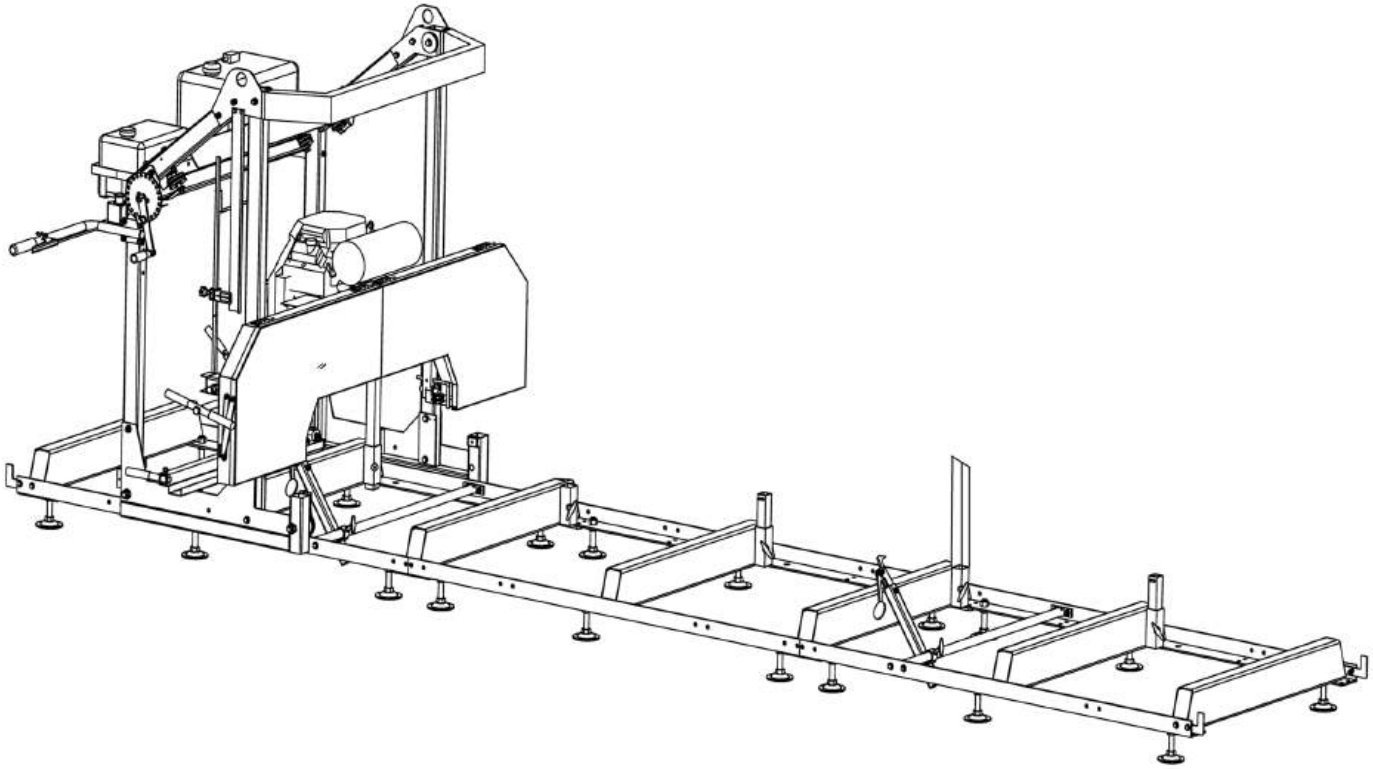
Using tips:
Video on Youtube

BILT HARD

38-in Cutting Capacity Portable Sawmill



⚠ WARNING

- Please read and understand the product manual completely before assembly
- Check against the parts list to make sure all parts are received
- Wear proper safety goggles or other protective gears while in assembly

CustomerSupport: (888) 680-2849
inquiry@bilthardusa.com

FOR YOUR SAFETY

READ AND UNDERSTAND THE ENTIRE MANUAL BEFORE OPERATING MACHINE

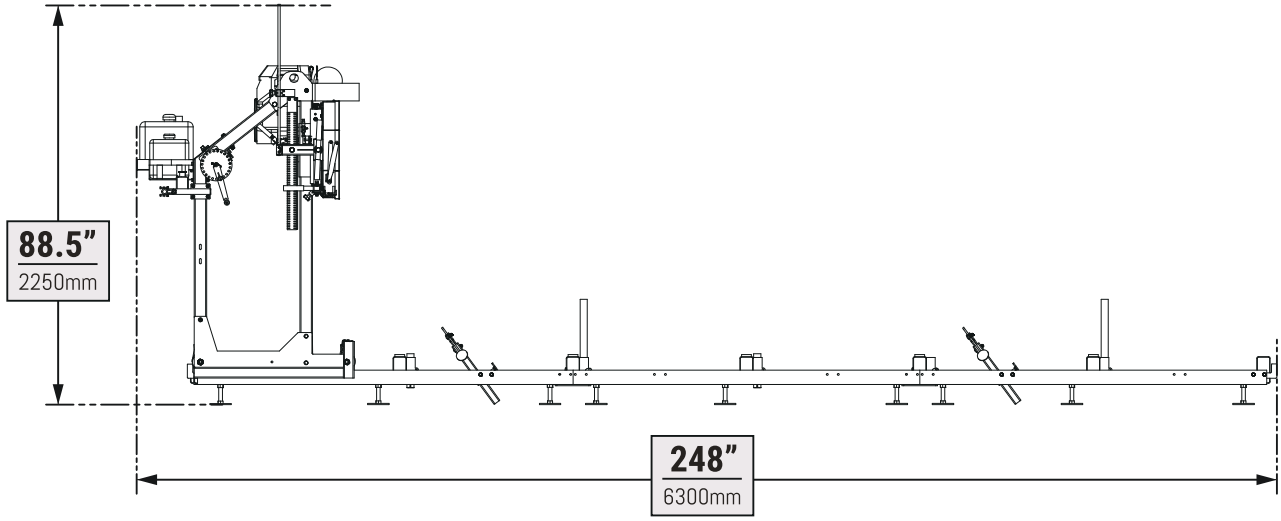
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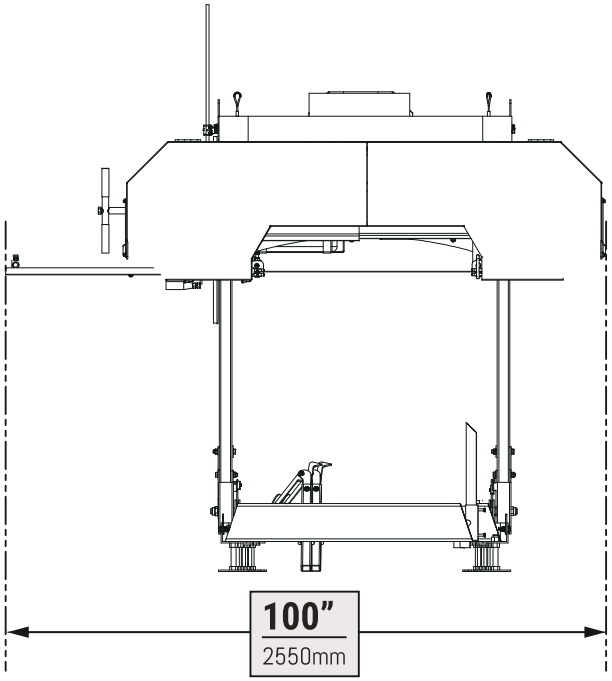
TABLE OF CONTENTS 1
SPECIFICATIONS 2
OVERALL DIMENSIONS 3
SAFETY SIGNS 4
SAFETY 5
WORK AREA 5
INTERNAL COMBUSTION ENGINE SAFETY 5
PERSONAL SAFETY 6
TOOL USE AND CARE 6
EQUIPMENT OPERATION 7
MAINTENANCE 8
ASSEMBLY 9
Parts list 9
Inspection 10
TRACK 10
LOG SUPPORTS 12
SAWMILL HEAD ASSEMBLY 14
STANDING THE SAWHEAD UPRIGHT 16
REAR POSTS 16
CROSS BEAM & HEAD STOPS 17
LIFTING SYSTEM 19
LOG SCALE 20
THROTTLE HANDLE 21
COOLING BOX AND FUEL TANK 22
LIFT CABLE ROUTING 23
TRANSPARENT WATER PIPE AND BLACK TUBING 23
ELECTRIC WIRE CONNECTION 26
ENGINE 27
SAWMILL SET-UP PROCEDURES 28
BELT TENSION 28
BLADE TRACKING 28
ADJUSTING THE RIGHT HAND SIDE 29
ADJUSTING THE LEFT HAND SIDE 30
MOVING THE BLADE FORWARD 31
MOVING THE BLADE REARWARD 31
BLADE GUIDE ADJUSTMENT 31
BLADE TENSION 32
SAWMILL MAINTENANCE 34
CHANGING THE BLADE 35
REPLACING BELTS 35
TROUBLESHOOTING 36
DIAGRAM--ENSEMBLE 38
DIAGRAM(A)--BAND WHEEL HOUSEING 39
PARTS LIST(A)--BAND WHEEL HOUSEING 40
DIAGRAM(B)--CARRIAGE 42
PARTS LIST(B)--CARRIAGE 43
DIAGRAM(C) --CARRIAGE 45
PARTS LIST(C) --CARRIAGE 46

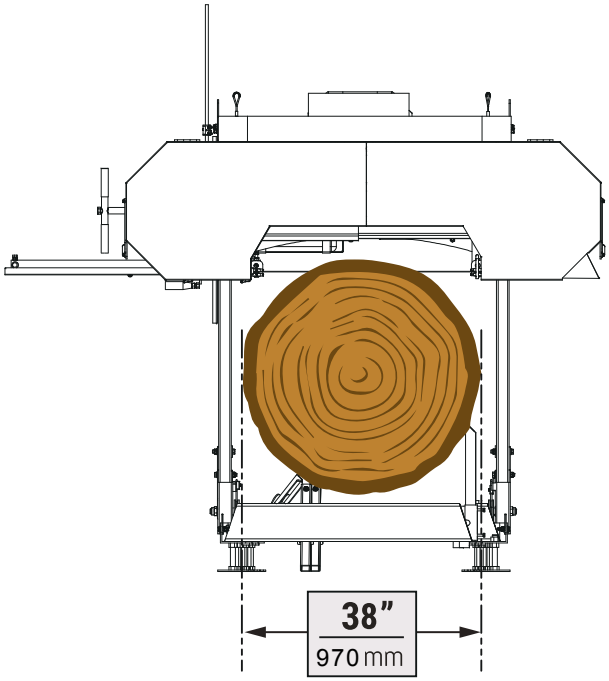
SPECIFICATIONS

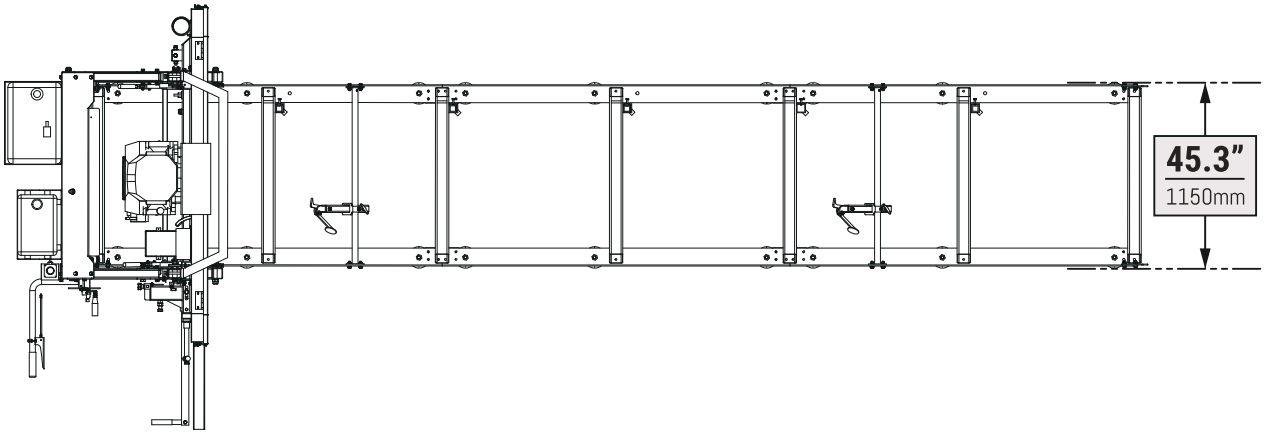
Model	TRS-1005	
Engine		Ducar
Engine Displacement		760cc
Horsepower	.	25hp
Engine Type	Dual cylinder (90'V type)4 stroke forced air Cooling	
Start	E-Start	
Log Diameter	38in	
Max Live Edge Width	38in	
Standard Cutting Length	16 ft 8 in	
Max Board Thickness	7 in	
Blade Engagement System	Centrifugal Clutch	
Cast Iron Bandwheel Diameter	19 in	
Blade Wheel Engagement	Belt Drive	
Blade Guide	By Roller	
Blade Tension	By Adjustable Lever	
Blade Size	175x 1.25 in	
Blade Pitch	7/8 in	
Blade Lubrication	Water Lube - Manual Valve	
Lubricant Tank Size	4 gal	
Fuel Tank Size	6.3 gal	
Track Width	45.3 in	
Track Length	19.2ft	
Track Extension Length	6 ft 5 in	
Levelling Feet	18	
Log Rests	2 Long and 2 Short Rests	
Log Clamps	2 x Quick Lock	
Track Bunks	3X6 in	
4 Post Head Design	Yes	

OVERALL DIMENSIONS



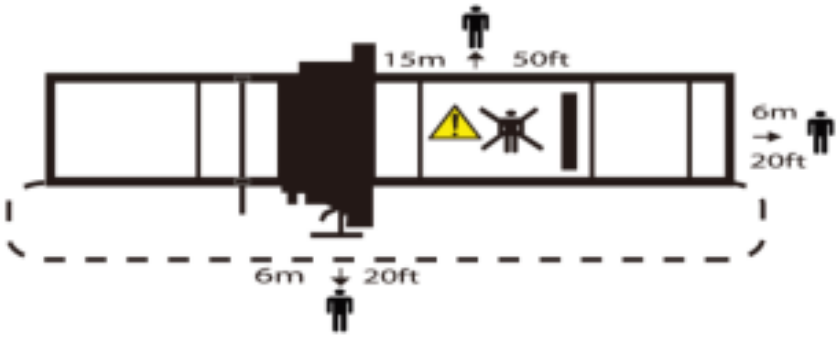




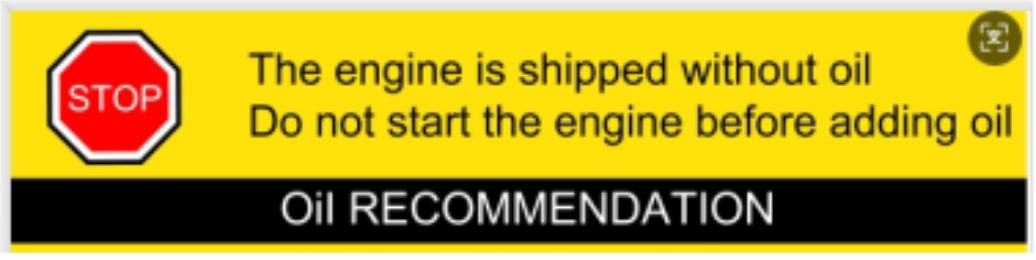


SAFETY SIGNS

The rating plate on your machine may show symbols. These represent important information about the product or instructions on its use.







SAFETY

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 ordeath.

· **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 and solid surfaces.

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.

· Avoid “kick-back” by knowing what conditions can create it.

· 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 band saw 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 GT38 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.

START UP PROCEDURE - EQUIPMENT OPERATION

- Wear heavy-duty work gloves, ANSI-approved goggles behind a full face shield, steel-toed work boots, and a dust mask.
- Operate only with assistance.
- Ensure guide blocks are tight and track is level
- Fill the lubrication tank with clean water and washing up detergent.
- Start and operate the engine according to the provided engine manual.
- Depress the throttle to bring the blade up to full speed.
- Throttle should be fully depressed when the saw is under load.
- Cut branches off the lumber to be processed.
- WARNING: to avoid death or serious injury. Do not cut lumber with foreign objects in it such as nails, any metal pieces, etc.
- Place the lumber to be cut on the supports.
- WARNING: The operator and any assistants must stay clear of the front and back of the blade whenever the engine is on.
- Move the saw head slowly along the track and against the lumber to make the cut.
- Trim off the rounded sides of the log.
- When the log is squared-off, boards or posts can be cut to custom specifications.
- 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.

MAINTENANCE

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

1. Band wheel Bearings — Should be inspected 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 inthe bearing case. Replace if necessary.

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

4. Log Screws — Grease frequently.

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

6. Drive Belt — Periodically check the tension of the drive belt. It should deflect by no more than 1/2".

7. Saw-Head Locking Cam Handles — Grease assembly every 30 days or as required.

8. Saw-Head Vertical Posts — Spray posts before use with a silicone spray lubricant such as 3-in-1 or Jig-A-Loo.

9. Band-Wheel Guards — Routinely remove any build-up of sawdust that may collect inside the band-Wheel guards.

10. Lubrication Tank — Only fill with a water/washing up detergent mixture(one to two caps) or in winter months, use windshield washer fluid. Do not leave lubricant in tank if temperatures fall below 0 degrees Celsius.

11. 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.

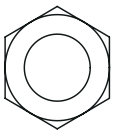
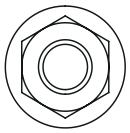
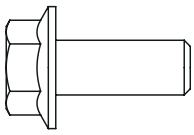
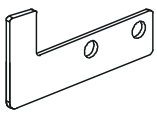
12. Engine — Check the engine oil level before each use and maintain the engine as per the instructions set out by the engine manufacturer in the engine manual.

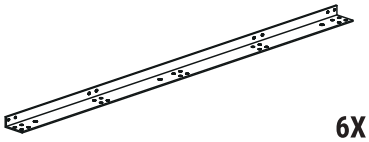
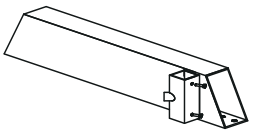
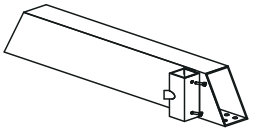
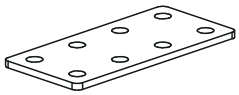
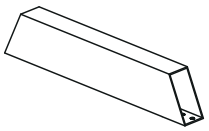
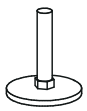
13. Sawhead Lifting Cables — Regularly before, during and after operations, inspect the cables for any wear or kinks. Ensure that the cables are in perfect condition. Oil coiled part of cable often to prevent premature wear. Replace with new cables as necessary.

ASSEMBLY

When assembling the sawmill, do not torque the bolts to hardware Class/Grade specifications. Snug the hardware, then tighten a further ¼—½ turn. Tightening bolts to torque spec can crush metal tubing, ruining the components.

