

Safety, Setup, Operation & Maintenance

Twin Vertical Saw (TVS)rev. A5.00-B3.00



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

February 2010

Form #1673

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Wood-Mizer

8180 West 10th Street
Indianapolis, Indiana 46214

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SECTION 1 SAFETY

1.1 Safety Symbols

The following symbols and signal words call your attention to instructions concerning your personal safety. Be sure to observe and follow these instructions.



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 or damage to equipment.



IMPORTANT! indicates vital information.

NOTE: gives helpful information.



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.

1.2 Safety Instructions

NOTE: ONLY safety instructions regarding personal injury are listed in this section. Caution statements regarding only equipment damage appear where applicable throughout the manual.

Observe Safety Instructions



IMPORTANT! Read the entire Operator's Manual before operating the machine. Take notice of all safety warnings throughout this manual and those posted on the machine. Keep this manual with this machine at all times, regardless of ownership.

Also read any additional manufacturer's manuals and

1 Safety

Wear Safety Clothing


observe any applicable safety instructions including dangers, warnings, and cautions.

Only persons who have read and understood the entire operator's manual should operate the machine. The machine is not intended for use by or around children.

IMPORTANT! It is always the owner's responsibility to comply with all applicable national and local laws, rules and regulations regarding the ownership and operation of your Wood-Mizer Twin Vertical Saw. All Wood-Mizer TVS/SVS owners are encouraged to become thoroughly familiar with these applicable laws and comply with them fully while using the machine.



Wear Safety Clothing

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


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! Always wear eye, ear, respiration, and foot protection when operating or servicing the machine.



Keep the Machine and Area Around Clean

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

Dispose of Sawing By-Products Properly



IMPORTANT! Always properly dispose of all sawing by-products, including sawdust and other debris.

Check the Machine Before Operation



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



WARNING! Fasten the machine to the floor before operating.

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



Keep Persons Away



DANGER! Keep all persons out of the path of moving equipment and lumber when operating the machine. Failure to do so will 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 will result in serious injury.



WARNING! Allow blade to come to a complete stop before opening the blade housing cover. Failure to do so will result in serious injury.

Keep Hands Away



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

DANGER! Motor components can become very hot during operation. Avoid contact with any part of a hot motor. Contact with hot motor components can cause serious burns. Therefore, never touch or perform service functions on a hot motor. Allow the motor to cool sufficiently before beginning any service function.

1 Safety

Use Proper Maintenance Procedures

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

DANGER! Always be aware of and take proper protective measures against rotating shafts, pulleys, fans, etc. Always stay a safe distance from rotating members and make sure that loose clothing or long hair does not engage rotating members resulting in possible injury.



WARNING! Use extreme caution when spinning the blade wheels by hand. Make sure hands are clear of blade and wheel spokes before spinning. Failure to do so may result in serious injury.

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.

Use Proper Maintenance Procedures



DANGER! Make sure all electrical installation, service and/or maintenance work is performed by a qualified electrician and is in accordance with applicable electrical codes.

DANGER! Hazardous voltage inside the electric boxes and at the motor can cause shock, burns, or death. Disconnect and lock out power supply before servicing! Keep all electrical component covers closed and securely fastened during machine operation.



WARNING! Consider all electrical circuits energized and dangerous.

WARNING! Disconnect and lock out power supply before servicing! Failure to do so may result in serious injury.

WARNING! Never assume or take the word of another person that the power is off; check it out and lock it out.

WARNING! Do not wear rings, watches, or other jewelry while working around an open electrical circuit.

WARNING! Remove the blade before performing any service to the motor. Failure to do so may result in serious injury.



DANGER! Operator can not for any reason perform any laser maintenance or repair work.

DANGER! Never clean the blade or blade wheels using the hand-held brush or scraper whilst the saw blade is in motion.

DANGER! Lockout procedures must be used during:

- Changing or adjusting blades
- Unjamming operations
- Cleaning
- Mechanical repair
- Electrical maintenance
- Retrieval of tools/parts from work area
- Activities where guards or electrical panel guard is open or removed

Maintenance hazards include:

- Blade contact
- Pinch points
- Kickbacks
- Missiles (thrown blades/wood chips)
- Electrical

Failure to lockout may result in:

- Cut
- Crush
- Blindness
- Puncture
- Serious injury and death
- Amputation
- Burn
- Shock
- Electrocution

To control maintenance dangers:



Safety

Use Proper Maintenance Procedures

Lockout procedures must be followed (see ANSI Standard Z244.1-1982 and OSHA regulation 1910.147).

Never rely on machine stop control for maintenance safety (emergency stops, on/off buttons, interlocks).

Do not reach into moving blades or feed systems. Allow all coasting parts to come to a complete stop.

Electrical power supply and air supply must both be locked out.

Where established lockout procedures cannot be used (electrical troubleshooting or mechanical dynamic troubleshooting), alternative effective protective techniques shall be employed which may require special skills and planning.

Always follow safe operations practices in the workplace.

LOCKOUT PROCEDURE

Lockout procedures must be followed (see ANSI Standard Z244.1-1982 and OSHA regulation 1910.147).

Purpose:

This procedure establishes the minimum requirements for lockout of energy sources that could cause injury.

Responsibility:

The responsibility for seeing that this procedure is followed is binding upon all workers. All workers shall be instructed in the safety significance of the lockout procedure. It is your responsibility to ensure safe operation of the machine.

Sequence of Lockout Procedure:

1. Notify all persons that a lockout is required and the reason therefore.
2. If the machine is operating, shut it down by the normal stopping procedure.
3. Operate the switch so that the energy sources are disconnected or isolated from the machine. Stored energy such as moving blades and feed system shall be dissipated.
4. Lockout the energy isolating devices with assigned individual locks.
5. After ensuring that no persons are exposed and as a check on having disconnected the energy sources, operate the push button or other normal operating controls to make certain the machine will not operate. Caution: Return operating controls to neutral position after the test.
6. The machine is now locked out.

Restoring Equipment to Service

1. When the job is complete and the machine is ready for testing or normal service, check the machine area to see that no one is exposed.
2. When the machine is all clear, remove all locks. The energy isolating devices may be operated to restore energy to the machine.

Procedure Involving More Than One Person

In the preceding steps, if more than one individual is required to lock out the machine, each shall place his own personal lock on the energy isolating devices.

Rules for Using Lockout Procedure

The machine shall be locked out to protect against accidental or inadvertent operation when such operation could cause injury to personnel. Do not attempt to operate any switch or valve bearing a lock.

Owner's Responsibility

The procedures listed in this manual may not include all ANSI, OSHA, or locally required safety procedures. It is the owner/operator's responsibility and not Wood-Mizer Products to ensure all operators are properly trained and informed of all safety protocols. Owner/Operators are responsible for following all safety procedures when operating and performing maintenance to the machine.

1 Safety

Keep Safety Labels In Good Condition

Keep Safety Labels In Good Condition



IMPORTANT! Always be sure that all safety decals are clean and readable. Replace all damaged safety decals to prevent personal injury or damage to the equipment. Contact your local distributor, or call your Customer Service Representative to order more decals.

IMPORTANT! If replacing a component which has a safety decal affixed to it, make sure the new component also has the safety decal affixed.

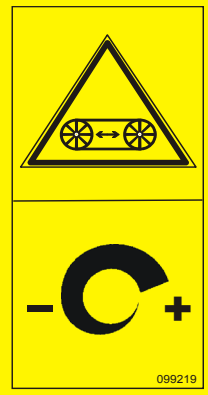


Safety Labels Description

See Table 1-1. See table below for safety labels description.

TABLE 1-1

Decal	Decal Part No.	Description
	096317	Carefully read operator's manual before handling the machine. Observe instructions and safety rules when operating.
	099220	Close guards prior to operating the machine

TABLE 1-1

 <p style="text-align: right; font-size: small;">099219</p>	<p>099219</p>	<p>Blade tension adjustment. Turn right to tighten, turn left to release.</p>
 <p style="text-align: right; font-size: small;">099221</p>	<p>099221</p>	<p>Keep safe distance when the machine is operating.</p>
 <p style="text-align: right; font-size: small;">096314</p>	<p>096314</p>	<p>Keep safe distance when the machine is operating.</p>

1 Safety
Safety Labels Description

TABLE 1-1

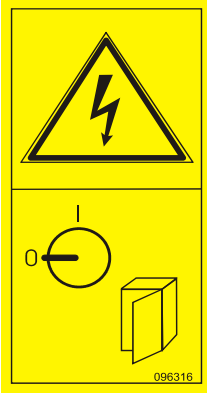
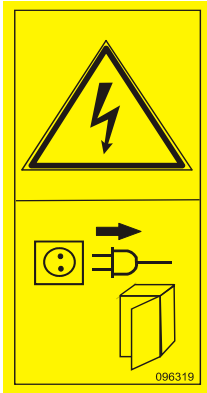
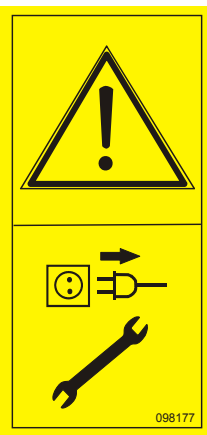

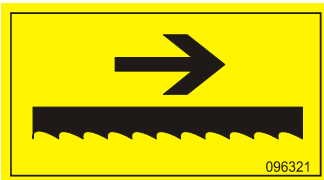


	<p>096316</p>	<p>Electric box opening is possible with the switch in "0" position only.</p>
	<p>096319</p>	<p>Always disconnect the power cord before opening the electric box.</p>
	<p>098177</p>	<p>Always disconnect the power cord before performing any service.</p>

TABLE 1-1

	<p>099540</p>	<p>CAUTION! Gear train - Keep safe distance!</p>
	<p>096321</p>	<p>Blade movement direction.</p>
	<p>500031</p>	<p>CAUTION! Do not adjust turnbuckles!</p>
	<p>S12004G</p>	<p>Always wear eye protection equipment when operating this machine</p>

1 Safety
Safety Labels Description

TABLE 1-1




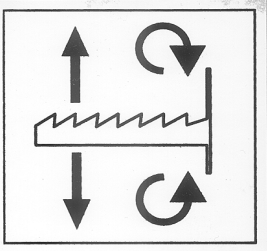
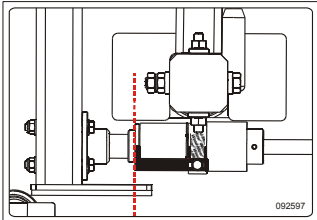
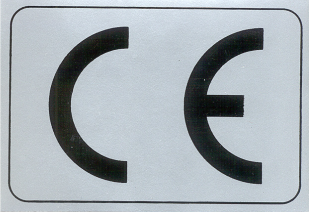

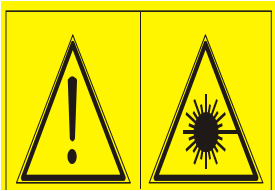

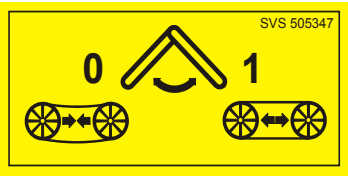



	<p>S12005G</p>	<p>Always wear ear protection equipment when operating this machine</p>
	<p>501465</p>	<p>CAUTION! Always wear safety boots when operating the machine</p>
	<p>501467</p>	<p>Lubrication Point</p>
	<p>P11789</p>	<p>Blade alignment. Turn right to move the blade out on wheel; turn left to move the blade in on wheel.</p>
	<p>092597</p>	<p>Blade tension adjustment. See Section 2.5</p>

TABLE 1-1

	P85070	CE certified machine.																													
	S20097	Motor rotation direction.																													
	099504	Visible and/or invisible laser radiation. Avoid eye or skin exposure to direct or scattered radiation.																													
	505346	Tensioner Valve Handle Placement, TVS																													
	505347	Tensioner Valve Handle Placement, SVS																													
<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th rowspan="2">Type</th> <th colspan="2"></th> <th colspan="2">505348</th> </tr> <tr> <th>F[mm]</th> <th>E[mm]</th> <th>psi</th> <th>bar</th> </tr> </thead> <tbody> <tr> <td>275</td> <td>1,07</td> <td>32</td> <td>830-850</td> <td>57-59</td> </tr> <tr> <td>375 376</td> <td>1,14</td> <td>32 38</td> <td>745-765</td> <td>51-53</td> </tr> <tr> <td>2735</td> <td>1,07</td> <td>35</td> <td>805-825</td> <td>55-57</td> </tr> <tr> <td>576 476</td> <td>1,27 1,40</td> <td>38</td> <td>715-735</td> <td>49-51</td> </tr> </tbody> </table>	Type			505348		F[mm]	E[mm]	psi	bar	275	1,07	32	830-850	57-59	375 376	1,14	32 38	745-765	51-53	2735	1,07	35	805-825	55-57	576 476	1,27 1,40	38	715-735	49-51	505348	Blade Tension Values
Type				505348																											
	F[mm]	E[mm]	psi	bar																											
275	1,07	32	830-850	57-59																											
375 376	1,14	32 38	745-765	51-53																											
2735	1,07	35	805-825	55-57																											
576 476	1,27 1,40	38	715-735	49-51																											

SECTION 2 OPERATION

2.1 General Information

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.

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

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

The TVS saw 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.

General Contact Information

Toll free phone numbers are listed below for the *continental* U.S. and Canada. See the next page for contact information for specific Wood-Mizer locations.

	United States	Canada
Sales	1-800-553-0182	1-877-866-0667
Service	1-800-525-8100	1-877-866-0667
Website	www.woodmizer.com	www.woodmizer.ca
E-mail	woodmizer@woodmizer.com	oninfo@woodmizer.com

In Europe call your local distributor or our European Headquarters and Manufacturing Facility in Kolo, 114 Nagorna Street, Poland, at **+48-63-2626000**.

Office Hours:

Country	Monday - Friday	Saturday	Sunday
U.S. ¹	8 a.m. to 5 p.m.	8 a.m. to 12 p.m. (Indianapolis Office Only)	Closed
Poland	7 a.m. to 3 p.m.	Closed	Closed

¹ All times are Eastern Standard Time.

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.

Wood-Mizer Locations**USA World Headquarters**

Serving North & South America, Oceania, East Asia

Wood-Mizer LLC
8180 West 10th Street
Indianapolis, IN 46214

Phone: 317.271.1542 or 800.553.0182
Customer Service: 800.525.8100
Fax: 317.273.1011
Email: infocenter@woodmizer.com

Canadian Headquarters

Serving Canada

Wood-Mizer Canada
396 County Road 36, Unit B
Lindsay, ON K9V 4R3

Phone: 705.878.5255 or 877.357.3373
Fax: 705.878.5355
Email: ContactCanada@woodmizer.com

Brazil Headquarters

Serving Brazil

Wood-Mizer do Brasil
Rua Dom Pedro 1, No: 205 Bairro: Sao Jose
Ivoti/RS CEP:93.900-000

Tel: +55 51 9894-6461/ +55 21 8030-3338/ +55 51
3563-4784
Email: info@woodmizer.com.br

Europe Headquarters

Serving Europe, Africa, West Asia

Wood-Mizer Industries Sp z o.o.
Nagorna 114
62-600 Kolo, Poland

Phone: +48.63.26.26.000
Fax: +48.63.27.22.327

Branches & Authorized Sales Centers

For a complete list of dealers, visit www.woodmizer.com

2.2 Control Overview

Control Panel

See Figure 2-1. The control panel of the Twin Vertical Saw is shown below.

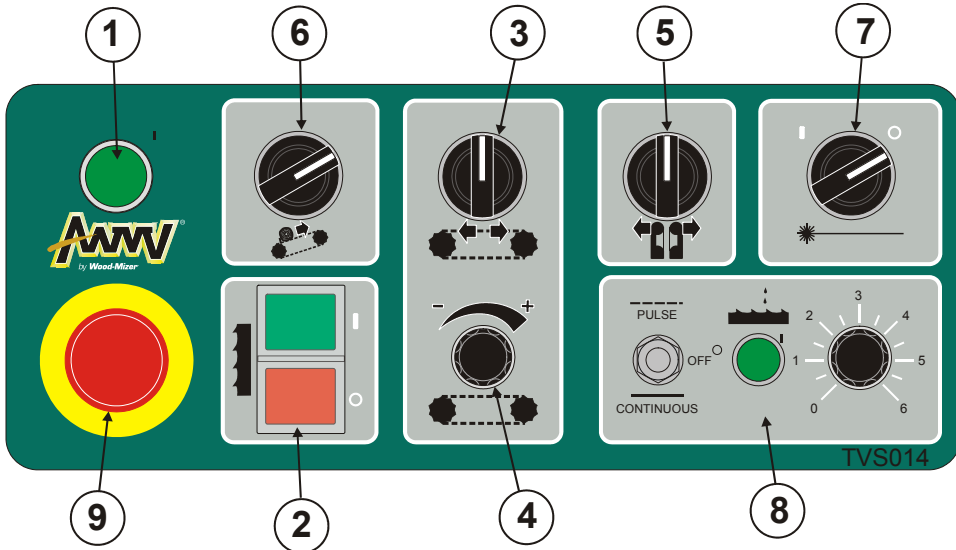


FIG. 2-1 CONTROL PANEL COMPONENTS (REV. A5.00+)

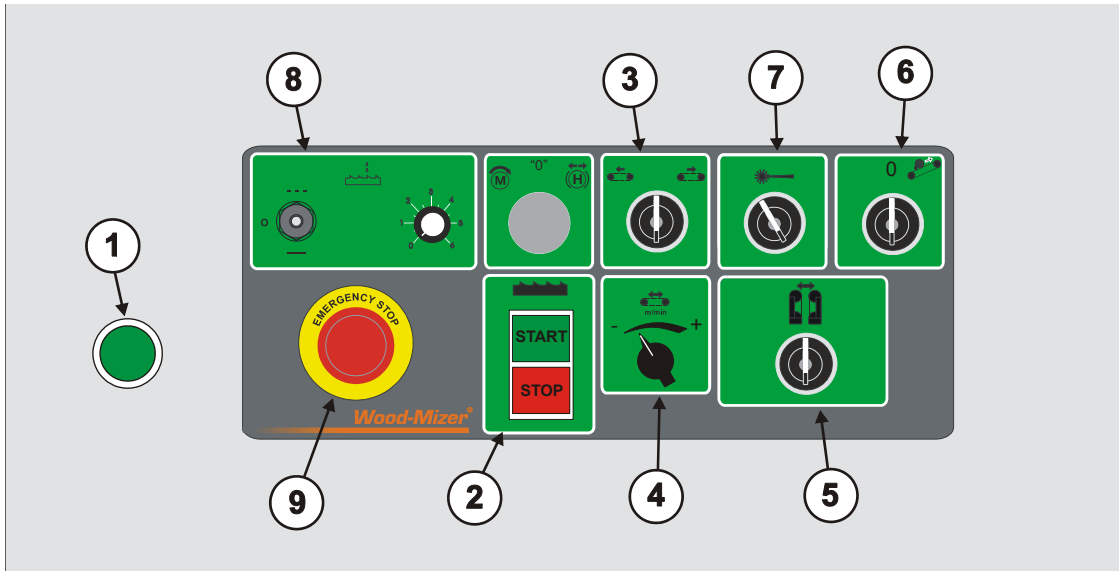


FIG. 2-1 CONTROL PANEL COMPONENTS (REV. A1.00 - A4.01)

1. Power Button

Release the E-STOP buttons by turning them clockwise until they pop out, if necessary.

2 Operation


Control Panel

Press the green POWER-ON button to power the unit.

2. Blade Motors


Press the START button to start the blade motors. To stop the blade motors, press the STOP button.

3. Feed Track


 The feed track switch turns the feed track on in the forward or reverse directions. **NOTE:** The feed track will not start in the forward direction until both blade motors have reached the operational speed. The feed track will start in reverse without the blade motors running.

To start the feed track forward, start the blade motors and turn the switch to the right. To start the feed backward, turn the switch to the left. To stop the feed track, turn the switch to the “0” position.


4. Feed Track Speed Adjustment

 The feed track speed switch controls the speed at which the feed track moves. Turn the switch to the right to increase the speed, turn to the left to reduce the speed.

5. Adjusting the distance between saw heads

 Adjust the distance between the saw heads by turning the switch to the left or to the right.


6. Loading ramp On/Off

 Turn the switch to the right to turn the ramp on. Turn the switch to the “0” position to turn the ramp off.

7. Lasers (optional)

 Lasers show the cutting positions. Turn the switch to the right to turn the lasers on.

8. Lube Mizer

 Toggle the Lube Mizer control switch up to put the Lube Mizer System into the intermittent mode. Use the Lube Mizer dial to control the frequency of the pump. Toggle the Lube Mizer control switch down to put the Lube Mizer System into the continuous mode. Toggle the switch to the “0” position to stop the Lube Mizer System.

9. Emergency Stop

Push the emergency stop button to disconnect power from the Twin Vertical Saw. Turn the emergency stop clockwise to release the stop. The machine will not restart until the emergency stop is released.

2.3 TVS Setup



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

- Set up the machine on firm and level ground.
- The machine can be operated with the sawdust collection system only.
- The machine can be operated under the roof only.
- The machine can be operated in temperature range from 5°F to 104°F (-15° C to 40° C) only.
- Have a qualified electrician install the power supply.
- The machine operator positions are shown below.

See Figure 2-2.

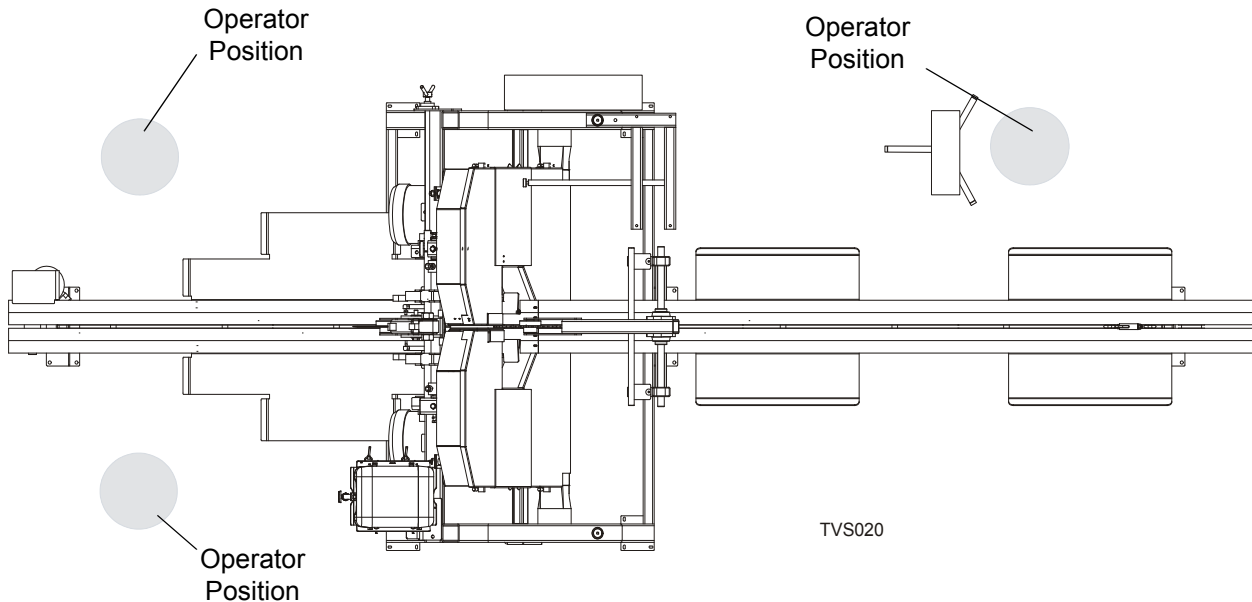


FIG. 2-2 REV. A5.00+

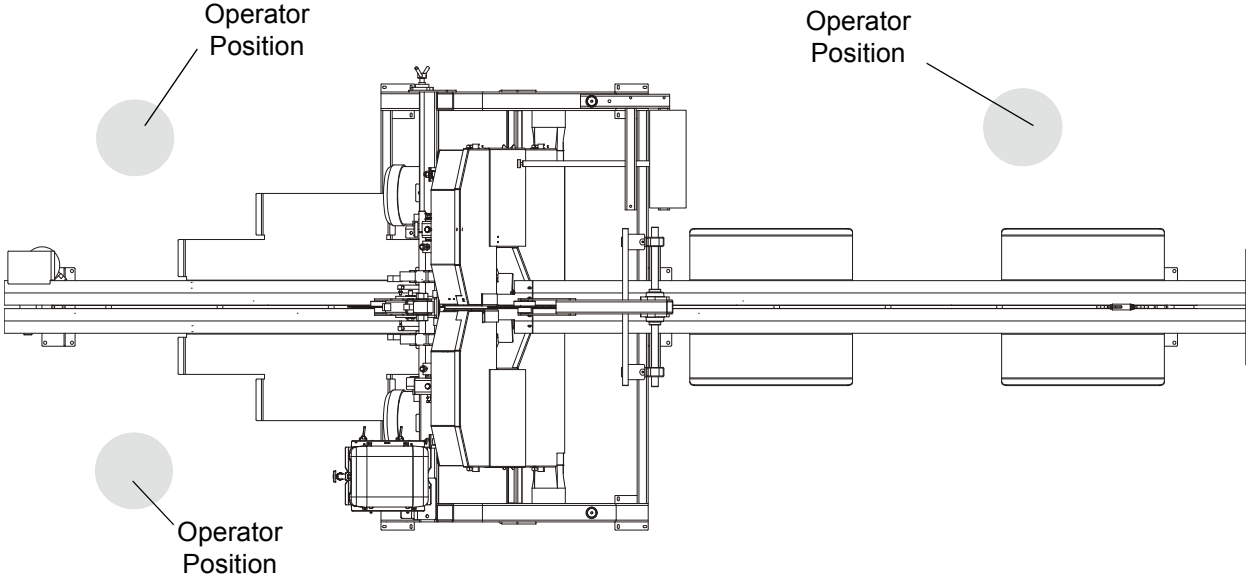


FIG. 2-2 REV. A1.00 - A4.01



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



IMPORTANT! When starting the machine for the first time, let it run without any load for 1-2 hours. It will let the infeed and outfeed tables drive components to grind in.

See Figure 2-3. The resaw can be lifted using the forklift only. The forklift must be rated for at least 4400 lbs. The resaw is equipped with forklift pockets. Insert the forklift forks into the pockets as shown below to lift the resaw.

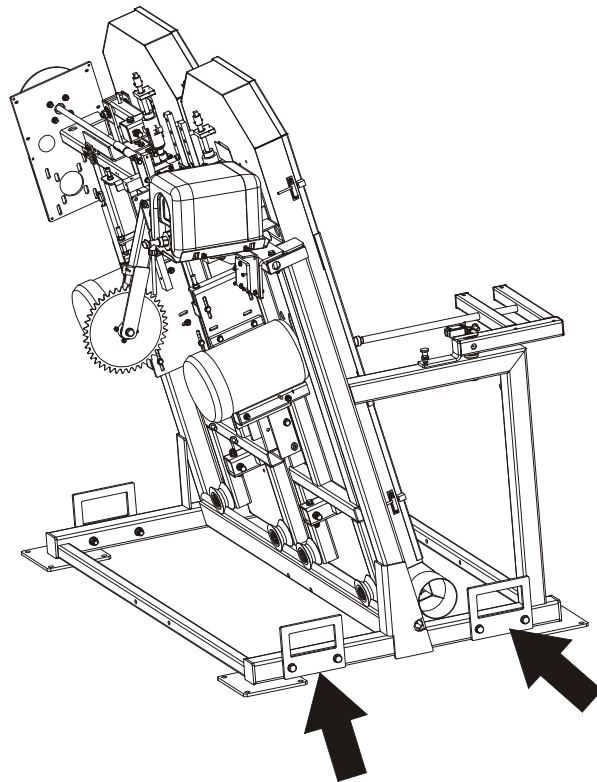


FIG. 2-3

2.4 Replacing The Blades



DANGER! Always shut off the machine motors before changing the blades. Failure to do so may result in serious injury.



WARNING! Always wear gloves and eye protection whenever handling bandsaw blades. 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.

See **Figure 2-4**. Disengage the three rubber cover latches. Pull up on the perimeter guard arm lock knob and rotate the arm out of the way. Open the blade housing cover. Turn the blade tension handle to release the blade tension until the wheel is pulled in and the blade is lying loose in the blade housing. Lift the blade out of the blade housing.

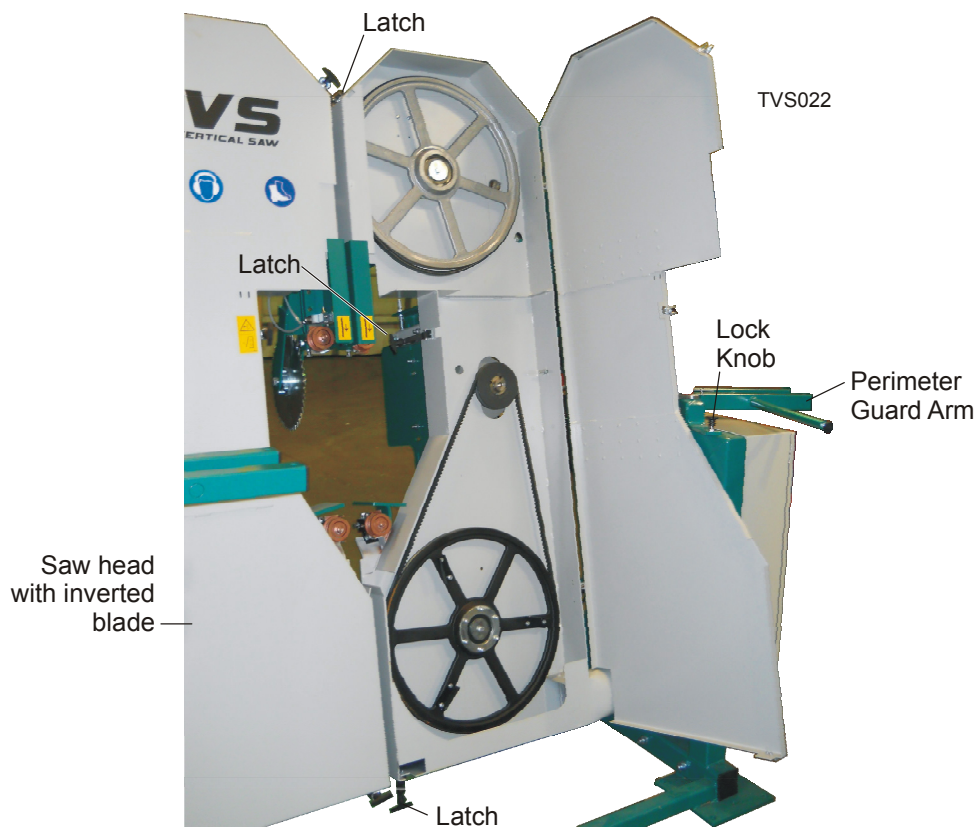


FIG. 2-4

Install a new blade around the two blade wheels so that the teeth located between the blade guide assemblies point to the infeed table. Make sure the teeth are pointing the correct direction.

2

Operation

Replacing The Blades

Position 1 1/4" wide blades on the wheels so the gullet is 1/8" (3.0 mm) out from the front edge of the wheel.

Close the blade housing cover.

Tension the blade as described in the following instructions.

NOTE: Before installing the blade on the left saw head, invert the blade ([See Section 4.3 Inverting the Blade in "Blade Handbook"](#)).

2.5 Tensioning The Blade

See **Figure 2-5. Rev. A8.00+**: Place the provided handle in the blade tensioner socket and secure with a screw. Set the tensioner valve to position “1”. Move the tensioner handle up and down to tension the blade. Depending on the installed blade type, tension the blade to the value shown on the decal located below the blade tension valve. Values “F” and “E” are: blade thickness and blade width. Check the blade tension occasionally when adjusting the cant control or while cutting and adjust if necessary. As the blade and belts heat up and stretch, the blade tension will change. Also, ambient temperature changes can cause tension to change. To release the blade tension set the tensioner valve to “0” position.

