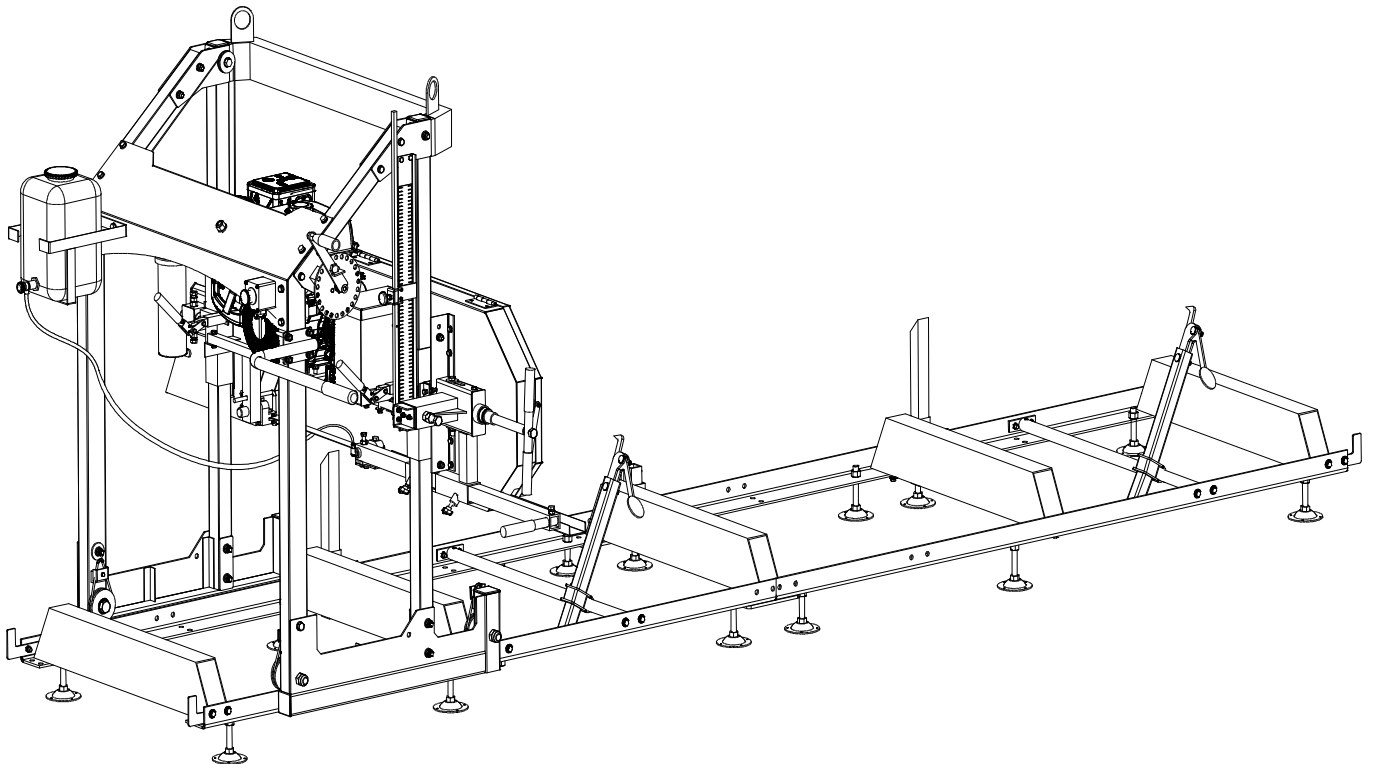


BILT HARD

32-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

FOR YOUR SAFETY

READ AND UNDERSTAND THE ENTIRE MANUAL BEFORE OPERATING MACHINE

Contents

GENERAL SAFETY RULES.....	3
GENERAL MAINTENANCE INFORMATION.....	7
SAWMILL ASSEMBLY INSTRUCTIONS.....	8
Inspection.....	8
Tracks.....	8
Log Dog & Supports.....	10
Carriage Assembly.....	12
Electric Wire Connect.....	24
Engine.....	25
SAWMILL SET-UP PROCEDURES.....	26
Belt Tension.....	26
Blade Tracking.....	27
Blade Guide Adjustment.....	31
Blade Tension.....	32
SAWMILL MAINTENANCE.....	34
Changing the Blade.....	34
Replacing Belts.....	34
TROUBLESHOOTING.....	36
PART DIAGRAMS.....	37
PARTS LIST.....	39

SPECIFICATIONS

Model	TRS -1001
Engine	Ducar
Engine Displacement	420cc
Horsepower	15 hp
Engine Type	Single cylinder, 4 stroke, air-cooled, OHV
Start	E - start
Log Diameter	32 inch
Max Live Edge Width	28.7 inch
Standard Cutting Length	10.25 ft
Max Board Thickness	7 inch
Blade Engagement System	Centrifugal Clutch
Cast Iron Bandwheel Diameter	19 inch
Blade Wheel Engagement	Belt drive
Blade Guide	By saw block
Blade Tension	By adjustable lever
Blade Size	158 x 1.25 in
Blade Pitch	7/8 in
Blade Lubrication	Water lube - manual valve
Lubricant Tank Size	2.6 gal
Track Width	37 inch
Track Length	12.8ft
Track Extension Length	6 ft 5 in
Leveling Feet	12
Log Rests	2 long and 2 short rests
Log Clamps	2x Quick Lock
N.W.	783 lbs
G.W.	895 lbs
MEAS	89.8x25.6x35.8 in

Thank you very much for choosing the **32"** Portable Sawmill. For future reference, please complete the owner's purchase date:

Save the receipt for warranty and these instructions. **It is important that you read the entire manual to become familiar with this product before you begin using it.**

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.

INTENDED USE

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

TECHNICAL SPECIFICATIONS

Item	Description
Engine	15HP
Maximum Log Diameter	32" (815mm)
Maximum Board Width	28.7"(730mm)
Blade Size	1-1/4x158"(32x4013mm)

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 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 a dust mask in dusty work conditions. This applies to all persons in the work area. Also use non-skid safety shoes, hardhat, gloves, dust collection systems, and hearing protection when appropriate.
- **Do not 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 GT26 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

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. Ensure guide blocks are tight and track is level
4. Fill the lubrication tank with clean water and *washing up detergent*.
5. Start and operate the engine according to the provided engine manual.
6. Depress the throttle to bring the blade up to *full* speed.
7. Throttle should be *fully depressed* when the saw is *under load*.
8. Cut branches off the lumber to be processed.
9. WARNING: to avoid death or serious injury. Do not cut lumber with foreign objects in it such as nails, any metal pieces, etc.
10. Place the lumber to be cut on the supports.
11. WARNING: The operator and any assistants must stay clear of the front and back of the blade whenever the engine is on.
12. Move the saw head slowly along the track and against the lumber to make the cut.
13. Trim off the rounded sides of the log.
14. When the log is squared-off, boards or posts can be cut to custom specifications.
15. 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 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 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.

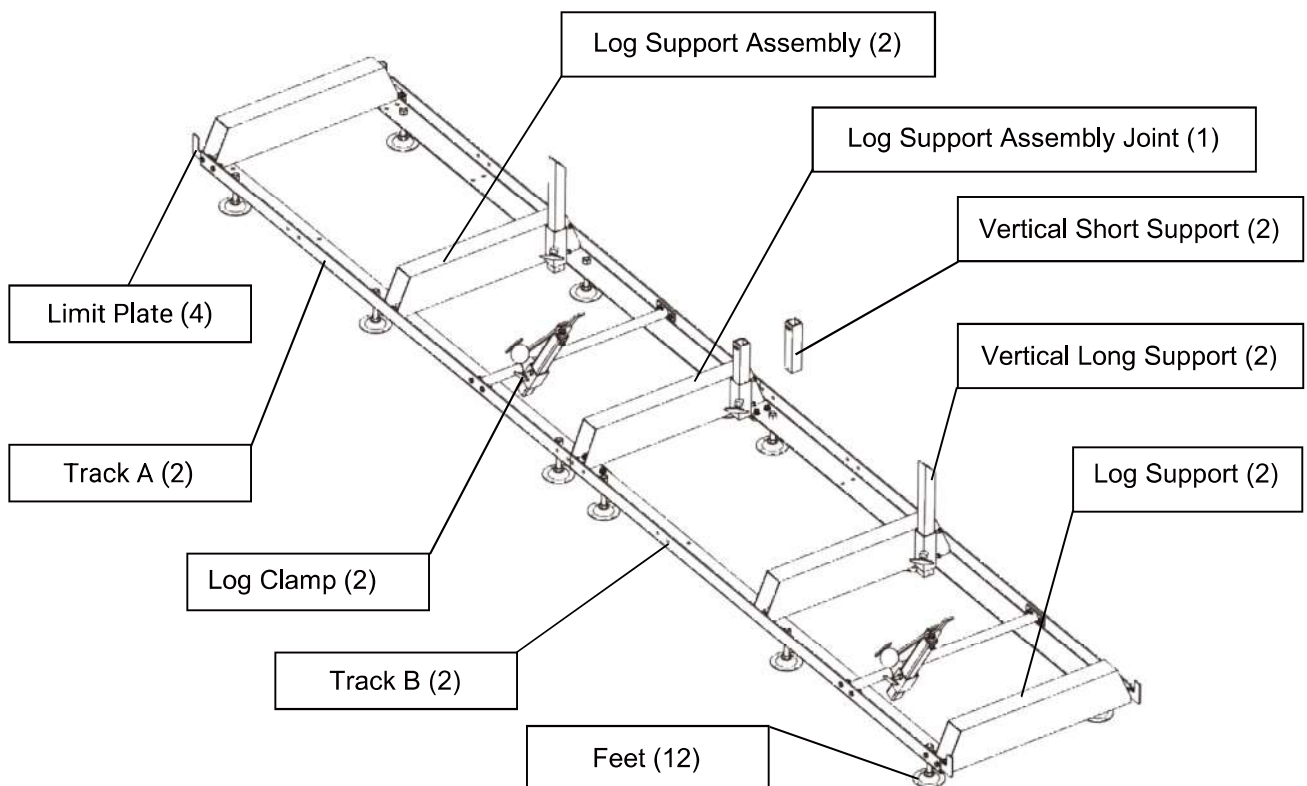
SAWMILL ASSEMBLY

#1 – INSPECTION

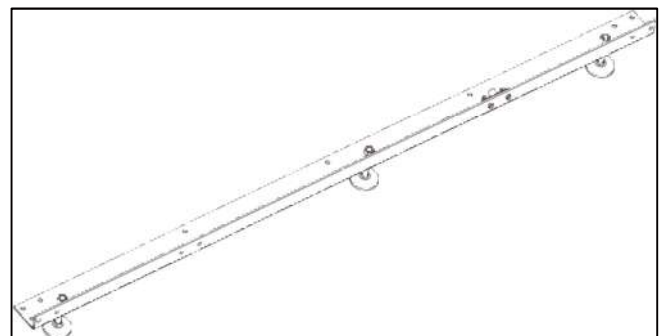
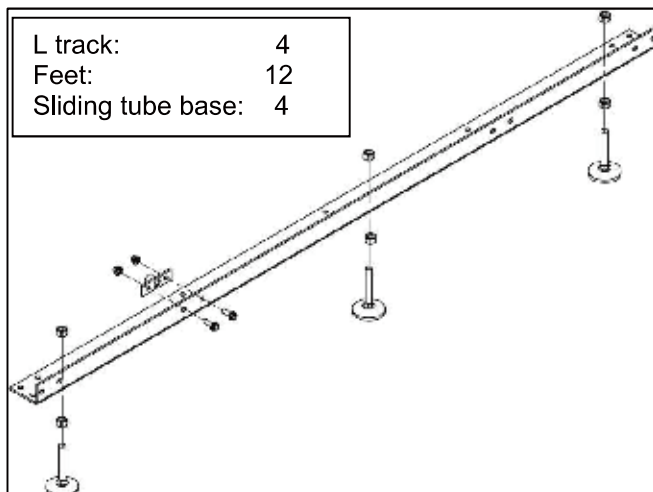
Take all of the parts out of the shipping crate and lay them out.

#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.

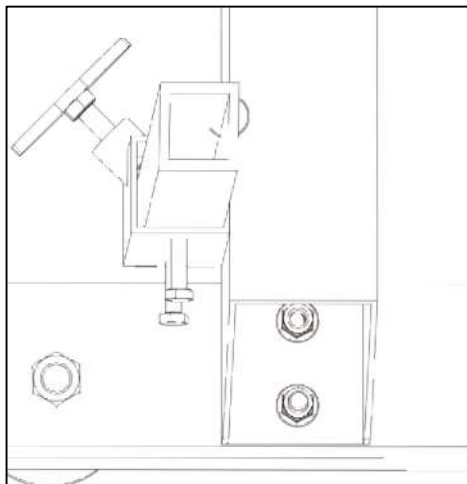


1. Install leveling feet and fasteners to the track, and install the sliding tube base on the track, repeat the above installation until all four are complete

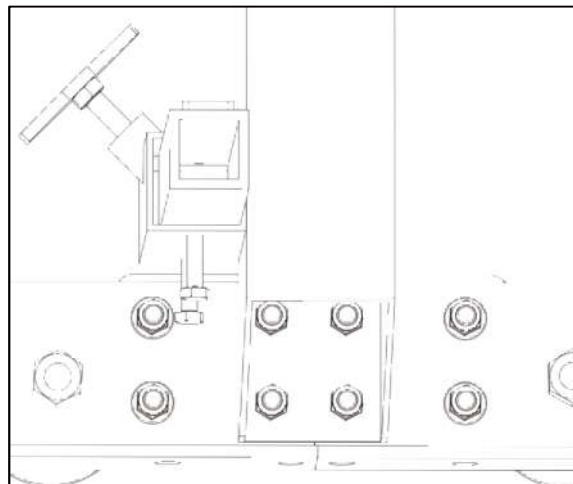
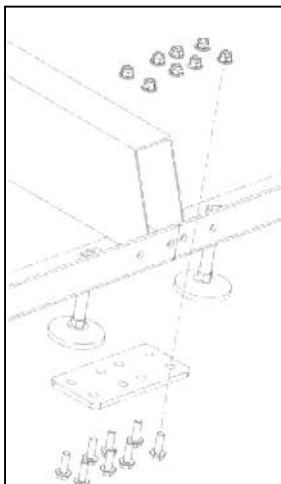


Hexagon flange bolts:	M10x30	8
Nuts:	M10	8
Nuts:	M16	24

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.

