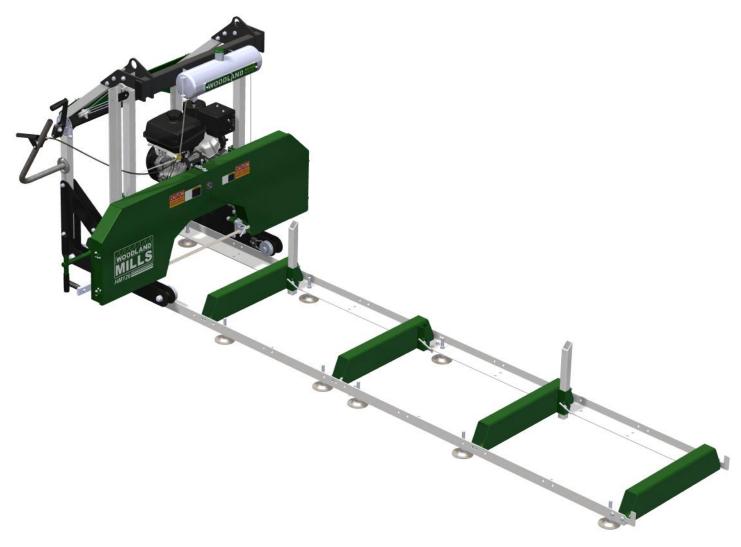
HM126 PORTABLE SAWMILL

9.5 and 14 Horsepower Models



OPERATOR'S MANUAL

HM126-MY2020: Rev A Publication Date: 11-Oct-2019



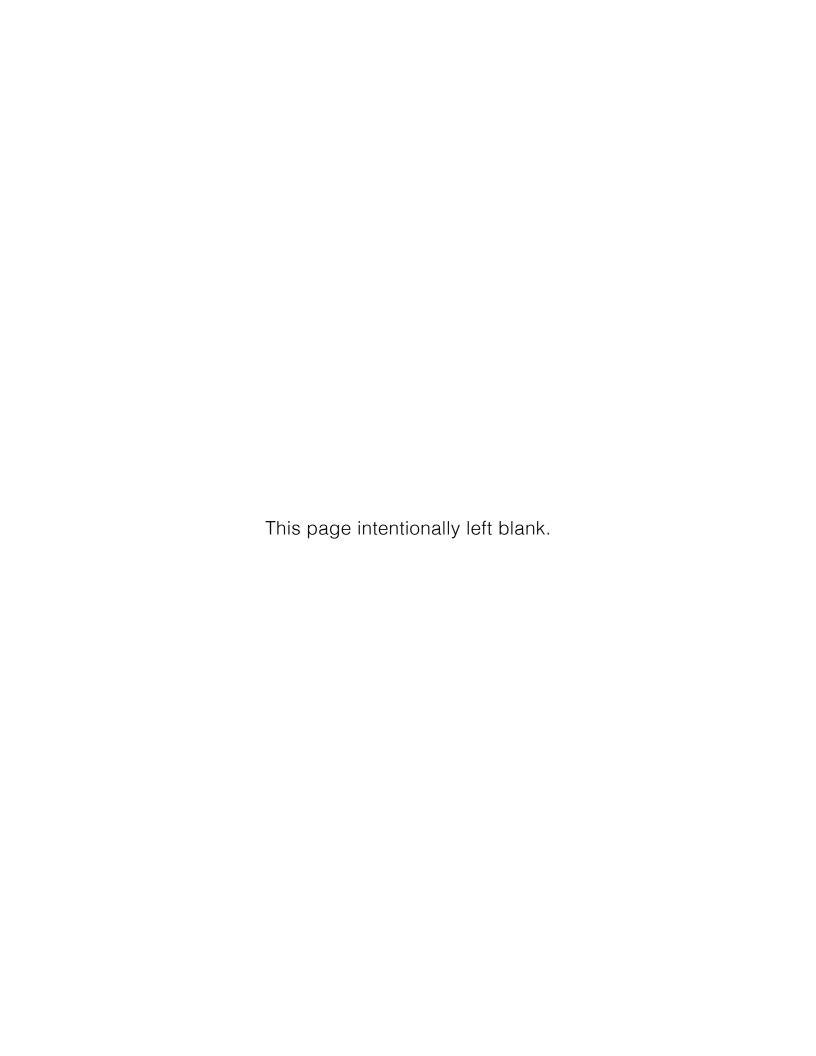




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INTRODUCTION

Congratulations on your purchase and welcome to Woodland Mills! This manual gives you the necessary information about your machine so you will be able to use it properly. The entire manual must be read and understood before you start using the machine. If any questions should arise that are not covered by this manual, please contact Woodland Mills Inc.

OWNER'S RECORD
OWNER 5 RECORD
Please take a moment to record the following information about your sawmill. If you need to call for assistance, please be ready to provide your model and serial numbers. This information will allow us to help you more quickly when you call.
MODEL NUMBER
SERIAL NUMBER
DATE OF PURCHASE

This machine is designed for certain applications only. We strongly recommend that 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 Woodland Mills Inc.

INTENDED USE

Woodland Mills wood sawmills are designed for acreage owners to aid in the milling of natural, untreated wood with the mill firmly supported on the ground. Materials that are processed may contain chemicals or by-products that could corrode the machine or damage it, resulting in safety concerns.



SAFETY GUIDELINES

SAVE THESE INSTRUCTIONS



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.





Only operate the engine in a well ventilated area. Carbon Monoxide (CO) 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.



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, therefore, visitors should remain 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 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 fuelling. 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 (CO); 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 refuelling the engine.
- DO NOT refuel a hot or running engine.
- DO NOT refuel the engine near an open flame.
- DO NOT spill fuel when refuelling the engine.
- DO NOT run the engine near an open flame.
- ALWAYS refill the fuel tank in a well-ventilated area.
- ALWAYS replace the fuel tank cap after refuelling.
- 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, and exhaust fumes.



PERSONAL SAFETY

- Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool when 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 overreach.** 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 while the engine is running. Always shut the engine off, remove the ignition key, and turn the engine off before carrying out any of the aforementioned procedures. Consult your engine manual for safe shutdown procedures to prevent accidental ignition.



TOOL USE AND CARE

- **Always** be sure the 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 extremely hot and can cause burns.
- Always close the fuel valve on the engine when the machine is not in use.
- **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 bandsaw 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 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.



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. Cut-off branches from the lumber to be processed.
- 4. Place the lumber to be cut on the track supports.
- 5. Clamp the lumber firmly in place using the included log clamp and supports.
- 6. Fill the lubrication tank with clean water. Add a ¼ cup of liquid dish soap per full tank; add less if topping up a partially full tank. The soap helps keep the blade clean(er) when excess tree oils and sap are encountered.
- 7. Start and operate the engine according to the provided engine manual.
- 8. Depress the throttle to bring the blade up to speed—the throttle should be fully depressed while the saw is under load.
- 9. Roll the head assembly slowly along the track and against the lumber to make the cut.
- 10. Trim off the rounded sides of the log.
- 11. When the log is squared-off, boards or posts can be cut to standard or custom specifications.
- 12. 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.



WARNING!

To avoid death or serious injury, do not cut lumber containing embedded foreign objects such as nails, metal fragments, etc.



WARNING!

The operator and any assistants must stay clear of the front and back of the blade whenever the engine is on.



MAINTENANCE

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

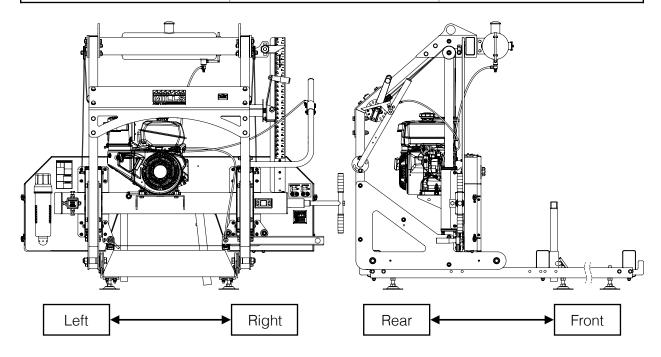
- Band Wheel Bearings Inspect before use to ensure they are not worn. Bearings are sealed and do not need to be greased.
- Blade Guide Bearings Inspect before use for excessive grooves or scoring in the bearing case. Replace if necessary.
- **Blade Tension** Grease threads of tensioning T-handle when dry or as required. Use multi-purpose, extreme-pressure grease.
- Log Clamp Spray the cam mechanism with dry silicone spray frequently.
- **Belts** Periodically check the condition and wear of the drive and idler belt. Ensure that the blade does not ride on the band wheels.
- **Drive Belt** Periodically check the tension of the drive belt.
- Carriage Posts (Front) Spray posts before use with a silicone spray lubricant such as 3-in-1 or Jig-A-Loo.
- Band Wheel Guards Routinely remove any build-up of sawdust that may collect inside the band wheel guards.
- **Lubrication Tank** Only fill with a water and dish soap mixture, or in winter months use windshield washer fluid. Do not leave lubricant in tank if temperature falls below 0° C.
- 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 operation, replace the water lubricant with windshield washer fluid.
- **Engine** Check the engine oil level before each use and maintain the engine per the instructions set out by the engine manufacturer in the engine manual. The engine is equipped with an oil alert system and will not start without adding oil before starting.
- Lifting Cables Before, during, and after operation, regularly inspect the cables for any wear or kinks. Ensure that the cables are in perfect condition. Oil the coiled part of the cable often to prevent premature wear. Replace with new cables as necessary.



TECHNICAL SPECIFICATIONS

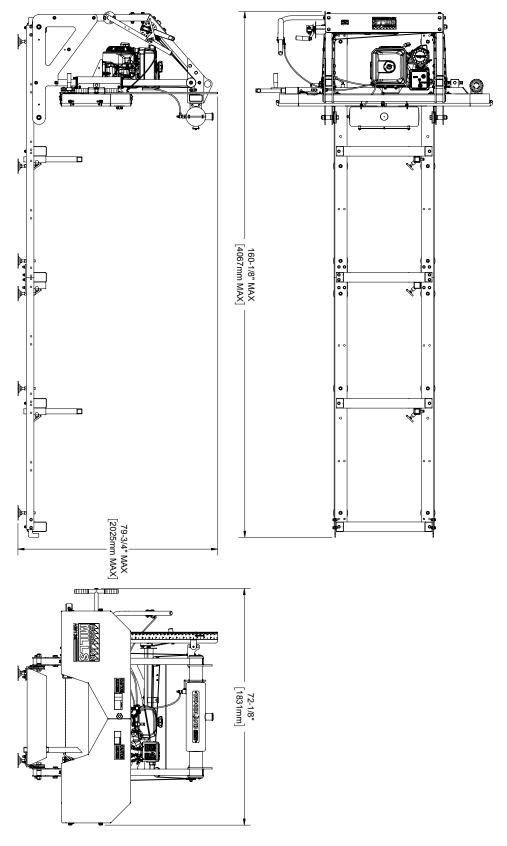
The HM126 sawmill comes in two variants: the *HM126-9.5* that utilizes a 9.5 horsepower engine and the *HM126-14* with a 14 horsepower engine and adjustable blade guide. Both versions are assembled and operated in the same manner. Pictures and graphics used in this manual display the HM126-14 sawmill but the instructions still apply to both.

Item	HM126-9.5 Specification	HM126-14 Specification		
Gasoline Engine	9.5 hp Kohler Command Pro	14 hp Kohler Command Pro		
Max Log Diameter	26 in [60	60 mm]		
Max Board Width	24 in [6	10 mm]		
Max Board Thickness	7 in [178 mm]			
Blade Size	1-1/4 x 144 in [32 mm x 3657 mm]			
Track Length	153-½ in [3900 mm]			
Track Width	30-½ in [775 mm]		
Track Height Adjustability (top of bunk)				
Product Weight	850 lb [386 kg]	862 lb [391 kg]		
Shipping Weight	900 lb [408 kg]	912 lb [414 kg]		





OVERALL DIMENSIONS





ASSEMBLY

1. TOOLS REQUIRED

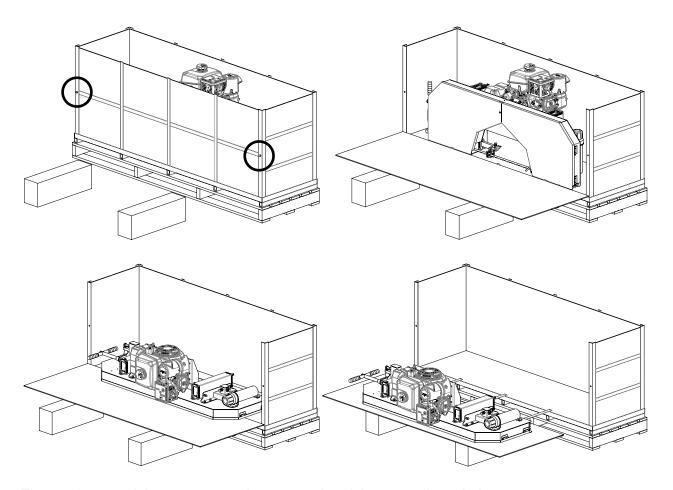
TOOL	SPECIFICATION
Wrench/Socket	7 mm (2X)
Wrench/Socket	10 mm (2X)
Wrench/Socket	13 mm (2X)
Wrench/Socket	14 mm (2X)
Wrench/Socket	15 mm (2X)
Wrench/Socket	16 mm (2X)
Wrench/Socket	17 mm (2X)
Wrench/Socket	18 mm (2X)
Wrench/Socket	19 mm (2X)
Wrench	24 mm or Adjustable Wrench (2X)
Wrench	30 mm or Adjustable Wrench (2X)
Hex Key	3 mm
Hex Key	4 mm
Phillips Head Screwdriver	No. 3
Torque Wrench	Capable of at least 25 ft•lb (34 N•m)
Tape Measure	Standard Inch/Metric Tape Measure

During several of the assembly steps, more than one socket or wrench of the same size may be required to assemble the hardware. A socket or box wrench in combination with an adjustable wrench can be utilized if multiple same size tools are in limited supply.



2. UNPACKING

Unpack the contents of the crate except for the sawhead and the two long boxes in the bottom that contain the sections of track. Unfasten the two (2) M8 bolts/nuts on the front of the crate using a socket/wrench. Place two (2) 6-8 in [150-200 mm] tall support blocks in front of the crate, bend the front of the crate down, and then lay the cardboard wall over it. Carefully rotate the sawhead down onto the cardboard and support blocks and slide it out of the crate as shown below.



The two long track boxes can now be removed and the crate discarded.



3. TRACK

Assemble the track system with the provided components and hardware listed in the table below. It is important to assemble and level the track on a firm foundation before tightening all of the hardware and it should ideally be a minimum of 4 in [100 mm] off the ground. This will allow for easy cleanup of sawdust from under the tracks and height adjustment of the log supports.

16x	M10 X 35 mm Flanged Hex Bolt	4x	Track Rail	
28x	M10 X 25 mm Flanged Hex Bolt	2x	Reinforcement Plate	
40x	M10 Flanged Lock Nut	4x	Carriage Stop	
12x	Track Foot	2x	End Bunk	
		2x	Mid Bunk	
		1x	Centre Bunk*	

^{*} Centre bunk incorporates four (4) mounting holes at each end



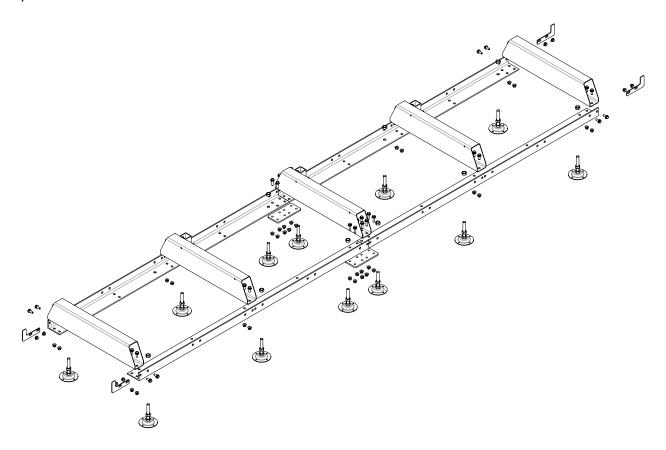
If a Woodland Mills sawmill trailer was purchased with this sawmill, skip this track assembly section and follow the track assembly instructions in those manuals.





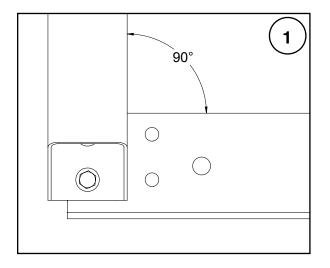
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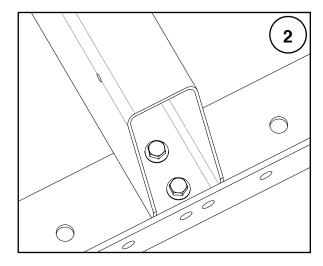
The track comes completely disassembled from the factory. Lay out all the components on a flat piece of level ground prior to assembly. See the *TRACK* exploded view for a more detailed part breakdown.



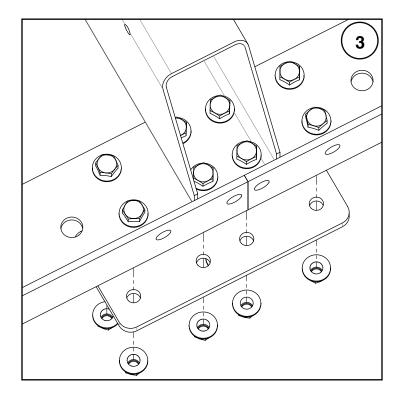


When assembling the log bunks to the rails, ensure that the two end bunks are square (90°) as shown in **Figure 1**. Use sixteen (16) M10 X 25 mm bolts at all end bunk and mid bunk locations (**Figures 1 & 2**).



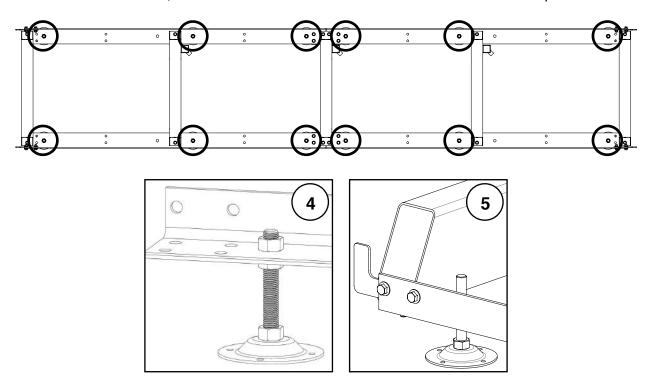


Use sixteen (16) M10 X 35 mm bolts to join the centre bunk and reinforcement plates to the rails at the rail joints (**Figure 3**).



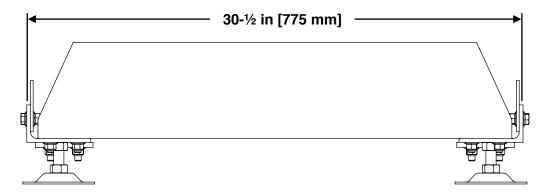


Attach the twelve (12) levelling feet to the track at the locations shown below. The bolt can be turned to either raise or lower the foot to adjust the level of the track (**Figure 4**). If setting the track on wooden blocks, use wood screws in the four holes to secure each foot in place.



Assemble the four (4) carriage stops to the ends of the rails using eight (8) M10 X 25 mm bolts and lock nuts then fully tighten the bolts. Ensure carriage stops are assembled to the inside face of the rails, *not* the outside (**Figure 5**).

The assembled track should measure 30-½ in [775 mm] wide when measuring from the outside faces of the rails.



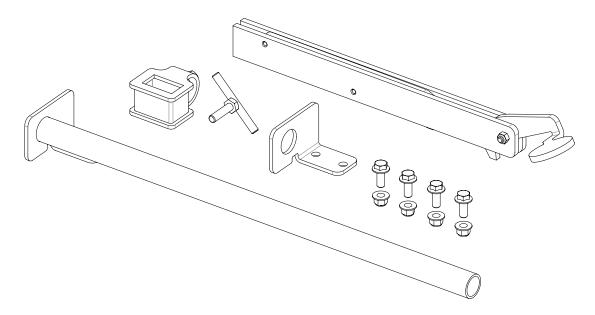


4. LOG CLAMP AND SUPPORTS

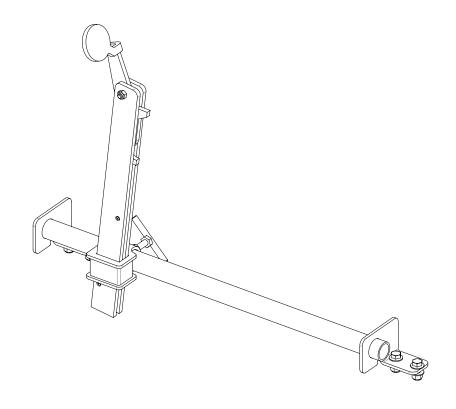
Assemble the log clamp components as shown below. The HM126-14 and HM126-9.5 each come with one (1) log clamp assembly. Attach the log clamp to the track using four (4) M10 X 25 mm bolts with lock nuts and tighten.

4x	M10 X 25 mm Flanged Hex Bolt	1x	Log Clamp Shaft/Bracket Weldment	
4x	M10 Flanged Lock Nut	1x	Log Clamp Bracket	
		1x	Log Dog Receiver	
		1x	Log Dog	
		2x	Long Log Support	
		2x	Short Log Support	
		4x	M10 X 40 mm T-Bolt	

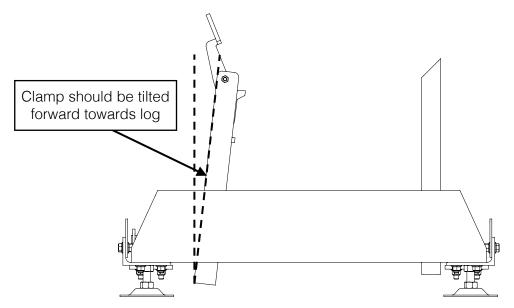




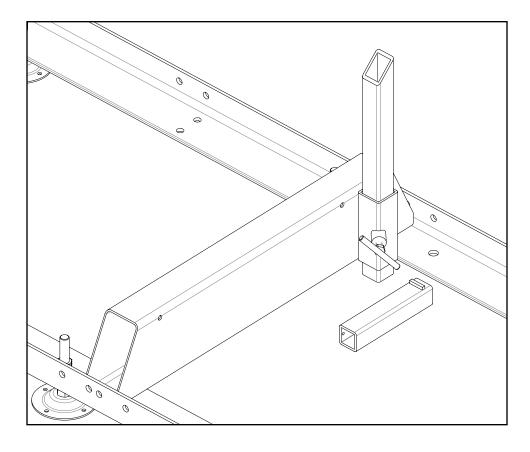
Attach log dog assembly to track as shown below with the four (4) nuts and bolts provided. Note that there are various locations along the track where this assembly can be bolted. Depending on how many track sections are being used, select a log clamp position that will secure the log firmly against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







Insert log supports into track cross supports and secure with T-bolts as shown in the picture below. The T-bolt threads should be *coated with grease*. The sawmill includes two sets of log supports—a short set and a long set. The long set is ideal for large diameter logs while the shorter set is better suited for small logs and square cants.

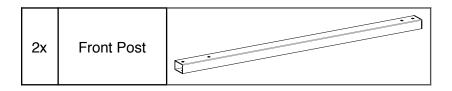




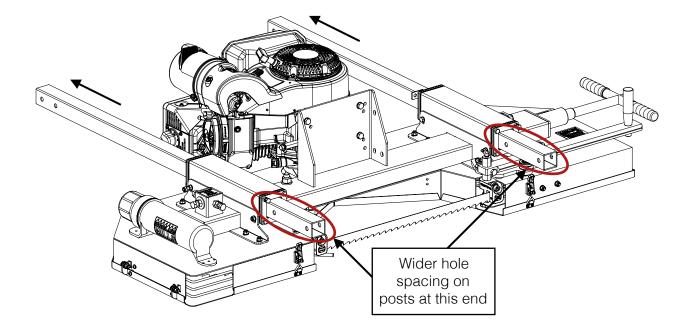
5. SAWMILL HEAD ASSEMBLY

The sawmill head assembly is built in multiple steps. Follow the sub-sections below using the parts table at the top of each sub-section to gather the necessary components for each step.