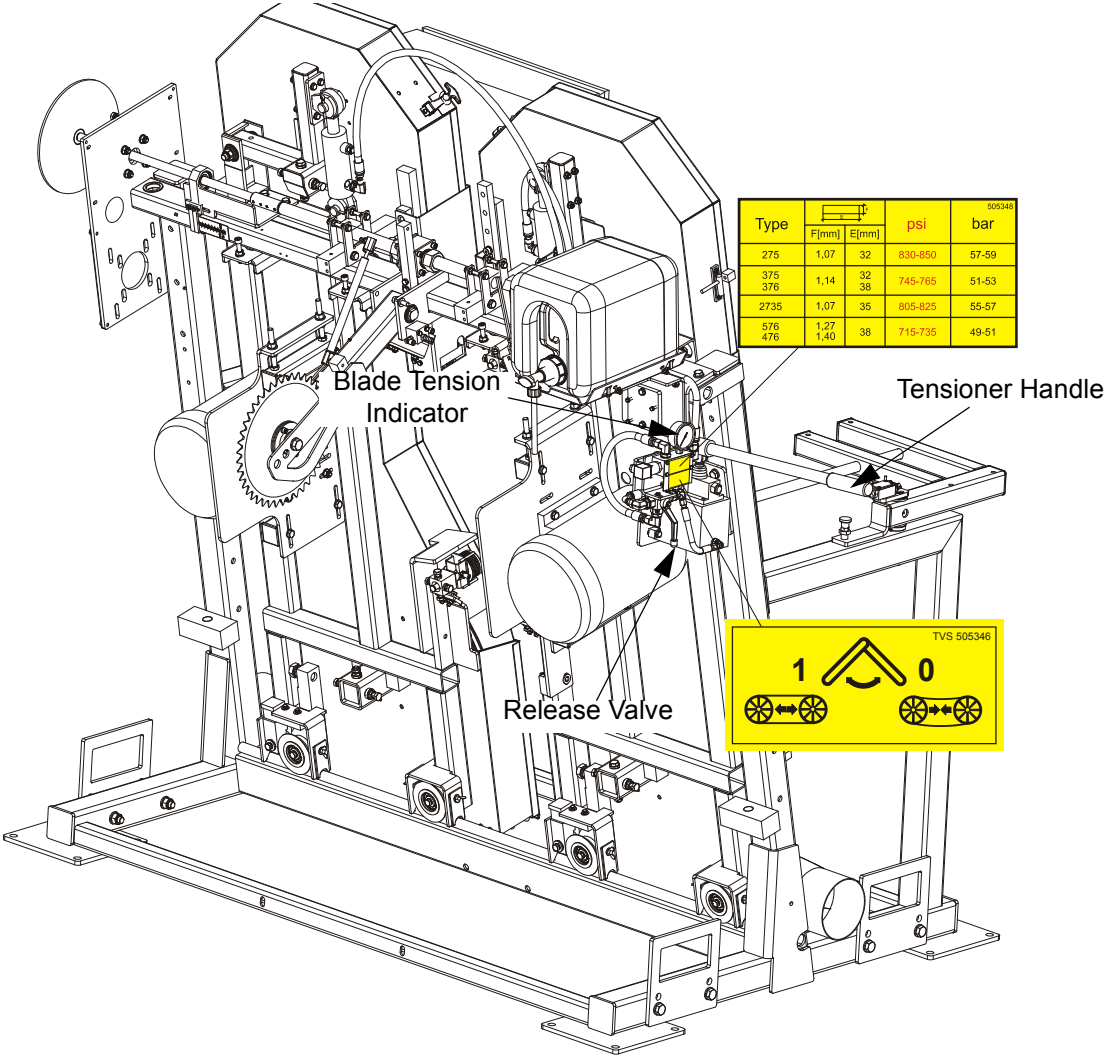


FIG. 2-5 REV. A8.00+

See **Figure 2-6. Rev. A1.00 - A7.00**: Place the provided handle on the blade tensioner

2

Operation

Tensioning The Blade

shaft. Turn the handle clockwise until the outside face of the rubber spring washer is even with the indicator (see the figure below). Check the blade tension occasionally when adjusting the cant control or while cutting and adjust if necessary. As the blade and belts heat up and stretch, the blade tension will change. Also, ambient temperature changes can cause tension to change.

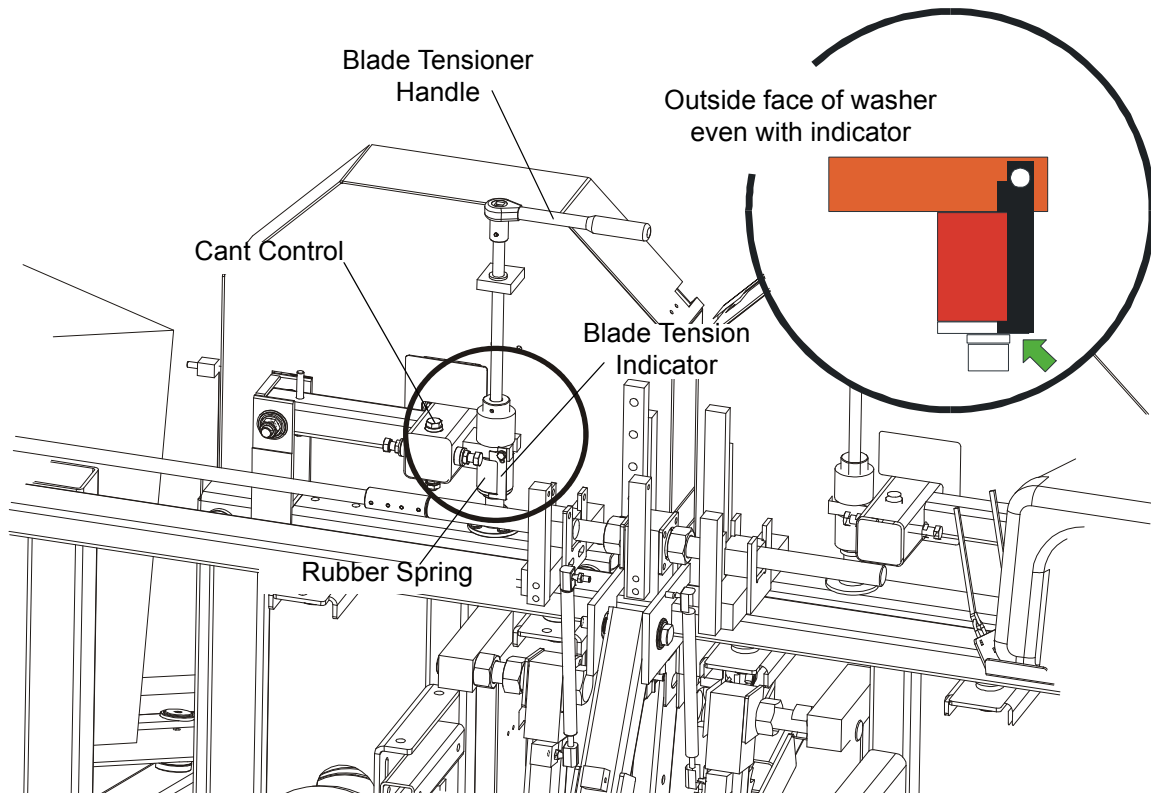


FIG. 2-6 REV. A1.00 - A7.00



CAUTION! Always release the blade tension when the machine is not in use.

2.6 Tracking The Blade

1. Open the blade housing cover of each saw head.
2. Manually spin one of the blade wheels until the blade positions itself on the blade wheels.
3. Check that the blade is properly positioned on the blade wheels.

See Figure 2-7. 1 1/4" wide blades should be placed on the blade wheels so that the gullet is 1/8" (3.0 mm) out from the front edge of the wheel.

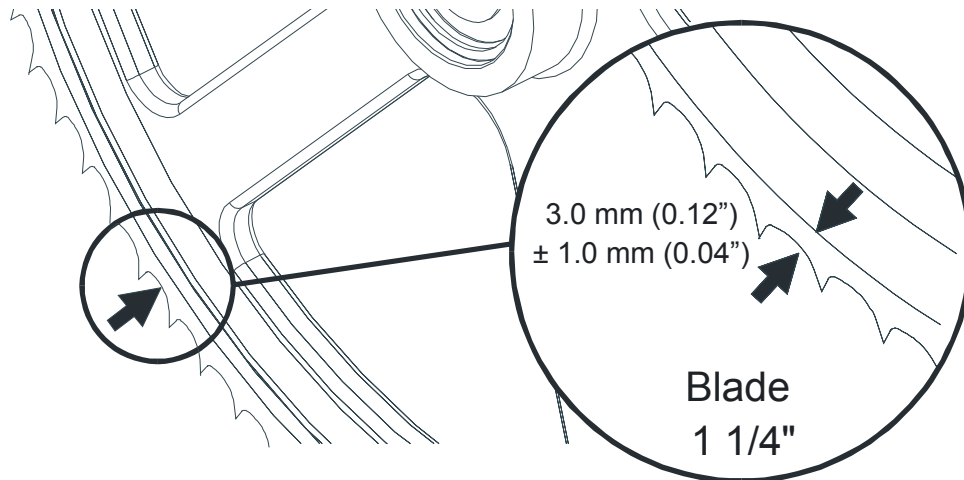


FIG. 2-7

4. Use the cant adjustment bolt to adjust where 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.

5. Adjust the blade tension if necessary to compensate for any changes that may have occurred while adjusting the cant control.
6. Close the blade housing cover.



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

NOTE: After aligning the blade on the wheels, always check the blade guide spacing and location.

2.7 Machine Start

⚠ DANGER! Before starting the machine, perform these steps to avoid injury and/or damage to the equipment:

- Close the blade housing covers and replace any guards removed for service.
- Check the feed track and remove all loose objects such as tools, wood, etc.
- Check that the blades are properly tensioned.
- Make sure all persons are a safe distance from the machine.
- Check that the emergency stops are released.

NOTE: The machine will not start if either of the emergency stops is pressed.

Before starting the saw heads, check that the main power switch servicing the machine is on.

See Figure 2-8. Start the blade motors. To start, press the POWER-ON button and push the Blade START button on the control panel (see the figure below). The motors should start and the blades should start spinning.

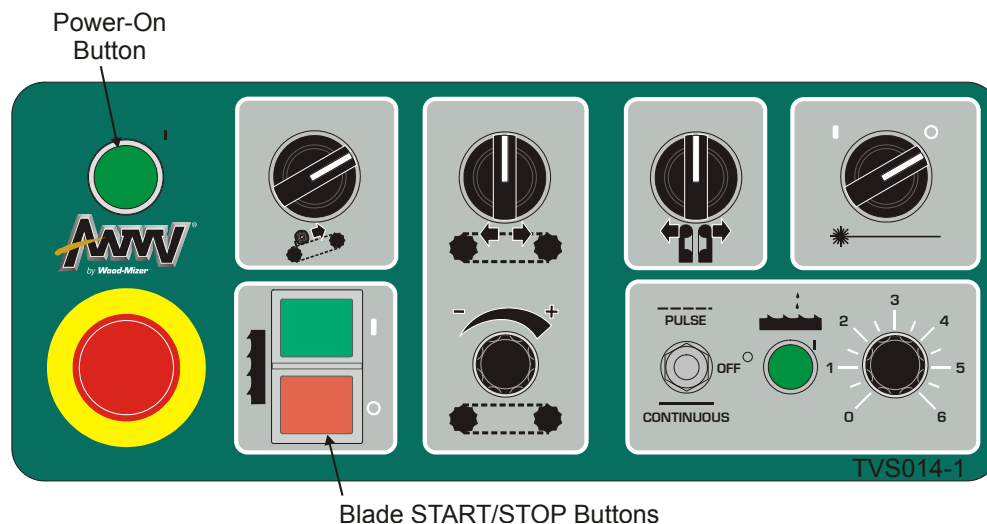


FIG. 2-8 REV. A5.00+

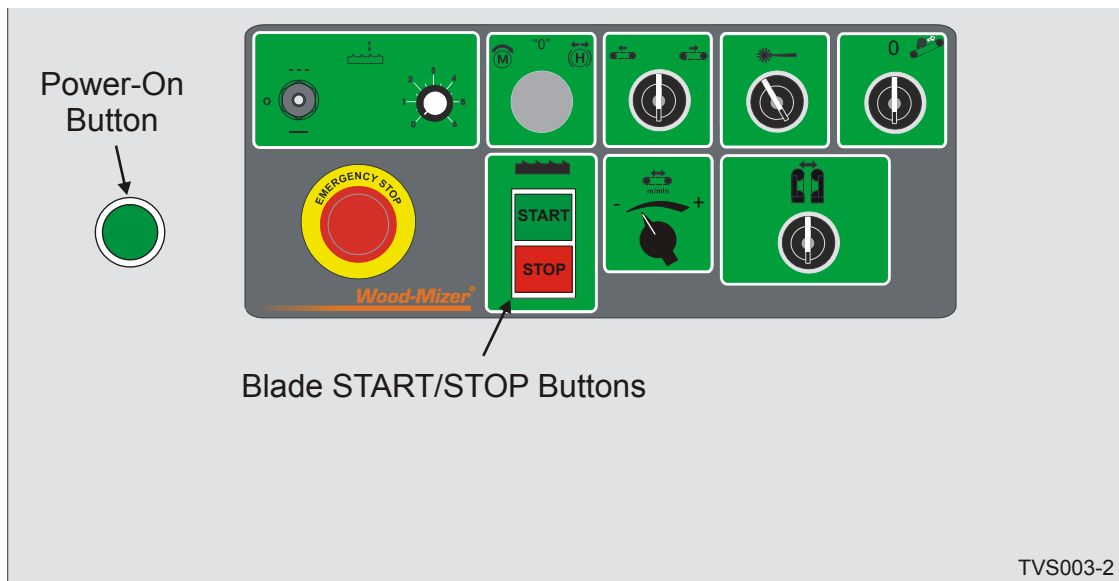


FIG. 2-8 REV. A1.00 - A4.01

To stop the blade motors, push the Blade Stop button shown in the figure above. The blade motors also may be stopped by pushing either of the emergency stop buttons.

If any of the emergency switches has been used to stop the blade motors, turn the switch clockwise before restarting the saw heads. The saw heads cannot be restarted until all the emergency stop buttons are released.

See Figure 2-9. After the saw heads have been successfully started, start the feed track motor. To start the feed track motor, turn the Feed Track Switch to the right to start the track forward, turn the switch to the left to start the track backward. Return the Feed Track

2 Operation

Machine Start

Switch to the "0" position to stop the track.

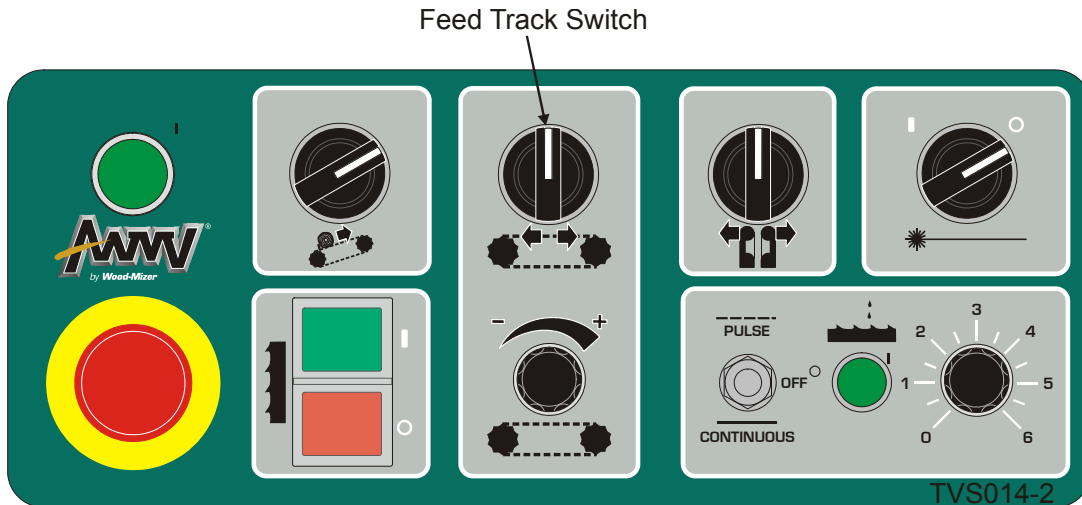


FIG. 2-9 REV. A5.00+

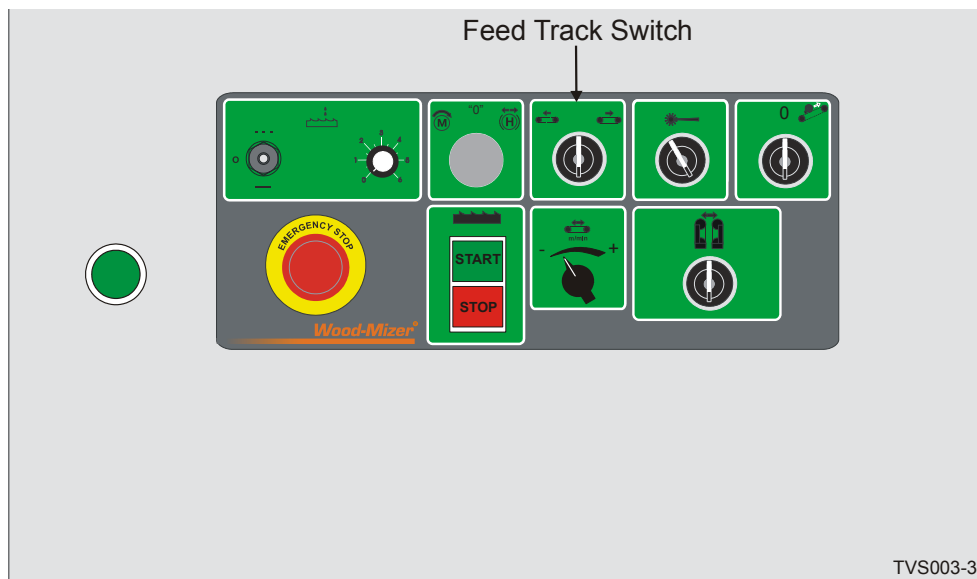
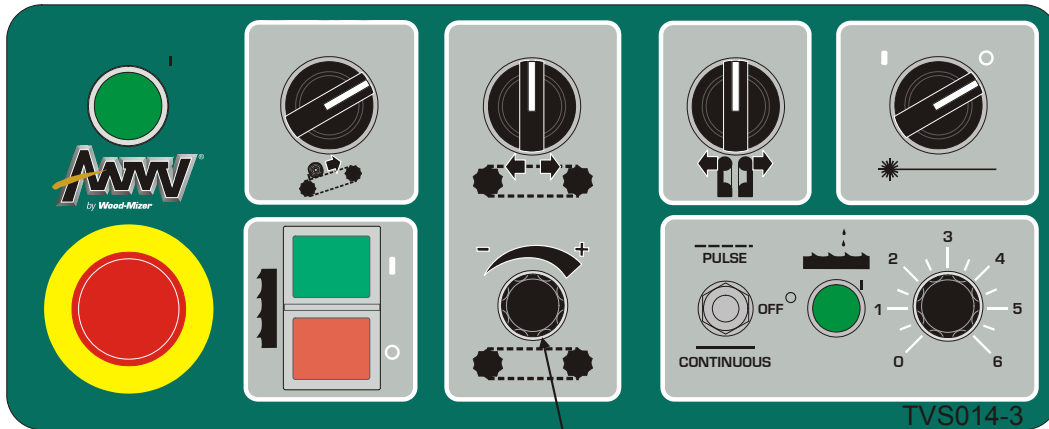


FIG. 2-9 REV. A1.00 - A4.01

The feed track can also be stopped by pressing one of the emergency stop buttons. Pressing the emergency stop will also stop the blade motor.

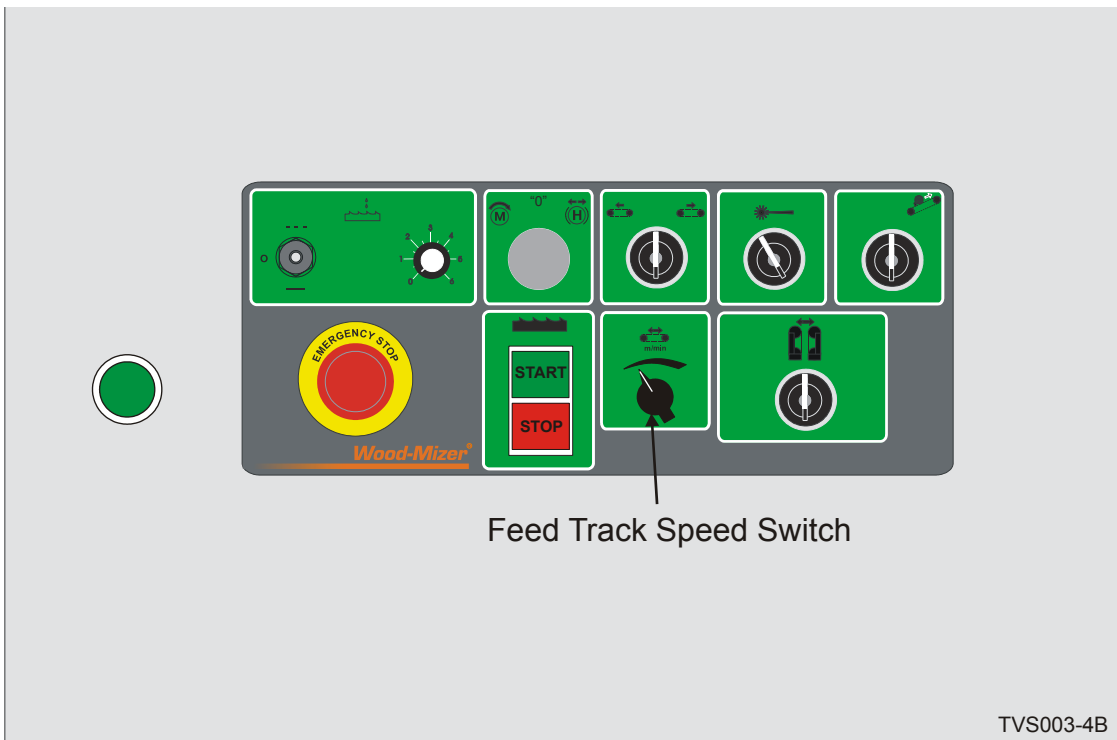
NOTE: The feed track cannot be started, if the blade motor is not started.

See **Figure 2-10**. The speed at which the feed track moves is adjustable. The feed track speed switch, located on the control panel, allows the operator to adjust the feed rate from 0 to approx. 82 ft. (25 m) per minute.



Feed Track Speed Switch

FIG. 2-10 REV. A5.00+



Feed Track Speed Switch

TVS003-4B

FIG. 2-10 REV. A1.00 - A4.01

Turn the switch clockwise to increase the feed rate, counterclockwise to slow the feed rate down.

Factors that will determine what feed rate you can use include:

- Log diameter.
- Hardness of material to be cut. Some woods that are seasoned or naturally very hard will require slower feed rates.
- Sharpness of blades. Dull or improperly sharpened blades will require slower feed rates than sharp and properly maintained blades.
- Off-bearing capability. Your ability to feed will also determine what feed rate you can use.

2.8 Cutting Width Setting

1. Install a blade if needed and check for correct blade tension. ([See Section 2.5 Tensioning The Blade](#))
2. Set the saw heads at the desired width using the handle and width scale shown in the figure below.

See Figure 2-11. To move the saw heads in, turn the handle left. To move saw heads out, turn the handle right.

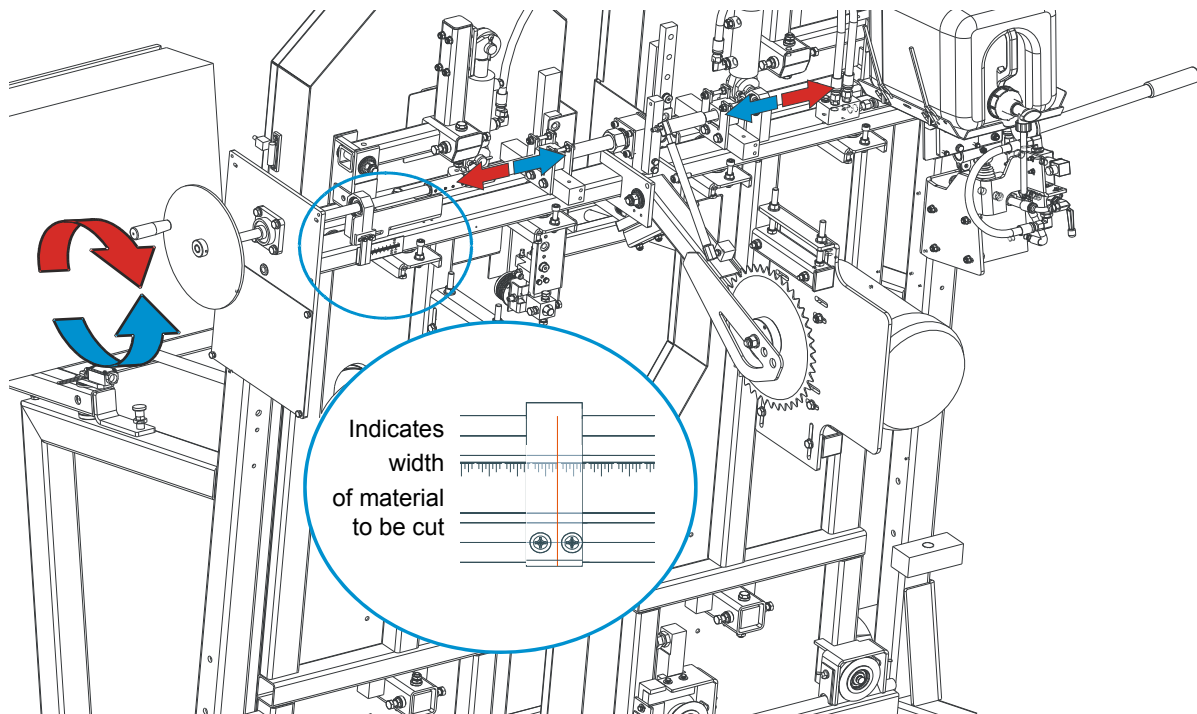


FIG. 2-11

2.9 The LubeMizer System

Lube Mizer system is used to lubricate the blade during sawing. The LubeMizer applies lubricant on both sides of the blade as you are sawing to reduce resin buildup on the blade. The LubeMizer controls allow you to adjust the volume of lubricant for various wood types. The LubeMizer option uses less volume than the standard Water Lube, helping to reduce lubricant/sawdust mess and waste, and to prevent stained boards.

Usual flow will be between 0.7-2.5 gallons (2.6 - 9.5 liters) per hour.

1. To start the self-priming system:

- Open the water lube bottle valve all the way.
- Turn the lube control switch to PULSE¹ and set the lube dial to the desired flow rate. Use the lowest setting that successfully eliminates pitch buildup.

NOTE: Softwood applications will usually require more lubricant than hardwood applications.

2. Cut the log.

3. To shut off the lube:

- Turn the lube control switch to OFF.
- Close the lube bottle valve all the way.

4. If you are sawing or storing the machine in freezing temperatures, use windshield washer fluid to help prevent the water from freezing.



CAUTION! Add windshield washer fluid to the water tank and prime as recommended when sawing or storing the machine in below-freezing temperatures. Use windshield washer fluid with a freezing point of at least -20°F (-29°C). Failure to do so will cause damage to the LubeMizer system may result.

Lube Additives

For further benefits, add one 12oz. bottle of Wood-Mizer Lube Additive to a 5 gallon jug of water. Wood-Mizer Lube Additive enables some previously impossible timbers to be cut

¹Pulse is suitable for most cutting applications. CONTINUOUS delivers a steady stream of lubricant and should be used only for heavy pitch buildup or occasional blade cleaning.

by significantly reducing resin buildup on the blade. It helps to reduce heat buildup, wavy cuts, and blade noise. This biodegradable and environmentally friendly pre-mix includes a water softener additive, so it works with hard water.



WARNING! Use ONLY water, Wood-Mizer Lube Additive or windshield washer fluid with the water lube accessory. Never use flammable fuels or liquids such as diesel fuel. If these types of liquids are necessary to clean the blade, remove it and clean with a rag. Failure to do so can damage the equipment and may result in serious injury or death.

See Table 2-1. Use windshield washer fluid as an antifreeze to prevent the water from freezing and damaging the LubeMizer system. See the chart below for recommended mixture levels depending on the temperature where you are sawing or storing the machine.

Run the LubeMizer system on the “Continuous” setting for 30 seconds after adding the windshield washer fluid to the system. This will insure the water throughout the system will not freeze and damage the check valves.



CAUTION! Add windshield washer fluid to the water tank and prime as recommended when sawing or storing the machine in below-freezing temperatures. Use windshield washer fluid with a freezing point of at least -20°F (-29°C). Failure to do so may cause damage to the LubeMizer system.

Ratio WWF ¹ :Water to fill 5 Gal. tank	Freezing Point Of Solution	
	(°F)	(°C)
5:0	-22	-30
4:1	-3	-19
3:2	7	-14
2.5:2.5	13	-10
1:4	24	-4
0:5	32	0

TABLE 2-1

¹ WWF = Windshield Washer Fluid with -20°F (-29°C) freezing point.

2.10 Operation Procedure

1. Install a blade if necessary.



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.

2. Close the blade housing cover.
3. Tension the blade as described in [See Section 2.5 Tensioning The Blade.](#)
4. Slowly spin the blade wheel by hand.



WARNING! Use extreme caution when spinning the blade wheel by hand. Make sure hands are clear of blade and wheel spokes before spinning. Failure to do so may result in serious injury.

5. Check alignment of the blade on the blade wheels and blade guides. Adjust as necessary.
6. Set the cutting width as desired.



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

7. Perform pre-start check. [See Section 2.3 TVS Setup](#)
8. Start the blade motors.
9. Turn on the Lube Mizer system.
10. Using the feed track speed switch, set the feed rate as desired.



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



WARNING! Always wear eye, ear, respiration and foot protection when operating or servicing your machine.

11. Place the test material on the feed track and start the feed track.



DANGER! Always be aware of and take proper protective measures against rotating shafts, pulleys, fans, etc. Always stay a safe distance from rotating members and make sure that loose clothing or long hair does not engage rotating members resulting in possible injury.

12. Shut off the blades and feed track. Measure the finished material and adjust the saw heads in or out as necessary. Repeat with the test material until the desired finished dimension is obtained.

13. Restart the blade and feed track.

14. Place material on the infeed table.

15. Monitor blade tension as operation continues. Adjust blade tension if required.

16. If material jam occurs, stop the blade motor and feed track.



WARNING! Allow blade to come to a complete stop before servicing. Failure to do so will result in serious injury.

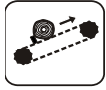
17. After operation is complete, shut off the blade motor and feed track.

18. Release blade tension, if you are done sawing for the day.



CAUTION! Remove tension from the blade when the machine is not in use.

2.11 Loading Ramp Operation



Use the switch located on the operator panel to turn on/off the log ramp.



CAUTION! Minimum log length which can be handled by the loading ramp is 27" (700 mm). Log must be placed so, that the limit switch would be activated when the log will reach the end of the ramp.

See Figure 2-12.

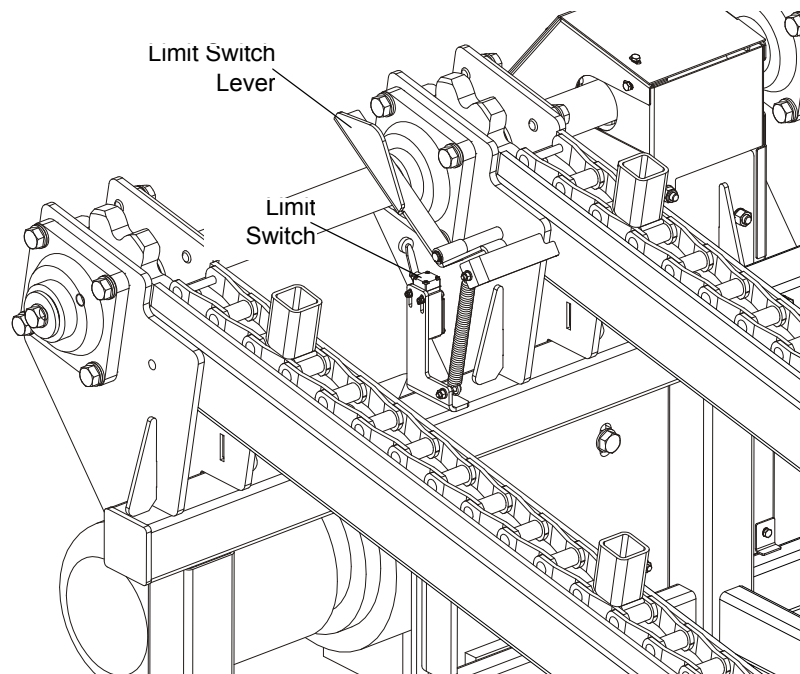


FIG. 2-12



DANGER! If there are many logs on the ramp, be extremely careful when taking out the logs. First take the upper logs and be careful not to release the limit switch which will start the feed and may cause the operator crush.

