TMG INDUSTRIAL

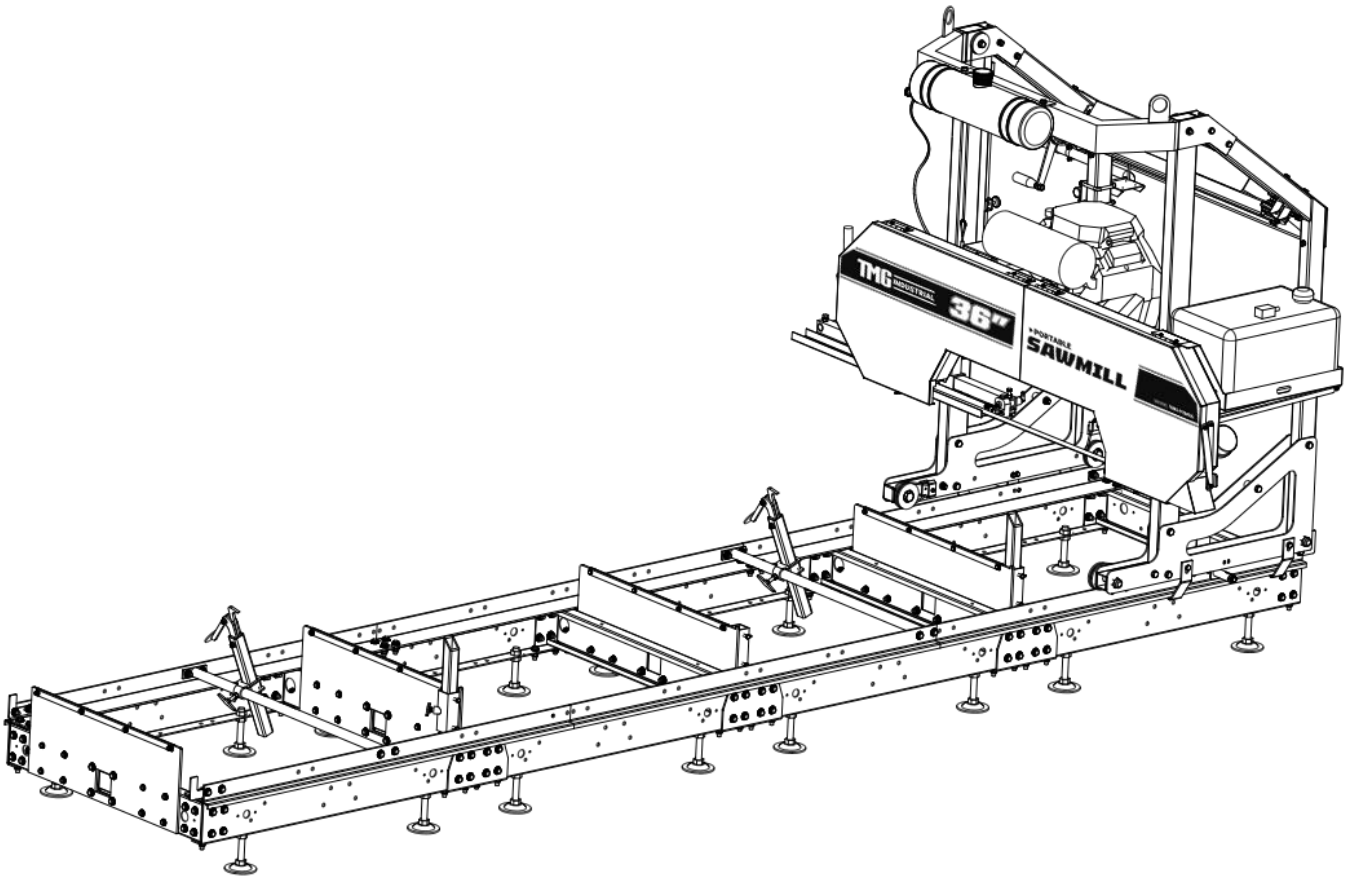
TMG-PSM36

PRODUCT MANUAL

v2023.10.04

36" CUTTING CAPACITY PORTABLE SAWMILL

WITH 21HP HONDA V-TWIN ENGINE



⚠ 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**
- Do not return the product to dealer. They are not equipped to handle your requests.

Missing parts or questions on assembly?
Please call: 1-877-761-2819 or email: cs@tmgindustrial.com

Contents

Thank you very much for choosing the **TMG-PSM36** 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.

For technical questions and replacement parts, please contact TMG Industrial-A division of Transcan Motorsports Inc.

INTENDED USE

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

TECHNICAL SPECIFICATIONS

Item	Description
Engine	21HP HONDA V-twin engine
Maximum Log Diameter	36" (914mm)
Maximum Log Length	13'(3940mm)
Maximum Board Width	31-1/2" (800mm)
Maximum Board Thickness	7" (178mm)
Blade Size	1-1/4 x 165" (32 x 4191mm)

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 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.

  Donot 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 TMG-PSM36 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.

GENERAL MAINTENANCE INFORMATION

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 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-1or 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.

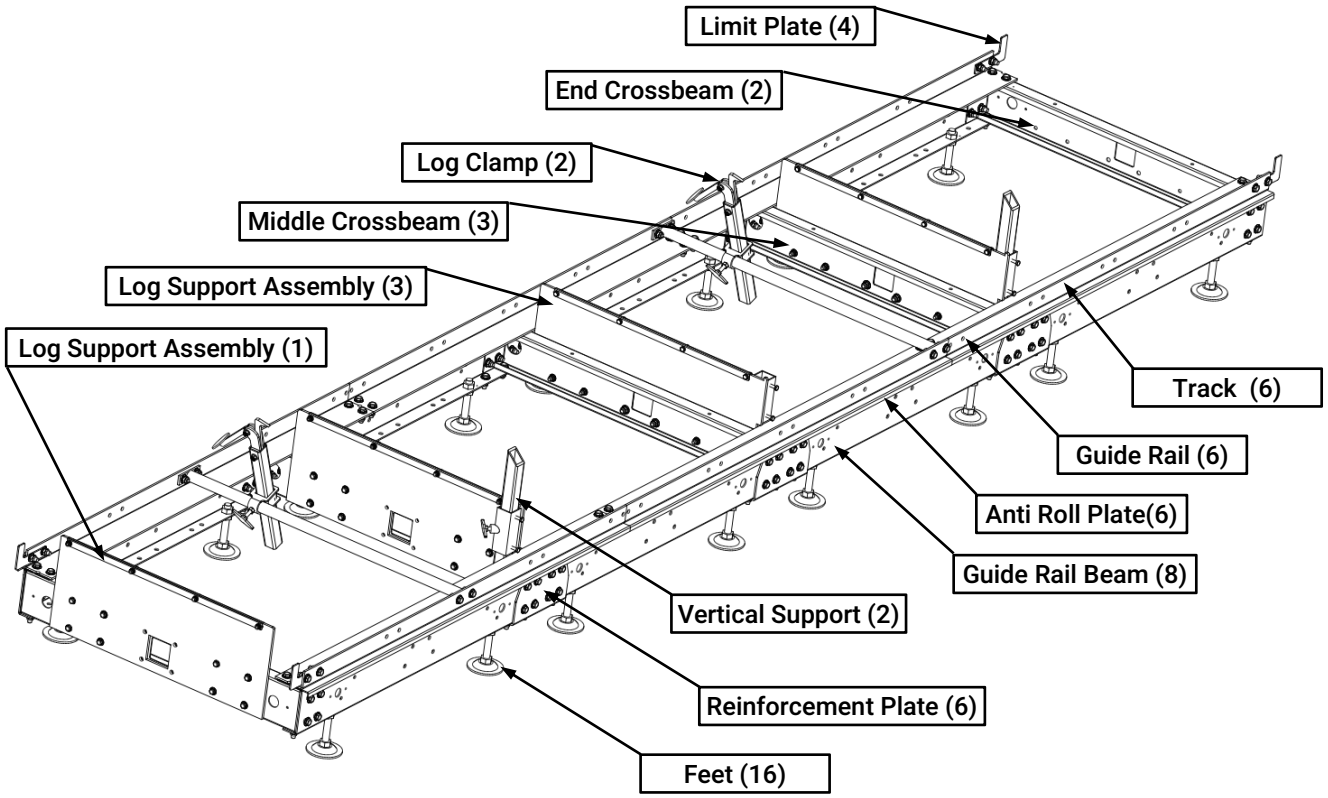
SAWMILL ASSEMBLY

#1 – INSPECTION

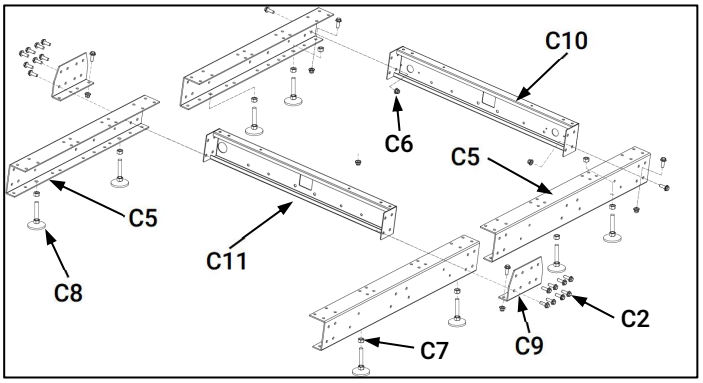
Take all of the parts out of the shipping crate and lay them out.

#2 – TRACKS

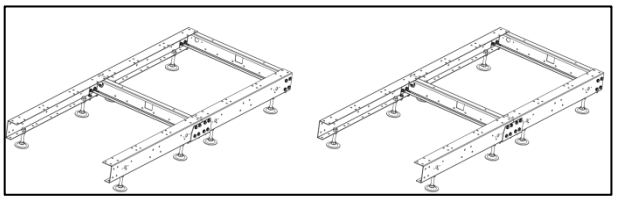
Assemble track system and secure loosely with provided nuts & bolts. It is important not to fully tighten the bolts at this stage. This will be done after the head is assembled and rolled along the track. It is ideal to assemble the tracks on a solid and level footing that is a minimum of 4" off of the 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 the leveling feet and fasteners to the guide rail beam, the reinforcement plates are bolted to the joint of the chassis, connect the crossbeam to the middle position as shown in the figure.
   Repeat the installation process and install the two components properly, Refer to the figure on the right.

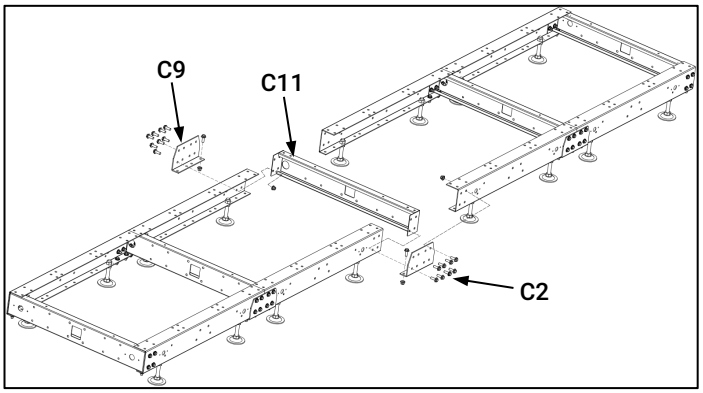


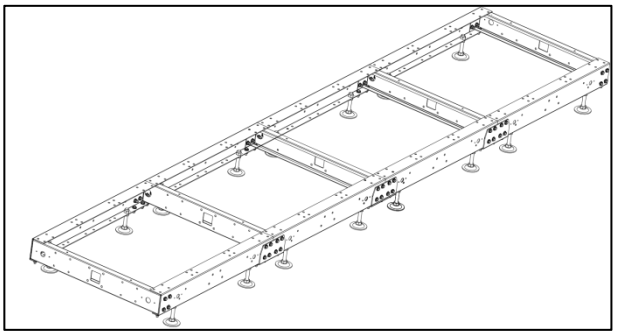
Note: If you have purchased TMG-PSM36-Mjack, do not need to install the foot, directly install the trailer jack seat and trailer jack, installation instructions refer to installation manual of TMG-PSM36-Mjack



PART NO.	DESCRIPTION	QTY
C2	Hexagon flange bolts M10*30	56
C5	Guide rail beam 1.2m	8
C6	Hexagon lock nut M10	56
C7	Hexagon nut M20	16
C8	Leveling feet M20	16
C9	Rail connecting plate	4
C10	Front and rear crossbeam	2
C11	Middle crossbeam	2

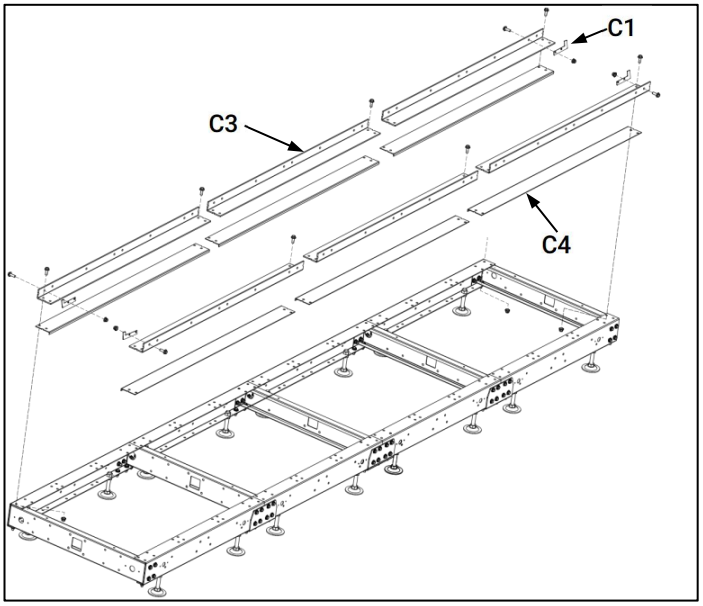
2. Connect the two components installed in the first step, two reinforcement plates and a middle crossbeam are needed in this step.

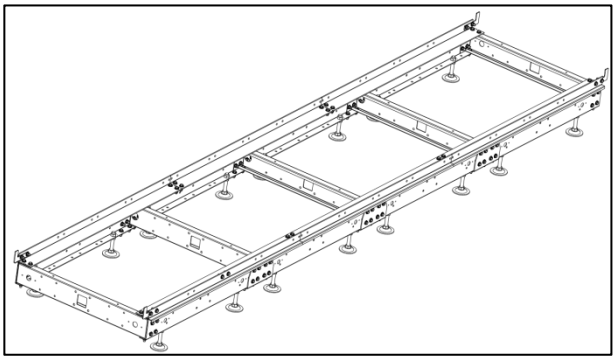




PART NO.	DESCRIPTION	QTY
C2	Hexagon flange bolts M10*30	24
C6	Hexagon lock nut M10	24
C9	Reinforcement plate	2
C11	Middle crossbeam	1

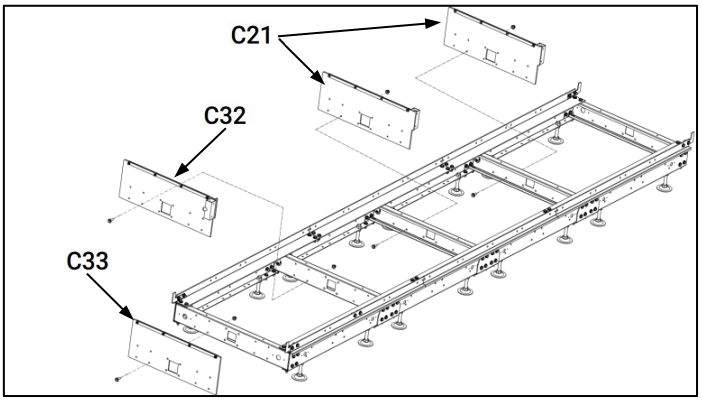
3. Bolt the guide rails , anti roll plate and limit plate to the base, the anti roll plate is under the guide rail.

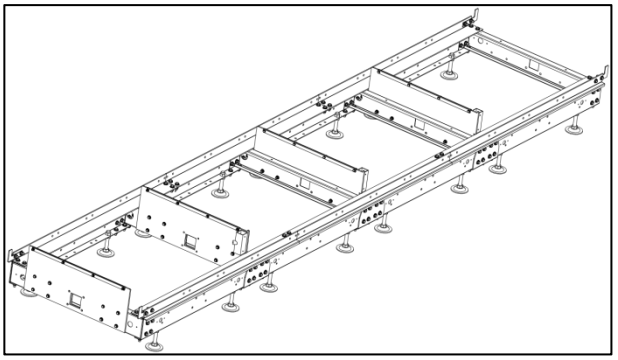




PART NO.	DESCRIPTION	QTY
C1	Limit plate	4
C2	Hexagon flange bolts M10*30	32
C3	Guide rail 1.6m	6
C4	Anti roll plate	6
C6	Hexagon flange nuts M10	32

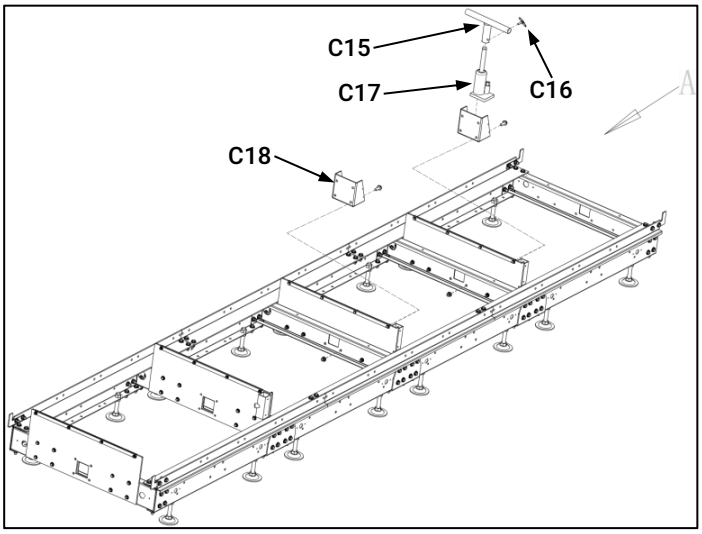
4. Install the crossbeam plates and front crossbeam plate to the base as shown in the figure.

