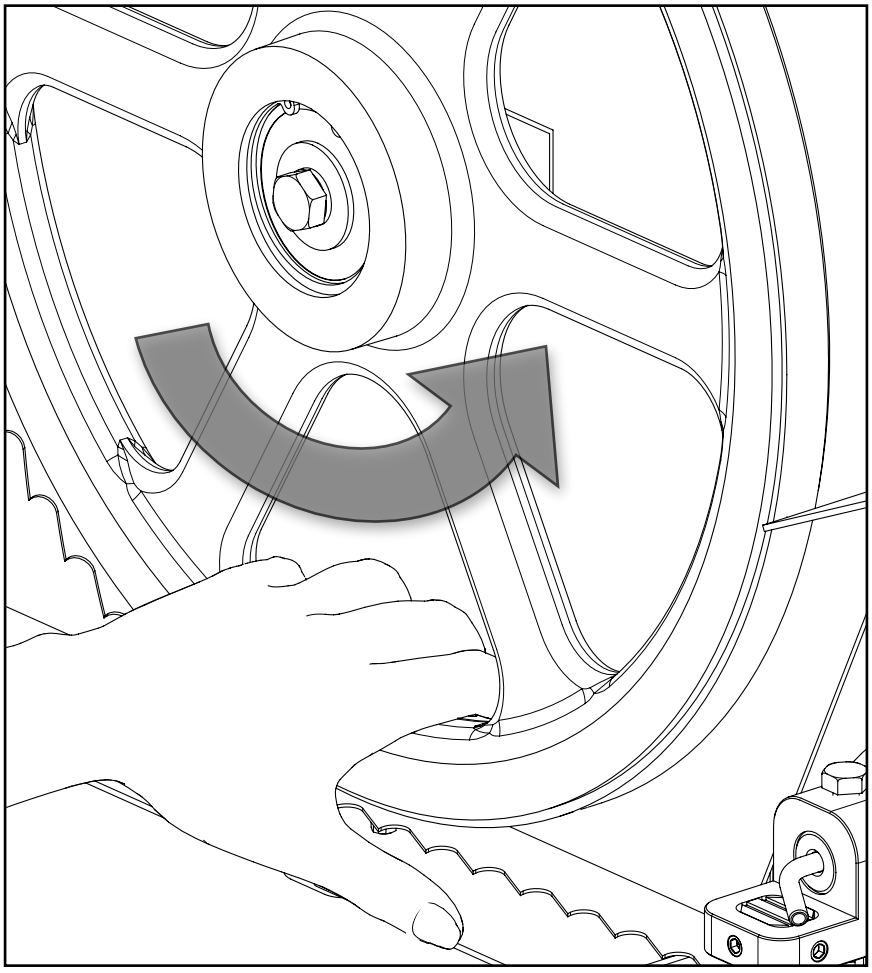
Alternatively, to move the blade ***rearward***—or ***in***—on the band wheel, start with the left-hand bolt by turning it *counter-clockwise* (**#2**) so that it moves ***in*** towards the sawmill. Turn it ½ turn then snug the right-hand bolt by turning it *clockwise* (**#1**) to fix the follower band wheel shaft in plate.



A simple phrase to help remember which way to adjust the tracking bolts is: **IN is IN, and OUT is OUT**. When the bolts move in towards the sawmill, the blade moves *in*. When the bolts move out away from the sawmill, the blade moves *out*.

****Note that the band wheel angle shown in these graphics has been exaggerated and some components have been removed for clarity.****

Turn the T-handle *clockwise* until proper blade tension is achieved. While wearing gloves, spin the band wheel by hand and observe how the blade tracking has changed. Measure the distance again and repeat the above step to further compensate if required. The ideal measurement is ⅜ in [9 mm] or check that the back of the blade is just proud of the back of the band wheel.

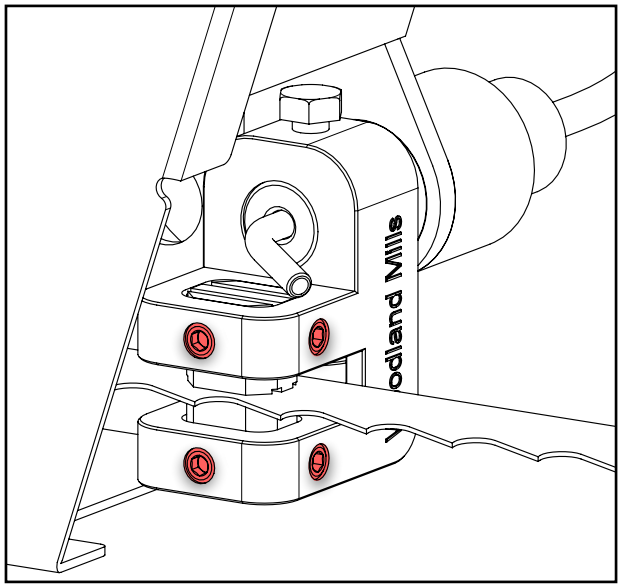


Finally, move the guide block holders forward to the blade. See section, ***BLADE GUIDE ADJUSTMENT*** on the next page for more information.

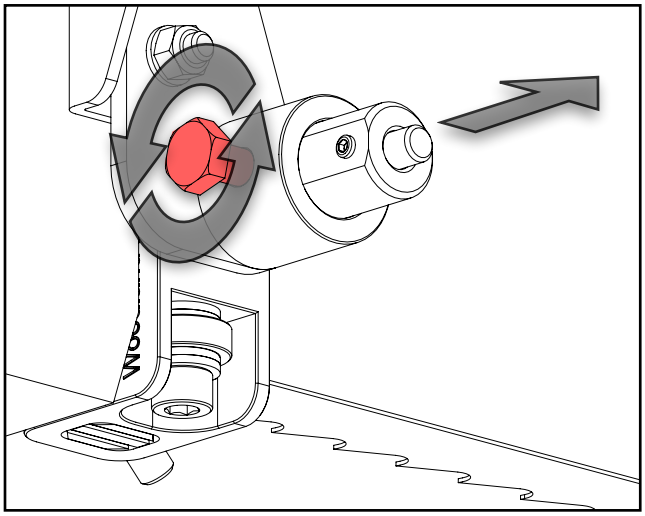
After the blade tracking is set properly, it should require no further adjusting, even after blade changes. The RapidChange™ blade system maintains the band wheel pitch angle whether or not a blade is on the sawmill.

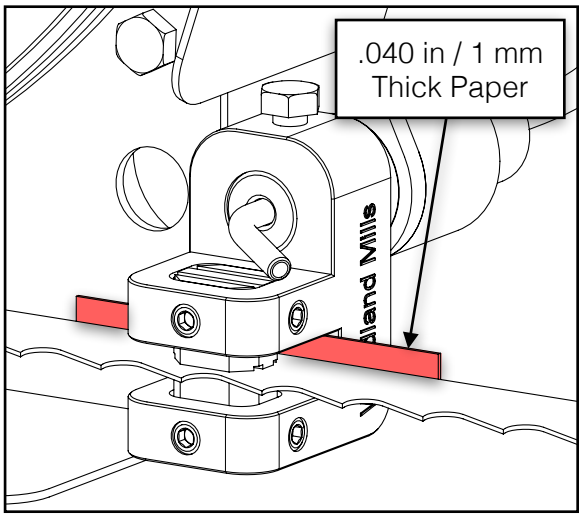
BLADE GUIDE ADJUSTMENT

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.

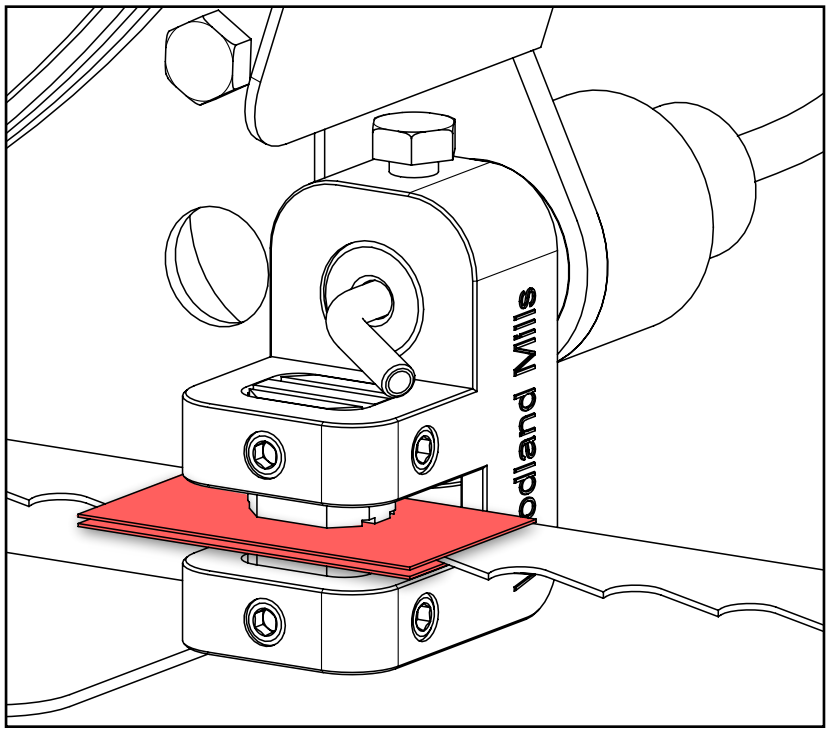


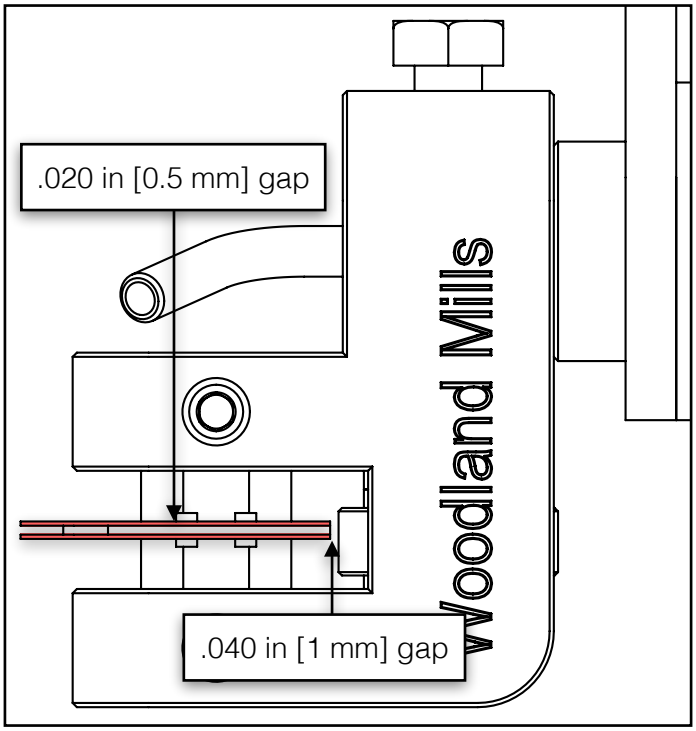
Loosen the blade guide assembly bolts on both guide block holders so that the round shaft is free to slide back and forth. Position it so that there is a thick paper-sized gap (.040 in or 1 mm) between the bearing and the back of blade. Re-tighten the bolt against the flat on the shaft to secure the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



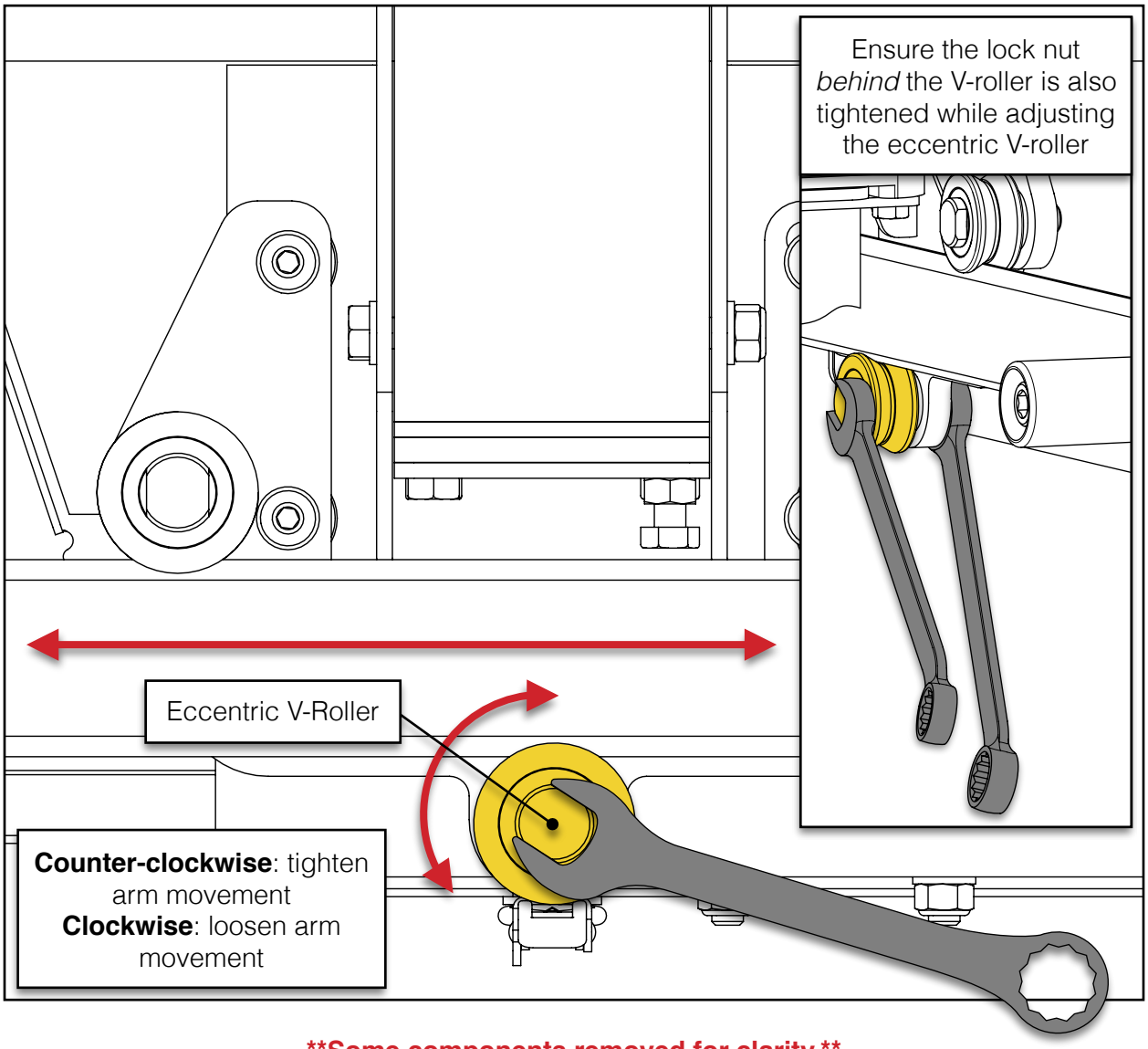


ADJUSTABLE BLADE GUIDE CALIBRATION

14 hp Sawmill Owners (Optional on 9.5 hp Sawmills)

ECCENTRIC V-ROLLER ADJUSTMENT

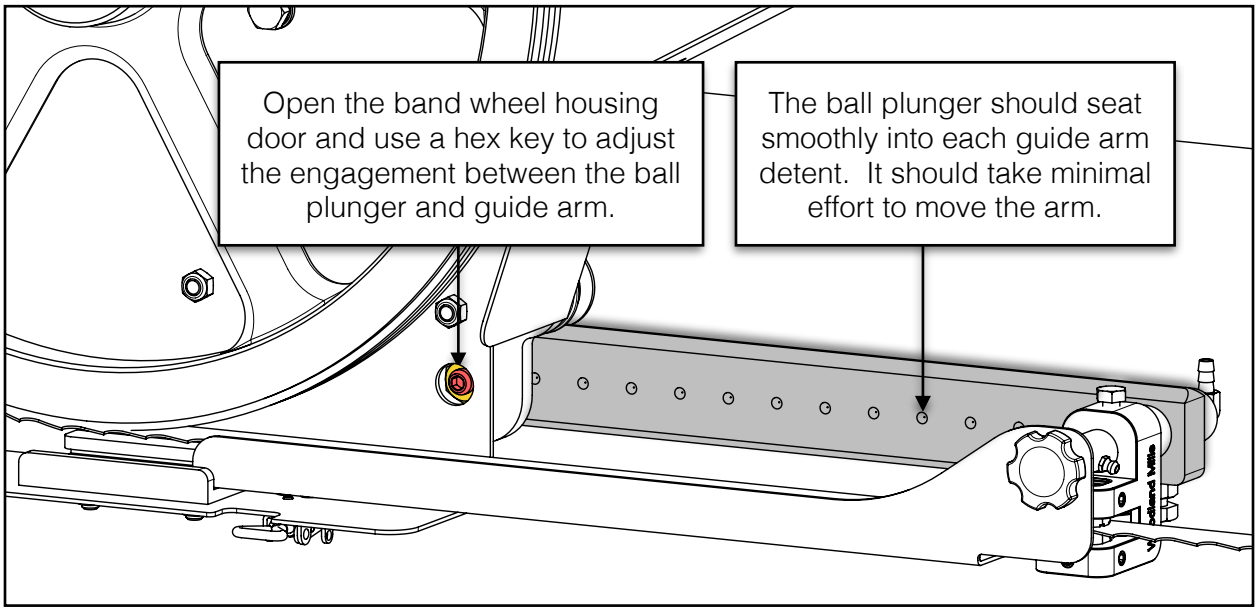
Slide the adjustable blade guide (ABG) arm in and out to check that it moves smoothly between the V-rollers. If it feels too loose or too tight, adjust the bottom eccentric roller using a wrench. Turning it counter-clockwise will tighten the arm movement; turning it clockwise will loosen the movement.

