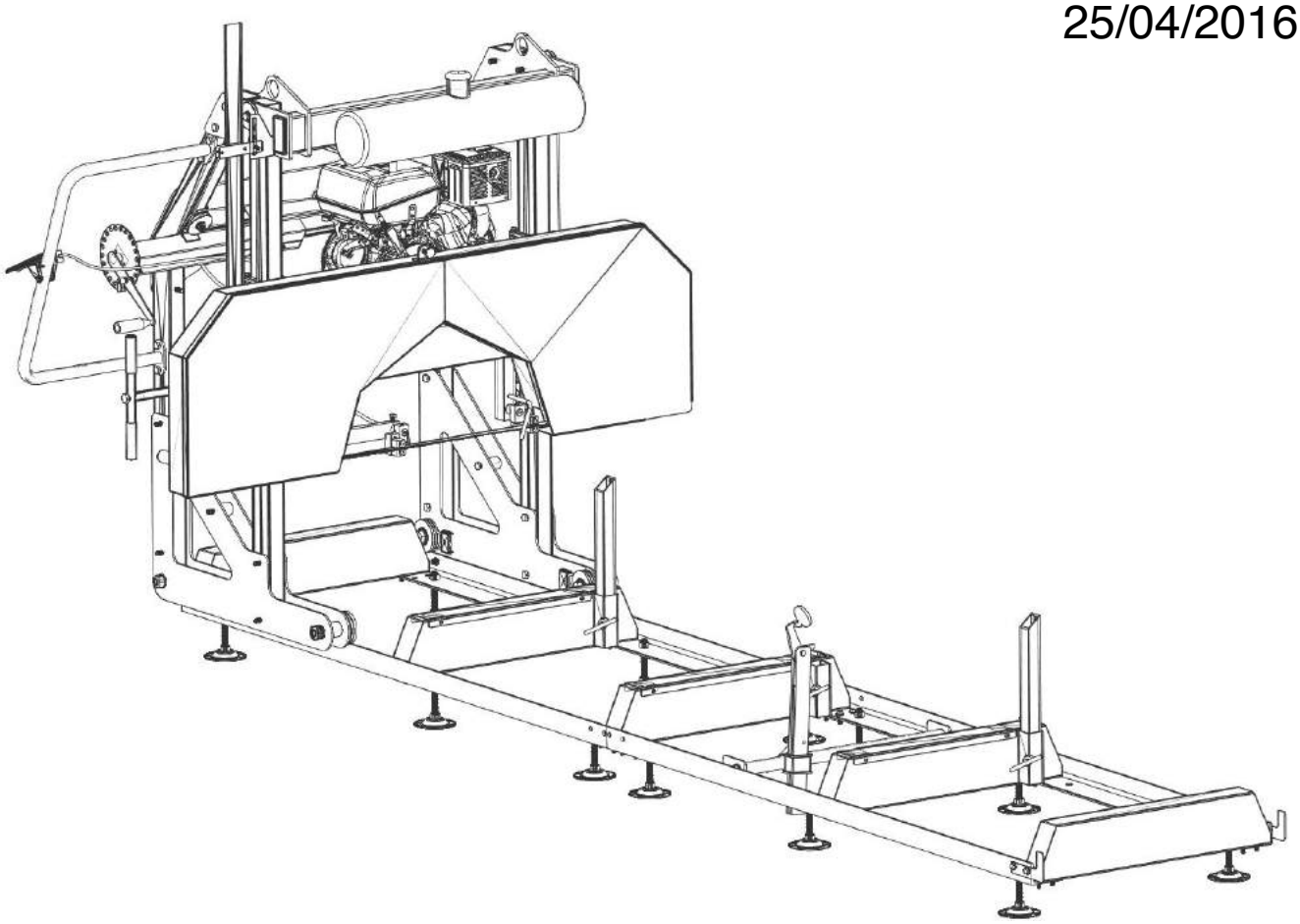
HM130 PORTABLE SAWMILL

HM130

25/04/2016



Owner's Manual

WOODLAND MILLS

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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 our customer service at 1-855-476-6455.

OWNER'S RECORD

Please take a moment to record the following information about your portable 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 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. at 1-855-476-MILL (6455)

INTENDED USE

This sawmill is designed for sawing logs while the mill is firmly supported on the ground.

TECHNICAL SPECIFICATIONS

ITEM	DESCRIPTION
Gasoline Engine	14 HP Kohler
Maximum Log Diameter	30” (762mm)
Maximum Board Width	22” (558mm)
Maximum Board Thickness	7” (178mm)
Blade Size	1-1/4” x 144” (32mm x 3657mm)

GENERAL SAFETY RULES

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 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.

SAVE THESE INSTRUCTIONS

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, so visitors should remain at 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 may 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 fueling. 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; 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 refueling the engine.
- **DO NOT** refuel a hot or running engine.
- **DO NOT** refuel the engine near an open flame.
- **DO NOT** spill fuel when refueling the engine.
- **DO NOT** run the engine near open flames.
- **ALWAYS** refill the fuel tank in a well-ventilated area.
- **ALWAYS** replace the fuel tank cap after refueling.
- **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, 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 while 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 as 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 over reach.** Keep proper footing and balance at all times.

- **Remove adjusting keys or wrenches** before connecting to the power supply or turning on the tool. A wrench or key that is left attached to a rotating part of the tool may result in personal injury.

- **Never make blade guide adjustments, remove or install blades or conduct any other maintenance or make any other adjustments when the engine is running.** Always shut the engine off, remove the ignition key, and keep the engine off before carrying out any of the aforementioned procedures. Consult your engine manual for safe shutdown procedures to prevent accident ignition.

TOOL USE AND CARE

- **Always** be sure 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 hot and may cause burns.
- **Always** close fuel valve on engines when machine is not being operated.
- **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, and a dust mask.
2. Operate only with assistance.
3. Fill the lubrication tank with clean water and liquid soap.
4. Start and operate the engine according to the provided engine manual.
5. Depress the throttle to bring the blade up to speed.
6. Throttle should be fully depressed when the saw is under load.
7. Cut branches off the lumber to be processed.
8. Place the lumber to be cut on the supports.
9. Move the saw head 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 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 with foreign objects in it such as nails, any metal pieces, 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 prolonging the life of your investment.

1. **Bandwheel Bearings** — Inspect before use to ensure they are not worn. Bearings are sealed and do not need to be greased.

2. **Blade Guide Bearings** — Inspect before use for excessive grooves or scoring in the bearing case. Replace if necessary.

3. **Blade Tension** — Grease threads of tensioning “T” handle when dry or as required. Use multi-purpose, extreme-pressure grease.

4. **Log Clamps** — Spray cam mechanism with dry silicone spray frequently.

5. **Belts** — Periodically check the condition and wear of the drive and idler belt. Ensure that the blade does not ride on the bandwheels.

6. **Drive Belt** — Periodically check the tension of the drive belt.

7. **Sawhead Vertical Posts** — Spray posts before use with a silicone spray lubricant such as 3-in-1 or Jig-A-Loo.

8. **Bandwheel Guards** — Routinely remove any build-up of sawdust that may collect inside the bandwheel guards.

9. **Lubrication Tank** — Only fill with a water and dish soap mixture or in winter months, use windshield washer fluid. Do not leave lubricant in tank if temperature falls below 0˚ C.

10. **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 operations, replace the water lubricant with windshield washer fluid.

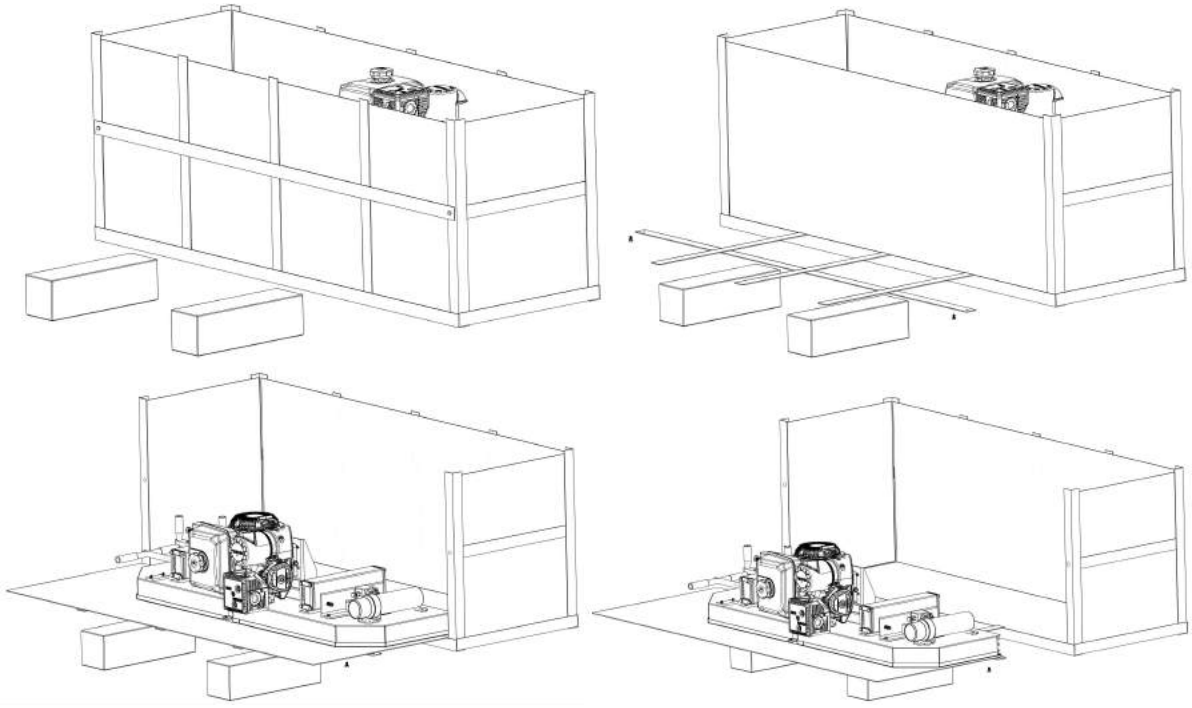
11. **Engine** — Check the engine oil level before each use and maintain the engine as per the instructions set out by the engine manufacturer in the engine manual. The engine is equipped with an oil alert system and will not start without adding oil before starting.

12. **Sawhead Lifting Cables** — Regularly before, during, and after operations; inspect the cables for any wear or kinks. Ensure that the cables are in perfect condition. Oil coiled part of cable often to prevent premature wear. Replace with new cables as necessary.

SAWMILL ASSEMBLY

#1 – UNPACKING

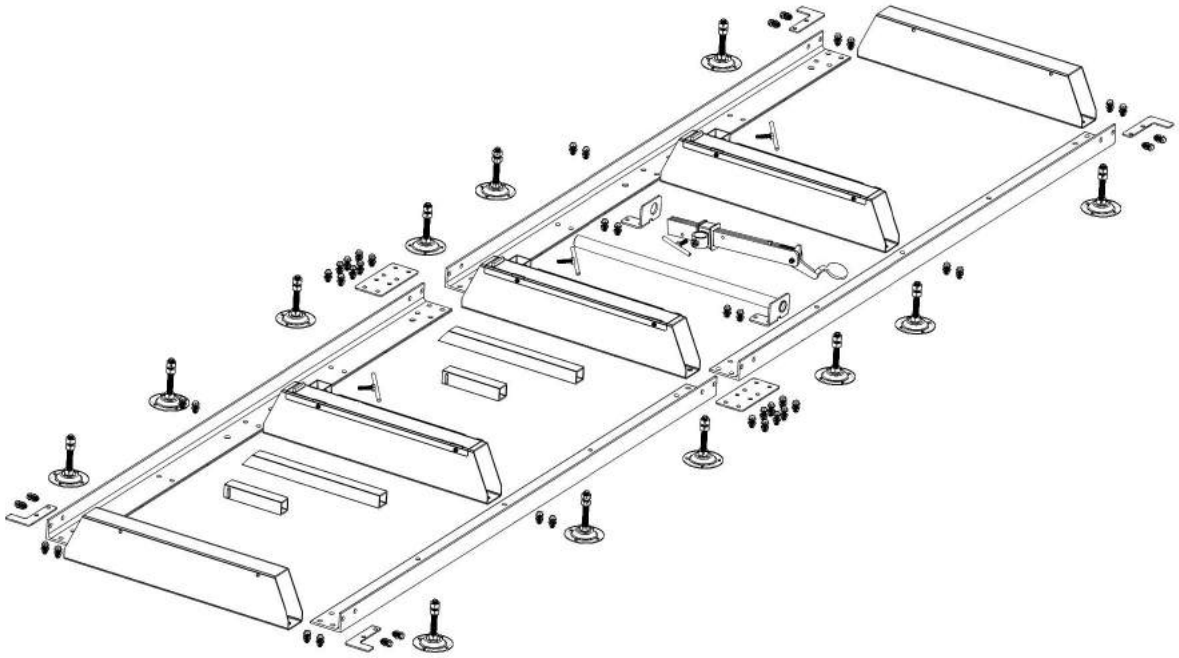
Unpack the contents of the crate except for the sawmill head and the two long boxes in the bottom that contain the two sections of track. Unbolt the front of the crate and lay 6” high support blocks in front of the crate. Bend the front of the crate down. Carefully lay the sawmill head and the cardboard down onto the 6” support blocks. Slide the sawmill head out of the crate as shown below.



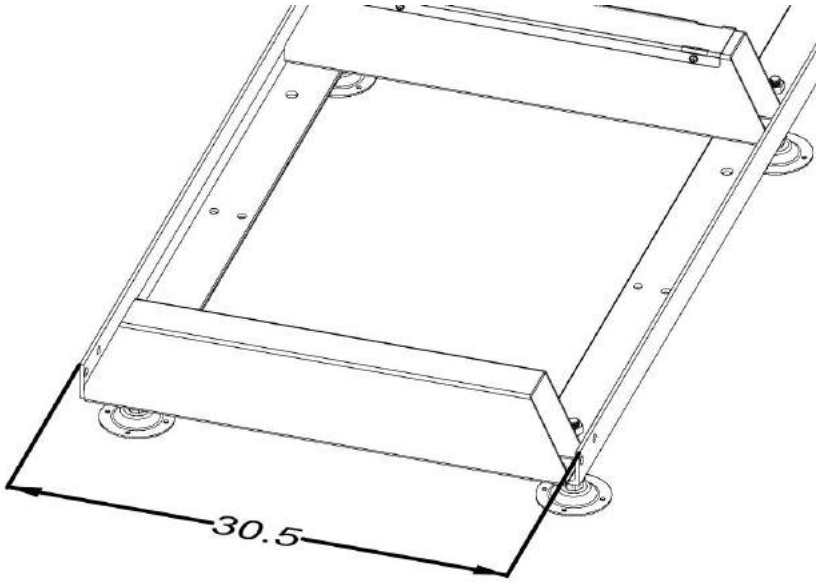
The two long track boxes may now be removed from the crate and the crate be placed out of the way.

#2 – TRACKS

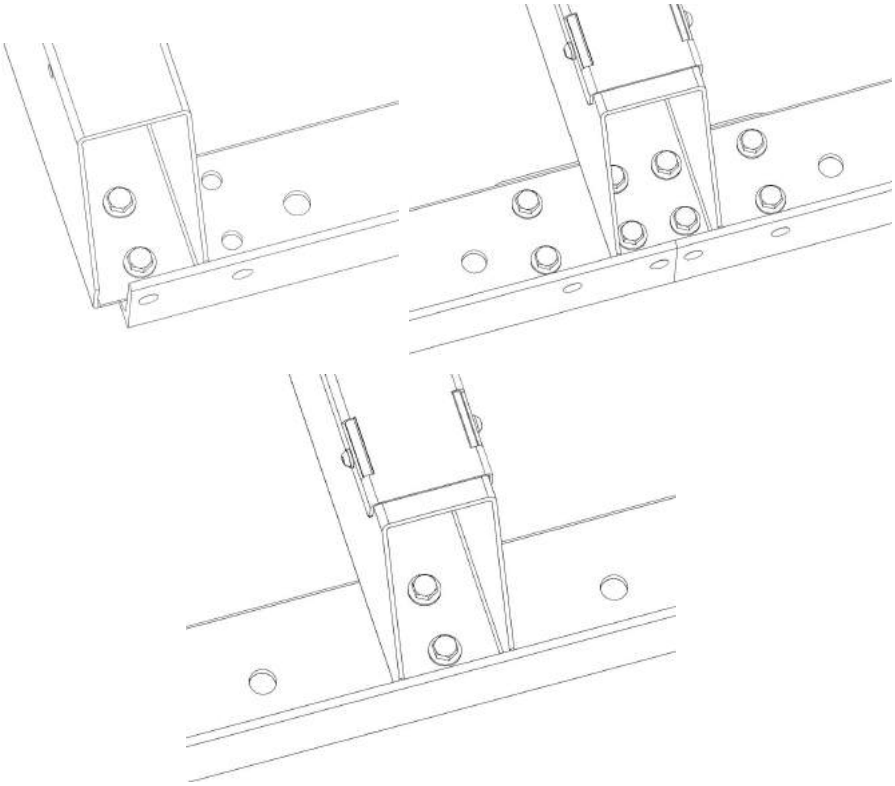
Assemble the track system with the provided nuts & bolts. It is important to assemble and level the track on a firm foundation before tightening all of the nuts and bolts. It is ideal to assemble the tracks on a solid and level footing that is a minimum of 4” off of the ground. This will allow for easy cleanup of sawdust from under the tracks and height adjustment of the log supports.



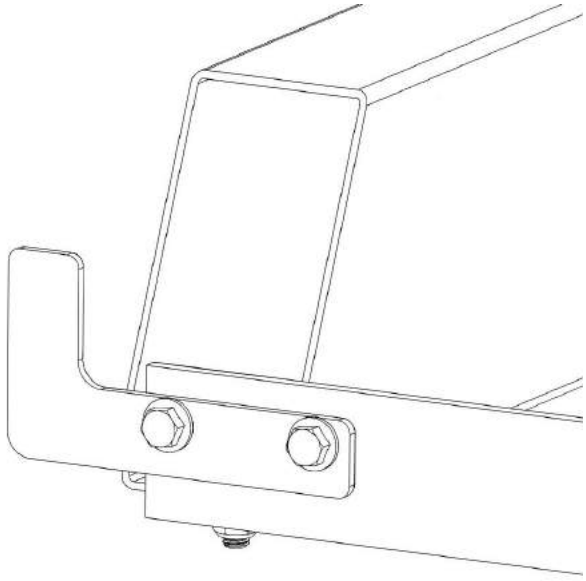
The width of the track should be assembled so that it is 30.5” (775mm) wide when measuring the width from the outside to outside of the “L” rails.



The below pictures show the assembly of the log bunks to the “L” rails.

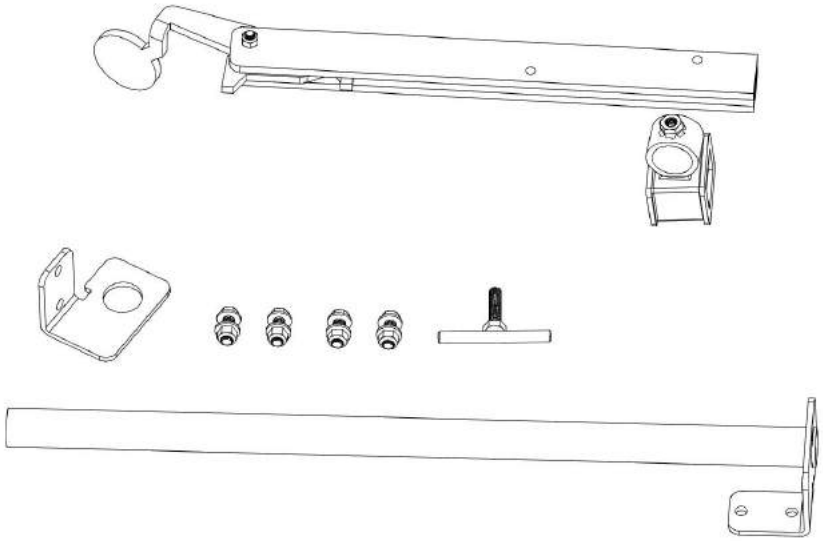


Assemble carriage stops at the ends of the tracks (4 stops total) and tighten bolts as shown below.