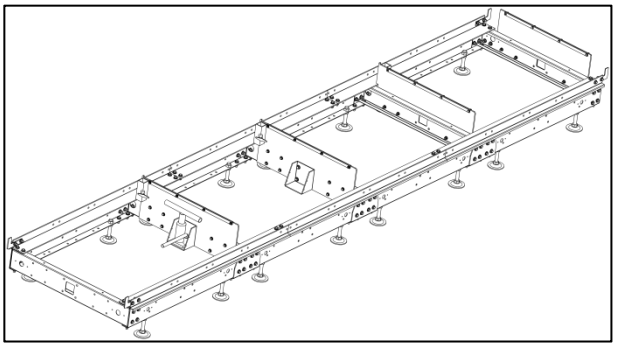




PART NO.	DESCRIPTION	QTY
C2	Hexagonal flange bolt M10X30	32
C6	Hexagon flange nuts M10	32
C21	Crossbeam plate welding	2
C32	Crossbeam plate welding 1	1
C33	Front crossbeam plate	1

5. Install hydraulic jack seat and hydraulic jack as shown in the figure.

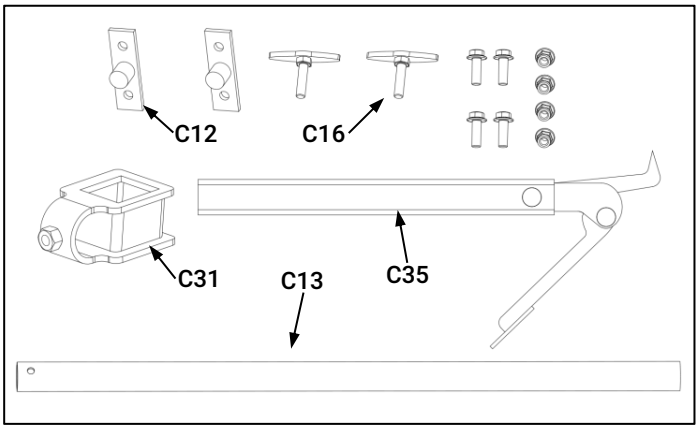


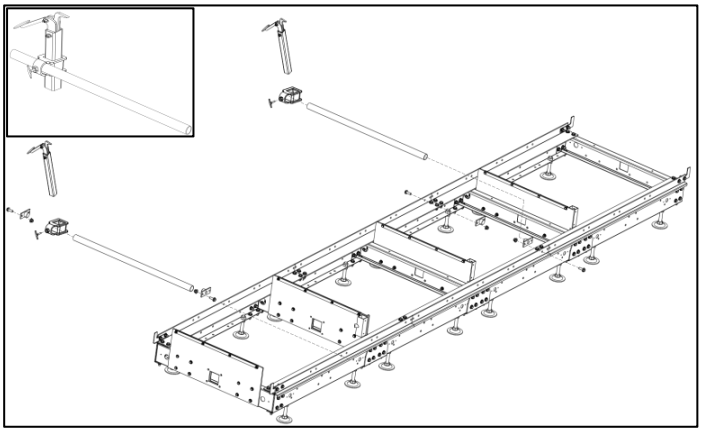


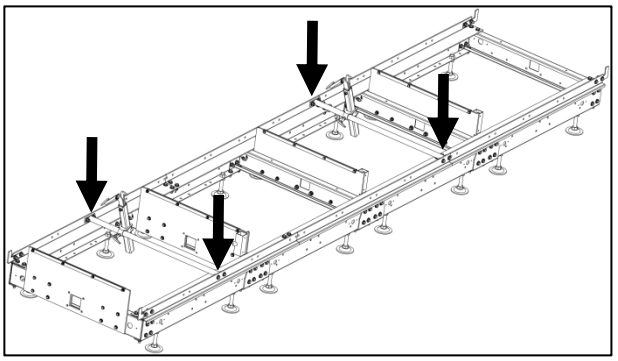
PART NO.	DESCRIPTION	QTY
C2	Hexagonal flange bolt M10X30	8
C6	Hexagon flange nuts M10	8
C15	Jack adjustment shaft welding	1
C16	T-screw M10*40	1
C17	Hydraulic jack 1Ton	1
C18	Hydraulic jack seat	2

#3 – LOG DOG & SUPPORTS

1. Install quick log clamp assembly(set of two) as shown in the figure. Insert sliding seat welding into sliding tube and secure with T-screw. Then install the sliding pipe seat and on the guide rail. The T-screw should be coated with waterproof grease.

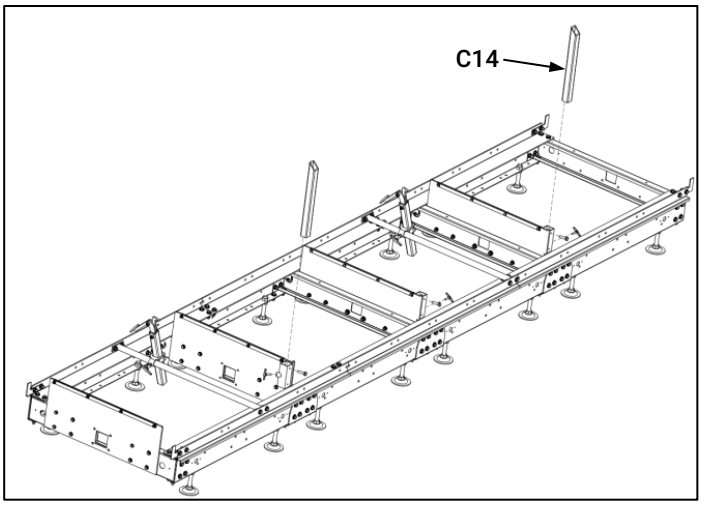


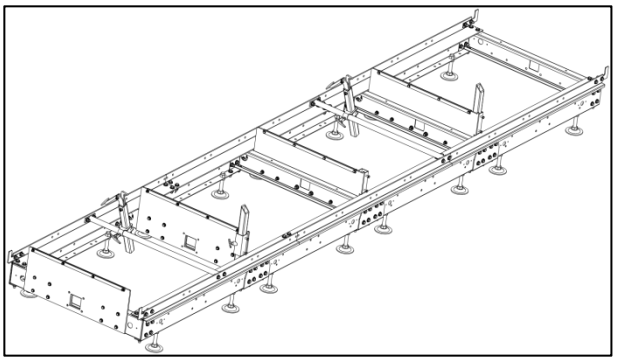




PART NO.	DESCRIPTION	QTY
C2	Hexagonal flange bolt M10X30	8
C6	Hexagon flange nuts M10	8
C12	Sliding pipe seat welding	4
C13	Sliding tube	2
C16	T-screw M10*40	2
C31	Sliding seat welding	2
C35	Quick log clamp assembly	2

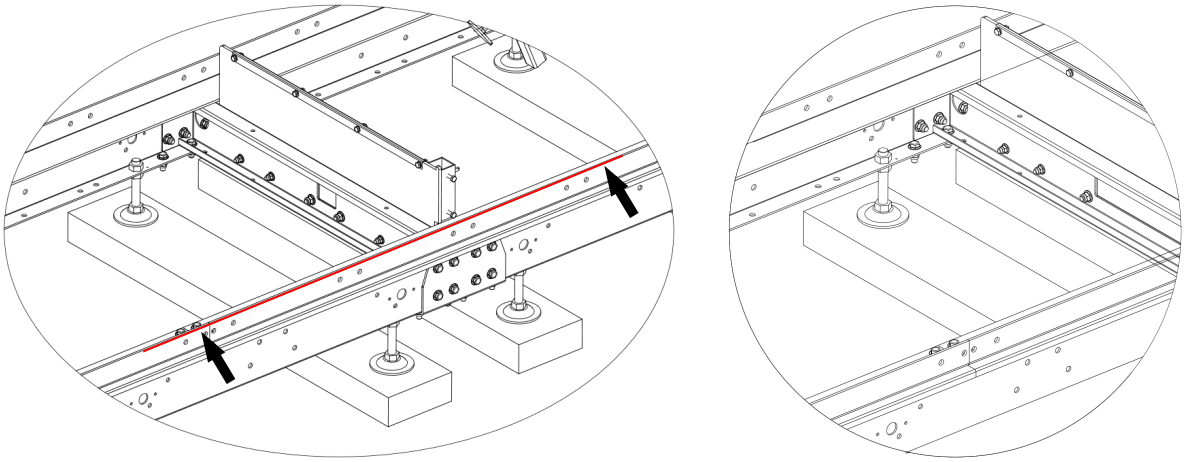
2. Insert vertical support into crossbeam plate and secure with T-screw.



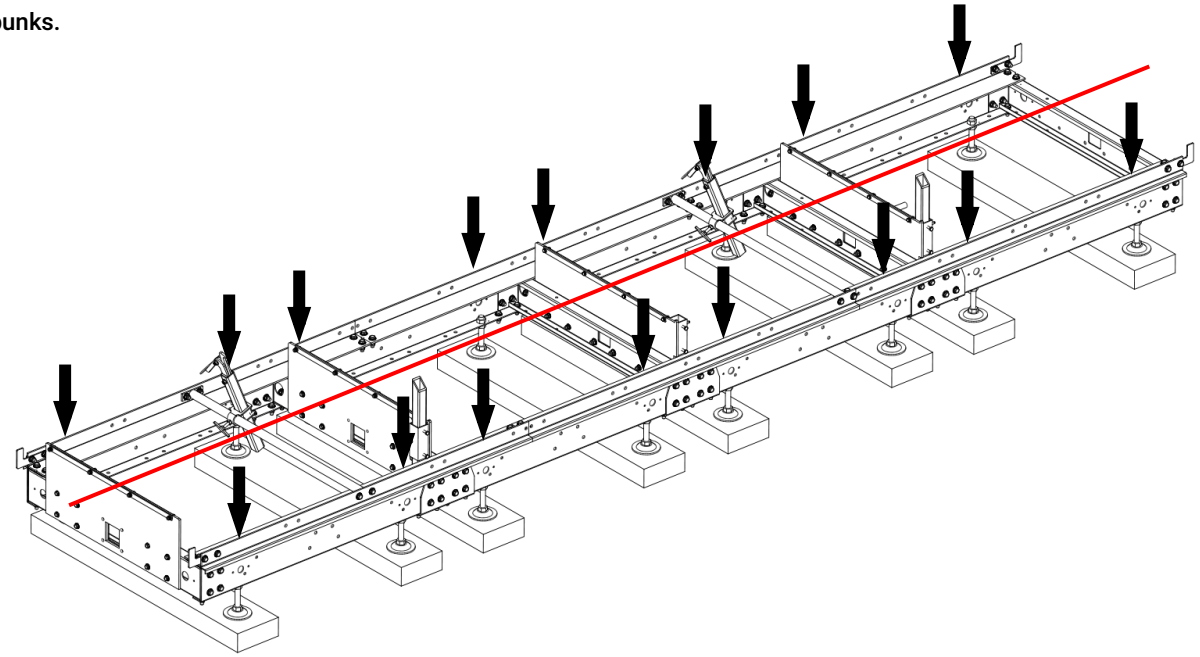


PART NO.	DESCRIPTION	QTY
C14	Vertical support	2
C16	T-screw M10X40	3

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 red in the above picture).

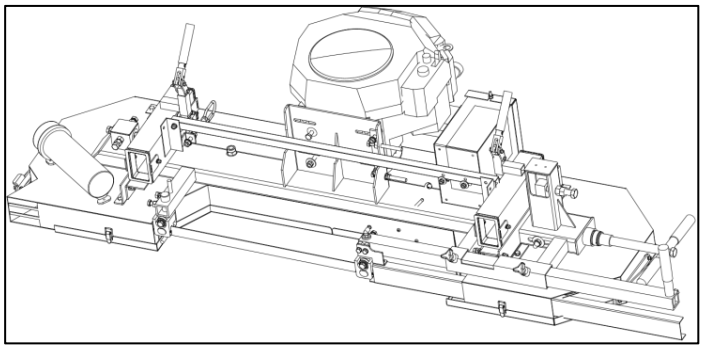


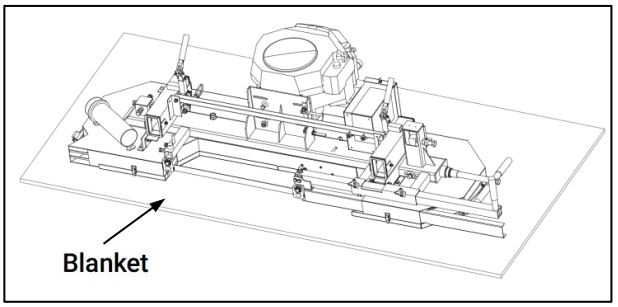
The BLACK ARROWS indicate where the locations of the leveling legs are. There are 4pcs per 87in. of track. 174 in. total on the machine. On the intermediate bunks the leveling legs alternate. We recommend placing the mill leveling legs on sleepers running left to right as shown above. You need to make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



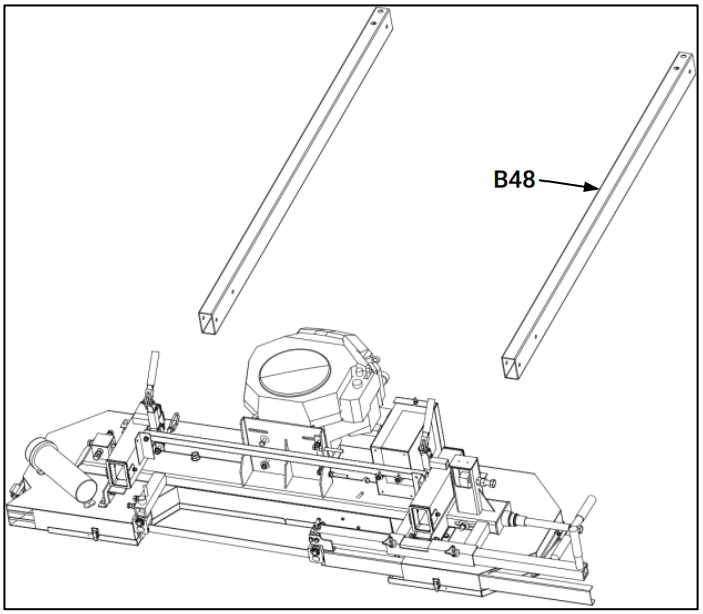
#4 – CARRIAGE ASSEMBLY

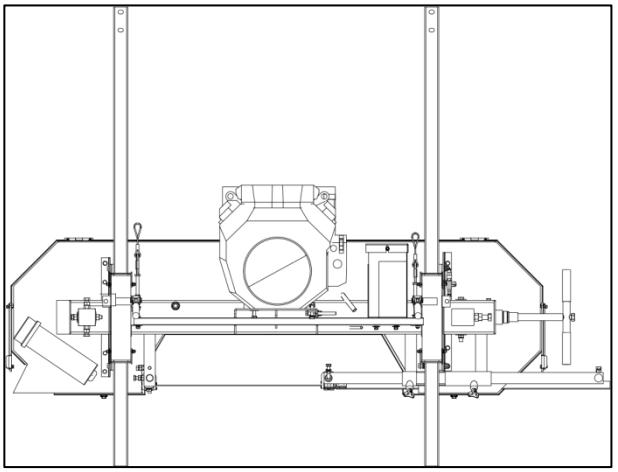
1. Place a moving blanket on the shipping pallet that the sawmill crate was strapped to. The blanket will prevent the blade guard covers from becoming scratched. Using a minimum of two people or a mechanical advantage system, remove the head assembly from the sawmill crate and place face down on the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





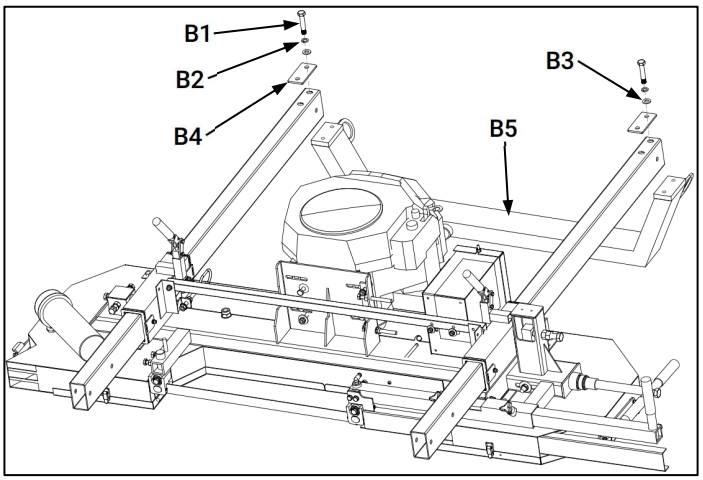
2. Then insert lifting square tube into corresponding locations in head assembly.

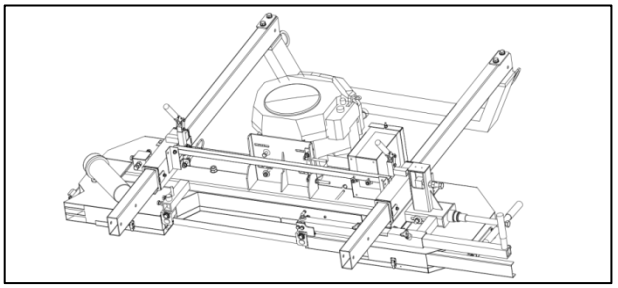




PART NO.	DESCRIPTION	QTY
B48	Lifting square tube	2

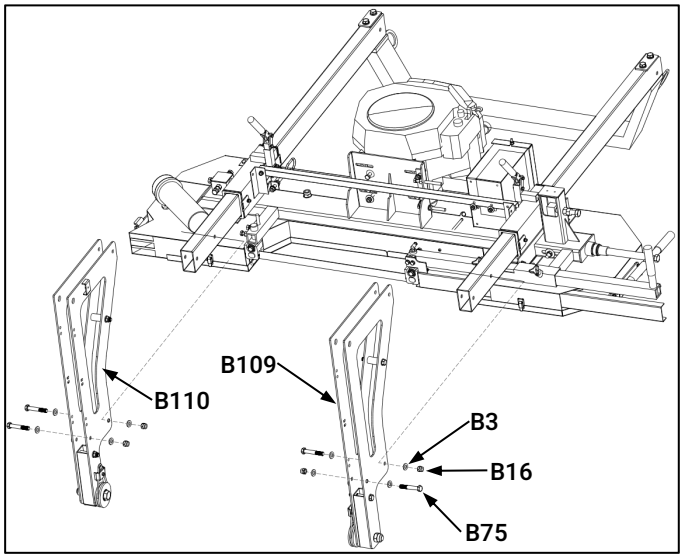
3. Connect the upper beam welding to the lifting square tube. When tightening the bolts, pay attention to two clamping plate in this area.





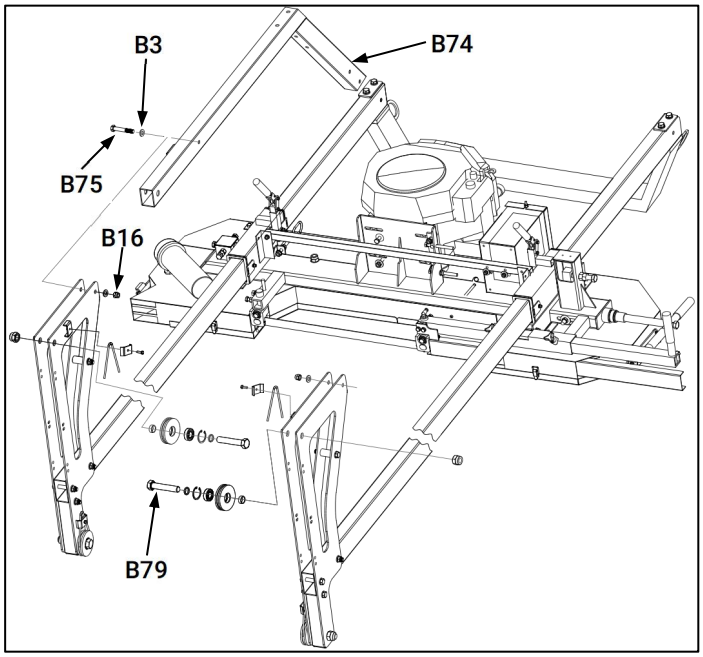
PART NO.	DESCRIPTION	QTY
B1	Hexagon head bolt M12X155	4
B2	Spring washer Ø12	4
B3	Plain washer Ø12	4
B4	Clamping plate	2
B5	Upper beam welding	1

4. Install the wheel assembly onto the lifting square tube as shown in the figure, secure it with the provided bolts and nuts.