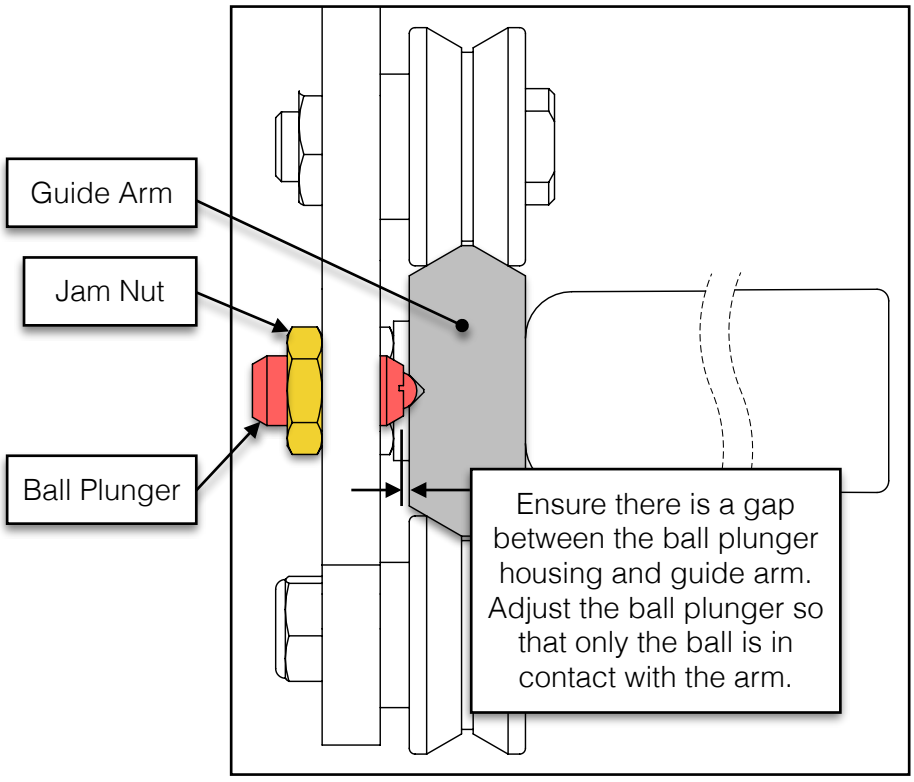


****Some components removed for clarity.****

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.



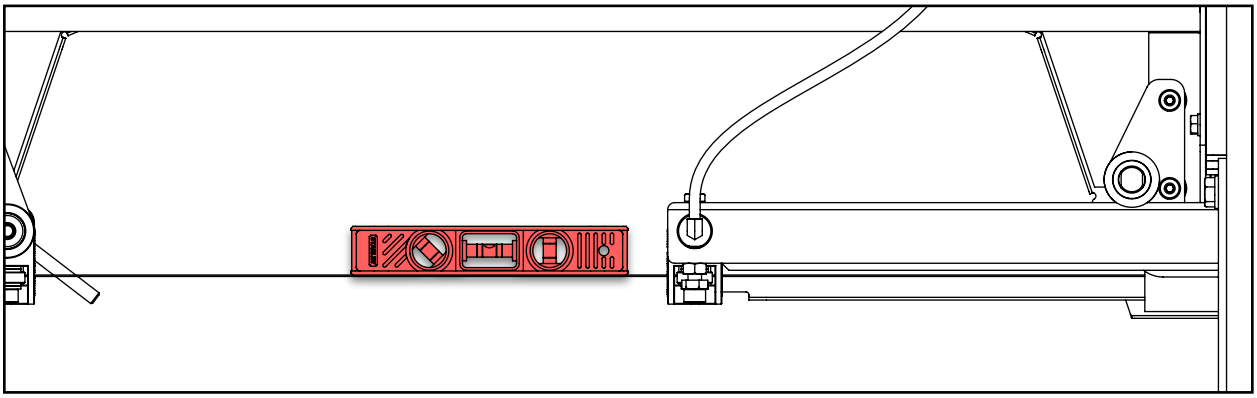


After adjusting the ball plunger, slide the guide arm in and out a few times to verify the movement feels smooth and that there is positive engagement between the ball plunger and guide arm detents. If not, adjust the ball plunger with the hex key again and repeat the process until satisfied.

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

CARRIAGE & GUIDE ARM ADJUSTMENT

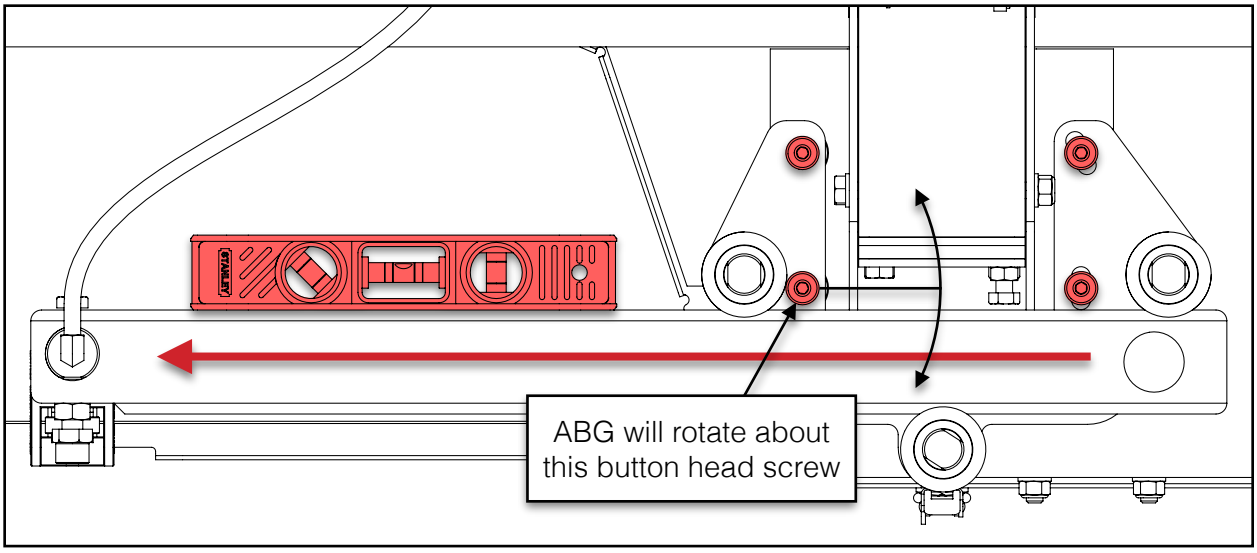
If the guide arm does not extend parallel with the blade, apply full tension to the blade and place a spirit level on the blade to check its level.



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

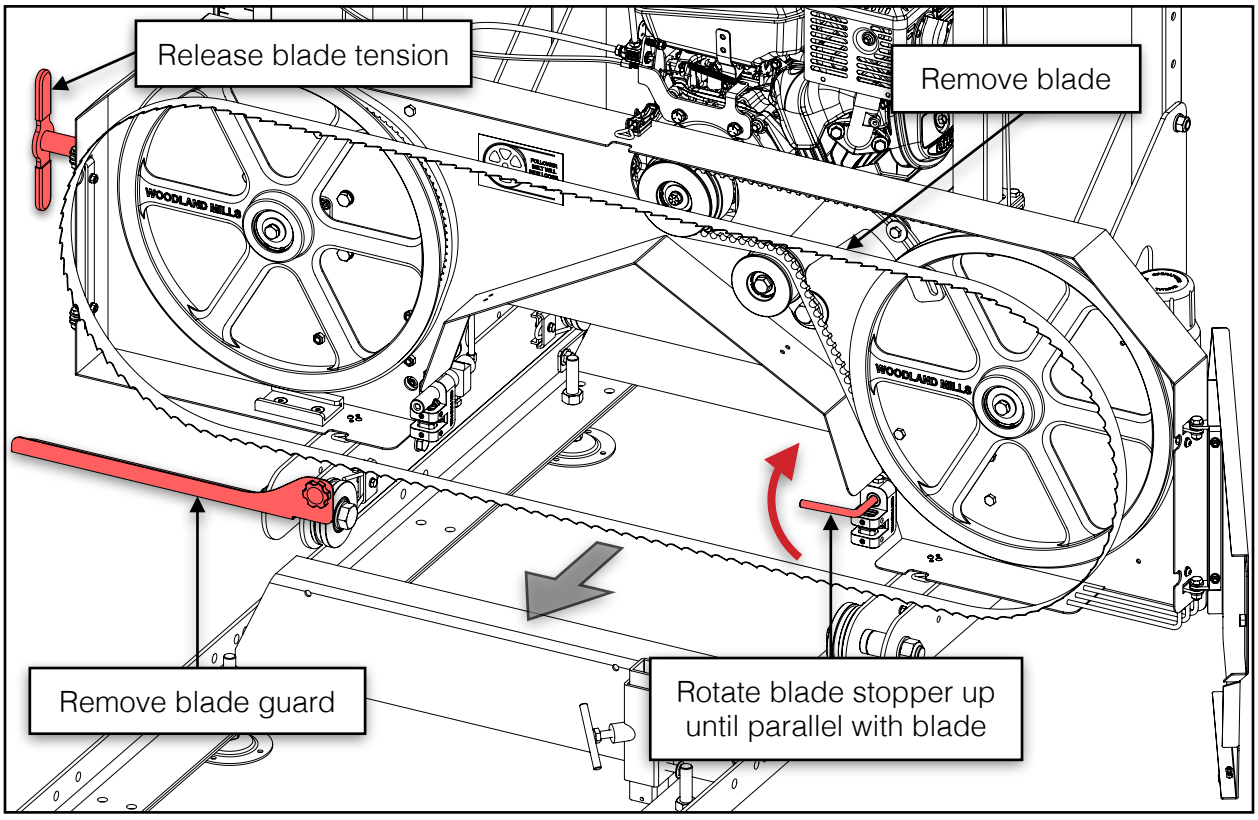
CHANGING THE BLADE

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.

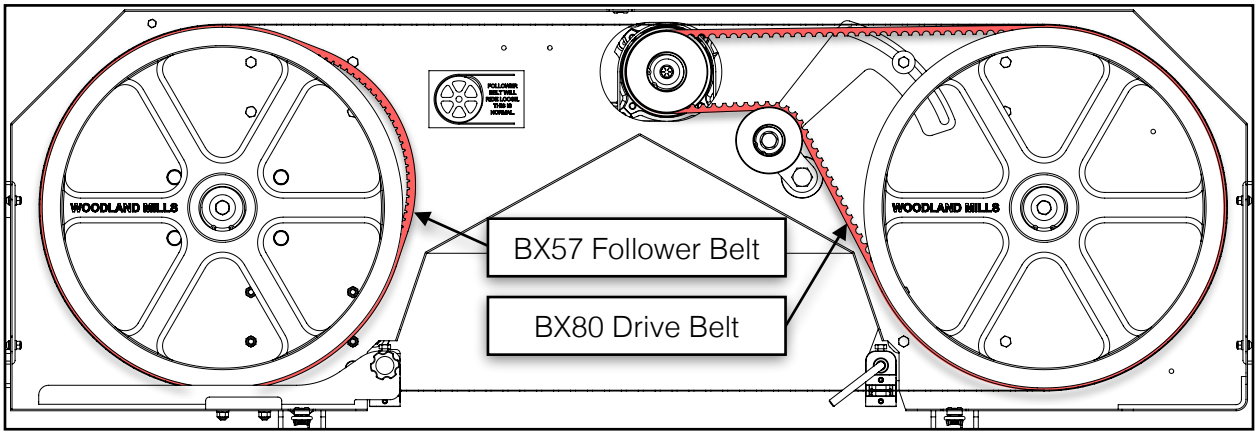
The blade is now sufficiently loose and can be easily pulled straight out the front.



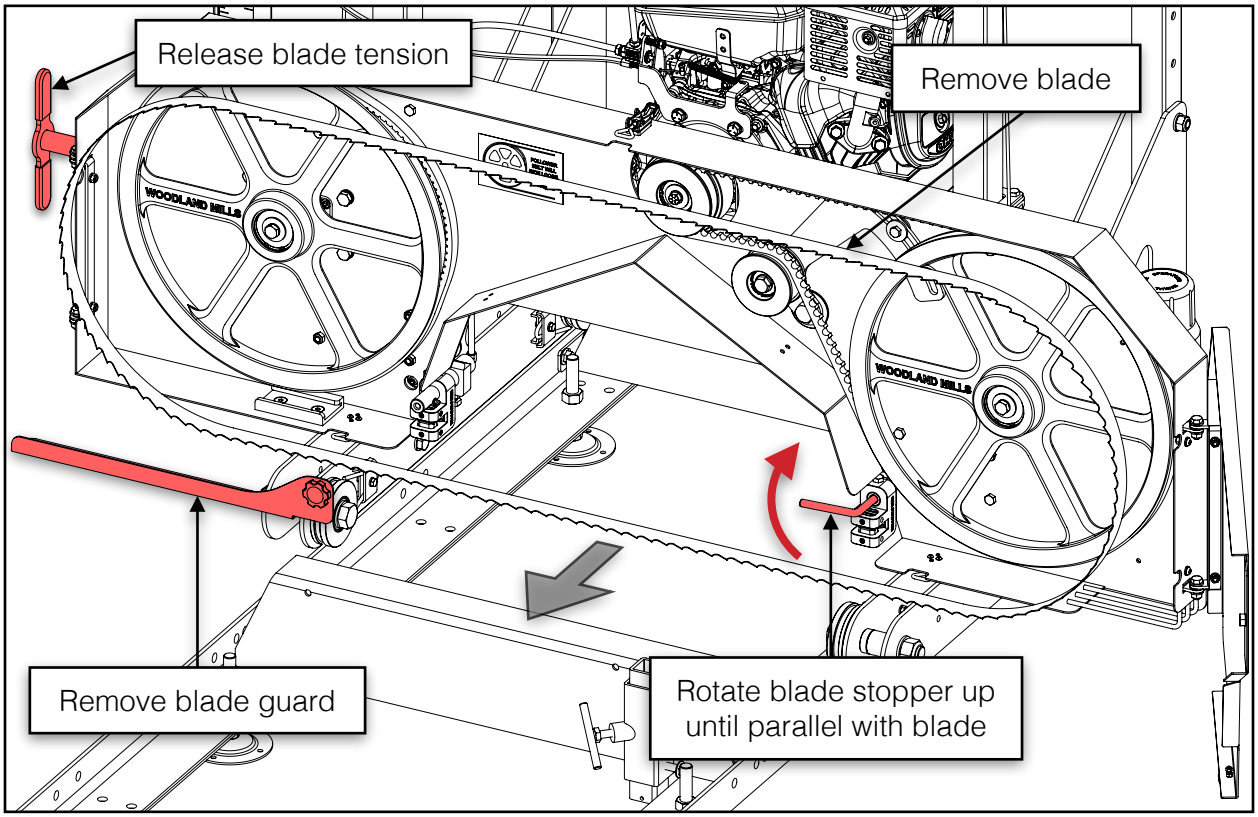
Install a new blade following the reverse order of steps and then set the proper blade tension. The tracking should not have to be adjusted after changing blades. See section, ***ADJUSTING THE FOLLOWER SIDE TRACKING***, for more information.