FRONT POSTS



With the sawhead resting approximately 6 in [150 mm] above the ground, slide the two (2) front posts through the post sleeves. Orient the posts so that the ends with the wider hole spacing are towards the bottom of the assembly. The top ends will be capped in a later step.



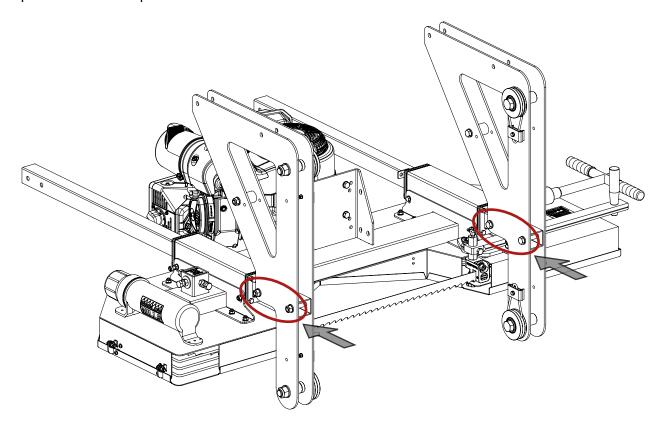


CARRIAGE LEGS

The carriage leg sub-assemblies come loosely assembled from the factory. Final tightening of these bolts will be done in a later step. See the *CARRIAGE LEG, WHEEL, AND SWEEPER* exploded view for a more detailed part breakdown.

4x	M12 X 80 mm Hex Bolt		4x	M12 Flat Washer	
4x	M12 Lock Nut		2x	Carriage Leg Sub-Assembly	

Attach the two (2) carriage leg sub-assemblies to the front posts with four (4) M12 X 80 mm bolts, flat washers, and lock nuts. Be sure the bolts point outward and the carriage wheels are positioned on the inside of the legs. Fully tighten these four (4) M12 bolts so that the plates are firmly attached to the posts. The posts should be pushed all the way up until the carriage leg plates contact the post sleeves.





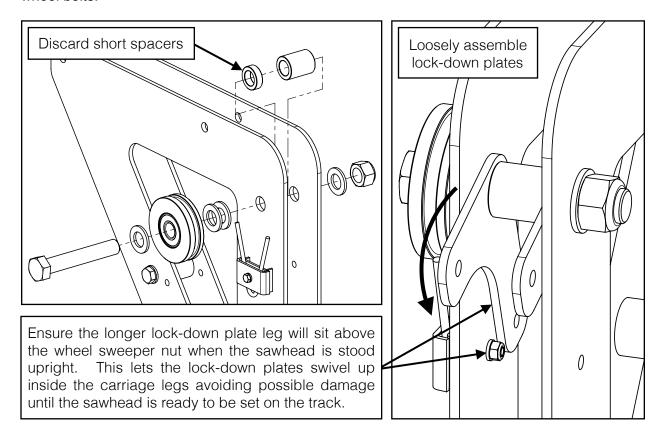
HEAD LOCK-DOWN PLATES

Woodland Mills sawmill trailer owners only

If a Woodland Mills sawmill trailer was purchased with this sawmill, the head lock-down plates can be loosely installed prior to standing the sawhead upright. The lock-down plates come with the sawmill trailers and are not included with the sawmill.



Disassemble each carriage wheel and discard the short spacers as they are no longer necessary. Assemble one (1) lock-down plate on each side of the long spacers—between the carriage legs—and then reassemble the carriage wheels. Do <u>not</u> fully tighten the carriage wheel bolts.

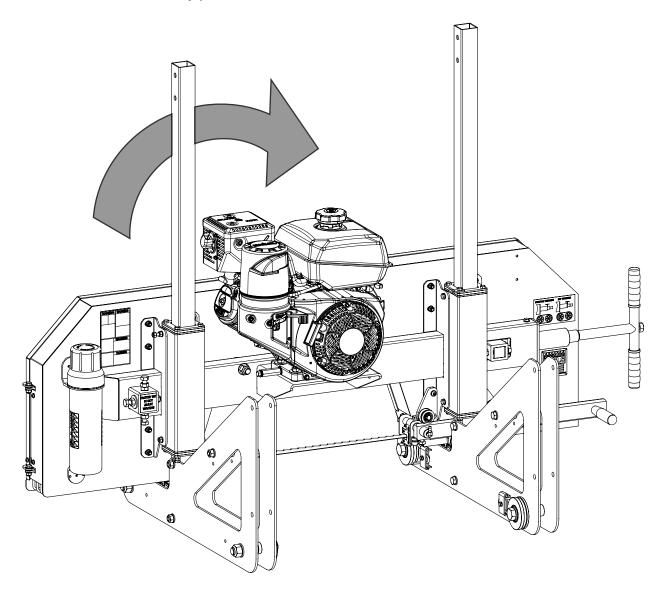


See section, *HEAD LOCK-DOWN PLATES*, in the sawmill trailer Operator Manuals to complete the lock-down plate installation once the sawmill is on the trailer.



STANDING THE SAWHEAD UPRIGHT

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

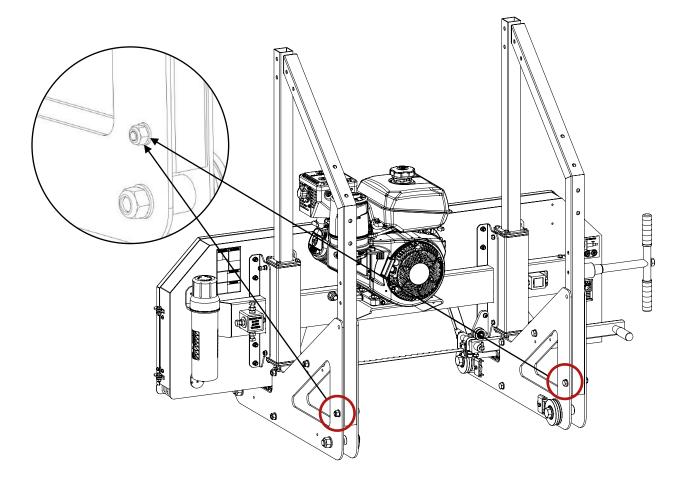




REAR POSTS

Using the hardware listed below, attach the rear posts between the carriage leg plates using only one (1) M12 X 80 mm bolt, flat washer, and lock nut per post.

2x	M12 X 80 mm Hex Bolt			
2x	M12 Lock Nut	2x	Rear Post	
2x	M12 Flat Washer			





CROSS BEAM

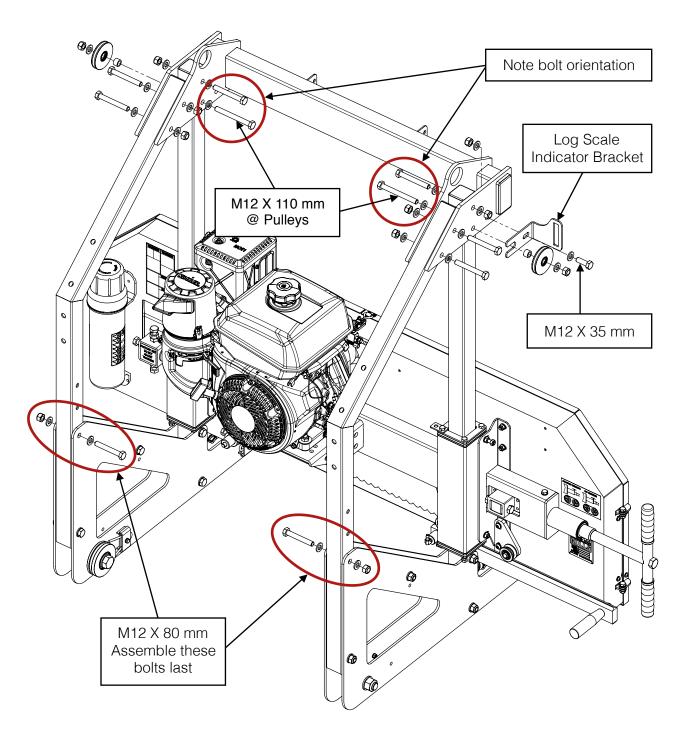
With the hardware listed below, assemble the cross beam to the carriage posts.

2x	M12 X 110 mm Hex Bolt	1x	Cross Beam	
6x	M12 X 90 mm Hex Bolt	1x	Log Scale Indicator Bracket	
2x	M12 X 80 mm Hex Bolt	2x	Pulley	
1x	M12 X 35 mm Hex Bolt	2x	Spacer [12 mm Lg]	
11x	M12 Lock Nut			
22x	M12 Flat Washer			

With the help of a second person, slide the cross beam over the carriage posts. Use six (6) M12 X 90 mm bolts and two (2) M12 X 110 mm bolts (with pulleys and spacers) to fasten it in place. Be sure to install the log scale indicator bracket on the right-side behind the pulley. Also take note of the orientation of the two (2) M12 X 110 mm bolts with pulleys and two (2) of the M12 X 90 mm bolts—the bolts are installed pointing outward. Use an M12 flat washer under every bolt head and lock nut.

Finally, install two (2) M12 X 80 mm bolts at the top of each carriage leg. Do *not* fully tighten these bolts at this time.





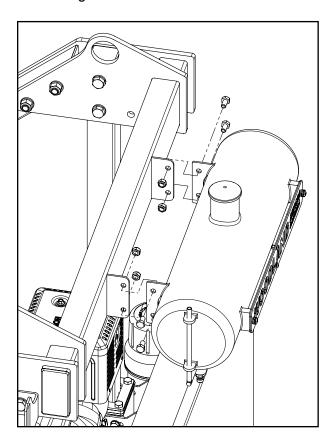


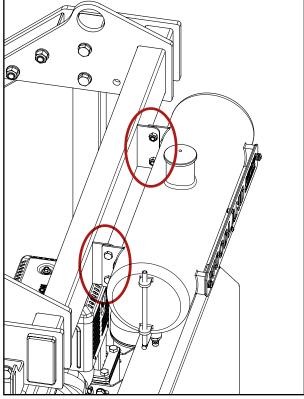
LUBRICATION TANK

With the hardware listed below, assemble the lubrication tank to the front of the cross beam.

4x	M8 X 16 mm Hex Bolt	1x	Lubrication Tank	EWOODLAND
4x	M8 Lock Nut	1x	Lubrication Tank Cap	°

Assemble the lubrication tank to the cross beam with four (4) M8 X 16 mm bolts and lock nuts. Ensure the bolts point inward. Insert the cap chain into the tank opening to prevent the cap from being lost.







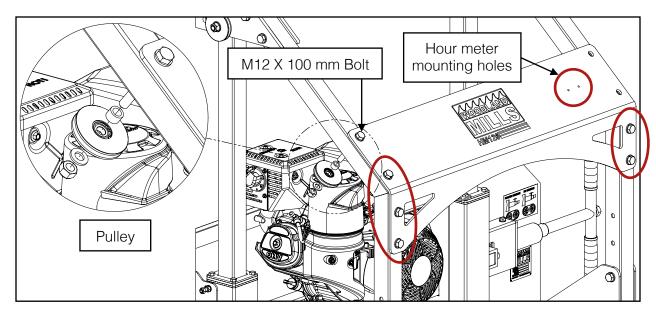
DASHBOARD & HOUR METER

With the hardware listed below, assemble the dashboard to the rear carriage posts.

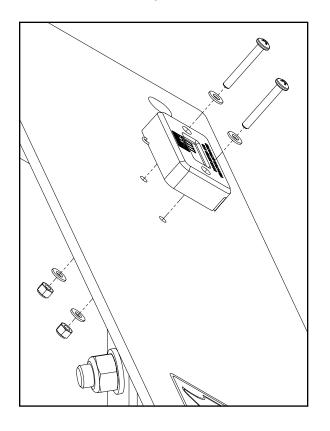
1x	M12 X 100 mm Hex Bolt		1x	Dashboard	
5x	M12 X 80 mm Hex Bolt		1x	Pulley	
2x	M4 X 30 mm Pan Head Screw		1x	Spacer [12 mm Lg]	
6x	M12 Lock Nut		1x	Hour Meter	Section 5 to 10 to
2x	M4 Lock Nut				
12x	M12 Flat Washer				
4x	M4 Flat Washer				

Assemble the dashboard to the rear carriage posts with five (5) M12 X 80 mm bolts and one (1) M12 X 100 mm bolt (with pulley and spacer) as illustrated on the next page. Use an M12 flat washer under every bolt head and lock nut. Do *not* fully tighten these bolts at this time.





Assemble the hour meter to the right-side of the dashboard through the two (2) small holes. Use two (2) M4 X 30 mm pan head screws, four (4) flat washers (2 per screw), and two (2) lock nuts. Once the entire sawmill has been assembled, snip the wire loop at the top of the meter with either a razor or sharp knife. This will activate the meter to start measuring the vibration of the machine, recording the hours of use on the engine.





Cut wire loop on hour meter after sawmill is assembled



LIFT MECHANISM

With the hardware listed below, assemble the lift mechanism to the carriage.

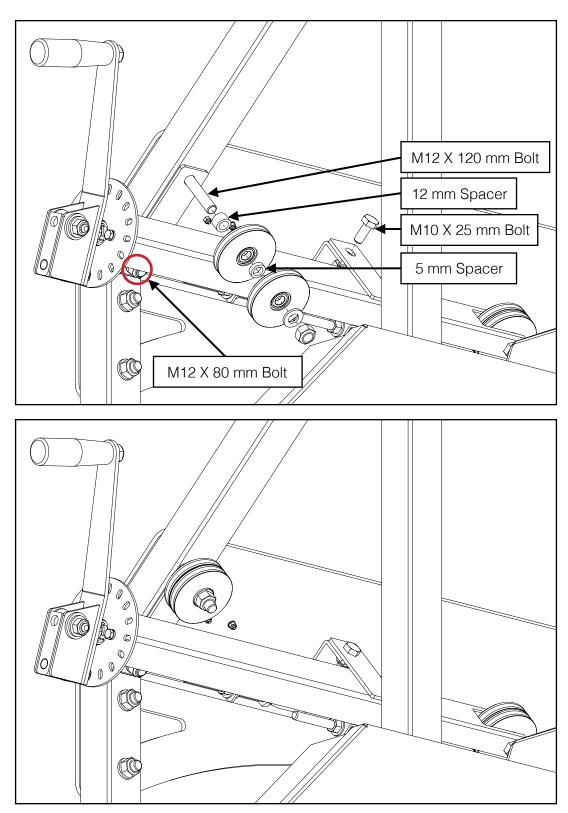
1x	M12 X 120 mm Hex Bolt	1x	Lift Mechanism Sub-Assembly	
1x	M12 X 80 mm Hex Bolt	2x	Pulley	
1x	M10 X 25 mm Hex Bolt	1x	Spacer [12 mm Lg]	
2x	M12 Lock Nut	1x	Spacer [5 mm Lg]	
1x	M10 Lock Nut			
4x	M12 Flat Washer			

Attach the lift mechanism assembly to the underside of the right-rear carriage post as shown on the next page.

Use one (1) M12 X 120 mm bolt (including the pulleys and 2 spacers—5 mm spacer *between* pulleys) and one (1) M12 X 80 mm bolt. Use an M12 flat washer under each bolt head and lock nut. Fasten the centre tab to the inside of the dashboard using an M10 X 25 mm bolt and nut.

Do not fully tighten these bolts at this time.

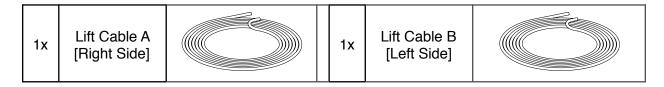






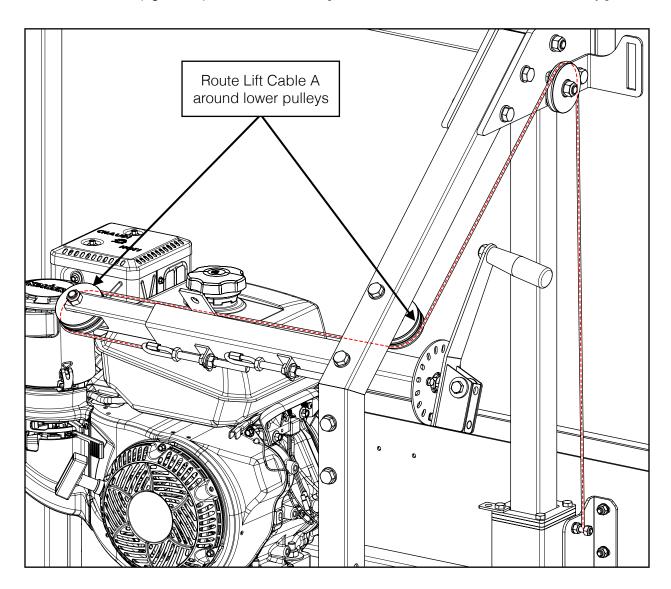
LIFT CABLE ROUTING

Route the lift cables listed below.



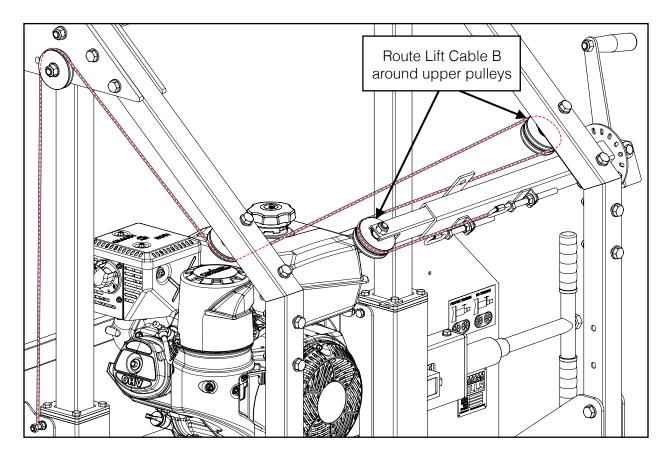
The wire rope lift cables come coiled and both are assembled at one end to the back beam post sleeves. The lengths are specific to each side so do not swap them.

Route lift cable A (right side) as shown below. [Dashboard removed from views for clarity.]

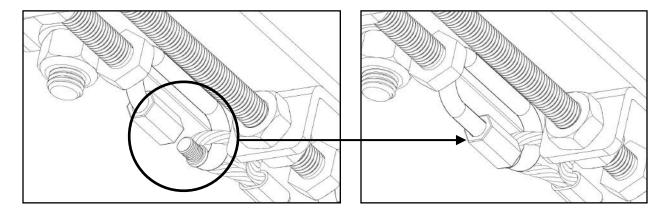




Route lift cable B (left side) as shown below. [Dashboard and lift cable A removed from view for clarity.]



Be sure to securely tighten the oval chain link with a wrench after the cable loop ends have been attached.





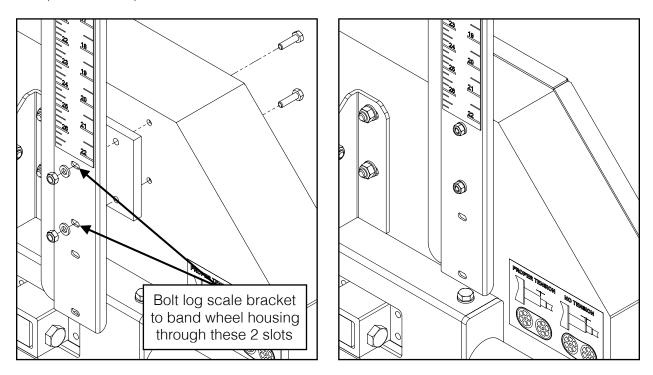
LOG SCALE

With the hardware listed below, assemble the log scale components.

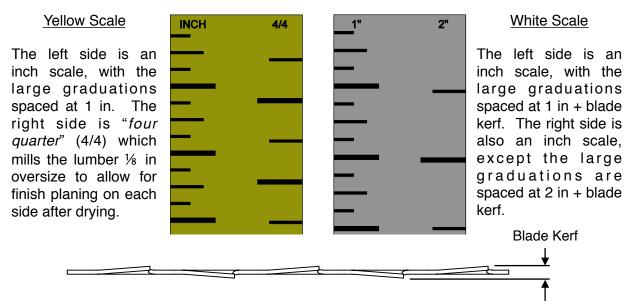
2x	M6 X 22 mm Hex Bolt	1x	Log Scale Bracket	
2x	M6 Lock Nut	1x	Magnetic Scale [White]	
2x	M6 Flat Washer	1x	Magnetic Scale [Yellow]	negregregregregregregregregregregregregre
		1x	Log Scale Bracket Spacer Plate	
		1x	Log Scale Guide	
		1x	Lock Scale Locking Plate	0
		1x	Log Scale Indicator Arrow	0
		1x	M8 X 25 mm Knob	



Bolt the log scale bracket and spacer plate to the band wheel housing with two (2) M6 X 22 mm bolts, flat washers, and lock nuts as shown below.



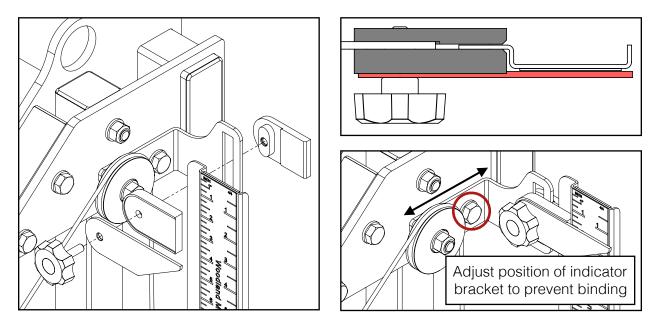
Note: the sawmill comes with two (2) different magnetic scales: one yellow, one white. Each with two different graduations down the left and right sides.



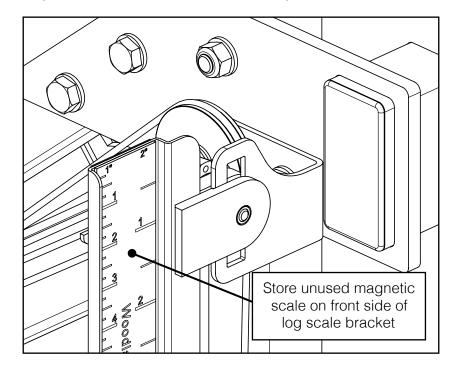
The graduations on the white magnetic scale make allowances for the blade kerf. On the yellow magnetic scale the kerf is not accounted for in the measurements.



Assemble the guide, locking plate, and indicator arrow to the log scale indicator bracket using the M8 threaded knob. Adjust the position of the indicator bracket forwards or backwards if the guide and locking plate bind on the log scale bracket as the sawhead is raised and lowered.



Store the other magnetic scale on the front side of the log scale bracket when not in use.



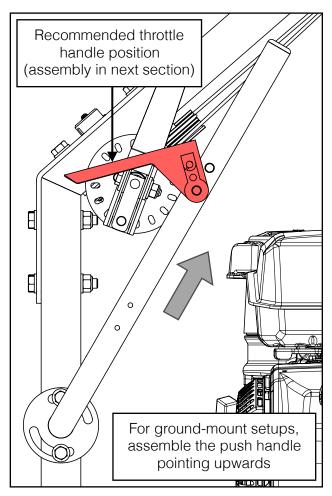


PUSH HANDLE

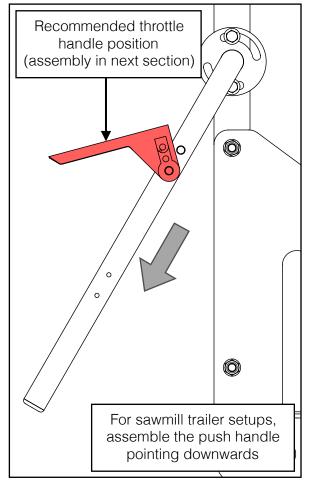
With the hardware listed below, assemble the push handle to the right rear carriage leg.

2x	M10 X 70 mm Flanged Hex Bolt	2x	M10 Flat Washer	
2x	M10 Lock Nut	1x	Push Handle	

The push handle is installed in an upward position when the sawmill is ground-mounted (**below-left**). Or it can be rotated 180° if the sawmill is high above the ground on a sawmill trailer or on a purpose-built stand (**below-right**).