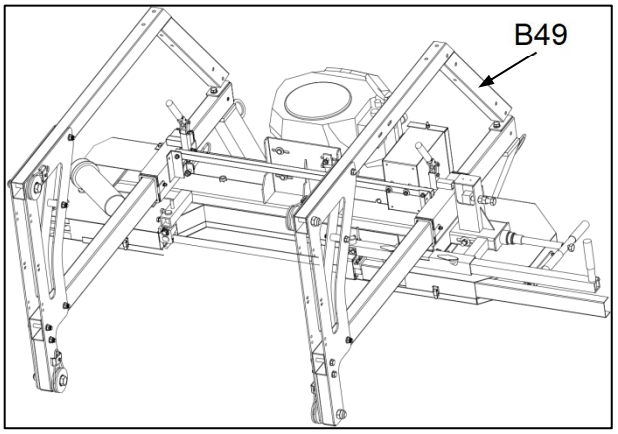


PART NO.	DESCRIPTION	QTY
B3	Plain washer Ø12	8
B16	Non-metallic insert hex lock nut M12	4
B75	Hexagon head bolt M12X80 half wire	4
B109	Left wheel assembly	1
B110	Right wheel assembly	1

5. Insert the bottom wheel frame welding into the middle of the clamp plates and secure it with the provided bolts and nuts.

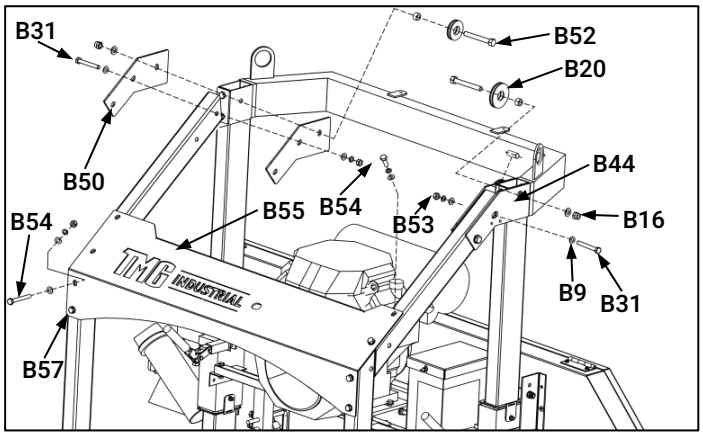


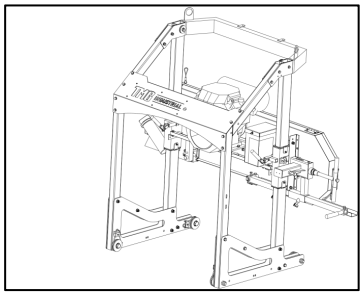
Noted: Need to loosen the bolts(#B79) first when installing the bottom wheel frame.



PART NO.	DESCRIPTION	QTY
B3	Plain washer Ø12	4
B16	Non-metallic insert hex lock nut M12	2
B49	Left bottom wheel frame welding	1
B74	Right bottom wheel frame welding	1
B75	Hexagon head bolt M12X80 half wire	2

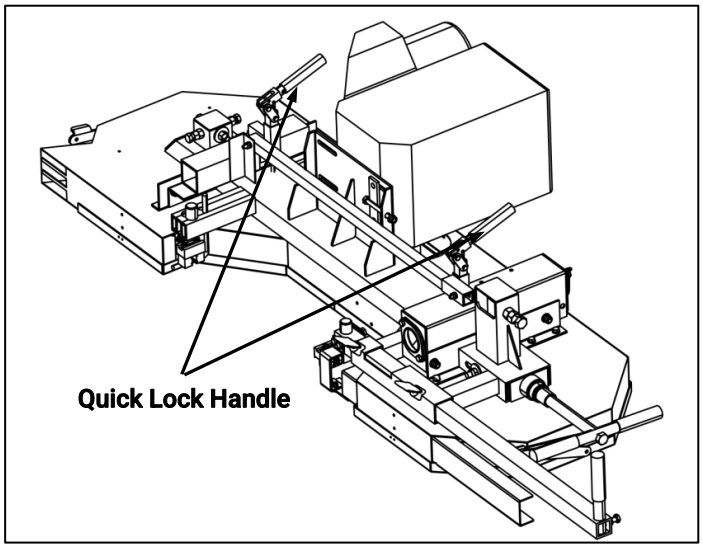
6. Install the connecting clamping plate, uper arch and steel cable roller,using wrench to hold the nut, tighten the bolt

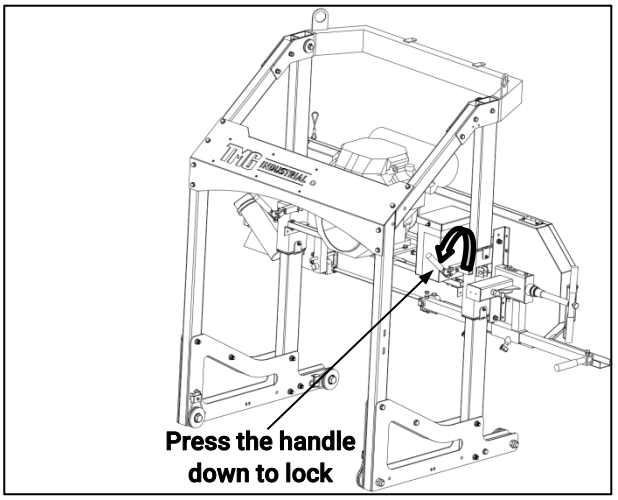




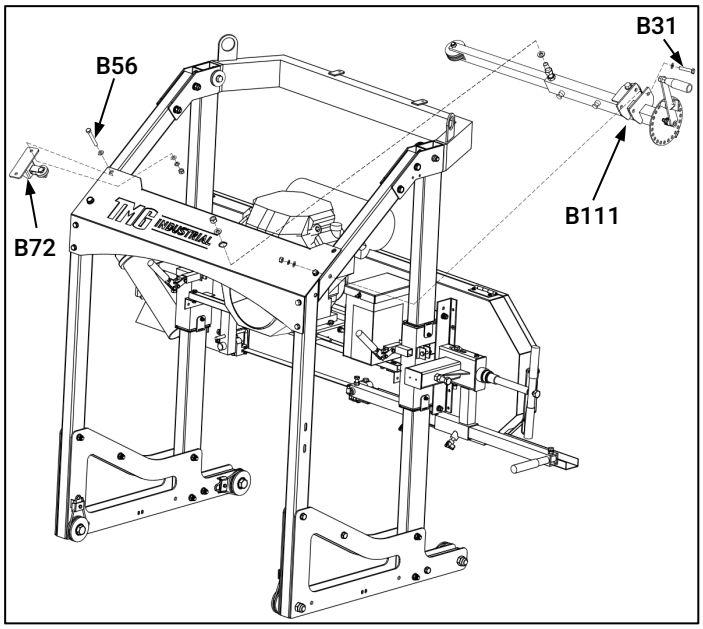
PART NO.	DESCRIPTION	QTY
B3	Plain washer Ø12	2
B6	Hex nut M10	10
B9	Plain washer Ø10	20
B16	Non-metallic insert hex lock nut M12	2
B20	Lifting wheel	6
B31	Hexagon head bolt M10X75 half wire	4
B44	Connecting plate 3	1
B50	Connecting plate 1	3
B52	Hexagon head bolt M12x100	2
B53	Spring washer Ø10	10
B54	Hexagon head bolt M10 x 30	3
B55	Upper dome cover	1
B57	Hexagon head bolt M10X90	3

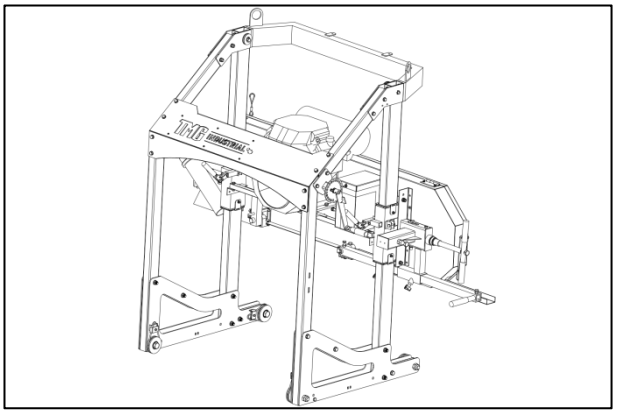
7. Lock the cam handles on both the square post to prevent the head from moving when it is stood up in the coming steps. Ensure that when activating the cam handles, the clamps securely lock on the square vertical post. Again, using a minimum of two people, set the saw head assembly on the ground.





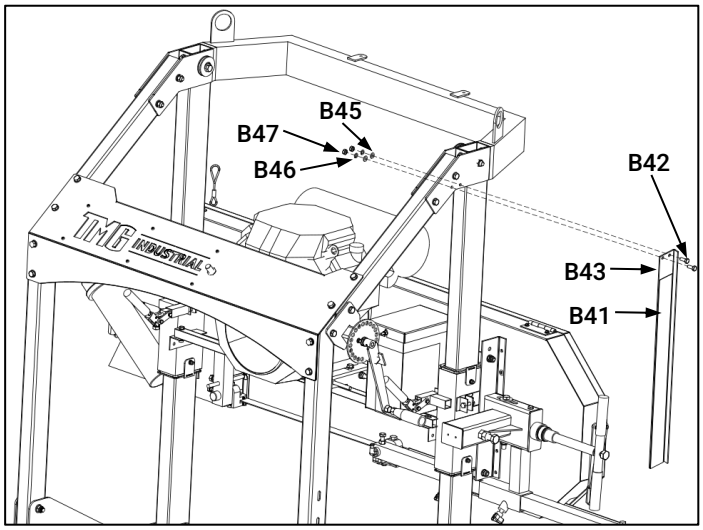
8. **Install the lifting system,using wrench to hold the nut ,tighten the bolt.**

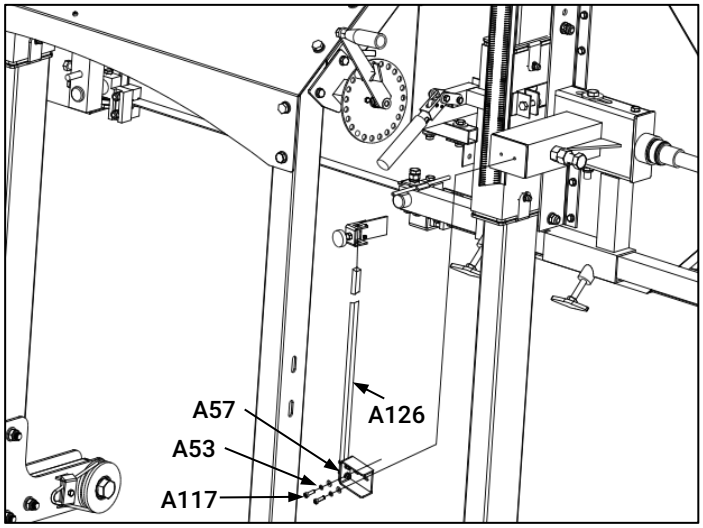


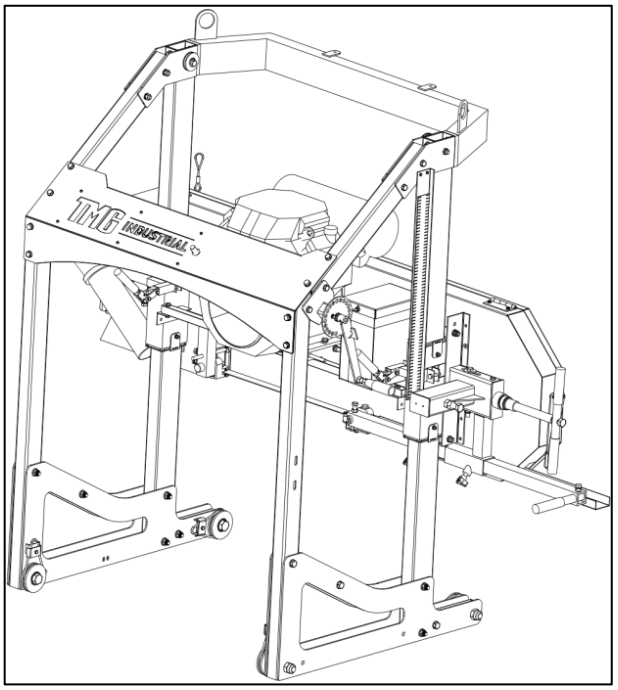


PART NO.	DESCRIPTION	QTY
B6	Hex nut M10	4
B9	Plain washer Ø10	8
B31	Hexagon head bolt M10X75 half wire	2
B56	Hexagon head bolt M10X95	2
B72	Pulley frame seat	2
B111	Lifting system	1

9. 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.



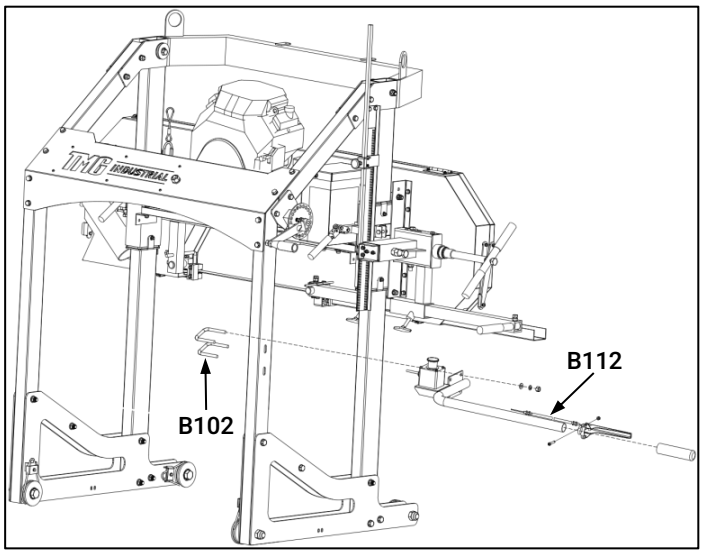


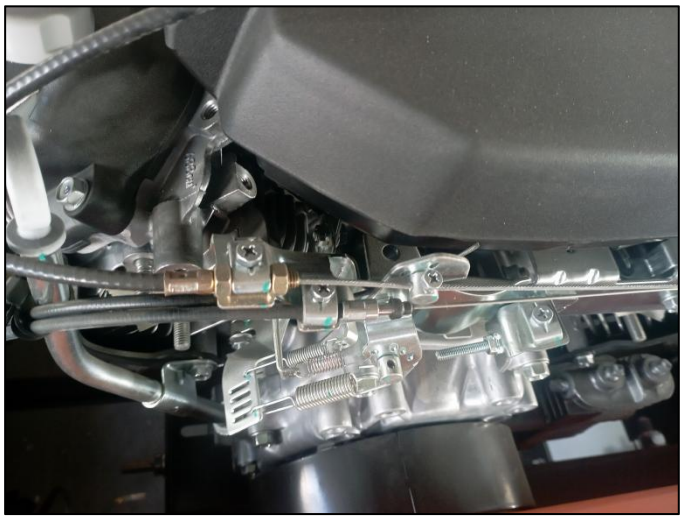


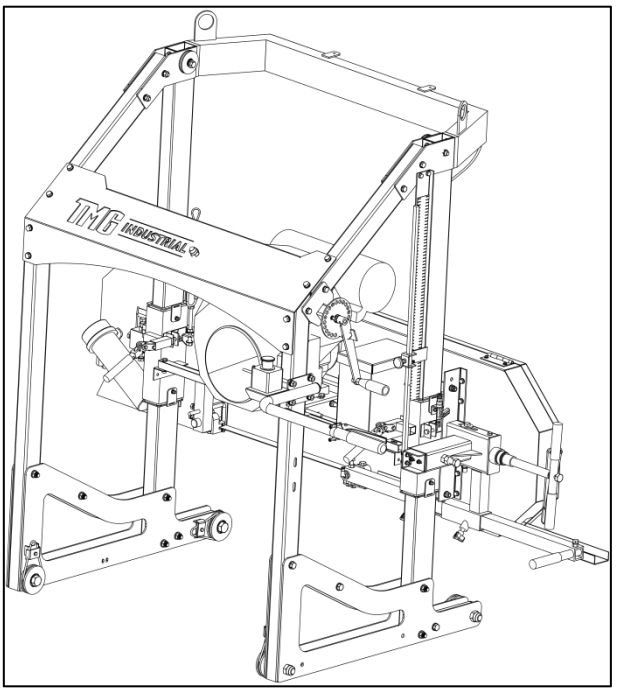
PART NO.	DESCRIPTION	QTY
B41	Height ruler	1
B42	Hexagon head bolt M8X20	2
B43	Ruler base	1
B45	Plain washer Ø8	2
B46	Spring washer Ø8	2
B47	Hex nut M8	2
A53	Spring washer Ø6	2
A57	Hex nut M6	2
A117	Hexagon socket head cap screws M6X14	2
A126	Ruler rod assembly	1

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.

10. 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.