REPLACING BELTS

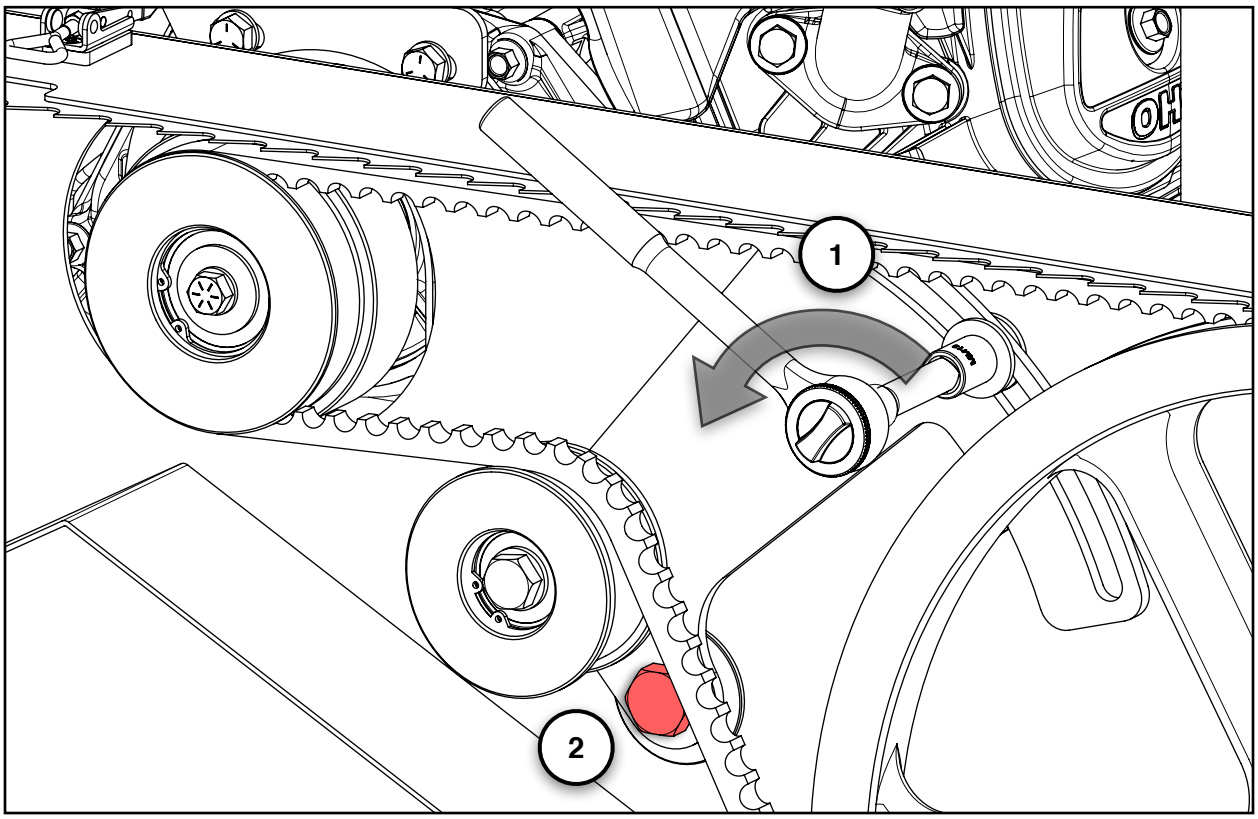
Never attempt to replace the belts with the engine running. As a safety precaution, remove the spark plug cap. Gloves and safety glasses must be worn when replacing the belts. There are two V-belts on the sawmill: a BX80 cogged belt on the drive side and a BX57 cogged belt on the follower side. The BX57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

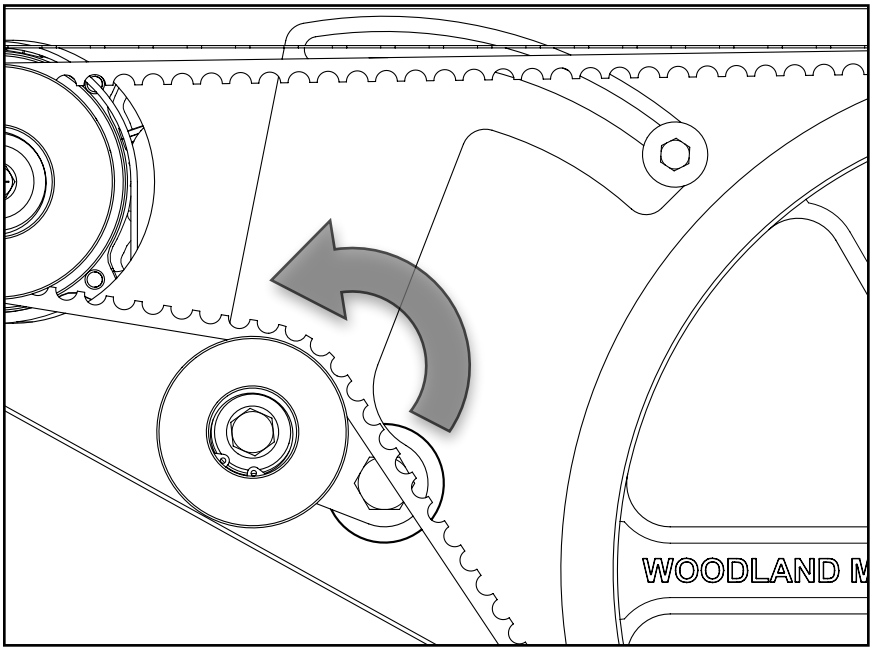


First, remove the blade following the procedure outlined in section, ***CHANGING THE BLADE***.



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.

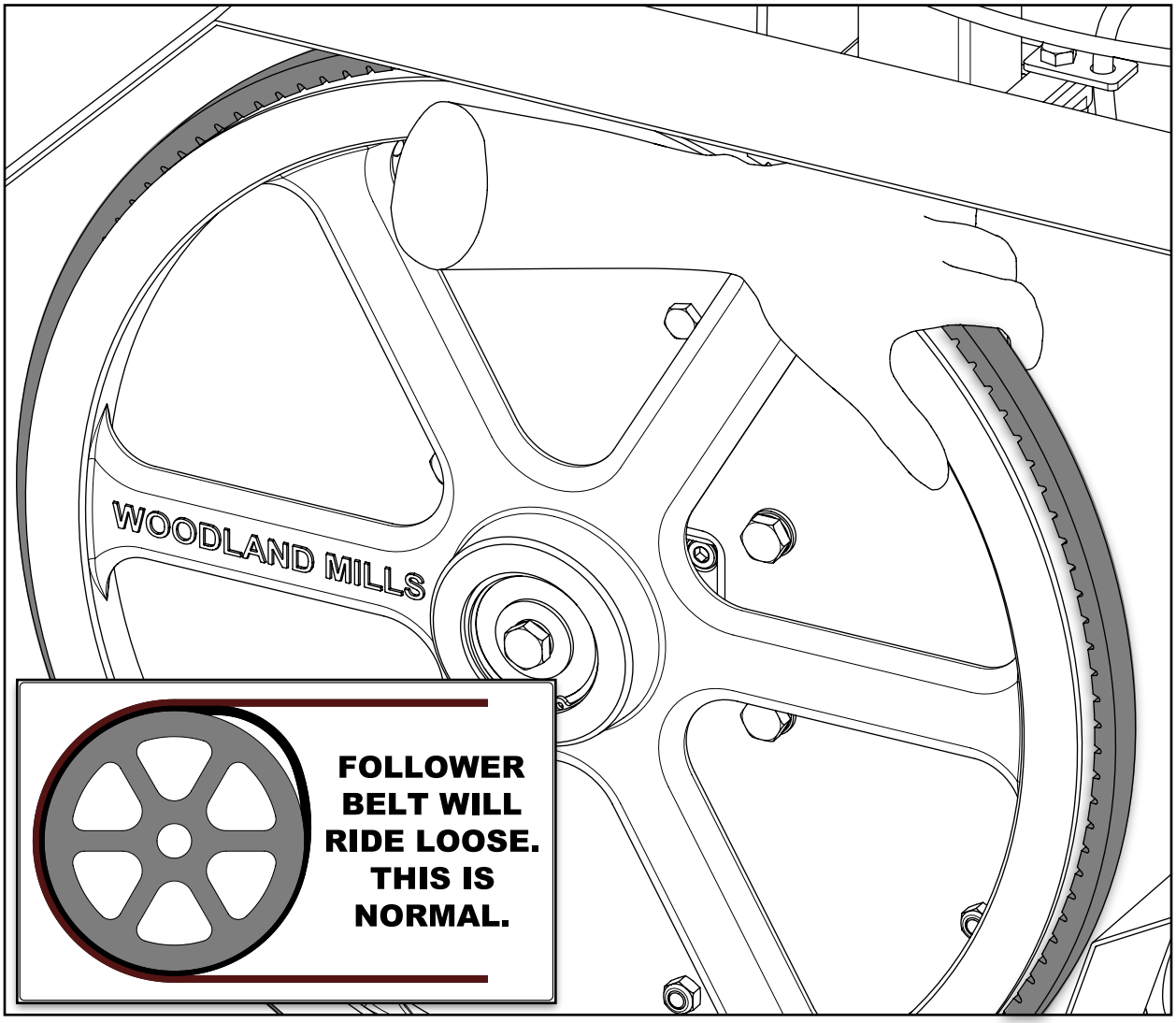




Once both bolts are loose, the belt tensioner will rotate counter-clockwise until the idler pulley comes to rest on the band wheel housing. The belt can now easily be removed by hand and a new belt installed.

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 pitch angle while the blade is removed. Refer to section, *BLADE TRACKING*, for more information.****

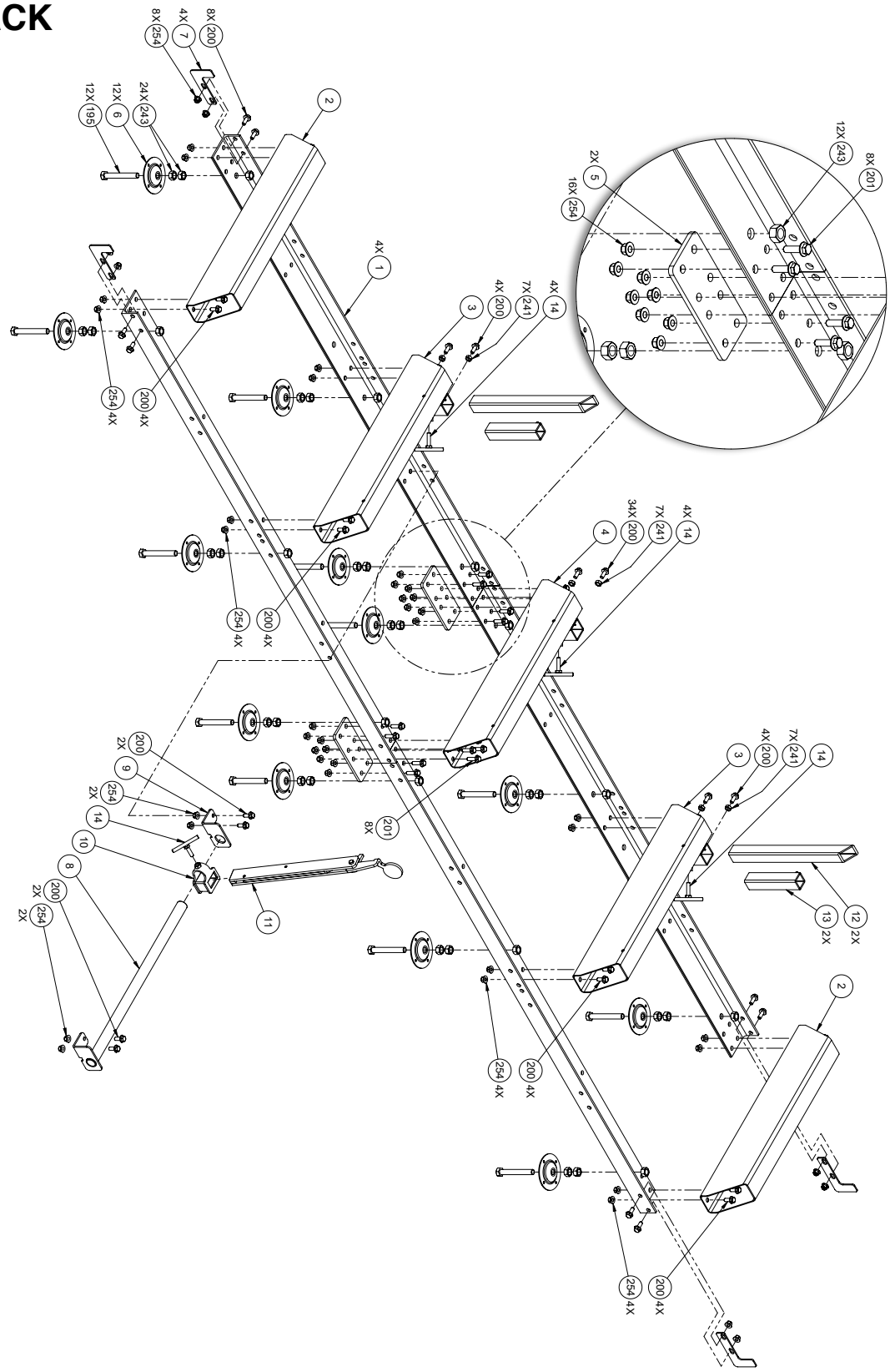
TROUBLESHOOTING

Problem/Issue	Possible Causes	Resolution Options
Producing wavy cuts	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.	1. Tighten blade. Refer to page 70. 2. Gap between guide blocks and blade are incorrect. Refer to page 75. 3. Adjust blade tracking. Refer to page 71. 4. Install new blade. Refer to page 80. Always use blade lubricant. 5. Install new blade. Refer to page 80. 6. Slow feed rate down and push head slower through log.
Last board is tapered or narrow in middle	1. Track is not level.	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	1. Logs are not clean. 2. Foreign objects in log.	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	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.	1. Tighten blade. Refer to page 70. 2. Gap between guide blocks and blade are incorrect. Refer to page 75. 3. Adjust blade tracking. Refer to page 71. 4. Install new belts. Refer to page 81. 5. Install new blade. Refer to page 80. 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 66 (#3). 9. Call Woodland Mills Technical Support.
Blades are breaking	1. Too many blade sharpenings. 2. Inadequate blade tension. 3. Improper blade guide set up. 4. Improper blade tracking. 5. Pushing mill too quickly.	1. Replace blade. Refer to page 80. 2. Binding between guide blocks when blade is too loose. Tighten blade. Refer to page 70. 3. Gap between guide blocks and blade are incorrect. Refer to page 75. 4. Adjust blade tracking. Refer to page 71. 5. Slow feed rate down and push head slower through log.
Blade is slowing down or stopping when milling	1. Inadequate blade tension. 2. Improper drive belt tension. 3. Pushing mill too quickly.	1. Tighten blade. Refer to page 70. 2. Belts are worn or too loose. Replace. Refer to page 81. 3. Slow feed rate down and push head slower through log.
Mill is not cutting or cutting very slowly	1. Dull blade. 2. Blade is on backwards.	1. Install new blade. Refer to page 80. 2. Remove blade and flip it inside out. The teeth should be facing in the direction of the log supports.

