

2017

GT26 Sawmill Owner's Manual



WARNING:

Read carefully and understand all INSTRUCTIONS before operating. Failure to follow the safety rules and other basic safety precautions may result in serious personal injury.

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DISCLAIMER

This sawmill, its options, accessories, engine and blades are extremely dangerous and can cause severe injury or death. To avoid serious injury, the equipment must always be handled, operated and stored with the utmost care and good judgment and in accordance with all warnings, cautions, instructions and procedures contained in this manual, in the engine manual, in the instructions enclosed with optional accessories and on the decals on the equipment. Failure to use good judgement or to follow any of these warnings, cautions, instructions and procedures can result in severe injury or death.

Hardwood Mills Australia and Geoff's Tools Pty Ltd. disclaim any responsibility or liability, in negligence or otherwise, for any injuries, damages or losses of any kind arising during the course of assembling, operating or handling this equipment, options, accessories or blades howsoever caused. Responsibility for final inspection of the Hardwood Mills GT26 parts and components, and the assembly, maintenance and safe use of the equipment, lies solely with the person(s) who assembles and operates the equipment and handles blades.

Thank you very much for choosing the Hardwood Mills Australia GT26 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 Hardwood Mills Australia **0432 221 952**.


INTENDED USE


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


TECHNICAL SPECIFICATIONS

Item	Description
Petrol Engine	14 HP Kohler
Maximum log diameter	26" (660mm)
Maximum Board Width	21" (533mm)
Blade Size	1-1/4 x 144" (32 x 3657mm)

GENERAL SAFETY RULES

 **WARNING:** Read and understand all instructions. Failure to follow all instructions listed below may result in electric shock, fire and/or serious injury.

 **WARNING:** The warnings, cautions, and instructions discussed in this instruction manual cannot cover all possible conditions or situations that could occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.

 **WARNING:** Only operate the engine in a well-ventilated area. Carbon Monoxide produced by the engine during use can kill. Do not use indoors, near windows or in other sheltered areas.

NOTE: All Federal and State laws and any regulation having jurisdiction covering the safety requirements for use of the machine take precedence over the statements in this manual. Users of this machine must adhere to such regulations.

SAVE THESE INSTRUCTIONS

For your own safety and the safety of others, do not begin working with this equipment before having read and understood this entire manual, the engine manual, the instructions enclosed with optional accessories and the decals posted on the equipment. **Save all instructions for future reference**. Keep all decals in place, clean and readable. Replace any damaged or missing decals without delay.

<p>OPERATOR SAFETY</p>	<ul style="list-style-type: none"> ① 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. ① Individuals under the age of 18 may not work with the equipment or handle blades. ① Only persons who meet all of the following requirements are qualified to operate the equipment or handle blades. <ul style="list-style-type: none"> a. Have read and fully understood all the warnings, cautions, instructions and procedures in this manual, the engine manual and all instructions enclosed with the optional accessories, and on all decals posted on the equipment b. Are well rested c. Are in good physical health with good eyesight d. Have not consumed alcohol or drugs and/or e. Not taking medication that can impair judgement, reaction times, mobility, alertness or otherwise cause negative side effects. <p>Individuals who fail to meet any of these requirements are not qualified to use the equipment or handle blades.</p> ① Personal Protection Equipment (PPE) that meet the Australian standard should always be worn when operating the equipment and handling blades. This include: <ul style="list-style-type: none"> - Protective gloves as there is a risk of cutting injuries when handling blades, and blades and the engine can be hot immediately after sawing. - Wear approved hearing protection when operating the equipment. Hearing can be permanently impaired after only short exposure to high frequency sounds. - Wear Approved safety goggles when working with the equipment or handling blades. - Wear approved protective footwear with saw protection, steel toe-cap and non-slip sole when working with the equipment or handling blades. - Wear full length protective pants and hi-vis gear when working with or operating the equipment or blades. Never wear loose fittings clothing, scarves, jewelry or similar long items that could get caught when working with the equipment. Always secure loose hair before working with the equipment. - Wear respiration protection when working with the equipment. Long term inhalation of sawdust and the engines exhaust fumes can represent a health risk.
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<p>WORK SITE SAFETY</p>	<ul style="list-style-type: none"> ① Operate the equipment and handle blades in full daylight or under adequate site lighting, cast from at least four sides to minimize shadows. ① Keep the work area clean, free of clutter, pets, children, obstacles, hazards or distractions. ① Keep all children and animals well away from the equipment, blades and worksite. ① A broken blade can be ejected out of the sawdust chute at high velocity. Keep all people and pets completely clear of the path of the sawdust chute. Remember that, as the carriage moves, so does the blade and the path of the sawdust chute. ① Risk of a blade breaking increases when it is not properly and regularly profiled and maintained and/or when a blade is used past its service life. ① The illustration below depicts a view of a work site as seen from above. It sets out the minimum safety distance for persons other than the operator. While operating the equipment, the operator must be within the stipulated area, bounded between the broken line and the nearest side of the sawmill. ① While the equipment is running, persons other than the operator must observe the safety distances stipulated in the illustration. The minimum safety distance away from the equipment for persons other than the operator on the left side of the sawmill (opposite the operator) is 15m due to the risk of blades being ejected out of the sawdust chute. On all other sides of the equipment, the minimum distance away for persons other than the operator is 6m. ① Keep hands, limbs and all body parts completely clear of the blade, cables and any other moving parts. Remember that, as the carriage moves so do the blade, cables and other moving parts. Keep clear of all danger areas. ① Never operate the petrol powered engine in an enclosed area. Operate petrol-powered engine outside only, in a well ventilated area. The exhaust gases of the engine can cause nausea, delirium, and potentially death unless adequate ventilation is present. ① Never walk on the rails or cross bunks. ① Never step across the rails. ① Set up the equipment on level ground so that there is at least 3m of level ground around the rails and that there are no obstacles within that area. ① Do not stand between the pile of logs and the equipment. ① Always stand at the side of the pile of logs when handling the logs. Never stand where you are at risk of being hit by a rolling log. ① Keep a fully charged dry-chemical fire extinguisher visible and easily accessible at the worksite. ① Keep a fully stocked first aid kit visible and easily accessible at the worksite. ① Never work alone. Make sure that there are other adults within hearing distance should you need to call for help.
<p>OPERATING THE EQUIPMENT</p>	<ul style="list-style-type: none"> ① Cutting tools: Stand behind the carriage and keep both your hands on the push handle while operating the equipment. Never stand in front of the carriage or blade. Never pull the carriage through the cut. ① Saw head drop danger: Releasing, even slightly on the adjustment winch will release the winch brake. Releasing the winch break will cause the saw-head to drop quickly and violently causing serious injury. ① Clutch: The clutch mechanism is extremely sensitive. Even the slightest touch when the engine is idling can engage the clutch and thereby cause

**OPERATING
THE
EQUIPMENT**

the blade to spin. Never open the blade and band wheel guards while the engine/motor is running. Never put your hands on the blade and band wheel guards while the engine/motor is running.

- ① **Before** opening the blade and band-wheel guards, turn the engine off. If your machine is fitting with an electric motor, disconnect the power supply from the electrical outlet.
- ① **Coiled** blades can spring apart with considerable force and unpredictably in any direction. Handle coiled blades, including those packaged with the utmost care.
- ① The blade and band wheel guards are shatter resistant to temperatures as low as -28°C. Never operate the equipment in temperatures at or below -28°C
- ① Ensure that the equipment is assembled and maintained in accordance with this manual, the engine manual and any instructions enclosed with the optional accessories.
- ① Never use the equipment to cut anything other than clean logs or timber.
- ① Never add hardware or attachments of any kind to the equipment other than those manufactured by Hardwood Mills specifically for the equipment. Never modify the equipment.
- ① **Before operating the equipment**, ensure that:
 - All maintenance procedures have been properly carried out;
 - The blade is disengaged;
 - The equipment stands firmly and securely and the rails are fully supported along their full length;
 - The carriage retaining under-wheels and bed end stops are properly and securely installed;
 - All components, fasteners, cables and parts are properly and securely installed and in good working order;
 - All safety sheets are filled out
 - All safety features are properly and securely installed and in good working order including, but not limited to, the engine circuit breaking safety switch, the blade/band wheel brake, the sawdust chute cage, and blade and band wheel guards are correctly installed and securely locked; and
 - The blade is correctly installed, properly tensioned and aligned, and can rotate freely in the correct direction.
- ① **Before each cut**, ensure that:
 - No person other than the operator and no pets are within the minimum safety distances;
 - The work site is free of objects that the operator can trip over, hazards or distractions.
 - The blade will clear the log posts and log dogs;
 - The rails and track are free of debris;
 - The log is firmly secured with the log clamping mechanisms;
 - The blade and band wheel guards are correctly installed and securely locked; and
 - The operator is wearing all personal protective equipment.
- ① **At regular intervals during operation**, ensure that no person other than the operator and no pets are within the minimum safety distances.

OPERATING THE EQUIPMENT

- ① Turn the engine/motor **off** if you are going to leave the operating station behind the carriage, even just temporarily, for example when loading or repositioning logs or removing lumber.
- ① Never overreach. Keep proper footing at all times.
- ① Discontinue operating the equipment or handling blades if you become fatigued or distracted.
- ① Stay focused and alert. Watch what you are doing. Use common sense.
- ① **BURN DANGER:** The engine and muffler get very hot during operation and remain very hot for a long time after operation. Do not touch.
- ① **When operating the petrol powered engine:**
 - **FIRE DANGER!** Petrol, its vapors and oil are extremely flammable. Burn injuries can be life-threatening.
 - **Never** operate the petrol powered engine with a fuel or oil leak. The leaking fuel or oil could potentially come in contact with hot surfaces and ignite into flames. If you spill fuel, turn off the engine immediately and clean the area right away. If you get fuel on your clothing, change immediately.
 - To avoid fire or explosion, never smoke while refueling or handling fuel. Never permit smoking, welding, grinding, blade sharpening or any sparks or flames near the engine, fuel tanks or fuel.
 - To avoid fire or explosion, always turn the engine off before refueling.
 - Refuel before operating the sawmill when the engine is cold; never refuel when the engine is hot.
 - To avoid fire or explosion, always remove the fuel tank before installing or removing the battery.
- ① **When operating the electric powered motor:**
 - **RISK OF ELECTRIC SHOCK** – Hazardous voltage inside the disconnect box, starter box and at the electric motor can cause shock, burns or death.
 - **Electrical short danger!** Ensure that you do not short out any part of the electrical system. Shorting out the electrical system can cause both of the saw head support cables to simultaneously break suddenly and the saw head to drop violently causing serious injury.
 - **Only a qualified electrician** can open the electrical equipment. All electrical installation, service and maintenance work must be performed by a qualified electrician and must be performed in accordance to applicable Australia electrical codes. Failure to do so can result in serious injury or death.
 - **Before installing, servicing or maintaining** any of the electrical equipment, turn the key to the OFF position and remove the ignition key, disconnect the sawmill battery ground terminal and disconnect the power supply electrical cable from the electrical outlet (unplug it). Follow all applicable Australia safety standards.
 - If you have any reason to suspect that there is anything wrong with the electrical system, immediately disconnect (unplug) the power supply electrical cable from the electrical socket, turn the ignition key to the OFF position and remove it, disconnect the sawmill battery ground terminal and contact a qualified electrician to service the electrical equipment. **DO NOT OPERATE** the equipment until it has been serviced by a qualified electrician and certified fully safe to operate.

