

## user manual

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

Retain for future use  
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Сохраните для последующего  
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Bewaren voor gebruik in de toekomst  
Conservare il presente manuale a l'uso futuro  
Păstrați acest manual pentru utilizare viitoare  
Conservar para futuras consultas  
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Uchovejte pro další použití  
Hranite za prihodnjo uporabo



# **Wood-Mizer®**

## **Safety, Setup, Operation & Maintenance Manual**

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**LX100**

**rev. A2.01**

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

*Form #801*

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

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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.

### *General Contact Information*

From Europe call your local distributor or our European Headquarters and Manufacturing Facility in Kolo, Nagórna 114 St, Poland at **+48-63-2626000**. From the continental U.S., call our U.S. Headquarter 8180 West 10th St. Indianapolis, IN 46214, toll-free at **1-800-525-8100**. Ask to speak with a Customer Service Representative. Please have your machine identification number and your customer number ready when you call. The Service Representative can help you with questions about the operation and maintenance of your machine. He also can schedule you for a service call.

### **Office Hours:**

<b>Country</b>	<b>Monday - Friday</b>	<b>Saturday</b>	<b>Sunday</b>
Poland	7 a.m.- 3 p.m.	Closed	Closed
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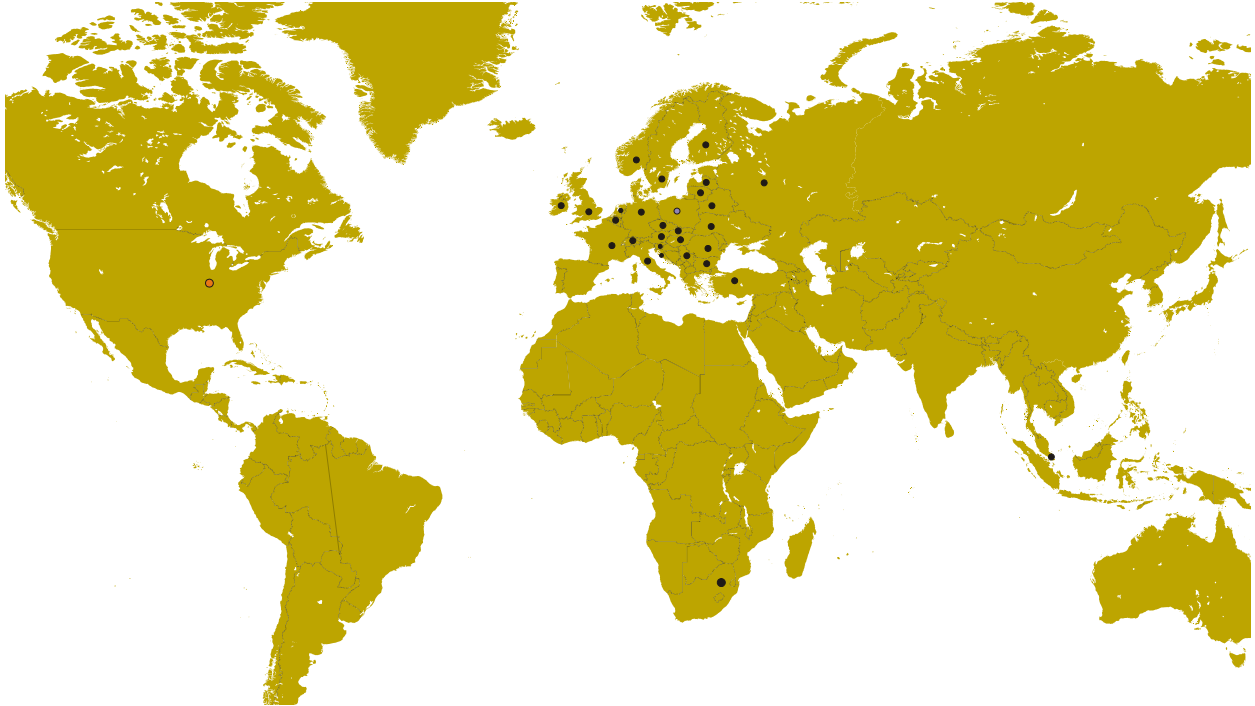
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Actual product may differ from product images. Some illustrations show machines with optional equipment.

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For a complete list of dealers, visit [www.woodmizer.com](http://www.woodmizer.com)

## Sawmill and Customer Identification

Each Wood-Mizer LX100 sawmill is identified with a revision and VIN numbers. See the table below for VIN description.

<b>LX100</b> Base Model	<b>S3</b> Bed Section Numbers	<b>EH11</b> Engine/Motor Configuration	<b>S</b> CE Version	<b>-P</b> Power Feed Option
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Revision Number

<b>A1.</b> Major Revision Code
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<b>00</b> Minor Revision Code
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### MODEL & REVISION NUMBERS DESCRIPTION

Company Identification Number 456=Wood-Mizer Indiana	Weight Class: A=Under 1361 kg, B=1361-1814 kg, C=1814-2268 kg, D=2269-3000kg	Product No.: 1=LT10/15, 2=LT20 Series, 4=LT40 Series, 7=LT70 Series	Length of the trailer: 20=20' (6 m), 24=24' (7 m), 35=35' (11 m)	Number of axes on the trailer	Check Digit Add all the number and divide by 11	Year of manufacture: J=2011, K=2012, L=2013, M=2014, N=2015, O=2016	State of manufacture: N=Indiana, P=Poland	Month of Manufacture: A=January, B=February, C=March, etc.	Revision Level	Sequence Number Ranging from 000-999	End of 17-Digit VIN	Revision Level (Repeated)	Two-Digit Minor Revision Level
<b>456</b>	<b>A</b>	<b>5</b>	<b>24</b>	<b>1</b>	<b>X</b>	<b>H</b>	<b>P</b>	<b>A</b>	<b>F9</b>	<b>017</b>	<b>F9</b>	<b>.01</b>	

V.I.N. DESCRIPTION

When you pick up your mill, you will receive a customer number. The VIN number, revision and your customer number expedite our service to you. Please write these numbers below so you have quick, easy access to them.

Customer No.	Model Type	VIN No.	Revision No.



**Important!** Read the entire Operator's Manual before operating the sawmill. 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.

## SECTION 1 SAFETY & GENERAL INFORMATION

### 1.1 Safety Symbols

These symbols 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 to persons or equipment.



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.

Also read any additional manufacturer's manuals and observe any applicable safety instructions including dangers, warnings, and cautions.

Always be sure that all safety decals are clean and readable. Replace all damaged safety decals to prevent personal injury or damage to the equipment. Contact Wood-Mizer Customer Service or the Wood-Mizer distributor in your area to order a new decal.

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

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

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

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



## 1.2 Blade Handling



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



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

## 1.3 Sawmill Setup



**WARNING!** Do not set up the mill on ground with more than a 10 degree incline. If setup on an incline is necessary, put blocks under one side of the mill or dig out areas for the legs to keep mill level. Setting up the mill on an incline could cause it to tip over, resulting in serious personal injury.

**WARNING!** Keep all persons away from area while loading and unloading the sawmill. Failure to do so may result in serious injury or death.

## 1.4 Sawmill Operation



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

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



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

**DANGER!** Be sure the blade housing is in place and secured.

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

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

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

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

**WARNING!** Always wear eye, ear, respiration, and foot protection when operating or servicing the machine. Failure to do so may result in serious injury.



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

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

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



**CAUTION!** Be sure the log clamps are all the way down before loading a log onto bed. Failure to do so may result in machine damage.

**CAUTION!** Before loading a log, be sure the cutting head is moved far enough forward so the log does not hit it. Failure to do so may result in machine damage.

**CAUTION!** Do not try to force the saw head beyond its upper and lower travel limits. Failure to do so may result in up/down damage.

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

**CAUTION!** The saw head will hit the spring-loaded ramp stops when adjusted for low cuts. Remove the loading ramps before sawing to prevent damage to the saw head.



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

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

**CAUTION!** Blade should be replaced every two hours of sawmill operation.

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

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

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

## 1.5 Sawmill Maintenance



**CAUTION!** The up/down screw bellows should completely cover the screw. If either of the bellows is damaged, replace it immediately. Before installing the new bellows, clean the up/down screw and nut thoroughly with extraction naphtha and then grease them.

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

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

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

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

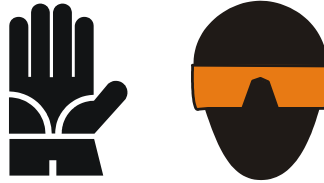
**IMPORTANT!** It is always owner's responsibility to comply with all applicable federal, state and local laws, rules and regulations regarding the ownership and operation of your Wood-Mizer sawmill. All Wood-Mizer owners are encouraged to become thoroughly familiar with these applicable laws and comply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




### Keep Sawmill and Area Around Sawmill Clean

 **DANGER!** Maintain a clean and clear path for all necessary movement around the sawmill 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 Sawmill Before Operation

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



### Keep Persons Away



**DANGER!** Keep all persons out of the path of moving equipment and lumber when operating the sawmill. 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 may 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.


**DANGER!** Always keep hands away from moving bandsaw blade. Failure to do so may 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.

## 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 disconnect box, starter box, 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 sawmill operation.




 **WARNING!** Consider all electrical circuits energized and dangerous.


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

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

 **NOTE!** 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 the blades.

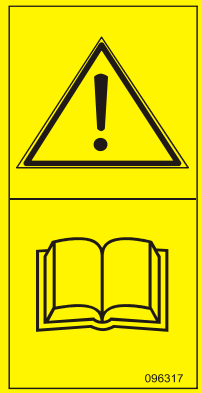

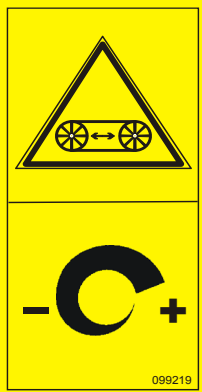
## Keep Safety Labels In Good Condition

 **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.



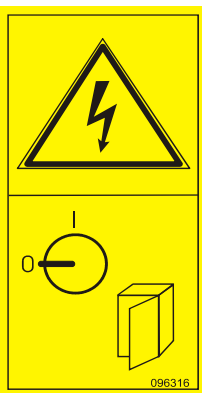
**IMPORTANT!** If replacing a component which has a safety decal affixed to it, make sure the new component also has the safety decal affixed.

See **Table 1-1**. Pictogram decals used to warn and inform the user about danger in the LX100 are shown below.

**TABLE 1-1**

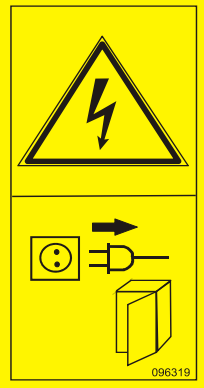
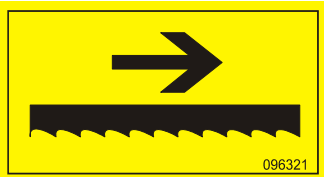



Decal View	Decal No.	Description
	096317	CAUTION! Read thoroughly the operator's manual before operating the sawmill. Observe all safety instructions and rules when operating.
	099220	CAUTION! Close all guards and covers before starting the machine.
	099219	Blade tension. Turning the bolt clockwise will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

**TABLE 1-1**


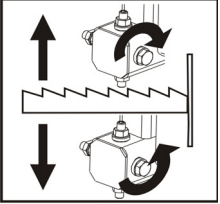
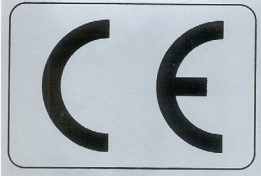


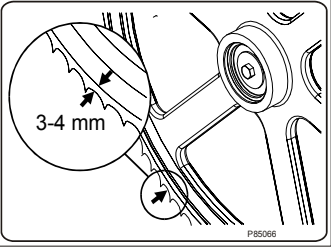
 <p>099221</p>	<p>099221</p>	<p>CAUTION! Keep all persons at a safe distance from work area when operating the machine.</p>
 <p>098176</p>	<p>098176</p>	<p>CAUTION! Keep away from debarker blade!</p>
 <p>096316</p>	<p>096316</p>	<p>CAUTION! Do not open or close the electric box when the switch is not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



**TABLE 1-1**

	<p>096319</p>	<p>CAUTION! Disconnect power supply before opening the box.</p>
	<p>096321</p>	<p>Blade movement direction</p>
	<p>S12004G</p>	<p>CAUTION! Always wear safety goggles when operating the sawmill.</p>
	<p>S12005G</p>	<p>CAUTION! Always wear protective ear muffs when operating the sawmill!</p>
	<p>501465</p>	<p>CAUTION! Always wear safety boots when operating the sawmill!</p>

**TABLE 1-1**

	<p>501467</p>	<p>Lubrication point</p>
 <p>P11789b</p>	<p>P11789</p>	<p>Aligning the blade on wheels</p>
	<p>P85070</p>	<p>CE safety certification</p>
 <p>099401</p>	<p>099401</p>	<p>Russian safety certification</p>
 <p>S20097</p>	<p>S20097</p>	<p>Motor rotation direction.</p>
 <p>P85066</p>	<p>P85066</p>	<p>Blade positioning.</p>

## 1.7 Belt Sizes

See Table 1-2. Belt sizes for the LX100 are shown below.

Description	Belt Size	Part #
Motor Drive Belt E11, E15	2BXB81	014819-2
Blade Pulley Belts	B57 <sup>1</sup>	P04185-2

**TABLE 1-2**

<sup>1</sup> To insure proper blade tracking, use Goodyear, Dayco Super II, or Browning belts only.

## 1.8 Blade Sizes

See Table 1-3. Wood-Mizer TRU•SHARP™ offers three types of blades to provide efficient sawing for all models of sawmills. The engine/motor size of your sawmill and type of wood you saw should determine which blade you choose for optimum performance.

Engine/Motor Size	Recommended Blade For Sawing <sup>1</sup> :		
	Softwood	Hardwood	Frozen or Hard-To-Cut Wood
5 - 15 hp	B275IH1030 B275IH741030	B375IH929	B375IH929 <sup>2</sup>
16 hp or more	B376IH1030 B376IH741030	B275IH1030 B275IH741030 B376IH1030 B376IH741030 <sup>3</sup>	B375IH929 <sup>2</sup>
Electric Motor	B376IH1030 B376IH741030	B275IH1030 B275IH741030 B376IH1030 B376IH741030 <sup>3</sup>	B375IH929 <sup>2</sup>

**TABLE 1-3**

<sup>1</sup> LX100 sawmill is equipped with a blade with a length of 4.01m.

<sup>2</sup> TRU•SHARP™ "F" blades use a 9/29 (9° hook angle and 29° back angle) and are designed to cut frozen and/or extremely dense, hard-to-cut wood. Standard TRU•SHARP™ blades use a 10/30 profile.

<sup>3</sup> Customer may choose preferred blade.

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

### 1.9 Cutting Capacity

See Table 1-4. The log size capacities of the LX100 sawmills are listed below.

	Max. Diameter	Max. Length
LX100 S2 <sup>1</sup>	70 cm	3.6 m
LX100 S3	70 cm	5.58 m
LX100 M2 <sup>2</sup>	70 cm	5.4 m
LX100 M3	70 cm	8.1 m

TABLE 1-4

<sup>1</sup> Each additional S type bed frame segment adds approximately 185cm to length capacity.

<sup>2</sup> Each additional M type bed frame segment adds approximately 275 cm to length capacity.

See Table 1-5. The performance capacity of the LX100 sawmill is listed below. Peak cutting rates are measured in 30 cm wide red oak and represent the capability of the sawmill only. Rates based on using Tru-Sharp 1 1/4" x 0,042.

Sawmill Model	Cutting Rate
LX100 E11, G25	3.3 m/min.

TABLE 1-5

### 1.10 Engine/Motor Specifications

See Table 1-6. The power options available for the LX100E11/E15 sawmills are listed below.

Engine/Motor Type	Manufacturer	Model No.	Specifications
Electric Motor, E11, 7.5 kW	Siemens, Germany	1LE1002 1CA13-4AA4-Z F01+F12	3 x 400V, 50 Hz
Electric Motor, E15, 11 kW	Indukta, Poland	PSg-132 S2 - HM	3 x 400V, 50 Hz
Up/Down Motor, 0.55 kW	Besel	SKh71X-4C2/HPS08	3x 230/400VAC, 50Hz
Power Feed Motor, 0.55 kW	Dutchi Motors, The Netherlands	DMA 80K4	230/400V, 50 Hz

TABLE 1-6

See Table 1-7. Power supply specifications for the LX100E11/E15 SAWMILL

3-Phase Volts	Fused Disconnect	Recommended Wire Size
400 VAC	16 A	2.5 mm <sup>2</sup> up to 15 m long

TABLE 1-7



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

See Table 1-8. The power options available for the LX100G25 sawmills are listed below.