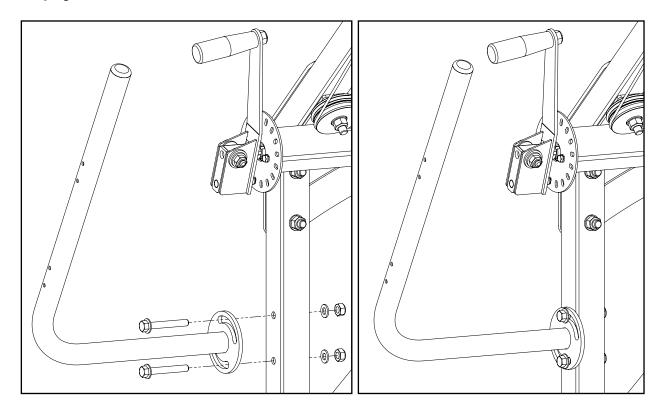
Ground-Mount Push Handle and Throttle Handle Recommended Position



Sawmill Trailer Push Handle and Throttle Handle Recommended Position



When a desired push handle orientation has been decided upon, attach the push handle to the side of the post using two (2) M12 X 70 mm bolts, flat washers, and lock nuts as shown below. Fully tighten these bolts.

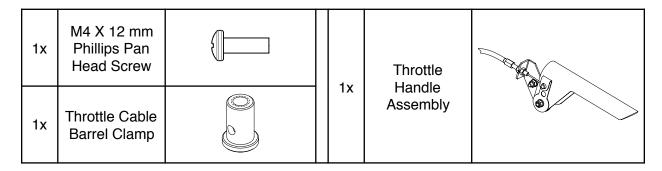


The push handle can be adjusted/rotated forwards or backwards to suit the ergonomics of the operator in either ground-mount or sawmill trailer configurations.



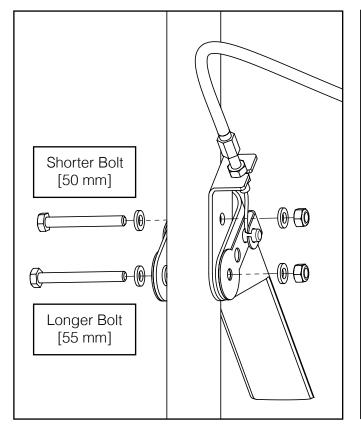
THROTTLE HANDLE AND CABLE

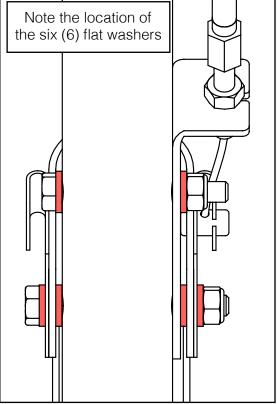
Use the hardware listed below to assemble the throttle handle to the push handle and route the throttle cable to the engine.



The throttle handle comes loosely pre-assembled. The hardware needs to be unthreaded from the throttle handle prior to assembly. There are two (2) M6 hex bolts, two (2) lock nuts, and six (6) flat washers.

Assemble the throttle handle to the uppermost pair of holes in the push handle.

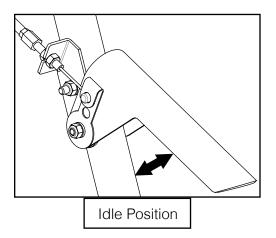


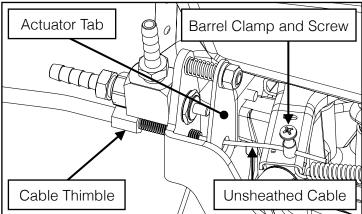




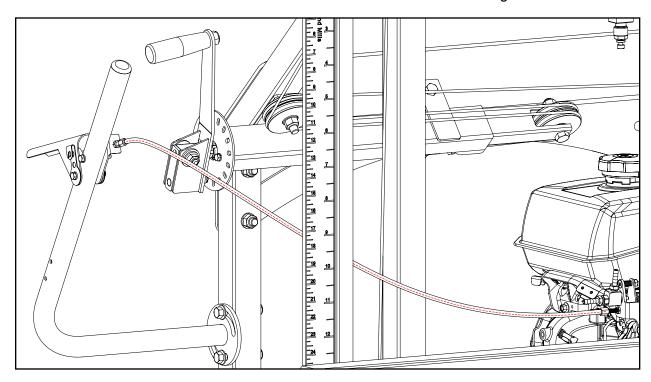
With the throttle lever in the idle position (fully open), route the cable between the log scale bracket and the front-right carriage post. Pass the cable through the thimble in the auto-lube bracket and pull the unsheathed portion of the cable through the hole in the actuator tab, then to the engine.

Next, route the unsheathed end of the cable through the hole in the barrel clamp, pull it tight while ensuring the throttle handle is still fully open, and then tighten the M4 Phillips pan head screw to secure it in place. This will take the slack out of the cable.





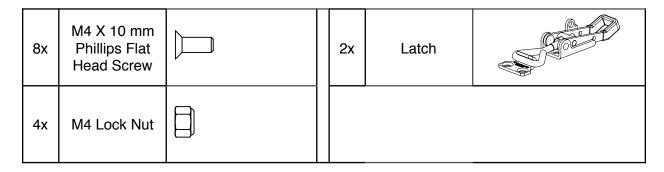
The assembled throttle handle and routed cable should now match the image below.



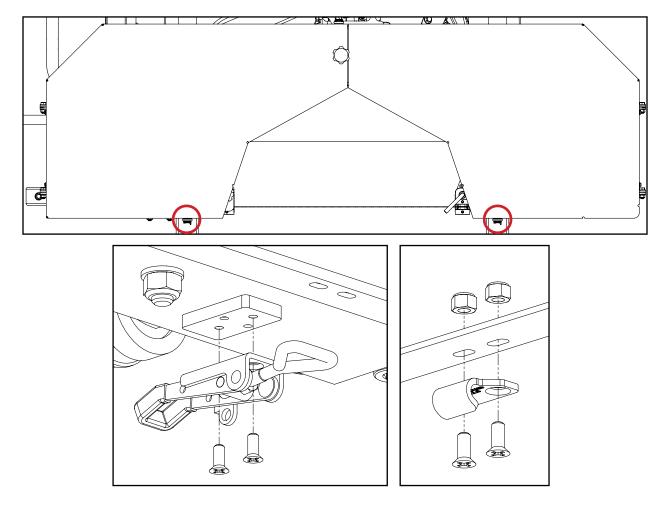


BAND WHEEL DOOR LATCHES

Using the hardware listed below, assemble the two (2) bottom band wheel door latches.



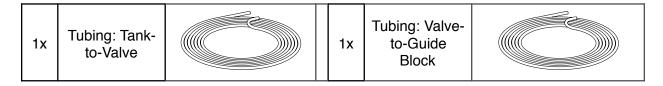
Use two (2) M4 X 10 mm flat head screws per latch. Assemble the latches to the pre-installed spacers on the bottom of the band wheel housing. On each band wheel door, install the hook-shaped catch using two (2) M4 X 10 mm flat head screws with lock nuts.





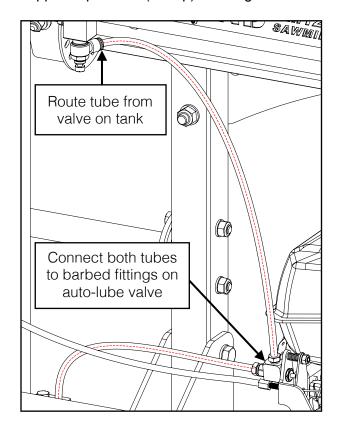
LUBRICATION TUBING

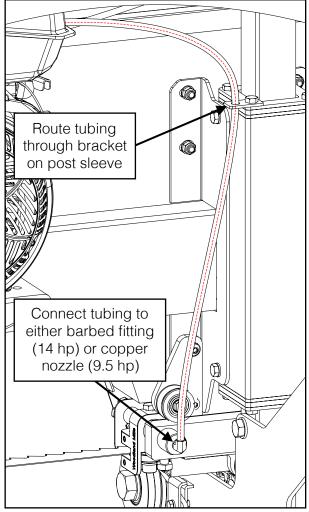
Use the tubing listed in the table below to complete the routing for the lubrication system.



Route the *tank-to-valve* tubing from the blue ring fitting on the tank to the <u>vertical</u> barbed fitting on the auto-lube valve.

Route the *valve-to-guide block* tubing from the <u>horizontal</u> barbed fitting on the auto-lube valve, down through the bracket on the post sleeve, then to either the barbed fitting (14 hp) or the copper drip nozzle (9.5 hp) on the guide block holder shaft.

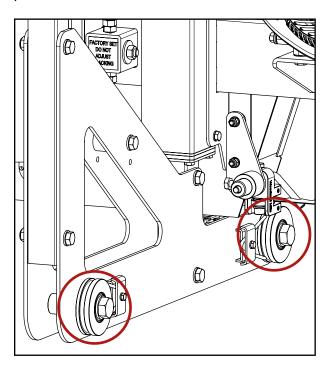


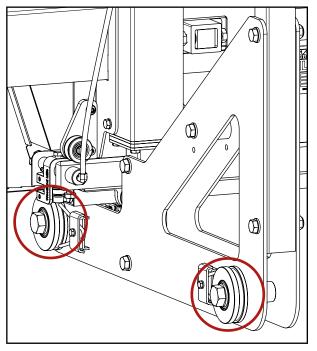




TIGHTEN CARRIAGE WHEEL BOLTS

Tighten the four (4) M20 X 120 mm bolts that fasten the carriage wheels to the carriage side plates.

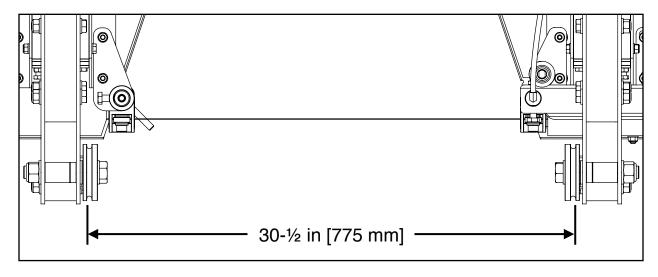




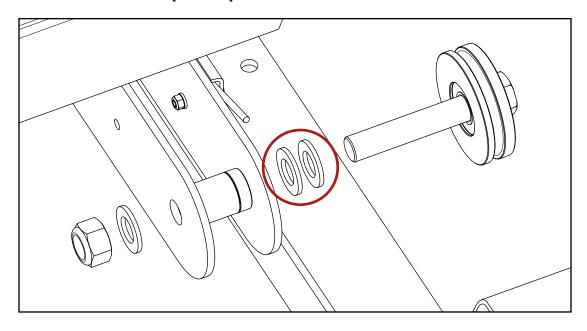


6. PLACING THE HEAD ON THE TRACK

Before placing the head on the track, the carriage wheel spacing can be set to ensure they will fit properly on the rails. Check the wheel spacing to ensure that a distance of 30-½ in [775 mm] is measured from outside to outside of the wheel grooves as shown below.



To adjust the width of the wheels, washers may be added or removed from each wheel to ensure a distance of 30-½ in [775 mm] is achieved as shown below.

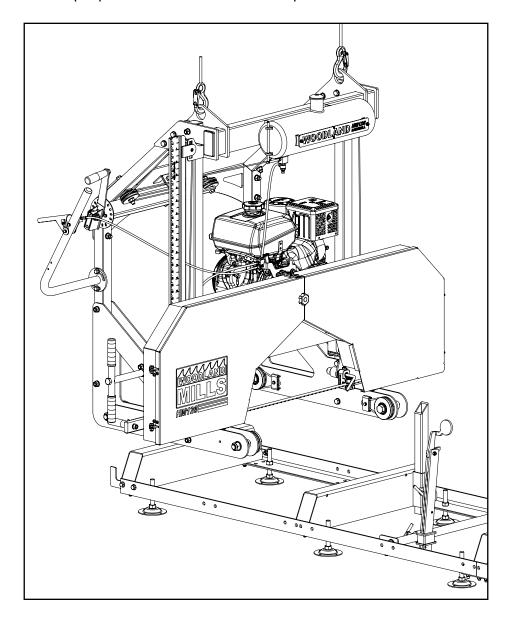




At this point, most of the sawmill head bolts should only be hand tight. They will be fully tightened when the head is on the track and has settled in to a true and square state. There are two methods in which the sawmill head can be lifted onto the track assembly:

METHOD 1

If a tractor or forklift is available, the head can be lifted onto the track with a lifting strap or chain with a minimum rating of 1000 lb. [450 kg]. Attach the lifting strap/chain to the lifting hooks, raise the head up, and rest it on the track so that the grooves in the carriage wheels fit around the track rails. Two people are recommended for this procedure.

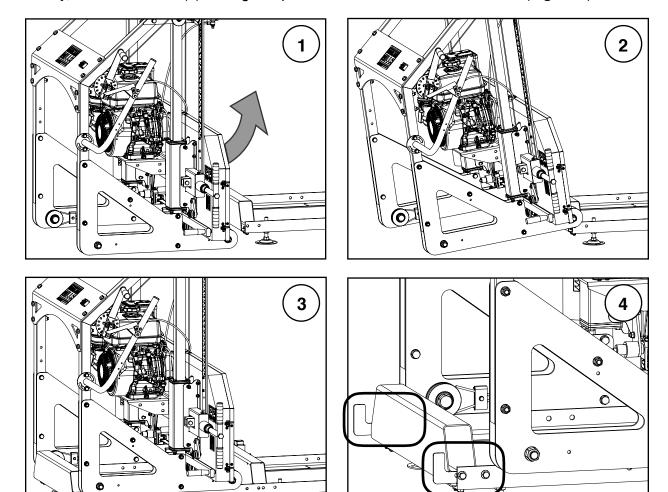




METHOD 2

At least two people are required for this step. Start by removing the two (2) carriage stops from one end of the track. The head can be walked over to the track until positioned behind it (**Figure 1**). Once in this position, tilt the head backwards so that the front two wheels are off the ground. Walk the head forward while the grooves in the two front carriage wheels ride along the track rails (**Figure 2**). Next, using at least two people, lift up the back end of the sawmill head and walk it forward until both rear carriage wheels are seated on the track (**Figure 3**).

Finally, reattach the two (2) carriage stops to the inner faces of the track rails (Figure 4).



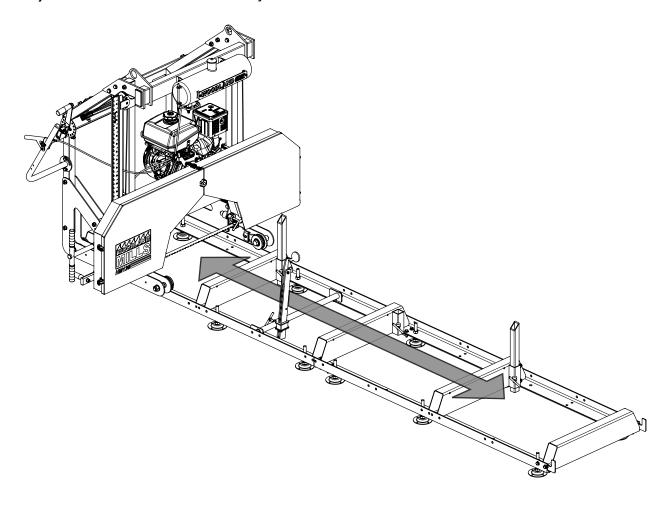
With the sawmill head assembly now resting on the track, grab hold of the one side of the cross beam and perform a shake-down of the head. Shaking the head will help settle the components into their proper position that may have become misaligned either due to tolerances during the assembly process or when the saw head was set on the track.

Afterwards, tighten all of the saw head bolts, post and cross beam hardware.



ROLLING THE SAWMILL HEAD ASSEMBLY

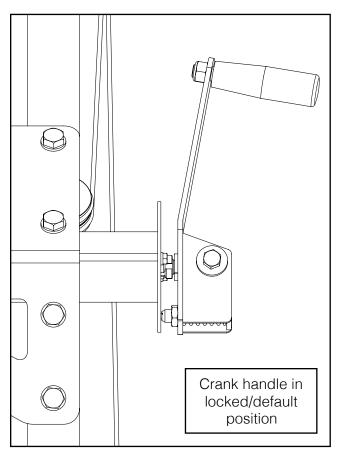
Roll the sawmill head assembly along the full length of the track to ensure it moves freely. If it binds or is difficult to push it is likely the track is not square, straight, and/or level. Make the necessary adjustments to the track and roll the head assembly again. Repeat the track adjustments until the head rolls freely.

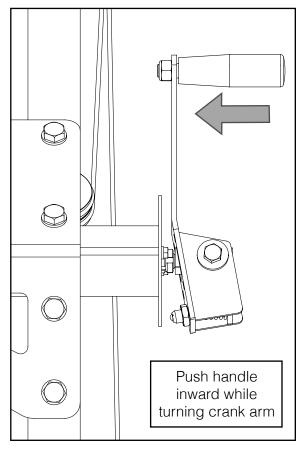


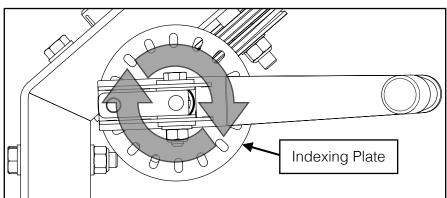


RAISING & LOWERING THE SAWHEAD

The lift mechanism is equipped with a self-locking, spring-loaded crank arm that prevents the head from lowering during cuts. When winding the head up or down, the operator pushes the handle towards the mill as the crank arm is turned. When the desired cut depth is reached, releasing the handle will lock the arm into one of the slots in the indexing plate.



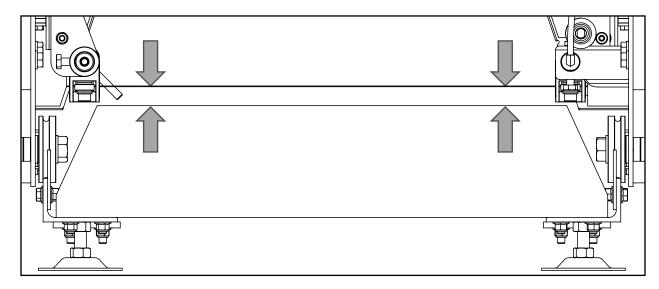




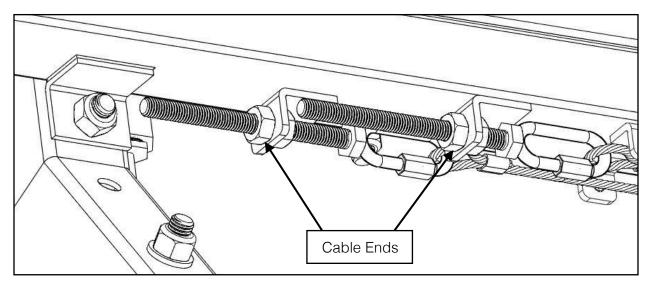


LEVELLING THE SAWMILL HEAD ASSEMBLY

Using a tape measure, measure the distance from the blade to the top of the log bunk on both the left and right side. The distance should be equal. If the measurements are not equal, adjust the lift cable ends under the lift mechanism sub-assembly to either raise or lower one side.



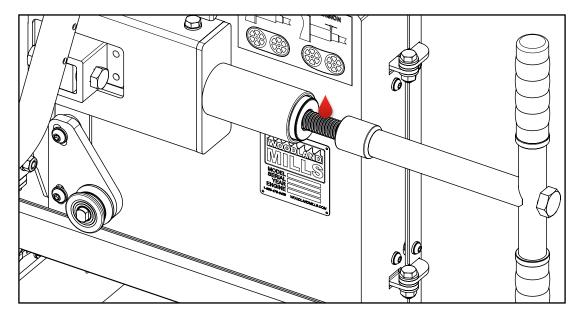
Using a wrench, turn the nut clockwise to raise one side of the sawmill head assembly, or counter-clockwise to lower it. Double-check the blade height as discussed in the previous step. Once the measurements are equal on both sides, tighten the corresponding jam nut to clamp it securely against tab.





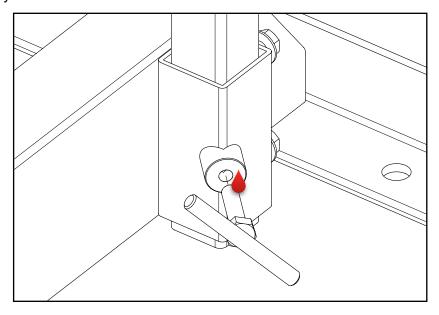
GREASING THREADS

Add waterproof grease to the threads of the blade tension T-handle and to the mating bearing face prior to use.



Note: It is very important to take the tension off 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 subsequent uses.

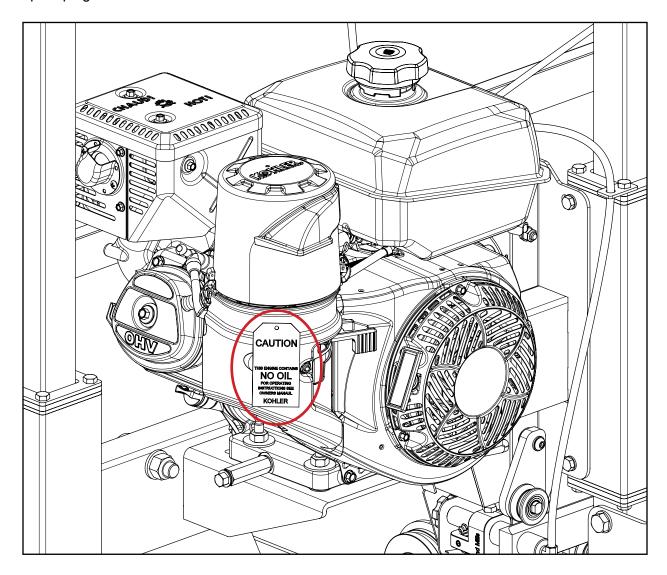
Add grease to all T-bolt threads on the sawmill track: three (3) on the bunks and one (1) on the log clamp assembly.





ENGINE OIL

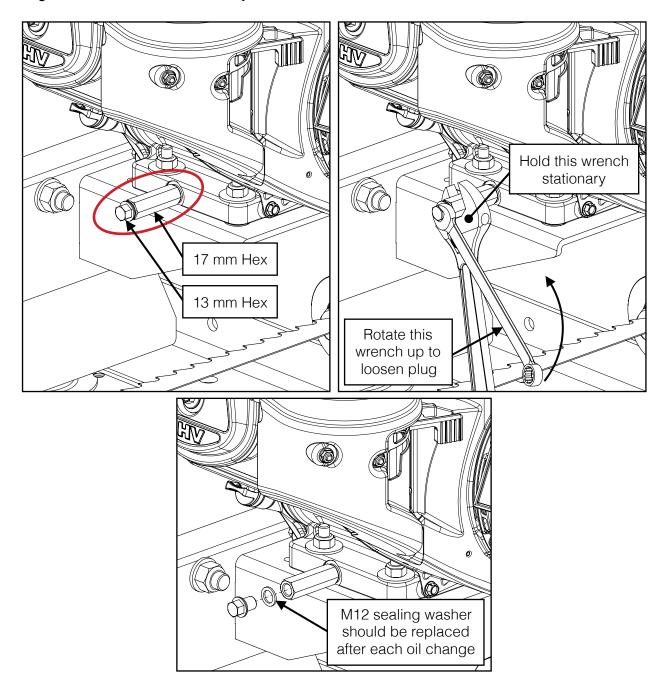
Refer to the engine manual before using your sawmill. Please note that the engine does not contain any gasoline or engine oil when it is shipped. Furthermore, the engine is equipped with an oil alert system, meaning that if the crankcase oil level is low or empty, the power is cut to the spark plug and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



When changing the engine oil, follow the instructions on the next page.



The engine comes with a brass oil drain extension to make oil changes easier. When removing the drain plug, use a wrench to hold the brass extension stationary while a second wrench loosens the plug. Failure to follow this procedure could damage the threads in the aluminum engine block and void the warranty.