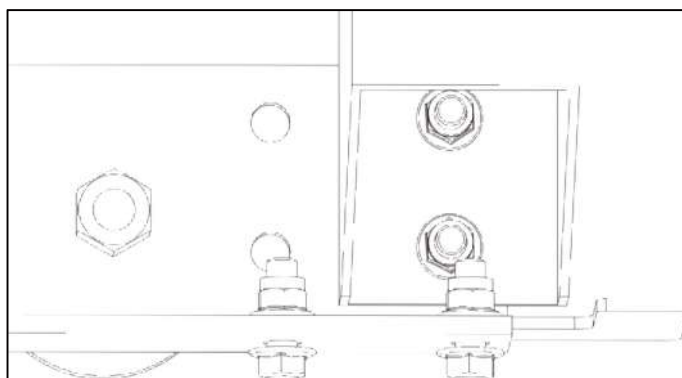
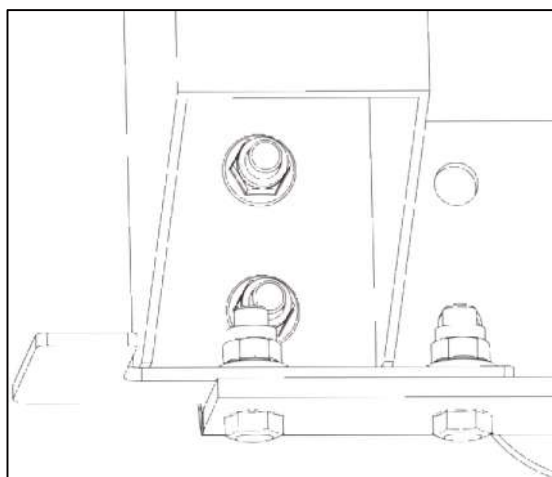


Hexagon flange bolts:	M10x30	16
Nuts:	M10	16

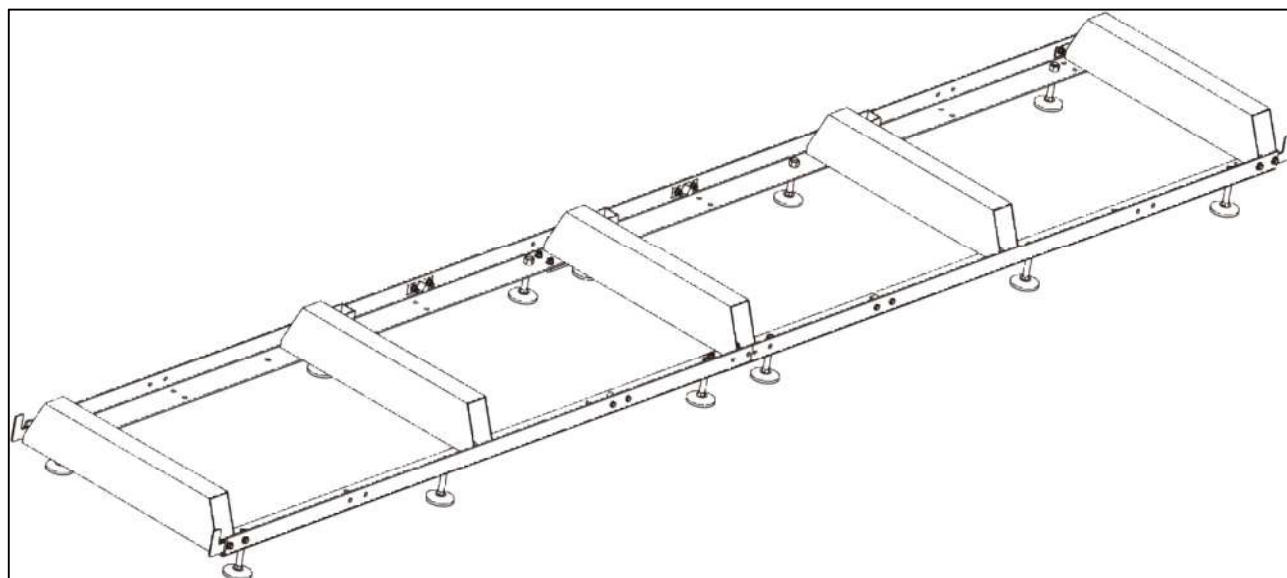


Hexagon flange bolts:	M10x30	16
Nuts:	M10	16

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

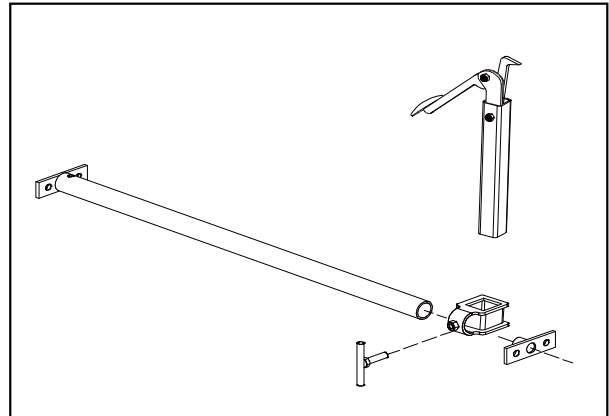
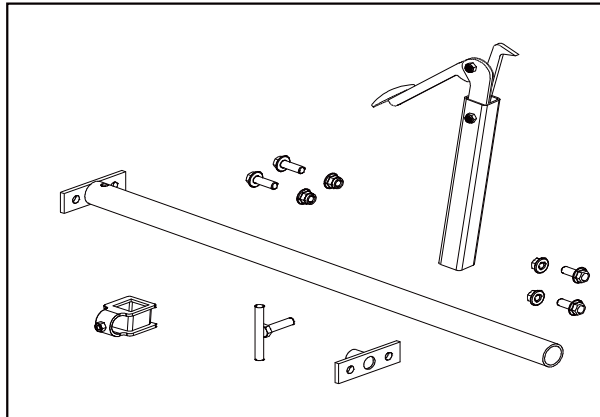


Hexagon flange bolts:	M10x30	8
Nuts:	M10	8

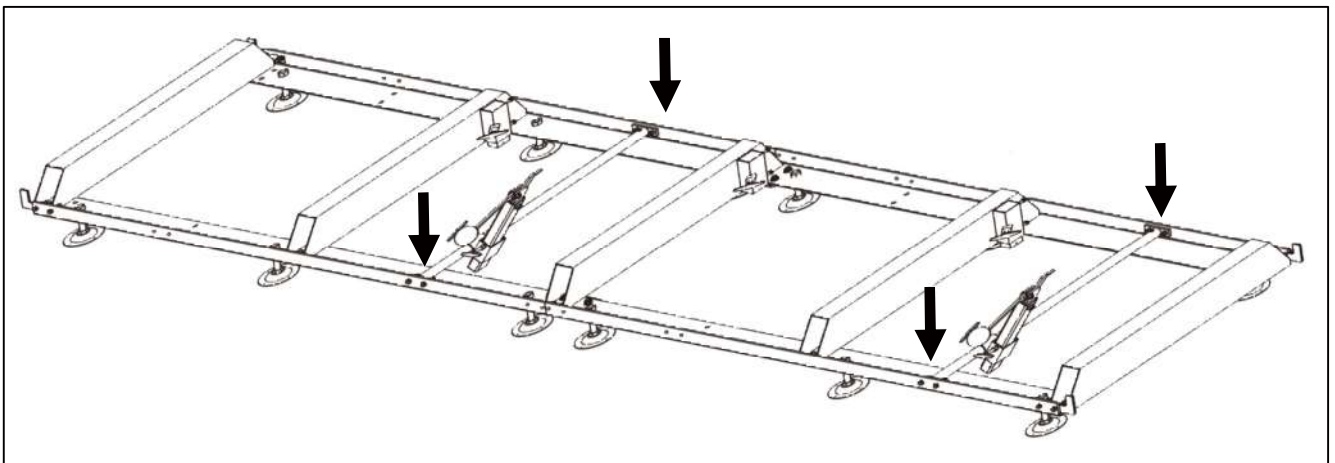


#3 – LOG DOG & SUPPORTS

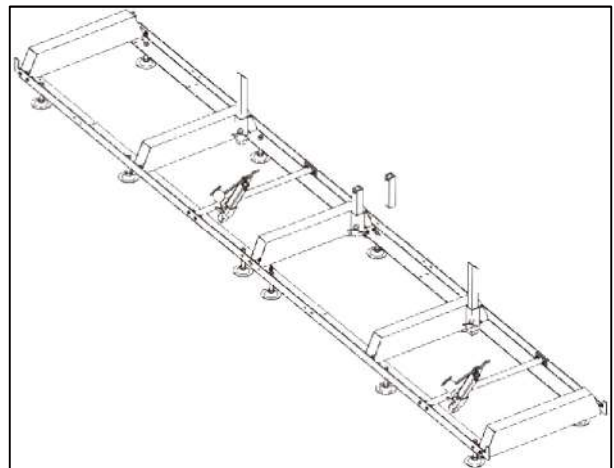
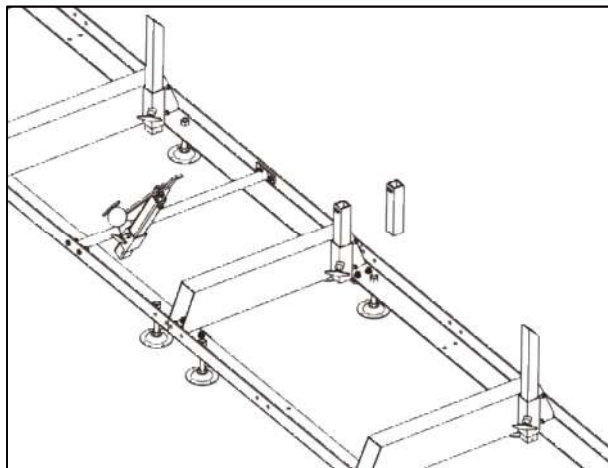
Assemble log dog pieces as shown below and use water proof grease on threaded handle and “T” handle.

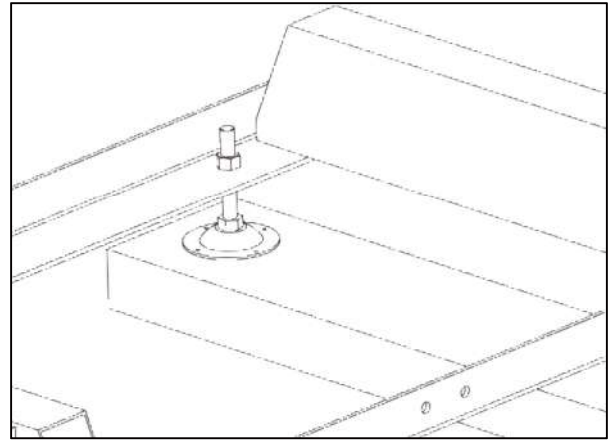
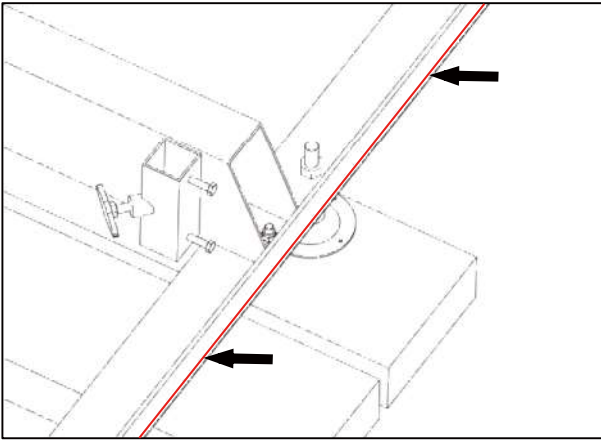


Attach assembly to the track using the provided nuts & bolts and tighten. Attach log dog assembly to track as shown below with the 4 nuts and bolts provided. Note that there are various locations along the track where this assembly can be bolted. Depending on how many track sections are being used, select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

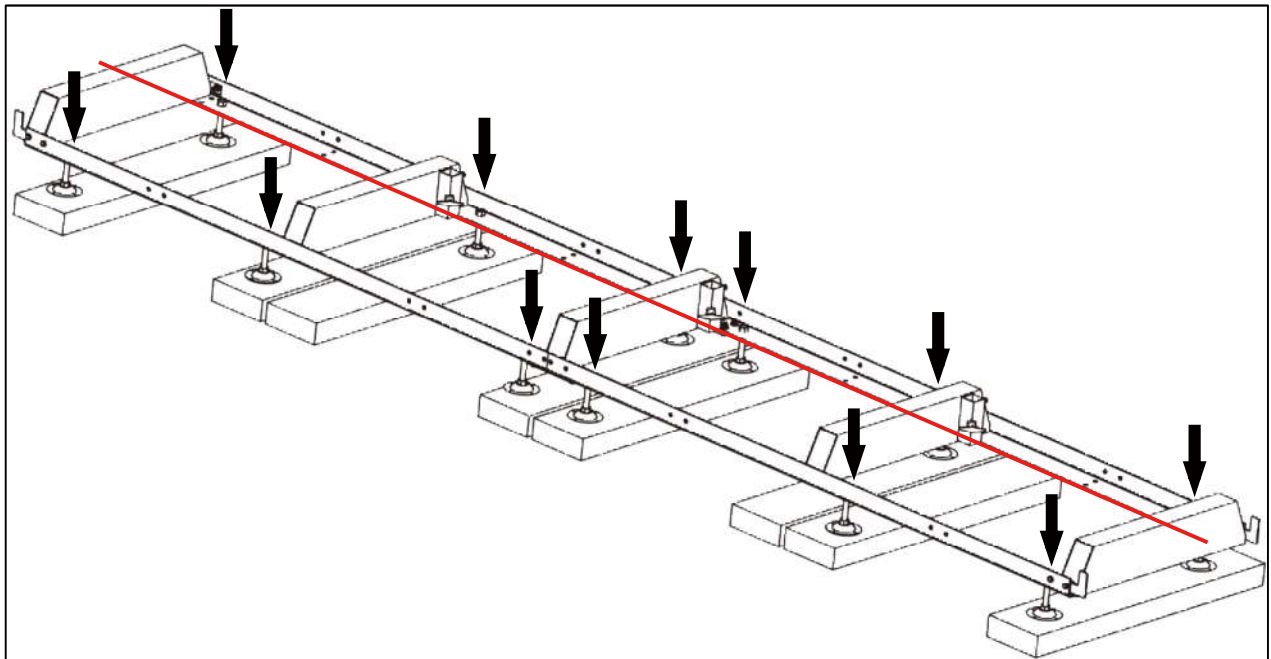


Insert log supports into track cross supports and secure with “T” handles. The “T” handle threads should be coated with waterproof grease. The sawmill includes two sets of log supports – a short set and a long set. The longer set is ideal for larger logs and the shorter set is ideal for small logs and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





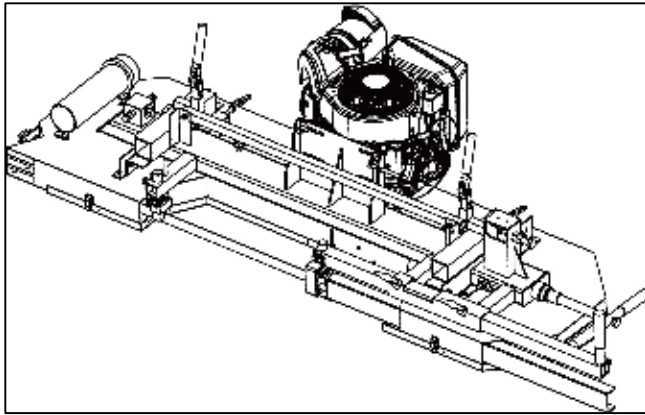
We recommend before screwing the leveling legs to sleepers once the mill has been made level. So before screwing the mill to the sleepers, it is highly recommended that you run a string line down **both** sides of the mill, to make sure the track is straight and level. (The string line is in pink in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



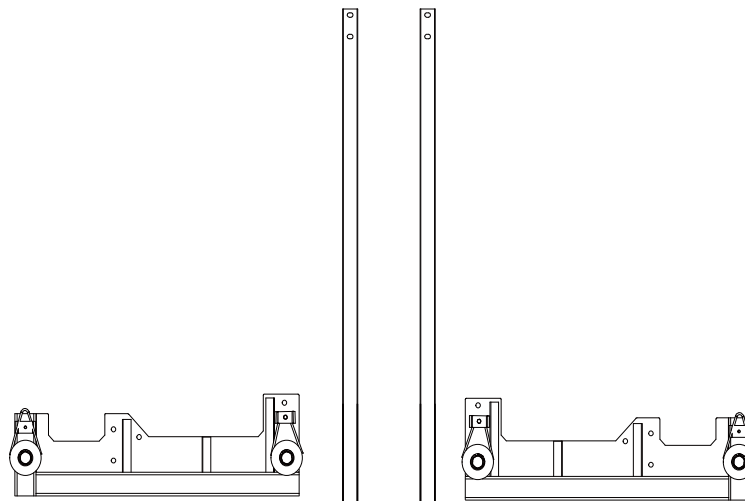
The **WHITE ARROWS** indicate where the locations of the leveling legs are. There are 4pcs per 87in. of track. 174 in. total on the machine. On the intermediate bunks the leveling legs alternate. We recommend placing the mill leveling legs on sleepers running left to right as shown above. You need to 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.

