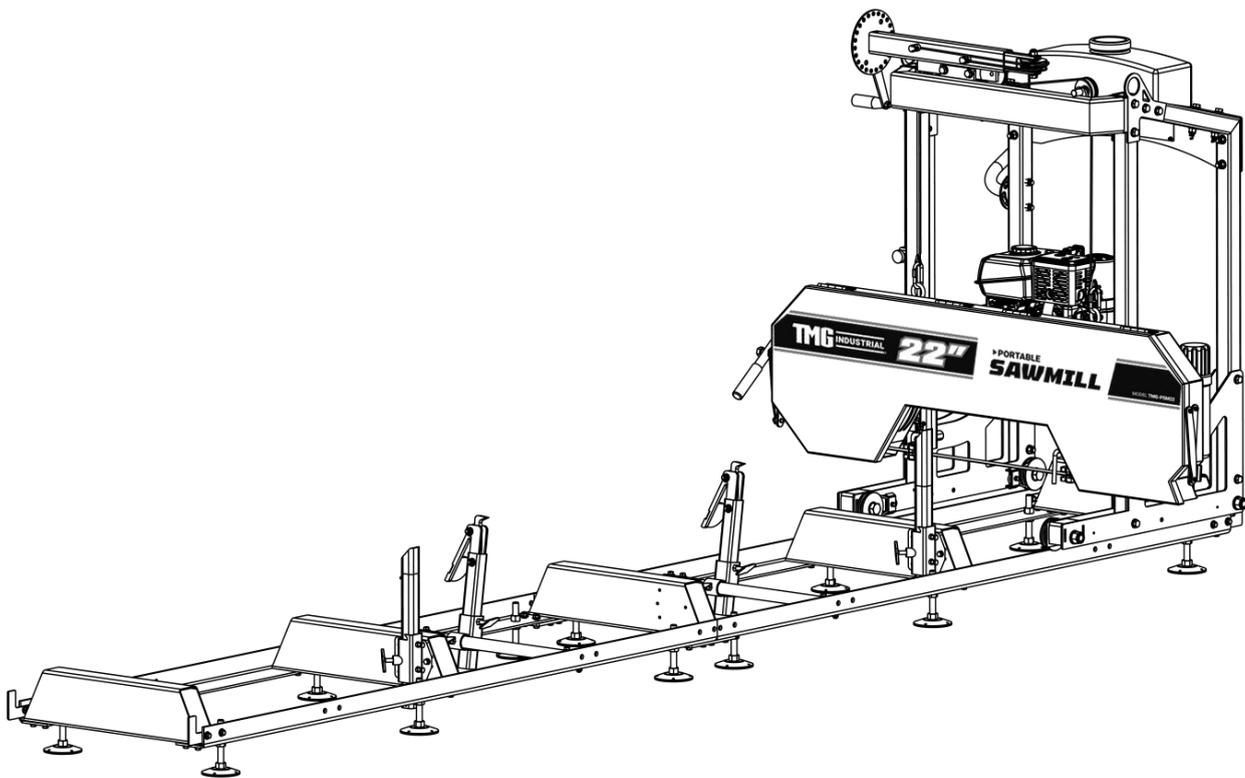


# 22" CUTTING CAPACITY PORTABLE SAWMILL

### KOHLER COMMAND PRO SERIES 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](mailto:cs@tmgindustrial.com)

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Thank you very much for choosing the **TMG-PSM22** 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	7 HP Kohler
Maximum Log Diameter	22" (560mm)
Maximum Board Width	20" (502mm)
Maximum Board Thickness	5-1/2" (140mm)
Max. Log Length	12' (3556mm)
Blade Size	1-1/4 x 128" (32 x 3251mm)

## 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 TMG-PSM22 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.

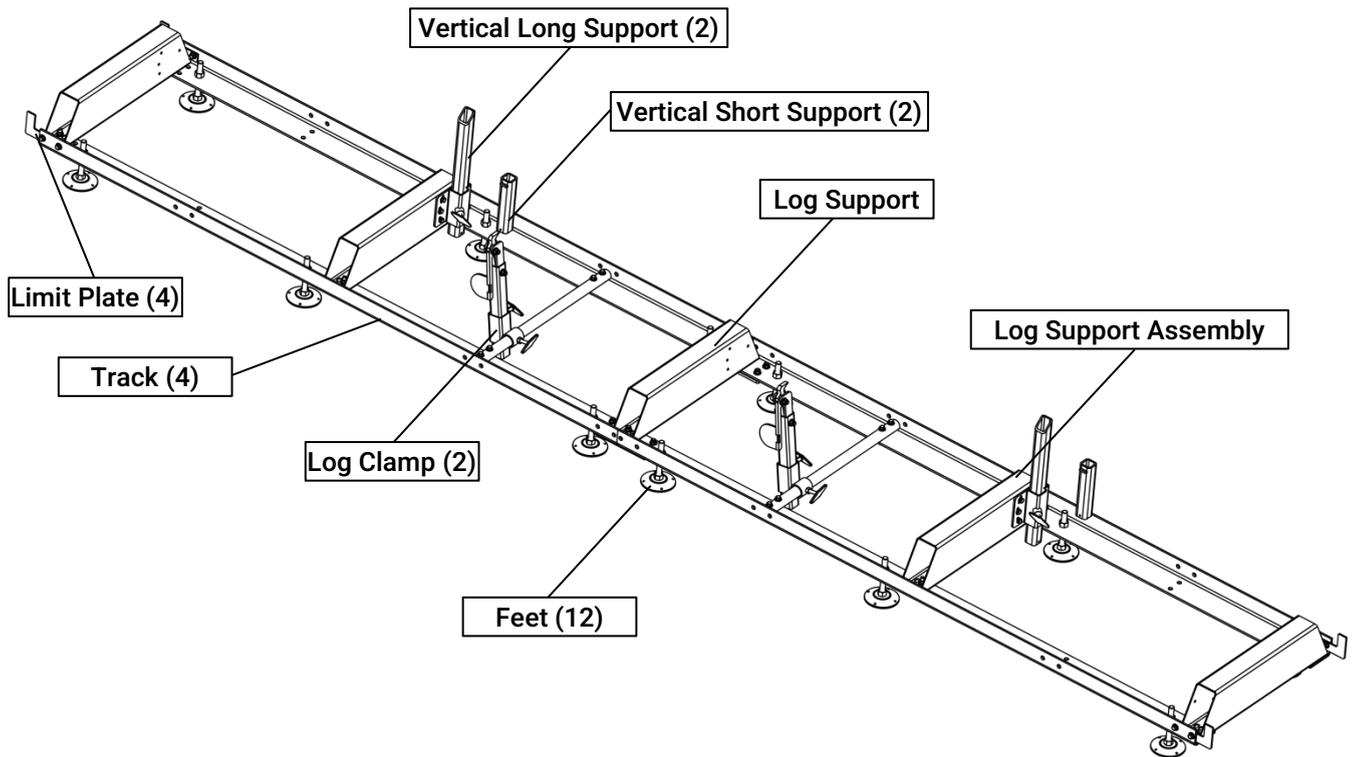
# SAWMILL ASSEMBLY

## #1 – INSPECTION

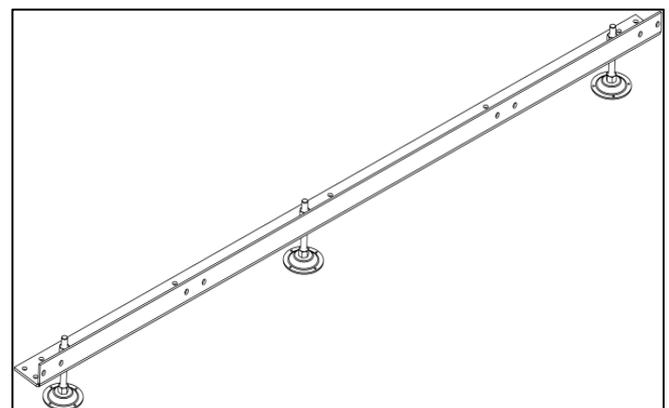
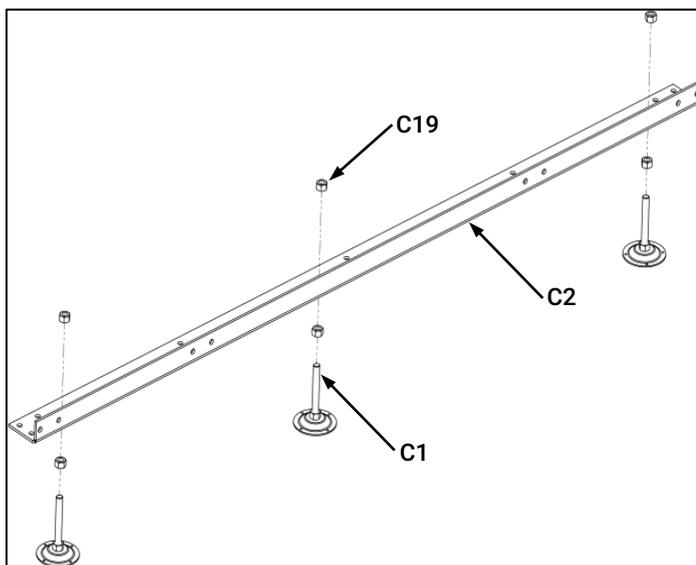
Take all of the parts out of the shipping crate and lay them out.

## #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.

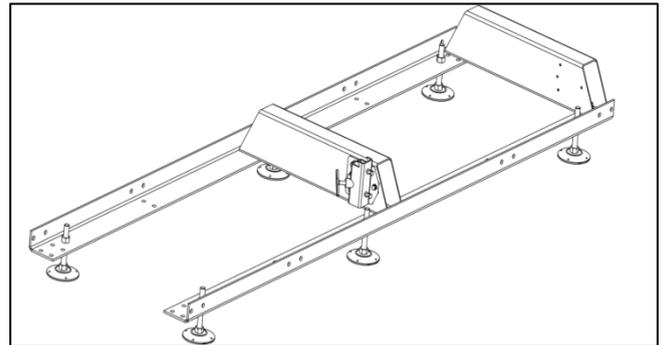
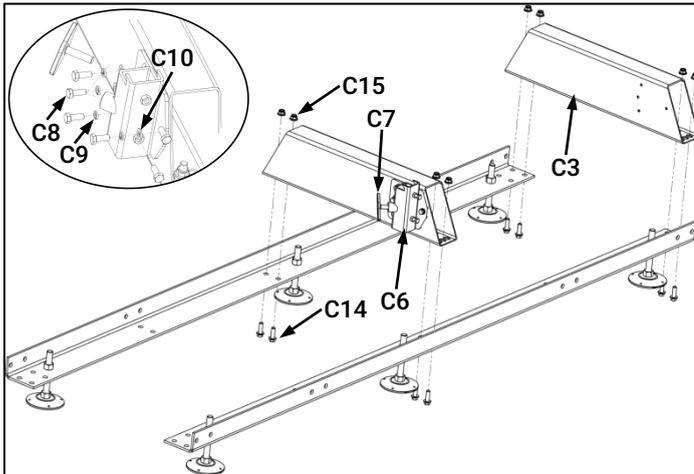


1. Install leveling feet and nuts to the guide rail, repeat the above installation until all four are complete.



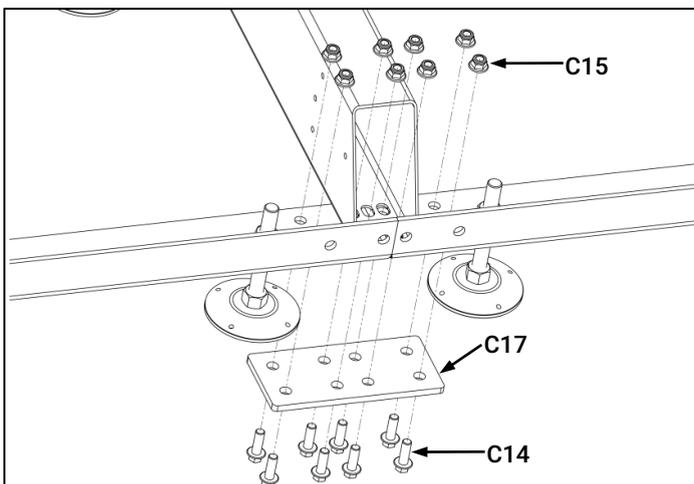
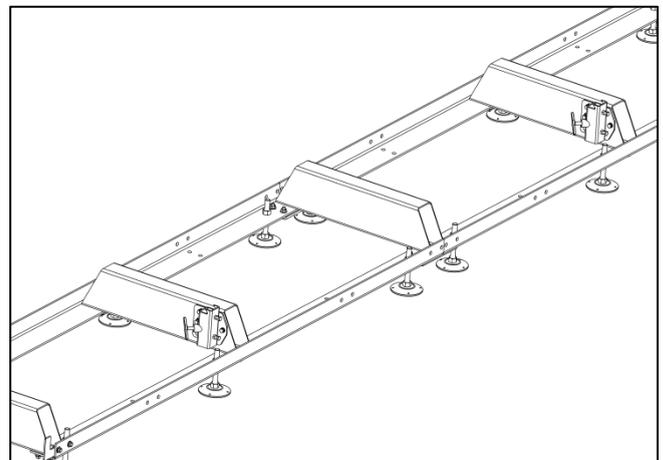
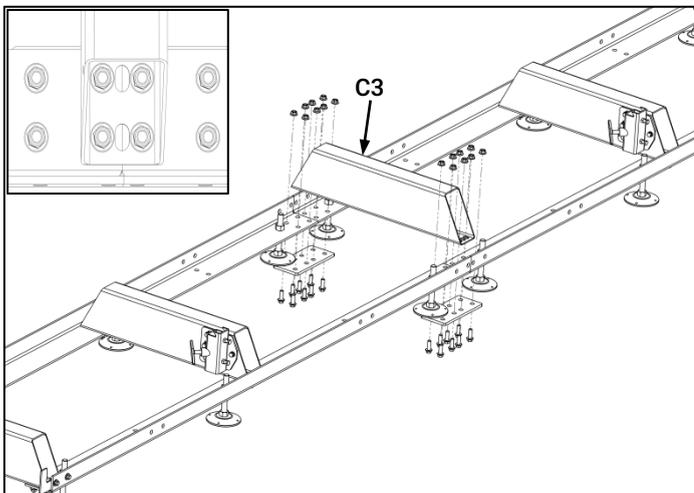
PART NO.	DESCRIPTION	QTY
C1	Leveling feet M16	12
C2	Guide rail	4
C19	Hexagon flange nuts M16	24

2. Install crossbeam to the guide rail, and bolt the log rest to the crossbeam as show in the figure. Ensure that all holes on the cross bunks are facing in the same direction during installation. Install the sliding socket welding to the crossbeam as show in the figure. repeat the above installation until all are complete.