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



CAUTION! Never drop logs onto the log deck from a height bigger than 8" (200 mm) when loading. Failure to do so may result in damage to the log deck.

2.12 Cross Transfer Deck Operation

See **Figure 2-13**. Use the START/STOP button located on the electric box to turn on/off the transfer deck. If there is any danger to persons or equipment, press the emergency stop button. It will stop the transfer deck and TVS resaw. Turn the emergency stop clockwise to release the stop. The machine will not restart until the emergency stop is released.

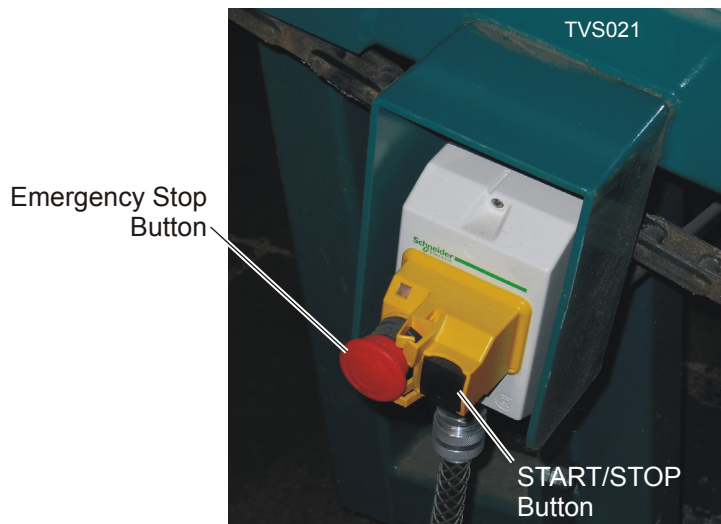

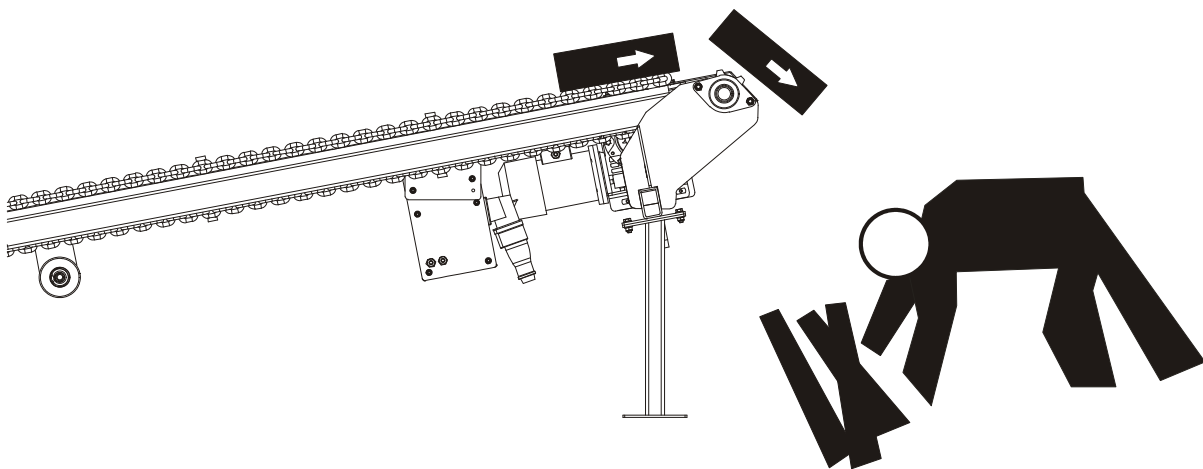


FIG. 2-13

 **DANGER!** Be extremely careful when picking up slabs from the ground. Operator may be struck by falling slabs from the deck which may result in serious injury or death.



SECTION 3 NETWORKS OPERATION

3.1 TVS Networks (Optional - U.S. Version)

The Networks option allows you to program eight positions for the blades and adjust to those positions by pushing a single button. For Networks to be operational, the power to the machine must be on and the green power indicator on the operator control illuminated.

3.1.1 TVS Networks Start-up

See **Figure 3-2**. When the power to the machine is turned on, the Networks display flashes the company name first. After a short delay, you may see an Error #203 displayed. This is normal during start-up as the display waits for the PLC to boot up. Once communication with the PLC is established, the display will return to the first screen and then show the PLC and Display software versions. This information should be supplied to Customer Service when requesting service.

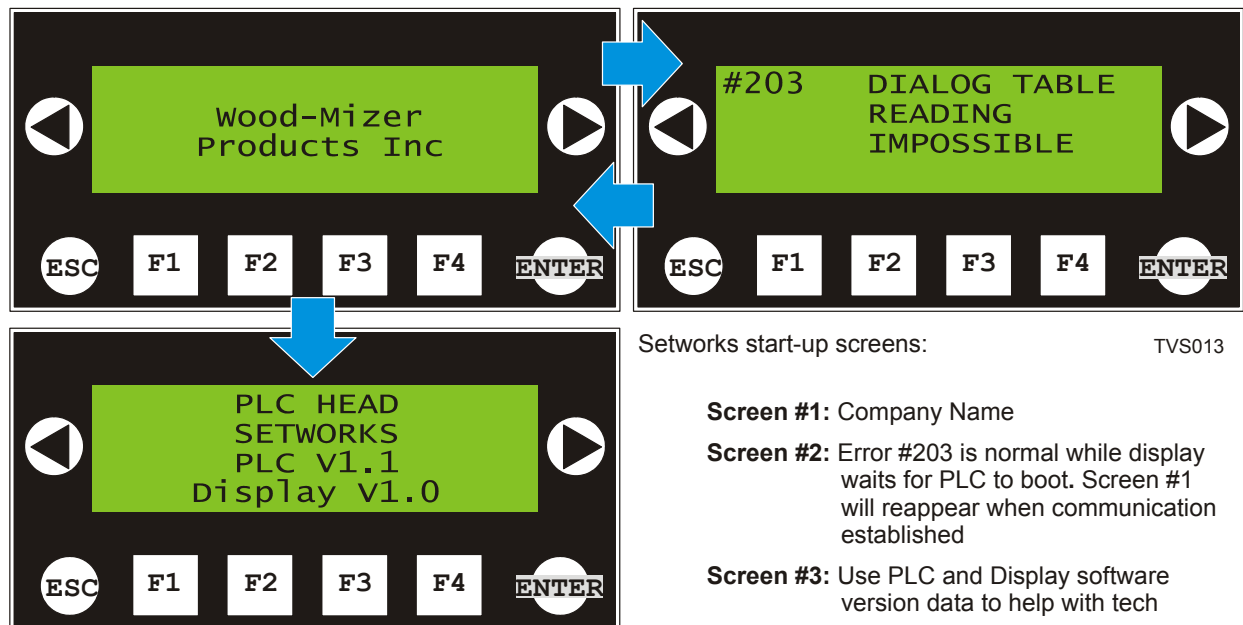


FIG. 3-2

See Figure 3-3. After the Networks display scrolls through the start-up screens, the Main screen will be displayed. Depending on how the control is programmed, the Main screen will display in one of three unit options: Imperial Fractions, Imperial Decimals or Metric.

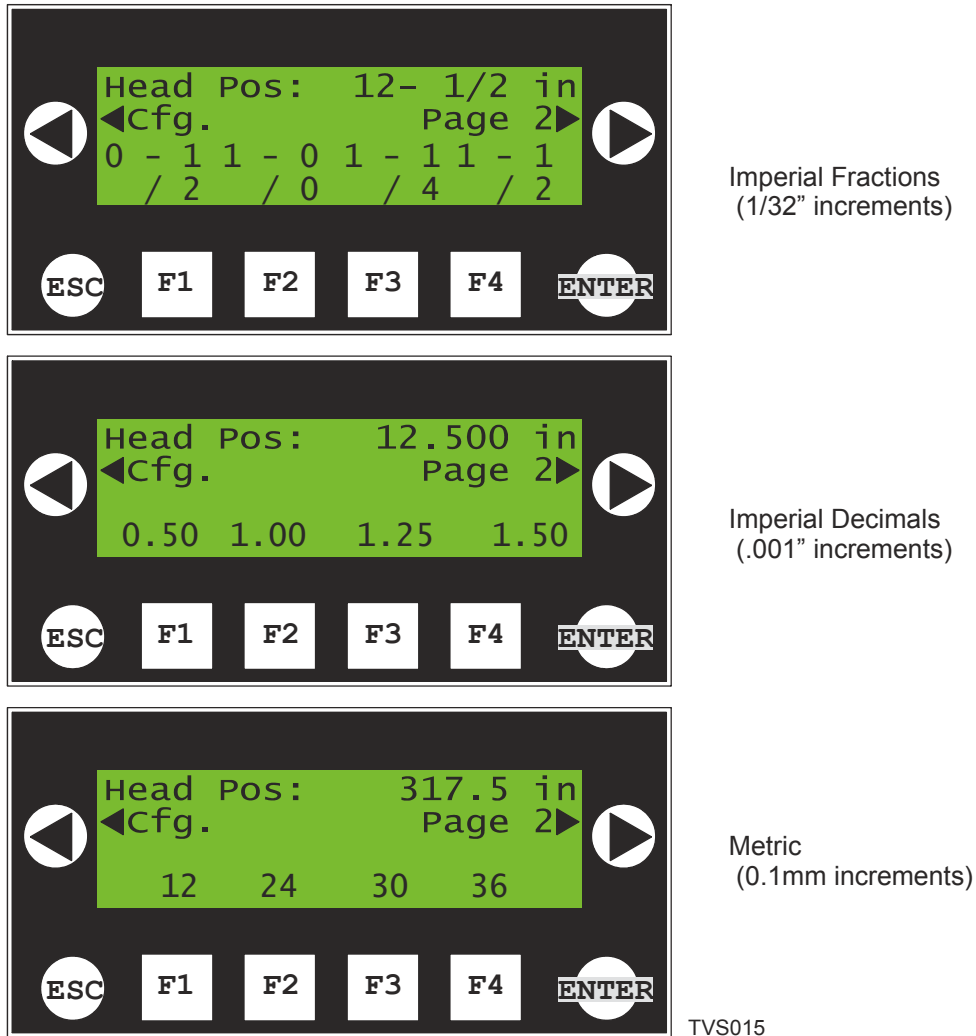


FIG. 3-3

The Main screen displays the position of the heads (distance between blades) and the first set of four Presets. Push the corresponding 'F' button to select a preset. The saw heads will move until the blades are that distance apart. Push the right arrow labeled 'Page 2' to scroll to the second set of four Presets.

NOTE: If the heads are required to move in to reach the desired preset value, they will travel in past the preset target and then move out to the target. This compensates for backlash in the mechanical system.

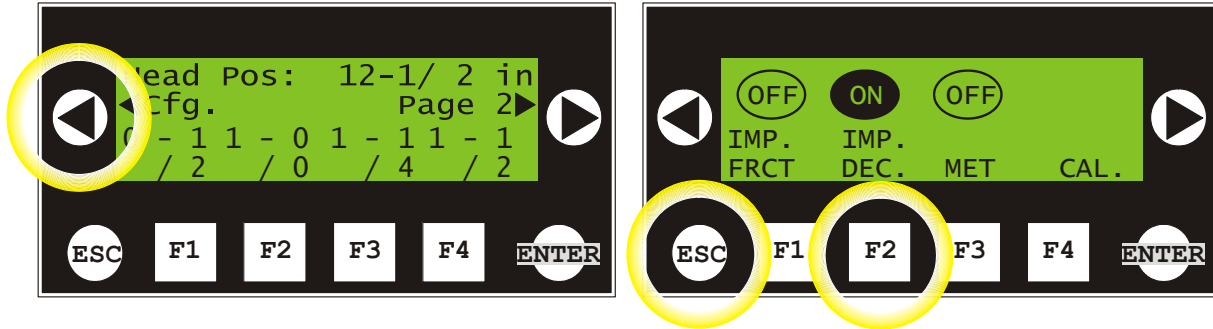
3

Setworks Operation

TVS Networks (Optional - U.S. Version)

3.1.4 Select Unit Of Measure

See Figure 3-5. Push the left arrow labeled 'Cfg.' to enter the Configuration menu. Use the F1, F2 or F3 buttons to select the unit of measure you wish to use. The units currently selected will be labeled 'ON'. Push 'ESC' to return to the main screen.



Push left arrow labeled 'Cfg.'

Push 'F1' for Imperial Fractions, 'F2' for Imperial Decimals or 'F3' for Metric units. The unit selected will show 'ON' above the button label. Push ESC to return to the main screen.

TVS016

FIG. 3-5

3.1.6 Calibrate Head Position

After the Networks option is installed or if inaccurate position of the heads is observed, calibration of the Networks control with the saw head position may be required.

Adjust the head positions so the blades are an easy-to-measure distance from each other (as measured from teeth set toward the center of the saw). **NOTE:** Because the Networks control calibration values are limited to integers between 0 and 9, the distance between the blades should be set less than 9.999 inches in Imperial units or 999.9mm in Metric units. When adjusting the head positions, be sure to move the heads in past the target position and then out to compensate for any backlash in the mechanical system.

See Figure 3-7. Push the left arrow labeled 'Cfg.' to enter the Configuration menu. Push the F4 button to enter the Calibration menu. If using Imperial Fractions or Imperial Decimal units, the Calibration menu will display in inch increments. If using Metric units, the menu will display increments in millimeters.

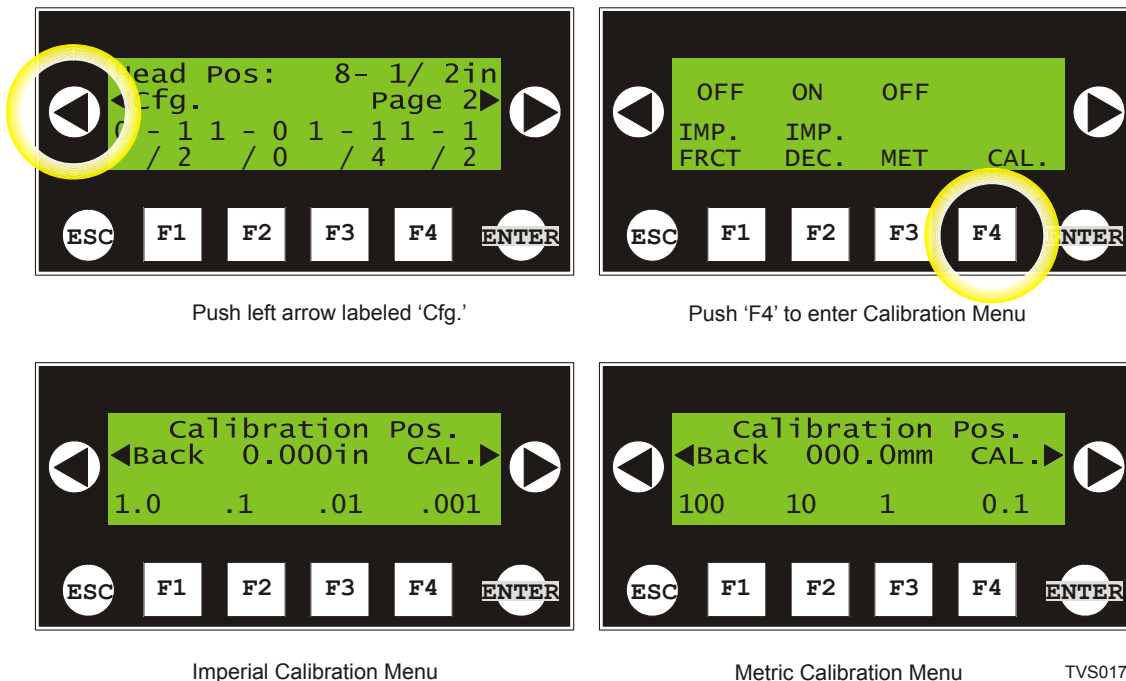


FIG. 3-7

Use the F1 - F4 buttons to scroll each value as desired. When the value reaches '9' pushing the button again will return the value to '0'. Adjust the values until the Calibration Position equals the actual measurement between the blades.

To save the Calibration Position setting, push the right arrow button labeled 'CAL.' To exit without changing the calibration, push the left 'BACK' arrow. Push the Back button to return to the Configuration screen or the 'ESC' button to return to the Main screen.

3

Networks Operation

TVS Networks (Optional - U.S. Version)

3.1.8 Adjust Preset Values

See **Figure 3-9**. To enter different values for each preset, push the right arrow button labeled 'Page 2' from the Main screen. Push the right arrow again to enter the presets Setup menu. Push the left arrow 'Back' button to return to the Main screen.

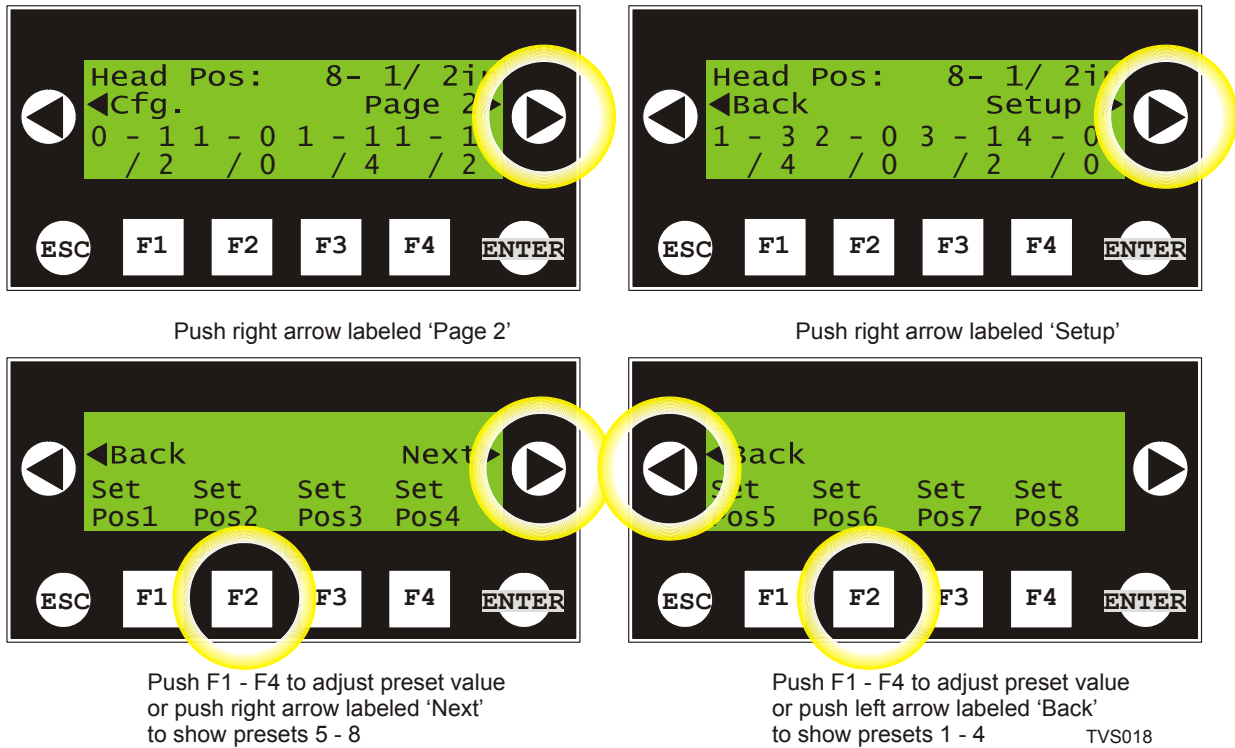
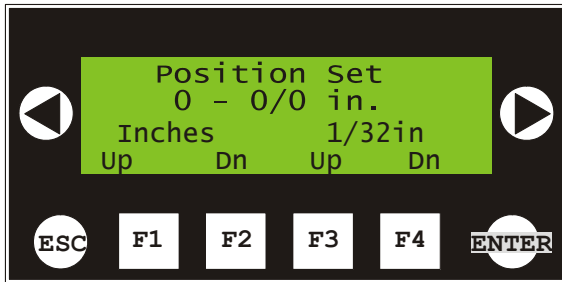


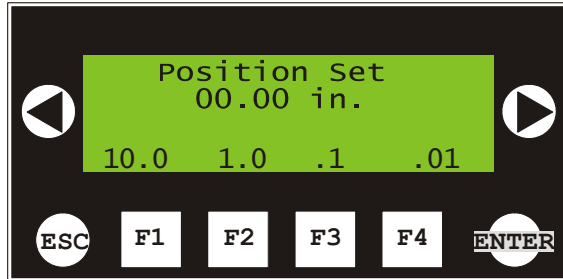
FIG. 3-9

See Figure 3-10. In the Setup menu, select the corresponding 'F' button for the value you wish to set. Push the right arrow 'Next' button to scroll to Presets 5-8. Once you select a Preset to change, the Position Set menu will appear.

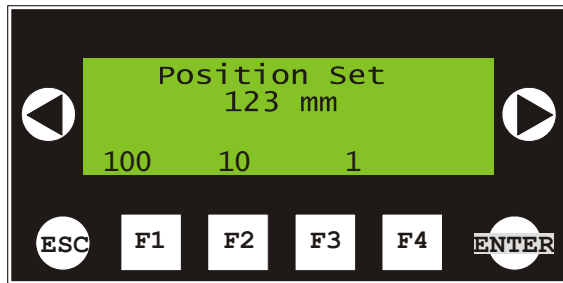


Imperial Fractions:
Use F1 & F2 to adjust inches up or down;
Use F3 & F4 to adjust fraction up or down

TVS019



Imperial Decimals:
Use F1 to adjust tens value; F2 to adjust ones;
F3 to adjust tenths; F4 to adjust hundredths



Metric:
Use F1 to adjust hundreds value; F2 to adjust tens;
F3 to adjust ones

FIG. 3-10

Imperial Fractions: Use the F1 and F2 buttons to scroll the whole inch by a value of one up or down each time the corresponding button is pushed. Use F3 and F4 to adjust the fraction value by 1/32 inch up or down each time the corresponding button is pushed.

Example: To set the value to 1-1/4, press F1 once and F3 eight times.

Imperial Decimals: Use the F1 button to scroll the tens value in increments of 1, F2 to scroll the ones value, F3 to scroll the tenths and F4 to scroll the hundredths.

Example: To set the value to 1.25, press F2 once, F3 twice and F4 five times.

Metric: Use the F1 button to scroll the hundreds value in increments of 1, F2 to scroll the tens value, and F3 to scroll the ones.

Example: To set the value to 25mm, press F2 twice and F3 five times.

3

Setworks Operation

TVS Setworks (Optional - U.S. Version)

Push 'ENTER' to save the preset value and return to the Setup menu. Push the 'Back' button to scroll back through the menus or push 'ESC' to return to the Main screen.

3.2 TVS Networks (Optional - European Version)

3.2.11 TVS Networks Control Panel

See Figure 3-12.

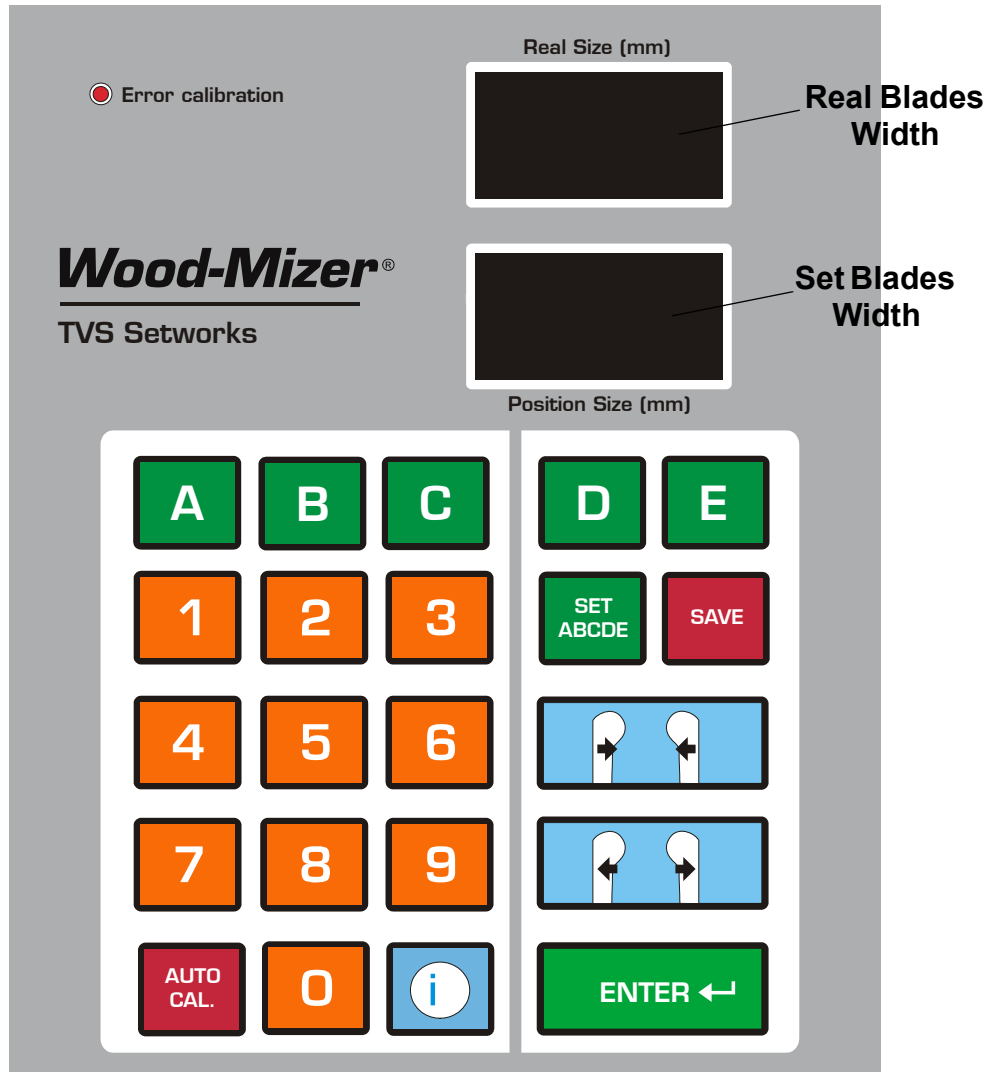


FIG. 3-12

A A, B, C, D, E - Heads width memory buttons.

SET ABCDE SET ABCDE - Sets the blades width value to each memory button.

3 Networks Operation

TVS Networks (Optional - European Version)




Save - Saves parameters determined by operator.



Blades width manual setting buttons (in/out).




ENTER  enters the value to the memory



Auto Mode – Adjustment of the SW-08 automatic calibration parameters. Used for initial calibration and re-calibration if dimensional error occur.

3.2.13 Start-up settings of the controller

1. Setting the input divider (entered only once, at the first start-up)

- Switch on the controller by turning the main switch to ON position.
- Press the green POWER-ON button.
- When the text “TVS-01” appears on the display, press and hold  , until the divider value will appear on the lower right display.
- Enter the correct value of the divider (for TVS the divider value should be 5).

See Figure 3-14.

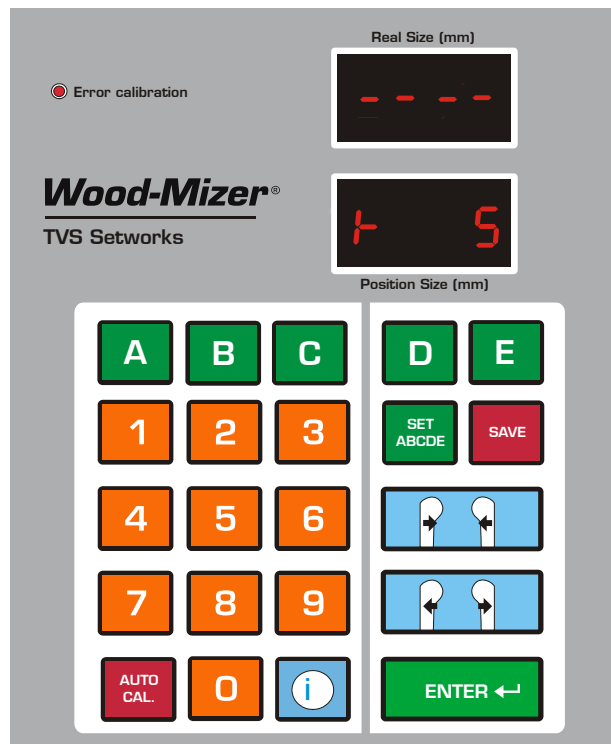




FIG. 3-14

- Press  to save the entered divider value.

2. Auto-calibration

This function should also be used in case of: replacement of the screw of the blades width setting system, motor or after lubrication of the screws and other moving elements of the heads or when significant cutting variances are observed;

- Switch on the controller and wait until the text “TVS-01” disappears.
- Press the green POWER-ON button.
- Set the head width to 5” (125 mm).
- Press and hold down . After a while - the text “Auto CALL” will appear on the displays. The controller is ready for auto-calibration.

See Figure 3-15.

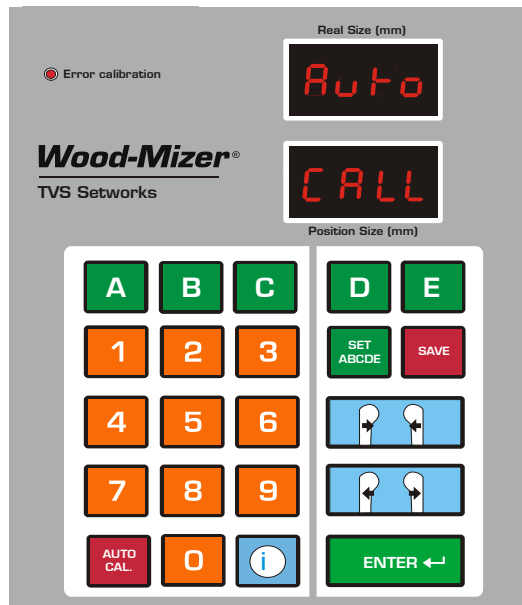





FIG. 3-15


- Press  again, the controller successively performs some movements of the heads. After performing the last movement, measure and enter the real head width using the keypad. Confirm by pressing .

- The end of the function is signaled and the normal mode of operation is restored.




NOTE: If, during the movement, the limit switch is activated, set the different head width and repeat the auto-correction function.

3.2.16 Memory Buttons (A, B, C, D, E)

After switching on, the TVS-01 inscription appears on the display, and the setworks is ready for operation within a few seconds or after  is pressed.

- To set the saw heads to any width, enter the heads width value and press . The saw heads will automatically move to the entered width value.

You can store up to 5 heads width values using the memory buttons.

- To store the width value using the memory button, press and hold . On the upper display the “ABC” will appear. Press the memory button (A, B, C, D or E), enter the width value and confirm by pressing . Perform the same procedure for other memory buttons. Press  to exit this function.

3 Networks Operation

TVS Networks (Optional - European Version)

See Figure 3-17.

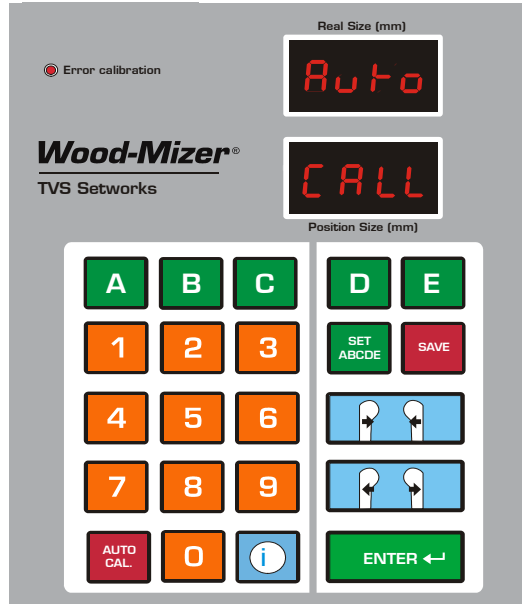


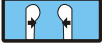


FIG. 3-17

- To use the stored value, press the required memory button and confirm by pressing . The saw heads will move to the stored width.