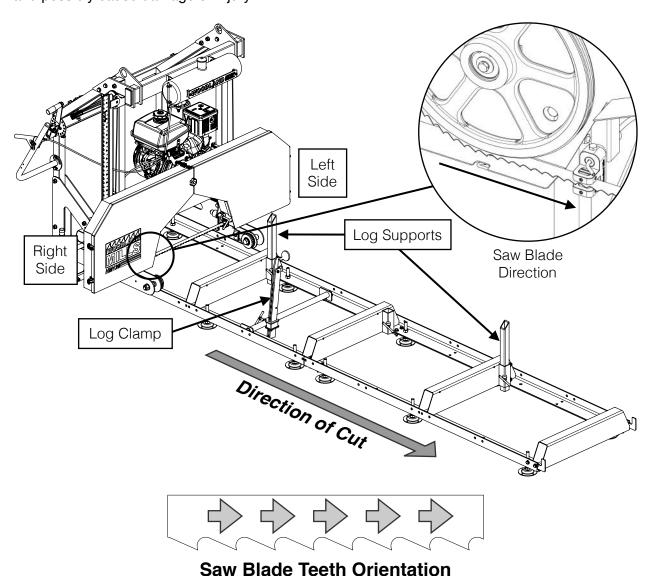


Repeat the process in reverse to re-install the drain plug. Remember to hold the brass extension stationary with a second wrench when tightening the plug.



DIRECTION OF CUT

Always cut in the direction shown below. The log clamp is located to the right side of the log with the log supports on the left. Failure to cut in this direction can cause the log to come loose and possibly cause damage or injury.



Always ensure the saw blade teeth are orientated such that they are cutting *into* the wood and not being dragged backwards across it. Some blade manufacturers ship their saw blades inside out (backwards) due to manufacturing processes and they must be flipped prior to installation.

Please follow the instructions in the <u>SAWMILL SET-UP PROCEDURES</u> section. Failure to do so may result in poor sawing performance, damage or injury.



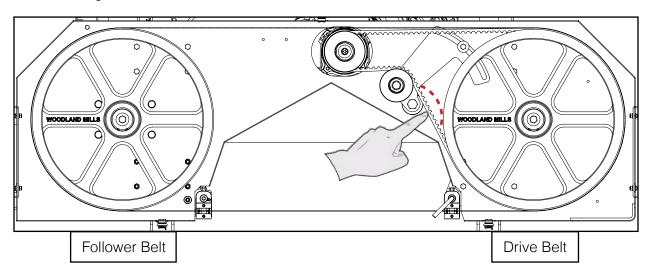
SAWMILL SET-UP PROCEDURES DRIVE BELT TENSION



Make sure the blade is under proper tension when setting the drive belt tension. This ensures the belt is fully seated into the pulley grooves when the deflection is checked. See section, <u>BLADE TENSION</u>, for more information.



To check the drive belt tension, push against it firmly and measure the deflection. There should be no more than ¼ in [6 mm] of movement. If the belt deflection exceeds this amount it will need to be tightened as described below.

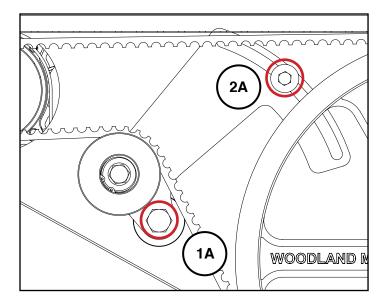


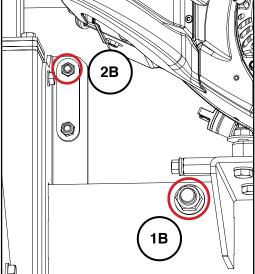
Never attempt to adjust the belt tension with the engine running. As a safety precaution, remove the spark plug cap.

Start by loosening the M16 hex bolt (1A) and lock nut (1B) that secure the belt tensioner mechanism to the sawhead. Then loosen the M8 bolt (2A) in the curved slot—its nut (2B) is secured in place by an anti-rotation device and does not require a second wrench or socket.

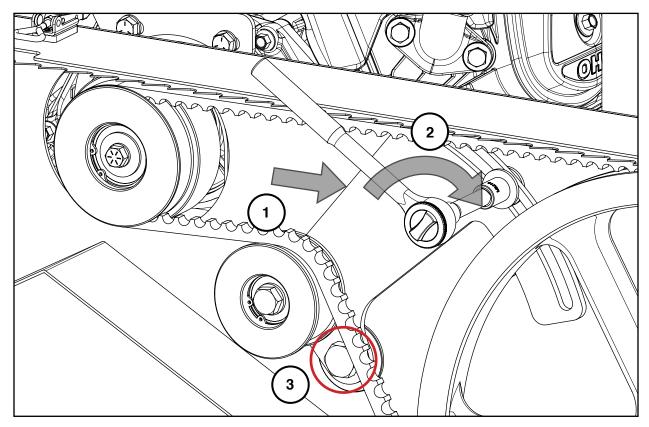
Only loosen the bolts approx. one turn—do not remove them.







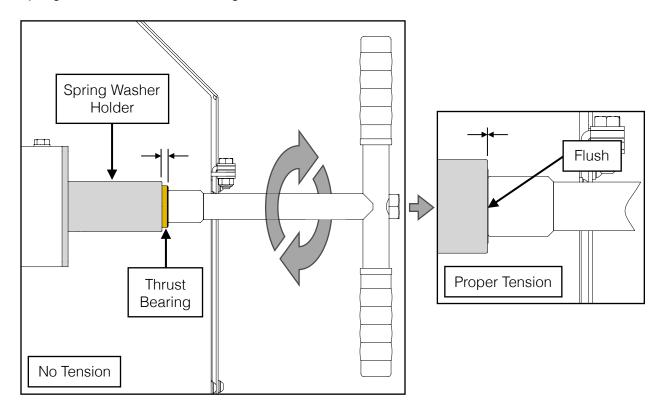
Once both bolts are loose, firmly push the belt tensioner towards the band wheel until the belt is tight (#1), then tighten the upper bolt in the curved slot in a clockwise direction using a 13 mm socket (#2). Re-check the belt tension to ensure a maximum of ¼ in [6 mm] deflection and then tighten the M16 bolt and lock nut when the deflection is correct (#3).



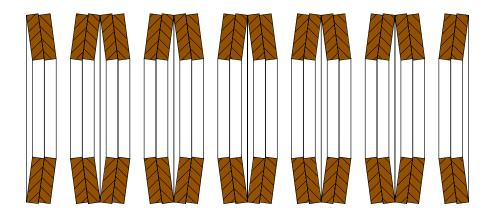


BLADE TENSION

Proper blade tension is achieved when the thrust bearing is flush with the outer face of the spring washer holder after turning the T-handle clockwise.



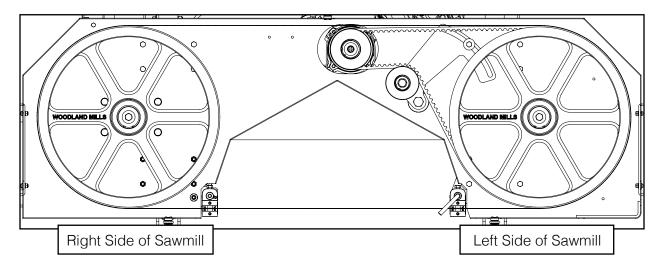
If the spring washer holder is removed for maintenance (e.g. greasing or replacement), ensure the twenty-four (24) Belleville washers inside are oriented and re-installed as shown in the graphic below. There are five (5) groups of four (4)—each made up of two (2) opposing nested pairs—with a separate nested pair at each end.



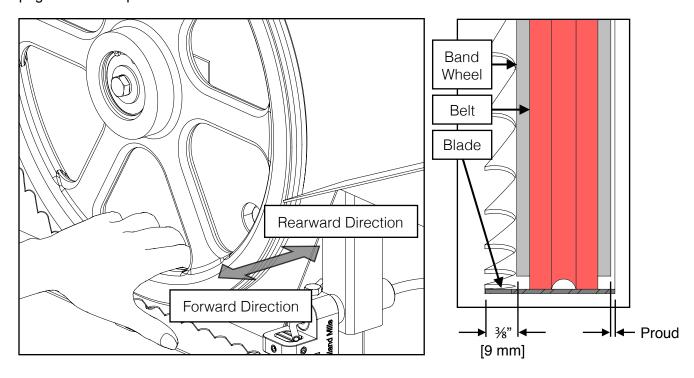


BLADE TRACKING

Never attempt to adjust the blade tracking with the engine running. As a safety precaution, remove the spark plug cap. Gloves and safety glasses should be worn when working with the blade as it is extremely sharp.



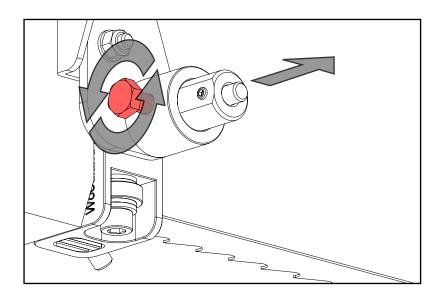
The blade should run with the same tooth-to-front band wheel face distance on both the drive and follower sides: ~\mathfrak{m} in [9 mm] ideally. The back of the blade will be just proud [~.04 in / 1 mm] of the rear face of the band wheel at this distance and can be a quicker check than using a tape measure or scale. If an adjustment on either side is required, the steps on the following pages detail the procedure.



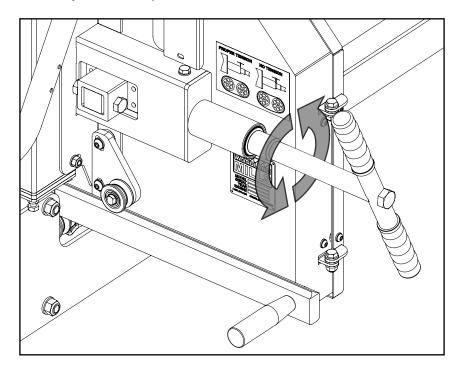


REDUCING THE BLADE TENSION

Loosen the blade guide holder assembly bolt using a socket/wrench. The shaft should now be free to slide rearward and out of the way. Perform this step on both blade guide assemblies. This ensures the guide bearings will not influence the tracking of the blade whilst being adjusted.



Take some tension off the blade by turning the tension handle in the counter-clockwise direction one full turn from its fully-tensioned position.

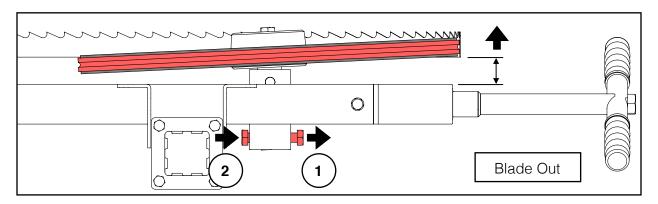




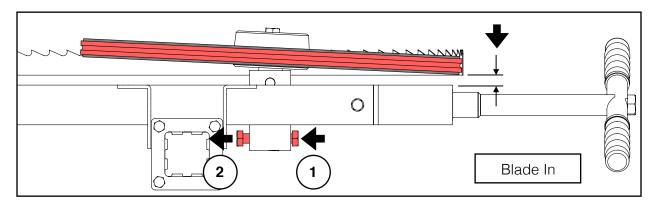
ADJUSTING THE FOLLOWER SIDE TRACKING

The follower side band wheel shaft is connected to an auto-tracking system. Once the tracking is set, it maintains these settings even without a blade on the sawmill, allowing for quick and simple blade/belt changes. The two (2) bolts at the rear of the follower shaft are used to adjust the pitch angle of the band wheel to track the blade.

To move the blade **forward**—or **out**—on the band wheel, start with the right-hand bolt by turning it **counter-clockwise** (**#1**) so that it moves **out** from the sawmill. Turn it ½ turn then snug the left-hand bolt by turning it **clockwise** (**#2**) to fix the follower band wheel shaft in plate.



Alternatively, to move the blade *rearward*—or *in*—on the band wheel, start with the left-hand bolt by turning it *counter-clockwise* (#2) so that it moves *in* towards the sawmill. Turn it ½ turn then snug the right-hand bolt by turning it *clockwise* (#1) to fix the follower band wheel shaft in plate.

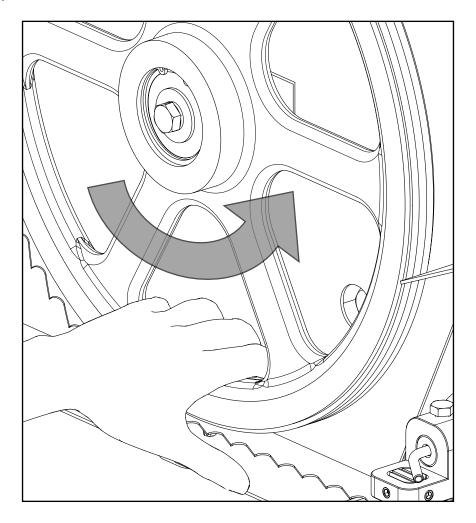


A simple phrase to help remember which way to adjust the tracking bolts is: **IN is IN, and OUT is OUT**. When the bolts move in towards the sawmill, the blade moves *in*. When the bolts move out away from the sawmill, the blade moves *out*.

Note that the band wheel angle shown in these graphics has been exaggerated and some components have been removed for clarity.



Turn the T-handle *clockwise* until proper blade tension is achieved. While wearing gloves, spin the band wheel by hand and observe how the blade tracking has changed. Measure the distance again and repeat the above step to further compensate if required. The ideal measurement is $\frac{3}{8}$ in [9 mm] or check that the back of the blade is just proud of the back of the band wheel.



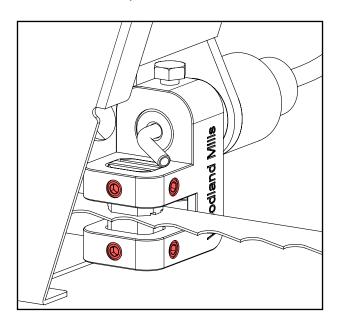
Finally, move the guide block holders forward to the blade. See section, **BLADE GUIDE ADJUSTMENT** on the next page for more information.

After the blade tracking is set properly, it should require no further adjusting, even after blade changes. The auto-tracking mechanism maintains the band wheel pitch angle whether or not a blade is on the sawmill.

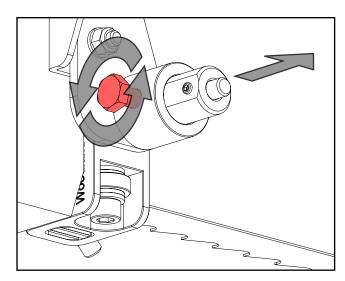


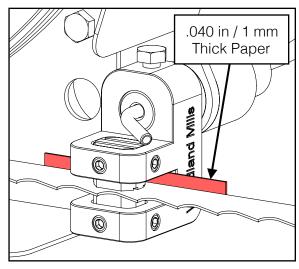
BLADE GUIDE ADJUSTMENT

Never attempt to adjust the guide blocks or the guide bearing 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 steps below. Blade tracking is covered in the **BLADE TRACKING** section. Using a 4 mm hex key, loosen the blade guide blocks on both the left and right sides. They should be free to slide up and down.



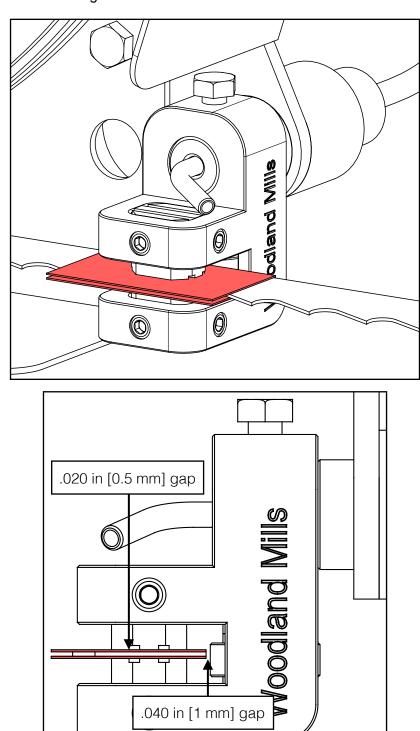
Loosen the blade guide assembly bolts on both guide block holders so that the round shaft is free to slide back and forth. Position it so that there is a thick paper-sized gap (.040 in or 1 mm) between the bearing and the back of blade. Re-tighten the bolt against the flat on the shaft to secure the assembly into position.







Using a feeler gauge or thick piece of paper (.020 in / 0.5 mm), place it between the blade and both guide blocks and then tighten the set screws.





SAWMILL MAINTENANCE

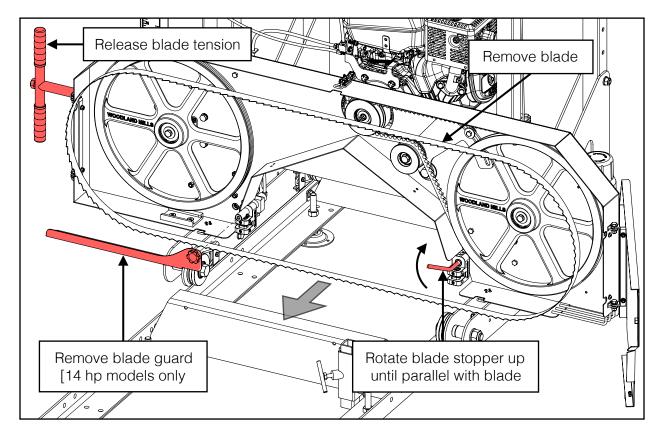
CHANGING THE BLADE

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

Follow these steps to remove an old/worn blade from the sawmill:

- 1. Turn the belt tension handle counter-clockwise to release the tension from the blade until it is loose.
- 2. Open the band wheel housing doors.
- 3. Remove the yellow blade guard [14 hp sawmills models only].
- 4. Rotate the blade stopper up on the drive-side guide block holder.

The blade is now sufficiently loose and can be easily pulled straight out the front.

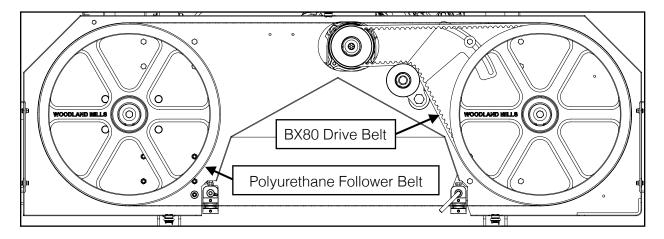


Install a new blade following the reverse order of steps and then set the proper blade tension. The tracking should not have to be adjusted after changing blades. See section, **ADJUSTING THE FOLLOWER SIDE TRACKING**, for more information.

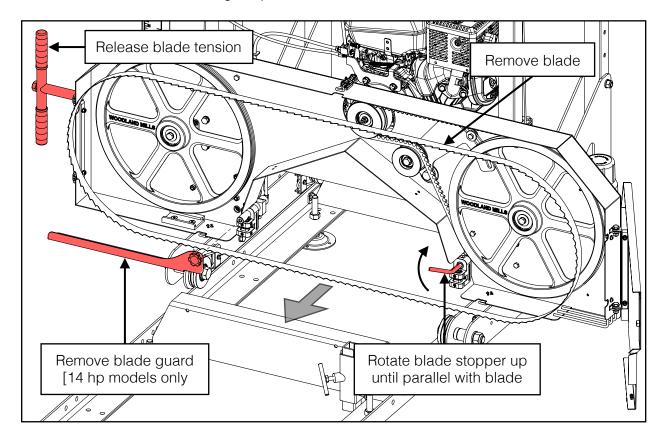


REPLACING BELTS

Never attempt to replace the belts 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 V-belts on the sawmill: a BX80 cogged belt on the drive side and a Woodland Mills polyurethane belt on the follower side.

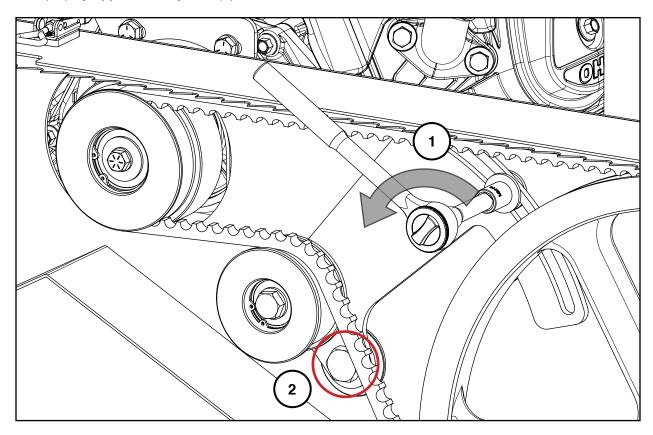


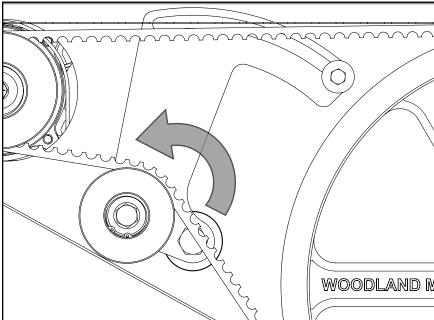
First, remove the blade following the procedure outlined in section, *CHANGING THE BLADE*.





Next, remove the tension from the drive belt by loosening the M8 hex bolt (#1) and the M16 hex bolt (#2) by approximately one (1) turn—do not remove the bolts.



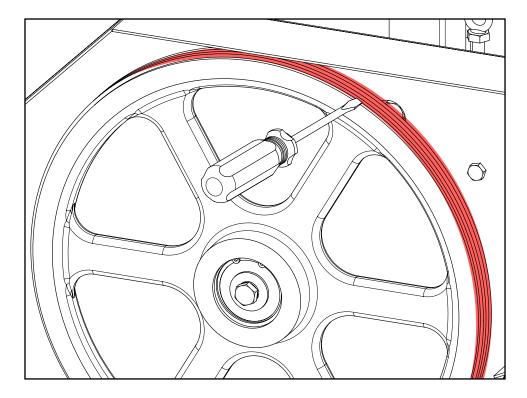


Once both bolts are loose, the belt tensioner will rotate counter-clockwise until the idler pulley comes to rest on the band wheel housing. The belt can now easily be removed by hand and a new belt installed.

Tension the belt following the same procedure as outlined in section, *DRIVE BELT TENSION*.



The follower belt is changed by prying it off and installing a new one with the aid of slotted screw drivers.



The blade can now be re-installed, band wheel housing doors closed, and proper blade tension set.

**Note that blade tracking should <u>not</u> have changed after replacing the belts. The autotracking mechanism maintains the band wheel pitch angle while the blade is removed.

Refer to section, *BLADE TRACKING*, for more information.**



TROUBLESHOOTING

Problem/Issue	Possible Causes	Resolution Options
Producing wavy cuts	 Inadequate blade tension. Improper blade guide set up. Improper blade tracking. Sap build up on blade. Dull blade. Pushing mill too quickly. 	 Tighten blade. Refer to page 58. Gap between guide blocks and blade are incorrect. Refer to page 63. Adjust blade tracking. Refer to page 59. Install new blade. Refer to page 65. Always use blade lubricant. Install new blade. Refer to page 65. Slow feed rate down and push head slower through log.
Last board is tapered or narrow in middle	Tracks are not level.	Tracks need to be checked with level and adjusted to be square. They also need to be set up on firm, sturdy base so deflection does not occur from logs or sawmill head.
Blade dulls quickly	 Logs are not clean. Foreign objects in log. 	 Logs may contain dirt/sand causing blades to wear prematurely. Tree may contain nails, staples, old fencing etc.
Blade comes off band wheels	 Inadequate blade tension. Improper blade guide set up. Improper blade tracking. Belts are worn. Dull blade. Pushing mill too quickly. 	 Tighten blade. Refer to page 58. Gap between guide blocks and blade are incorrect. Refer to page 63. Adjust blade tracking. Refer to page 59. Install new belts. Refer to page 66. Install new blade. Refer to page 65. Slow feed rate down and push head slower through log.
Blades are breaking	 Too many blade sharpenings. Inadequate blade tension. Improper blade guide set up. Improper blade tracking. Pushing mill too quickly. 	 Replace blade. Refer to page 65. Binding between guide blocks when blade is too loose. Tighten blade. Refer to page 58. Gap between guide blocks and blade are incorrect. Refer to page 63. Adjust blade tracking. Refer to page 59. Slow feed rate down and push head slower through log.
Blade is slowing down or stopping when milling	 Inadequate blade tension. Improper drive belt tension. Pushing mill too quickly. 	 Tighten blade. Refer to page 58. Belts are worn or too loose. Replace. Refer to page 66. Slow feed rate down and push head slower through log.
Mill is not cutting or cutting very slowly	Dull blade. Blade is on backwards.	 Install new blade. Refer to page 65. Remove blade and flip it inside out. The teeth should be facing in the direction of the log supports.
Mill is vibrating excessively	 Log is not clamped securely. Belts are deformed. Band wheel bearing issue. Pushing mill too quickly. Loose bolts. 	 Ensure log is clamped firmly resting on log bunks and against log supports. Belts may have flats in them from leaving blade tension tight when not in use. Replace them. Refer to page 66. Inspect and replace the band wheel bearings if worn. Slow feed rate down when milling. Check all bolts to ensure they are tight.