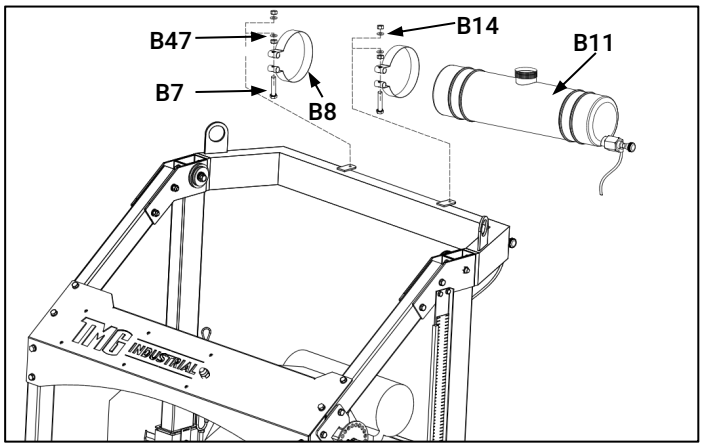


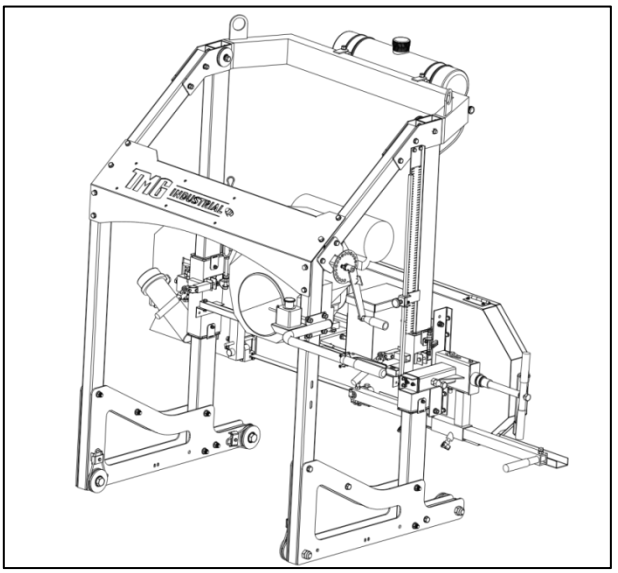
PART NO.	DESCRIPTION	QTY
B6	Hex nut M10	4
B9	Plain washer Ø10	4
B53	Spring washer Ø10	4
B102	U-bolt	2
B112	Throttle handle assembly	1

PLEASE NOTEThe 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.***

PLEASE NOTEInstall the emergency switch to the uper arch as shown in left image.***

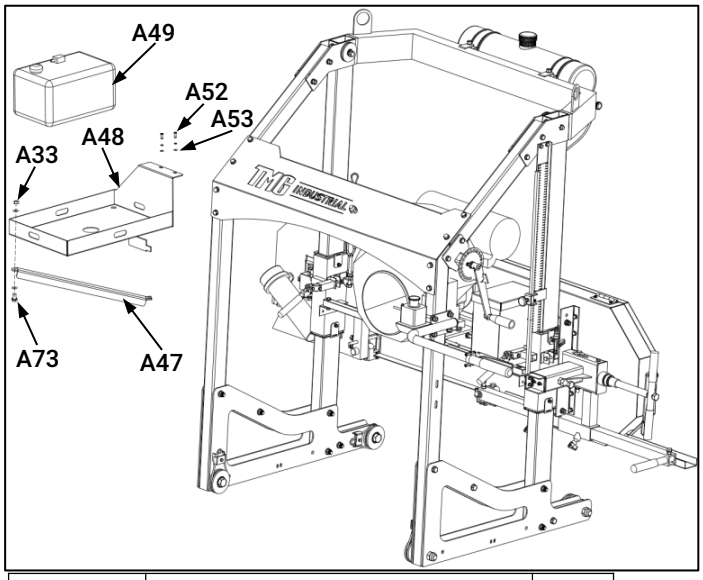
11. Install the water tank onto the upper crossbeam as shown in the figure, using the provided fasteners.

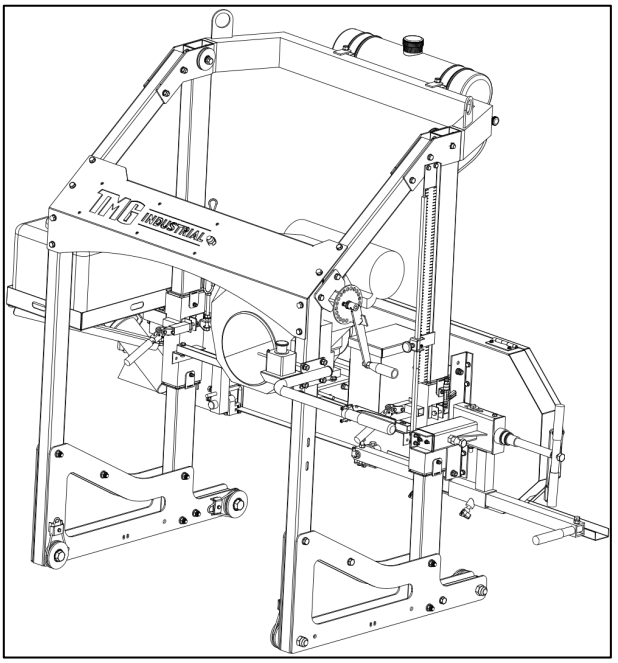




PART NO.	DESCRIPTION	QTY
B7	Hexagon head bolt M8X105	2
B8	Water tank rack	2
B11	Water tank	1
B14	Plain washer Ø8	4
B47	Hex nut M8	4

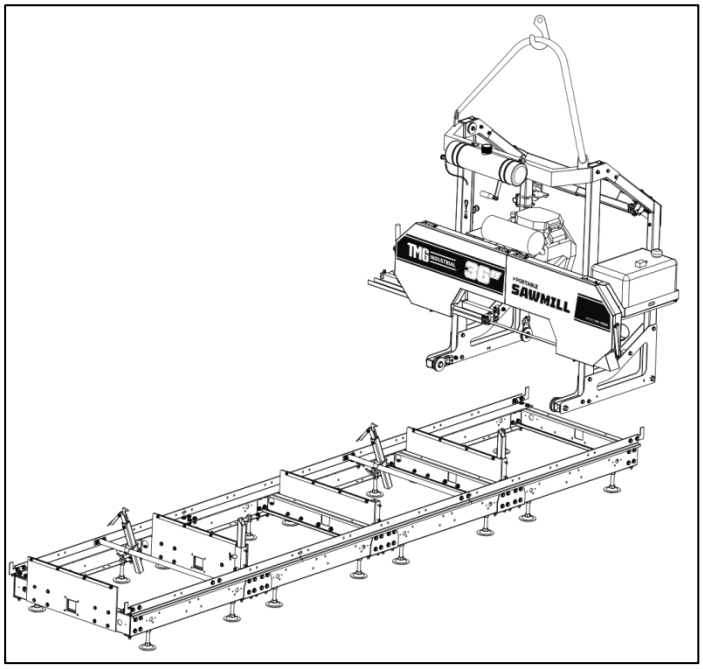
12. Install the fuel tank bracket onto the machine using the provided fasteners.

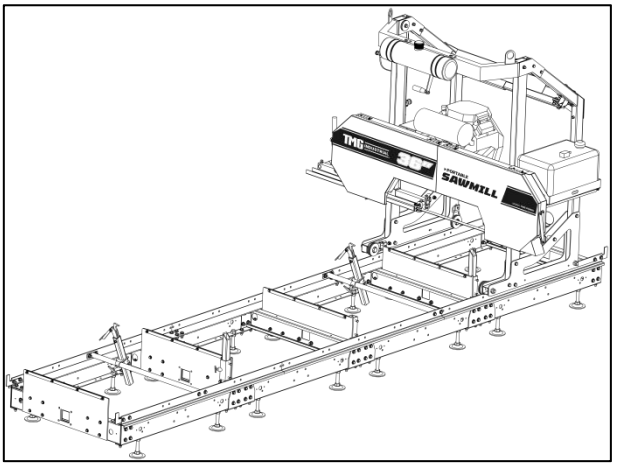




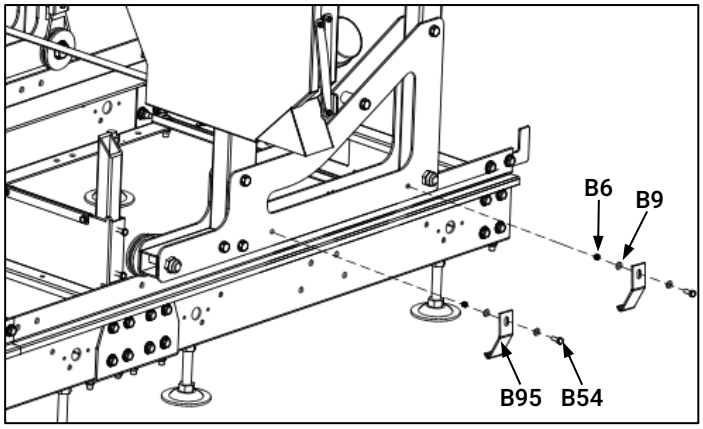
PART NO.	DESCRIPTION	QTY
A33	Non-metallic insert hex lock nut M8	1
A47	Fuel tank bracket	1
A48	Square fuel tank bracket welding	1
A49	Square fuel tank 12L	1
A52	Cross pan head screw M6X16	2
A53	Spring washer Ø6	2
A73	Hexagon head bolt M8X20	1

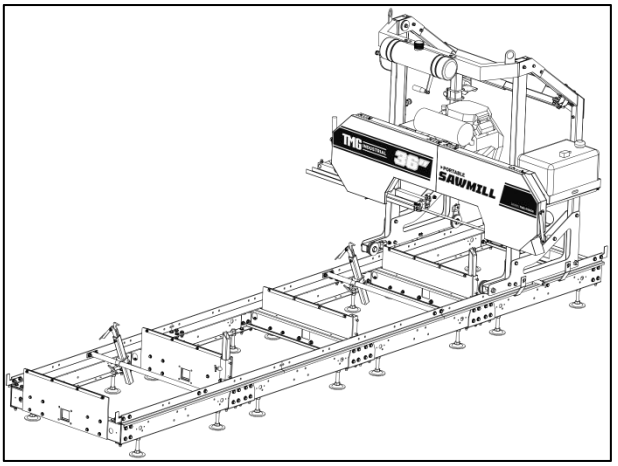
13. When the installation of the machine is completed, use lifting equipment such as forklifts and cranes to lift the machine head onto the installed track. Be cautious when taking this step.

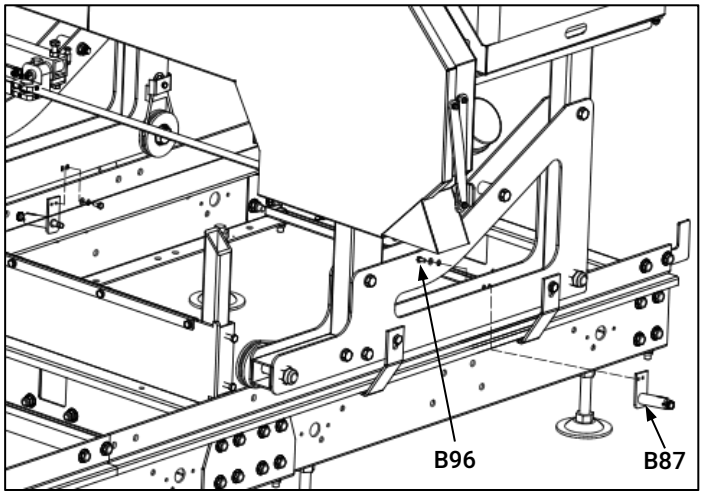




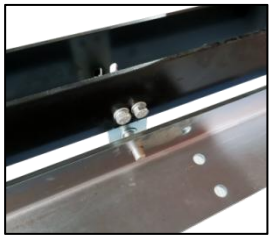
14. Install the anti roll hook using provided fasteners.



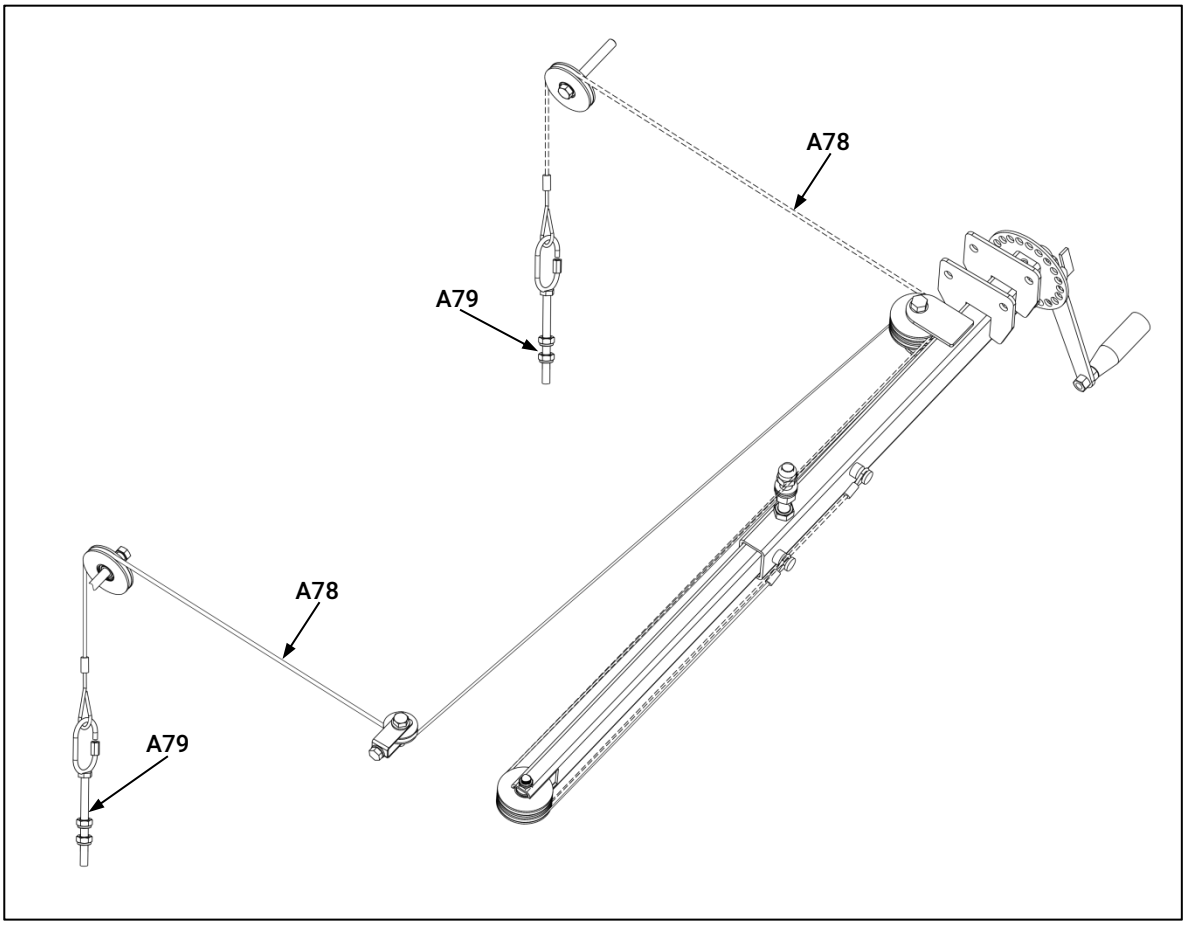




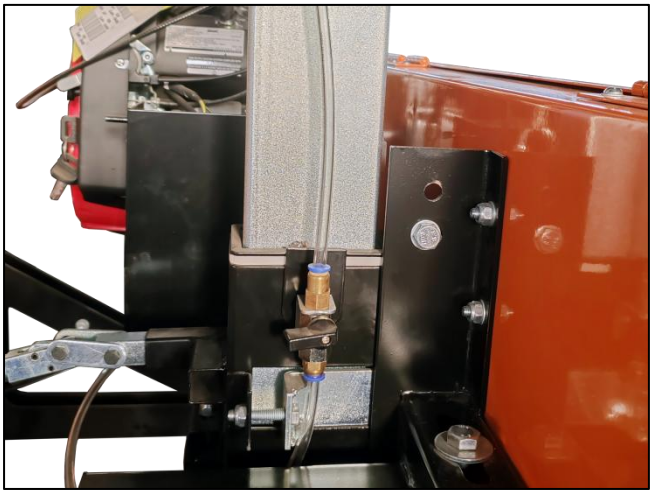
PART NO.	DESCRIPTION	QTY
B6	Hex nut M10	4
B9	Plain washer Ø10	8
B45	Plain washer Ø8	4
B46	Spring washer Ø8	4
B54	Hexagon head bolt M10 x 30	4
B87	Limit welding	2
B95	Anti roll hook	4
B96	Hexagon head bolt M8X16	4

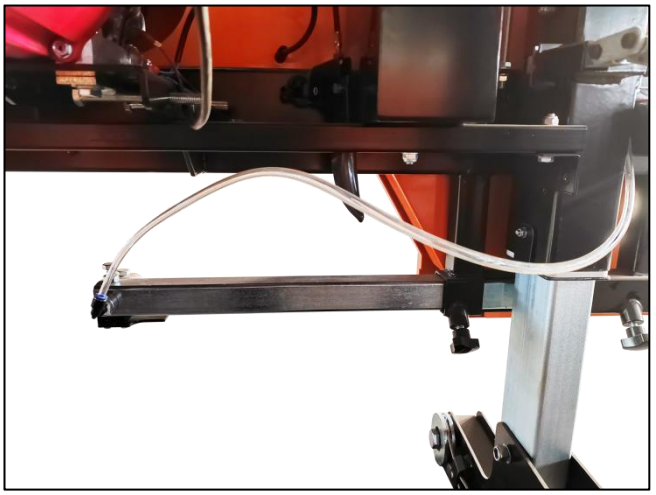


15. Route the cables on both sides as shown in the below image.



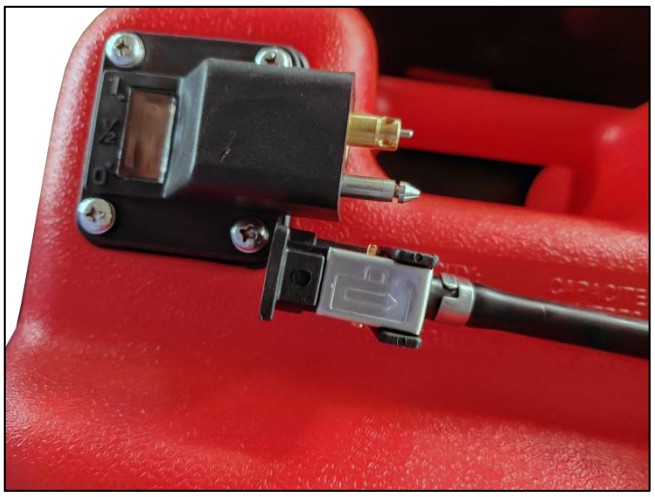
16. Connect the water pipe. After the connection is completed, check to ensure that there is no water leakage at the joints.





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

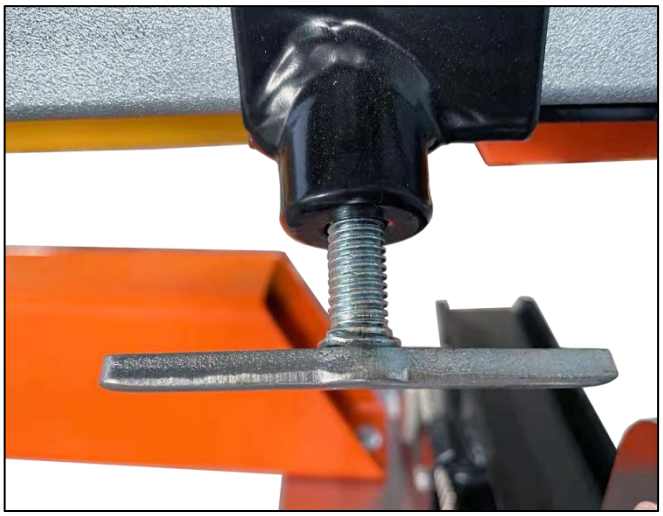
17. **Connect the oil pipe as shown in the figure, a pliers is required at this step.**

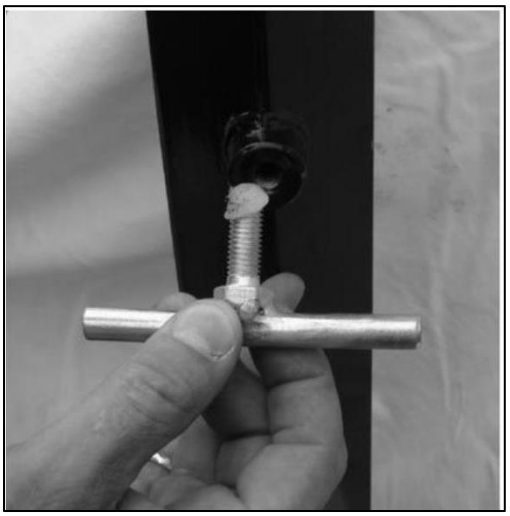


18. Add waterproof grease to the threads of the blade tension “T” handle and to the washer face that it meets before use. Proper blade tension is achieved when the blade deflects no more than a total of 1/8” - 1/4” up/down.