NOTE: If during normal operation the “Error calibration” lamp start lighting, use the  buttons to move the  saw heads manually through the position of calibration sensor (about 5” (125 mm)).

SECTION 4 MAINTENANCE

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



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

Be sure to refer to the motor manual for maintenance procedures concerning the blade motor.

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 resaw 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
B57 Blade Wheel Belts	500 hours
Blade Guide Rollers	1000 hours
Drive Belt	1250 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, rebuild them. Replace any rollers which have worn smooth or have become cone shaped. See the Parts manual for blade guide rebuild kits and complete roller assemblies.

4.3 Sawdust Removal

1. Remove the excess sawdust from the blade wheel housing sawdust chute every blade change and saw heads lower rollers.

See Figure 4-1.

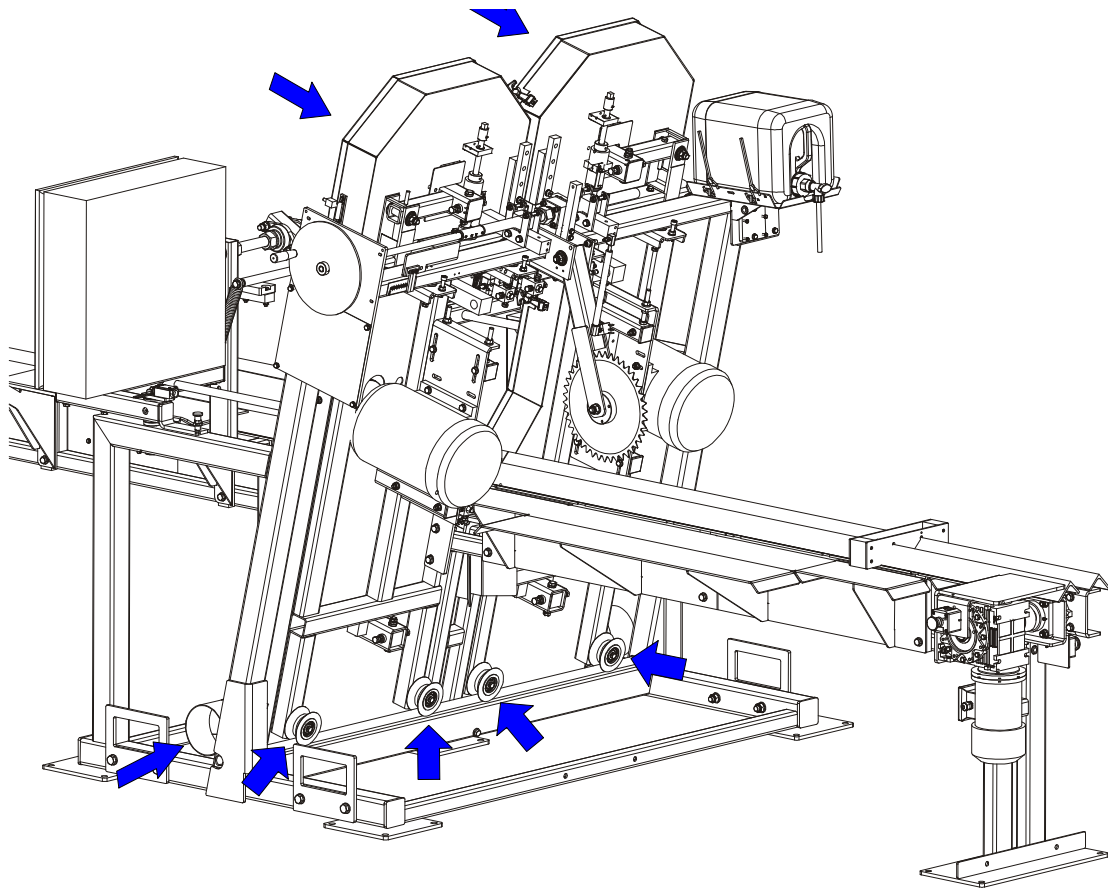


FIG. 4-1



CAUTION! Never use grease on the saw heads lower rollers as it will collect sawdust.

2. Remove the excess sawdust and slabs from the infeed and outfeed table, log deck and cross transfer deck.

4.4 Miscellaneous Lubrication

1. Apply a thin film of a lithium grease to the saw heads width adjustment screw to help prevent it from rusting.
2. Using the grease nipples, lubricate the chain drive shaft bearings, hold down roller bearing of the infeed table, saw heads width adjustment screw bearing with a lithium grease.

CAUTION! Never apply grease to the feed track chain. It causes sawdust buildup in chain links.

See Figure 4-2.

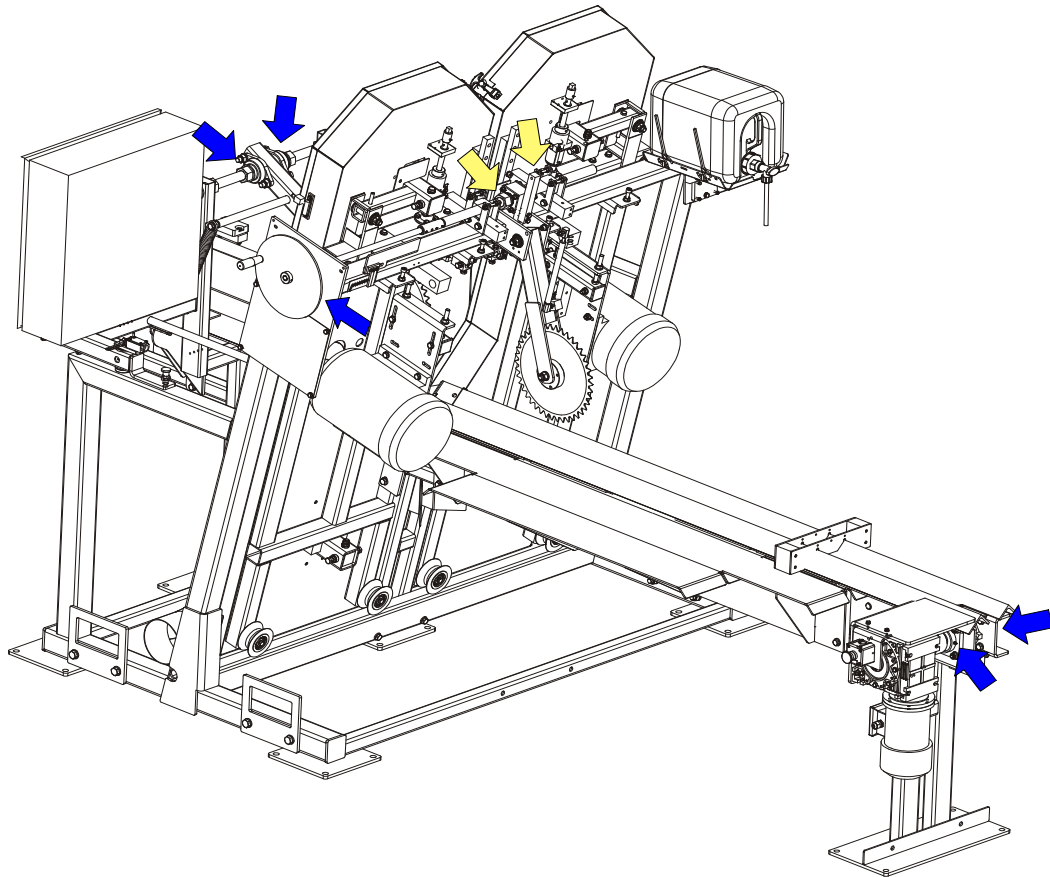


FIG. 4-2

3. If the TVS resaw is equipped with Log Deck and/or Cross Transfer Deck, lubricate the chain drive shaft bearings, using the grease nipples.

See Figure 4-3.

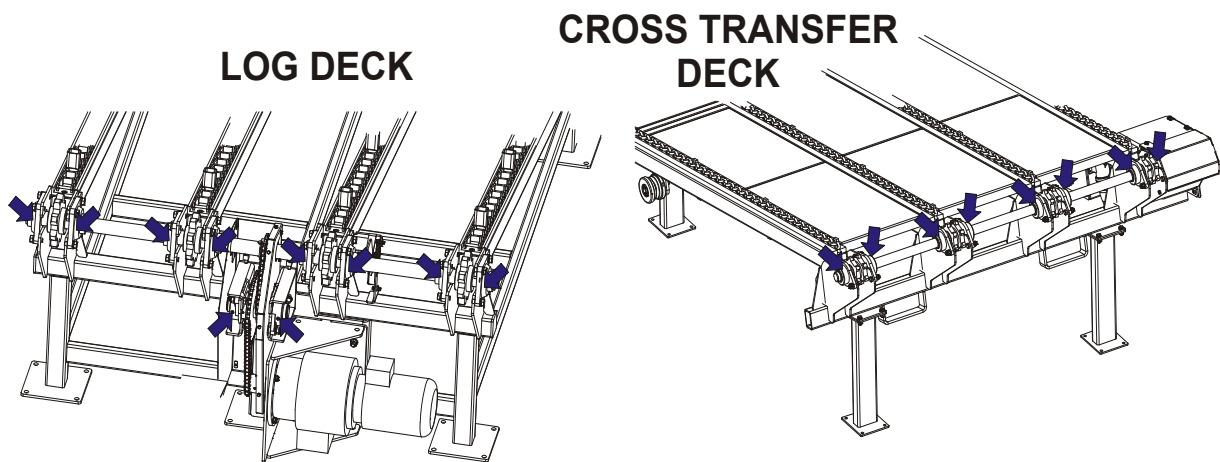


FIG. 4-3

4. 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.

4.5 Blade Tensioner

1. Grease the screws on the blade tensioner shafts with a lithium grease every fifty hours of operation, but at least once a week.

See Figure 4-4.

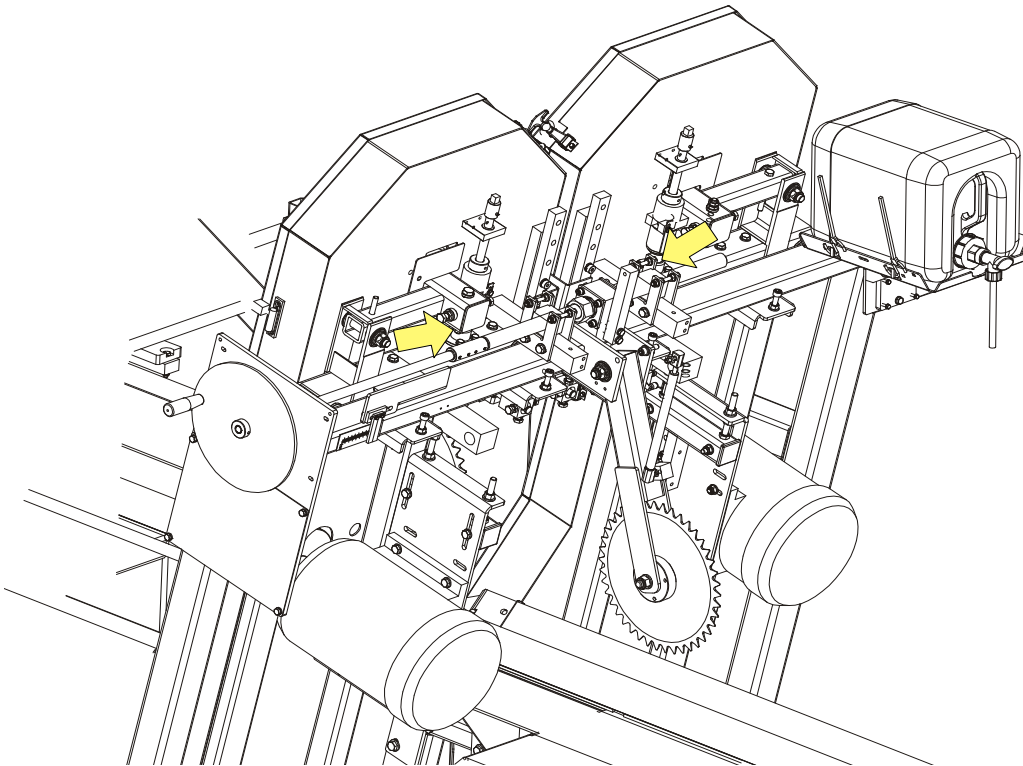


FIG. 4-4

4.6 Belts

1. Check the blade wheel belts for wear every 50 hours of operation. Replace as needed.
2. Periodically check all belts for wear. Replace any damaged or worn belts as needed.

4.7 Drive Belt Adjustment



WARNING! Do not for any reason adjust the drive belt with the motor running. Doing so may result in serious injury.



See **Table 4-2**. Check the drive belt tension after the first 20 hours, and every 50 hours thereafter. See the table below for drive belt tension specifications for your resaw.

Model	Belt Tension
TVSEC15U	5/8" (17mm) deflection with 22 lbs (10 KG) of deflection force
TVSEC25	5/8" (17mm) deflection with 22 lbs (10 KG) of deflection force

TABLE 4-2

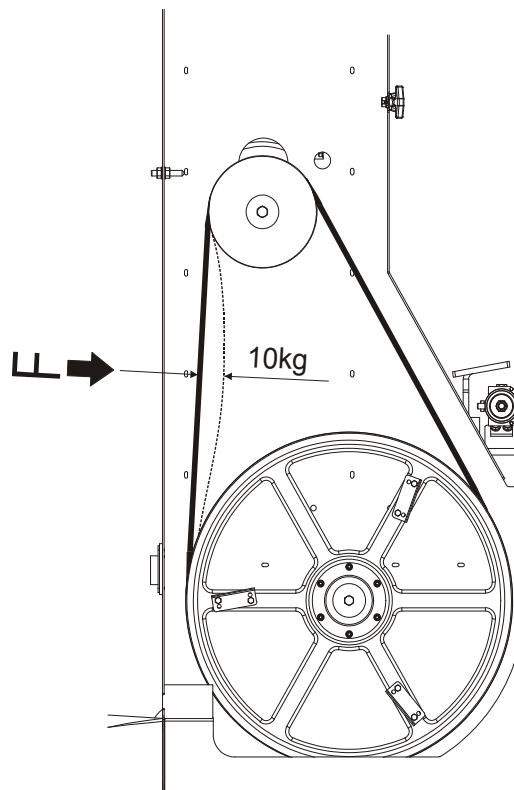


FIG. 4-4

To adjust the drive belt tension:

1. Loosen the four motor mounting bolts (see Figure 3-3).
2. Loosen the lock nuts on the adjustment bolts. Using the adjustment bolts move the motor mounting plate down to tension the drive belt, move the motor plate up to loosen the belt. Next tighten the lock nuts. **NOTE:** Be sure to adjust the bolts evenly so the motor remains in alignment.

3. Tighten the four motor mounting bolts.

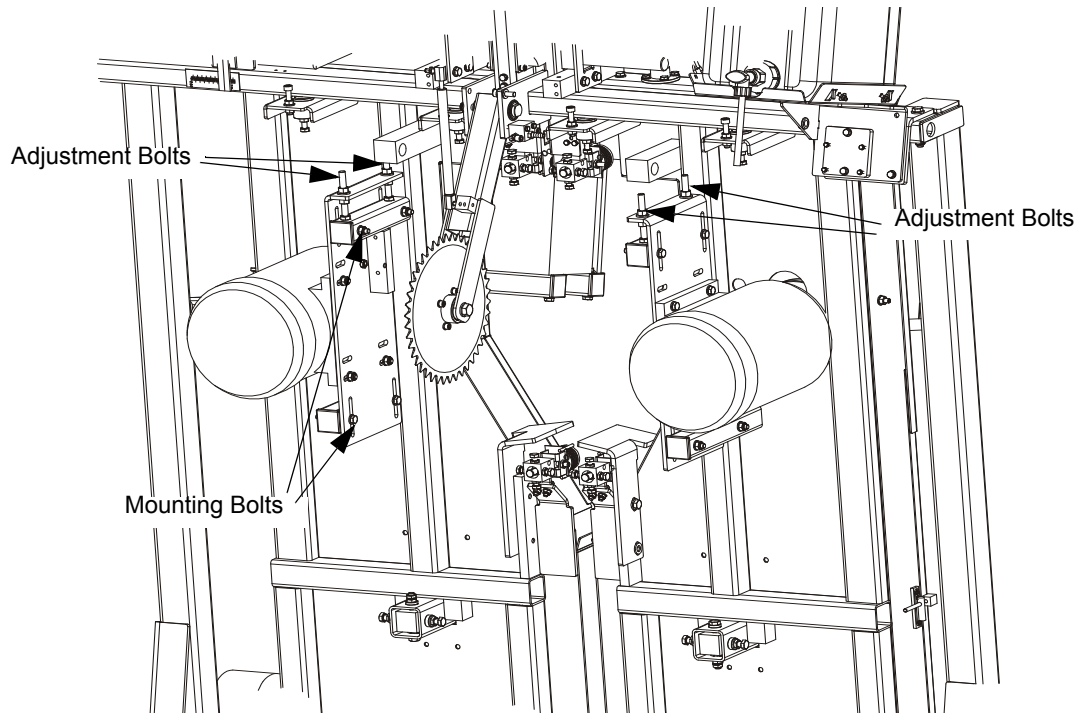


FIG. 4-4



Periodically check the belt for wear. Replace if damaged or worn.

4

Maintenance

Drive Belt Adjustment

See **Figure 4-5**. Keep the motor and drive pulleys aligned to prevent premature belt wear. To align the motor pulley to the drive pulley, loosen the mounting bolts on the motor plate and slide the motor plate in or out until it is in line with the drive pulley. After performing the alignment, make sure the drive belt tension has not been changed.

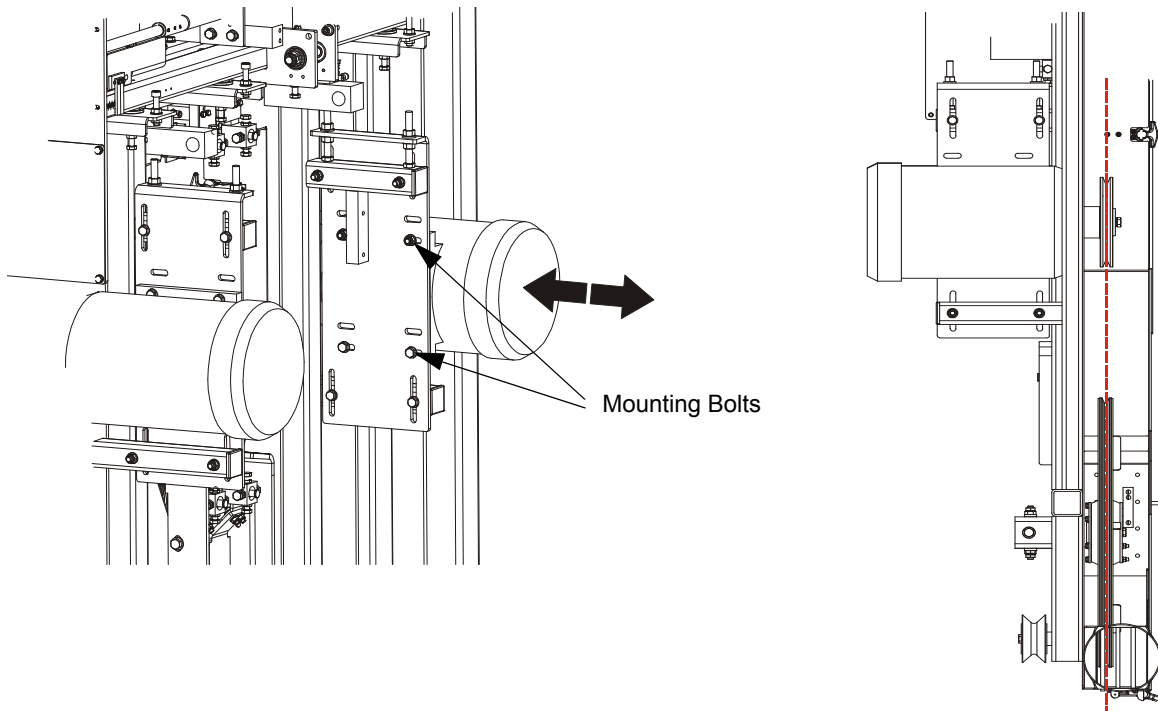


FIG. 4-5

4.8 Feed Track Chain Tension

See Figure 4-6. If necessary, use the adjustment bolts shown below to adjust the feed track chain tension. The chain should rest freely on the upper and lower bars.

CAUTION! Do not over-tension the TVS tables, Log Deck and Transfer Table chains. Over-tensioning may lead to early failure of the gear, bearings, rollers and chains.

See Figure 4-7. Adjust the adjustment bolts evenly.

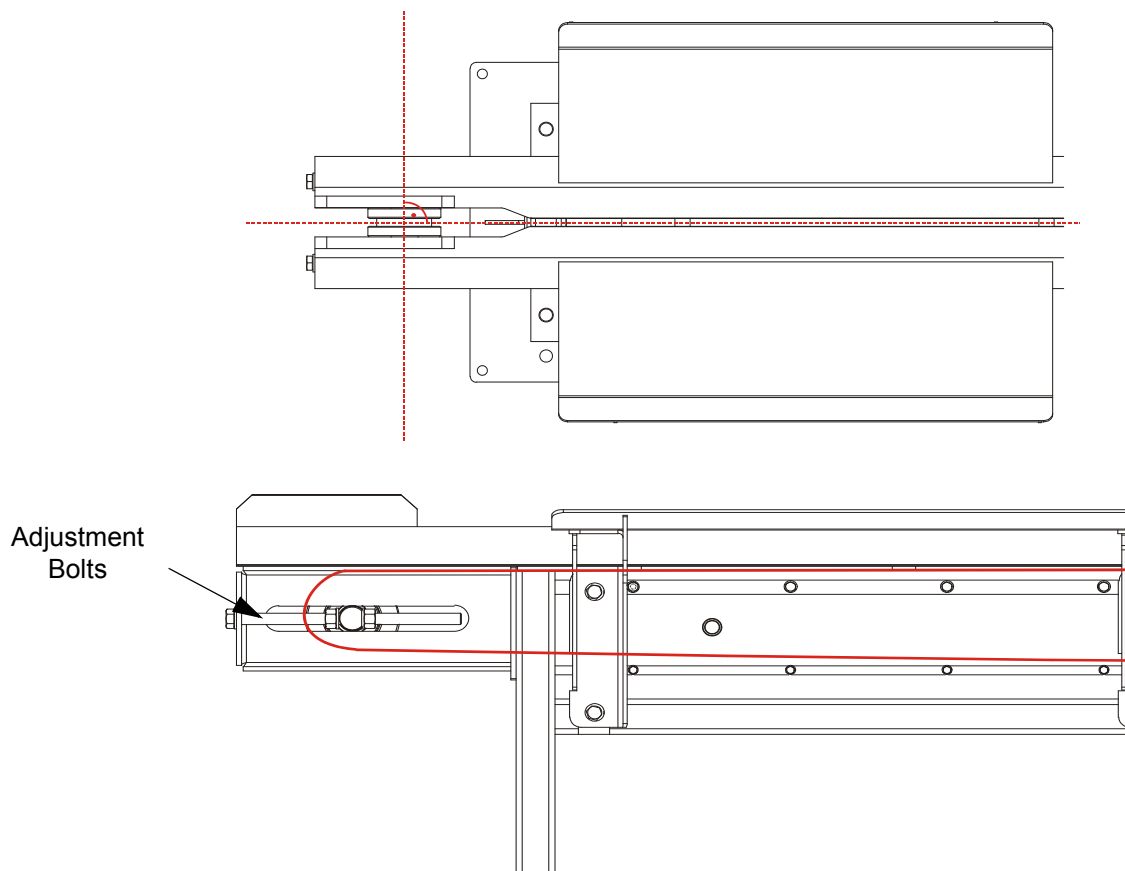


FIG. 4-7

See Figure 4-8. Incline Log Deck chain tension adjustments.

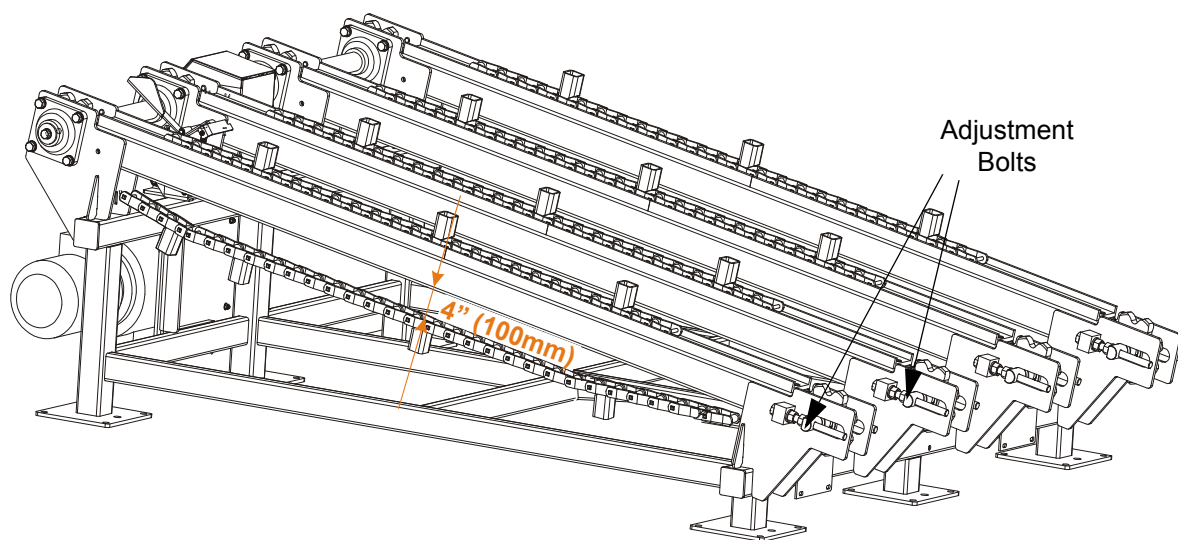


FIG. 4-8

See Figure 4-9. Adjust Cross Transfer Deck chain tension so that the chain lay freely, on the supporting roller.

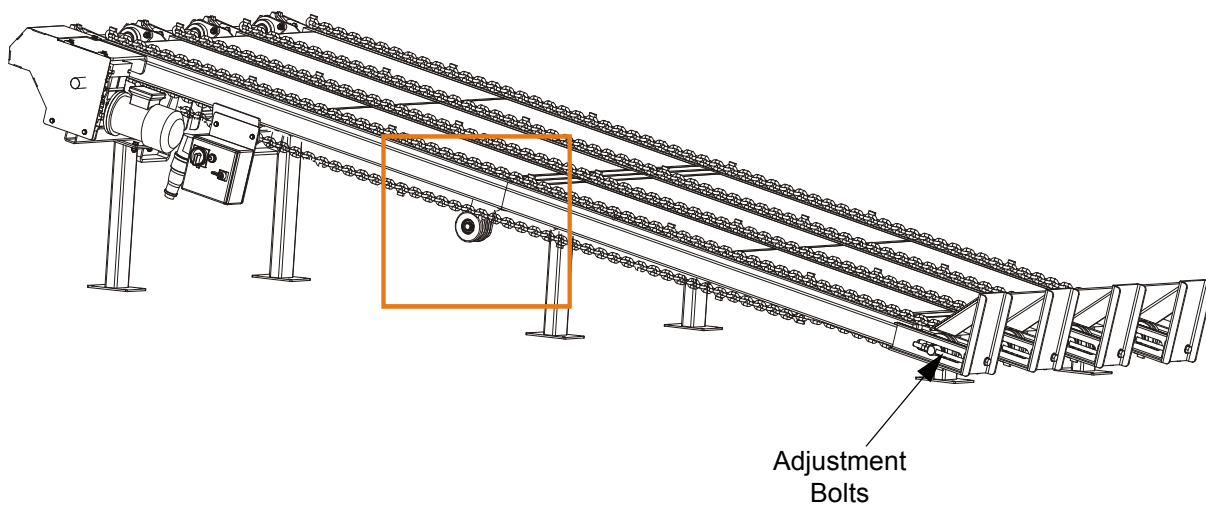


FIG. 4-9

4.9 Log Deck and Transfer Deck Drive Chain Tension

Check the drive chains for tension every 40 hours of operation and tension as necessary. The chains should have approximately 5/8" (15 mm) of slack.

See **Figure 4-10**. Loosen mounting bolts and slide the motor with mounting plate in direction shown by arrows.

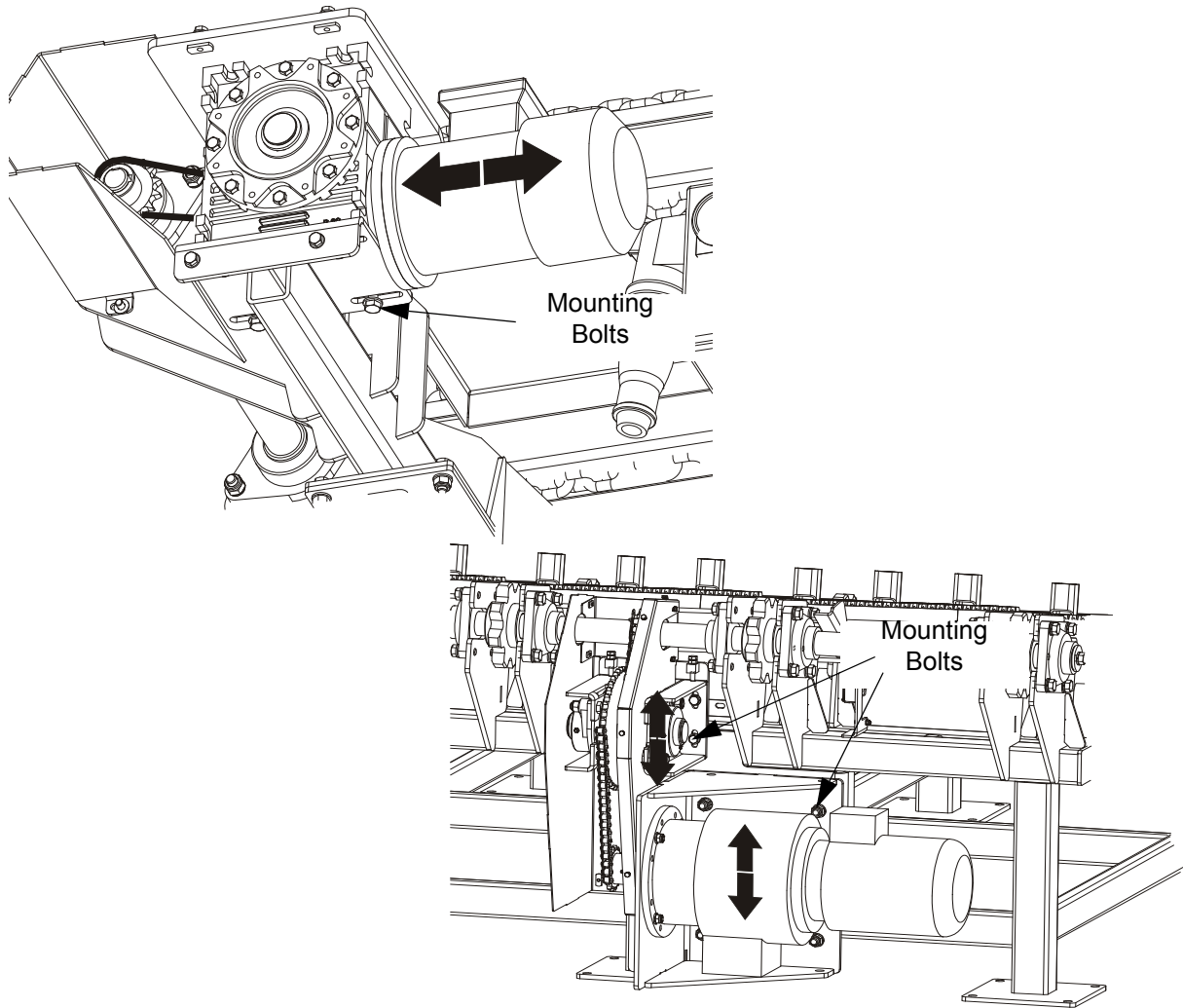


FIG. 4-10

4.10 Lube Mizer System

1. Clean the lube filter as needed.

To clean the lube filter:

- Make sure the lube control is in the OFF position and the lube bottle valve is closed all the way.
- Unscrew the filter reservoir and flush with water.
- Remove the cylindrical mesh filter and gently flush with water.
- Replace the filter and reservoir.

