



user manual

Instrukcja obsługi | Руководство по использованию
Manuel de l'Utilisateur | Betriebsanleitung
Bruksanvisning | Manual del Usuario
Betjeningsvejledning | Gebruikershandleiding
Käyttöohjeet | Manual de utilizare | Bruksanvisning
Manuale d'uso | Příručka uživatele | Navodila za uporabo

Retain for future use
Zachować do przyszłego użytku
Сохраните для последующего
использования
A conserver pour une utilisation future
Für zukünftige Benutzung aufbewahren
Behold for senere bruk
Säilytä nämä käyttöohjeet tulevaa tarvetta marten
Opbevar manualen til fremtidig brug
Bewaren voor gebruik in de toekomst
Conservare il presente manuale a l'uso futuro
Păstrați acest manual pentru utilizare viitoare
Conservar para futuras consultas
Behall för framtida användning
Uchovajte pro další použití
Hranite za prihodnjo uporabo

Wood-Mizer®

Safety, Setup, Operation & Maintenance Manual

WM1000

rev.A1.00



Safety is our #1 concern! Read and understand all safety information and instructions before operating, setting up or maintaining this machine.

September 2010

Form #633

**This is the original language
for the manual**

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SECTION 1 INTRODUCTION

Thank you for choosing Wood-Mizer wood processing equipment!

Wood-Mizer is committed to providing you with the latest technology, best quality and strongest customer service available on the market today. We continually evaluate our customers' needs to ensure we're meeting current wood-processing demands. Your comments and suggestions are welcome.

The present documentation contains information that should be used when preparing the machine for operation, working with it and when servicing or repairing it, as well.

1.1 Machine Description

The WM1000 sawmill is intended for sawing wood only. The sawmill must not be used for any other purposes such as cutting ice, metal or any other materials.

Using the machine correctly, you will obtain a material of the highest quality and high degree of accuracy.

The WM1000 sawmill should be operated only by an adult who has read and understood the entire operator's manual.

The machine is built to be durable and easy to operate and maintain.

1.2 Machine and Site Preparation

The sawmill is delivered and installed at customer's premises by the Wood-Mizer Customer Service.

1.3 The major components of the WM1000 sawmill are shown in the figure below

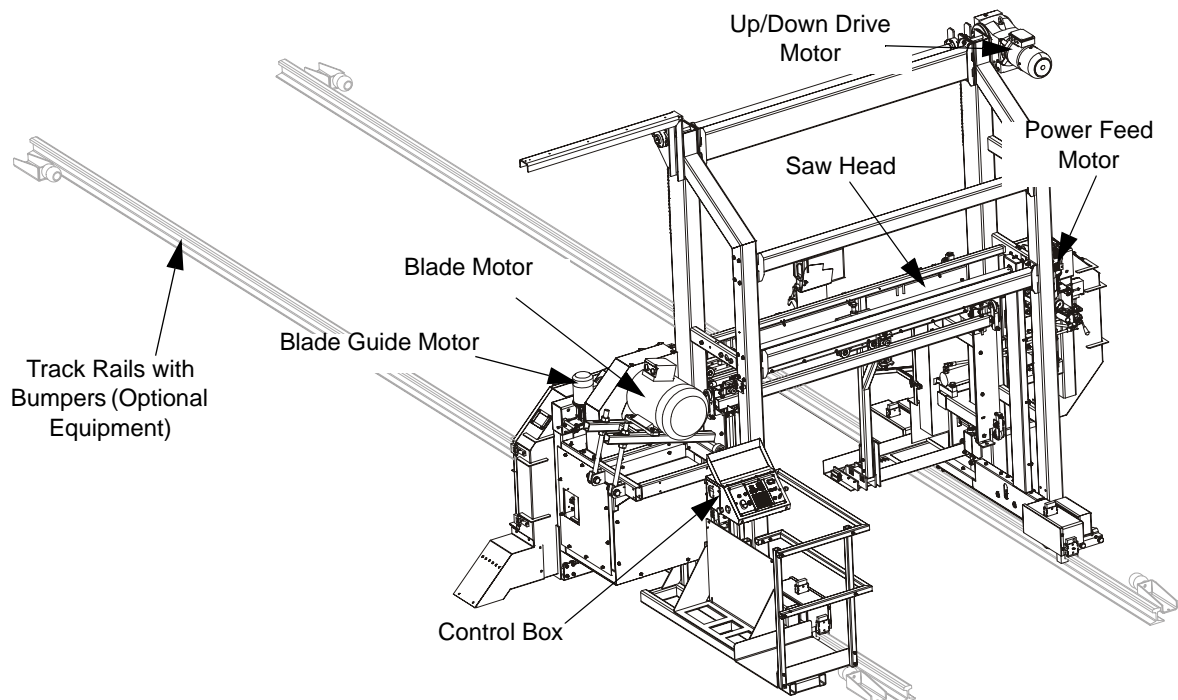


FIG. 1-0

1.4 If You Need To Order Parts

From Europe call your local distributor or our European Headquarters and Manufacturing Facility in Kolo, Nagórna 114 St, Poland at +48-63-2626000. Please have the machine identification number and your customer number ready when you call. Wood-Mizer will accept these methods of payment:

- Visa, Mastercard, or Discover
- COD
- Prepayment
- Net 15 (with approved credit)

Be aware that shipping and handling charges may apply. Handling charges are based on size and quantity of order. In most cases, items will ship on the day they are ordered.

Second Day and Next Day shipping are available at additional cost.

1.5 If You Need Service

From Europe call your local distributor or our European Headquarters and Manufacturing Facility in Kolo, Nagórna 114 St, Poland at +48-63-2626000. Ask to speak with a Customer Service Representative. Please have your machine identification number and your customer number ready when you call. The Service Representative can help you with questions about the operation and maintenance of your sawmill. He also can schedule you for a service call.

Office Hours:

Country	Monday - Friday	Saturday	Sunday
Poland	7 a.m.- 4 p.m.	Closed	Closed

SECTION 2 SAFETY



This symbol calls your attention to instructions concerning your personal safety. Be sure to observe and follow these instructions. This symbol accompanies a signal word. The word **DANGER** indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury. **WARNING!** suggests a potentially hazardous situation which, if not avoided, could result in death or serious injury. **CAUTION** refers to potentially hazardous situations which, if not avoided, may result in minor or moderate injury to persons or equipment. Read all safety instructions before operating this machine and observe all safety warnings!



Warning stripes are placed on areas where a single decal would be insufficient. To avoid serious injury, keep out of the path of any equipment marked with warning stripes.

Read all safety instructions before operating this sawmill and observe them during operation of the machine! Also read any additional manufacturer's manuals and observe any applicable safety instructions including dangers, warnings, and cautions.

Always be sure that all safety decals placed on the machine are clean and readable. Replace immediately all damaged safety decals to prevent personal injury or damage to the equipment. Contact your local Wood-Mizer dealer, or call Wood-Mizer Customer Service Department to order more decals.

IMPORTANT! It is always the owner's responsibility to comply with all applicable federal, state and local laws, rules and regulations regarding the ownership, operation and towing of your Wood-Mizer sawmill. All Wood-Mizer mill owners are encouraged to become thoroughly familiar with these applicable laws and comply with them fully while using or towing the mill.

Always properly dispose of all sawing by-products, including sawdust and other debris, coolant, oil, fuel, oil filters and fuel filters.

Safety instructions are listed in this section by the following operations:

- Blade Handling,
- Sawmill Setup,
- Sawmill Operation,
- Sawmill Maintenance.

2.1 Blade Handling



DANGER! Always disengage the blade and shut off the sawmill motor before changing the blade. Failure to do so may result in serious injury.



WARNING! Always wear gloves and eye protection when handling bandsaw blades. Changing blades is safest when done by one person! Keep all other persons away from area when coiling, carrying or changing a blade. Failure to do so may result in serious injury.



WARNING! Do not spin the blade wheels by hand. Spinning the blade wheels by hand may result in serious injury.

2.2 Sawmill Setup



WARNING! Securely fasten the feet of a stationary sawmill to the floor before operating the sawmill. Failure to do so may result in serious injury or death.

WARNING! The sawmill should be set up on firm, level ground and must be fastened to the ground. Setting up the sawmill on an incline could cause it to tip over, resulting in serious personal injury.



CAUTION! Changes in temperature could cause increased pressure in the blade tensioner and loss of fluid from the gauge. Release the blade tension when the sawmill is not in use.

2.3 Sawmill Operation



IMPORTANT! The sawmill is intended for sawing wood only. See Section [6.3 Cutting Capacity](#) for log size capacities of the machine.

IMPORTANT! The sawmill's operator should get training in operation and adjustment of the machine.



DANGER! Make sure all guards and covers are in place and secured before operating or towing the sawmill. Failure to do so may result in serious injury.

Be sure the blade housing and pulley covers are in place and secured, and the safety switches located on them are engaged. Use the rubber latches to fasten the blade housing covers shut.

DANGER! Always keep hands away from moving bandsaw blade. Failure to do so may result in serious injury.

DANGER! Keep all persons out of the path of moving equipment and logs when operating the sawmill or loading and turning logs. Failure to do so may result in serious injury.

DANGER! Maintain a clean and clear path for all necessary movement around the mill and lumber stacking areas. Failure to do so may result in serious injury.

DANGER! Always be sure all persons are out of the path of the blade before starting the motor. Failure to do so may result in serious injury.

WARNING! When operating or servicing the machine, always wear eye, ear and foot protection as well as safety clothing. Failure to do so may result in serious injury.



WARNING! Secure all loose clothing and jewelry before operating the sawmill. Failure to do so may result in serious injury or death.

WARNING! Always make sure a log is clamped securely before sawing. Failure to do so may result in serious injury or death.

WARNING! Use ONLY oil specified in Section [6.9 Lube System Specifications](#) with the blade lube system. Never use flammable fuels or liquids! If these types of liquids are necessary to clean the blade, remove it and clean with a rag. Failure to do so may result in serious injury or death. When cutting in freezing temperatures, use an anti-freeze, non-flammable additive.



CAUTION! Make sure the log handling accessories are below bed level before loading a log onto the bed. Failure to do so may result in machine damage or cause misalignment.

CAUTION! Before loading a log, make sure the saw head is moved far enough so the log does not hit it. Failure to do so may result in sawmill damage.

CAUTION! Do not try to force the saw head beyond its upper and lower travel limits. Damage to the up/down system may result.



CAUTION! Never clean the blade or the blade wheels with a brush or a scraper during sawmill operation.

CAUTION! Before installation of the blade, inspect it for damage and cracks. Use only properly sharpened blades. Always handle the blade with extreme caution. Use suitable carrier equipment for transporting blades.

CAUTION! Always wear gloves when handling the blade. Never grab the blade with bare hands!

CAUTION! If the blade breaks during sawmill operation, push the emergency stop button to stop the blade motor and wait at least 10 seconds before you open the blade housing cover.

CAUTION! Be sure to stop the blade when returning the saw head. This will not only prevent the blade from being pulled off and ruined by a wood sliver, but also will increase the life of the blade.

CAUTION! The sawmill's work-stand should be equipped with a 4 kg or bigger dry powder extinguisher.

CAUTION! If at any time you need to immediately stop the blade motor, press the emergency stop button located on the control box.

CAUTION! The sawmill should be operated with a sawdust extraction system only.

CAUTION! When working in dusty conditions, use a protective dust mask.

2.4 Sawmill Maintenance



WARNING! Always secure the saw head with a chain or a brace before adjusting the up/down chain. The saw head may fall, causing severe injury or death.

WARNING! Always secure the saw head with a chain or a brace before adjusting the saw head guide rollers. The cutting head may fall, causing severe injury or death.

CAUTION! Reinstall the track scraper so that it lightly touches the track rail. If the scraper presses too firmly against the rail, it can cause the power feed to bind.

CAUTION! Do not use chain lube. It causes sawdust buildup in chain links.

CAUTION! Due to variations in the vertical mast, the guide roller spacing may vary throughout the travel of the saw head. Check the guide roller spacing at the top and bottom ends of the mast only. Rollers adjusted too tight will cause premature up/down motor failure.



DANGER! Always disconnect and lock out power supply before performing any maintenance work, cleaning or servicing the sawmill!

See Table 2-1 Pictographic safety decals placed on the WM1000 sawmill are shown in the table below.

TABLE 2-1

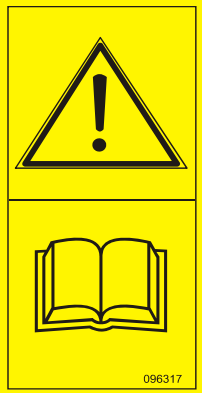

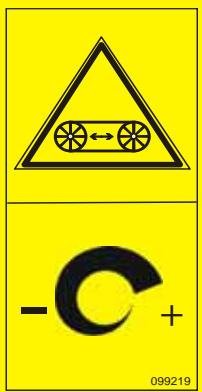
Decal View	Decal No.	Description
	096317	CAUTION! Read thoroughly the manual before operating the machine. Observe all safety instructions and rules when operating the sawmill.
	099220	CAUTION! Close all guards and covers before starting the sawmill.
	099219	Blade tension. Turning the bolt clockwise will increase the blade tension, and turning the bolt counterclockwise will decrease the tension.

TABLE 2-1

<p>099221</p>	<p>099221</p>	<p>CAUTION! Keep all other persons at a safe distance from work area when operating the machine.</p>
<p>098176</p>	<p>098176</p>	<p>CAUTION! Keep a safe distance from the debarker blade!</p>
<p>096316</p>	<p>096316</p>	<p>CAUTION! Do not open or close the electric box when the switch is not in the "0" position.</p>

TABLE 2-1

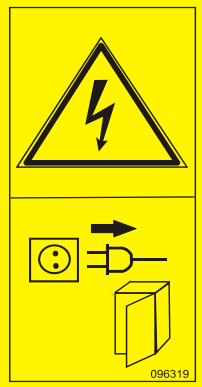
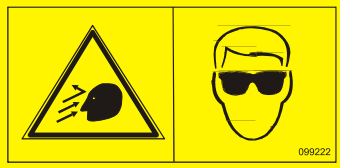
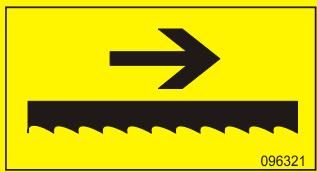

	<p>096319</p>	<p>CAUTION! Disconnect power supply before opening the box.</p>
	<p>099222</p>	<p>CAUTION! Sawdust chute. Protect eyes!</p>
	<p>096321</p>	<p>Blade movement direction</p>
	<p>S12004G</p>	<p>CAUTION! Always wear safety goggles when operating the sawmill!</p>

TABLE 2-1




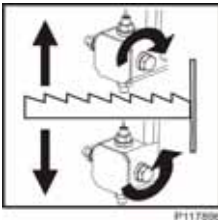



	<p>S12005G</p>	<p>CAUTION! Always wear protective ear muffs when operating the sawmill!</p>
	<p>501465</p>	<p>CAUTION! Always wear safety boots when operating the sawmill!</p>
	<p>501467</p>	<p>Lubrication point</p>
	<p>P11789</p>	<p>Aligning the blade on the wheels</p>
	<p>P85070</p>	<p>CE safety certification</p>

TABLE 2-1

	<p>099401</p>	<p>Russian safety certification</p>
	<p>S20097F</p>	<p>Motor rotation direction - 1465 r.p.m.</p>

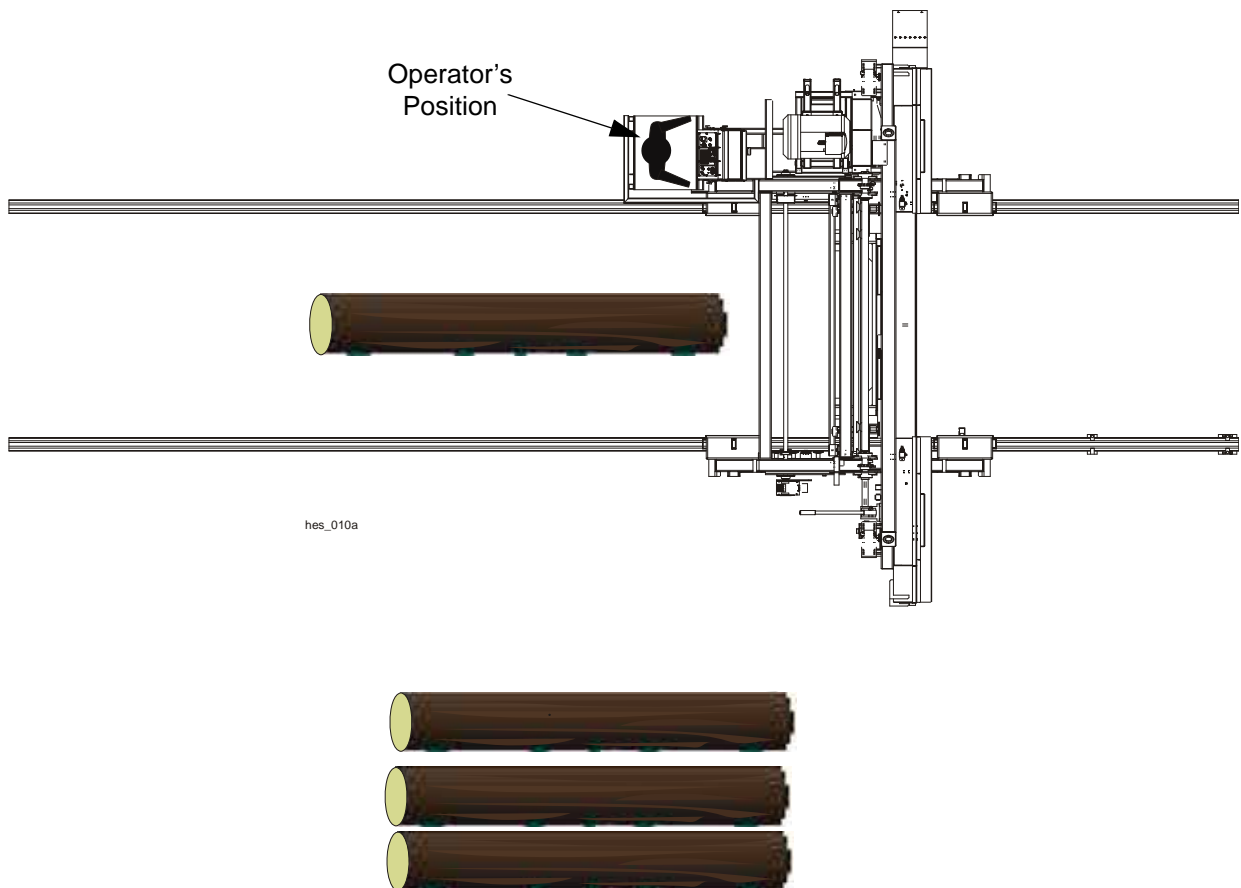
SECTION 3 SETUP & OPERATION

3.1 Sawmill Setup



IMPORTANT! Before starting to use the sawmill you have to meet the following conditions:

- The sawmill should be operated with a sawdust extraction system only.
- The sawmill should be operated under roof only.
- The sawmill should be operated in temperature range from -15°C do 40° (C5°F to 104°F) only.
- The illumination at the operator's position should be at least 300lx.
- The sawmill operator's position is shown below.



- Have a qualified electrician install the power supply (according to EN 60204 Standard). The power supply must meet the specifications given in the table

below.

3-Phase Volts	Fuse Disconnect	Suggested Wire Size
EH30, EC30 22 KW 400 VAC 460 VAC	50 A	16 mm ² to 15m in length 5 AWG to 49 ft in length
EH40, EC40 30 KW 400 VAC 460 VAC	70 A	16 mm ² to 15m in length 5 AWG to 49 ft in length
EH50, EC50 37 KW 400 VAC 460 VAC	80 A	16 mm ² to 15m in length 5 AWG to 49 ft in length

TABLE 3-1



IMPORTANT! When starting the machine for the first time, check that main motor rotation direction is as indicated by the arrow located on the motor body. If the rotation direction is incorrect, invert the phases in the phase inverter located in the power socket. Setting the phases in the phase inverter correctly will ensure correct rotation directions of all sawmill motors.



DANGER! It is recommended that a 30mA Ground Fault Interrupter (GFI) be used.

Set up the sawmill on firm and level footing. Fasten the machine to the floor to prevent any movement. It is highly recommended that cement pads with 21mm (0.826”) diameter anchor bolts be made under the track rails and the bed (if equipped). The cement pad should be rated to support 40 T/m².



WARNING! Fasten the sawmill to the floor before operating.

The machine can be lifted with a forklift or a winch only. The forklift must be rated for at least 8818 lb. The sawmill head is equipped with lifting brackets. Attach the winch hook to the brackets shown in the figure below.

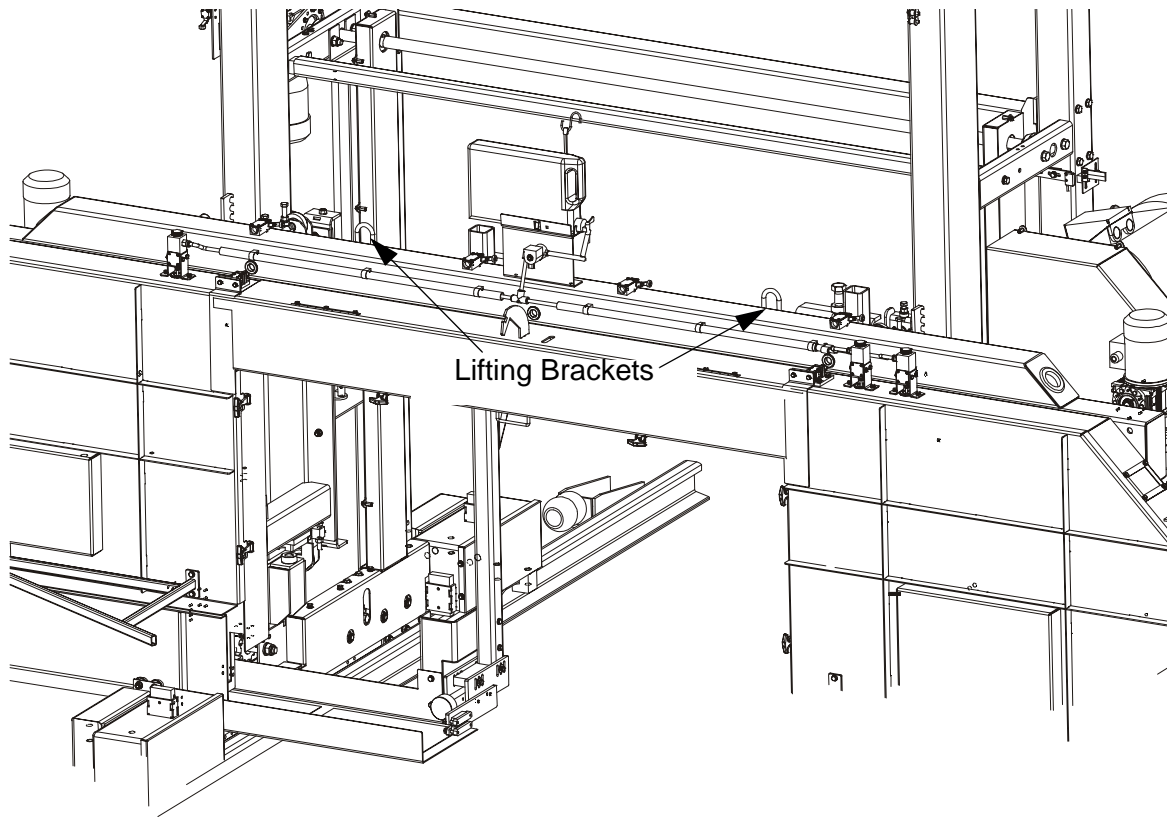


FIG. 3-1

3.2 Replacing the Blade



DANGER! Always shut off the sawmill motor before changing the blade. Failure to do so may result in serious injury.