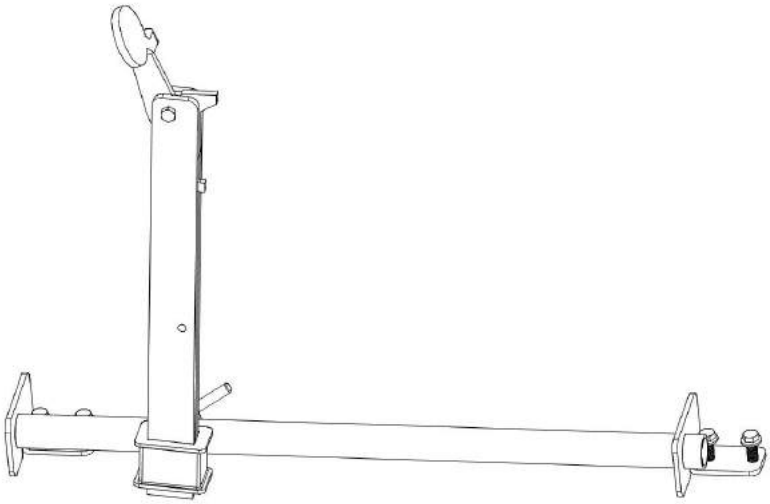


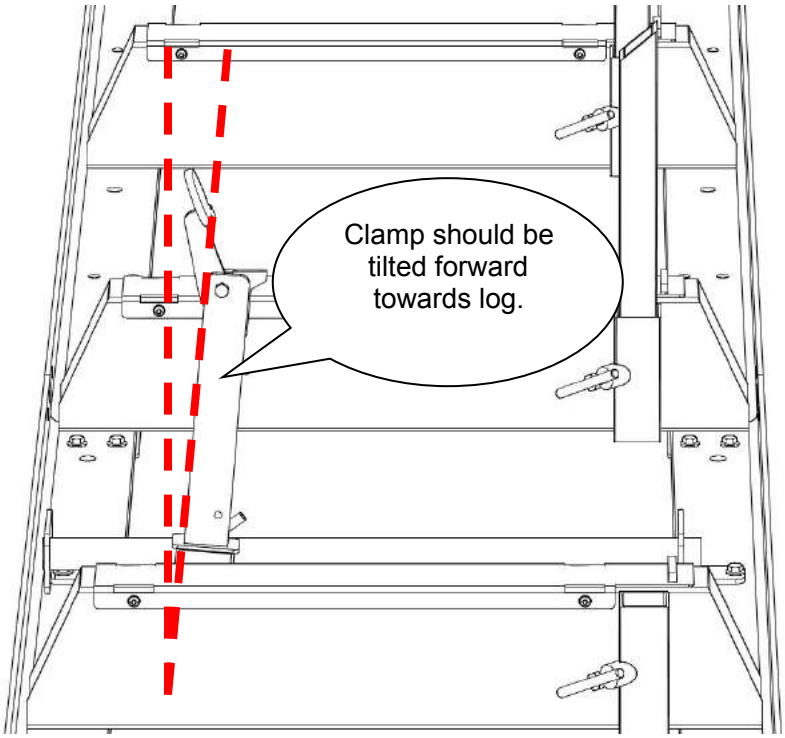
#3 – LOG DOG & SUPPORTS

Assemble log dog pieces as shown below and use grease on threaded handle and “T” handle. Attach assembly to the track using the provided nuts & bolts and tighten.

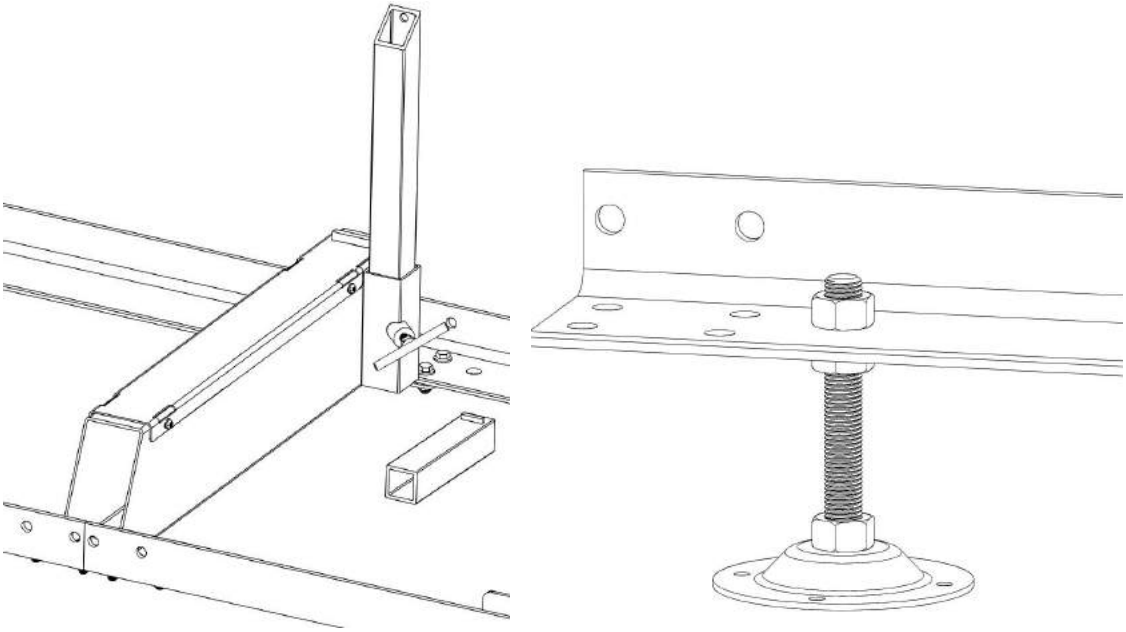


Attach log dog assembly to track as shown below with the 4 nuts and bolts provided. Note that there are various locations along the track where this assembly can be bolted. Depending on how many track sections are being used, select a log clamp position that will secure the log firmly against the log supports.



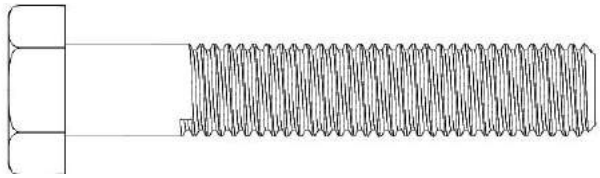


Insert log supports into track cross supports and secure with “T” handles as shown in the picture below. The “T” handle threads should be coated with grease. The sawmill includes two sets of log supports – a short set and a long set. The longer set is ideal for larger logs and the shorter set is ideal for small logs and square cants. The picture below shows how to attach the leveling feet to the track. The bolt can be turned to either raise or lower the round feet to get your track level. If setting the track on wood blocks, screws may be used in the four holes to secure the foot in place.

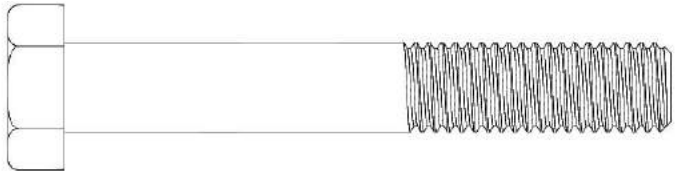


#4 – SAWMILL HEAD ASSEMBLY

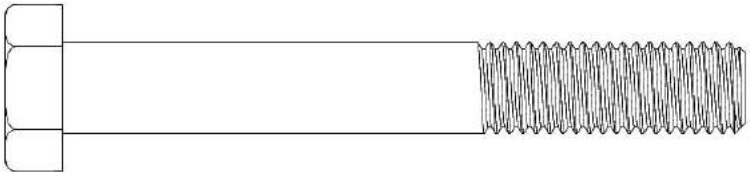
The below chart shows the various bolts that will be used to assemble the head of the sawmill. This chart may be used to ensure the correct bolts are used.



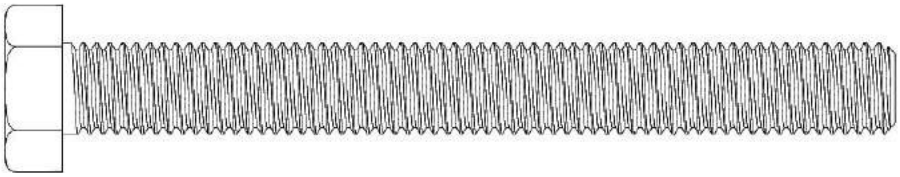
M12 x 70



M12 x 80

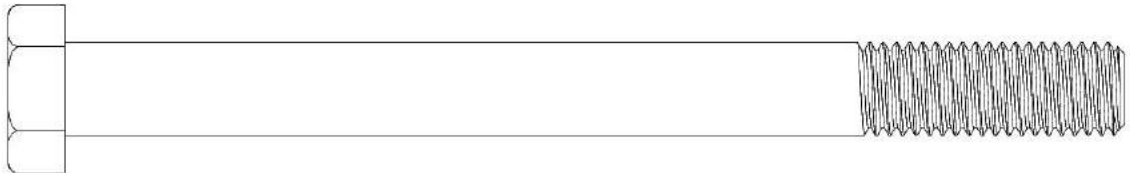


M12 x 90



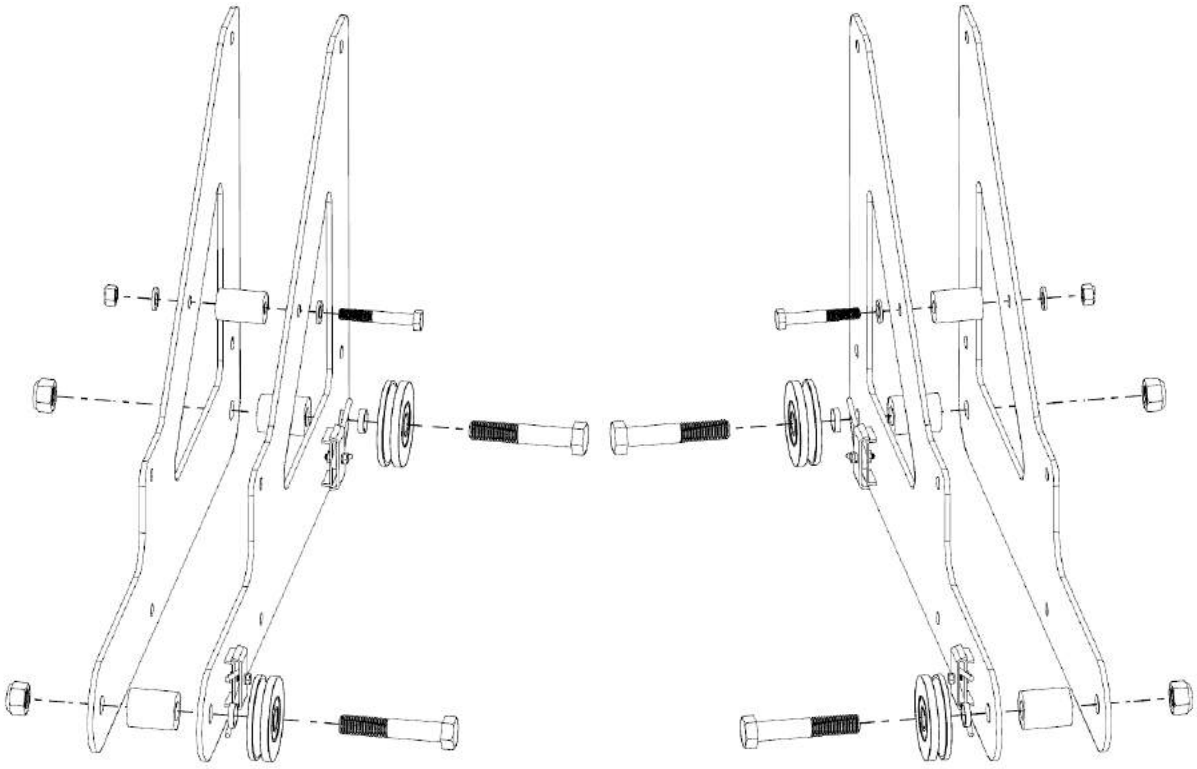
M12 x 110

M12 x 120

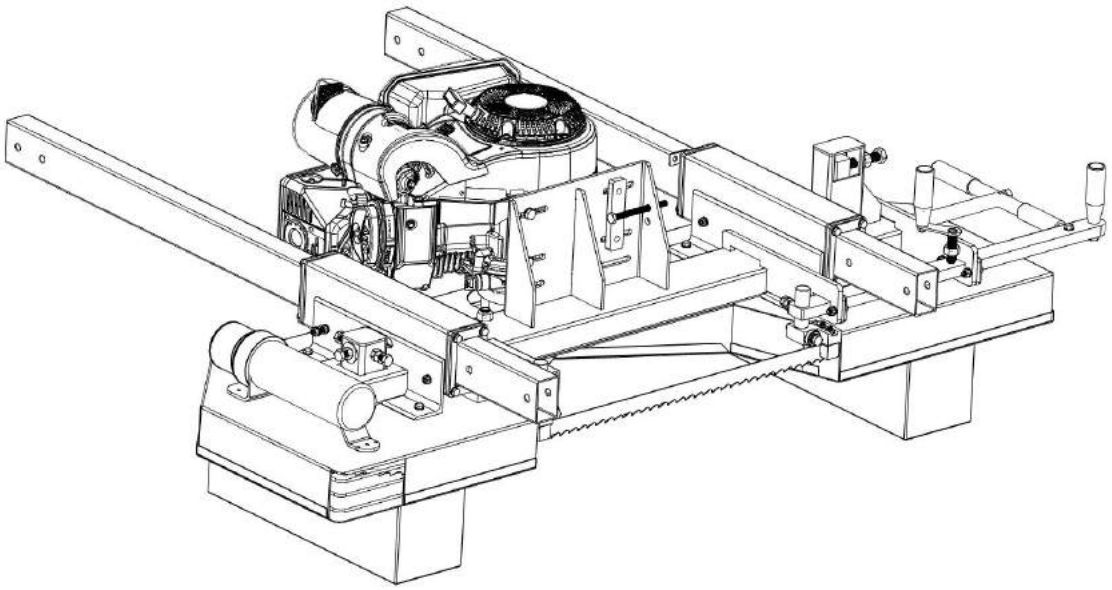


M12 x 140

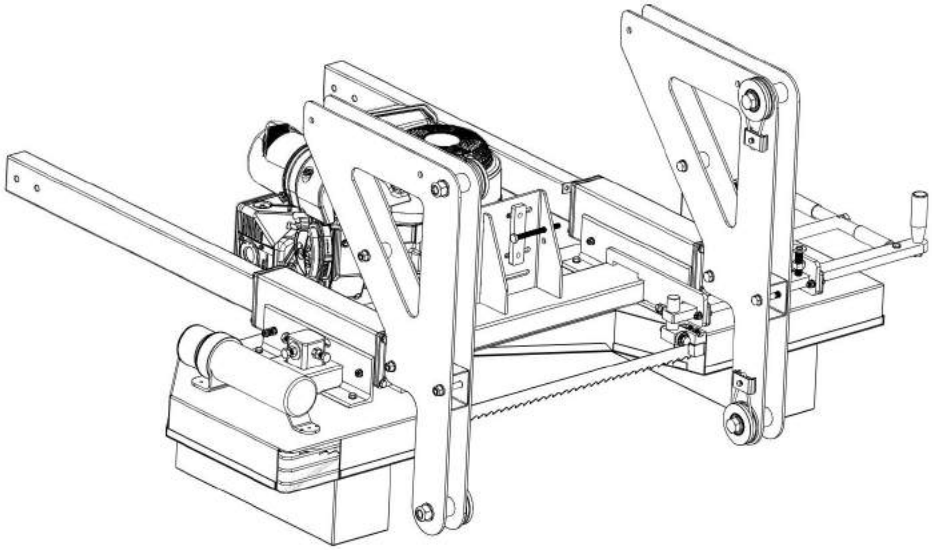
Assemble the carriage base legs as shown below. At this point all bolts should only be loosely tightened. Final tightening of these bolts will be done in a later step.



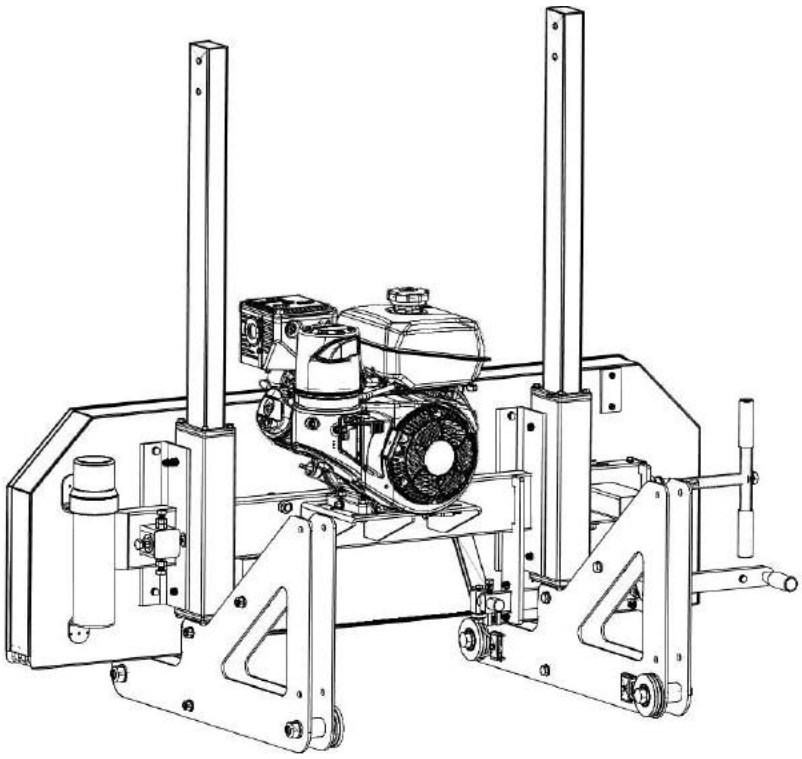
With the sawhead resting about 6” above the ground. Slide the 2 front posts into the slots as shown below.



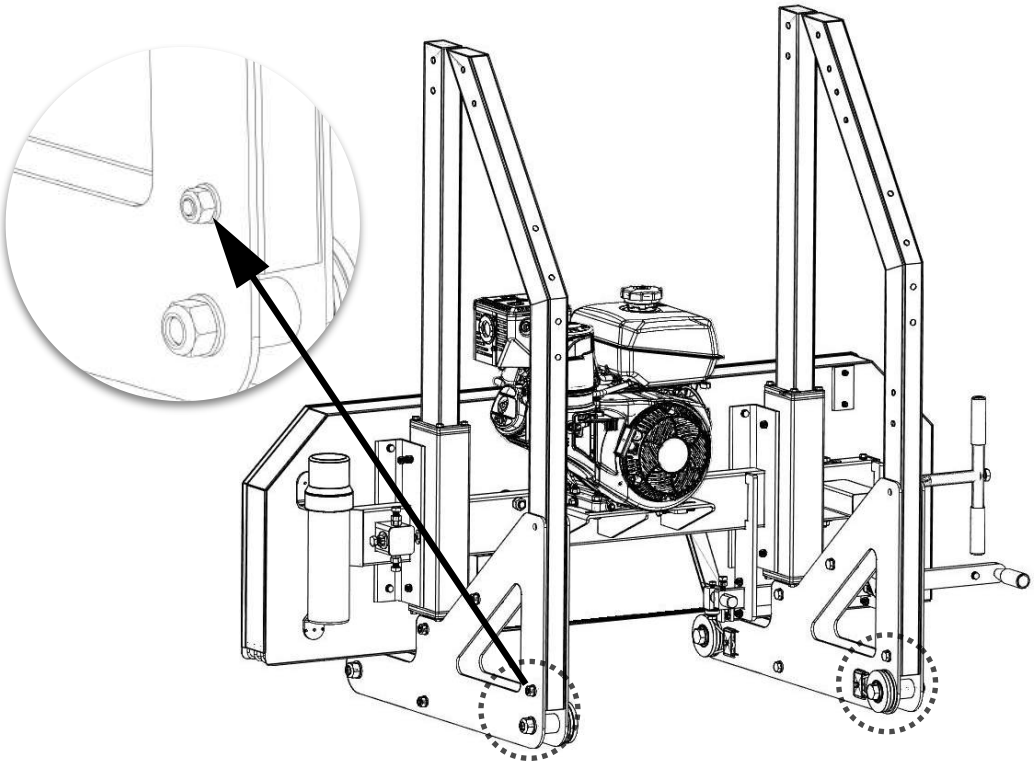
Using 4 of the M12 x 80 bolts, washers and lock nuts, attach the sawhead carriage plate assembly to the bottom of the posts. Be sure the carriage wheels are located to the inside. Fully tighten these 4 bolts so the plates are firmly attached to the posts. The posts should be pushed all the way up until the carriage plates contact the sawmill head.



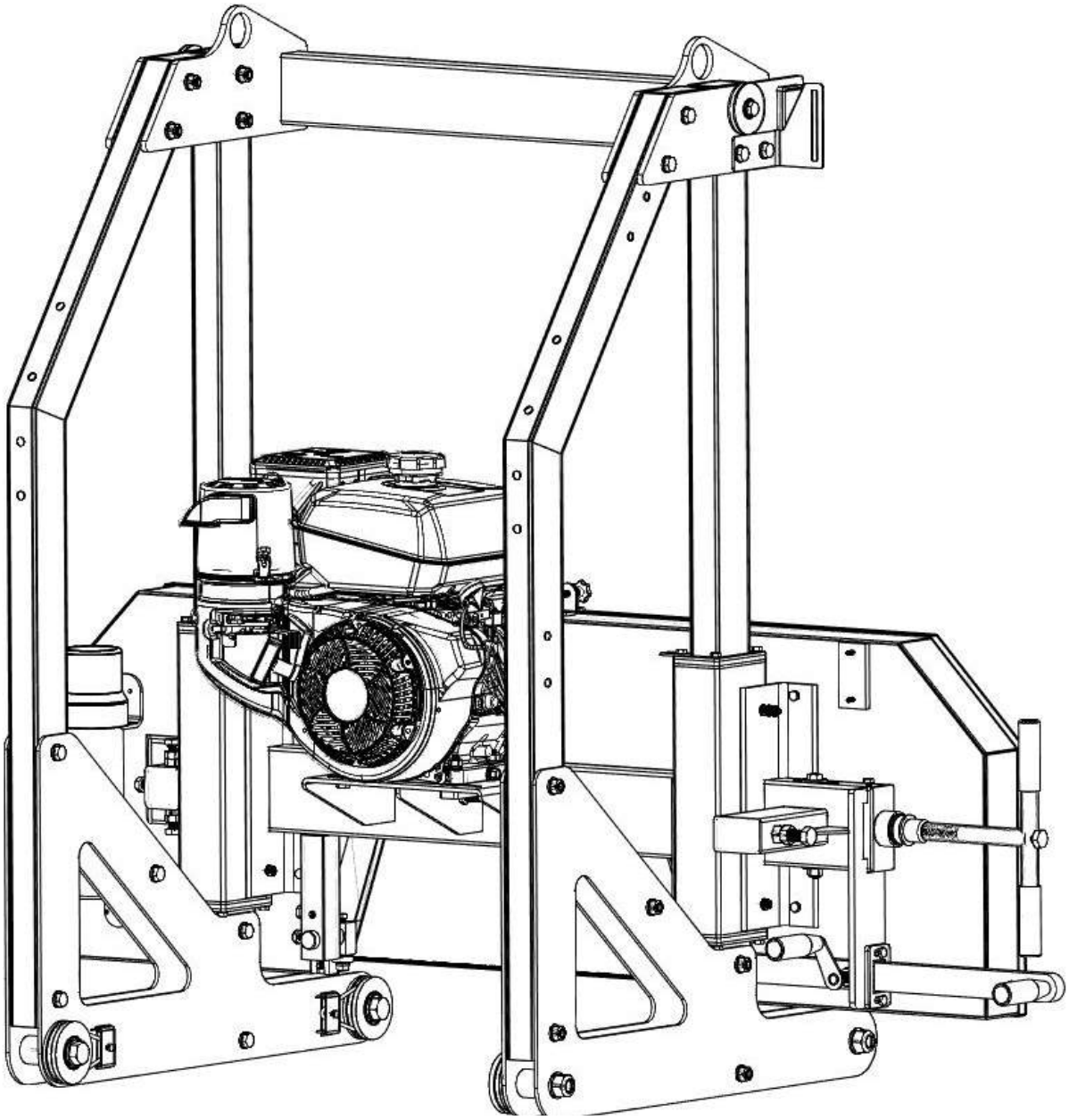
With the help of another person, stand the sawhead to its upright position.