Engine/Motor Type	Manufacturer	Model No	Specifications
Gas Engine G25	Kohler, USA	CH740	25 hp, 18.6kW, 725cm <sup>3</sup>
Up/Down Motor, 0.5 kW	--	--	12V DC, 1550 RPM
Power Feed Motor, 0.55 kW (option)	--	--	
Blade Guide Arm Motor	Motor Products Owsso, USA	--	12V DC, 17W, 60 r.p.m.

TABLE 1-8

## 1.11 Noise Level

See Table 1-9. The average noise level is given in the table below<sup>12</sup>.

Sawmill	Noise Level:
LX100E11	$L_{EX8} = 81,9 \text{ dB (A)}$
LX100G25	$L_{EX8} = -- \text{ dB (A)}$

TABLE 1-9

1. The noise level measurement was taken in accordance with PN-EN ISO 3746 Standard The noise exposure level given above concerns an 8-hour work day. Value for associated uncertainty K=4dB.

2. The measured values refer to emission levels, not necessarily to noise levels in the workplace. Although there is a relation between emission levels and exposure levels, it is not possible to determine with certainty if preventives are needed or are not needed. The factors affecting a current level of noise exposure during work are inter alia room characteristics and characteristics of other noise sources, e.g. number of machines and machining operations nearby. Also the permissible exposure level can vary from country to country. This information, however, will enable the user of the machine to make a better evaluation of the hazard and risk.

## 1.12 Sawdust Extractor Specifications

See Table 1-10. Specifications of the dust extractors used on the sawmill for each saw head are listed below<sup>1</sup>.

Maximum Capacity	1200 m <sup>3</sup> /h
Collector Inlet Diameters (in front of fan)	100 mm
Electric Motor Horsepower:	1,5 kW
Number of Sacks for Waste	1 pcs
Total Capacity of Sacks	0.25 m <sup>3</sup>
Pressure drop	1,5 kPa (0.22 psi) <sup>1</sup>
Weight	110 kg
Conveying Speed When 10 m Long Hose Is Used	20 m/s

**TABLE 1-10**

<sup>1</sup> The pressure drop between the inlet of the capture device and the connection to the CADES should not exceed 1.5 kPa (for the nominal air flow rate). If the pressure drop exceeds 1.5 kPa the machine might not be compatible with conventional CADES.



**IMPORTANT!** The sawdust extractor hoses must be grounded or made with materials not accumulating electrostatic charge.



**CAUTION!** Always turn on the dust extractor before starting the machine.



**IMPORTANT!** The total value of hand-arm vibration the operator may be exposed to does not exceed 2.5 m/s<sup>2</sup>. The highest root mean square value of weighted acceleration to which the whole operator's body is subjected does not exceed 0.5 m/s<sup>2</sup>.

1. External chip and dust extraction equipment with fixed installations are dealt with in EN12779:2016-04.

### 1.13 Overall Dimensions

See Figure 1-1. The overall dimensions of the LX100 sawmills with S type frames are shown below.

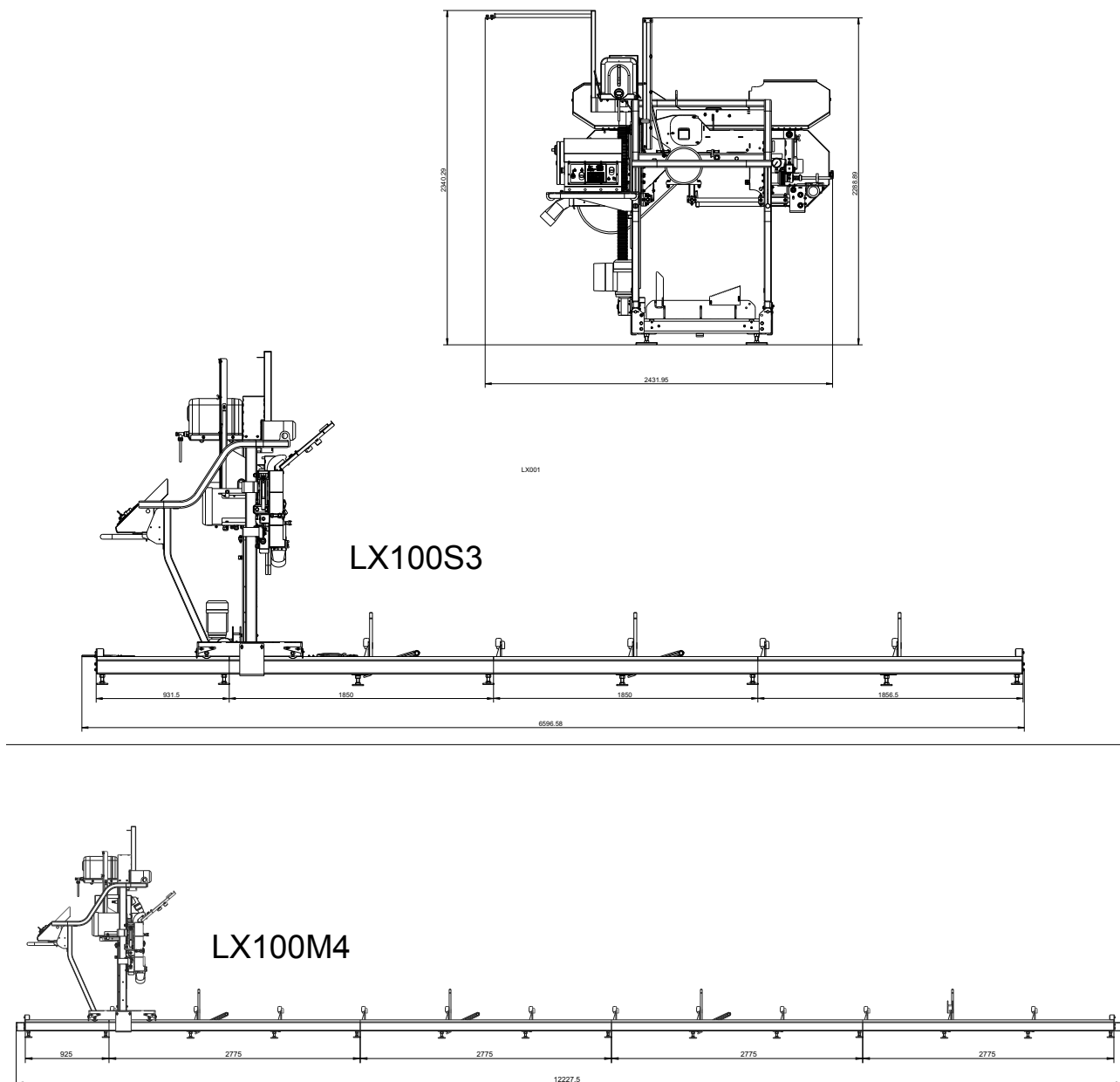


FIG. 1-1

See Figure 1-2. The sawmill operator's position is shown below.

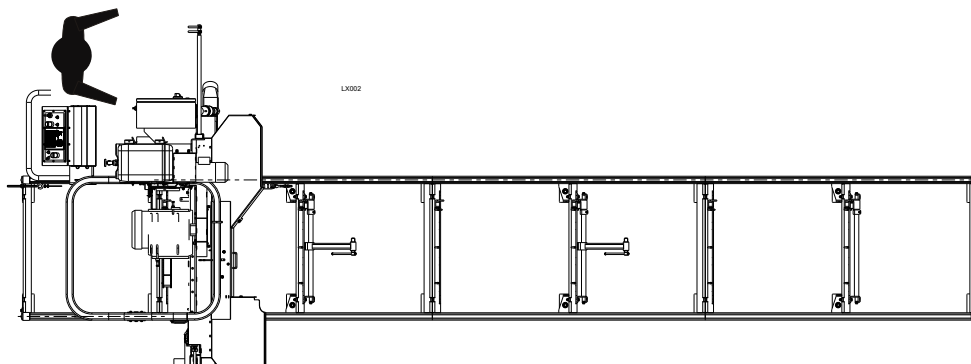


FIG. 1-2

## 1.14 Components

See Figure 1-3. The major components of the LX100E11/E15 sawmill are shown below.

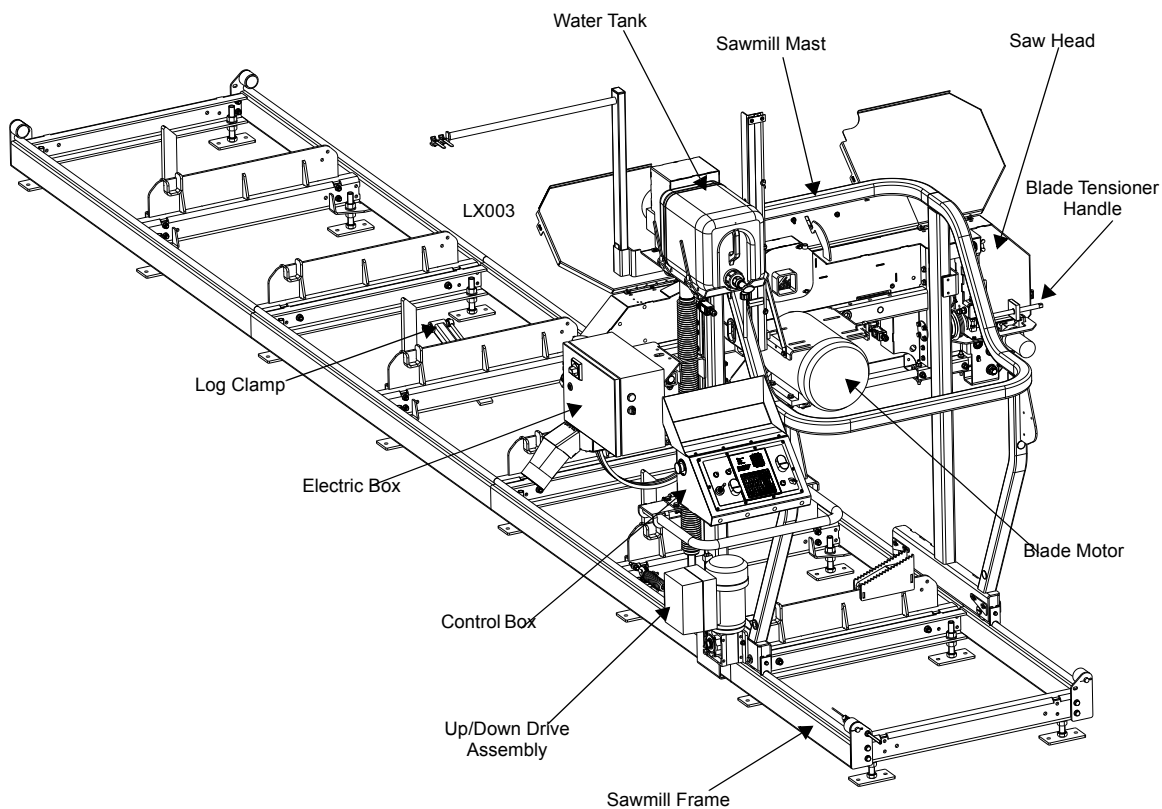


FIG. 1-3



See Figure 1-4. The major components of the LX100G25 sawmill are shown below.

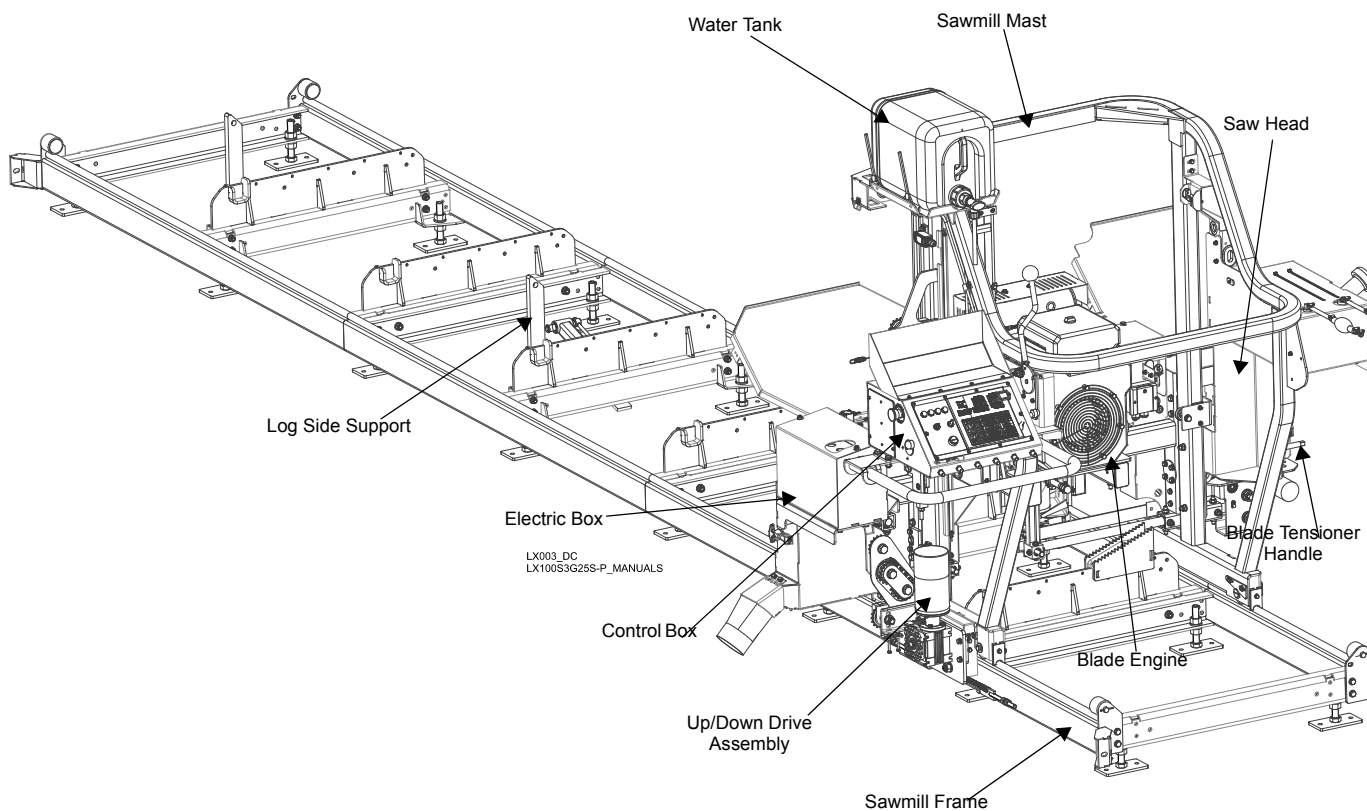


FIG. 1-4

## SECTION 2 SAWMILL ASSEMBLY

### 2.1 Mounting Parts of LX100 sawmill

#### 2.1.1 Parts specifications

Table 1:

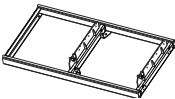
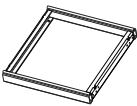










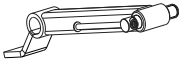
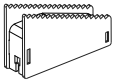








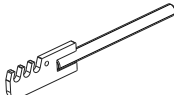


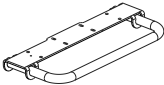
Fig.	Wood-Mizer No.	Description	Qty. LX100 S3		Qty. LX100 S3-P	
			CE	RPA	CE	RPA
	516261-1	Bed Section, S type	3	3	3	3
	516268-1	Extension, Bed Frame LX100	1	1	1	1
	514996-1	Foot, Bed	16	16	16	16
	516820-1	Handle, Weldment	1	1	1	1
	517616	Cap, SR1530 (30 Hole) Tube	0	1	0	1
	517605-1	Plate, Weldment	1	1	1	1
	517610-1	Plate, Scraper Clamping	4	4	4	4
	517609	Scraper	4	4	4	4
	500338-1	Bracket, Log Clamp Mounting	6	6	6	6
	515059-1	Rod, Log Clamp Main	3	3	3	3

Table 1:

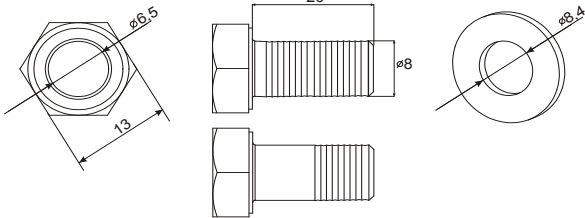
	517722-1	Side Support, Wldmt/Ptd	3	3	3	3
	090675	Pin, Special	6	6	6	6
	507566-1	Log Clamp	3	3	3	3
	515413-1	Wedge, Bed	1	1	1	1
	516075-1	Plate, Bumper	2	2	2	2
	515061-1	Washer, Bumper Plate Spacer	4	4	4	4
	P12165	Bushing, Rubber	4	4	4	4
	086182-1	Mount Weldment, Saw Head Stop	4	4	4	4
	517902-1	Bracket Weldment, Right	1	1	1	1
	517901-1	Bracket Weldment, Left	1	1	1	1
	097449	Hanger, Power Cord	1	1	1	1
	100903-1	Sawdust Chute	1	1	1	1
	517895-1	Bracket, Power Feed Chain	-	-	2	2