Parts list

Hex Nut M20		**36X**
Flanged Lock Nut M10		**68X**
Flanged Hex Bolt M10 X 30 mm		**68X**
Limit Plate		**4X**

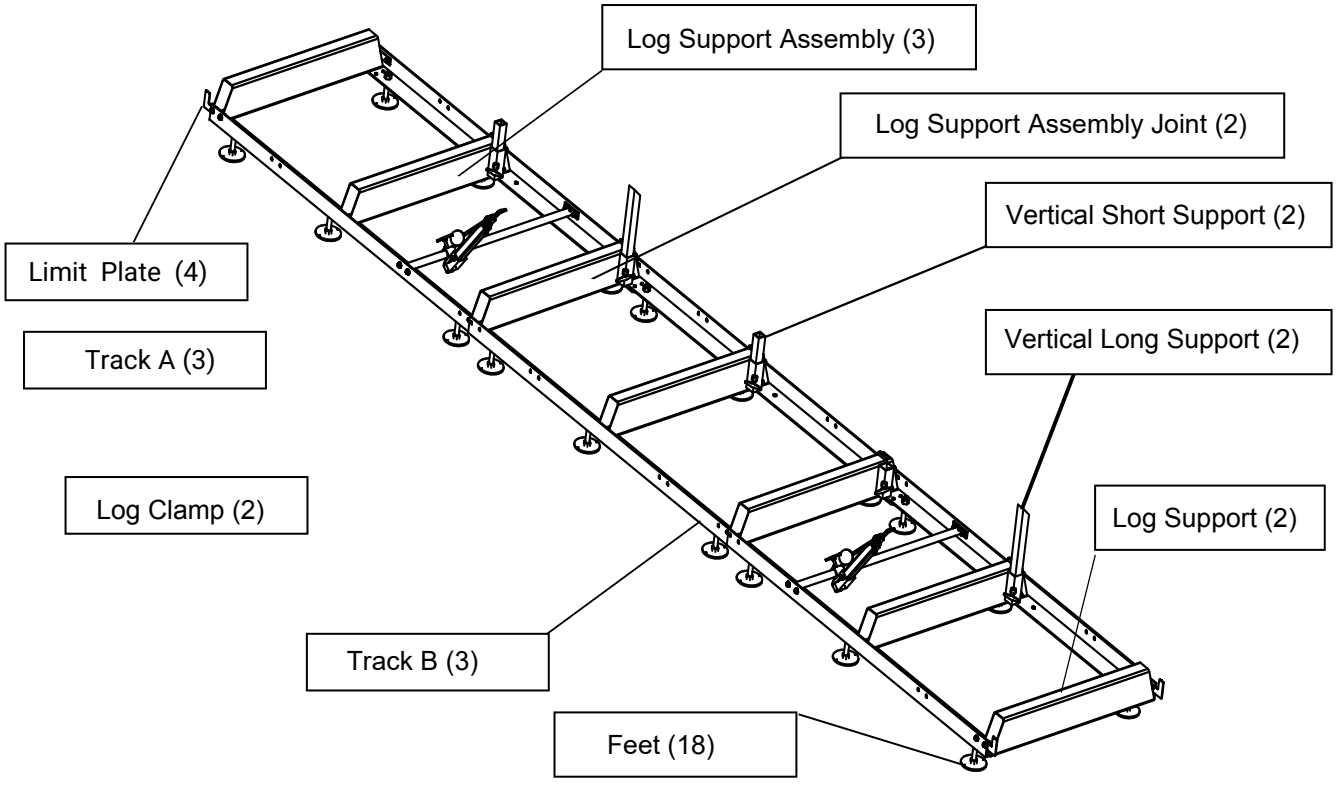
Track Rail		**6X**
Bunk Assembly (Two-hole guide rail beam welding)		**3X**
Bunk Assembly (Four-hole guide rail beam welding)		**2X**
Reinforcement Plate		**4X**
End Bunk		**2X**
Feet		**18X**

#1 – INSPECTION

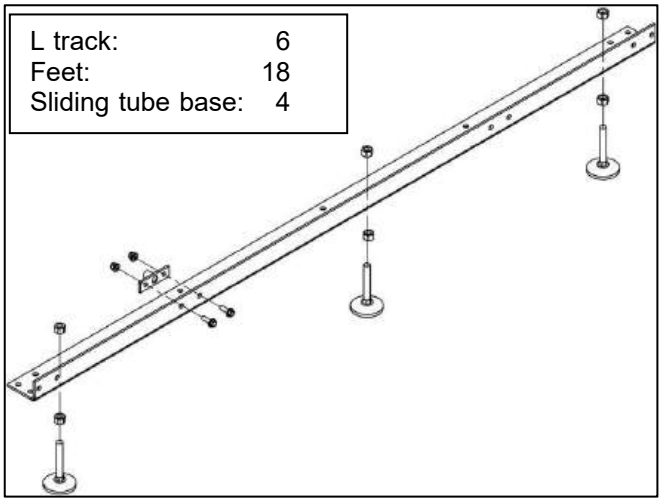
Take all of the parts out of the shipping crate and lay them out.

#2 – TRACKS

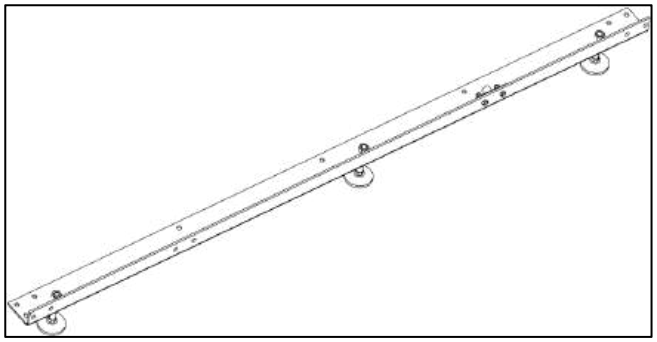
Assemble track system and secure loosely with provided nuts & bolts. It is important not to fully tighten the bolts at this stage. This will be done after the head is assembled and rolled along the track. It is ideal to assemble the tracks on a solid and level footing that is a minimum of 4" off of the ground – We recommend you attach the leveling legs to sleepers which we discuss later in the instruction manual). This will allow for easy cleanup of sawdust from under the tracks and height adjustment of the log supports and also easier leveling of the track.



1.Install leveling feet and fasteners to the track, and install the sliding tube base on the track,repeat the above installation until all four are complete

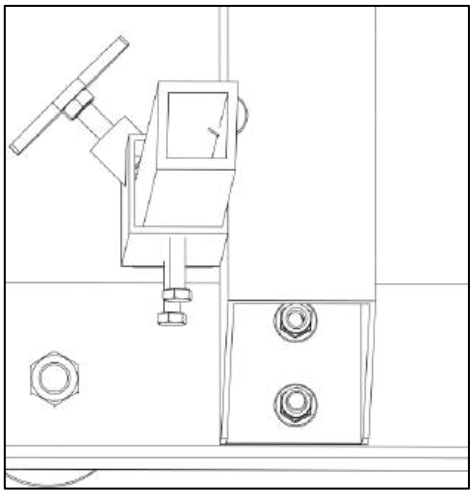


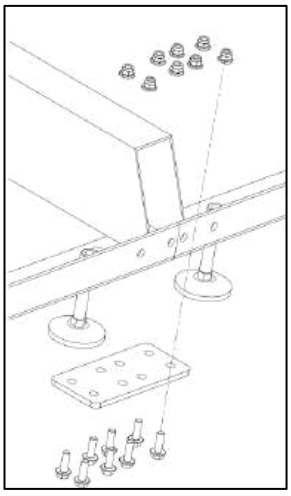
L track:	6
Feet:	18
Sliding tube base:	4

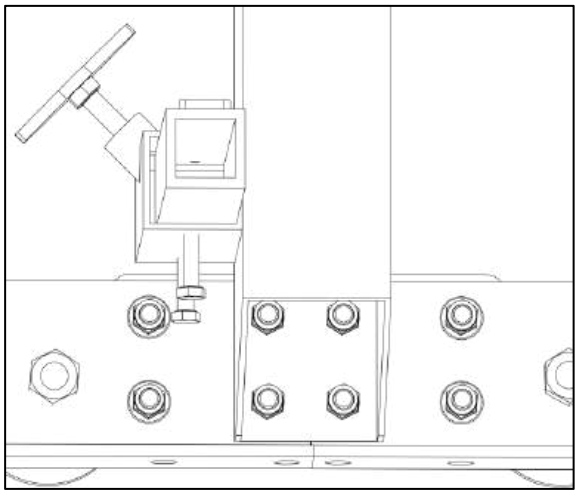


Hexagon flange bolts:	M10x30	8
Nuts:	M10	8
Nuts:	M20	36

2.Attach track cross supports to “L” channel with the provided nuts & bolts. The joining plate is used at the seam joint to join the two sections together (shown in right-down image). Ensure to only hand tighten at this stage. The bolts will be fully tightened once the head assembly is free to roll on the tracks and provide the correct track width.



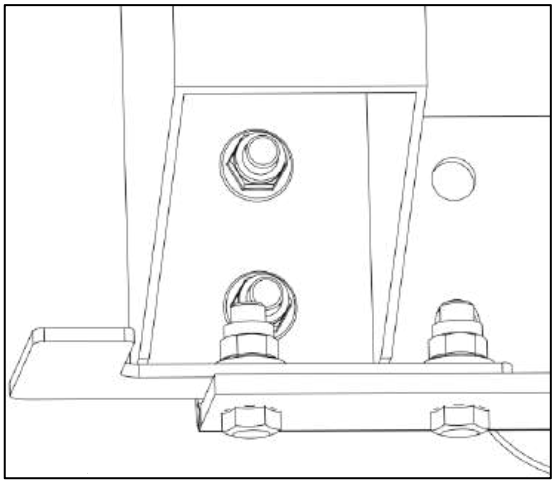


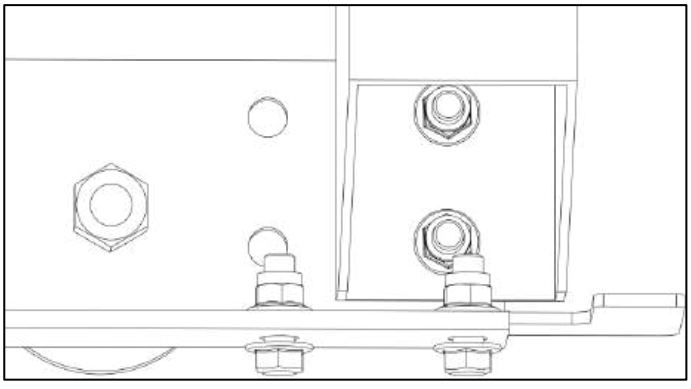


Hexagon flange bolts:	M10x30	20
Nuts:	M10	20

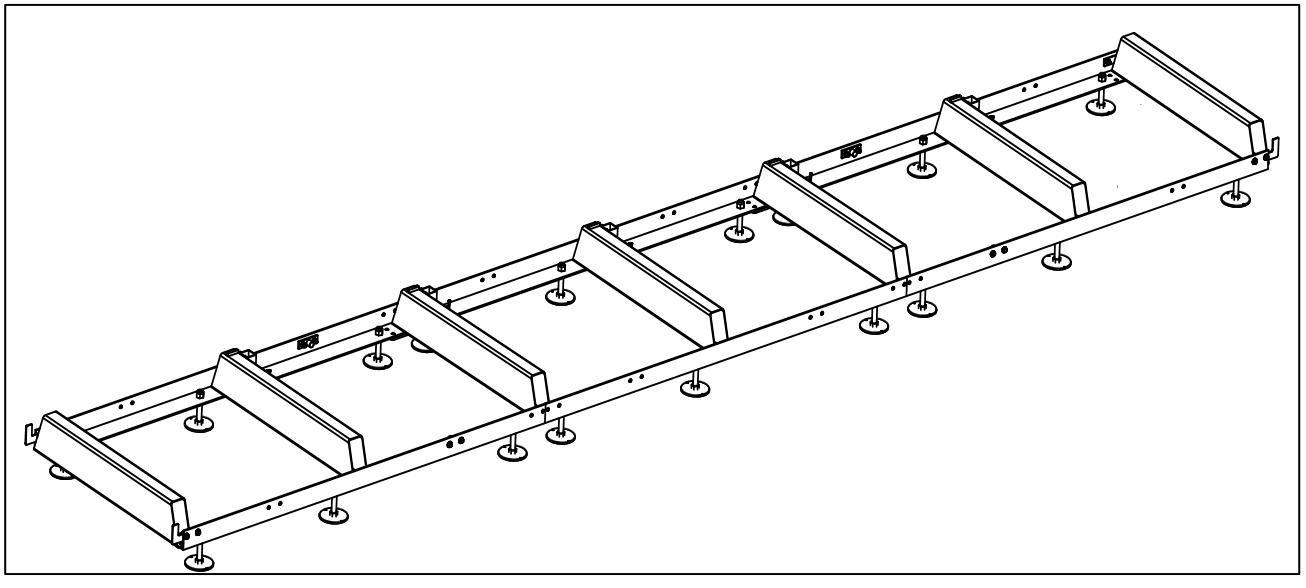
Hexagon flange bolts:	M10x30	32
Nuts:	M10	32

3.Assemble carriage stops at the ends of the tracks (4 stops total) and tighten.



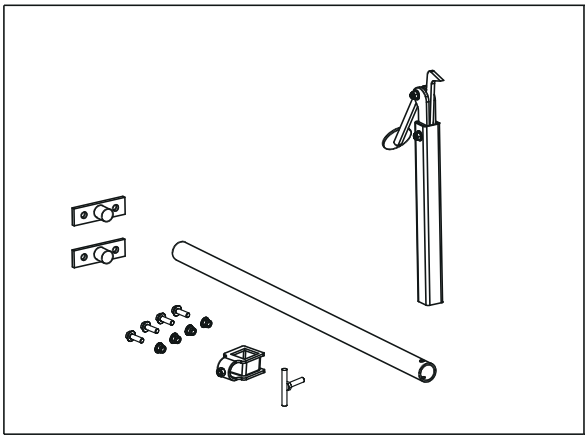


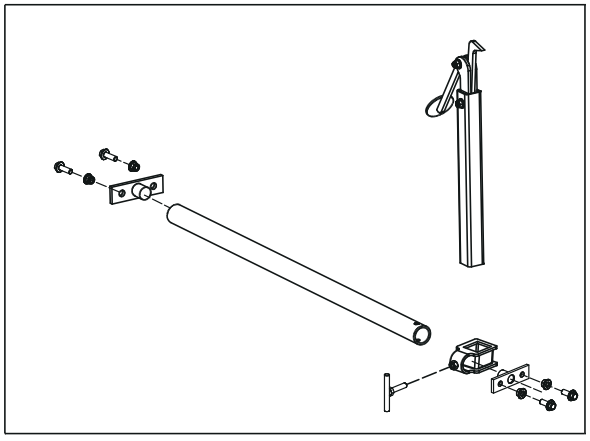
Hexagon flange bolts:	M10x30	8
Nuts:	M10	8



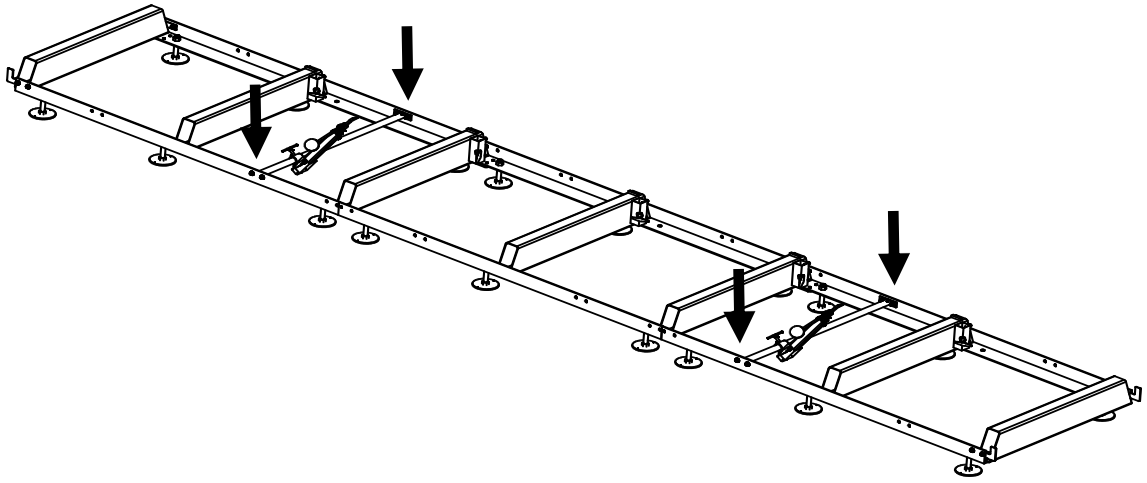
#3 – LOG DOG & SUPPORTS

Assemble log dog pieces as shown below and use water proof grease on threaded handle and “T” handle.

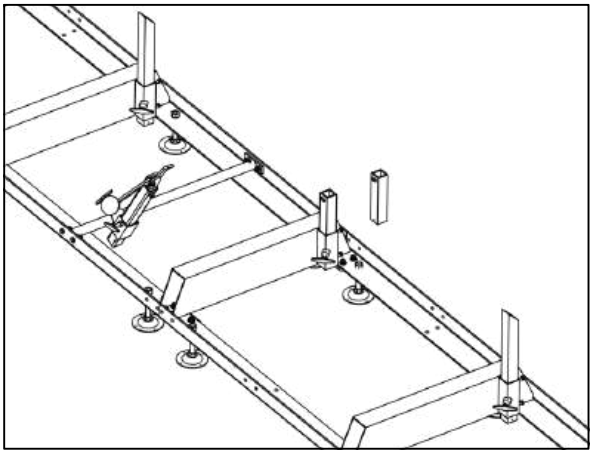


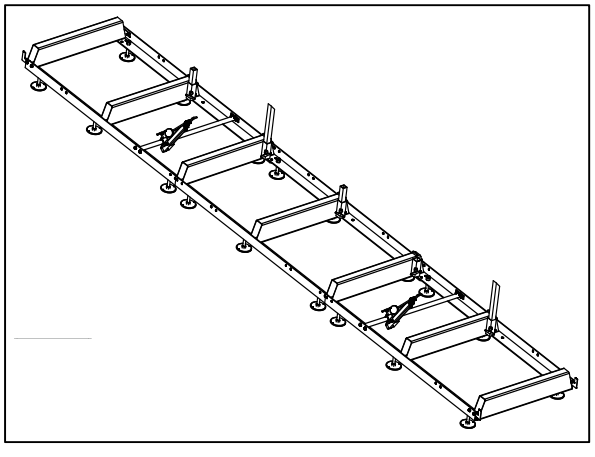


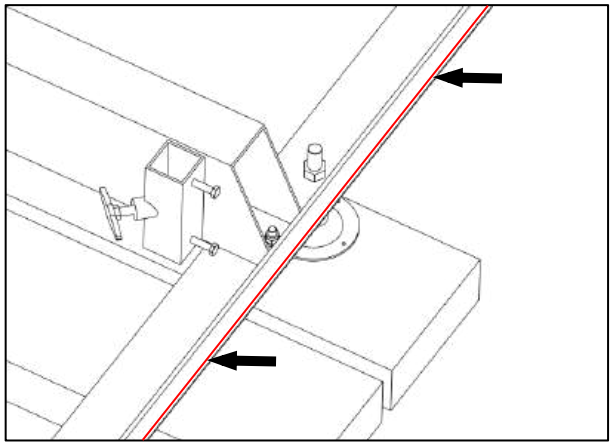
Attach assembly to the track using the provided nuts & bolts and tighten.Attach log dog assembly to track as shown below with the 4 nuts and bolts provided. Note that there are various locations along the track where this assembly can be bolted. Depending on how many track sections are being used, select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

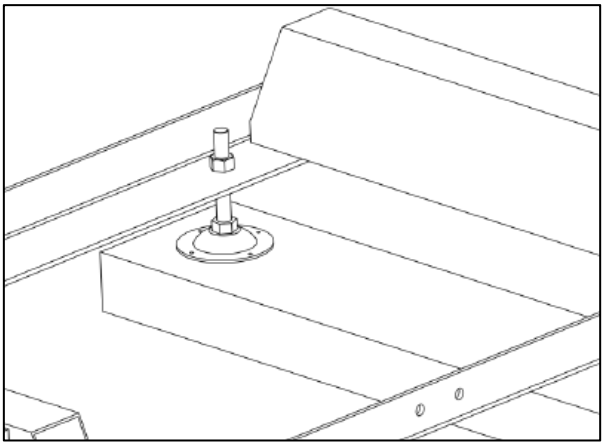


Insert log supports into track cross supports and secure with “T” handles. The “T” handle threads should be coated with waterproof grease. The sawmill includes two sets of log supports – a short set and a long set. The longer set is ideal for larger logs and the shorter set is ideal for small logs and square cants.