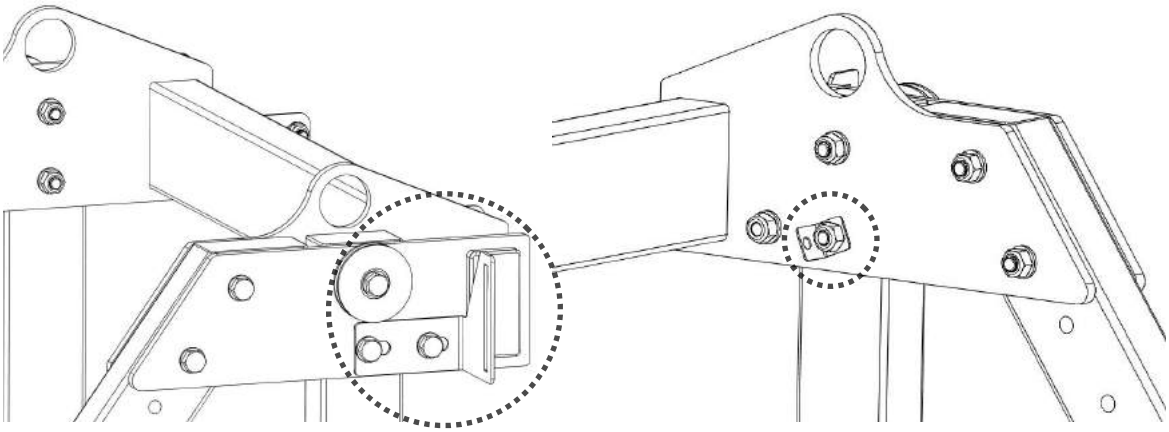
Attach the back posts between the plates using only 1 of the M12 x 80 bolts per side.



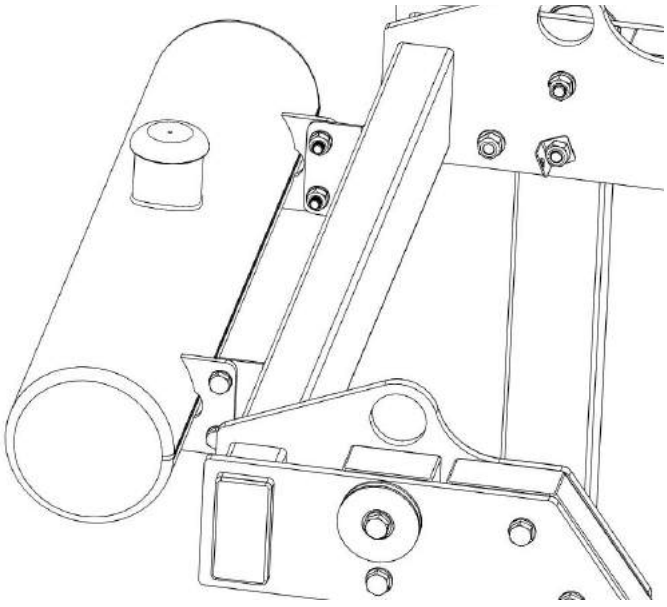
Using 7 of the M12 x 90 bolts and 2 of the M12 x 110 bolts (with the pulleys attached), with the help of another person attach the top cross support to the posts. Do not fully tighten these bolts at this time.



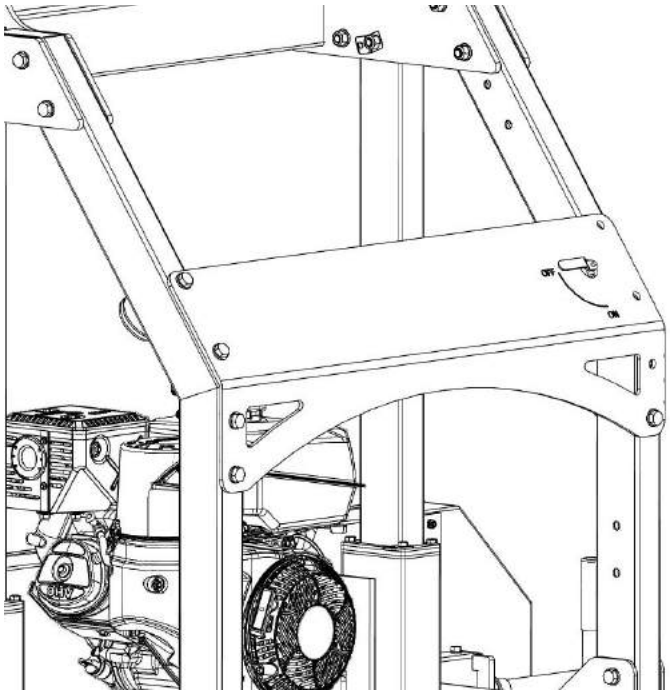
Be sure to attach the scale bracket and water line bracket as shown below.



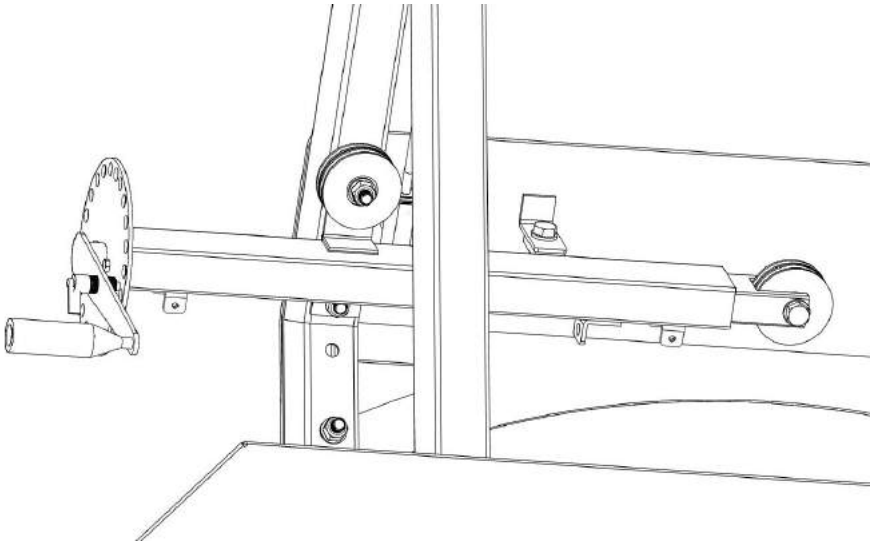
Attach the lubrication tank using the attached hardware as shown below.



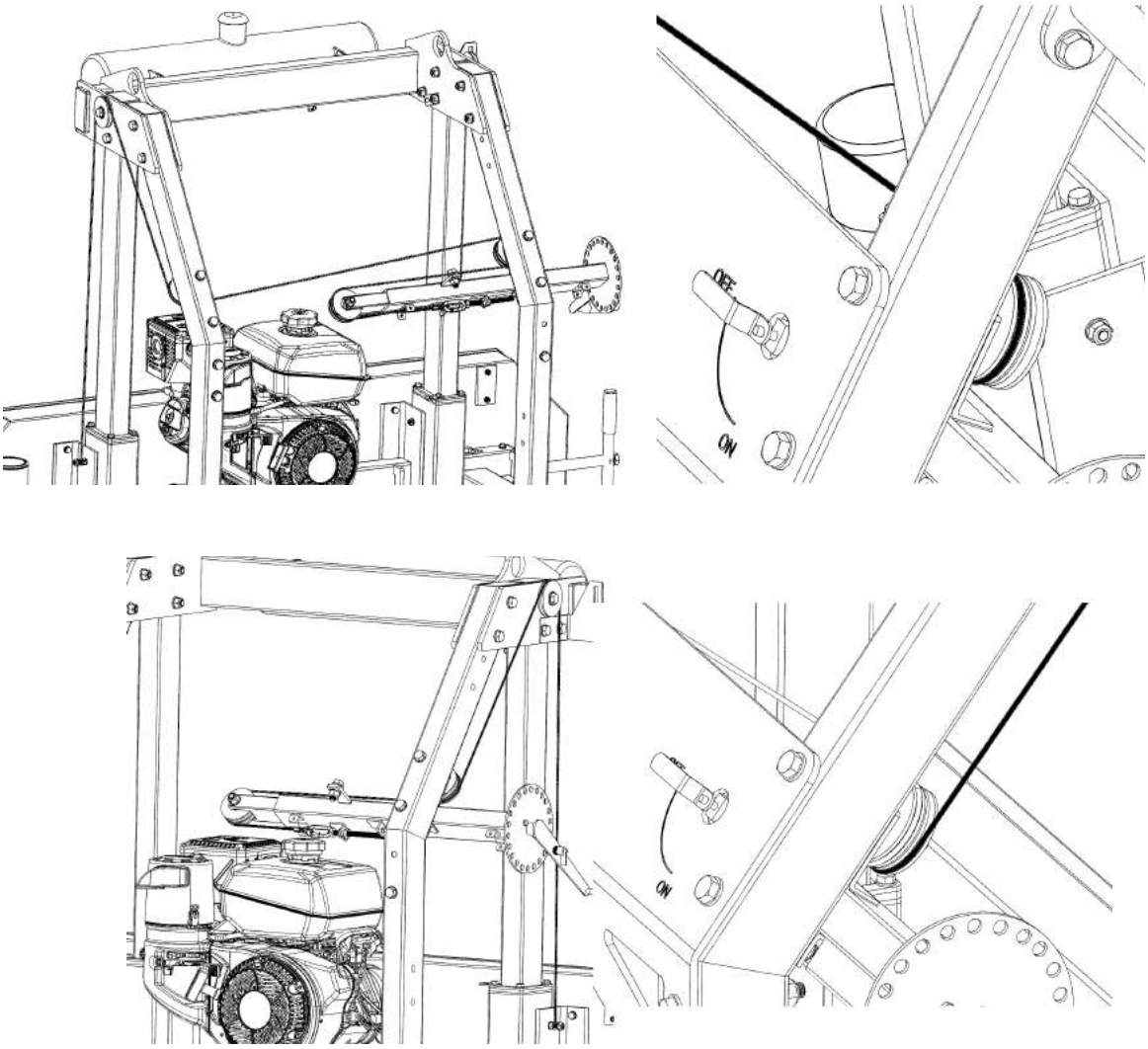
Attach the dashboard plate to the posts using 4 of the M12 x 100 bolts and the 1 M12 x 120 bolt with the roller attached as illustrated in the picture below. Do not fully tighten these bolts at this time.



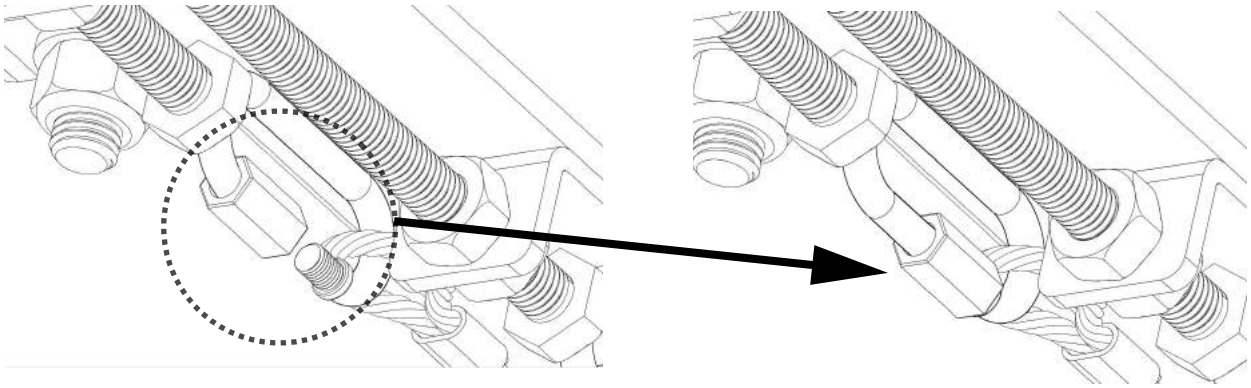
Attach the crank handle assembly to the underside of the angled post using the M12 x 140 bolt with double roller and 1 of the M12 x 110 bolts as illustrated below. Do not fully tighten these bolts at this time.



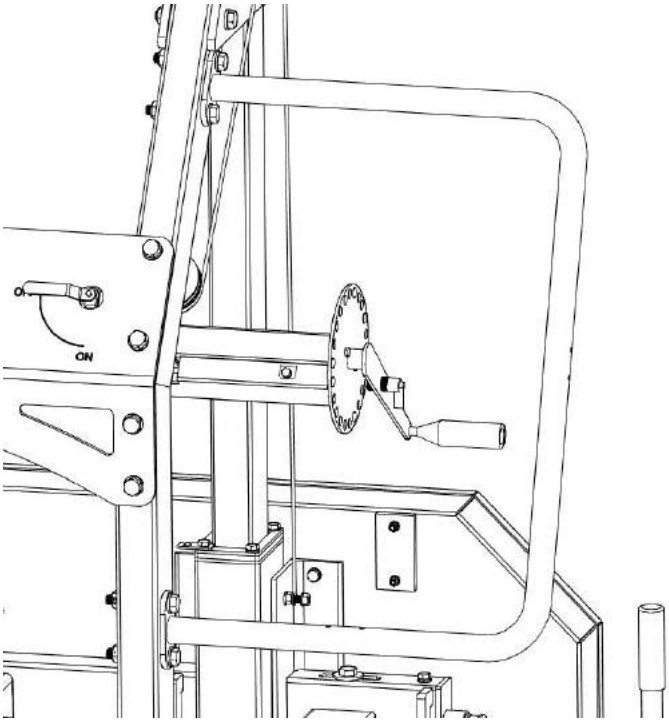
Route the cables as shown below.



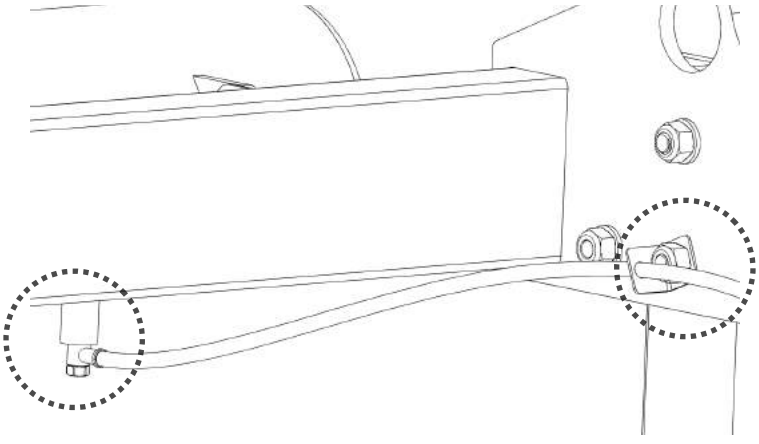
Be sure to tighten the oval chain link with a wrench after the cable loop ends have been attached.

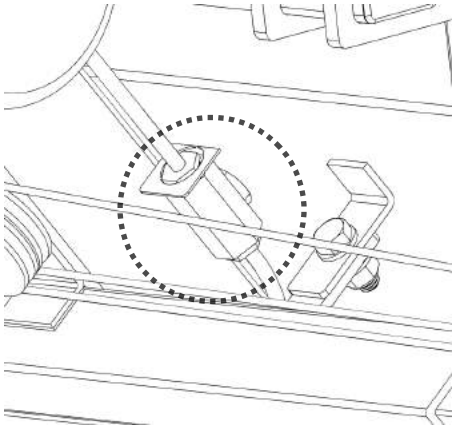


Attach the ‘D’ handle to the side of the post using all 4 of the M12x70 bolts, washers, and lock nuts as shown below. These bolts can be tightened.

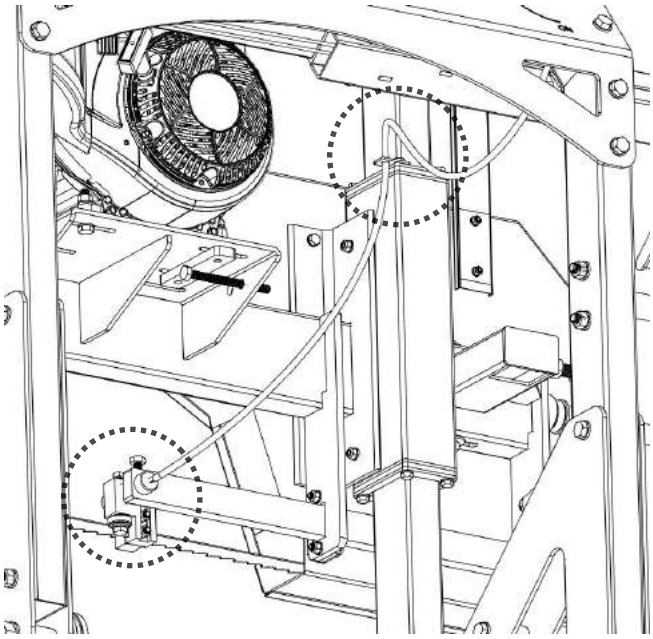


Insert the lubrication tube into the fitting on the tank by pushing the blue collar in at the same time the tube is inserted. Once inserted, release the blue collar and the tube will be secure. Feed the tube through the bracket as shown below. Attach the other end to the water valve.

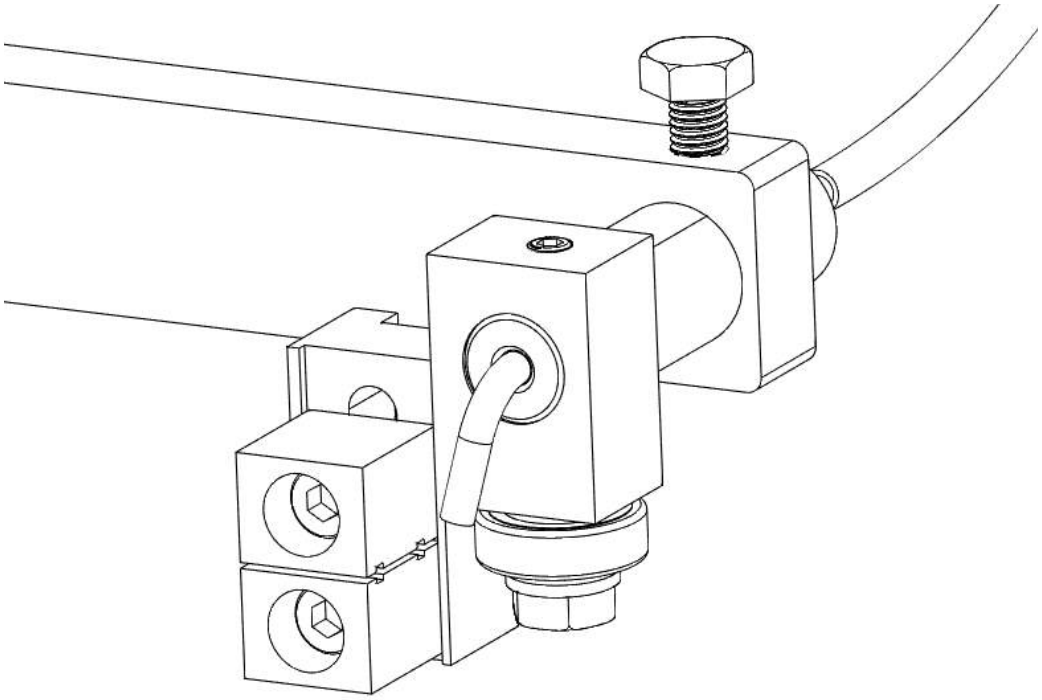




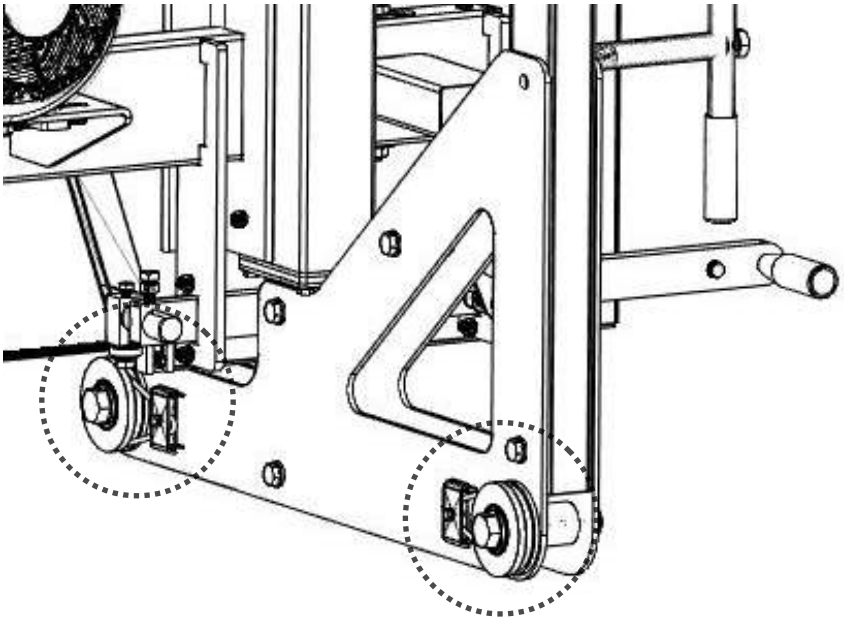
Attach the other lubrication tube from the valve on the dashboard and feed it through the water tube bracket and fit it over the end of the copper tube.