#4 – CARRIAGE ASSEMBLY

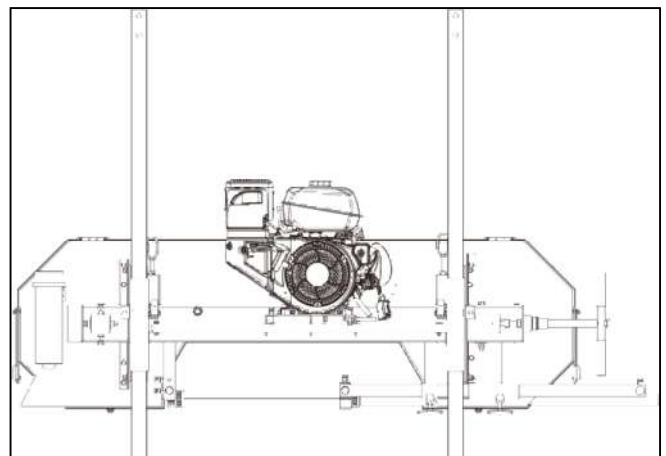
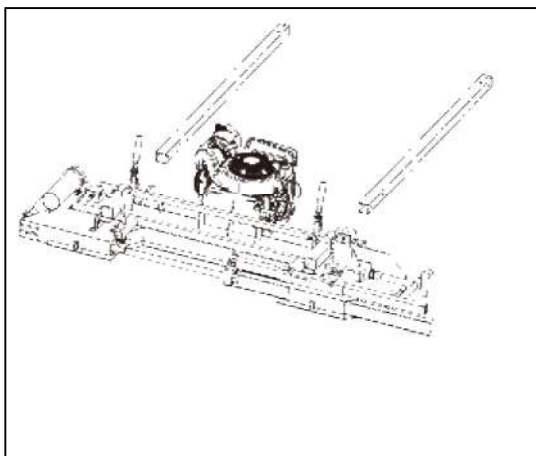
1. Place a moving blanket on the shipping pallet that the sawmill crate was strapped to. The blanket will prevent the blade guard covers from becoming scratched. Using a **minimum of two people** or a mechanical advantage system, remove the head assembly from the sawmill crate and place face down on the blanker. The head assembly is very heavy, proper technique must be used to avoid injury or damage.



2. Lay the above carriage pieces out.

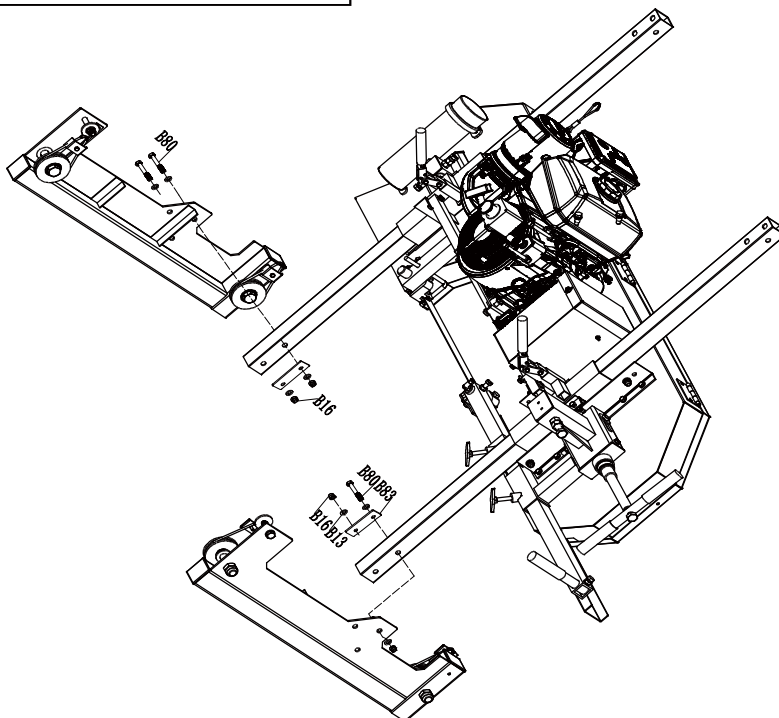


3. Then Insert vertical post assemblies into corresponding locations in head assembly.



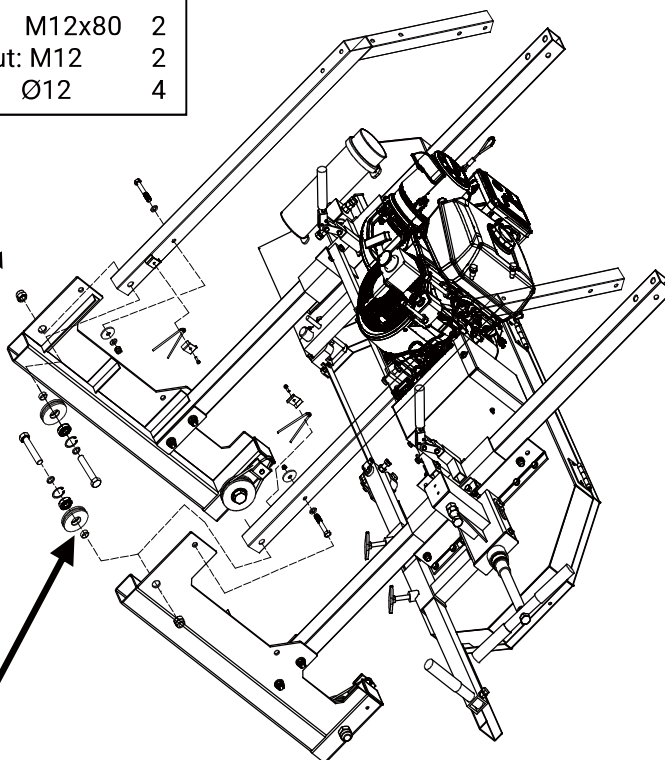
4. Assemble front vertical post to wheel assembly using the two bolts and back plate. Repeat same step for the other front vertical post assembly.

Hexagon head bolt:	M12x80	4
Hexagon self-locking nut: M12		4
Flat washer:	Ø12	8



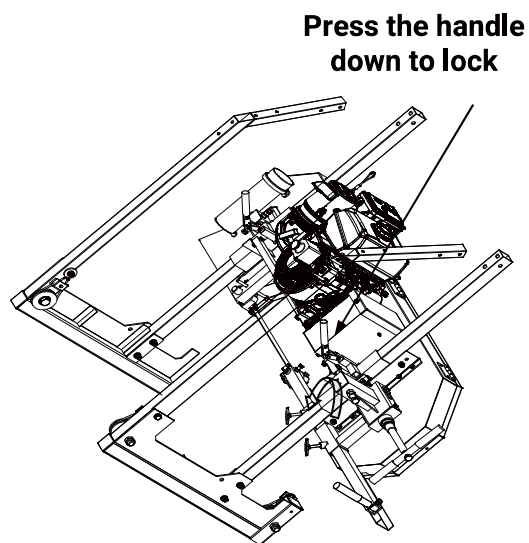
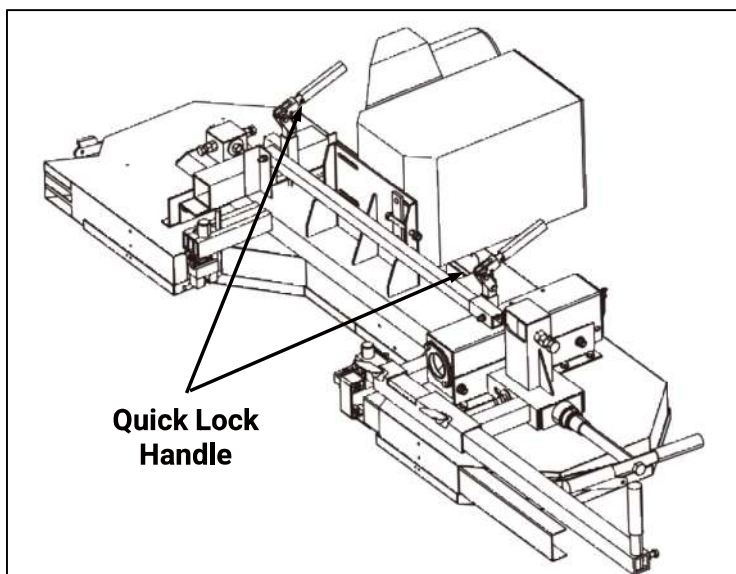
5. Assemble rear vertical post to wheel assembly using the two bolts and back plate. Repeat same step for the other rear vertical post assembly.

Hexagon head bolt:	M12x80	2
Hexagon self-locking nut: M12		2
Flat washer:	Ø12	4

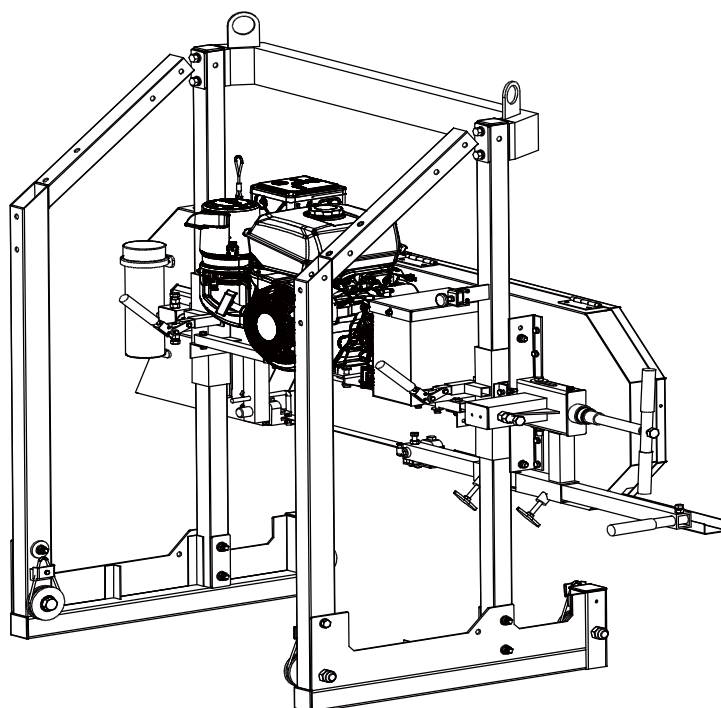


Hexagon head bolt:	M20x110	2
Hexagon self-locking nut: M20		2

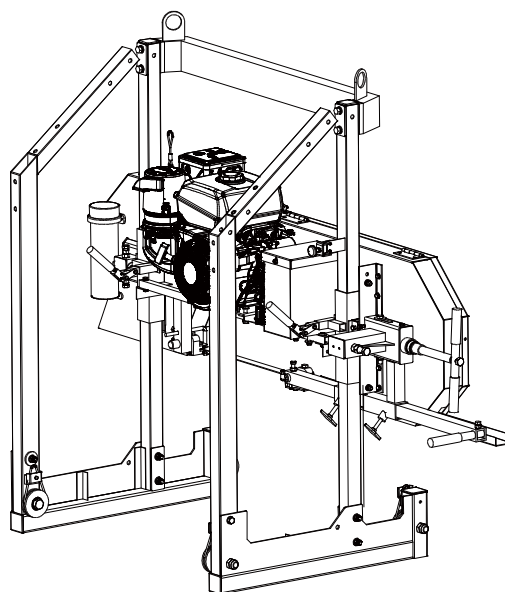
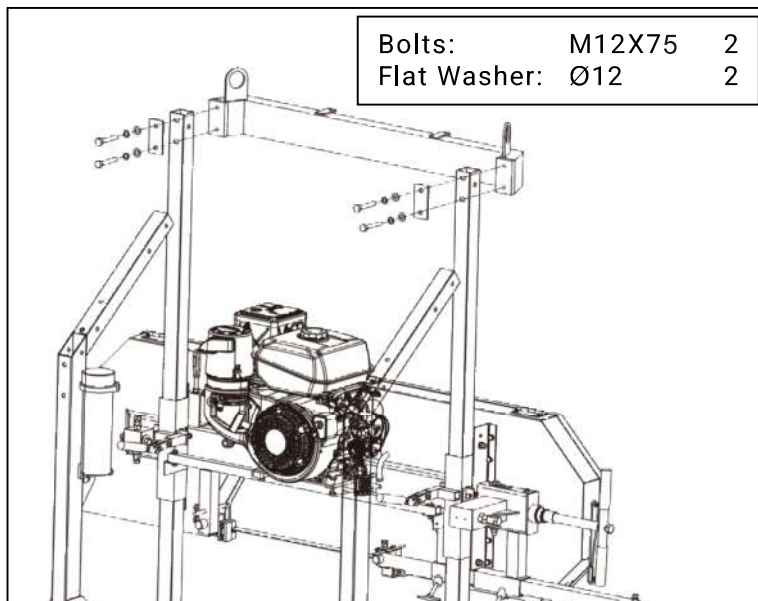
6. Lock the cam handles on both the square post to prevent the head from moving when it is stood up in the coming steps. Ensure that when activating the cam handles, the clamps securely lock on the square vertical post.



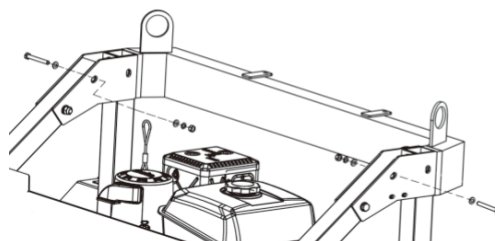
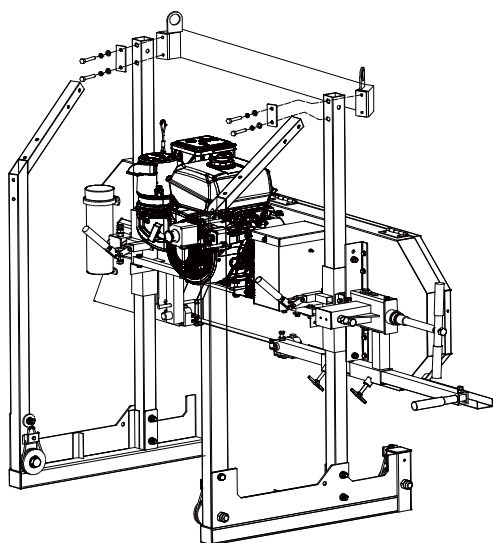
7. With one person on each post, stand the head assembly up on the wheels as shown above. Again, using a **minimum of two people**, set the saw head assembly on the track system ensuring the carriage wheel grooves rest on the "L" rails. The square vertical post should be on the same side as the log supports



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

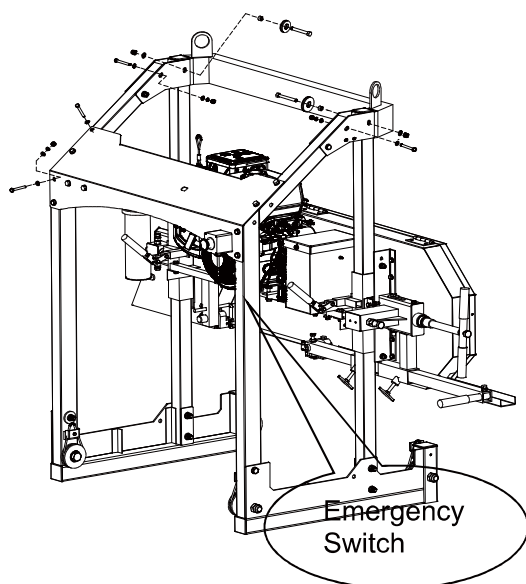
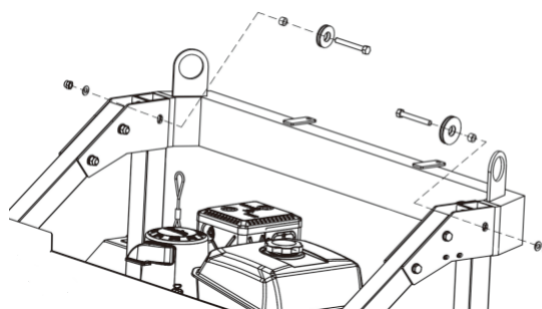


9. Install the connecting clamping plate, upper arch and steel cable roller, using wrench to hold the nut, tighten the bolt