See Figure 4-11.

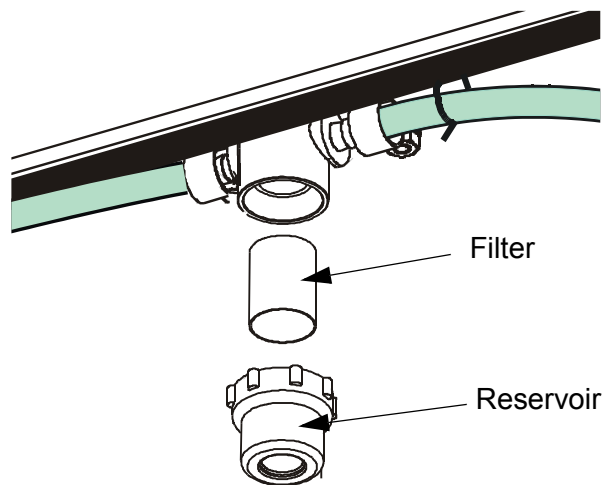


FIG. 4-11

2. Periodically check lube hoses and lines for buildup. Remove and flush with water as needed.
3. Periodically check the blade guide bracket nozzles for buildup. Remove and flush with water as needed.

SECTION 5 ALIGNMENT

The Wood-Mizer Twin Vertical Saw is factory aligned. This section includes routine and complete alignment procedures. Be scrupulous when performing all alignment steps as resaw alignment determines the accuracy of your cuts. The routine alignment procedure should be performed approximately every 1500 hours of operation. Complete alignment should be performed with the first resaw setup or after major repairs.

5.1 Routine Alignment Procedure

5.1.1 Blade Installation and Tracking

See Figure 5-1. Install a blades and apply the proper tension [See Section 2.5](#).

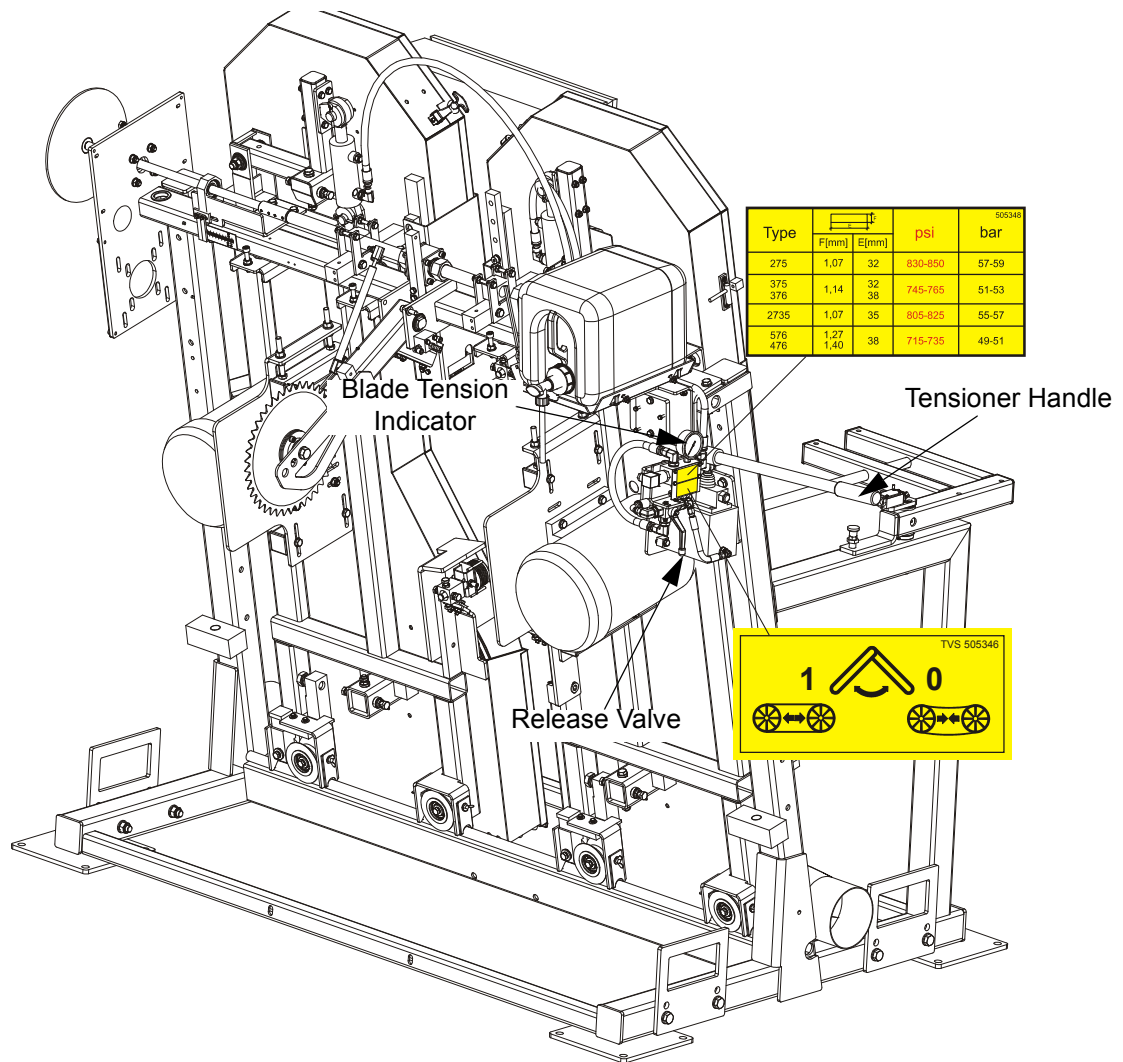


FIG. 5-1 REV. A8.00+

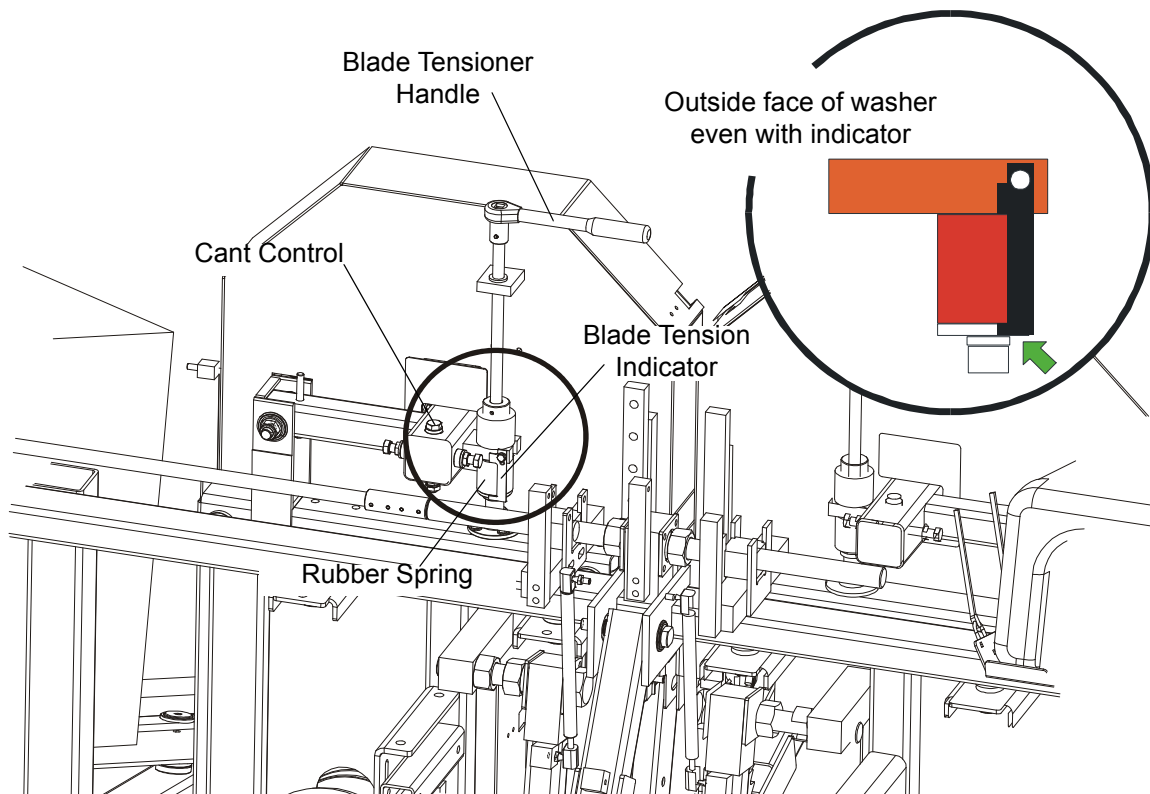


FIG. 5-1 REV. A1.00 - A7.00

1. Press the emergency button to stop the machine, if necessary.
2. Open the blade housing covers.
3. Manually spin one of the blade wheels until the blade positions itself on the wheels.

See Figure 5-2. The blade wheels should be adjusted so that the gullet of 1 1/4" blades is 1/8" (3.0 mm) out from the front edge of the wheels ($\pm 1/16"$ [1.5 mm]). The gullet of 1 1/2" blades should be 3/16" (4.5 mm) from the front edge of the wheels ($\pm 1/16"$ [1.5 mm]). Do

not let the teeth touch the belt.

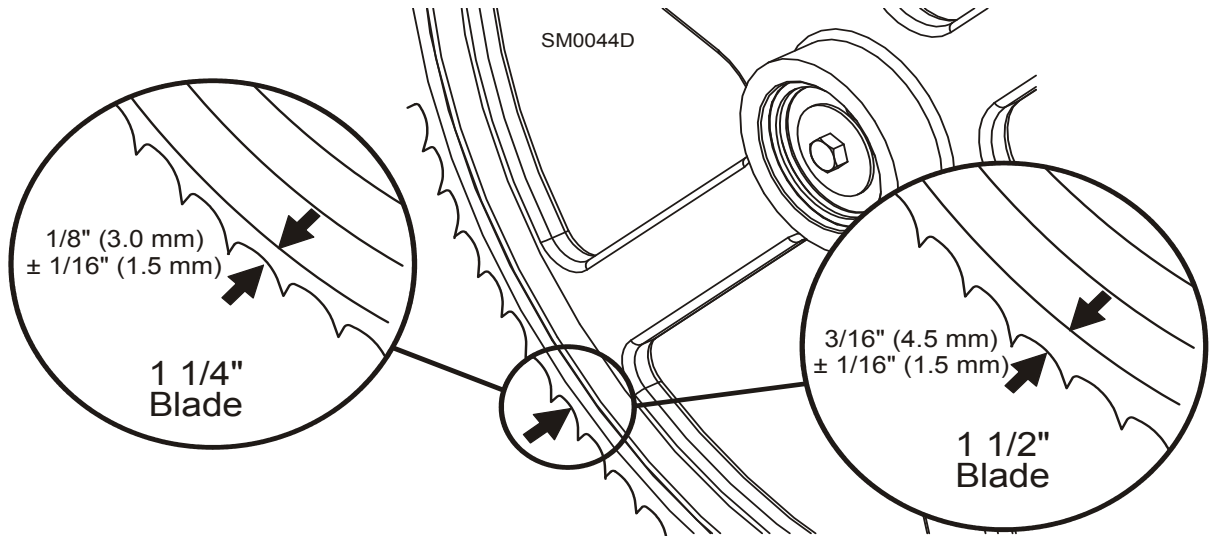


FIG. 5-2

To adjust the blade on the idle-side blade wheel, use the cant control ([See Section 2.5](#)).

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.

Some adjustment in blade tension may be needed to compensate for adjustments made with the cant control.

Adjustment with the cant control is usually all that is required to track the blade properly on both blade wheels. The drive-side blade wheel will usually not have to be adjusted. If necessary, the drive-side wheel can be adjusted as follows:

Locate the adjusting bolt with lock nuts located on the drive-side of the cutting head. Turn the bolt clockwise to move the blade out on the wheel, turn it counterclockwise to move the blade in on the blade wheel. Make sure to tighten the lock nuts when adjustment is complete.

5.1.2 Blade Wheel Alignment

The blade wheels should be adjusted so they are level in the vertical and horizontal planes. If the blade wheels are tilted vertically, the blade will want to move in the tilted direction. If the blade wheels are tilted horizontally, the blade will not track properly on the wheels. The blade guide rollers should not touch and deflect the blade when adjusting the blade wheels.

1. Use the blade guide alignment tools to check the vertical alignment of each blade wheel. Attach the tools to the blade near the lower blade guide mounts as shown. Be sure the tools do not rest on a tooth or burr, and are lying flat against the blades.

See Figure 5-3.

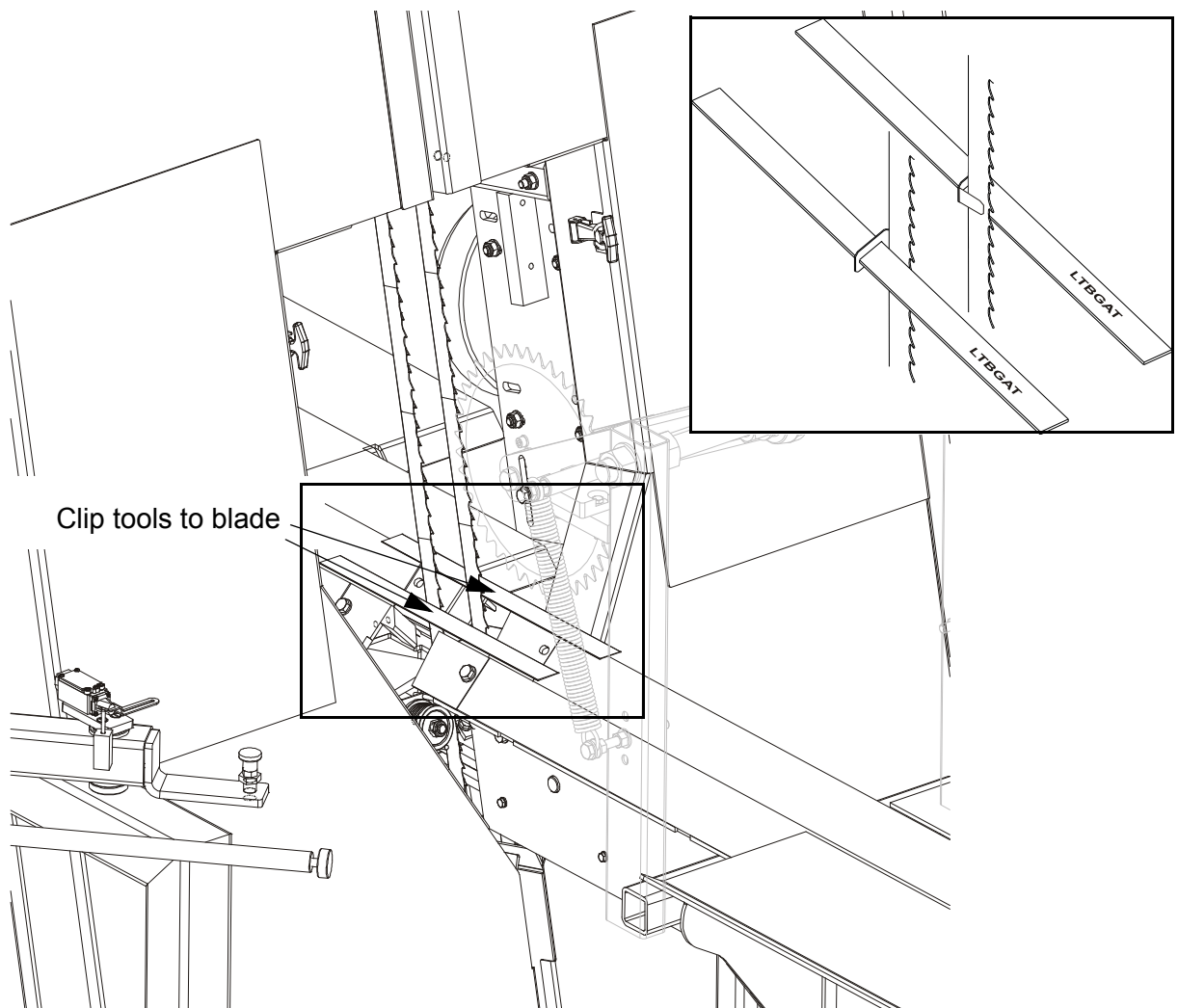


FIG. 5-3

2. Mount the alignment brackets to infeed and outfeed tables. Attach the rope to the lower holes of the alignment bracket as shown below.

See Figure 5-4.

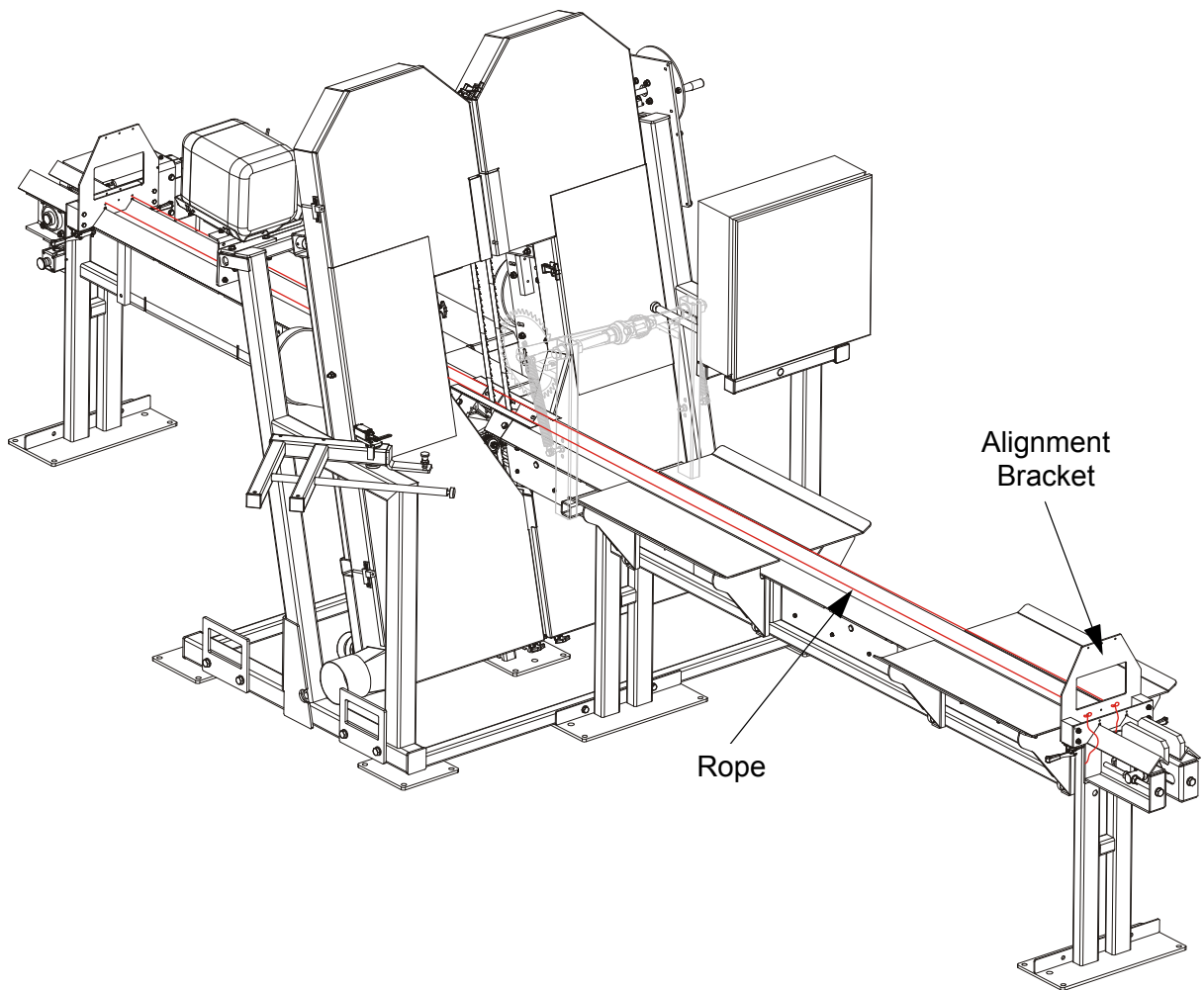


FIG. 5-4

5

Alignment

Blade Wheel Alignment

3. Mount the alignment brackets to infeed and outfeed tables. Attach the rope to the lower or upper holes of the alignment bracket. Measure the distance from the rope to the infeed and outfeed tables in places shown below. Dimensions marked A, B and C must be equal. If they are not, use the table leg adjustment bolts to correct it.

See Figure 5-5.

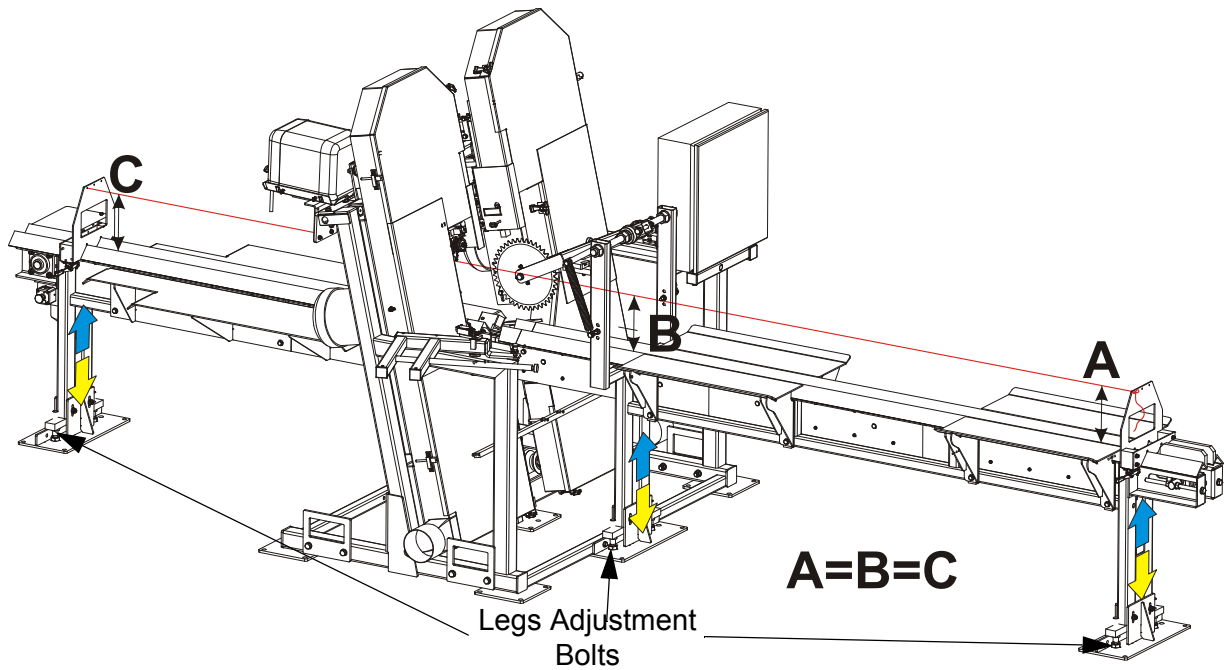


FIG. 5-5

4. Check if the ropes are aligned with top edges of the infeed and outfeed tables. Move the appropriate table end, if necessary.

See Figure 5-6.

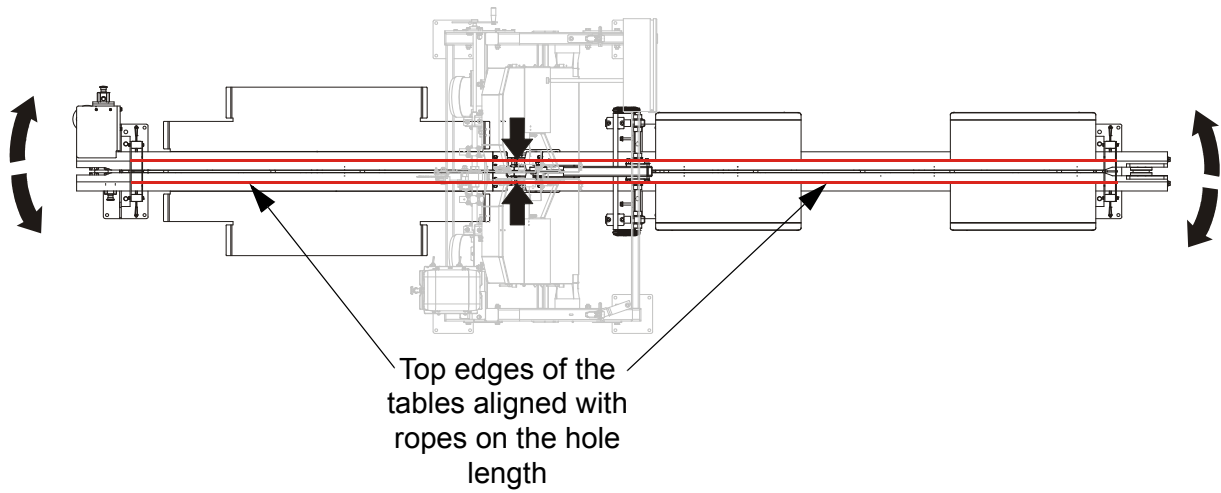


FIG. 5-6

5

Alignment

Blade Wheel Alignment

5. Measure the distance from the edge of the tool to the rope. The distances marked A, B, C and D must be equal. If the measurements are different, use the drive side blade wheel adjustment bolts to correct its alignment.



IMPORTANT! Before adjusting the drive side wheel, loosen the drive belt. [See Section 4.7](#)

See Figure 5-7.

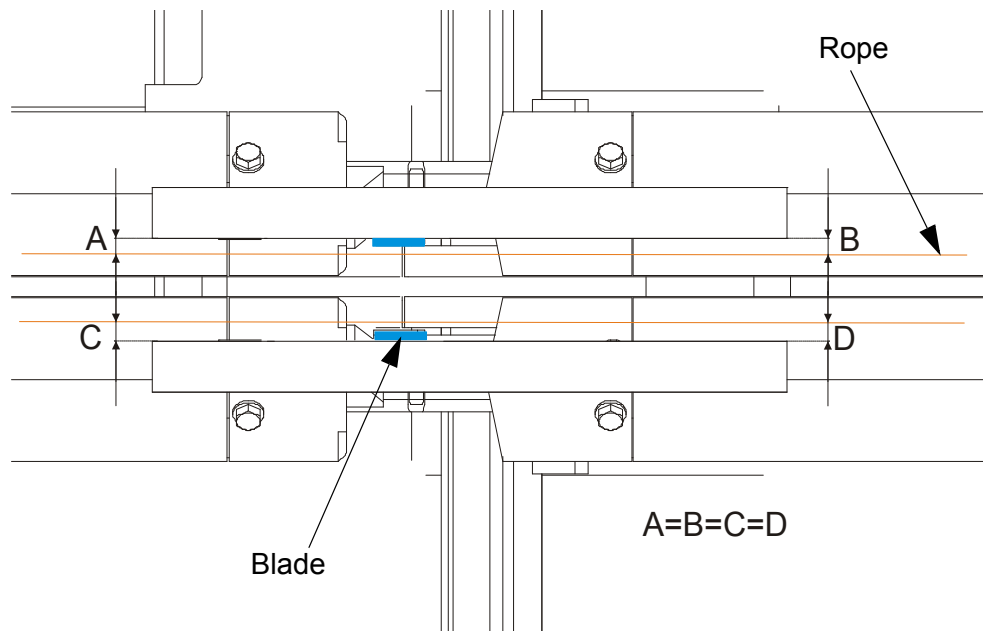


FIG. 5-7

See **Figure 5-8**. Loosen the lock nuts on the horizontal plane adjustment bolt. Use the vertical plane adjustment bolts to adjust the drive wheel so that the adjustment tool would be parallel to the rope.

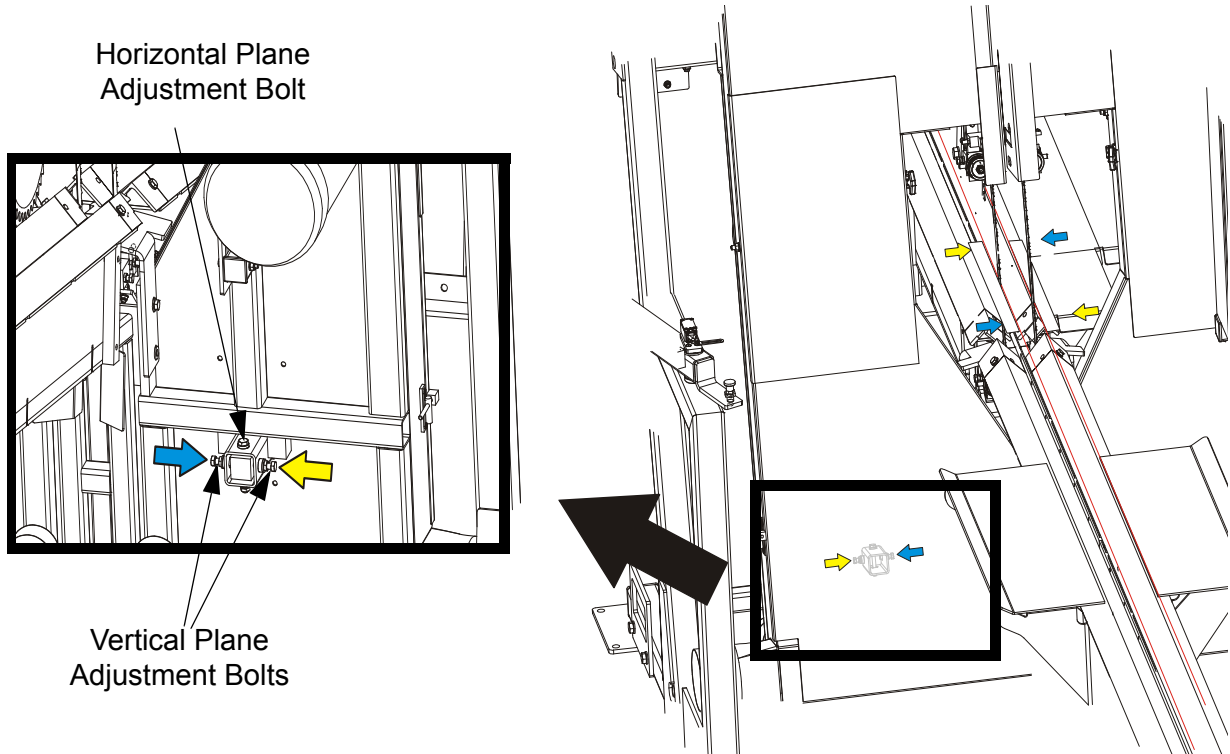


FIG. 5-8

5

Alignment

Blade Wheel Alignment

6. Attach the rope to the upper holes of the alignment bracket as shown below. Move the alignment tools up to the ropes. Use the idle side wheel adjustment bolts in vertical plane to correct its alignment as shown below.

See Figure 5-9.