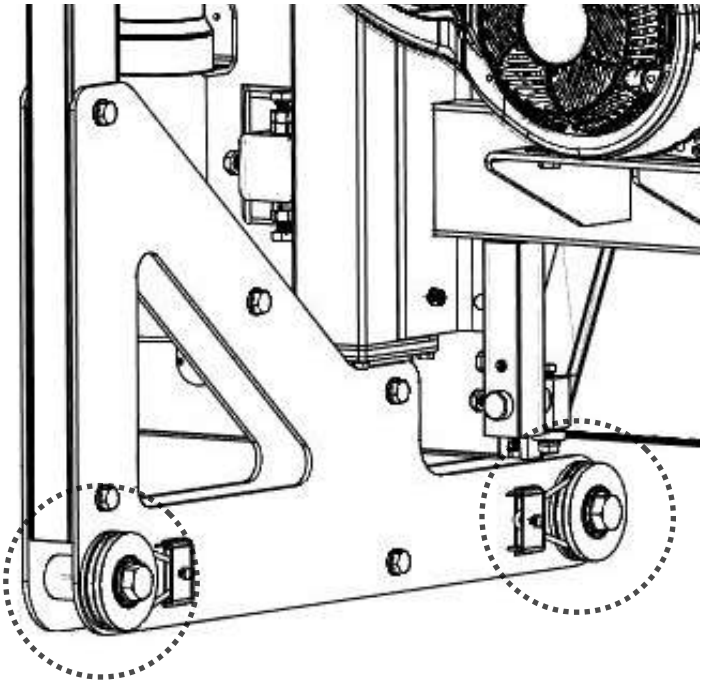


Insert the lubrication hose as shown below. Use a wrench to secure the copper end in position by tightening the bolt so that it lightly pinches the copper tube. Do not over tighten or crush the copper end.



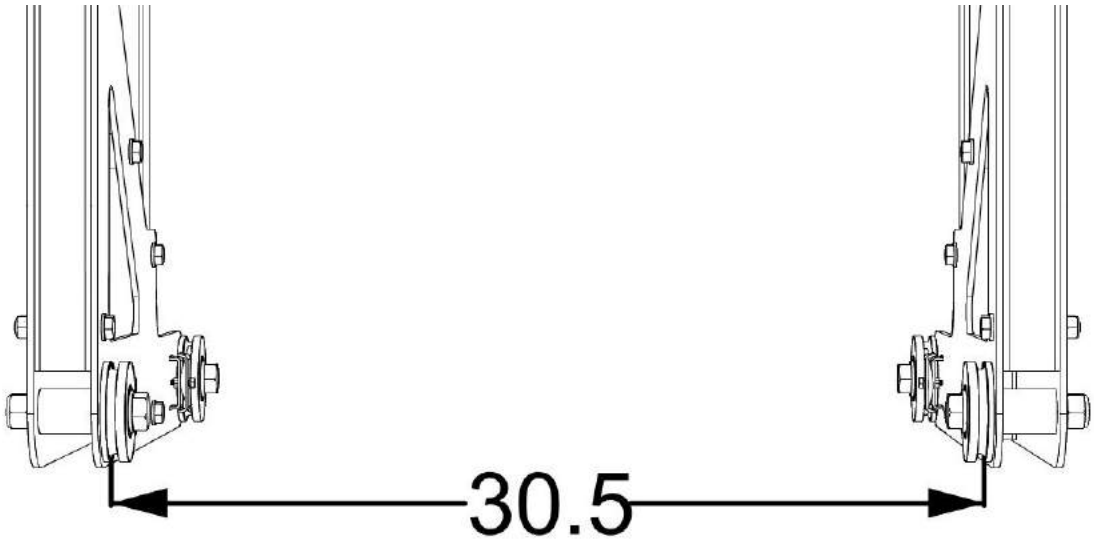
Tighten all 4 bolts that hold the wheels to the carriage plates as shown below.



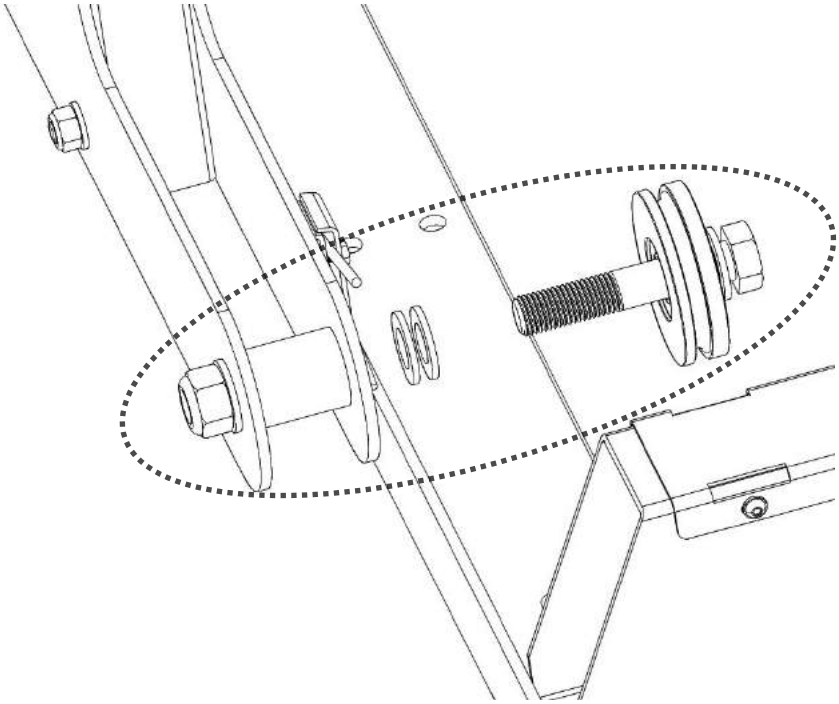


#5 – PLACING THE HEAD ON THE TRACK

Before placing the head on the track, the carriage wheel spacing can be set to ensure they will fit properly on the “L” rails. Check the wheel spacing to ensure that a distance of 30.5” (775mm) is measured from outside to outside of the wheel grooves as shown below.



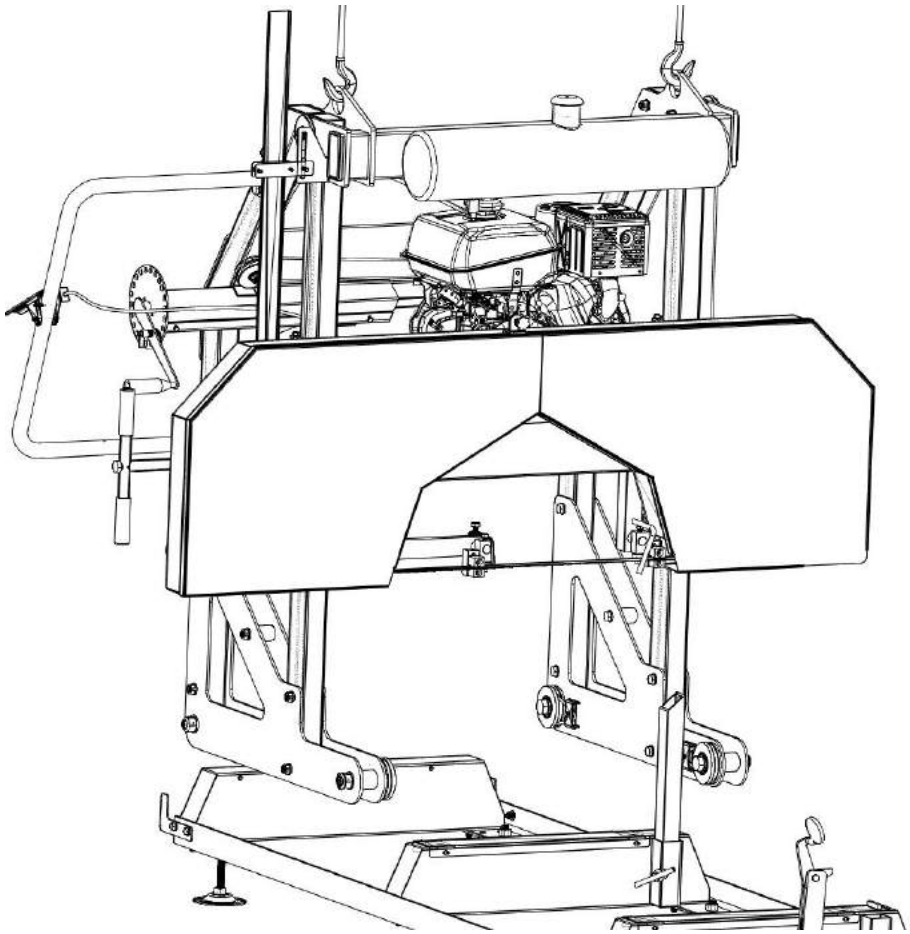
To adjust the width of the wheels, washers may be added or removed from each wheel to ensure a distance of 30.5” (775mm) is achieved as shown below.



There are two methods in which the sawmill head can be lifted onto the track assembly. 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 a true and square state.

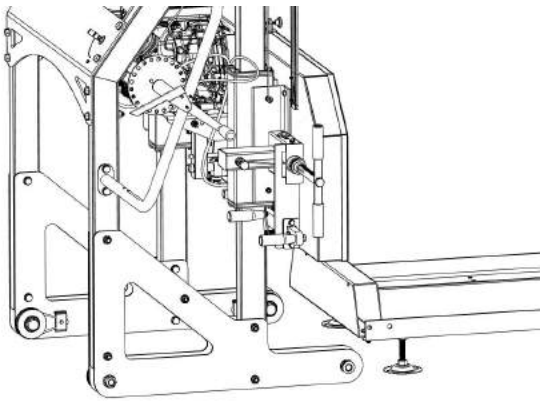
Method #1:

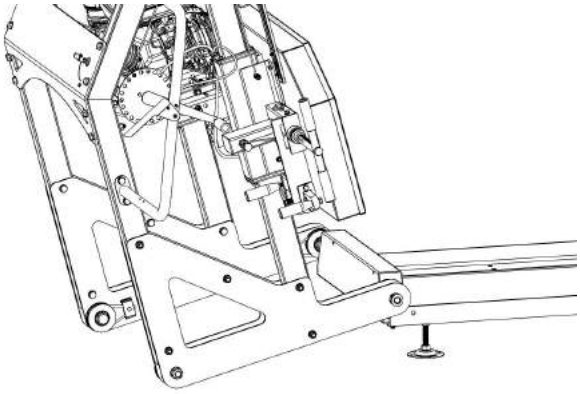
If a tractor or forklift is available, the head may be lifted onto the track with a lifting strap or chain rated for at least 1,000lbs / 450kgs. Attach the lifting strap/chain to the lifting hooks and pick the head up and rest it on the track so that the grooves in the carriage wheels fit around the “L” rails. Two people are recommended for this procedure.

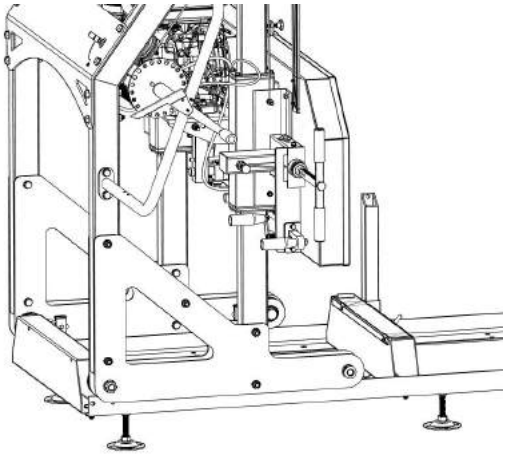


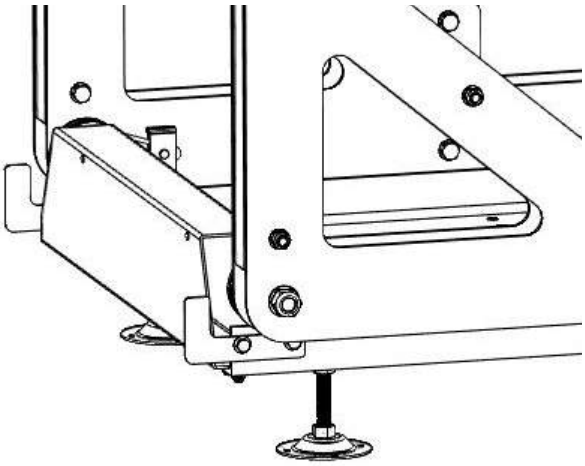
Method #2:

Two people are needed for this method. Start by removing the “L” shaped brackets on the end of the tracks. The head can be walked over to the track until it is positioned behind the track as shown below. Once in this position, the head can be tilted backwards so that the front two wheels are off the ground. The head can then be walked in place whereas the two front wheels rest it on the track so that the grooves in the carriage wheels fit around the “L” rails. Finally, two people can lift up on the back of the sawmill head and walk it forward so that two back wheels are situated on the track. Finally, the “L” shaped brackets can be re-attached to the track rails.





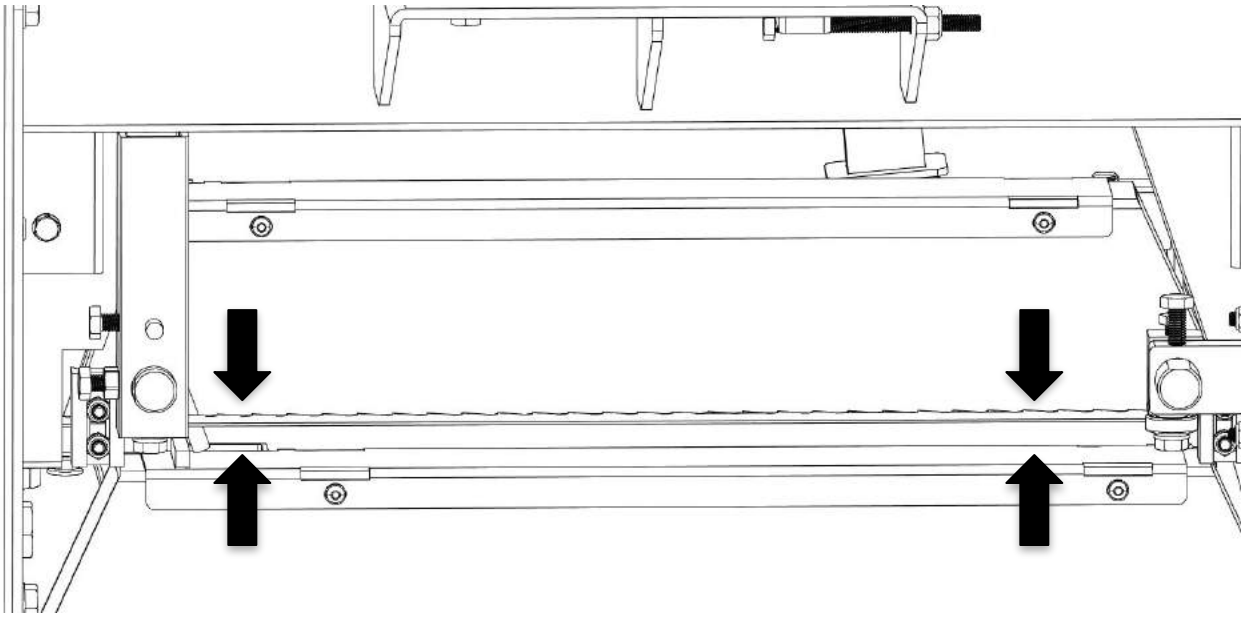


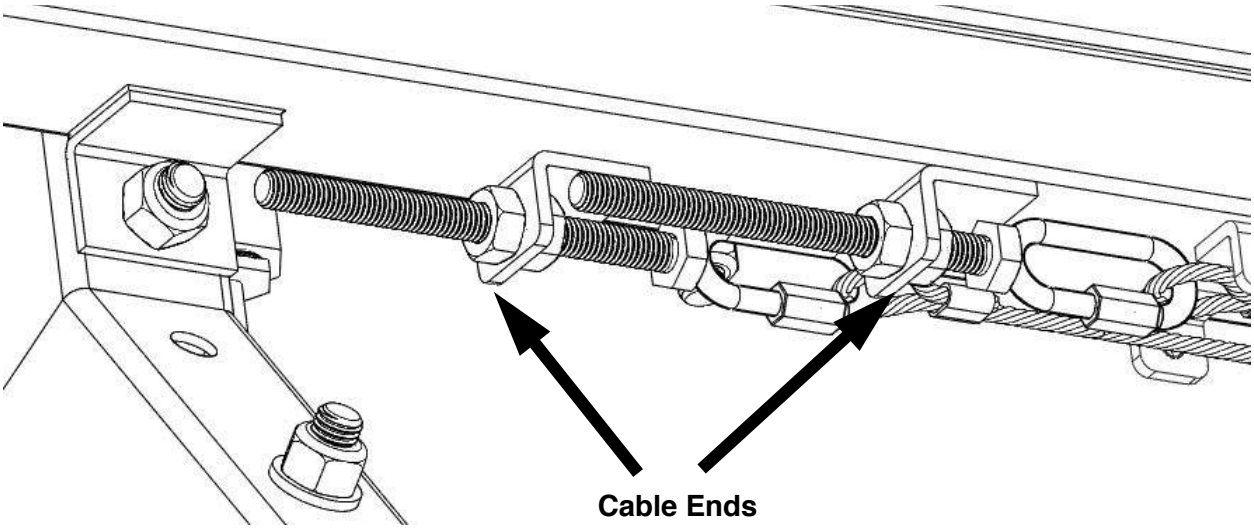


With the sawhead now resting on the track, all of the sawhead bolts may be tightened up.

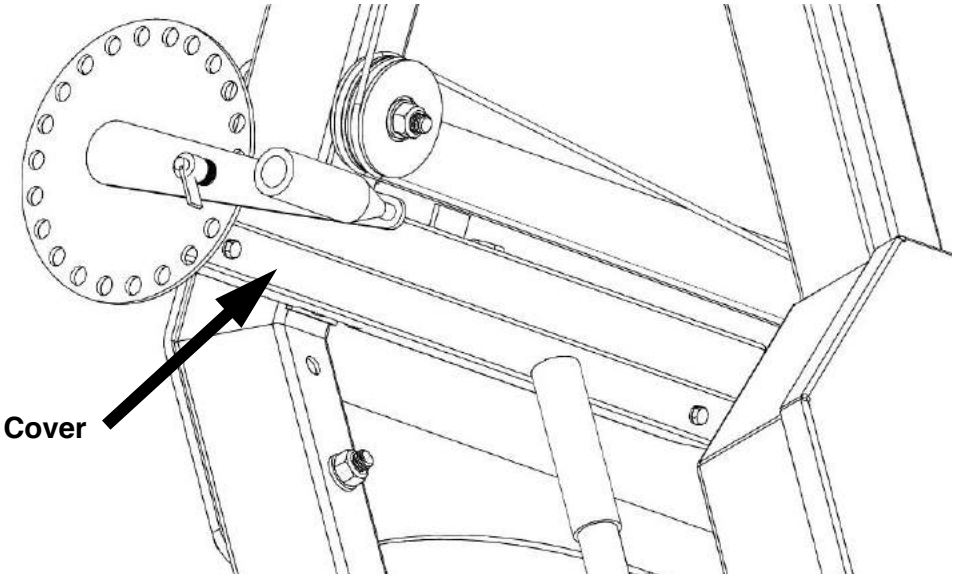
Using a tape measure, take a measurement from the blade to the top of the log bunk on both the left and right side. The distance should be equal on both sides. If it isn't, you will need to adjust the cable ends at the rear handle to either raise or lower one side. Refer to step below for adjustment instructions.

Using a 14mm socket, turn the nut either clockwise to raise one side of the saw head or counter-clockwise to lower one side of the saw head. Double check the blade height as discussed in the previous step. Once measurement is consistent on both sides, tighten the corresponding nut to clamp securely against tab.