PARTS LIST

Highlighted rows are items specific to HM126-14 (14 Horsepower) sawmill.

	Quantity					
Item	14 hp	9.5 hp	Part No.	Description		
1	4	4	0001073	TRACK RAIL		
2	2	2	0001075	LOG BUNK, END		
3	2	2	0001080	LOG BUNK, MID		
4	1	1	0001084	LOG BUNK, CENTER		
5	2	2	0001072	REINFORCEMENT PLATE		
6	4	4	0001055	CARRIAGE STOP		
7	12	12	0001070	LEVELLING FOOT		
8	1	1	0001062	LOG CLAMP SHAFT AND BRACKET WELDMENT		
9	1	1	0001069	LOG CLAMP SHAFT BRACKET		
10	1	1	0001061	LOG CLAMP RECEIVER		
11	1	1	0001211	LOG CLAMP		
12	2	2	0001056	LOG SUPPORT, LONG		
13	2	2	0001465	LOG SUPPORT, SHORT		
14	4	4	0001059	T-BOLT, M10 X 1.5, 40 mm LG		
15	1	1	0001949	BACK BEAM		
16	2	2	0001127	POST SLEEVE		
17	4	4	0001125	POST SLEEVE NYLON BUSHING		
18	4	4	0001126	POST SLEEVE LOCKING PLATE		
19	1	1	0001020	WATER TUBE BRACKET, FLAT		
20	1	1	0002052	AUTO-TRACKING MOUNTING PLATE		
21	1	1	0002053	AUTO-TRACKING TENSION BLOCK		
22	1	1	0002054	AUTO-TRACKING SHAFT SLEEVE		
23	1	1	0002241	AUTO-TRACKING TENSION BAR, TORQUE GAUGE, TR18X3 THD		
24	1	1	0002056	AUTO-TRACKING BACK PLATE		
25	2	2	0002350	HEX BOLT, M12 X 1.25, 20 mm LG, 2.5 mm CHAMFER		
26	1	1	0003116	SPRING WASHER HOLDER, AUTO-TRACKING		
27	6	6	0002637	SPRING WASHER HOLDER SPACER, AUTO-TRACKING		
28	1	1	0001029	TENSION HANDLE		
29	2	2	0001030	HANDLE GRIP, GROOVED, 26 mm ID, 108 mm LG		
30	6	4	0002023	SPACER, ADJUSTABLE BLADE GUIDE		
31	1	-	0002654	ADJUSTABLE BLADE GUIDE ROLLER CARRIAGE, 41 mm X 120∞ ROLLERS		
32	2	-	0002655	TRACK ROLLER ASSEMBLY, CONCENTRIC, 41 mm X 120∞, M12 X 1.75 THD		
33	1	-	0002658	TRACK ROLLER ASSEMBLY, ECCENTRIC, 41 mm X 120∞, M10 X 1.5 THD		
34	2	1	0002661	BALL-NOSE SPRING PLUNGER, HEX DRIVE, NON-LOCKING, M12 X 1.75, 26 mm LG		
35	1	-	0002660	BLADE GUIDE ADJUSTMENT ARM, 120∞ TRACK ROLLERS		
36	1	-	0002673	PLASTIC HANDLE, TAPERED, 29 mm DIA, 112 mm LG, M12 X 1.75 THD HOLE		
37	1	-	0002666	BLADE GUARD GUIDE		
38	1	-	0002665	BLADE GUARD, ADJUSTABLE BLADE GUIDE		
39	1	-	0002667	KNOB, MULTI-LOBE, 38 mm OD, M8 X 1.25, 12 mm LG		
40	-	1	0002020	BLADE GUIDE HOLDER BRACKET, RIGHT		
41	1	1	0002022	BLADE GUIDE HOLDER BRACKET, LEFT		
42	2	2	0001093	GUIDE BLOCK HOLDER		



Item	-	ntity Part No.		Description				
	14 hp 9.5 hp			2000 i p.ii.o.ii				
43	1	1	0001096	GUIDE BLOCK HOLDER SHAFT A				
44	-	1	0001091	GUIDE BLOCK HOLDER SHAFT B				
45	1	-	0002663	GUIDE BLOCK HOLDER SHAFT B, GUARD MOUNT				
46	4	4	0001090	GUIDE BLOCK				
47	-	1	0001092	DRIP NOZZLE				
48	1	-	0002664	GREASE FITTING, STRAIGHT, 14 mm LG, M6 TPR THD, MODIFIED				
49	1	1	0001095	SAW BLADE STOPPER				
50	1	1	0001951	BAND WHEEL HOUSING				
51	1	1	0001952	BAND WHEEL DOOR, LEFT				
52	1	1	0001953	BAND WHEEL DOOR, RIGHT				
53	2	2	0001954	BAND WHEEL HOUSING INNER HINGE BRACKET				
54	2	2	0001955	BAND WHEEL HOUSING OUTER HINGE BRACKET				
55	3	3	0003161	LATCH SPACER				
56	3	3	0002248	ADJUSTABLE DRAW LATCH				
57	1	1	0001659	KNOB, MULTI-LOBE, 48 mm OD, M8 X 1.25, 17 mm LG				
58	1	1	0001104	DRIVE SHAFT				
59	1	1	0001993	FOLLOWER SHAFT, AUTO-TRACKING				
60	2	2	0001105	BAND WHEEL, 19 in				
61	1	1	0001107	V-BELT, FOLLOWER, B1448Li, 19 in DIA				
62	1	1	0002017	BELT TENSIONER SHAFT SPACER				
63	1	1	0002643	BELT TENSIONER ADAPTER PLATE W/ LEVELLING WASHER HOUSING				
64	1	1	0002644	BELT TENSIONER IDLER SHAFT, LEVELLING WASHERS				
65	1	1	0002645	BELT TENSIONER PULLEY, SINGLE BEARING, SPHERICAL ALIGNMENT				
66	1	1	0002646	KEY, 8 X 8 mm, 37 mm LG				
67	1	1	0002019	NUT LOCKING PLATE				
68	1	1	0001655	MANUAL TUBE				
69	1	1	0001217	CLUTCH SPACER				
70	1	1	0001137	PARALLEL KEY, 1/4 X 1/4 X 1 in LG				
71	-	1	0001823	CLUTCH ASSEMBLY, 1 in [25.4 mm] BORE, 87 mm DIA PULLEY				
72	1	-	0001824	CLUTCH ASSEMBLY, 1 in [25.4 mm] BORE, 108 mm DIA PULLEY				
73	1	1	0001814	CLUTCH HOUSING GUARD W/ SIDE FLANGES				
74	1	1	0002079	OIL DRAIN EXTENSION, 56 mm LG, M12 X 1.5 THD				
75	1	1	0001136	EXHAUST REDIRECT				
76	-	1	0001983	VALVE MOUNT BRACKET, 9.5 HP				
77	1	_	0001986	VALVE MOUNT BRACKET, 14 HP				
78	-	1	0001984	VALVE ACTUATION TAB, 9.5 HP				
79	1	-	0001987	VALVE ACTUATION TAB, 14 HP				
80	1	1	0001985	CABLE THIMBLE, 10 mm HEX, M6 X 1 THD				
81	1	1	0001303	SAW BLADE, 7/8 in PITCH, 165 TEETH, 1-1/4 WD X 144 LG X .042 in THK				
82	2	2	0001125	FRONT POST				
83	2	2	0001133	BACK POST, ADJUSTABLE PUSH HANDLE				
84	2	2	0002007	PLASTIC END CAP, RECT, 50 X 50 mm				
85	4	4	0001660					
	4			CARRIAGE SIDE PLATE				
86		4	0001966	SPACER, 32 mm OD, 20.5 mm ID, 40 mm LG				
	2	2	0001967	SPACER, 32 mm OD, 20.5 mm ID, 10 mm LG SPACER, 33.5 OD X 13 ID X 50 mm LG				
88	4	4	0001102					
09	4	4	0001037	CARRIAGE WHEEL				



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Item	em Quantity		Part No.	Description					
	14 hp	9.5 hp		· · · · · · · · · · · · · · · · · · ·					
90	4	4	0001019	WHEEL SWEEP BRACKET					
91	4	4	0001017	WHEEL SWEEP HOLDER					
92	4	4	0001018	WHEEL SWEEPER					
93	1	1	0001139	CROSS BEAM					
94	2	2	0001661	PLASTIC END CAP, RECT, 100 X 50 mm					
95	1	1	0002096	LOG SCALE MOUNTING BRACKET					
96	1	1	0002097	LOG SCALE GUIDE					
97	1	1	0002098	LOG SCALE GUIDE LOCKING PLATE					
98	1	1	0002099	LOG SCALE INDICATOR ARROW					
99	1	1	0002764	KNOB, MULTI-LOBE, 48 mm OD, M8 X 1.25, 25 mm LG					
100	1	1	0002040	LOG SCALE BRACKET					
101	1	1	0001038	LOG SCALE BRACKET SPACER PLATE					
102	1	1	0003233	MAGNETIC SCALE, 27 in, YELLOW					
103	1	1	0003235	MAGNETIC SCALE, 27 in, WHITE					
104	1	1	0002034	LUBRICANT TANK, 10 L [2.6 gal], MANOMETER/BADGE MOUNT					
105	1	1	0001132	TANK CAP					
106	1	1	0002037	HM126 NAMEPLATE					
107	1	1	0002038	NAMEPLATE BACKING					
108	1	1	0002809	MANOMETER PIPE, LUBRICATION TANK					
109	1	1	0002691	LUBRICATION TUBING, TANK-TO-ELBOW, 2-3/16 in [55 mm] LG					
110	1	1	0002692	LUBRICANT TUBING, TANK-TO-VALVE, 8 mm OD, 22-1/4 in [565 mm] LG					
111	1	1	0002693	LUBRICANT TUBING, VALVE-TO-BLADE, 8 mm OD, 32-1/2 in [825 mm] LG					
112	1	1	0002066	DASHBOARD, HOUR METER					
113	1	1	0002671	HOUR METER					
114	1	1	0001120	LIFT MECHANISM HOUSING					
115	1	1	0001048	BRASS NUT, LIFT MECHANISM, TR20X4 THD					
116	1	1	0001134	CRANK HANDLE SHAFT, TR20X4 THD					
117	1	1	0001121	LIFT MECHANISM EXTENSION ARM					
118	6	6	0002812	SPACER, 12 ID X 18 OD X 12 mm LG					
119	2	2	0002813	SPACER, 12 ID X 18 OD X 5 mm LG					
120	7	7	0001099	CABLE PULLEY					
121	2	2	0001100	CABLE HOOK					
122	1	1	0002520	CRANK HANDLE INDEXING PLATE					
123	1	1	0002632	CRANK HANDLE ARM LUG					
124	2	2	0002675	SPACER, 12.5 ID X 30 OD X 3.3 mm LG					
125	1	1	0002633	CRANK ARM					
126	1	1	0002651	HANDLE, TAPERED, REVOLVING GRIP, 31 DIA X 102 mm LG, M12 x 1.75, 20 mm LG					
127	1	1	0001144	WIRE ROPE LIFT CABLE, LEFT, 4 mm DIA, 120 in [3048 mm] LG					
128	1	1	0001145	WIRE ROPE LIFT CABLE, RIGHT, 4 mm DIA, 77 in [1956 mm] LG					
129	1	1	0002068	PUSH HANDLE, ADJUSTABLE					
130	1	1	0001662	PLASTIC END CAP, CIRCULAR, 32 mm OD					
131	1	1	0001002	THROTTLE HANDLE					
132	1	1	0001021	THROTTLE HANDLE THROTTLE CABLE BRACKET					
133	1	1	0001024						
134			0001112	THROTTLE CABLE BARREL END CLAMP					
134	1	1	0001117	SERIAL NUMBER LABEL					
135	2	2	0001839	CAUTION LABEL, DO NOT OPERATE WITHOUT GUARDS					
130			0002700	ONO HOW ENDER, DO NOT OF LIMITE WITHOUT GUMNDS					