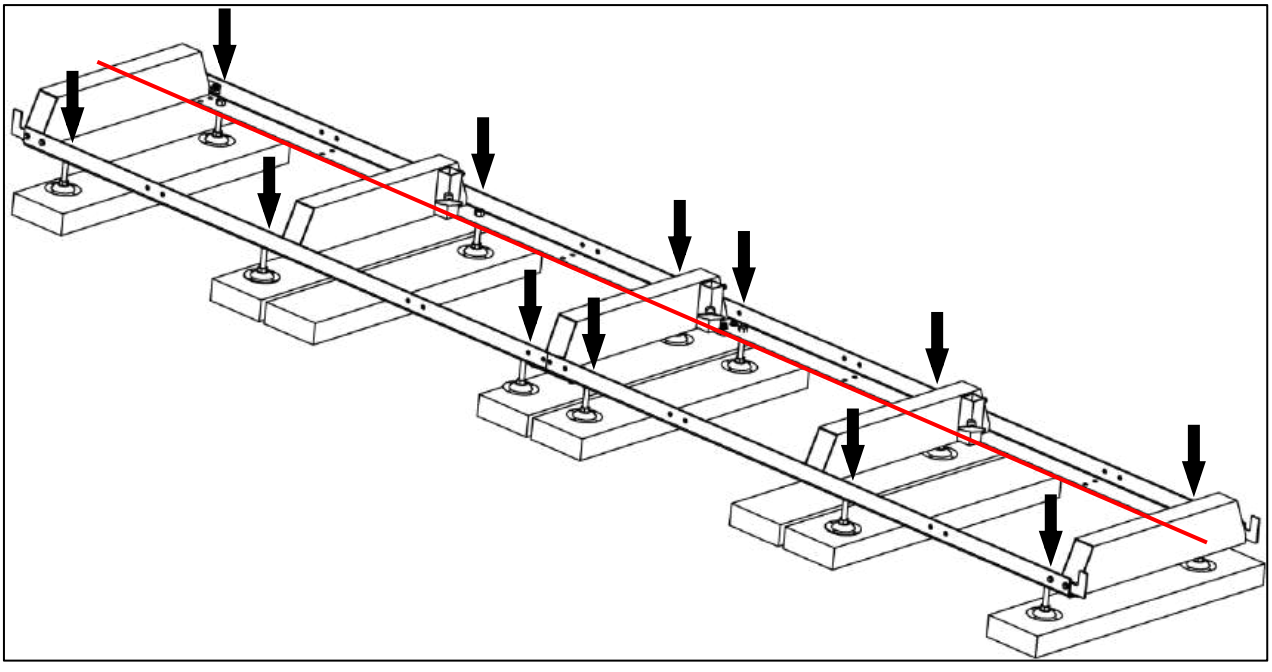








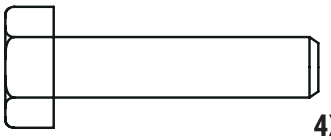
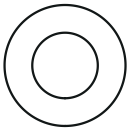
We recommend tex screwing the leveling legs to sleepers once the mill has been made level. So before tex screwing the mill to the sleepers, it is highly recommended that you run a string line down ***both*** sides of the mill, to make sure the track is straight and level. (The string line is in pink in the above picture).

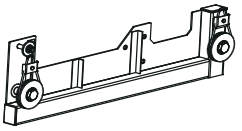


The **WHITE ARROWS** indicate where the locations of the leveling legs are. There are 6pcs per77in. of track. 230 in. total on the machine. On the intermediate bunks the leveling legs alternate. We recommend placing the mill leveling legs on sleepers running left to right as shown above. You need to make sure the bunks are also level. To do this you use a spirit level going left to right on top of each bunk and also using a string line down the length of the track. The string line needs to be approx. 10mm **above** the bunks.

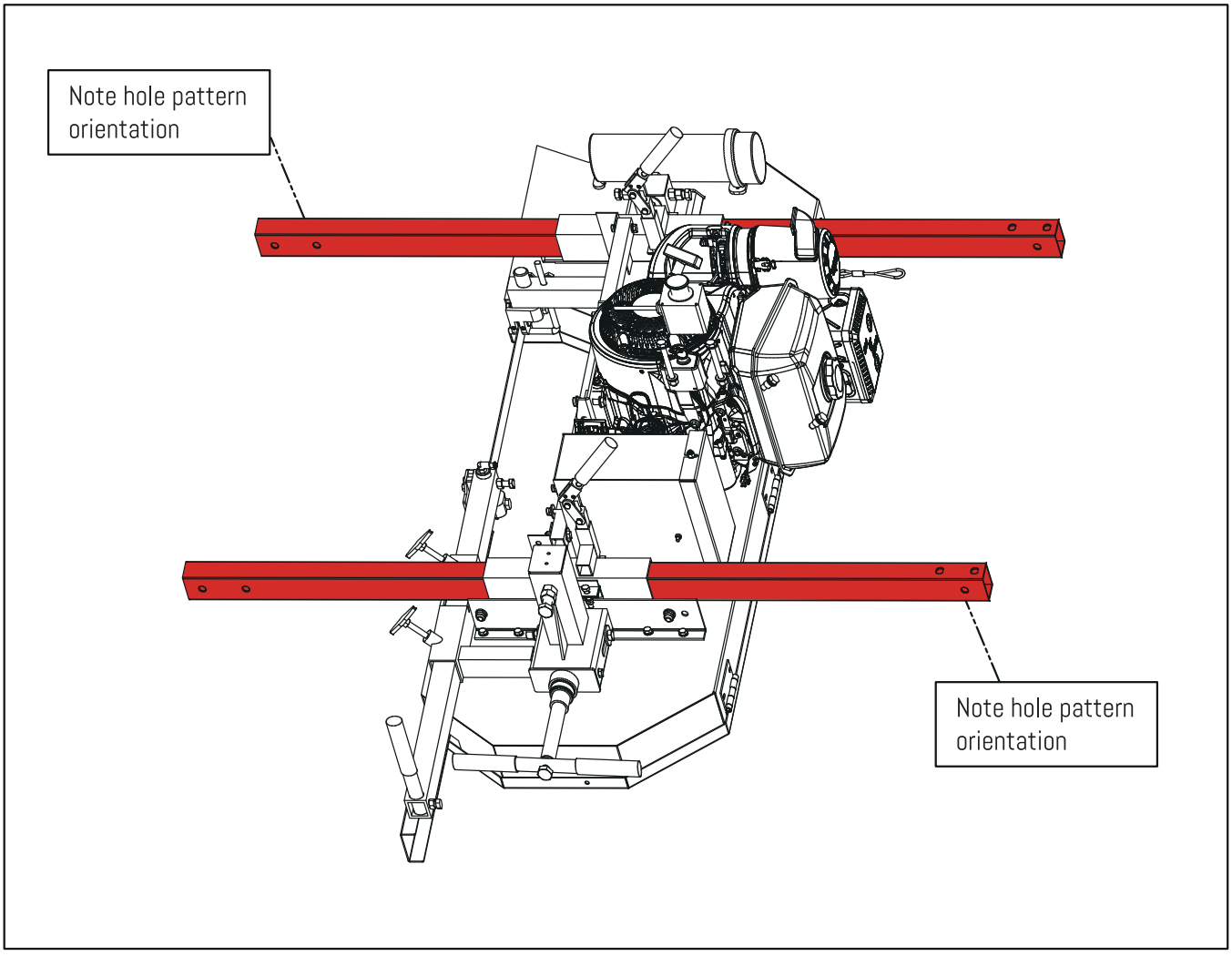
SAWMILL HEAD ASSEMBLY

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.

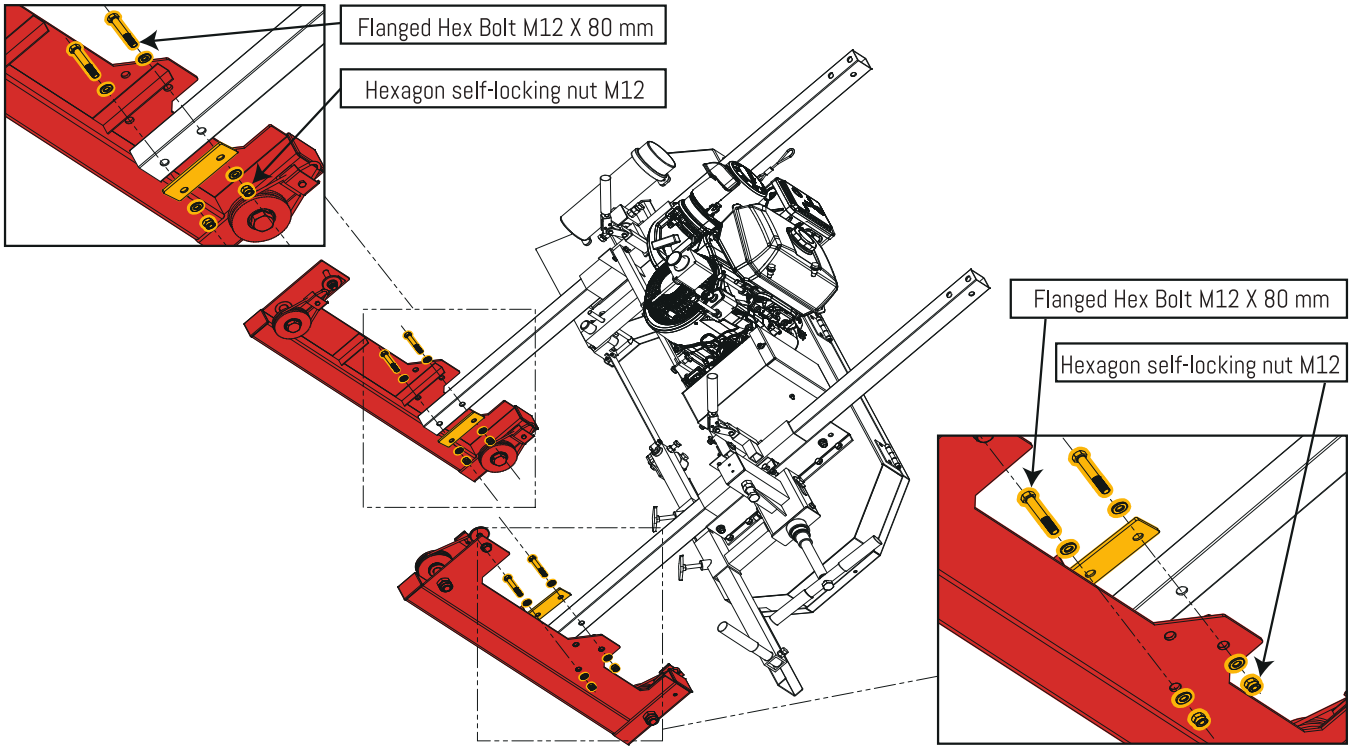
Hexagon head bolt M12x80	 **4X**
Hexagon self-locking nut M12	 **4X**
Flat washer 12	 **8X**

Wheel assembly	 **2X**
Front Post	 **2X**
Clamping piece	 **2X**

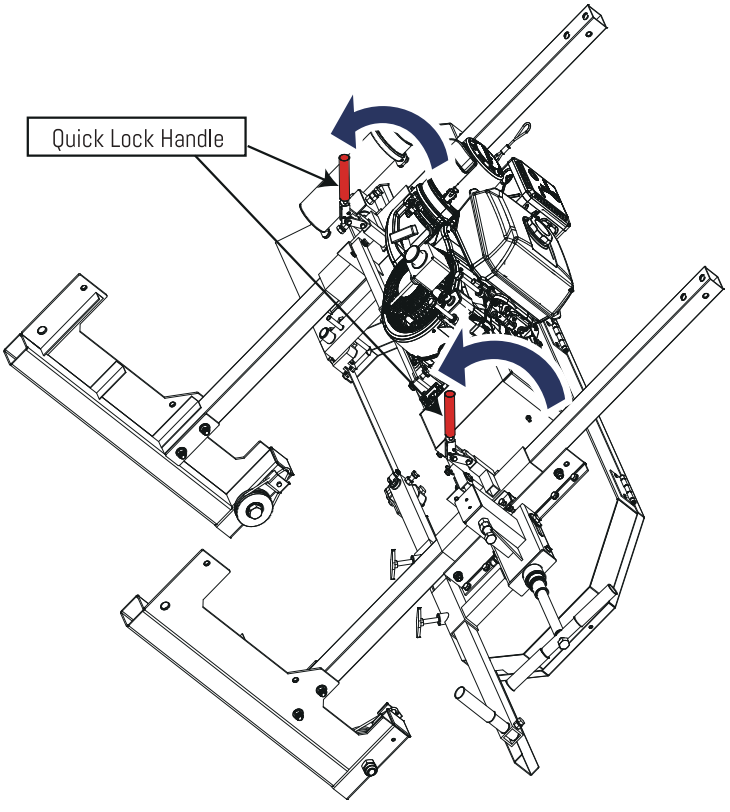
Then Insert vertical post assemblies into corresponding locations in head assembly.



Assemble front vertical post to wheel assembly using the two bolts and back plate. Repeat same step for the other front vertical post assembly.

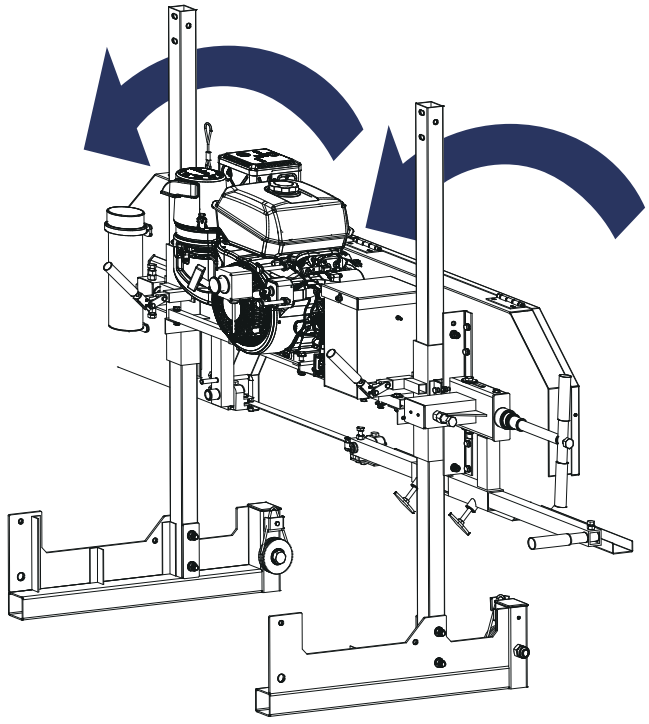


Lock the cam handles on both the square post to prevent the head from moving when it is stood up in the coming steps. Ensure that when activating the cam handles, the clamps securely lock on the square vertical post.



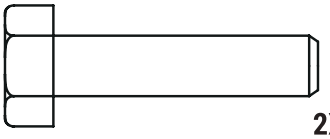
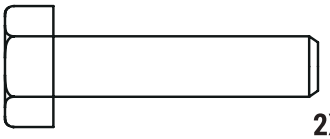
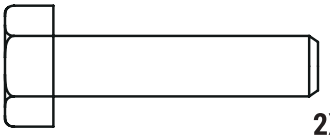
STANDING THE SAWHEAD UPRIGHT

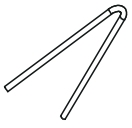
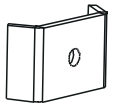
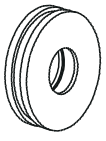
With the help of another person, stand the sawhead upright by rotating it around the rounded profiles at the front of the carriage legs. Do not set the sawhead on the track until instructed to do so later in the assembly process.

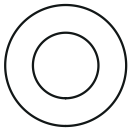


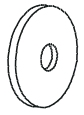
REAR POSTS

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.

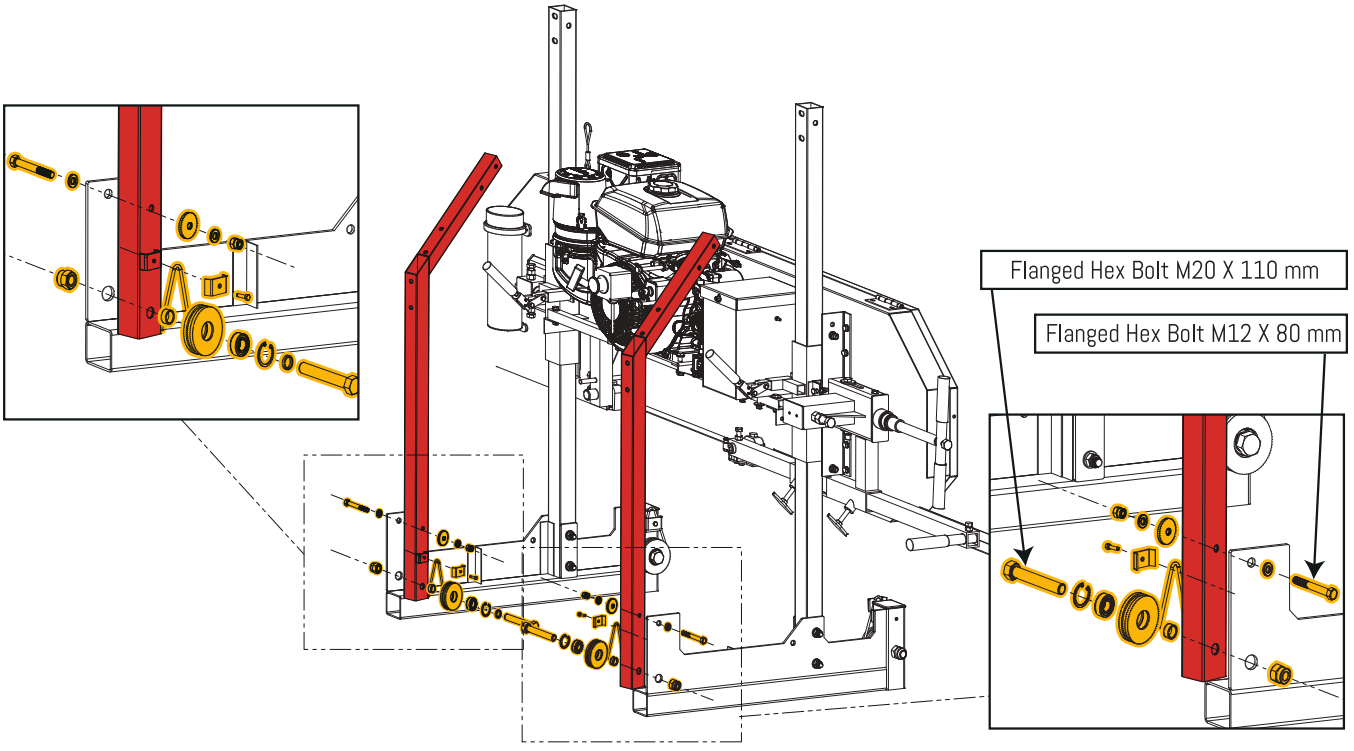
Hexagon head bolt M6x20	 **2X**
Hexagon head bolt M12x80	 **2X**
Hexagon head bolt M20x110	 **2X**
Hexagon self-locking nut M12	 **2X**

Rear Post	 **2X**
Wire rope brush	 **2X**
Clamping plate	 **2X**
Bottom wheel	 **2X**

Hexagon self-locking nut M20	 2X
Flat washer 12	 4X

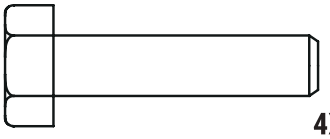
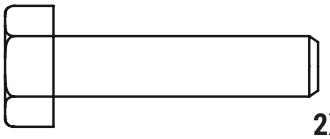
Bottom wheel spacer	 2X
Rear gasket	 2X

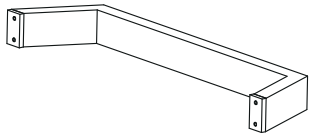
Assemble rear vertical post to wheel assembly using the two bolts and back plate. Repeat same step for the other rear vertical post assembly.