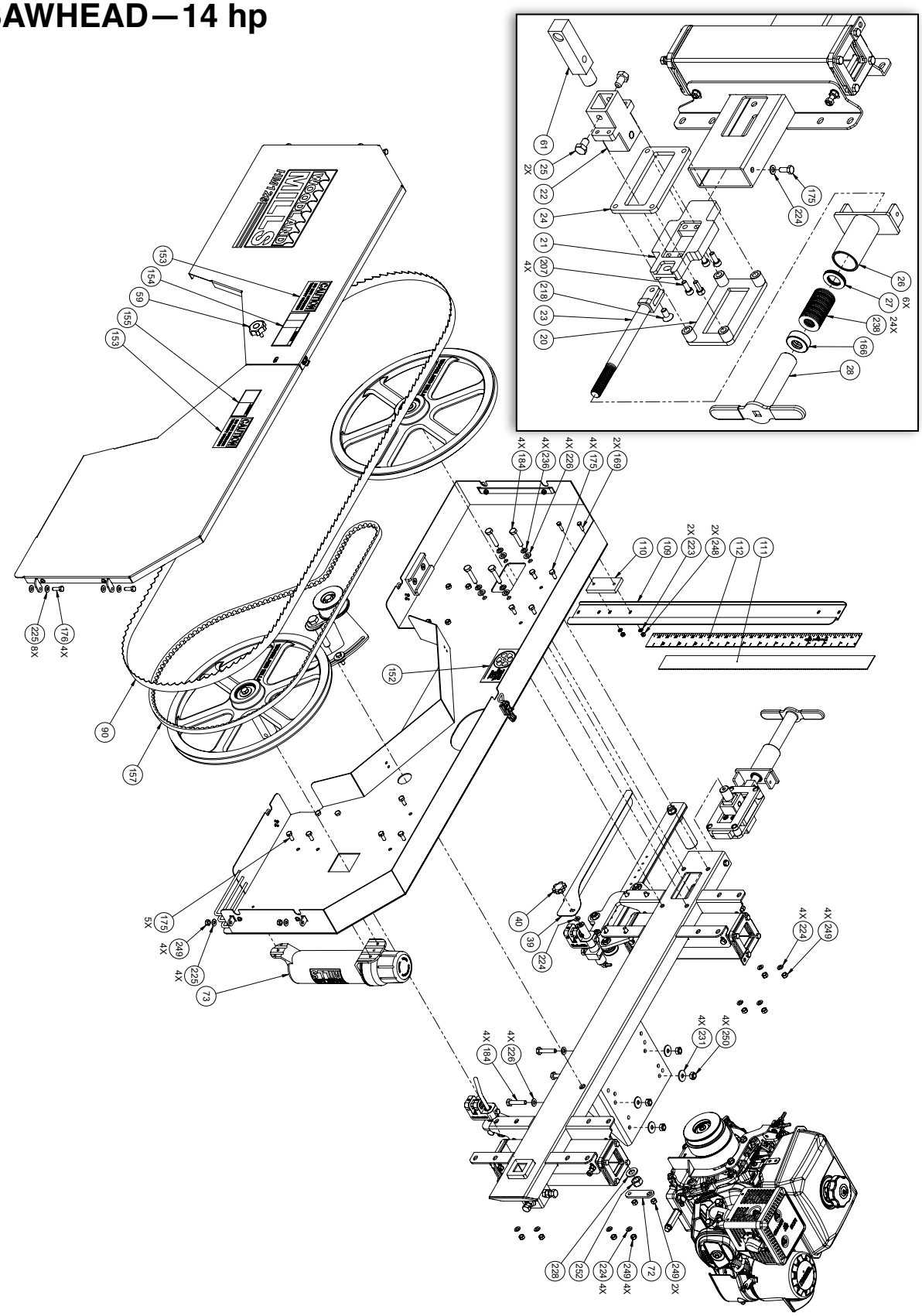
Problem/Issue	Possible Causes	Resolution Options
Mill is vibrating excessively	1. Log is not clamped securely. 2. Belts are deformed. 3. Band wheel bearing issue. 4. Pushing mill too quickly. 5. Loose bolts. 6. Post sleeve bushings worn.	1. Ensure log is clamped firmly resting on log bunks and against log supports. 2. Belts may have flats in them from leaving blade tension tight when not in use. Replace them. Refer to page 81. 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 62.
Adjustable blade guide arm is difficult to move or too loose	1. Eccentric V-roller not adjusted properly. 2. Ball plunger over-engaged or not enough engagement. 3. Guide arm is not parallel with blade.	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 77. 2. Adjust the ball plunger. Refer to page 78. 3. Rotate the adjustable blade guide carriage until parallel with the blade. Refer to page 79.
Sawhead difficult to raise or lower	1. Sawhead not level. 2. Front posts not lubricated.	1. Level the sawhead by adjusting the lift cable ends under the lift mechanism. Refer to page 61. 2. Spray front posts with water resistant silicone lubricant.