Name					IVIILEO				
14	Item	m — i		Part No.	Description				
138		14 hp	9.5 hp						
139	137	1	1	0002769	DANGER/WARNING COLLAGE LABEL				
140	138	1	1	0002770					
141	139	1	1	0002771	DANGER LABEL, BANDSAW BLADE WILL CUT				
142 1 1 1 BX80 V-BELT, COGGED, BX80 143 - 1 CH395-3149 ENGINE, KOHLER COMMAND PRO HORIZONTAL, 9.5 hp 144 1 1 CH495-3149 ENGINE, KOHLER COMMAND PRO HORIZONTAL, 14 hp 145 4 4 5204-2RS BALL BEARING, SEALED, 5204-2RS, 20 mm BORE, 26 mm OD, 20.6 mm WIDE 146 2 2 6 6000-2RS BALL BEARING, SEALED, 61000-2RS, 10 mm BORE, 26 mm OD, 8 mm WIDE 147 7 7 6001-2RS BALL BEARING, SEALED, 6001-2RS, 12 mm BORE, 28 mm OD, 8 mm WIDE 148 1 1 6203-2RS BALL BEARING, SEALED, 6203-2RS, 17 mm BORE, 20 mm OD, 17 mm WIDE 149 4 4 6305-2RS BALL BEARING, SEALED, 6203-2RS, 17 mm BORE, 40 mm OD, 17 mm WIDE 150 2 2 51102 THRUST BEARING, SINGLE DIR, 51102, 15-16 mm BORE, 28 mm OD, 9 mm WIDE 151 1 1 51204 THRUST BEARING, SINGLE DIR, 51102, 15-16 mm BORE, 28 mm OD, 9 mm WIDE 152 1 1 1 MJV-2 STEM VALVE, 1/8 in NPT FEMALE, 1/8 in STEM TRAVEL 153 1 1 SLS-03-08 FLOW CONTROL VALVE, RA, 3/8 NPT, 8 mm QUICK-CONNECT TUBE 154 3 3 HDW FITTING, STRAIGHT, BARBED, 1/8 in NPT, 1/4 in HOSE 155 1 + HDW FITTING, ELBOW, 90∞, BARBED, 1/8 in NPT, 1/4 in HOSE 157 1 1 HDW COMPRESSION SPRING, GROUND ENDS, 0.72 OD, 0.096 in DIA WIRE, 1.75 in LG 160 1 1 HDW EXTENSION SPRING, GROUND ENDS, 0.72 OD, 0.096 in DIA WIRE, 1.75 in LG 161 1 HDW EXTENSION SPRING, GROUND ENDS, 8.5 OD, 0.9 DIA WIRE, 27 mm LG 162 2 2 HDW HEX BOLT, MS X 1, 20 mm LG 163 4 4 HDW HEX BOLT, MS X 1, 20 mm LG 164 1 HDW HEX BOLT, MS X 1, 25 mm LG 165 1 HDW HEX BOLT, MS X 1, 25 mm LG 166 2 2 HDW HEX BOLT, MS X 1, 25 mm LG 167 4 4 HDW HEX BOLT, MS X 1, 25 mm LG 168 4 HDW HEX BOLT, MS X 1, 25 mm LG 169 4 HDW HEX BOLT, MS X 1, 25, 10 mm LG 170 1 HDW HEX BOLT, MS X 1, 25 mm LG 171 4 HDW HEX BOLT, MS X 1, 25, 10 mm LG 172 4 HDW HEX BOLT, MS X 1, 25, 10 mm LG 173 2 HDW HEX BOLT, MS X 1, 25, 10 mm LG 174 4 HDW HEX BOLT, MS X 1, 25, 10 mm LG 175 1 HDW HEX BOLT, MS X 1, 25, 10 mm LG 176 4 HDW HEX BOLT, MS X 1, 25, 50 mm LG 177 4 HDW HEX BOLT, MS X 1, 25, 50 mm LG 178 1 HDW HEX BOLT, MS X 1, 25, 50 mm LG 179 1 HDW HEX BOLT, MS X 1, 25, 50 mm LG 179 1 HDW HEX BOLT, MS X 1, 25, 50 mm LG 1	140	1	1	0001829	BLADE TRACKING WARNING LABEL				
143 - 1 CH395-3149 ENGINE, KOHLER COMMAND PRO HORIZONTAL, 9.5 hp 144 1 - CH440-3149 ENGINE, KOHLER COMMAND PRO HORIZONTAL, 14 hp 145 4 4 5204-2RS BALL BEARING, SEALED, 5204-2RS, 20 mm BORE, 27 mm OD, 20.6 mm WIDE 146 2 2 6000-2RS BALL BEARING, SEALED, 5204-2RS, 20 mm BORE, 26 mm OD, 8 mm WIDE 147 7 7 7 6001-2RS BALL BEARING, SEALED, 6001-2RS, 10 mm BORE, 26 mm OD, 8 mm WIDE 148 1 1 6020-2RS BALL BEARING, SEALED, 6203-2RS, 17 mm BORE, 28 mm OD, 12 mm WIDE 149 4 4 6305-2RS BALL BEARING, SEALED, 6305-2RS, 25 mm BORE, 40 mm OD, 12 mm WIDE 150 2 2 51102 THRUST BEARING, SINGLE DIR, 51102, 15-16 mm BORE, 28 mm OD, 9 mm WIDE 151 1 1 51204 THRUST BEARING, SINGLE DIR, 51102, 15-16 mm BORE, 28 mm OD, 9 mm WIDE 151 1 1 MJV-2 STEM VALVE, 1/8 in NPT FEMALE, 1/8 in STEM TRAVEL 153 1 1 SLS-03-08 FLOW CONTROL VALVE, RA, 3/8 NPT, 8 mm QUICK-CONNECT TUBE 154 3 3 HDW FITTING, STRAIGHT, BARBED, 1/8 in NPT, 1/4 in HOSE 155 1 HDW FITTING, ELBOW, 90∞, BARBED, 1/8 in NPT, 1/4 in HOSE 156 1 HDW COMPRESSION SPRING, GROUND ENDS, 0.72 OD, 0.096 in DIA WIRE, 1.75 in LG 159 1 HDW COMPRESSION SPRING, GROUND ENDS, 8.5 OD, 0.9 DIA WIRE, 2.75 in LG 160 1 HDW EXTENSION SPRING, 3 mm OD, 1.5 mm WIRE, 0 mm LG 161 2 DHDW HEX BOLT, M6 X 1, 20 mm LG 162 2 HDW HEX BOLT, M6 X 1, 20 mm LG 163 4 HDW HEX BOLT, M6 X 1, 20 mm LG 164 1 HDW HEX BOLT, M6 X 1, 20 mm LG 165 1 HDW HEX BOLT, M6 X 1, 20 mm LG 167 4 HDW HEX BOLT, M8 X 1, 25 mm LG 168 2 DHDW HEX BOLT, M8 X 1, 25 mm LG 169 4 HDW HEX BOLT, M8 X 1, 25, 10 mm LG 170 1 HDW HEX BOLT, M8 X 1, 25, 10 mm LG 171 4 HDW HEX BOLT, M8 X 1, 25, 10 mm LG 172 2 HDW HEX BOLT, M8 X 1, 25, 10 mm LG 173 3 HDW HEX BOLT, M8 X 1, 25, 10 mm LG 174 4 HDW HEX BOLT, M8 X 1, 25, 50 mm LG 175 1 HDW HEX BOLT, M8 X 1, 25, 50 mm LG 176 4 HDW HEX BOLT, M8 X 1, 25, 50 mm LG 177 4 HDW HEX BOLT, M8 X 1, 25, 50 mm LG 178 1 HDW HEX BOLT, M8 X 1, 25, 50 mm LG 179 1 HDW HEX BOLT, M1 X 1, 50 mm LG 179 1 HDW HEX BOLT, M1 X 1, 50 mm LG 179 1 HDW HEX BOLT, M1 X 1, 50 mm LG 179 1 HDW HEX BOLT, M1 X 1, 50 mm LG	141	1	1	0003245	3LADE TENSION LABEL				
144	142	1	1	BX80	V-BELT, COGGED, BX80				
145 4 4 5204-2RS BALL BEARING, SEALED, 5204-2RS, 20 mm BORE, 47 mm OD, 20.6 mm WIDE 146 2 2 6000-2RS BALL BEARING, SEALED, 61000-2RS, 10 mm BORE, 26 mm OD, 8 mm WIDE 147 7 7 6001-2RS BALL BEARING, SEALED, 6203-2RS, 12 mm BORE, 28 mm OD, 8 mm WIDE 148 1 1 6203-2RS BALL BEARING, SEALED, 6203-2RS, 12 mm BORE, 28 mm OD, 12 mm WIDE 149 4 4 6305-2RS BALL BEARING, SEALED, 6203-2RS, 25 mm BORE, 62 mm OD, 17 mm WIDE 150 2 2 51102 THRUST BEARING, SINGLE DIR, 51102, 15-16 mm BORE, 28 mm OD, 9 mm WIDE 150 1 1 51204 THRUST BEARING, SINGLE DIR, 51204, 20 mm BORE, 28 mm OD, 15 mm WIDE 151 1 1 MJV-2 STEM VALVE, 1/8 in NPT FEMALE, 1/8 in STEM TRAVEL 152 1 1 MJV-2 STEM VALVE, 1/8 in NPT FEMALE, 1/8 in NPT, 1/4 in HOSE 153 1 1 SLS-03-08 FLOW CONTROL VALVE, RA, 3/8 NPT, 8 mm QUICK-CONNECT TUBE 154 3 3 HDW FITTING, ELBOW, 90-8, BARBED, 1/8 in NPT, 1/4 in HOSE 155 1	143	-	1	CH395-3149	ENGINE, KOHLER COMMAND PRO HORIZONTAL, 9.5 hp				
146 2 2 6000-2RS BALL BEARING, SEALED, 61000-2RS, 10 mm BORE, 26 mm OD, 8 mm WIDE 147 7 7 6001-2RS BALL BEARING, SEALED, 6001-2RS, 12 mm BORE, 26 mm OD, 8 mm WIDE 148 1 1 6203-2RS BALL BEARING, SEALED, 6303-2RS, 17 mm BORE, 20 mm OD, 12 mm WIDE 149 4 4 6305-2RS BALL BEARING, SEALED, 6303-2RS, 17 mm BORE, 40 mm OD, 17 mm WIDE 150 2 2 51102 THRUST BEARING, SINGLE DIR, 51102, 15-16 mm BORE, 28 mm OD, 9 mm WIDE 151 1 51204 THRUST BEARING, SINGLE DIR, 51204, 20 mm BORE, 41.5 mm OD, 15 mm WIDE 152 1 1 MJV-2 STEM AVLYE, 18 in NPT FEMALE, 18 in STEM TRAVEL 153 1 1 SLS-03-08 FLOW CONTROL VALVE, RA, 36 NPT, 8 mm QUICK-CONNECT TUBE 154 3 3 HDW FITTING, STRAIGHT, BARBED, 178 in NPT, 174 in HOSE 155 1 1 HDW FITTING, ELBOW, 90∞, BARBED, 178 in NPT, 174 in HOSE 155 1 1 HDW FITTING, ELBOW, 90∞, BARBED, 6 mm ID TUBE, WHITE 157 1 1 HDW <	144	1	-	CH440-3149	ENGINE, KOHLER COMMAND PRO HORIZONTAL, 14 hp				
147 7 7 6001-2RS BALL BEARING, SEALED, 6001-2RS, 12 mm BORE, 40 mm OD, 12 mm WIDE 148 1 1 6203-2RS BALL BEARING, SEALED, 6203-2RS, 17 mm BORE, 40 mm OD, 12 mm WIDE 150 2 2 51102 THRUST BEARING, SEALED, 6305-2RS, 25 mm BORE, 62 mm OD, 17 mm WIDE 150 2 2 51102 THRUST BEARING, SINGLE DIR, 51102, 15-16 mm BORE, 28 mm OD, 9 mm WIDE 151 1 1 51204 THRUST BEARING, SINGLE DIR, 51104, 20 mm BORE, 41.5 mm OD, 15 mm WD W/ HSG 152 1 1 MJV-2 STEM VALVE, 18 in NPT FEMALE, 1/8 in STEM TRAVE 153 1 1 SLS-03-08 RLOW CONTROL VALVE, RA, 38 NPT, 8 mm QUICK-CONNECT TUBE 154 3 3 HDW FITTING, ELBOW, 90-, BARBED, 1/8 in NPT, 1/4 in HOSE 155 1 1 HDW FITTING, ELBOW, 90-, BARBED, 8 mm ID TUBE, WHITE 157 1 1 HDW FITTING, ELBOW, 90-, BARBED, 1/8 in NPT, 1/4 in HOSE 158 1 1 HDW FITTING, ELBOW, 90-, BARBED, 1/8 in NPT, 1/4 in HOSE 156 1 1 HDW	145	4	4	5204-2RS	BALL BEARING, SEALED, 5204-2RS, 20 mm BORE, 47 mm OD, 20.6 mm WIDE				
148 1 1 6203-2RS BALL BEARING, SEALED, 6203-2RS, 17 mm BORE, 40 mm OD, 12 mm WIDE 149 4 4 6305-2RS BALL BEARING, SEALED, 6305-2RS, 25 mm BORE, 28 mm OD, 17 mm WIDE 150 2 2 51102 THRUST BEARING, SINGLE DIR, 51102, 15-16 mm BORE, 28 mm OD, 9 mm WIDE 151 1 1 51204 THRUST BEARING, SINGLE DIR, 51204, 20 mm BORE, 41.5 mm OD, 15 mm WD W HSG 152 1 1 MJV-2 STEM VALVE, 1/8 in NPT FEMALE, 1/8 in STEM TRAVEL 153 1 1 SL5-03-08 FLOW CONTROL VALVE, RA, 3/8 NPT, 8 mm QUICK-CONNECT TUBE 154 3 3 HDW FITTING, STRAIGHT, BARBED, 1/8 in NPT, 1/4 in HOSE 155 1 - HDW FITTING, STRAIGHT, BARBED, 1/8 in NPT, 1/4 in HOSE 155 1 - HDW FITTING, STRAIGHT, BARBED, 1/8 in NPT, 1/4 in HOSE 156 1 1 HDW FITTING, STRAIGHT, BARBED, 1/8 in NPT, 1/4 in HOSE 157 1 1 HDW FITTING, STRAIGHT, BARBED, 1/8 in NPT, 1/4 in HOSE 158 1 1 HDW COMPRESS	146	2	2	6000-2RS	BALL BEARING, SEALED, 61000-2RS, 10 mm BORE, 26 mm OD, 8 mm WIDE				
149 4 4 6305-2RS BALL BEARING, SEALED, 6305-2RS, 25 mm BORE, 62 mm OD, 17 mm WIDE 150 2 2 51102 THRUST BEARING, SINGLE DIR, 51102, 15-16 mm BORE, 28 mm OD, 9 mm WIDE 151 1 1 51204 THRUST BEARING, SINGLE DIR, 51102, 10-16 mm BORE, 41.5 mm OD, 15 mm WD W/ HSG 152 1 1 MJV-2 STEM VALVE, 18 in NPT FEMALE, 1/8 in STEM TRAVEL 153 1 1 SLS-03-08 FLOW CONTROL VALVE, RA, 3/8 NPT, 8 mm QUICK-CONNECT TUBE 154 3 3 HDW FITTING, ELBOW, 90∞, BARBED, 1/8 in NPT, 1/4 in HOSE 155 1 - HDW FITTING, ELBOW, 90∞, BARBED, 6 mm ID TUBE, WHITE 156 1 1 HDW COMPRESSION SPRING, GROUND ENDS, 0.72 OD, 0.99 in DIA WIRE, 1.75 in LG 158 1 1 HDW COMPRESSION SPRING, GROUND ENDS, 8.5 OD, 0.9 DIA WIRE, 27 mm LG 159 1 1 HDW EXTENSION SPRING, 8.5 mm OD, 1.5 mm WIRE, 60 mm LG 160 1 1 HDW HEX BOLT, M6 X 1, 20 mm LG 161 2 2 HDW HEX BOLT, M6 X	147	7	7	6001-2RS	BALL BEARING, SEALED, 6001-2RS, 12 mm BORE, 28 mm OD, 8 mm WIDE				
150 2 2 51102 THRUST BEARING, SINGLE DIR, 51102, 15-16 mm BORE, 28 mm OD, 9 mm WIDE 151 1 1 51204 THRUST BEARING, SINGLE DIR, 51204, 20 mm BORE, 41.5 mm OD, 15 mm WD W HSG 152 1 1 MJV-2 STEM VALVE, 1/8 in NPT FEMALE, 1/8 in STEM TRAVEL 153 1 1 SLS-03-08 FLOW CONTROL VALVE, RA, 3/8 NPT, 8 mm QUICK-CONNECT TUBE 154 3 3 HDW FITTING, STRAIGHT, BARBED, 1/8 in NPT, 1/4 in HOSE 155 1 - HDW FITTING, ELBOW, 90∞, BARBED, 1/8 in NPT, 1/4 in HOSE 156 1 1 HDW FITTING, ELBOW, 90∞, BARBED, 1/8 in NPT, 1/4 in HOSE 157 1 1 HDW COMPRESSION SPRING, GROUND ENDS, 0.72 OD, 0.99 in DIA WIRE, 1.75 in LG 158 1 1 HDW EXTENSION SPRING, GROUND ENDS, 0.72 OD, 0.99 in DIA WIRE, 1.75 in LG 159 1 1 HDW EXTENSION SPRING, GROUND ENDS, 0.72 OD, 0.99 in DIA WIRE, 1.75 in LG 160 1 1 HDW EXTENSION SPRING, GROUND ENDS, 0.72 OD, 0.99 in DIA WIRE, 1.75 in LG 161 1 1	148	1	1	6203-2RS	BALL BEARING, SEALED, 6203-2RS, 17 mm BORE, 40 mm OD, 12 mm WIDE				
151 1 51204 THRUST BEARING, SINGLE DIR, 51204, 20 mm BORE, 41.5 mm OD, 15 mm WD W/ HSG 152 1 1 MJV-2 STEM VALVE, 18 in NPT FEMALE, 18 in STEM TRAVEL 153 1 1 SLS-03-08 FLOW CONTROL VALVE, RA, 3/8 NPT, 8 mm QUICK-CONNECT TUBE 154 3 3 HDW FITTING, ELBOW, 90∞, BARBED, 1/8 in NPT, 1/4 in HOSE 155 1 HDW FITTING, ELBOW, 90∞, BARBED, 1/8 in NPT, 1/4 in HOSE 156 1 1 HDW COMPRESSION SPRING, GROUND ENDS, 0.72 OD, 0.096 in DIA WIRE, 1.75 in LG 157 1 1 HDW COMPRESSION SPRING, GROUND ENDS, 8.5 OD, 0.9 DIA WIRE, 1.75 in LG 158 1 1 HDW COMPRESSION SPRING, GROUND ENDS, 8.5 OD, 0.9 DIA WIRE, 1.75 in LG 159 1 1 HDW EXTENSION SPRING, B.5 mm OD, 1.5 mm WIRE, 60 mm LG 160 1 1 HDW SPRING PIN, SLOTTED, 5 mm DIA, 20 mm LG 161 2 2 HDW HEX BOLT, M6 X 1, 22 mm LG 162 2 4 HDW HEX BOLT, M6 X 1, 55 mm LG 164 1<	149	4	4	6305-2RS	BALL BEARING, SEALED, 6305-2RS, 25 mm BORE, 62 mm OD, 17 mm WIDE				
152	150	2	2	51102	THRUST BEARING, SINGLE DIR, 51102, 15-16 mm BORE, 28 mm OD, 9 mm WIDE				
153	151	1	1	51204	THRUST BEARING, SINGLE DIR, 51204, 20 mm BORE, 41.5 mm OD, 15 mm WD W/ HSC				
154 3 3 HDW FITTING, STRAIGHT, BARBED, 1/8 in NPT, 1/4 in HOSE 155 1 - HDW FITTING, ELBOW, 90∞, BARBED, 1/8 in NPT, 1/4 in HOSE 156 1 1 HDW FITTING, ELBOW, 90∞, BARBED, 6 mm ID TUBE, WHITE 157 1 1 HDW COMPRESSION SPRING, GROUND ENDS, 0.72 OD, 0.99 in DIA WIRE, 1.75 in LG 158 1 1 HDW COMPRESSION SPRING, GROUND ENDS, 8.5 OD, 0.9 DIA WIRE, 27 mm LG 159 1 1 HDW EXTENSION SPRING, 8.5 mm OD, 1.5 mm WIRE, 60 mm LG 160 1 1 HDW EXTENSION SPRING, 8.5 mm OD, 1.5 mm WIRE, 60 mm LG 161 2 2 HDW HEX BOLT, MEX 1, 20 mm LG 162 2 HDW HEX BOLT, MEX 1, 20 mm LG 163 4 4 HDW HEX BOLT, MEX 1, 35 mm LG 164 1 1 HDW HEX BOLT, MEX 1, 55 mm LG 165 1 1 HDW HEX BOLT, MEX 1, 25, 12 mm LG 166 2 2 HDW HEX BOLT, MEX 1, 25, 20 mm LG	152	1	1	MJV-2	STEM VALVE, 1/8 in NPT FEMALE, 1/8 in STEM TRAVEL				
155 1 - HDW FITTING, ELBOW, 90∞, BARBED, 1/8 in NPT, 1/4 in HOSE 156 1 1 HDW FITTING, ELBOW, 90∞, BARBED, 6 mm ID TUBE, WHITE 157 1 1 HDW COMPRESSION SPRING, GROUND ENDS, 0.72 OD, 0.99 fa ID IA WIRE, 1.75 in LG 158 1 1 HDW COMPRESSION SPRING, GROUND ENDS, 8.5 OD, 0.9 DIA WIRE, 27 mm LG 159 1 1 HDW EXTENSION SPRING, 8.5 mm OD, 1.5 mm WIRE, 60 mm LG 160 1 1 HDW EXTENSION SPRING, 8.5 mm OD, 1.5 mm WIRE, 60 mm LG 161 2 2 HDW HEX BOLT, M6 X 1, 20 mm LG 162 2 2 HDW HEX BOLT, M6 X 1, 20 mm LG 163 4 4 HDW HEX BOLT, M6 X 1, 25 mm LG 164 1 1 HDW HEX BOLT, M6 X 1, 50 mm LG 166 2 2 HDW HEX BOLT, M8 X 1, 25, 12 mm LG 167 4 4 HDW HEX BOLT, M8 X 1, 25, 20 mm LG 169 4 4 HDW HEX BOLT, M8 X 1, 25, 20 mm LG	153	1	1	SLS-03-08	FLOW CONTROL VALVE, RA, 3/8 NPT, 8 mm QUICK-CONNECT TUBE				
156 1 1 HDW FITTING, ELBOW, 90∞, BARBED, 6 mm ID TUBE, WHITE 157 1 1 HDW COMPRESSION SPRING, GROUND ENDS, 0.72 OD, 0.96 in DIA WIRE, 1.75 in LG 158 1 1 HDW COMPRESSION SPRING, GROUND ENDS, 8.5 OD, 0.9 DIA WIRE, 27 mm LG 159 1 1 HDW EXTENSION SPRING, 8.5 mm OD, 1.5 mm WIRE, 60 mm LG 160 1 1 HDW SPRING PIN, SLOTTED, 5 mm DIA, 20 mm LG 161 2 2 HDW HEX BOLT, M6 X 1, 22 mm LG 162 2 2 HDW HEX BOLT, M6 X 1, 22 mm LG 163 4 4 HDW HEX BOLT, M6 X 1, 55 mm LG 164 1 1 HDW HEX BOLT, M6 X 1, 55 mm LG 165 1 1 HDW HEX BOLT, M6 X 1, 25, 12 mm LG 166 2 2 HDW HEX BOLT, M8 X 1, 25, 12 mm LG 167 4 4 HDW HEX BOLT, M8 X 1, 25, 20 mm LG 169 4 4 HDW HEX BOLT, M8 X 1, 25, 30 mm LG 170 <td>154</td> <td>3</td> <td>3</td> <td>HDW</td> <td>FITTING, STRAIGHT, BARBED, 1/8 in NPT, 1/4 in HOSE</td>	154	3	3	HDW	FITTING, STRAIGHT, BARBED, 1/8 in NPT, 1/4 in HOSE				
157 1 1 HDW COMPRESSION SPRING, GROUND ENDS, 0.72 OD, 0.096 in DIA WIRE, 1.75 in LG 158 1 1 HDW COMPRESSION SPRING, GROUND ENDS, 8.5 OD, 0.9 DIA WIRE, 27 mm LG 159 1 1 HDW EXTENSION SPRING, 8.5 mm OD, 1.5 mm WIRE, 60 mm LG 160 1 1 HDW SPRING PIN, SLOTTED, 5 mm DIA, 20 mm LG 161 2 2 HDW HEX BOLT, M6 X 1, 20 mm LG 162 2 2 HDW HEX BOLT, M6 X 1, 20 mm LG 163 4 4 HDW HEX BOLT, M6 X 1, 55 mm LG 164 1 1 HDW HEX BOLT, M6 X 1, 55 mm LG 165 1 1 HDW HEX BOLT, M8 X 1.25, 12 mm LG 166 2 2 HDW HEX BOLT, M8 X 1.25, 16 mm LG 167 4 4 HDW HEX BOLT, M8 X 1.25, 20 mm LG 168 24 26 HDW HEX BOLT, M8 X 1.25, 35 mm LG 170 1 1 HDW HEX BOLT, M8 X 1.25, 30 mm LG 171 4	155	1	-	HDW	FITTING, ELBOW, 90∞, BARBED, 1/8 in NPT, 1/4 in HOSE				
158 1 1 HDW COMPRESSION SPRING, GROUND ENDS, 8.5 OD, 0.9 DIA WIRE, 27 mm LG 159 1 1 HDW EXTENSION SPRING, 8.5 mm OD, 1.5 mm WIRE, 60 mm LG 160 1 1 HDW SPRING PIN, SLOTTED, 5 mm DIA, 20 mm LG 161 2 2 HDW HEX BOLT, M6 X 1, 20 mm LG 162 2 2 HDW HEX BOLT, M6 X 1, 20 mm LG 163 4 HDW HEX BOLT, M6 X 1, 35 mm LG 164 1 1 HDW HEX BOLT, M6 X 1, 55 mm LG 165 1 1 HDW HEX BOLT, M8 X 1.25, 12 mm LG 166 2 2 HDW HEX BOLT, M8 X 1.25, 12 mm LG 167 4 4 HDW HEX BOLT, M8 X 1.25, 20 mm LG 168 24 26 HDW HEX BOLT, M8 X 1.25, 30 mm LG 170 1 1 HDW HEX BOLT, M8 X 1.25, 30 mm LG 171 4 6 HDW HEX BOLT, M8 X 1.25, 310 mm LG 172 2 2 HDW HEX BOLT	156	1	1	HDW	FITTING, ELBOW, 90∞, BARBED, 6 mm ID TUBE, WHITE				
159 1 1 HDW EXTENSION SPRING, 8.5 mm OD, 1.5 mm WIRE, 60 mm LG 160 1 1 HDW SPRING PIN, SLOTTED, 5 mm DIA, 20 mm LG 161 2 2 HDW HEX BOLT, M6 X 1, 20 mm LG 162 2 2 HDW HEX BOLT, M6 X 1, 35 mm LG 163 4 4 HDW HEX BOLT, M6 X 1, 55 mm LG 164 1 1 HDW HEX BOLT, M6 X 1, 55 mm LG 165 1 1 HDW HEX BOLT, M8 X 1, 25, 12 mm LG 166 2 2 HDW HEX BOLT, M8 X 1.25, 12 mm LG 167 4 4 HDW HEX BOLT, M8 X 1.25, 20 mm LG 168 24 26 HDW HEX BOLT, M8 X 1.25, 30 mm LG 170 1 1 HDW HEX BOLT, M8 X 1.25, 35 mm LG 171 4 6 HDW HEX BOLT, M8 X 1.25, 110 mm LG, 22 mm LG THD 173 2 2 HDW HEX BOLT, M10 X 1.5, 20 mm LG 174 2 2 HDW HEX BOLT	157	1	1	HDW	COMPRESSION SPRING, GROUND ENDS, 0.72 OD, 0.096 in DIA WIRE, 1.75 in LG				
160 1 1 HDW SPRING PIN, SLOTTED, 5 mm DIA, 20 mm LG 161 2 2 HDW HEX BOLT, M6 X 1, 20 mm LG 162 2 2 HDW HEX BOLT, M6 X 1, 35 mm LG 163 4 4 HDW HEX BOLT, M6 X 1, 55 mm LG 164 1 1 HDW HEX BOLT, M6 X 1, 55 mm LG, 18 mm LG THD 165 1 1 HDW HEX BOLT, M8 X 1.25, 12 mm LG 167 4 4 HDW HEX BOLT, M8 X 1.25, 16 mm LG 168 24 26 HDW HEX BOLT, M8 X 1.25, 20 mm LG 169 4 4 HDW HEX BOLT, M8 X 1.25, 30 mm LG 170 1 1 HDW HEX BOLT, M8 X 1.25, 35 mm LG 171 4 6 HDW HEX BOLT, M8 X 1.25, 110 mm LG, 22 mm LG THD 173 2 2 HDW HEX BOLT, M8 X 1.25, 130 mm LG 174 2 2 HDW HEX BOLT, M10 X 1.5, 20 mm LG 175 3 3 HDW HEX BOLT, M10 X	158	1	1	HDW	COMPRESSION SPRING, GROUND ENDS, 8.5 OD, 0.9 DIA WIRE, 27 mm LG				
161 2 2 HDW HEX BOLT, M6 X 1, 20 mm LG 162 2 2 HDW HEX BOLT, M6 X 1, 22 mm LG 163 4 4 HDW HEX BOLT, M6 X 1, 35 mm LG 164 1 1 HDW HEX BOLT, M6 X 1, 55 mm LG, 18 mm LG THD 165 1 1 HDW HEX BOLT, M8 X 1.25, 12 mm LG 166 2 2 HDW HEX BOLT, M8 X 1.25, 16 mm LG 167 4 4 HDW HEX BOLT, M8 X 1.25, 20 mm LG 168 24 26 HDW HEX BOLT, M8 X 1.25, 20 mm LG 169 4 4 HDW HEX BOLT, M8 X 1.25, 30 mm LG 170 1 1 HDW HEX BOLT, M8 X 1.25, 30 mm LG 171 4 6 HDW HEX BOLT, M8 X 1.25, 30 mm LG 172 2 2 HDW HEX BOLT, M10 X 1.5, 20 mm LG 173 2 2 HDW HEX BOLT, M10 X 1.5, 20 mm LG 175 3 3 HDW HEX BOLT, M10 X 1.5, 50 mm LG </td <td>159</td> <td>1</td> <td>1</td> <td>HDW</td> <td>EXTENSION SPRING, 8.5 mm OD, 1.5 mm WIRE, 60 mm LG</td>	159	1	1	HDW	EXTENSION SPRING, 8.5 mm OD, 1.5 mm WIRE, 60 mm LG				
162 2 2 HDW HEX BOLT, M6 X 1, 22 mm LG 163 4 4 HDW HEX BOLT, M6 X 1, 35 mm LG 164 1 1 HDW HEX BOLT, M6 X 1, 55 mm LG, 18 mm LG THD 165 1 1 HDW HEX BOLT, M8 X 1.25, 12 mm LG 166 2 2 HDW HEX BOLT, M8 X 1.25, 16 mm LG 167 4 4 HDW HEX BOLT, M8 X 1.25, 20 mm LG 168 24 26 HDW HEX BOLT, M8 X 1.25, 20 mm LG 170 1 1 HDW HEX BOLT, M8 X 1.25, 30 mm LG 171 4 6 HDW HEX BOLT, M8 X 1.25, 35 mm LG 172 2 2 HDW HEX BOLT, M8 X 1.25, 110 mm LG, 22 mm LG THD 173 2 2 HDW HEX BOLT, M8 X 1.25, 130 mm LG 174 2 2 HDW HEX BOLT, M10 X 1.5, 20 mm LG 175 3 3 HDW HEX BOLT, M10 X 1.5, 50 mm LG 176 4 4 HDW HEX BOLT, M10 X 1.5, 5	160	1	1	HDW	SPRING PIN, SLOTTED, 5 mm DIA, 20 mm LG				
163 4 4 HDW HEX BOLT, M6 X 1, 35 mm LG 164 1 1 HDW HEX BOLT, M6 X 1, 50 mm LG 165 1 1 HDW HEX BOLT, M6 X 1, 55 mm LG, 18 mm LG THD 166 2 2 HDW HEX BOLT, M8 X 1.25, 12 mm LG 167 4 4 HDW HEX BOLT, M8 X 1.25, 20 mm LG 168 24 26 HDW HEX BOLT, M8 X 1.25, 25 mm LG 170 1 1 HDW HEX BOLT, M8 X 1.25, 30 mm LG 171 4 6 HDW HEX BOLT, M8 X 1.25, 35 mm LG 172 2 2 HDW HEX BOLT, M8 X 1.25, 110 mm LG, 22 mm LG THD 173 2 2 HDW HEX BOLT, M8 X 1.25, 130 mm LG 174 2 2 HDW HEX BOLT, M8 X 1.5, 20 mm LG 175 3 3 HDW HEX BOLT, M10 X 1.5, 25 mm LG 176 4 4 HDW HEX BOLT, M10 X 1.5, 55 mm LG 177 4 4 HDW HEX BOLT, M10 X 1.5, 55 mm LG 178 1 1 HDW HEX BOLT, M12 X 1	161	2	2	HDW	HEX BOLT, M6 X 1, 20 mm LG				
164 1 1 HDW HEX BOLT, M6 X 1, 50 mm LG 165 1 1 HDW HEX BOLT, M6 X 1, 55 mm LG, 18 mm LG THD 166 2 2 HDW HEX BOLT, M8 X 1.25, 12 mm LG 167 4 4 HDW HEX BOLT, M8 X 1.25, 20 mm LG 168 24 26 HDW HEX BOLT, M8 X 1.25, 25 mm LG 170 1 1 HDW HEX BOLT, M8 X 1.25, 30 mm LG 171 4 6 HDW HEX BOLT, M8 X 1.25, 35 mm LG 172 2 2 HDW HEX BOLT, M8 X 1.25, 110 mm LG, 22 mm LG THD 173 2 2 HDW HEX BOLT, M10 X 1.5, 20 mm LG 174 2 2 HDW HEX BOLT, M10 X 1.5, 20 mm LG 175 3 3 HDW HEX BOLT, M10 X 1.5, 50 mm LG 176 4 4 HDW HEX BOLT, M10 X 1.5, 50 mm LG 177 4 4 HDW HEX BOLT, M10 X 1.5, 50 mm LG 179 1 1 HDW HEX BOLT, M12 X 1.75	162	2	2	HDW	HEX BOLT, M6 X 1, 22 mm LG				
165 1 1 HDW HEX BOLT, M6 X 1, 55 mm LG, 18 mm LG THD 166 2 2 HDW HEX BOLT, M8 X 1.25, 12 mm LG 167 4 4 HDW HEX BOLT, M8 X 1.25, 20 mm LG 168 24 26 HDW HEX BOLT, M8 X 1.25, 20 mm LG 169 4 4 HDW HEX BOLT, M8 X 1.25, 30 mm LG 170 1 1 HDW HEX BOLT, M8 X 1.25, 35 mm LG 171 4 6 HDW HEX BOLT, M8 X 1.25, 35 mm LG 172 2 2 HDW HEX BOLT, M8 X 1.25, 110 mm LG, 22 mm LG THD 173 2 2 HDW HEX BOLT, M8 X 1.25, 130 mm LG 174 2 2 HDW HEX BOLT, M10 X 1.5, 20 mm LG 175 3 3 HDW HEX BOLT, M10 X 1.5, 50 mm LG 176 4 4 HDW HEX BOLT, M10 X 1.5, 55 mm LG, 26 mm LG THD 178 1 1 HDW HEX BOLT, M12 X 1.75, 35 mm LG 180 2 2 HDW H	163	4	4	HDW	HEX BOLT, M6 X 1, 35 mm LG				
166 2 2 HDW HEX BOLT, M8 X 1.25, 12 mm LG 167 4 4 HDW HEX BOLT, M8 X 1.25, 16 mm LG 168 24 26 HDW HEX BOLT, M8 X 1.25, 20 mm LG 169 4 4 HDW HEX BOLT, M8 X 1.25, 25 mm LG 170 1 1 HDW HEX BOLT, M8 X 1.25, 30 mm LG 171 4 6 HDW HEX BOLT, M8 X 1.25, 110 mm LG, 22 mm LG THD 172 2 2 HDW HEX BOLT, M8 X 1.25, 130 mm LG 173 2 2 HDW HEX BOLT, M8 X 1.25, 130 mm LG 174 2 2 HDW HEX BOLT, M10 X 1.5, 20 mm LG 175 3 3 HDW HEX BOLT, M10 X 1.5, 50 mm LG 176 4 4 HDW HEX BOLT, M10 X 1.5, 50 mm LG 177 4 4 HDW HEX BOLT, M12 X 1.75, 20 mm LG 179 1 1 HDW HEX BOLT, M12 X 1.75, 35 mm LG 180 2 2 HDW HEX BOLT, M12 X 1.75, 45	164	1	1	HDW	HEX BOLT, M6 X 1, 50 mm LG				
167 4 4 HDW HEX BOLT, M8 X 1.25, 16 mm LG 168 24 26 HDW HEX BOLT, M8 X 1.25, 20 mm LG 169 4 4 HDW HEX BOLT, M8 X 1.25, 25 mm LG 170 1 1 HDW HEX BOLT, M8 X 1.25, 30 mm LG 171 4 6 HDW HEX BOLT, M8 X 1.25, 35 mm LG 172 2 2 HDW HEX BOLT, M8 X 1.25, 110 mm LG, 22 mm LG THD 173 2 2 HDW HEX BOLT, M8 X 1.25, 130 mm LG 174 2 2 HDW HEX BOLT, M10 X 1.5, 20 mm LG 175 3 3 HDW HEX BOLT, M10 X 1.5, 25 mm LG 176 4 4 HDW HEX BOLT, M10 X 1.5, 55 mm LG 177 4 4 HDW HEX BOLT, M10 X 1.5, 55 mm LG 179 1 1 HDW HEX BOLT, M12 X 1.75, 35 mm LG 180 2 2 HDW HEX BOLT, M12 X 1.75, 45 mm LG 181 1 1 HDW HEX BOLT, M12 X 1.75, 65 mm LG, 30 mm LG THD 182 16 16 HDW HE	165	1	1	HDW	HEX BOLT, M6 X 1, 55 mm LG, 18 mm LG THD				
168 24 26 HDW HEX BOLT, M8 X 1.25, 20 mm LG 169 4 4 HDW HEX BOLT, M8 X 1.25, 25 mm LG 170 1 1 HDW HEX BOLT, M8 X 1.25, 30 mm LG 171 4 6 HDW HEX BOLT, M8 X 1.25, 35 mm LG 172 2 2 HDW HEX BOLT, M8 X 1.25, 110 mm LG, 22 mm LG THD 173 2 2 HDW HEX BOLT, M8 X 1.25, 130 mm LG 174 2 2 HDW HEX BOLT, M10 X 1.5, 20 mm LG 175 3 3 HDW HEX BOLT, M10 X 1.5, 25 mm LG 176 4 4 HDW HEX BOLT, M10 X 1.5, 50 mm LG 177 4 4 HDW HEX BOLT, M10 X 1.75, 50 mm LG 179 1 1 HDW HEX BOLT, M12 X 1.75, 35 mm LG 180 2 2 HDW HEX BOLT, M12 X 1.75, 45 mm LG 181 1 1 HDW HEX BOLT, M12 X 1.75, 65 mm LG, 30 mm LG THD 182 16 16 HDW HEX BOLT, M12 X 1.75, 80 mm LG, 30 mm LG THD	166	2	2	HDW	HEX BOLT, M8 X 1.25, 12 mm LG				
169 4 4 HDW HEX BOLT, M8 X 1.25, 25 mm LG 170 1 1 HDW HEX BOLT, M8 X 1.25, 30 mm LG 171 4 6 HDW HEX BOLT, M8 X 1.25, 35 mm LG 172 2 2 HDW HEX BOLT, M8 X 1.25, 110 mm LG, 22 mm LG THD 173 2 2 HDW HEX BOLT, M8 X 1.25, 130 mm LG 174 2 2 HDW HEX BOLT, M10 X 1.5, 20 mm LG 175 3 3 HDW HEX BOLT, M10 X 1.5, 25 mm LG 176 4 4 HDW HEX BOLT, M10 X 1.5, 50 mm LG 177 4 4 HDW HEX BOLT, M10 X 1.5, 55 mm LG, 26 mm LG THD 178 1 1 HDW HEX BOLT, M12 X 1.75, 20 mm LG 179 1 1 HDW HEX BOLT, M12 X 1.75, 45 mm LG 180 2 2 HDW HEX BOLT, M12 X 1.75, 45 mm LG 181 1 1 HDW HEX BOLT, M12 X 1.75, 65 mm LG, 30 mm LG THD 182 16 16 HDW HEX BOLT, M12 X 1.75, 80 mm LG, 30 mm LG THD	167	4	4	HDW	HEX BOLT, M8 X 1.25, 16 mm LG				
170 1 1 HDW HEX BOLT, M8 X 1.25, 30 mm LG 171 4 6 HDW HEX BOLT, M8 X 1.25, 35 mm LG 172 2 2 HDW HEX BOLT, M8 X 1.25, 110 mm LG, 22 mm LG THD 173 2 2 HDW HEX BOLT, M8 X 1.25, 130 mm LG 174 2 2 HDW HEX BOLT, M10 X 1.5, 20 mm LG 175 3 3 HDW HEX BOLT, M10 X 1.5, 25 mm LG 176 4 4 HDW HEX BOLT, M10 X 1.5, 55 mm LG 177 4 4 HDW HEX BOLT, M10 X 1.5, 55 mm LG 178 1 1 HDW HEX BOLT, M12 X 1.75, 20 mm LG 179 1 1 HDW HEX BOLT, M12 X 1.75, 35 mm LG 180 2 2 HDW HEX BOLT, M12 X 1.75, 45 mm LG 181 1 1 HDW HEX BOLT, M12 X 1.75, 65 mm LG, 30 mm LG THD 182 16 16 HDW HEX BOLT, M12 X 1.75, 80 mm LG, 30 mm LG THD	168	24	26	HDW	HEX BOLT, M8 X 1.25, 20 mm LG				
171 4 6 HDW HEX BOLT, M8 X 1.25, 35 mm LG 172 2 2 HDW HEX BOLT, M8 X 1.25, 110 mm LG, 22 mm LG THD 173 2 2 HDW HEX BOLT, M8 X 1.25, 130 mm LG 174 2 2 HDW HEX BOLT, M10 X 1.5, 20 mm LG 175 3 3 HDW HEX BOLT, M10 X 1.5, 25 mm LG 176 4 4 HDW HEX BOLT, M10 X 1.5, 55 mm LG, 26 mm LG THD 177 4 4 HDW HEX BOLT, M12 X 1.75, 20 mm LG 179 1 1 HDW HEX BOLT, M12 X 1.75, 35 mm LG 180 2 2 HDW HEX BOLT, M12 X 1.75, 45 mm LG 181 1 1 HDW HEX BOLT, M12 X 1.75, 65 mm LG, 30 mm LG THD 182 16 16 HDW HEX BOLT, M12 X 1.75, 80 mm LG, 30 mm LG THD	169	4	4	HDW	HEX BOLT, M8 X 1.25, 25 mm LG				
172 2 2 HDW HEX BOLT, M8 X 1.25, 110 mm LG, 22 mm LG THD 173 2 2 HDW HEX BOLT, M8 X 1.25, 130 mm LG 174 2 2 HDW HEX BOLT, M10 X 1.5, 20 mm LG 175 3 3 HDW HEX BOLT, M10 X 1.5, 25 mm LG 176 4 4 HDW HEX BOLT, M10 X 1.5, 55 mm LG, 26 mm LG THD 177 4 4 HDW HEX BOLT, M12 X 1.75, 20 mm LG 178 1 1 HDW HEX BOLT, M12 X 1.75, 20 mm LG 179 1 1 HDW HEX BOLT, M12 X 1.75, 35 mm LG 180 2 2 HDW HEX BOLT, M12 X 1.75, 45 mm LG 181 1 1 HDW HEX BOLT, M12 X 1.75, 65 mm LG, 30 mm LG THD 182 16 16 HDW HEX BOLT, M12 X 1.75, 80 mm LG, 30 mm LG THD	170	1	1	HDW	HEX BOLT, M8 X 1.25, 30 mm LG				
173 2 2 HDW HEX BOLT, M8 X 1.25, 130 mm LG 174 2 2 HDW HEX BOLT, M10 X 1.5, 20 mm LG 175 3 3 HDW HEX BOLT, M10 X 1.5, 25 mm LG 176 4 4 HDW HEX BOLT, M10 X 1.5, 55 mm LG, 26 mm LG THD 177 4 4 HDW HEX BOLT, M10 X 1.5, 55 mm LG, 26 mm LG THD 178 1 1 HDW HEX BOLT, M12 X 1.75, 20 mm LG 179 1 1 HDW HEX BOLT, M12 X 1.75, 35 mm LG 180 2 2 HDW HEX BOLT, M12 X 1.75, 45 mm LG 181 1 1 HDW HEX BOLT, M12 X 1.75, 65 mm LG, 30 mm LG THD 182 16 16 HDW HEX BOLT, M12 X 1.75, 80 mm LG, 30 mm LG THD	171	4	6	HDW	HEX BOLT, M8 X 1.25, 35 mm LG				
174 2 2 HDW HEX BOLT, M10 X 1.5, 20 mm LG 175 3 3 HDW HEX BOLT, M10 X 1.5, 25 mm LG 176 4 4 HDW HEX BOLT, M10 X 1.5, 50 mm LG 177 4 4 HDW HEX BOLT, M10 X 1.5, 55 mm LG, 26 mm LG THD 178 1 1 HDW HEX BOLT, M12 X 1.75, 20 mm LG 179 1 1 HDW HEX BOLT, M12 X 1.75, 35 mm LG 180 2 2 HDW HEX BOLT, M12 X 1.75, 45 mm LG 181 1 1 HDW HEX BOLT, M12 X 1.75, 65 mm LG, 30 mm LG THD 182 16 16 HDW HEX BOLT, M12 X 1.75, 80 mm LG, 30 mm LG THD	172	2	2	HDW	HEX BOLT, M8 X 1.25, 110 mm LG, 22 mm LG THD				
175 3 3 HDW HEX BOLT, M10 X 1.5, 25 mm LG 176 4 4 HDW HEX BOLT, M10 X 1.5, 50 mm LG 177 4 4 HDW HEX BOLT, M10 X 1.5, 55 mm LG, 26 mm LG THD 178 1 1 HDW HEX BOLT, M12 X 1.75, 20 mm LG 179 1 1 HDW HEX BOLT, M12 X 1.75, 35 mm LG 180 2 2 HDW HEX BOLT, M12 X 1.75, 45 mm LG 181 1 1 HDW HEX BOLT, M12 X 1.75, 65 mm LG, 30 mm LG THD 182 16 16 HDW HEX BOLT, M12 X 1.75, 80 mm LG, 30 mm LG THD	173	2	2	HDW	HEX BOLT, M8 X 1.25, 130 mm LG				
176 4 4 HDW HEX BOLT, M10 X 1.5, 50 mm LG 177 4 4 HDW HEX BOLT, M10 X 1.5, 55 mm LG, 26 mm LG THD 178 1 1 HDW HEX BOLT, M12 X 1.75, 20 mm LG 179 1 1 HDW HEX BOLT, M12 X 1.75, 35 mm LG 180 2 2 HDW HEX BOLT, M12 X 1.75, 45 mm LG 181 1 1 HDW HEX BOLT, M12 X 1.75, 65 mm LG, 30 mm LG THD 182 16 16 HDW HEX BOLT, M12 X 1.75, 80 mm LG, 30 mm LG THD	174	2	2	HDW	HEX BOLT, M10 X 1.5, 20 mm LG				
177 4 4 HDW HEX BOLT, M10 X 1.5, 55 mm LG, 26 mm LG THD 178 1 1 HDW HEX BOLT, M12 X 1.75, 20 mm LG 179 1 1 HDW HEX BOLT, M12 X 1.75, 35 mm LG 180 2 2 HDW HEX BOLT, M12 X 1.75, 45 mm LG 181 1 1 HDW HEX BOLT, M12 X 1.75, 65 mm LG, 30 mm LG THD 182 16 16 HDW HEX BOLT, M12 X 1.75, 80 mm LG, 30 mm LG THD	175	3	3	HDW	HEX BOLT, M10 X 1.5, 25 mm LG				
178 1 1 HDW HEX BOLT, M12 X 1.75, 20 mm LG 179 1 1 HDW HEX BOLT, M12 X 1.75, 35 mm LG 180 2 2 HDW HEX BOLT, M12 X 1.75, 45 mm LG 181 1 1 HDW HEX BOLT, M12 X 1.75, 65 mm LG, 30 mm LG THD 182 16 16 HDW HEX BOLT, M12 X 1.75, 80 mm LG, 30 mm LG THD	176	4	4	HDW	HEX BOLT, M10 X 1.5, 50 mm LG				
179 1 1 HDW HEX BOLT, M12 X 1.75, 35 mm LG 180 2 2 HDW HEX BOLT, M12 X 1.75, 45 mm LG 181 1 1 HDW HEX BOLT, M12 X 1.75, 65 mm LG, 30 mm LG THD 182 16 16 HDW HEX BOLT, M12 X 1.75, 80 mm LG, 30 mm LG THD	177	4	4	HDW	HEX BOLT, M10 X 1.5, 55 mm LG, 26 mm LG THD				
180 2 2 HDW HEX BOLT, M12 X 1.75, 45 mm LG 181 1 1 HDW HEX BOLT, M12 X 1.75, 65 mm LG, 30 mm LG THD 182 16 16 HDW HEX BOLT, M12 X 1.75, 80 mm LG, 30 mm LG THD	178	1	1	HDW					
180 2 2 HDW HEX BOLT, M12 X 1.75, 45 mm LG 181 1 1 HDW HEX BOLT, M12 X 1.75, 65 mm LG, 30 mm LG THD 182 16 16 HDW HEX BOLT, M12 X 1.75, 80 mm LG, 30 mm LG THD	179	1	1	HDW					
181 1 1 HDW HEX BOLT, M12 X 1.75, 65 mm LG, 30 mm LG THD 182 16 16 HDW HEX BOLT, M12 X 1.75, 80 mm LG, 30 mm LG THD	180	2	2	HDW	HEX BOLT, M12 X 1.75, 45 mm LG				
182 16 16 HDW HEX BOLT, M12 X 1.75, 80 mm LG, 30 mm LG THD		1	1						
	183	6	6	HDW					