WARNING! Always wear gloves and eye protection whenever handling a bandsaw blade. Changing blades is safest when done by one person! Keep all other persons away from work area when changing blades. Failure to do so may result in serious injury.

Move the right blade guide arm out.

Open the blade housing covers. Release the blade tension ([See Section 3.3](#)) until the wheel is pulled in and the blade is lying loose in the blade housing. Carefully remove the blade from the blade housing.

Install the blade so it is lying around the wheels. When installing the blade, make sure the teeth are pointing the correct direction. The teeth should be pointing toward the operator side of the sawmill when you are looking at the blade below the blade guides, as shown on the label located on the blade housing.

Position 2" wide blades on the wheels so the gullet is 5mm (0.196 ") out from the front edge of the wheel.

Close the blade housing. Next, use the blade tension handle to tension the blade correctly.



CAUTION! Should you need to adjust the blade position, never grab the wheel arms to spin the idle-side blade wheel, because your fingers can get pinched.

3.3 Tensioning the Blade

See Figure 3-1.

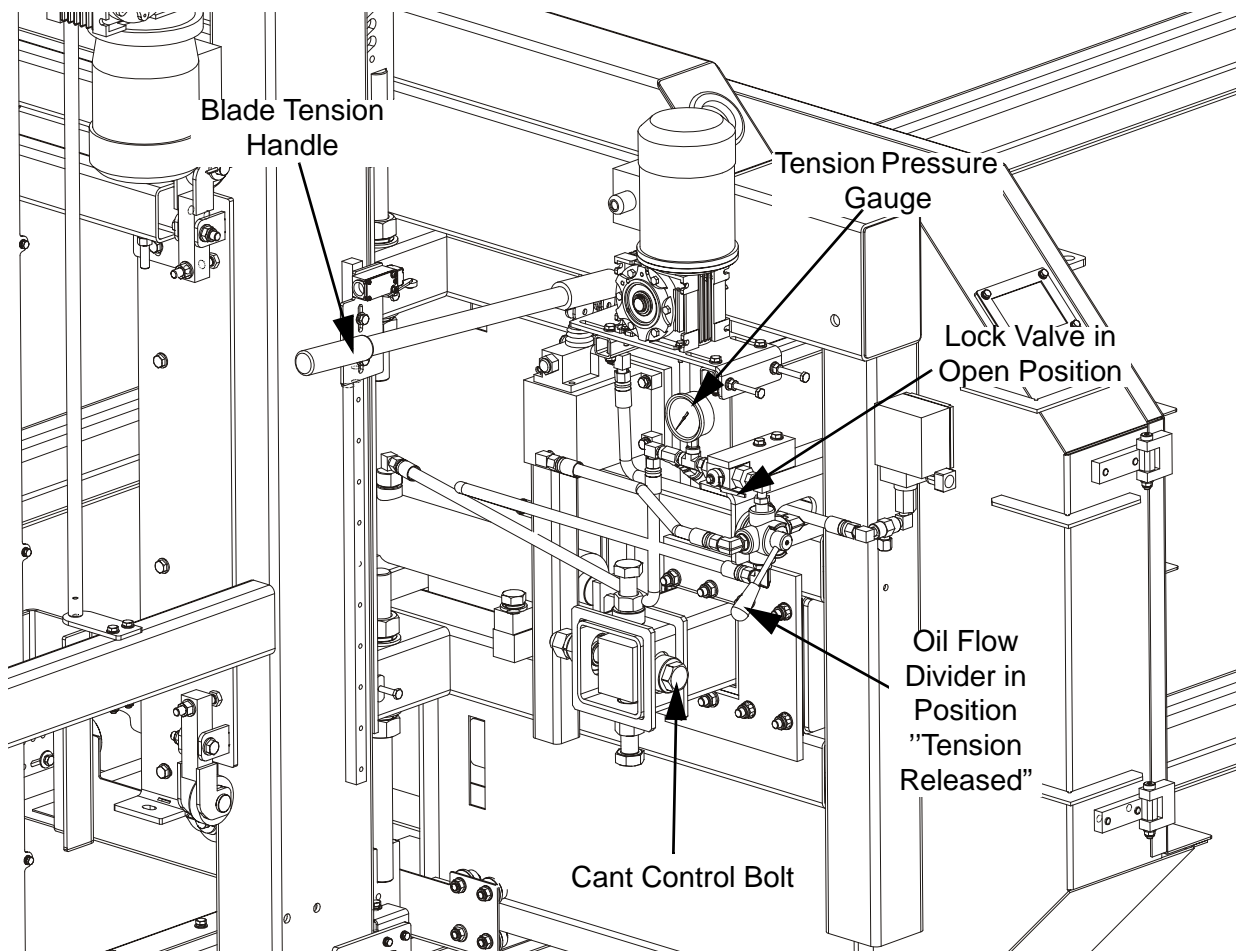


FIG. 3-1

The blade tension is adjusted with the blade tension handle and by setting properly the oil flow control valves shown in the figure above.

To release the tension, turn the lock valve right. Then turn the oil flow divider to the down position. Move the tension handle up and down to release the blade tension. Turn the lock valve left to the position "closed" and remove or install the blade.

To tension the blade, turn the lock valve left and set the oil flow divider in the up position. Moving the tension handle up and down, tension the blade until the tension pressure gauge indicates 40-50 bar (580-725 PSI). Turn the lock valve left to the position "closed" and read again the tension pressure on the gauge.

Check the blade tension occasionally when adjusting the cant control or while cutting. Also, ambient temperature changes can cause tension to change.

IMPORTANT! Loosen the blade when the machine is not in use. Tension the blade again before starting the motor.

The WM1000 sawmill is equipped with a safety switch that disengage the motor until the blade is properly tensioned (the motor is stopped also when the blade breaks).

3.4 Tracking the Blade

1. Open the blade housing.
2. Turn the key switch to the "H" position.



3. Carefully spin by hand one of the blade wheels until the blade positions itself on them.
4. Check if the blade is properly positioned on the blade wheels.

See Figure 3-2. Position 2" (50mm) wide blades on the wheels so the gullet is 5mm (0.196") out from the front edge of the wheel and 8 mm (0.314") in case of 3" (75mm) blade.

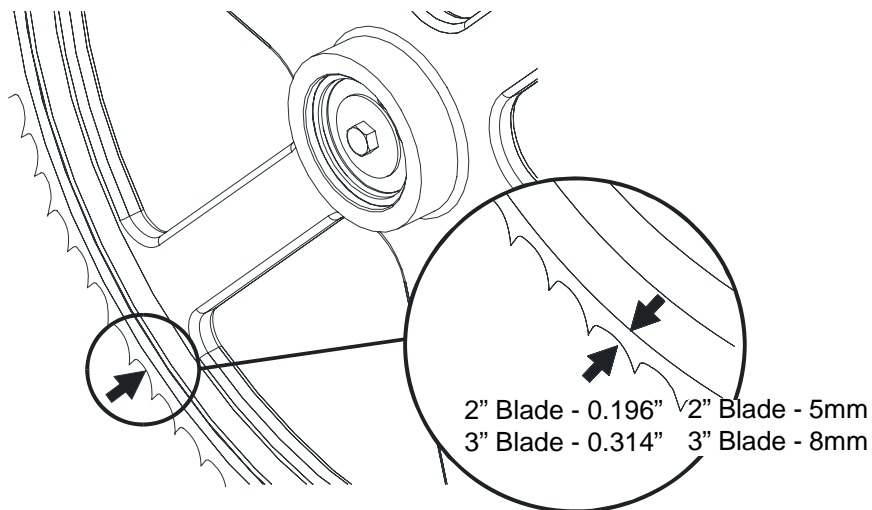


FIG. 3-2

5. Use the cant adjustment bolt, shown in **Figure 3-1**, to adjust when the blade travels on the blade wheels.

To move the blade out on the blade wheel, turn the cant adjustment bolt clockwise.

To move the blade in on the blade wheel, turn the bolt counterclockwise.

6. After making the cant adjustment, tension the blade properly.
7. Close the blade housing.



DANGER! Make sure all guards and covers are in place and secured before operating or towing the sawmill. Failure to do so may result in serious injury. Be sure the blade housing covers are in place and secured.

DANGER! After adjusting the blade wheels, always recheck the blade tracking.

3.5 Starting the Motor

See the appropriate manual supplied with your specific motor configuration for detailed starting and operating instructions.



IMPORTANT! For safe operation of the sawmill, one person is sufficient, however in case of manual collection of sawn material, at least two persons should be assigned to these activities in order not to exceed the manual lifting standard.



CAUTION! Before starting the sawmill, the operator must warn all persons who are nearby of the intention of starting the machine.



IMPORTANT! The sawmill should be operated only by a qualified person of age, being in good state of health confirmed by a medical certificate.

IMPORTANT! When starting the machine for the first time, check that the main motor rotation direction is as indicated by the arrow located on the motor body (fan guard). If the rotation direction is incorrect, invert the phases in the phase inverter in the power socket (electric box). Setting the phases in the phase inverter correctly will ensure correct rotation directions of all sawmill motors.



CAUTION! Make sure all guards and covers are in place and secured before operating or towing the sawmill. Failure to do so may result in serious injury. Be sure the blade housing covers are in place and secured.

CAUTION! Do not start the motor when the clutch/brake

lever is in the engaged position. Always be sure the blade is disengaged and all persons are out of the path of the blade before starting the motor.



CAUTION! Always wear eye, ear, respiration and foot protection when operating the machine. Secure all loose clothing and jewelry before operating the sawmill.

CAUTION! Before starting the sawmill, connect a sawdust extraction system to the sawdust chute and start the extraction system. [See Section 1.12](#) for the sawdust extractor specifications.

CAUTION! If at any time you need to immediately stop the blade motor, press the emergency stop button located on the control box.

Before starting the sawmill at a new location, at least once a year or after every repair have a qualified electrician (having appropriate measurement qualifications) check the insulation resistance and the electric shock protection of the electrical system.

The electric box should be protected against dust and moisture. Regularly disconnect the power supply and clean the inside of the electric box of dust, sawdust, etc. Do not operate or leave the sawmill with the electric box door open.



CAUTION! Hazardous voltage inside the electric box (even if disconnected with the main disconnect switch) and at the motor can cause shock, burns, or death. Always disconnect the power supply before servicing!

3.6 Loading and Clamping Logs



CAUTION! Be extremely careful when handling the log. Also, be sure the cutting head is moved far enough forward so the log does not hit it.

To Load Logs

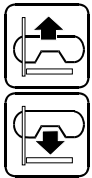
1. Load the log onto the bed using a forklift, a crane, or other equipment specifically designed for that purpose.
2. Use any wedges to secure the log in the middle of the track rails.

To Clamp and Level Tapered Logs

1. Use any wooden or steel wedges of an adequate size to level the log.

3.7 Up/Down Operation

1. Install a blade and check for correct blade tension. ([See Section 2.4.](#))
2. Set the cutting head at the desired height. (The blade height scale shows the height of the blade above the track rails, bed rail or ground depending on the sawmill installation.)



See Figure 3-1. The up/down switch is located on the right side of the control panel. Push the switch up to raise the saw head; push the switch down to lower the saw head. Hold the switch in position until the saw head reaches the desired height and then release.

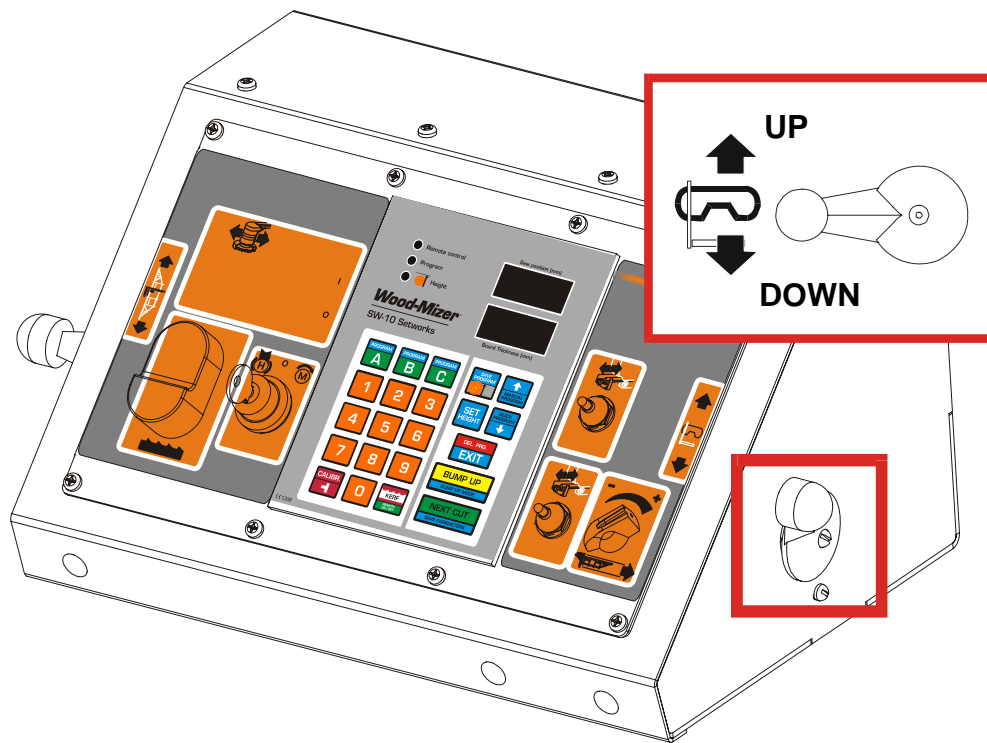


FIG. 3-5

The up/down switch is designed to return to the neutral position when released. If the switch remains engaged, manually move it to the neutral position. Repair the switch immediately.

3.8 Blade Guides Setting

1. Look down the length of the log to see its maximum width. The blade guides should be adjusted to clear the widest section of the log by about 25mm (1").
2. Use the blade guide toggle switches on the control panel to adjust the blade guides as necessary.



See Figure 3-6.

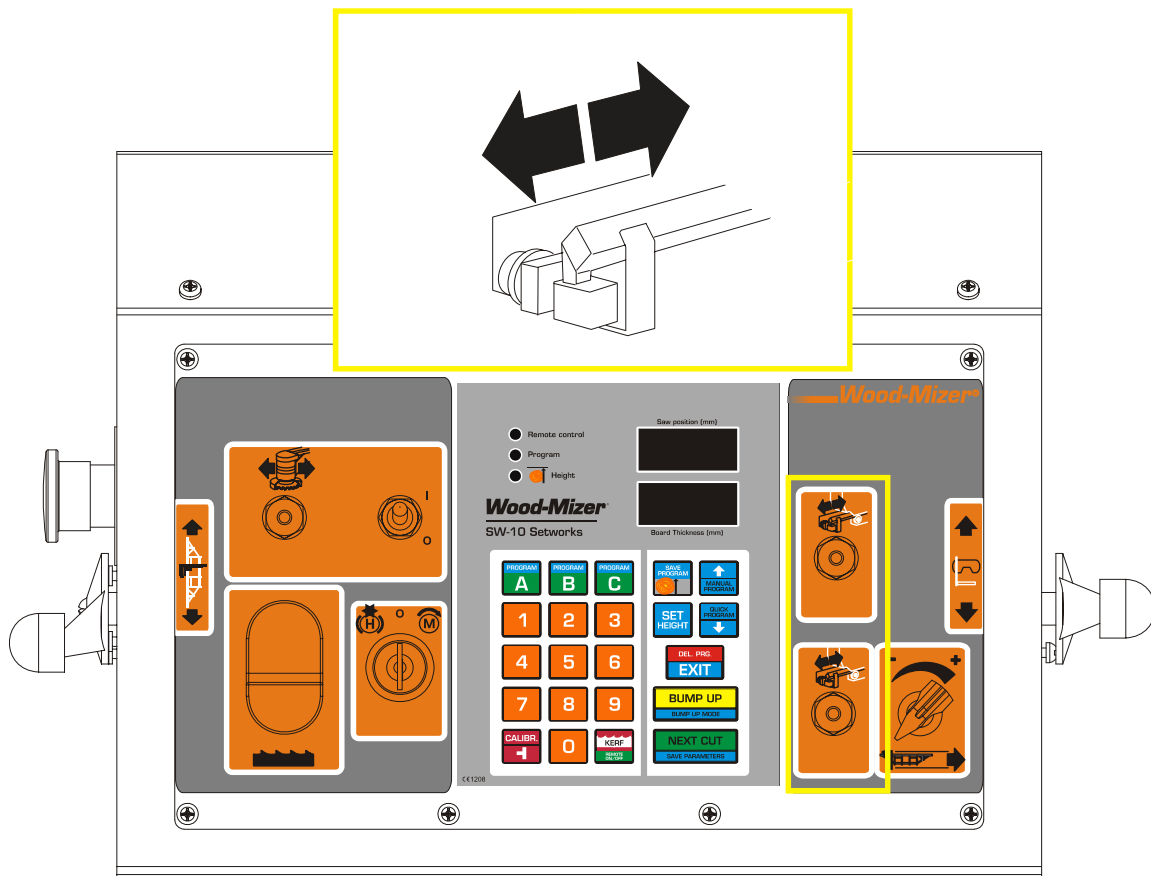


FIG. 3-6

3.9 Power Feed Operation

See Figure 3-7. The power feed system moves the saw head forward and backward by using two switches on the control panel.

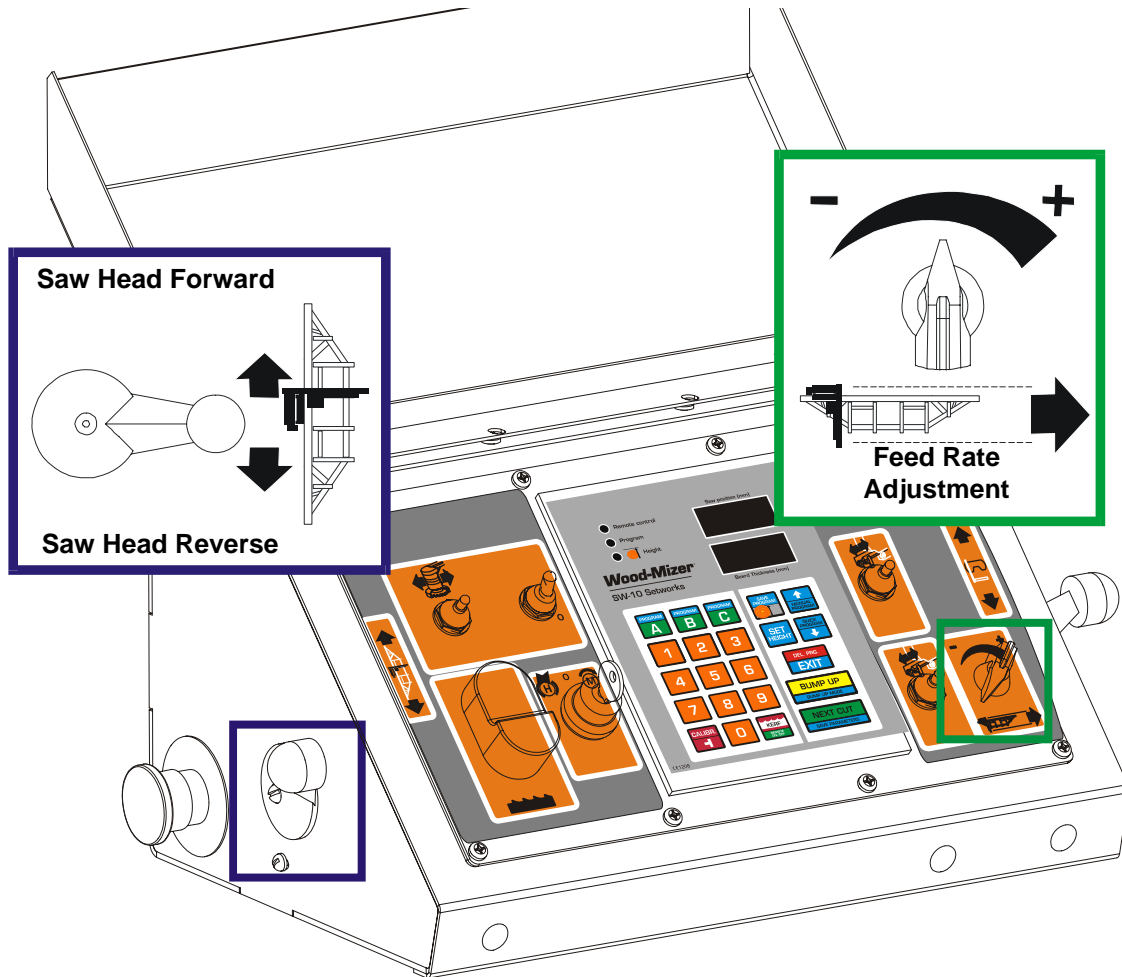


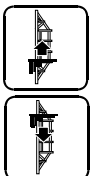
FIG. 3-7

Saw Head Feed Rate



The saw head feed rate switch controls the speed at which the saw head travels forward. Turn the switch clockwise to increase the speed; turn it counterclockwise to reduce the speed.

Saw Head Forward and Reverse



The power feed switch controls the direction in which the saw head travels. Turn the switch upward to move the saw head forward; turn it down to move the saw head backward.

NOTE: Always disengage the blade before returning the saw head and raise the saw head slightly to make sure it clears the log.

The middle position (shown in the figure above) is the neutral position. The power feed switch is designed to return to the neutral position when released. If the switch remains engaged, manually move it to the neutral position. Repair the switch. ([See Section Maintenance.](#))



WARNING! Be sure the power feed switch is in the neutral position before turning the key switch to the ON position. This prevents accidental saw head movement which may cause serious injury or death.

Feed Rate

HINT: To get a straight cut in the first part of the log, the blade should be fed into the log at a slow speed. This will stop the blade from flexing and dipping up or down. Turn the saw head feed rate switch to a slow speed until the whole width of the blade has entered the cut. Then use the saw head feed rate switch to increase the feed rate as desired.



Maximum feed rate varies with width and hardness of the wood. Over-feeding results in motor and blade wear, and also produces a wavy cut.



Stop the saw head at the end of the cut by turning the saw head feed rate switch counterclockwise until the saw head stops moving.

- Using the STOP button, disengage the blade. This will stop the blade. Remove the board from the log.



CAUTION! Be sure to stop the blade when returning the saw head.


- To return the saw head to the front of the sawmill, turn the power feed switch down. The power feed motor will bypass the saw head feed rate switch and the saw head will automatically return at the fastest speed available. **Always disengage the blade before returning the saw head for the next cut.**



- Make sure that the blade does not catch on the end of the log. Raise the saw head slightly to make sure the blade clears the log when returned. **HINT:** Try to stop the blade while the heel of the blade is still on the log. Then bring the saw head back without adjusting the blade up. This lets you keep the blade at the current height so you can make the next blade height setting more quickly.

3.10 Cutting the Log

The following steps guide you through normal operation of the Wood-Mizer sawmill.