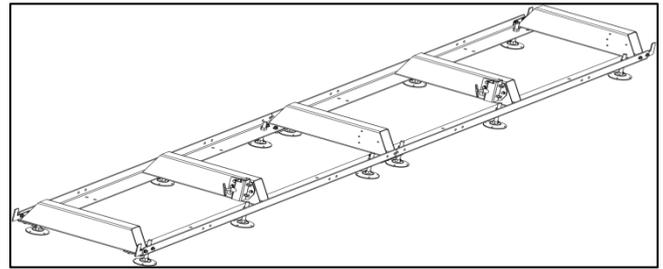
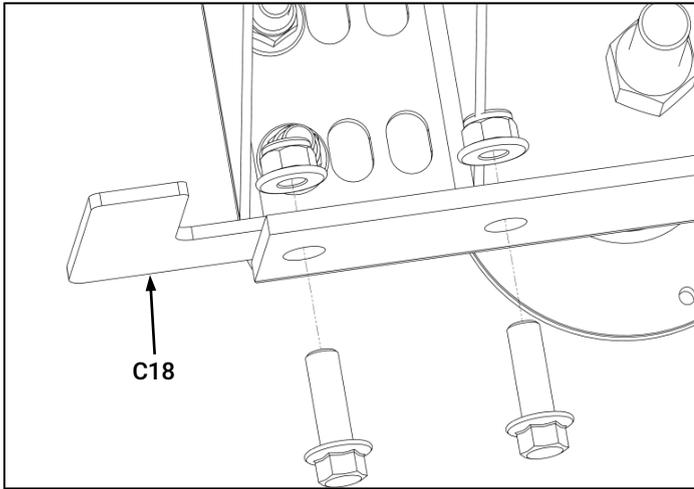
PART NO.	DESCRIPTION	QTY
C3	Crossbeam	4
C6	Sliding socket welding	2
C7	T-screw M10x40	2
C8	Hexagonal head bolt M8x20	12
C9	Spring washer Ø8	8
C10	Plain washer Ø8	8
C14	Hexagon flange bolts M10x30	16
C15	Hexagon flange nuts M10	16

3. Attach the crossbeam 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.

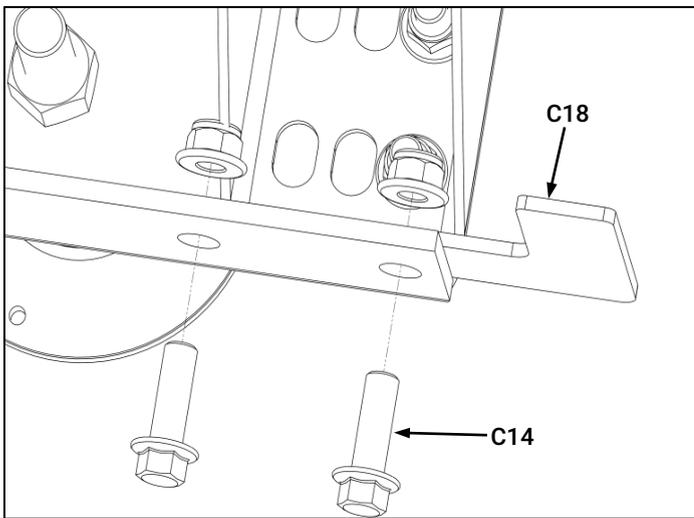


PART NO.	DESCRIPTION	QTY
C3	Crossbeam	1
C14	Hexagon flange bolts M10x30	16
C15	Hexagon flange nuts M10	16
C17	Rail connection plate	2

4. Assemble the limit plate at the ends of the guide rail (4 stops total) and tighten.

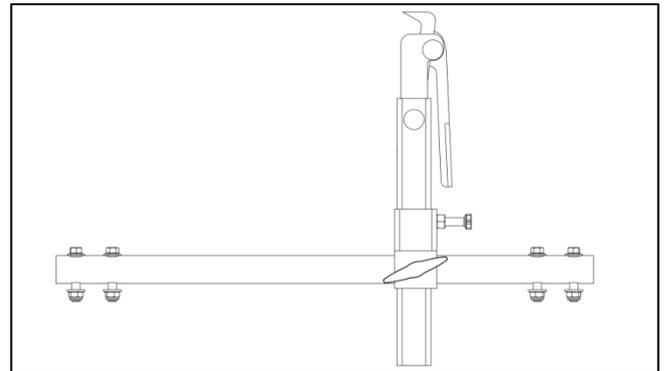
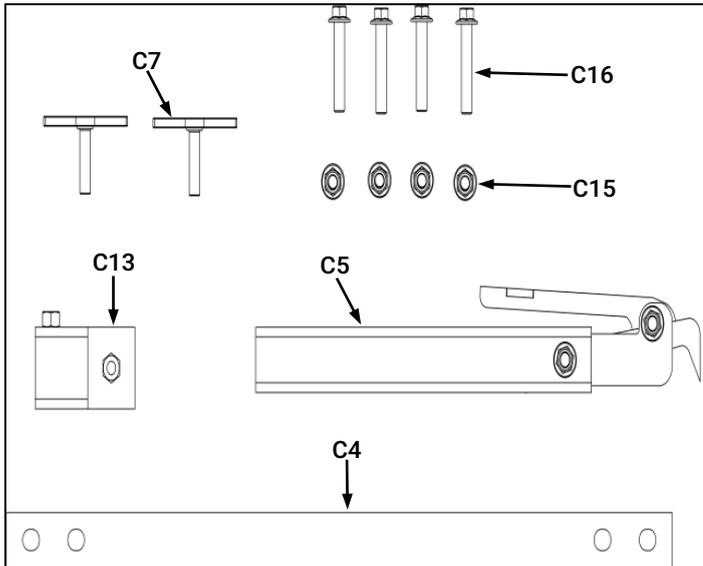


PART NO.	DESCRIPTION	QTY
C14	Hexagon flange bolts M10x30	8
C15	Hexagon flange nuts M10	8
C18	Limit plate	4



### #3 – LOG DOG & SUPPORTS

1. Assemble quick clamping as shown below and use water proof grease on threaded handle and T-screw.

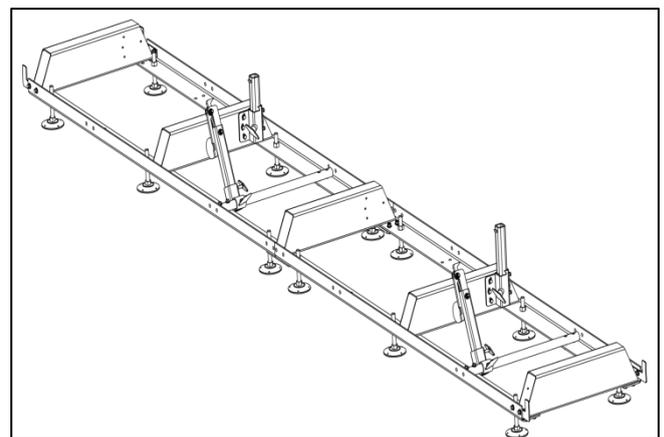
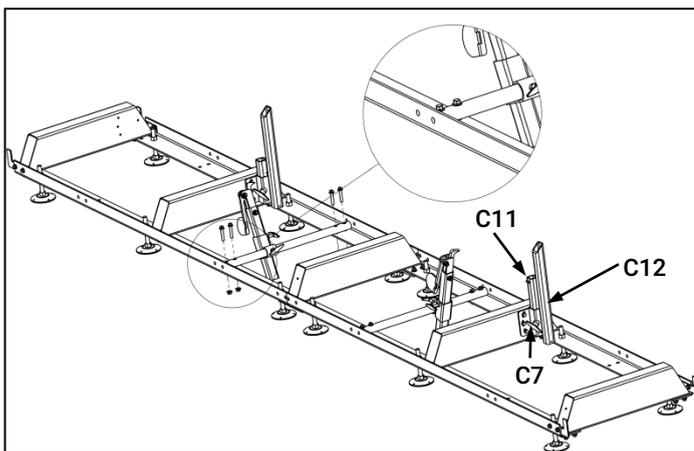


PART NO.	DESCRIPTION	QTY
C4	Sliding tube	2
C5	Quick clamping	2
C7	T-screw M10x40	4
C13	Sliding support	2
C15	Hexagon flange nuts M10	4
C16	Hexagonal head bolt M10x50	4

2. Attach the quick clamping assembly to the guide rail using the provided nuts & bolts and tighten.

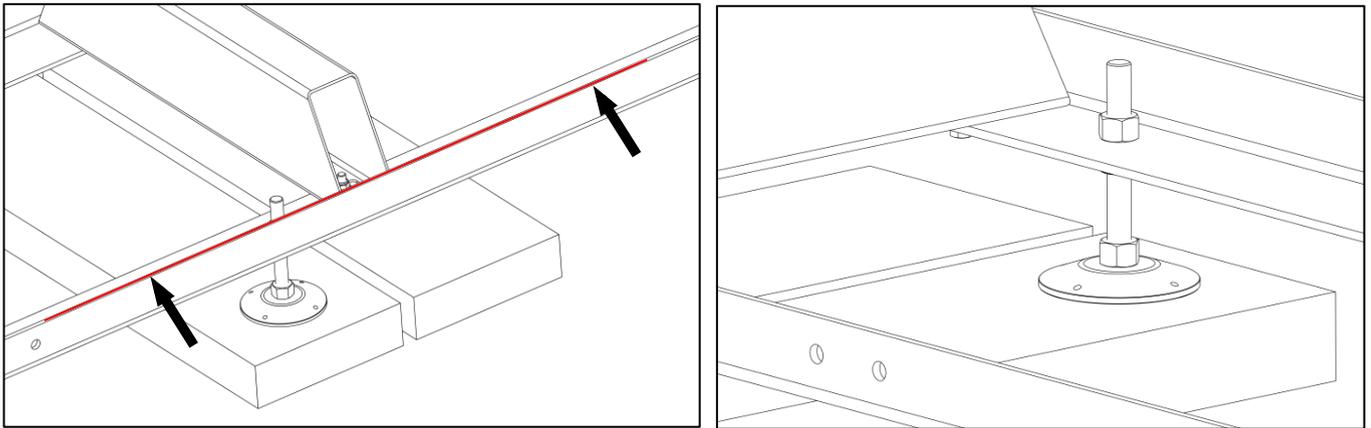
Note that there are various locations along the track where this assembly can be bolted. Depending on how many track sections are being used, select a log clamp position that will secure the log firmly against the log supports.

3. Insert the log supports into the sliding socket welding and secure with T-screw. The T-screw 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.

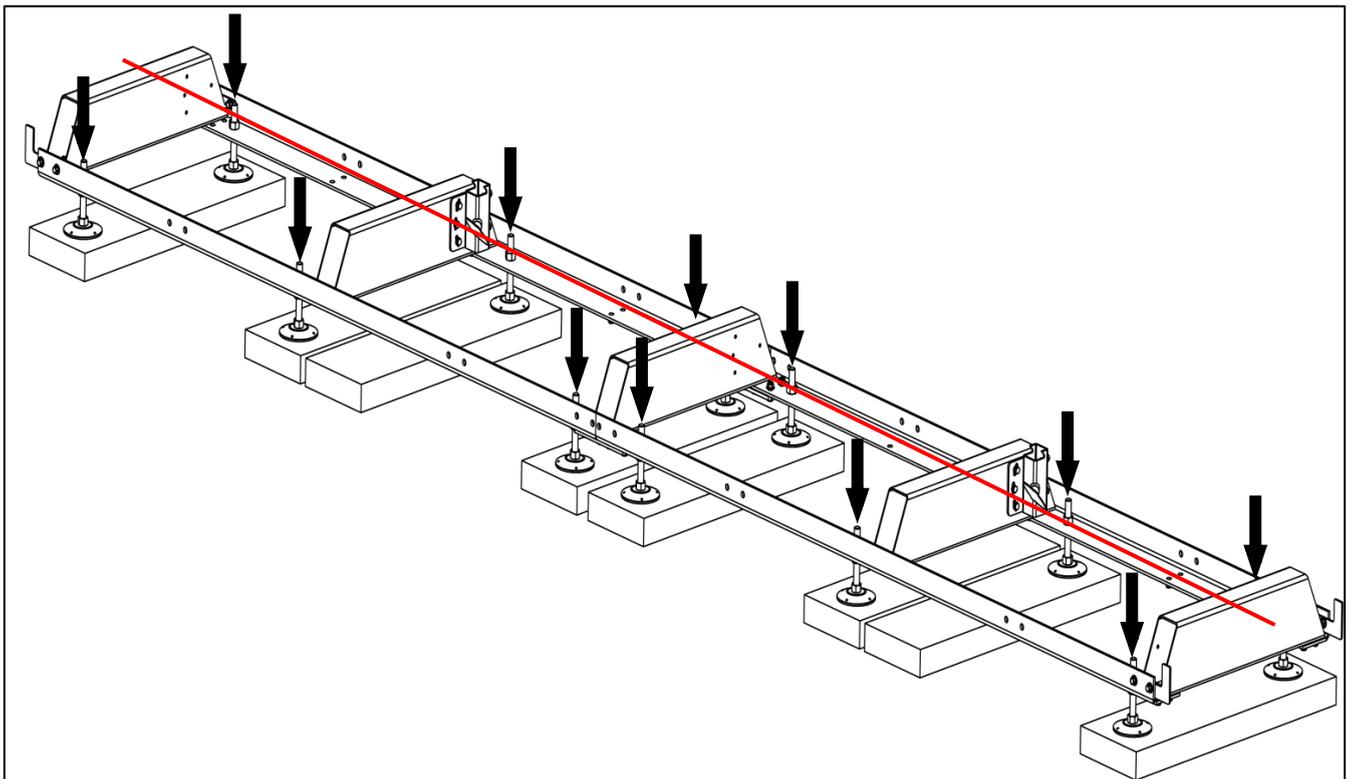


PART NO.	DESCRIPTION	QTY
C11	Short log support	2
C12	Long log support	2

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



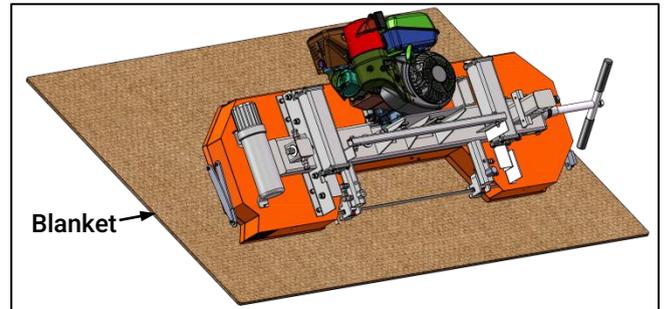
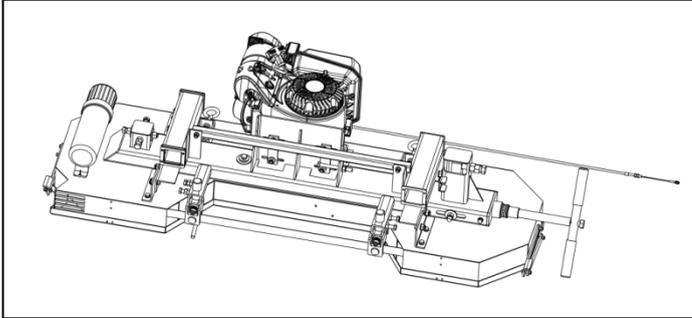
5. The BLACK ARROWS indicate where the locations of the leveling legs are. There are 4pcs per 87in. of track. 174 in. total on the machine. On the intermediate bunks the leveling legs alternate. We recommend placing the mill leveling legs on sleepers running left to right as shown above. You need to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



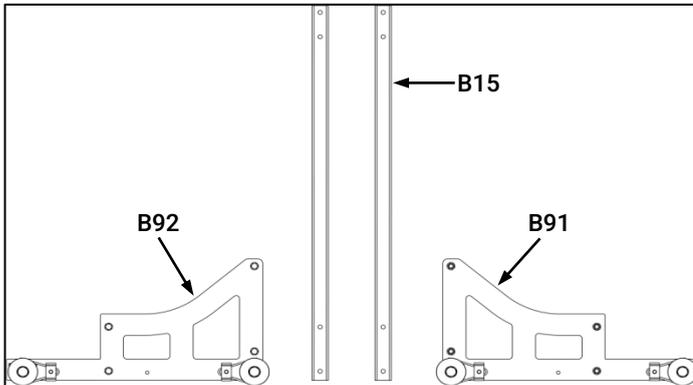
## #4 – CARRIAGE ASSEMBLY

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.