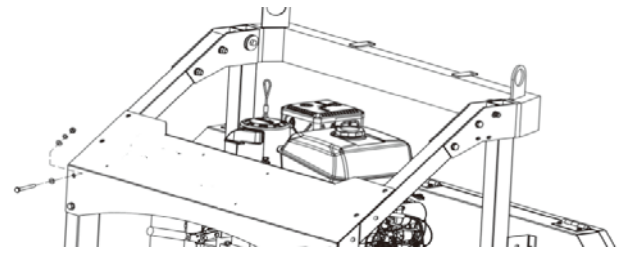
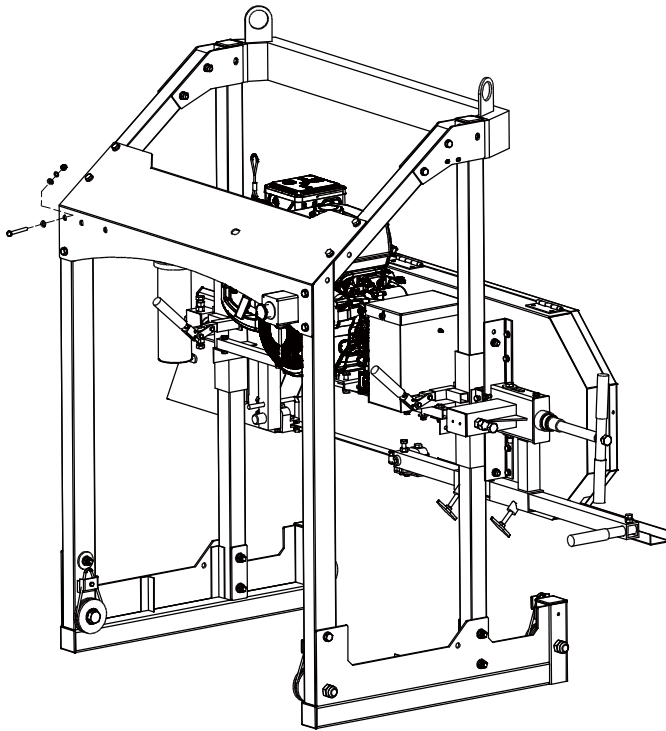


Bolts:	M10X80	4
Flat Washer:	Ø10	8
Spring Washer:	Ø10	8
Hex Nut:	M10	8

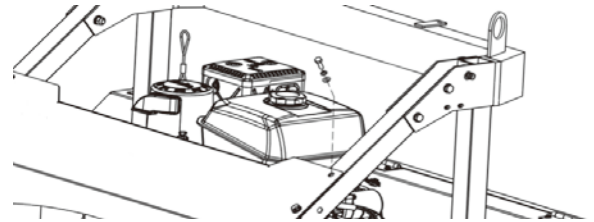
Bolts:	M12X100	2
Flat Washer:	Ø12	2
Hex Nut:	M12	2



PLEASE NOTE*Install the emergency switch to the upper arch as shown in left image.**

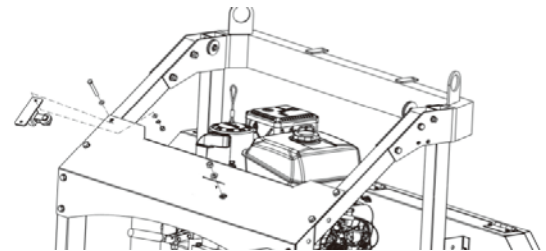
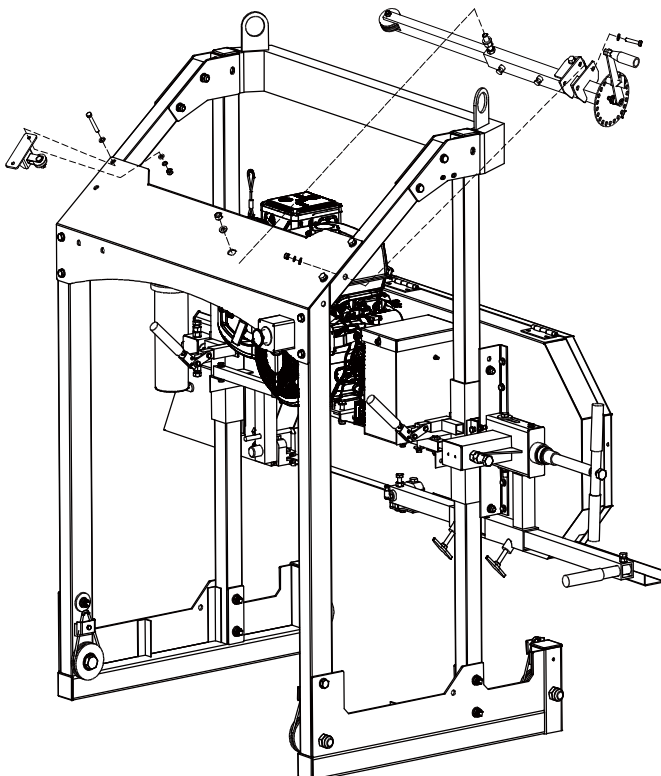


Bolts:	M10X90	4
Flat Washer:	Ø10	8
Spring Washer:	Ø10	4
Hex Nut:	M10	4

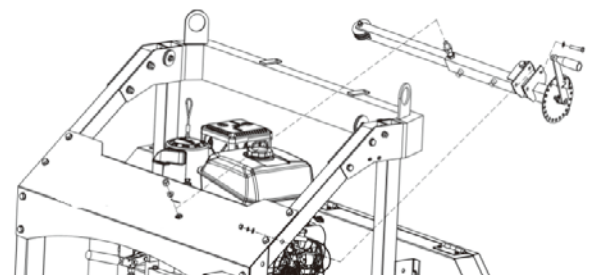


Bolts:	M10X30	2
Flat Washer:	Ø10	2

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



Bolts:	M10X75	2
Flat Washer:	Ø10	2
Spring Washer:	Ø10	2
Hex Nut:	M10	2

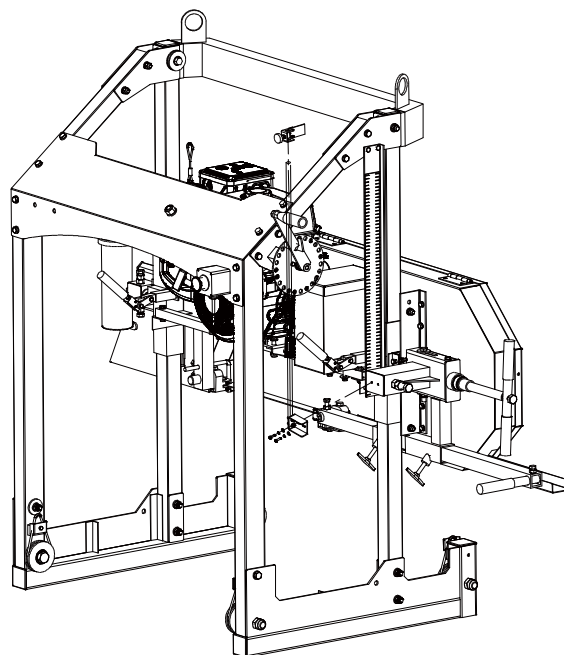
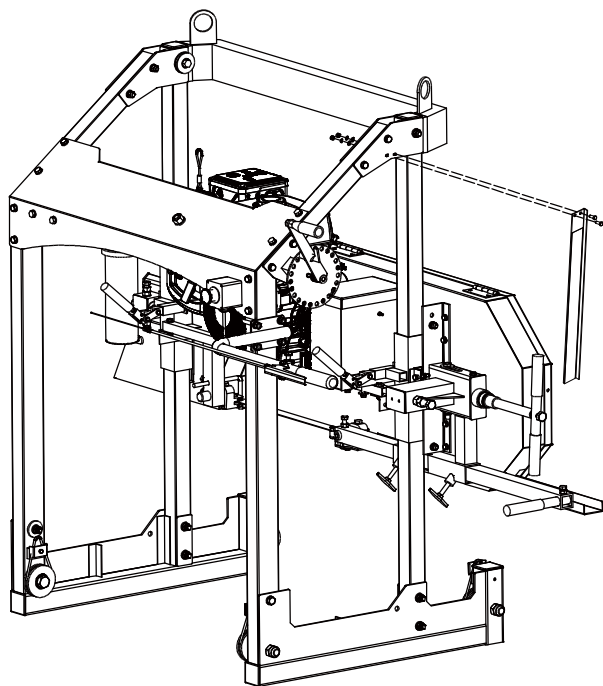


Bolt:	M10 x 80	2
Flat Washer:	Ø10	4
Spring Washer:	Ø10	2
Nuts:	M10	2
Nuts:	M16	2

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

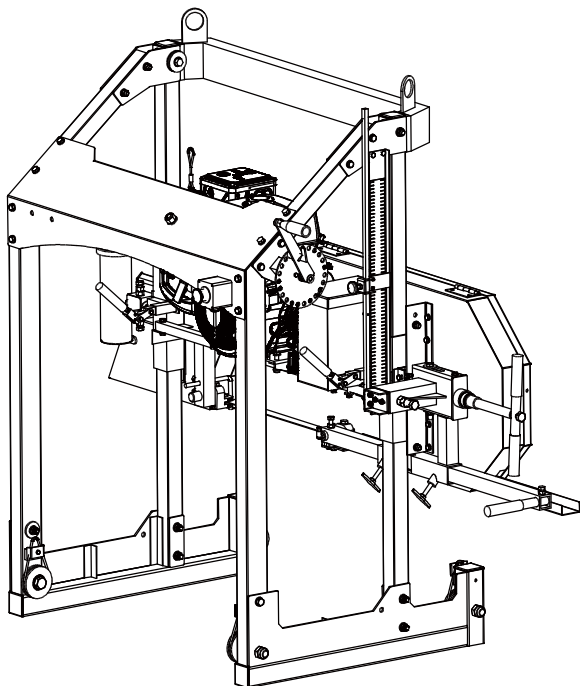
A. install ruler, using wrench to hold the nut, tighten the bolt.

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.



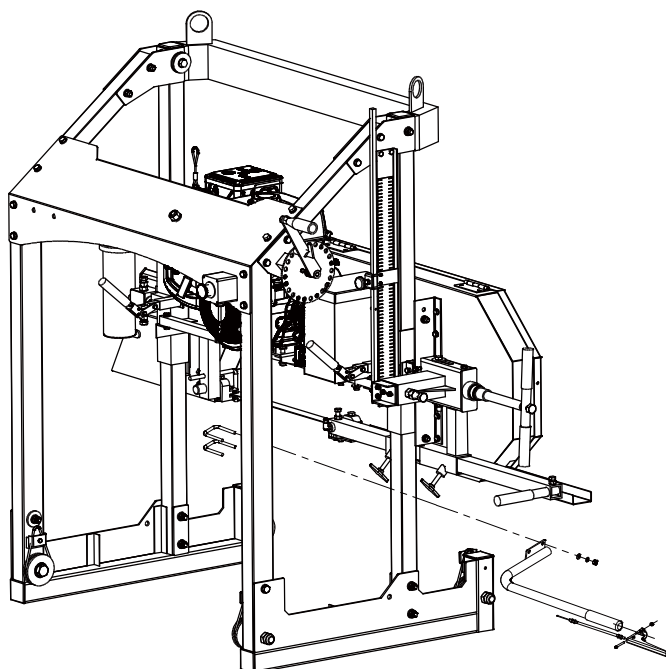
Hexagon Head Bolt :	M8X20	2
Spring Washer:	Ø8	2
Flat Washer	Ø8	2
Nuts:	M8	2

Hexagon Head Bolt :	M6X25	2
Spring Washer:	Ø6	2
Flat Washer	Ø6	2



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.

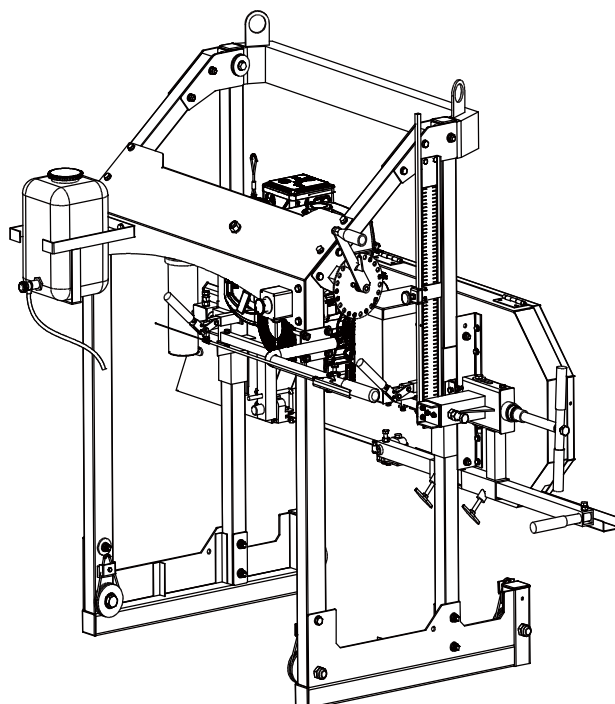
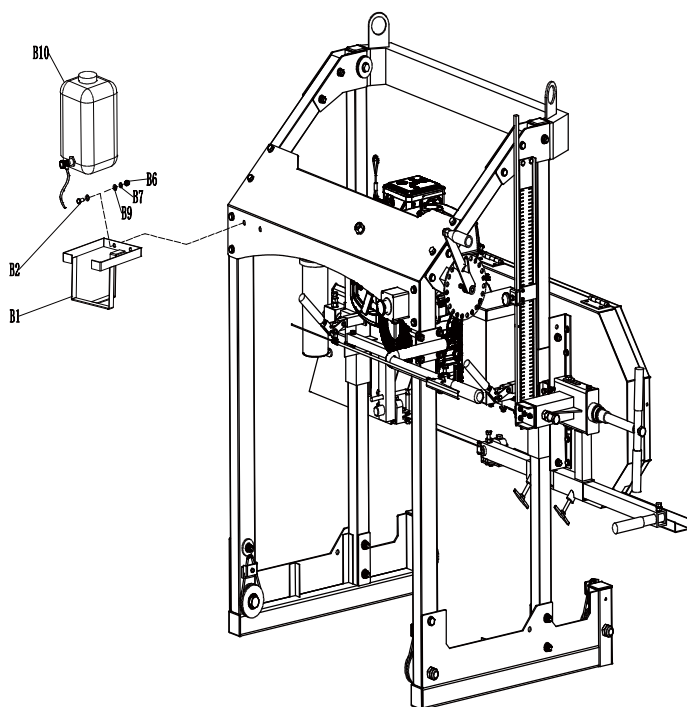
12. Install the throttle handle to the round bar as shown in below left image. With the throttle lever in the idle position/fully open, pull the cable tight at the engine and tighten the screw to hold it in place. This will take all of the slack out of the cable.



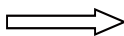
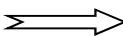
PLEASE NOTE*The idler screw needs to be wound fully out failure to do this will result in the engine not running at its full RPMs' which will result a poor cut.**

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

Hexagon Head Bolt :	M10X25	2
Flat Washer	Ø10	4
Nuts:	M10	4

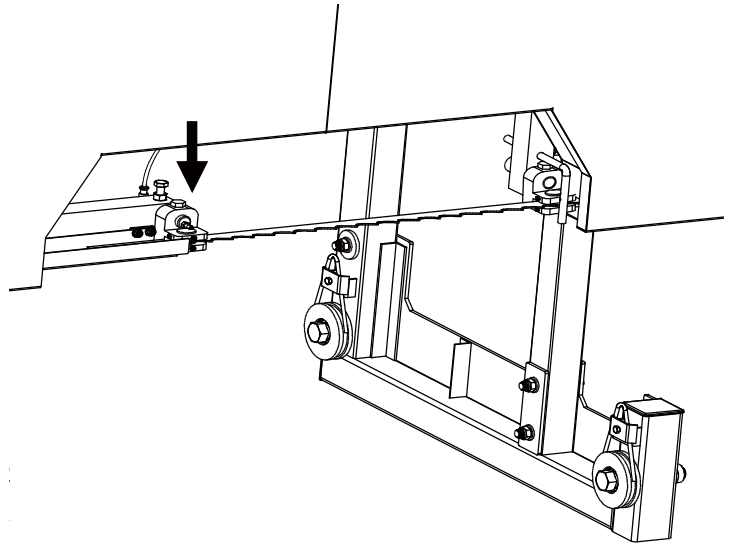
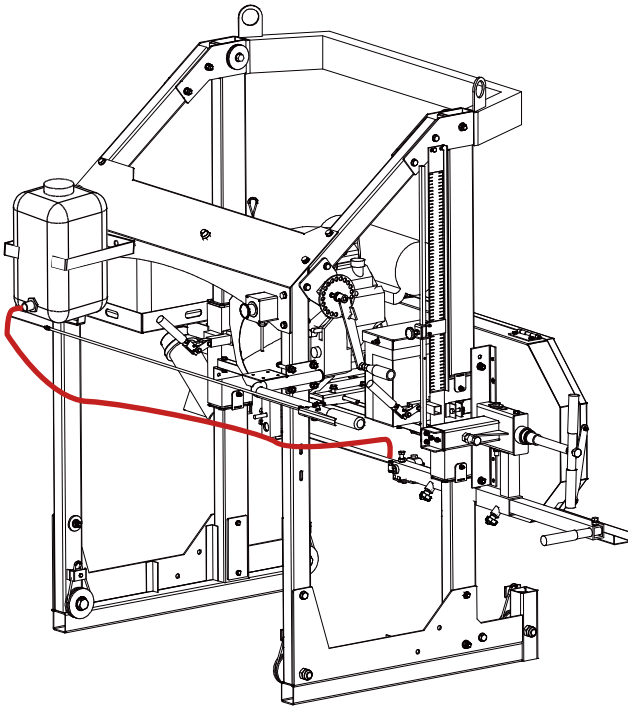


14.Route the cables on both sides as shown in the below image.