**Table 1:**

	517898-S3	Chain, 08B = 6.62m	-	-	1	1
	091625	Link, 08B Chain	-	-	2	2
	517557-1	Handle LX100	1	0	1	0
	518167-1	Handle LX100 Africa	0	1	0	1
	517660-1	Washer, Control Box	1	0	1	0

**2.1.2 Specifications of Fasteners**

**Table 2:**

Wood-Mizer No.	Description	Qty. LX100 S3		Qty. LX100 S3-P	
		CE	RPA	CE	RPA
<b>Designations of fasteners:</b> M8 Nut      M8x20 Bolt      8.4 Washer 					
F81053-1	6.4 Washer	12	18	12	18
F81001-3	Bolt, M6x25	4	8	4	8
F81031-2	Nut, M6	3	6	3	6
F81054-1	8.4 Washer	4	4	4	4
F81054-4	Washer, 8.2 Split Lock	2	2	2	2
F81002-5	Bolt, M8x25-8.8-B Hex Head Full Thread Zinc	2	2	2	2
F81053-3	Washer, 6.1 Split Lock	6	6	6	6
F81056-1	Flat Washer 13	12	12	12	12

**Table 2:**

F81004-4	Bolt, M12x40-8.8 Hex Head Full Thread Zinc	6	6	6	6
F81034-2	Nut, M12-8 Hex Nylon Zinc Lock	6	6	6	6
F81055-1	Washer, 10.5 Flat Zinc 10.5	54	54	54	54
F81003-1	Bolt, M10x20-5.8 Hex Head Full Thread Zinc	6	6	6	6
F81082-1	Tie wrap	2	2	2	0
F81001-9	Bolt, M6x60-8.8 Hex Head Full Thread Zinc	3	3	3	3
F81003-50	Bolt, M10x80-8.8 Hex Head Zinc	12	12	12	12
F81033-1	Nut, M10-8-B Hex Nylon Zinc Lock	24	24	24	24
F81037-1	Nut, M20-8 Hex Zinc	32	32	32	32
F81059-2	Washer, 21 Flat Zinc 21	32	32	32	32
F81043-2	Pin, Cotter	4	4	4	4
F81003-17	Bolt, M10x35-8.8 Hex Head Full Thread Zinc	8	8	8	8
F81000-25	Screw, M5x16-8,8 Hex Socket Head Cap Zinc M5x16	2	2	2	2
F81030-2	Nut, M5-8 Hex Zinc DIN985	2	2	2	2
F81002-20	Bolt, M8x16-8.8-B Hex Head Full Thread Zinc	2	2	2	2
F81056-2	Washer, 12.2 Split Lock	-	-	4	4
F81034-1	Nut, M12-8 Hex Nylon Zinc Lock	-	-	4	4
F81003-2	Bolt, M10x30-5.8 Hex Head Full Thread Zinc	4	4	4	4

### 2.1.3 Tools Necessary for Assembling the Sawmill

Table 3:

Required tools	
Flat Wrench #8	1 pcs
Flat Wrench #10	2 pcs
Flat Wrench #13	2 pcs
Flat Wrench #17	2 pcs
Flat Wrench #19	2 pcs
Ratchet Wrench #30	1 pcs
Hammer	1 pcs
Allen Wrench #4	1 pcs
Allen Wrench #5	1 pcs

## 2.2 Unpacking the Sawmill




**IMPORTANT!** The sawmill can be lifted using only the forklift truck with lifting capacity of 2000kg and minimum length of forks 2m.

See Figure 2-1.



FIG. 2-1

1. Cut the bands holding the components together.
2. Using a forklift truck or a winch with lifting capacity of minimum 500 kg, carefully lift the saw head and set it aside. Attach the winch hook to the bracket on the saw head.

 **WARNING!** When removing the saw head, use extreme care and keep all persons at a safe distance. Failure to do so may result in serious injury or death.

See Figure 2-2.

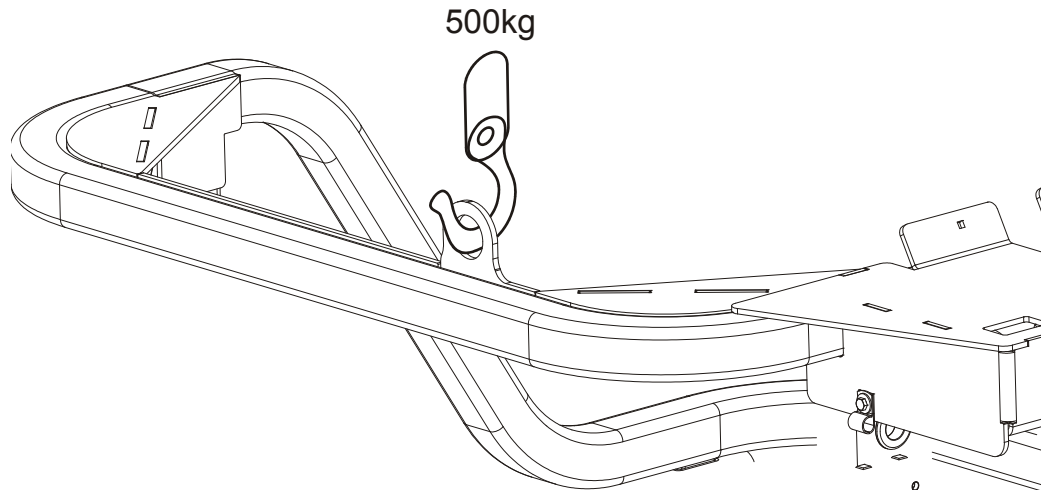


FIG. 2-2

3. Unbolt frame segments from the pallet.

See Figure 2-3.



FIG. 2-3

4. Remove frame segments from the pallet.


5. Remove parts arranged inside the box on the pallet

See Figure 2-4.



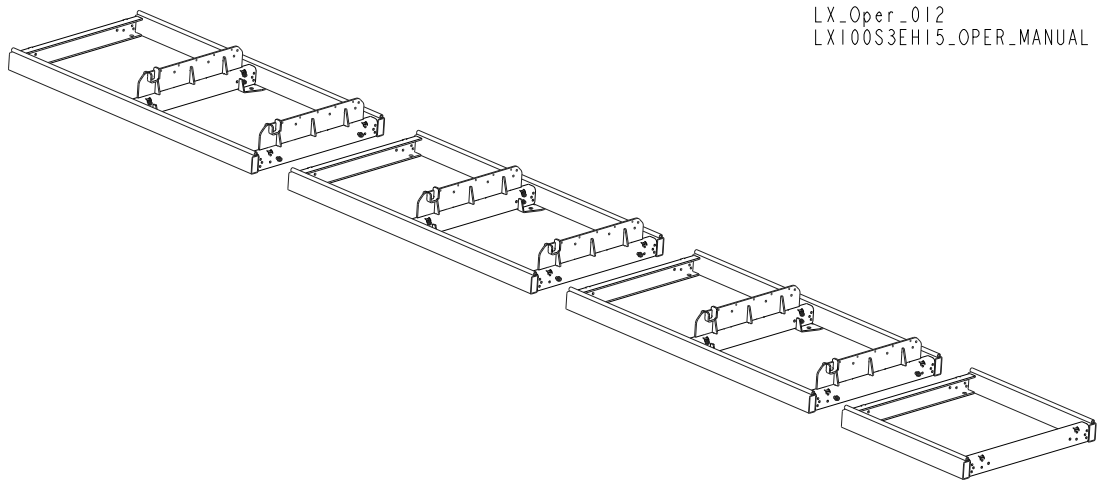
FIG. 2-4

### 2.3 Bed Frame Assembly

 **IMPORTANT!** With all screw joints without split lock washer or lock nylon nut, use the “LOCTITE 243” (blue), of average durability, for screw joints.

1. Lay the bed segments end-to-end, as shown below.

See Figure 2-5.



LX\_Oper\_012  
LXI00S3EH15\_OPER\_MANUAL

FIG. 2-5



2. Mount preliminarily legs (B) to the bed segments using fasteners (A).

See Figure 2-6.

LX\_Oper\_013  
LX100S3EH15\_OPER\_MANUAL

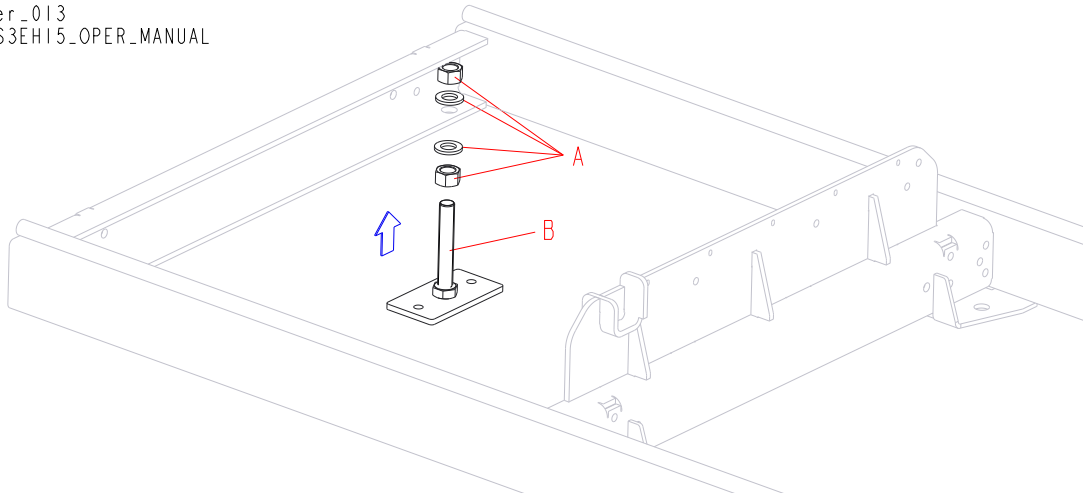


FIG. 2-6

3. Use a rubber hammer to force pins (B) into bed rails (A), as shown below.

See Figure 2-7.

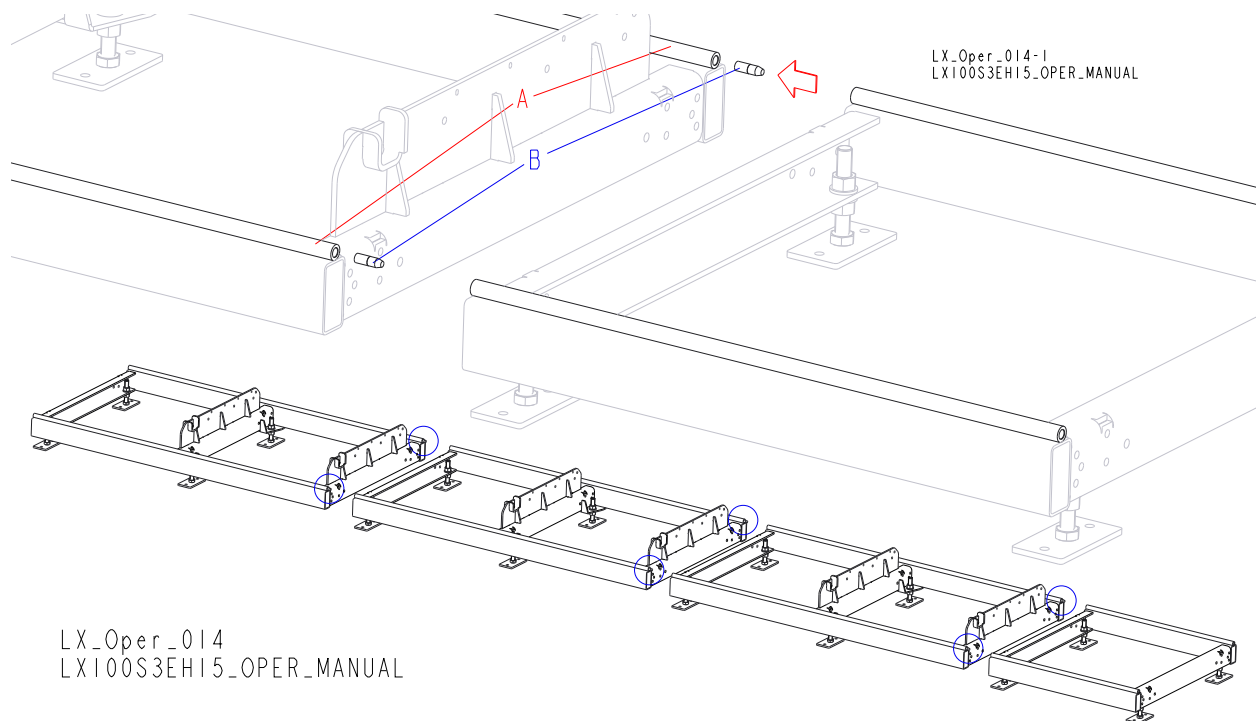


FIG. 2-7

- Slide the segments together and secure with the fasteners (A).

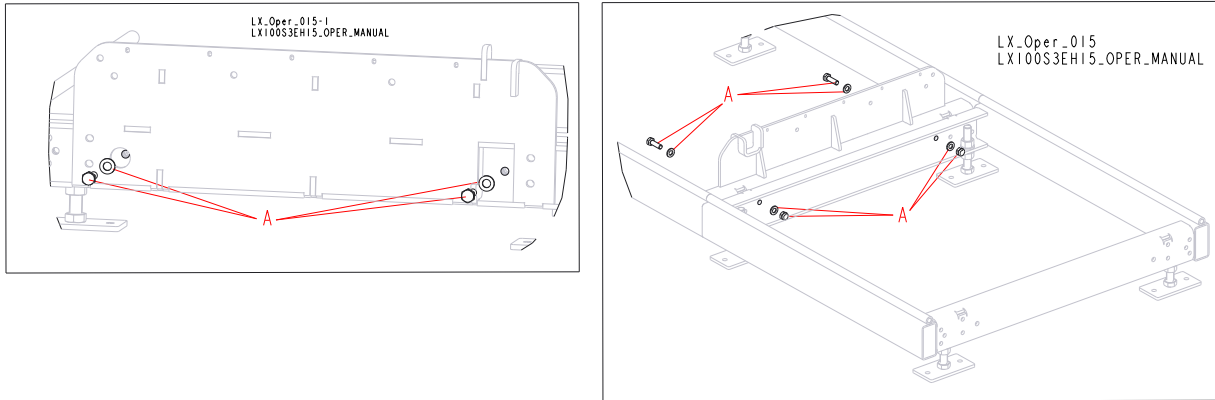


FIG. 2-8

## 2.4 Log Clamps and Side Supports Assembly

- Slide log clamp arm (B) onto log clamp main rod (A).

See Figure 2-9.

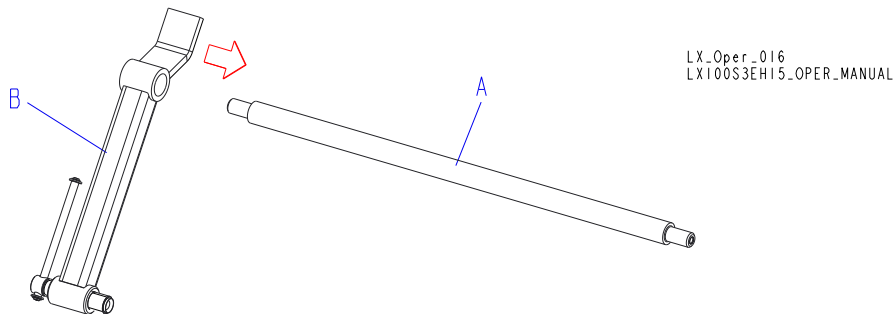


FIG. 2-9

- Slide the side support (A) onto the log clamp main rod (B) and tighten preliminarily using the fasteners (C).