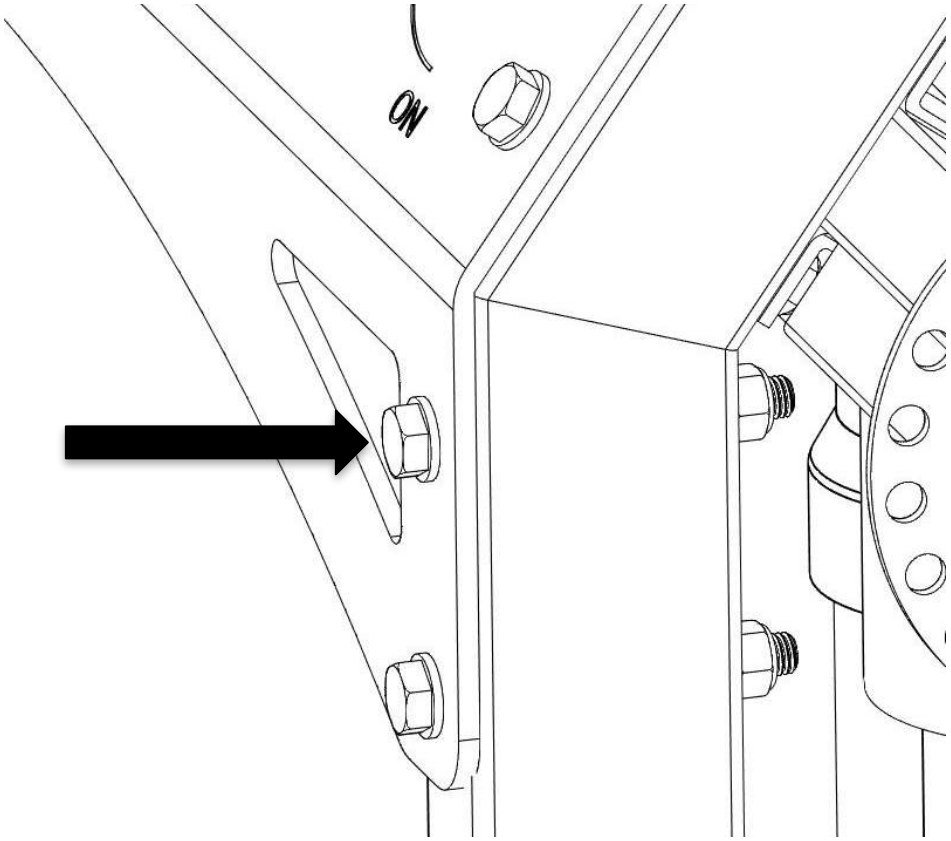




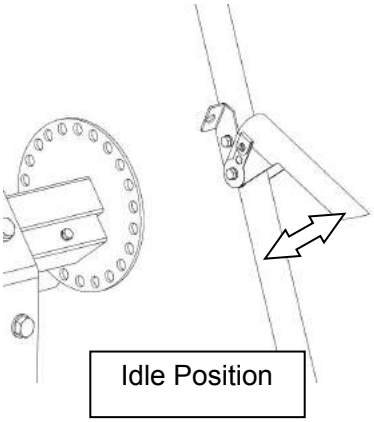
Install the cover and tighten the two bolts on the top and two on the bottom to secure it in place. Use a 10mm socket for all four bolts.

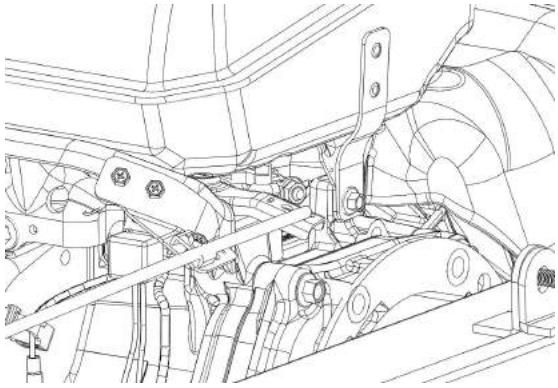


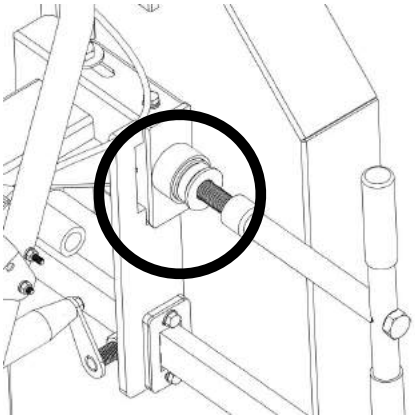
Install the last M12x100 bolt into the dashboard.

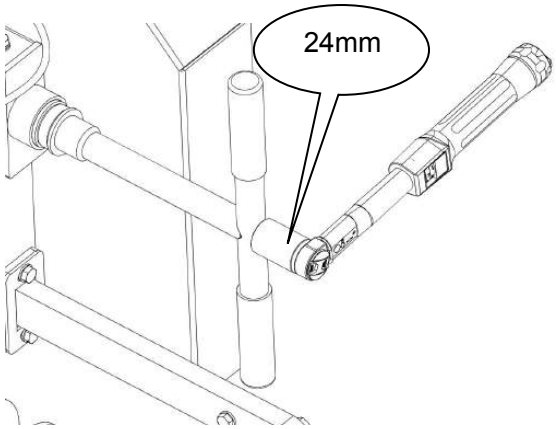


Install the throttle handle to the round bar as shown in below left image. With the throttle lever in the idle position/fully open, pull the cable tight at the engine and tighten the screw to hold it in place. This will take all of the slack out of the cable.





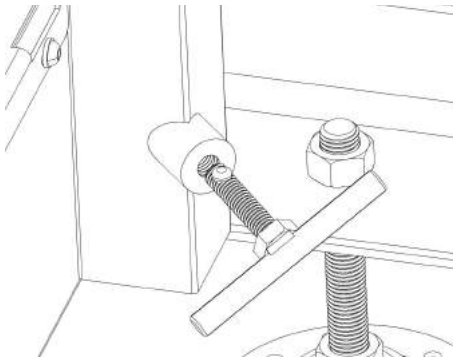




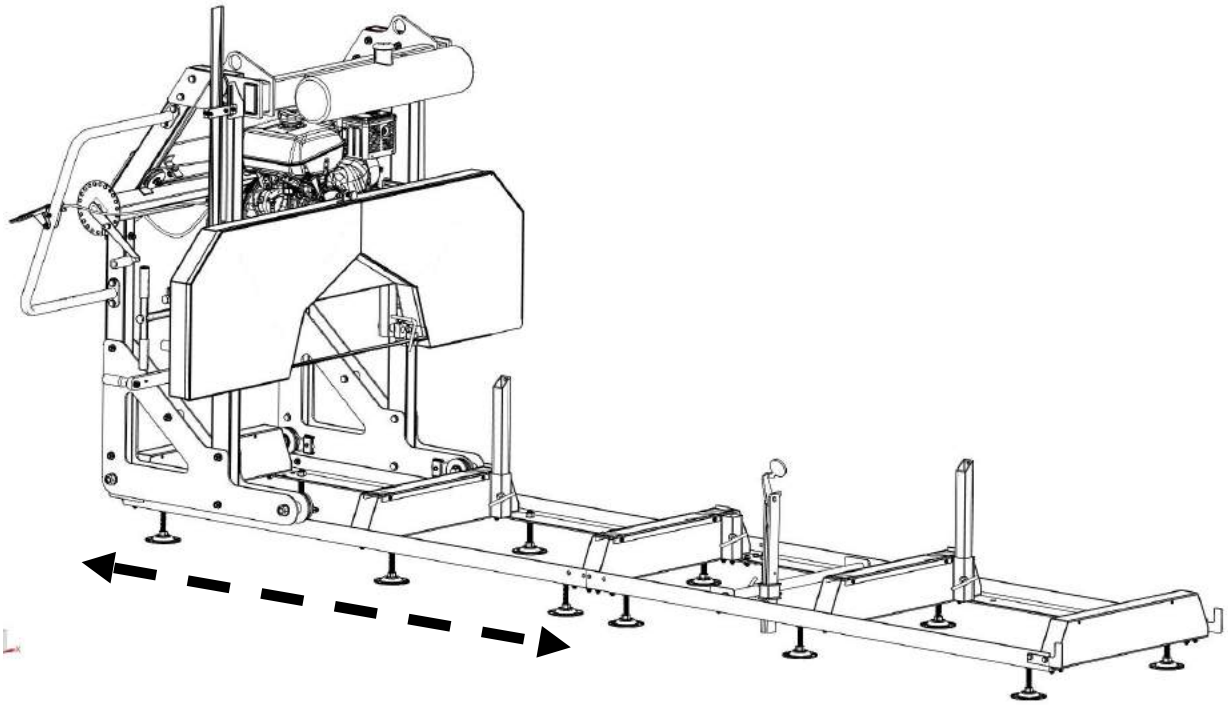
Add waterproof grease to the threads of the blade tension “T” handle and to the washer face that it meets before use. Proper blade tension is achieved when a 24mm socket is used on a torque wrench to tighten the “T” handle to 35 ft-lbs torque. See above right image.

Note – It is very important to take the tension off of 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 next use.

Add grease to all “T” handle threads on the sawmill.

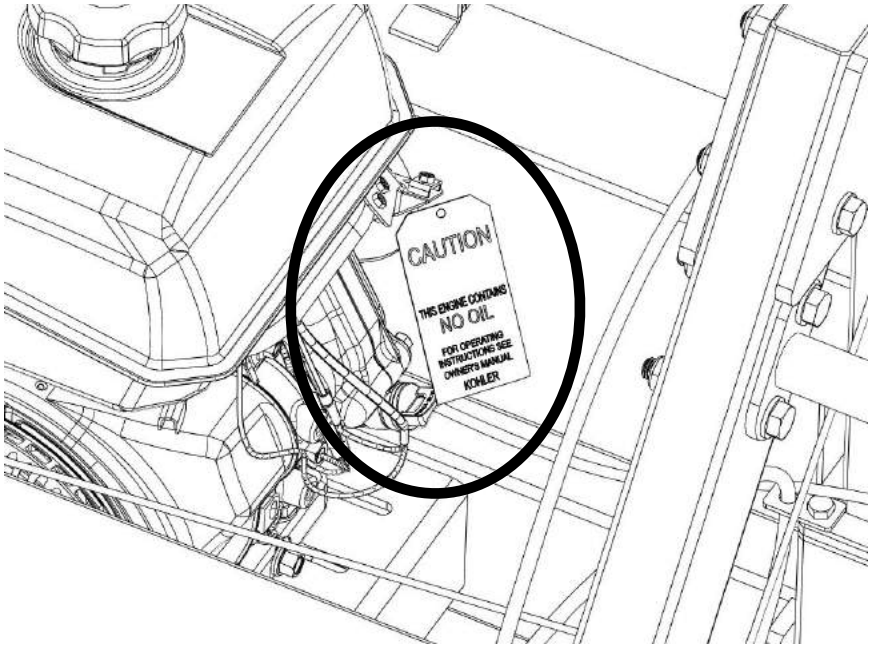


Push the saw head up and down the track system to ensure that the width of the track allows for the saw head to move freely. If it binds or feels tight, the carriage wheel spacing can be adjusted again by adding or removing washers.

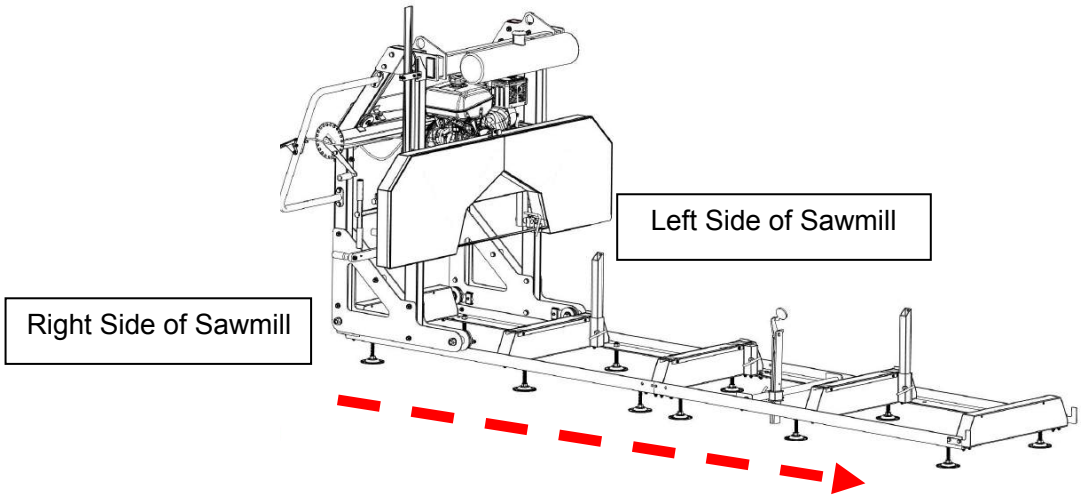


#6 – ENGINE

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.



Always cut in the direction shown above. The log clamp should always be on the right side of the log and the log supports should always be on the left. Failure to cut in this direction can cause the log to come loose and possibly even cause damage or injury.



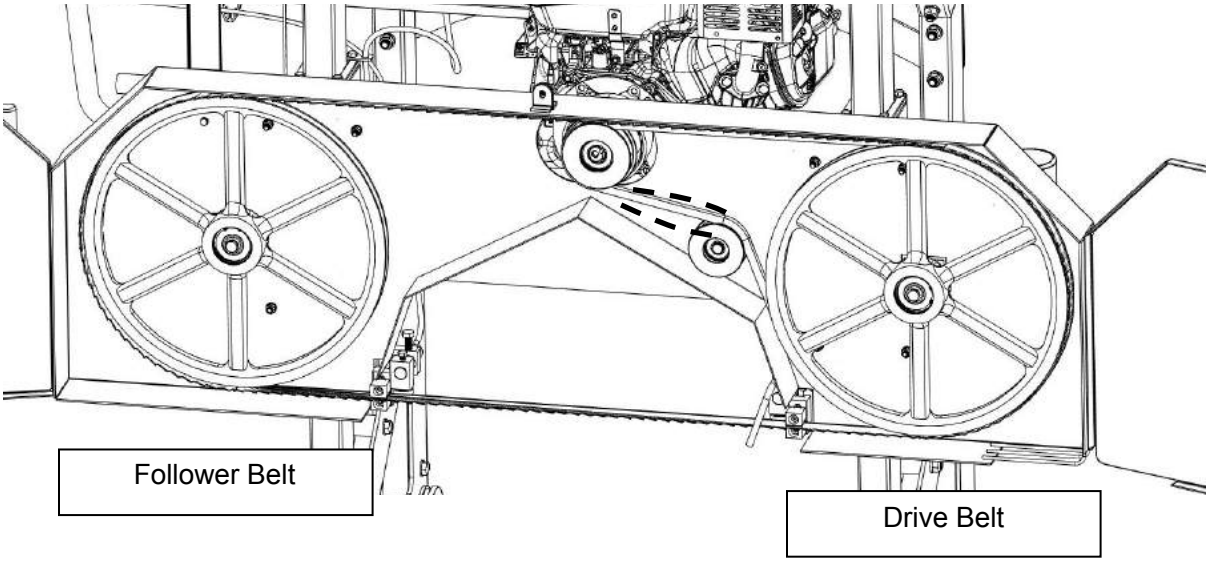
Now that your sawmill is assembled, please run through the "SAWMILL SET-UP PROCEDURES" in the following section. Failure to do so may result in poor sawing performance, damage or injury. See next page.

SAWMILL SET-UP PROCEDURES

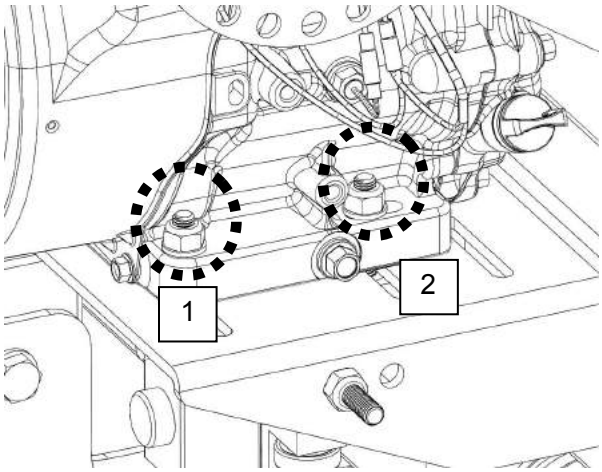
#1 – BELT TENSION

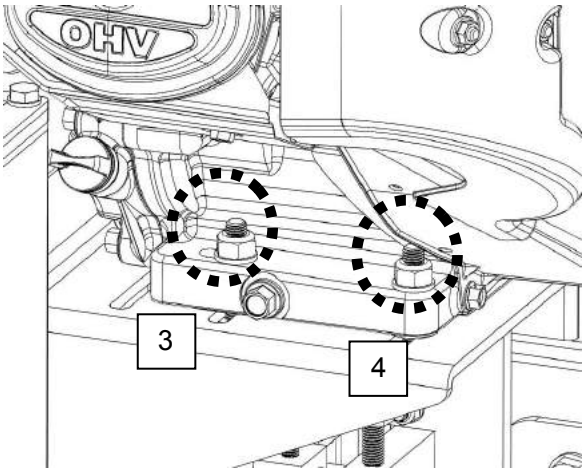
Follower Belt – This is a polyurethane belt and will be seated tightly in the bandwheel vee groove. No adjustment is required for this belt.

Drive Belt - To check the belt tension, with your hand, firmly try to deflect the belt up and down. There should be no more than 1/4” of deflection. If the belt deflects more than this, it will need to be tightened as described below.



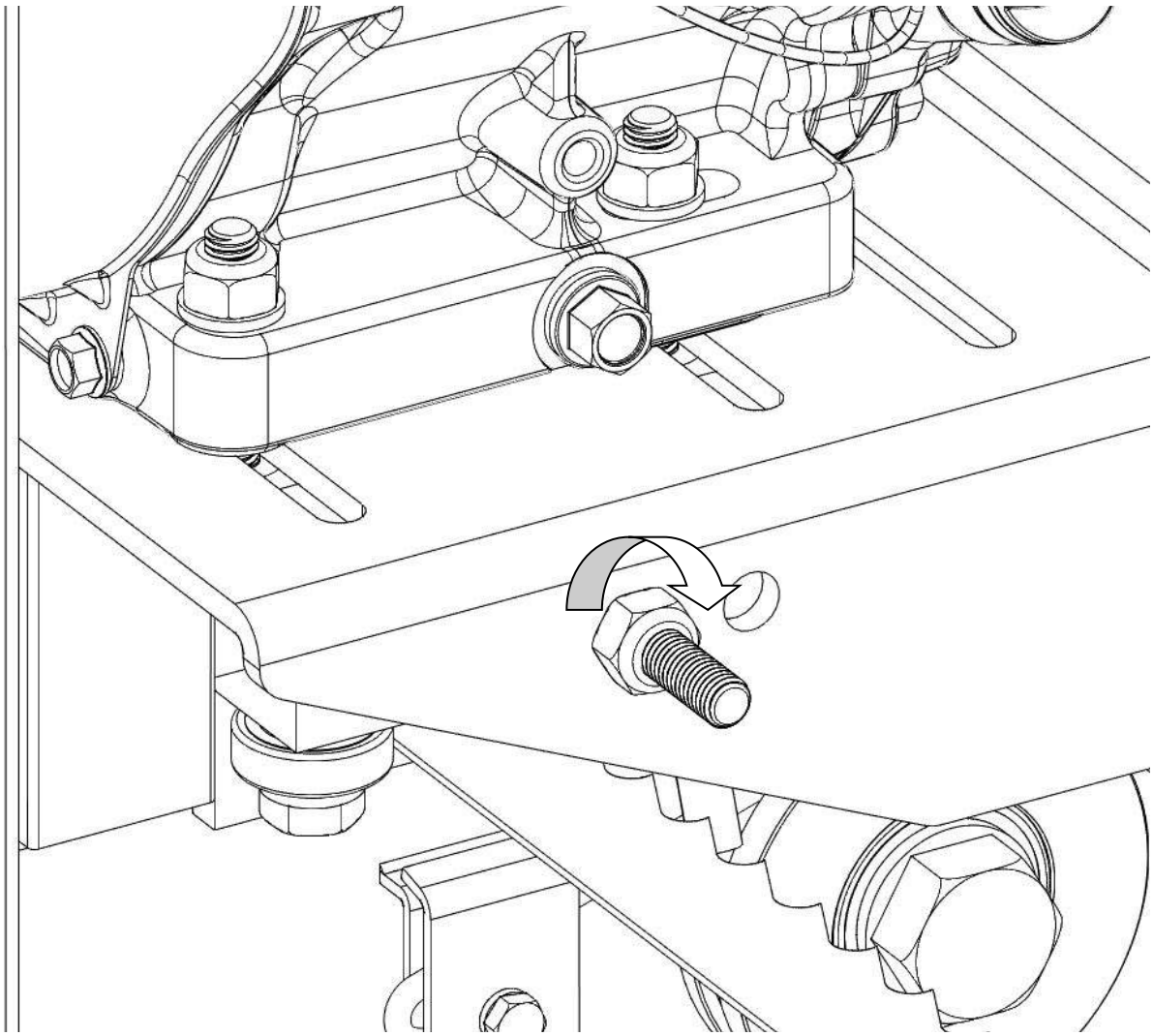
To tighten the drive belt, start by loosening the four bolts that secure the engine to the engine mount.