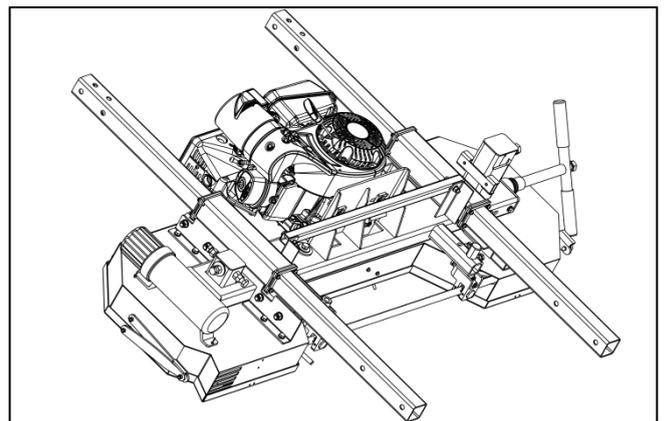
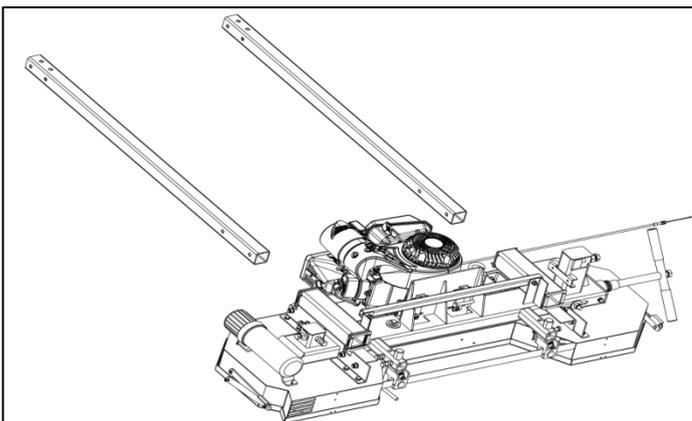


2. Lay the above carriage pieces out.

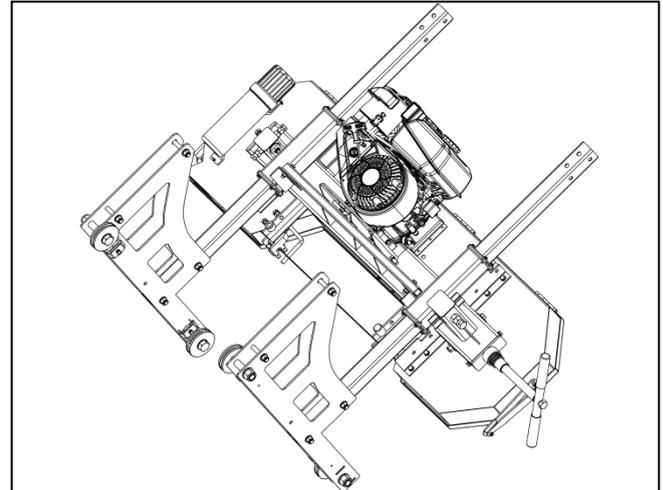
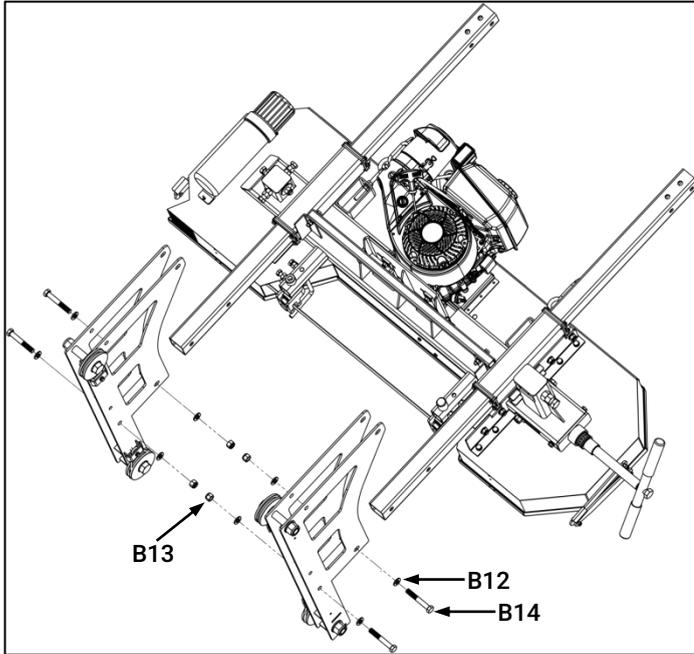


PART NO.	DESCRIPTION	QTY
B15	Lifting square tube	2
B91	Left wheel assembly	1
B92	Right wheel assembly	1

3. Then Insert the lifting square tube into corresponding locations in head assembly.

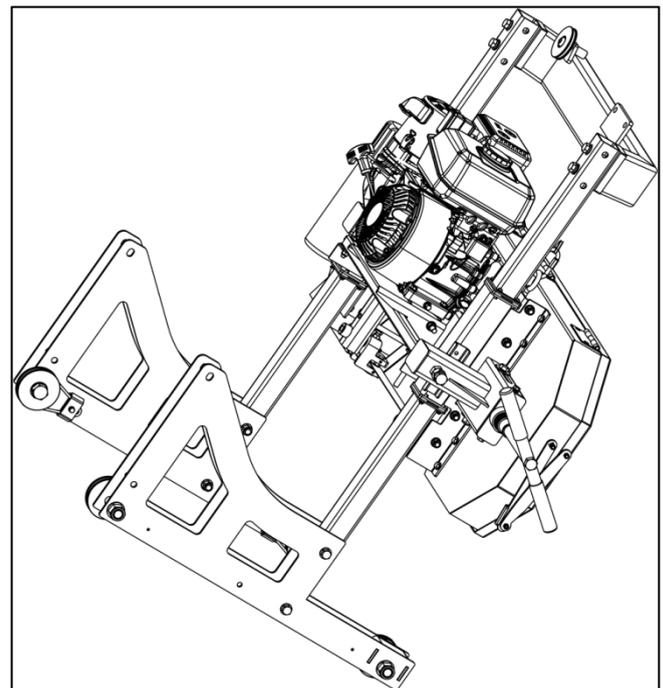
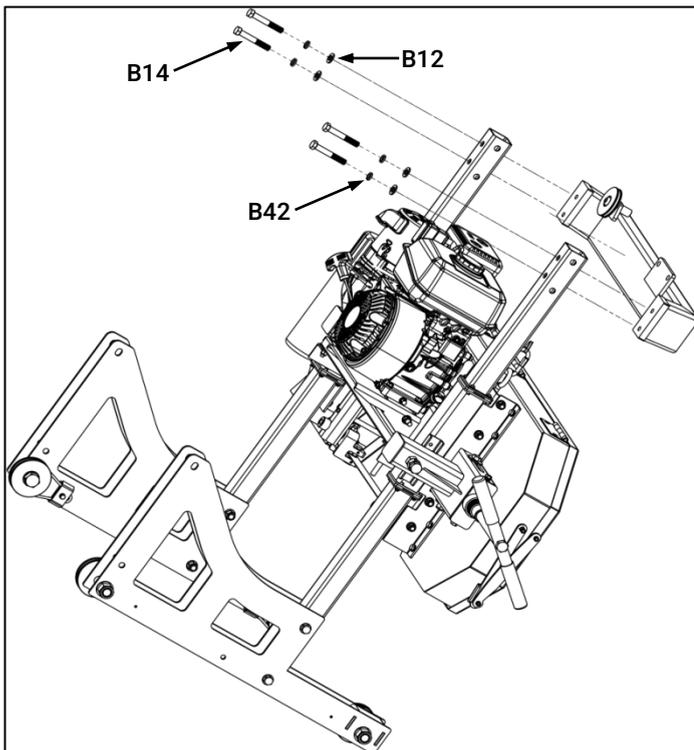


4. Install the two wheel assembly onto the front posts as shown in the figure.



PART NO.	DESCRIPTION	QTY
B12	Plain washer Ø12	8
B13	Hexagon lock nut M12	4
B14	Hexagonal head bolt M12x80	4

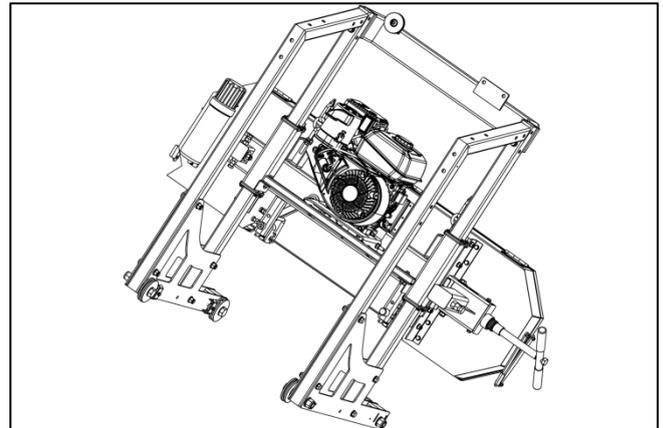
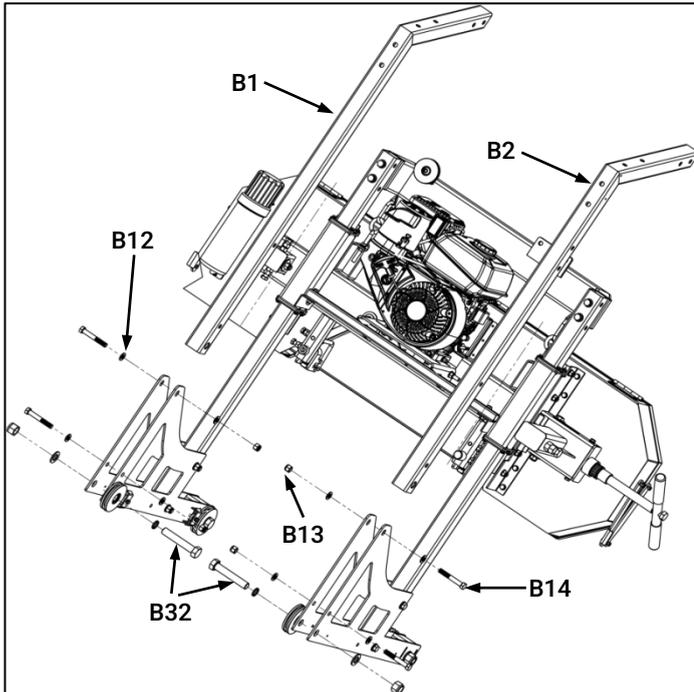
5. Connect the upper beam welding to the lifting square tube, as shown in the figure



PART NO.	DESCRIPTION	QTY
B12	Plain washer Ø12	4
B14	Hexagonal head bolt M12x80	4
B36	Upper beam welding	1
B42	Spring washer Ø12	4

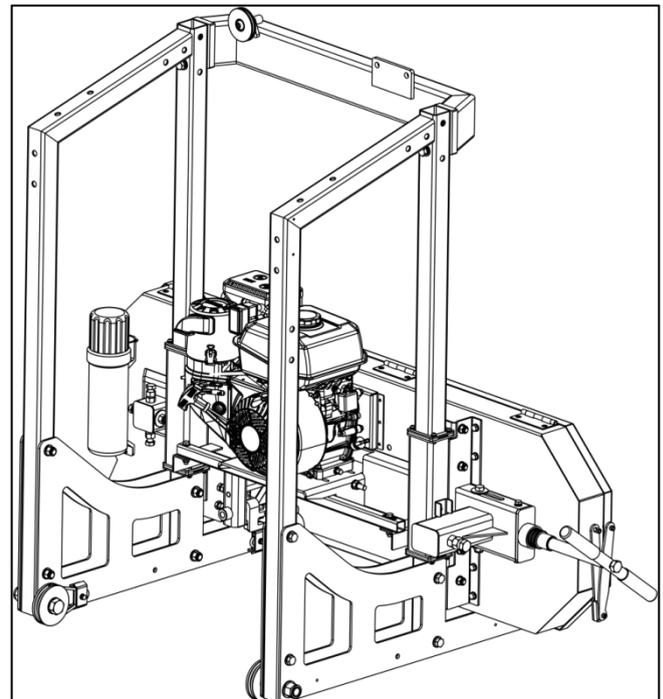
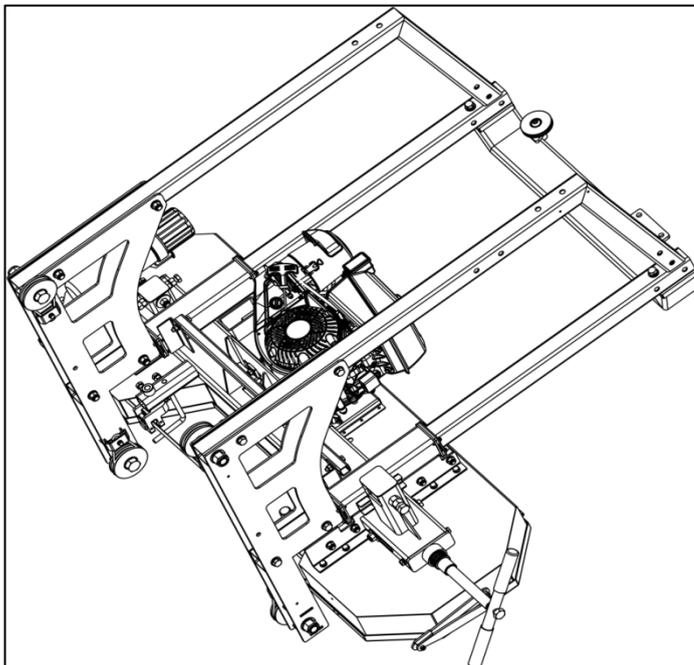
6. Insert the bottom wheel frame welding into the middle of the clamp plates and secure it with the provided bolts and nuts.

Noted: Need to loosen the bolts(#B32) first when installing the bottom wheel frame.

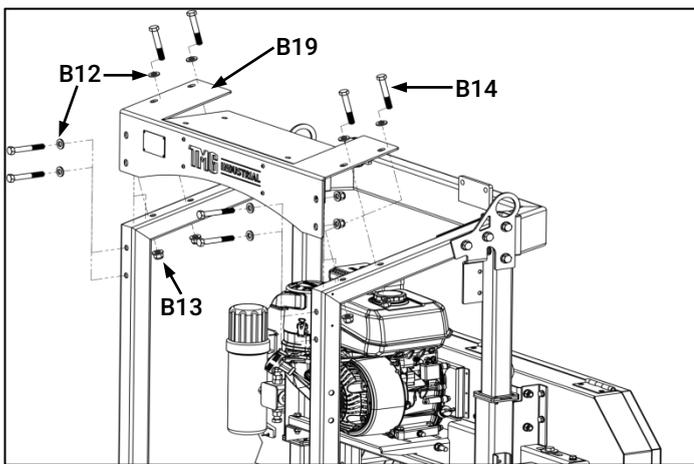
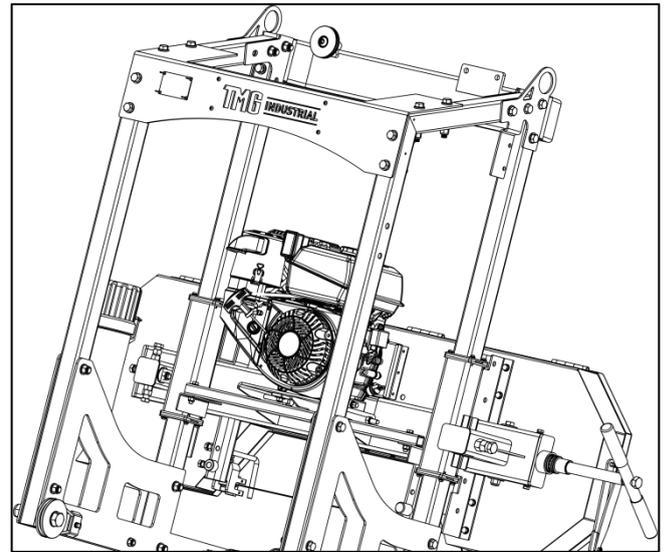
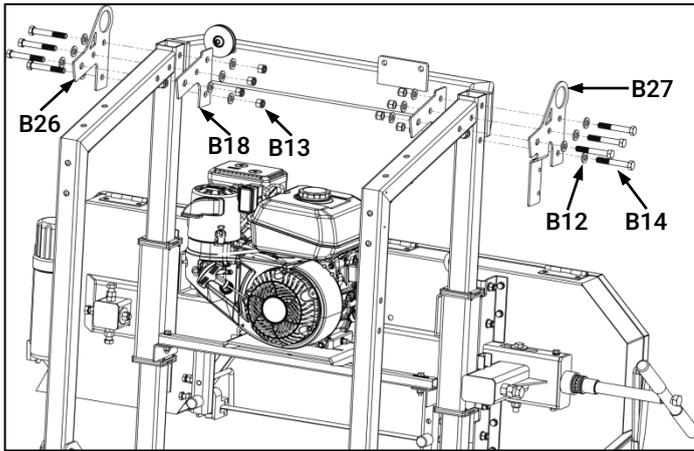


PART NO.	DESCRIPTION	QTY
B1	Left bottom wheel frame welding	1
B2	Right bottom wheel frame welding	1
B12	Plain washer Ø12	4
B13	Hexagon lock nut M12	4
B14	Hexagonal head bolt M12x80	4

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 ground.

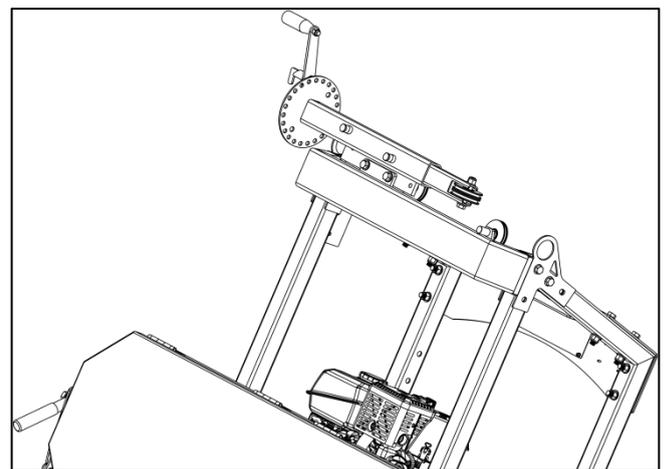
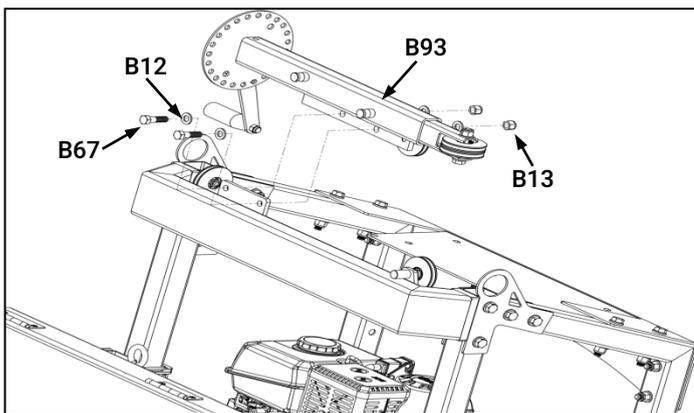


8. Install the connecting clamping plate, saw frame horizontal connecting plate, external saw frame connecting plate and connecting the ruler plate, using wrench to hold the nut, tighten the bolt.