<p>STORING THE EQUIPMENT</p>	<ul style="list-style-type: none"> ① When storing the equipment, make sure the engine is off with the fuel shut off at the engine or the ignition switch turned to OFF position and removed and remove the blade. Consult your engine manual for safe shutdown procedures to prevent accidental ignition, and take any further measures necessary to prevent unauthorised operators from accessing or starting the equipment. If your sawmill is equipped with an electric motor, also disconnect the power supply electrical cable from your electrical socket (unplug). ① Ensure the blade and band wheel guards are correctly installed and securely locked. ① Lower the saw head to its lowest position. ① Always store the equipment in a secure and locked location completely in accessible by children or any other individuals. ① When not in use or when unattended, even for short periods of time such as during breaks, remove the blade from the sawmill and store it in a location inaccessible by children or any persons. In addition to being a wise safety precaution, removing the blade from the sawmill ensures that it is not stored under tension and so prevents premature blade fatigue. ① When not in use, take measures to secure the carriage to the bed to prevent the carriage from being blown or inadvertently rolled along the track ① Always store all blades in a secure and locked location, completely inaccessible by children or any persons.
<p>MAINTAINING THE EQUIPMENT</p>	<ul style="list-style-type: none"> ① Always ensure that all the equipment, its components, fasteners, cables and parts are properly maintained and adjusted and in good working order before operation. ① Before performing any service, maintenance, cleaning, repairs or adjustments, before opening the blade and band-wheel guards, before removing or installing blades, before moving the sawmill and before storing the equipment, turn the engine ignition key to the OFF position, remove the ignition key from the engine, and shut the fuel off at the engine. Consult your engine manual for safe shutdown procedures to prevent accidental ignition. If your sawmill is equipped with an electrical motor, also disconnect (unplug) the power supply electrical cable from your electrical outlet. ① Before performing any service, maintenance, cleaning, repairs or adjustments, before opening the blade and band-wheel guards, before removing or installing blades, before moving the sawmill and before storing the equipment, lower the saw head to its lowest position. ① Only service the engine before operating the sawmill when the engine is cold, never service the engine when the engine and muffler are hot. ① Keep operating handles dry, clean and free of oil. ① Use only original parts from Hardwood Mills. ① Keep saw blades sharp and clean. Properly maintained band saw blades are less likely to bind and are easier to control. ① 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. ① Always operate sawmill with all safety devices and guards in place and in working order. DO NOT modify or make changes to safety devices. DO NOT operate sawmill if any safety devices or guards are missing or inoperative.

<p>MOVING THE EQUIPMENT</p>	<ul style="list-style-type: none"> ① The saw carriage and the bed must not be lifted or transported simultaneously; the saw carriage and the bed must each be lifted and transported separately and by forklift or the like. ① RISK of being crushed by the carriage and bed. Keep all people and pets at least 6m from the equipment while it is being loaded, suspended, moved, and unloaded. ① Danger of tipping – do not transport on uneven terrain. ① Before moving the sawmill, lower the saw head to its lowest position. ① Lifting the saw carriage: Disconnect the carriage under wheels and lift the saw carriage with reliable rated straps affixed to both lifting points located at the top of the saw carriage. ① Lifting the bed: Lift the bed slowly and carefully with the use of tines of a forklift or the like positioned under the bed rails. Place a protective layer of weed securely on the top surface of the tines. Centered along the side of the bed, insert the tines all the way under the bed so that both rails are securely balanced and supported. Securely strap the rails to the tines.
<p>WARNING</p>	<p>WARNING: Cutting tools: Incorrect use of the equipment or unsafe blade handling can cause life-threatening injuries. Blades are extremely sharp and dangerous. Safety instructions are found in this section of this manual, in other sections throughout this manual, in the engine manual, in the instructions enclosed with optional accessories and on the decals posted on the equipment.</p> <p>Risk of being crushed by the carriage.</p> <p>Risk of tripping on the rails or the cross bunks</p> <p>Risk of being crushed between the sawmill and a moving log</p>
<p>WARRANTY</p>	<p>Hardwood Mills warrant that each new GT26 sawmill will be free, under normal use and maintenance, from any defects in workmanship and materials for a period of ONE YEAR from the date of purchase by the ORIGINAL purchaser. Should any trouble develop during this period, return of the defective part (and any other parts called for), freight prepaid, to Hardwood Mills warranty coverage commences from the date of purchase by the original purchaser.</p> <p>If, after inspection, Hardwood Mills determines that the trouble is attributable to faulty workmanship or material at the time of manufacture, Hardwood Mills will repair or, at its option, replace the part at no charge.</p> <p>The warranty does not cover:</p> <ol style="list-style-type: none"> 1. The engine which is warranted directly but the engine manufacturer. 2. Normal maintenance services 3. Repairs required where alterations have been made to the equipment, or as a result of the attachment or installation of any parts or devices on the equipment other than those manufactured by Hardwood Mills specifically for the equipment. 4. Repairs required after repairs have been made or attempted to be made by an unauthorised individual. 5. Repairs required as a result of collision, accident, misuse or abuse or lack of required maintenance. 6. Repairs required because the equipment has not been assembled correctly; and 7. Consumable items such as belts or blades. 8. Chips, scratches, rust or blemishes in finish. <ul style="list-style-type: none"> • It is always a good idea to keep spare parts on hand to ensure that your milling operation stays on schedule, particularly if you intend to mill

<p>WARRANTY</p>	<p>commercially. At a minimum, you should keep adequate stock of blades, spare belts, bearings, blade guides and track sweepers.</p> <p>Hardwood Mills warrant that the new GT26 spare parts (except consumables such as but not limited to blades and belts), will be free under normal use and maintenance, from any defects in workmanship and materials for a period of forty-five days from the date of purchase by the original purchaser.</p> <p>To obtain warranty service: Contact Hardwood Mills via sales@hardwoodmills.com.au with the part number and issue, your name and best contact number.</p> <p>Engine warranty: Hardwood Mills does not warrant the engine; the engine is warranted directly by the engine manufacturer. Refer to your engine owner's manual for the warranty policy regarding your engine. Contact your engine manufacturer's customer service department or your local authorised engine dealer directly with any questions regarding your engine.</p> <p>Kohler Australia 1800 564 537 Or check their website.</p>
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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
3. 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 bandwheels.
6. **Drive Belt** — Periodically check the tension of the drive belt. It should deflect by no more than 1/2".
7. **Sawhead Locking Cam Handles** — Grease assembly every 30 days or as required.
8. **Sawhead Vertical Posts** — Spray posts before use with a silicone spray lubricant such as 3-in-1 or Jig-A-Loo.
9. **Bandwheel Guards** — Routinely remove any build-up of sawdust that may collect inside the bandwheel 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

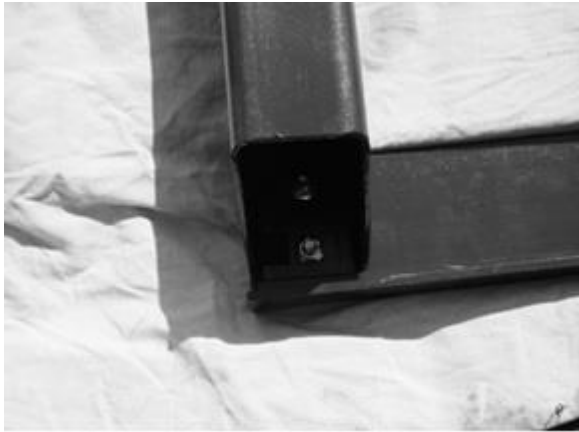
Take all of the parts out of the shipping crate and lay them out.



#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.





Attach track cross supports to “L” channel with the provided nuts & bolts. The joining plate is used at the seam joint to join the two sections together (shown in top right 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.



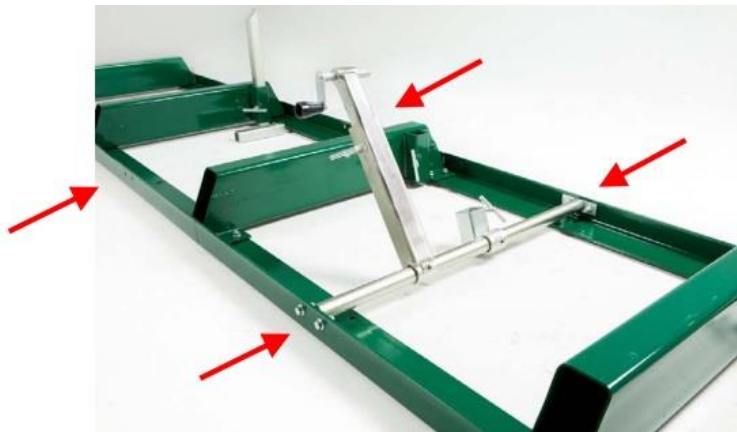
Assemble carriage stops at the ends of the tracks (4 stops total) and tighten.