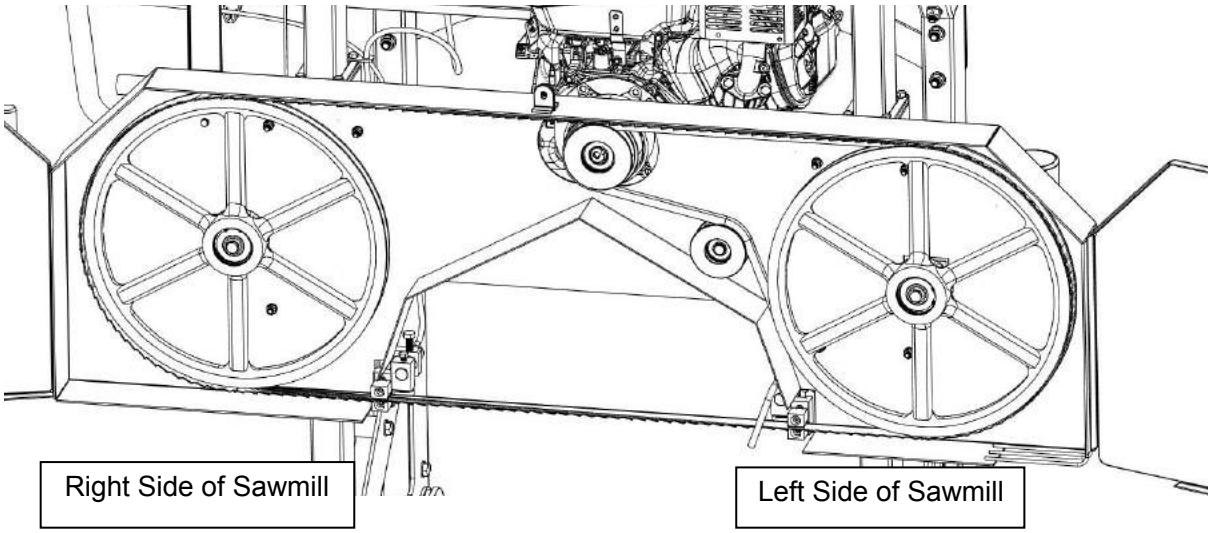
Now that the engine is free to slide on the engine mounting plate, turn the nut on the horizontal stud in the clockwise direction. This will pull the engine towards the stud and apply more tension on the belt. Do this step incrementally while checking the belt for proper deflection. It is also important to ensure that the engine remains perpendicular to the drive belt. Over tightening can cause the engine to twist on the mounting plate, resulting in belt alignment issues and premature wear. Once the desired belt tension is set, tighten the four engine bolts.

Alternatively, if the drive belt is too tight, the nut on the horizontal stud can be turned counter-clockwise.

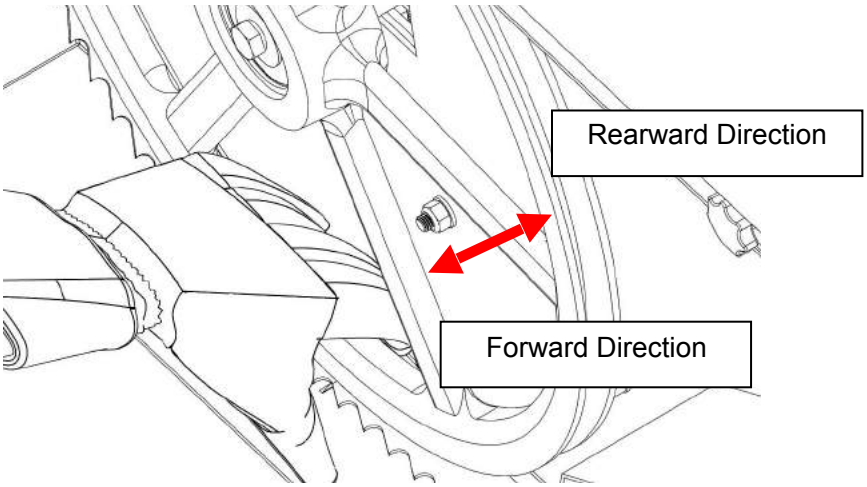


#2 – BLADE TRACKING

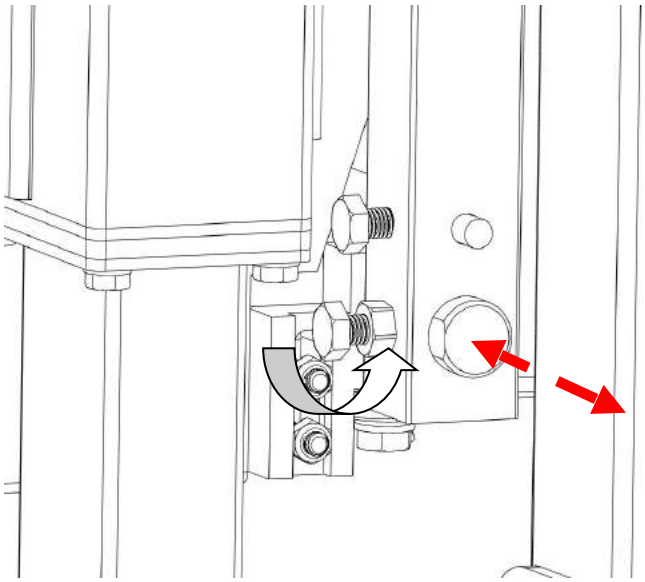
Never attempt the below with the engine running. As a safety precaution, remove the spark plug cap. It is also advised to wear gloves and safety glasses when working with the blade as it is extremely sharp.



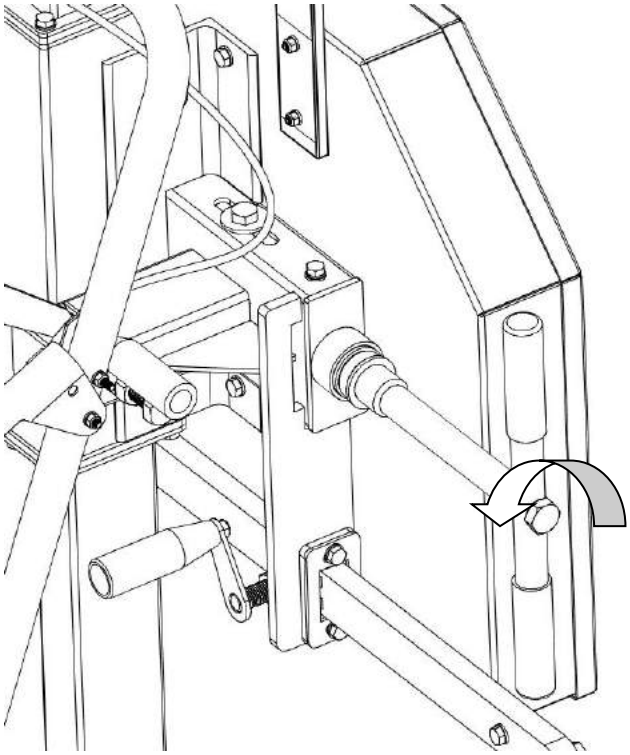
The blade should run with the same tooth to bandwheel face distance on both sides. 3/8” is ideal. The back of the blade will be flush with the back of the bandwheel at this distance and is a quicker check than measuring with a tape measure. If an adjustment on either side is required, the below steps will detail this procedure.



Loosen the blade guide assembly bolt with a 16mm socket. The round shaft should now be free to slide rearward and out of the way. Perform this step on both guide assemblies. This will ensure that the guide bearings do not influence tracking of the blade while adjusting.

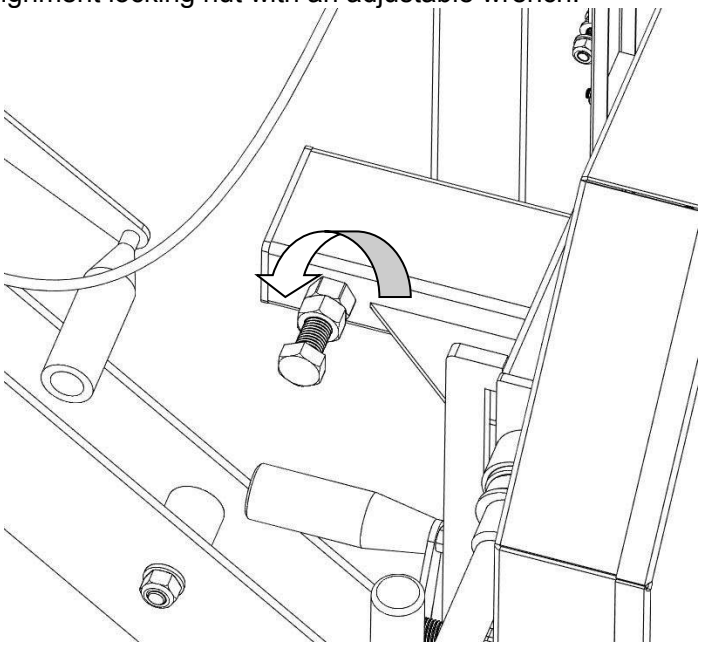


Take some tension off of the blade by turning the “T” handle in the counter-clockwise direction one full turn from full tension position.

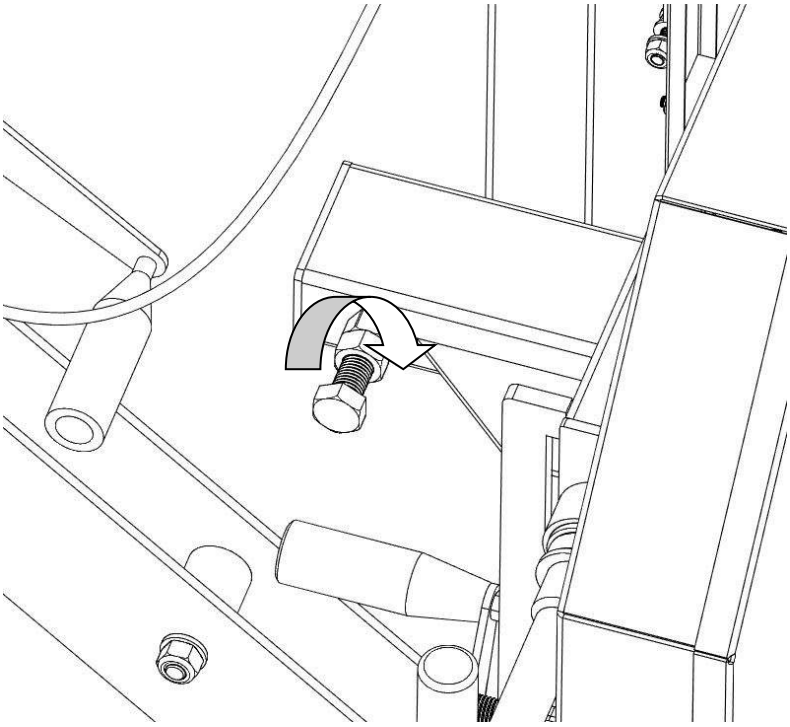


Adjusting The Right Hand Side

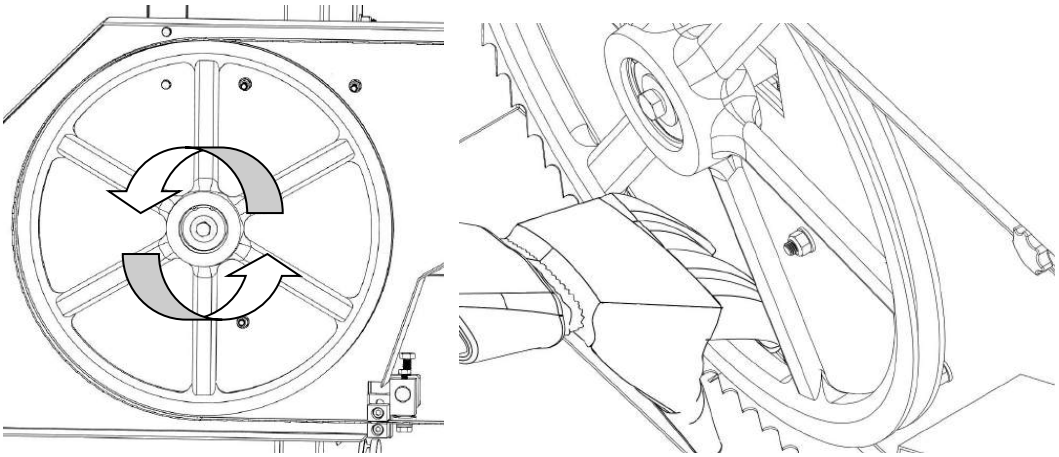
Loosen the tracking alignment locking nut with an adjustable wrench.



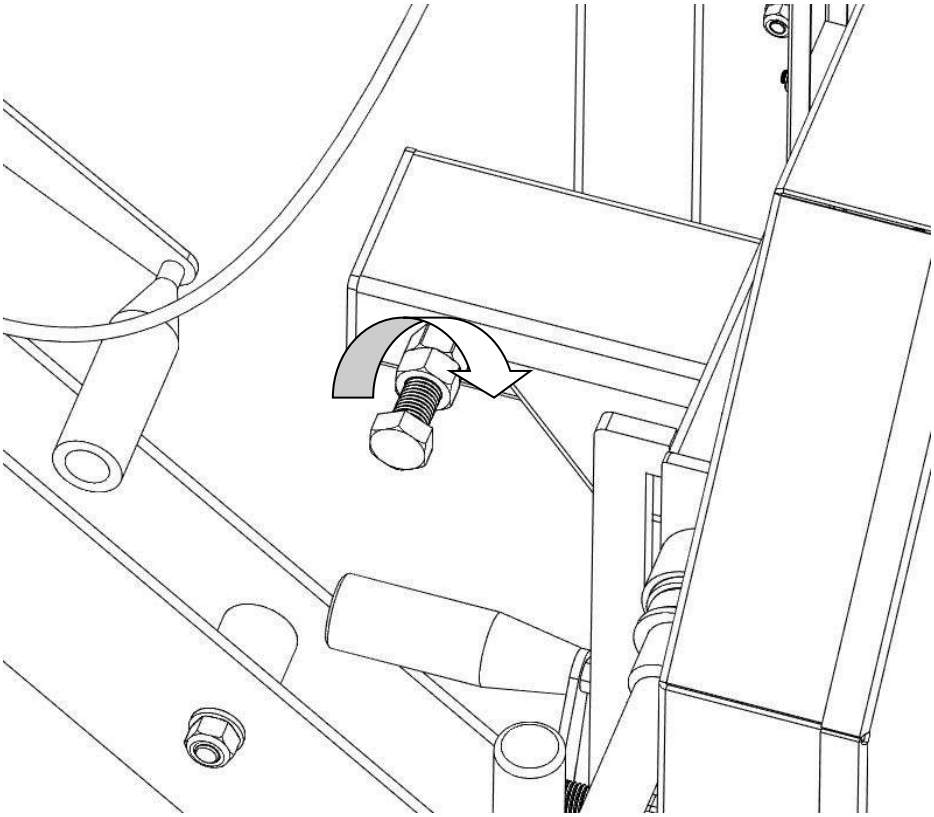
The alignment bolt can now be turned to change the angle of the bandwheel and track the blade. To move the blade more rearward on the bandwheel, this bolt will need to be turned clockwise. Alternatively, turning the bolt in the counter-clockwise direction would force the blade to run more forward on the bandwheel. Turn the bolt a 1/2 turn and re-tension the blade.



Tighten the blade tension back to 35 ft-lbs. Wearing gloves, spin the bandwheel with your hand and observe how the blade has changed tracking. Measure the distance again and repeat the above step to further compensate if required. The ideal measurement is 3/8” or check for the back of the blade to be flush with the back of the bandwheel.

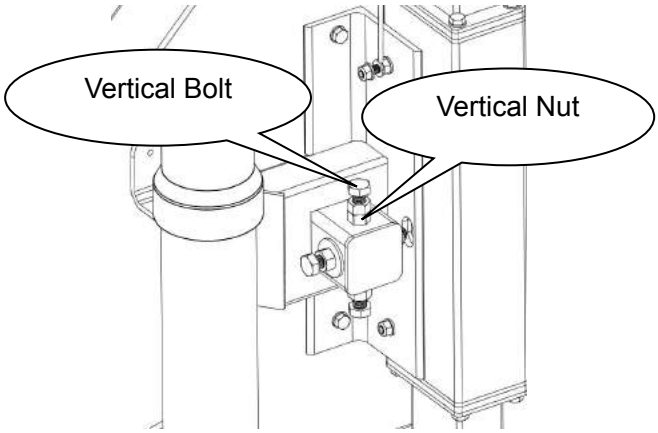


Once satisfied with the measurement, tighten the locking nut clockwise.



Adjusting The Left Hand Side

To adjust the left side of the sawmill, again start by taking the tension off of the blade by turning the "T" handle one turn in the counter-clockwise direction. Using a 17mm wrench, loosen the "***vertical nut***" a ½ turn. Next, loosen the ***"vertical bolt"*** a ½ turn. This will take the clamping force off of the bandwheel shaft caused by these two bolts and allow it to move freely in the following steps.



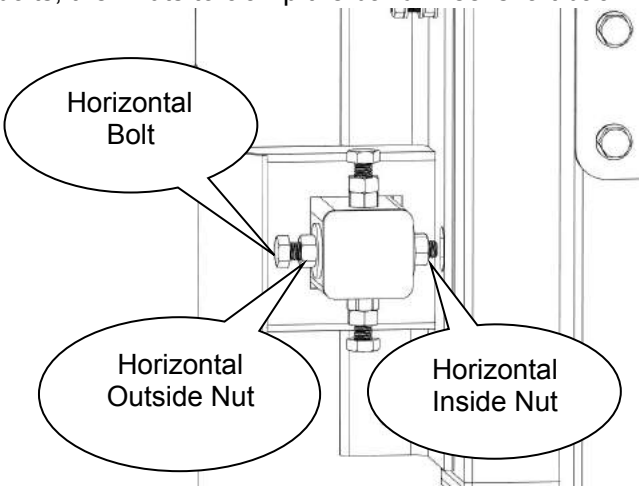
Moving the Blade Forward

Using a wrench, hold the ***"horizontal bolt"*** stationary with a wrench and turn the ***"horizontal inside nut"*** counter-clockwise a ½ turn. Still holding the ***"horizontal bolt"*** stationary, turn the ***"horizontal outside nut"*** clockwise a ½ turn. This has now shifted the ***"horizontal bolt"*** and bandwheel shaft, causing the blade to track more forward.

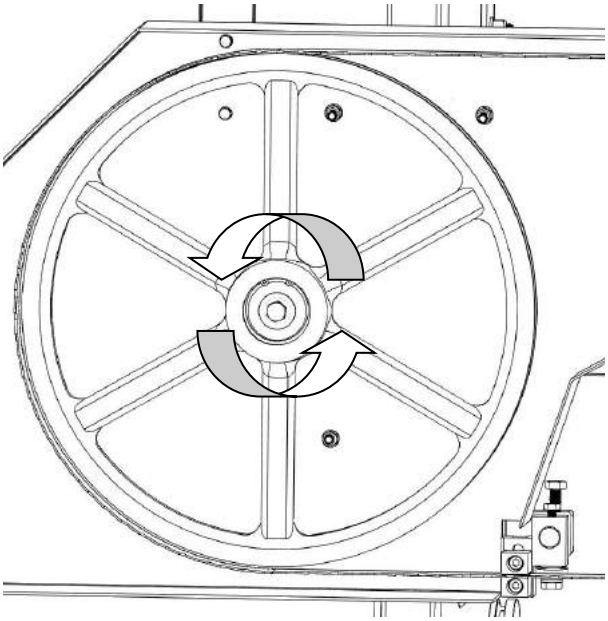
Moving the Blade Rearward

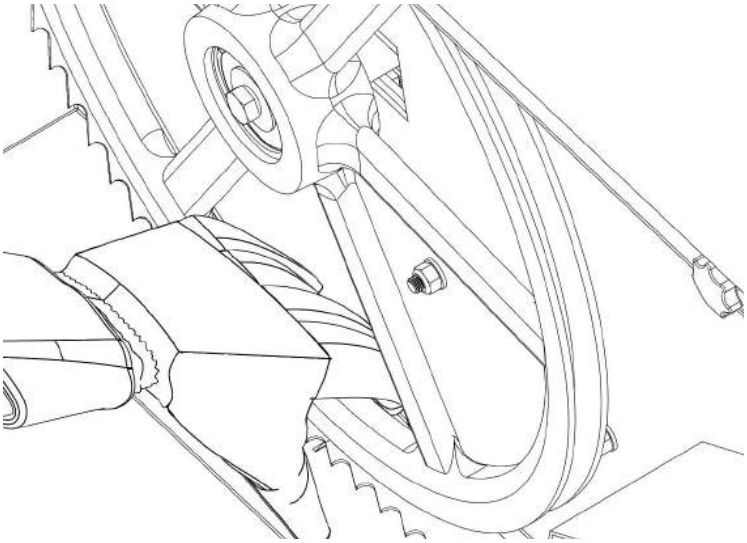
Using a wrench, hold the ***"horizontal bolt"*** stationary with a wrench and turn the ***"horizontal outside nut"*** counter-clockwise a ½ turn. Still holding the ***"horizontal bolt"*** stationary, turn the ***"horizontal inside nut"*** clockwise a ½ turn. This step has now shifted the ***"horizontal bolt"*** and bandwheel shaft, causing the blade to track more rearward.

Tighten the vertical bolts, then nuts to clamp the bandwheel shaft back into vertical position.