1. Once the log is placed where you want it and clamped firmly, position the blade close to the end of the log.
2. Use the blade height scale or SW-10 Setworks to determine where to make your first cut. ([See Section 3.11.](#)) Set the blade to the desired height with the up/down switch. Make sure that the blade will clear the side supports and the clamps.
3. Adjust the blade guides to clear the widest section of the log using the blade guide toggle switches.
4.  Make sure all guards and covers are in place. Engage the blade. To do this, turn the key switch to the "M" position and press the START button.
5. To prevent sap buildup on the blade, open the oil tank valve. ([See Section 2.19.](#))
6. Feed the blade into the log slowly. ([See Section 3.9.](#)) Once the blade completely enters the log, increase the feed rate as desired. Always try to cut at the fastest speed you can while keeping an accurate cut. Cutting too slowly will waste blade life and lower production!
7. As you get to the end of the log, slow down the feed rate. When the teeth exit the end of the log, turn the power feed switch to the neutral position. Then disengage the blade using the STOP button. Remove the board that you have just cut from the log.
8. Use the power feed switch to move the saw head to the front of the sawmill. Always disengage the blade before returning the saw head for the next cut.
9. Repeat until the first side of the log is cut as desired. Set aside the usable flitches (boards with bark on one or both sides). You can edge them on the sawmill later.
10. Lower the toe boards if they were used (optional equipment). Release the clamps or carefully remove the wedges and turn the log 90 or 180 degrees. Using the wedges or the toeboards, level the log until the heart of it is parallel to the bed/ground.
11. Repeat the steps used to cut the first side of the log until the log is square. Cut boards from the remaining cant by adjusting the blade height for the thickness of boards that you want.

Example: Remember that the blade cuts a 1/16-1/8" (1.5-3.0 mm) wide kerf. If you want to get 1" (25 mm) thick boards, lower the saw head 1 1/16 - 1 1/8" (27-29 mm) for each board. If SW-10 Setworks is used, the kerf value is included automatically. See *SW-10 Setworks Operator's Manual*.

3.11 Blade Height Scale

See Figure 3-8. The blade height scale is attached to the saw head frame. It includes:

- a blade height indicator
- a metric/inch scale

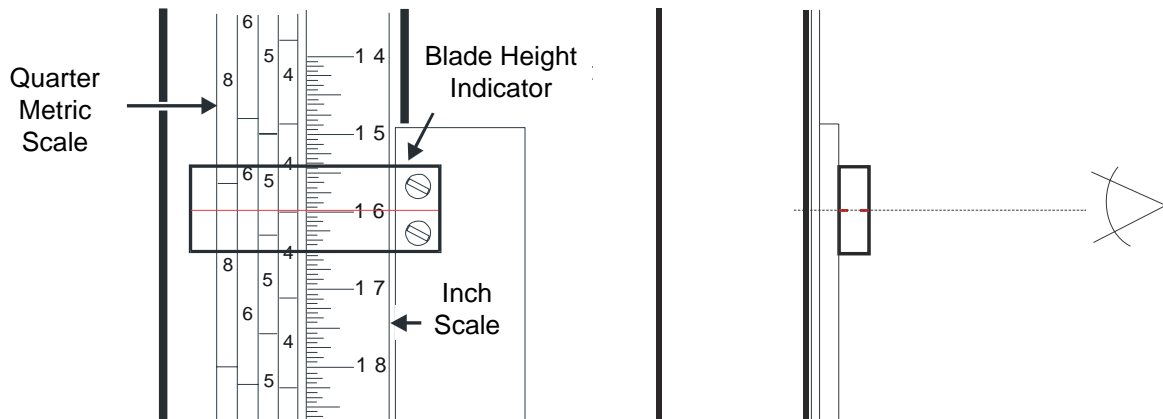


FIG. 3-8

Blade Height Indicator

The blade height indicator has two horizontal, red lines on both sides. Readings should be taken with eyes level with the indicator, when the two red lines are in line. This will allow to avoid the parallax error (different scale readings depending on the angle of vision).

Metric/Inch Scale

The horizontal red line on the blade height indicator shows how many inches the bottom of the blade is above the sawmill bed. If you know the height of your blade at each cut, you can determine the thickness of lumber you are sawing.

Example: You want to cut 1" (25mm) random width boards from a log. Position the blade for the first cut. Move the saw head to an even measurement on the scale. Make a trim cut. Return the saw head for the second cut and lower it 1 1/8" (28 mm) below the original measurement. (The extra 1/8" (3 mm) allows for saw kerf and shrinkage of the lumber.)

The yellow area on the scale identifies where the blade could encounter a side support or a log clamp (if equipped). Check that these items are below the blade level before sawing.

Quarter Scale

See Table 3-2 Two quarter scales are provided with four sets of marks. Each set represents a specific lumber thickness. Saw kerf and shrinkage allowance are included, but actual board thickness will vary slightly depending on blade thickness and tooth set.

To choose which scale to use, determine what finished thickness you want to end up with. The Grade Hardwood Quarter Scale provides thicker finished boards usually required by commercial buyers. The Standard Quarter Scale allows for kerf and shrinkage of finished boards suitable for most custom applications. Always check with your customer before you saw to determine what actual finished thickness is required.

Standard Quarter Scale		Grade Hardwood Quarter Scale	
Scale	Board Thickness	Scale	Board Thickness
4/4	1" (25 mm)	4/4	1 1/8" (29 mm)
5/4	1 1/4" (32 mm)	5/4	1 3/8" (35 mm)
6/4	1 1/2" (38 mm)	6/4	1 5/8" (41 mm)
8/4	2" (51 mm)	8/4	2 1/8" (54 mm)

TABLE 3-2

To use the quarter scale, look at the blade height indicator. Line up the horizontal red line on the indicator with the nearest mark on the scale you want to use. Make a trim cut. When you return the saw head for a second cut, lower the saw head to the next mark on the scale. This mark shows where the blade should be positioned to cut a certain thickness of lumber, without having to measure on the inch scale.

Example: You want to cut 1" (25 mm) (4/4) random width boards from a log. Position the blade for the first cut. Adjust the quarter scale so a 4/4 mark is aligned with the red line on the indicator. Make a trim cut. Return the saw head for the second cut. Now, instead of having to measure down 1 1/8" (29 mm) on the inch scale, you can simply lower the blade so the indicator is aligned with the next 4/4 mark on the quarter scale. Turn the log 90 degrees and repeat.

3.12 Lube System Operation

See Figure 3-9. The Lube System keeps the blade and the wheels clean and cools them. The coolant (ACP-1 oil) flows from a 5-liter tank through hoses to both sides of the blade and surfaces of the wheels. Drip feed lubricators located on the saw head control the amount of oil flow.

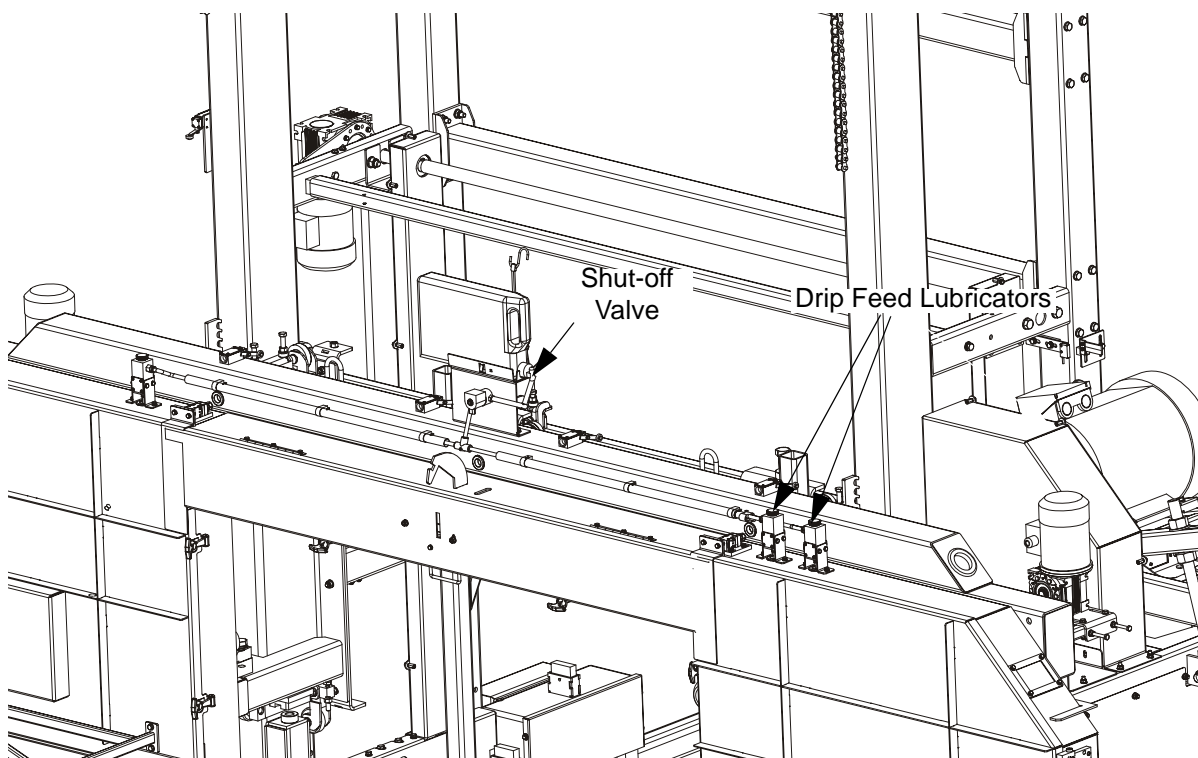


FIG. 3-9

Use just as much coolant as it is necessary to keep the blade clean. Usually, it is sufficient to set the drip feed lubricators so that one drop flows every 3 seconds.



WARNING! Never use flammable fuels or liquids! If these types of liquids are necessary to clean the blade, remove it and clean with a rag. Failure to do so may result in serious injury or death.

Before removing the blade, start the motor with the START button. Let the blade spin with oil running on it for about 15 seconds. This will clean the blade of sap buildup. Wipe the blade dry with a rag before storing or sharpening.

If you are sawing in temperatures below -20°C (-4°F), remove the oil tank from the sawmill when done sawing and store it in a warm place. Blow any remaining oil from the lube hose.

SECTION 4 MAINTENANCE

This section lists the maintenance procedures that need to be performed.

The Short Interval Maintenance Schedule lists procedures that need to be performed every 4, 8 or 25 hours. The Maintenance Log lists procedures that need to be performed every 50, 100, 200, or 1000 hours. Keep track of machine maintenance by filling in the machine hours and the date you perform each procedure.



This symbol identifies the interval (hours of operation) at which each maintenance procedure should be performed.

4.1 Wear Life

See Table 4-1. This chart lists estimated life expectancy of common replacement parts if proper maintenance and operation procedures are followed. Due to the many variables which exist during sawmill operation, actual part life may vary significantly. This information is provided so that you may plan ahead in ordering replacement parts.

Part Description	Estimated Life
Up/Down Motor	2000 hours
Up/Down Drum Switch	1000 hours
Blade Guide Blocks	1000 hours
Power Feed Drum Switch	1200 hours
Drive Belt	1250 hours
Power Feed Motor	1500 hours

TABLE 4-1

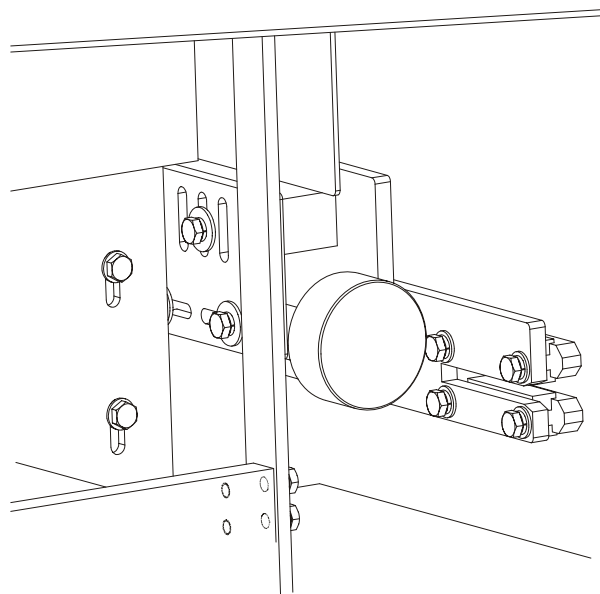
4.2 Blade Guides

1. Check the rollers for performance and wear every blade change. Make sure the rollers are clean and spinning freely. If not, replace them. Replace any rollers which have worn.

Steel Guide Blocks

2. Inspect the blocks at every blade change for damage or wear.

As the blocks wear, the front inside corner will wear more than the body of the block. When the corner wears far enough, sawing performance will be affected even if the body of the block is adjusted properly to the blade. At this point, the block should be replaced. If you have access to the appropriate equipment, you can grind or mill the blocks to a new flat surface and reuse them. It is recommended you develop a routine schedule for replacing the blade guide blocks based on your sawing conditions and experience.



RYS. 4-0

3. Check the inserts are properly spaced from the bottom of the blade every 25 hours of operation. As the rollers wear, the gap between the blade and inserts will become larger. Use the provided shim or a feeler gauge to check the inserts are adjusted 0,012"-0,02" from the blade.

25

See Figure 4-1. To adjust the disks up, loosen the bottom guide disk mounting bolt and clamp bolt. Use the provided adjustment tool. to raise bottom disk Retighten the bottom disk mounting bolt and clamp bolt. [See Section: Blade Disk Adjustment](#)



IMPORTANT! The disks should be parallel to the blade. Check the space between the disks and the blade at each side of the disks to insure it is parallel. Use the appropriate adjustment bolt to tilt the disks mounting plate

so the insert is parallel to the blade.

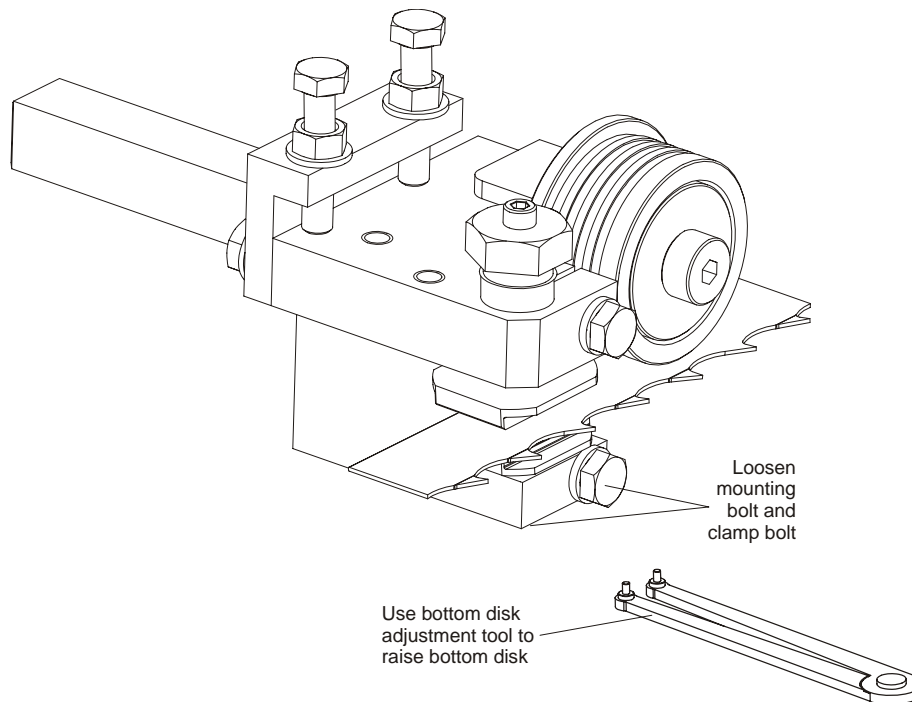


FIG. 4-1



Inspect the blade guide assemblies for proper alignment every time you change the blade. [See Section: Blade Guides](#) for blade guide adjustment instructions.



WARNING! Blade guide alignment is essential for optimal cutting performance, blade life and safety. Failure to check and maintain proper blade guide alignment will result in stress cracks forming in the blade. These cracks will lead to premature blade breakage. If the blade breaks during operation and the blade has multiple stress cracks, the blade could shatter into several pieces and escape from the protective guards of the sawmill. Small blade pieces projected into the area around the sawmill creates a safety hazard for the operator and any bystanders surrounding the mill.



WARNING! DO NOT use blades with stress cracks. Blades with stress cracks can shatter causing bodily injury and/or machine damage.

Preventing sap buildup on the blade is critical when using the high-performance blade guide system. If the wood you are sawing leaves sap buildup using plain water in the blade lube system, use Wood-Mizer lube additive (Part No. 033439).

Throat Screw

Make sure the blade screw in the top center of the C-frame is 1/16" (1.5 mm) away from the blade. If not, loosen the nut and adjust the screw as necessary. Check the screw every blade change. Failing to maintain this adjustment will lead to early blade breakage.

See Figure 4-2.

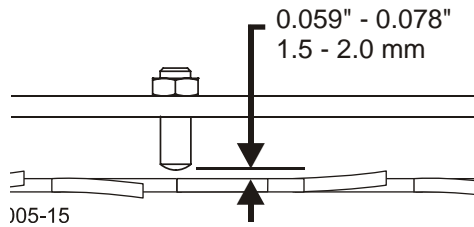


FIG. 4-2

4.3 Sawdust Removal

1. Remove the excess sawdust from the blade wheel housings and sawdust chute every blade change.
- 8 2. Remove all sawdust and debris from around the velocity fuse valves every 8 hours of operation. The valves are located at the bottom of the log loader cylinders. Remove sawdust buildup from the track rail cover.

4.4 Carriage Track, Wiper & Scrapers

Properly maintaining the sawmill carriage track is critical in preventing corrosion that can cause pitting and scaling on the rail surfaces. Pitted and scaled surfaces can, in turn, cause rough cuts or jerky power feed movement

See Figure 4-3.

- 8 1. Clean track rails to remove any sawdust and sap buildup every eight hours of operation.

Use a light-grade sandpaper or emery cloth to sand off any rust or other adhering particles from the rails.



CAUTION! Keep track rails free of rust. Formation of rust on the track rail in the areas where the cam bearings roll can cause rapid deterioration of the track rail's surface.

Lubricate the rails by wiping them with Dexron III ATF transmission fluid, 10W30 motor oil, or 3-in-1 turbine oil. Oil lubrication will help protect the rails from corrosive elements such as acid rain and/or moisture from nearby bodies of saltwater (if applicable). This lubrication is essential to maintain the integrity of the track rails and track rollers and to achieve long service life.

- 25 2. Remove sawdust from the track roller housings and lubricate the felt track wiper every twenty-five hours of operation.

Remove the track roller housing covers and brush any sawdust buildup from the housings.

3. Check the track scrapers as needed. Make sure the scrapers fit firmly against the rail. If a track scraper needs to be adjusted, loosen the thumb screw, push the scraper downward until it fits firmly against the rail, and retighten the thumb screw.

25

Clean and lubricate the upper track wiper every twenty-five hours of operation. Unbolt the wiper, remove it from the sawmill, and remove any sawdust buildup. Soak the felt wiper with Dexron III transmission fluid, 10W30 motor oil or 3-in-1 turbine oil.



CAUTION! Reinstall the track wiper so that it lightly touches the track rail. If the wiper presses too firmly against the rail, it can cause the power feed to bind.

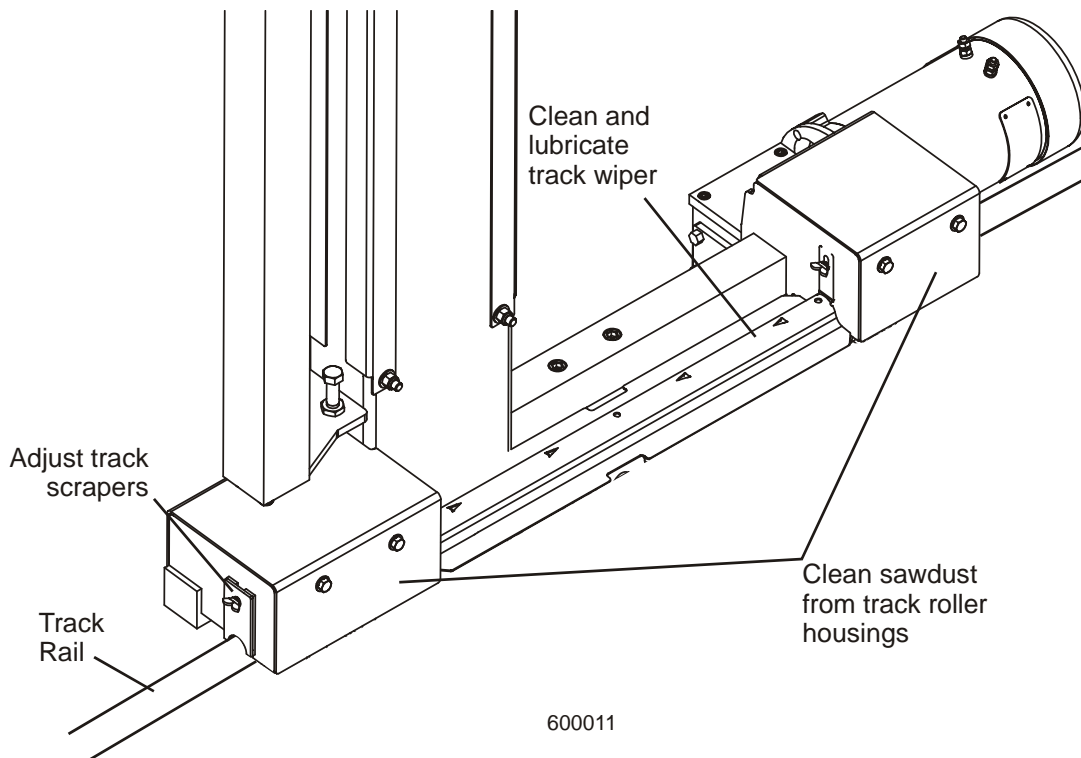


FIG. 4-3

4.5 Vertical Mast Rails

- 50 Clean and lubricate the vertical mast rails every 50 hours of operation. Clean with solvent and remove any rust with a light-grade sand paper or emery cloth. Lubricate the mast with motor oil or automatic transmission fluid (ATF).



CAUTION! Never use grease on the mast rails as it will collect sawdust.

4.6 Drum Switches

- 50 Lubricate the up/down and power feed drum switch contacts inside the control panel every fifty hours of operation. Use only contact grease supplied by Wood-Mizer. Remove the control panel cover. Use a cotton swab to apply grease to the switch contact ends.



WARNING! Drum switch grease contains Petroleum Hydrocarbon Lubricant. Eye and skin irritant. If introduced into eyes, flush with water for at least 15 minutes. If film or irritation persists, seek medical attention. Wash skin with soap and water. If ingested, do not induce vomiting - contact a physician. KEEP OUT OF THE REACH OF CHILDREN.

4.7 Miscellaneous

- 50 1. Oil all chains with Dexron III ATF every fifty hours of operation.



CAUTION! Do not use chain lube. It causes sawdust buildup in chain links.

- 50 2. Apply a thin film of a NLGI No. 2 grade lithium grease to the blade guide arm every fifty hours of operation to help prevent it from rusting.

- AR 3. Adjust the blade guide arm drive chain as necessary. To adjust the chain, loosen the blade guide arm motor mounting plate bolts and slide the motor to take slack out of the chain

- 50 4. Grease the clamp mechanism, loading arms, clutch handle pivot and side supports with a NLGI No. 2 grade lithium grease every fifty hours of operation.

- 50 5. Lubricate the board return pivot every fifty hours of operation with a NLGI No. 2 grade lithium grease. Apply grease to the grease fitting on the board return pivot tube.

6. Check the mill alignment every setup. See Section 5, Alignment of Sawmill Operators Manual.

7. Make sure all safety warning decals are readable. Remove sawdust and dirt. Replace any damaged or unreadable decals immediately. Order decals from your Customer Service Representative.

8.