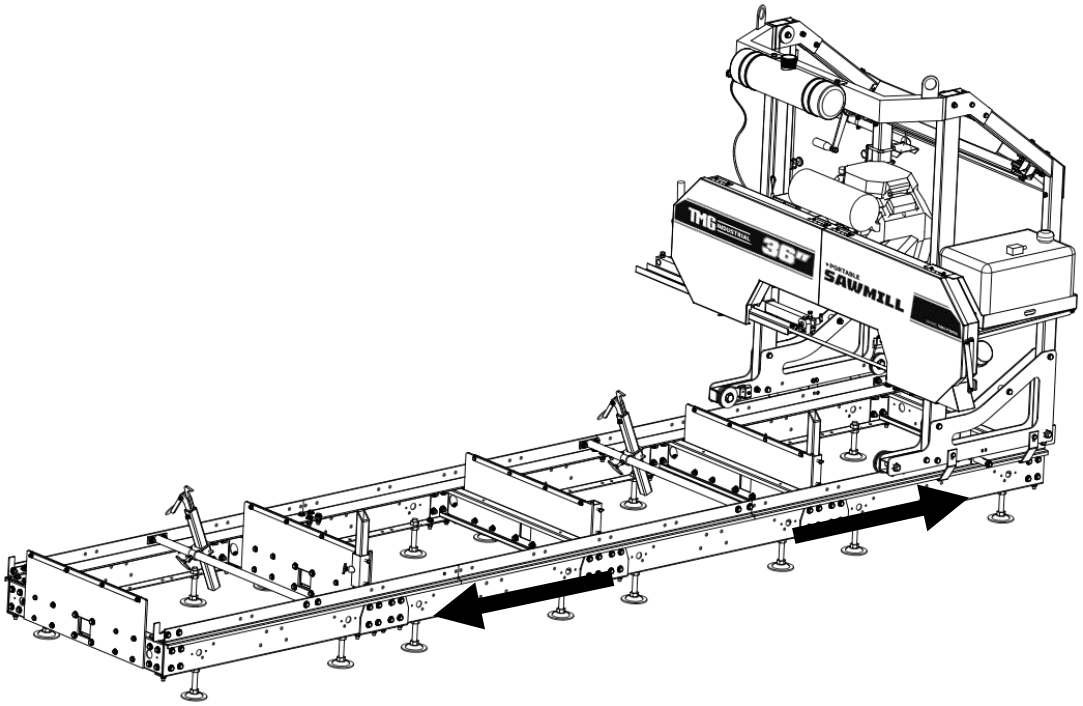
Note – It is very important to take the tension off of the blade by turning the “T” handle in the counter-clockwise direction when the sawmill is not in use. Failure to do so, will result in flat spots on the rubber belts. These flat spots will cause the mill to vibrate excessively during next use.

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

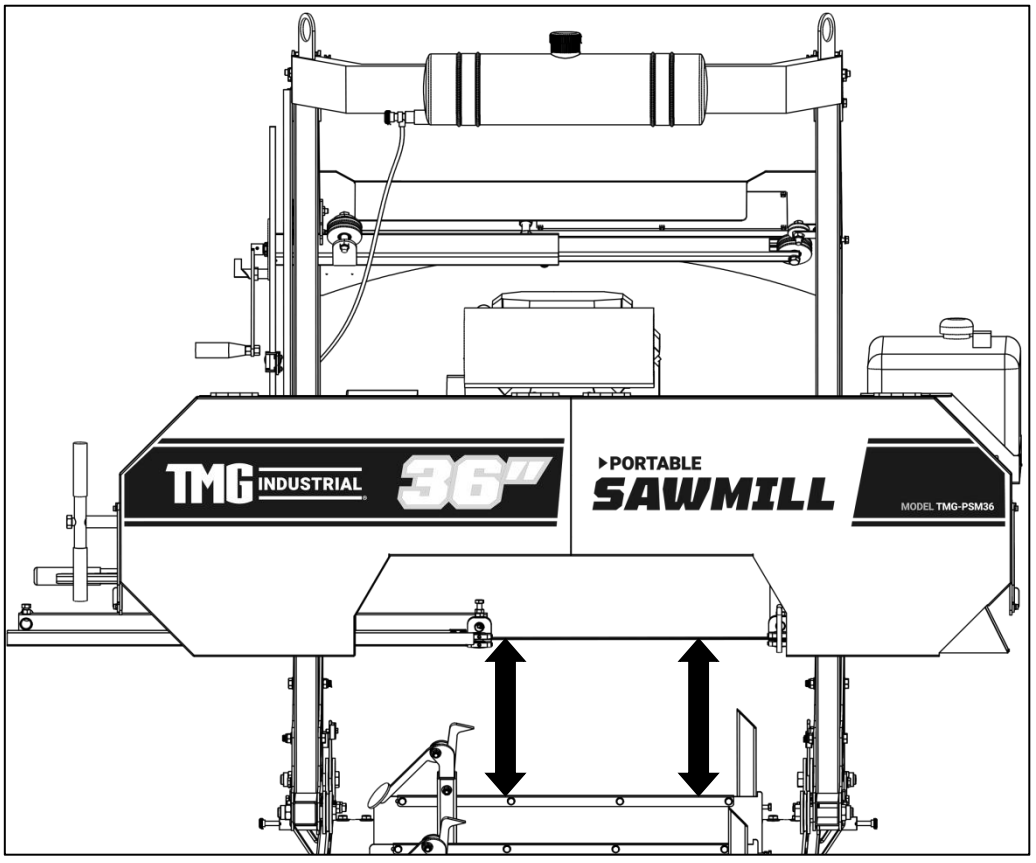




20. Push the saw head up and down the track system to ensure that the width of the track allows for the saw head to move freely. If it binds, the “L” rails will need to be set further or closer together to achieve a consistent width along the entire track system. Once the desired width is achieved, all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

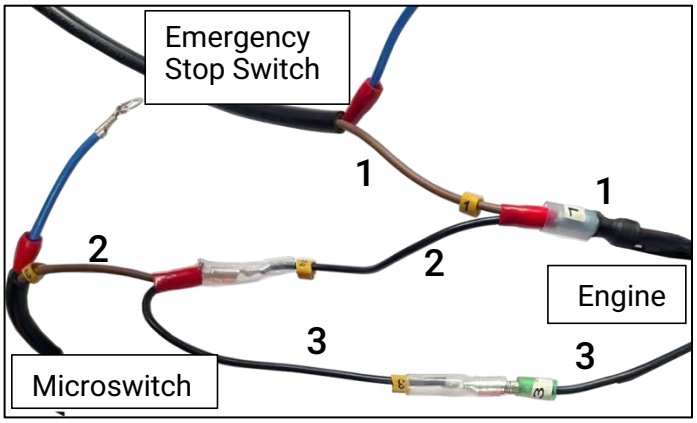


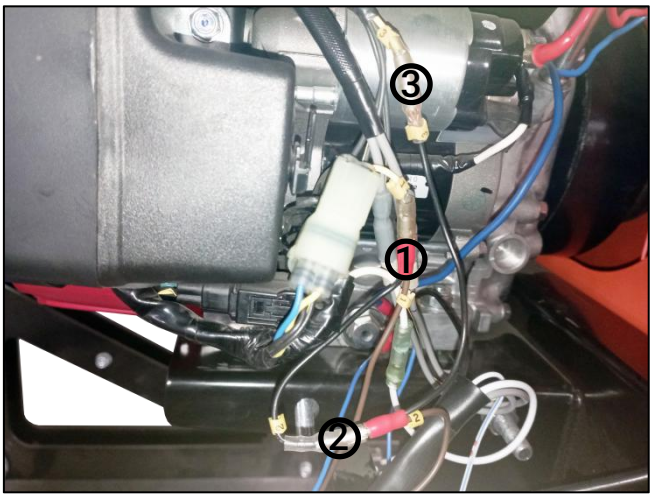
21. Using a tape measure, take a measurement from the blade to the top of the log bunk on both the left and right side. The distance should be equal on both sides. If it isn’t, you will need to adjust the cable ends at the rear handle to either raise or lower one side.

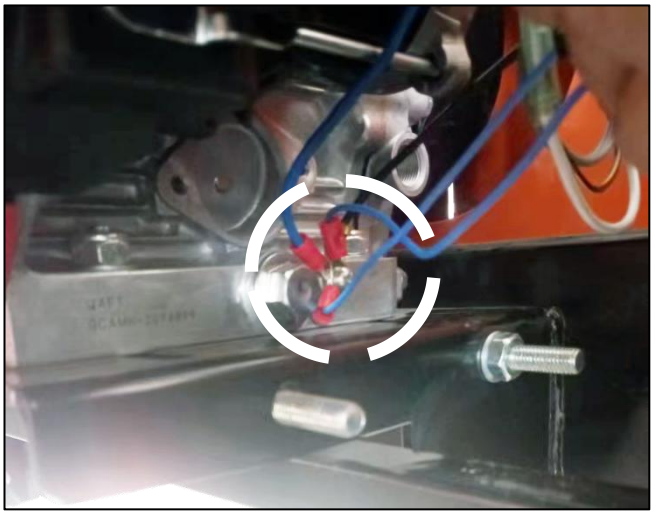


#5 – ELECTRIC WIRE CONNECT

1. Find the show 1 and 3 connection terminals on gas engine
2. Find the electric card of the **Emergency Stop Switch** and the **Microswitch**
3. Connect the 1 and 1, 2 and 2, 3 and 3
4. Connect the ground wire (Blue) on the engine

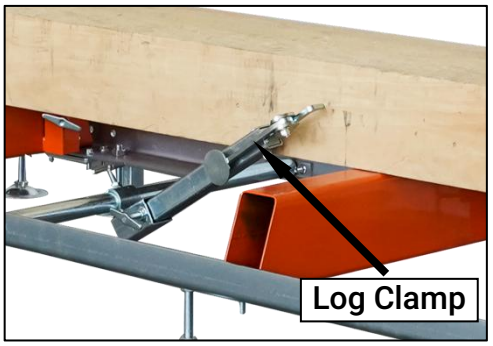


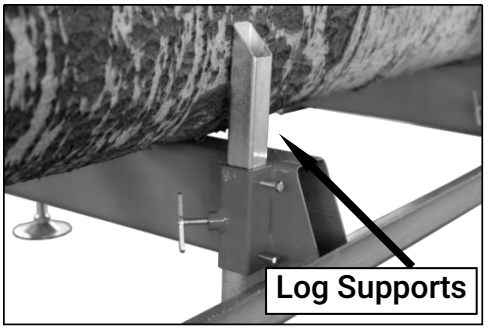




#6– ENGINE

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.





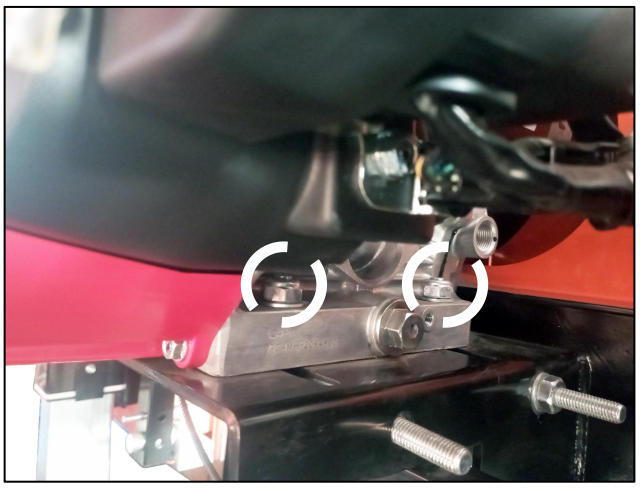
Always cut in the direction shown above. The log clamp should always be on the right side of the log and the log supports should always be on the left. Failure to cut in this direction can cause the log to come lose and possibly even cause damage or injury.

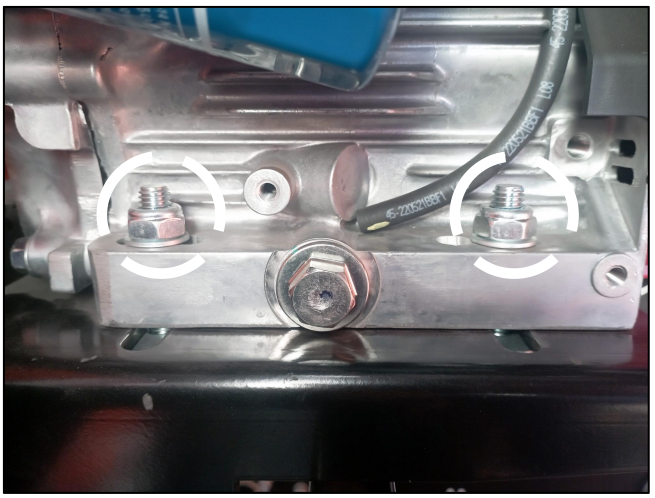
Now that your sawmill is assembled, please run through the "SAWMILL SET-UP PROCEDURES" in the following section. Failure to do so may result in poor sawing performance, damage or injury. See next page.

SAWMILL SET-UP PROCEDURES

#1 – BELT TENSION

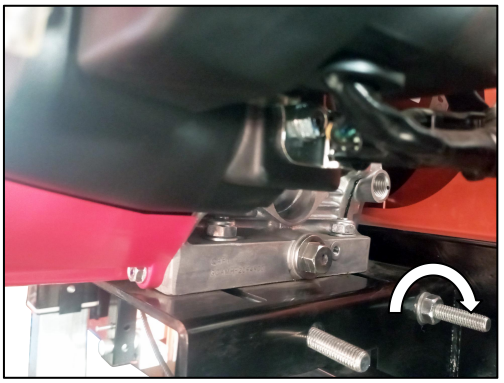
To check the belt tension, with your hand, firmly try to deflect the belt up and down. There should be no more than 1/4" of deflection in both directions (1/2" total). If the belt deflects more than this, it will need to be tightened as described below.





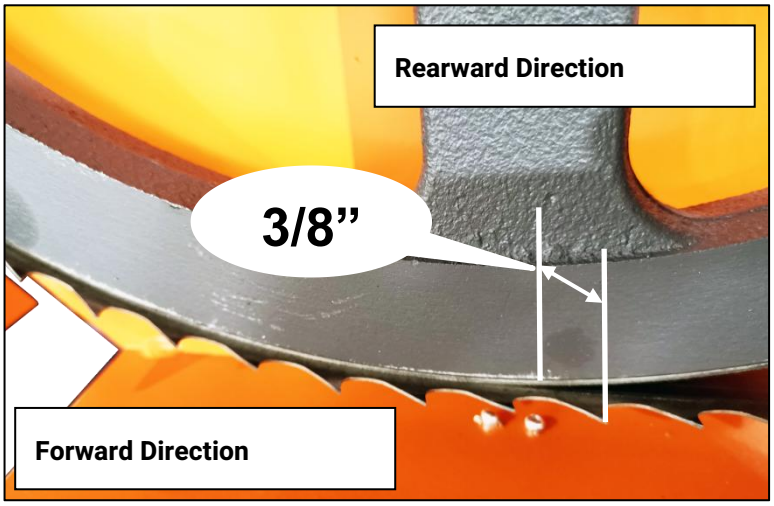
To tighten the drive belt, start by loosening the four bolts that secure the engine to the engine mount using a 16mm wrench.

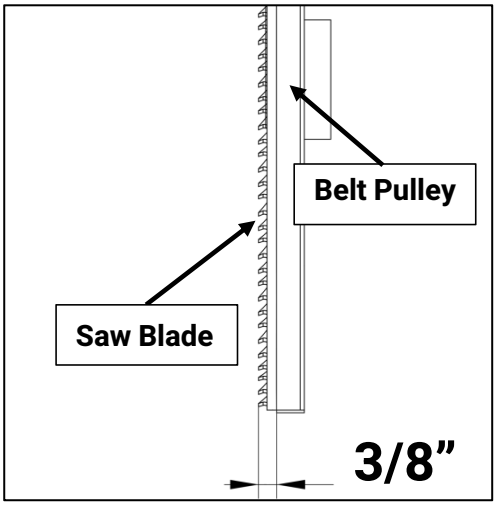
Now that the engine is free to slide on the engine mounting plate, turn the 16mm nut on the horizontal stud in the clockwise direction. This will pull the engine towards the stud and apply more tension on the belt. Do this step incrementally while checking the belt for proper deflection. It is also important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



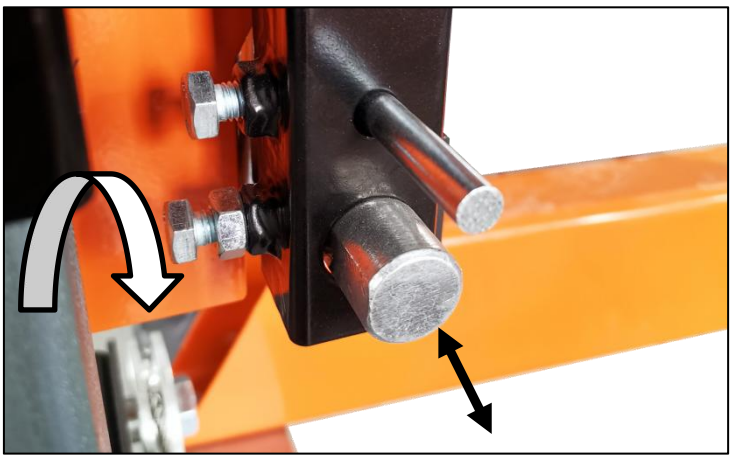
#2 – BLADE TRACKING

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.





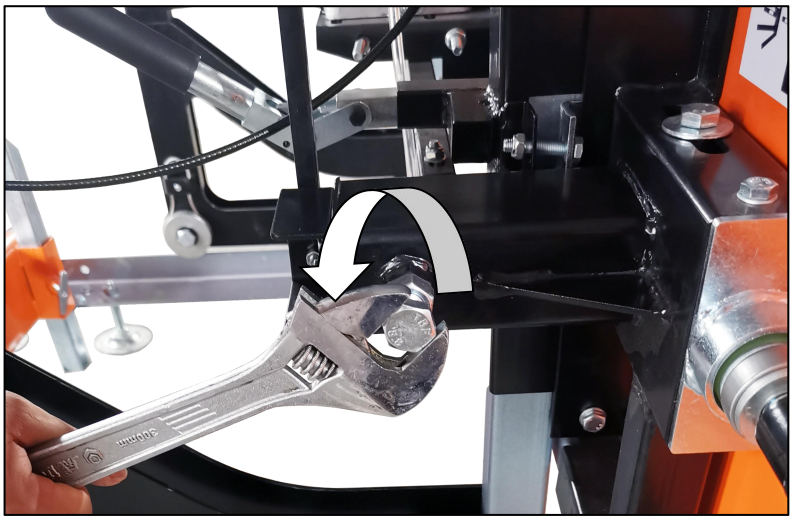
The blade should run with the same tooth to bandwheel face distance on both sides. 3/8” is ideal. Measure the distance from the tip of the blade tooth to the front face of the bandwheel on both sides. If an adjustment on either side is required, the below steps will detail this procedure.