EXPLODED ASSEMBLY VIEWS

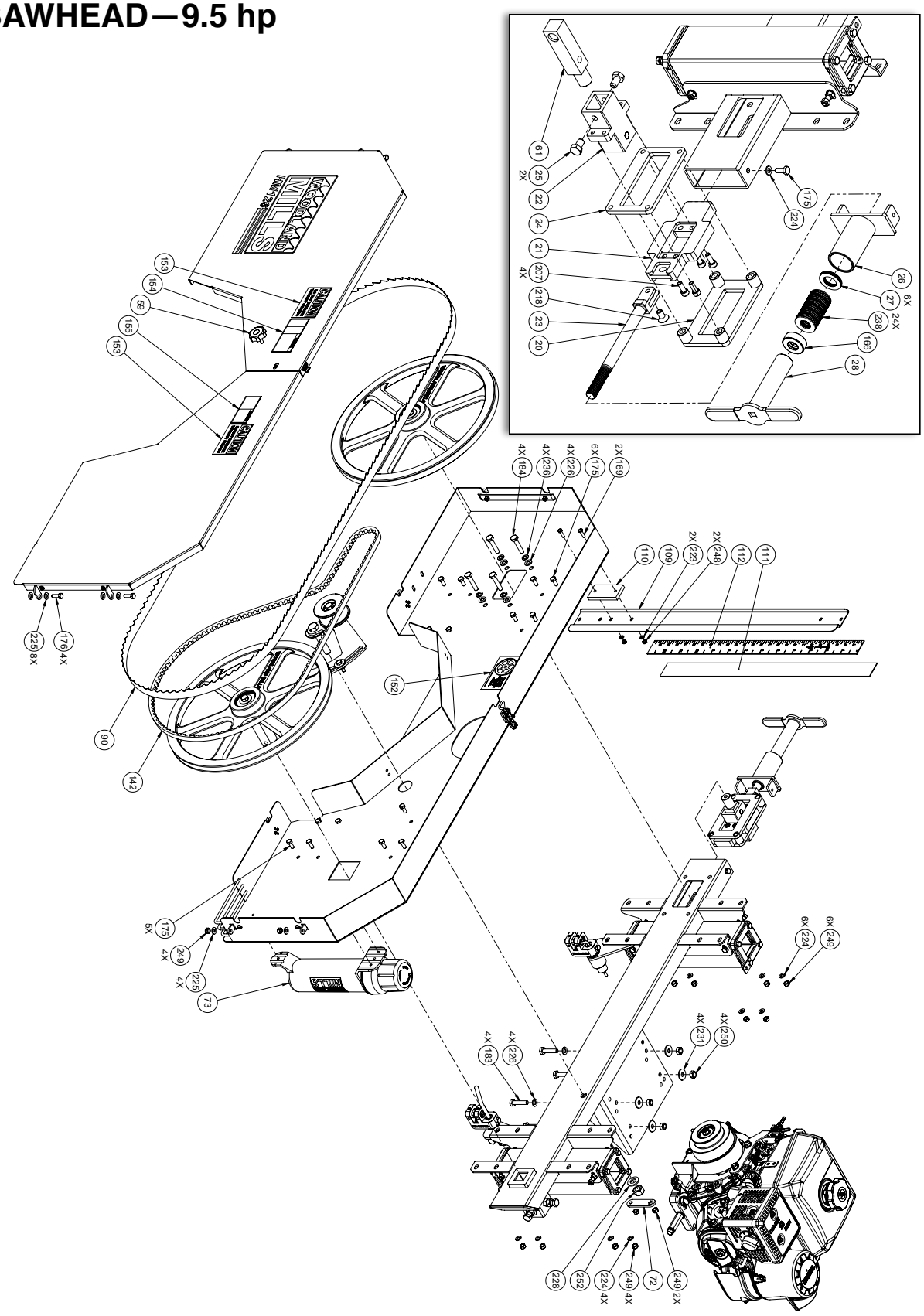
TRACK



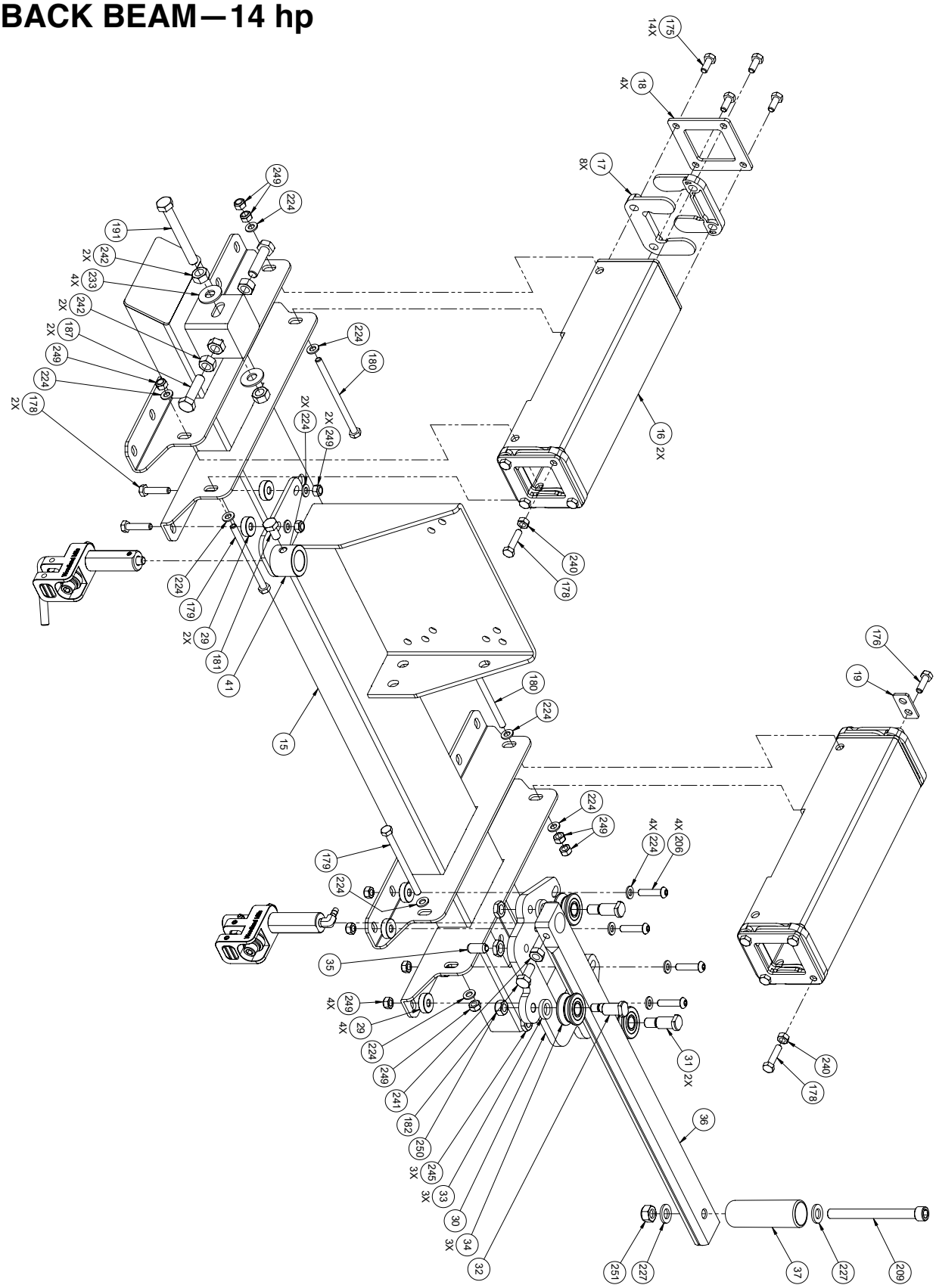
SAWHEAD—14 hp



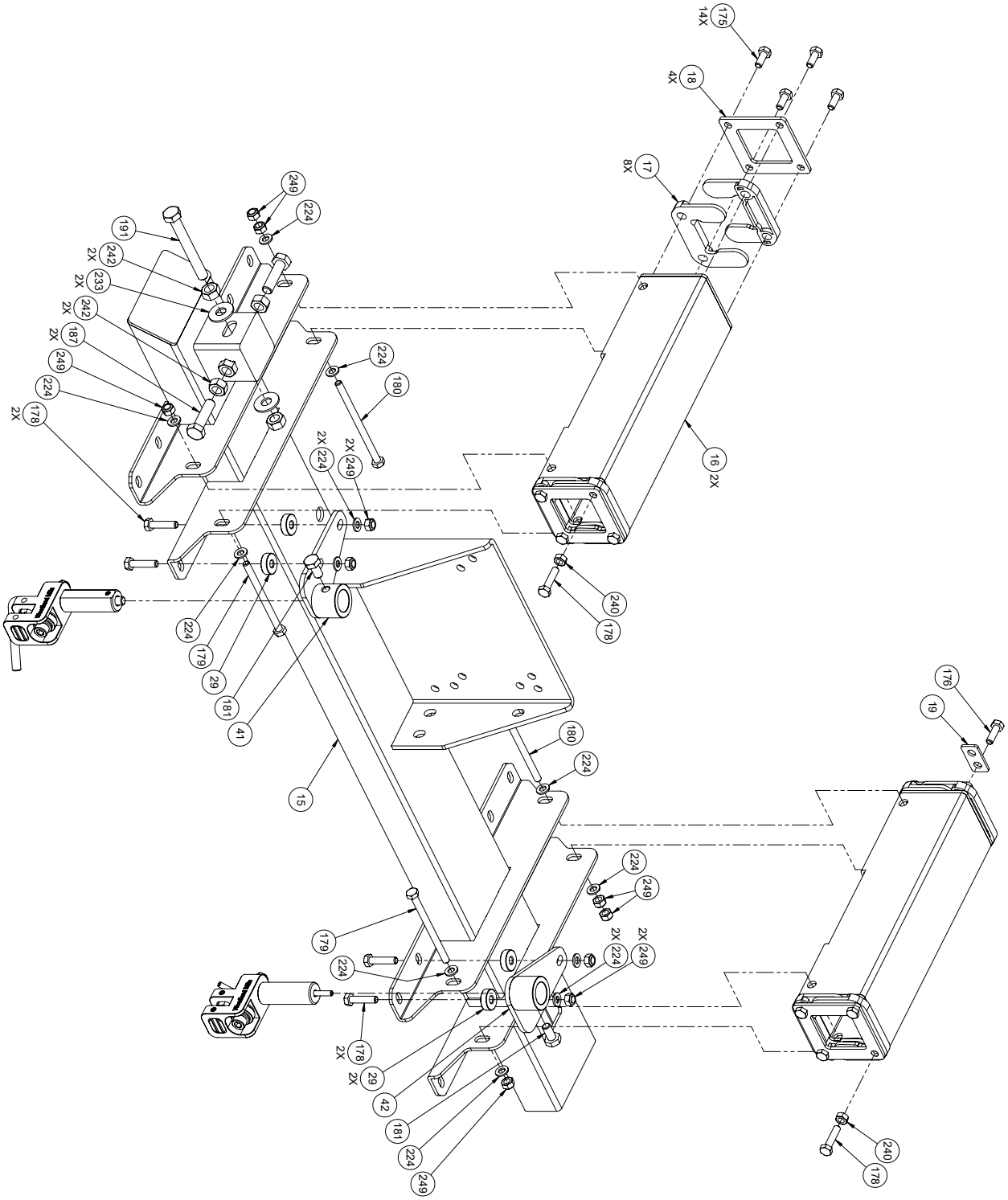
SAWHEAD—9.5 hp



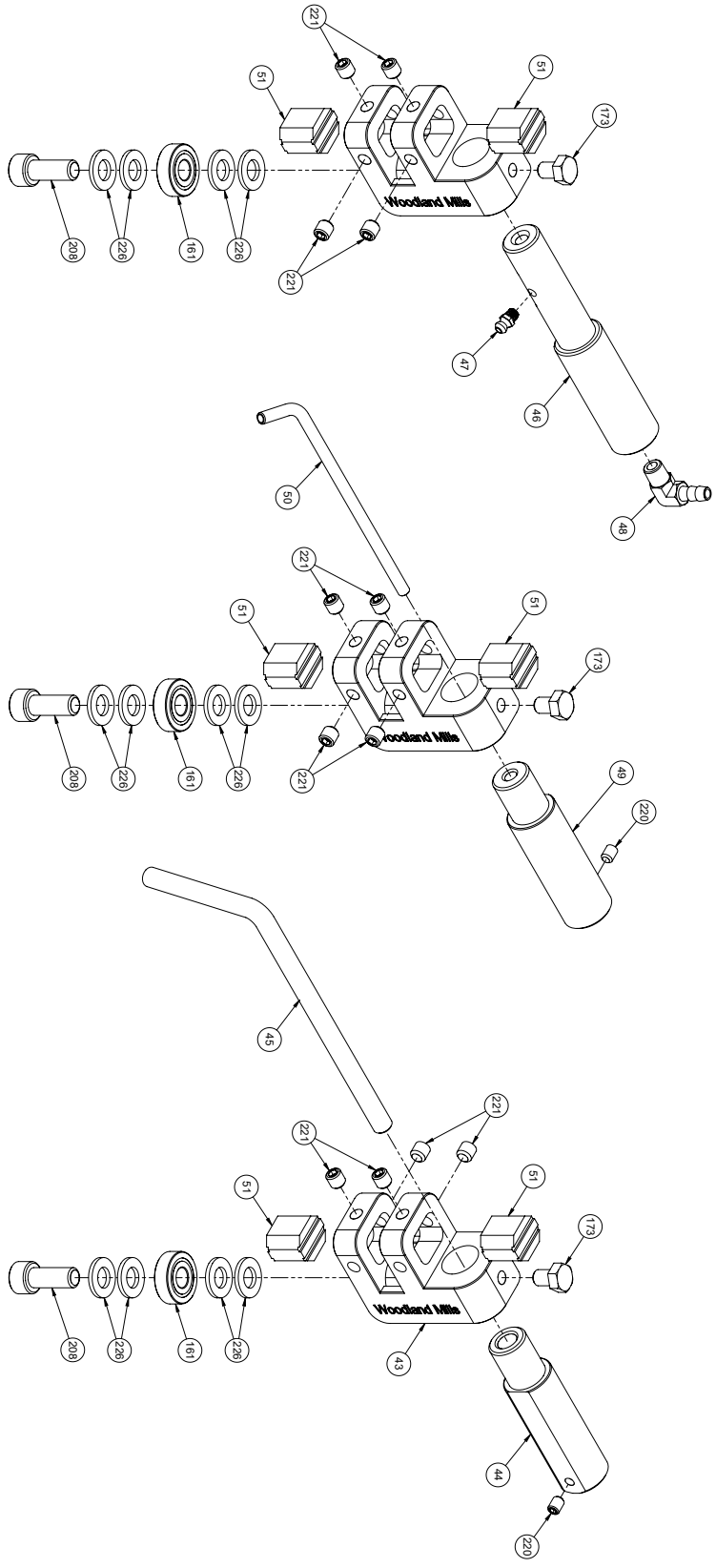
BACK BEAM—14 hp



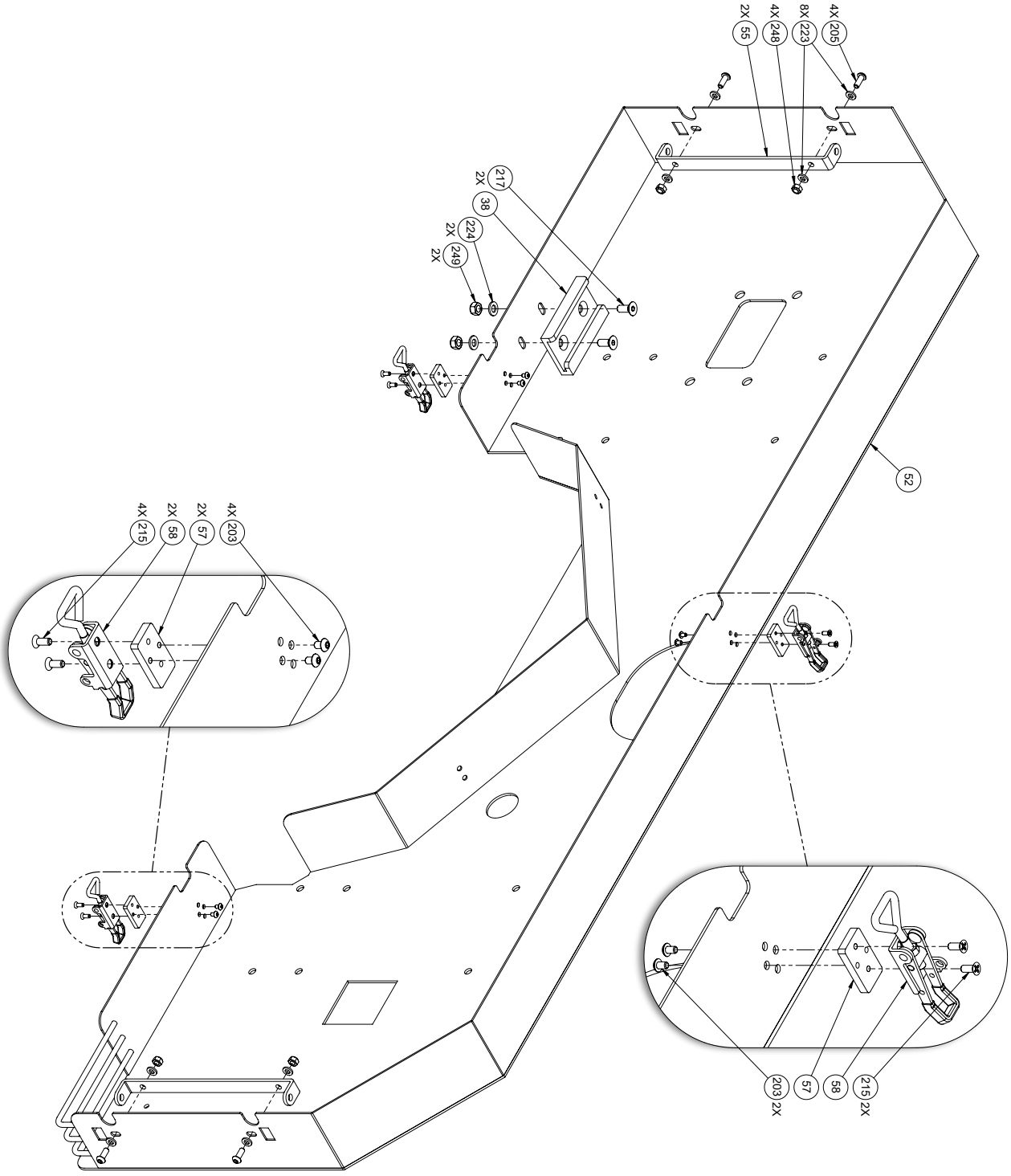
BACK BEAM—9.5 hp



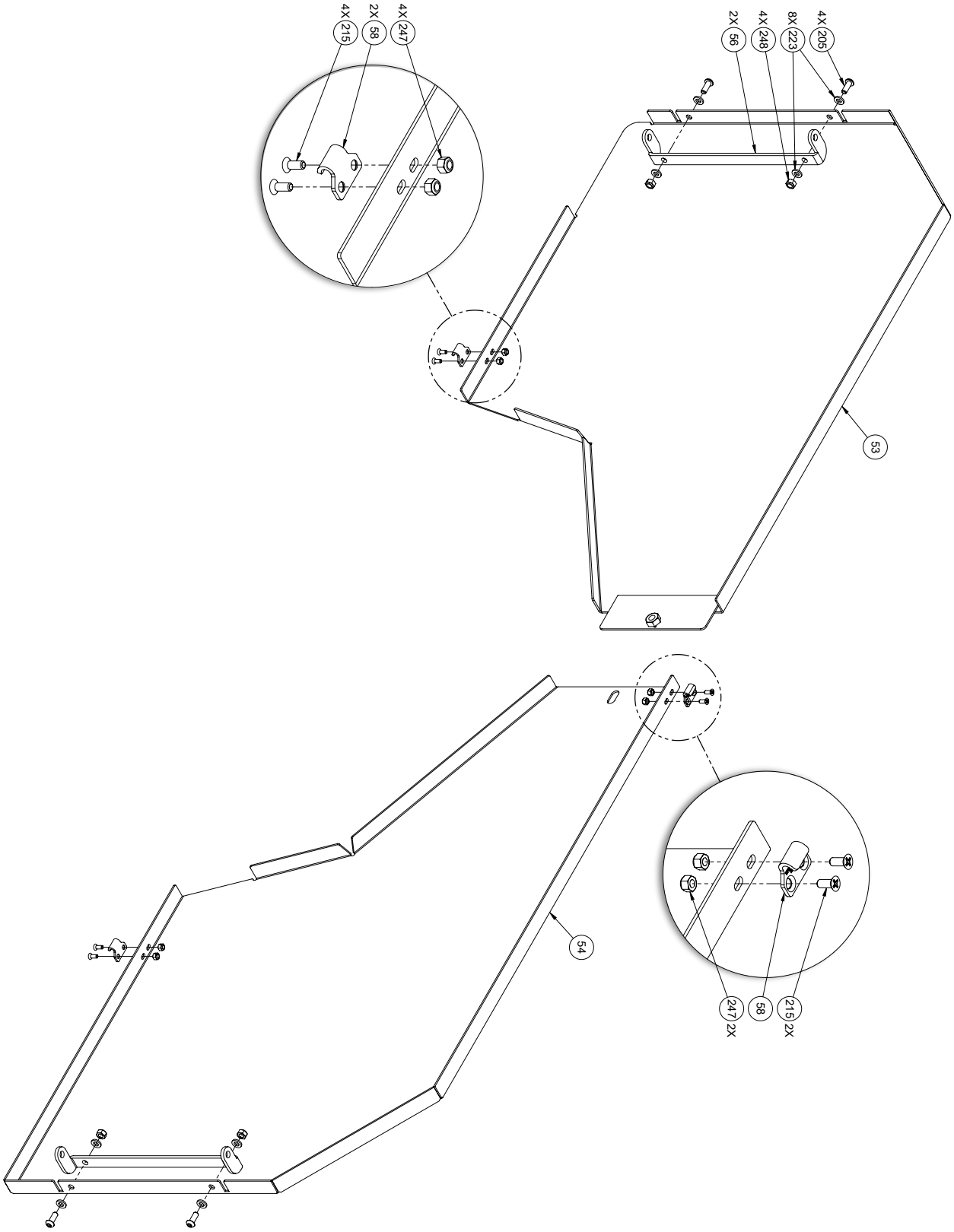
GUIDE BLOCK HOLDERS



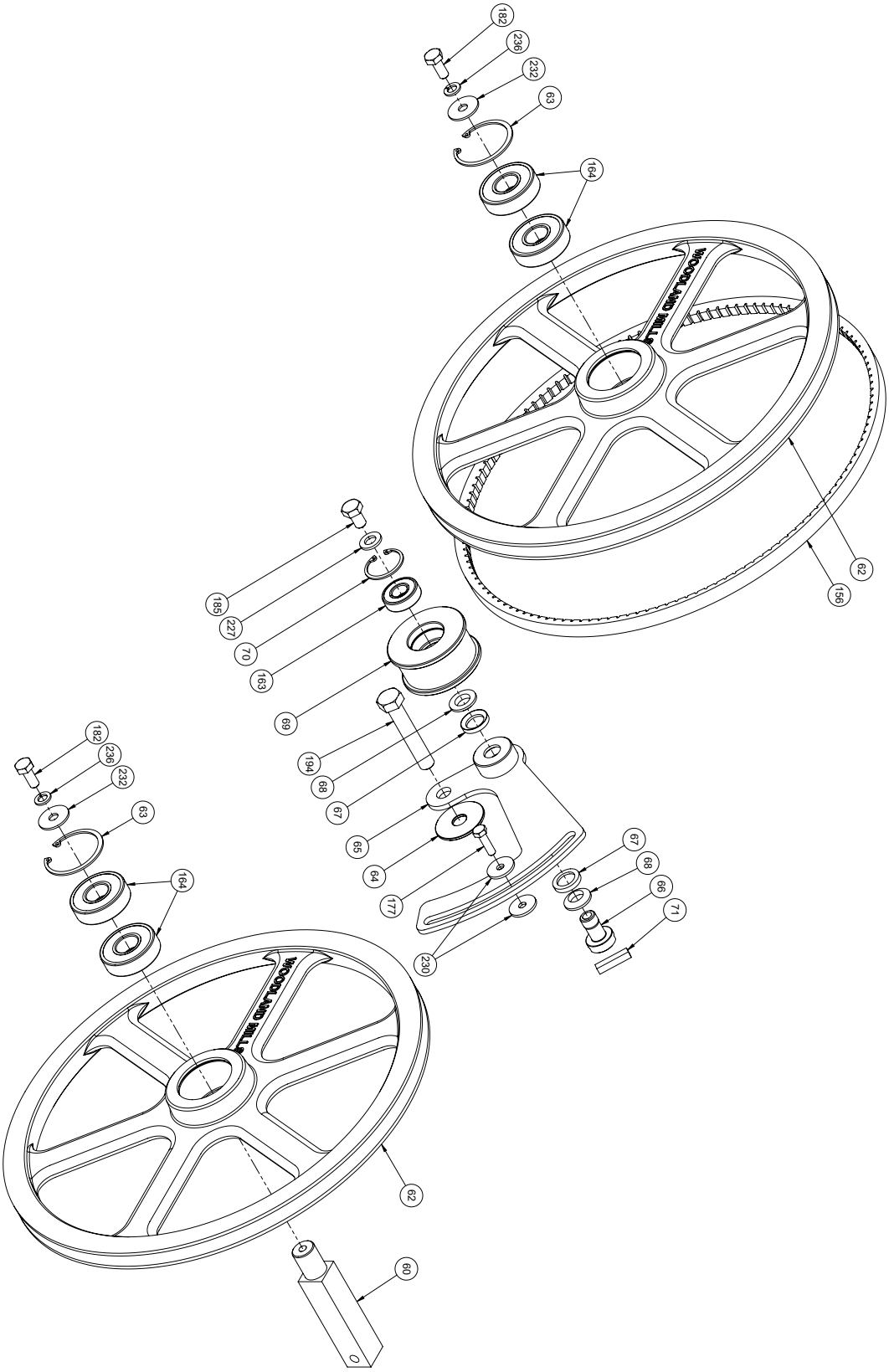
BAND WHEEL HOUSING



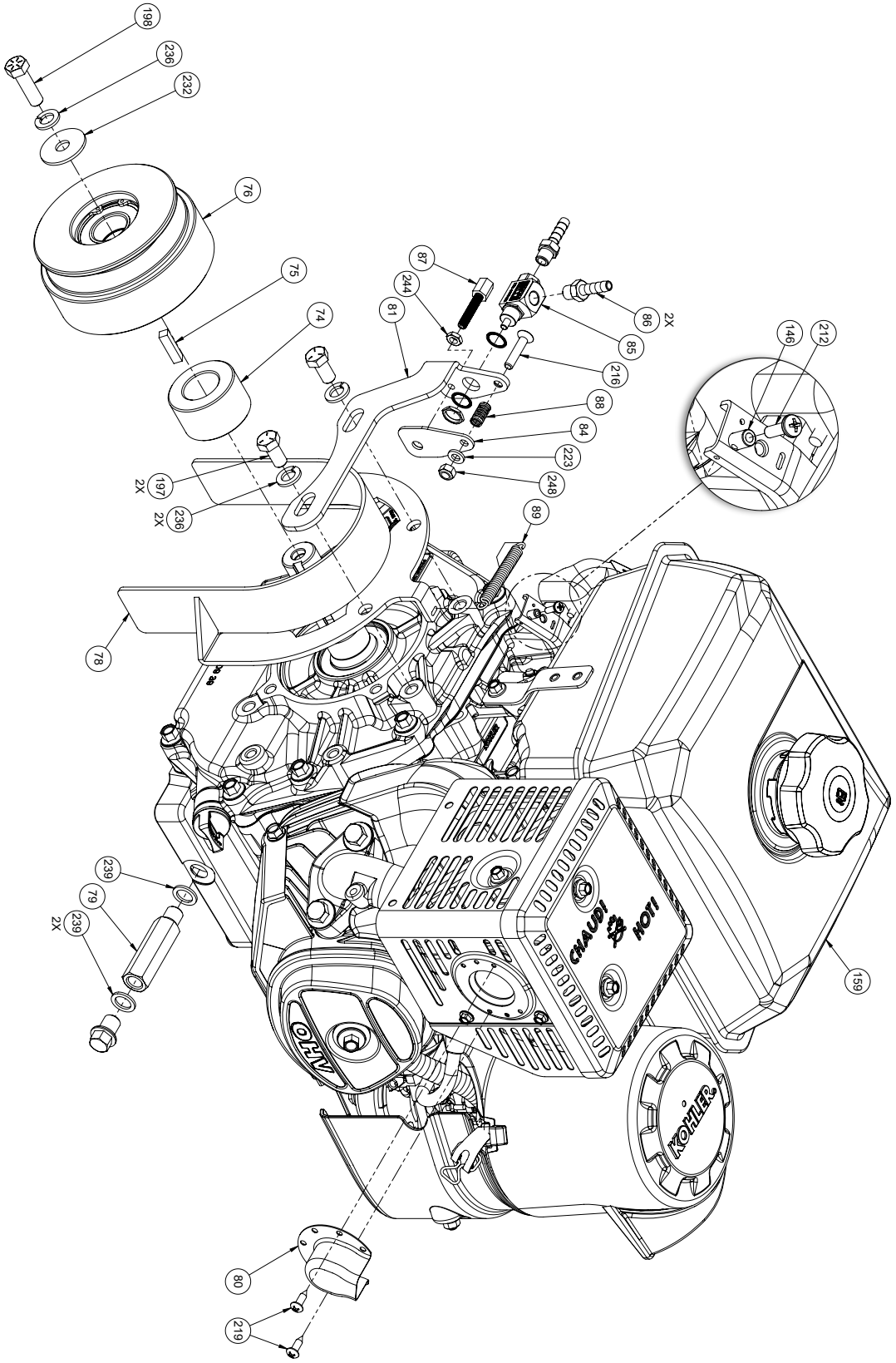
BAND WHEEL HOUSING DOORS



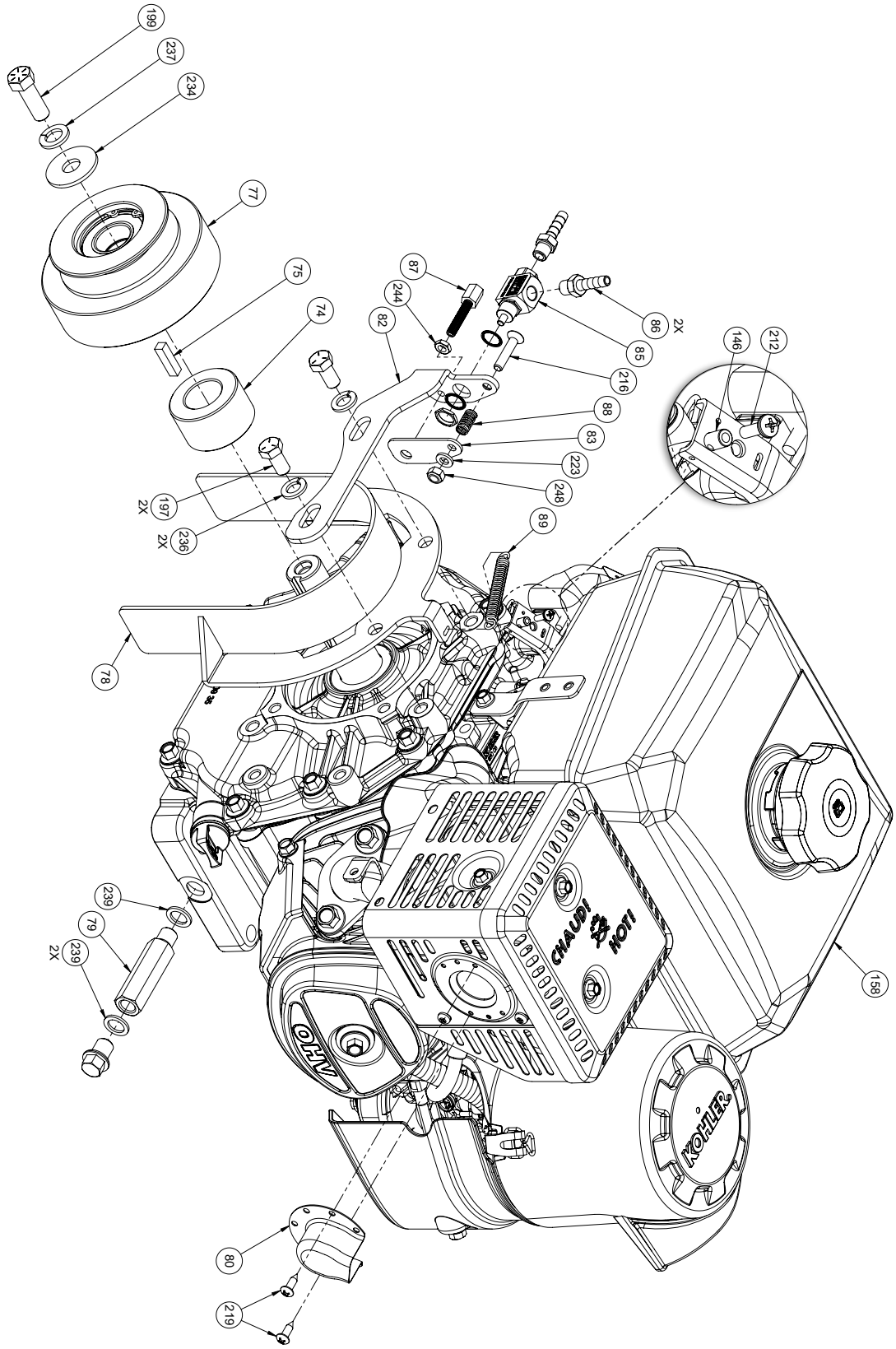
BAND WHEELS AND BELT TENSIONER



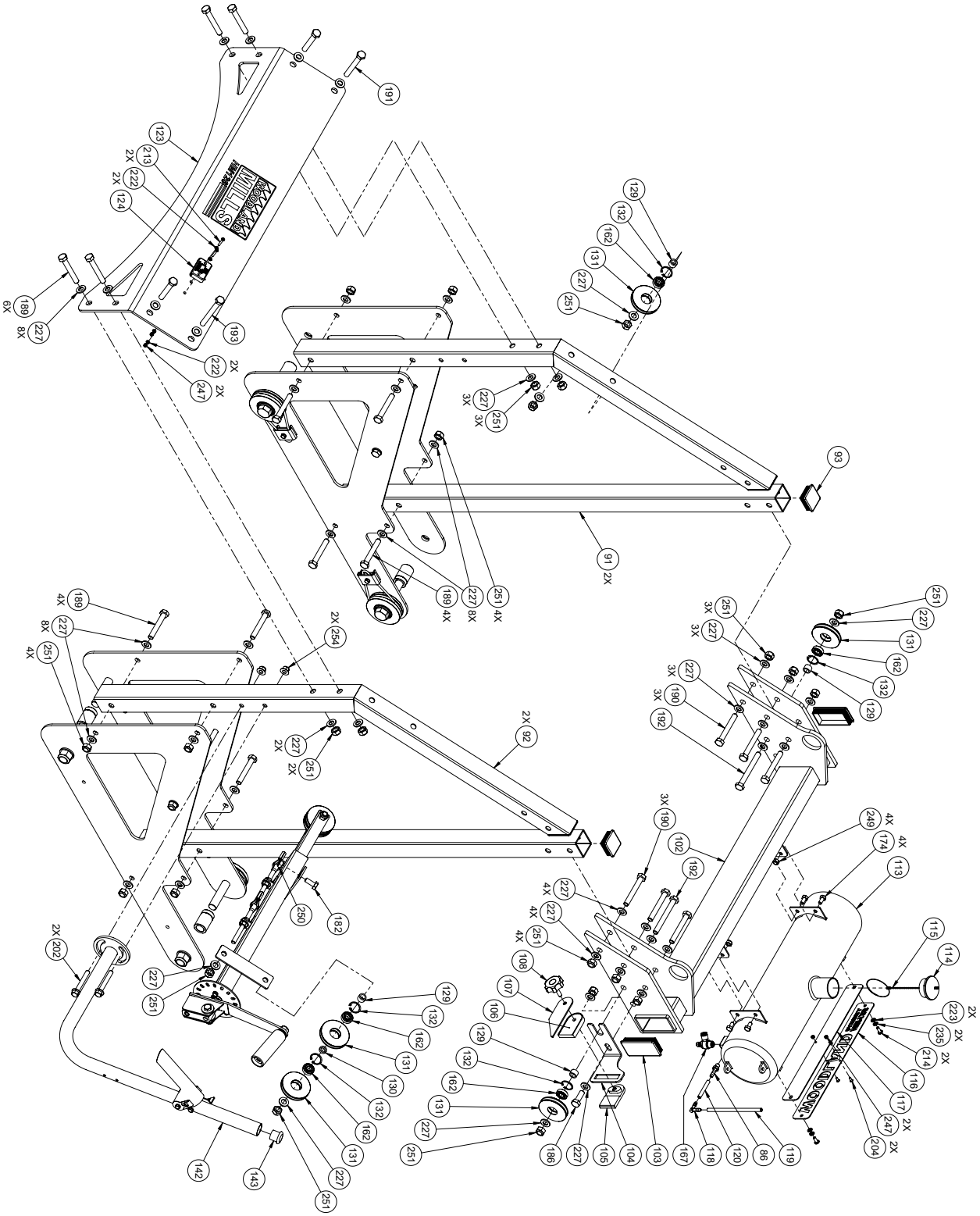
ENGINE COMPONENTS—14 hp



ENGINE COMPONENTS—9.5 hp



CARRIAGE


191
123
213 2X