( Short cable,  Long cable)



15. The transparent water pipe connects the water tank to the copper connector



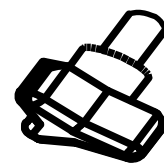
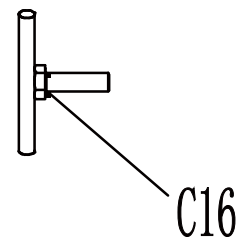
Please Note: We recommend adding some dishwashing liquid to the tank to help lubricate the wood – two to three capfuls.

16. 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.

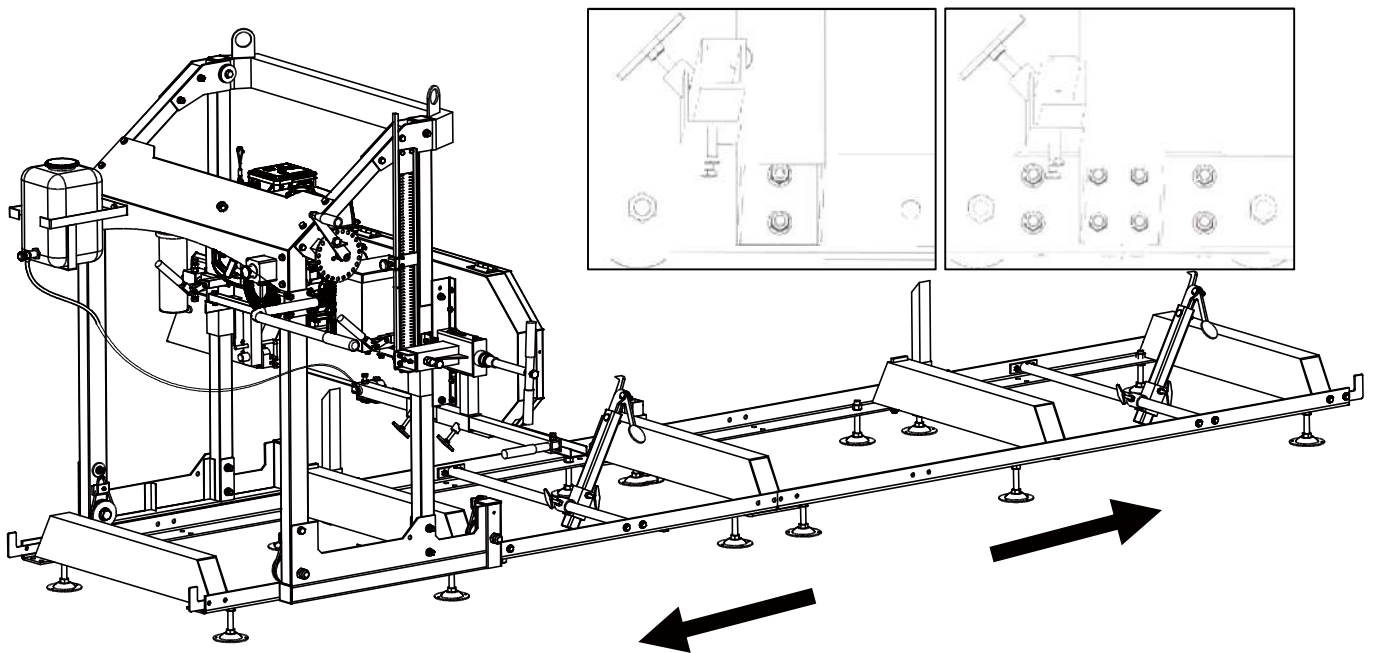


****Note – It is very important to take the tension off of the blade by turning the "T" handle in the counter-clockwise direction when the sawmill is not in use. Failure to do so, will result in flat spots on the rubber belts. These flat spots will cause the mill to vibrate excessively during next use.****

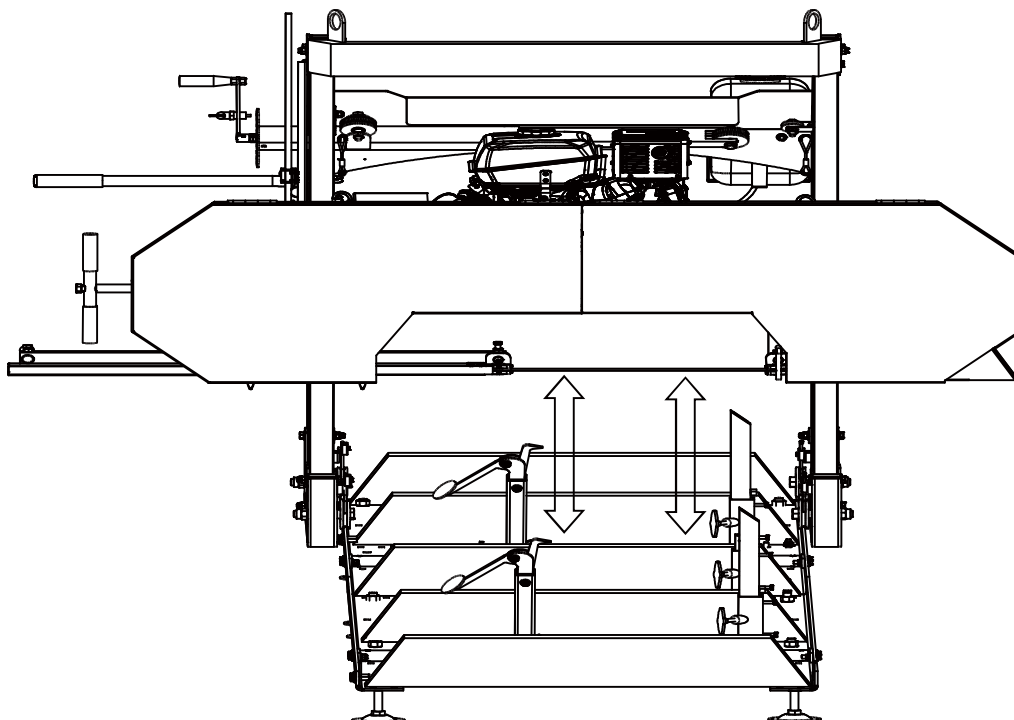
17. Add water proof grease to all "T" handle threads on the sawmill.



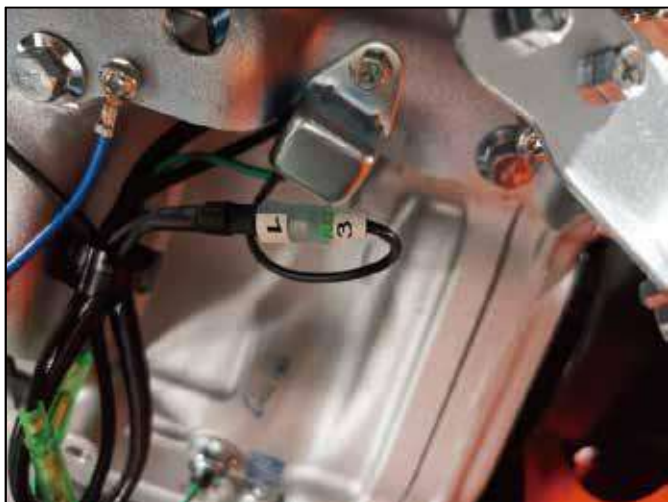
18. Push the saw head up and down the track system to ensure that the width of the track allows for the saw head to move freely. If it binds, the "L" rails will need to be set further or closer together to achieve a consistent width along the entire track system. Once the desired width is achieved, all nuts and bolts can be tightened to the log bunks .



20. 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.



5 – ELECTRIC WIRE CONNECT



Step. 1: find the show 1 and 3 connection terminals

Emergency
Stop Switch

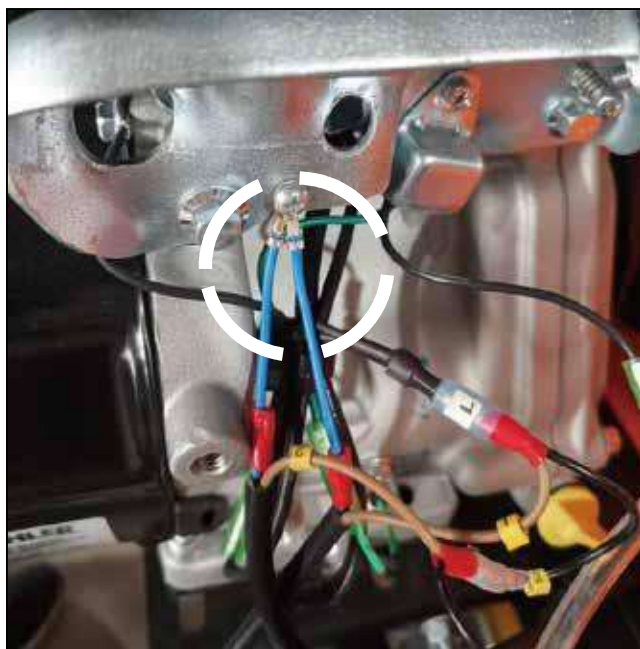


Step. 2: Disconnect the connection terminals

Step. 3: Find the **Emergency Stop Switch** and the **Microswitch**

Step. 4: Connect the 1 and 1,2 and 2, 3 and 3

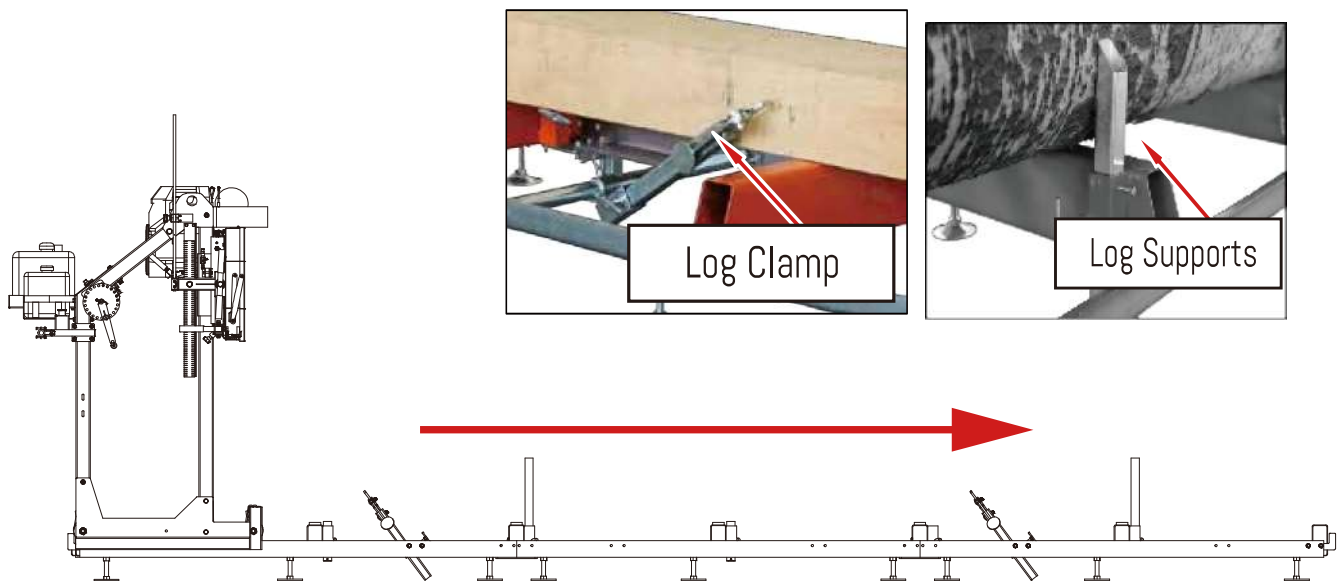
Step. 5: Connect the ground wire (Blue) on the engine



#6- 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 loose and possibly even cause damage or injury.

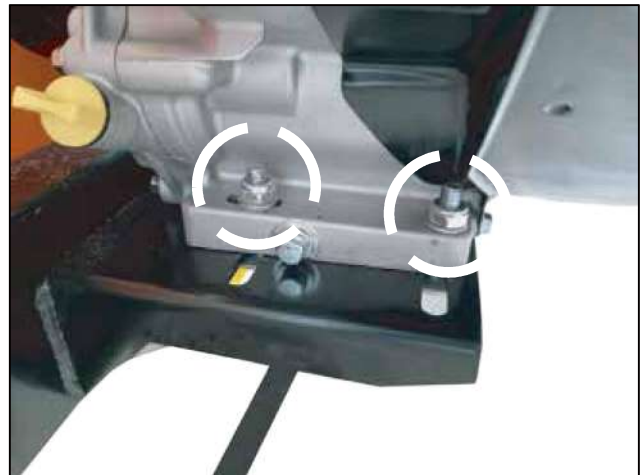
****Now that your sawmill is assembled, please run through the "SAWMILL SET-UP PROCEDURES" in the following section. Failure to do so may result in poor sawing performance, damage or injury. See next page.****

SAWMILL SET-UP PROCEDURES

#1 – BELT TENSION

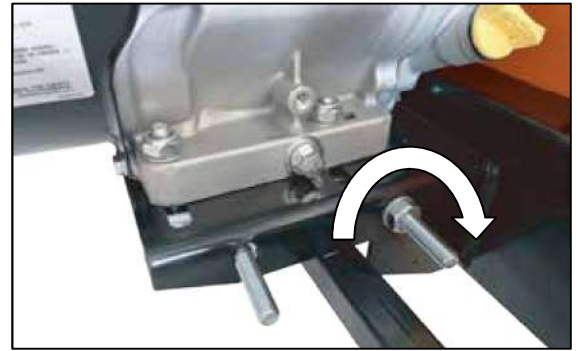


To check the belt tension, with your hand, firmly try to deflect the belt up and down. There should be no more than 1/4" of deflection in both directions (1/2" total). If the belt deflects more than this, it will need to be tightened as described below.