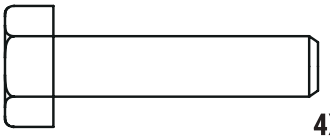
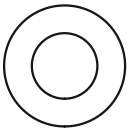
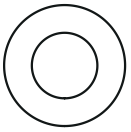


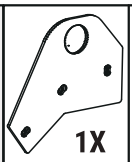
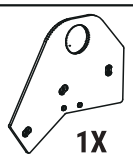
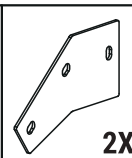
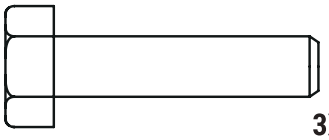
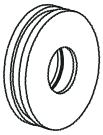
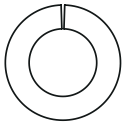
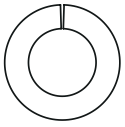
CROSS BEAM & HEAD STOPS

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

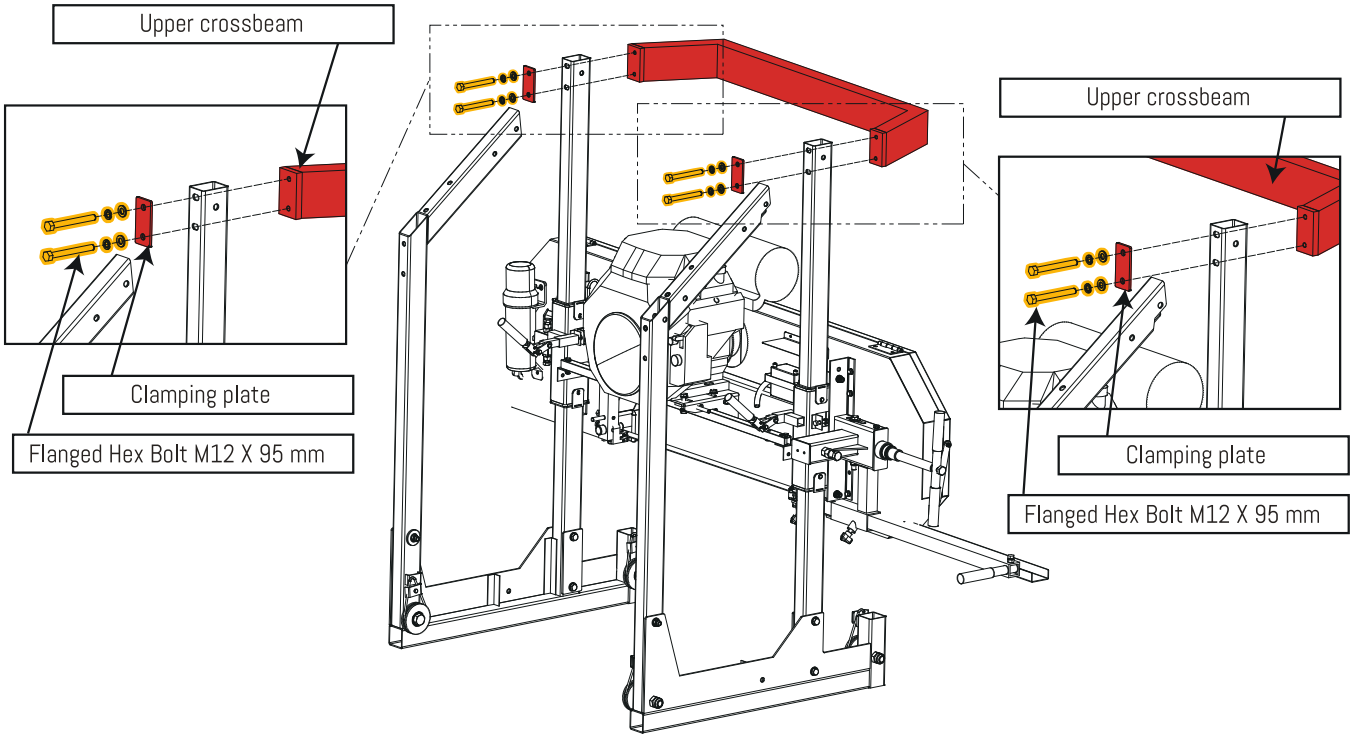
Hexagon head bolt M12x95	 4X
Hexagon head bolt M12x110	 2X

Upper crossbeam	 1X
Clamping plate	 2X

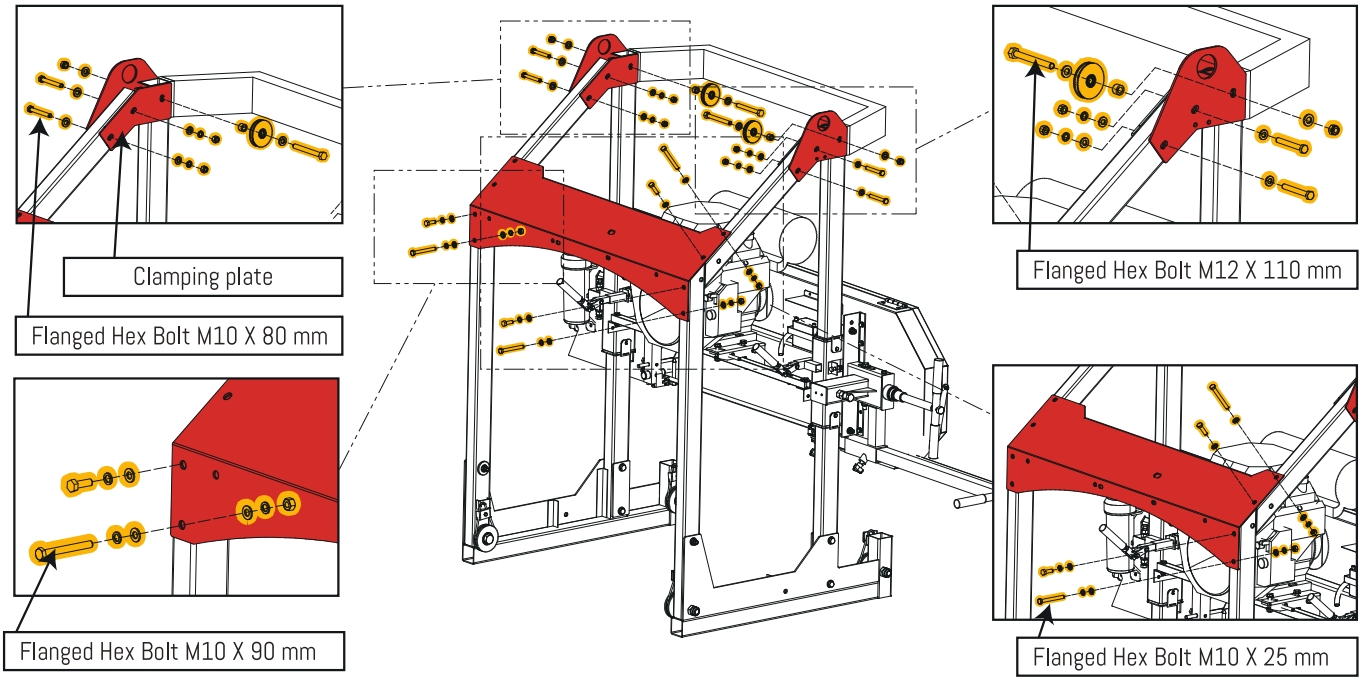
Hexagon head bolt M10x90	 3X
Hexagon head bolt M10x80	 4X
Hexagon self-locking nut M10	 7X
Hexagon self-locking nut M12	 2X
Flat washer 12	 4X
Flat washer 10	 17X

Connecting plate	 1X  1X  2X
Hexagon head bolt M10x25	 3X
Bottom wheel spacer	 2X
Bottom wheel	 2X
Spring washer 12	 4X
Spring washer 10	 10X

Slide the cross beam into the two square tube post. Bolt the top of the square tube posts and the cross beam.



Install the connecting clamping plate, upper arch and steel cable roller, using a wrench to hold the nut and tighten the bolt.

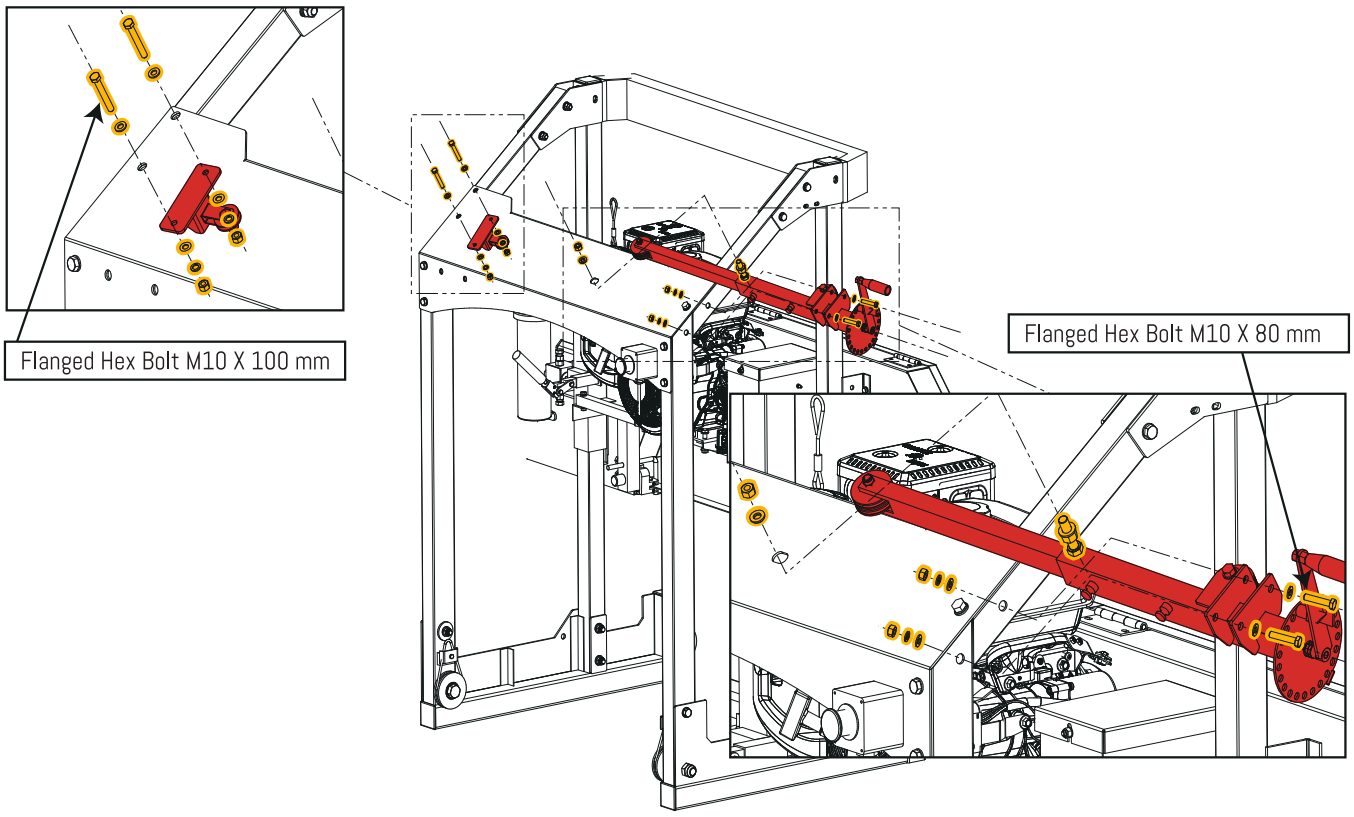


LIFTING SYSTEM

Assemble the Lifting system to the posts using the hardware listed below.

Hexagon head bolt M10x80	2X	**lifting system**	1X
Hexagon head bolt M10x100	2X	**Flat washer 10**	8X
Hexagon nut M16	2X	**Flat washer 16**	2X
Hexagon nut M10	4X	**Spring washer 10**	4X

Install the lifting system,using wrench to hold the nut ,tighten the bolt.



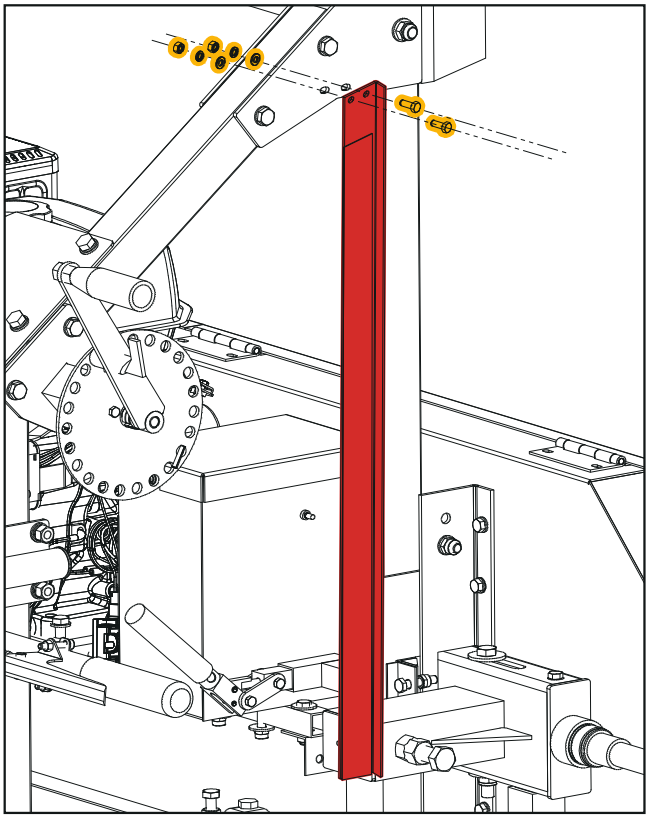
LOG SCALE

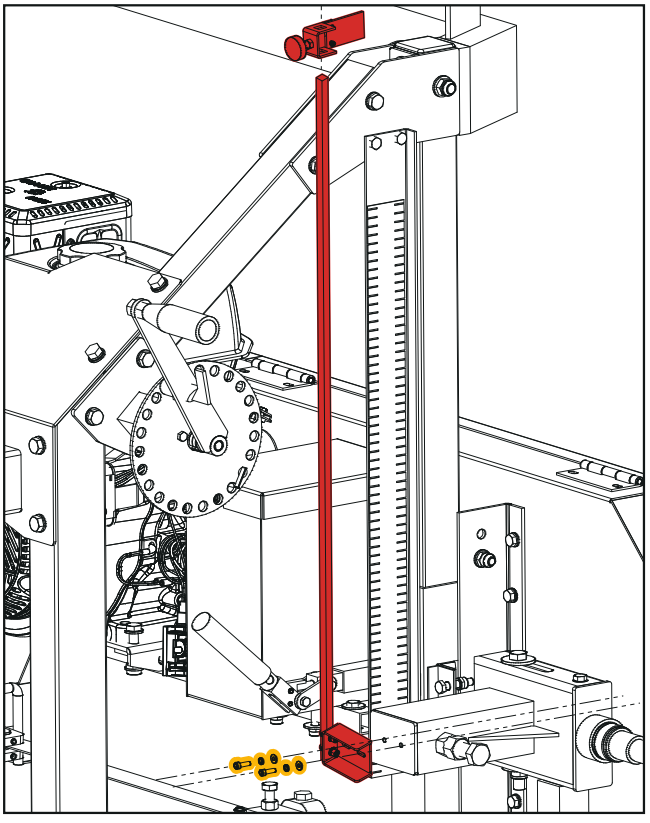
Place the measuring scale assembly, the assembly include ruler and height indicator.

Hexagon head bolt M8x20	**2X**
Hexagon head bolt M6x14	**2X**
Hexagon nut M8	**2X**

Flat washer 6	**2X**
Flat washer 8	**2X**
Spring washer 6	**2X**
Spring washer 8	**2X**

A. install ruler,using wrench to hold the nut ,tighten the bolt.
B. Install the square indicator rod to the sawmill using the two bolts and tighten. Slide the scale indicator over the square rod and tighten.





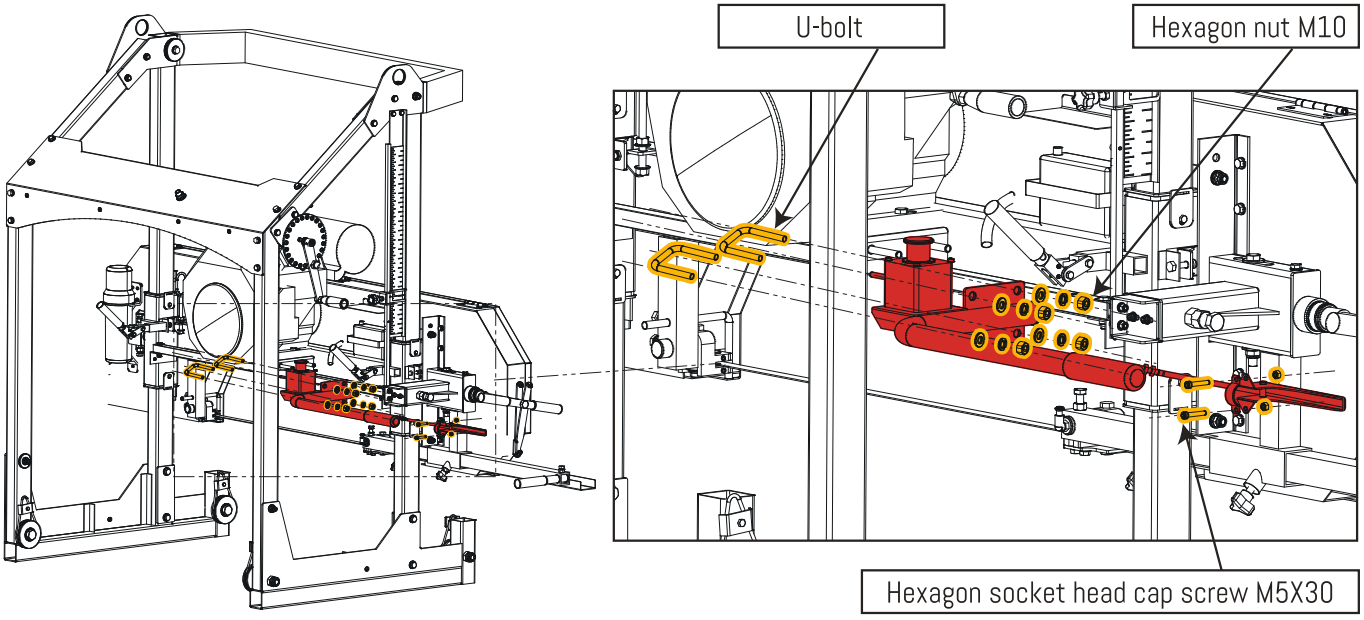
It is important to alternate tightening of the nuts (top then bottom) to ensure the black round clamp begins to compress evenly on both the top and bottom until flanges meet at outer edge.