222 2X
124
189 6X
227 8X
193
222 2X
247 2X
129
132
162
131
227
251
227 3X
251 3X
93
91 2X
189 4X
227 8X
251 4X
189 4X
227 8X
251 4X
254 2X
227 2X
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92 2X
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202 2X
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249 4X
174 4X
113
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223 2X
235 2X
214
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117
247 2X
204 2X
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162
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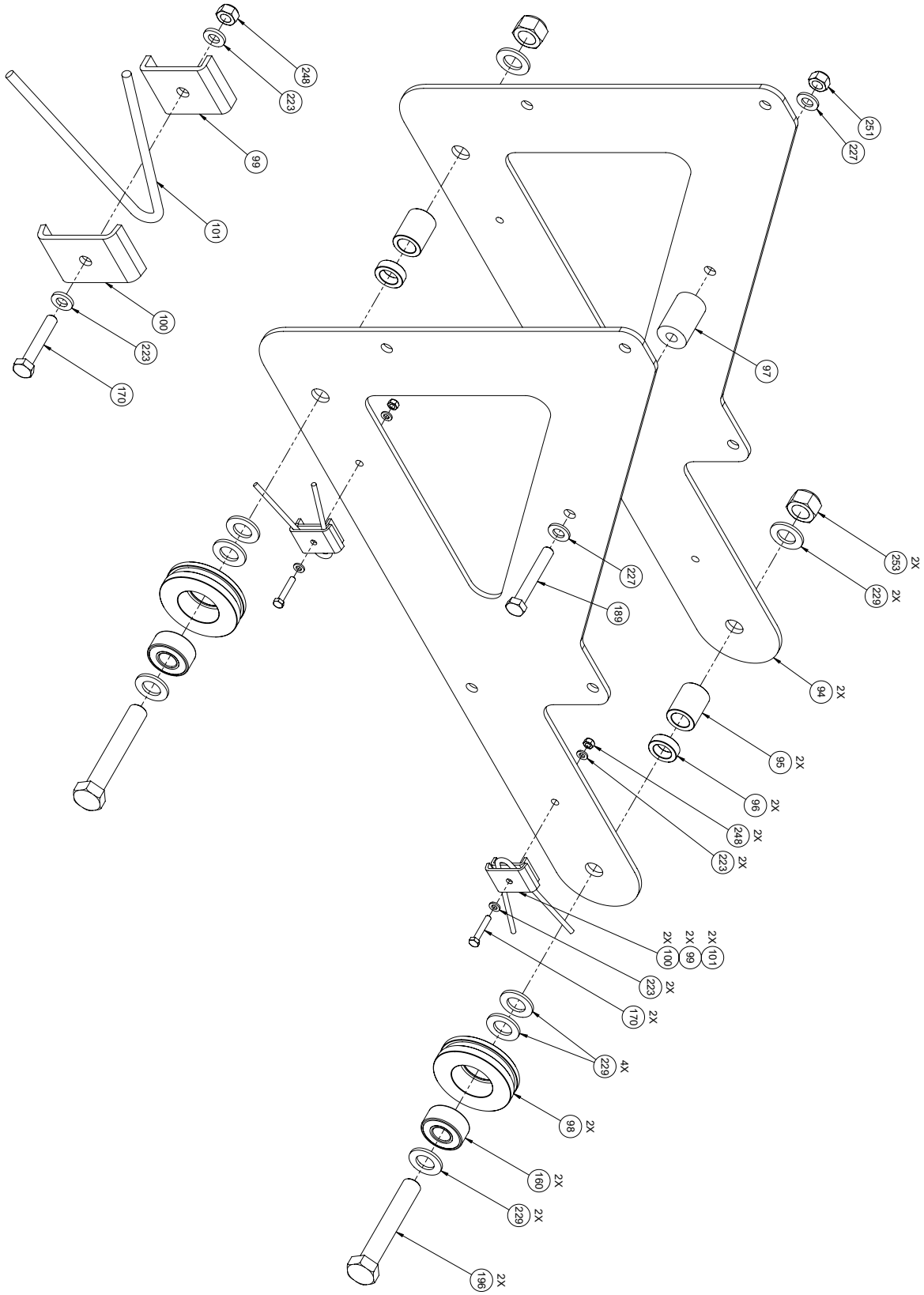
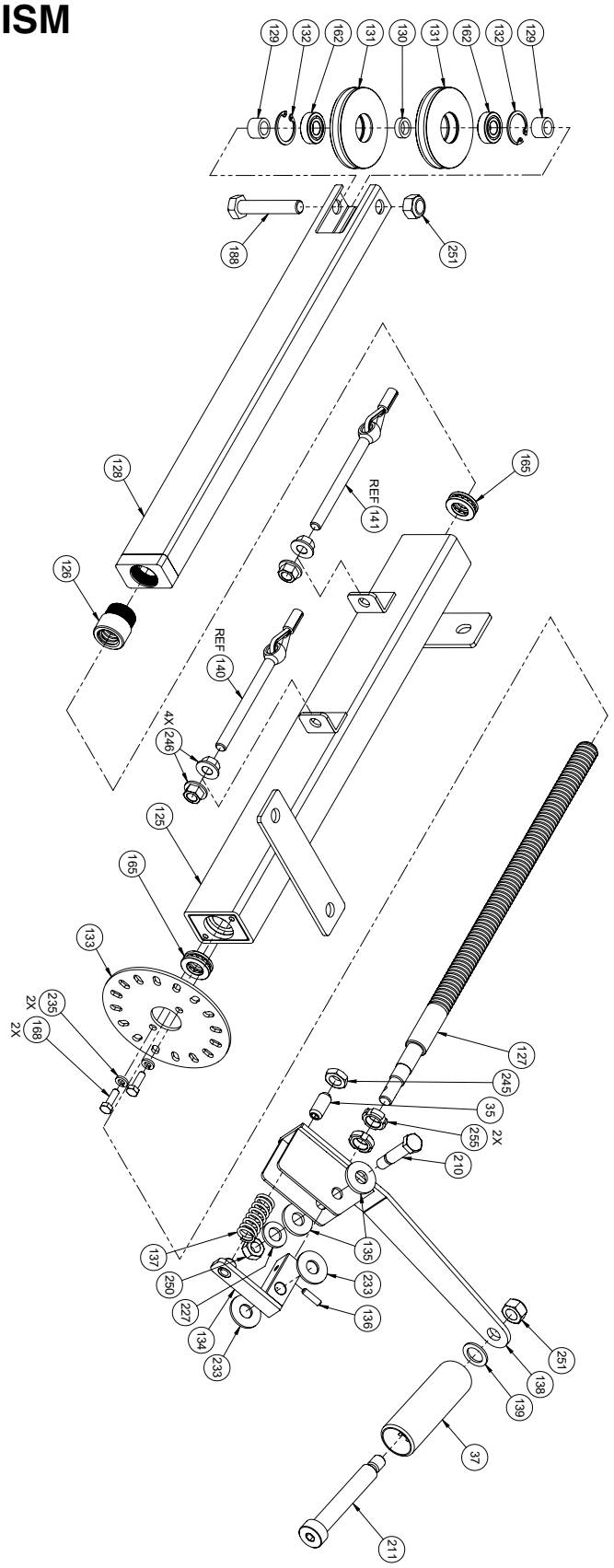
251 3X
227 3X
227 3X
190 3X
192 3X