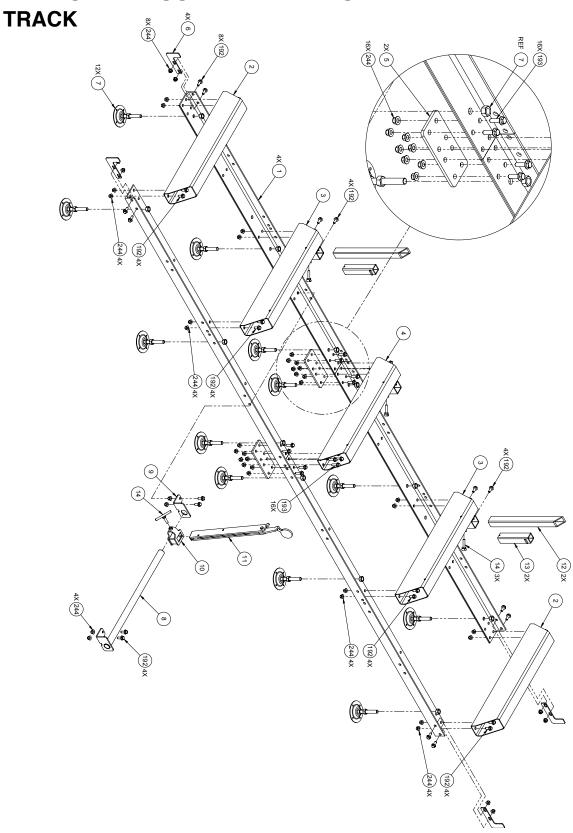
	IVIILLO							
Item	Quantity		Part No.	Description				
	14 hp	14 hp 9.5 hp		Besonption				
184	2	2	HDW	HEX BOLT, M12 X 1.75, 100 mm LG, 30 mm LG THD				
185	2	2	HDW	HEX BOLT, M12 X 1.75, 110 mm LG				
186	1	1	HDW	HEX BOLT, M12 X 1.75, 120 mm LG, 30 mm LG THD				
187	1	1	HDW	HEX BOLT, M16 X 2, 90 mm LG, 38 mm LG THD				
188	4	4	HDW	HEX BOLT, M20 X 2.5, 120 mm LG, 46 mm LG THD				
189	2	2	HDW	HEX BOLT, 3/8-16, 5/8 in LG				
190	1	-	HDW	HEX BOLT, 3/8-24, 1-1/4 in LG				
191	-	1	HDW	HEX BOLT, 7/16-20, 1-1/4 in LG				
192	32	32	HDW	HEX BOLT, FLANGED, M10 X 1.5, 25 mm LG				
193	16	16	HDW	HEX BOLT, FLANGED, M10 X 1.5, 35 mm LG				
194	2	2	HDW	HEX BOLT, FLANGED, M10 X 1.5, 70 mm LG, 26 mm LG THD				
195	6	6	HDW	BUTTON HEAD SCREW, M4 X 0.7, 6 mm LG				
196	2	2	HDW	BUTTON HEAD SCREW, M4 X 0.7, 10 mm LG				
197	8	8	HDW	BUTTON HEAD SCREW, M6 X 1, 16 mm LG				
198	4	-	HDW	BUTTON HEAD SCREW, M8 X 1.25, 35 mm LG				
199	4	4	HDW	SHCS, M8 X 1.25, 20 mm LG				
200	2	2	HDW	SHCS, M10 X 1.5, 25 mm LG				
201	1	-	HDW	SHCS, M12 X 1.75, 40 mm LG, 36 mm LG THD				
202	1	1	HDW	SHLDR SCREW, HEX HEAD, 11 X 35 mm LG SHLDR, M10 X 1.5 X 18 mm LG THD				
203	1	1	HDW	SCREW, PPH, M4 X 0.7, 12 mm LG				
204	2	2	HDW	SCREW, PPH, M4 X 0.7, 30 mm LG				
205	2	2	HDW	SCREW, PPH, M6 X 1, 14 mm LG				
206	12	12	HDW	SCREW, PFH, M4 X 0.7, 10 mm LG				
207	1	1	HDW	SCREW, HFH, M6 X 1, 30 mm LG, 18 mm THD				
208	2	-	HDW	SCREW, HFH, M8 X 1.25, 20 mm LG				
209	1	1	HDW	SCREW, HFH, M10 X 1.5, 20 mm LG				
210	2	2	HDW	SELF-TAPPING SCREW, PPH, #10, 5/8 in LG				
211	1	2	HDW	SET SCREW, FLAT TIP, M6 X 1, 8 mm LG				
212	8	8	HDW	SET SCREW, FLAT TIP, M8 X 1.25, 8 mm LG, SST				
213	4	4	HDW	FLAT WASHER, M4				
214	35	35	HDW	FLAT WASHER, M6				
215	26	23	HDW	FLAT WASHER, M8				
216	12	12	HDW	FLAT WASHER, M8, NYLON				
217	18	18	HDW	FLAT WASHER, M10				
218	56	56	HDW	FLAT WASHER, M12				
219	1	1	HDW	FLAT WASHER, M16				
220	16	16	HDW	FLAT WASHER, M20				
221	2	2	HDW	FENDER WASHER, M8, 30 mm OD				
222	7	6	HDW	FENDER WASHER, MIO, 34 mm OD				
223	2	2	HDW					
				FENDER WASHER, M12, 31 mm OD				
224	2	3	HDW	FENDER WASHER, M12, 37 mm OD				
225	4	4	HDW	SPLIT LOCK WASHER, M6				
226	9	8	HDW	SPLIT LOCK WASHER, M10				
227	1	1	HDW	SPLIT LOCK WASHER, M12				
228	24	24	HDW	BELLEVILLE WASHER, 20.4 ID, 40 OD, 2.5 THK, 3.45 mm HGT				
229	2	2	HDW	LEVELING WASHER, FEMALE, M16				
230	2	2	HDW	LEVELING WASHER, MALE, M16				



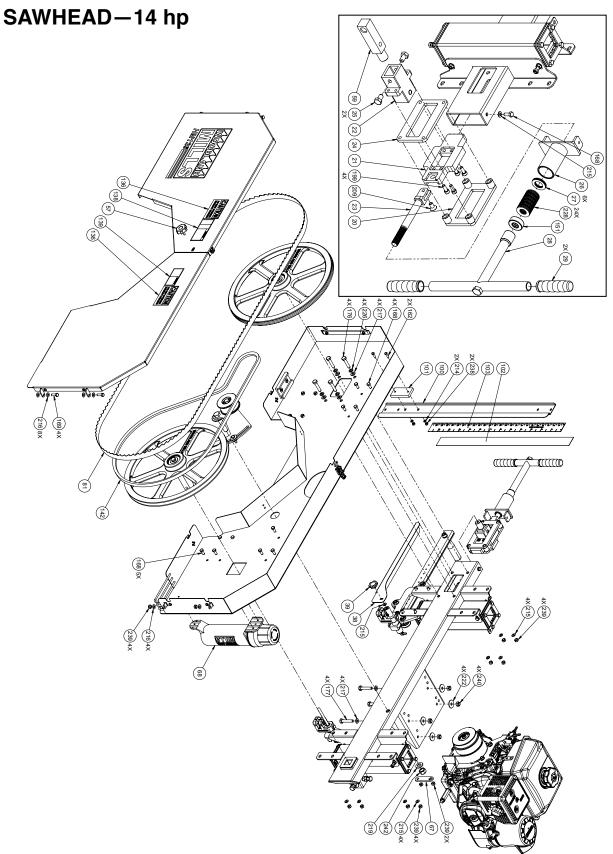
Item	Quantity		Part No.	Description			
iteili	14 hp	9.5 hp	rait No.	Description			
231	2	2	HDW	SEALING WASHER, M12			
232	2	2	HDW	HEX NUT, M8 X 1.25			
233	4	4	HDW	HEX NUT, M12 X 1.75			
234	1	1	HDW	HEX NUT, THIN, M6 X 1, 3.2 mm HGT			
235	4	1	HDW	HEX NUT, THIN, M12 X 1.75, 6 mm HGT			
236	4	4	HDW	HEX NUT, FLANGED, M10 X 1.5			
237	10	10	HDW	LOCK NUT, M4 X 0.7			
238	17	17	HDW	LOCK NUT, M6 X 1			
239	32	30	HDW	LOCK NUT, M8 X 1.25			
240	9	8	HDW	LOCK NUT, M10 X 1.5			
241	29	29	HDW	LOCK NUT, M12 X 1.75			
242	1	1	HDW	LOCK NUT, M16 X 2			
243	4	4	HDW	LOCK NUT, M20 X 2.5			
244	44	44	HDW	LOCK NUT, FLANGED, M10 X 1.5			
245	2	2	HDW	SLOTTED NUT, ROUND, M14 X 1.5			
246	7	7	HDW	RETAINING RING, INTERNAL, 28 mm BORE (29.4 mm GROOVE)			
247	1	1	HDW	RETAINING RING, INTERNAL, 40 mm BORE (42.5 mm GROOVE)			
248	2	2	HDW	RETAINING RING, INTERNAL, 62 mm BORE (65 mm GROOVE)			