THROTTLE HANDLE

Assemble the throttle handle to the post using the hardware listed below.

Hexagon head bolt M5x30	2X	**U-bolt**	2X
Hexagon nut M10	4X	**Flat washer 10**	4X
Hexagon nut M5	2X	**Spring washer 10**	4X

Install the push handle onto the rear post of the machine using provided U-bolts and nuts, the installation height can be adjusted. Tighten the nuts in a position suitable for the operator.

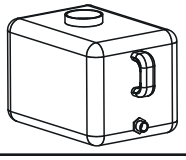
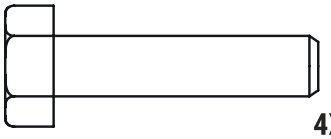


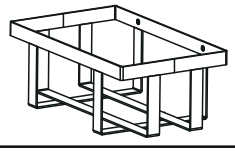
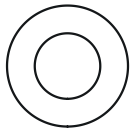


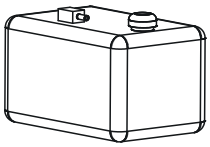
PLEASENOTE***The idler screw needs to be wound fully out failure to do this will result in the engine not running at its full RPMs' which will result a poor cut.

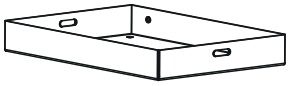
COOLING BOX AND FUEL TANK

Follow the parts table below to gather the components required for each step.

Bucket		**1X**	
Hexagon head bolt M10x20		**4X**	
Hexagon nut M10		**4X**	

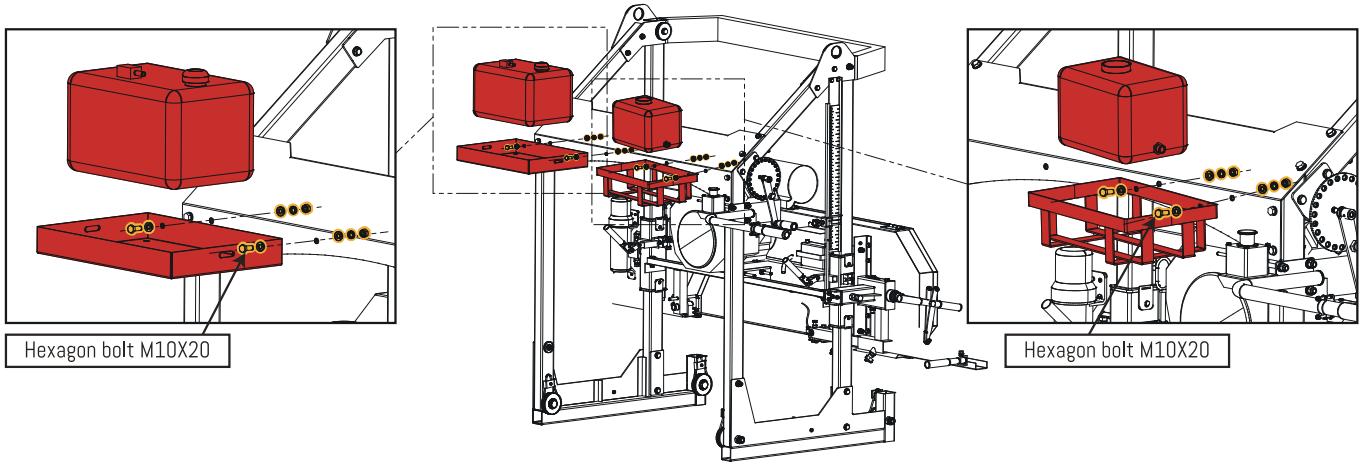
Bucket frame		**1X**	
Flat washer 10		**8X**	

Fuel tank	 1X

Fuel tank frame	 1X

Install the cooling box bracket on the beam,using wrench to hold the nut ,tighten the bolt.

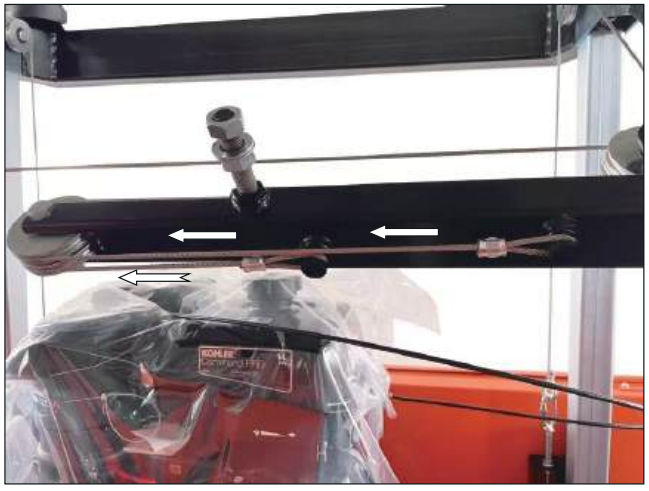
Install the fuel tank bracket on the beam,using wrench to hold the nut ,tighten the bolt.



LIFT CABLE ROUTING

Route the cables on both sides as shown in the below image. Short cable, Long cable

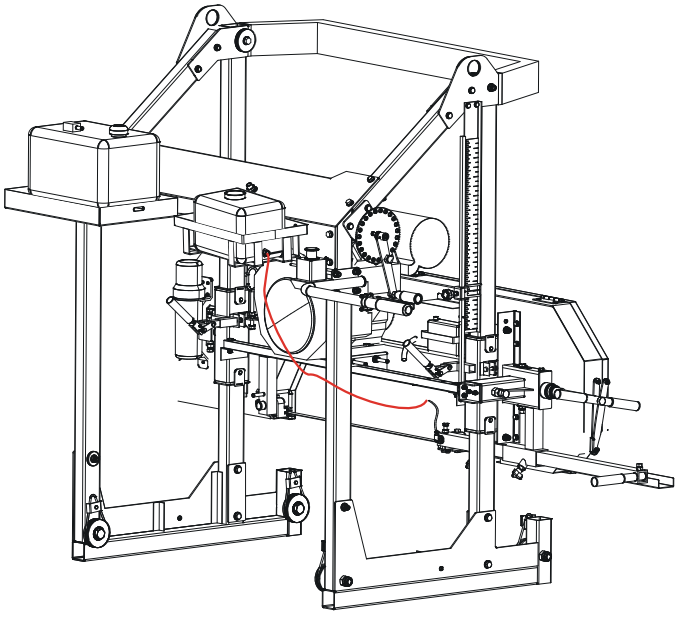




TRANSPARENT WATER PIPE AND BLACK TUBING

Connect the water pipe. After the connection is completed, check to ensure that there is no water leakage at the joints.

Connect the black tubing from the mail tank to the engine



Please Note: We recommend adding some dishwashing liquid to the tank to help lubricate the wood – two to three capfuls.

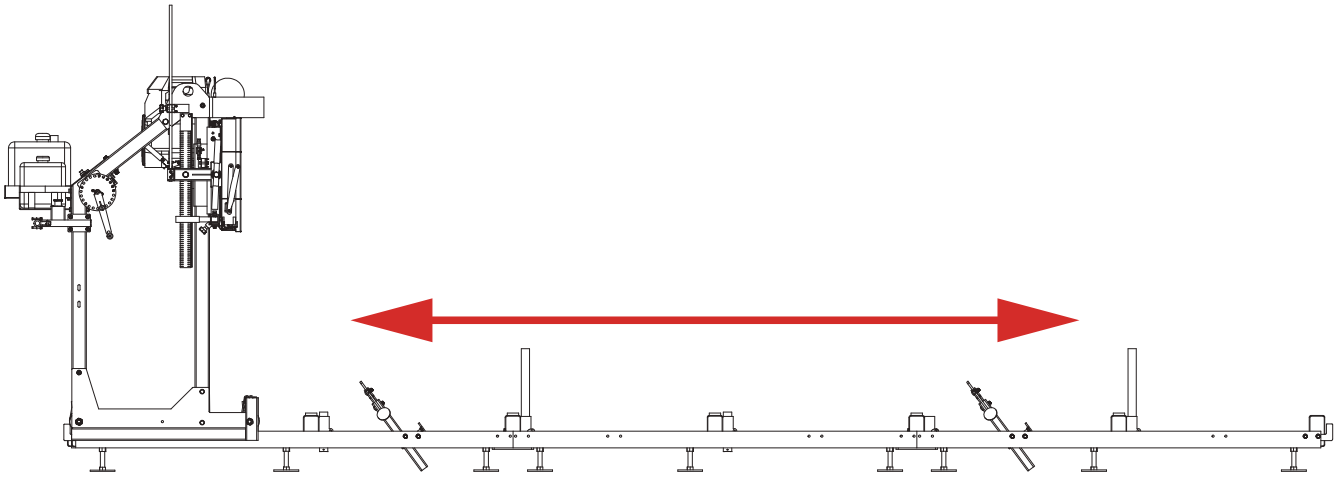
Add waterproof grease to the threads of the blade tension "T" handle and to the washer face that it meets before use. Proper blade tension is achieved when the blade deflects no more than a total of 1/8" - 1/4" up/down.

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.

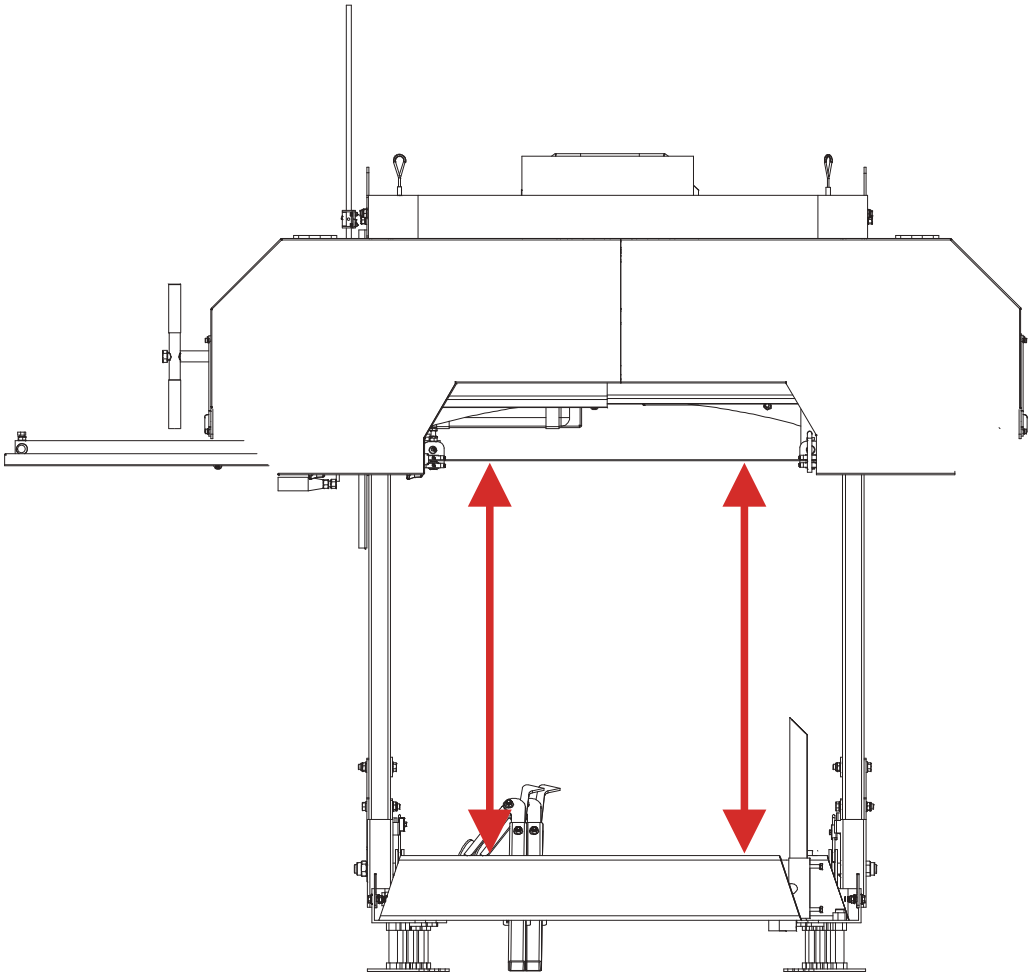
Add water proof grease to all "▲" handle threads on the sawmill.



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, the "L" rails will need to be set further or closer together to achieve a consistent width along the entire track system. Once the desired width is achieved, all nuts and bolts can be tightened to the log bunks

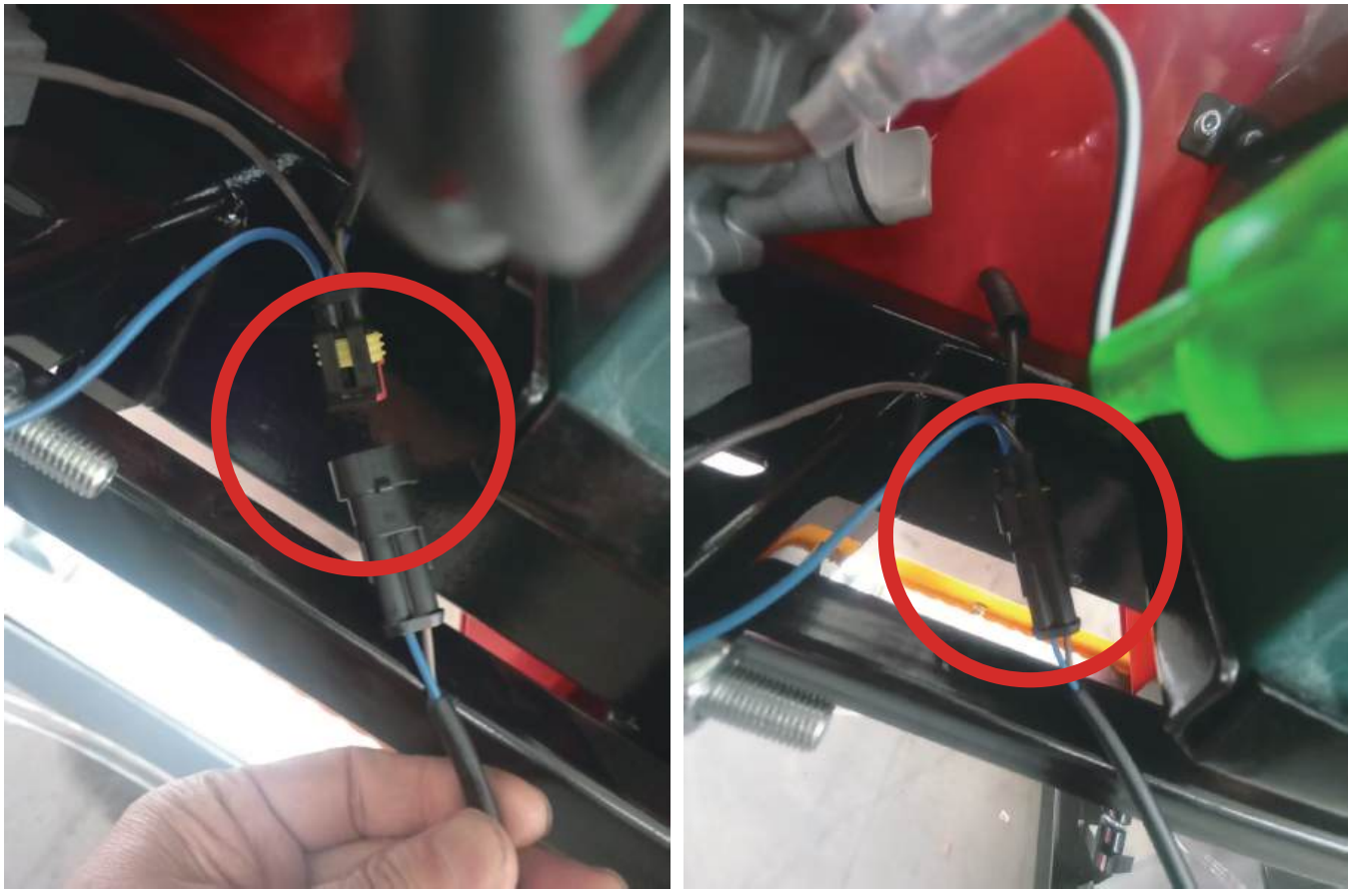


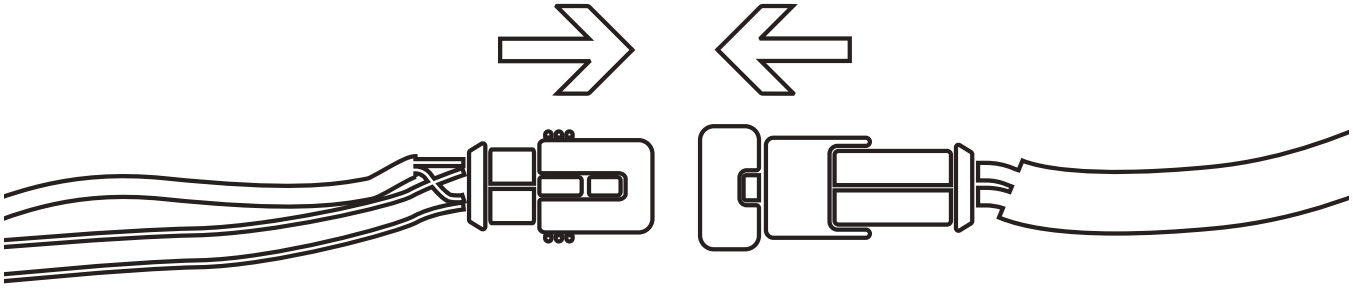
Using a tape measure, take a measurement from the blade to the top of the log bunk on both the left and right side. The distance should be equal on both sides. If it isn't, you will need to adjust the cable ends at the rear handle to either raise or lower one side.



ELECTRIC WIRE CONNECTION

Connection the wiring plugs together.