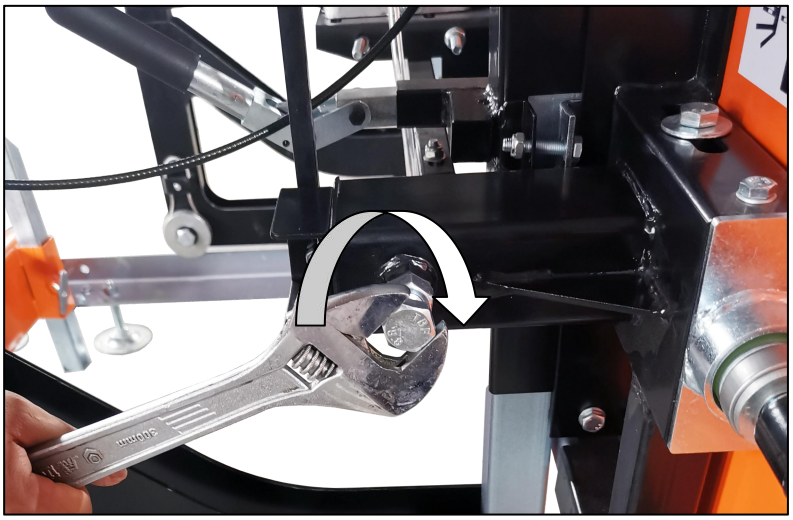
Loosen the blade guide assembly bolt with a socket. The round shaft should now be free to slide rearward and out of the way. Perform this step on both guide assemblies. This will ensure that the guide bearings do not influence tracking of the blade while adjusting.

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

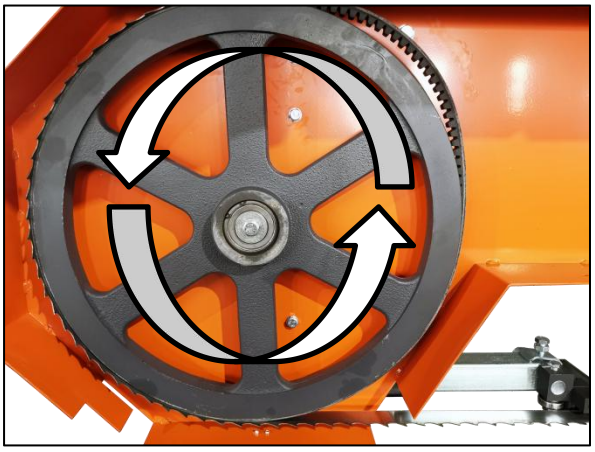
Adjusting The Right Hand Side

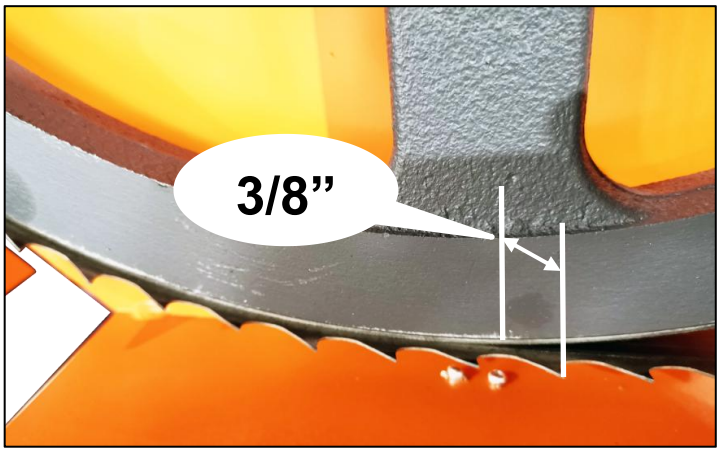


Loosen the tracking alignment locking nut with an adjustable wrench.

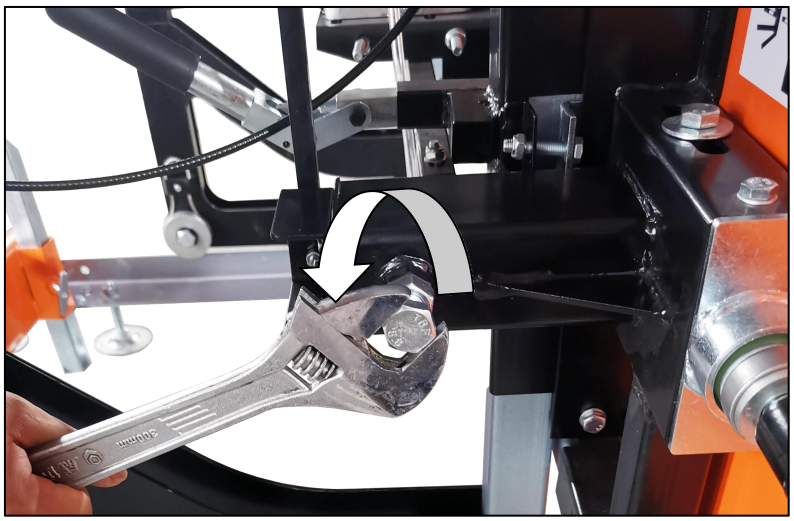


The alignment bolt can now be turned to change the angle of the bandwheel and track the blade. To move the blade more rearward on the bandwheel, this bolt will need to be turned clockwise.
Alternatively, turning the bolt in the counter-clockwise direction would force the blade to run more forward on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



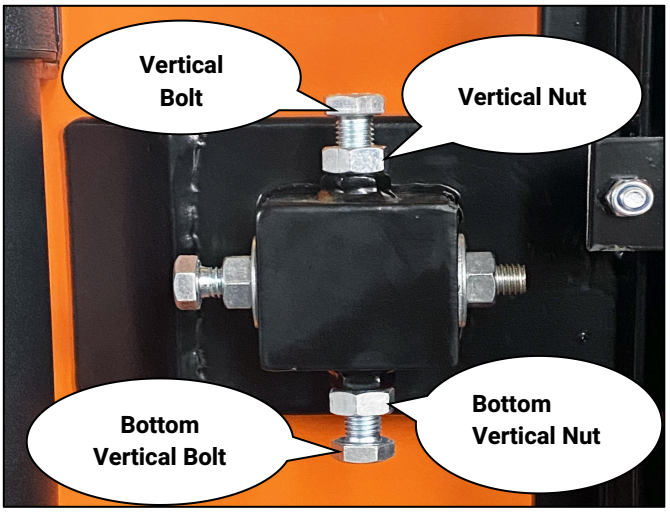


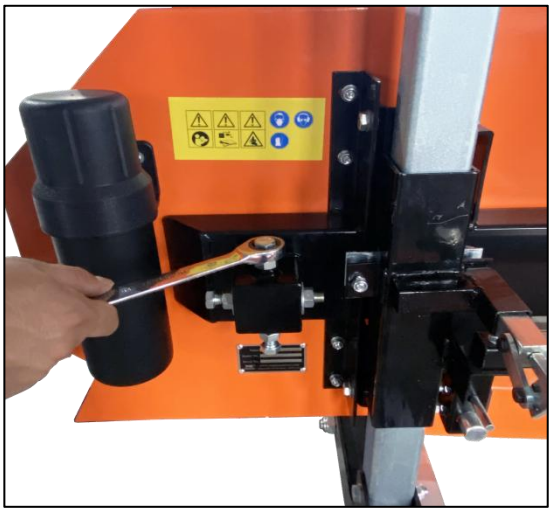
Wearing gloves, spin the bandwheel with your hand and observe how the blade has changed tracking.
Measure the distance again and repeat the above step to further compensate if required.The ideal measurement is 3/8”.



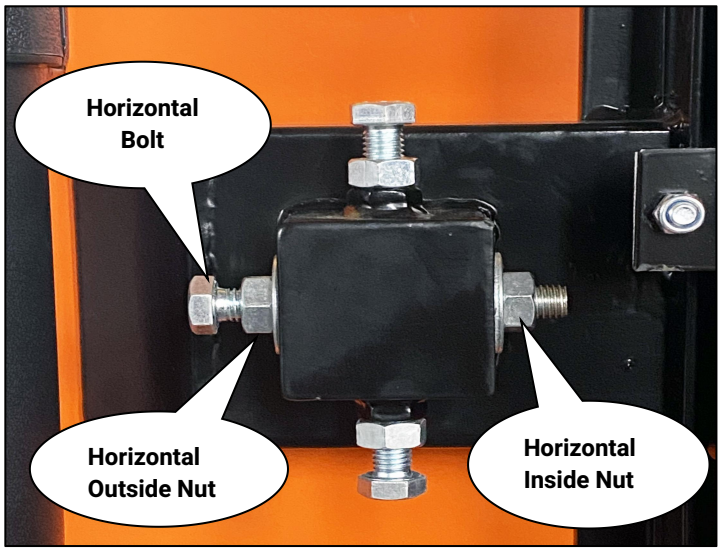
Once satisfied with the measurement, tighten the locking nut clockwise.

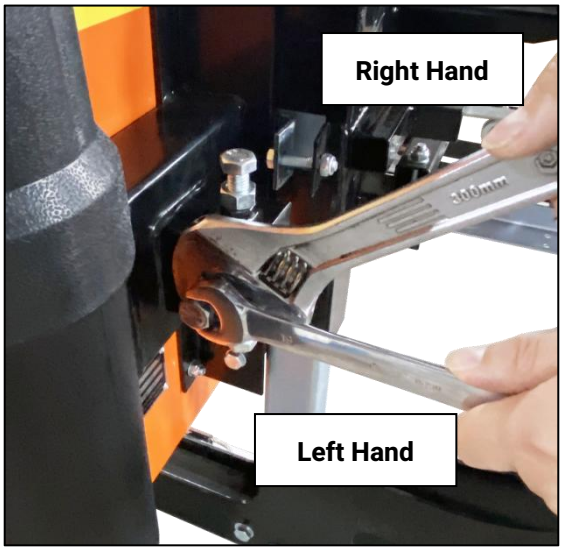
Adjusting The Left Hand Side





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.





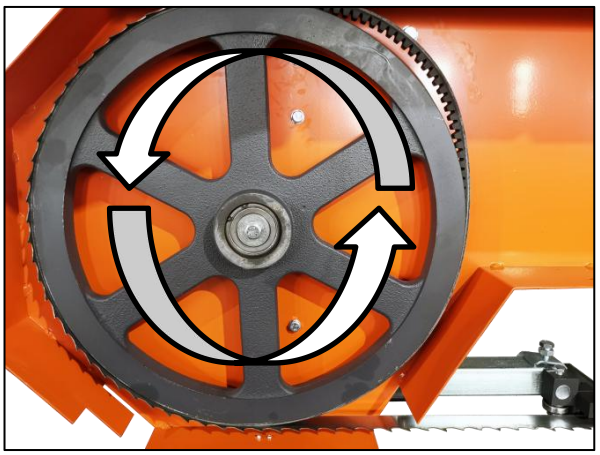
Moving The Blade Forward

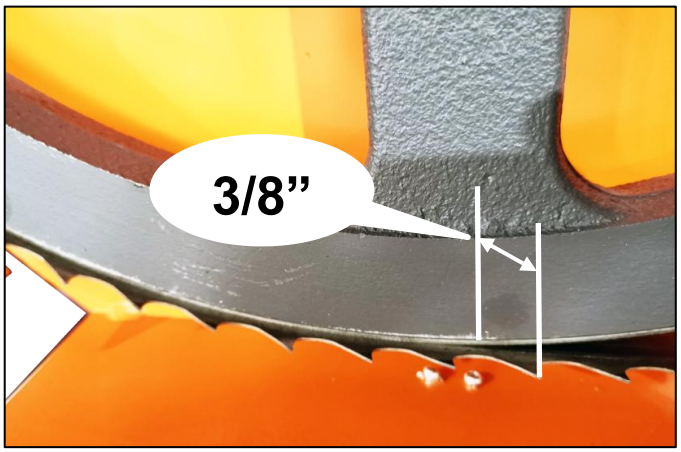
Using a 16mm wrench, hold the ***"horizontal bolt"*** stationary with a wrench and turn the ***"horizontal inside nut"*** counter-clockwise a ½ turn. Still holding the ***"horizontal bolt"*** stationary, turn the ***"horizontal outside nut"*** clockwise a ½ turn. This has now shifted the ***"horizontal 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.

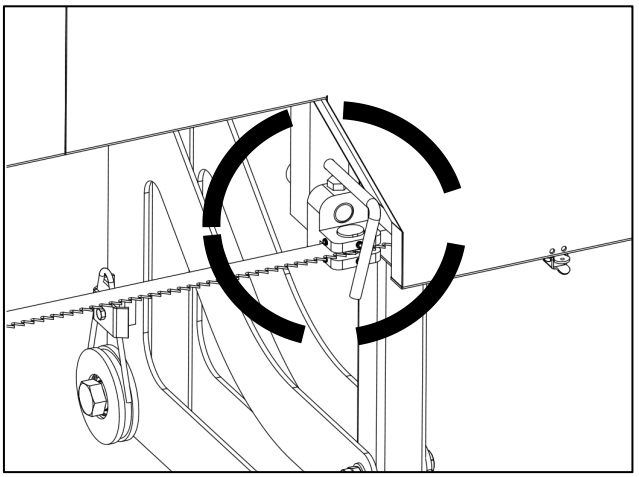
Measure the distance again and repeat the above step to further compensate if required. The ideal measurement is 3/8”.

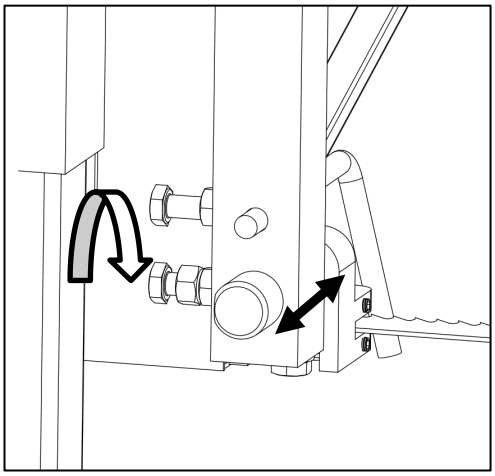
Once the blade is tracking true, bring the blade guide assemblies back up to the blade. Keep a paper width distance between the blade guide bearing and the back of the blade. More information on this set up can be found in the next section – *“BLADE GUIDE ADJUSTMENT”*

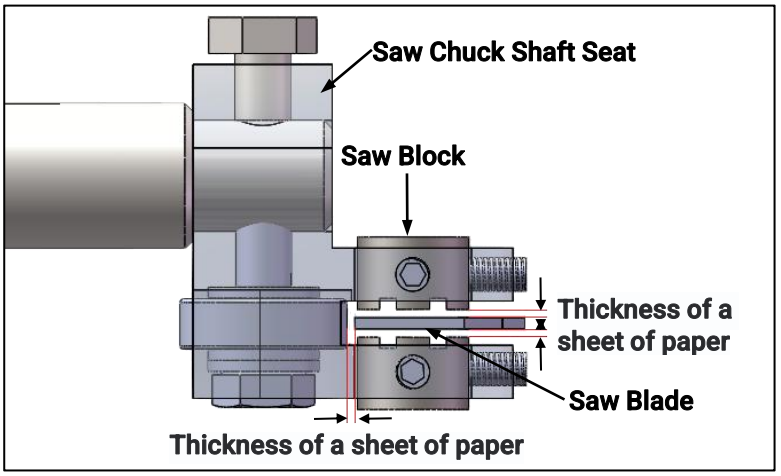
#3 – BLADE GUIDE ADJUSTMENT

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.

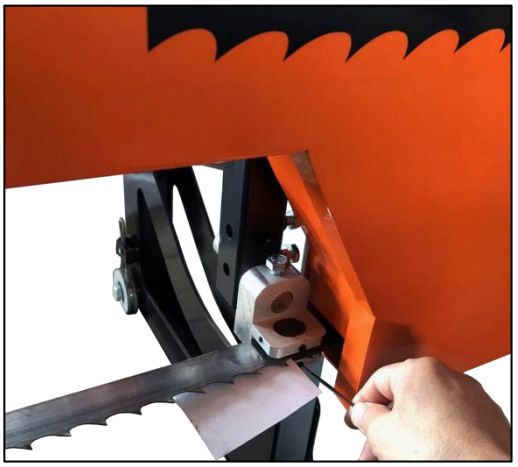
Using a 6mm allen key, loosen the blade guide blocks on both the left and right sides. They should be free to slide up and down.





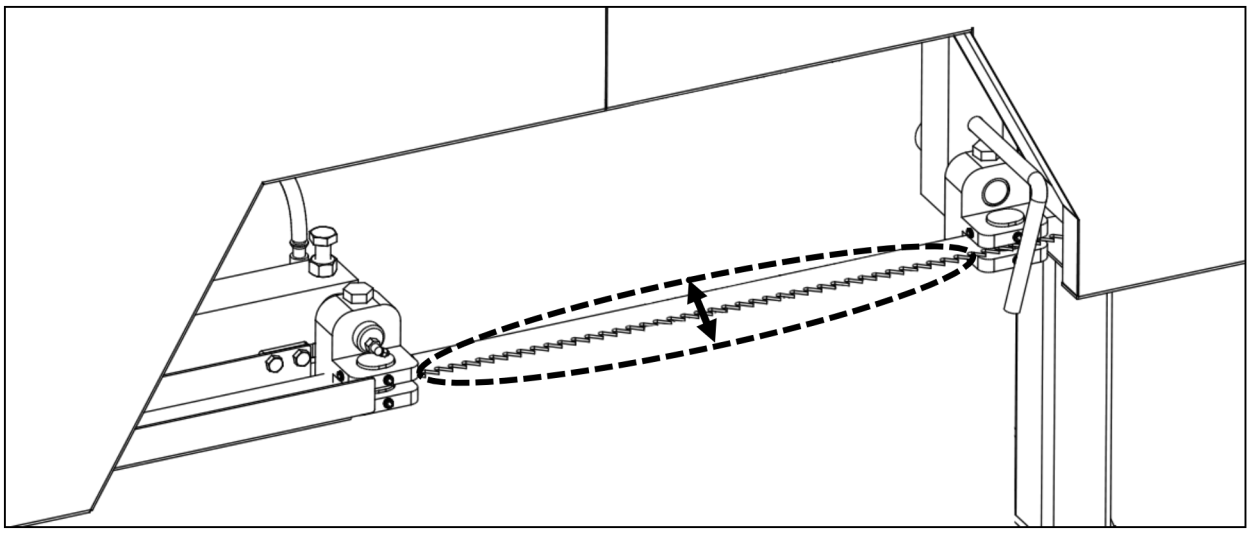


Loosen the blade guide assembly bolt with a 16mm socket. The round shaft should now be free to slide back and forth. Position it so that there is a paper width gap between the bearing and the back of blade. Tighten bolt against the flat on the shaft to secure assembly back in position.