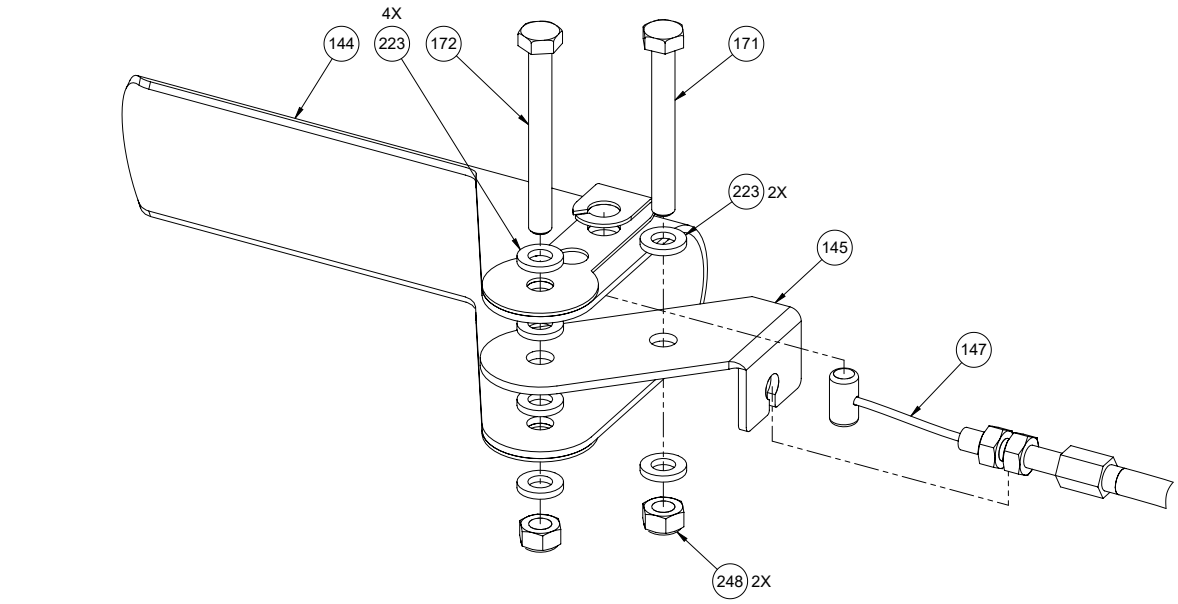
CARRIAGE LEG, WHEEL, AND SWEEPER

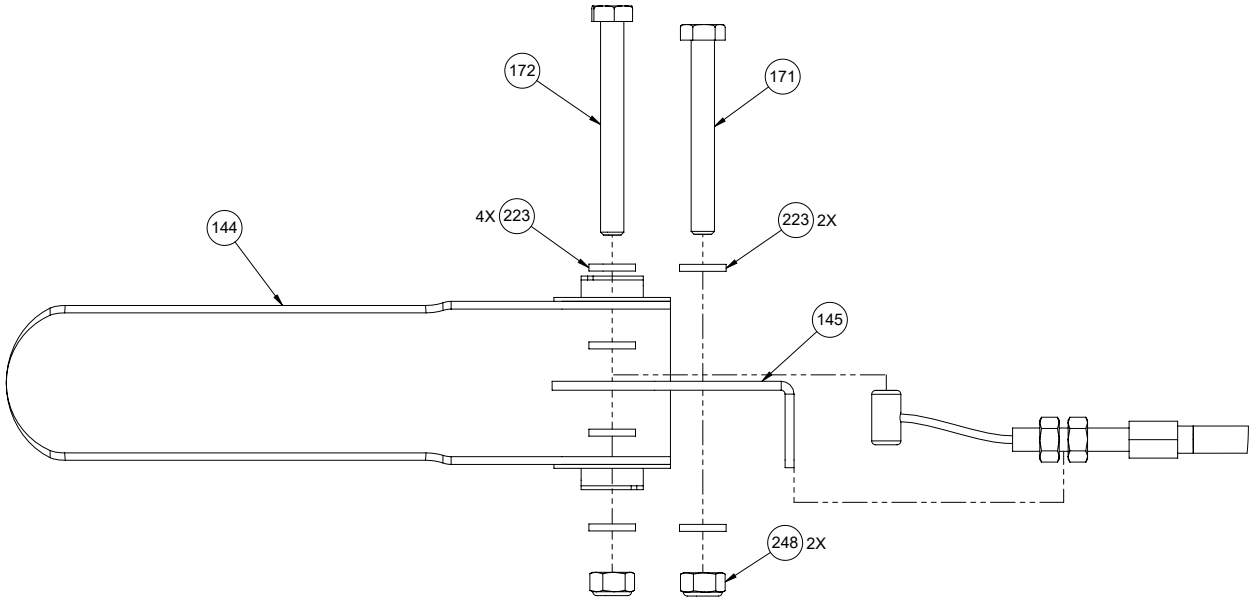


LIFT MECHANISM

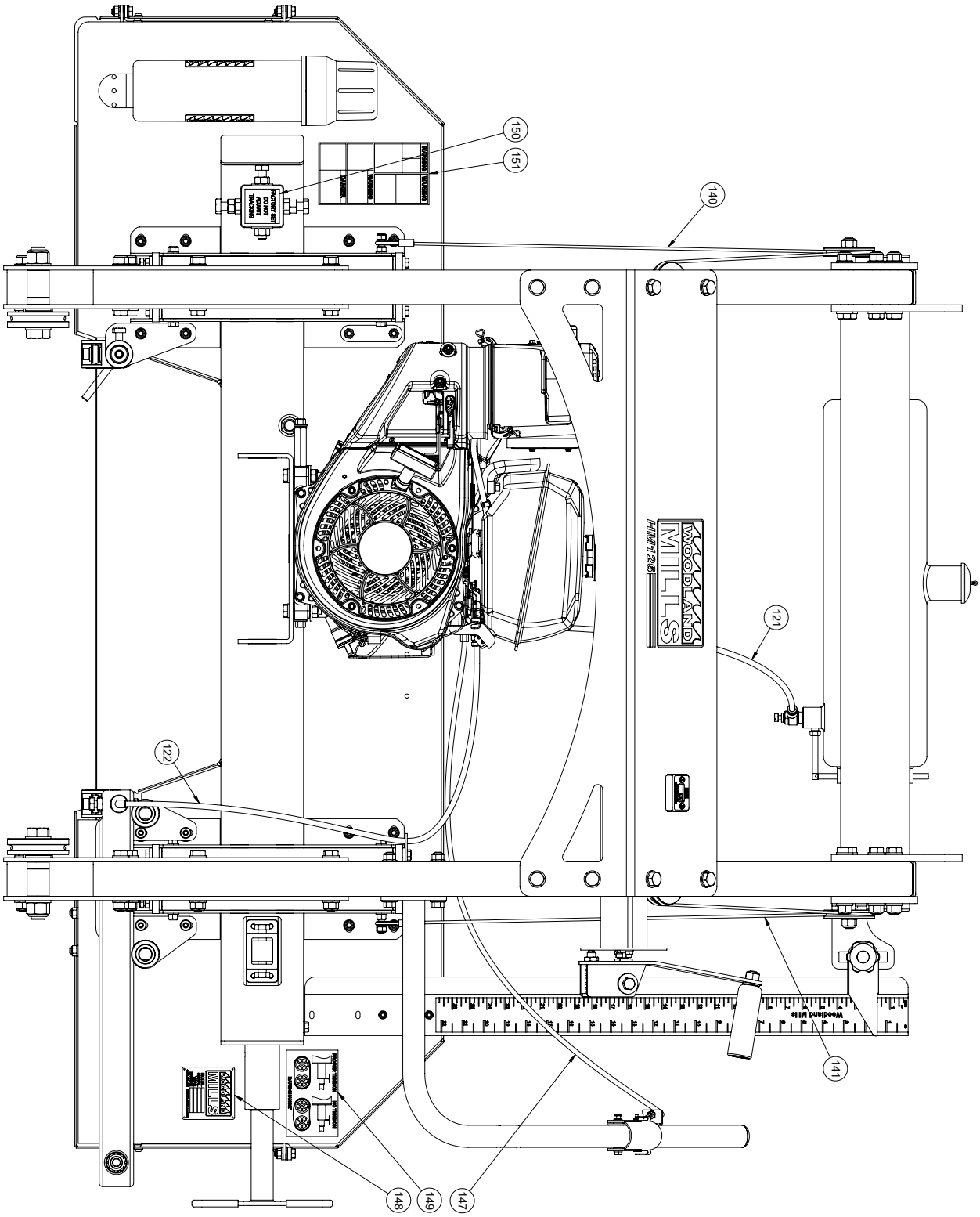


THROTTLE HANDLE





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, 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
9	1	1	0001069	LOG CLAMP SHAFT BRACKET
10	1	1	0001061	LOG CLAMP RECEIVER
11	1	1	0001211	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	1	1	0005452	TENSION HANDLE, RATCHET MOUNT, OFFSET THD, 139 mm LG
29	6	4	0002023	SPACER, ADJUSTABLE BLADE GUIDE
30	1	-	0003529	ADJUSTABLE BLADE GUIDE ROLLER CARRIAGE, 41 mm X 120° ROLLERS
31	2	-	0003525	TRACK ROLLER SHAFT W/ HEAD, CONCENTRIC, M12 X 1.75 THD
32	1	-	0003527	TRACK ROLLER SHAFT W/ HEAD, ECCENTRIC, M10 X 1.5 THD
33	3	-	0003528	TRACK ROLLER SHAFT SPACER, 15 ID X 23 OD X 5 mm THK
34	3	-	0002657	TRACK ROLLER, V-GROOVE, 120°, 41 mm DIA X 20 mm WD
35	2	1	0002661	BALL-NOSE SPRING PLUNGER, HEX DRIVE, NON-LOCKING, M12 X 1.75, 26 mm LG
36	1	-	0002660	ADJUSTABLE BLADE GUIDE ARM, 120° TRACK ROLLERS, 575 mm LG
37	2	1	0004199	PLASTIC HANDLE, 35 mm DIA, M16 THRU
38	1	-	0002666	BLADE GUARD GUIDE, ADJUSTABLE BLADE GUIDE
39	1	-	0002665	BLADE GUARD, ADJUSTABLE BLADE GUIDE
40	1	-	0002667	KNOB, MULTI-LOBE, 38 mm OD, M8 X 1.25, 12 mm LG
41	1	1	0002022	GUIDE BLOCK HOLDER BRACKET, LEFT
42	-	1	0002020	GUIDE BLOCK HOLDER BRACKET, RIGHT

Item	Quantity		Part No.	Description
	14 hp	9.5 hp		
43	2	2	0001093	GUIDE BLOCK HOLDER
44	1	1	0001096	GUIDE BLOCK HOLDER SHAFT, BLADE STOPPER
45	1	1	0002759	SAW BLADE STOPPER, 82.5 mm LG
46	1	-	0002663	GUIDE BLOCK HOLDER SHAFT, DRIP NOZZLE, GUARD MOUNT
47	1	-	0002664	GREASE FITTING, STRAIGHT, 14 mm LG, M6 TPR THD, MODIFIED
48	1	-	0005116	FITTING, ELBOW, 90°, BARBED, 1/8 in NPT, 1/4 in HOSE
49	-	1	0001091	GUIDE BLOCK HOLDER SHAFT, DRIP NOZZLE
50	-	1	0001092	DRIP NOZZLE, 6 mm DIA
51	4	4	0001090	GUIDE BLOCK
52	1	1	0001951	BAND WHEEL HOUSING
53	1	1	0001952	BAND WHEEL DOOR, LEFT
54	1	1	0001953	BAND WHEEL DOOR, RIGHT
55	2	2	0001954	BAND WHEEL HOUSING INNER HINGE BRACKET
56	2	2	0001955	BAND WHEEL HOUSING OUTER HINGE BRACKET
57	3	3	0003161	LATCH SPACER
58	3	3	0002248	ADJUSTABLE DRAW LATCH
59	1	1	0001659	KNOB, MULTI-LOBE, 48 mm OD, M8 X 1.25, 17 mm LG
60	1	1	0001104	DRIVE SHAFT, 30 mm SQ, 125 mm LG, 25 mm DIA
61	1	1	0001993	FOLLOWER SHAFT, RAPIDCHANGE, 30 mm SQ, 108.5 mm LG, 25 mm DIA
62	2	2	0001105	BAND WHEEL, 19 in
63	2	2	0004820	RETAINING RING, INTERNAL, 62 mm BORE (65 mm GROOVE)
64	1	1	0002017	BELT TENSIONER SHAFT SPACER
65	1	1	0002643	BELT TENSIONER ARM
66	1	1	0002644	BELT TENSIONER IDLER SHAFT
67	2	2	0005282	LEVELLING WASHER, FEMALE, M16
68	2	2	0005283	LEVELLING WASHER, MALE, M16
69	1	1	0002645	IDLER PULLEY, SPHERICAL ALIGNMENT, 33 mm WD, 80 mm DIA
70	1	1	0004816	RETAINING RING, INTERNAL, 40 mm BORE (42.5 mm GROOVE)
71	1	1	0002646	PARALLEL KEY, 8 X 8 mm, 37 mm LG
72	1	1	0002019	NUT LOCKING PLATE
73	1	1	0001655	MANUAL TUBE
74	1	1	0001217	CLUTCH SPACER, 27 ID X 50.5 OD X 30 mm LG
75	1	1	0001137	PARALLEL KEY, 1/4 X 1/4 in, 1 in LG
76	1	-	0003930	CLUTCH ASSEMBLY, HEAVY-DUTY, 1 in [25.4 mm] SHAFT, 108 mm DIA PULLEY
77	-	1	0001823	CLUTCH ASSEMBLY, 1 in [25.4 mm] SHAFT, 87 mm DIA PULLEY
78	1	1	0005165	CLUTCH HOUSING GUARD, SIDE FLANGES, SPRING TAB, 123 mm DIA
79	1	1	0002079	OIL DRAIN EXTENSION, 56 mm LG, M12 X 1.5 THD
80	1	1	0001136	EXHAUST REDIRECT, 9.5 & 14 hp KOHLER ENGINES
81	1	-	0005170	VALVE MOUNT BRACKET, 14 hp, NO SPRING TAB
82	-	1	0005167	VALVE MOUNT BRACKET, 9.5 hp, NO SPRING TAB
83	-	1	0001984	VALVE ACTUATION TAB, 9.5 hp
84	1	-	0001987	VALVE ACTUATION TAB, 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 THIMBLE, 10 mm HEX, M6 X 1 THD
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	0005102	EXTENSION SPRING, HOOK ENDS, 8.5 mm OD, 1.5 mm DIA WIRE, 60 mm LG
90	1	1	0001123	SAW BLADE, 7/8 in PITCH, 165 TEETH, 1-1/4 WD X 144 LG X .042 in THK
91	2	2	0001135	FRONT POST, 50 X 50 mm, 1315 mm LG
92	2	2	0002067	BACK POST, 50 X 50 mm
93	2	2	0001660	PLASTIC END CAP, SQ, 50 X 50 mm
94	4	4	0001143	CARRIAGE SIDE PLATE
95	4	4	0001966	SPACER, 32 OD X 20.5 ID X 40 mm LG
96	4	4	0001967	SPACER, 32 OD X 20.5 ID X 10 mm LG
97	2	2	0001102	SPACER, 33.5 OD X 13 ID X 50 mm LG
98	4	4	0001037	CARRIAGE WHEEL
99	4	4	0001019	WHEEL SWEEPER INNER BRACKET
100	4	4	0001017	WHEEL SWEEPER OUTER BRACKET
101	4	4	0001018	WHEEL SWEEPER CABLE
102	1	1	0001139	CROSS BEAM
103	2	2	0001661	PLASTIC END CAP, RECT, 100 X 50 mm
104	1	1	0002096	LOG SCALE MOUNTING BRACKET
105	1	1	0002097	SCALE INDICATOR ARROW BRACKET, REAR
106	1	1	0002098	SCALE INDICATOR ARROW BRACKET, FRONT
107	1	1	0002099	SCALE INDICATOR ARROW
108	1	1	0002764	KNOB, MULTI-LOBE, 48 mm OD, M8 X 1.25, 25 mm LG
109	1	1	0002040	SCALE SUPPORT
110	1	1	0001038	SCALE SUPPORT SPACER PLATE
111	1	1	0003233	MAGNETIC SCALE, 27 in, YELLOW
112	1	1	0003235	MAGNETIC SCALE, 27 in, WHITE
113	1	1	0002034	LUBRICANT TANK, 10 L [2.6 gal], MANOMETER/NAMEPLATE MOUNT
114	1	1	0001132	TANK CAP
115	1	1	0005221	BEAD CHAIN, 3 mm BEAD, 140 mm LG
116	1	1	0002037	NAMEPLATE, HM126
117	1	1	0002038	NAMEPLATE BACKING
118	1	1	0005117	FITTING, ELBOW, 90°, BARBED, 6 mm ID TUBE, WHITE
119	1	1	0002809	SIGHT LEVEL TUBING, LUBRICATION TANK
120	1	1	0002691	LUBRICATION TUBING, TANK-TO-ELBOW, 2-3/16 in [55 mm] LG
121	1	1	0002692	LUBRICATION TUBING, TANK-TO-VALVE, 8 mm OD, 22-1/4 in [565 mm] LG
122	1	1	0002693	LUBRICATION TUBING, VALVE-TO-BLADE, 8 mm OD, 32-1/2 in [825 mm] LG
123	1	1	0002066	DASHBOARD
124	1	1	0002671	HOUR METER
125	1	1	0001120	LIFT MECHANISM HOUSING
126	1	1	0001048	BRONZE NUT, LH TR20X4 THD
127	1	1	0001134	LEAD SCREW, LH TR20X4 X 335 mm LG THD
128	1	1	0001121	LIFT MECHANISM EXTENSION ARM
129	6	6	0002812	SPACER, 12 ID X 18 OD X 12 mm LG
130	2	2	0002813	SPACER, 12 ID X 18 OD X 5 mm LG
131	7	7	0001099	WIRE ROPE PULLEY, 6001-2RS BEARING, 73 mm DIA
132	7	7	0004813	RETAINING RING, INTERNAL, 28 mm BORE (29.4 mm GROOVE)
133	1	1	0002520	CRANK HANDLE INDEX PLATE, 125 mm DIA, SST
134	1	1	0002632	SELF-LOCKING CRANK HANDLE ARM LUG
135	2	2	0002675	SPACER, 12.5 ID X 30 OD X 3.3 mm LG