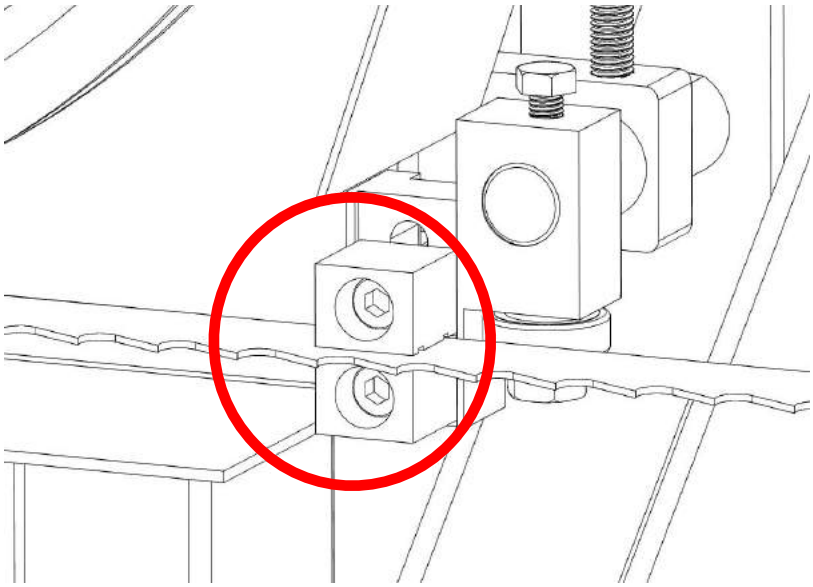
Re-tension the blade by turning the “T” handle a full turn in the clockwise direction (to achieve 35 ft-lbs). Wearing gloves, spin the bandwheel with your hand and observe how the blade has changed tracking. Measure the distance again and repeat the above step to further compensate if required. The ideal measurement is 3/8” or check for the back of the blade to be flush with the back of the bandwheel. Once the blade is tracking true, bring the blade guide assemblies back up to the blade. Keep a paper width distance between the blade guide bearing and the back of the blade. More information on this set up can be found in the next section – ***”BLADE GUIDE ADJUSTMENT”***



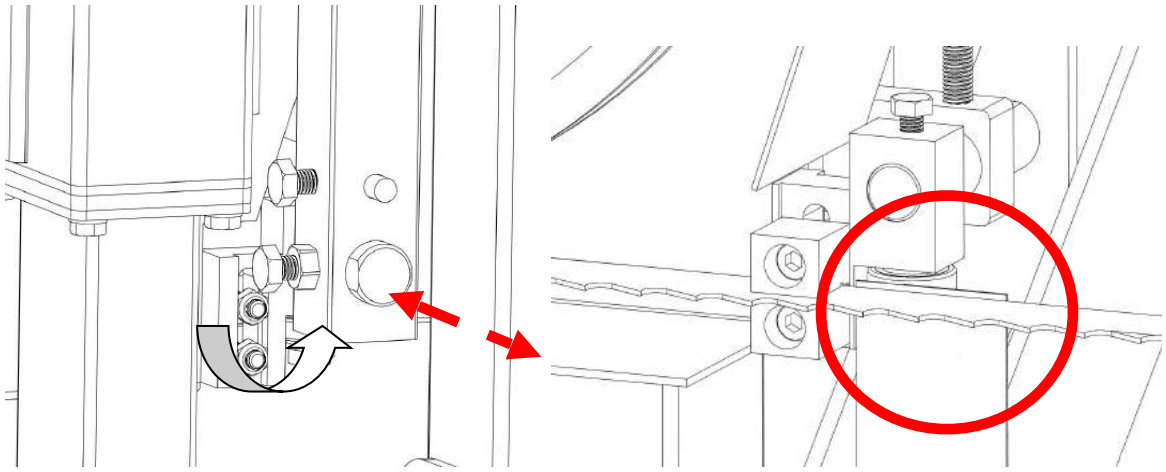


#3 – BLADE GUIDE ADJUSTMENT

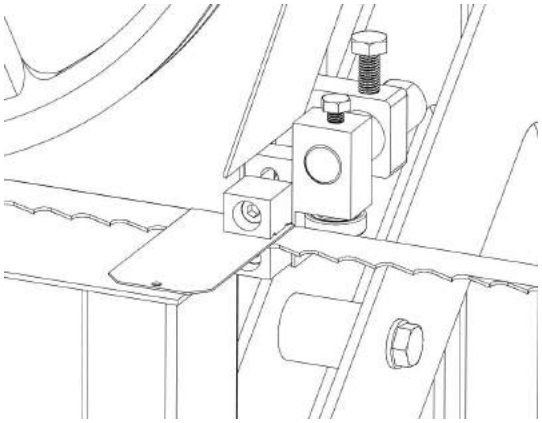
Never attempt the below with the engine running. As a safety precaution, remove the spark plug cap. It is also advised to confirm that the blade is tracking properly before performing the below. Blade tracking is covered in the previous page. Using a 6mm allen key, loosen the blade guide blocks on both the left and right sides. They should be free to slide up and down.



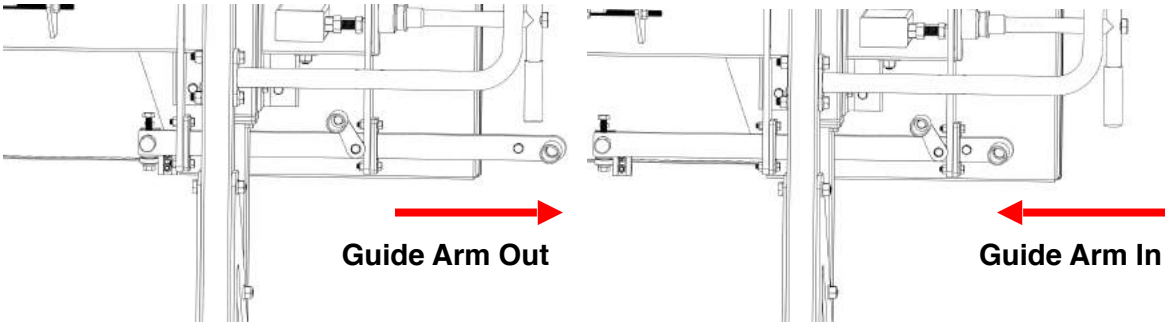
Loosen the blade guide assembly bolt with a wrench. The round shaft should now be free to slide back and forth. Position it so that there is a paper width gap between the bearing and the back of blade. Tighten bolt against the flat on the shaft to secure assembly back in position.



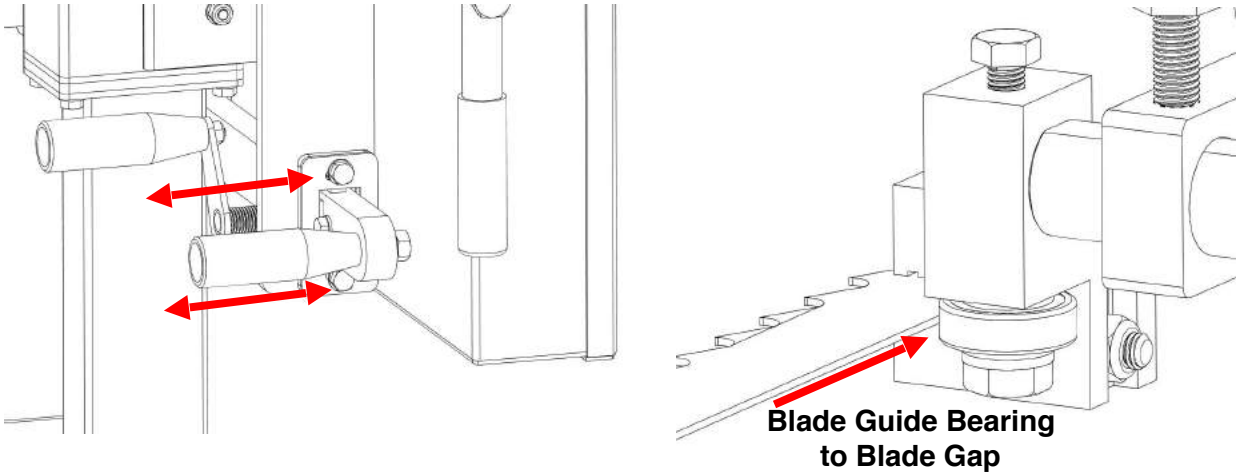
Using a thick piece of paper (0.020”/0.5mm) in between the blade and blade guide blocks, tighten the allen key bolts.



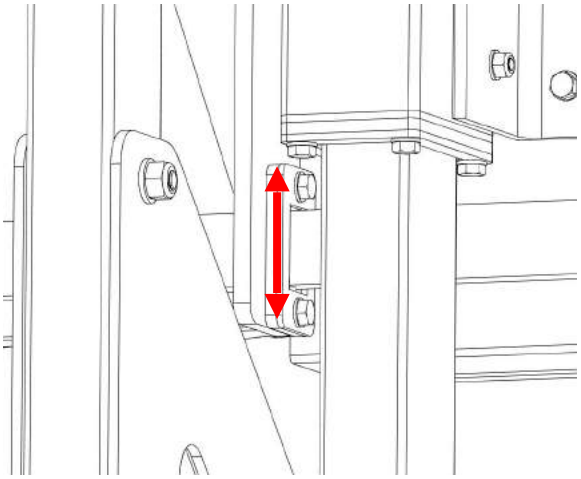
After the guide blocks and guide rollers are set, slide the adjustable blade guide in and out while noting the blade guide bearing to blade gap and the guide block to blade gap. If either of these gaps change while sliding the adjustable arm in and out, the guide angle can be adjusted as detailed in the below steps.

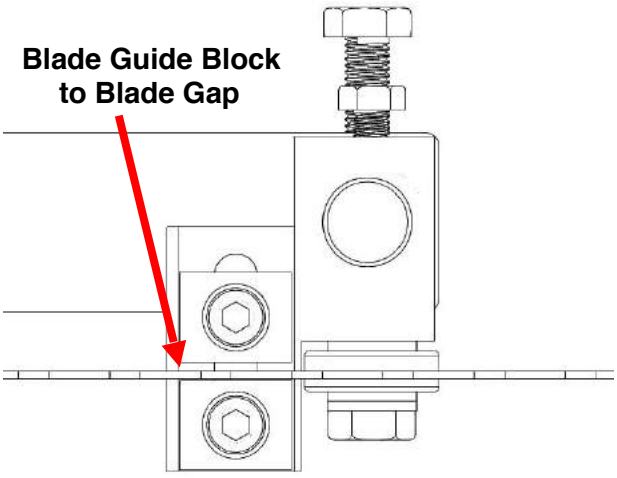


If the blade guide bearing to blade gap needs to be adjusted, loosen the bolts shown below and move the arm in or out to align it to be parallel to the blade. Once the bearing is parallel to the blade through the entire movement of the adjustable guide arm, the two bolts can be tightened again.



If the blade guide blocks to blade gap needs to be adjusted, loosen the bolts shown below and move the arm up or down to align them to be parallel to the blade. To check for parallelism, slide the guide arm all the way out and all the way in, noting the blade guide block to blade gap. Once the blocks are parallel to the blade through the entire movement of the guide arm (sliding in and out), the two bolts can be tightened to lock the guide arm in the proper alignment position.

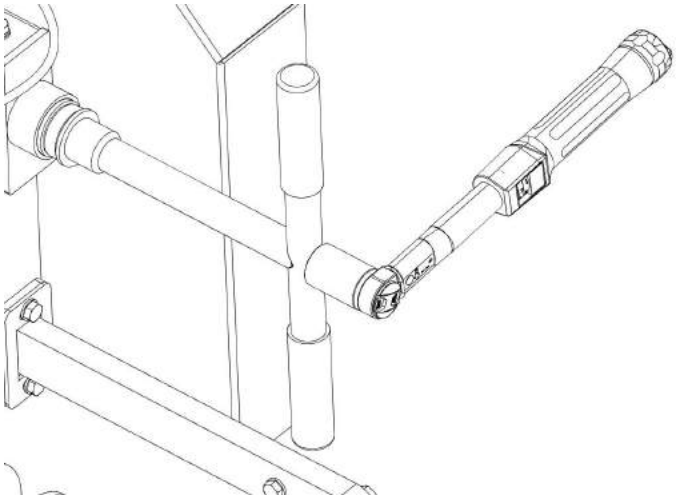




SAWMILL MAINTENANCE

#1 – BLADE TENSION

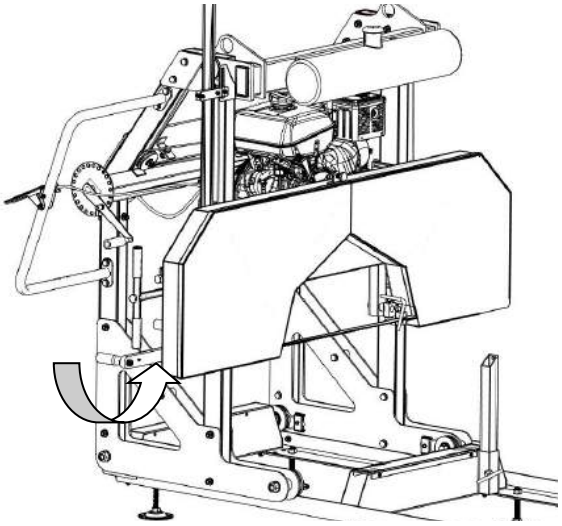
Proper blade tension is achieved when a 24mm socket is used on a torque wrench to tighten the “T” handle to 35 ft-lbs torque. See the image above.

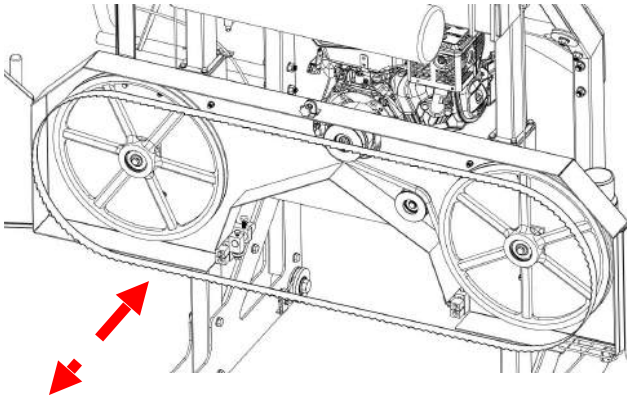


#2 – CHANGING THE BLADE

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

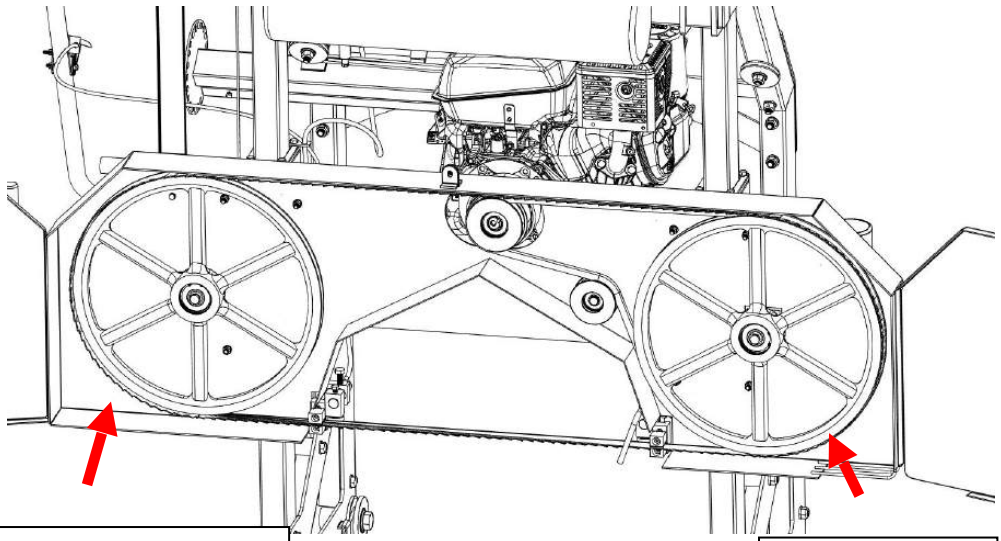
Remove the tension in the blade by turning the “T” handle in the counter-clockwise direction and then open the blade guard cover. The blade should now be loose and free to pull straight out the front. The new blade can now be installed, guards closed and proper blade tension set.





#3 – REPLACING BELTS

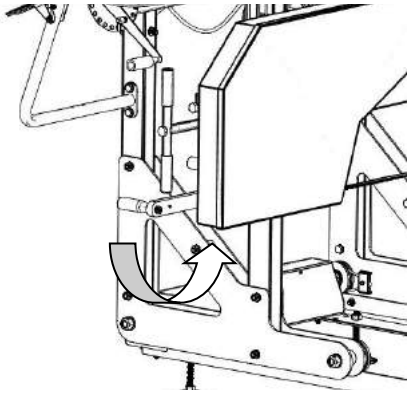
Never attempt the below with the engine running. As a safety precaution, remove the spark plug cap. Gloves and safety glasses must be worn when replacing the belts. There are two vee belts on the sawmill. It is recommended to to use a BX79 cogged belt for the drive side and a Woodland Mills polyurethane follower belt.

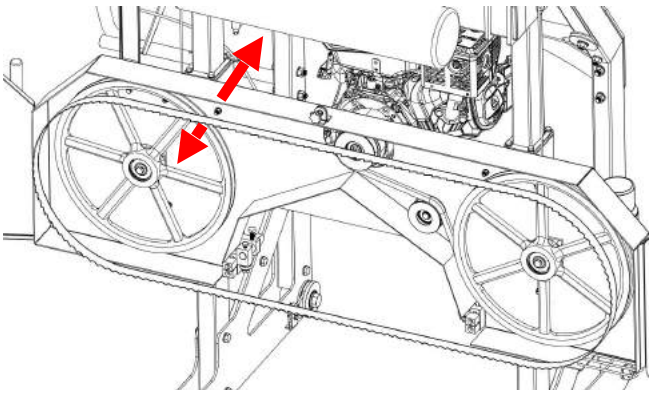


Polyurethane Follower Belt

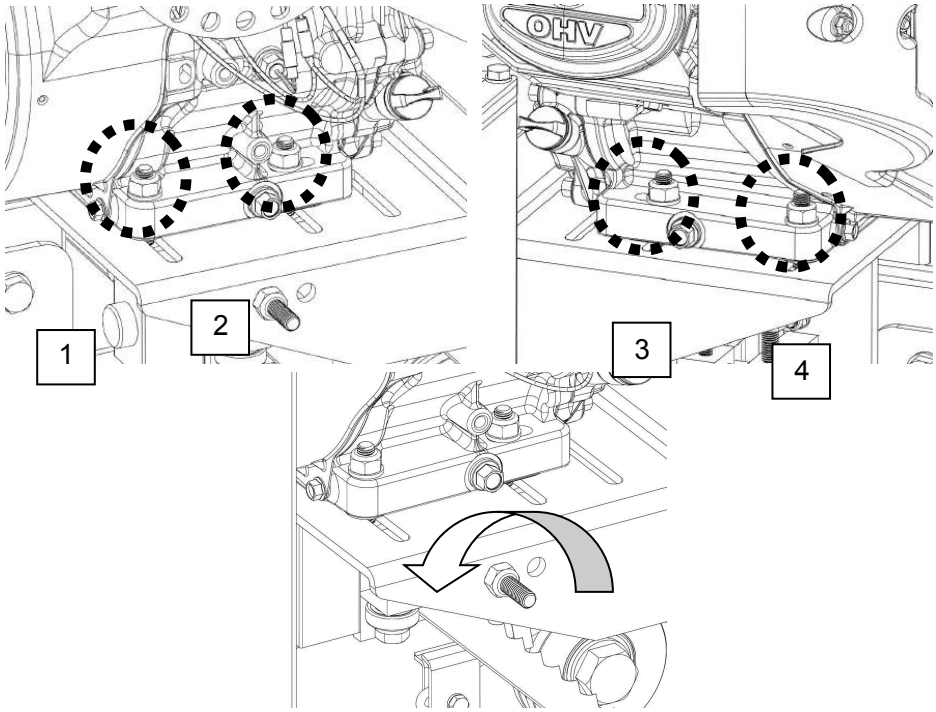
BX79 Drive Belt

Remove the tension in the blade by turning the “T” handle in the counter-clockwise direction and then open the blade guard cover. The blade should now be loose and free to pull straight out the front.





To change the drive side belt, loosen the four bolts that secure the engine to the engine mount using wrenches.



Now that the engine is free to slide on the engine mounting plate, turn the 17mm nut on the horizontal stud in the counter-clockwise direction. This will allow the engine to move and will also take the tension off of the belt. The old belt can be removed and the new belt can be installed. Tension the new belt and refer to the ***BELT TENSION*** instructions described in the sawmill set up section of the manual.

The follower belt can now be changed by prying it off and installing the new one with the aid of slotted screw drivers. The blade can now be re-installed, guards closed and proper blade tension set.

Note that blade tracking is likely to change and need adjusting when new belts are installed. Refer to "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 43. 2. Gap between guide blocks and blade are incorrect. Refer to page 41. 3. Adjust blade tracking. Refer to page 35. 4. Install new blade. Refer to page 44. Always use blade lubricant. 5. Install new blade. Refer to page 44. 6. Slow feed rate down and push head slower through log.
Last board is tapered or narrow in middle.	1. Tracks are not level.	1. Tracks need to be checked with level and adjusted to be square. They also need to be set up on firm, sturdy ground/base so deflection does not occur from logs or sawmill head.
Blade dulls quickly.	1. Logs are not clean. 2. Foreign objects in log.	1. Logs may contain dirt/sand causing them to wear prematurely. 2. Tree may contain nails, staples, old fencing etc.
Blade comes off of bandwheels.	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.	1. Tighten blade. Refer to page 43. 2. Gap between guide blocks and blade are incorrect. Refer to page 41. 3. Adjust blade tracking. Refer to page 35. 4. Install new belts. Refer to page 44. 5. Install new blade. Refer to page 44. 6. Slow feed rate down and push head slower through log.
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 44. 2. Binding between guide blocks when blade is too loose. Tighten blade. Refer to page 43. 3. Gap between guide blocks and blade are incorrect. Refer to page 41. 4. Adjust blade tracking. Refer to page 35. 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 43. 2. Belts are worn or too loose. Replace. Refer to page 44. 3. Slow feed rate down and push head slower through log.
Mill is not cutting/cutting very slowly.	1. Dull blade. 2. Blade is on backwards.	1. Install new blade. Refer to page 44. 2. Remove blade and flip it inside out. The teeth should be facing in the direction of the log supports.
Mill is vibrating excessively.	1. Log is not clamped securely. 2. Belts are deformed. 3. Bandwheel bearing issue. 4. Pushing mill too quickly. 5. Loose bolts.	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 44. 3. Inspect and replace the bandwheel bearings if worn. 4. Slow feed rate down when milling. 5. Check all bolts to ensure they are tight.