4.8 Drive Belt Adjustment



DANGER! Never adjust the drive belts while the engine is running. Failure to do so may result in serious injury.



Periodically check the drive belt for wear. Replace any damaged or worn belts as needed.

See Figure 4-4. Adjust proper drive belt tension using the bolt located between the drive side wheel covers. To tighten drive belt turn the bolt clockwise. To loosen drive belt turn the bolt counter clockwise.

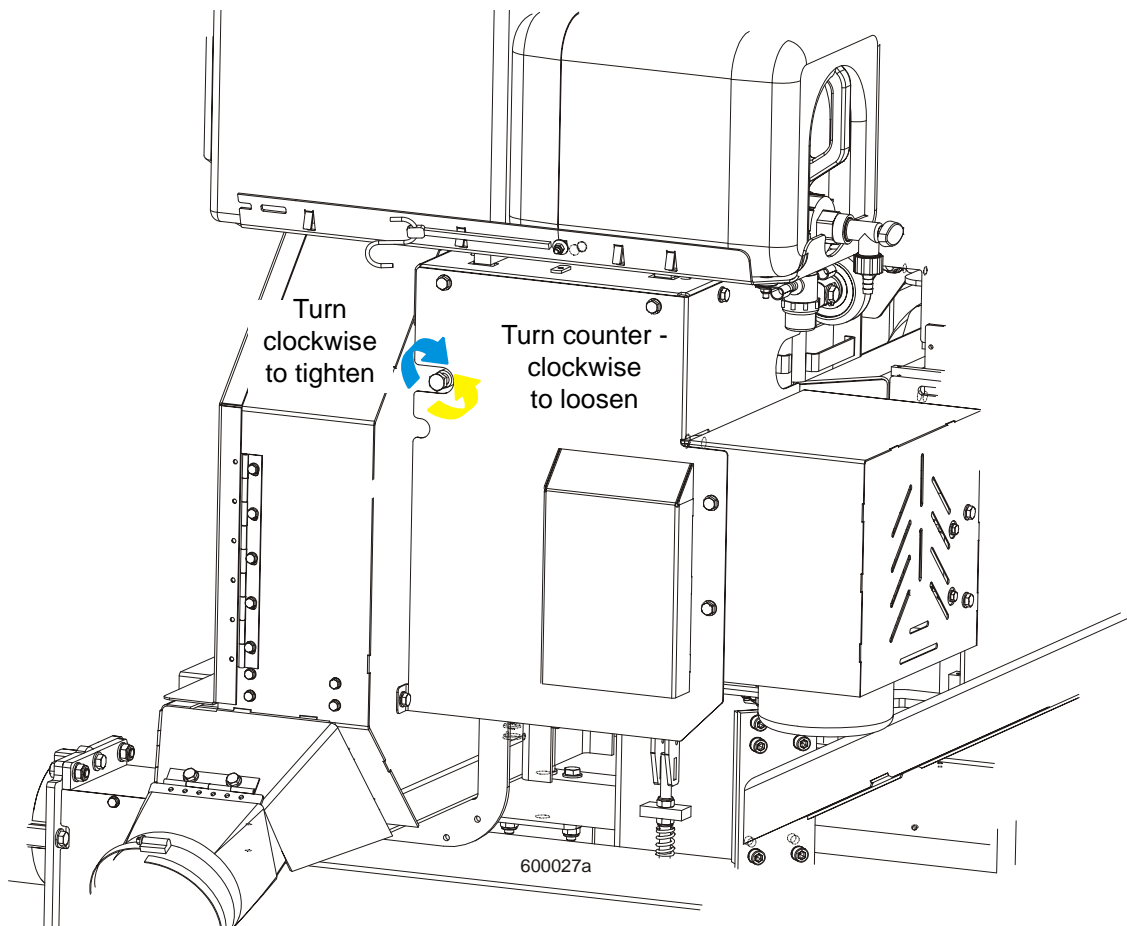


FIG. 4-4

4.9 Up/Down System

750

Adjust the up/down chain tension as needed. Measure chain tension with the head all the way to the top of the vertical mast. Find the chain adjusting bolt at the bottom of the mast. Use the adjustment nut to adjust the bolt until the center of the chain can be deflected 3/4" (1.9cm) with a 5 lb. (2.3 KG) deflection force.



CAUTION! Do not over-tension the chain. Over-tensioning the chain may lead to early failure of the gear reducer.

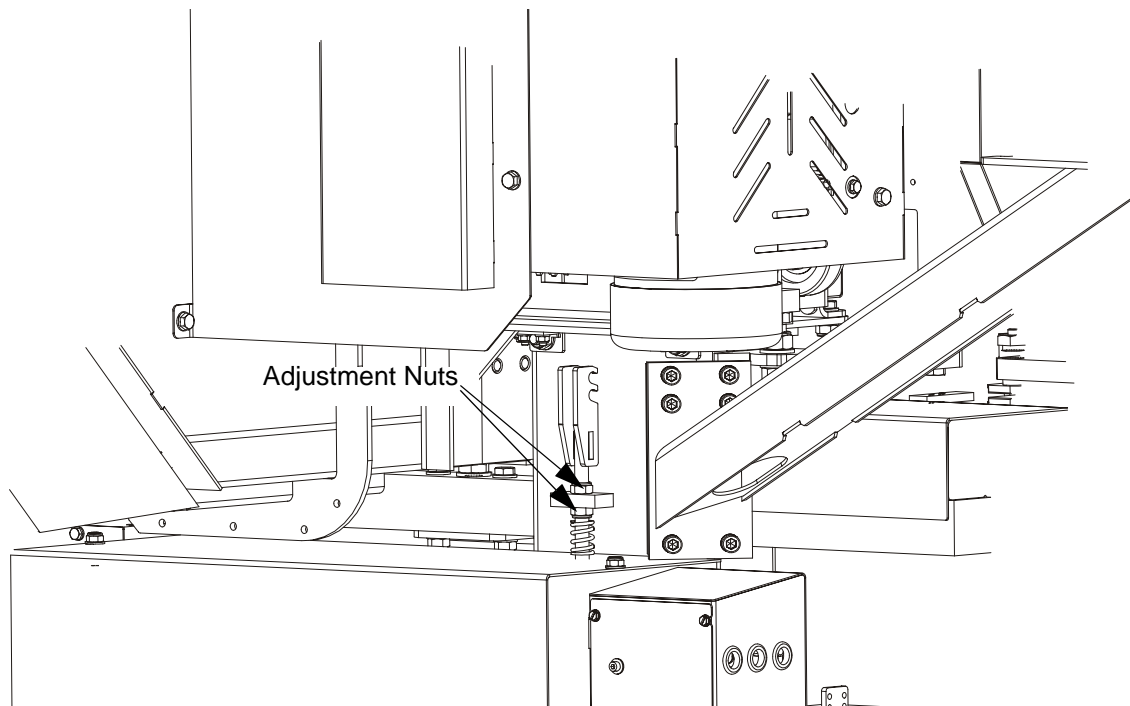


FIG. 4-4

1. Adjust the motor belt tension as needed. To do this, loosen the motor mounting bolts and turn adjustment bolts clockwise or counterclockwise evenly, until the belt is properly tensioned. Tighten the motor mounting bolts.

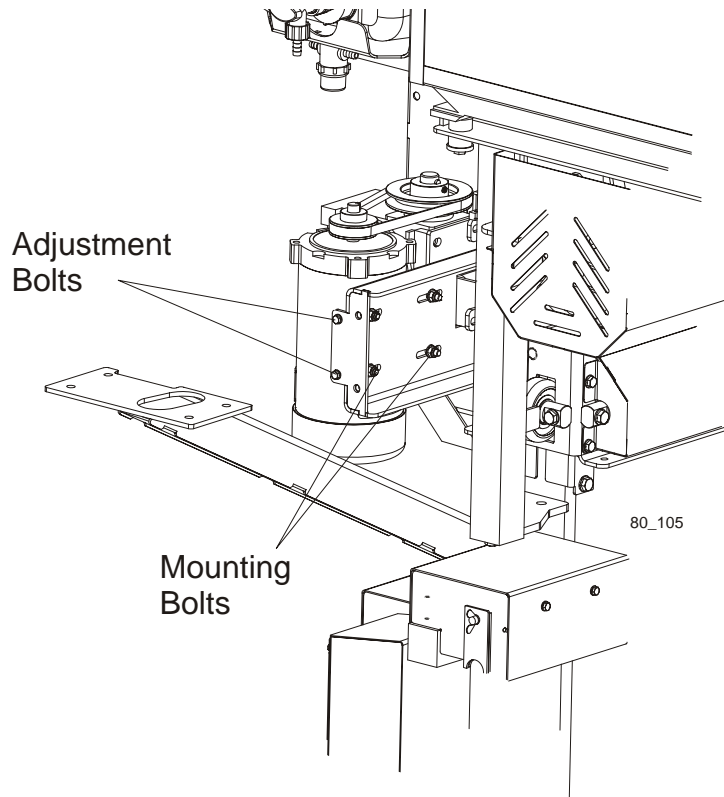


FIG. 4-4



Periodically check the belt for wear. Replace any damaged or worn belts as needed.

2. When oil leaks from the gear reducer please contact Customer Service.

4.10 Power Feed

1. Adjust the power feed chain as needed. Measure the power feed chain tension with the saw head all the way toward the front of the mill. Use the two lock nuts at the rear of the mill to tighten or loosen the power feed chain. Adjust the chain until it measures 7 to 8 inches (17.8 to 20.3 cm) from the top of the top rail at its lowest point.



CAUTION! Do not overtighten the feed chain. Damage to the power feed motor may result.

See Figure 4-5.

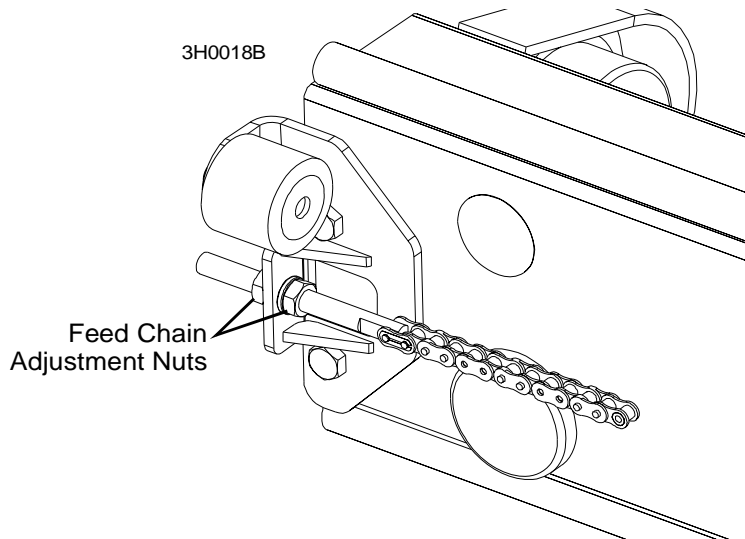


FIG. 4-5

2.

4.11 Hydraulic System

1. Check the hydraulic fluid level every fifty hours of operation. Add fluid as necessary. The level in the hydraulic pump should be 3/4" (19mm) from the top with all cylinders collapsed.

50

If humidity is a problem or the mill is used outside in humid weather, drain and replace two quarts (.95 liters) of fluid every six months. This will drain any accumulated water and help prevent pump failure due to water ingestion. It also will prevent excessive fluid wear and allow the fluid to maintain its hot end performance. If humidity is not a problem, drain and replace one gallon (3.8 liters) of fluid every year to prevent fluid wear.

See Figure 4-6. If you are operating in temperatures -20° to 100° F (-29° to 38° C), use an all-weather hydraulic fluid such as Exxon Univis J26. For alternate fluids and/or other temperature ranges, refer to the chart below. Operating above the recommended temperature range of a fluid could result in excessive pump wear. Operating below the recommended temperature range could result in reduced hydraulic cylinder speed.

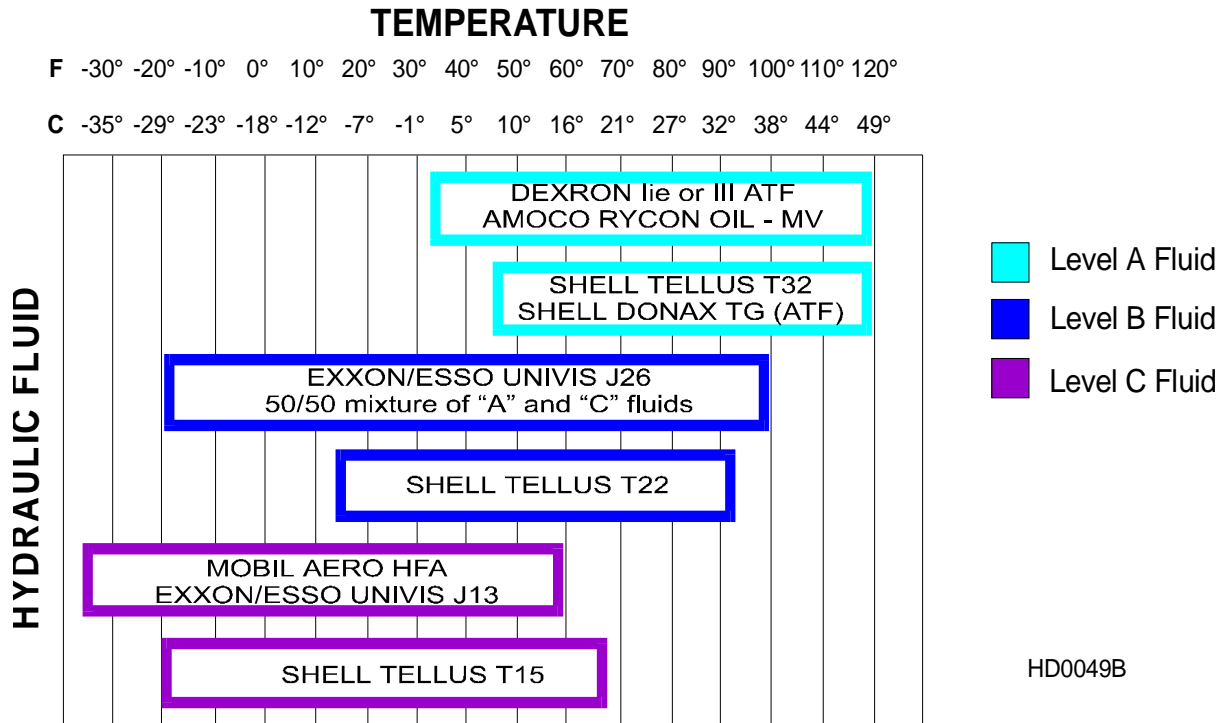


FIG. 4-6

Replace the hydraulic system cartridge filter every 500 hours of operation.

500

2. Periodically check all hydraulic lines and fitting as needed. Replace as necessary.

4.12 Safety Devices Inspection

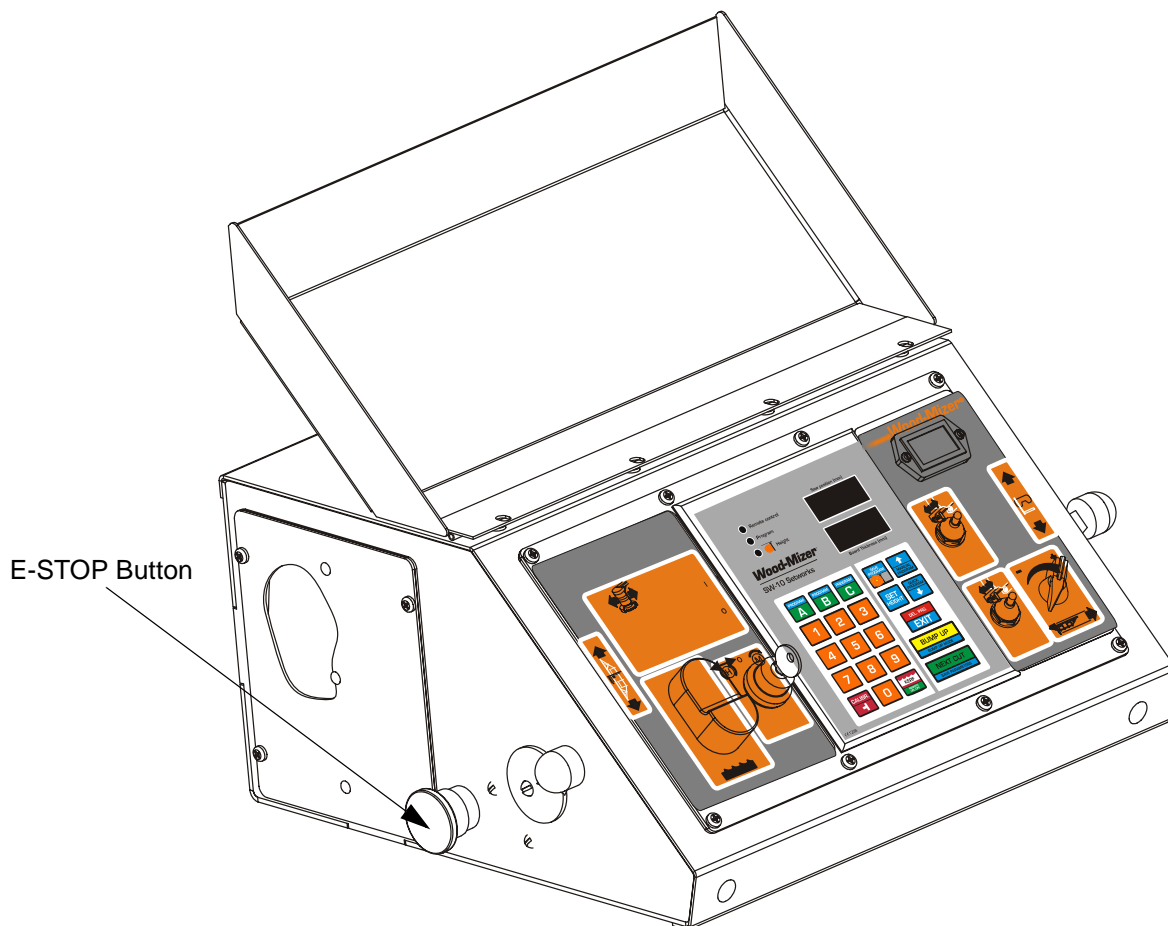
WM1000 – Safety devices inspection

Safety devices on the WM1000 machine which must be checked before every shift:

- E-STOP button and its circuit inspection
- Inspection of the control circuits with the E-STOP button pressed
- Blade cover safety switch #1 and its circuit inspection
- Blade cover safety switch #2 and its circuit inspection
- Motor brake and its circuit inspection

1. E-STOP button and its circuit inspection

- Turn on the blade motor;
- Press the E-STOP button located on the left side of the control box. Blade motor should be stopped. Pressing the START button shouldn't start the motor until the E-STOP button is released.



2. Inspection of the control circuits with the E-STOP button pressed

- Turn on the blade motor;
- Press the E-STOP button located on the left side of the control box. Blade motor should be stopped.
- With E-STOP button pressed try to move the saw head up and down using switch and setwork buttons and forward/backward using power feed switch. Both systems shouldn't start.
- With E-STOP button pressed try to start the debarker blade motor and move the debarker arm in and out. Debarker shouldn't work.
- With E-STOP button pressed try to move the blade guide arm in and out. Blade guide arm shouldn't work.
- With E-STOP button pressed try to start the board return system. Board return system shouldn't work.

3. Blade cover safety switch #1 and its circuits inspection.

- Turn on the blade motor;
- Open blade housing cover #1;
- Blade motor should be stopped;
- Try to start the motor. The blade motor should remain stopped;
- Close blade housing cover #1;
- Blade motor should remain stopped until re-started using START button.

4. Blade cover safety switch #2 and its circuits inspection.

- Turn on the blade motor;
- Open blade housing cover #2;
- Blade motor should be stopped;
- Try to start the motor. The blade motor should remain stopped;
- Close blade housing cover #2;
- Blade motor should remain stopped until re-started using START button.

5. Motor brake and its circuit inspection

- Turn on the blade motor. Stop the motor using STOP button. Measure the braking time.
- Turn on the blade motor. Stop the motor by switching the key to "0" position. Measure the braking time.
- Turn on the blade motor. Stop the motor by switching the key to "2" position. Measure the braking time.
- Braking time should always be shorter than 10 seconds. If the braking time is longer it is necessary to adjust or replace motor disc brake. See your motor option manual.