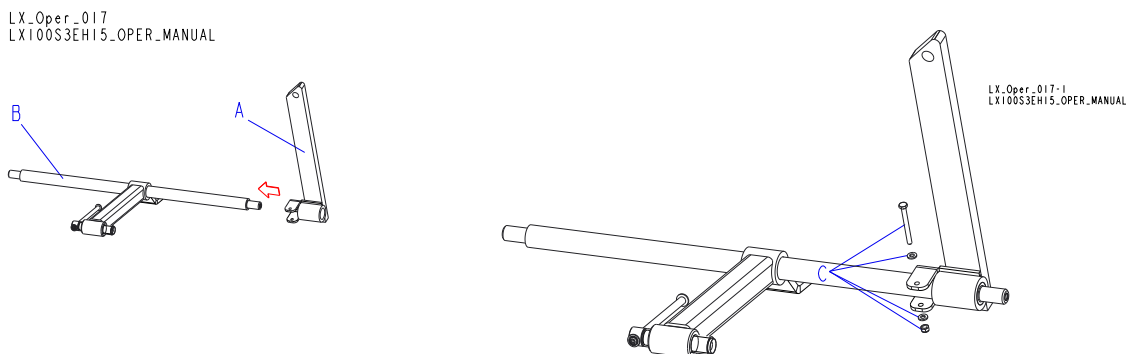


FIG. 2-10

- Slide the mounting bracket (B) onto the log clamp main rod (A) and tighten preliminarily using the fasteners (C).

LX\_Oper\_018  
LX100S3EH15\_OPER\_MANUAL

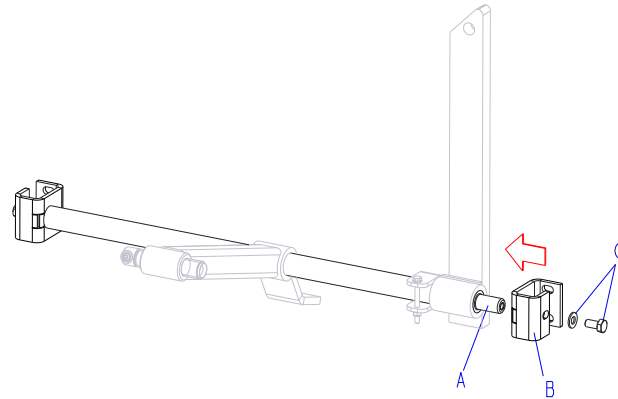


FIG. 2-11

- Use fasteners (C) to tighten the log clamp (A) to the cross rail (B). Next, use fasteners (F) to tighten side support (D) to log clamp main rod (E) with such force to set the side support in the desired position so it does not change its position.

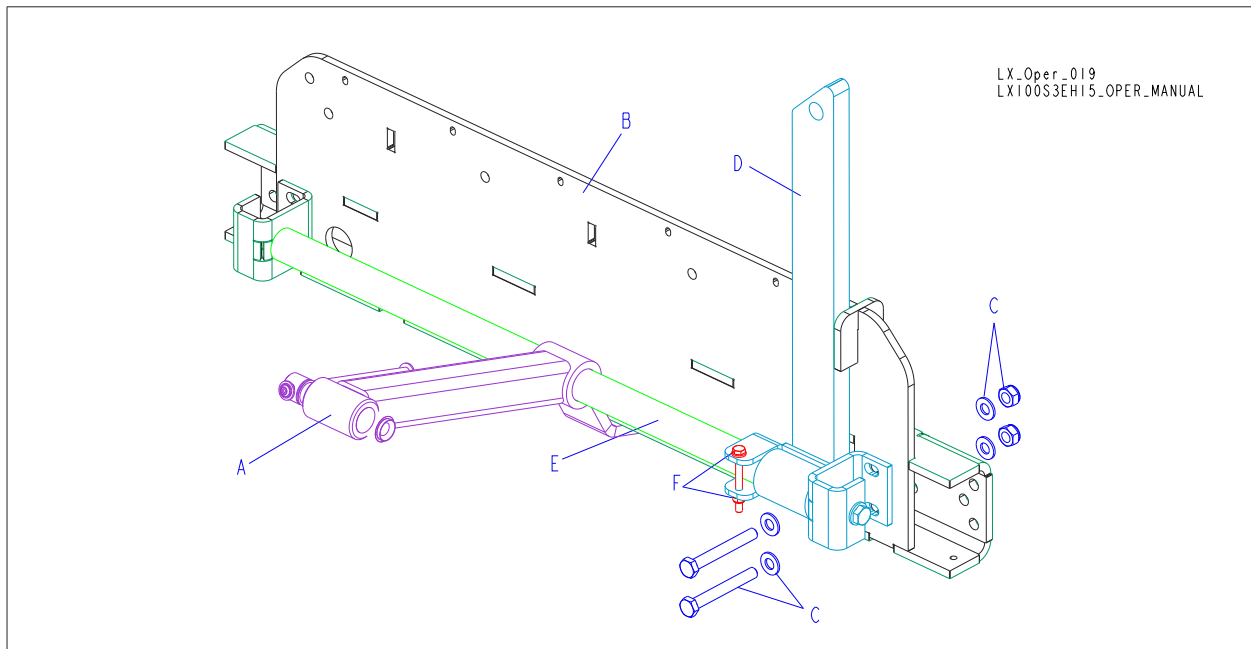


FIG. 2-12

## 2.5 Frame Leg Adjustment

1. Use the adjustable outriggers to level the sawmill bed. Use lower nut (B) to adjust the sawmill bed height, and upper nut (A) to tighten.

See Figure 2-13.

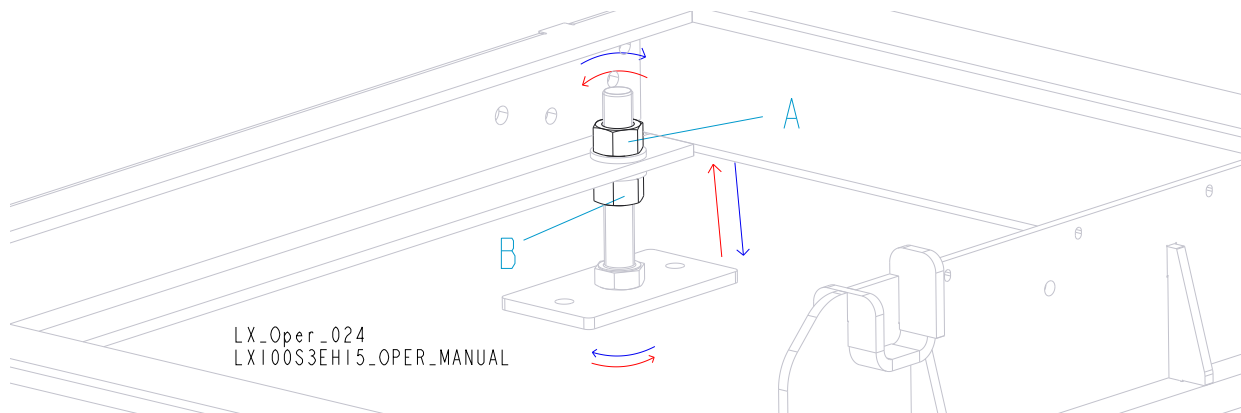


FIG. 2-13

2. Place the level along and across the sawmill bed to check if sawmill bed is level.

See Figure 2-14.

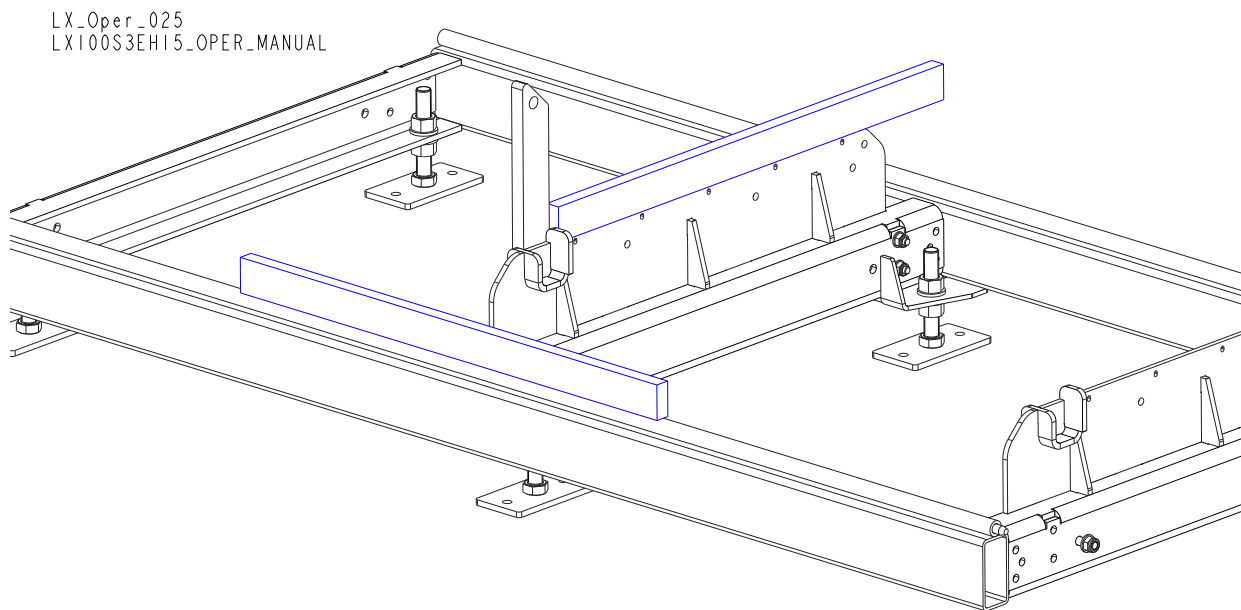


FIG. 2-14

## 2.6 Bumper Assembly

1. Put saw head stop mount (A) into the rubber bushing (B). Next, put them into the bracket hole (C) and secure with the cotter pin (D).

See Figure 2-15.

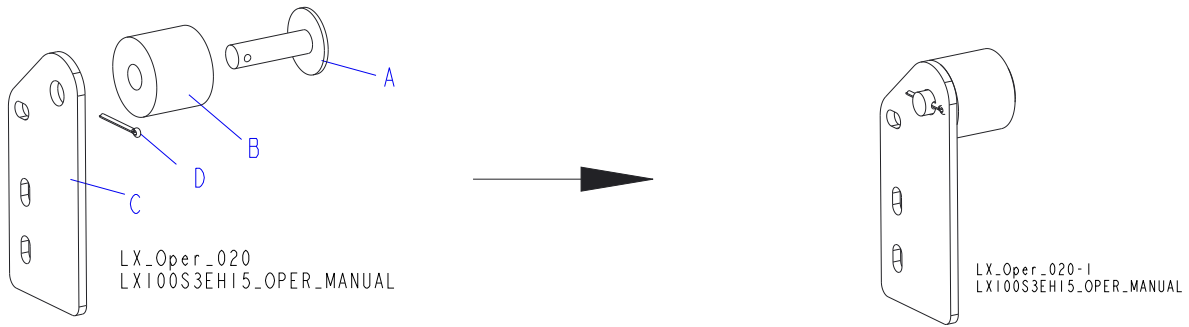


FIG. 2-15

See Figure 2-16.

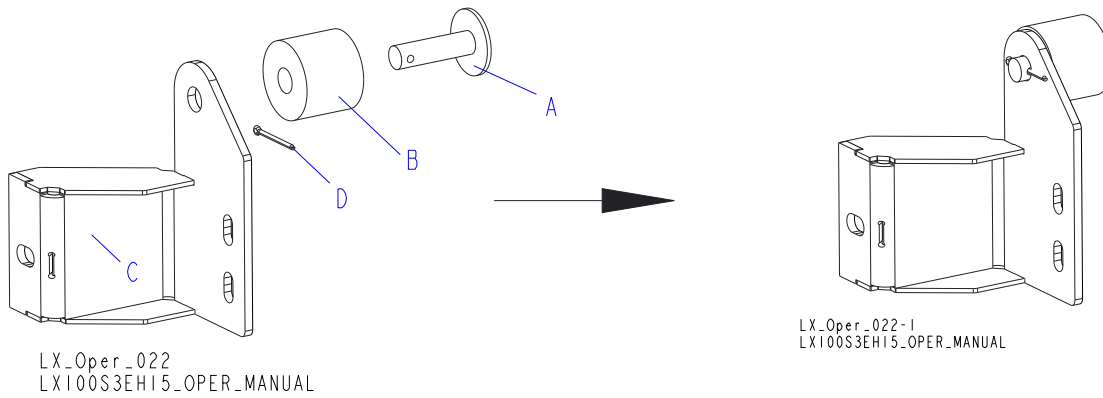


FIG. 2-16

2. Use the fasteners (C) to mount the bumpers (A) to the bed frame segment (B) at the end of the bed frame.

See Figure 2-17.

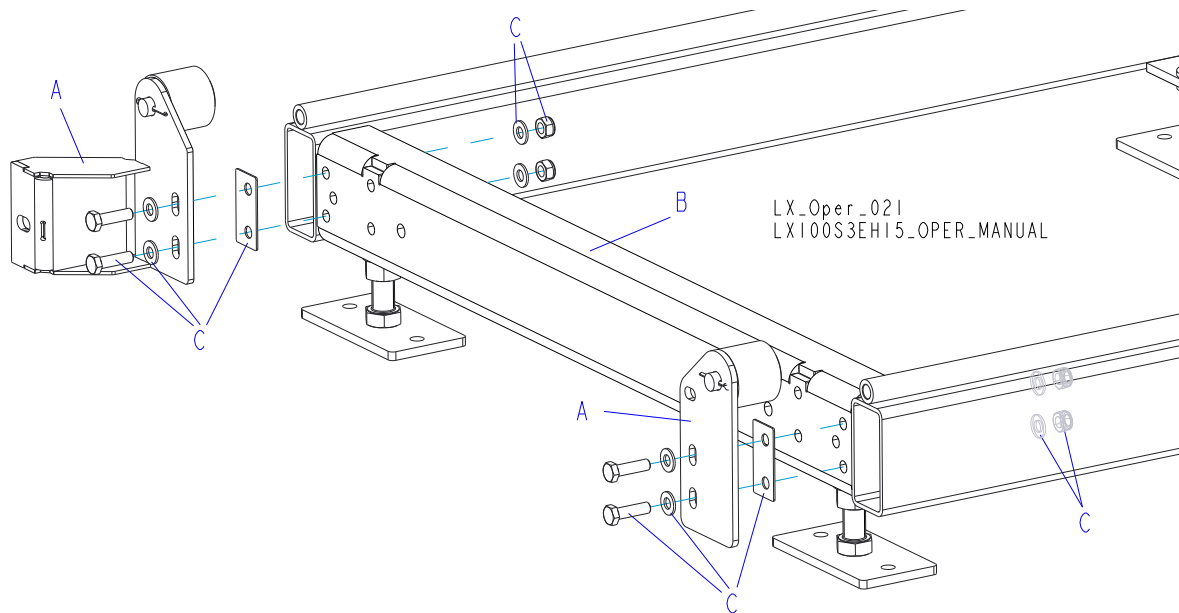


FIG. 2-17

See Figure 2-18.

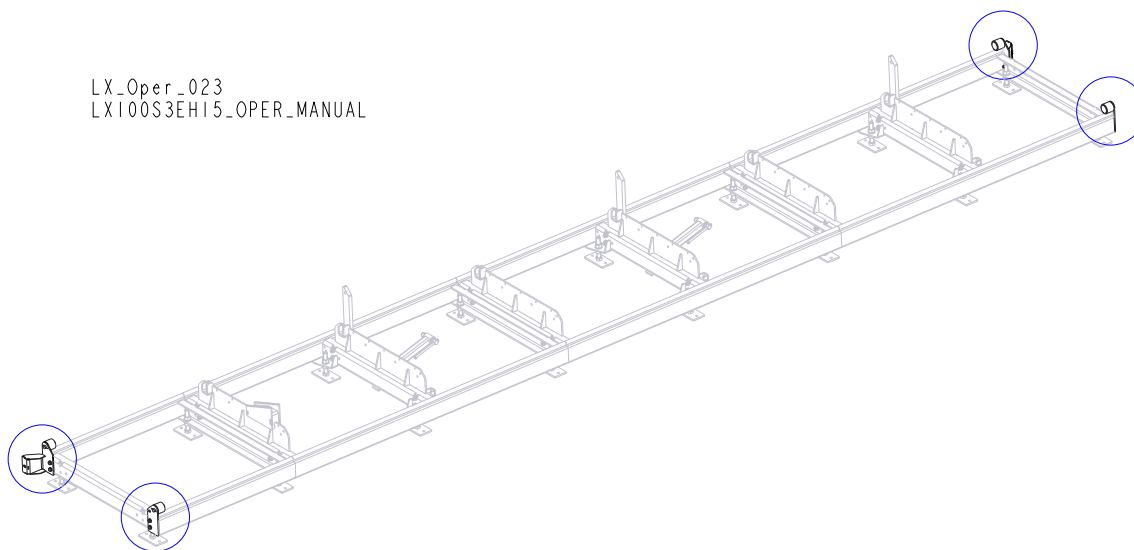


FIG. 2-18

## 2.7 Saw Head Assembly



**WARNING!** When removing the saw head, use extreme care and keep all persons at a safe distance. Failure to do so may result in serious injury or death.