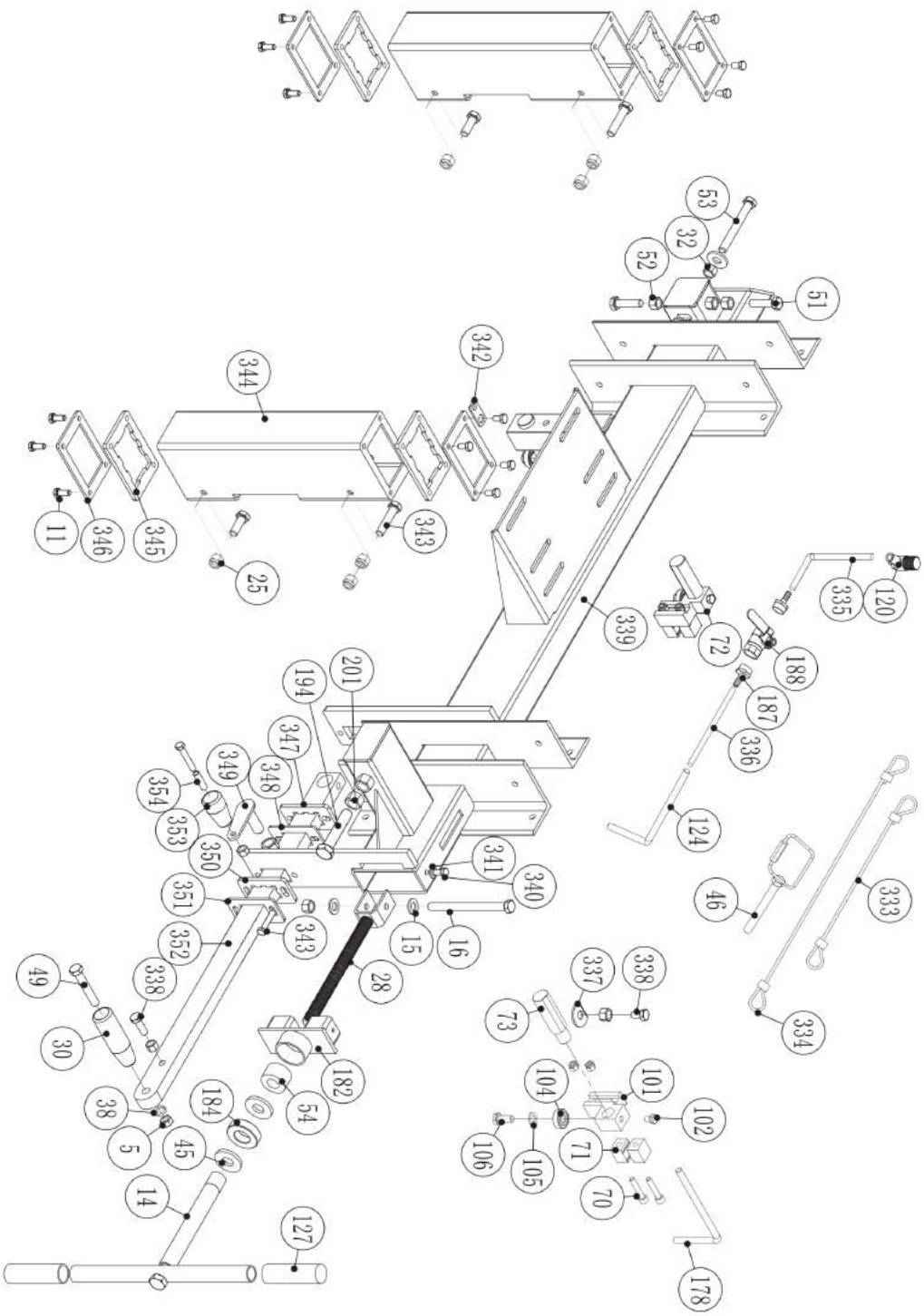
PARTS LIST

HM130 Parts List								
2	Lock Nut	M20	4		87	T-Handle		4
5	Lock Nut	M12	34		91	Log Support (Short)		2
6a	Hex Bolt	M20 x 115	4		98	Track Reinforcement Plate		2
8	Hex Bolt	M12 x 80	10		99	Log Bunk		2
11	Hex Bolt	M8 x 20	30		101	Sawblade Holder Block (Left)		1
12	Hex Bolt	M10 x 25	7		102	Hex Bolt	M8 x 12	2
14	Tension Handle		1		104	Ball Bearing	6200	2
15	Flat Washer	M12	2		105	Flat Washer	M10	10
16	Hex Bolt	M12 x 145	1		106	Hex Bolt	M10 x 25	7
25	Lock Nut	M8	27		109	Plastic Knob	M8 x 50	1
27	Cotter Pin	5 x 20	1		110	Engine Bolt	7/16-20UNF x 30	1
28	Thread Rod		1		110a	Flat Washer	M12	1
30	Plastic Handle		2		110b	Clutch Housing Guard		1
32	Nut	M12	6		111	Bushing		1
33	Hex Bolt	M12 x 90	7		114	Lock Washer	M6	15
35	Pulley Wheel		7		118	Thrust Bearing	51102	2
37	Circlip	28	7		119	Nut	M14 x 1.5	2
38	Lock Washer	M12	3		120	Water Coupling	SLS-03-8	1
41	Pulley Wheel Bushing		4		124	Drip Nozzle	6mm OD	1
42a	Ball Bearing	6001	7		125	Scale		1
42b	Pulley Wheel Bushing	Ø19 x 5	3		127	Handle Grip		2
45	Flat Washer	M20	2		132	Carriage Wheel Spacer		4
46	Cable Hook		2		136	Center Log Bunk (Track Joint)		1
47	Log Support Bunk Assembly		2		137	Throttle Cable		1
49	Hex Bolt	M12 x 70	6		138	Throttle Bracket		1
51	Bolt	M12 x 45	2		139	Hex Bolt	M6 x 55	1
52	Nut	M12	4		140	Lock Nut	M6	14
53	Hex Bolt	M12 x 100	7		141	Throttle Handle		1
54	Grommet		1		142	Lock Nut	M10	7
61	Lock Washer	M10	3		145a	Carriage Wheel Brush Bracket		4
62	Flat Washer	M10	9		149	Lubrication Tank Cap		1
63	Circlip	62	2		155	Hex Bolt	M6 x 10	4
64	SKF Ball Bearing	6305-2RS	4		156	Washer	M6	4
65	V Belt	BX79	1		159	Bolt	M4 x 12	3
66	Band Wheel		2		167	Index Plate		1
67a	Belt Pulley		1		168	Hex Bolt	M6 x 16	6
68	Key Stock	6.35 x 6.35 x 25	1		169	Handle Arm		1
69	Lenox Sawblade		1		170	Index Plunger		1
70	Socket Head Cap Screw	M8 x 40	4		171	Hex Flange Bolt	M10 x 30	8
71	Sawblade Guide Block		4		172	Track End Stopper		4
72	Blade Guide Assembly (Right)		1		173	Track Rail		4
73	Shaft		1		176	Bushing		1
74	Driven Shaft		1		177	Engine Tension Plate		1
75	Driving Shaft		1		178	Log Supprt Stopper		1
76a	Polyurethane Belt		1		179	Throttle Cable Clamp		1
77	Hex Flange Bolt	M10 x 25	42		180	Circlip	50	1
82	Log Support (Long)		2		181	Ball Bearing	1641-2RS	1
84	Hex Flange Lock Nut	M10	50		182	Guide Block		1
83a	Log Clamp Tube Bracket		1		183	Centrifugal Clutch		1
85a	Log Clamp Tube		1		184	Thrust Bearing	8204	1

PARTS LIST

HM130 Parts List Continued								
186	Carriage Wheel Brush		4		323	Aluminium Lubrication Tank		1
187	Connector		2		324	Lubrication Tank Bracket		1
188	Water Valve	1/2"	1		325	End Insert		2
189	Leveling Foot	M16 x 120	12		326	Hex Bolt	M12 x 140	1
191	Log Clamp Receiver		1		327	Hex Bolt	M12 x 120	1
192	Log Clamp		1		328	Dashboard		1
193	Nut	M8	1		329	Kohler Engine	14HP	1
194	Hex Bolt	M16 x 80	1		330	Band Wheel Housing (Back)		1
195	Tension Shaft		1		331	Manual Holder Tube		1
196	Tension Pulley		1		332	Hinge Pin		4
197	SKF Ball Bearing	6203-2RS	1		333	Wiring Cable A	2420mm	1
198	Circlip	17	1		334	Wiring Cable B	3170mm	1
199	Lock Nut	M16	1		335	Water Hose	8 x 5 x 1050mm	1
200	Circlip	42	1		336	Water Hose	8 x 5 x 1300mm	1
201	Nut	M16	1		337	Bent Washer		1
202	Hex Bolt	M10 x 45	4		338	Hex Bolt	M10 x 30	2
301	Stainless Steel Bunk Cap		3		339	Frame Assembly		1
302	Hex Bolt	M6 x 20	12		340	Hex Bolt	M8 x 16	1
303	Hex Bolt	M6 x 35	2		341	Flat Washer	M8	1
304	Indicator Bracket		1		342	Straight Water Tube Bracket		1
305	Hex Bolt	M6 x 25	2		343	Hex Bolt	M8 x 35	6
306	Scale Bracket		1		344	Post Sliding Sleeve		2
307	Scale Spacer Plate		1		345	Nylon Bushing		4
308	Nut	M10	2		346	Locking Plate		4
309	Thread Block Housing (Lower)		1		347	Nylon Bushing		1
310	Thread Block Housing (Upper)		1		348	Locking Plate		1
311	Pushing Handle Assembly		1		349	Sliding Arm Screw Clamp		1
312	Water Tube Bracket		1		350	Nylon Bushing		1
313	Thread Rod		1		351	Locking Plate		1
314	Thread Housing		1		352	Aluminum Sliding Rod		1
315	Front Post		2		353	Plastic Handle		1
316	Back Post Assembly		2		354	Bushing Sleeve	Ø9 x Ø12 x 32	1
317	Spacer	Ø13	2		355	Sawhead Carrige Plate		4
318	Sawhead Carrige Plate Assembly (Right)		1		356	Band Wheel Housing (Left)		1
319	Ball Bearing	3204-2RS	4		357	Band Wheel Housing (Right)		1
320	Carriage Wheel		4		358	Sawhead Carrige Plate Assembly (Left)		1
321	Spacer	Ø20.5	4		359	Scale Indicator Face		1
322	Hex Bolt	M12 x 110	2		360	Scale Bracket Backing		1

DIAGRAM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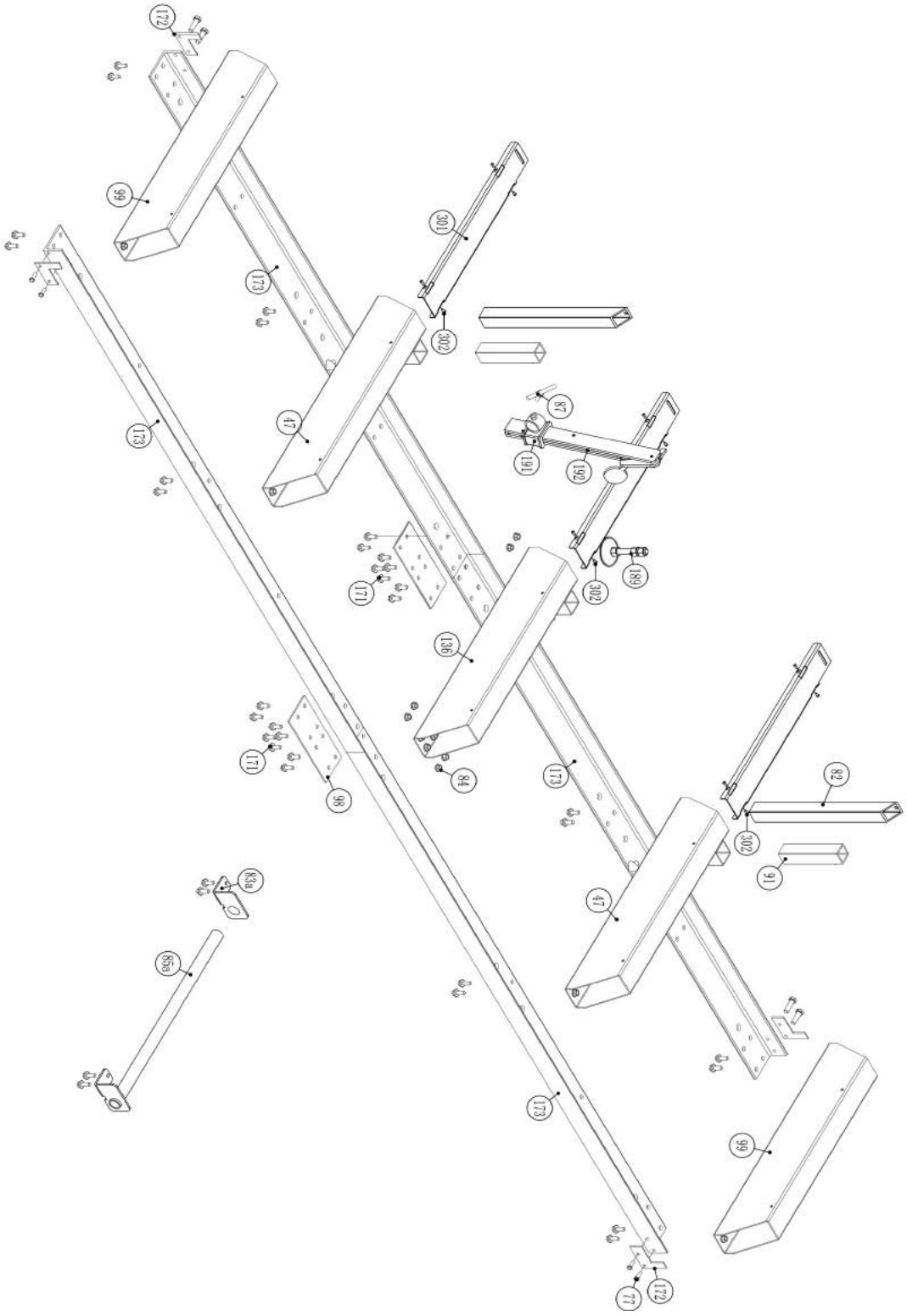

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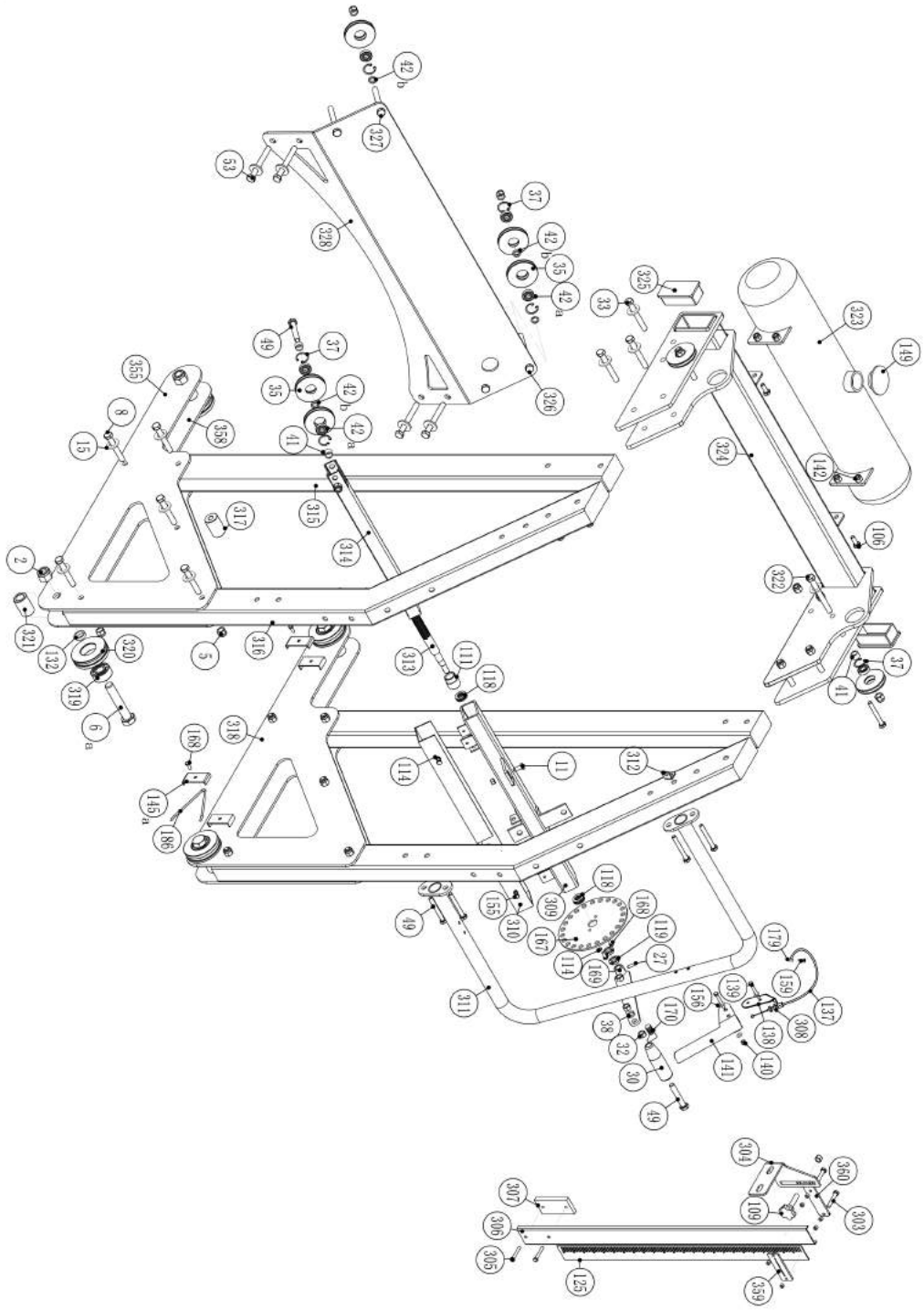
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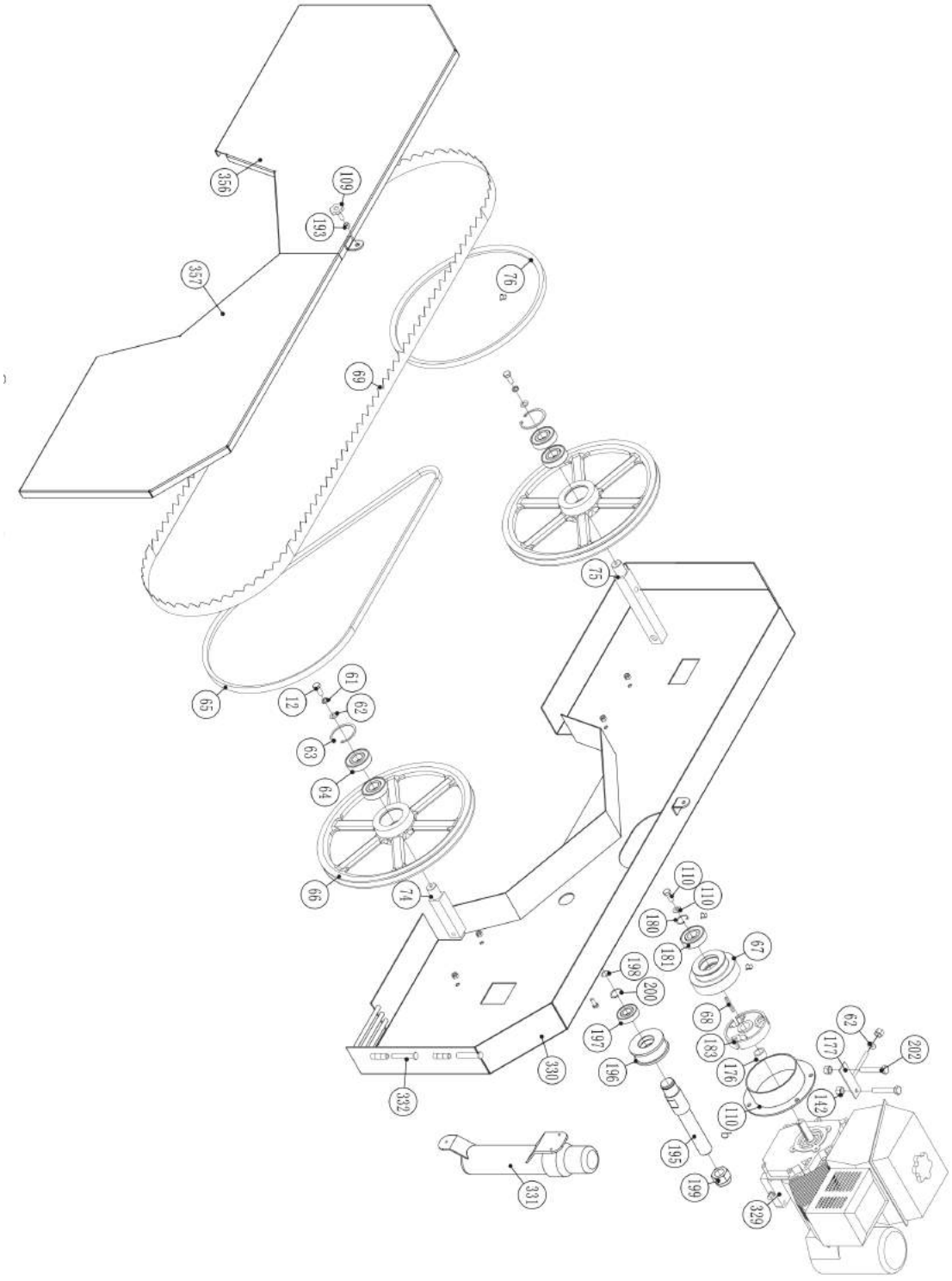
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NOTES


WOODLAND
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