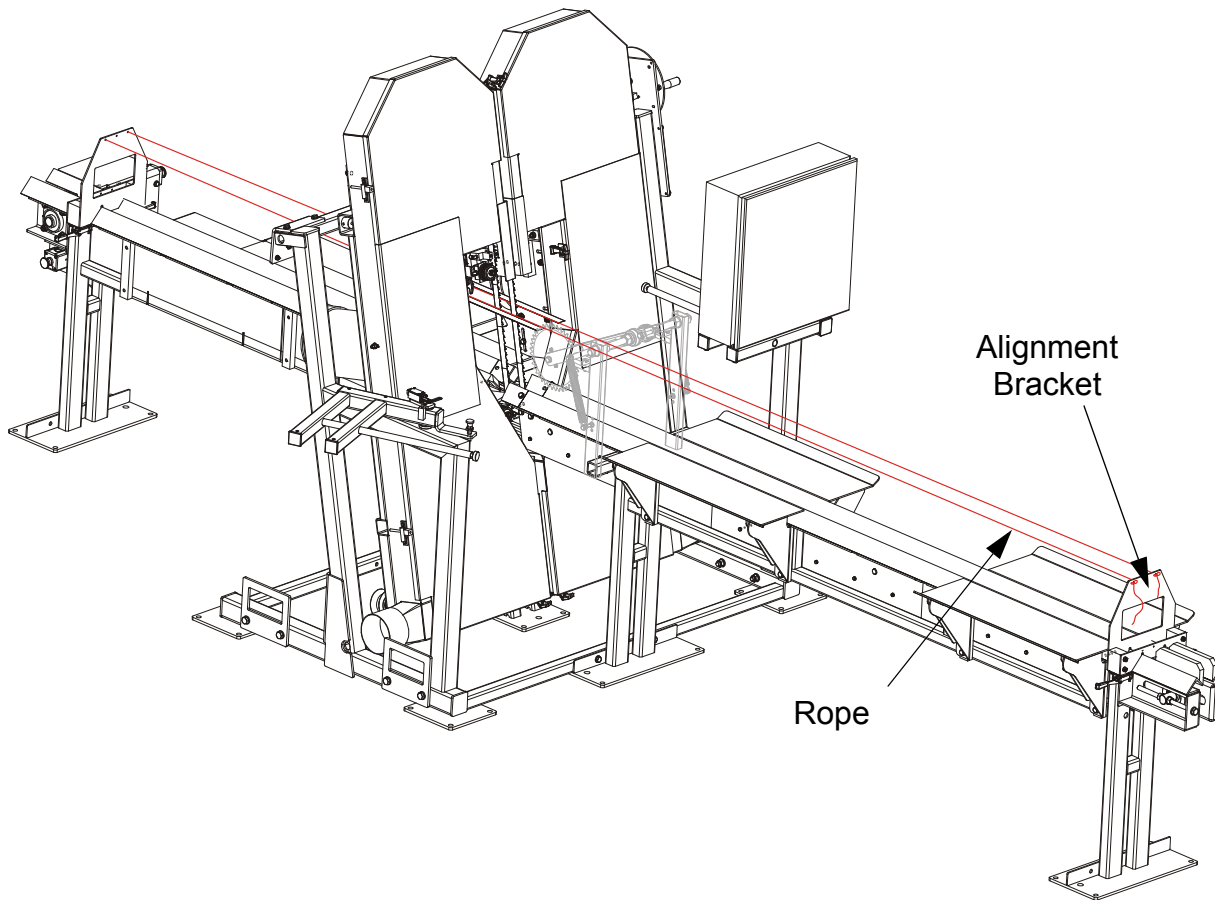


FIG. 5-9

See **Figure 5-10**. Loosen the lock nuts on the horizontal plane adjustment bolt. Use the vertical plane adjustment bolts to adjust the idle wheel so that the adjustment tool would be parallel to the rope.

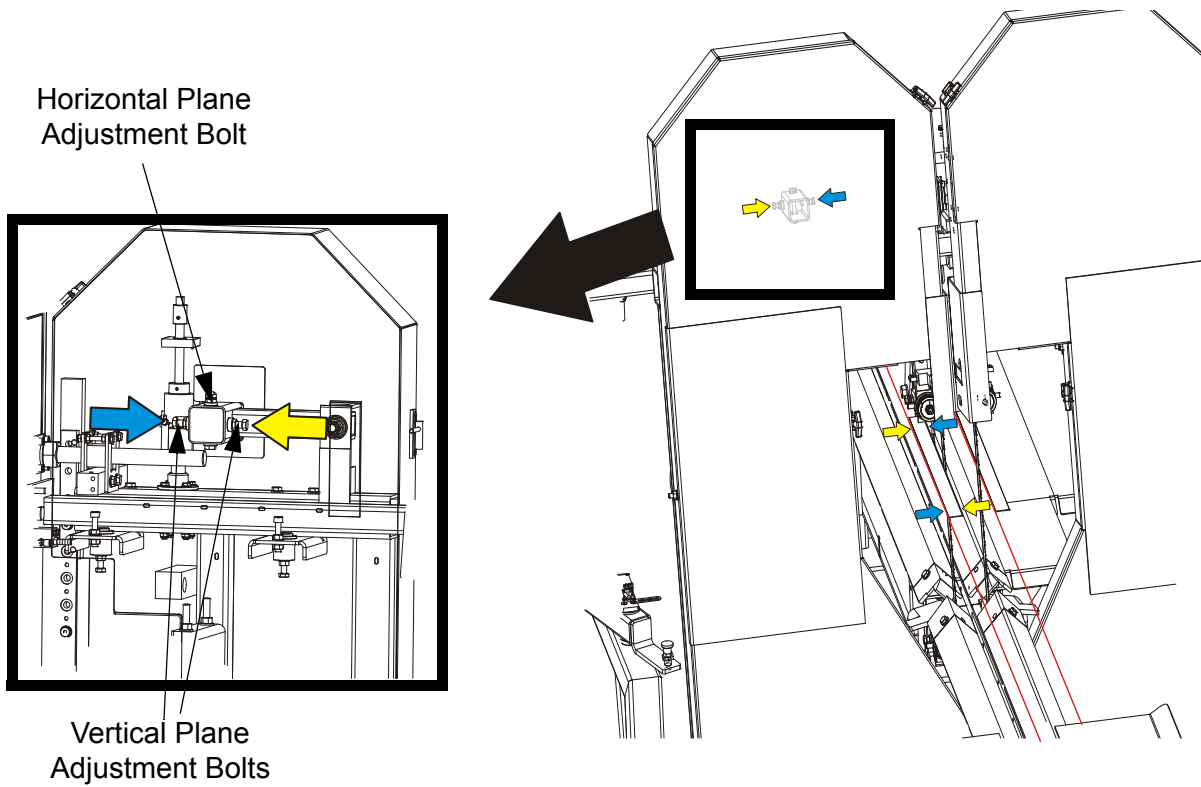


FIG. 5-10

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

5

Alignment

Blade Wheel Alignment

See **Figure 5-11**. The vertical tilt of the blade wheel should be adjusted so that the gullet of 1 1/4" blade is 1/8" (3.0 mm) out from the front edge of the wheel ($\pm 1/16"$ [1.5 mm]).

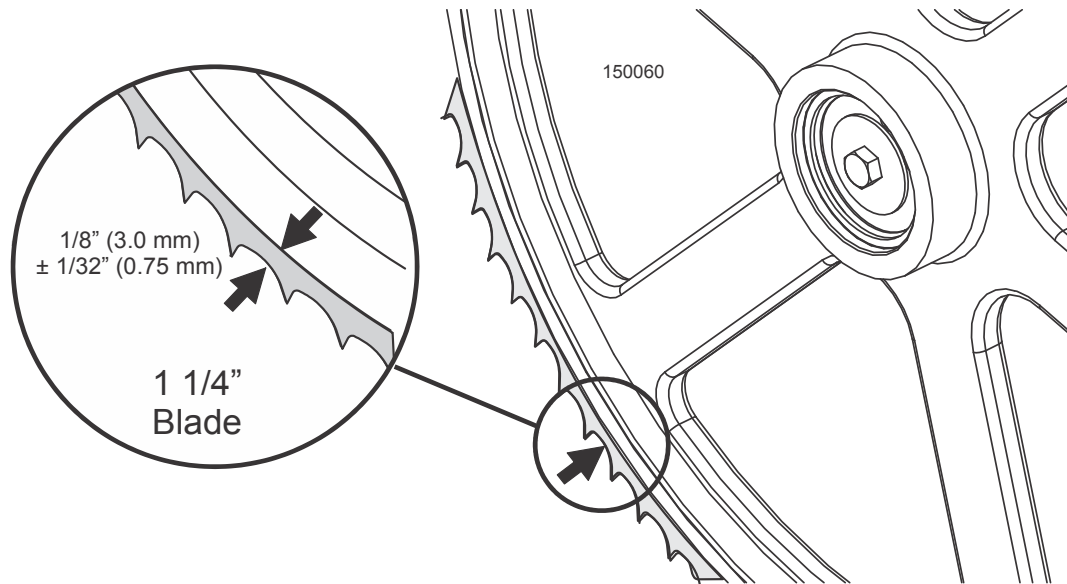


FIG. 5-11

See **Figure 5-12**. 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.

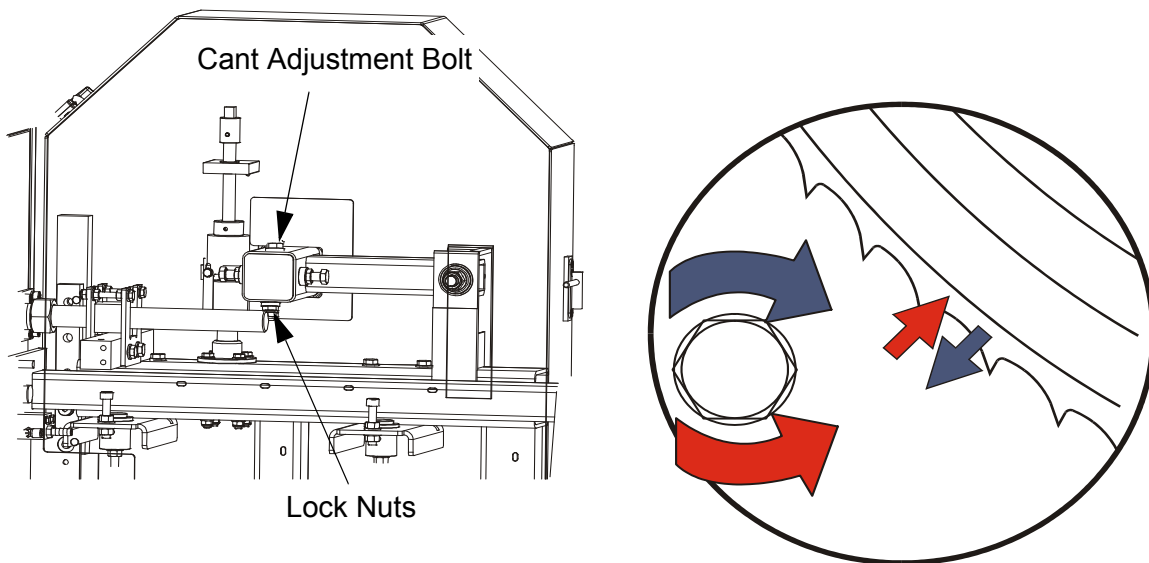


FIG. 5-12

8. 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 5-13. Use the cant control adjustment to adjust the drive-side blade wheel. If the blade is too far forward on the wheel, turn the cant control bolt clockwise. If it is too far back on the wheel, turn it counterclockwise.

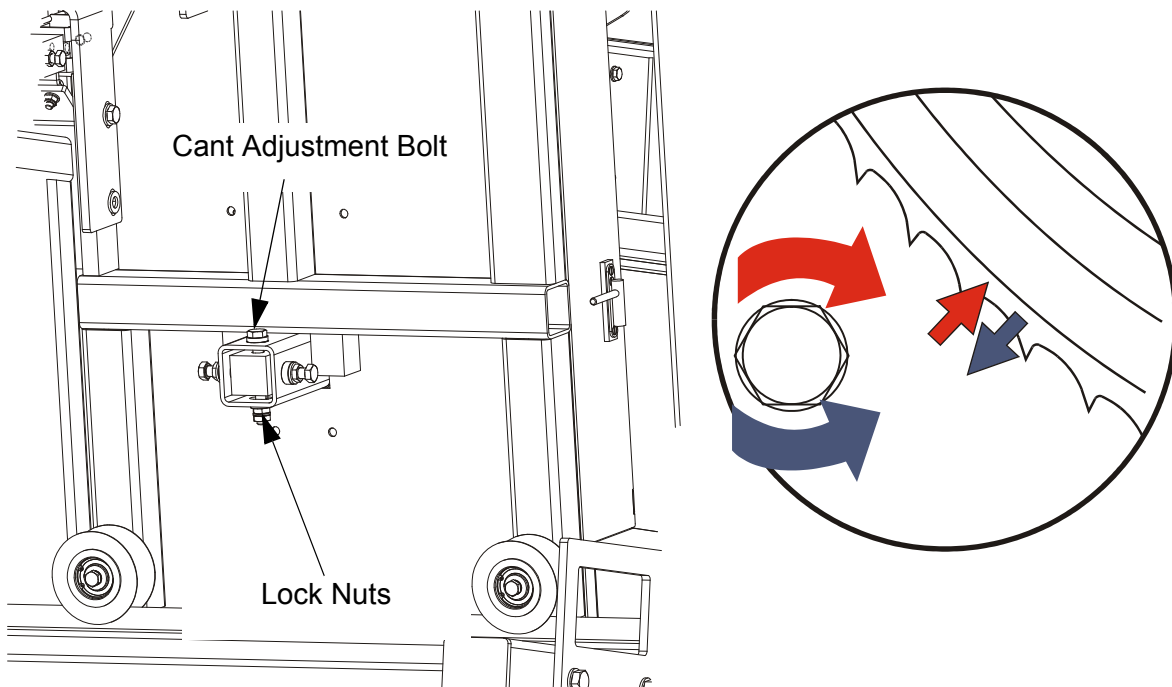


FIG. 5-13

5.1.3 Aligning the Blade Guides

[See Section 5.2.4](#)

5 Alignment

Complete Alignment Procedure

5.2 Complete Alignment Procedure

Perform all steps in this section to completely realign or align the resaw after first setup.

5.2.1 Blade Wheels Alignment

The blade wheels should be adjusted so they are level in the vertical and horizontal planes. If the blade wheels are tilted vertically, the blade will want to move in the tilted direction. If the blade wheels are tilted horizontally, the blade will not track properly on the wheels. The blade guide rollers should not touch and deflect the blade when adjusting the blade wheels.

1. Set the saw head distance at 4" (100mm). [See Section 2.2.](#)
2. Attach the blade wheels alignment tool (service part no. 099330) to the lower blade wheels as shown below.

See Figure 5-14.

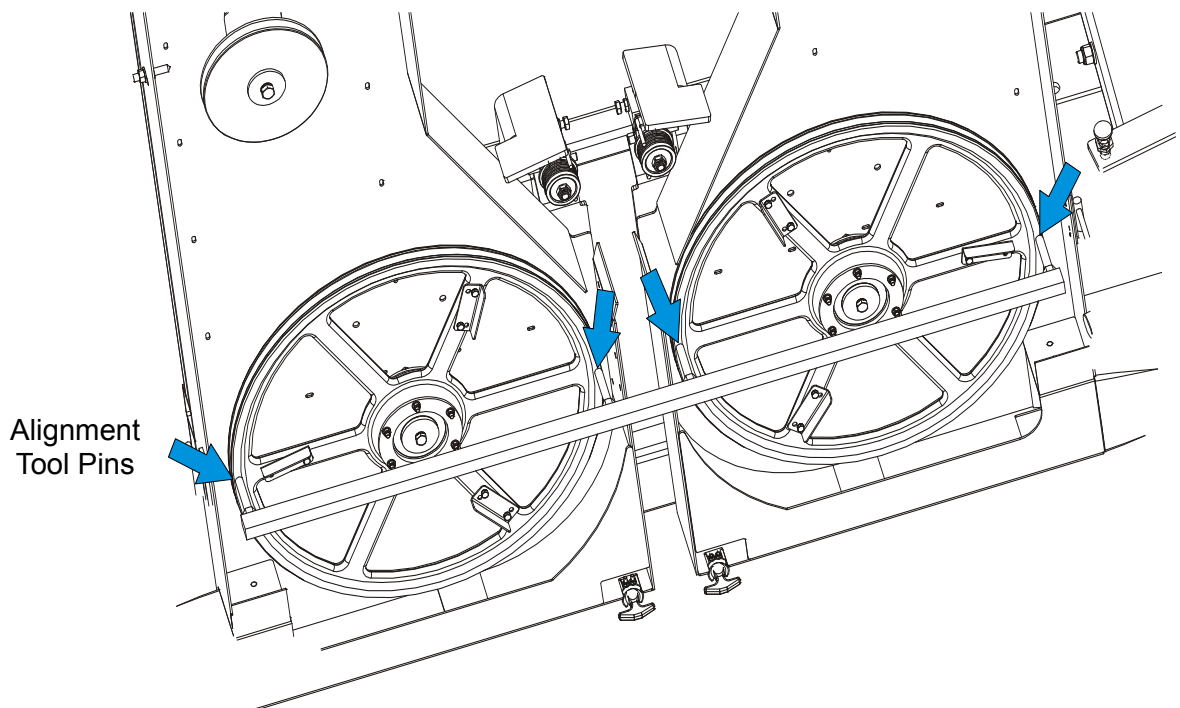


FIG. 5-14

All pins on the alignment tool must touch the blade wheels surface. If any of the pins does not touch the blade, use the vertical plane adjustment bolts to correct blade wheel alignment.

See **Figure 5-15**. Use the vertical plane adjustment bolts of the drive wheels, so that all the pins touch the blade wheels surface.

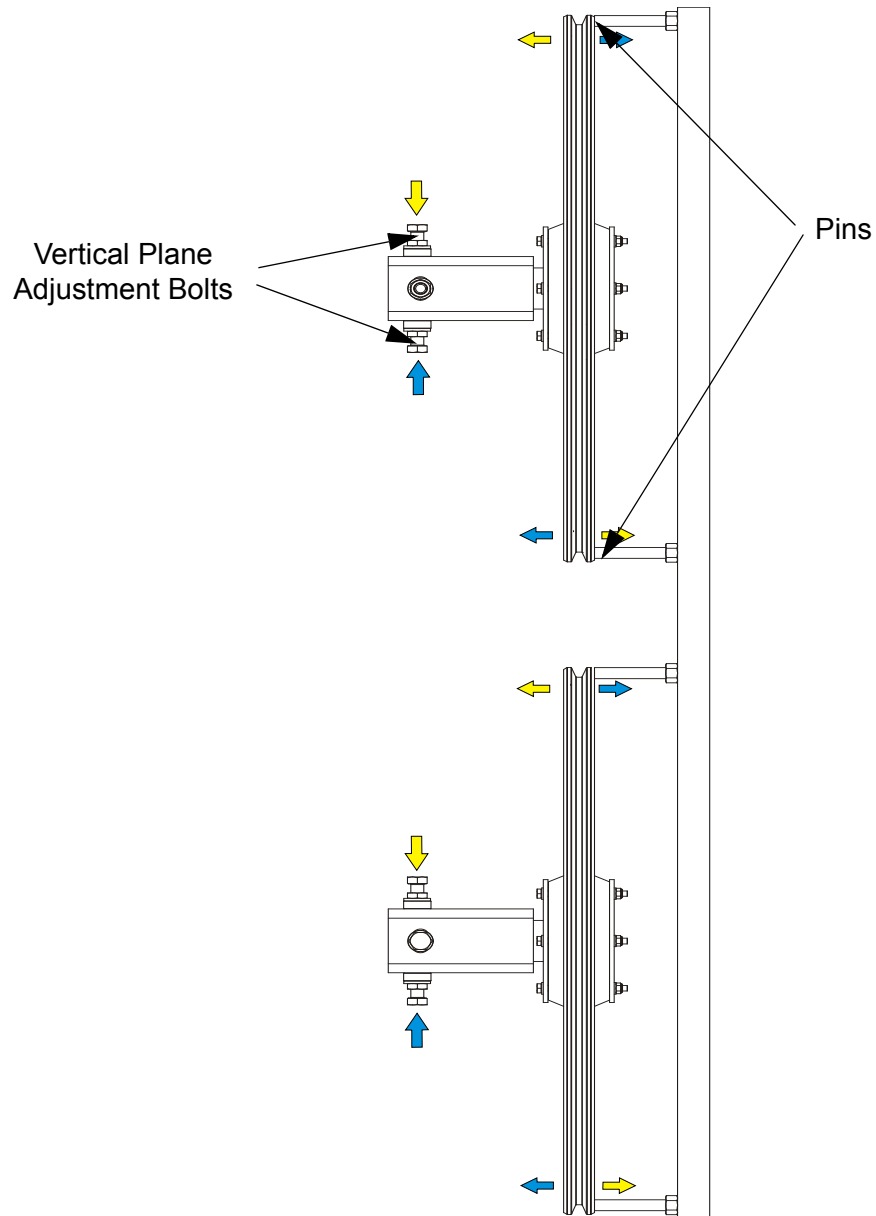


FIG. 5-15

3. Install the blades and apply the proper tension. [See Section 2.5](#)
4. Manually spin the lower blade wheels. Observe how the blade rides on the blade wheels.

5 Alignment

Blade Wheels Alignment

See **Figure 5-16**. The blade wheels should be adjusted so that the gullet of 1 1/4" blade is 1/8" (3.0 mm) out from the front edge of the wheels ($\pm 1/16"$ [1.5 mm]).

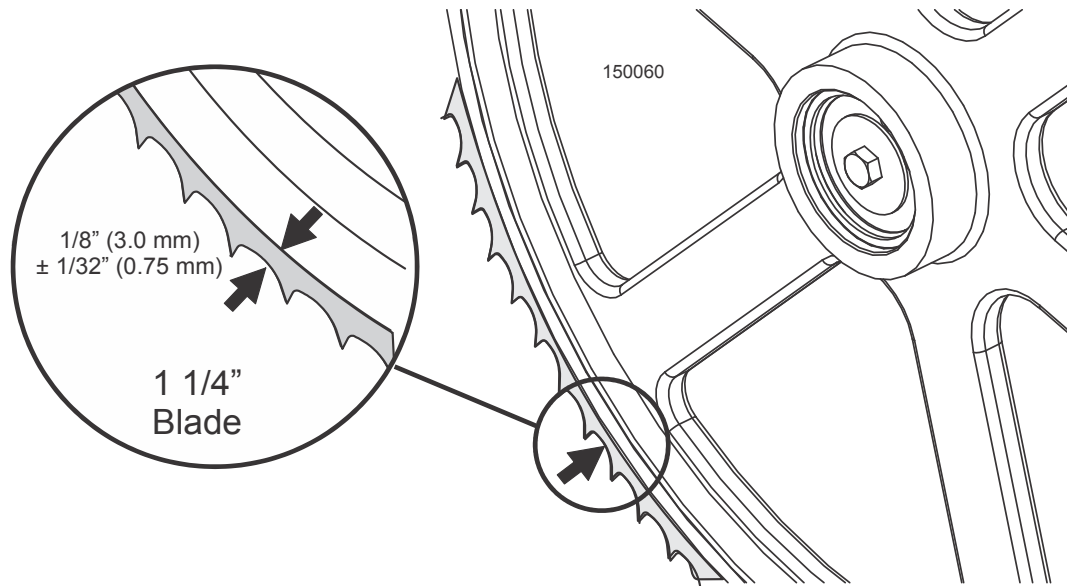


FIG. 5-16

See Figure 5-17. Use the adjustment bolts as shown below to tilt the wheels as required.

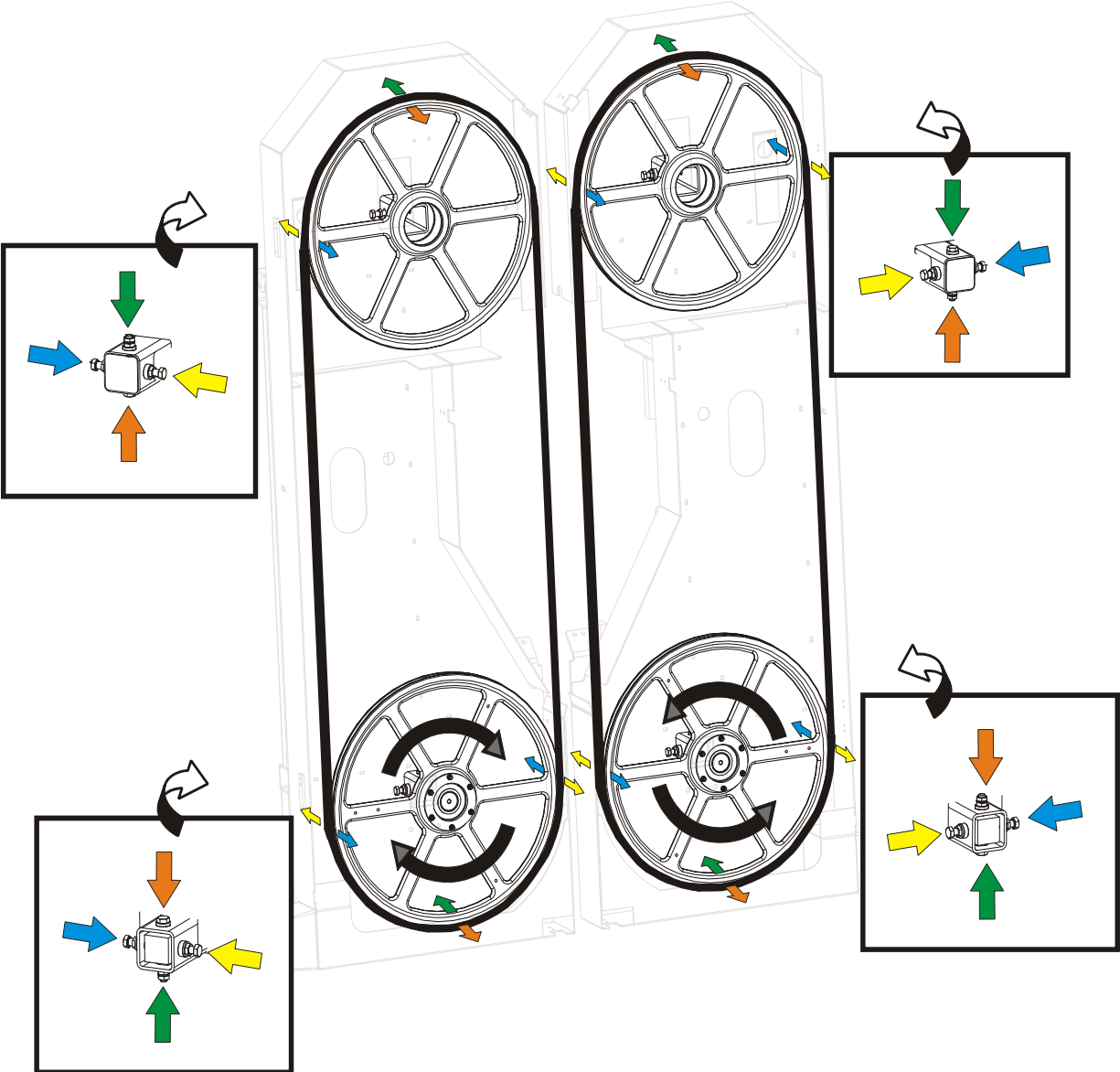


FIG. 5-17

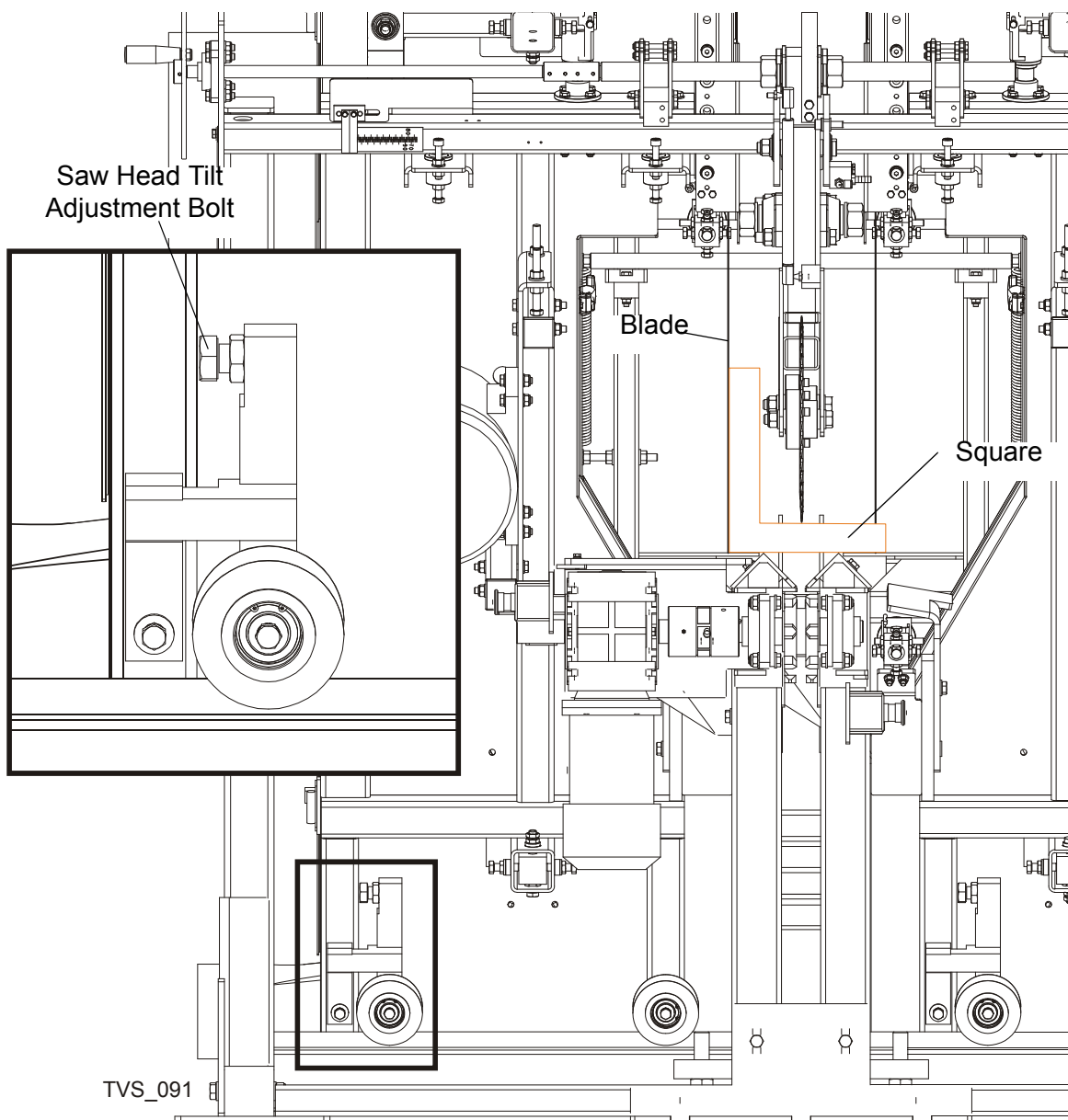
- 5. Remove the blades from the blade wheels.

5.2.2 Saw Head Tilt Adjustment

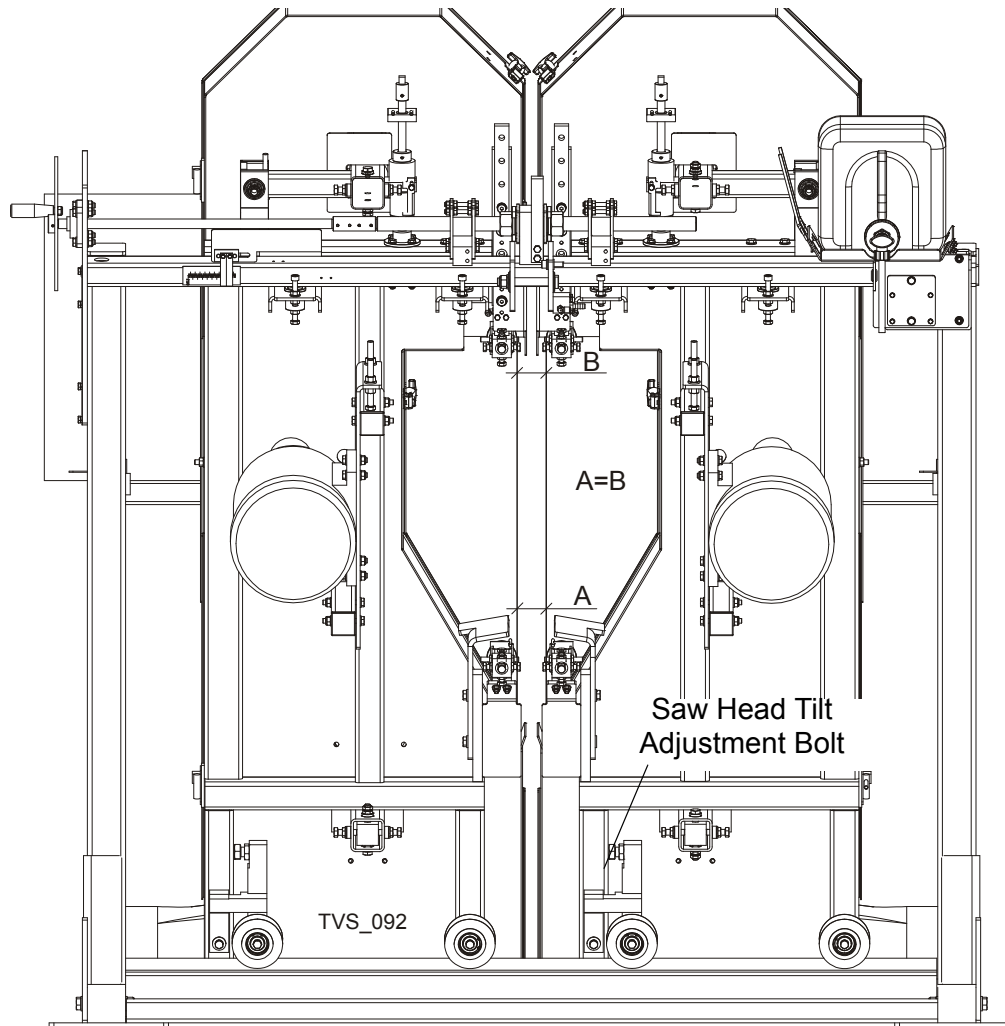
The saw head blades should be perpendicular to the tables and parallel to each other.