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

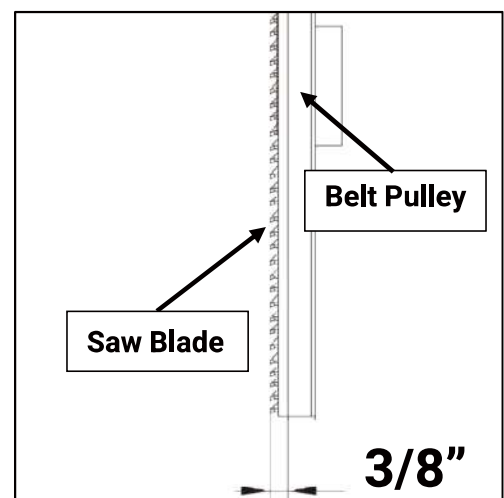
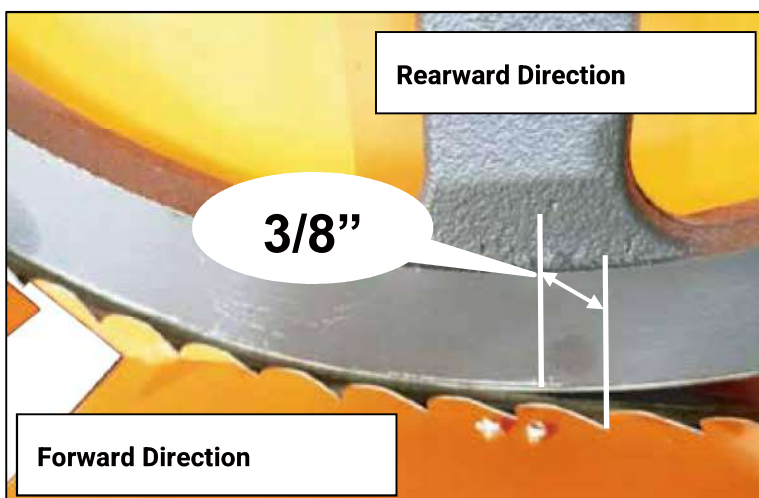
Now that the engine is free to slide on the engine mounting plate, turn the 16mm nut on the horizontal stud in the clockwise direction. This will pull the engine towards the stud and apply more tension on the belt. Do this step incrementally while checking the belt for proper deflection. It is also important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



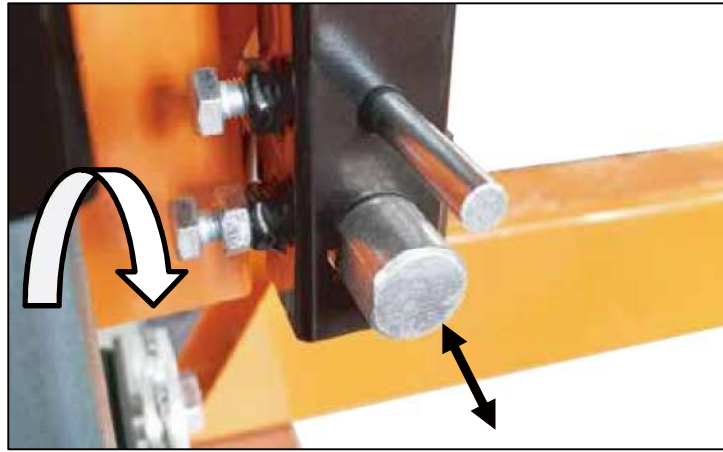
Once the desired belt tension is set, tighten the four engine bolts. *Alternatively, if the drive belt is too tight, the 16mm nut on the horizontal stud can be turned counter-clockwise.*

#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. 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.

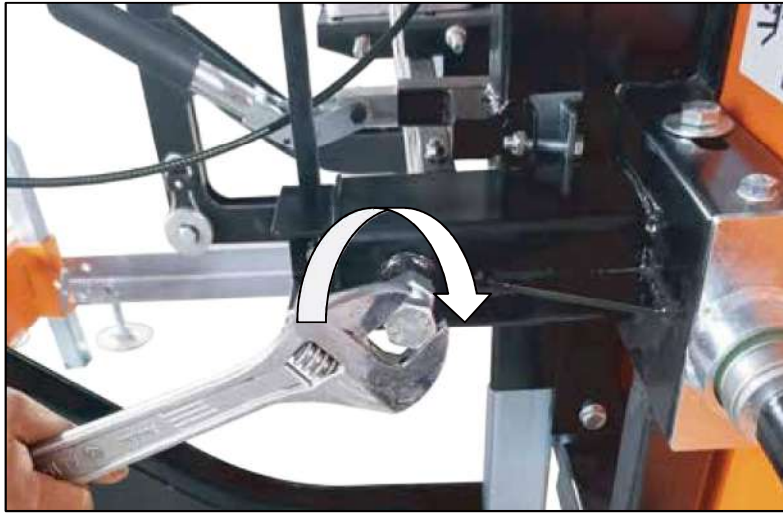


Take some tension off of the blade by turning the "T" handle in the counter-clockwise direction one full turn from full tension position.

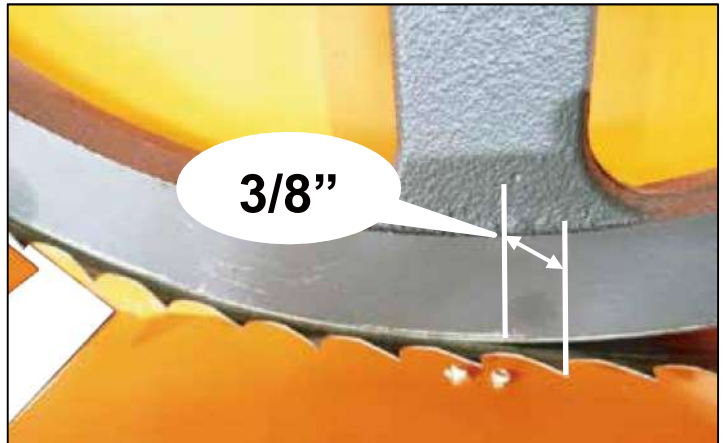
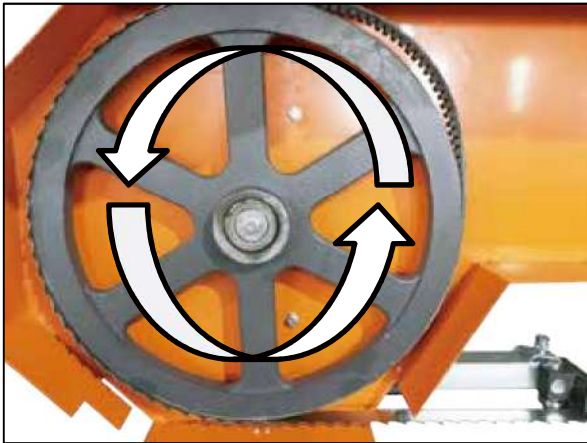
Adjusting The Right Hand Side



Loosen the tracking alignment locking nut with an adjustable wrench. **w9**



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.

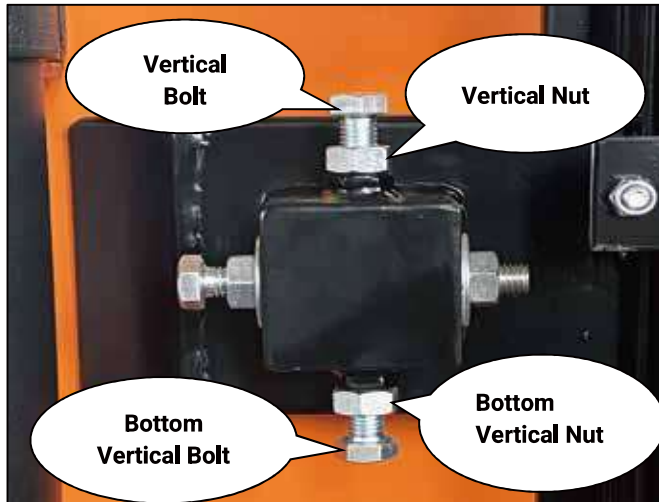


Wearing gloves, spin the bandwheel with your hand and observe how the blade has changed tracking. Measure the distance again and repeat the above step to further compensate if required. The ideal measurement is 3/8".

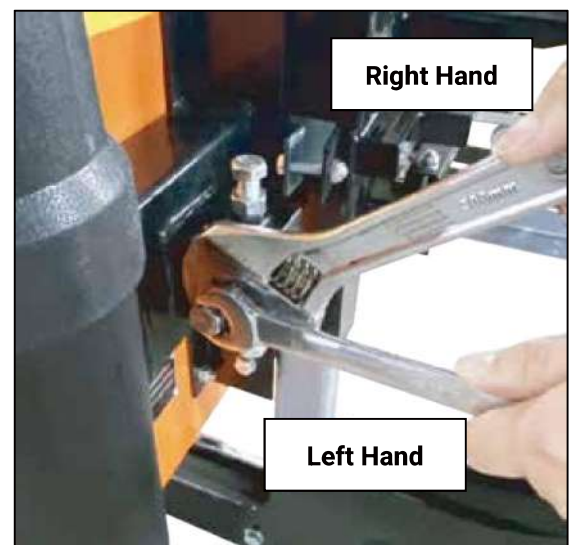
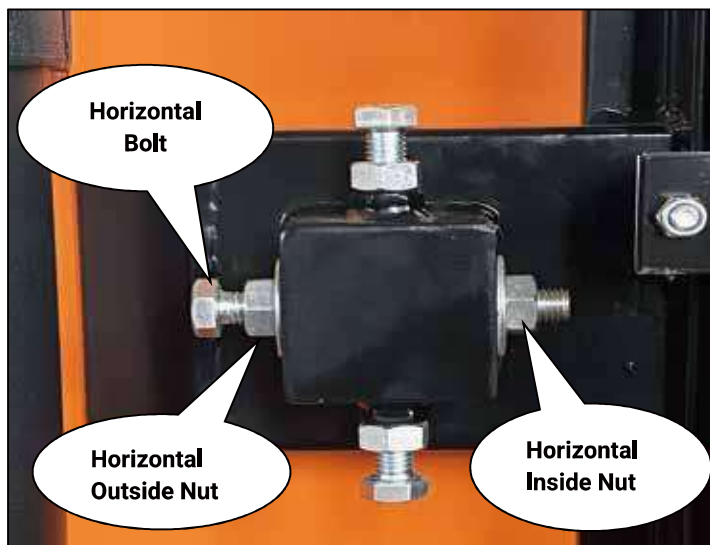


Once satisfied with the measurement, tighten the locking nut clockwise.

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.



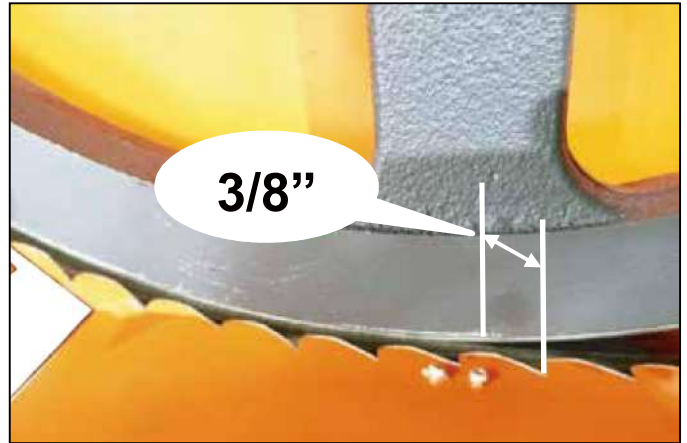
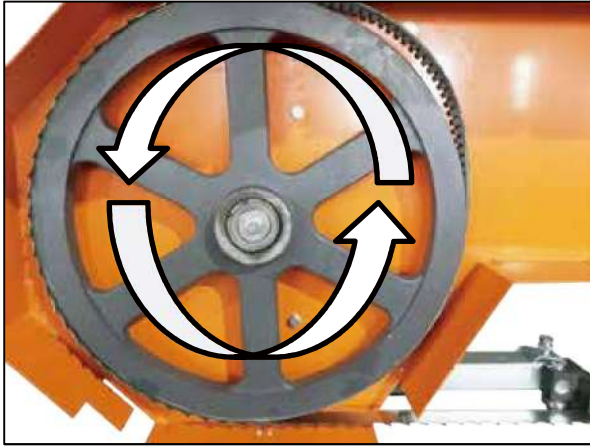
Moving The Blade Forward

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.

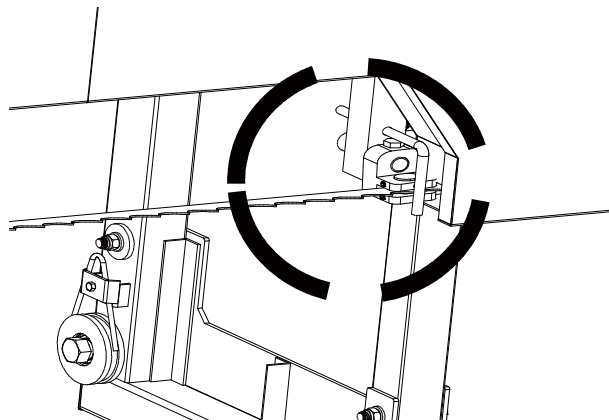
Measure the distance again and repeat the above step to further compensate if required. The ideal measurement is 3/8".

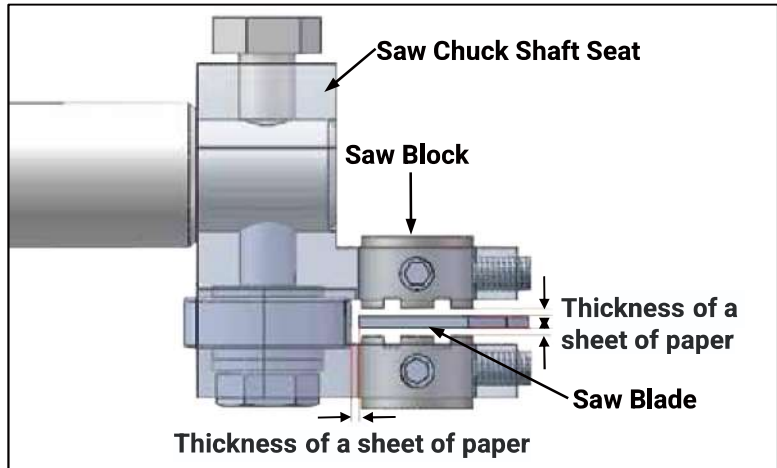
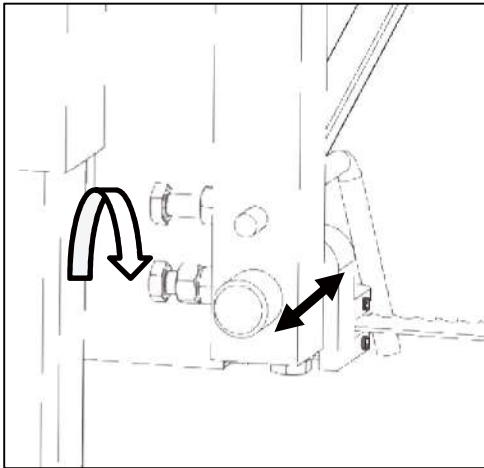
Once the blade is tracking true, bring the blade guide assemblies back up to the blade. Keep a paper width distance between the blade guide bearing and the back of the blade. More information on this set up can be found in the next section – ***"BLADE GUIDE ADJUSTMENT"***

#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.



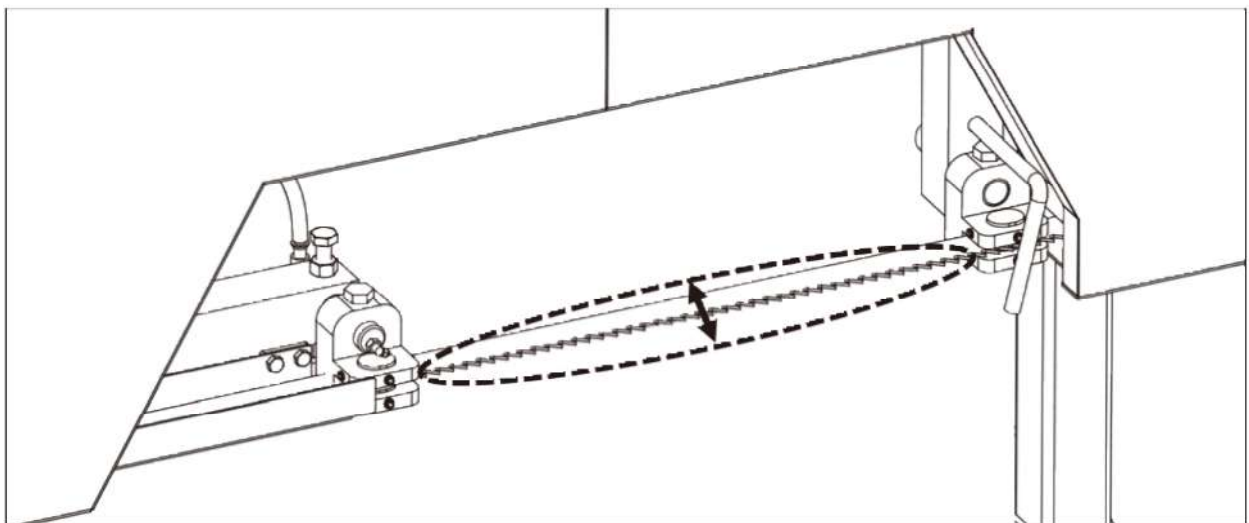


Loosen the blade guide assembly bolt with a 16mm socket. The round shaft should now be free to slide back and forth. Position it so that there is a paper width gap between the bearing and the back of blade. Tighten bolt against the flat on the shaft to secure assembly back in position.