PART NO.	DESCRIPTION	QTY
B12	Plain washer Ø12	32
B13	Hexagon lock nut M12	16
B14	Hexagonal head bolt M12x80	16
B18	Saw frame connecting plate	2
B19	Saw frame horizontal connecting plate	1
B26	External saw frame connecting plate	1
B27	Connecting the ruler plate	1

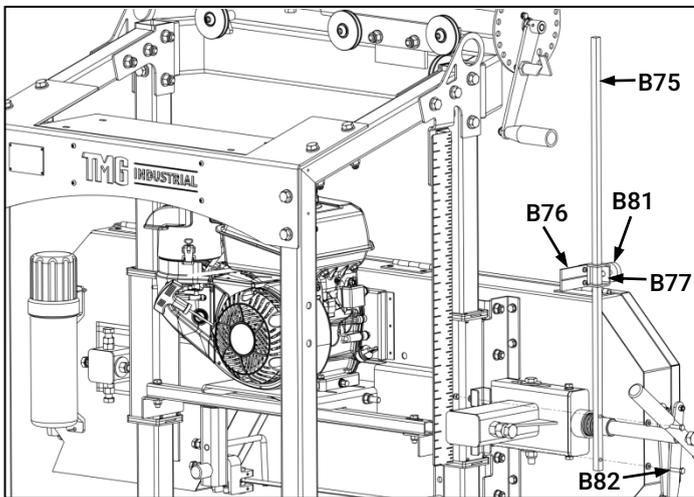
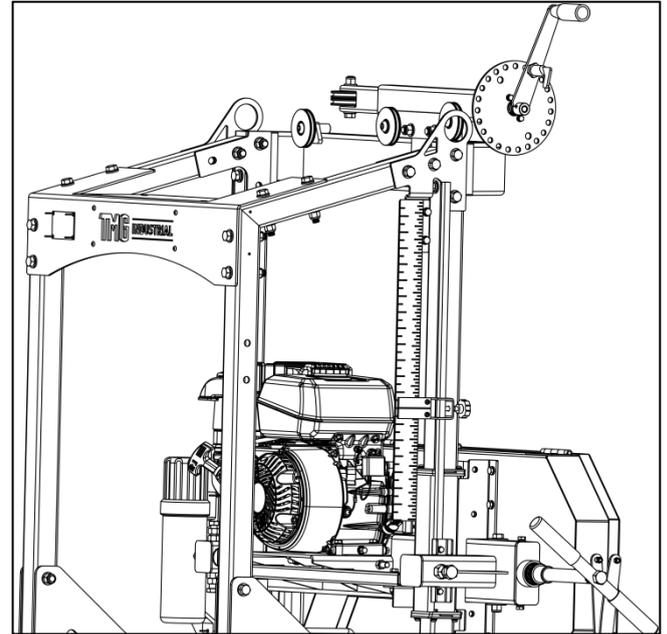
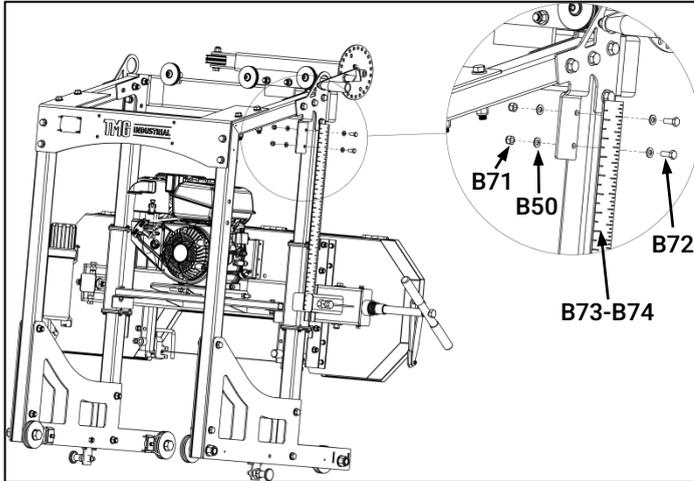
9. Install the lifting system, using wrench to hold the nut, tighten the bolt.



PART NO.	DESCRIPTION	QTY
B12	Plain washer Ø12	4
B13	Hexagon lock nut M12	2
B67	Hexagonal head bolt M12x40	2
B93	Lifting assembly	1

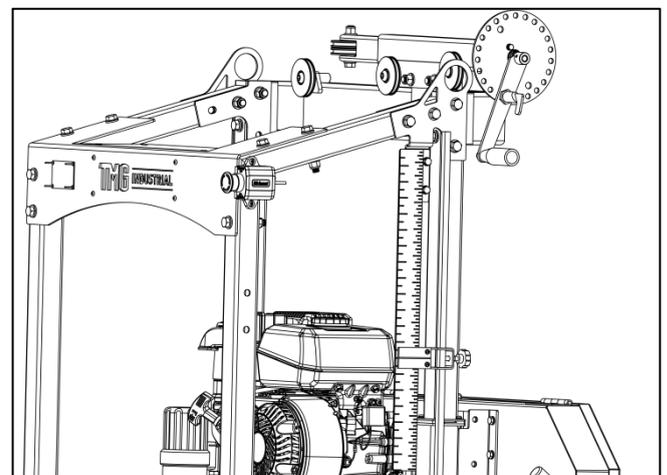
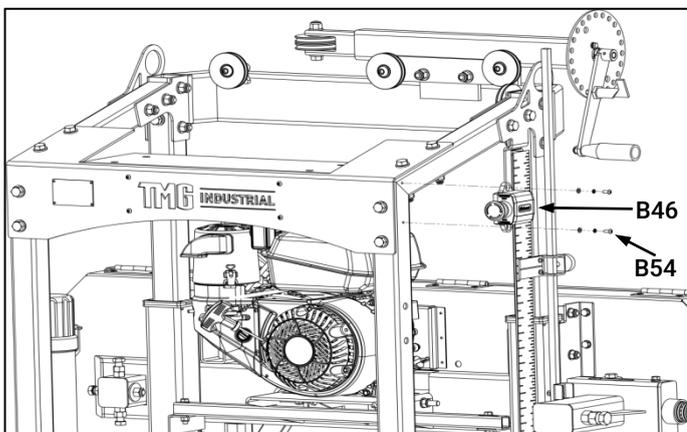
10. Place the measuring scale assembly, the assembly include ruler and height indicator.

- A. Install ruler assembly 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.



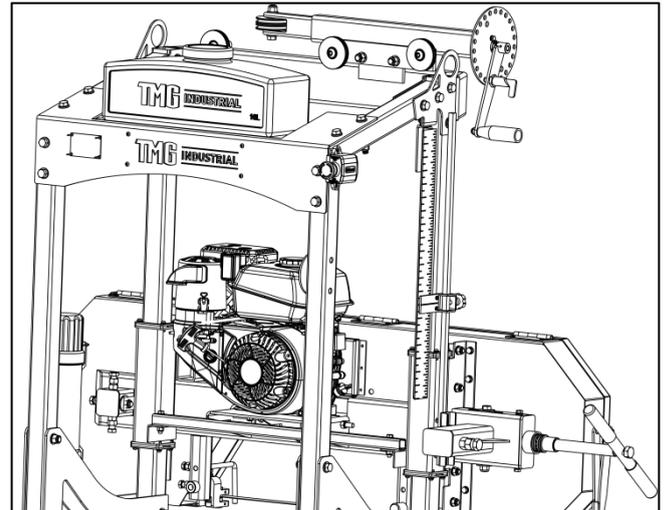
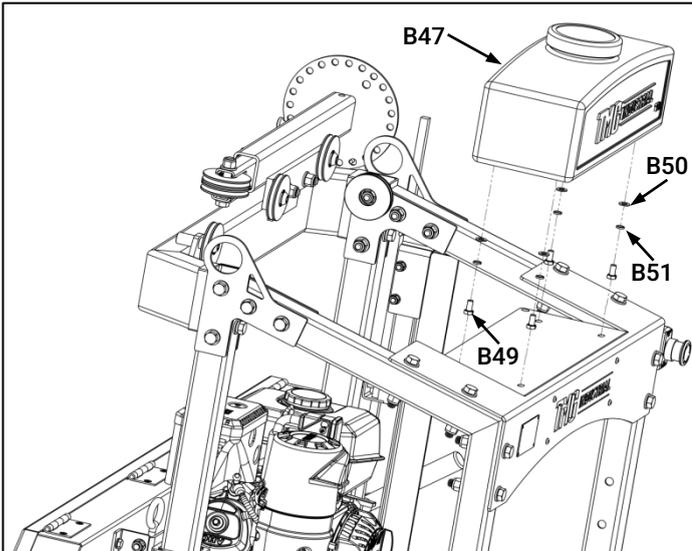
PART NO.	DESCRIPTION	QTY
B50	Plain washer Ø8	4
B71	Hexagon lock nut M8	2
B72	Hexagonal head bolt M8x20	2
B73	Ruler base	1
B74	Height ruler	1
B75	Scale guide rail	1
B76	Scale plate	1
B77	Scale holder	1
B81	Handle M6x25	1
B82	Hexagonal head bolt M8x45	2

11. Install the emergency stop switch.



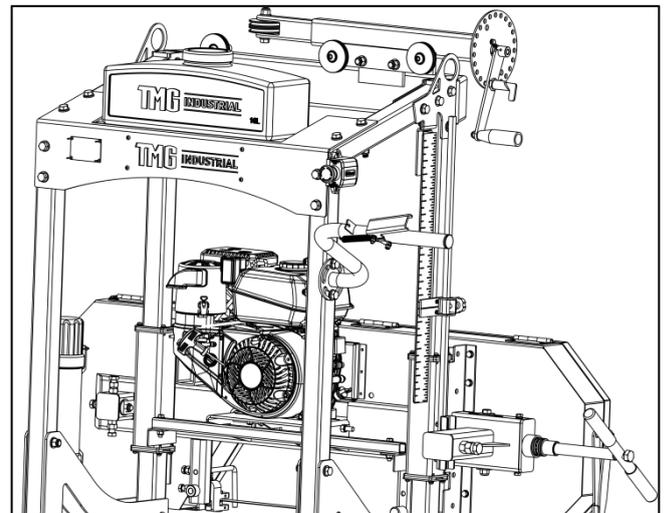
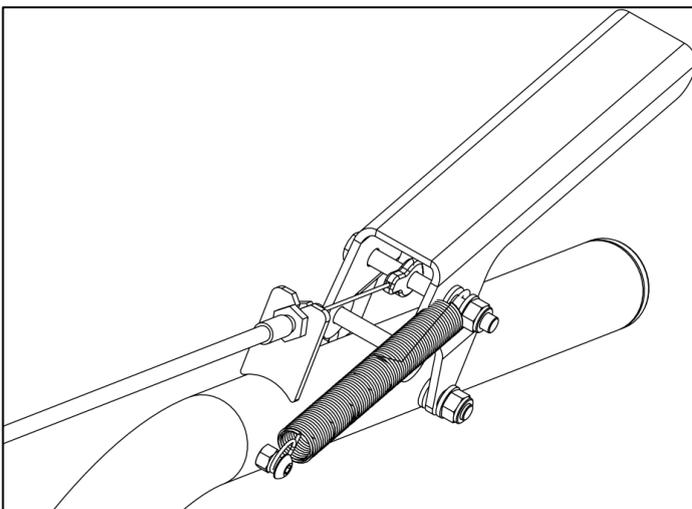
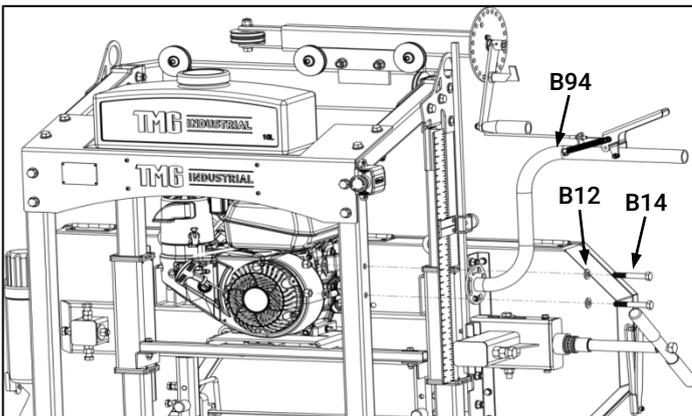
PART NO.	DESCRIPTION	QTY
B46	Emergency stop switch	1
B54	Hexagon socket flat round head triple combination screw M5X12	2

12. Install the water tank.



PART NO.	DESCRIPTION	QTY
B47	Water tank	1
B49	Hexagonal head bolt M8x16	4
B50	Plain washer Ø8	4
B51	Spring washer Ø8	4

13. Install the pushing bar assembly. Connect the throttle cable to the gasoline engine, then install the spring, and press the throttle handle to ensure that the gasoline engine reaches the maximum speed.

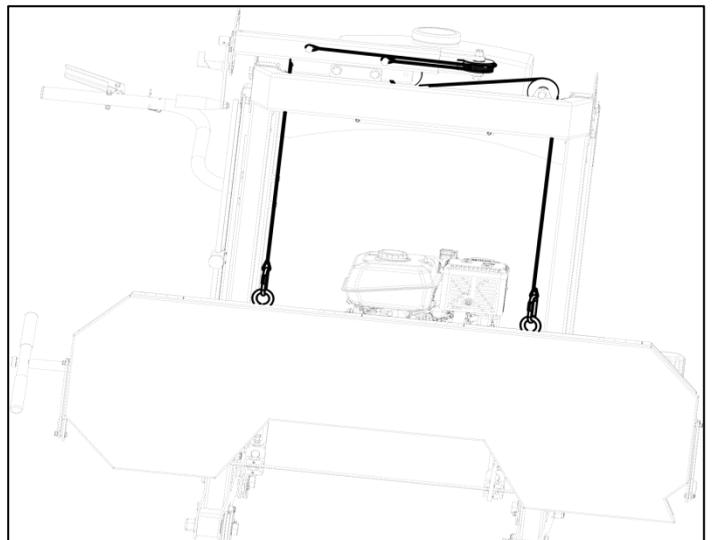
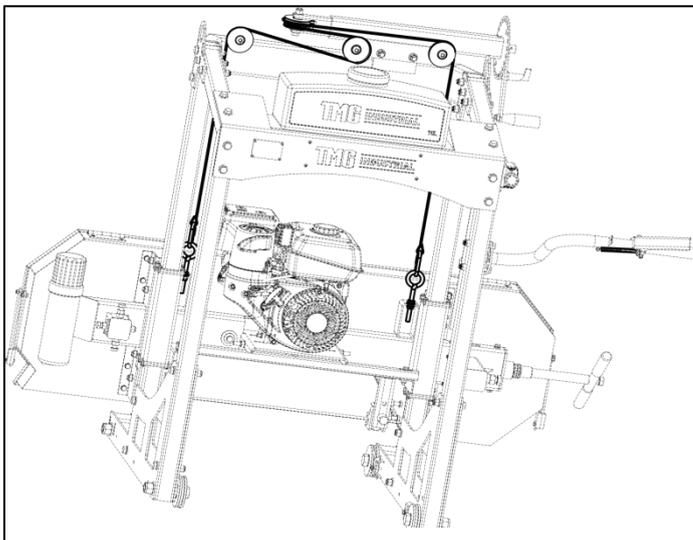
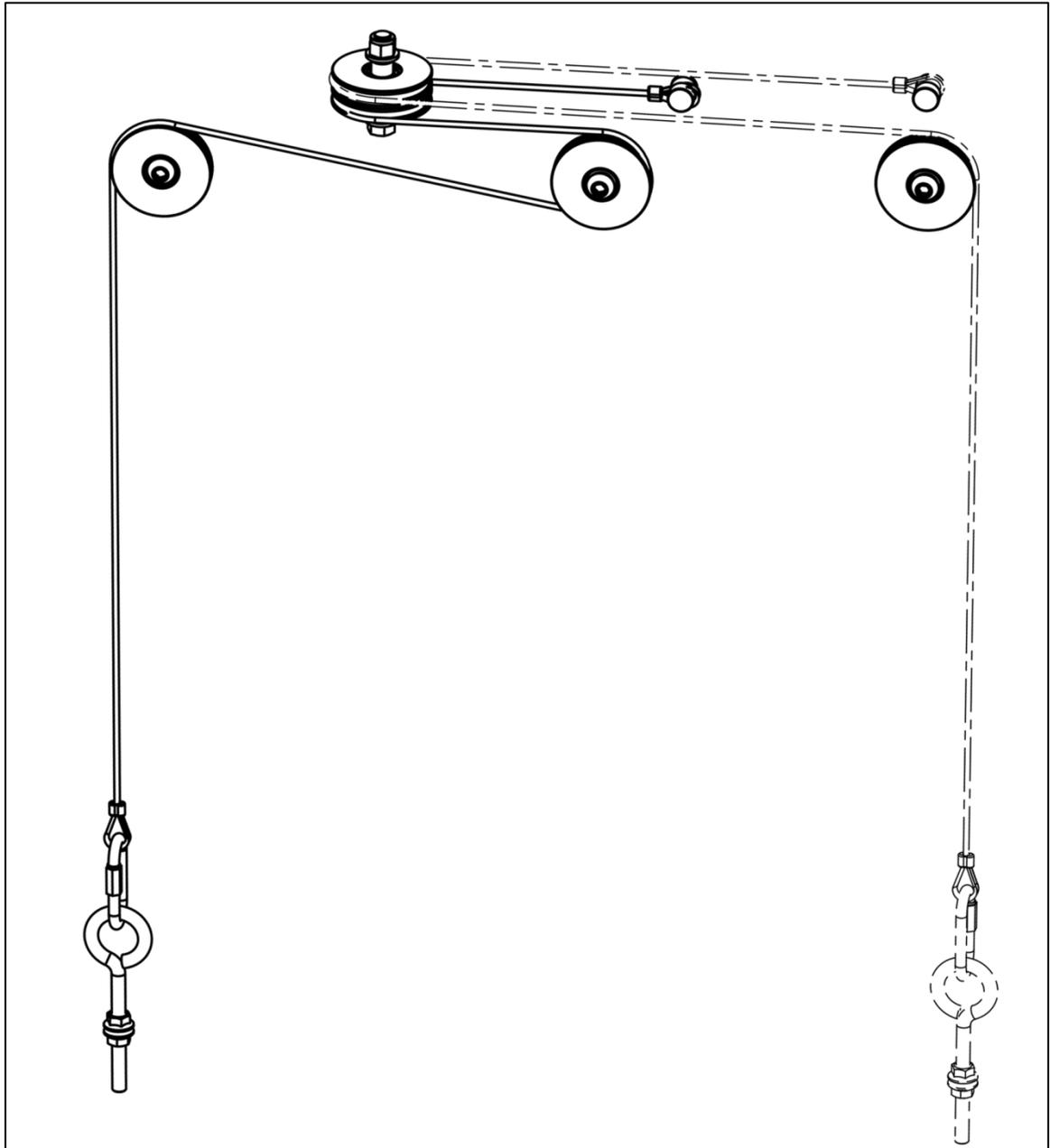