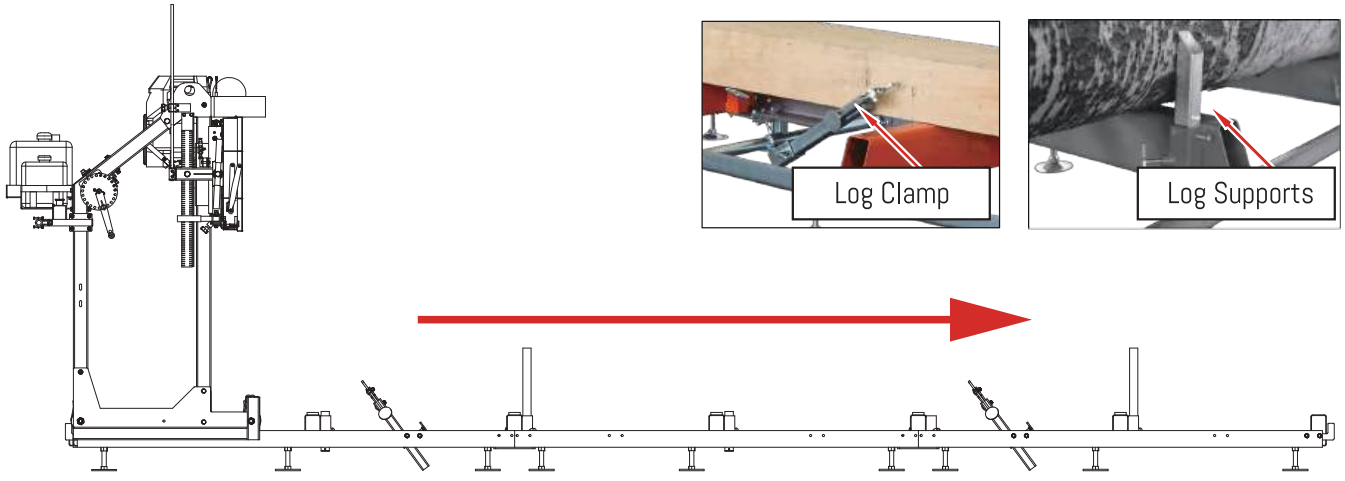




ENGINE



Refer to the engine manual before using your sawmill. Please note that the engine does not contain any petrol 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.

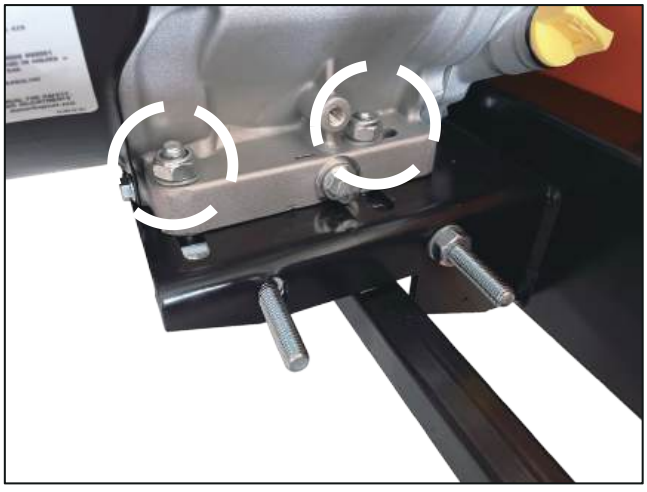


Always cut in the direction shown above. The log clamp should always be on the right side of the log and the log supports should always be on the left. Failure to cut in this direction can cause the log to come lose and possibly even cause damage or injury.

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

BELT TENSION

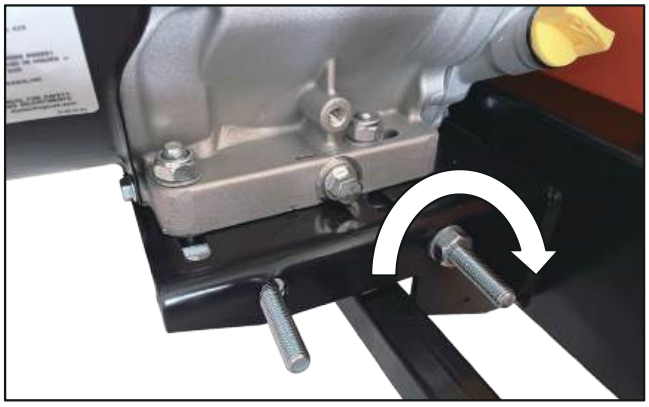
To check the belt tension, with your hand, firmly try to deflect the belt up and down. There should be no more than 1/4" of deflection in both directions (1/2" total). If the belt deflects more than this, it will need to be tightened as described below.





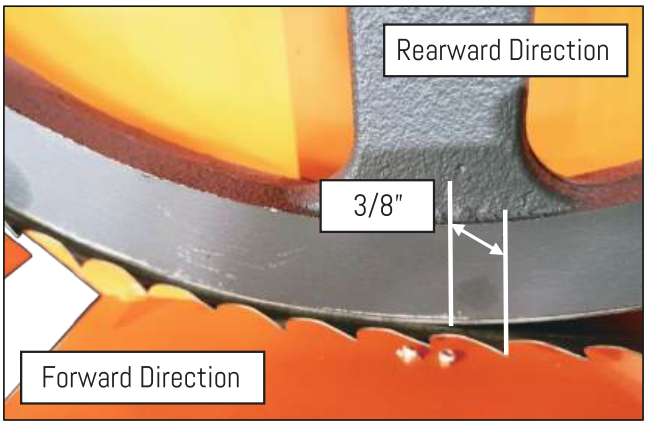
To tighten the drive belt, start by loosening the four bolts that secure the engine to the engine mount using a 16mm wrench.

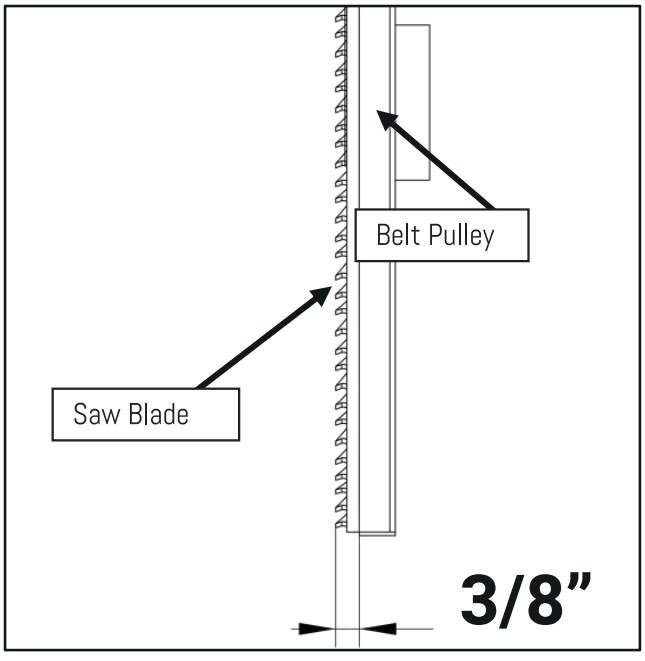
Now that the engine is free to slide on the engine mounting plate, turn the 16mm nut on the horizontal stud In the clockwise direction. This will pull the engine towards the stud and apply more tension on the belt. Do this step incrementally while checking the belt for proper deflection. It is also important 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 16mm nut on the horizontal stud can be turned counter-clockwise.



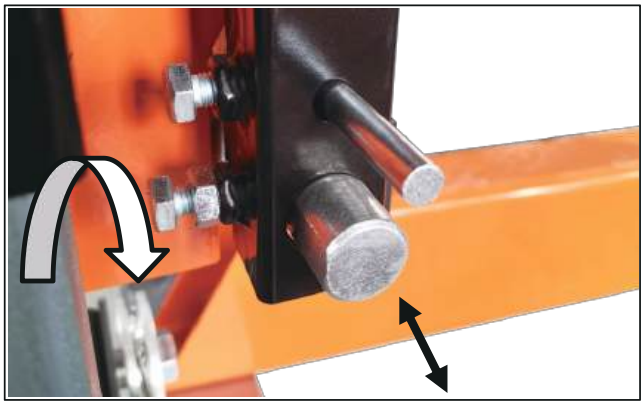
BLADE TRACKING

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. Measure the distance from the tip of the blade tooth to the front face of the bandwheel on both sides. If an adjustment on either side is required, the below steps will detail this procedure.



Loosen the blade guide assembly bolt with a 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.

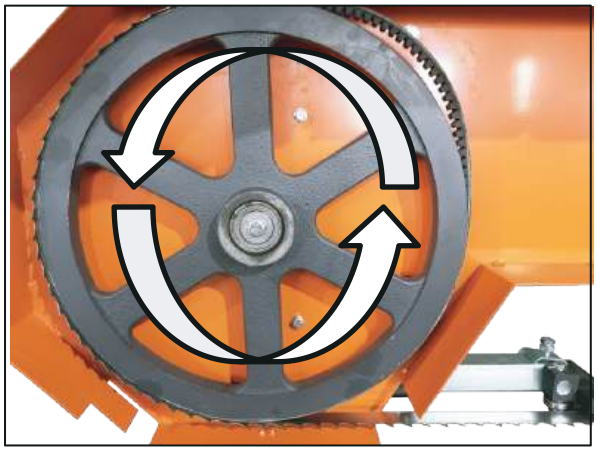
ADJUSTING THE RIGHT HAND SIDE

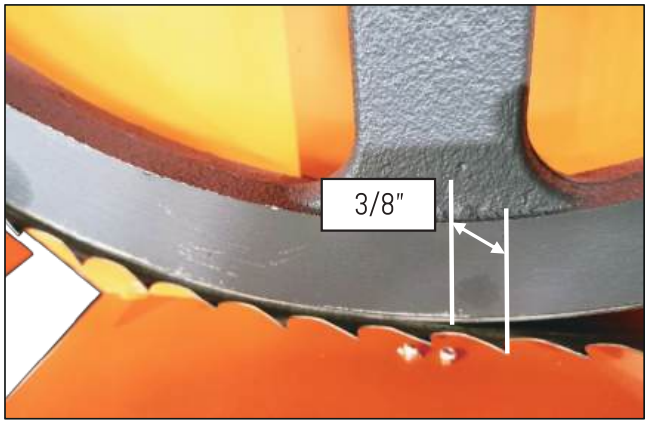


Loosen the tracking alignment locking nut with an adjustable wrench.

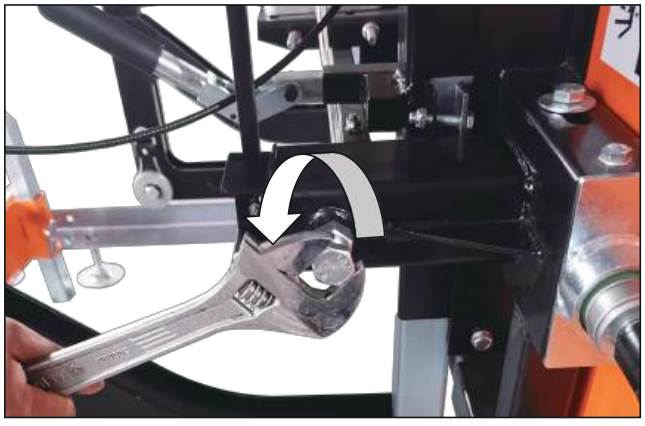


The alignment bolt can now be turned to change the angle of the bandwheel and track the blade. To move the blade more rearward on the bandwheel, this bolt will need to be turned clockwise. Alternatively, turning the bolt in the counter-clockwise direction would force the blade to run more forward on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



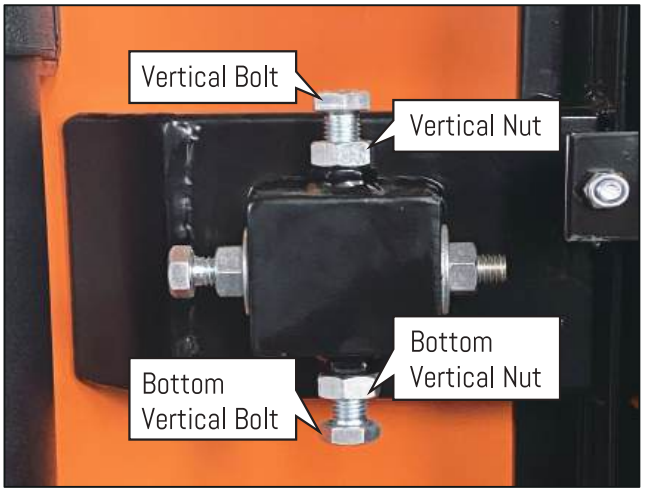


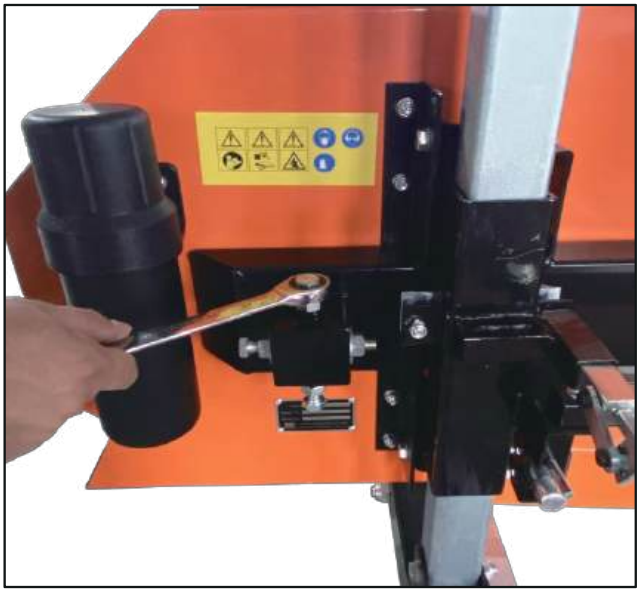
Wearing gloves, spin the bandwheel with your hand and observe how the blade has changed tracking. Measure the distance again and repeat the above step to further compensate if required.The ideal measurement is 3/8".



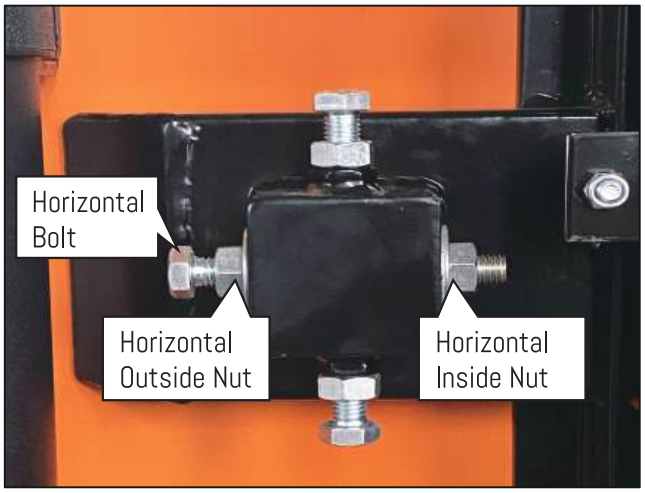
Once satisfied with the measurement, tighten the locking nut clockwise.

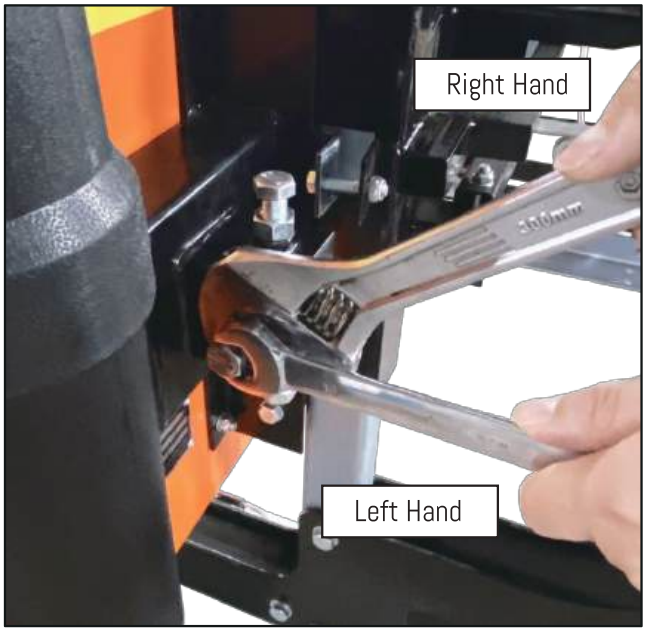
ADJUSTING THE LEFT HAND SIDE





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 16mm wrench, loosen the "vertical nut" a ½ turn. Do the same on the "bottom vertical nut". Next, loosen both "vertical bolts" 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.



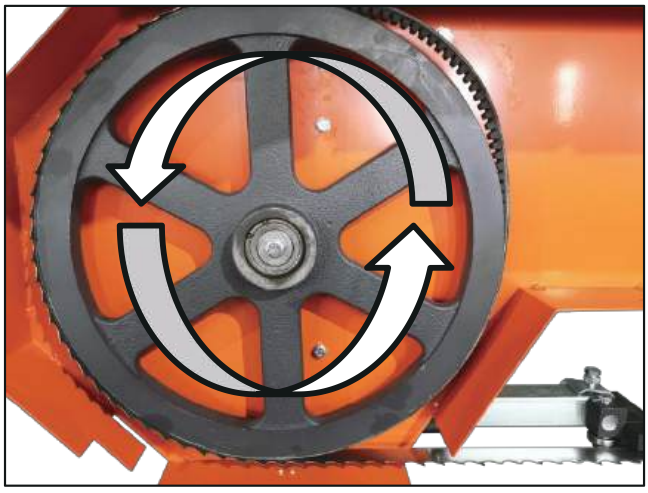


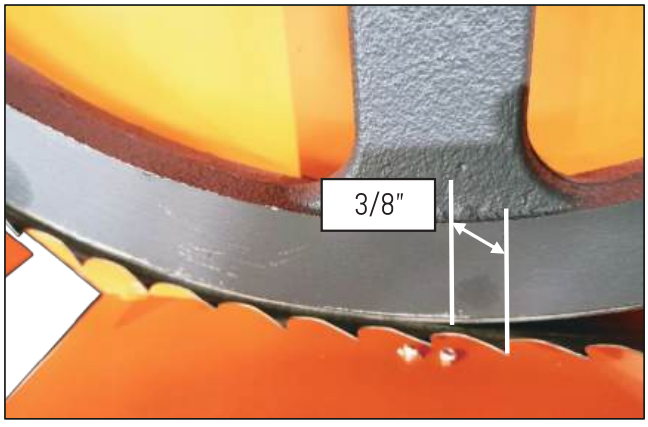
MOVING THE BLADE FORWARD

Using a 16mm 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 16mm 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 forward. Tighten the vertical bolts, then nuts to clamp the bandwheel shaft back into vertical position.





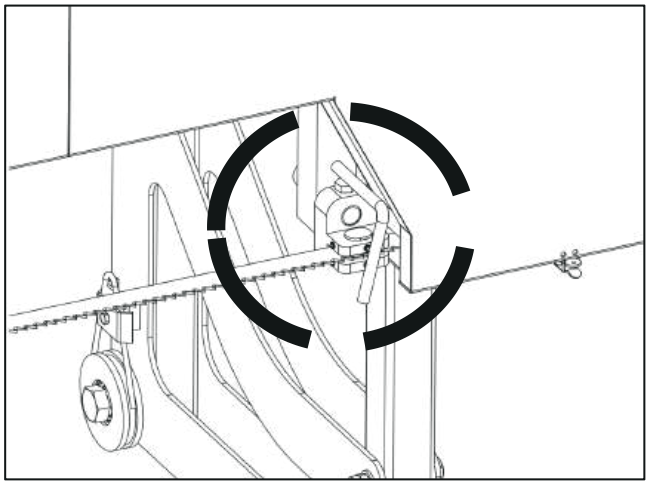
Re-tension the blade by turning the "T" handle a full turn in the clockwise direction. Wearing gloves, spin the bandwheel with your hand and observe how the blade has changed tracking. Measure the distance again and repeat the above step to further compensate if required. The ideal measurement is 3/8".