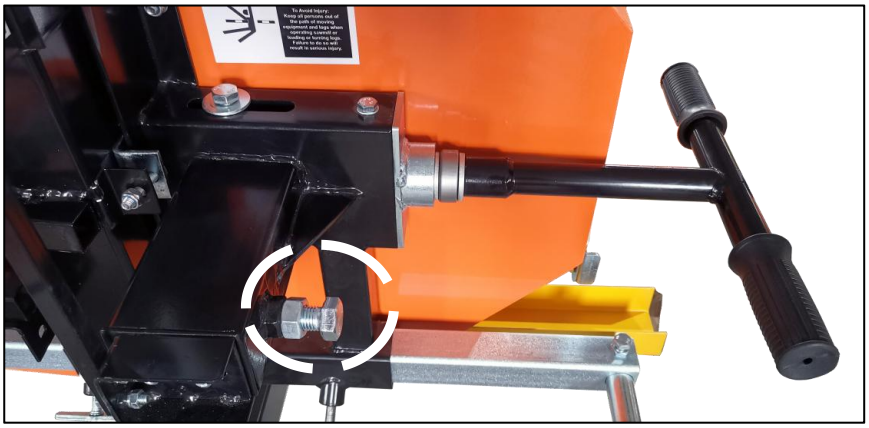


Using a piece of paper in between the blade and blade guide blocks, tighten the allen key bolts.

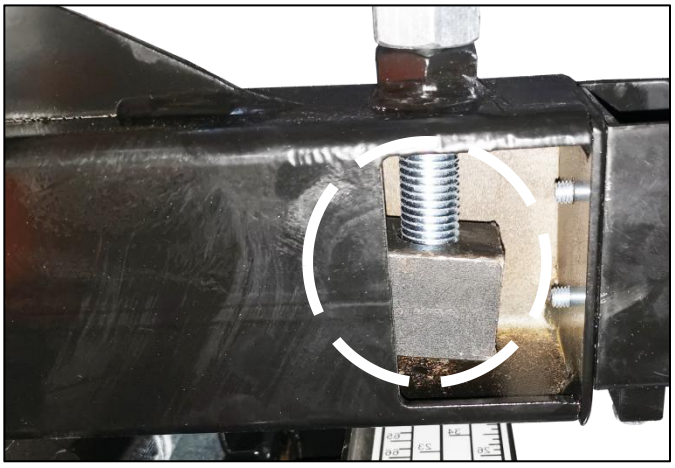
#4 – BLADE TENSION



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.

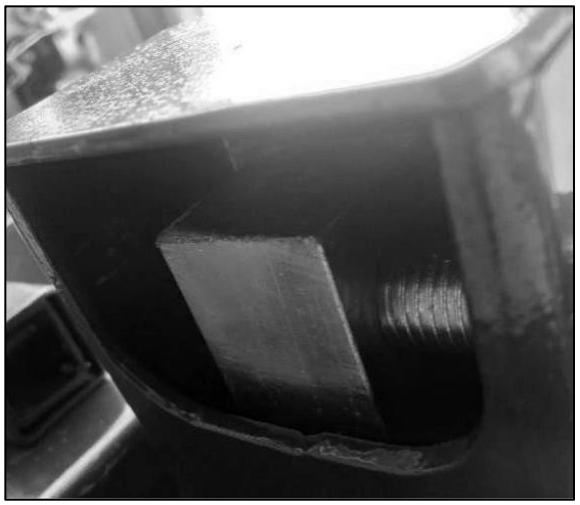


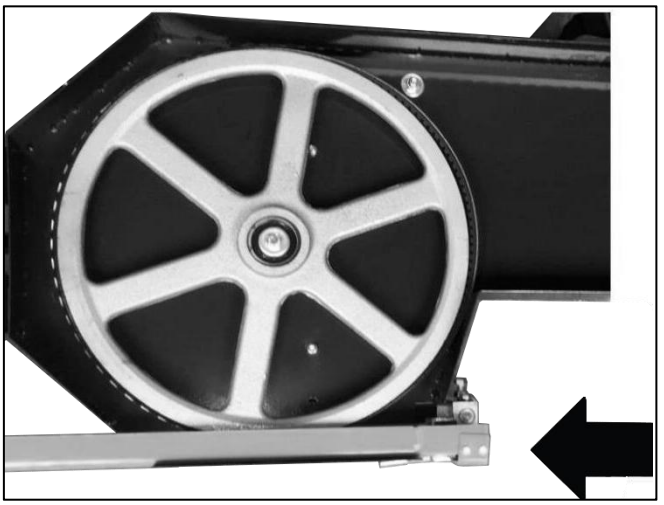
When tensioning the blade, make sure the tracking adjustment bolt sitting behind the T handle (pictured) is sitting back in its recess after you have finished and before the mill is run. Failure to do this will result in the blade being thrown and possibly broken.



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

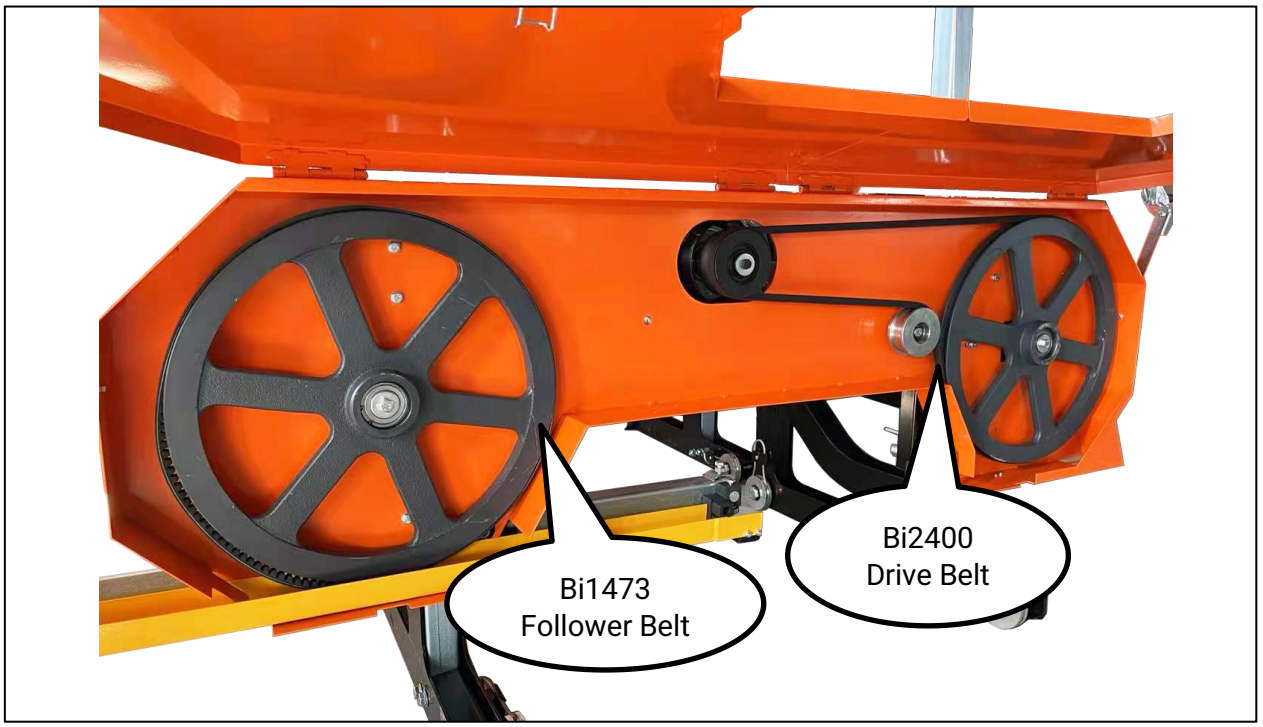
#1 – CHANGING THE BLADE

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.

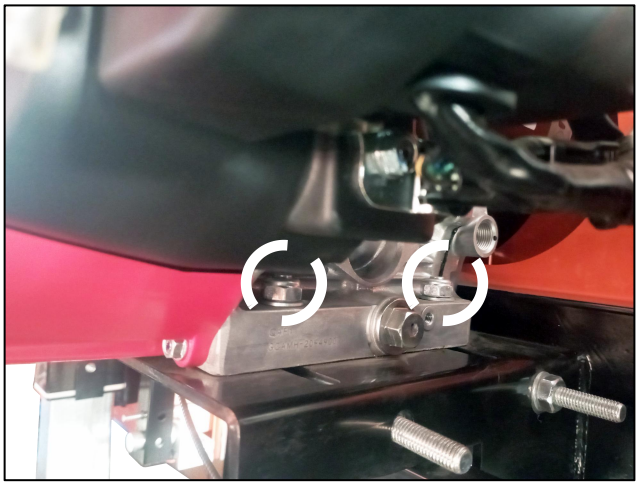
#2 – REPLACING BELTS

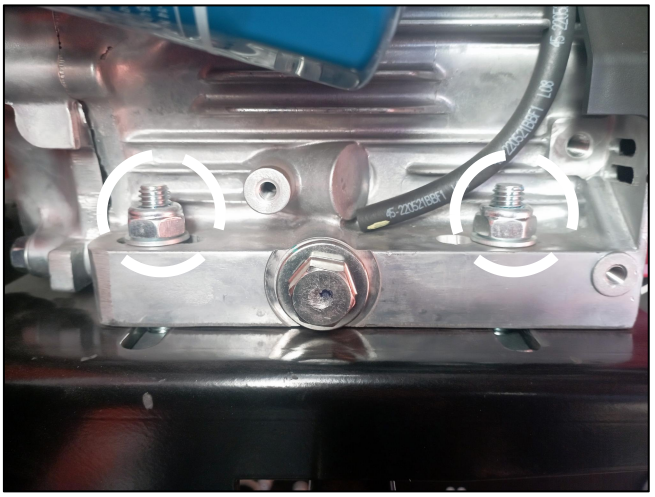
Never attempt the below with the engine running. As a safety precaution, remove the spark plug cap. Gloves and safety glasses must be worn when replacing the belts.



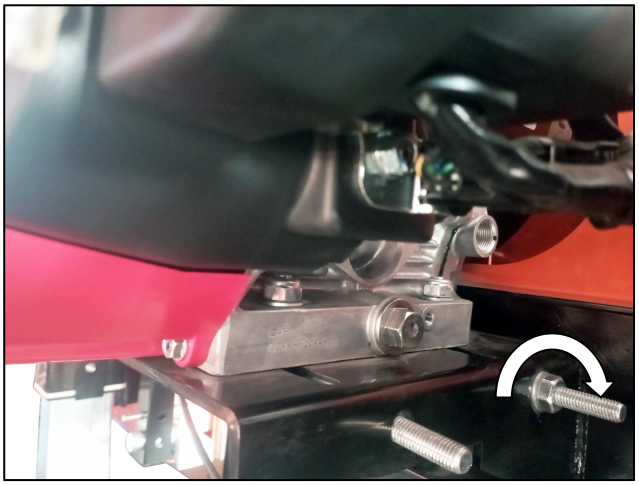
There are two rubber "V" belts on the sawmill and they should be replaced as a set. It is not advised to replace individual belts separately. It is recommended to use a Bi2400 drive belt for the drive side and a Bi1473 follower belt.

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

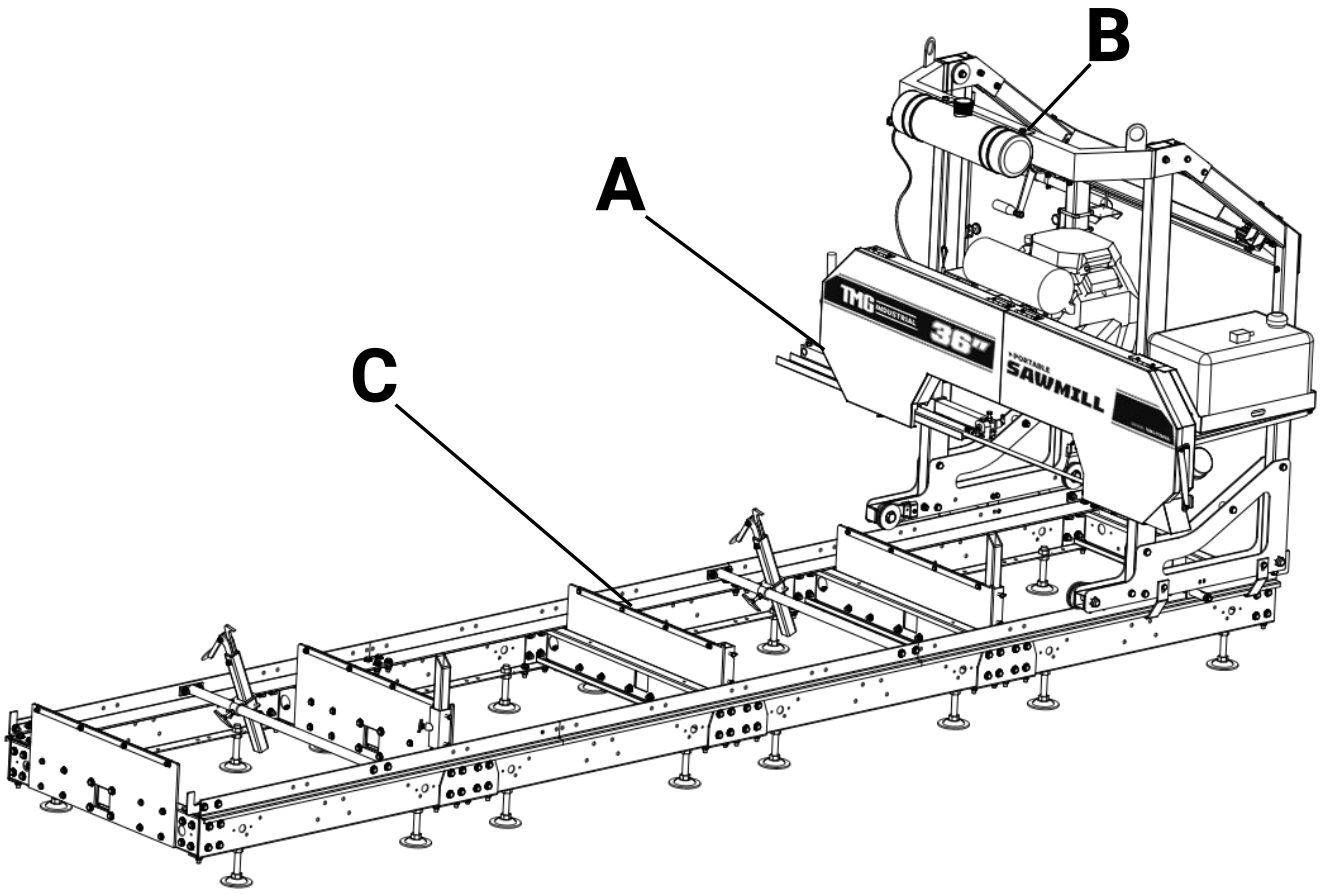
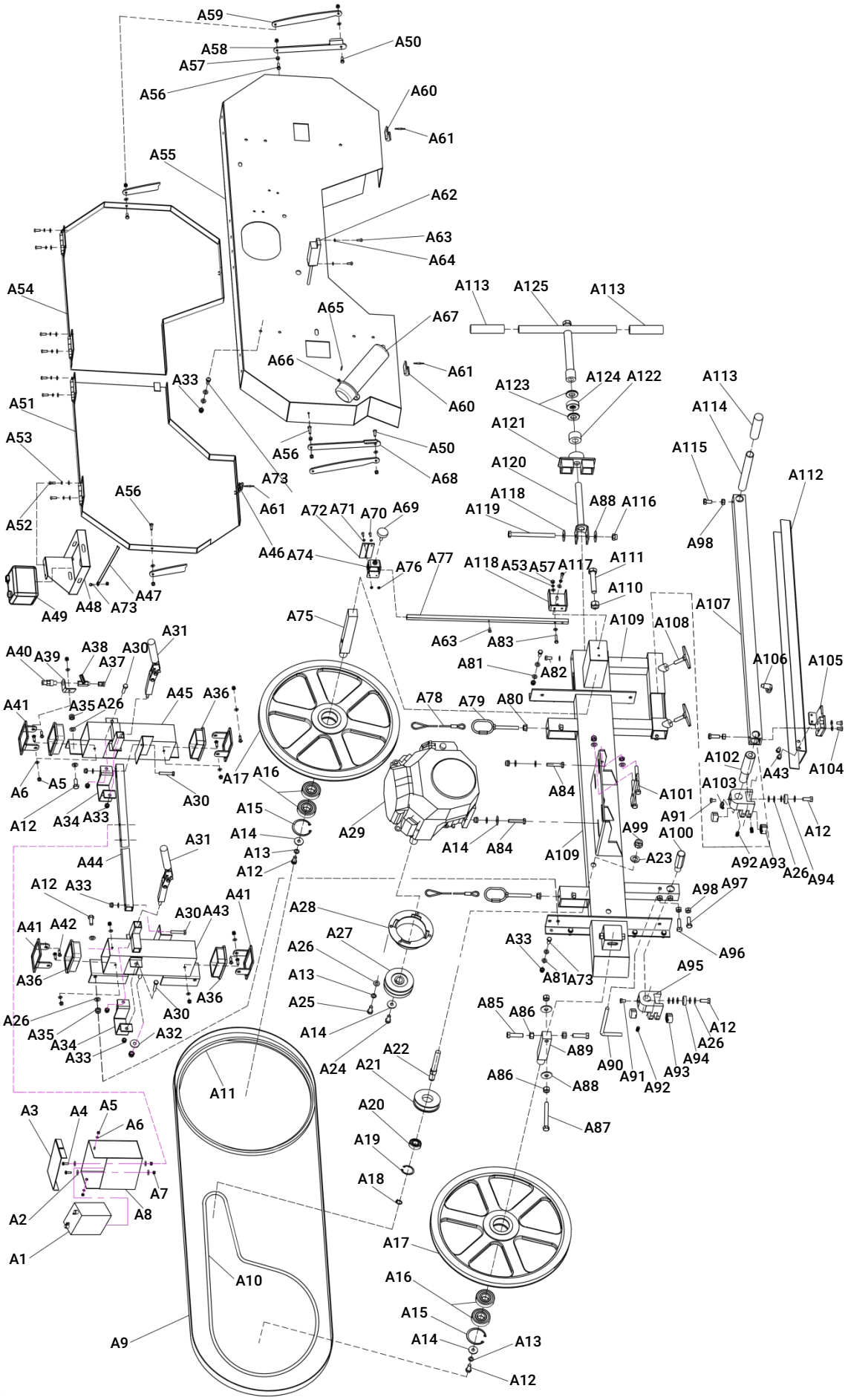