MAINTENANCE LOG

(Check Engine And Option Manuals For Additional Maintenance Procedures)

Lubricate Blade Guide Rollers	See Section 5.2	Daily - Every 4 Hours	DAILY MAINTENANCE PROCEDURES
Check Blade Screw	See Section 5.2	Daily - Every Blade Change	
Check Blade Guide Roller Performance	See Section 5.2	Daily - Every Blade Change	
Remove Excess Sawdust From Blade Wheel Housings And Sawdust Chute	See Section 5.3	Daily - Every Blade Change	
Clean Sawdust From Hydraulic Loader Fuses, Battery Box Lid & Track Cover	See Section 5.3	Daily - Every 8 Hours	
Clean And Lubricate Track	See Section 5.4	Daily - Every 8 Hours	
Remove Sawdust From Upper Track Roller Housings	See Section 5.4	Bi-Weekly - Every 25 Hours	
Clean And Lubricate Upper Track Wiper	See Section 5.4	Bi-Weekly - Every 25 Hours	

PROCEDURE	REFERENCE	TOTAL HOURS OF OPERATION FILL IN THE DATE AND THE MACHINE HOURS AS YOU PERFORM EACH PROCEDURE. A SHADED BOX INDICATES MAINTENANCE IS NOT NEEDED AT THIS TIME.									
		50 HRS	100 HRS	150 HRS	200 HRS	250 HRS	300 HRS	350 HRS	400 HRS	450 HRS	500 HRS
		Clean & lube mast rails	See Section 5.5								
Lubricate drum switches	See Section 5.5										
Grease pivot points and bearings/Oil chains	See Section 5.6										
Lubricate blade tensioner screwhandle and rods	See Section 5.6 See Section 5.8										
Rotate drive/idle blade wheel belts/Check for wear	See Section 5.9										
Check brake strap tension	See Section 5.8										
Check belt tensions	See Section 5.9 See Section 5.11 See Section 5.12										
Replace cylinder drive bearing fluid	See Section 5.13										
Check feed & up/down chain tensions	See Section 5.11 See Section 5.12										
Check up/down & power feed gear box fluid levels	See Section 5.11 See Section 5.12										
Inspect hydraulic lines & fittings	See Section 5.10										
Check hydraulic fluid level	See Section 5.10										
Replace hydraulic system filter	See Section 5.10										
Inspect hydraulic pump, power feed and up/down motor brushes	See Section 5.10 See Section 5.11 See Section 5.12										
Grease up/down shaft bearing	See Section 5.11										

MAINTENANCE LOG

PROCEDURE	REFERENCE	TOTAL HOURS OF OPERATION									
		FILL IN THE DATE AND THE MACHINE HOURS AS YOU PERFORM EACH PROCEDURE. A SHADED BOX INDICATES MAINTENANCE IS NOT NEEDED AT THIS TIME.									
		550 HRS	600 HRS	650 HRS	700 HRS	750 HRS	800 HRS	850 HRS	900 HRS	950 HRS	1000 HRS
Clean & lube mast rails	See Section 5.5										
Lubricate drum switches	See Section 5.5										
Grease pivot points and bearings/Oil chains	See Section 5.6										
Lubricate blade tensioner screwhandle and rods	See Section 5.6 See Section 5.8										
Rotate drive/idle blade wheel belts/Check for wear	See Section 5.9										
Check brake strap tension	See Section 5.8										
Check belt tensions	See Section 5.9 See Section 5.11 See Section 5.12										
Replace cylinder drive bearing fluid	See Section 5.13										
Check feed & up/down chain tensions	See Section 5.11 See Section 5.12										
Check up/down & power feed gear box fluid levels	See Section 5.11 See Section 5.12										
Inspect hydraulic lines & fittings	See Section 5.10										
Check hydraulic fluid level	See Section 5.10										
Replace hydraulic system filter	See Section 5.10										
Inspect hydraulic pump, power feed and up/down motor brushes	See Section 5.10 See Section 5.11 See Section 5.12										
Grease up/down shaft bearing	See Section 5.11										

MAINTENANCE LOG

PROCEDURE	REFERENCE	TOTAL HOURS OF OPERATION									
		FILL IN THE DATE AND THE MACHINE HOURS AS YOU PERFORM EACH PROCEDURE. A SHADED BOX INDICATES MAINTENANCE IS NOT NEEDED AT THIS TIME.									
		1050 HRS	1100 HRS	1150 HRS	1200 HRS	1250 HRS	1300 HRS	1350 HRS	1400 HRS	1450 HRS	1500 HRS
Clean & lube mast rails	See Section 5.5										
Lubricate drum switches	See Section 5.5										
Grease pivot points and bearings/Oil chains	See Section 5.6										
Lubricate blade tensioner screwhandle and rods	See Section 5.6 See Section 5.8										
Rotate drive/idle blade wheel belts/Check for wear	See Section 5.9										
Check brake strap tension	See Section 5.8										
Check belt tensions	See Section 5.9 See Section 5.11 See Section 5.12										
Replace cylinder drive bearing fluid	See Section 5.13										
Check feed & up/down chain tensions	See Section 5.11 See Section 5.12										
Check up/down & power feed gear box fluid levels	See Section 5.11 See Section 5.12										
Inspect hydraulic lines & fittings	See Section 5.10										
Check hydraulic fluid level	See Section 5.10										
Replace hydraulic system filter	See Section 5.10										
Inspect hydraulic pump, power feed and up/down motor brushes	See Section 5.10 See Section 5.11 See Section 5.12										
Grease up/down shaft bearing	See Section 5.11										

MAINTENANCE LOG

PROCEDURE	REFERENCE	TOTAL HOURS OF OPERATION									
		FILL IN THE DATE AND THE MACHINE HOURS AS YOU PERFORM EACH PROCEDURE. A SHADED BOX INDICATES MAINTENANCE IS NOT NEEDED AT THIS TIME.									
		1550 HRS	1600 HRS	1650 HRS	1700 HRS	1750 HRS	1800 HRS	1850 HRS	1900 HRS	1950 HRS	2000 HRS
Clean & lube mast rails	See Section 5.5										
Lubricate drum switches	See Section 5.5										
Grease pivot points and bearings/Oil chains	See Section 5.6										
Lubricate blade tensioner screwhandle and rods	See Section 5.6 See Section 5.8										
Rotate drive/idle blade wheel belts/Check for wear	See Section 5.9										
Check brake strap tension	See Section 5.8										
Check belt tensions	See Section 5.9 See Section 5.11 See Section 5.12										
Replace cylinder drive bearing fluid	See Section 5.13										
Check feed & up/down chain tensions	See Section 5.11 See Section 5.12										
Check up/down & power feed gear box fluid levels	See Section 5.11 See Section 5.12										
Inspect hydraulic lines & fittings	See Section 5.10										
Check hydraulic fluid level	See Section 5.10										
Replace hydraulic system filter	See Section 5.10										
Inspect hydraulic pump, power feed and up/down motor brushes	See Section 5.10 See Section 5.11 See Section 5.12										
Grease up/down shaft bearing	See Section 5.11										

MAINTENANCE LOG

PROCEDURE	REFERENCE	TOTAL HOURS OF OPERATION									
		FILL IN THE DATE AND THE MACHINE HOURS AS YOU PERFORM EACH PROCEDURE. A SHADED BOX INDICATES MAINTENANCE IS NOT NEEDED AT THIS TIME.									
		2050 HRS	2100 HRS	2150 HRS	2200 HRS	2250 HRS	2300 HRS	2350 HRS	2400 HRS	2450 HRS	2500 HRS
Clean & lube mast rails	See Section 5.5										
Lubricate drum switches	See Section 5.5										
Grease pivot points and bearings/Oil chains	See Section 5.6										
Lubricate blade tensioner screwhandle and rods	See Section 5.6 See Section 5.8										
Rotate drive/idle blade wheel belts/Check for wear	See Section 5.9										
Check brake strap tension	See Section 5.8										
Check belt tensions	See Section 5.9 See Section 5.11 See Section 5.12										
Replace cylinder drive bearing fluid	See Section 5.13										
Check feed & up/down chain tensions	See Section 5.11 See Section 5.12										
Check up/down & power feed gear box fluid levels	See Section 5.11 See Section 5.12										
Inspect hydraulic lines & fittings	See Section 5.10										
Check hydraulic fluid level	See Section 5.10										
Replace hydraulic system filter	See Section 5.10										
Inspect hydraulic pump, power feed and up/down motor brushes	See Section 5.10 See Section 5.11 See Section 5.12										
Grease up/down shaft bearing	See Section 5.11										

MAINTENANCE LOG

PROCEDURE	REFERENCE	TOTAL HOURS OF OPERATION									
		FILL IN THE DATE AND THE MACHINE HOURS AS YOU PERFORM EACH PROCEDURE. A SHADED BOX INDICATES MAINTENANCE IS NOT NEEDED AT THIS TIME.									
		2550 HRS	2600 HRS	2650 HRS	2700 HRS	2750 HRS	2800 HRS	2850 HRS	2900 HRS	2950 HRS	3000 HRS
Clean & lube mast rails	See Section 5.5										
Lubricate drum switches	See Section 5.5										
Grease pivot points and bearings/Oil chains	See Section 5.6										
Lubricate blade tensioner screwhandle and rods	See Section 5.6 See Section 5.8										
Rotate drive/idle blade wheel belts/Check for wear	See Section 5.9										
Check brake strap tension	See Section 5.8										
Check belt tensions	See Section 5.9 See Section 5.11 See Section 5.12										
Replace cylinder drive bearing fluid	See Section 5.13										
Check feed & up/down chain tensions	See Section 5.11 See Section 5.12										
Check up/down & power feed gear box fluid levels	See Section 5.11 See Section 5.12										
Inspect hydraulic lines & fittings	See Section 5.10										
Check hydraulic fluid level	See Section 5.10										
Replace hydraulic system filter	See Section 5.10										
Inspect hydraulic pump, power feed and up/down motor brushes	See Section 5.10 See Section 5.11 See Section 5.12										
Grease up/down shaft bearing	See Section 5.11										

SECTION 5 SAWMILL ALIGNMENT

The Alignment instructions should be performed as necessary to solve sawing problems not related to blade performance or approximately every 1500 hours of operation.

5.1 Alignment Procedure:

Blade Installation

1. Check the blade and the blade wheels. Remove any sawdust buildup from the surface of the wheels.
2. Install a clean blade and apply the appropriate tension ([See Section 3.3 Tensioning the Blade](#)).
3. Check the blade guide blocks are properly adjusted ([See Section Blade Guides](#)).
4. Adjust the idle-side and drive-side cant control to track the blade ([See Section 2.7 Tracking The Blade](#)).
5. Turn the key switch to #3 position.
6. Manually spin one of the blade wheels until the blade positions itself on the blade wheels.

Saw Head Tilt

The saw head must be leveled.

1. Place a water level on the saw head main tube.
2. Use the up/down chain adjustment bolts to level the saw head.

See Figure 5-1.

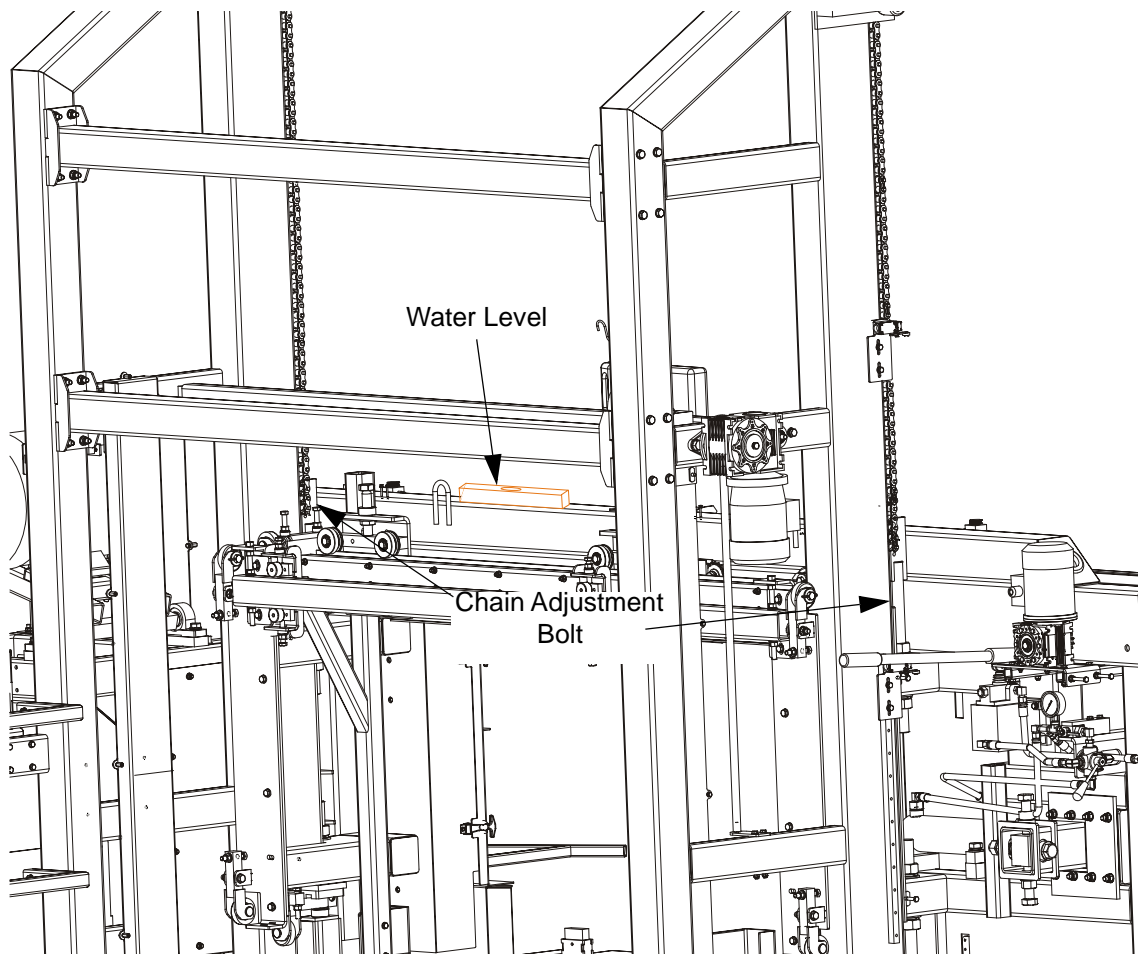


FIG. 5-1

NOTE: To make the tilt adjustment easier, it is recommended to completely lower the saw head until it rests on the stop bolts, tighten or loosen adjustment bolts. Then raise the saw head to check the saw head tilt.

3. After levelling the saw head, check the saw head rollers adjustment. All twelve rollers must touch the mast tube or may have maximum 0.5 mm (0,02") of clearance. Use the adjustment bolts shown below if necessary.

5 Sawmill Alignment

Alignment Procedure:

See Figure 5-2.

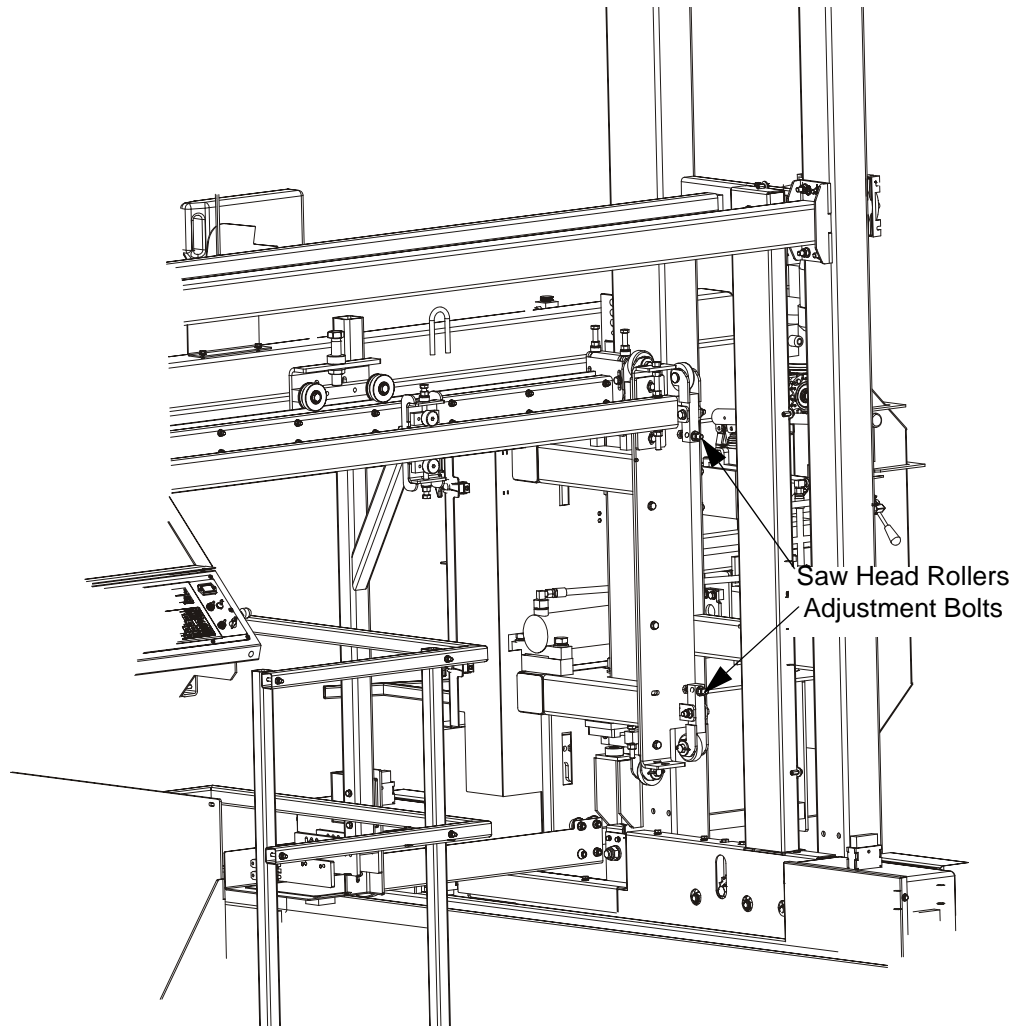


FIG. 5-2

Blade Wheels Adjustment

The blade wheels should be adjusted so they are level in the vertical and horizontal planes. If the blade wheels are tilted up or down, the blade will want to travel in the tilted direction. If the blade wheels are tilted horizontally, the blade will not track properly on the wheels.

1. Set left and right blade guide arms to its extreme outer position. Be sure the blade guide rollers or blocks do not deflect the blade. Use the blade guide alignment tool to check the vertical alignment of each blade wheel. Attach the tool to the blade near the left blade guide mount. Be sure the tool does not rest on a tooth or burr, and is lying flat against the bottom of the blade.

See Figure 5-3.

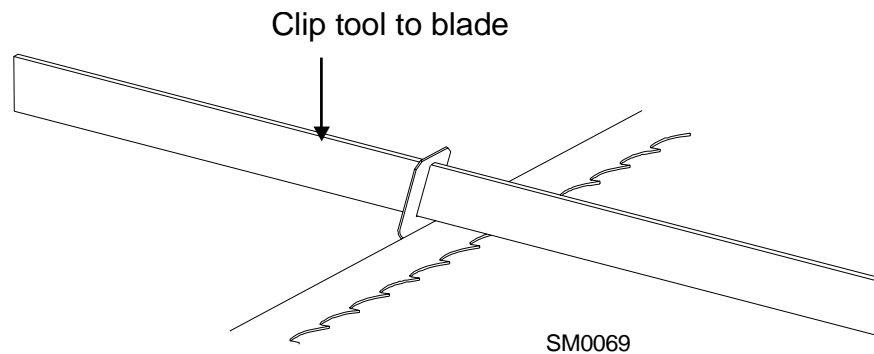


FIG. 5-3

2. Choose a reference point on the ground, floor or bed frame (if equipped).
3. Move the saw carriage so the front end of the tool is positioned over the reference point. Measure the distance from the bottom of the tool to the reference point.
4. Move the saw head so the rear of the tool is positioned over the reference point. Measure the distance from the bottom of the tool to the reference point.
5. If the two measurements differ by more than 1.5 mm (1/16"), adjust the vertical tilt of the drive-side blade wheel.

See Figure 5-4. Unbolt and remove inner cover of the the drive side wheel. Use the vertical adjustment screws to adjust the drive-side blade wheel. To tilt the wheel down, loosen two lock bolts and the top adjustment screw one quarter turn. Loosen the jam nut on the bottom adjustment screw and tighten the screw. Tighten the top and bottom jam nuts and lock bolts. To tilt the wheel up, loosen two lock bolts and the bottom adjustment screw one quarter turn. Loosen the jam nut on the top adjustment screw and tighten the screw. Tighten the top and bottom jam nuts and lock bolts. Mount the inner cover of the drive

side wheel.

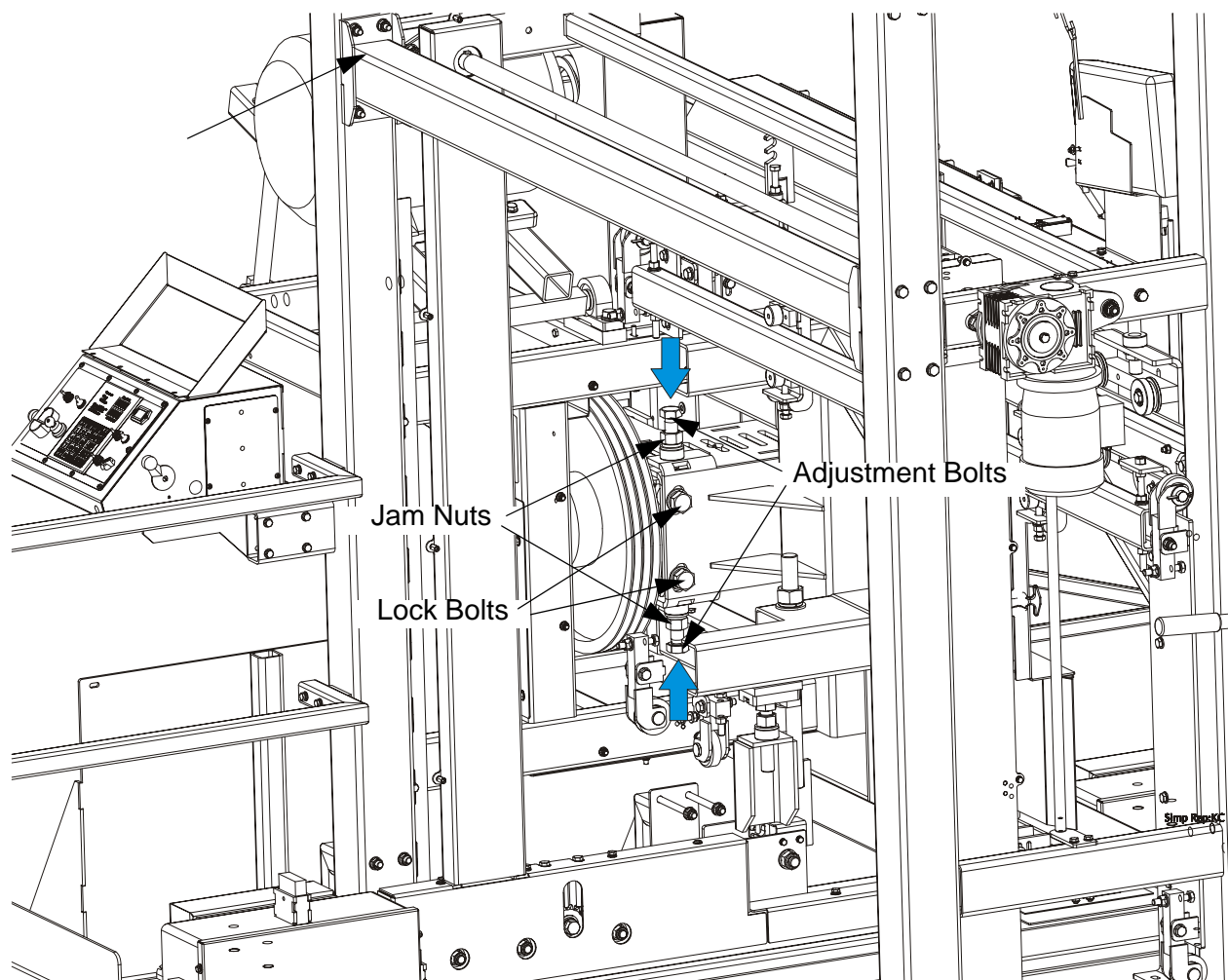


FIG. 5-4 DRIVE SIDE WHEEL VERTICAL ADJUSTMENT (SOME PART WERE HIDDEN INTENTIONALLY)

6. Recheck the vertical tilt of the drive-side blade wheel with the blade guide alignment tool. Readjust the blade wheel as necessary until the front and rear of the tool are the same distance from the reference point (1/16").
7. Remove the tool from the blade and reattach it near the outer blade guide assembly.
8. Measure from the tool to the reference point at both ends of the tool. If the measurements at the front and rear ends of the tool differ by more than 1.5mm (1/16"), adjust the vertical tilt of the idle-side blade wheel.

See Figure 5-5. Use the vertical adjustment screws to adjust the idle-side blade wheel. To tilt the wheel up, loosen the bottom adjustment screw one quarter turn. Loosen the jam nut on the top adjustment screw and tighten the screw. Tighten the top and bottom jam nuts.

To tilt the wheel down, loosen the top adjustment screw one quarter turn. Loosen the jam nut on the bottom adjustment screw and tighten the screw. Tighten the top and bottom jam nuts.