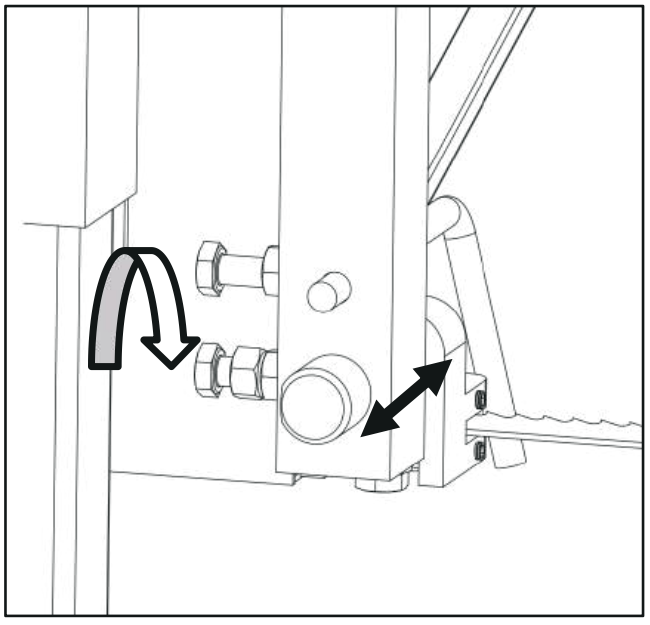
Once the blade is tracking true, bring the blade guide assemblies back up to the blade. Keep a paper width distance between the blade guide bearing and the back of the blade. More information on this set up can be found in the next section – "BLADE GUIDE ADJUSTMENT"

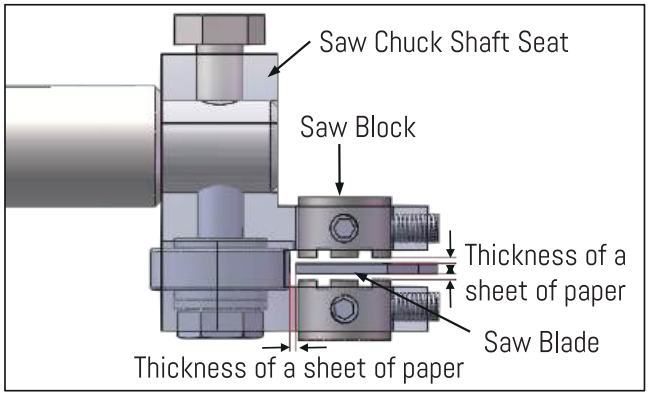
BLADE GUIDE ADJUSTMENT

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.

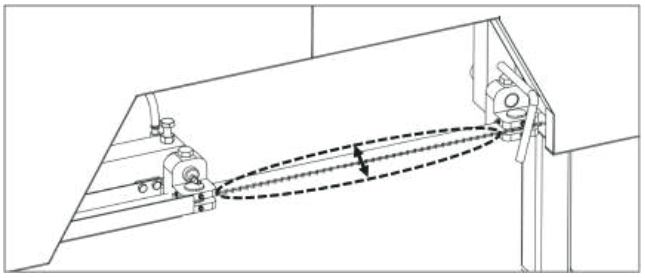




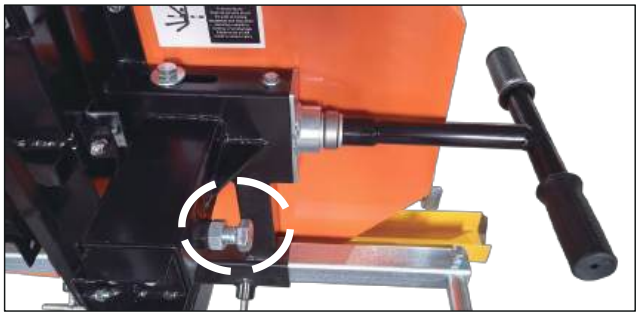


Loosen the blade guide assembly bolt with a 16mm socket. The round shaft should now be free to slide back and forth. Position it so that there is a paper width gap between the bearing and the back of blade. Tighten bolt against the flat on the shaft to secure assembly back in position.

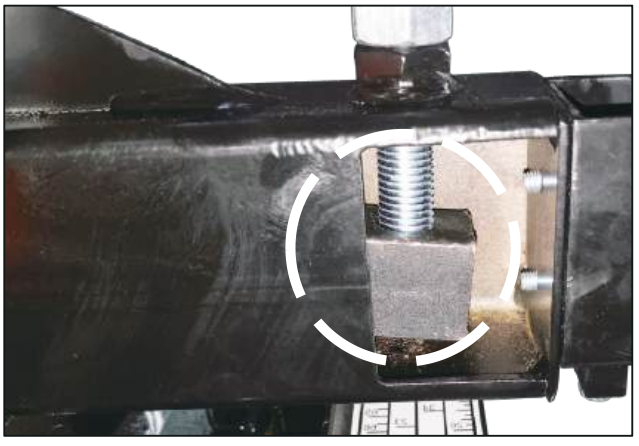
BLADE TENSION



Proper blade tension is achieved when the blade deflects no more than a total of 1/8" - 1/4" up/down when it is firmly moved by hand at the center location of the blade guide blocks. Turning the blade tension "T" handle in the clockwise direction will add tension to blade.

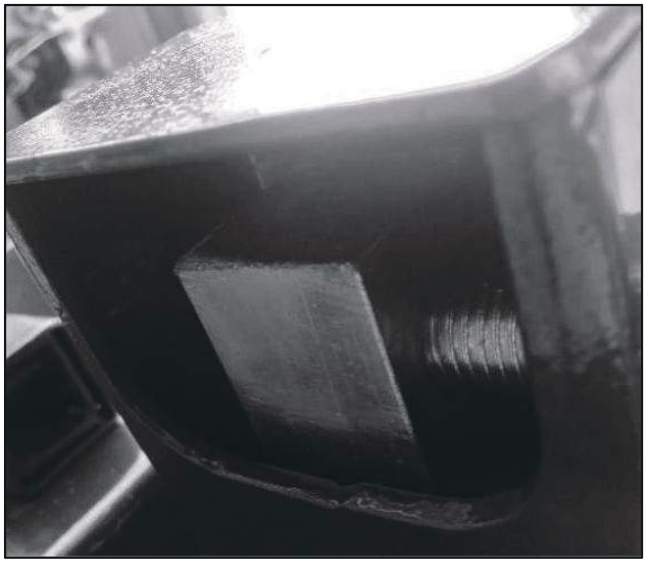


When tensioning the blade, make sure the tracking adjustment bolt sitting behind the T handle (pictured) is sitting back in its recess after you have finished and before the mill is run. Failure to do this will result in the blade being thrown and possibly broken.



Tracking adjustment bolt out of recess, of it looks like this DO NOT start the mill until it is resting back in its recess

Tracking adjustment bolt sitting in recess. It should look like this before the mill is started back up.



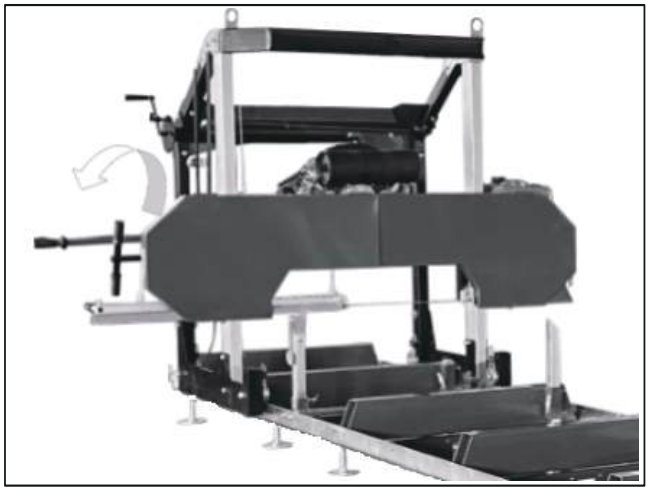


Ensure the blade support arm is locked into place after tensioning the blade.

SAWMILL MAINTENANCE

CHANGING THE BLADE

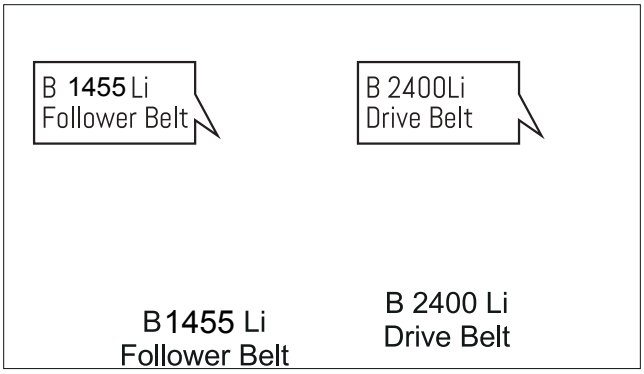
Never attempt the below with the engine running. As a safety precaution, remove the spark plug cap. Gloves and safety glasses must be worn when changing the blade.



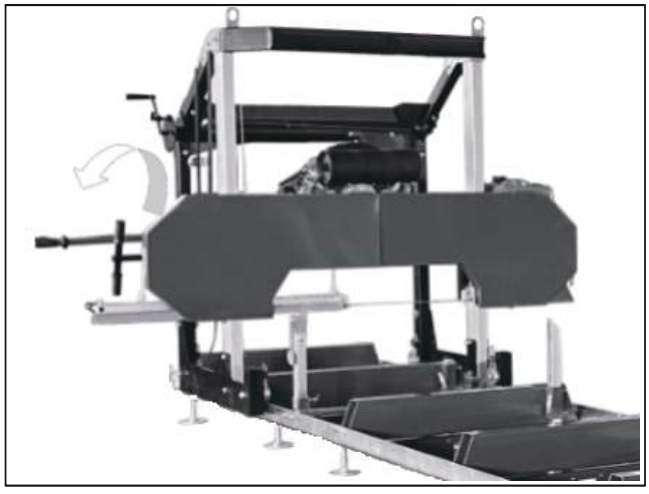
Remove the tension in the blade by turning the "T" handle in the counter-clockwise direction and then open the blade guard cover. The blade should now be loose and free to pull straight out the front. The new blade can now be installed, guards closed and proper blade tension set.

REPLACING BELTS

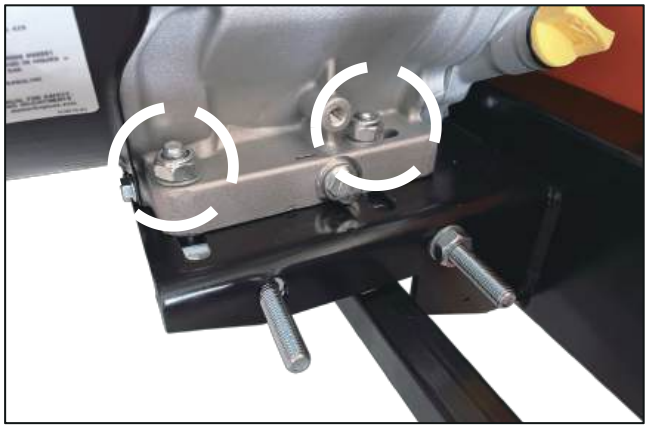
Never attempt the below with the engine running.As a safety precaution, remove the spark plug cap. Gloves and safety glasses must be worn when replacing the belts.



There are two rubber "V" belts on the sawmill and they should be replaced as a set. It is not advised to replace individual belts separately. It is recommended to use a B 2400 Li drive belt for the drive side and a B1455 Li follower belt.

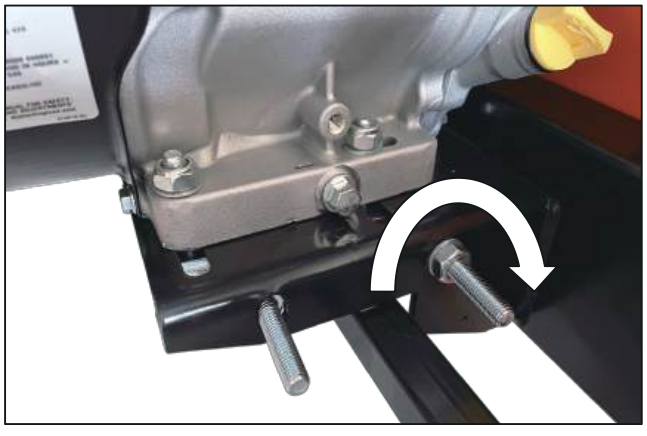


Remove the tension in the blade by turning the "T" handle in the counter-clockwise direction and then open the blade guard cover. The blade should now be loose and free to pull straight out the front.





To change the drive side belt, loosen the four bolts that secure the engine to the engine mount using a 16mm wrench.



Now that the engine is free to slide on the engine mounting plate, turn the 16mm 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 themanual.

The follower belt can now be changed by simply pulling it off and installing the new one. The blade can now be re-installed, guards closed and proper blade tension set.

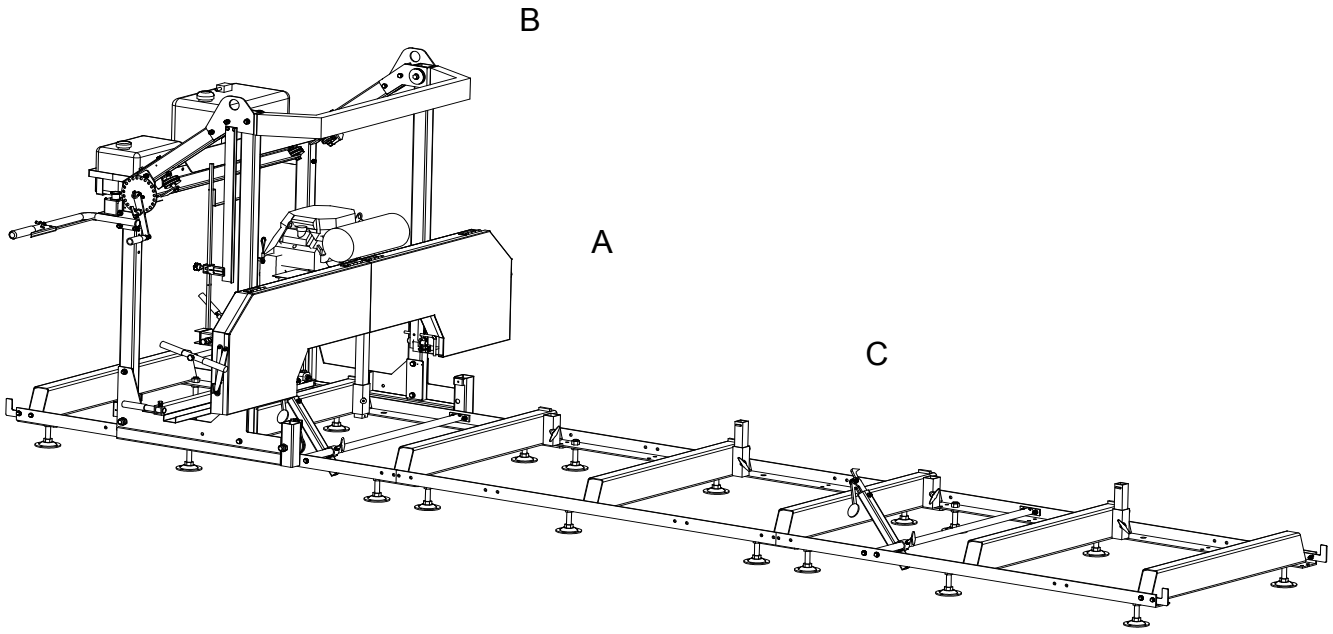
Note that blade tracking is likely to change and need adjusting when new belts are installed. Refer to "BLADE TRACKING" for more information.

TROUBLESHOOTING

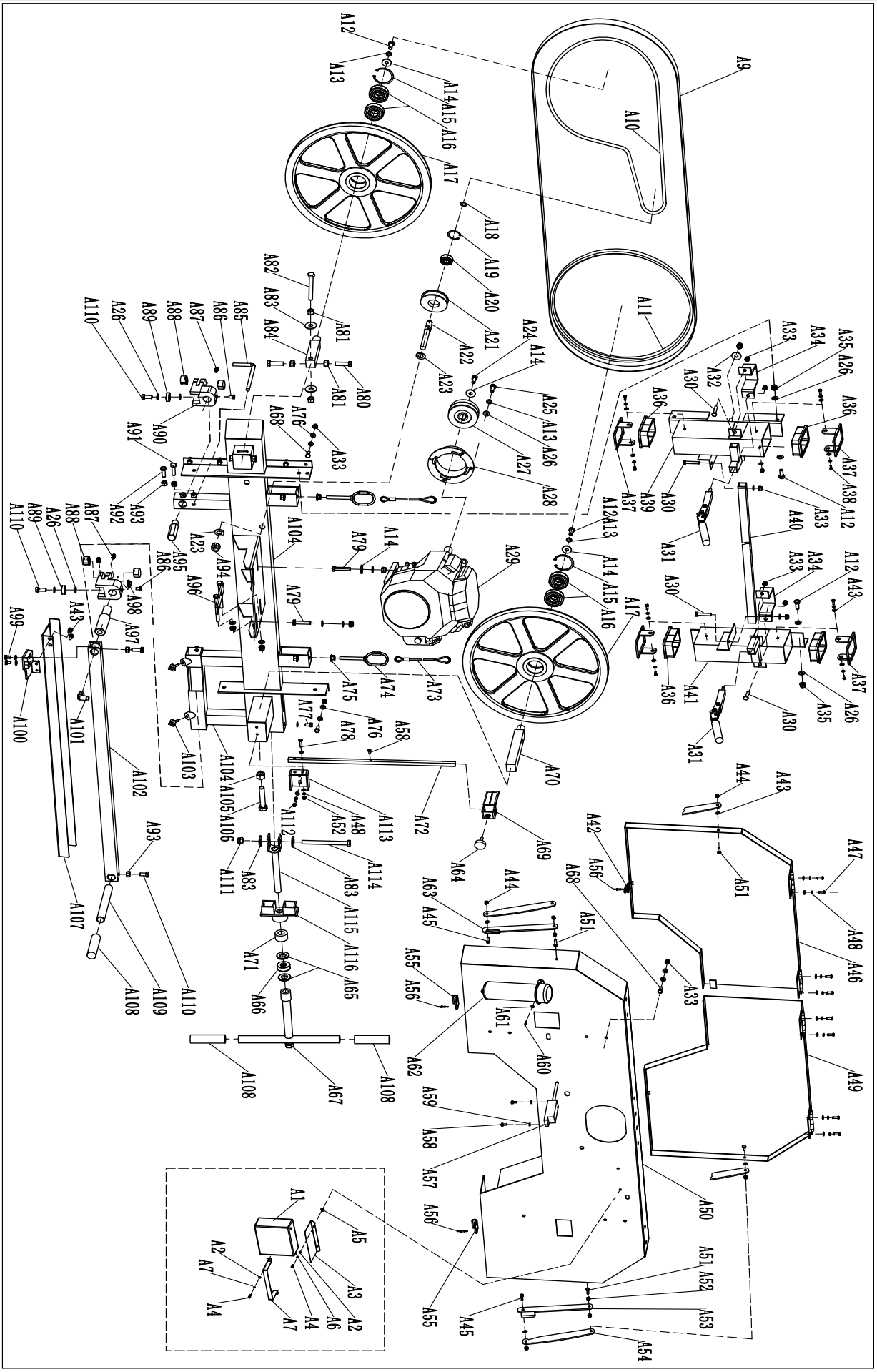
Problem/Issue	Possible Causes	Resolution Options
Producing wavy cuts.	1. Inadequate blade tension. 2. Improper blade guide set up. 3. Improper blade tracking. 4. Sap build up on blade. 5. Dull blade. 6. Pushing mill too quickly.	1. Tighten blade. 2. Gap between guide blocks and blade are incorrect. 3. Adjust blade tracking. 4. Install new blade. Always use blade lubricant. 5. Install new blade. 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 round/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. 2. Gap between guide blocks and blade are incorrect. 3.Adjust blade tracking. 4. Install new belts. 5. Install new blade. 6. Slow feed rate down and push head slower through log.
Blades are breaking.	1. Too many blade sharpening. 2. Inadequate blade tension. 3. Improper blade guide set up. 4. Improper blade tracking. 5. Pushing mill too quickly.	1. Replace blade. 2. Binding between guide blocks when blade is too loose. Tighten blade. 3. Gap between guide blocks and blade are incorrect. 4. Adjust blade tracking. 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. 2. Belts are worn or too loose. Replace. 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. 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 clampedsecurely. 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 bunksand against log supports. 2. Belts may have flats in them from leaving blade tension tight when not in use. Replace them. 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.