3. Attach the winch hook to the bracket on the saw head. Using a forklift truck or a winch with lifting capacity of minimum 500 kg, carefully lift the saw head.

See Figure 2-19. .

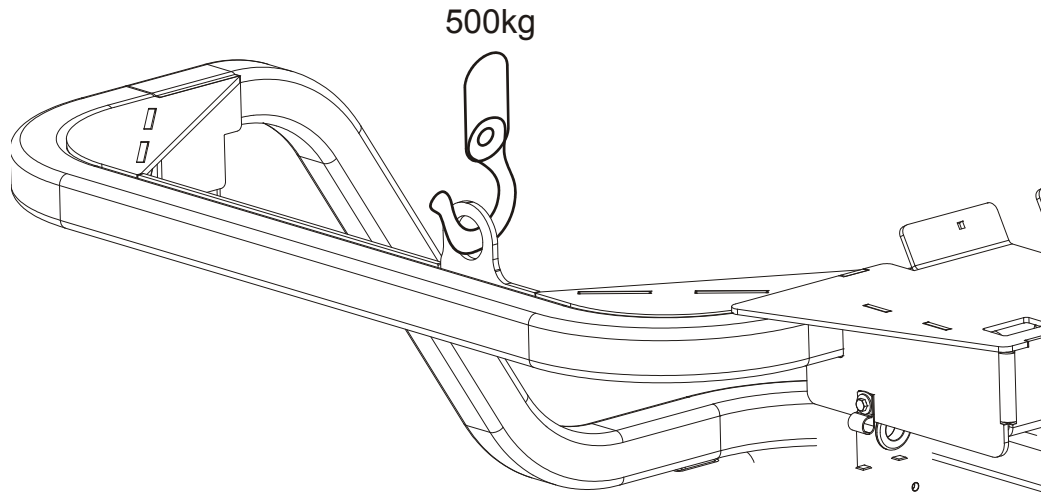
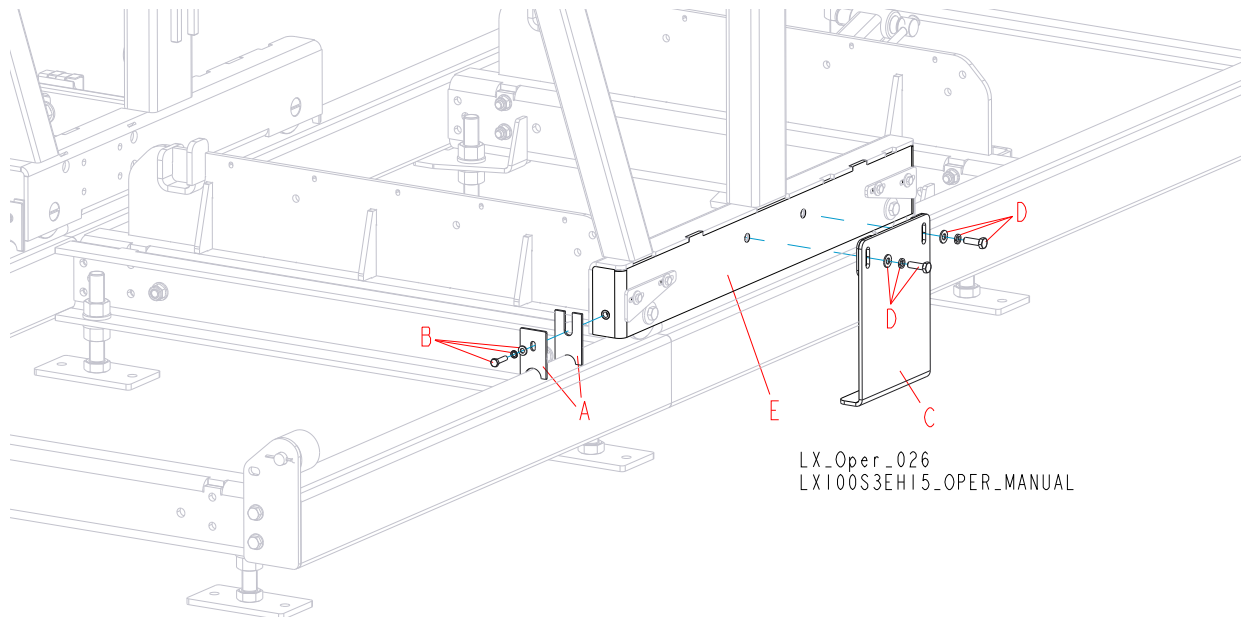


FIG. 2-19

4. Position the saw head at the end of the bed frame assembly. Carefully slide the saw head rollers onto the bed frame track. Keep the saw head square to the bed to avoid jamming the track rollers.
5. Lower the saw head on the bed frame.
6. Use fasteners (D) to mount distance plate (C) to each track roller housing (E).
7. Use fasteners (B) to install a track wiper with a felt strip (A) to each track roller housing (E).

See Figure 2-20.



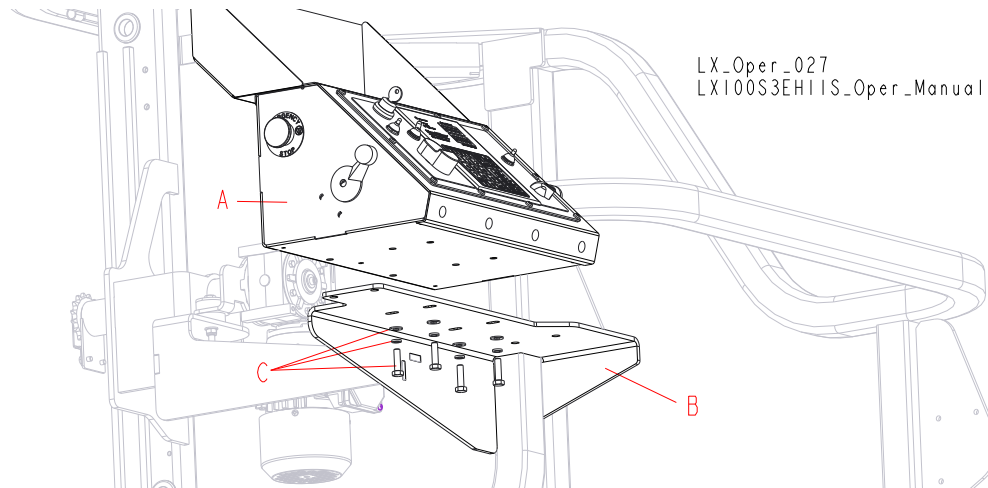
LX\_Oper\_026  
LX100S3EH15\_OPER\_MANUAL

FIG. 2-20

## 2.8 Control Box Assembly (CE Version)

1. Unbolt (using fasteners (C)) the control box (A) from the mounting plate (B) in travel position.

See Figure 2-21.

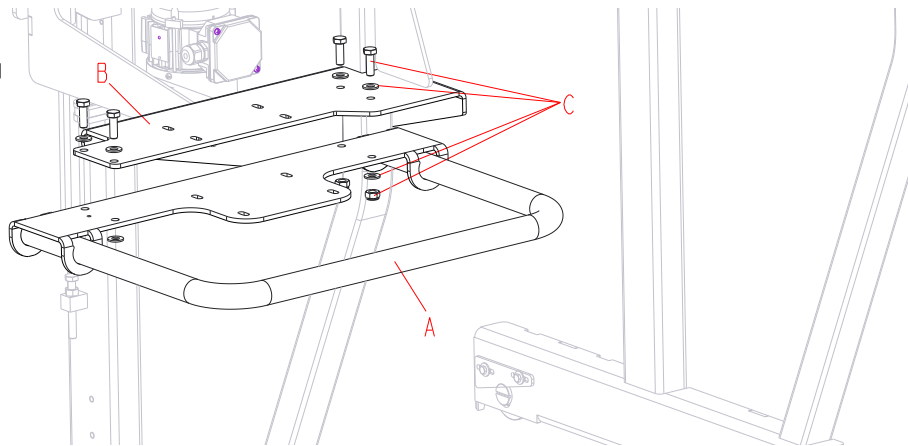


**FIG. 2-21**

2. Mount the handle (A) to the control box mounting plate (B) using fasteners (C).

See Figure 2-22.

LX\_Oper\_028  
LX100S3EH11S\_Oper\_Manual



**FIG. 2-22**

3. Put the distance plate (A) at place shown below and use fasteners (C) to mount the control box (B) in operation position as shown below.



See Figure 2-23.

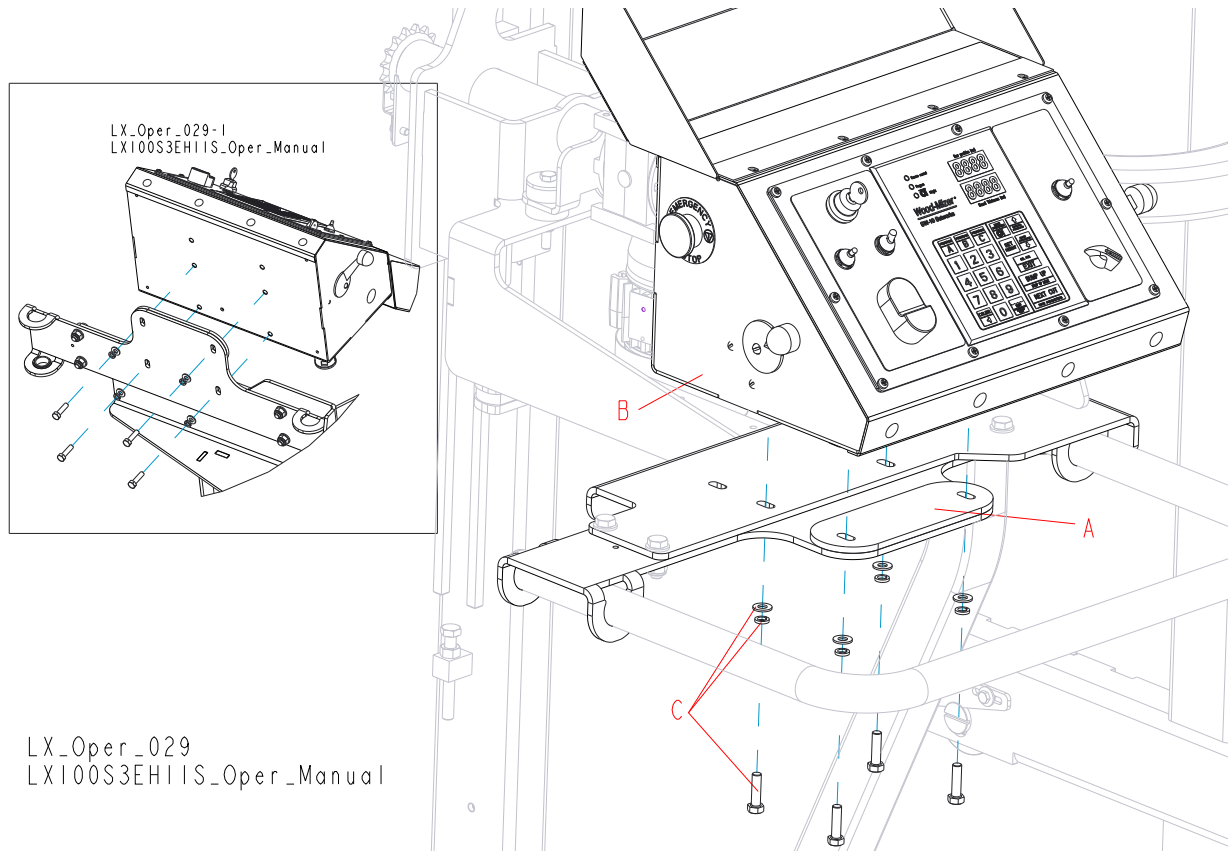


FIG. 2-23

## 2.9 Control Box Assembly (Non CE Version)

1. Use fasteners (C) to unbolt the control box (A) from the control box mounting plate (B).

See Figure 2-24.

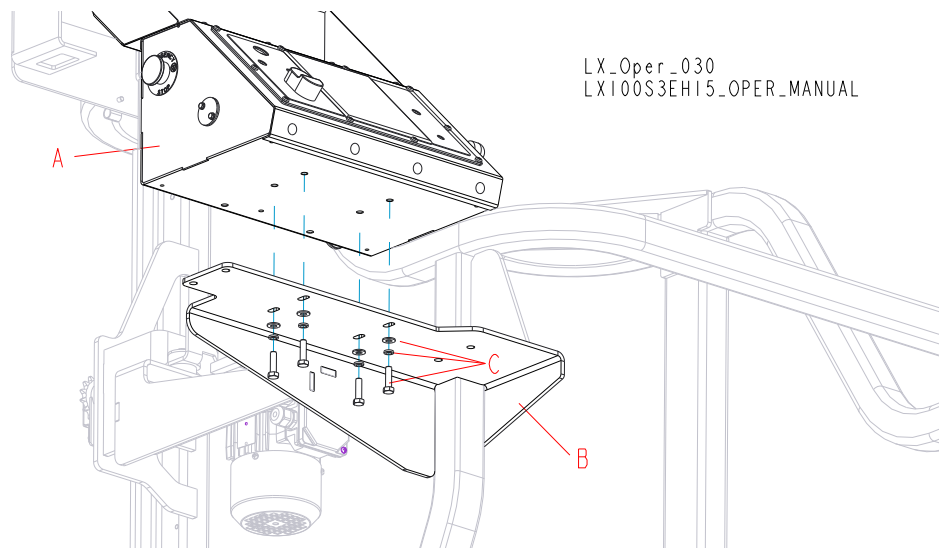


FIG. 2-24

2. Mount the handle (A) to the control box mounting plate (B) using fasteners (C).

See Figure 2-25.

LX\_Oper\_031  
LX100S3EH15\_OPER\_MANUAL

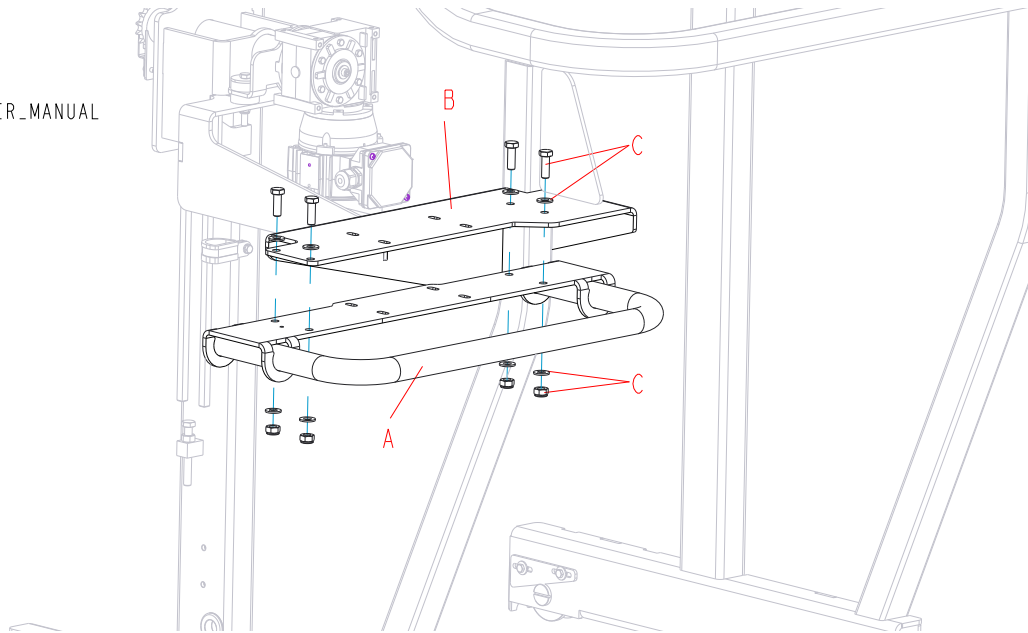


FIG. 2-25

3. Mount the control box (A) to the control box mounting plate (B) using fasteners (C).

See Figure 2-26.