#3 – LOG DOG & SUPPORTS

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



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

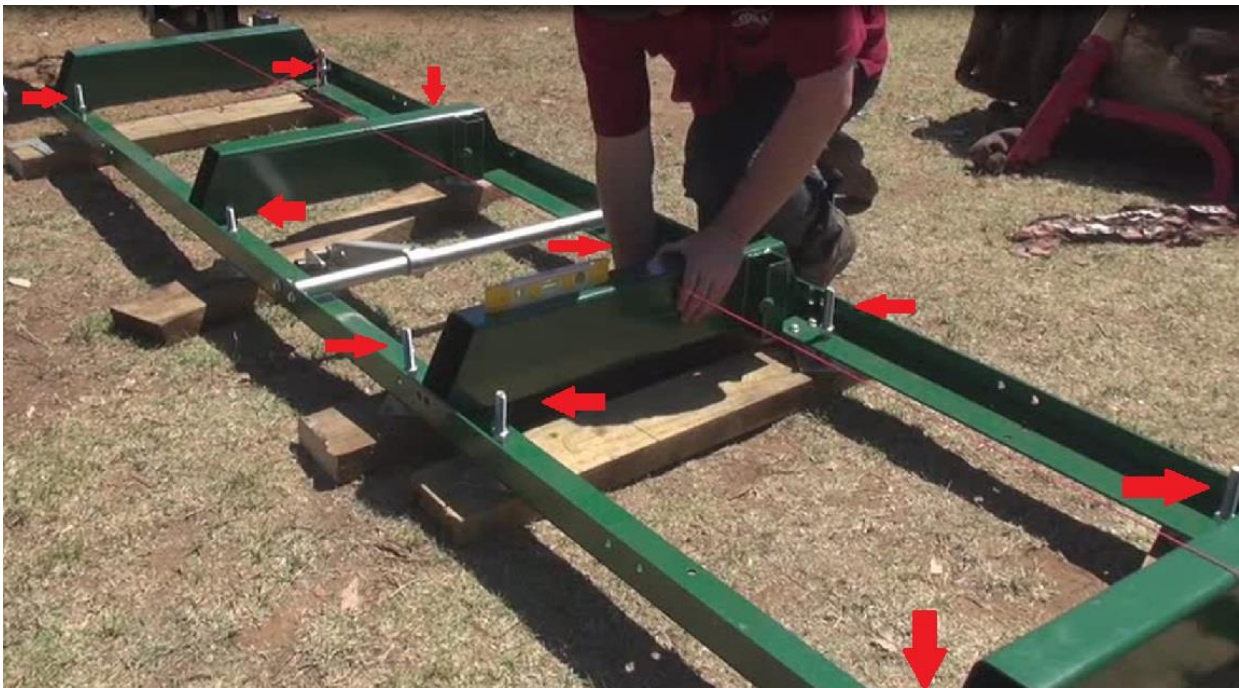


Insert log supports into track cross supports and secure with “T” handles. The “T” handle threads should be coated with waterproof grease. The sawmill includes two sets of log supports – a short set and a long set. The longer set is ideal for larger logs and the shorter set is ideal for small logs and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





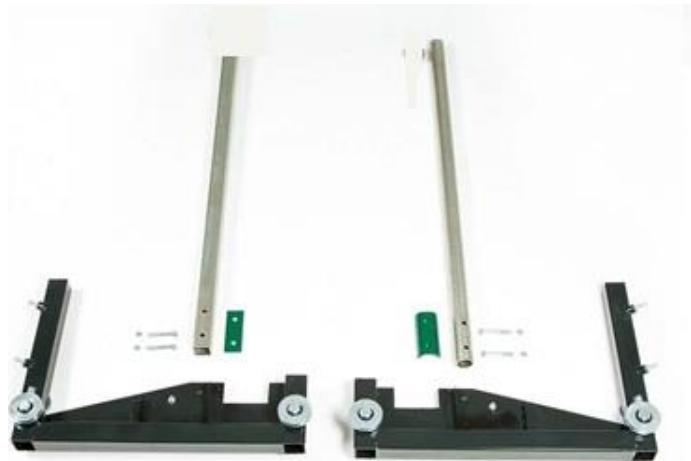
We recommend screwing the leveling legs to sleepers once the mill has been made level. So before screwing the mill to the sleepers, it is highly recommended that you run a string line down **both** sides of the mill, to make sure the track is straight and level. (The string line is in pink in the above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



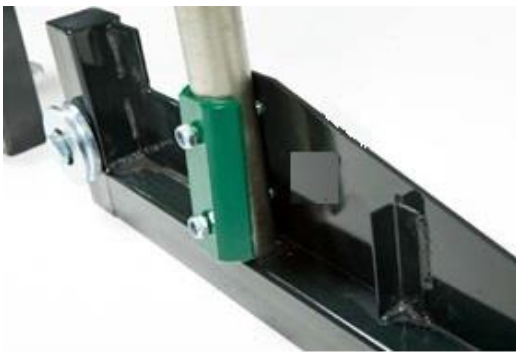
The red arrows indicate where the locations of the leveling legs are. There are six per 2 metres of track. 18 in total on the machine. On the intermediate bunks the leveling legs alternate. We recommend placing the mill leveling legs on sleepers running left to right as shown above. You need to make 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

Lay the above carriage pieces out.



Assemble round vertical post (shown on left) to wheel assembly using the two bolts and back plate. Repeat same step for the square vertical post assembly (shown on right).



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.





Insert vertical post assemblies into corresponding locations in head assembly and insert the rear square frame into the carriage base until it hits the bottom as shown in pictures above.



Lock the cam handles on both the round and 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 round and square vertical post. If they don't, a 13mm wrench will need to be used to tighten the adjustment nut. This will allow the clamps to lock on the post better.



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

Slide the top cross support over the round post and insert the pulley, collar and bolt assembly into the hole.



Install the nut on the inside of the round post to secure the pulley. Using a 16mm wrench to hold the nut, tighten the bolt.



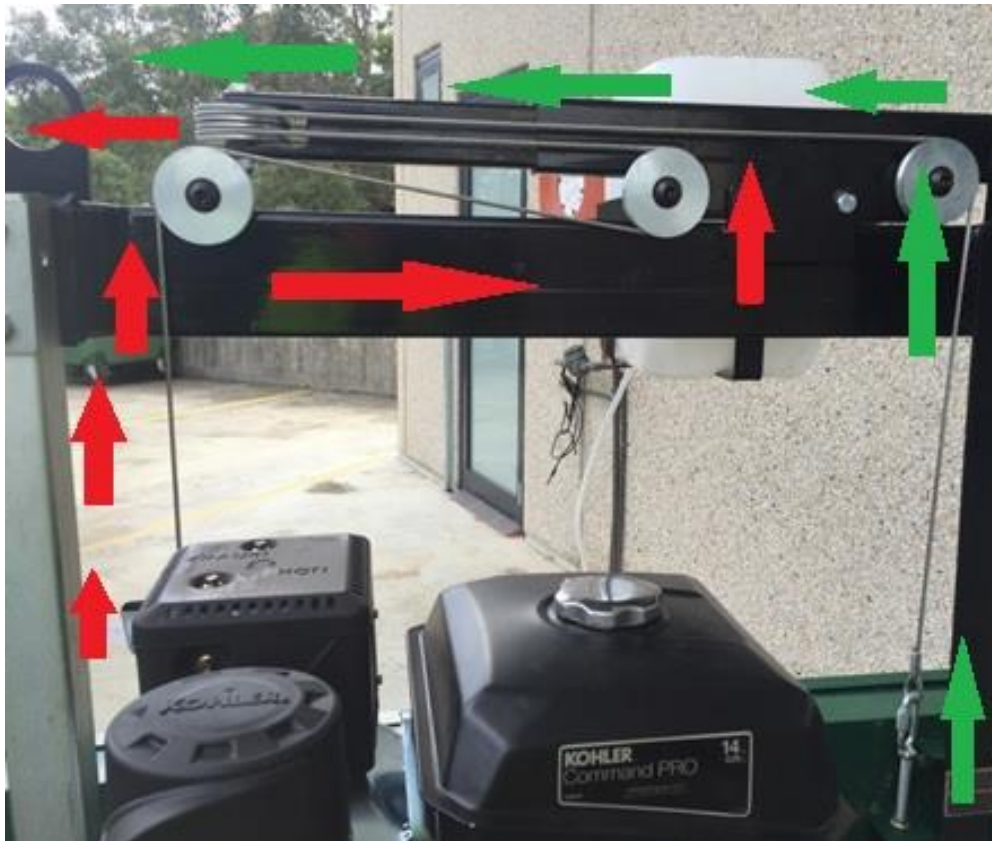
Insert the bolts into the back plate as shown in above image. Align the square post holes with the corresponding black top cross support holes. Tighten using an 18mm socket.



Place the measuring scale bracket as shown above and insert bolts and nuts. 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. Tighten nuts using a 13mm socket.



Install the square indicator rod to the sawmill using the two bolts and tighten using a 10mm socket. Slide the scale indicator over the square rod and tighten.



Route the cables on both sides as shown in the above image.



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.



Install the lube tank brace to the top cross support as shown. Insert lube tank bottle into the brace and attach the hose to the copper spout near the blade guide assembly (as shown below). ***Please Note: We recommend adding some dishwashing liquid to the tank to help lubricate the wood – two to three capfuls.***



Insert the lube tank line through the hole in the bracket on the of the saw head as show. Use a 16mm socket to secure the copper end in position. Do not over tighten or crush the copper end.



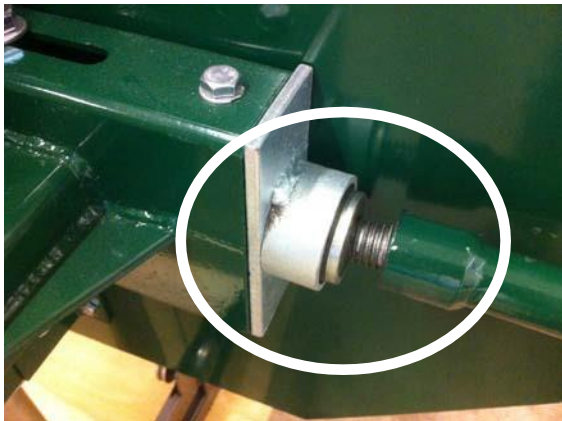
Install the throttle handle to the round bar as shown in above left image. With the throttle lever in the idle position/fully open, pull the cable tight at the engine and tighten the screw to hold it in place. This will take all of the slack out of the cable.



PLEASE NOTE*The idler screw (as shown above) needs to be sticking out approx. 4mm, as shown in picture above. Failure to do this will result in the engine not running at its full RPMs' which will result a poor cut.**



Attach the four track sweepers to the frame so that the steel brush reaches the bottom of the groove in the carriage wheels. Use a 13mm socket to fasten.

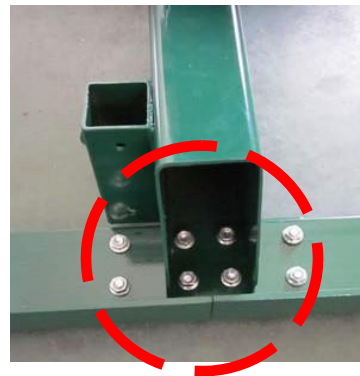


Add waterproof grease to the threads of the blade tension "T" handle and to the washer face that it meets before use. Proper blade tension is achieved when the blade deflects no more than a total of 1/8" - 1/4" up/down. Alternatively, a 24mm socket on a torque wrench may be used to tighten the "T" handle to 8-20 ft-lbs torque. See above right image.

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



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



Push the saw head up and down the track system to ensure that the width of the track allows for the saw head to move freely. If it binds, 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 as shown in above right image using a 16mm socket.