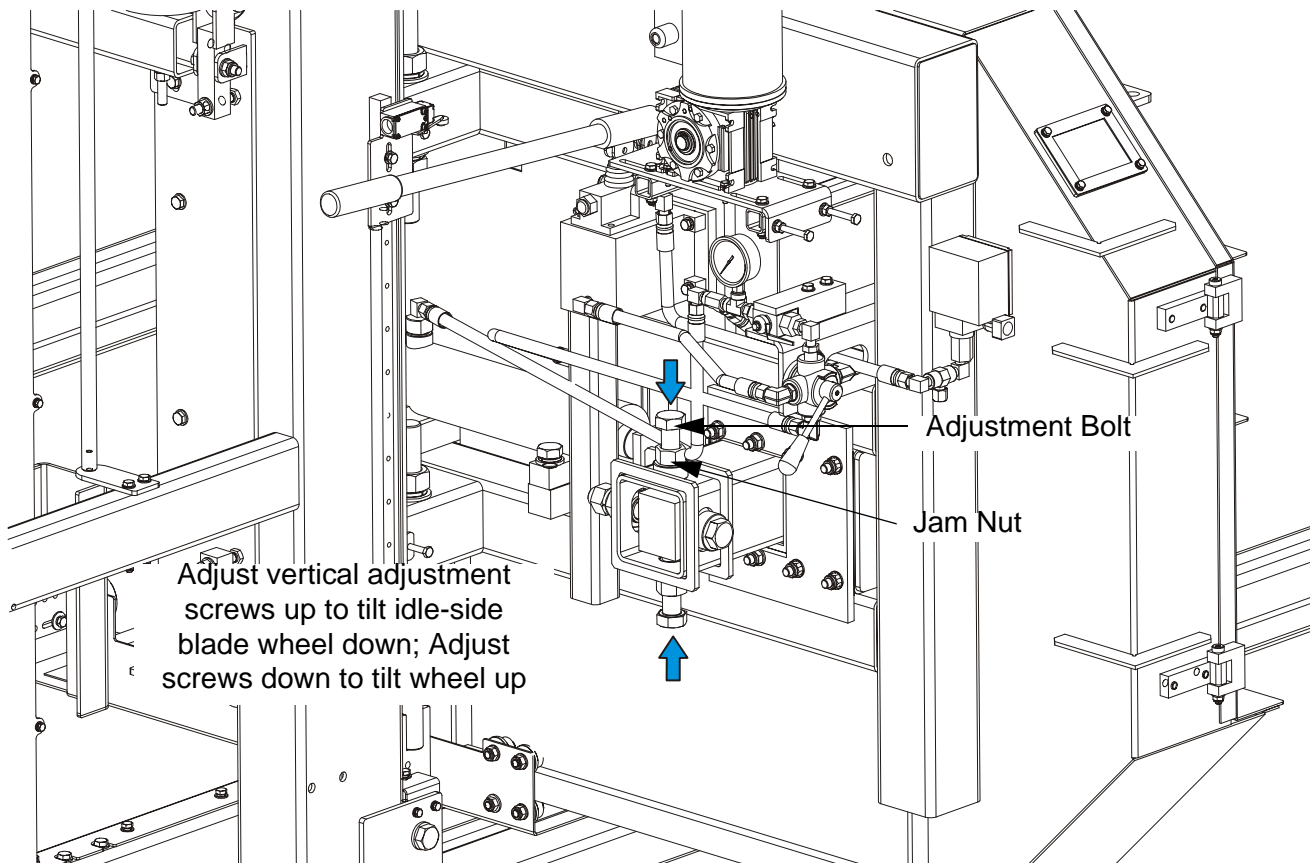


FIG. 5-5

9. Recheck the vertical tilt of the idle-side blade wheel with the blade guide alignment tool. Readjust the blade wheel as necessary until the front and rear of the tool are the same distance from the reference point (within 1.5 mm (1/16")).

5 Sawmill Alignment

Alignment Procedure:

10. Check the position of the blade on the idle-side blade wheel.

See **Figure 5-6**. The horizontal tilt of the blade wheel should be adjusted so that the gullet of a 2" (50 mm) blade is 5mm (0.196") out from the front edge of the wheel and 8 mm (0.314") in case of 3" (75 mm) blade. Do not let the teeth ride on the wheels.

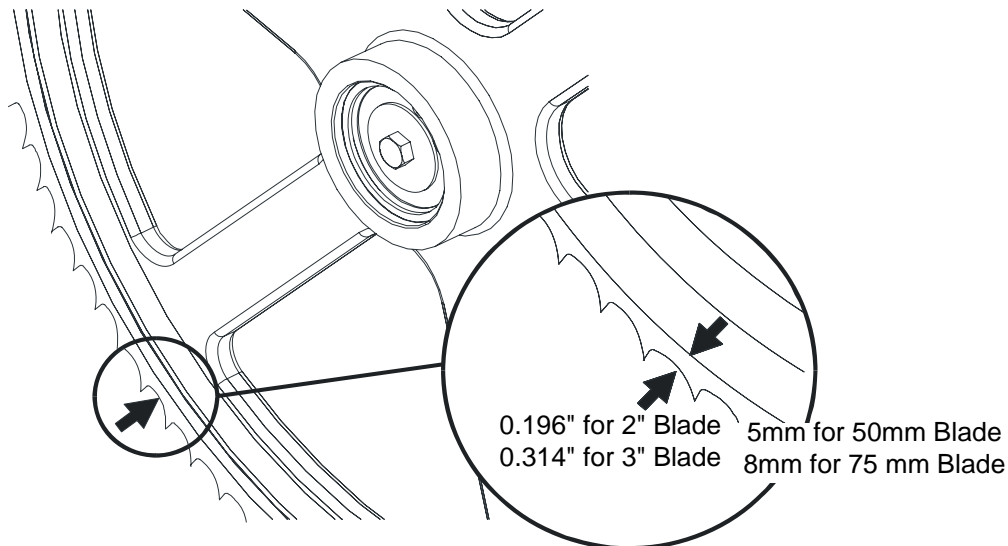


FIG. 5-6

See **Figure 5-7**. Use the cant control adjustment to adjust the idle-side blade wheel. If the blade is too far forward on the wheel, turn the cant control counterclockwise. If it is too far back on the wheel, turn the cant control clockwise.

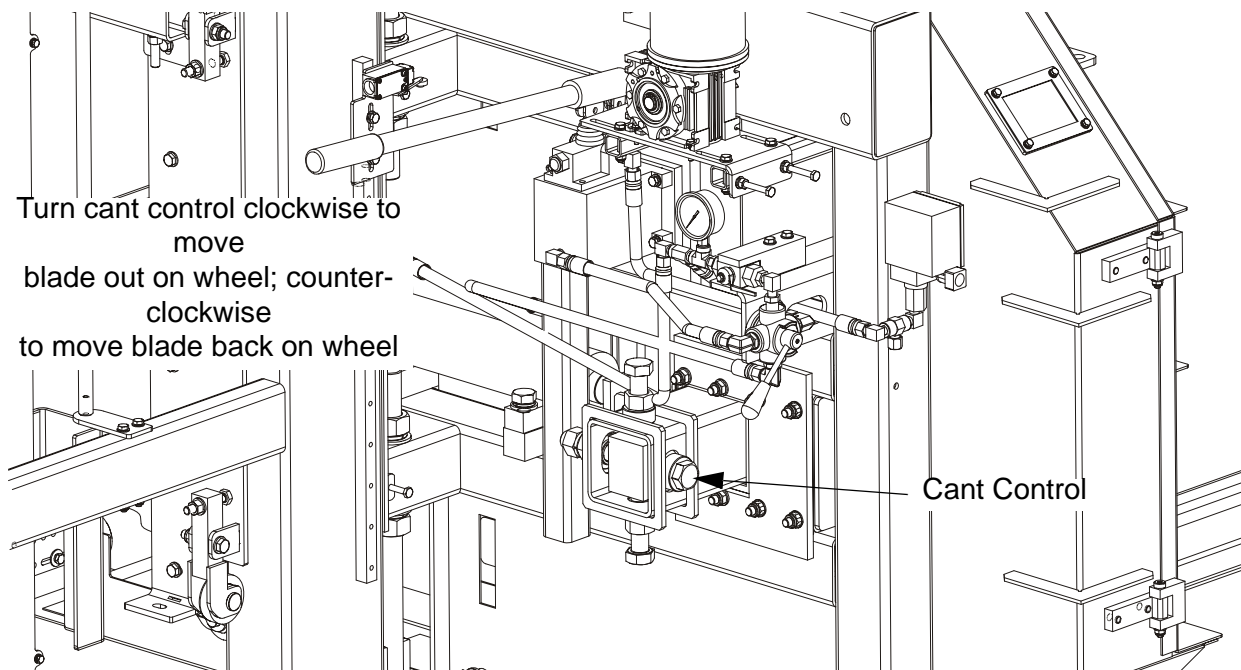


FIG. 5-7

11. Check the position of the blade on the drive-side blade wheel. The blade should be positioned on the

wheel as described for the idle-side blade wheel. Adjust the drive-side blade wheel if necessary.

See Figure 5-8. Remove the saw head side cover. Use the horizontal adjustment bolt to adjust the drive-side blade wheel. To move the blade back on the wheel, loosen the jam nuts on the adjustment bolt and turn the bolt counterclockwise. Tighten the jam nuts.

To move the blade out on the wheel, loosen the jam nuts on the adjustment bolt and turn the screw clockwise. Tighten the jam nuts. After adjustment is finished, mount the saw head side cover.

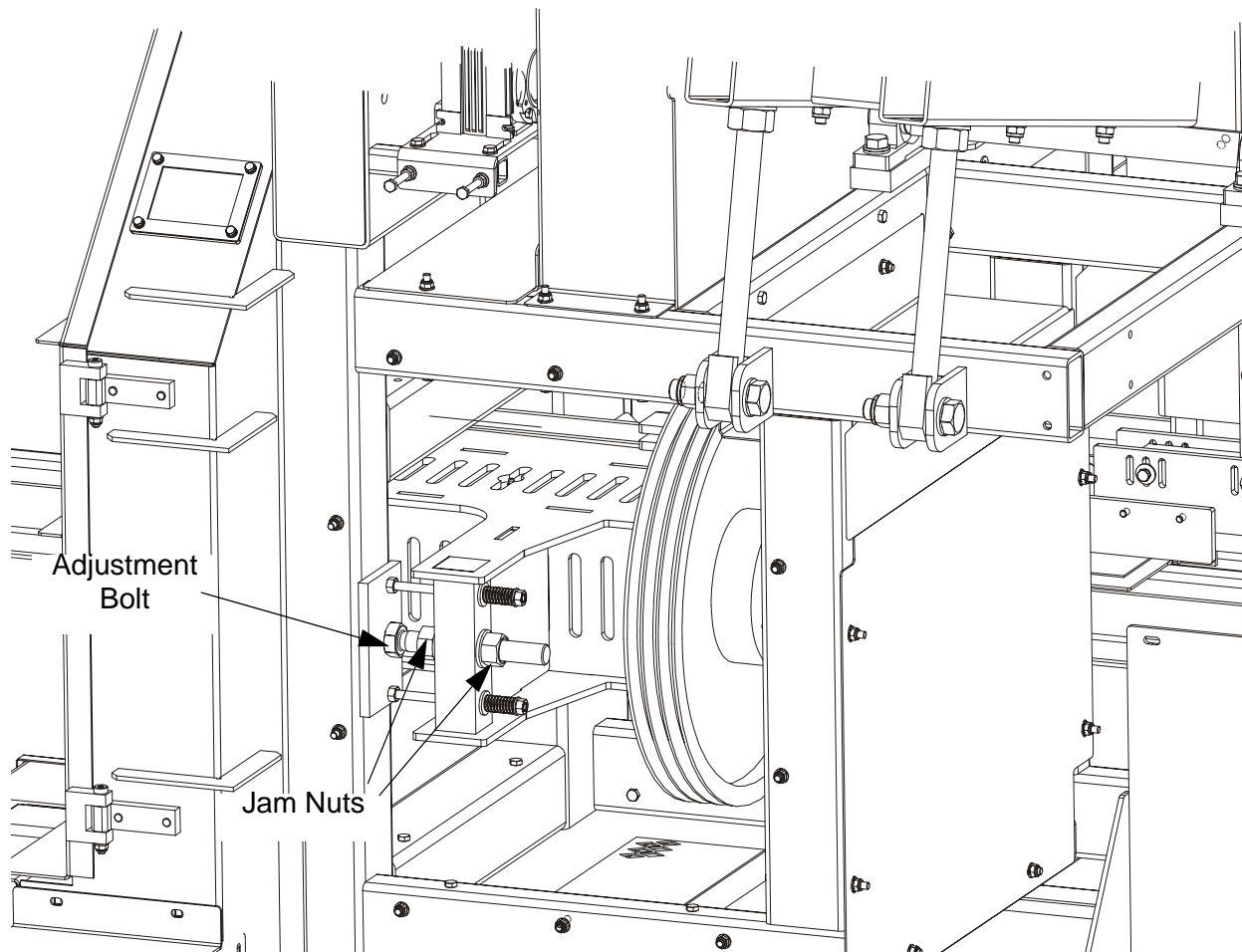


FIG. 5-8

12. After blade wheels adjustment always check drive belt tension (See Section....) and blade tension (See Section....).

5 Sawmill Alignment

Alignment Procedure:

Blade Guides

1. Check if the blade guides front horizontal tube is level.

See Figure 5-9. Place a water level on the blade guides front horizontal tube. The tube must be leveled. If adjustment is necessary, loosen the mounting bolts and lock nuts. Use adjustment bolts shown below to level this tube. Tighten lock nuts and mounting bolts when adjustment is done.

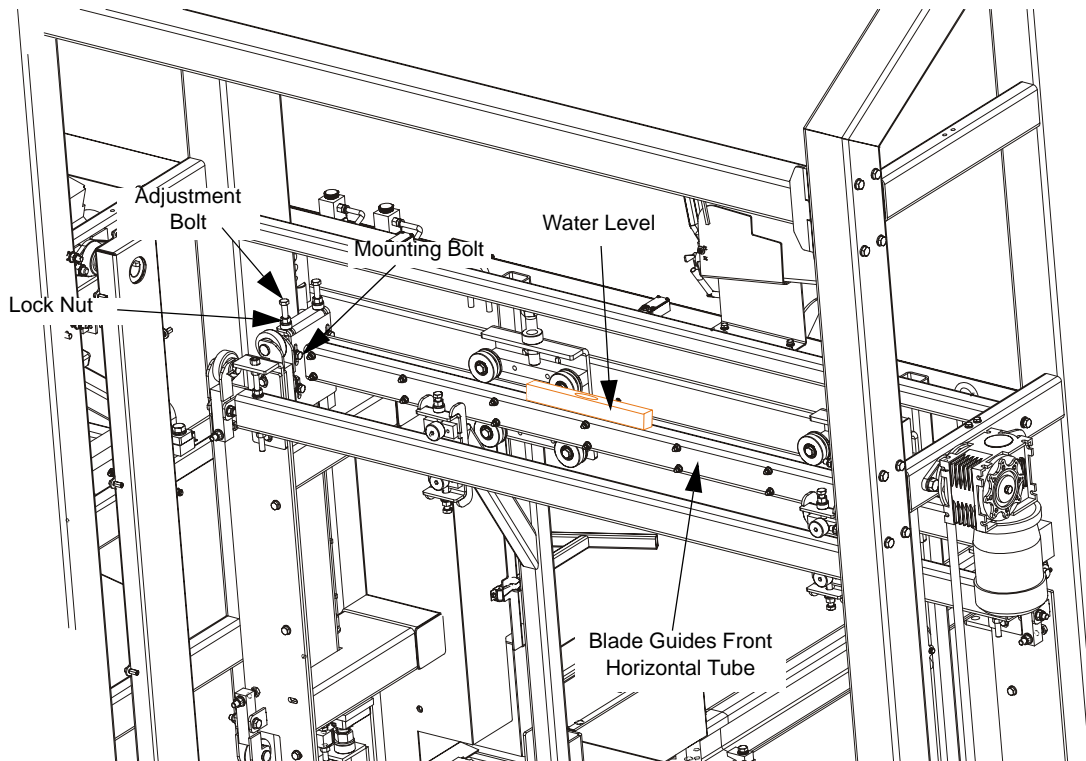


FIG. 5-9

2. Check if the blade guides back horizontal tube is level.

See Figure 5-10. Place a water level on the blade guides back horizontal tube. The tube must be leveled. If adjustment is necessary, loosen the mounting bolts and lock nuts. Use adjustment bolts shown below to level this tube. Tighten lock nuts and mounting bolts when adjustment is done.

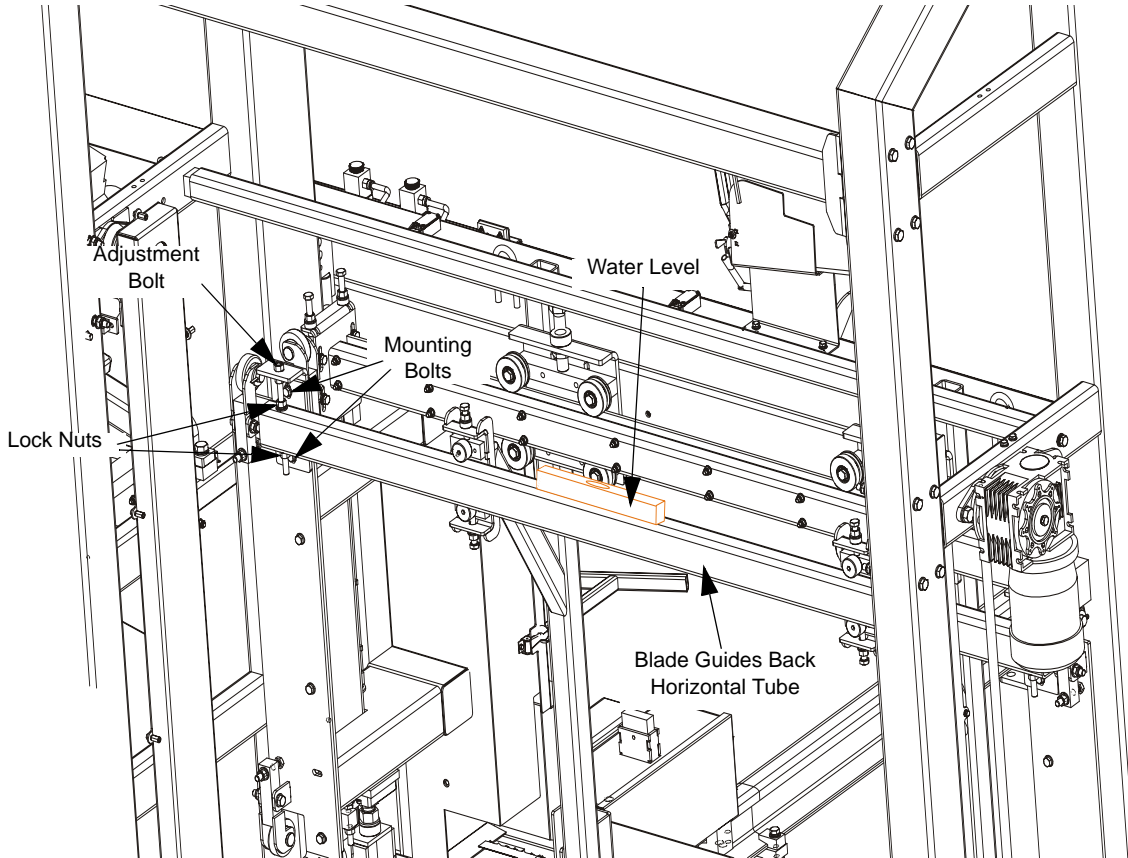


FIG. 5-10

5 Sawmill Alignment

Alignment Procedure:

3. Check if the blade guides vertical tubes are perpendicular.

See **Figure 5-11**. Put a water level against the left and then right blade guides vertical tubes. The tubes must be perpendicular. To adjust loosen the lock nuts and turn the adjustment bolts shown below left or right to make the vertical tube perpendicular. Tighten lock nuts when adjustment is done.

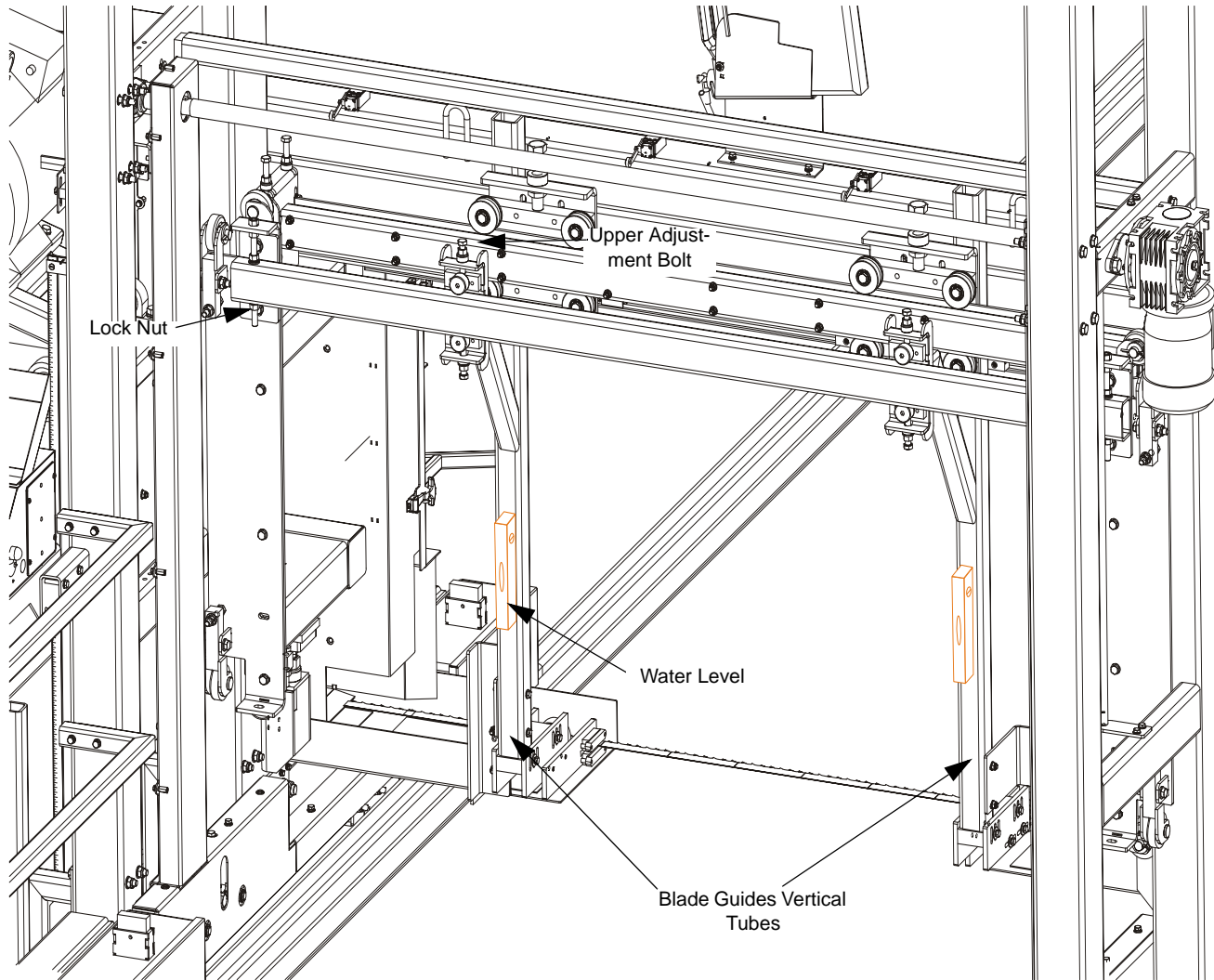


FIG. 5-11 BLADE GUIDE VERTICAL TUBES ADJUSTMENT (SOME PART WERE HIDDEN INTENTIONALLY)

4. Measure the distance between front surface of the blade guide roller and the back of the blade. This distance should be 8-10mm (0.314"-0.393").

See Figure 5-12.