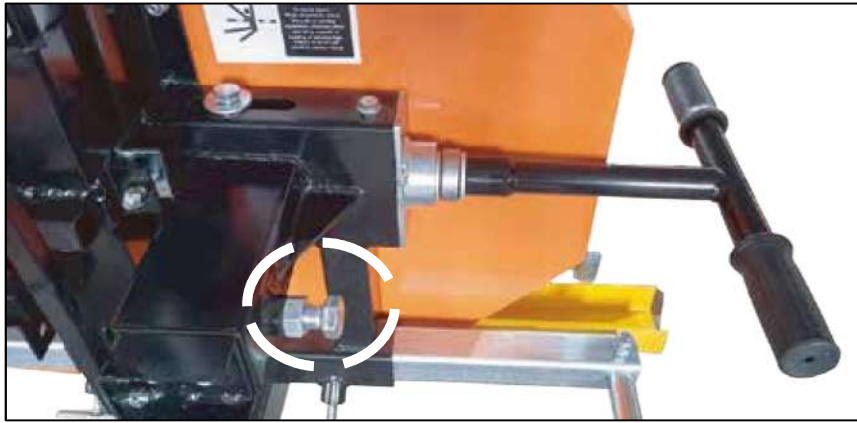


Using a piece of paper in between the blade and blade guide blocks, tighten the allen key bolts.

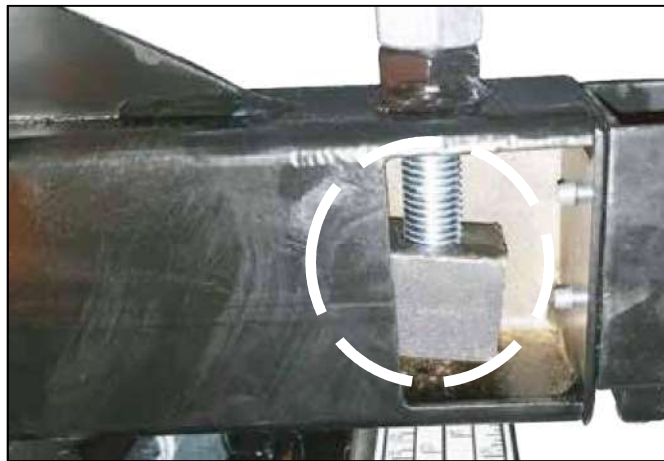
#4 – BLADE TENSION



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.

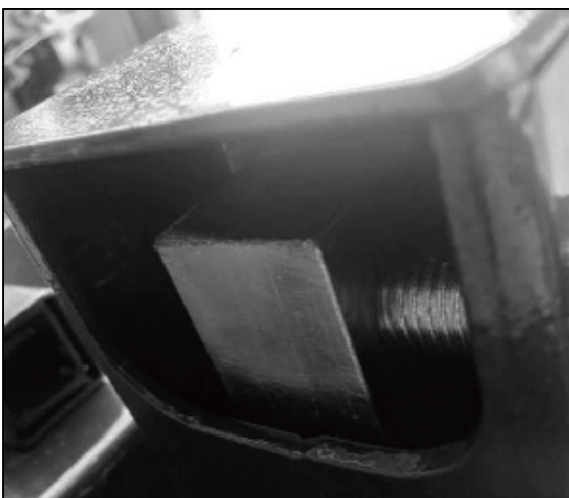


When tensioning the blade, make sure the tracking adjustment bolt sitting behind the T handle (pictured) is sitting back in its recess after you have finished and *before* the mill is run. Failure to do this will result in the blade being thrown and possibly broken.



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

#1 – CHANGING THE BLADE

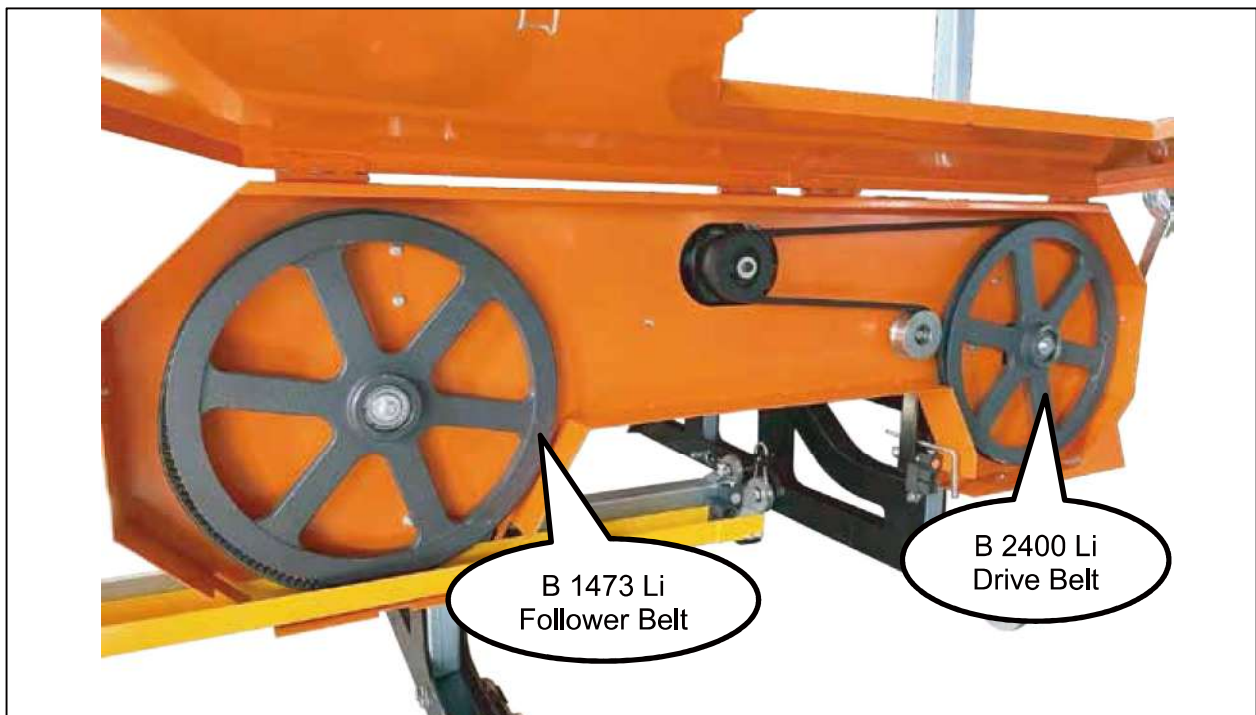
Never attempt the below with the engine running. As a safety precaution, remove the spark plug cap. Gloves and safety glasses must be worn when changing the blade.



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.

#2 – 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 B 1473 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 the manual.

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. Refer to page 32. 2. Gap between guide blocks and blade are incorrect. Refer to page 31. 3. Adjust blade tracking. Refer to page 27. 4. Install new blade. Refer to page 34. Always use blade lubricant. 5. Install new blade. Refer to page 34. 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. Refer to page 32. 2. Gap between guide blocks and blade are incorrect. Refer to page 31. 3. Adjust blade tracking. Refer to page 27. 4. Install new belts. Refer to page 34. 5. Install new blade. Refer to page 34. 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. Refer to page 34. 2. Binding between guide blocks when blade is too loose. Tighten blade. Refer to page 33. 3. Gap between guide blocks and blade are incorrect. Refer to page 31. 4. Adjust blade tracking. Refer to page 27. 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 32. 2. Belts are worn or too loose. Replace. Refer to page 35. 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 34. 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 34. 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

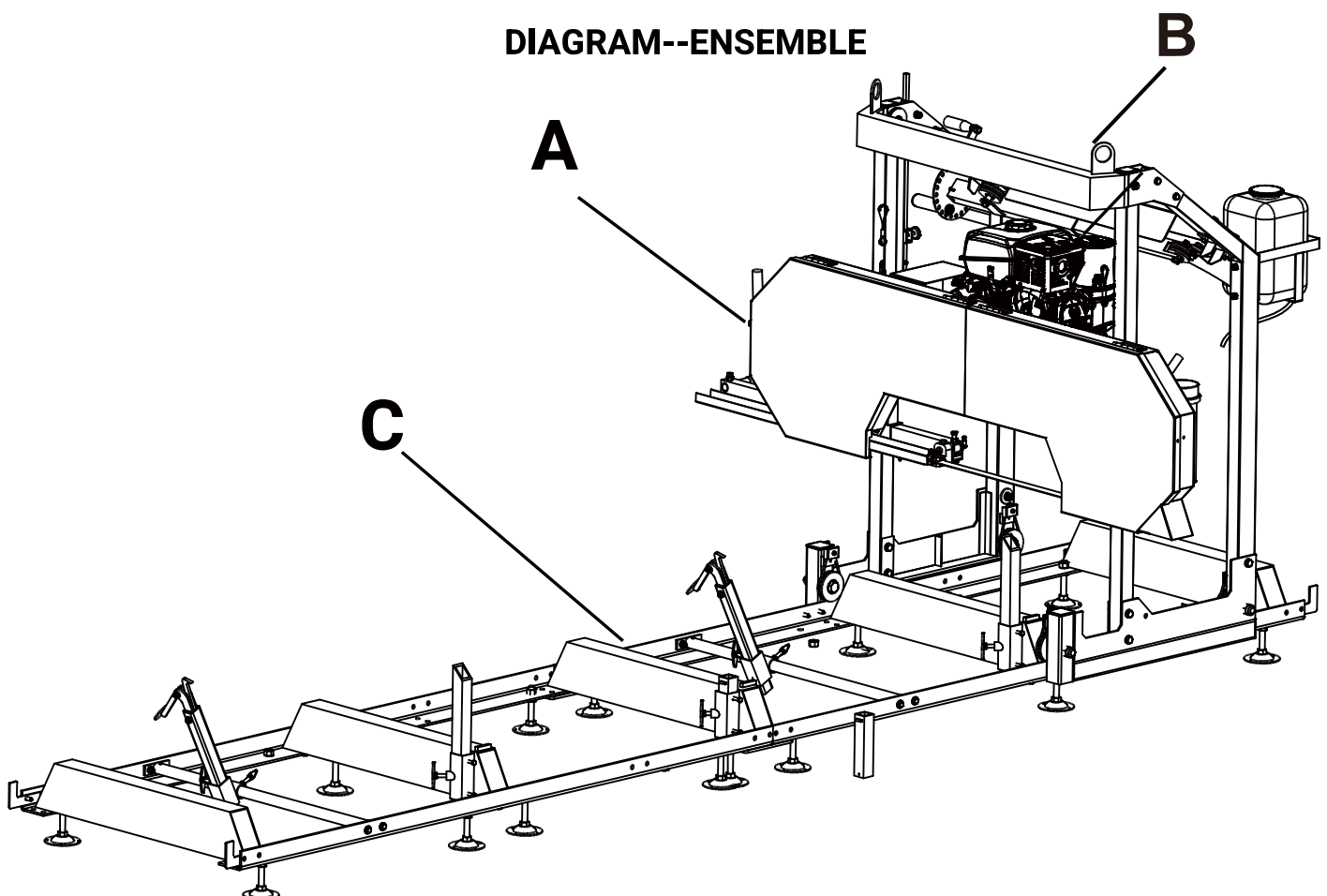
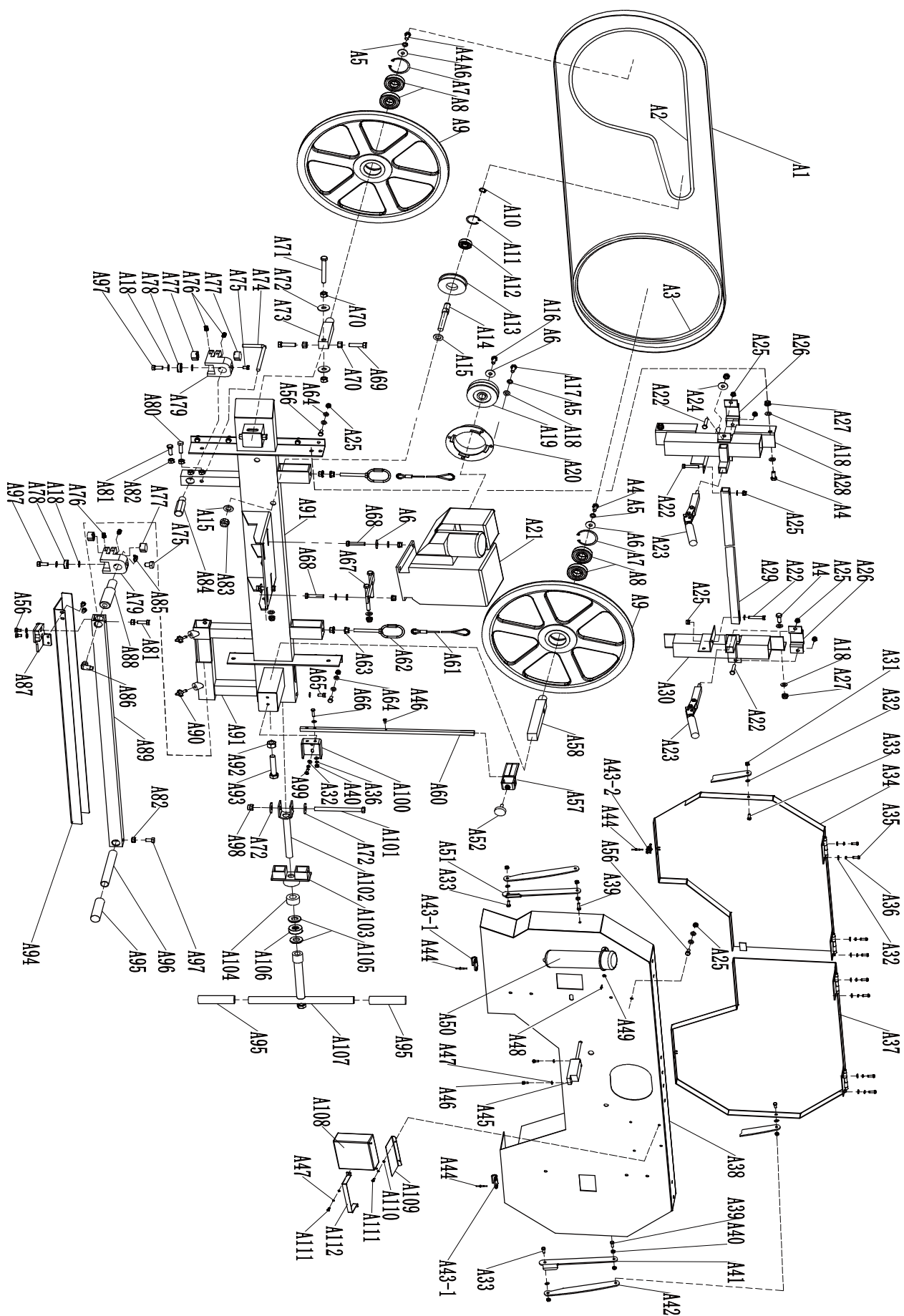