PART NO.	DESCRIPTION	QTY
B12	Plain washer Ø12	4
B13	Hexagon lock nut M12	2
B14	Hexagonal head bolt M12x80	2
B94	Pushing bar assembly	1

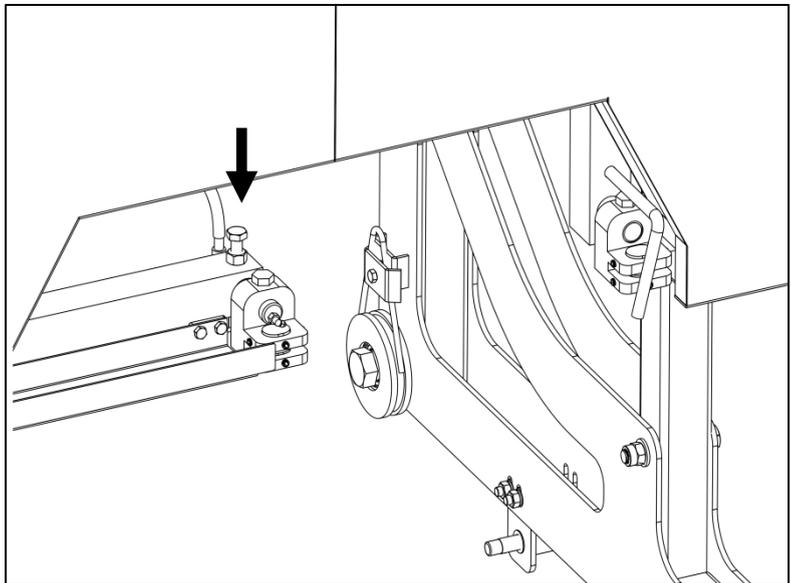
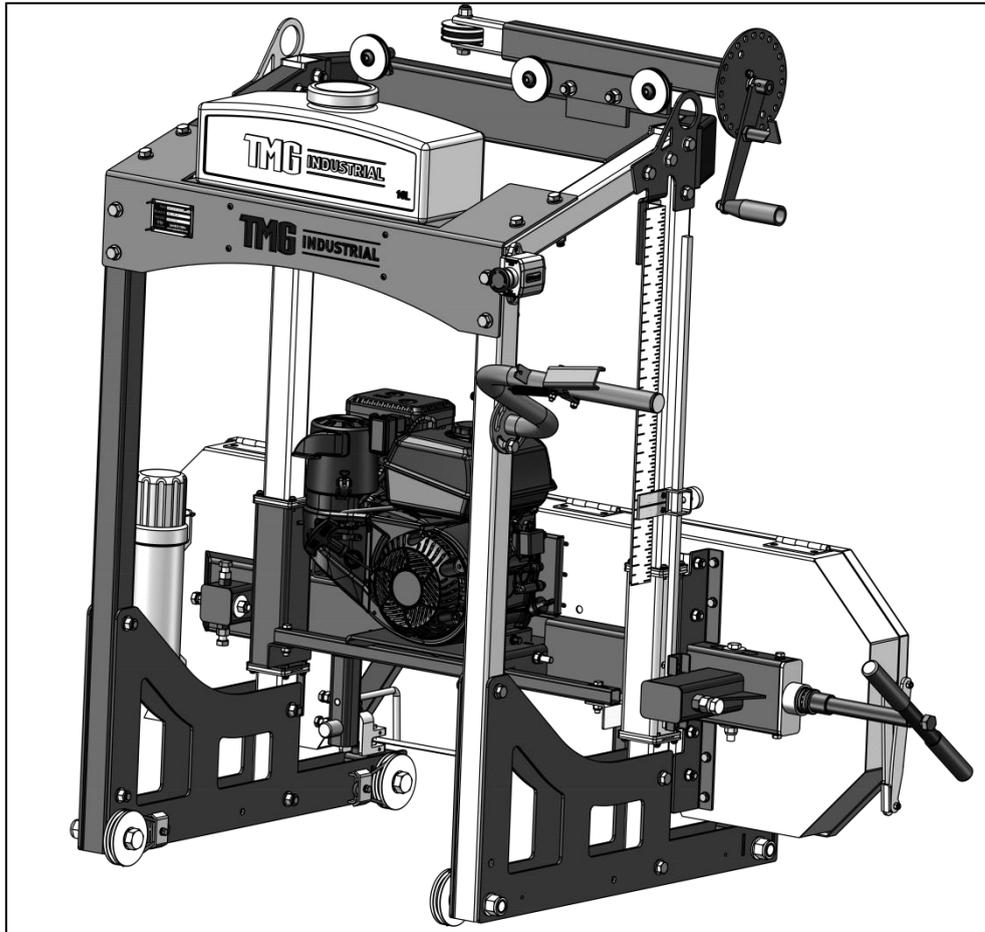
PLEASE NOTE\*\*\*The idler screw needs to be wound fully out failure to do this will result in the engine not running at its full RPMs' which will result a poor cut.



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

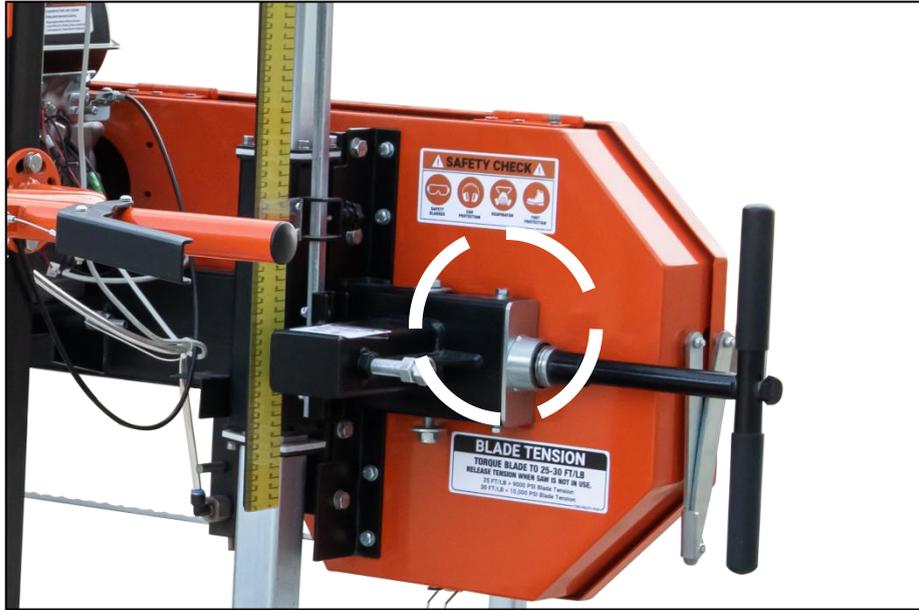


15. The transparent water pipe connects the water tank to the copper connector



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.



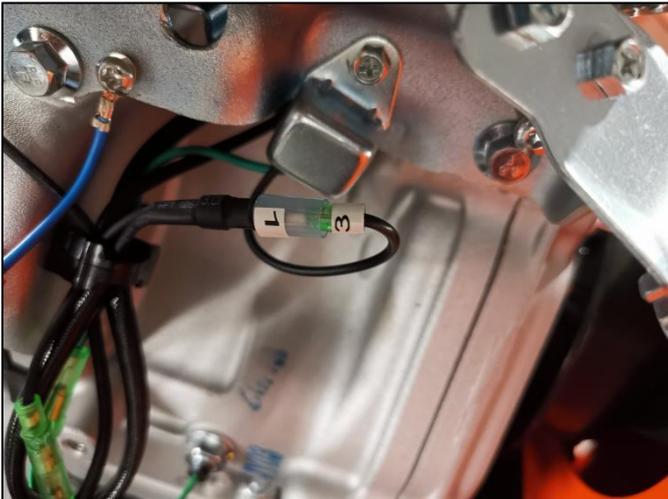
\*Note – It is very important to take the tension off of the blade by turning the "T" handle in the counter-clockwise direction when the sawmill is not in use. Failure to do so, will result in flat spots on the rubber belts. These flat spots will cause the mill to vibrate excessively during next use.\*

17. Add water proof grease to all T-screw threads on the sawmill.

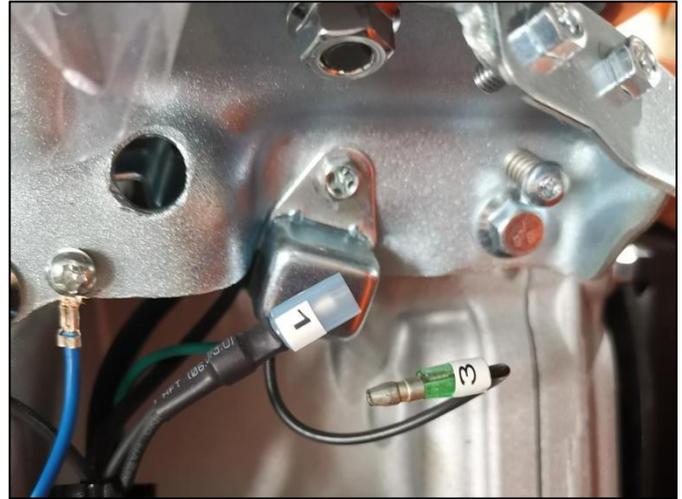




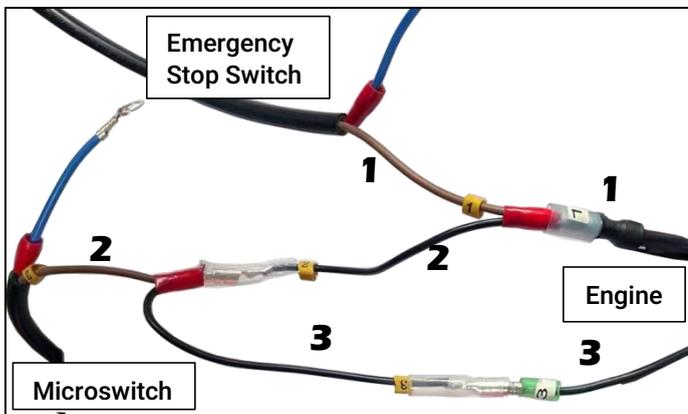
## 5 – ELECTRIC WIRE CONNECT



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



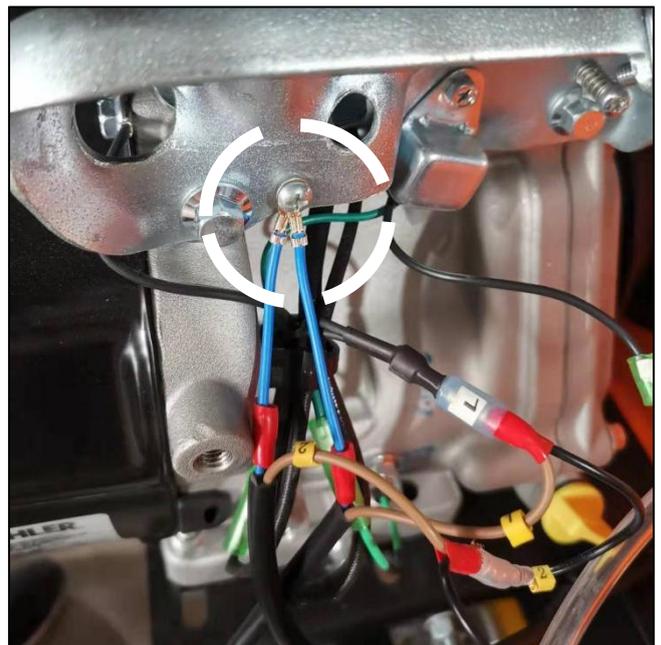
Step. 2: Disconnect the connection terminals



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

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

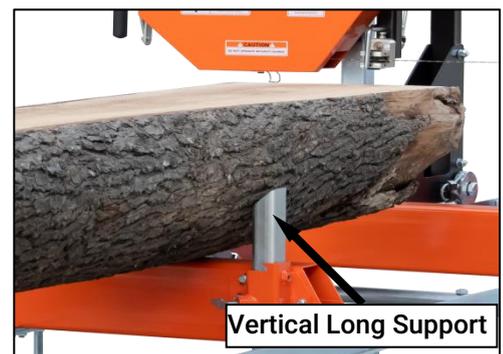
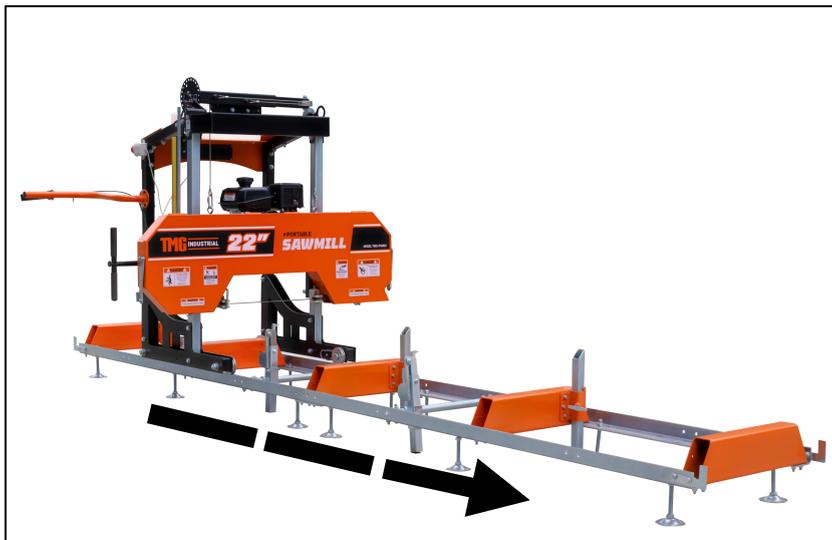
Step. 4: Connect the 1 and 1,2 and 2, 3 and 3



## #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

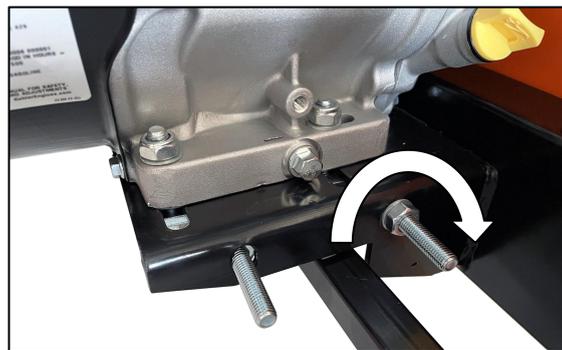


To check the belt tension, with your hand, firmly try to deflect the belt up and down. There should be no more than 1/4" of deflection in both directions (1/2" total). If the belt deflects more than this, it will need to be tightened as described below.