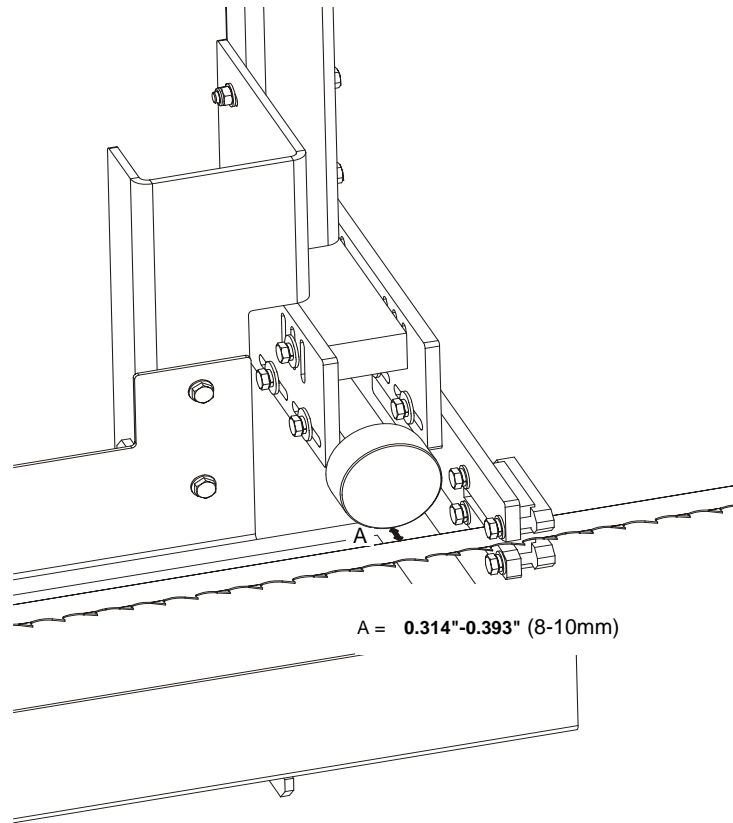


FIG. 5-12

5 Sawmill Alignment

Alignment Procedure:

5. Measure the distance between bottom of the blade guide roller and the bottom side of the blade. This distance should be 17-18 mm (0.669"-0.708").

See Figure 5-13.

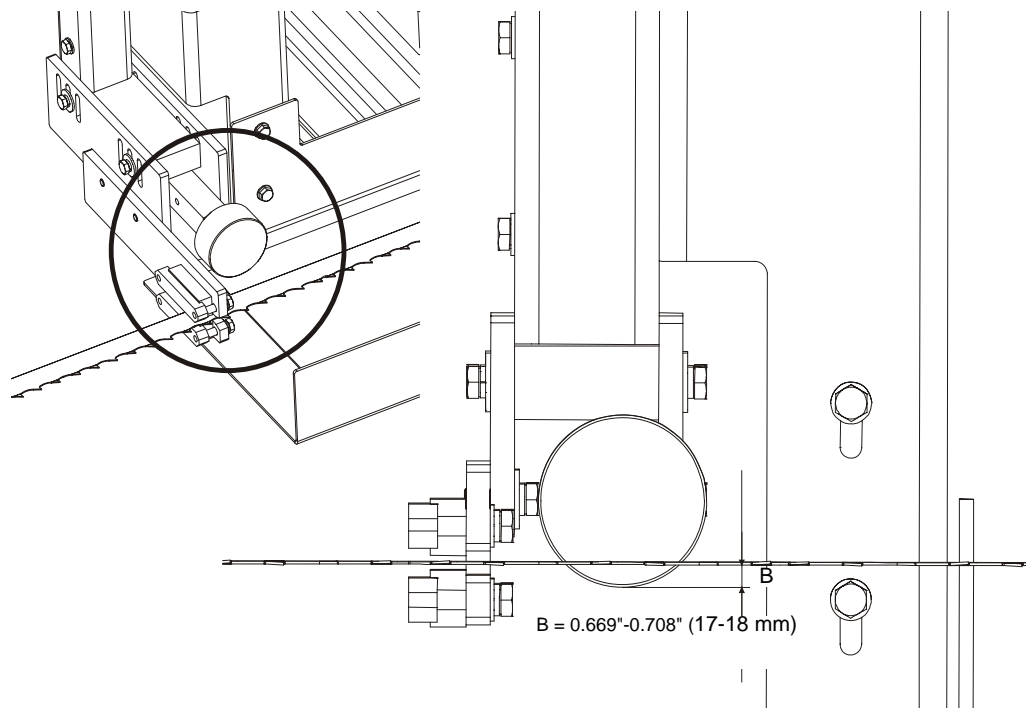


FIG. 5-13 BLADE GUIDE ADJUSTMENT (SOME PART WERE HIDDEN INTENTIONALLY)

6. Measure the distance between blade gullet and front surface of the upper and bottom blade guide blocks. This distance should be 5mm (0.196") for 2" blade and 8 mm (0.314") for 3" blade. Then check if the upper and bottom blade guide blocks slightly touches the blade on the entire length of the block.

See Figure 5-14.

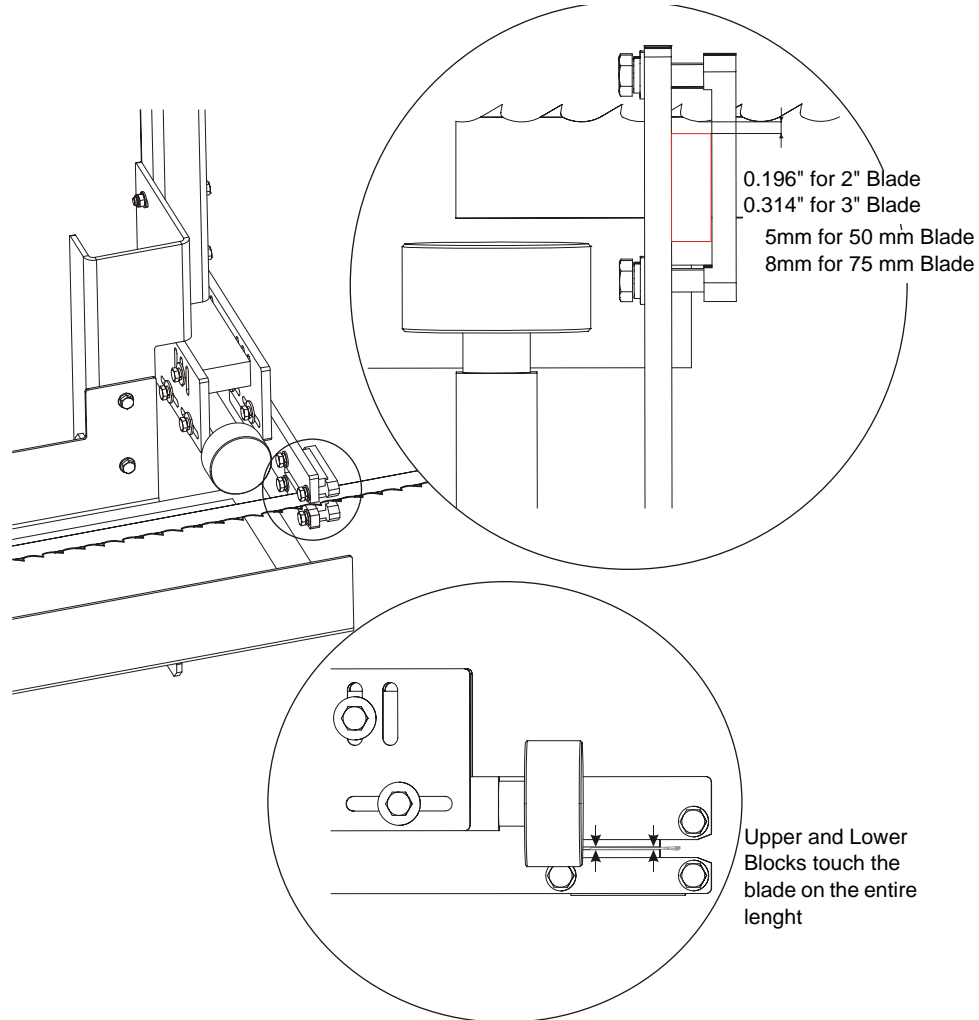


FIG. 5-14 BLADE GUIDE BLOCKS ADJUSTMENT (SOME PART WERE HIDDEN INTENTIONALLY)

SECTION 6 SAWMILL SPECIFICATIONS

6.1 Belt Sizes

See Table 6-1. Belt sizes for the WM1000 sawmill are shown below.

Description	Belt Size	Wood-Mizer Part #
Motor Drive Belt	3BX2640Le	--

TABLE 6-1.

6.2 Blade

See Table 6-2. Blade specifications for the WM1000 sawmill are shown below.

Parameter	Value
Blade Width	50-75mm 2"-3"
Blade Length	9823mm 386.731"
Blade linear speed	18-25m/s 19-27yd/s
Blade Tension System	Hydraulic
Blade Lubrication	Oil only

TABLE 6-2.

See **The Blade Handbook** for blade hook angle, tooth height, and tooth set specifications.

6.3 Cutting Capacity

See Table 6-3. The log size capacities of the WM1000 sawmill are listed below.

Parameter	Value
Min. Log Diameter	300mm ,12"
Max. Log Diameter	1200-1700mm 47"-67"(depends on sawmill configuration)
Min. Log Length	1800mm 71"
Max. Log Length	depends on rails length
Min. Cut Width	200mm 8"
Max. Cut Width	1700mm 67"

TABLE 6-3.

6.4 Motor Specifications

See Table 6-4. The power options available for the WM1000 sawmill are listed below.

Motor Type	Manufacturer	W-M No.	Power	Other Specifications
Electric E30	Siemens	093897	22 kW	50 A, 1465 r.p.m.
Electric E40	Siemens	505394	30 kW	66 A, 1465 r.p.m.
Electric E50	Siemens	505378	37 kW	80 A, 1465 r.p.m.

TABLE 6-4.

See Table 6-5. The other motors used in sawmills are listed below.

Motor Type	Power
Up/Down	1,1 kW
Power Feed	1,1kW
Blade Guide Arms Motors	2x0,25kW

TABLE 6-5.

6.5 Noise Level

See Table 6-6. The average noise level is given in the table below¹².

Sawmill	Noise Level
WM1000	$L_{EX8} = 88 \text{ dB (A)}$

TABLE 6-6.

6.6 Overall Dimensions

1. The noise level measurement was taken in accordance with PN-EN ISO 3746 Standard. The noise exposure level given above concerns an 8-hour work day.
2. The measured values refer to emission levels, not necessarily to noise levels in the workplace. Although there is a relation between emission levels and exposure levels, it is not possible to determine with certainty if preventives are needed or are not needed. The factors affecting a current level of noise exposure during work are inter alia room characteristics and characteristics of other noise sources, e.g. number of machines and machining operations nearby. Also, the permissible exposure level value may vary depending on country. This information enables the machine's user to better identify hazards and a risk.

See Table 6-7. The overall dimensions of the WM1000 sawmill are listed below.

Sawmill Model	Length	Width	Height	Weight
WM1000 Stationary	10000mm (393.7") ¹	4812mm (189.448")	3380mm (133.07")	3000kg (6613lb) ² 3600kg (7936lb) ³

TABLE 6-7.

¹ If equipped with optional track rails.

² Head without rails

³ Head with 32.8 ft (10 m) long rails.

6.7 Chains

See Table 6-8. The load capacity of the chains is listed below.

	Load Capacity According to ISO Nr 08A-1
Up/Down Chains	5800 KG 12786 lb each

TABLE 6-8.

6.8 Sawdust Extractor Specifications



CAUTION! Always connect a dust extraction system before starting the machine.



CAUTION! The sawdust extraction system must be grounded or made with materials not accumulating electrostatic charge.

See **Table 6-9**. See the table below for specifications of the dust extractor.

Maximum Capacity	1200 m ³ /h (1569 yd ³ /h)
Collector Inlet Diameters (in front of fan)	150 mm (5.9 ")
Motor Power	1.5 kW
Number of Sacks for Waste	1 pcs
Total Capacity of Sacks	0,25 m ³ (8.8 ft) ³
Weight	110 kg (242.5 lb)
Conveying Speed When 10 m Long Hose Is Used	20 m/s (65.6 ft/s)

TABLE 6-9.

6.9 Lube System Specifications

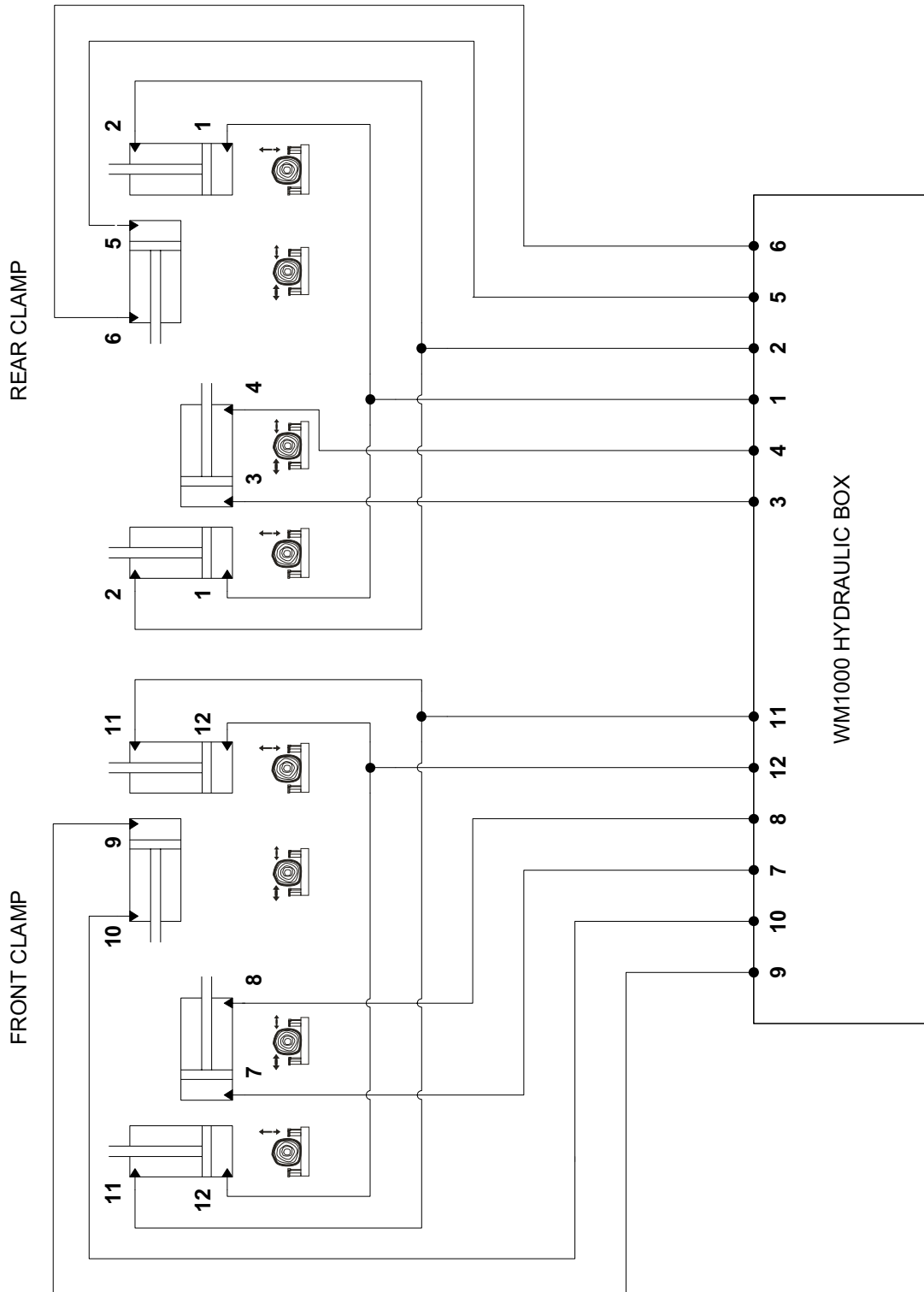
The blade lubricating oil specifications are listed below.

Oil Type	Manufacturer	Freezing Temperature	Ignition Temperature	Autoignition Temperature
ACP-1E ¹	Orlen	-20° C (-4° F ⁰)	Above 140° C (284° F)	250° C (482° F)

TABLE 6-10.

¹ Waste oil must be disposed of in compliance with applicable national and local regulations.

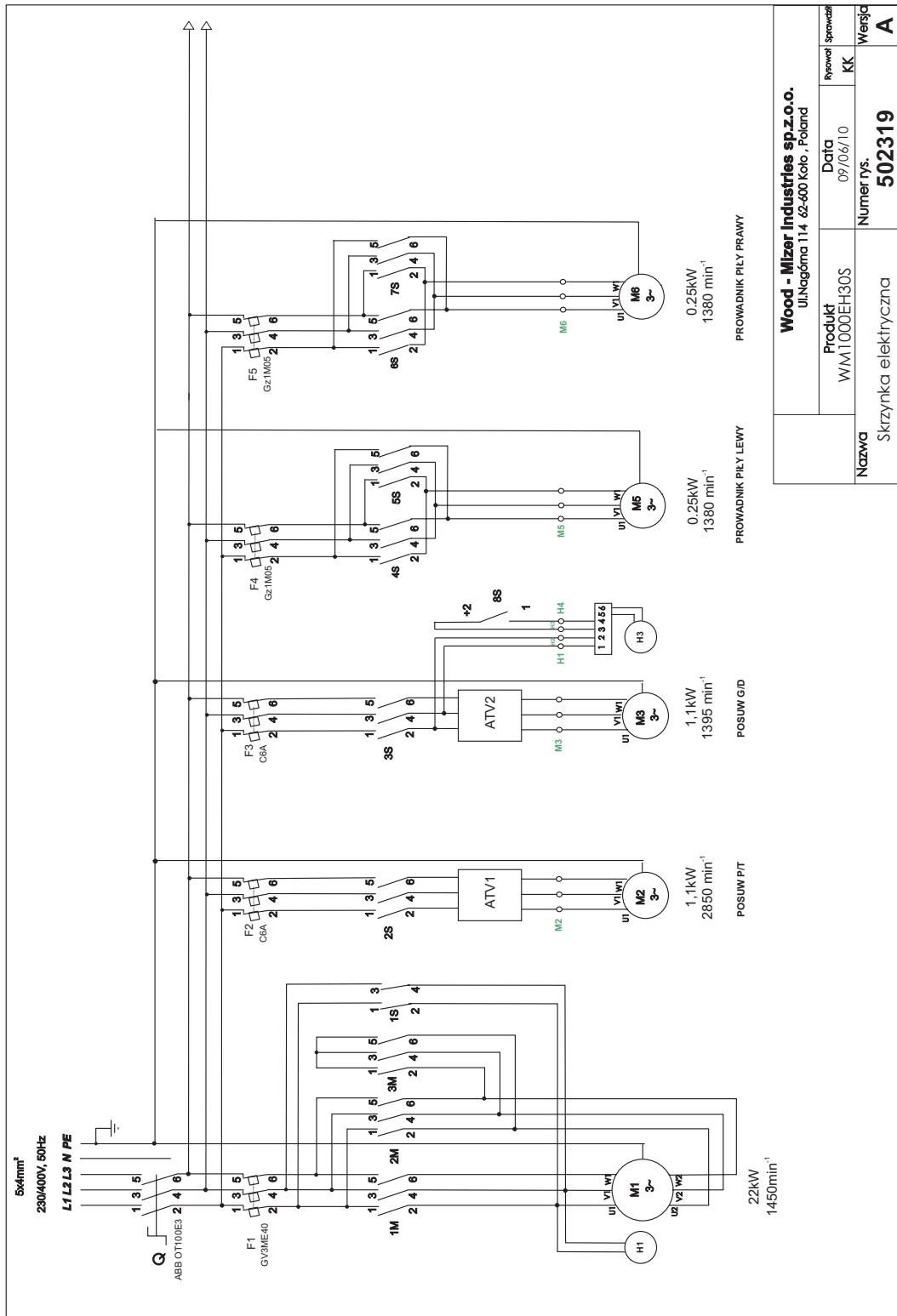
SECTION 7 HYDRAULIC DIAGRAMS (OPTIONAL EQUIPPMENT)



RYS. 7-0

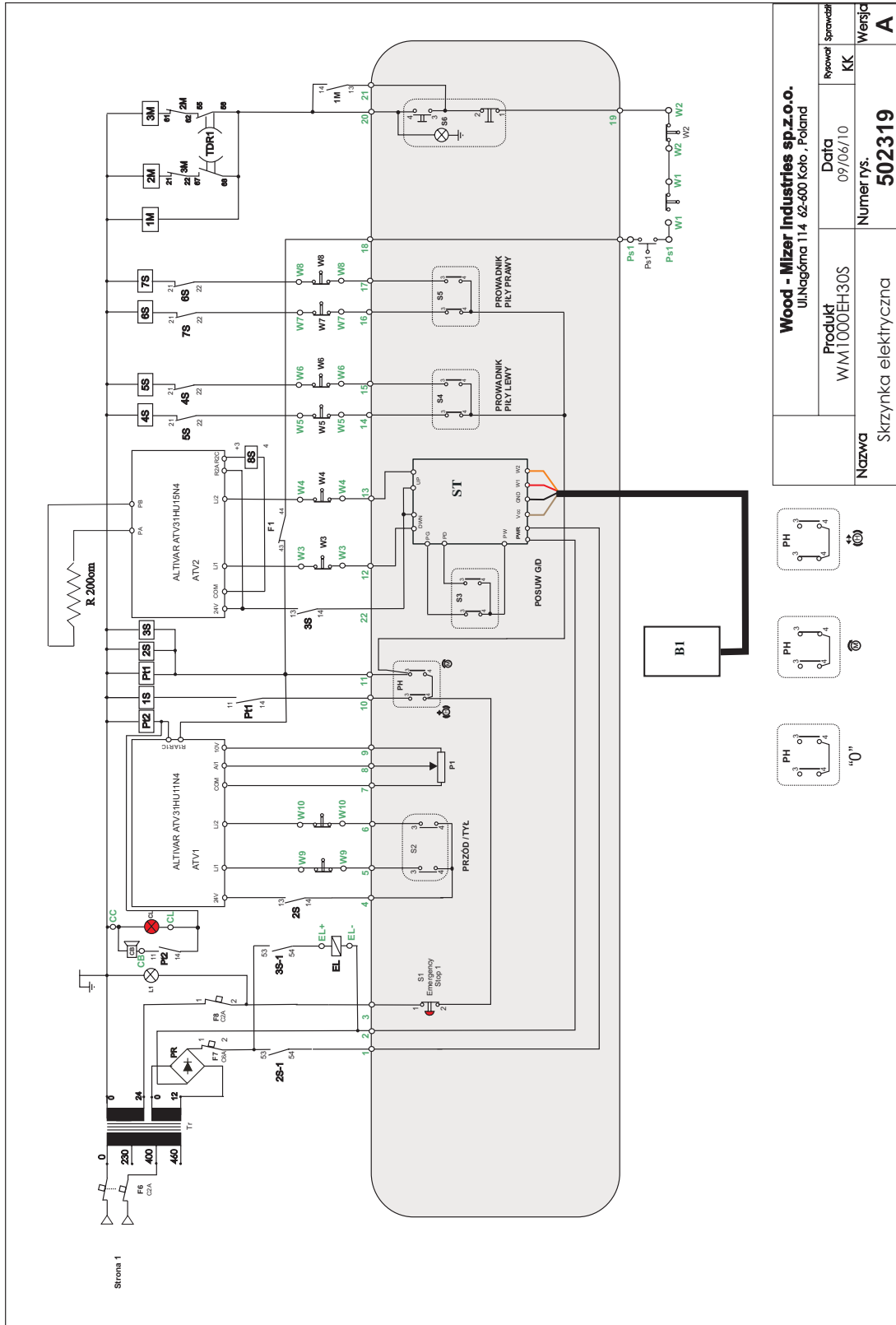
SECTION 8 ELECTRICAL DIAGRAMS

8.1 Electrical Diagram, WM1000EH30S



Wood - Mizer Industries sp.z.o.o. ul.Nagólna 114, 62-600, Koto, Poland		Revised	Sprawdzil
Produkt	WM1000EH30S	Data	09/06/10
Nazwa	Skizzynka elektryczna	Numer rys.	502319
		Wersja	A