First, set one of the blades so that it is perpendicular to the table and then set the other blade in relation to the first one. To do that, perform the following steps:

1. Make sure the rollers do not touch the blade. Set the blade perpendicularly to the table using a square and adjust using the adjustment bolt.



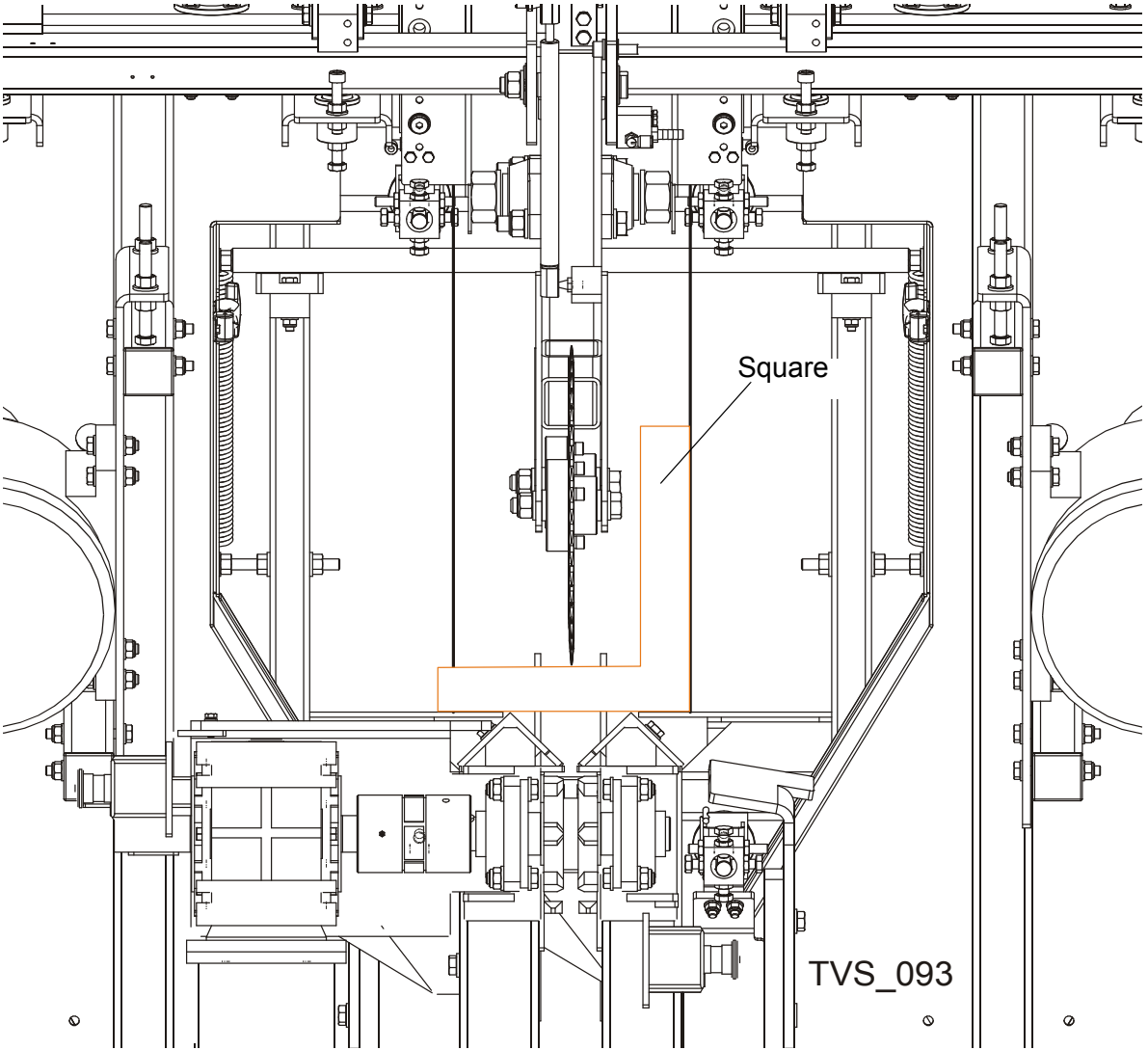
2. Measure distances between the blades at the lowest and the highest points. If the measurements are not the same, adjust the saw heads using the tilt adjustment bolts shown below.



5 Alignment

Saw Head Tilt Adjustment

3. Use the square to check if the saw heads are perpendicular to the table. Adjust if necessary.



5.2.3 Installation of Tables

1. Mount the outfeed table.

See **Figure 5-18**. Move out the saw heads to the maximum width. Slide the front leg of the outfeed table under the TVS frame as shown. Use the two M12x75 bolts and washers to install the table to the TVS frame.

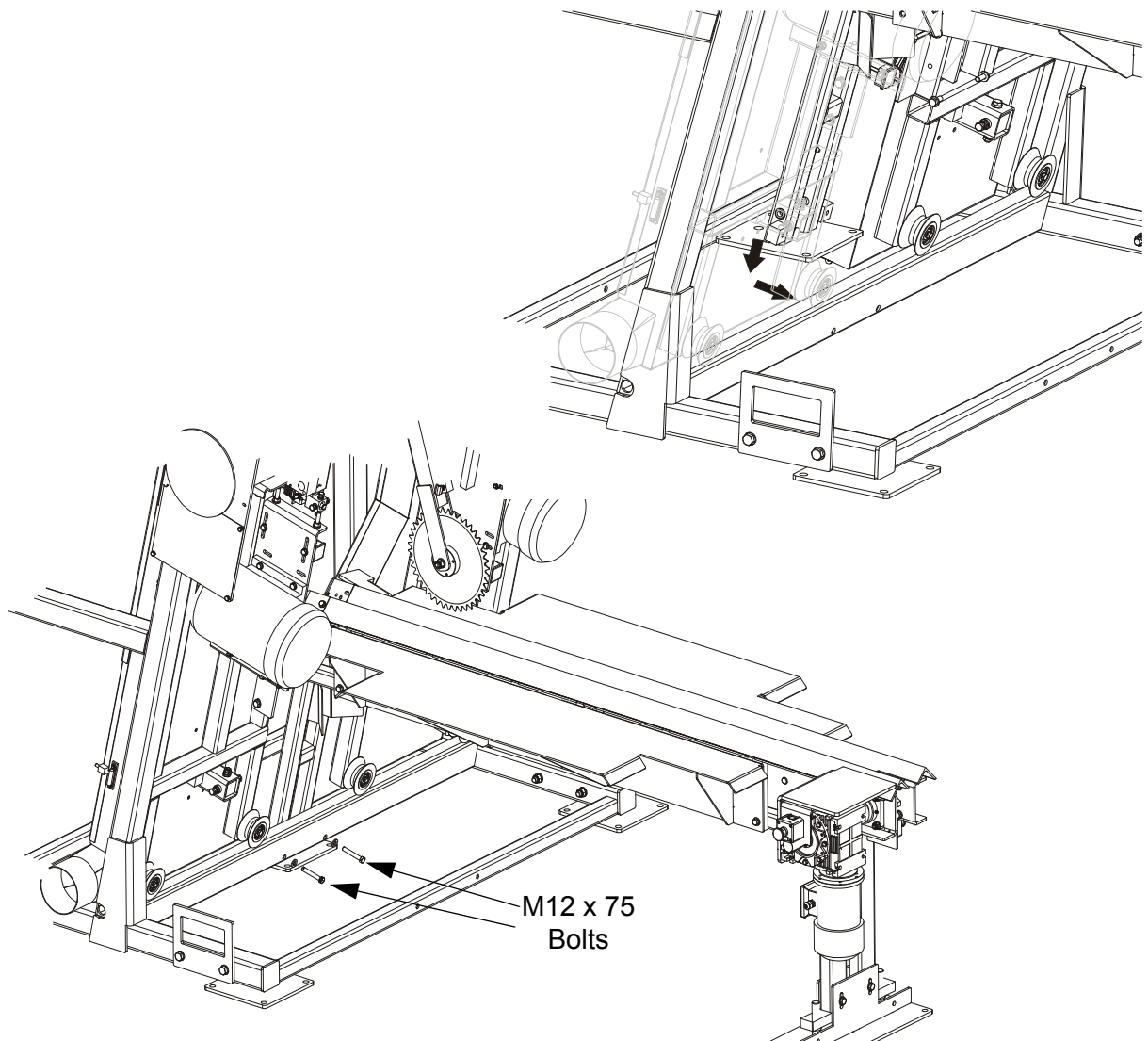


FIG. 5-18

2. Mount the infeed table.

5**Alignment***Installation of Tables*

See **Figure 5-19**. Attach the infeed table to the TVS frame. Use the mounting bar and M10x80 bolt to mount the infeed and outfeed tables together. Use the two M12 x 75 bolts, washers and self-locking nuts to install the infeed table to the TVS frame.

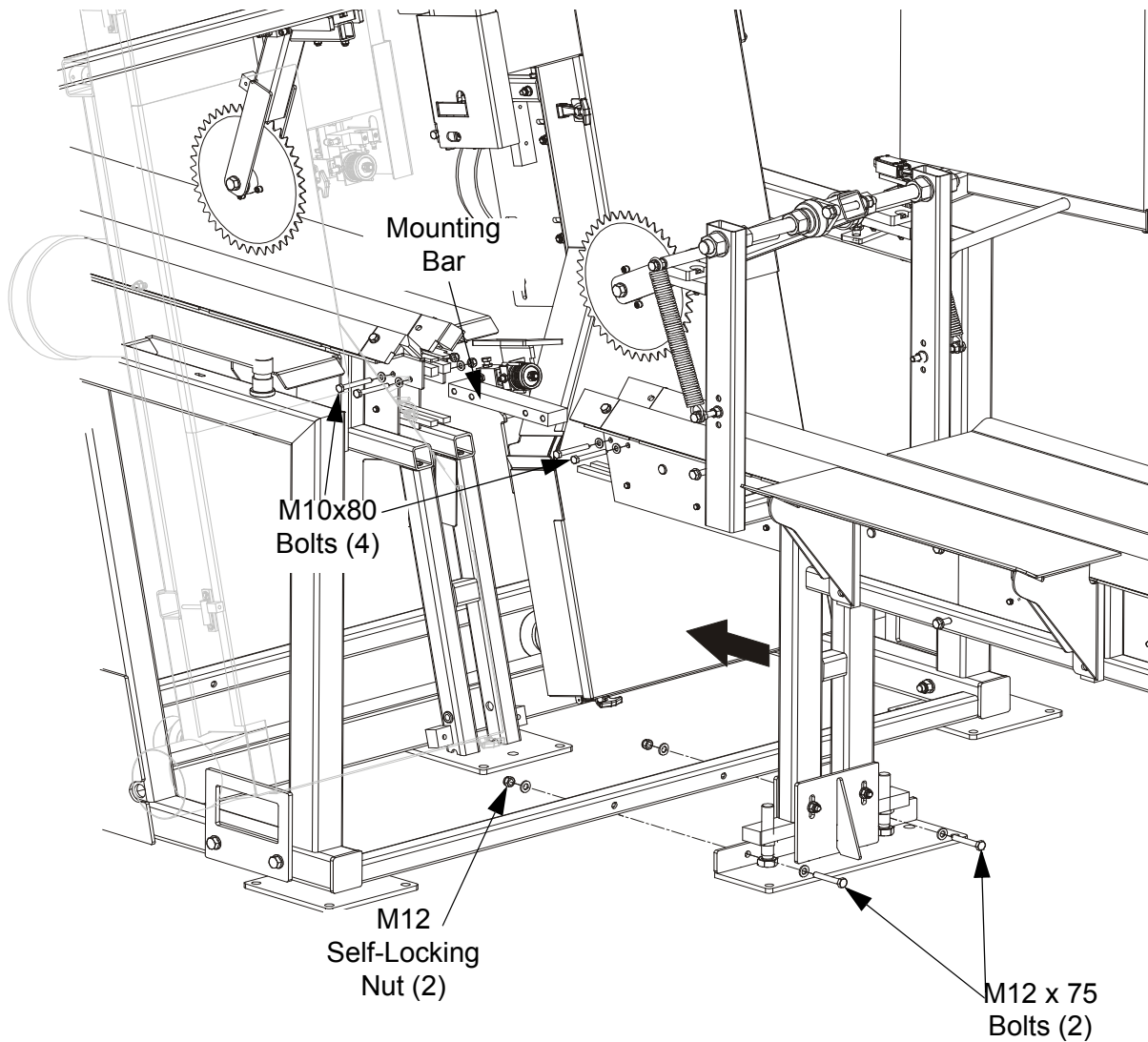


FIG. 5-19

3. Place the level on the outfeed and infeed tables and check if they are level.

See Figure 5-20. Place the level in places shown below and check, if the tables are level. If they need adjustment, use the proper adjustment bolts as shown below. The front leg of the outfeed table is not adjustable.

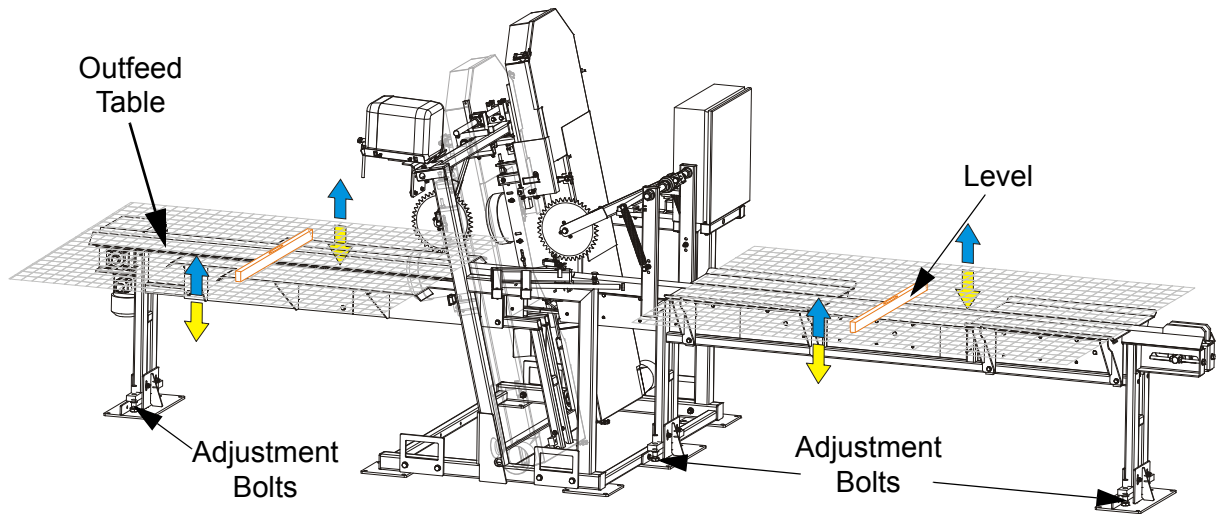


FIG. 5-20

4. Mount the alignment brackets to the infeed and outfeed tables. Attach the rope to the lower or upper holes of the alignment bracket. Measure the distance from the rope to the infeed and outfeed tables in places shown below. Dimensions marked A, B and C must be equal. If they are not, use the tables legs adjustment bolts to correct it.

5 Alignment Installation of Tables

See Figure 5-21.

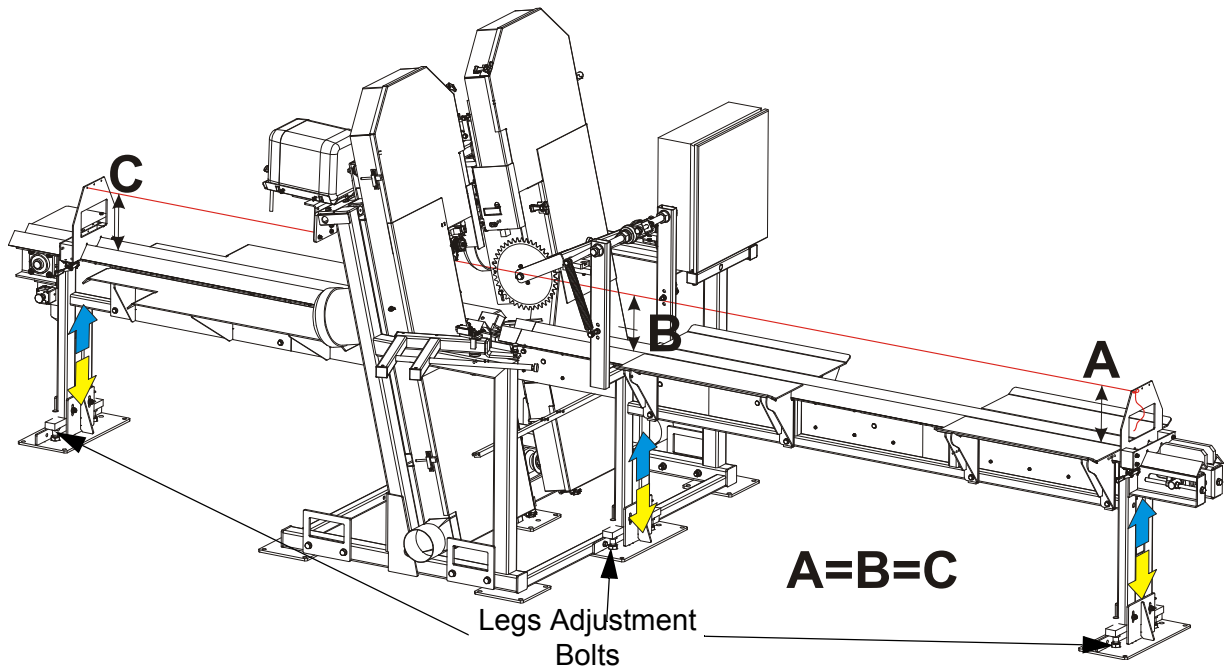


FIG. 5-21

5. Check, if the ropes are aligned with top edges of the infeed and outfeed tables. Move the appropriate table end, if necessary.

See Figure 5-22.

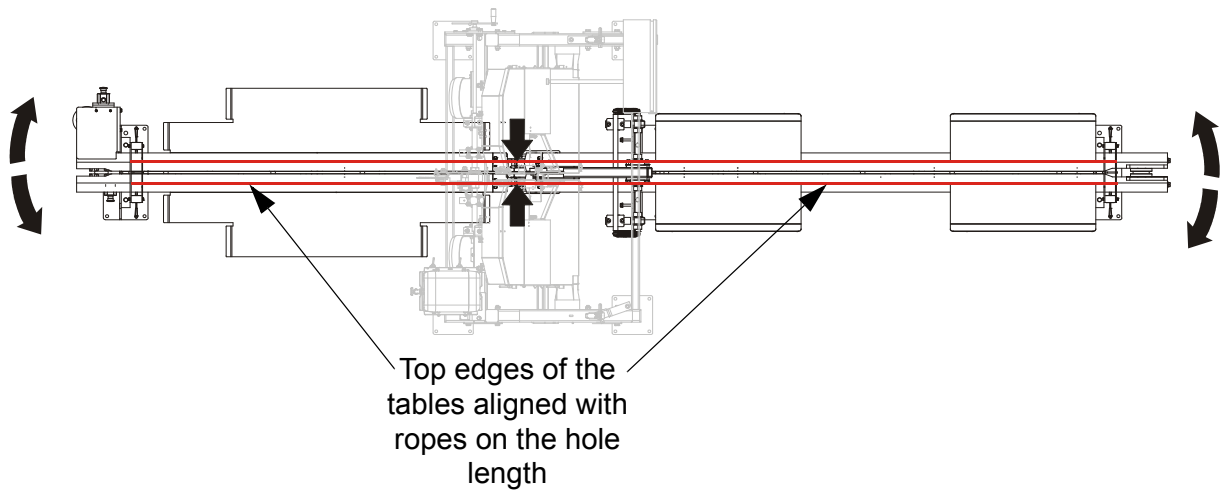


FIG. 5-22

6. Install the blades and apply the proper tension ([See Section 2.5](#)).
7. Using a square, check if the blades are perpendicular to the tables. If they are not, put wedges under the appropriate TVS frame legs.

See Figure 5-23.

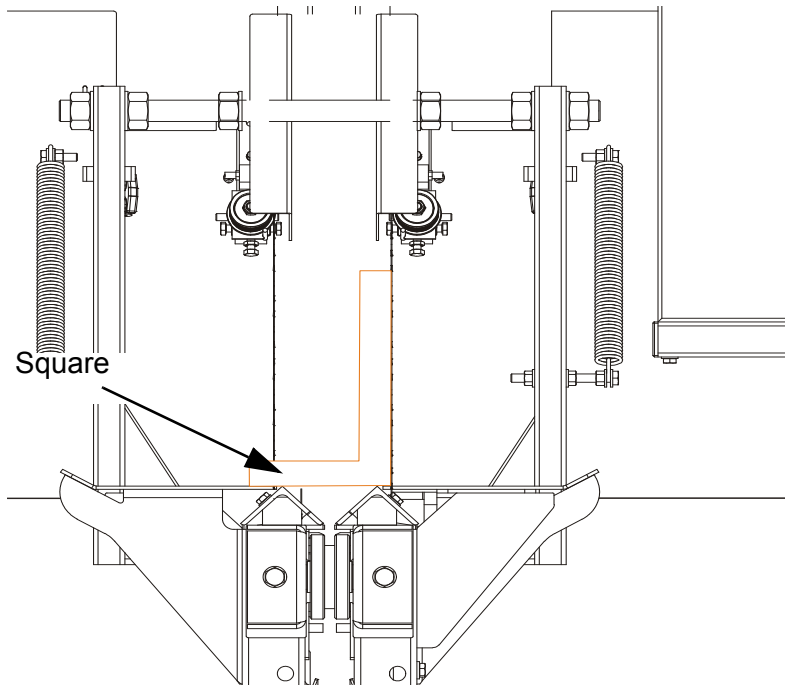


FIG. 5-23

8. Check if the distance between blades and tables on the left and right saw heads is the same (saw heads centering).

5

Alignment

Installation of Tables

See **Figure 5-24**. Set the saw head width to about 5.5" (140 mm). Measure the distance from the blade on the left saw head to the left rope. Measure the distance from the blade on the right saw head to the right rope. The measured distances should be the same. If they are not, use the nuts on the saw head width adjustment screw and two #46 wrench to move both saw heads left or right.

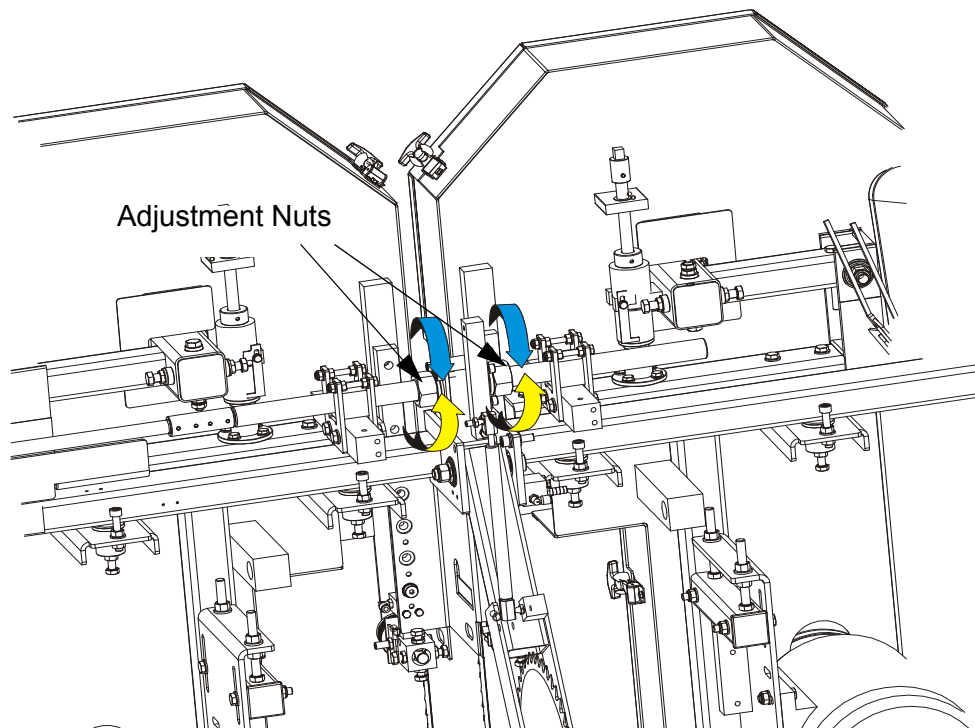
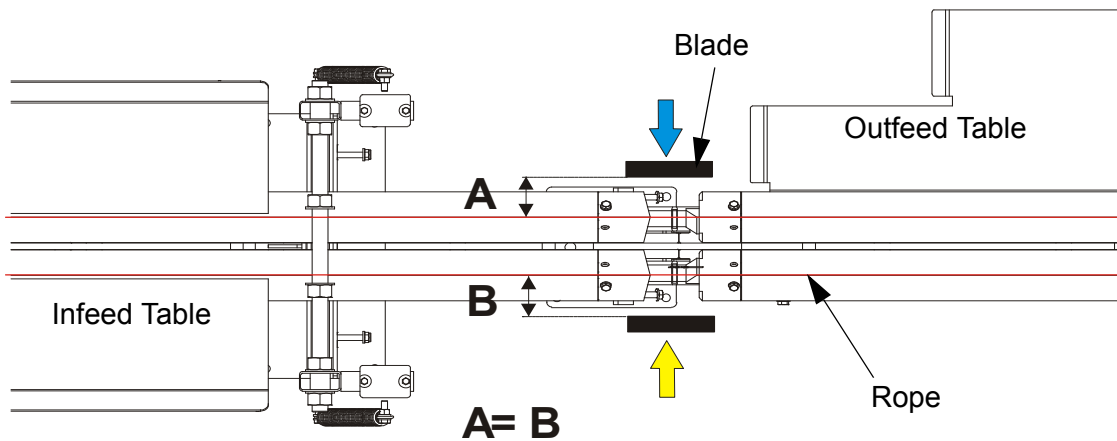


FIG. 5-24

5.2.4 Aligning the Blade Guides

Each Wood-Mizer resaw has two blade guide assemblies that help the blade maintain a straight cut. The two blade guide assemblies are positioned on the cutting head to guide the blade on each side of the material being cut.

One blade guide assembly is mounted in a stationary position on the drive side of the cutting head. This assembly is referred to as the "inner" blade guide assembly.

The other blade guide assembly is mounted on the idle side of the cutting head. It is referred to as the "outer" assembly and is adjustable for various widths of materials to be processed.

Blade guide alignment includes four steps:

- Blade Deflection,
- Blade Guide Vertical Tilt,
- Blade Guide Flange Spacing,
- Blade Guide Horizontal Tilt.

Perform the blade guide alignment after you have aligned the blade on the wheels. After blade guide alignment, check the scale indicator to make sure it is adjusted properly.

NOTE: During blade guide alignment, remove the blade guide adjusting screws and apply a lubricating oil such as 10W30 or Dexron III to each screw. This will prevent the screws and threaded holes from corroding and make screw adjustments easier.

5.2.5 Blade Deflection

Perform the following steps to achieve proper blade deflection with the blade guides.

1. Set the blade guide arms to fully closed.
2. If the blade wheels adjustment has been performed correctly, measure the actual distance from the rope to the bottom of the blade with a tape.
3. Install the blade guides. Make sure the two set screws shown below are threaded into the blade guide shaft until they touch each other.

5

Alignment

Blade Guide Horizontal Tilt Adjustment

See Figure 5-25.

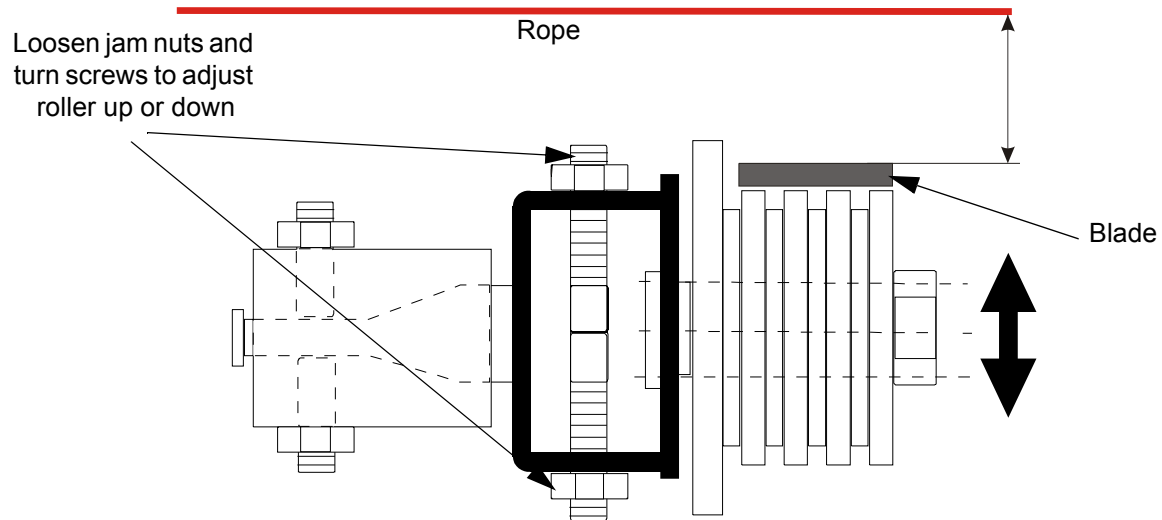


FIG. 5-25

4. Loosen the jam nut and tighten the appropriate screw until the blade guide deflects the blade 1/4" (6.0 mm).
5. Repeat for the other blade guides.

NOTE: Be sure that the blade guide touches the blade in both guide assemblies.

5.2.6 Blade Guide Horizontal Tilt Adjustment

1. Attach the ropes to the upper holes of the alignment bracket. Attach the tools to the blade near the upper blade guides mount as shown. Be sure the tools do not rest on a tooth or burr, and are lying flat against the blades.

See Figure 5-26.