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

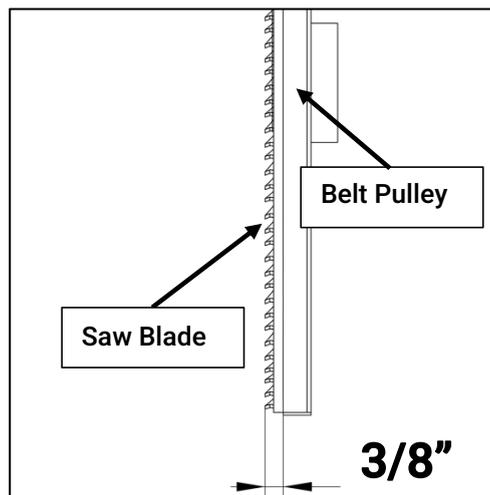
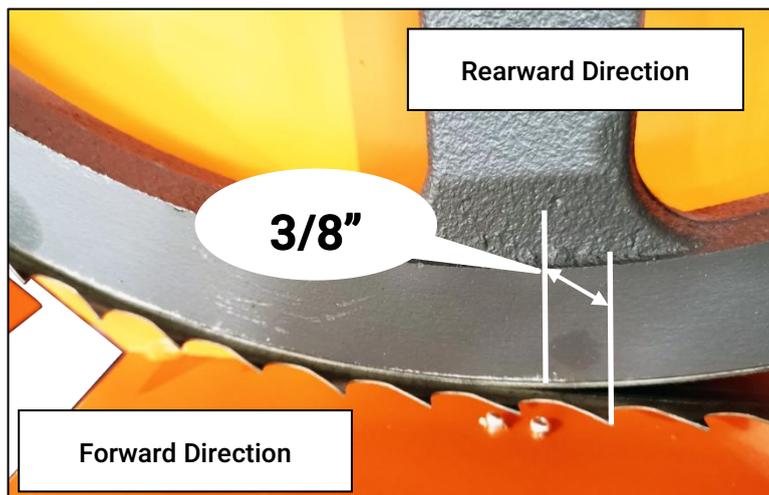
Now that the engine is free to slide on the engine mounting plate, turn the 16mm nut on the horizontal stud in the clockwise direction. This will pull the engine towards the stud and apply more tension on the belt. Do this step incrementally while checking the belt for proper deflection. It is also important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



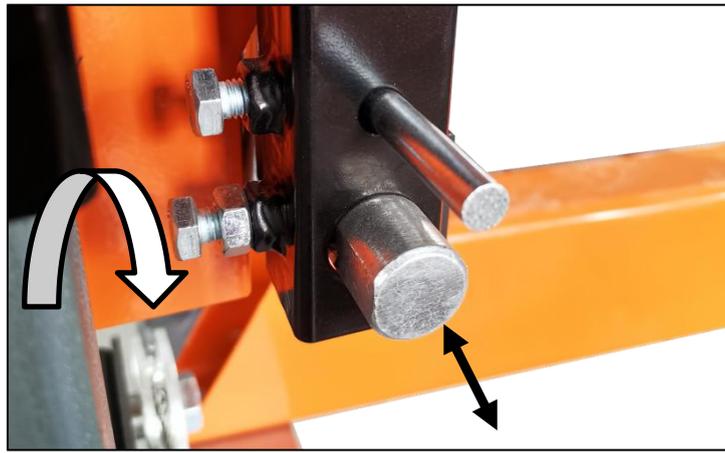
*Alternatively, if the drive belt is too tight, the 16mm nut on the horizontal stud can be turned counter-clockwise.*

## #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

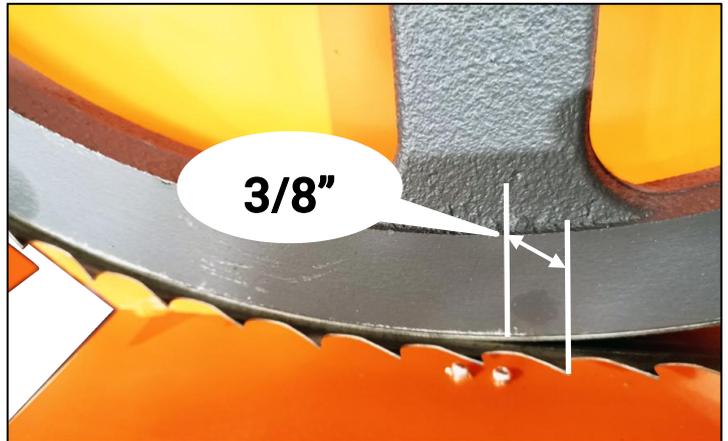


Loosen the tracking alignment locking nut with an adjustable wrench.



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.



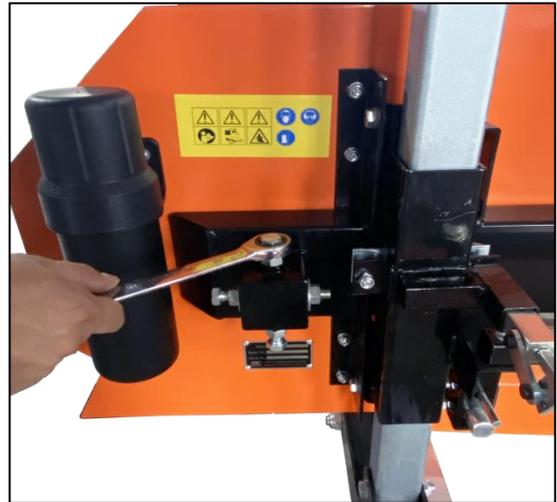
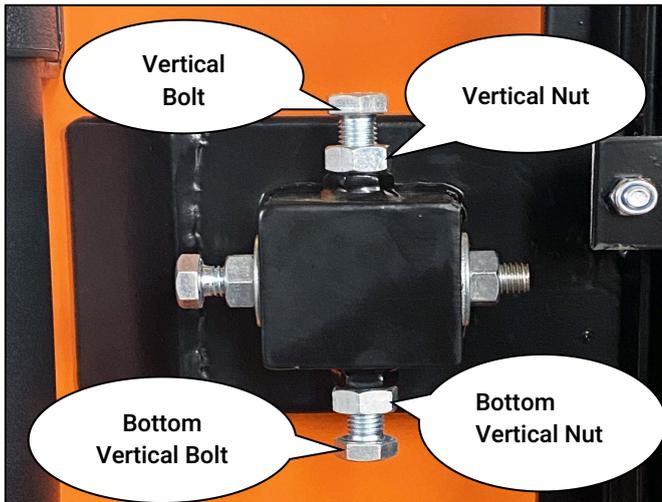
Wearing gloves, spin the bandwheel with your hand and observe how the blade has changed tracking.

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

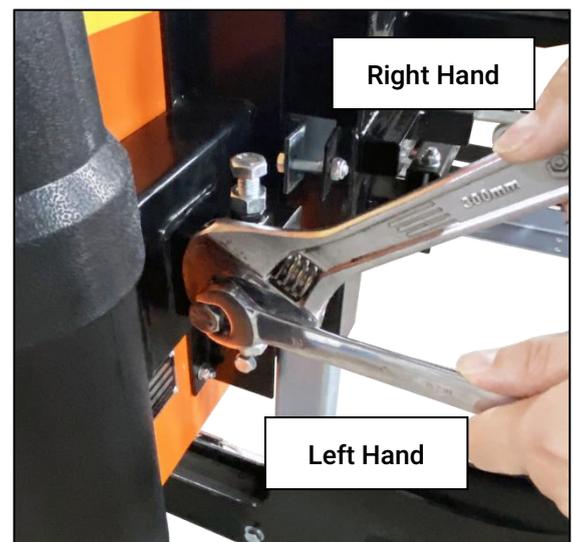
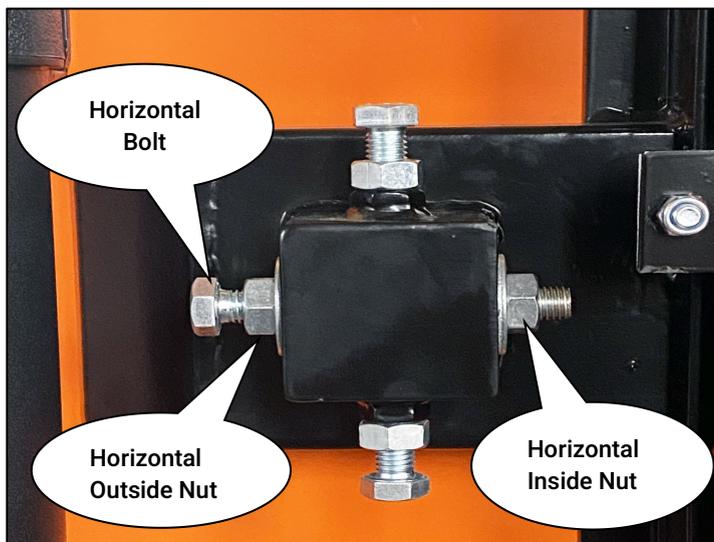


Once satisfied with the measurement, tighten the locking nut clockwise.

## 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.



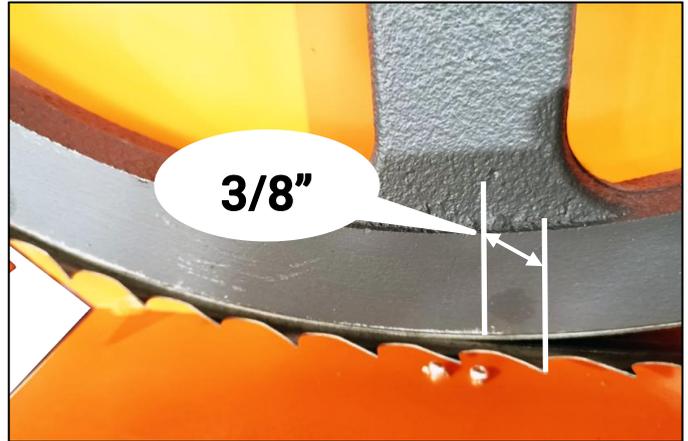
## Moving The Blade Forward

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.

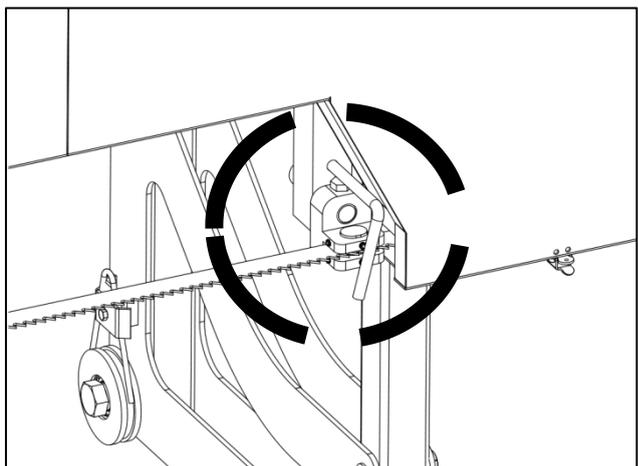
Measure the distance again and repeat the above step to further compensate if required. The ideal measurement is 3/8".

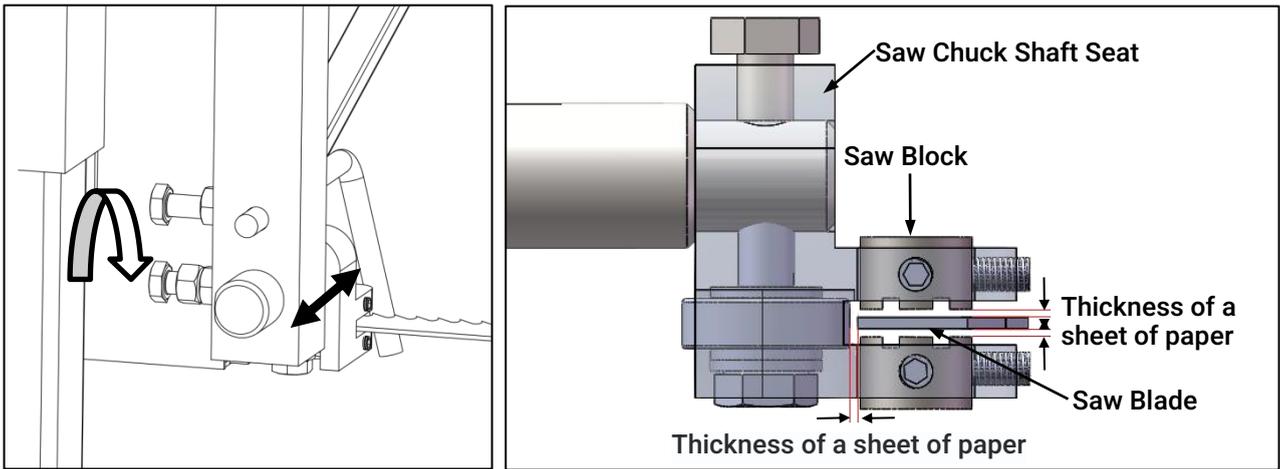
Once the blade is tracking true, bring the blade guide assemblies back up to the blade. Keep a paper width distance between the blade guide bearing and the back of the blade. More information on this set up can be found in the next section – ***"BLADE GUIDE ADJUSTMENT"***

## #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.



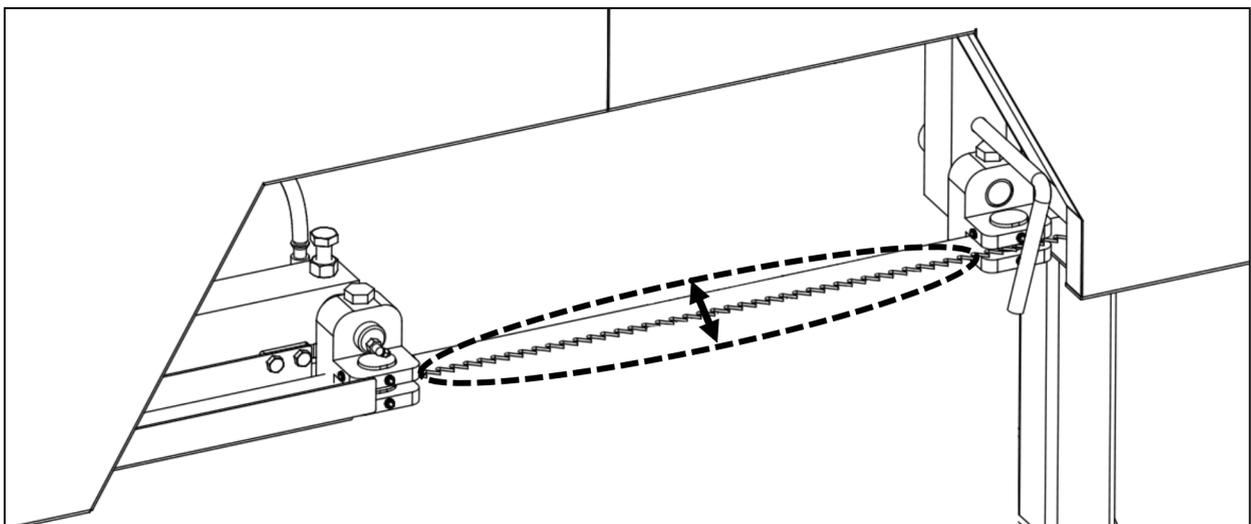


Loosen the blade guide assembly bolt with a 16mm socket. The round shaft should now be free to slide back and forth. Position it so that there is a paper width gap between the bearing and the back of blade. Tighten bolt against the flat on the shaft to secure assembly back in position.