#5 – ENGINE

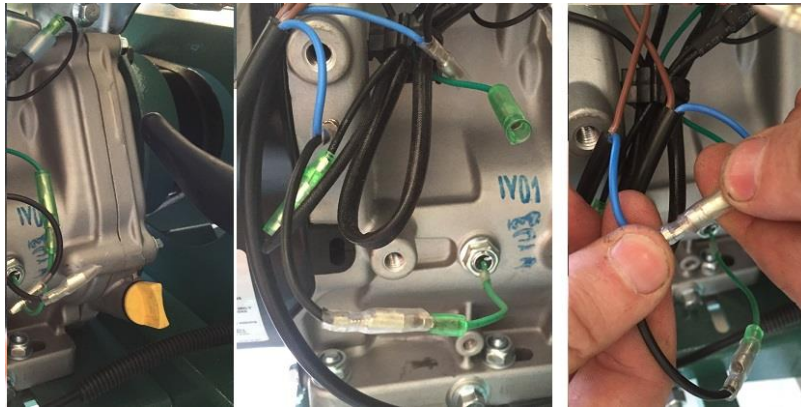


Refer to the engine manual before using your sawmill. Please note that the engine does not contain any petrol or engine oil when it is shipped. Furthermore, the engine is equipped with an oil alert system, meaning that if the crankcase oil level is low or empty, the power is cut to the spark plug and it will not start.

Wiring in the emergency stop button.



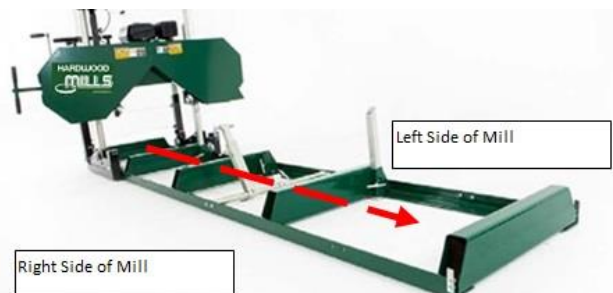
To wire the emergency stop, place two brown earth lines, screw to engine as per photo. Disconnect engine oil alert (green wires), then connect black wire from emergency stop to green and black wire from door cut out switch to the other green wire. Connect both the blue and black combination wires together. Test function of emergency stop button before using the machine. If it fails, cease use and contact Hardwood Mills immediately.



Anti-tamper bolt must be fitted to machine (as per photo), if the anti-tamper bolt is not supplied or fitted, the machine cannot be used. If it has not been supplied please call Hardwood Mills immediately.



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.



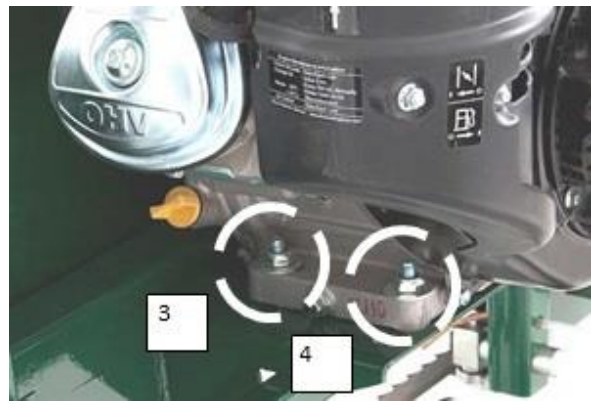
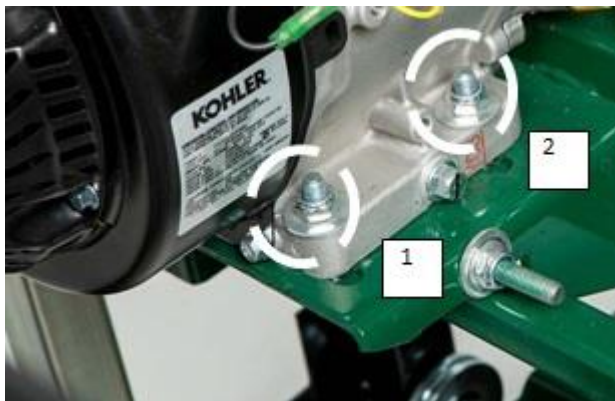
****Now that your sawmill is assembled, please run through the “SAWMILL SET-UP PROCEDURES” in the following section. Failure to do so may result in poor sawing performance, damage or injury. See next page.****

SAWMILL SET-UP PROCEDURES

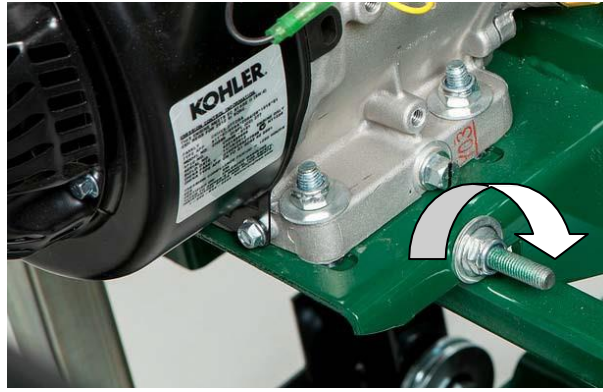
#1 – BELT TENSION



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.



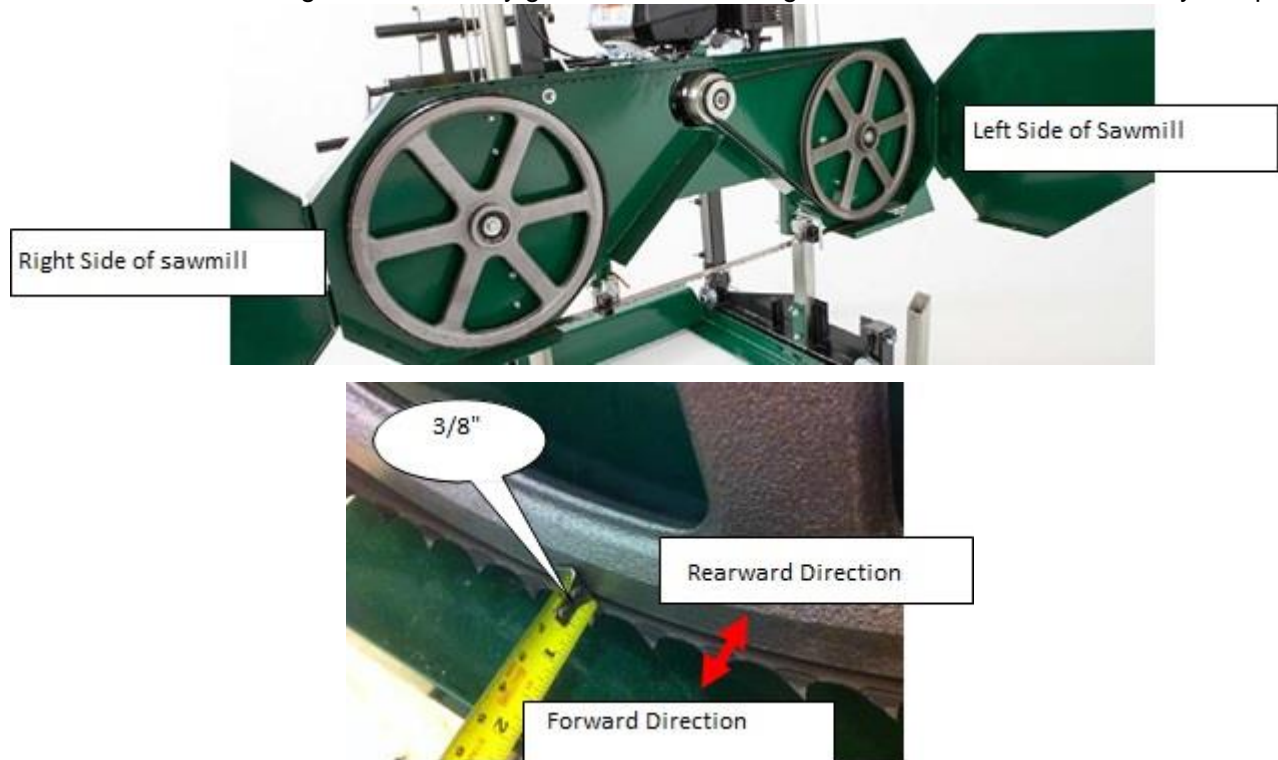
To tighten the drive belt, start by loosening the four bolts that secure the engine to the engine mount using a 16mm wrench.



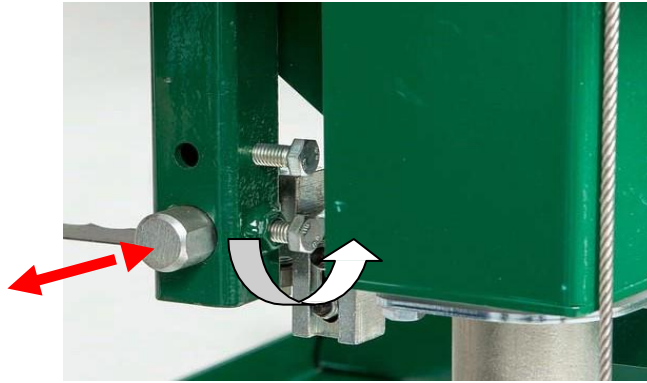
Now that the engine is free to slide on the engine mounting plate, turn the 16mm nut on the horizontal stud in the clockwise direction. This will pull the engine towards the stud and apply more tension on the belt. Do this step incrementally while checking the belt for proper deflection. It is also important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

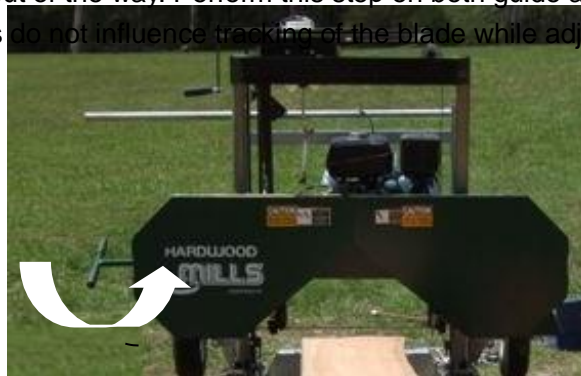
Never attempt the below with the engine running. As a safety precaution, remove the spark plug cap. It is also advised to wear gloves and safety glasses when working with the blade as it is extremely sharp.



When fitting a brand new blade, always turn it inside about BEFORE applying to the mill. 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 16mm socket. The round shaft should now be free to slide rearward and out of the way. Perform this step on both guide assemblies. This will ensure that the guide bearings do not influence tracking of the blade while adjusting.