LX\_Oper\_032  
LX100S3EH15\_OPER\_MANUAL

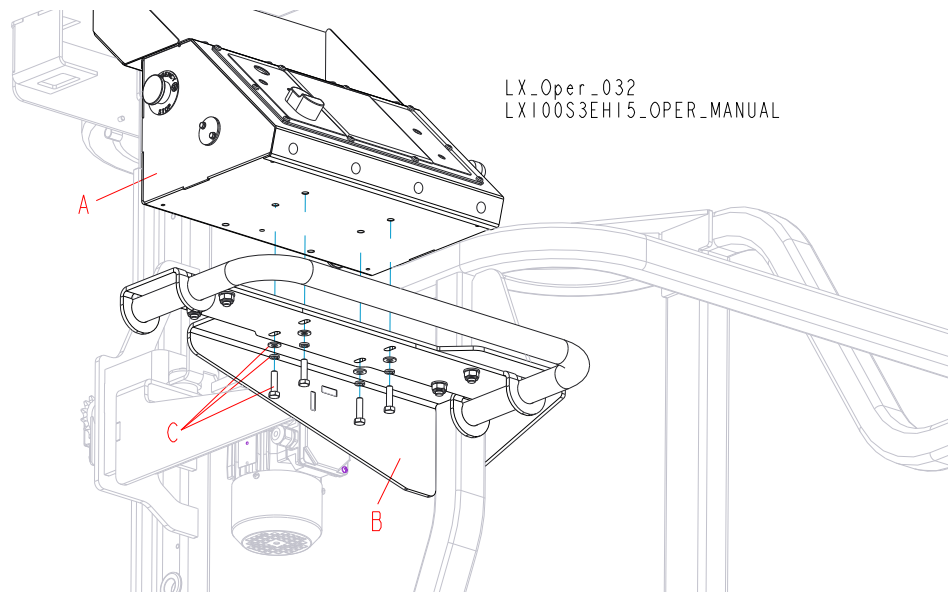


FIG. 2-26

## 2.10 Sawdust Chute Assembly

1. Mount the sawdust chute (A) to the saw head (B) using fasteners (C).

See Figure 2-27.

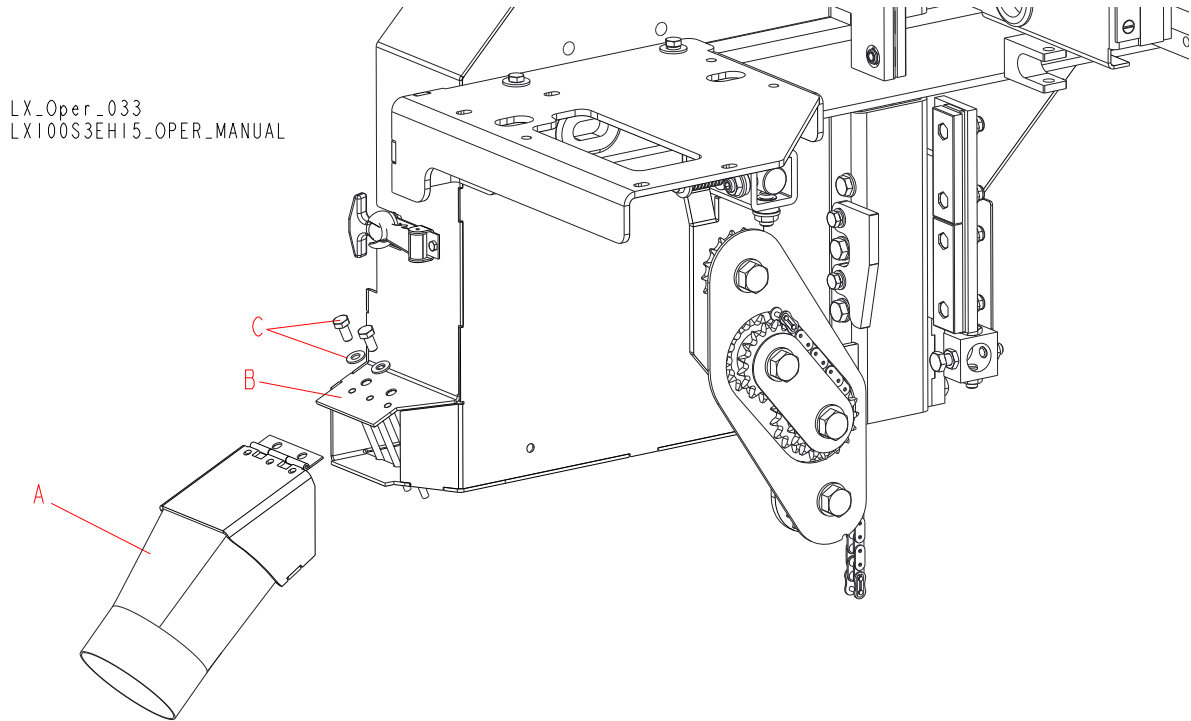
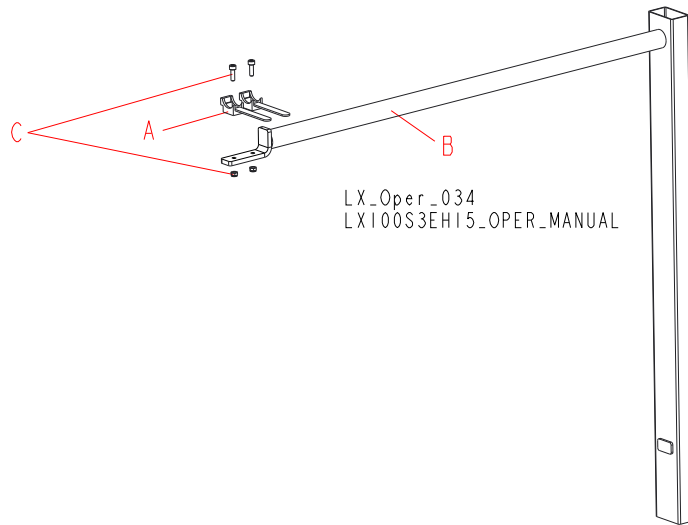


FIG. 2-27

## 2.11 Power Cord Bracket Assembly

1. Mount the plastic cable tie holder (A) to the power cord bracket (B) using fasteners (C).

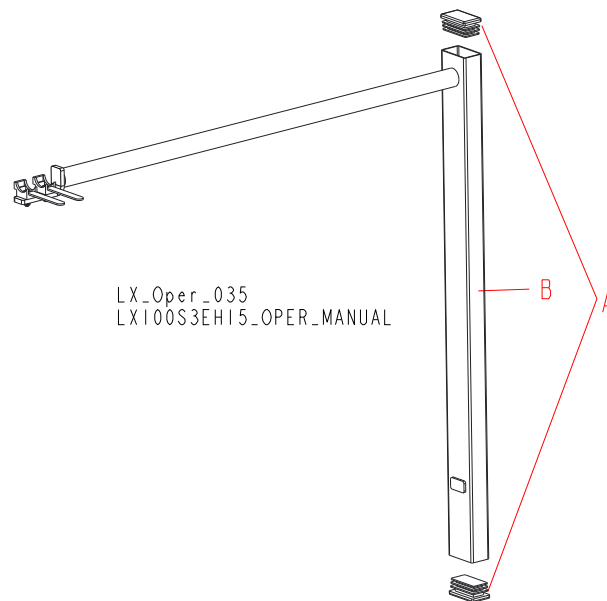
See Figure 2-28.



**FIG. 2-28**

2. Push caps (A) into bracket vertical tube (B).

See Figure 2-29.



**FIG. 2-29**

- Slide power cord bracket (A) from the top into the mast (B).

See Figure 2-30.

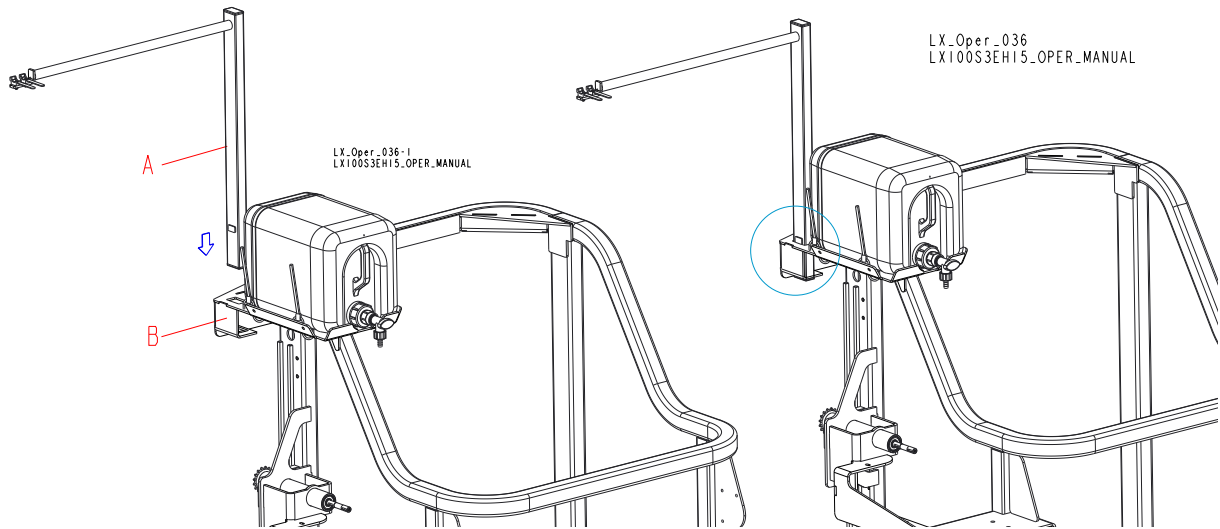


FIG. 2-30

- Route the power cord through the bracket as shown below, and secure the cord with the plastic tie holders to the bracket.

See Figure 2-31.



FIG. 2-31

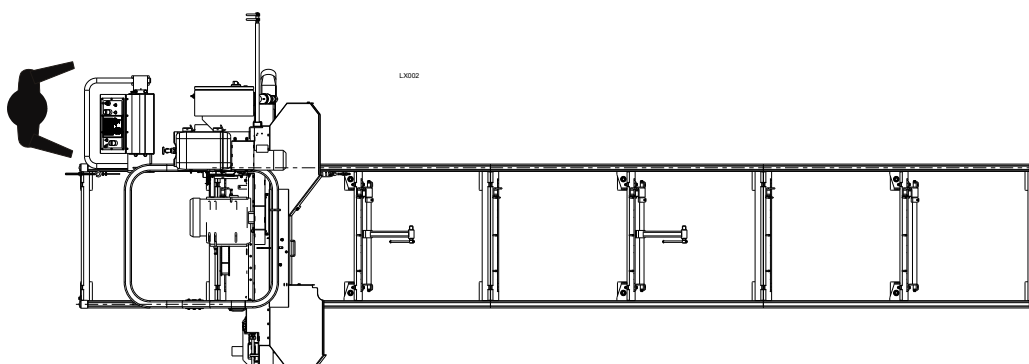
## SECTION 3 SETUP & OPERATION

### 3.1 Sawmill Setup



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

- Set up the sawmill on firm, level ground and level the sawmill. Secure the sawmill to the ground to prevent moving during operation. A concrete foundation (rated to support 31T/m<sup>2</sup> at each sawmill foot position) and 16mm anchored bolts are recommended.
- Under roof, the sawmill should always be operated with the sawdust collection system.
- AC sawmills can not be operated when it is raining/snowing and in case of rain or snow the sawmill must be stored under roof or indoor
- It is not allowed to use the sawmill with gas engine indoor. When using this sawmill type outdoor it is allowed to work without sawdust collection system connected. We recommend to setup sawmill in the way that operator position be down the wind. It will separate the operator from sawdust and engine exhaust gases
- The sawmill can be operated in temperature range from -15° C to 40° C only.
- Illuminance at operator's position must be 300lx.
- The sawmill's operator position is shown below.



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

See Table 3-1.

3-Phase Volts	Fused Disconnect	Suggested Wire Size
400 VAC	16 A	2.5 mm <sup>2</sup> up to 15 m long

**TABLE 3-1**



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



**WARNING!** In case of blade or drive belt break, wait until all rotating parts are completely stop Failure to do so may result in serious injury or death.

The LX100 sawmills are only partially aligned at the factory. Some assemblies need to be aligned by the user before first usage of the sawmill.

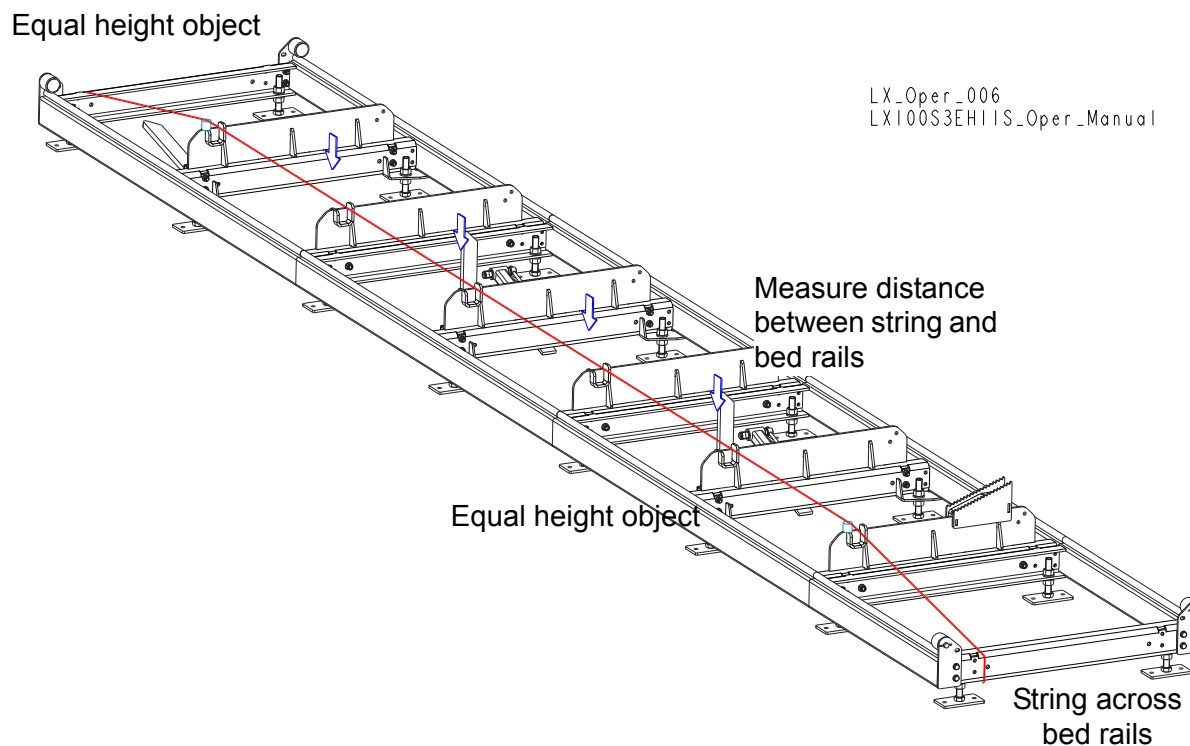
#### Assemblies aligned at the factory:

- Blade drive belt tension;
- Engine r.p.m. (DC sawmills only);
- Blade wheels (in vertical and horizontal planes);
- Blade guide arm - [See Section 6.5](#);
- Blade guides - [See Section 6.6](#);
- Blade height scale - [See Section 6.12](#);
- Cam engaging the limit switch and/or stop bolt - [See Figure 3-8](#).

The following setup procedure should be performed whenever the sawmill is moved or reassembled. If sawing problems occur and misalignment is suspected, [See SECTION 6](#) for complete alignment instructions.

1. Adjust the frame legs so the sawmill appears level. If sawmill is on soft ground, use shims under the legs if necessary.
2. Run a string from the front bed rail to the rear bed rail near control box. Place identical spacers between string and the front and rear bed rails. Measure the distance between string and the other bed rails. Adjust the frame legs until all bed rails measure the same distance from the string.
3. Loosen the auxiliary bed rail bolts and adjust the rail so it is the same distance from the string as the main bed rails. Retighten the bolts.

See Figure 3-1.