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

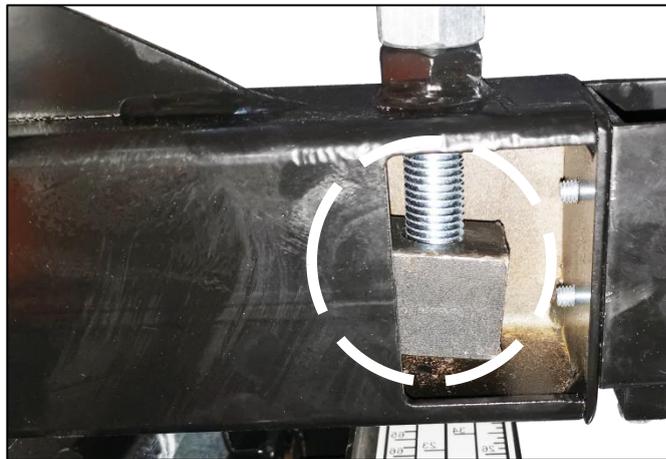
**#4 – BLADE TENSION**



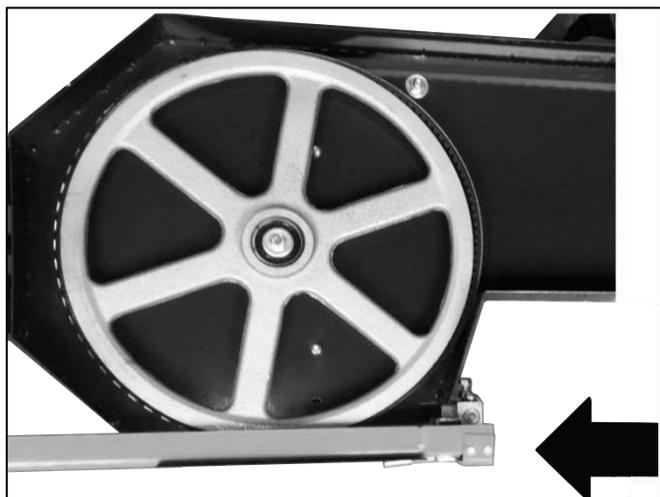
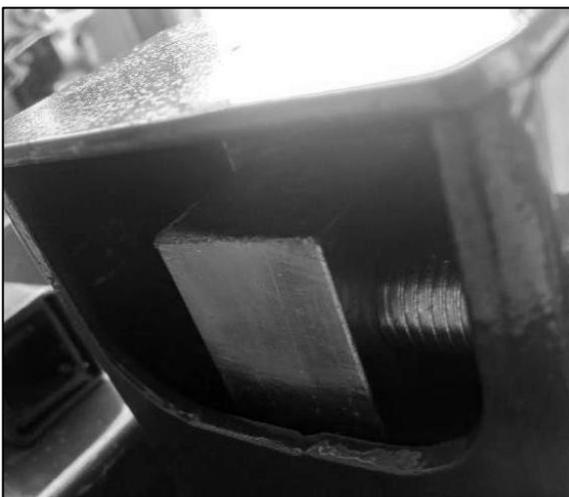
Proper blade tension is achieved when the blade deflects no more than a total of 1/8" - 1/4" up/down when it is firmly moved by hand at the center location of the blade guide blocks. Turning the blade tension "T" handle in the clockwise direction will add tension to blade.



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

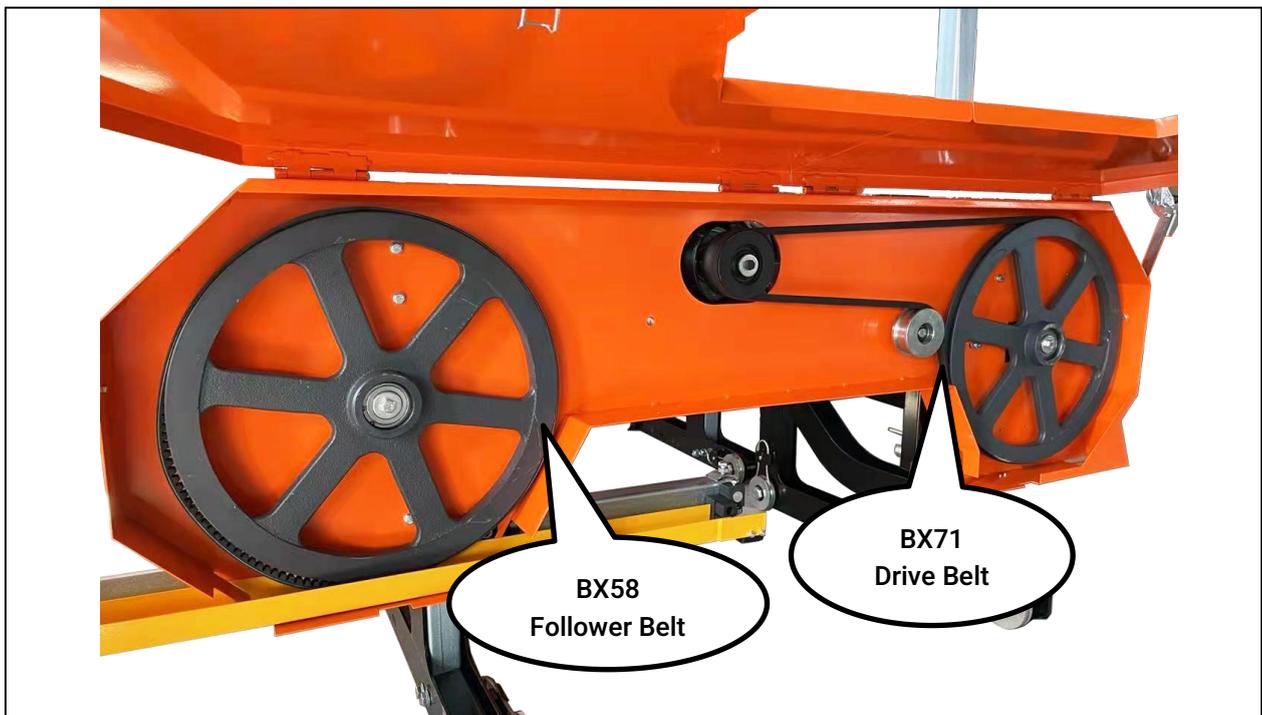
Never attempt the below with the engine running. As a safety precaution, remove the spark plug cap. Gloves and safety glasses must be worn when changing the blade.



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.



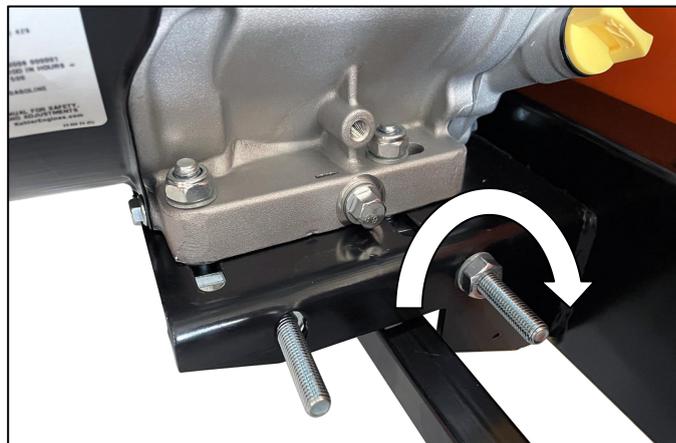
There are two rubber “V” belts on the sawmill and they should be replaced as a set. It is not advised to replace individual belts separately. It is recommended to use a BX71 drive belt for the drive side and a BX58 follower belt.



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.

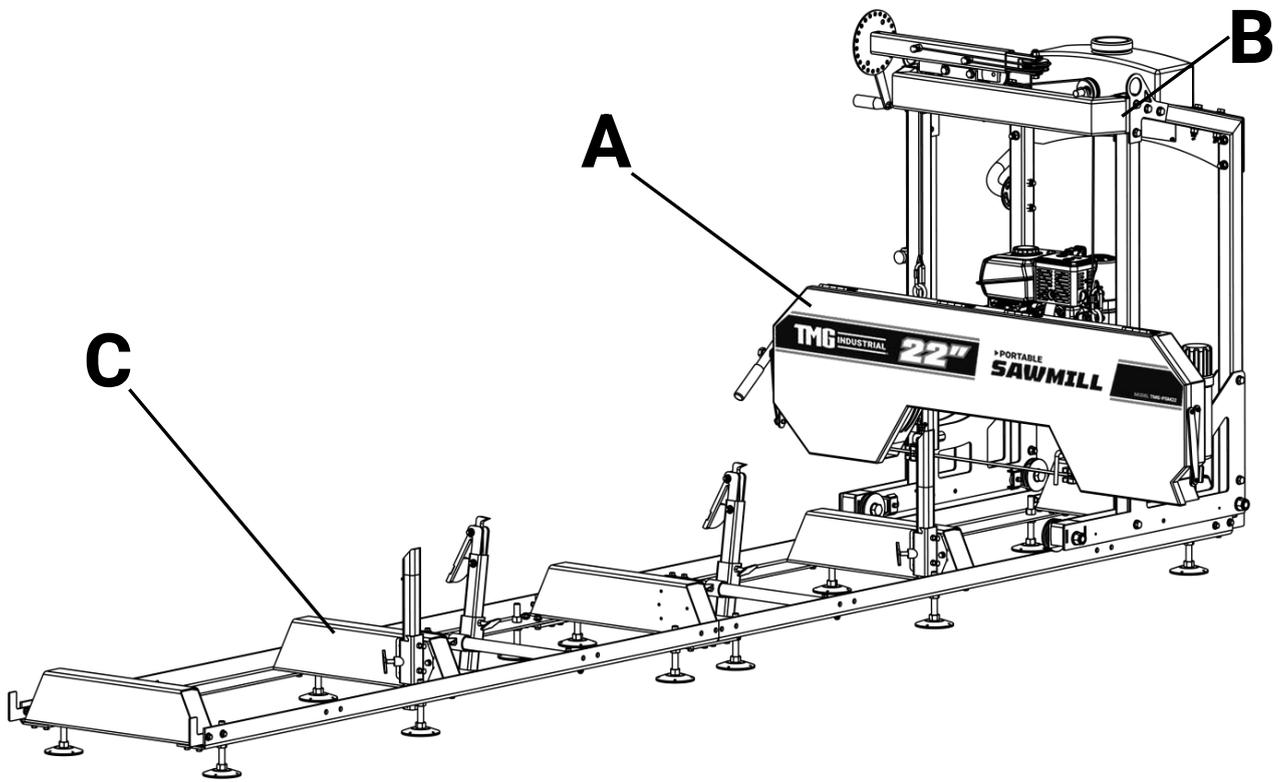
The follower belt can now be changed by simply pulling it off and installing the new one. The blade can now be re-installed, guards closed and proper blade tension set.

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

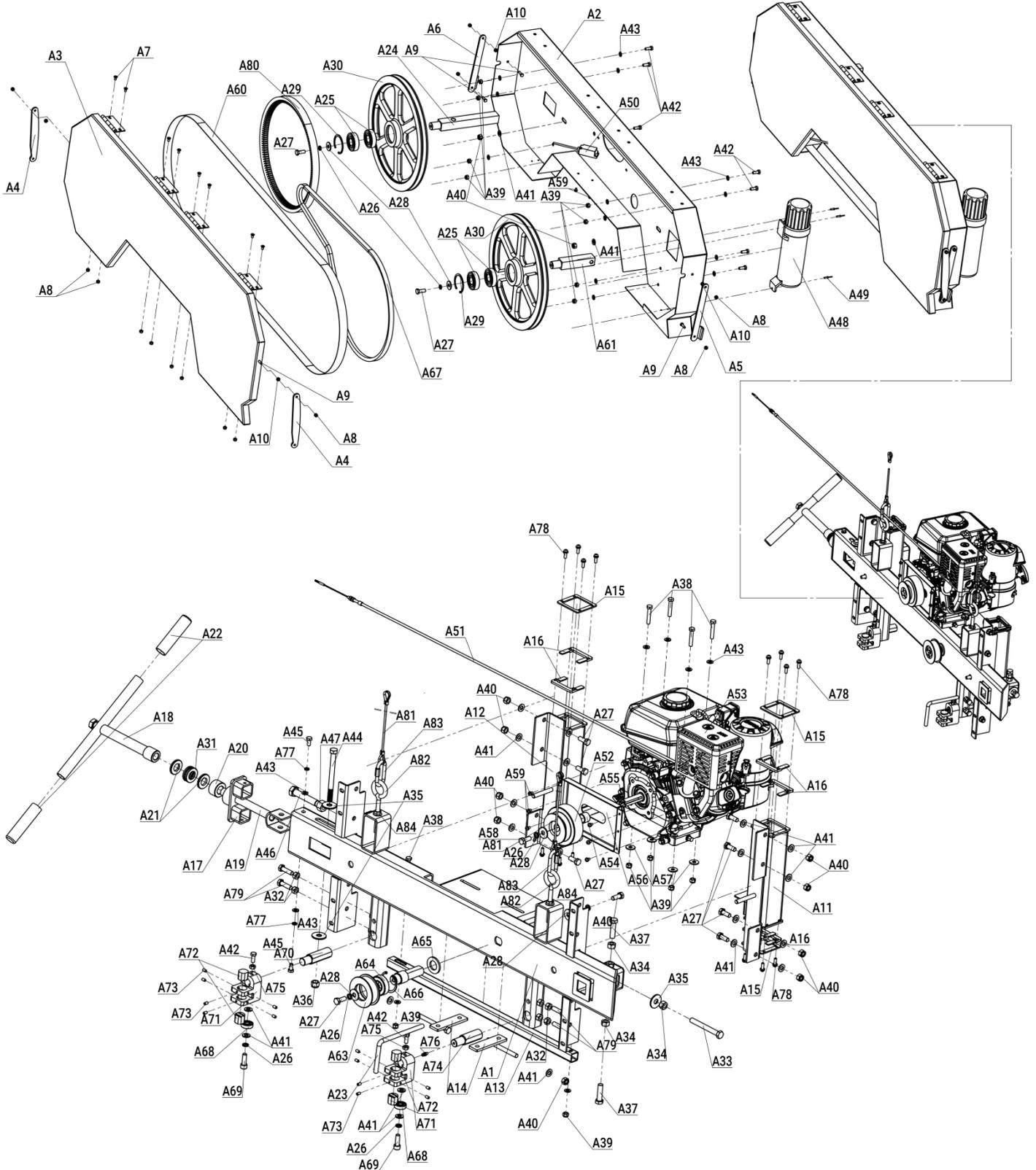
## TROUBLESHOOTING

Problem/Issue	Possible Causes	Resolution Options
Producing wavy cuts.	<ol style="list-style-type: none"> <li>1. Inadequate blade tension.</li> <li>2. Improper blade guide set up.</li> <li>3. Improper blade tracking.</li> <li>4. Sap build up on blade.</li> <li>5. Dull blade.</li> <li>6. Pushing mill too quickly.</li> </ol>	<ol style="list-style-type: none"> <li>1. Tighten blade. Refer to page 31.</li> <li>2. Gap between guide blocks and blade are incorrect. Refer to page 30.</li> <li>3. Adjust blade tracking. Refer to page 26.</li> <li>4. Install new blade. Refer to page 33. Always use blade lubricant.</li> <li>5. Install new blade. Refer to page 33.</li> <li>6. Slow feed rate down and push head slower through log.</li> </ol>
Last board is tapered or narrow in middle.	<ol style="list-style-type: none"> <li>1. Tracks are not level.</li> </ol>	<ol style="list-style-type: none"> <li>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.</li> </ol>
Blade dulls quickly.	<ol style="list-style-type: none"> <li>1. Logs are not clean.</li> <li>2. Foreign objects in log.</li> </ol>	<ol style="list-style-type: none"> <li>1. Logs may contain dirt/sand causing them to wear prematurely.</li> <li>2. Tree may contain nails, staples, old fencing etc.</li> </ol>
Blade comes off of bandwheels.	<ol style="list-style-type: none"> <li>1. Inadequate blade tension.</li> <li>2. Improper blade guide set up.</li> <li>3. Improper blade tracking.</li> <li>4. Belts are worn.</li> <li>5. Dull blade.</li> <li>6. Pushing mill too quickly.</li> </ol>	<ol style="list-style-type: none"> <li>1. Tighten blade. Refer to page 31.</li> <li>2. Gap between guide blocks and blade are incorrect. Refer to page 30.</li> <li>3. Adjust blade tracking. Refer to page 26.</li> <li>4. Install new belts. Refer to page 33.</li> <li>5. Install new blade. Refer to page 33.</li> <li>6. Slow feed rate down and push head slower through log.</li> </ol>
Blades are breaking.	<ol style="list-style-type: none"> <li>1. Too many blade sharpening.</li> <li>2. Inadequate blade tension.</li> <li>3. Improper blade guide set up.</li> <li>4. Improper blade tracking.</li> <li>5. Pushing mill too quickly.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace blade. Refer to page 33.</li> <li>2. Binding between guide blocks when blade is too loose. Tighten blade. Refer to page 32.</li> <li>3. Gap between guide blocks and blade are incorrect. Refer to page 30.</li> <li>4. Adjust blade tracking. Refer to page 26.</li> <li>5. Slow feed rate down and push head slower through log.</li> </ol>
Blade is slowing down or stopping when milling.	<ol style="list-style-type: none"> <li>1. Inadequate blade tension.</li> <li>2. Improper drive belt tension.</li> <li>3. Pushing mill too quickly.</li> </ol>	<ol style="list-style-type: none"> <li>1. Tighten blade. Refer to page 31.</li> <li>2. Belts are worn or too loose. Replace. Refer to page 34.</li> <li>3. Slow feed rate down and push head slower through log.</li> </ol>
Mill is not cutting/cutting very slowly.	<ol style="list-style-type: none"> <li>1. Dull blade.</li> <li>2. Blade is on backwards.</li> </ol>	<ol style="list-style-type: none"> <li>1. Install new blade. Refer to page 33.</li> <li>2. Remove blade and flip it inside out. The teeth should be facing in the direction of the log supports.</li> </ol>
Mill is vibrating excessively.	<ol style="list-style-type: none"> <li>1. Log is not clamped securely.</li> <li>2. Belts are deformed.</li> <li>3. Bandwheel bearing issue.</li> <li>4. Pushing mill too quickly.</li> <li>5. Loose bolts.</li> </ol>	<ol style="list-style-type: none"> <li>1. Ensure log is clamped firmly resting on log bunks and against log supports.</li> <li>2. Belts may have flats in them from leaving blade tension tight when not in use. Replace them. Refer to page 33.</li> <li>3. Inspect and replace the bandwheel bearings if worn.</li> <li>4. Slow feed rate down when milling.</li> <li>5. Check all bolts to ensure they are tight.</li> </ol>