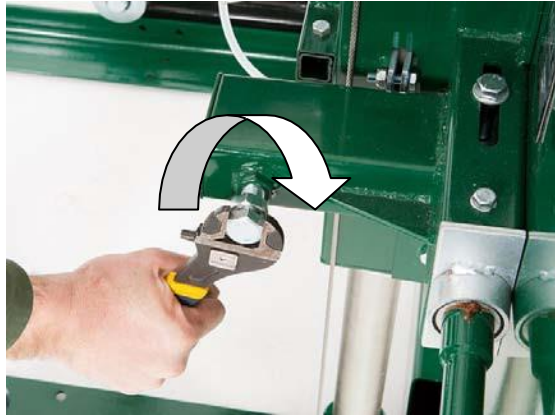


Take some tension off of the blade by turning the “T” handle in the counter-clockwise direction one full turn from full tension position.

Adjusting The Right Hand Side



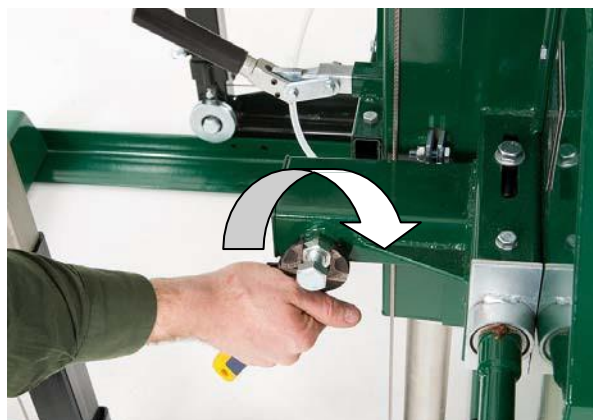
Loosen the tracking alignment locking nut with an adjustable wrench.



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

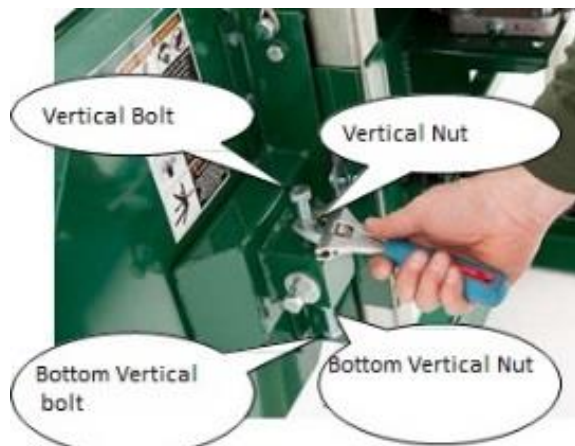


Wearing gloves, spin the bandwheel with your hand and observe how the blade has changed tracking. Measure the distance again and repeat the above step to further compensate if required. The ideal measurement is 3/8".

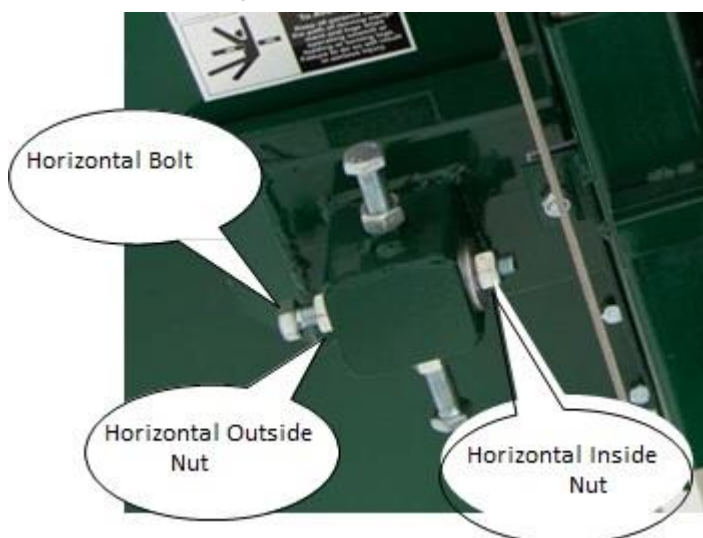


Once satisfied with the measurement, tighten the locking nut clockwise.

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”.

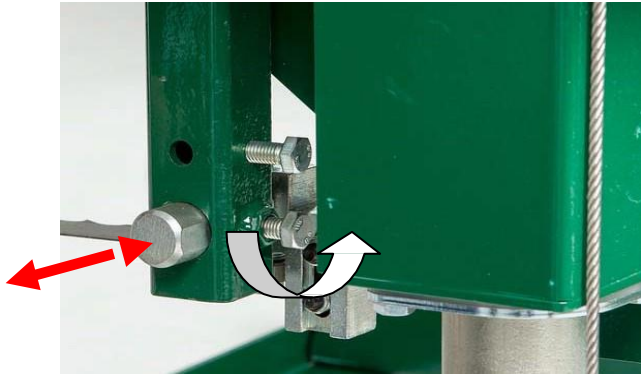
Once the blade is tracking true, bring the blade guide assemblies back up to the blade. Keep a paper width distance between the blade guide bearing and the back of the blade. More information on this set up can be found in the next section – **“BLADE GUIDE ADJUSTMENT”**

#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.



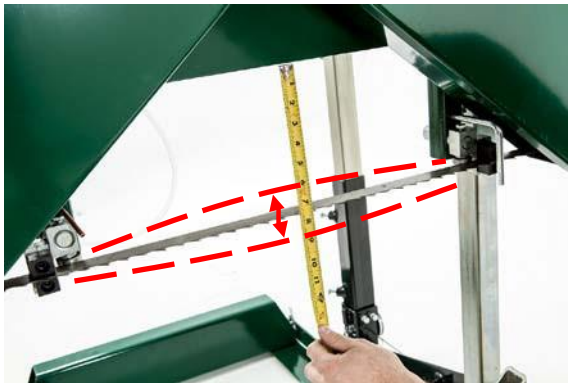


Loosen the blade guide assembly bolt with a 16mm socket. The round shaft should now be free to slide back and forth. Position it so that there is a paper width gap between the bearing and the back of blade. Tighten bolt against the flat on the shaft to secure assembly back in position.

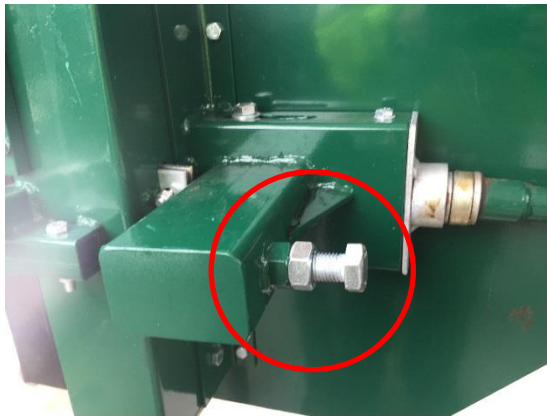


Using a piece of paper in between the blade and blade guide blocks, tighten the allen key bolts.

#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. Alternatively, a 24mm socket on a torque wrench may be used to tighten the "T" handle to 8-20 ft-lbs torque. See above right image.



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.

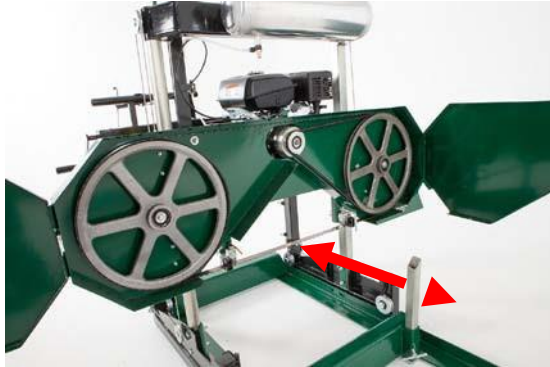
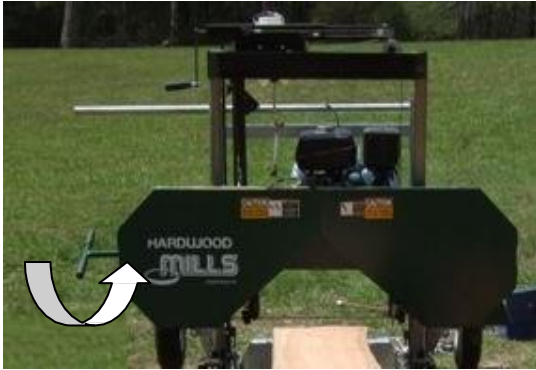


Ensure the blade support arm is locked into place after tensioning the blade.

SAWMILL MAINTENANCE

#1 – CHANGING THE BLADE

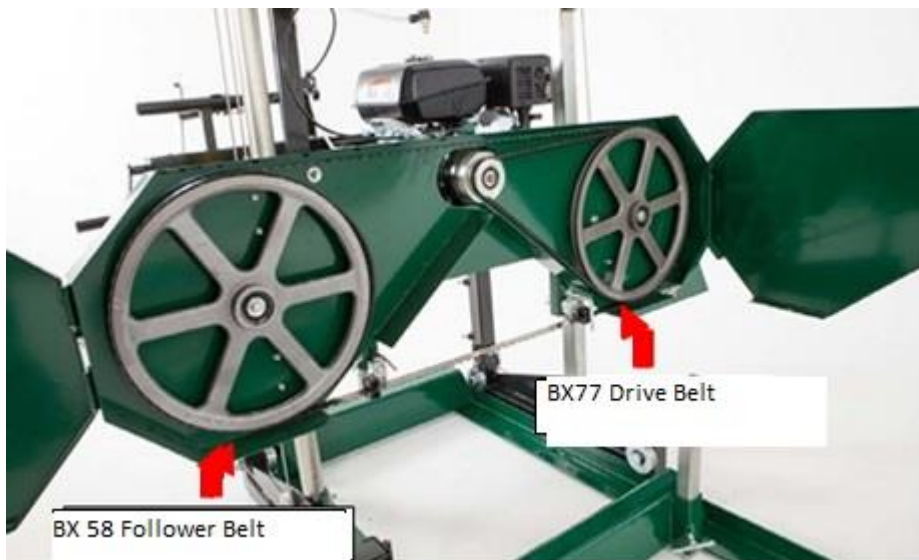
Never attempt the below with the engine running. As a safety precaution, remove the spark plug cap. Gloves and safety glasses must be worn when changing the blade.



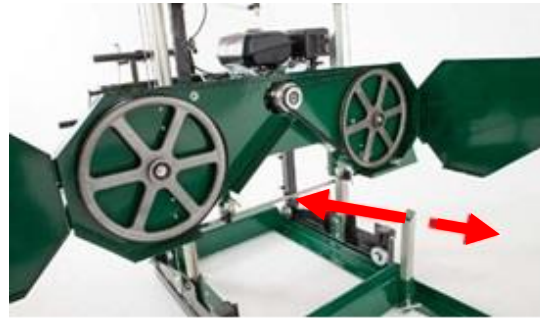
Remove the tension in the blade by turning the “T” handle in the counter-clockwise direction and then open the blade guard cover. The blade should now be loose and free to pull straight out the front. The new blade can now be installed, guards closed and proper blade tension set.