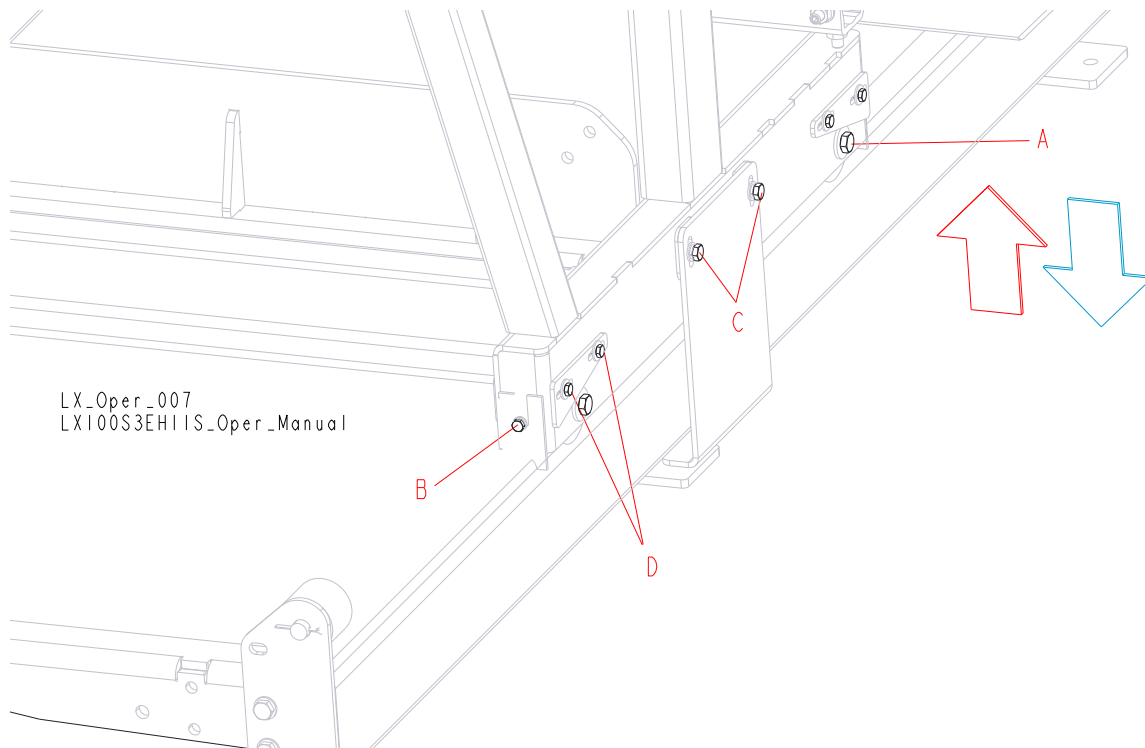


**FIG. 3-1**

4. Repeat the bed rail adjustment with the string at the other side of the sawmill frame.
5. Install a blade ([See Section 3.2](#) through [Section 3.4](#)) and move the saw head until the blade is positioned over the front bed rail.
6. The blade guide rollers should not touch and deflect the blade and the blade guide arm should be adjusted all the way out, away from the other blade guide.
7. Measure the distance from the bed rail to the bottom of the blade near the inside (fixed) blade guide.
8. Measure the distance from the bed rail to the bottom of the blade near the outside (movable) blade guide.



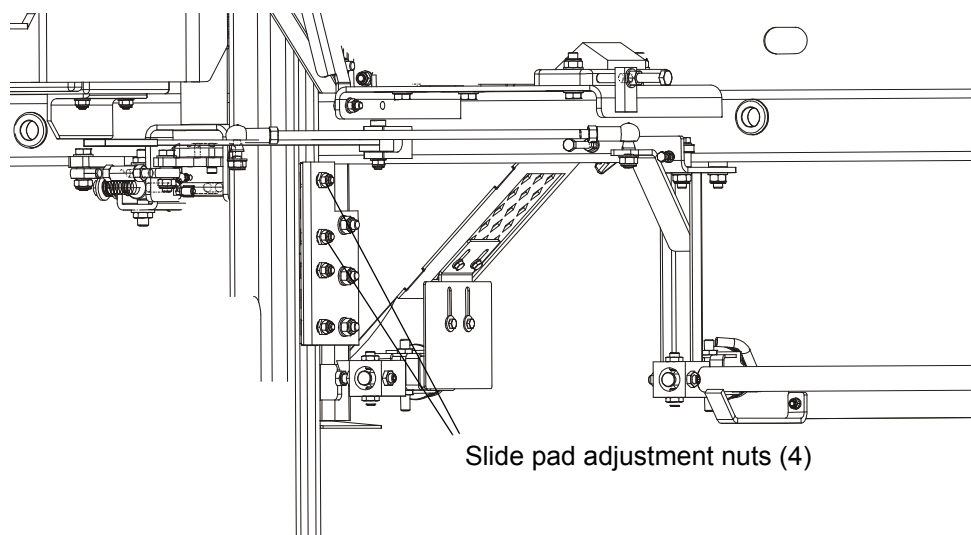
**See Figure 3-2.** When the blade is parallel to bed, it will measure the same distance from the bed rail at the inside and outside of the saw head. If not, adjust the saw head tilt. First, loosen two roller bolts (A), two scraper bolts (B) and two mast retaining bracket bolts (C). To adjust the saw head tilt, use eight mounting bolts (D) located on the roller bracket.



**FIG. 3-2**

9. Make sure the entire face of each slide pad makes contact with the mast. Use the adjustment nuts shown below to adjust the slide pads if necessary.

**See Figure 3-3.**



**FIG. 3-3**

10. Check if the blade is parallel to the bed rails. To do this, use the blade guide alignment tool.

- Attach the tool to the blade near the outer blade guide (next to idle blade wheel). Be sure the tool does not rest on a tooth or burr and is lying flat on the table.

See Figure 3-4.

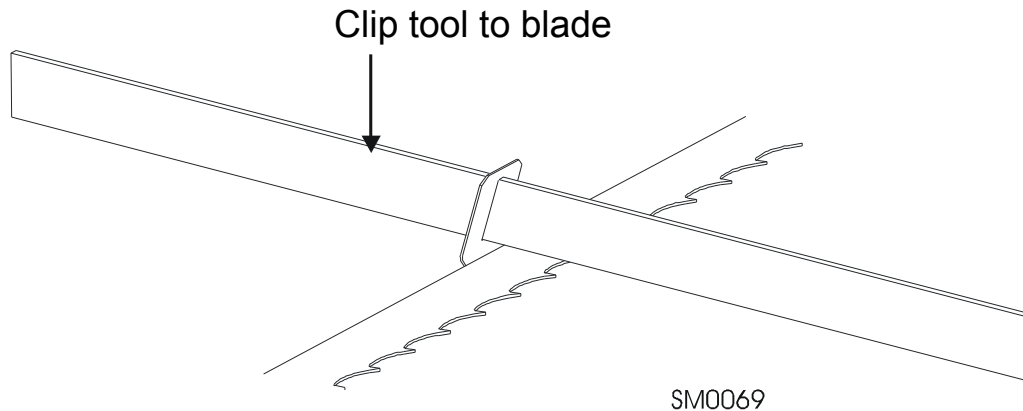


FIG. 3-4

- Move the saw head so the front end of the tool is positioned over the first bed rail. Measure the distance from the bottom of the tool to the top surface of the bed rail.
- Move the saw head so the front end of the tool is positioned over the bed rail. Again measure the distance from the bottom of the tool to the bed rail.
- If the two measurements differ by more than 1.5 mm, adjust the vertical tilt of the idle-side blade wheel. ( $\pm 1,5$  mm). [See Figure 3-5.](#)
- Remove the tool from the blade and reattach it near the inner blade guide. If the measurements at the front and rear ends of the tool differ by more than 1.5 mm, adjust the vertical tilt of the drive-side blade wheel. [See Figure 3-6.](#)

**See Figure 3-5.** To tilt the idle-side blade wheel up, loosen the bottom adjustment screw 1/2 turn. Loosen the nut on the top adjustment screw and tighten the top adjustment screw. Tighten the top and bottom nuts.

To tilt the wheel down, loosen the top adjustment screw 1/2 turn. Loosen the nut on the bottom adjustment screw and tighten the bottom adjustment screw. Tighten the top and bottom nuts.

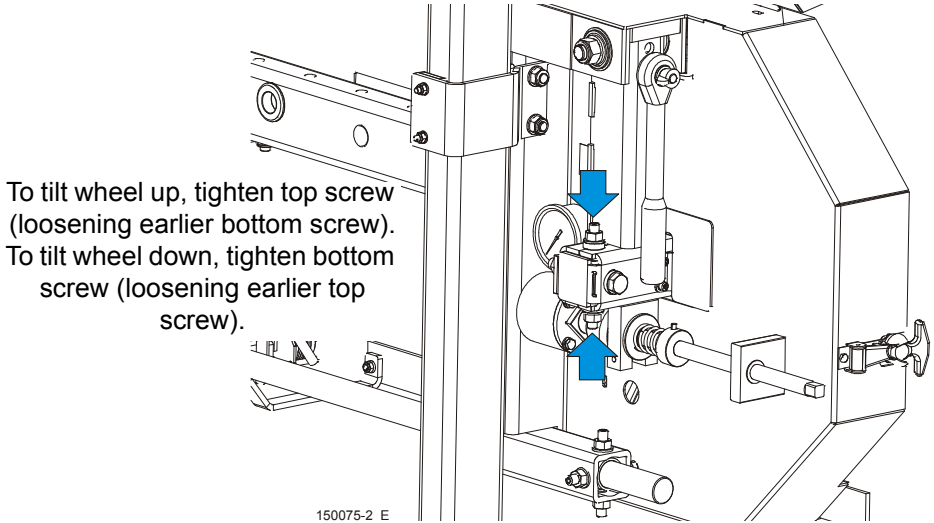


FIG. 3-5

**See Figure 3-6.** Use screws shown below to adjust vertical tilt of the drive-side blade wheel . To tilt the drive-side blade wheel down, loosen the top adjustment screw. Next loosen the nut on the bottom adjustment screw and tighten the bottom screw. Tighten the top and bottom nuts.

To tilt the drive-side blade wheel up, loosen the bottom adjustment screw. Next loosen the nut on the top adjustment screw and tighten the top screw. Tighten the top and bottom nuts.

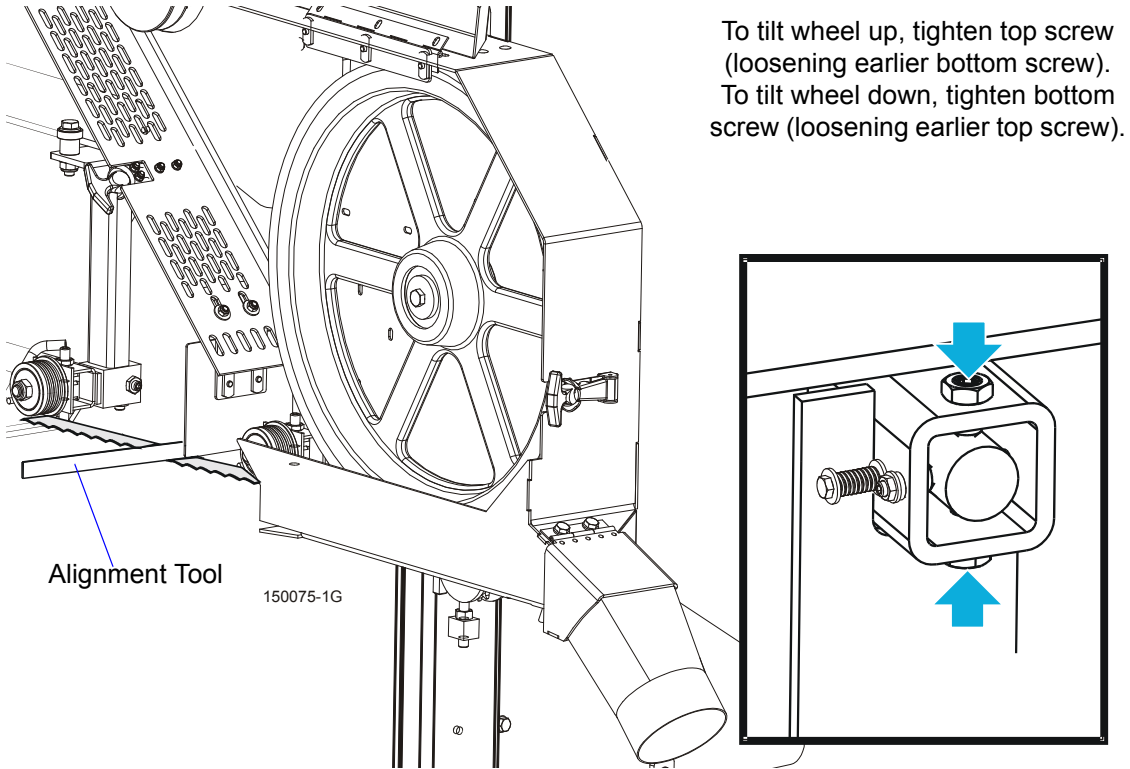


FIG. 3-6

- Recheck the vertical alignment of each blade wheel. Readjust if necessary.
11. Adjust the spacing between each blade guide roller flange and the back of the blade. [See Section 6.9](#)
  12. Adjust the horizontal angle of the blade guides. [See Section 6.10](#)
  13. Adjust the blade deflection ([See Section 6.7](#)) and vertical angle of the blade guides ([See Section 6.8](#)).

**HINT:** It is best to preliminarily set the blade deflection so that is 3 - 4 mm, then adjust the blade guides in vertical plane and make the final adjustments to the blade deflection. The proper blade deflection is 6mm. After adjusting the blade deflection, recheck the vertical alignment of the blade guides and adjust if necessary.

14. Install the blade height scale. To do that, first measure the distance from the bottom edge on a down-set tooth of the blade to the top of the bed rail. Then stick the blade height scale on the mounting bracket so that it indicates the true distance from the blade to the bed. Adjust the scale if necessary. [See Section 6.12](#).
15. Bolt the blade guide guard, so that its bottom edge is about 5mm above blade.

See Figure 3-7.

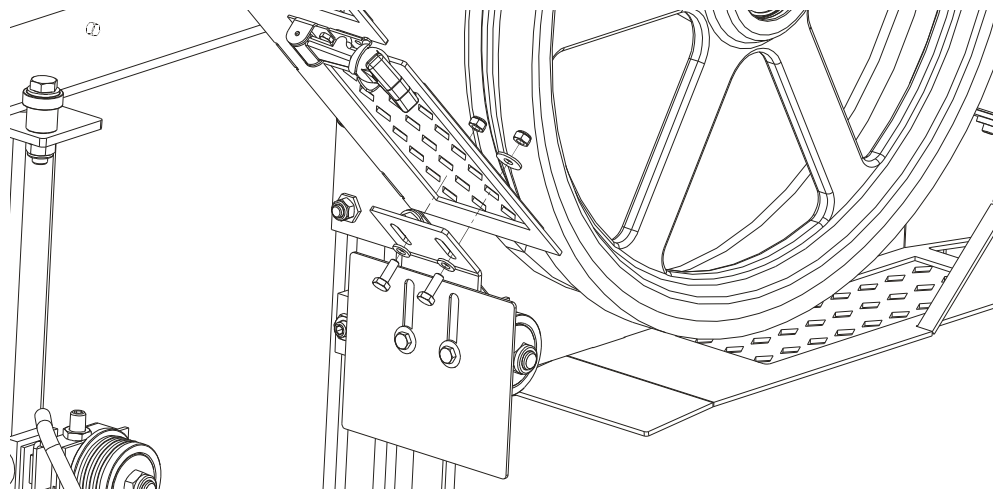
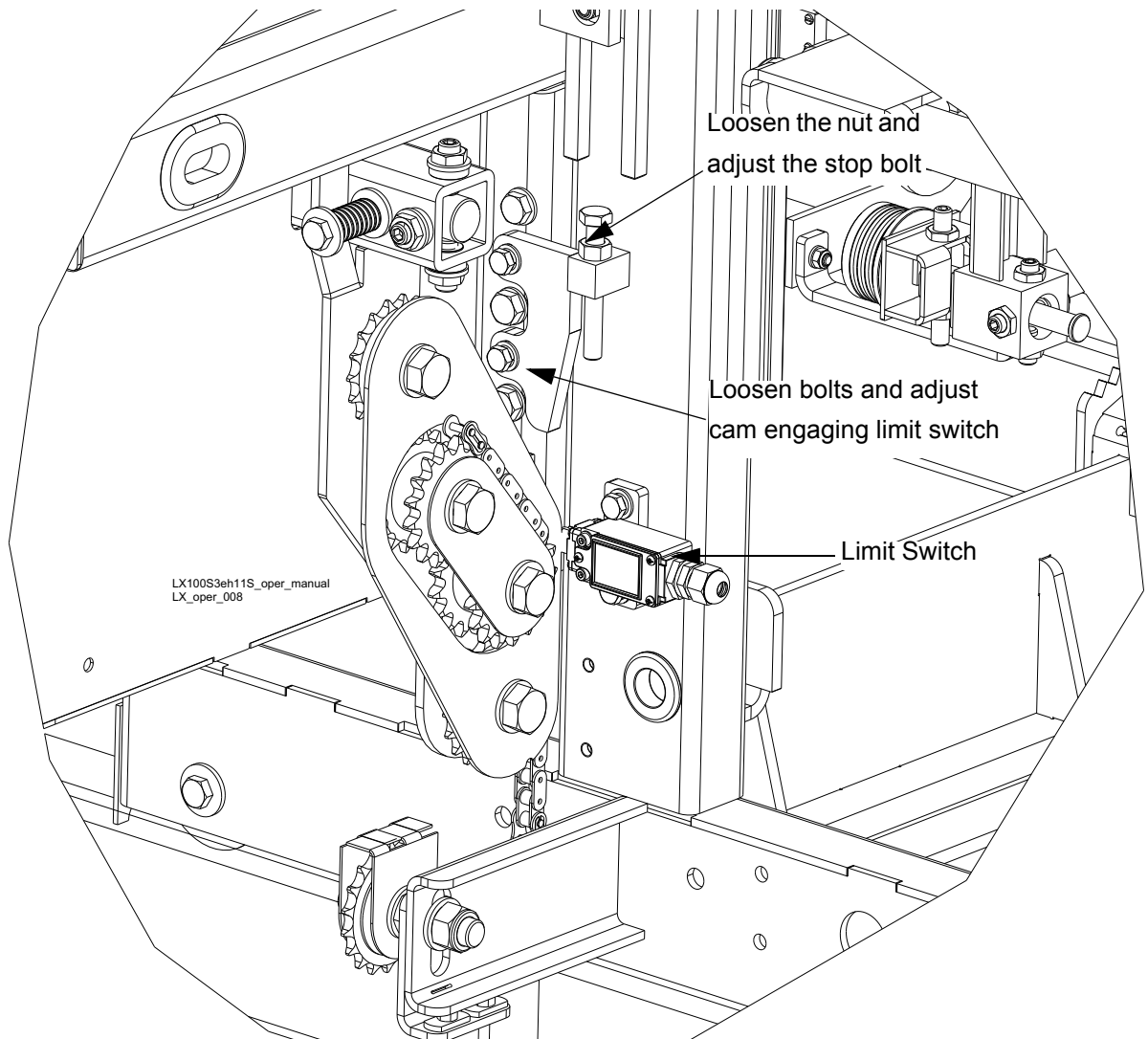


FIG. 3-7

**See Figure 3-8.** Adjust the cam (A) engaging the limit switch (B) as well as the saw head stop bolt (C) so that the saw head stops moving at its lower travel limit - at the height of 25 mm above the bed.