DIAGRAM (A) --BANDWHEEL HOUSING



PARTS LIST (A) -- BANDWHEEL HOUSING

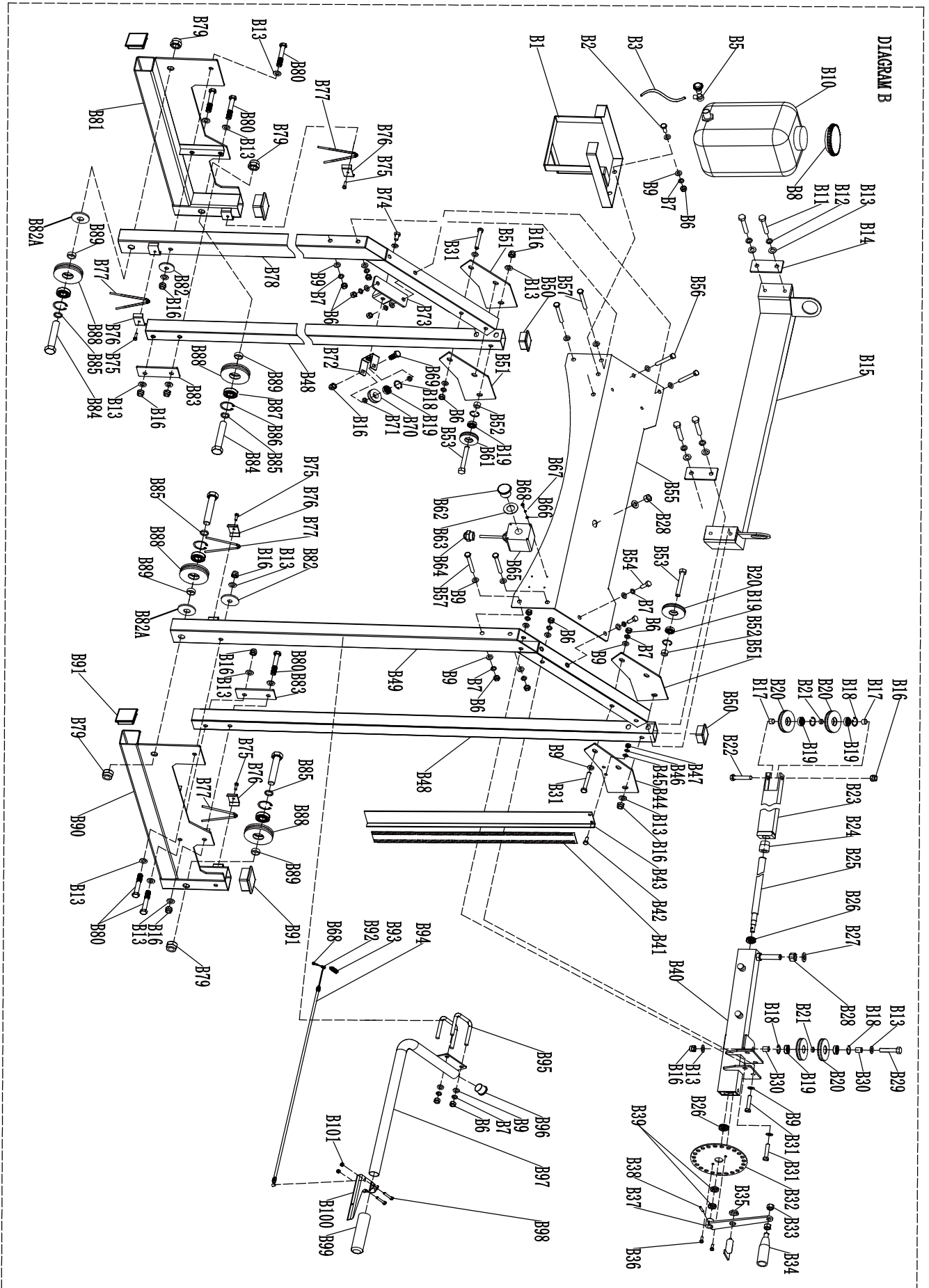
PART No	Description	QTY
A1	Saw blade	1
A2	Bi2400 V-belt	1
A3	Bi1473 V-belt	1
A4	Hexagon bolt M10x25	9
A5	Spring washer 10	7
A6	Large side flat pad 10($\phi 10 \times 35 \times 3.0$)	5
A7	Circlip for hole 62	2
A8	Deep groove ball bearing 6305	4
A9	Pulley	2
A10	Circlip for shaft 17	1
A11	Circlip for hole 40	1
A12	Deep groove ball bearing 6203-2RS	1
A13	Tensioner wheel	1
A14	Tension Shaft	1
A15	Flat washer 16	2
A16	American 3/8x24x25	1
A17	American 3/8x16x25	4
A18	Flat washer 10	22
A19	Clutch	1
A20	Clutch shield welding	1
A21	Engine	1
A22	Hexagon bolt M8x40	4
A23	Quick locking (assembly)	2
A24	Large washer 10	5
A25	Non metal insert hexagonlock nut M8	16
A26	Locking plate weldment	2
A27	Non metal insert hexagonlock nut M10	11
A28	Right lifting locking welding	1
A29	Tube drawing	2

PART No	Description	QTY
A30	Left lifting locking welding	1
A31	Non metal insert hexagonlock nut M6	8
A32	Flat washer 6	18
A33	Hexagon head bolt M6X16	6
A34	Right hood door welding 1	1
A35	Cross pan head screw M6x16	8
A36	Spring washer 6	12
A37	Left hood door welding	1
A38	Welding of shield body	1
A39	Hexagon head bolt M6X20	2
A40	Hexagon nut M6	4
A41	Side pull plate 3	1
A42	Side pull plate 1	2
A43	Buckle	1
A44	Pop rivet 4X10	8
A45	Limit switch YBLX	1
A46	Cross recessed pan headscrew M5X12	3
A47	Spring washer 5	6
A48	Pop rivet 4X16	3
A49	Large flat washer 4	3
A50	Instruction cartridge	1
A51	Side pull plate 2	1
A52	M8X40 floral handle	1
A53	Cross recessed pan head screw M4x12	2
A54	Flat washer 4	2
A55	Scale plate	1
A56	Hexagon head bolt M8X20	11
A57	Scale holder	1
A58	Passive saw wheel shaft	1

PART No	Description	QTY
A59	Hexagon nut M	2
A60	7101-150010 height indicator	1
A61	Lifting wire	2
A62	Lifting ring	2
A63	Hexagon flange nut M10	4
A64	Flat washer 8	17
A65	Hexagon head bolt M8X16	1
A66	Hexagon head bolt M6X25	2
A67	Tension plate	1
A68	Hexagon bolt M10X50	4
A69	Hexagon bolt M12X45	2
A70	Hexagon nut M12	4
A71	Hexagon head bolt full thread M12X100	1
A72	Large washer 12($\phi 12 \times 35 \times 3.0$)	4
A73	Driving saw wheel shaft	1
A74	Saw guard hook	1
A75	Hexagon bolt M10X12	2
A76	Hexagon socket set screw with concave point M6X12	12
A77	Aluminum seat	4
A78	Deep groove ball bearing 6200-2RS	2
A79	Aluminum Saw Clamp Shaft Seat 2	2
A80	Hexagon bolt M10 x 35	1
A81	Hexagon bolt M10X30	2
A82	Hexagon nut M10	5
A83	Non metal insert hexagon lock nut M16	1
A84	Right saw clamp shaft for aluminum seat	1
A85	One M6 90 degree oil cup	1
A86	1/4 elbow externally connected (connected to 8.0 gas pipe)	1
A87	Saw guard plate 1 welding	1
A88	Left saw clamp shaft	1
A89	Push rod	1

PART No	Description	QTY
A90	Triangular handle M10X40X30	2
A91	Beam welding	1
A92	Hexagon nut M16	1
A93	Hexagon bolt M16X80	1
A94	Saw guard 2	1
A95	25 Tube rubber handle	3
A96	Push-pull handle	1
A97	Hexagon bolt M10 x 20	1
A98	Non metal insert hexagon lock nut M12	1
A99	Hexagon socket head cap screw M6X14	2
A100	Scale base	1
A101	Hexagon bolt M12X150 half thread	1
A102	Welding of tension rod	1
A103	Welding of tie bar seat	1
A104	Cushion	1
A105	Tensioning gasket($\phi 21 \times 38 \times 4.5$)	2
A106	Thrust ball bearing 51204	1
A107	Welding of tensioning handle	1
A108	battery	1
A109	battery cap	1
A110	Flat washer 5	4
A111	Hexagonal cylindrical head screw M5X16	4
A112	Lead acid battery holder	1

PARTS LIST (B) --CARRIAGE



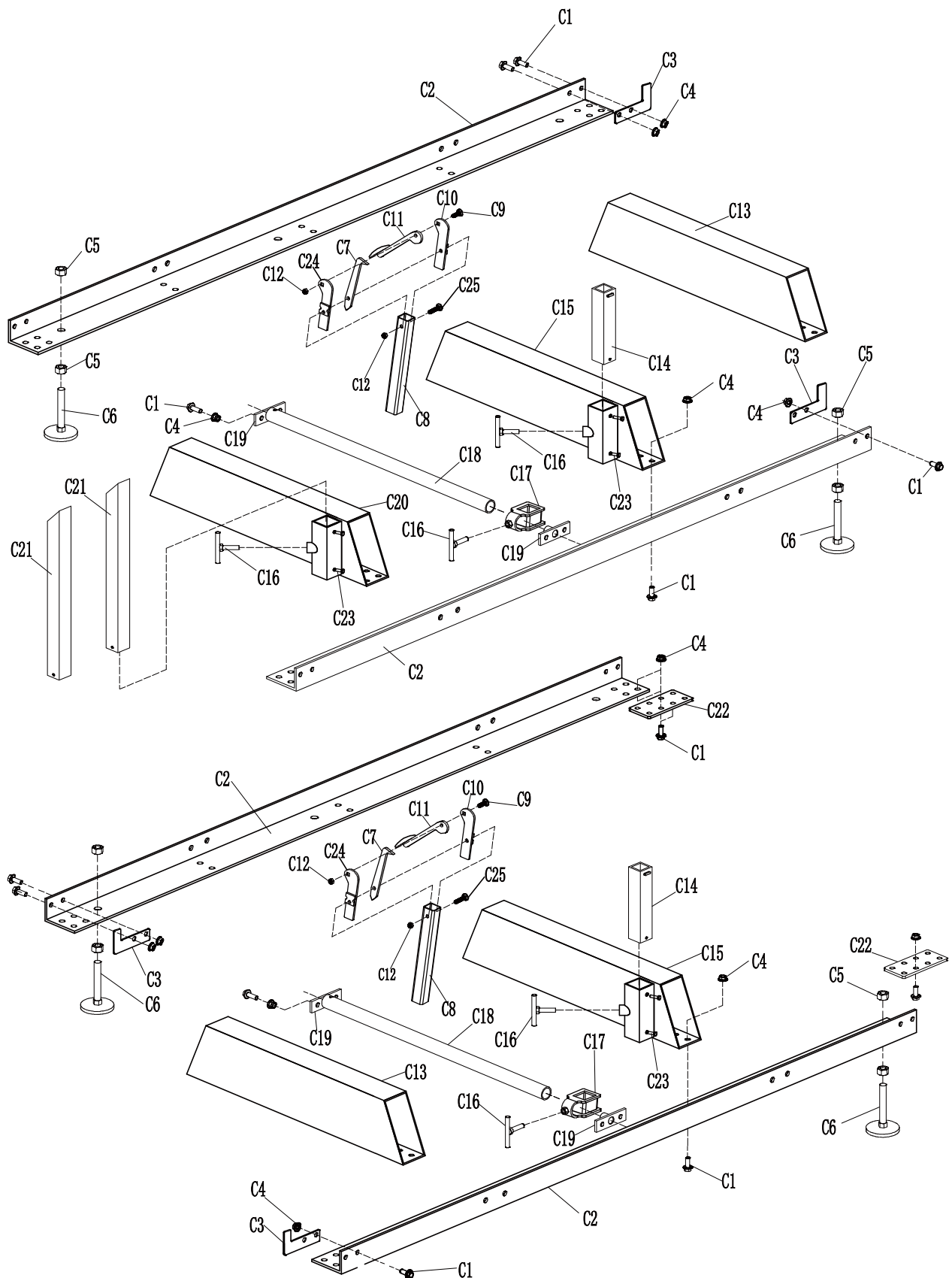
PARTS LIST (B) --CARRIAGE

PART No	Description	QTY	PART No	Description	QTY
B1	Welding of bucket frame	1	B52	Lifting wheel sleeve	2
B2	Hexagon bolt M10X25	2	B53	Hexagon bolt M12X95 half thread	2
B3	PU high-pressure air pipe 8 * 5 transparent	1.8 m	B54	Hexagon head bolt M10 x 30	2
B4	Throttle valve	1	B55	Upper arch cover	1
B5	Quick connect CSL8-04	1	B56	Hexagon bolt M10X75 half thread	2
B6	Hexagon nut M10	20	B57	Hexagon bolt M10X90 half thread	4
B7	Spring washer 10	20	B58	Trademark baffle	1
B8	Bucket lid	1	B59	Flat washer 5	6
B9	Flat washer 10	35	B60	M5 self-locking nut	6
B10	bucket	1	B61	Right lifting wheel	1
B11	Hexagon bolt M12X75 half thread	4	B62	Mushroom head emergency stop button	1
B12	Spring washer 12	4	B63	Emergency stop sign	1
B13	Flat washer 12	20	B64	Unable to pull off M20	1
B14	Clamping plate	2	B65	One hole of button box CA-BX1	1
B15	Welding of upper crossbeam	1	B66	Flat washer 4	4
B16	Non metal insert hexagon lock nut M12	11	B67	Spring washer 4	4
B17	Spacer 1	2	B68	Cross recessed pan head screw M4X12	5
B18	Circlip for hole 28	7	B69	Hexagon bolt M12X30	1
B19	Deep groove ball bearing 6001RS	7	B70	7001-230040 pulley 2	1
B20	Lifting wheel	5	B71	7101-240040 Spacer	2
B21	Spacer sleeve 2	2	B72	7001-230010 pulley frame welding	1
B22	Hexagon bolt M12X65 half thread	1	B73	Pulley frame seat	1
B23	Welding of expansion pipe 1	1	B74	Hexagon head bolt M10 x 20	1
B24	Copper nut	1	B75	Hexagon head bolt M6X20	4
B25	Lifting screw rod	1	B76	Clamping plate 2	4
B26	Thrust ball bearing 51102	2	B77	Wire rope brush	4
B27	Flat washer 16	2	B78	Welding of right rear support	1
B28	Hexagon nut M16	2	B79	Non metal insert hexagon lock nut M20	4
B29	Hexagon bolt M12X85 half thread	1	B80	Hexagon bolt M12X80 half thread	6
B30	Reversing wheel sleeve	2	B81	Welding of right bottom wheel frame	1
B31	Hexagon bolt M10X80 half thread	6	B82	Rear gasket of bottom wheel frame	2
B32	Dial	1	B82A	Rear bottom wheel gasket	2
B33	Hexagon nut M12	2	B83	Right clamping plate of bottom wheel frame	2
B34	13 hole handle	1	B84	Hexagon bolt M20X110 half thread	4

PARTS LIST (B) --CARRIAGE (CONT)

B35	PLUNGER AS-KNOB	1	B85	Bottom wheel spacer 1	4
B36	Hexagon head bolt M6X16	2	B86	Circlip for hole 42	4
B37	Crank welding	1	B87	Deep groove ball bearing 6004	4
B38	Elastic straight pin 5X24	1	B88	Bottom wheel	4
B39	Small round nut M14X1.5	2	B89	Bottom wheel spacer 2	4
B40	Welding of expansion pipe 2	1	B90	Welding of left bottom wheel frame	1
B41	7103-20003C Height scale	1	B91	60 * 60 square pipe plug	4
B42	Hexagon head bolt M8X20	2	B92	clamp	1
B43	7203-200050 ruler base	1	B93	drag spring	1
B44	Connecting plate 3	1	B94	Accelerator cable	1
B45	Flat washer 8	2	B95	U-bolt	2
B46	Spring washer 8	2	B96	33 Round pipe plug	1
B47	Hexagon nut M8	2	B97	Pusher welding	1
B48	Lifting square tube	2	B98	Hexagon socket head cap screw M6X35	2
B49	Welding of left rear support	1	B99	7001-201040 Handle cover φ thirty-two	1
B50	50 * 50 square pipe plug	2	B100	Throttle handle	1
B51	7203-230010 connecting plate 1	3	B101	Hexagon nut M6	2

DIAGRAM (C) --GUIDE RAIL



PARTS LIST (C) -- GUIDE RAIL

PART NO.	DESCRIPTION	QTY	PART NO.	DESCRIPTION	QTY
C1	Hexagon flange bolts M10*30	48	C14	Log support	2
C2	Guide rail	4	C15	Two-hole guide rail beam welding	2
C3	Limit plate	4	C16	T-screw M10*40	5
C4	Hexagon flange self-locking nuts M10	48	C17	Log clamp receiver	2
C5	Hex nut M16	24	C18	Slide tube	2
C6	Leveling Feet M16	12	C19	Sliding socket welding	4
C7	Hook	2	C20	Four-hole rail beam welding	1
C8	Telescopic tube welding	2	C21	Log support	2
C9	Hexagon socket head screw M10X35	2	C22	Rail connecting plate	2
C10	Telescopic left plate welding	2	C23	Hex Bolts M8*30	6
C11	Eccentric compression welding	2	C24	Telescopic right plate welding	2
C12	Hexagon lock nut M10	4	C25	Half round head square neck bolt M10x35	2
C13	Two-hole guide rail beam (not welded)	2			



www.bilthardusa.com
inquiry@bilthardusa.com