#2 – REPLACING BELTS

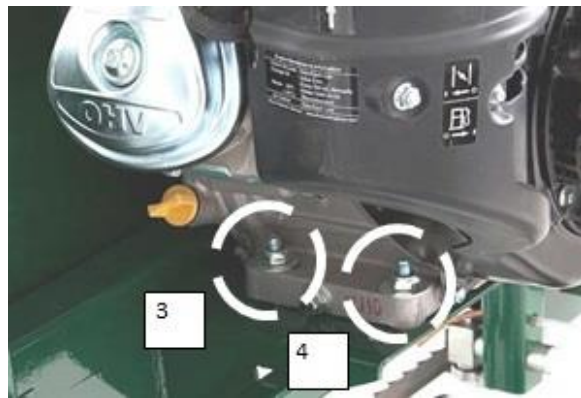
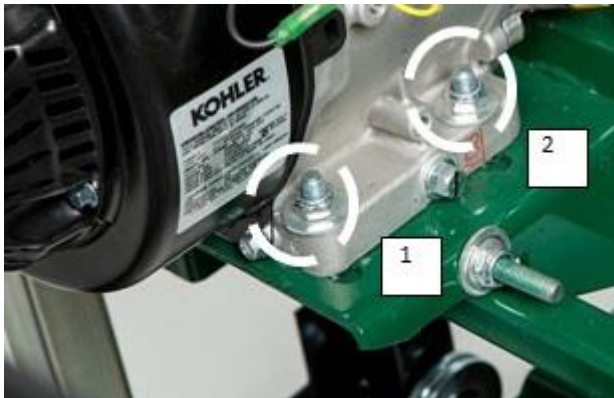
Never attempt the below with the engine running. As a safety precaution, remove the spark plug cap. Gloves and safety glasses must be worn when replacing the belts.



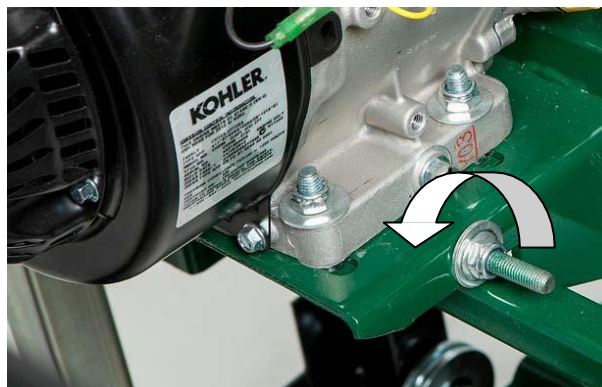
There are two rubber “V” belts on the sawmill and they should be replaced as a set. It is not advised to replace individual belts separately. It is recommended to use a BX77 cogged belt for the drive side and a BX58 follower belt.



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"> 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. 	<ol style="list-style-type: none"> 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 33. Always use blade lubricant. 5. Install new blade. Refer to page 33. 6. Slow feed rate down and push head slower through log.
Last board is tapered or narrow in middle.	<ol style="list-style-type: none"> 1. Tracks are not level. 	<ol style="list-style-type: none"> 1. Tracks need to be checked with level and adjusted to be square. They also need to be set up on firm, sturdy ground/base so deflection does not occur from logs or sawmill head.
Blade dulls quickly.	<ol style="list-style-type: none"> 1. Logs are not clean. 2. Foreign objects in log. 	<ol style="list-style-type: none"> 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.	<ol style="list-style-type: none"> 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. 	<ol style="list-style-type: none"> 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 33. 5. Install new blade. Refer to page 33. 6. Slow feed rate down and push head slower through log.
Blades are breaking.	<ol style="list-style-type: none"> 1. Too many blade sharpenings. 2. Inadequate blade tension. 3. Improper blade guide set up. 4. Improper blade tracking. 5. Pushing mill too quickly. 	<ol style="list-style-type: none"> 1. Replace blade. Refer to page 33. 2. Binding between guide blocks when blade is too loose. Tighten blade. Refer to page 32. 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.	<ol style="list-style-type: none"> 1. Inadequate blade tension. 2. Improper drive belt tension. 3. Pushing mill too quickly. 	<ol style="list-style-type: none"> 1. Tighten blade. Refer to page 32. 2. Belts are worn or too loose. Replace. Refer to page 33. 3. Slow feed rate down and push head slower through log.
Mill is not cutting/cutting very slowly.	<ol style="list-style-type: none"> 1. Dull blade. 2. Blade is on backwards. 	<ol style="list-style-type: none"> 1. Install new blade. Refer to page 33. 2. Remove blade and flip it inside out. The teeth should be facing in the direction of the log supports.
Mill is vibrating excessively.	<ol style="list-style-type: none"> 1. Log is not clamped securely. 2. Belts are deformed. 3. Bandwheel bearing issue. 4. Pushing mill too quickly. 5. Loose bolts. 	<ol style="list-style-type: none"> 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 33. 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 & PARTS LIST

P/N	Description	Spec	Q'ty
1	Track Wheel		4
2	Hex Nut	M20	4
3	Saw Head Wheel Base (Left)		1
4	Spacer Plate		1
5	Nut	M12	6
6	Hex Bolt	M20×110	4
7	Saw Head Wheel Base (Right)		1
8	Hex Bolt	M12×80	5
9	Nut	M12	6
10	Spacer Plate		1
11	Hex Bolt	M8×20	9
12	Hex Bolt	M10×25	21
13	Hex Bolt	M12×65	3
14	Blade Tension Handle		1
15	Flat Washer	12	2
16	Bolt	M12×145	1
17	Round Support Fastener Assembly		1
18	Hex Bolt	M8×16	5
19	Adjustable Clamp		1
20	Round Support		1
21	Scale Frame		1
22	Hex Bolt	M8×25	12
23	Cross Beam Assembly		1
24	Flat Washer	8	9
25	Nut	M8	36
26	Round Pin	B6×40	2
27	Cotter Pin	5×20	1
28	Thread Rod		1
29	Crank Assembly		1
30	Plastic Handle		1
31	Hex Bolt	M12×65	3
32	Hex Nut	M12	6
34	Housing		1
36	Bolt	M12×25	3
38	Spring Washer	φ12	3
39	Thread Block		1
40	Hex Bolt	M12×70	1
43	Nut	M12	
44	Bolt	M10×30	
45	Flat Washer		
46	Hook		1

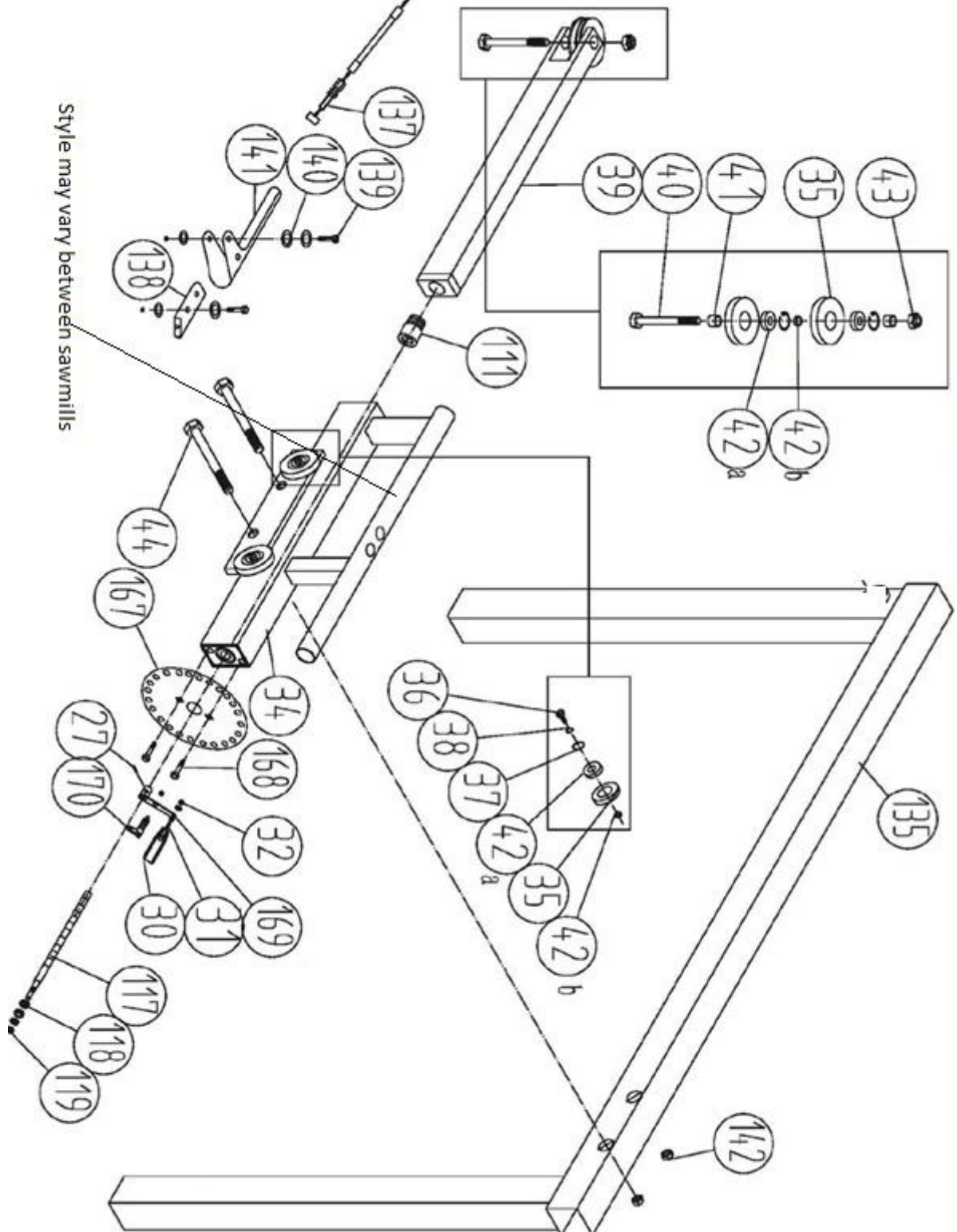
P/N	Description	Spec	Q'ty
48	Square Post		1
49	Bolt	M12×65	2
50	Blade Guard (Back)		1
51	Bolt	M12×45	1
52	Nut	M12	4
53	Hex Bolt	M12×100	1
54	Spacer		1
55	Bolt	M8×45	6
56	Reinforcement Rail		1
57	Engine Mount Plate		1
58	Hex Bolt	M12×80	2
59	Cam Lock Handle		2
60	Bolt	M10×25	2
61	Spring Washer	10	2
62	Flat Washer	10	2
63	Circlip	62	2
64	Bandwheel Bearing	6305	4
65	Cogged Belt	BX77	1
66	Bandwheel		2
67	Clutch		1
68	Pin		1
69	Blade		1
70	Bolt	M8×45	4
71	Blade Guide Block		4
72	Blade Guide Block Holder		1
73	Round Pin		2
74	Drive Wheel Shaft		1
75	Driven Wheel Shaft		1
76	Cogged Belt	BX58	1
77	Hex Bolt	M10×25	28
78	Track A		2
79	End Stop		4
80	Horizontal Log Support (End)		2
81	Horizontal Log Support		2
82	Vertical Log Support (Long)		2
83	Mandrel Assembly		2
84	Nut	M10	32
85	Spindle Tube		1
86	Log Fastener Receiver Tube		1
87	T Bolt		5
88	Log Fastener Rocker Arm		1
89	Fastener Crank		1
90	Horizontal Log Support (Joiner)		1
91	Vertical Log Support (Short)		2
92	Track B		2
93	Nut	M8	1