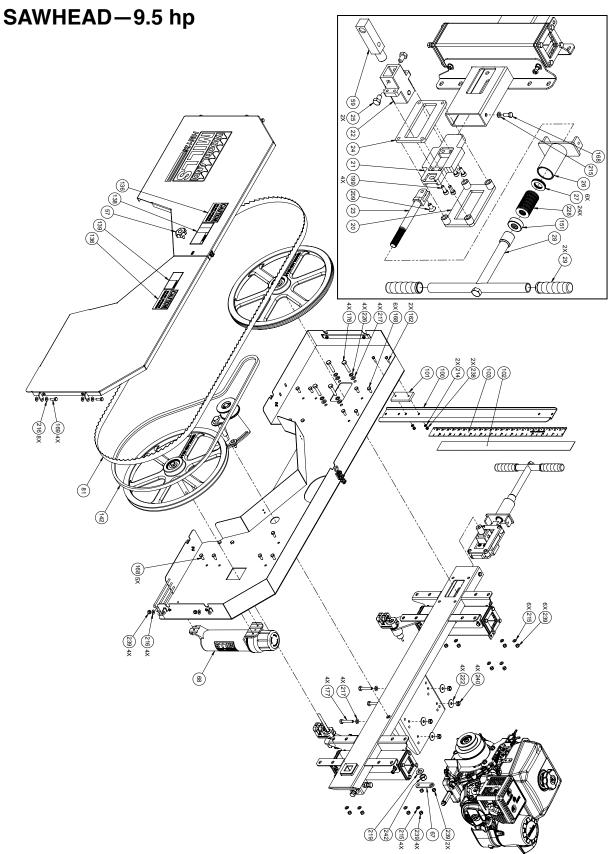
EXPLODED ASSEMBLY VIEWS



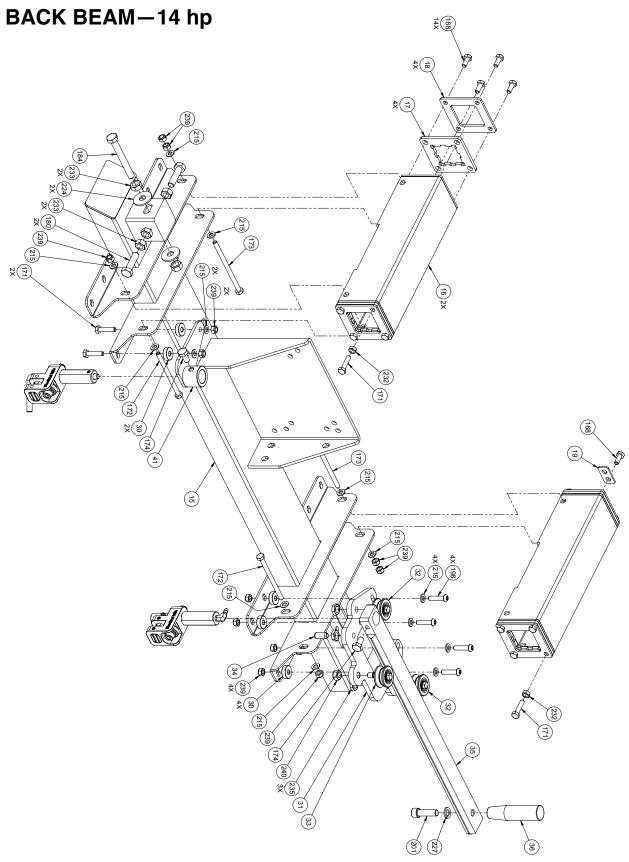






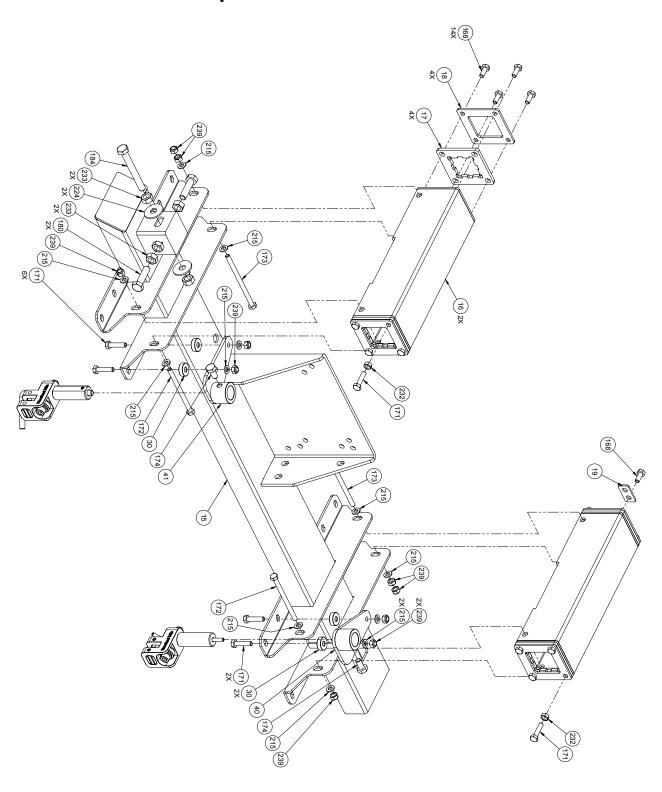




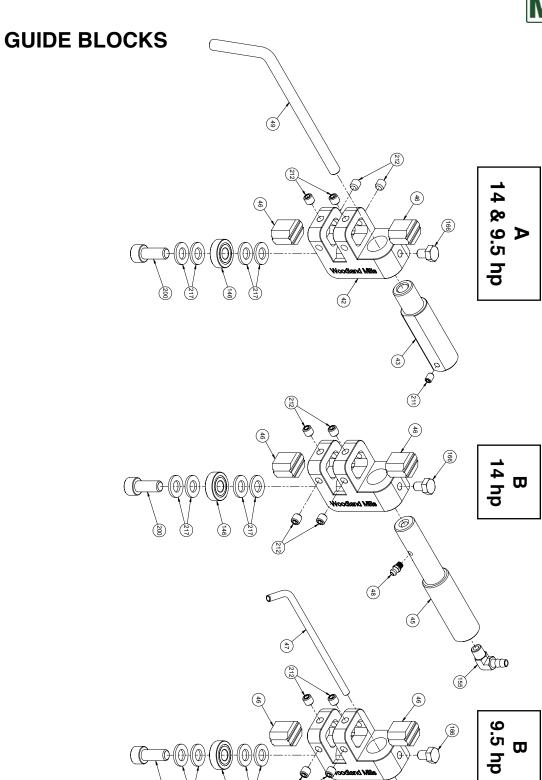




BACK BEAM-9.5 hp

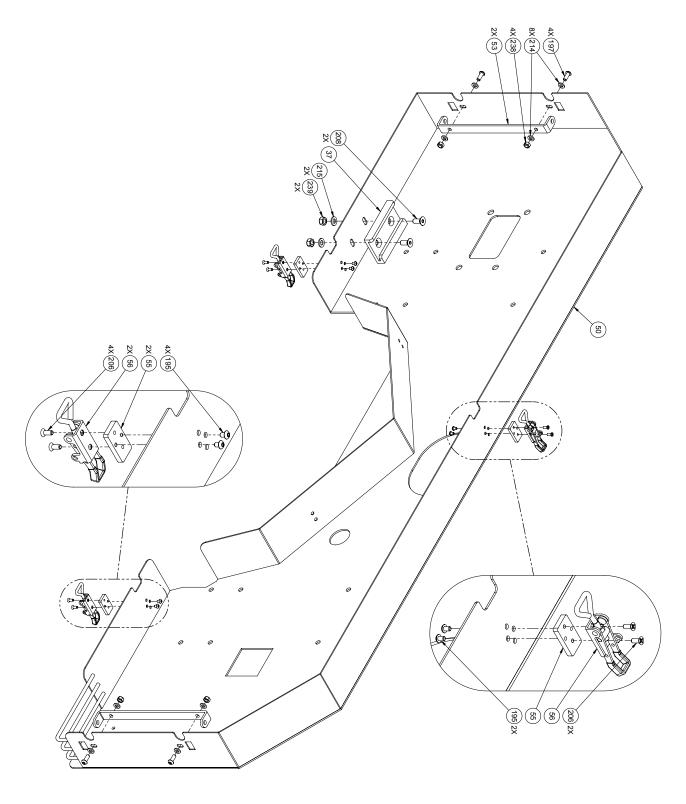






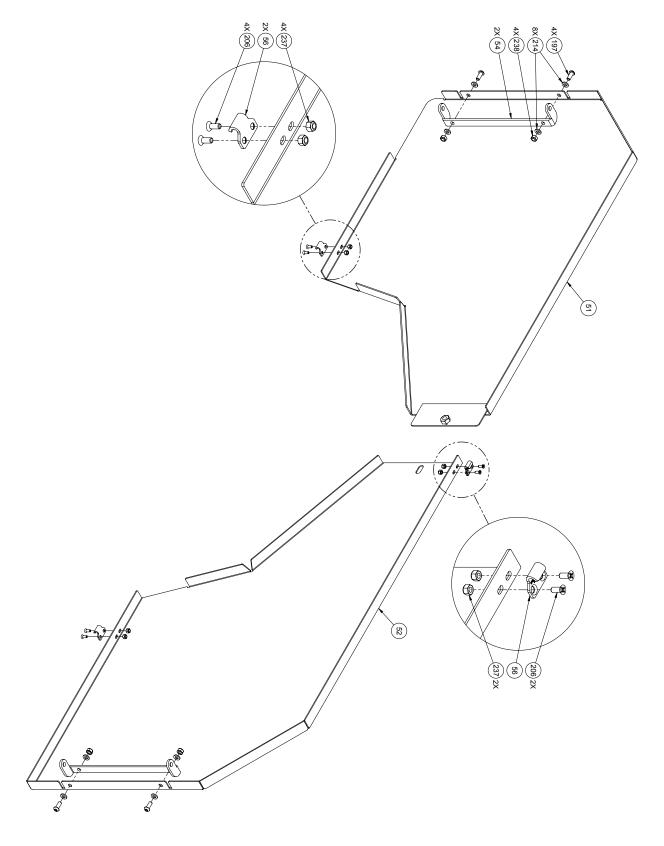


BAND WHEEL HOUSING



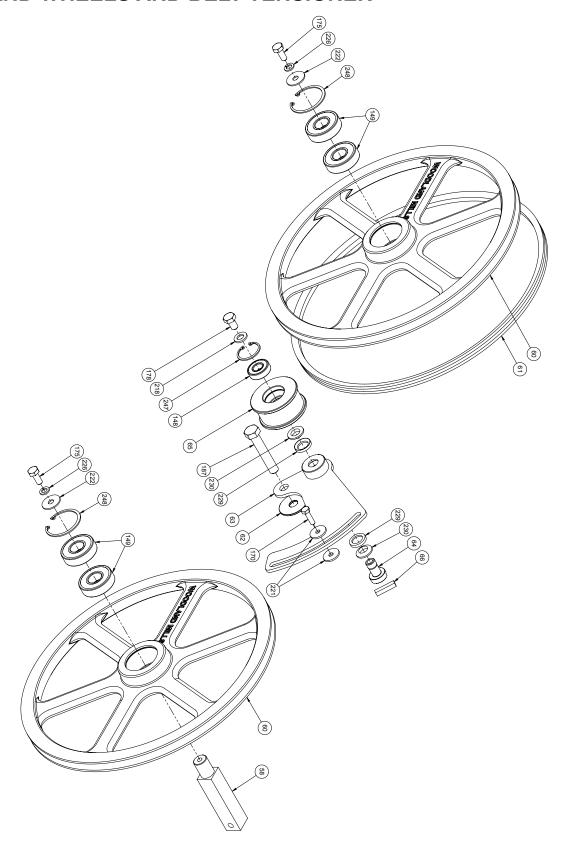


BAND WHEEL HOUSING DOORS



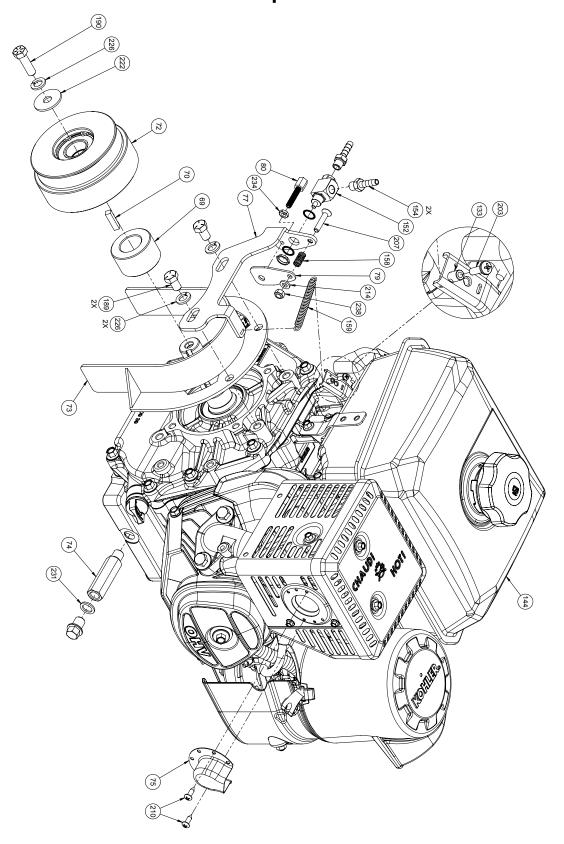


BAND WHEELS AND BELT TENSIONER



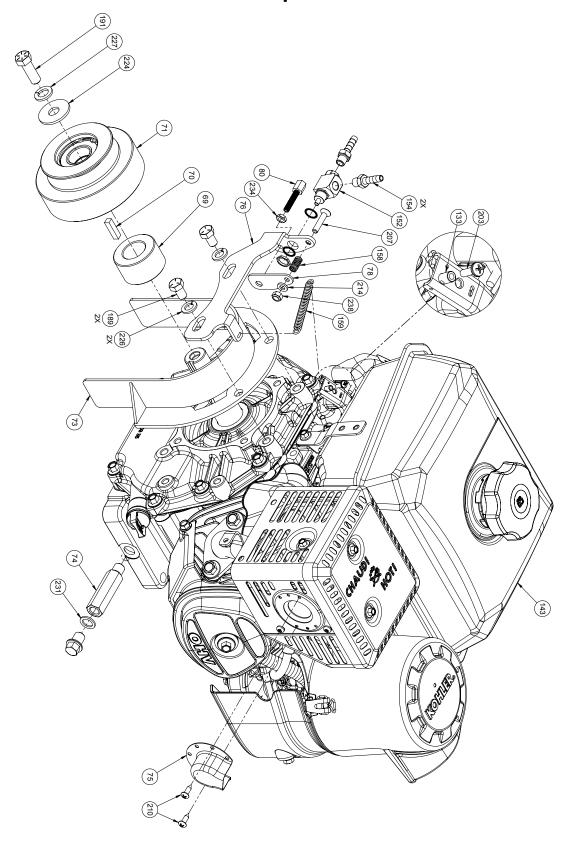


ENGINE COMPONENTS—14 hp



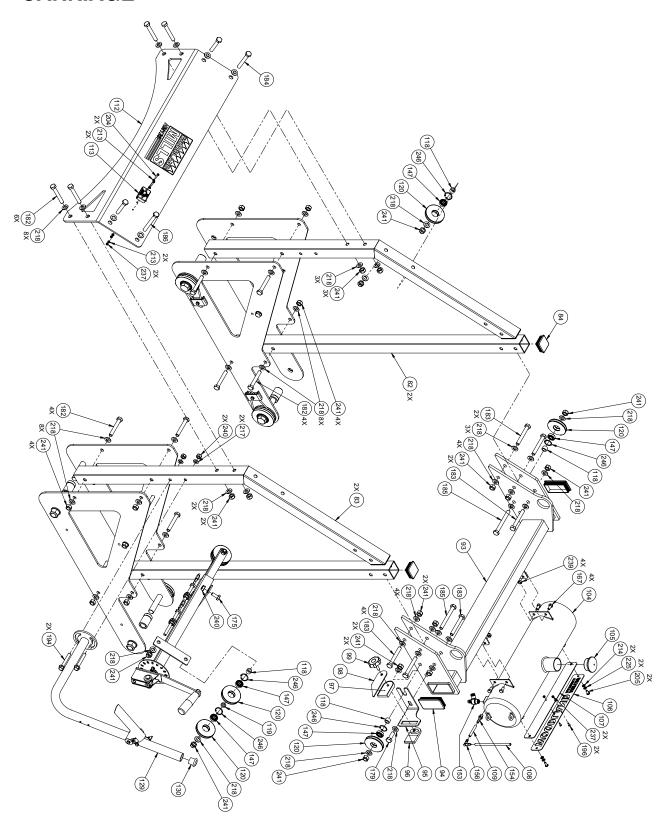


ENGINE COMPONENTS—9.5 hp



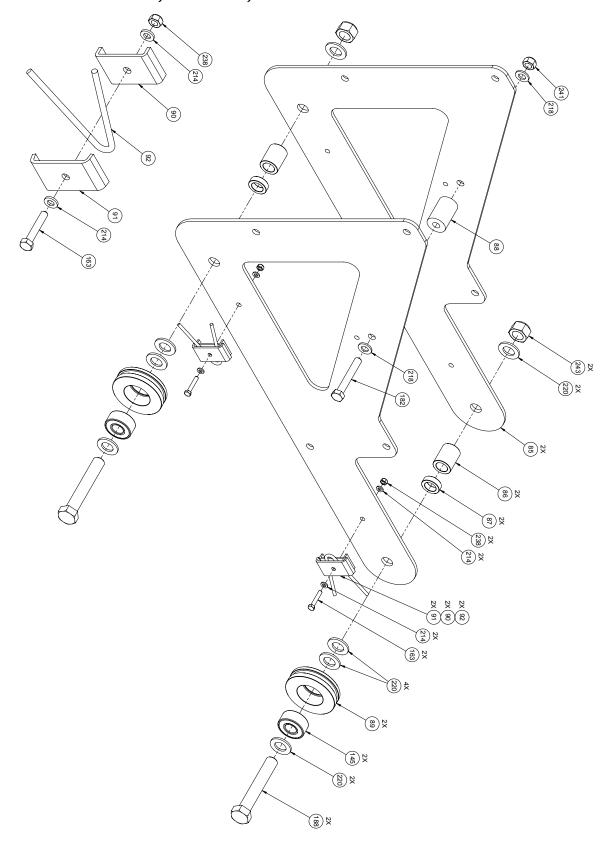


CARRIAGE



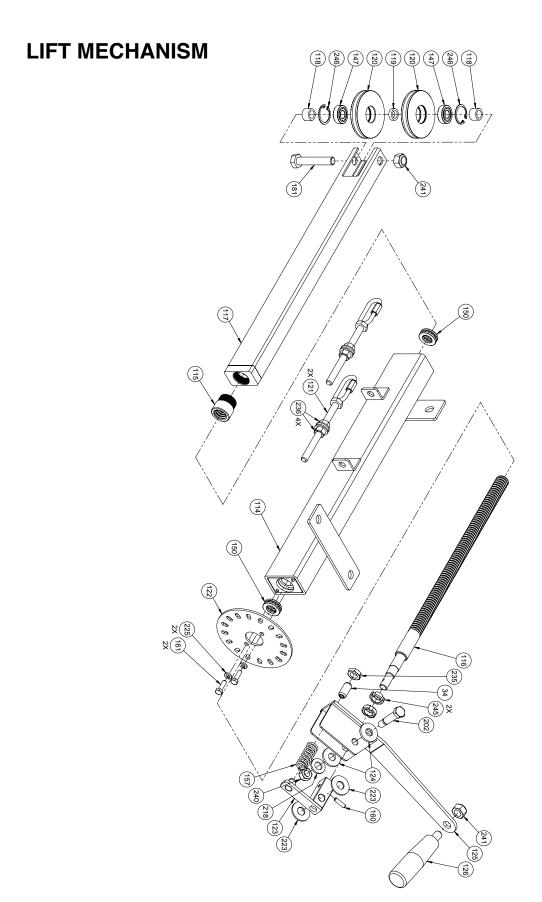


CARRIAGE LEG, WHEEL, AND SWEEPER



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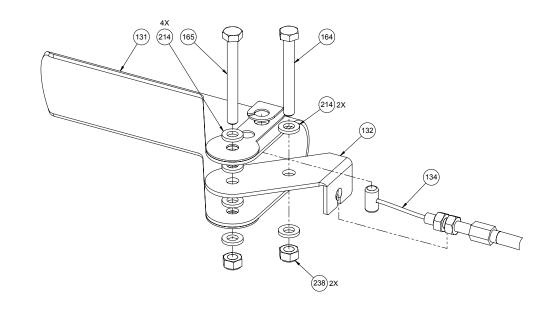


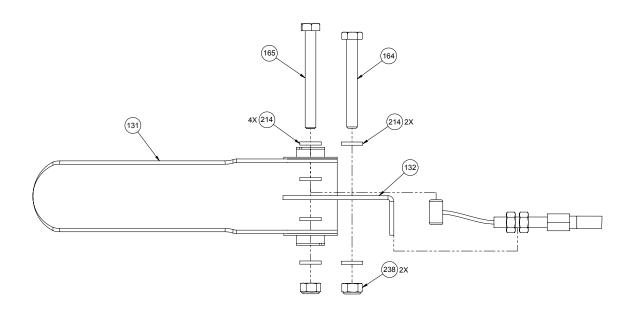




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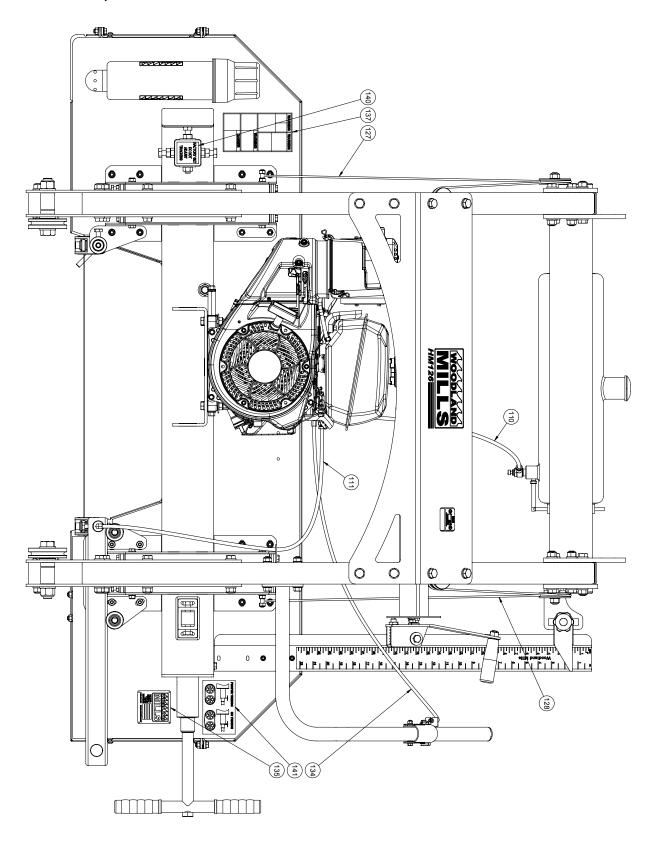
THROTTLE HANDLE







CABLES, TUBING & LABELS





NOTES							

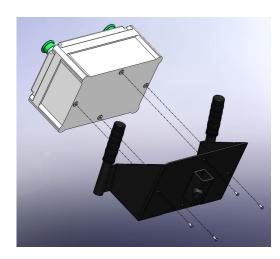
TILLEGG FOR EL-SAGER (EU/EØS)



2. Montere betjeningspanelet til braketten med håndakene

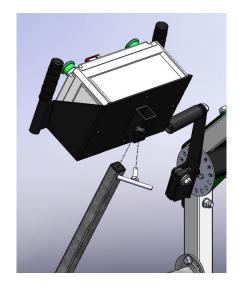
1. Montere stag for betjeningspanelet i passende høyde. Kan peke oppover og nedover avhengig av hvilken høyde som velges påå sagbenken.

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3. Montere komplett betjeningspanel på staget.





4. Montere kabelholder hvor det passer best ift plassering av kabel/støpsel.

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