DIAGRAM--ENSEMBLE



DIAGRAM(A)--BAND WHEEL HOUSEING



PARTS LIST(A)--BAND WHEEL HOUSEING

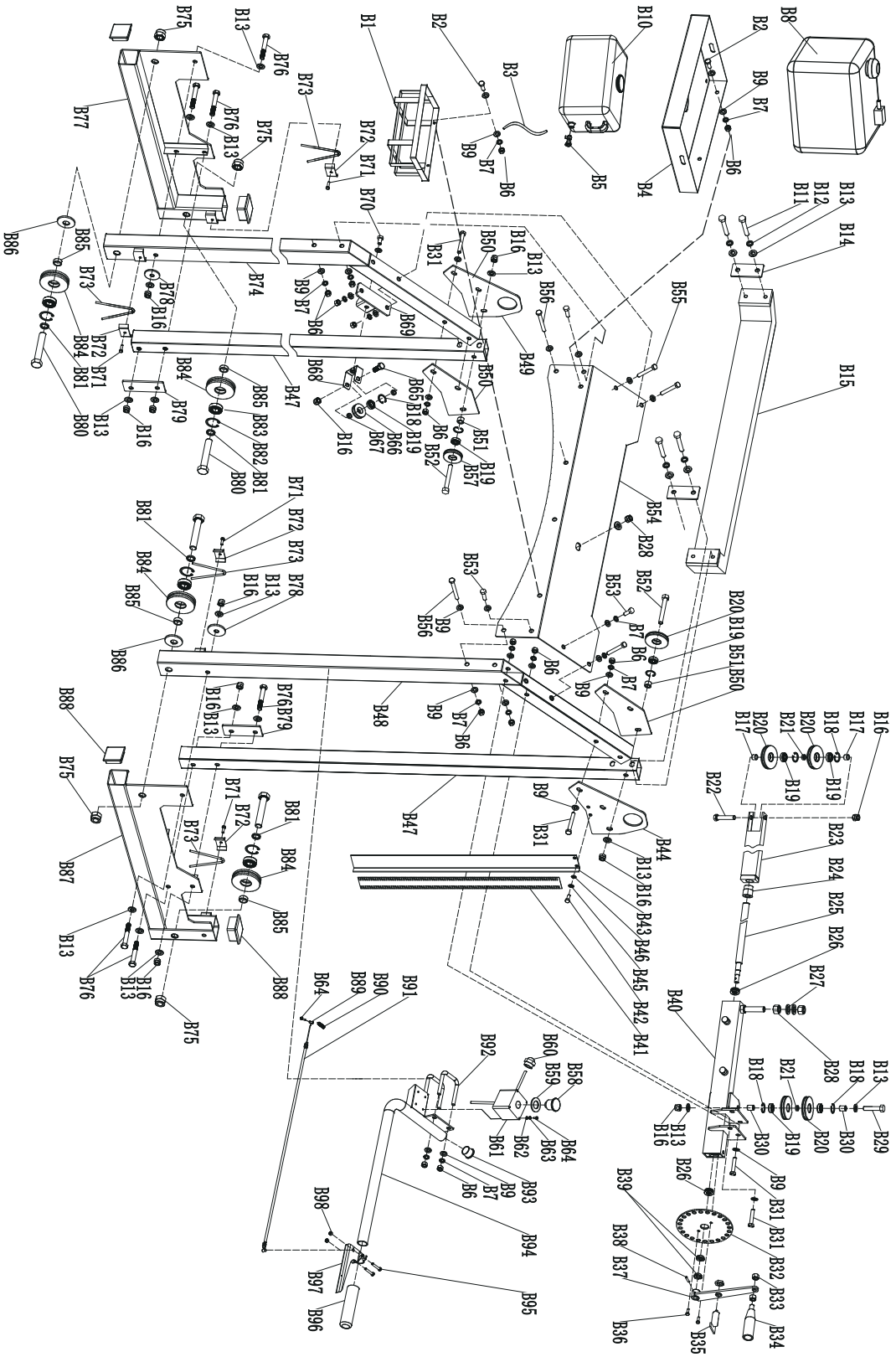
REF	DESCRIPTION	QTY
A1	Battery 12V6AH	1
A2	Flat washer 5	4
A3	Cover for battery	1
A4	Allen bolt M5x16	4
A5	Self locking nut M5	4
A6	Spring washer 5	4
A7	bracket	1
A8	Battery washer	1
A9	GT40G saw blade 4440	1
A10	Bi 2400 driving V Belt	1
A11	Bi1473 follower belt	1
A12	Hexagon bolt M10X25	7
A13	Spring washer 10	7
A14	Big washer (Φ10*35*3.0)	5
A15	C ring 62 for hole	2
A16	Bearing 6305	2
A17	Belt pulley	2
A18	C ring 17 for shaft	1
A19	Cring 40 for hole	1
A20	Bearing 6203-2RS	1
A21	Tension wheel	1
A22	Shaftfor tension wheel	1
A23	Flat washer 16	1
A24	America 3/8X24X25	1
A25	America 3/8X16X25	4
A26	Flat washer 10	22
A27	Clutch	1
A28	Cover for clutch	1
A29	Gasoline engine	1

REF	DESCRIPTION	QTY
A30	Hexagon M8x40	4
A31	Quick locking handle	2
A32	Big washer 10	5
A33	Self locking nut M8	16
A34	Self locking M10	2
A35	Locking plate	11
A36	Nylon Bushing	4
A37	Cover for nilonbush	4
A38	Carriage bolt M6X12	8
A39	Right locking tube	1
A40	GT40G-43 Pull the tube	1
A41	Left locking tube	1
A42	Upper lockfor door	2
A43	Flat washer 6	20
A44	Self locking M6	4
A45	Hexagon M6x16	6
A46	Right cover door welded	1
A47	Cross pan head screw M6X16	8
A48	Spring washer 6	18
A49	Left cover door welded	1
A50	Shield body welding (extra)	1
A51	Hexagon bolt M6X20	2
A52	Hex nut M6	4
A53	Door support plate no. 3	1
A54	Door support plate no. 1	2
A55	Lower door locking	2
A56	Rivet 4x10	8
A57	Limi tswitch YBLX	1
A58	Cross pan head screw M5X12	3

REF	DESCRIPTION	QTY
A59	Spring washer 5	2
A60	Rivet 4x16	3
A61	Big washer 4	3
A62	Containerfor Instruction manual	1
A63	Door support plate No. 2	1
A64	Flower handle M8X40	1
A65	Tension gasket (φ21*38*4.5)	2
A66	Thrust ball bearing 51204 for automotive steering	1
A67	Pull the handle and weld	1
A68	Hexagon bolt M8 x 20	4
A69	Pointer base for ruller	1
A70	Shaft for driven blade wheel	1
A71	cushion	1
A72	Support for pointer	1
A73	Steel rope	2
A74	Holderring	2
A75	Hexagon flange nut M10	4
A76	Flat washer 8	17
A77	Hexagon bolt M8 x16	1
A78	Hexagon bolt M6 x 25	2
A79	Hexagon bolt M10 x 55	4
A80	Hexagon bolt M12 x 45	2
A81	Hexagon nut M12	4
A82	Hexagon bolt M12 x 100	1
A83	Big washer Φ12*35*3.0	4
A84	Shaft for drving blade wheel	1
A85	Stop for blade	1
A86	Hexagon bolt M10 x 12	2
A87	Setscrew M6X12	12
A88	Blade guide plate	4
A89	Ball bearing 6200-2RS	1

REF	DESCRIPTION	QTY
A90	Base for balde guide plate	2
A91	Hexagon bolt M10 x 35	1
A92	Hexagon bolt M10 x 30	2
A93	Hexagon nut M10	5
A94	Selflockingnut M16	1
A95	Right shaft for blade guide plate	2
A96	Push-pull plate	1
A97	Left shaft for blade guide plate	1
A98	Grease fitting	1
A99	Hexagon bolt M8 x 20	2
A100	Blade protection coverno. 1	1
A101	1/4 elbow external connection	1
A102	Sliding tube	1
A103	Locking knob M10X40	2
A104	Beam weldment (extra)	1
A105	Hexagon nut M16	1
A106	Hexagon bolt M16 x 80	1
A107	Blade protection cover no. 2	1
A108	Rubber bush	3
A109	Push pull handle	1
A110	Hexagon bolt M10 x 20	3
A111	Allen bolt M6x14	1
A112	Self lockingut M12	2
A113	Mounting base plate	1
A114	Hexagon halfthread bolt M12X150	1
A115	Pull shaft	1
A116	Base for pullshaft	1

DIAGRAM(B)--CARRIAGE



PARTS LIST(B)--CARRIAGE

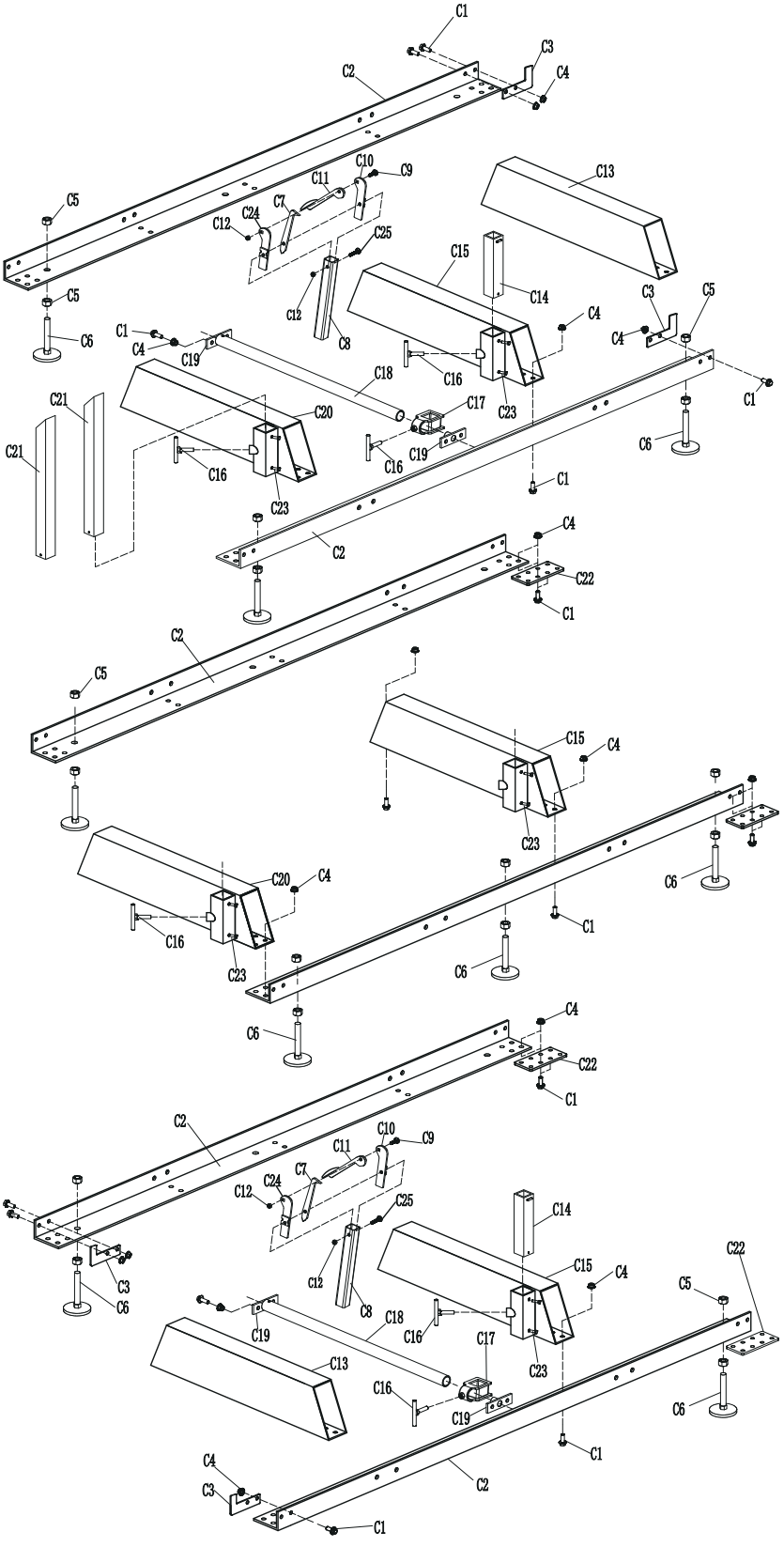
REF	DESCRIPTION	QTY
B1	Welding of bucket frame	1
B2	Hexagon head bolt M10X20	4
B3	PU high-pressure air pipe 8* 5 transparent	1
B4	Bracket	1
B5	Quick connect CSL8-04	1
B6	Hexagon nut M10	20
B7	Spring washer 10	20
B8	Tank for gasolinel 6.3Gal	1
B9	Flat washer 10	35
B10	bucket	1
B11	Hexagon bolt M12X95 half thread	4
B12	Spring washer 12	4
B13	Flat washer 12	20
B14	Clamping plate	2
B15	Welding of upper crossbeam	1
B16	Non metal insert hexagon lock nut M12	11
B17	Spacer 1	2
B18	Circlip for hole 28	7
B19	Deep groove ball bearing	7
B20	Lifting wheel	5
B21	Spacer sleeve 2	2
B22	Hexagon bolt M12X65 half	1
B23	Welding of expansion pipe 1	1
B24	Copper nut	1
B25	Lifting screw rod	1
B26	Thrust ball bearing 51102	2
B27	Flat washer 16	2
B28	Hexagon nut M16	2
B29	Hexagon bolt M12X85 half	1

REF	DESCRIPTION	QTY
B30	Reversing wheel sleeve	2
B31	Hexagon bolt M10X80 half	6
B32	Dial	1
B33	Hexagon nut M12	2
B34	13 hole handle	1
B35	PLUNGER AS-KNOB	1
B36	Hexagon head bolt M6X16	2
B37	Crank welding	1
B38	Elastic straight pin 5X24	1
B39	Small round nut M14X1.5	2
B40	Welding of expansion pipe 2	1
B41	7103-20003C Height scale	1
B42	Hexagon head bolt M8X20	2
B43	7203-200050 ruler base	1
B44	Connecting plate 3	1
B45	Spring washer 8	2
B46	Flat washer 8	2
B47	Hexagon nut M8	2
B48	Lifting square tube	2
B49	Welding of left rear support	1
B50	Connection plate no.1	3
B51	Spacer	2
B52	Hexagon bolt M12X110 half thread	2
B53	Hexagon bolt M10X25	3
B54	Upper arch cover	1
B55	Hexagon bolt M10X100 half thread	2
B56	Hexagon bolt M10X90 half thread	4
B57	Right lifting wheel	1
B58	Mushroom head emergency stop button	1

REF	DESCRIPTION	QTY
B59	Emergency stop sign	1
B60	Unable to pull off M20	1
B61	One hole of button box CA-BX1	1
B62	Flat washer 4	4
B63	Spring washer 4	4
B64	Cross pan head screw M4X12	5
B65	Hexagon bolt M12X30	1
B66	7001-230040 pulley 2	1
B67	7101-240040 Spacer	2
B68	7001-230010 pulley frame	1
B69	Pulley frame seat	1
B70	Hexagon head bolt M10 x 20	1
B71	Hexagon head bolt M6X20	4
B72	Clamping plate 2	4
B73	Wire rope brush	4
B74	Welding of right rear support	1
B75	Self locking nut M20	4
B76	Hexagon bolt M12X80 half thread	6
B77	Welding of right bottom wheel	1
B78	Rear gasket of bottom wheel frame	2
B79	Right clamping plate of bottom wheel frame	2
B80	Hexagon bolt M20X110 half thread	4
B81	Bottom wheel spacer 1	4
B82	Circlip for hole 42	4
B83	Deep groove ball bearing 6004	4
B84	Bottom wheel	4
B85	Bottom wheel spacer 2	4
B86	Washer for bottom wheel	2
B87	Welding of left bottom wheel frame	1
B88	60* 60 square pipe plug	4
B89	clamp	1

REF	DESCRIPTION	QTY
B90	drag spring	1
B91	Accelerator cable	1
B92	U-bolt	2
B93	33 Round pipe plug	1
B94	Pusher welding	1
B95	Hexagon socket head cap screw M5x30	2
B96	7001-201040 Handle cover φ thirty-two	1
B97	Throttle handle	1
B98	Hexagon nut M5	2

DIAGRAM(C)


C1
C2
C3
C4
C5
C6
C7
C8
C9
C10
C11
C12
C13
C14
C15
C16
C17
C18
C19
C20
C21
C22
C23
C24
C25

PARTS LIST(C)

REF	DESCRIPTION	QTY
C1	Hexagon flange bolts M10*30	68
C2	Guide rail	6
C3	Limit plate	4
C4	Hexagon flange self-locking nuts M10	68
C5	Hex nut M20	36
C6	Leveling Feet M20	18
C7	Hook	2
C8	Telescopic tube welding	2
C9	Hexagon socket head screw M10X35	2
C10	Telescopic left plate welding	2
C11	Eccentric compression welding	2
C12	Hexagon lock nut M10	4
C13	Two-hole guide rail beam (not welded)	2
C14	Log support	2
C15	Two-hole guide rail beam welding	3
C16	T-screw M10*40	7
C17	Log clamp receiver	2
C18	Slide tube	2
C19	Sliding socket welding	4
C20	Four-hole rail beam welding	2
C21	Log support	2
C22	Rail connecting plate	4
C23	Hex Bolts M8*30	10
C24	Telescopic right plate welding	2
C25	Half round head square neck bolt M10x35	2



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