FIG. 8-1 WM1000EH30S, PAGE 1



Wood - Mizer Industries sp.z.o.o. ul. Nagórna 114 62-600 Kolo, Poland		Revised Sprawdzil	
Produkt	WM1000EH30S	Data	09/06/10
Nazwa	Skrzynka elektryczna	Numer rys.	502319
		KK	Wersja
			A

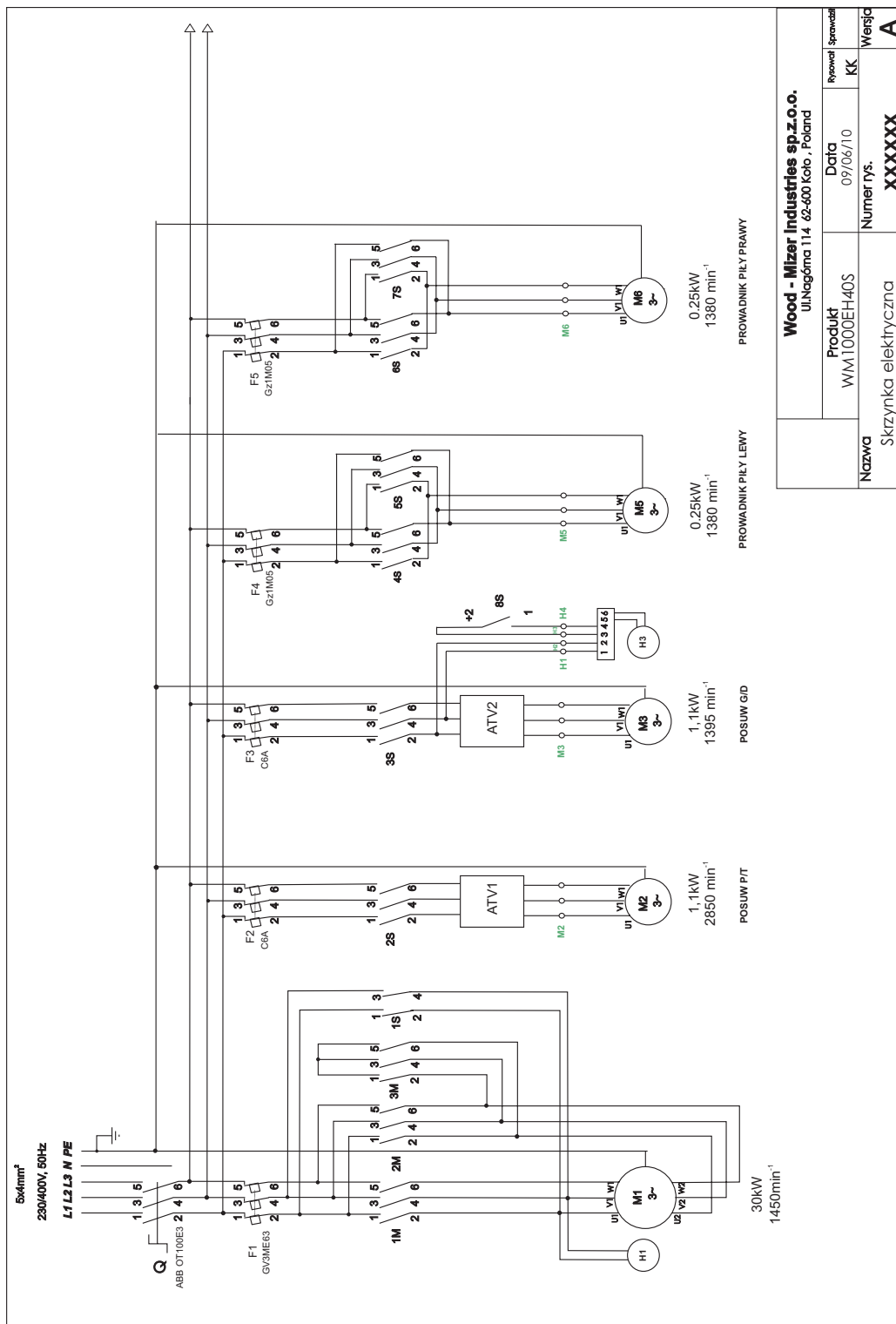
FIG. 8-2 WM1000EH30S, PAGE 2

8.2 Electrical Component List, WM1000EH30S

Symbol	Wood-Mizer Part No.	Description	Manufacturer
Q	501017	Switch, ABB OT100 F3	ABB
F1	090436	Motor Switch, GV3 P40	SCHNEIDER ELECTRIC
1M, 2M, 3M		Contactor, LC1 D25 B7	SCHNEIDER ELECTRIC
TDR	084037	Relay, LADS2 Time	SCHNEIDER ELECTRIC
M1+H	093897	Motor, 22 kW 1LG4186-4AA60-Z G26+C01	SIEMENS
1S, 2S, 3S	084308	Contactor, LC1 K610 B7	SCHNEIDER ELECTRIC
4S, 5S, 6S, 7S	084309	Contactor, LC1 K601 B7	SCHNEIDER ELECTRIC
F2, F3	091554	Circuit Breaker, C60N 3P 6A	SCHNEIDER ELECTRIC
ATV1, ATV2	093488	Controller, ATV312HU11N4	SCHNEIDER ELECTRIC
8S	503523	Solenoid, SSR D4D07 400V 7A	CRYDOM
M2		Motor, SKh 80-4B1 1,1kW Power Feed	BESEL
M3+H3		Motor, SK9030.1AZBDH-90S/4 BRE20 1,1kW Up/Down	-
M5, M6		Motor, SKh 71-4A1 0,25kW Tray	BESEL
F4, F5	503522	Motor Switch, GZ1 M05	SCHNEIDER ELECTRIC
F6		Circuit Breaker, C60N 2P 2A	SCHNEIDER ELECTRIC
F7	095842	Circuit Breaker, C60N 1P 6A	SCHNEIDER ELECTRIC
F8	088278	Circuit Breaker, C60N 1P 2A	SCHNEIDER ELECTRIC
TR	096917	Transformer, SU84A-4004601224	NORATEL
L1	090448	Control Light, M22 White	MOELLER
2S-1	097776	Contacts, LA1-KN22 Auxiliary	SCHNEIDER ELECTRIC
S1	086556	Switch, XB4 BS542 Emergency	SCHNEIDER ELECTRIC
PR	084318	Rectifier, KBPC 3508 Bridge	-
EL	016140	Solenoid, Water Lube	PARKER
PT1, PT2		Solenoid, 40.52 24VAC Time Module	FINDER
R	503527	Resistor, MCRA 200W 160OHM Braking	LG
PS1	E22726	Switch, Sealed GFW2B2 Hyd Pressure	SCHNEIDER ELECTRIC
W1, W2	094232	Safety Switch, AZ17-11ZRK	SCHMERSAL
W3, W4	100931	Safety Switch, GLCB01A01B	HONEYWELL
W5, W6, W7, W8, W9, W10	086469	Safety Switch, GLCB01A2B	HONEYWELL
ST	500628	Controller, SW-10 Networks	SELBIT
B1	096014	Sensor Assy, MSK-320	SIKO
P1	E20519	Potentiometer, 1K CLA 53C3-1K	HONEYWELL S&C CLAROSTAT
PH	095001	Key Switch, M22-WRS3	MOELLER
S6	090452	START-STOP Switch, M22	MOELLER
S2	E20438	Switch, 2601AF2S12 Pwr/Feed	SCHNEIDER ELECTRIC
S3	E20440	Switch, 2601AF2S10 Up/Down	SCHNEIDER ELECTRIC

S4, S5	024000	Switch Assy, 21A DPDT	Cole Hersee Company
CL+CB	503550	Column, Red-Sound Signal	MOELLER

8.3 Electrical Diagram, WM1000EH40S



Wood - Mizer Industries sp.z o.o. Ul.Nag6ma 114 62-400 Koto , Poland	
Produkt	WM1000EH40S
Data	09/06/10
Rzeczal Sprzeczal	KK
Nazwa	Skrzynka elektryczna
Numer rys.	XXXXXXX
Wersja	A

FIG. 8-3 WM1000EH40S, PAGE 1

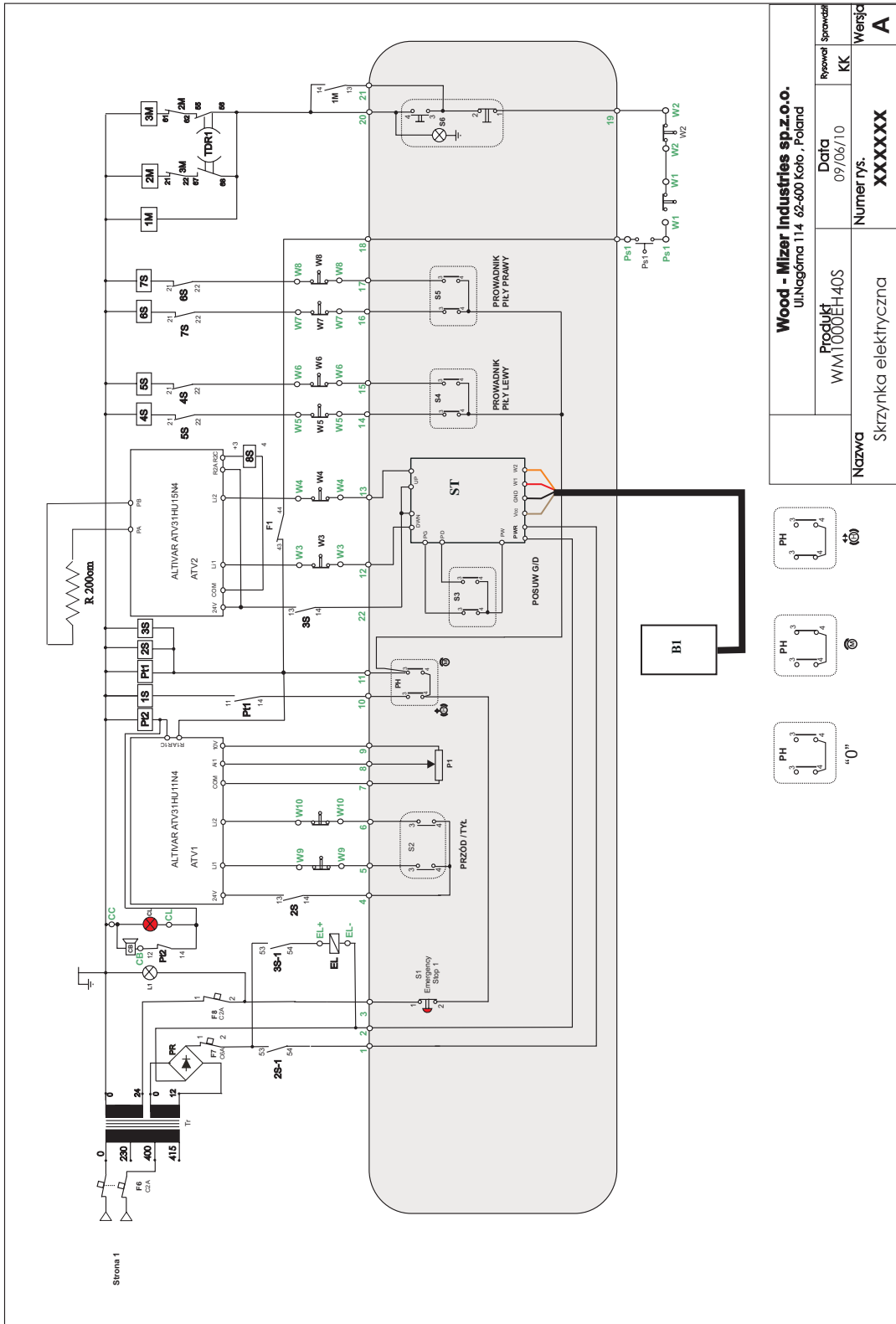
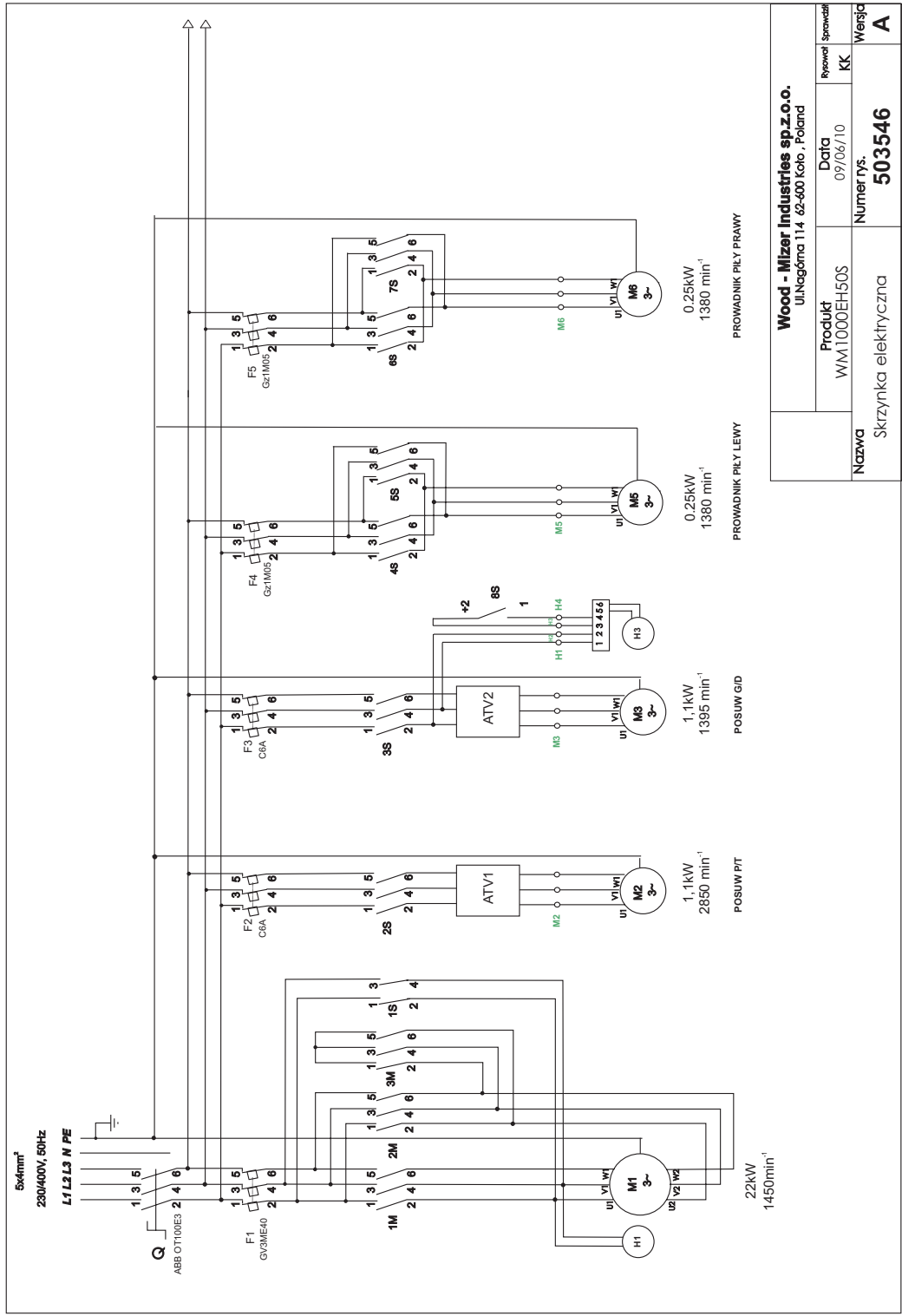


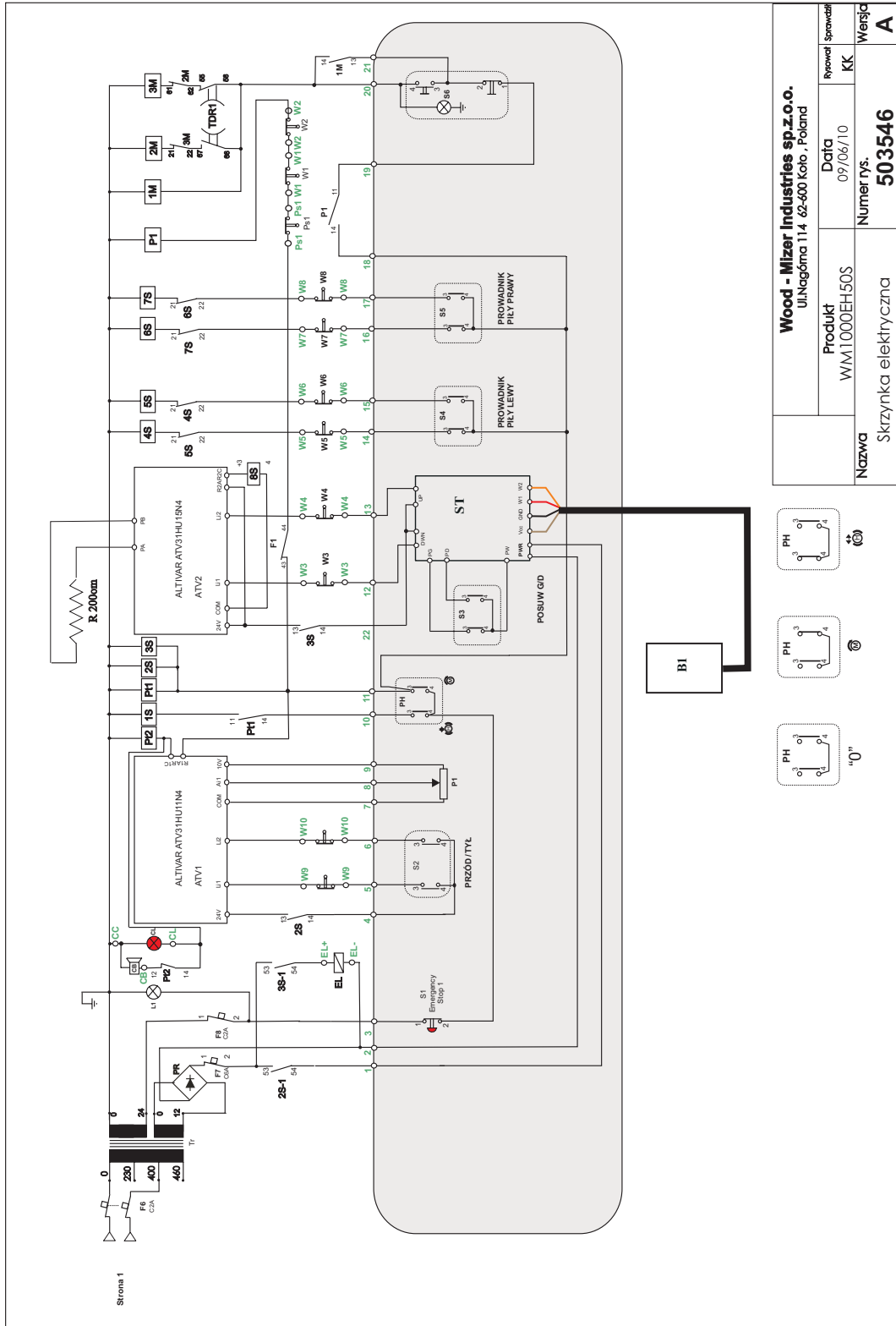
FIG. 8-4 WM1000EH40S, PAGE 2

8.4 Electrical Diagram, WM1000EH50S



Wood - Mizer Industries sp.z.o.o. Ul.Nagólna 114 62-400 Koto, Poland		
Produkt	Data	Rzeczal Sprawdzil
WM1000EH50S	09/06/10	KK
Nazwa	Numer rys.	Wersja
Skrzynka elektryczna	503546	A

FIG. 8-5 WM1000EH50S, PAGE 1



Wood - Mizer Industries sp.z o.o. ul. Nagórna 114 62-600 Kolo, Poland		Revised	Sprawdz
Produkt	WM1000EH50S	Data	09/06/10
Nazwa	Skryzynka elektryczna	Numer rys.	503546
		KK	Wersja
			A

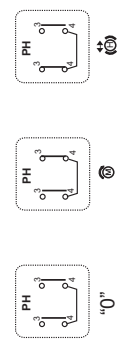


FIG. 8-6 WM1000EH50S, PAGE 2

8.5 Electrical Component List, WM1000EH50S

Symbol	Wood-Mizer Part No.	Description	Manufacturer
Q	501017	Switch, ABB OT100 F3	ABB
F1		Motor Switch, GV3 M80	SCHNEIDER ELECTRIC
1M, 2M, 3M		Contactor, LC1 D50 B7	SCHNEIDER ELECTRIC
TDR1	084037	Relay, LADS2 Time	SCHNEIDER ELECTRIC
M1+H	100772	Motor, 22 kW 1LG42204AA60 37kW	SIEMENS
1S, 2S, 3S	084308	Contactor, LC1 K610 B7	SCHNEIDER ELECTRIC
4S, 5S, 6S, 7S	084309	Contactor, LC1 K601 B7	SCHNEIDER ELECTRIC
F2, F3	091554	Circuit Breaker, C60N 3P 6A	SCHNEIDER ELECTRIC
ATV1, ATV2	093488	Controller, ATV312HU11N4	SCHNEIDER ELECTRIC
8S	503523	Solenoid, SSR D4D07 400V 7A	CRYDOM
M2		Motor, SKh 80-4B1 1,1kW Power Feed	BESEL
M3+H3		Motor, SK9030.1AZBDH-90S/4 BRE20 1,1kW Up/Down	-
M5, M6		Motor, SKh 71-4A1 0,25kW Tray	BESEL
F4, F5	503522	Motor Switch, GZ1 M05	SCHNEIDER ELECTRIC
F6		Circuit Breaker, C60N 2P 2A	SCHNEIDER ELECTRIC
F7	095842	Circuit Breaker, C60N 1P 6A	SCHNEIDER ELECTRIC
F8	088278	Circuit Breaker, C60N 1P 2A	SCHNEIDER ELECTRIC
TR	096917	Transformer, SU84A-4004601224	NORATEL
L1	090448	Control Light, M22 White	MOELLER
2S-1, 3S-1	097776	Contacts, LA1-KN22 Auxiliary	SCHNEIDER ELECTRIC
S1	086556	Switch, XB4 BS542 Emergency	SCHNEIDER ELECTRIC
PR	084318	Rectifier, KBPC 3508 Bridge	-
EL	016140	Solenoid, Water Lube	PARKER
PT1, PT2		Solenoid, 40.52 24VAC Time Module	FINDER
R	503527	Resistor, MCRA 200W 160OHM Braking	LG
PS1	E22726	Switch, Sealed GFW2B2 Hyd Pressure	SCHNEIDER ELECTRIC
W1, W2	094232	Safety Switch, AZ17-11ZRK	SCHMERSAL
W3, W4	100931	Safety Switch, GLCB01A01B	HONEYWELL
W5, W6, W7, W8, W9, W10	086469	Safety Switch, GLCB01A2B	HONEYWELL
ST	500628	Controller, SW-10 Networks	SELBIT
B1	096014	Sensor Assy, MSK-320	SIKO
P1	E20519	Potentiometer, 1K CLA 53C3-1K	HONEYWELL S&C CLAROSTAT
PH	095001	Key Switch, M22-WRS3	MOELLER
S6	090452	START-STOP Switch, M22	MOELLER
S2	E20438	Switch, 2601AF2S12 Pwr/Feed	SCHNEIDER ELECTRIC
S3	E20440	Switch, 2601AF2S10 Up/Down	SCHNEIDER ELECTRIC

S4, S5	024000	Switch Assy, 21A DPDT	Cole Hersee Company
CL+CB	503550	Column, Red-Sound Signal	MOELLER