DIAGRAM (A) --BANDWHEEL HOUSEING



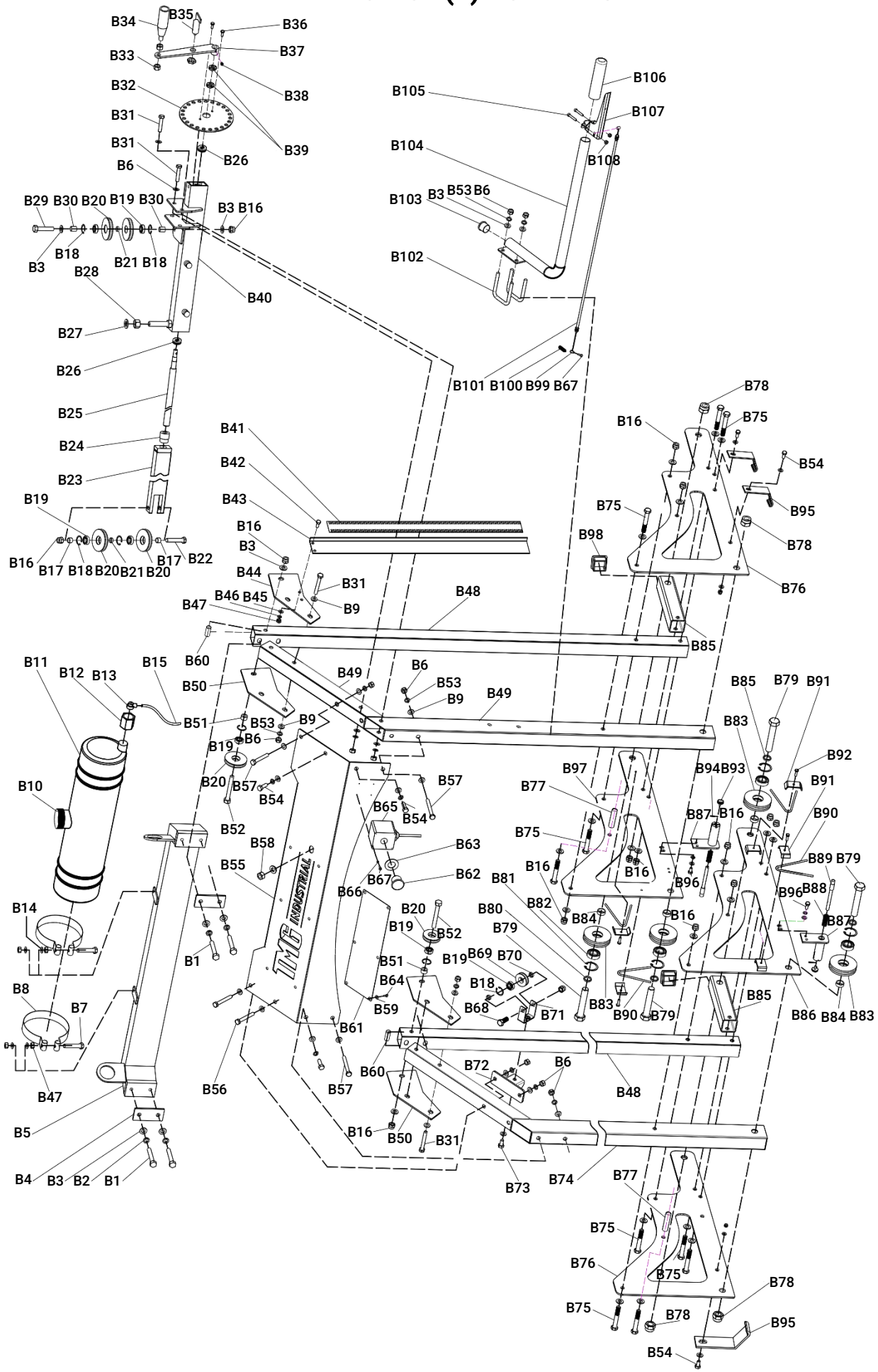
PARTS LIST (A) -- BANDWHEEL HOUSING

PART NO.	DESCRIPTION	QTY	PART NO.	DESCRIPTION	QTY
A1	Battery	1	A35	Non-metallic insert hex lock nut M10	11
A2	Plain washer Ø8	4	A36	Nylon sleeve	4
A3	Battery box cover	2	A37	Straight inner wire PCF8-02	1
A4	Hexagon head bolt M8X45	10	A38	Polished mini ball valve 1/4 threads	1
A5	Non-metallic insert hex lock nut M6	2	A39	Water switch fixing bracket	1
A6	Plain washer Ø6	2	A40	Direct PC8-02	1
A7	Non-metallic insert hex lock nut M8	1	A41	Nylon sleeve gland	4
A8	Battery box welding	1	A42	Half round head low square neck bolt M6X16	8
A9	Saw blade (not include)	1	A43	Right lift lock welding	1
A10	Bi2400 V- belt	1	A44	Pull tube	1
A11	Bi1473 V-belt	1	A45	Left lift lock welding	1
A12	Hexagon head bolt M10X25	9	A46	Buckle (upper)	2
A13	Spring washer Ø10	7	A47	Fuel tank bracket	1
A14	Large side flat pad 10 (Ø10*35*3.0)	5	A48	Square fuel tank bracket welding	1
A15	Circlips for holes 62	2	A49	Square fuel tank 12L	1
A16	Deep groove ball bearing 6305	4	A50	Hexagon head bolt M6X16	6
A17	Belt pulley	2	A51	Right cover door welding	1
A18	Shaft circlip 17	1	A52	Cross pan head screw M6X16	8
A19	Circlips for holes 40	1	A53	Spring washer Ø6	12
A20	Deep groove ball bearing 6203-2RS	1	A54	Left cover door welding	1
A21	Tensioner wheel	1	A55	Shield body welding	1
A22	Tensioner shaft	1	A56	Hexagon head bolt M6X20	2
A23	Plain washer Ø16	1	A57	Hex nut M6	4
A24	US 3/8X24X25	1	A58	Side pull plate 3	1
A25	US 3/8X16X25 (hexagon socket)	4	A59	Side pull plate 1	2
A26	Flat washer Ø10	22	A60	Buckle (lower)	2
A27	Clutch	1	A61	Blind rivet 4X10	8
A28	Clutch guard welding	1	A62	Limit switch YBLX	1
A29	Engine	1	A63	Cross recessed pan head screw M5X12	3
A30	Hexagon head bolt M8X40	4	A64	Spring washer Ø5	2
A31	Quick lock	2	A65	Blind rivets 4X16	3
A32	Large washer Ø10	5	A66	Large flat pad 4	1
A33	Non-metallic insert hex lock nut M8	16	A67	Instruction manual	1
A34	Locking plate weldment	2	A68	Side pull plate 2	1

PARTS LIST (A) -- BANDWHEEL HOUSING (CONT)

PART NO.	DESCRIPTION	QTY	PART NO.	DESCRIPTION	QTY
A69	M8X40 flower handle	1	A98	Hex Nut M10	5
A70	Cross recessed pan head screw M4X12	2	A99	Non-metallic insert hex lock nut M16	1
A71	Plain washer Ø4	2	A100	Right saw chuck shaft	2
A72	Scale plate	1	A101	Tension plate	1
A73	Hexagon head bolt M8X20	11	A102	Left saw chuck shaft	1
A74	Scale holder	1	A103	Degree grease fitting M6 x190	1
A75	Passive saw wheel shaft	1	A104	Hexagon head bolt M8X20	2
A76	Hex nut M4	2	A105	Saw guard plate 1 welding	1
A77	Height indicator rod	1	A106	1/4 elbow external connection	1
A78	Lifting wire	2	A107	Guide square tube	1
A79	Lifting rings	2	A108	Triangle handle M10X40X30	2
A80	Hexagon flange face nuts M10	4	A109	Crossbeam welding	1
A81	Plain washer Ø8	17	A110	Hex Nut M16	1
A82	Hexagon head bolt M8X16	1	A111	Hexagon head bolt M16X80	1
A83	Hexagon head bolt M6X25	2	A112	Saw guard plate 2	1
A84	Hexagon head bolt M10X50	4	A113	25 tube rubber handles	3
A85	Hexagon head bolt M12X45	2	A114	Push handle	1
A86	Hex Nut M12	4	A115	Hexagon bolt M10 x 20	1
A87	Hexagon head bolts full thread M12X100	1	A116	Non-metallic insert hex lock nut M12	1
A88	Large washer 12 (Ø12*35*3.0)	4	A117	Hexagon socket head cap screws M6X14	2
A89	Active saw wheel shaft	1	A118	Scale seat	1
A90	Saw hook	1	A119	Hexagon bolt M12X150 half wire	1
A91	Hexagon head bolt M10X12	2	A120	Tension rod welding	1
A92	Hexagon socket head set screw M6X12	12	A121	Tension seat welding	1
A93	Saw block for aluminum seat	4	A122	Cushion	1
A94	Deep groove ball bearing 6200-2RS	2	A123	Tension gasket (Ø21*38*4.5)	2
A95	Aluminum saw chuck shaft seat	2	A124	Thrust ball bearing for automobile steering knuckle 51204	1
A96	Hexagon bolt M10 x 35	1	A125	Tension handle welding	1
A97	Hexagon head bolt M10X30	2	A126	Ruler rod assembly	1

PARTS LIST (B) --CARRIAGE



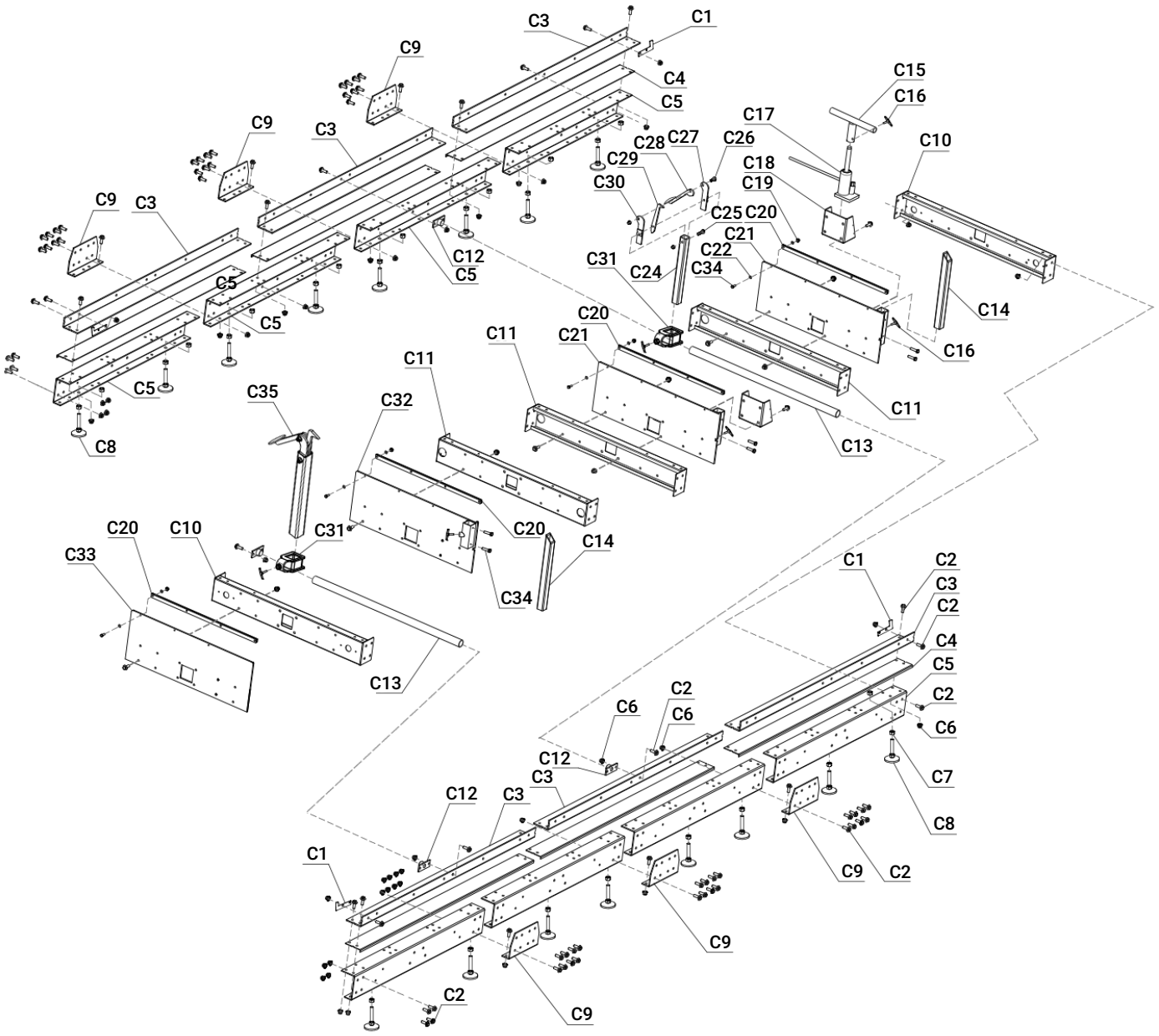
PARTS LIST (B) --CARRIAGE

PART NO.	DESCRIPTION	QTY	PART NO.	DESCRIPTION	QTY
B1	Hexagon head bolt M12X155 half wire	4	B34	13 hole handle	1
B2	Spring washer Ø12	4	B35	Knob plunger assembly	1
B3	Plain washer Ø12	24	B36	Hexagon head bolt M6X16	2
B4	Clamping plate	2	B37	Rocker welding	1
B5	Upper beam welding	1	B38	Cylindrical end set screw M6X8	2
B6	Hex nut M10	20	B39	Round nut M14X1.5	2
B7	Hexagon head bolt M8X105	2	B40	Expansion tube 2 welding	1
B8	Water tank rack	2	B41	Height ruler	1
B9	Flat washer Ø10	35	B42	Hexagon head bolt M8X20	6
B10	Water tank cover	1	B43	Ruler base	1
B11	Water tank	1	B44	Connecting plate 3	1
B12	Water tank connector	1	B45	Plain washer Ø8	10
B13	Quick connect CSL8-04	1	B46	Spring washer Ø8	6
B14	Plain washer Ø8	24	B47	Hex nut M8	2
B15	PU high pressure air pipe 8*5 transparent-1.8 m	1	B48	Lifting square tube	2
B16	Non-metallic insert hex lock nut M12	13	B49	Left bottom wheel frame welding	1
B17	Spacer 1	2	B50	Connecting plate 1	3
B18	Circlips for holes 28	7	B51	Lifting wheel cover	2
B19	Deep groove ball bearing 6001RS	7	B52	Hexagon head bolt M12x100	2
B20	Lifting wheel	6	B53	Spring washer Ø10	18
B21	Spacer 2	2	B54	Hexagon head bolt M10 x 30	7
B22	Hexagon head bolt M12X65 half wire	1	B55	Upper dome cover	1
B23	Telescopic tube 1 welding	1	B56	Hexagon head bolt M10X95	2
B24	Copper nut	1	B57	Hexagon head bolt M10X90	3
B25	Lifting screw rod	1	B58	Self-locking nut M16	1
B26	Thrust ball bearing 51102	2	B59	Plain washer Ø5	6
B27	Plain washer Ø16	2	B60	Square tube inner support	2
B28	Hex nut M16	2	B61	Trademark baffle	1
B29	Hexagon head bolt M12X85 half wire	1	B62	Mushroom head emergency stop button	1
B30	Reversing wheel set	2	B63	Emergency stop sign	1
B31	Hexagon head bolt M10X75 half wire	6	B64	Cross recessed pan head screw M5X8	1
B32	Dial	1	B65	Button box CA-BX1 one hole	1
B33	Hex nut M12	2	B66	Plain washer Ø4	4

PARTS LIST (B) --CARRIAGE (CONT)

PART NO.	DESCRIPTION	QTY	PART NO.	DESCRIPTION	QTY
B67	Cross recessed pan head screw M4x12	4	B90	Wire rope brush	4
B68	Hexagon head bolt M12 x 30	1	B91	Splint 2	4
B69	Pulley 2	1	B92	Hexagon head bolt M6X20	4
B70	Spacer sleeve	2	B93	Small round handle M5	2
B71	Pulley frame welding	1	B94	Split elastic pin 2.5X16	2
B72	Pulley frame seat	2	B95	Anti roll hook	4
B73	Hexagon head bolt M10 x 20	1	B96	Hexagon head bolt M8X16	4
B74	Right bottom wheel frame welding	1	B97	Left reinforcement plate welding	1
B75	Hexagon head bolt M12X80 half wire	10	B98	Square tube plugs 50x50	2
B76	Outer reinforcement plate	2	B99	Wire clip	1
B77	Bottom wheel frame cushion sleeve	2	B100	Tension spring (engine)	1
B78	Non-metallic insert hex lock nut M20	4	B101	Throttle Cable	1
B79	Hexagon head bolt M20X110 half wire	4	B102	U-bolt	2
B80	Bottom wheel spacer 1	4	B103	33 round pipe plug	1
B81	Circlip for hole 42	4	B104	Push handle welding	1
B82	Deep groove ball bearing 6004	4	B105	Hexagon socket head cap screws M6X35	2
B83	Bottom wheel	4	B106	Grip cover Ø32	1
B84	Bottom wheel spacer 2	4	B107	Throttle handle	1
B85	Bottom wheel frame cushion tube	2	B108	Hex nut M6	2
B86	Right reinforcement plate welding	1	B109	Left wheel assembly	1
B87	Limit welding	2	B110	Right wheel assembly	1
B88	Small compression spring	2	B111	Lifting system	1
B89	Limit shaft	2	B112	Throttle handle assembly	1

DIAGRAM (C) --GUIDE RAIL



PARTS LIST (C) -- GUIDE RAIL

PART NO.	DESCRIPTION	QTY	PART NO.	DESCRIPTION	QTY
C1	Limit plate	4	C19	Hexagon self-locking nut M8	16
C2	Hexagon flange bolts M10*30	172	C20	Wear plate	4
C3	Guide rail 1.6m	6	C21	Crossbeam plate welding	2
C4	Anti roll plate 1.6m	6	C22	Plain washer Ø8	32
C5	Guide rail beam 1.2m	8	C23	Hexagon bolts M8*25	16
C6	Hexagon lock nut M10	172	C24	Expansion pipe	4
C7	Hexagon nut M20	32	C25	Half round head square neck bolt M10x55	2
C8	Leveling feet M20	16	C26	Half round head square neck bolt M10x35	2
C9	Rail connecting plate	6	C27	Telescopic left plate welding	2
C10	Front and rear crossbeam	2	C28	Eccentric compression welding	2
C11	Middle crossbeam	3	C29	Hook	2
C12	Sliding pipe seat welding	4	C30	Telescopic right plate welding	2
C13	Sliding tube	2	C31	Sliding seat welding	2
C14	Vertical support	2	C32	Crossbeam plate welding 1	1
C15	Jack adjustment shaft welding	1	C33	Front crossbeam plate	1
C16	T-screw M10*40	6	C34	Hexagon bolt M8x30	6
C17	Hydraulic jack 1Ton	1	C35	Quick log clamp assembly	2
C18	Hydraulic jack seat	2			