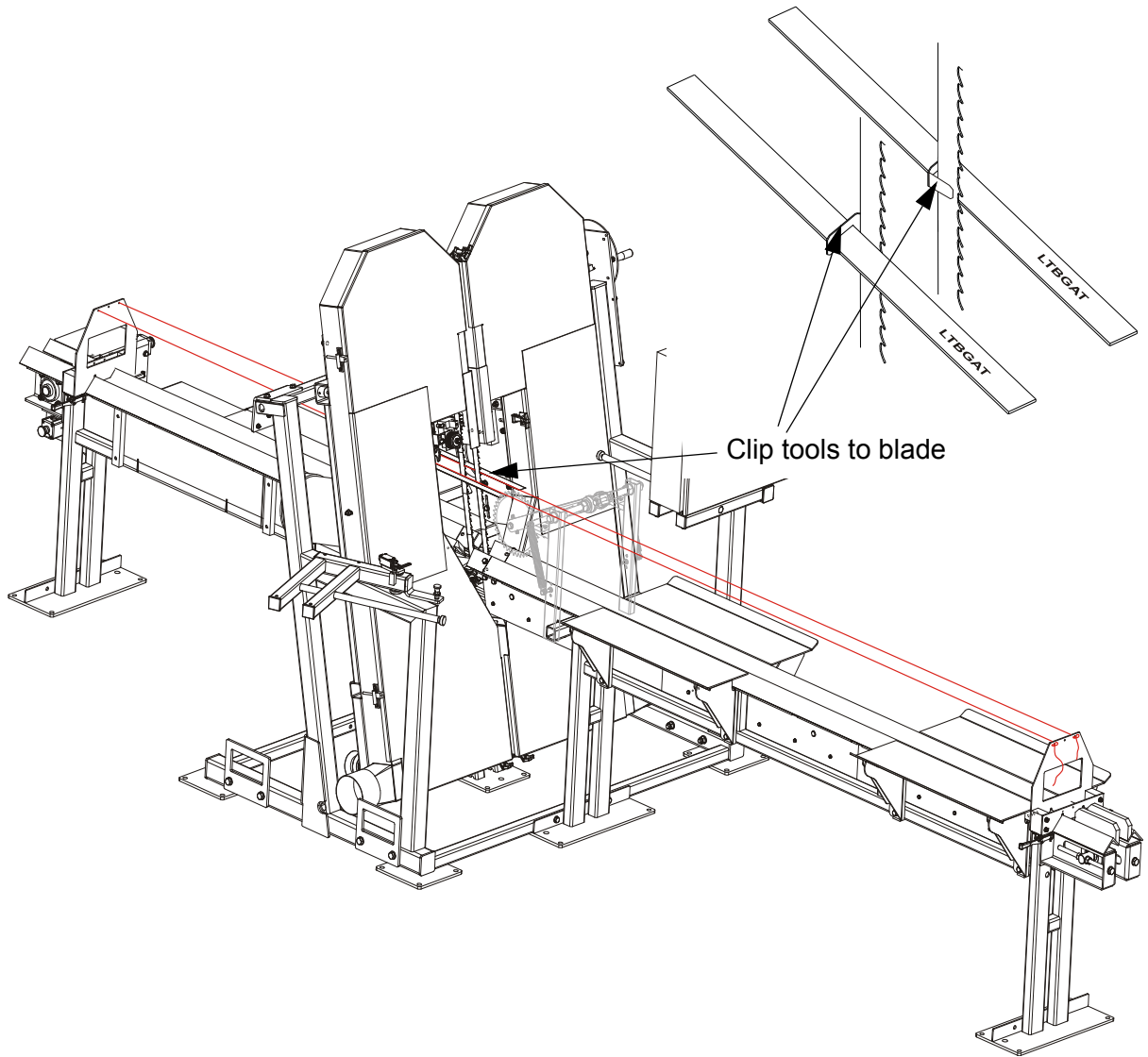


FIG. 5-26

Check that the blade guide does not tilt the blade left or right. A Blade Guide Alignment Tool (LTBGAT) is provided to help you measure the vertical tilt of the blade.

2. Position the tools near the upper blade guide.
3. Measure the distance from the edge of the tool to the ropes at the back end of the tool and then at the front end of the tool.

5

Alignment

Blade Guide Horizontal Tilt Adjustment

See Figure 5-27.

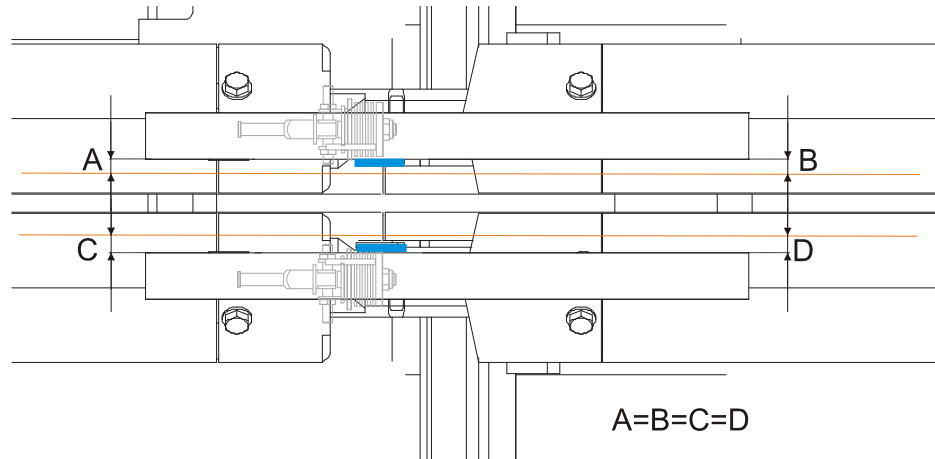


FIG. 5-27

4. All four distances (A, B, C, and D) should be equal. If the distances A and C or B and D differ, it is necessary to check the saw heads centering ([See Step 8.](#) of the blade wheels adjustment procedure). If the distances A and B or C and D differ, adjust the horizontal tilt of the blade guide using the adjustment screws shown in the figure below.

See Figure 5-28. Loosen the jam nuts on the left and right horizontal tilt adjustment screws. To tilt the roller left, loosen the right screw and tighten the left screw. To tilt the roller right, loosen the left screw and tighten the right screw. Tighten the jam nuts and recheck the tilt of the blade.

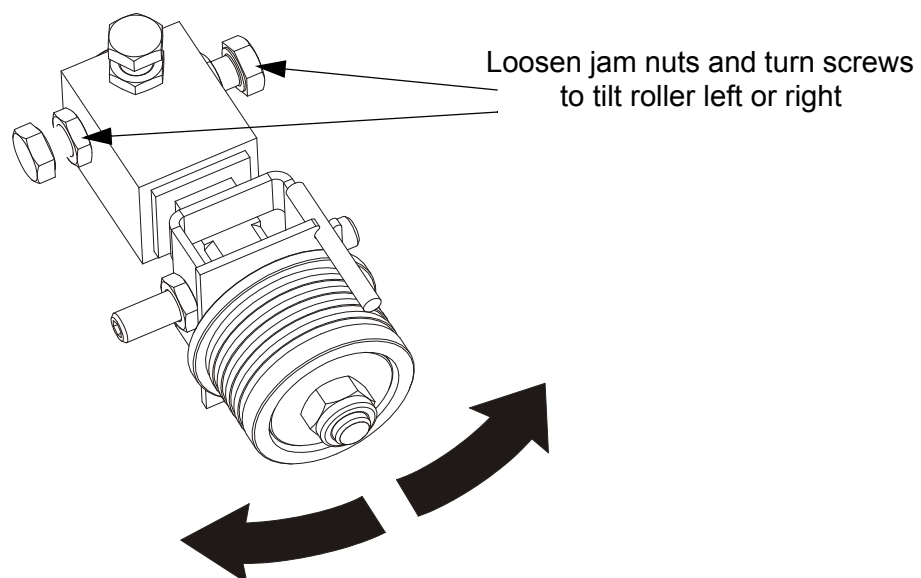


FIG. 5-28

5. Attach ropes to the lower holes of the alignment bracket. Attach the tools to the blade near the lower blade guide mount blocks and repeat above steps. Adjust the horizontal tilt of this guide if necessary.

NOTE: If any major adjustments to the blade guide tilt were made, use a tape to measure the actual distance from the rope to the bottom of the blade again to ensure the correct 1/4" (6.0 mm) blade guide deflection. Adjust if necessary.

5.2.7 Blade Guide Spacing

HINT: When adjusting blade guide spacing, loosen the top set screw and one side set screw only. This will ensure horizontal and vertical tilt adjustments are maintained when the set screws are retightened.

1. Adjust the lower blade guide so the blade guide flange is approximately 1/16"-1/8" (1.5-3.0 mm) from the back of the blade.
2. Loosen one side and one top set screw shown. Tap the blade guide forward or backward until properly positioned.

See Figure 5-29.

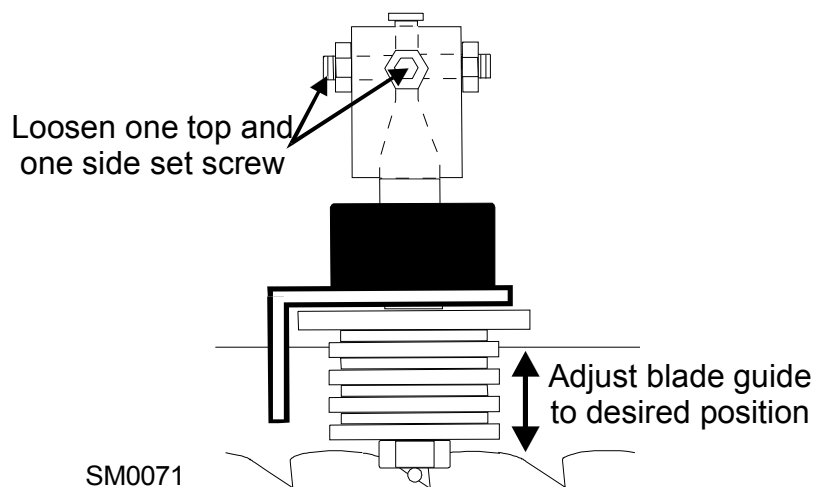


FIG. 5-29

3. Retighten the two set screws.
4. Adjust the upper blade guide in the same way so the blade guide flange is approximately 1/16"-1/8" (1.5-3.0 mm) from the back of the blade.

5.2.8 Blade Guide Vertical Tilt Adjustment

1. The blade guides should be adjusted vertically. To adjust, move the blade guide arm halfway in.

See Figure 5-30.

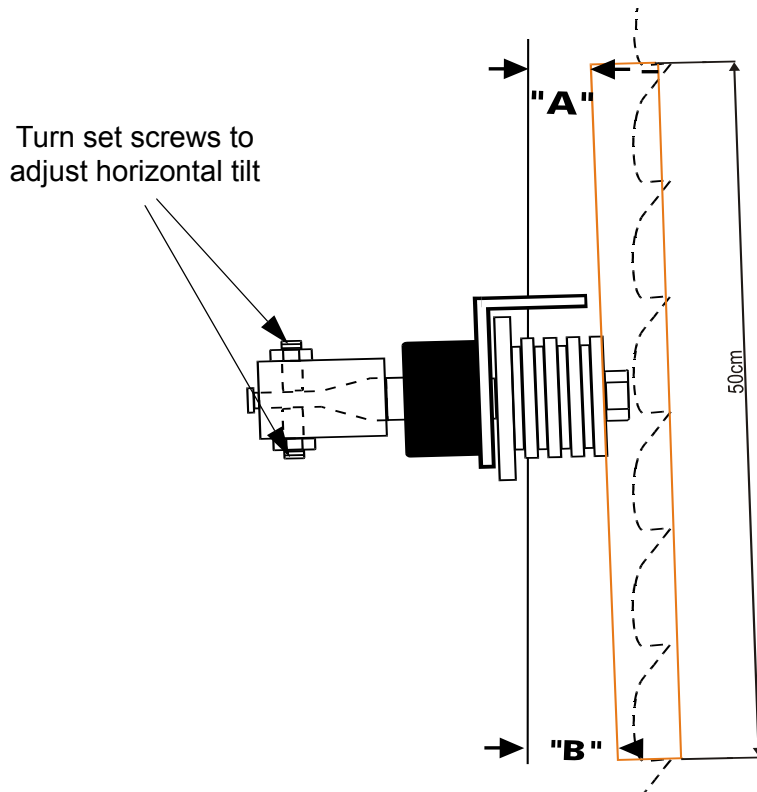


FIG. 5-30

2. Place the Blade Guide Alignment Tool against the face of the upper blade guide roller.
3. Center the tool on the roller and measure the distance between the back edge of the blade and the ruler at the end closest to the lower blade guide ("B").
4. Measure between the back edge of the blade and the other end of the ruler ("A").
5. The roller should be tilted slightly up ($A = B - 1/4$ " [6.0 mm]).
6. Use the set screws to adjust the horizontal tilt of the roller.
7. Repeat steps 3-7 for the lower blade guide roller.

NOTE: Once the blade guides have been adjusted, any cutting variances are most likely

caused by the blade. See the Wood-Mizer® Blade Handbook, Form #600.

5.2.9 Blades Width Scale Adjustment

After the entire resaw has been aligned and all adjustments made, check that the blade height scale indicates the true distance between the blades.

1. Measure the distance between the blades.

See Figure 5-31.

2. View the distance between the blades on the scale with the indicator.

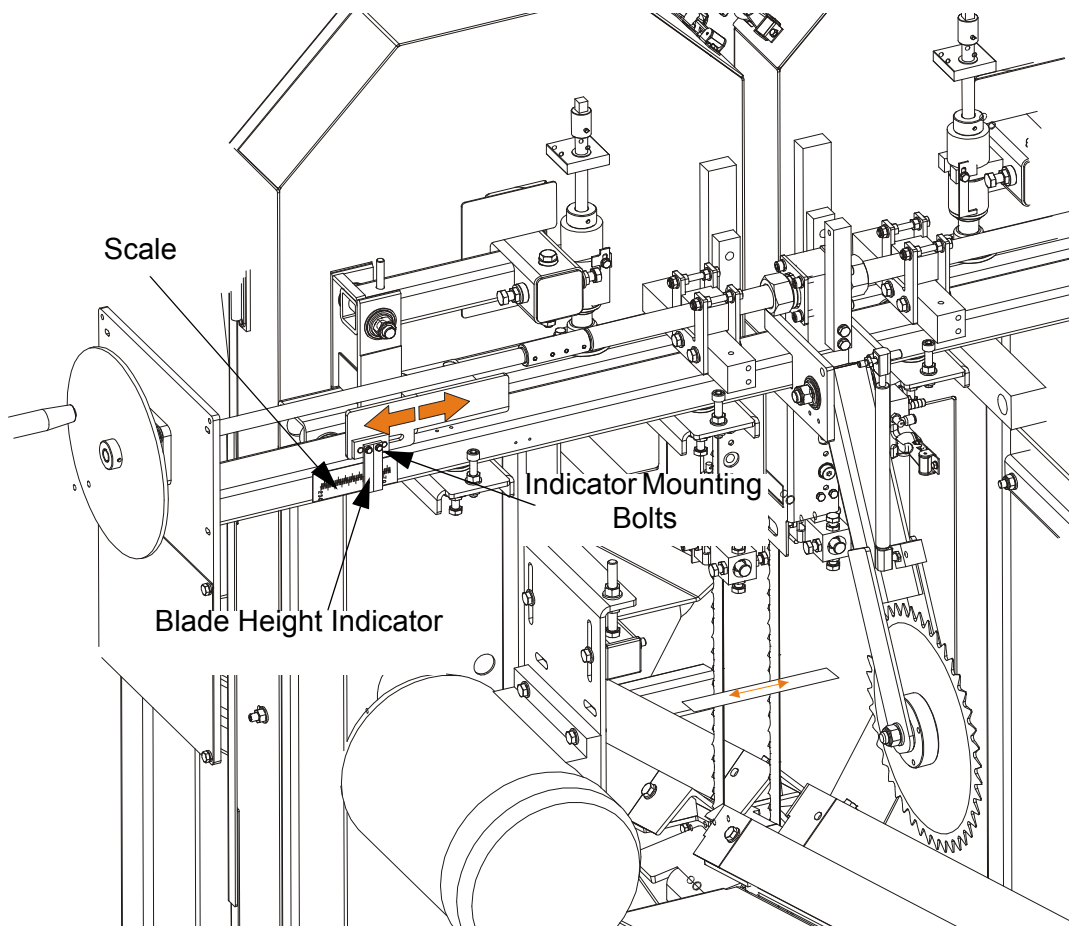



FIG. 5-31

3. Loosen the indicator bracket mounting bolts and adjust the bracket until the indicator is aligned with the correct mark on the scale. Retighten the bracket mounting bolts.

5 Alignment

Blades Width Scale Adjustment

 **CAUTION!** DO NOT adjust the saw head turnbuckle bracket nuts. The turnbuckles are factory set and should have a little gap between brackets.

See Figure 5-32.

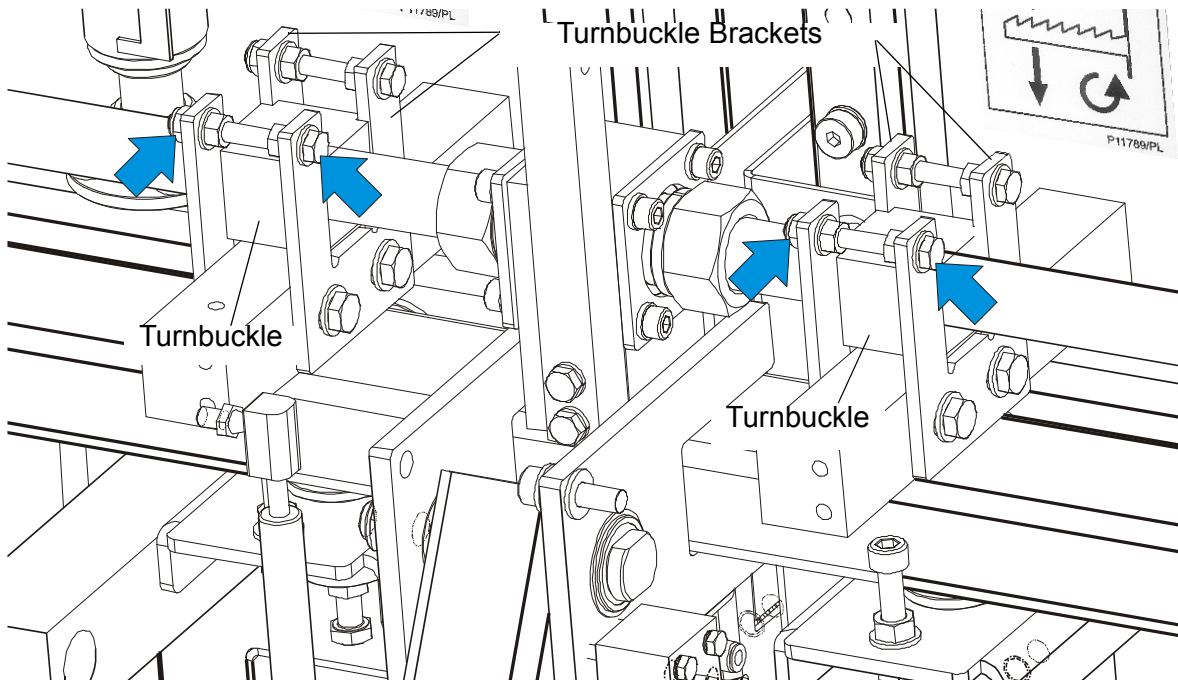


FIG. 5-32

5.2.10 Track Chain Mounting

Mount and tension the feed chain.

1. Loosen the chain tensioner.
2. Route the feed chain as shown below. Be sure the chain is mounted in correct direction.
3. Connect the chain using the chain link.
4. Tighten the chain. [See Section 4.8](#)

See Figure 5-33.

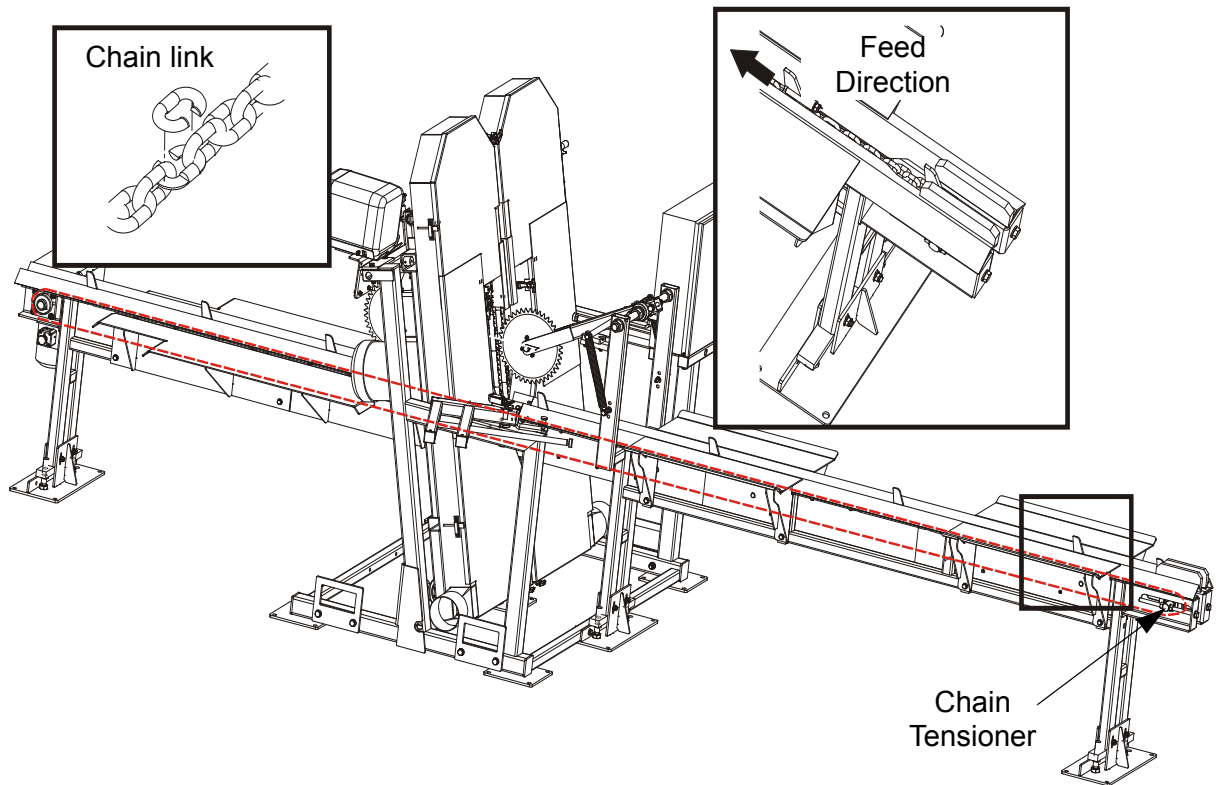


FIG. 5-33

SECTION 6 SPECIFICATIONS

6.1 Overall Dimensions

See Figure 6-1. The overall dimensions of the Twin Vertical Saw are shown below.

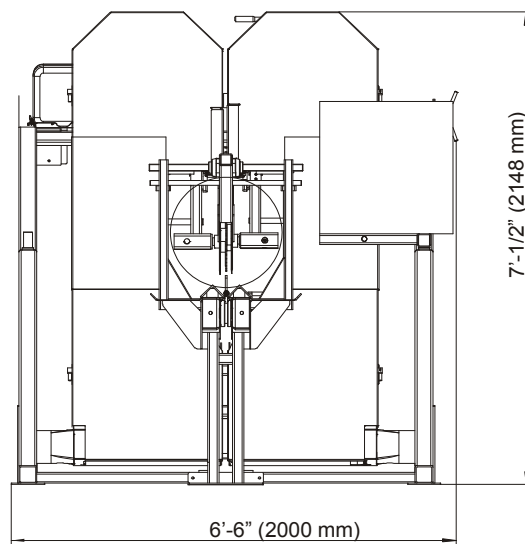
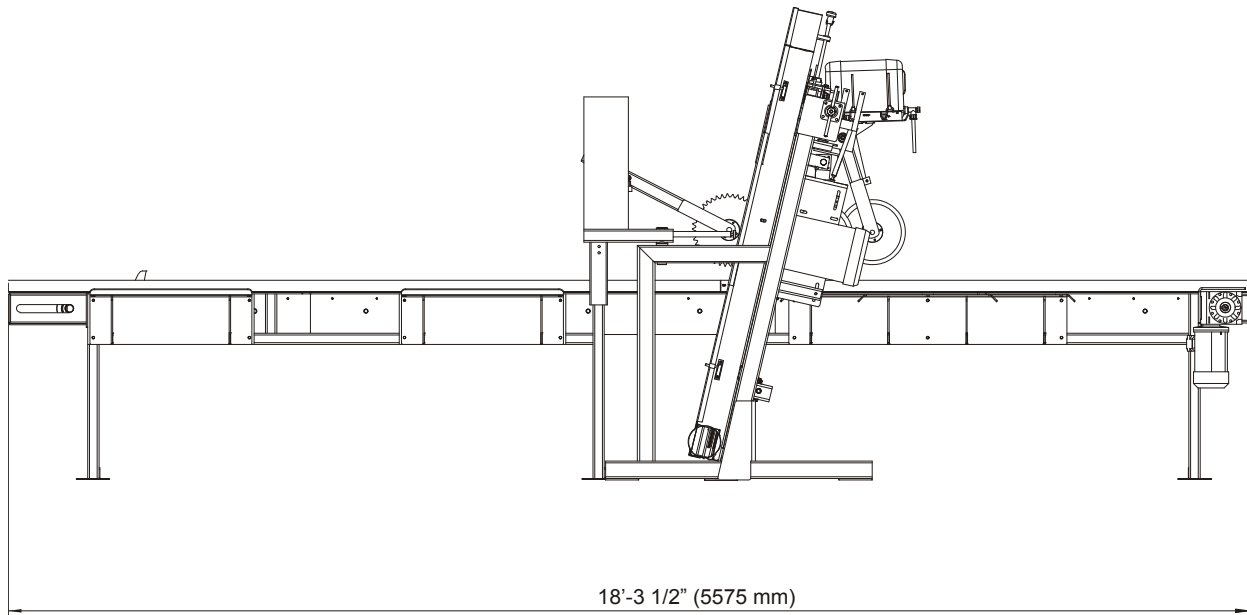


FIG. 6-2

See Table 6-1. The overall dimensions of the TVS are listed in the table below.

Weight	Heads and Tables - 3417 lbs. (1550 kg)
	Heads - 2063 lbs. (936kg)
	TVSIV2.4I - 882 lbs. (400kg)
	TVSIV3.6I - 701 lbs. (318kg)
	TVSOV4.8 - 1071 lbs. (486kg)
Height	7'-1/2" (2148 mm)
Width	6'-6" (2000 mm)
Length	18'-3 1/2" (5575 mm)

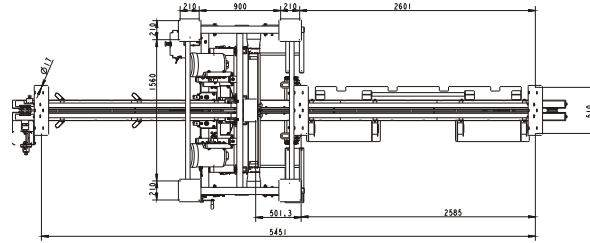
See Table 6-2. The TVS length depending on table configuration.

Table Configuration	Length [in meters]
TVSIV2.4 + TVSOV2.4	4.8
TVSIV2.4 + TVSOV3.6	6.0
TVSIV2.4 + TVSOV4.8	7.2
TVSIV3.6 + TVSOV2.4	6.0
TVSIV3.6 + TVSOV3.6	7.2
TVSIV3.6 + TVSOV4.8	8.4

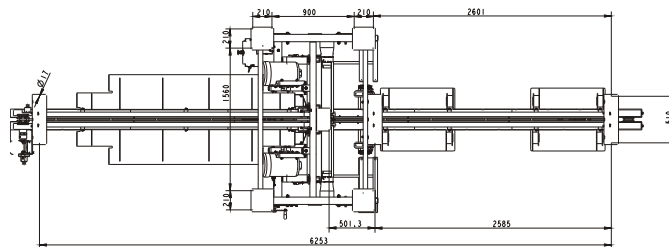
6 Specifications

Overall Dimensions

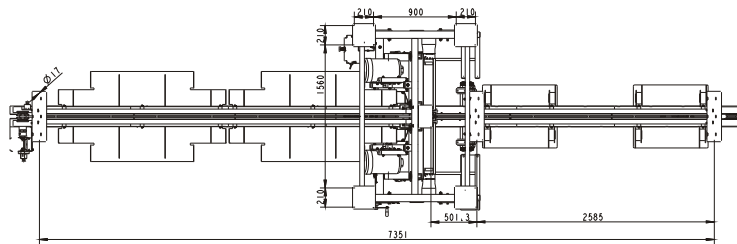
See Figure 6-3. The legs layouts with dimensions (in millimeters) are shown below.



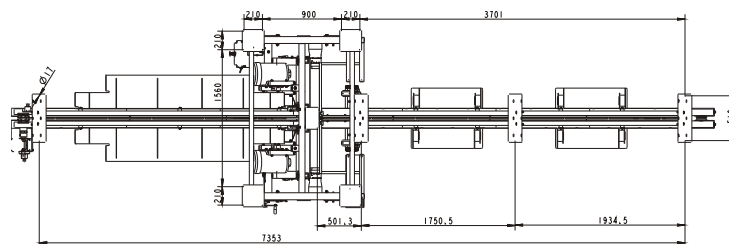
TVSE15S + TVSIV2.4M + TVSOV2.4M



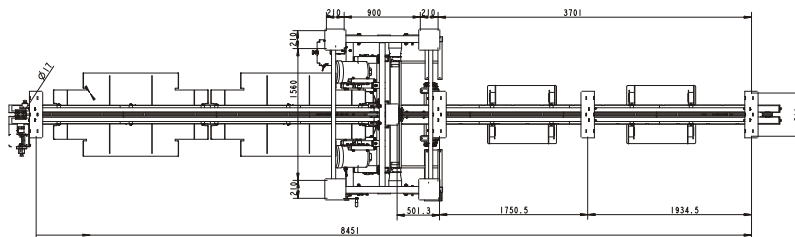
TVSE15S + TVSIV2.4M + TVSOV3.6M



TVSE15S + TVSIV2.4M + TVSOV4.8M



TVSE15S + TVSIV3.6M + TVSOV3.6M



TVSE15S + TVSIV3.6M + TVSOV4.8M

FIG. 6-3

6.2 Electrical Requirements



DANGER! Make sure all electrical installation, service and/or maintenance work is performed by a qualified electrician and is in accordance with applicable electrical codes.

The identification plate for the TVSEC15U model including the required electrical information is shown below:

MFG BY: WOOD-MIZER LLC, 8180 W. 10th St. Indianapolis, IN 46214-2400 317/271-1542 or 800/553-0182											
SERIAL #	TVS 014/2011	FLA OF LARGEST LOAD	20.1A								
FLA	58.2A	IR	300kA	SCCR	5kA	VOLTS	480	HZ	60	PH	3
<small>(Base unit only)</small>											
ELECTRICAL DIAGRAM #		TVS001		PATENTS					<small>S20038</small>		
											<small>300_0003C</small>

TVSEC15U IDENTIFICATION PLATE

IMPORTANT! The TVSEC15U is wired for use with a 480 volt power supply. To operate the TVS with 240 volt, 400 volt or 600 volt power supply an additional transformer is required. See the table below for transformers available from Wood-Mizer.

See Table 6-3.

Conversion From/To	240 to 480 volts	400 to 480 volts	600 to 480 volts
Wood-Mizer Part No.	069712	069616	068047

TABLE 6-3

6 Specifications

Cutting Capacity

6.3 Cutting Capacity

See Table 6-4. The material size and performance capacities of the TVS are shown below.

Cutting Length	40"-120" (1-3 m)
Material Width	2 3/4"-9 7/8" (70-250 mm)
Feed Speed	0-82 ft./min. (0-25 m/min)
Minimum Log Diameter	4" (100 mm)
Maximum Log Diameter	12" (300 mm)

See Table 6-5. Wood-Mizer TRU•SHARP™ offers three types of blades to provide efficient sawing. The type of wood you saw should determine which blade you choose for optimum performance.

Motor Size	Recommended Blade Type (184" Blade Length)		
	Softwood	Medium Hardwood	Frozen Timber or Dense Hardwood
5HP - 15HP	.042 x 7/8 x 1 1/4"	.042 x 7/8 x 1 1/4"	.045 x 7/8 x 1 1/4"

6.4 Motor Specifications

See Table 6-6. See the table below for motor specifications of the Twin Vertical Saw.

Motor Type	Manufacturer	Model	Power	Other Specifications
Blade Motor (TVSEC15U)	Siemens, Germany		16.09HP (12 kW)	460V/60Hz; 200Amp, 3515 RPM
Blade Motor (TVSE25)	Siemens, Germany	---	23.2 HP (17.3 kW)	460V/60Hz; 28.5Amp, 3525 RPM
Feed Track Motor	---	---	1.48 kW	460V/60Hz

6.5 Electrical Information

See *Form #2049 TVS Electrical Information* for TVS schematics, cables, component lists and layouts.

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