# DIAGRAM--ENSEMBLE



# DIAGRAM (A) --BANDWHEEL HOUSING



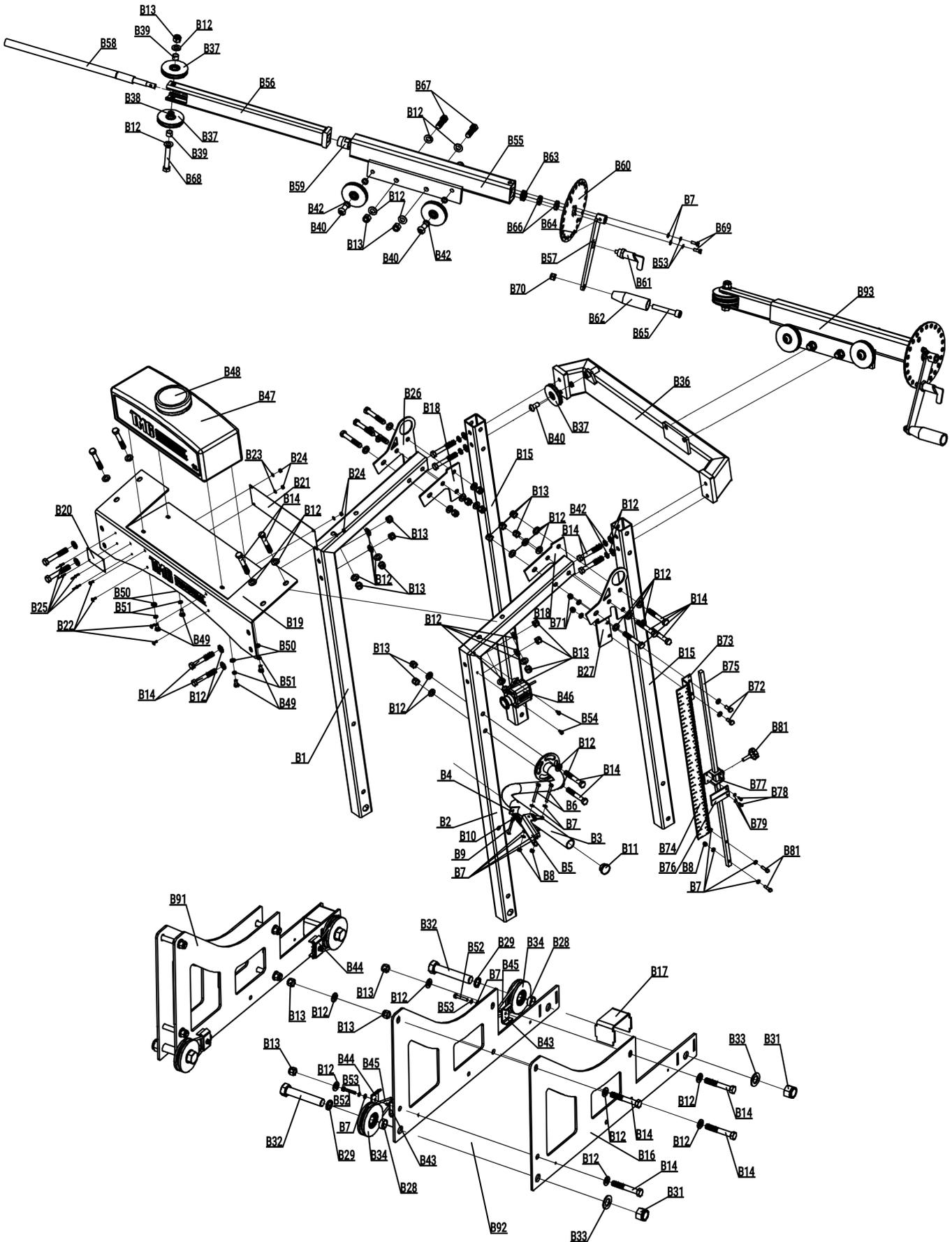
## PARTS LIST (A) -- BANDWHEEL HOUSING

PART NO.	DESCRIPTION	QTY	PART NO.	DESCRIPTION	QTY
A1	Beam welding	1	A35	Large washer (Ø12*35*3.0)	4
A2	Shield body welding	1	A36	Hex lock nut M12	2
A3	Welding of front hood door	1	A37	Hexagon head bolt M12X45	2
A4	Side pull plate 1	2	A38	Hexagon head bolt M8X45	6
A5	Side pull plate 2	1	A39	Non-metallic insert hex lock nut M8	18
A6	Side pull plate 3	1	A40	Non-metallic insert hex lock nut M10	12
A7	Cross pan head screw M6X12	8	A41	Plain washer Ø10	24
A8	Hexagon lock nut M6	14	A42	Hexagon head bolt M8X20	14
A9	Hexagon head bolt M6X20	6	A43	Plain washer Ø8	34
A10	Hex nut M6	4	A44	Hexagon bolt M12X140 half wire	1
A11	Right lifting lock welding	1	A45	Hexagon head bolt M8X16	2
A12	Left lifting lock welding	1	A46	Hexagon head bolt M16X80	1
A13	Pulling tube	1	A47	Hex nut M16	1
A14	Tensioning plate welding body	1	A48	Instruction bucket	1
A15	Cover plate	4	A49	Blind rivet 4X10	3
A16	Friction block	8	A50	Limit switch YBLX	1
A17	Tension seat welding	1	A51	Throttle line	1
A18	Tension handle welding	1	A52	Clutch B80-1905	1
A19	Tension rod welding	1	A53	Engine	1
A20	Cushion	1	A54	Gasoline engine sleeve	1
A21	Tension gasket (Ø21*38*4.5)	2	A55	Engine shaft 4.76*30	1
A22	25 tube rubber handle	2	A56	Soundproof cover	1
A23	Saw hook	1	A57	Large washer Ø8	4
A24	Passive saw wheel shaft	1	A58	Hexagonal head screw 5/16-24*3/4	1
A25	Deep groove ball bearing 6305	4	A59	Hexagonal flat round head combination M5*10	8
A26	Spring washer Ø10	7	A60	Saw blade (not include )	1
A27	Hexagon head bolt M10X25	12	A61	Active saw wheel shaft	1
A28	Large side flat pad (Ø10*35*3.0)	5	A62	Tensioner wheel shaft	1
A29	Circlips for holes 62	2	A63	Tensioner wheel	1
A30	Belt pulley	2	A64	Deep groove ball bearing 6205-2Z	1
A31	Thrust ball bearing for automobile steering knuckle 51204	1	A65	Plain washer Ø24	1
A32	Hex nut M10	4	A66	Shaft circlip Ø52	2
A33	Hexagon head bolts full thread M12X100	1	A67	Triangular belt BX71	1
A34	Hex nut M12	3	A68	Deep groove ball bearing 6200-2RS	2

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

PART NO.	DESCRIPTION	QTY	PART NO.	DESCRIPTION	QTY
A69	Hexagon socket head cap screw M10x30	2	A77	Spring washer Ø8	2
A70	Right saw chuck shaft	1	A78	Hexagon head screw M6X20	16
A71	Saw chuck shaft seat	2	A79	Hexagon head bolt M10X35	4
A72	Saw block for aluminum seat	4	A80	Triangular belt BX58	1
A73	Hexagon socket head set screw M6X10	12	A81	Lifting wire	2
A74	Left saw chuck shaft	1	A82	Sheep eye screw M10*100	2
A75	Hexagon nut M8	2	A83	Quick connect ring M8	2
A76	Grease nipple M6	1	A84	Hexagon flange nut M10	4

# PARTS LIST (B) --CARRIAGE



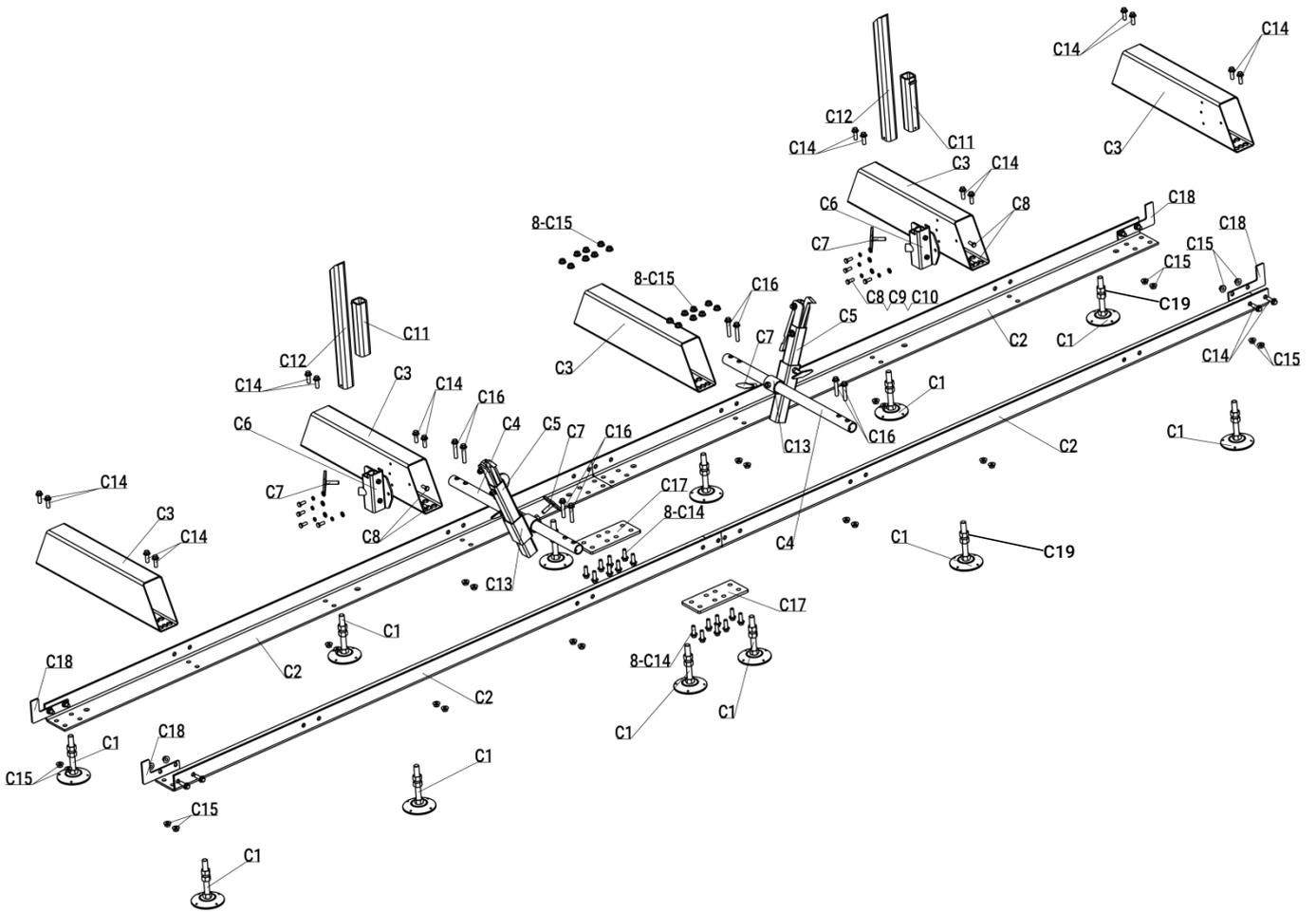
## PARTS LIST (B) --CARRIAGE

PART NO.	DESCRIPTION	QTY	PART NO.	DESCRIPTION	QTY
B1	Left bottom wheel frame welding	1	B42	Spring washer Ø12	6
B2	Right bottom wheel frame welding	1	B43	Splint 1	4
B3	Push handle welding	1	B44	Clamping plate 2	4
B4	Tension spring	1	B45	Wire rope brush	2
B5	Throttle handle	1	B46	Emergency stop switch	1
B6	Hexagon socket head screws M6X55	2	B47	Water tank	1
B7	Plain washer Ø6	17	B48	Water tank cover	1
B8	Hexagon lock nut M6	4	B49	Hexagon head bolt M8x16	4
B9	Hexagon socket flat round head screw M5x40	1	B50	Plain washer Ø8	8
B10	Hexagon nut M5	1	B51	Spring washer Ø8	4
B11	Circular pipe plug Ø32	1	B52	Hexagon head bolt M6x35	4
B12	Plain washer Ø12	62	B53	Spring washer Ø6	6
B13	Hexagon lock nut M12	29	B54	Hexagon socket flat round head triple combination screw M5*12	2
B14	Hexagon head bolt M12X80	30	B55	Expansion tube 2 welding	1
B15	Lifting square tube	2	B56	Telescopic tube 1 welding	1
B16	Outer reinforcement plate	2	B57	Rocker welding	1
B17	Inner reinforcement plate	2	B58	Lifting screw rod	1
B18	Saw frame connecting plate	2	B59	Copper nut	1
B19	Saw frame horizontal connecting plate	1	B60	Dial	1
B20	Product nameplate	1	B61	Knob plunger assembly	4
B21	Trademark pad	1	B62	Rotate the small handle M10x100	1
B22	Hexagon socket flat round head screw M5x12	4	B63	Thrust ball bearing 51102	1
B23	Plain washer Ø5	4	B64	Split elastic pin 5X24	1
B24	Hexagon lock nut M5	4	B65	Hexagon head bolt M10X70 half wire	1
B25	Open end flat round head blind rivets 4x12	4	B66	Small round nut M14x1.5	2
B26	External saw frame connecting plate	1	B67	Hexagon head bolt M12x40	2
B27	Connecting the ruler plate	1	B68	Hexagon head bolt M12x70	1
B28	Bottom wheel spacer sleeve 2	4	B69	Hexagon head bolt M6x12	1
B29	Bottom wheel spacer 1	4	B70	Hexagon lock nut M10	3
B31	Hex lock nut M20	4	B71	Hexagon lock nut M8	2
B32	Hexagon head bolt M20X110 half wire	4	B72	Hexagon head bolt M8X20	2
B33	Plain washer Ø20	4	B73	Ruler base	1
B34	Bottom wheel assembly	4	B74	Height ruler	1
B36	Upper beam welding	1	B75	Scale guide rail	1
B37	Lifting wheel assembly	5	B76	Scale plate	1
B38	Spacer 2	4	B77	Scale holder	1
B39	Spacer 1	2	B78	Cross recessed pan head screw M4X12	2
B40	Hexagon socket head bolt M12X25	3	B79	Plain washer Ø4	2

## PARTS LIST (B) --CARRIAGE (CONT)

PART NO.	DESCRIPTION	QTY	PART NO.	DESCRIPTION	QTY
B80	Hexagon lock nut M4	2	B90	Plain washer Ø10	4
B81	Handle M6x25	1	B91	Left wheel assembly	1
B82	Hexagon head bolt M8X45	2	B92	Right wheel assembly	1
B87	Support plate	2	B93	Lifting assembly	1
B88	Knob plunger	2	B94	Pushing bar assembly	1
B89	Hexagon head bolt M10X25	2			

## DIAGRAM (C) --GUIDE RAIL



## PARTS LIST (C) -- GUIDE RAIL

PART NO.	DESCRIPTION	QTY	PART NO.	DESCRIPTION	QTY
C1	Leveling feet M16	12	C11	Short log support	2
C2	Guide rail	4	C12	Long log support	2
C3	Crossbeam	6	C13	Sliding support	2
C4	Slide tube	2	C14	Hexagon flange bolts M10x30	40
C5	Quick clamping	2	C15	Hexagon flange nuts M10	48
C6	Sliding socket welding	2	C16	Hexagon socket head screw M10X50	8
C7	T-screw M10x40	6	C17	Rail connecting plate	2
C8	Hexagonal head bolt M8x20	12	C18	Limit plate	4
C9	Spring washer Ø8	8	C19	Hex nut M16	24
C10	Plain washer Ø8	8			