Item	Quantity		Part No.	Description
	14 hp	9.5 hp		
136	1	1	0004777	SPRING PIN, SLOTTED, 5 mm DIA, 20 mm LG
137	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
138	1	1	0002633	SELF-LOCKING CRANK HANDLE ARM
139	1	1	0004214	SPACER, 16.5 ID X 25 OD X 2 mm LG, NYLON
140	1	1	0003015	WIRE ROPE LIFT CABLE W/ EYEBOLT, LEFT, 4 mm DIA, 122.5 in [3110 mm] LG
141	1	1	0003016	WIRE ROPE LIFT CABLE W/ EYEBOLT, RIGHT, 4 mm DIA, 78 in [1980 mm] LG
142	1	1	0002068	PUSH HANDLE, ADJUSTABLE
143	1	1	0001662	PLASTIC END CAP, ROUND, 32 mm OD
144	1	1	0001021	THROTTLE HANDLE
145	1	1	0001024	THROTTLE HANDLE CABLE MOUNT, LEFT
146	1	1	0001112	THROTTLE CABLE BARREL CLAMP
147	1	1	0001117	THROTTLE CABLE, 70.5 in [1790 mm] LG CABLE, 60 in [1525 mm] LG SHEATH
148	1	1	0001839	LABEL, SERIAL NUMBER
149	1	1	0003245	LABEL, BLADE TENSION
150	1	1	0001829	LABEL, BLADE TRACKING WARNING
151	1	1	0002769	LABEL, DANGER/WARNING COLLAGE
152	1	1	0004646	LABEL, FOLLOWER BELT
153	2	2	0002766	LABEL, CAUTION: DO NOT OPERATE WITHOUT GUARDS
154	1	1	0002770	LABEL, DANGER: MOVING PARTS CUT/CRUSH
155	1	1	0002771	LABEL, DANGER: BANDSAW BLADE WILL CUT
156	1	1	BX57	V-BELT, COGGED, BX57
157	1	1	BX80	V-BELT, COGGED, BX80
158	-	1	CH395-3149	ENGINE, KOHLER COMMAND PRO HORIZONTAL, 9.5 hp
159	1	-	CH440-3149	ENGINE, KOHLER COMMAND PRO HORIZONTAL, 14 hp
160	4	4	5204-2RS	BALL BEARING, SEALED, ANG-CONT, DOUBLE ROW, 20 mm SFT, 47 mm HSG, 20.6 mm WD
161	2	2	6000-2RS	BALL BEARING, SEALED, 10 mm SFT, 26 mm HSG, 8 mm WD
162	7	7	6001-2RS	BALL BEARING, SEALED, 12 mm SFT, 28 mm HSG, 8 mm WD
163	1	1	6203-2RS	BALL BEARING, SEALED, 17 mm SFT, 40 mm HSG, 12 mm WD
164	4	4	6305-2RS	BALL BEARING, SEALED, 25 mm SFT, 62 mm HSG, 17 mm WD
165	2	2	51102	THRUST BEARING, SINGLE DIR, 15 mm SFT, 28 mm HSG, 9 mm WD
166	1	1	51204	THRUST BEARING, SINGLE DIR, W/ HSG, 20 mm SFT, 40 mm HSG, 14 mm WD
167	1	1	SLS-03-08	FLOW CONTROL VALVE, RA, 3/8 NPT, 8 mm QUICK-CONNECT TUBE
168	2	2	HDW	HEX BOLT, CLS 8.8, M6 X 1, 20 mm LG, FULL
169	2	2	HDW	HEX BOLT, CLS 8.8, M6 X 1, 22 mm LG, FULL
170	4	4	HDW	HEX BOLT, CLS 8.8, M6 X 1, 35 mm LG, FULL
171	1	1	HDW	HEX BOLT, CLS 8.8, M6 X 1, 50 mm LG, FULL
172	1	1	HDW	HEX BOLT, CLS 8.8, M6 X 1, 55 mm LG, 18 mm LG THD
173	2	2	HDW	HEX BOLT, CLS 8.8, M8 X 1.25, 12 mm LG, FULL
174	4	4	HDW	HEX BOLT, CLS 8.8, M8 X 1.25, 16 mm LG, FULL
175	23	25	HDW	HEX BOLT, CLS 8.8, M8 X 1.25, 20 mm LG, FULL
176	5	5	HDW	HEX BOLT, CLS 8.8, M8 X 1.25, 25 mm LG, FULL
177	1	1	HDW	HEX BOLT, CLS 8.8, M8 X 1.25, 30 mm LG, FULL
178	4	6	HDW	HEX BOLT, CLS 8.8, M8 X 1.25, 35 mm LG, FULL
179	2	2	HDW	HEX BOLT, CLS 8.8, M8 X 1.25, 110 mm LG, 22 mm LG THD
180	2	2	HDW	HEX BOLT, CLS 8.8, M8 X 1.25, 130 mm LG, FULL

Item	Quantity		Part No.	Description
	14 hp	9.5 hp		
181	1	2	HDW	HEX BOLT, CLS 8.8, M10 X 1.5, 20 mm LG, FULL
182	4	3	HDW	HEX BOLT, CLS 8.8, M10 X 1.5, 25 mm LG, FULL
183	-	4	HDW	HEX BOLT, CLS 8.8, M10 X 1.5, 45 mm LG, FULL
184	8	4	HDW	HEX BOLT, CLS 8.8, M10 X 1.5, 50 mm LG, FULL
185	1	1	HDW	HEX BOLT, CLS 8.8, M12 X 1.75, 20 mm LG, FULL
186	1	1	HDW	HEX BOLT, CLS 8.8, M12 X 1.75, 35 mm LG, FULL
187	2	2	HDW	HEX BOLT, CLS 8.8, M12 X 1.75, 45 mm LG, FULL
188	1	1	HDW	HEX BOLT, CLS 8.8, M12 X 1.75, 65 mm LG, 30 mm LG THD
189	16	16	HDW	HEX BOLT, CLS 8.8, M12 X 1.75, 80 mm LG, 30 mm LG THD
190	6	6	HDW	HEX BOLT, CLS 8.8, M12 X 1.75, 90 mm LG, 30 mm LG THD
191	2	2	HDW	HEX BOLT, CLS 8.8, M12 X 1.75, 100 mm LG, 30 mm LG THD
192	2	2	HDW	HEX BOLT, CLS 8.8, M12 X 1.75, 110 mm LG, FULL
193	1	1	HDW	HEX BOLT, CLS 8.8, M12 X 1.75, 120 mm LG, 30 mm LG THD
194	1	1	HDW	HEX BOLT, CLS 8.8, M16 X 2, 90 mm LG, 38 mm LG THD
195	12	12	HDW	HEX BOLT, CLS 8.8, M16 X 2, 120 mm LG, FULL
196	4	4	HDW	HEX BOLT, CLS 8.8, M20 X 2.5, 120 mm LG, 46 mm LG THD
197	2	2	HDW	HEX BOLT, GR 5, 3/8-16, 3/4 in LG, FULL
198	1	-	HDW	HEX BOLT, GR 8, 3/8-24, 1-1/4 in LG, FULL
199	-	1	HDW	HEX BOLT, GR 8, 7/16-20, 1-1/4 in LG, FULL
200	34	34	HDW	HEX BOLT, FLANGED, CLS 10.9, M10 X 1.5, 25 mm LG, FULL
201	16	16	HDW	HEX BOLT, FLANGED, CLS 10.9, M10 X 1.5, 35 mm LG, 26 mm LG THD
202	2	2	HDW	HEX BOLT, FLANGED, CLS 8.8, M10 X 1.5, 70 mm LG, 26 mm LG THD
203	6	6	HDW	BUTTON HEAD SCREW, CLS 10.9, M4 X 0.7, 6 mm LG, FULL
204	2	2	HDW	BUTTON HEAD SCREW, CLS 10.9, M4 X 0.7, 10 mm LG, FULL
205	8	8	HDW	BUTTON HEAD SCREW, CLS 10.9, M6 X 1, 16 mm LG, FULL
206	4	-	HDW	BUTTON HEAD SCREW, CLS 10.9, M8 X 1.25, 35 mm LG, FULL
207	4	4	HDW	SHCS, CLS 12.9, M8 X 1.25, 20 mm LG, FULL
208	2	2	HDW	SHCS, CLS 12.9, M10 X 1.5, 25 mm LG, FULL
209	1	-	HDW	SHCS, CLS 12.9, M12 X 1.75, 130 mm LG, 36 mm LG THD
210	1	1	HDW	SHLDR SCREW, HEX HEAD, ALLOY, 11 X 35 mm LG SHLDR, M10 X 1.5 X 18 mm LG THD
211	1	1	HDW	SHLDR SCREW, SH, CLS 12.9, 16 X 90 mm LG SHLDR, M12 X 1.75 X 18 mm LG THD
212	1	1	HDW	SCREW, PPH, SST, M4 X 0.7, 12 mm LG, FULL
213	2	2	HDW	SCREW, PPH, CLS 4.8, M4 X 0.7, 30 mm LG, FULL
214	2	2	HDW	SCREW, PPH, CLS 4.8, M6 X 1, 14 mm LG, FULL
215	12	12	HDW	SCREW, PFH, CLS 10.9, M4 X 0.7, 10 mm LG, FULL
216	1	1	HDW	SCREW, HFH, CLS 10.9, M6 X 1, 30 mm LG, 18 mm LG THD
217	2	-	HDW	SCREW, HFH, CLS 10.9, M8 X 1.25, 20 mm LG, FULL
218	1	1	HDW	SCREW, HFH, CLS 10.9, M10 X 1.5, 20 mm LG, FULL
219	2	2	HDW	SCREW, PPH, ST, #10, 5/8 in LG
220	1	2	HDW	SET SCREW, FLAT TIP, SST, M6 X 1, 8 mm LG
221	8	8	HDW	SET SCREW, FLAT TIP, SST, M8 X 1.25, 8 mm LG
222	4	4	HDW	FLAT WASHER, M4
223	35	35	HDW	FLAT WASHER, M6
224	26	23	HDW	FLAT WASHER, M8
225	12	12	HDW	FLAT WASHER, M8, NYLON
226	16	16	HDW	FLAT WASHER, M10

Item	Quantity		Part No.	Description
	14 hp	9.5 hp		
227	58	56	HDW	FLAT WASHER, M12
228	1	1	HDW	FLAT WASHER, M16
229	16	16	HDW	FLAT WASHER, M20
230	2	2	HDW	FENDER WASHER, M8, 30 mm OD
231	4	4	HDW	FENDER WASHER, M10, 30 mm OD
232	3	2	HDW	FENDER WASHER, M10, 34 mm OD
233	4	4	HDW	FENDER WASHER, M12, 31 mm OD
234	-	1	HDW	FENDER WASHER, M12, 37 mm OD
235	4	4	HDW	SPLIT LOCK WASHER, M6
236	9	8	HDW	SPLIT LOCK WASHER, M10
237	-	1	HDW	SPLIT LOCK WASHER, M12
238	24	24	HDW	BELLEVILLE WASHER, 20.4 ID, 40 OD, 2.5 THK, 3.45 mm TALL, 2111 lb WORKING LOAD
239	2	2	HDW	SEALING WASHER, M12
240	2	2	HDW	HEX NUT, CLS 8, M8 X 1.25
241	7	6	HDW	HEX NUT, CLS 8, M10 X 1.5
242	4	4	HDW	HEX NUT, CLS 8, M12 X 1.75
243	36	36	HDW	HEX NUT, CLS 8, M16 X 2
244	1	1	HDW	HEX NUT, THIN, CLS 4, M6 X 1, 3.2 mm THK
245	4	1	HDW	HEX NUT, THIN, CLS 4, M12 X 1.75, 6 mm THK
246	4	4	HDW	HEX NUT, FLANGED, CLS 8, M10 X 1.5
247	10	10	HDW	LOCK NUT, CLS 8, M4 X 0.7
248	17	17	HDW	LOCK NUT, CLS 8, M6 X 1
249	32	30	HDW	LOCK NUT, CLS 8, M8 X 1.25
250	7	6	HDW	LOCK NUT, CLS 8, M10 X 1.5
251	30	29	HDW	LOCK NUT, CLS 8, M12 X 1.75
252	1	1	HDW	LOCK NUT, CLS 8, M16 X 2
253	4	4	HDW	LOCK NUT, CLS 8, M20 X 2.5
254	46	46	HDW	LOCK NUT, FLANGED, CLS 10, M10 X 1.5
255	2	2	HDW	SLOTTED NUT, ROUND, M14 X 1.5

NOTES

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