DIAGRAM & PARTS LIST CONT'D

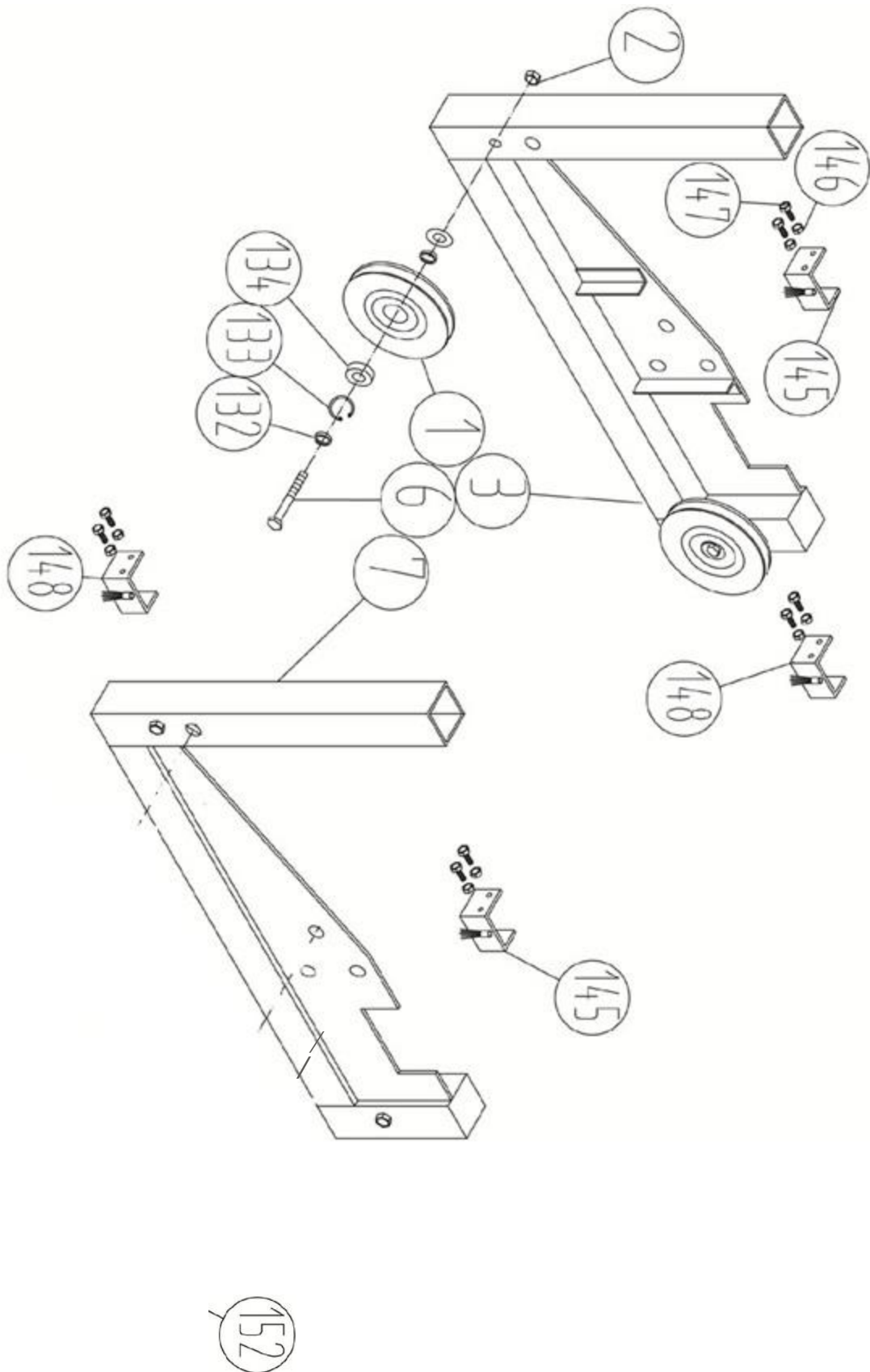
P/N	Description	Spec	Q'ty
94	Crank Plastic Handle		1
95	Sleeve	φ8.5	1
96	Flat Washer	φ8	1
97	Bolt	M8X45	1
99	Log Support		2
101	Hold Block(Left)		1
102	Bolt	M8X12	2
103	Nut	M8	2
104	Ball Bearing	6200	2
105	Flat Washer	φ10	10
106	Bolt	M10X25	2
107	Sawblade pulley Guard (Right)		1
108	Sawblade pulley Guard (Left)		1
109	Wing Bolt	M8X30	1
110	Engine Bolt	7/16-20UNFX30	1
110a	Washer	φ10	1
110b	Clutch Housing Guard		1
111	Brass Nut	Tr20X4	1
117	ACME Thread Rod	Tr20X4	1
118	Ball Bearing	51102	2
119	Nut	M14X1.5	2
121	Water Hose A	450mm	1
124	Brass Tube	φ6	1
125	Scale	24"	1
126	Scale Bracket	609mm	1
127	Handle Sleeve	φ20	2
129	Wing Bolt	M8X30	1
130	Spacer Plate		1
131	Handle Sleeve	φ16	2
132	Bushing	φ20	8
133	Circlip	φ42	4

P/N	Description	Spec	Q'ty
134	Ball Bearing	6004	4
135	Pushing Handle		1
136	Log Support Assembly (Joint)		1
137	Throttle Cable		1
138	Fastener Plate		1
139	Bolt	M6X55	1
140	Nut	M6	2
141	Throttle Handle		1
142	Nut	M10	2
143	Square Support Assembly		1
144	ACME Thread Rod Receiver		1
145	Track wheel Sweeper(Left)		2
146	Nut	M8	8
147	Bolt	M8X25	8
148	Track wheel Sweeper (Right)		2
150	Square Post Bracing Bracket		1
151	Round Post Bracing Bracket		1
153	Steel Cable (Short)		1
153a	Steel Cable (Long)		1
157	Scale Indicator		1
158	Indicator Bracket		1
159	Screw	ST4X7	2
160	Flat Washer	φ4	2
161	Screw	M4X35	2
164	Round Post end Cap		1
165	Square Post end Cap		1
166	Nylon Bushing Plate		1
167	Index Plate		1
168	Hex Bolt	M6	2
169	Crank Assembly		1
170	Index Plunger		1
171	Bolt	M10×30	8
172	End Stop		4
173	Track A		2
174	Track B		2

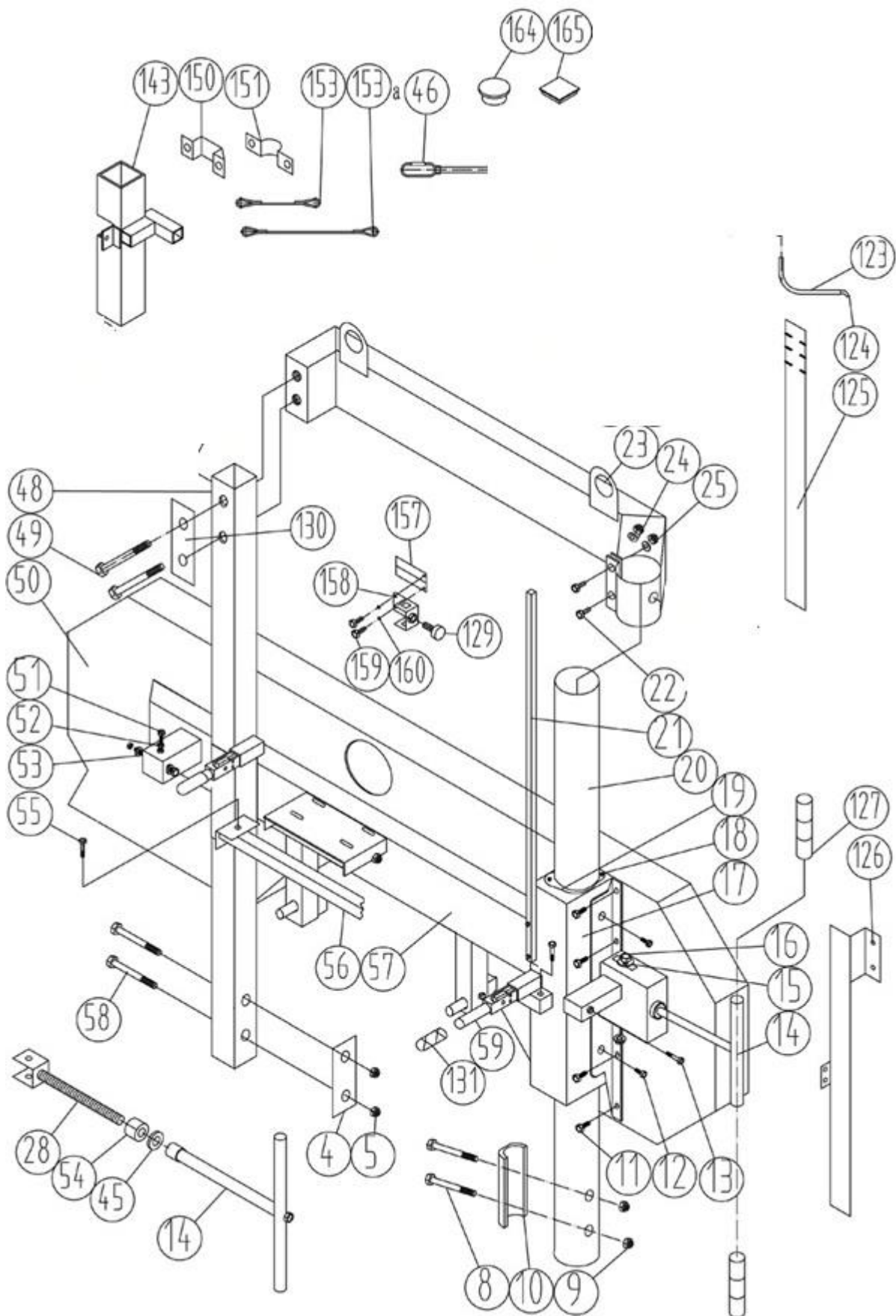
DIAGRAM



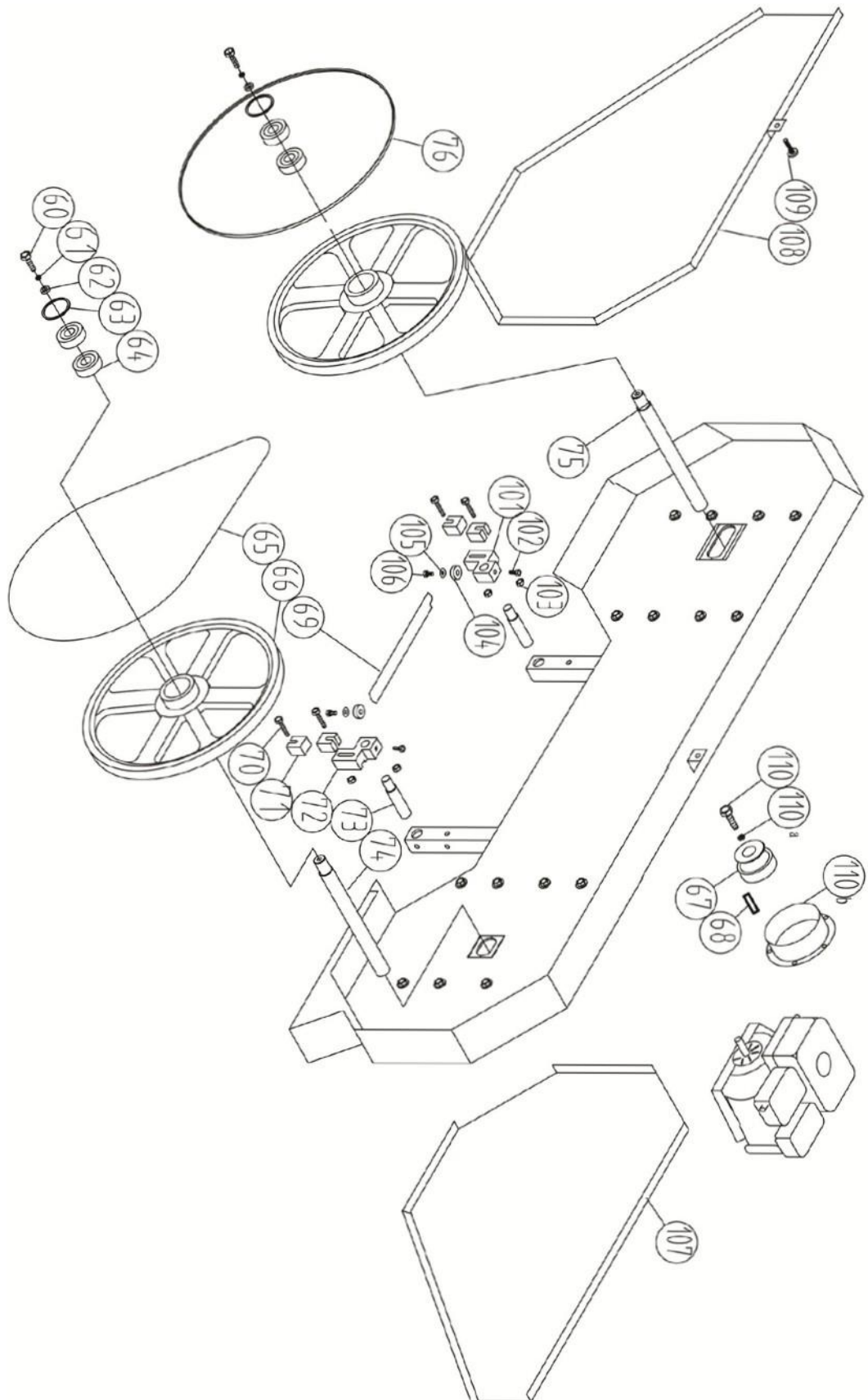
DIAGRAM



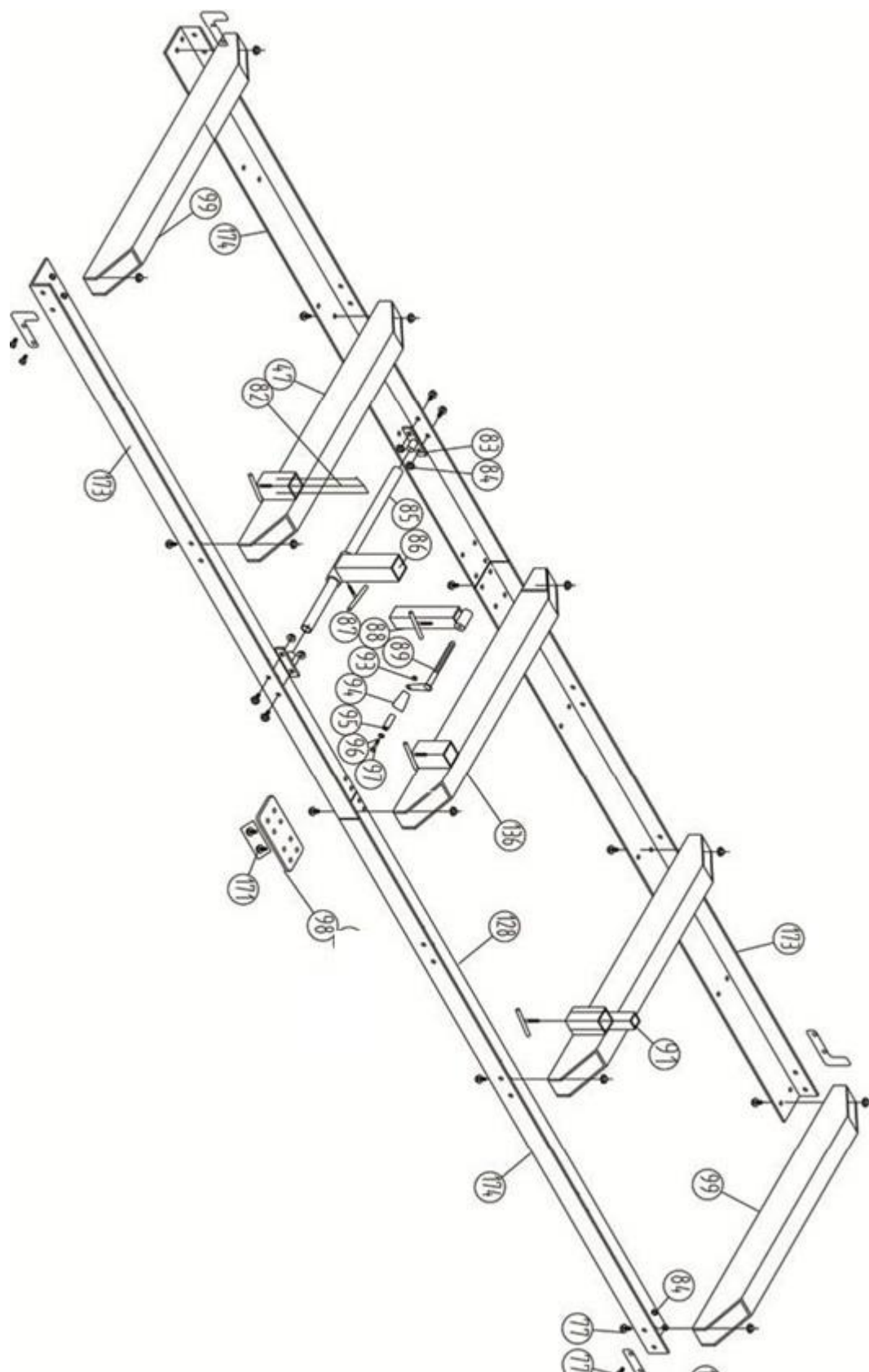
DIAGRAM



DIAGRAM

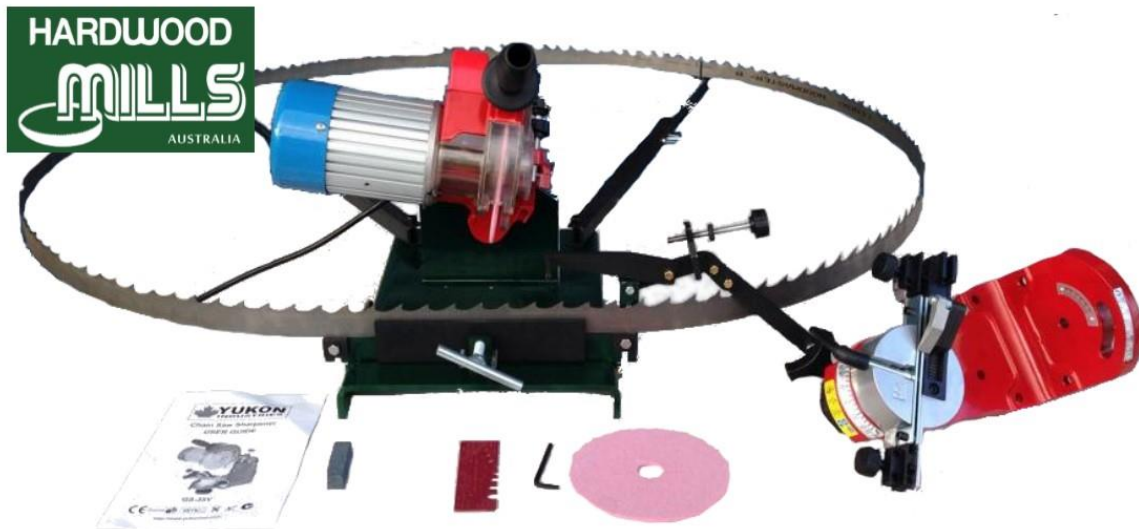


DIAGRAM



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GT28 Blade Sharpener



Jig made in Australia.

Perfect accessory to go with the GT26 Sawmill

These sharpeners have an all steel body an aluminium head and plastic wheel cover.

Tooth spacing 3/4" - 1" and also 3/4" - 2"

Comes with :

- 3 Grinding discs - 1/8", 3/16" 1/4" x 5—3/4" diameter
 - 1 Sharpening stone
 - 1 full year warranty
- A Chainsaw sharpener attachment
 - 15 watt Light

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