**FIG. 3-8**

## 3.2 Replacing The Blade

**! DANGER!** Always disengage the blade and shut off the sawmill motor before changing the blade. Disconnect the power supply using the main switch. Failure to do so will result in serious injury.

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

Adjust the blade guide arm all the way open.

Open the blade housing cover. Turn the blade tension handle to release the blade tension until the blade is pulled in and the blade is lying loose in the blade housing. Lift the blade out of the blade housing.

Install a new blade on the blade wheels. When installing the blade, make sure the teeth are pointing the correct direction. The teeth located between the blade guide assemblies should be pointing toward the sawdust chute.

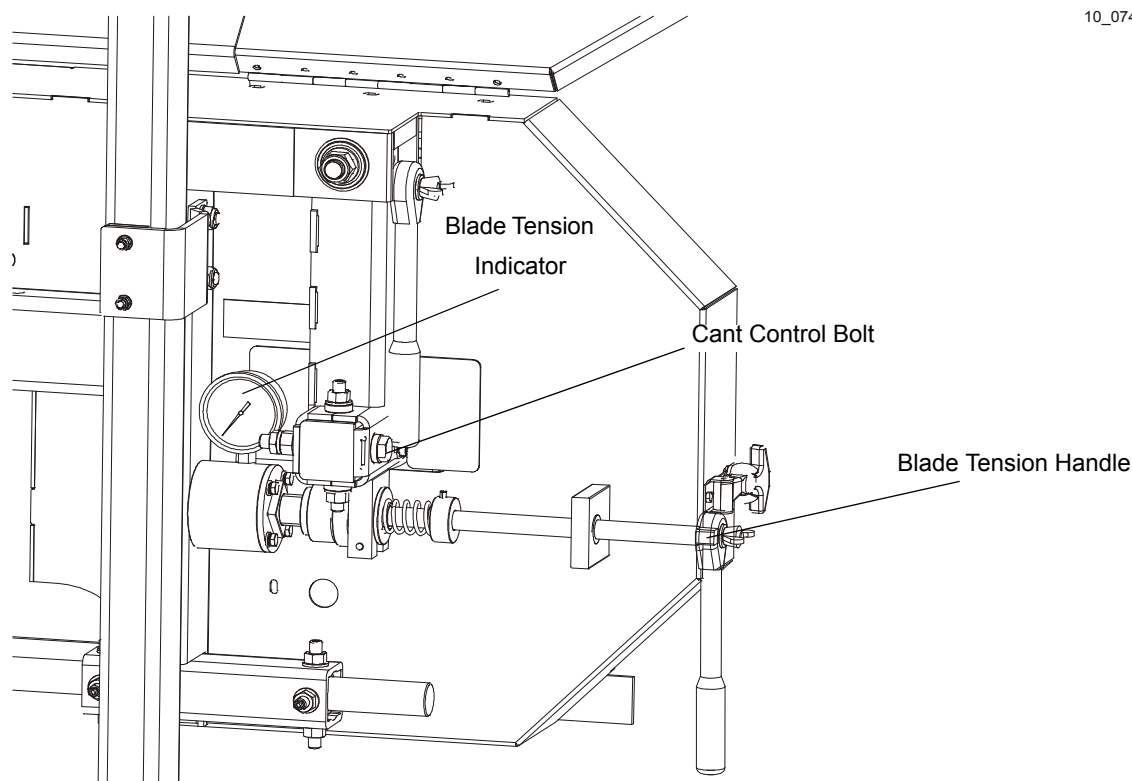
Position 1 1/4" wide blades on the wheels so the gullet is 3 mm out from the front edge of the wheel. Position 1 1/2" wide blades on the wheels so the gullet is 4.5mm out from the front edge of the wheel.

Close the blade housing cover.

Next, turn the tension handle until the blade is tensioned correctly.

### 3.3 Tensioning The Blade

See **Figure 3-9**. Tension the blade by turning the tensioner handle clockwise until the tension gauge indicates the recommended tension. Check the blade tension occasionally when adjusting the cant control or while cutting. As the blade and belts heat up and stretch, the blade tension will change. Also, ambient temperature changes can cause tension to change.



10\_074b

**FIG. 3-9**

See Table 3-2. The recommended tension for different blades is shown below.

Blade Type	Blade Dimensions		Tension range	
	Width	Height	PSI	Bar
275	1.07	32	1015-1088	70-75
375	1.14	32	1088-1160	75-80
2735	1.07	35	1160-1233	80-85

TABLE 3-2



**CAUTION!** The blade tension should be released when the machine is not in use (e.g.: after a shift). There should be information on the sawmill that it is necessary to tension the blade before starting to use the machine again

### 3.4 Tracking The Blade

1. Make sure the blade housing cover is closed and all persons are clear of the blade.
2. Start the motor for a moment until the blade positions itself on the wheels.



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

3. Turn off the motor and check the position of the blade on the blade wheels.

See Figure 3-10. Position 1 1/4" wide blades on the wheels so the gullet is 3.0 mm ( $\pm 0,75$  mm) out from the front edge of the wheel.

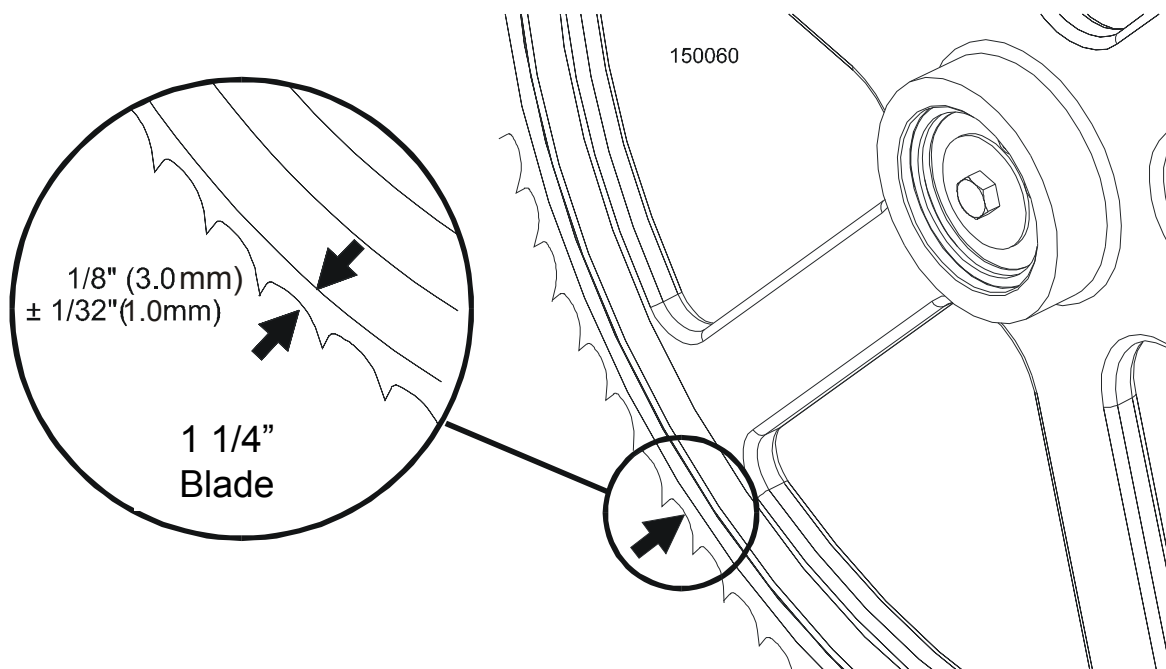


FIG. 3-10

See Figure 3-11. To adjust where the blade travels on the blade wheels, use cant control bolt.

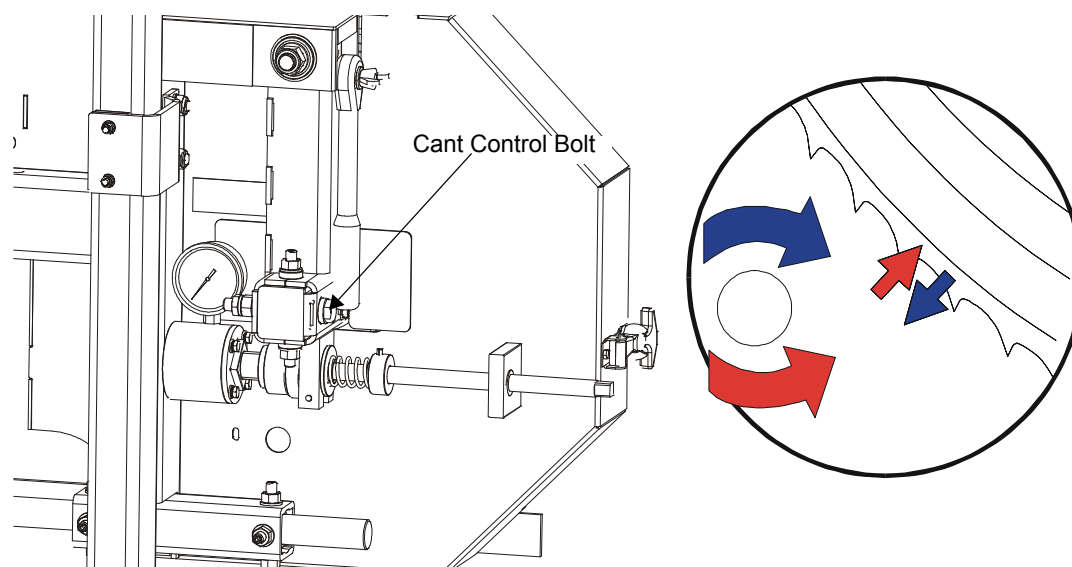


FIG. 3-11

If the blade is too far out, back the blade onto the wheel by turning the cant control bolt counterclockwise. If the blade is too far in, turn the cant control bolt clockwise until the gullet of the blade is the correct distance from the front edge of the wheel.

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



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

**IMPORTANT!** After aligning the blade on the wheels, always double-check the blade guide spacing and location. ([SECTION 6](#) for more information.)

### 3.5 Starting The Motor

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



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





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



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



**WARNING!** Always wear eye, ear, respiration, and foot protection when operating or servicing the machine. Failure to do so may result in serious injury.

### 3.6 Loading, Turning and Clamping Logs

#### To load logs:

1. Move the saw head to the front end of the frame.



**CAUTION!** Before loading a log, be sure the cutting head is moved far enough forward so the log does not hit it. Failure to do so may result in machine damage.

2. Adjust the log clamps all the way down and move them toward the loading side of the sawmill frame.



**CAUTION!** Be sure the log clamps are all the way down before loading a log onto bed. Failure to do so may result in machine damage.

3. Raise the side supports on the sawmill bed to prevent the log from falling off the side of the bed.
4. Position the log at the foot of the ramps.
5. Use a cant hook to roll the log up the ramps and onto the sawmill bed. Position the log against the side supports.
6. Remove the log ramps and set aside.



**CAUTION!** The saw head will hit the spring-loaded ramp stops when adjusted for low cuts. Remove the loading ramps before sawing to prevent damage to the saw head and/or blade guide arm.

If you did not purchase the optional loading ramps, use boards for ramps or use log loading equipment to load the log on the sawmill bed.

#### To turn logs:

1. Use a cant hook to spin the log against the side supports until it is turned the way you want it or the first cut.

### To clamp log:

1. Position the clamps against the log, far enough down they are below your cuts on a given side of the log. Using the clamp handle, clamp the log against the side supports.

See Figure 3-12.

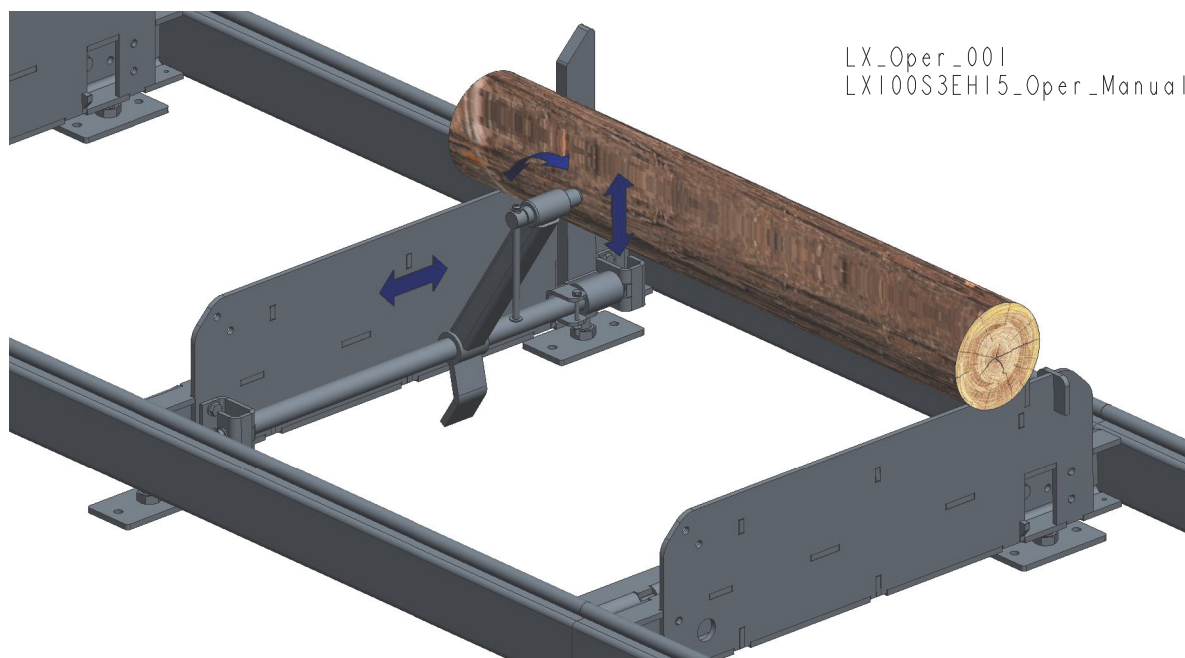


FIG. 3-12

2. Be sure to leave crank in the bottom position to avoid to the blade.

See Figure 3-13.

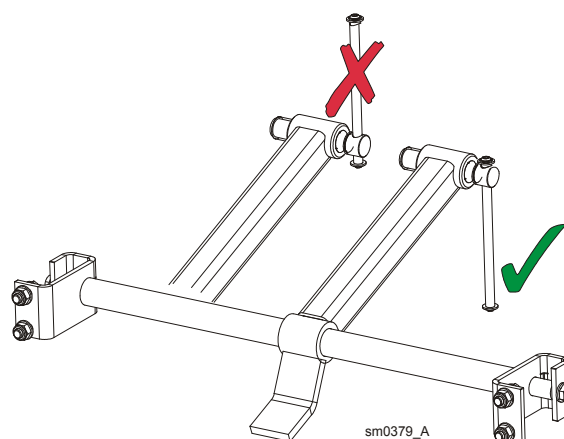


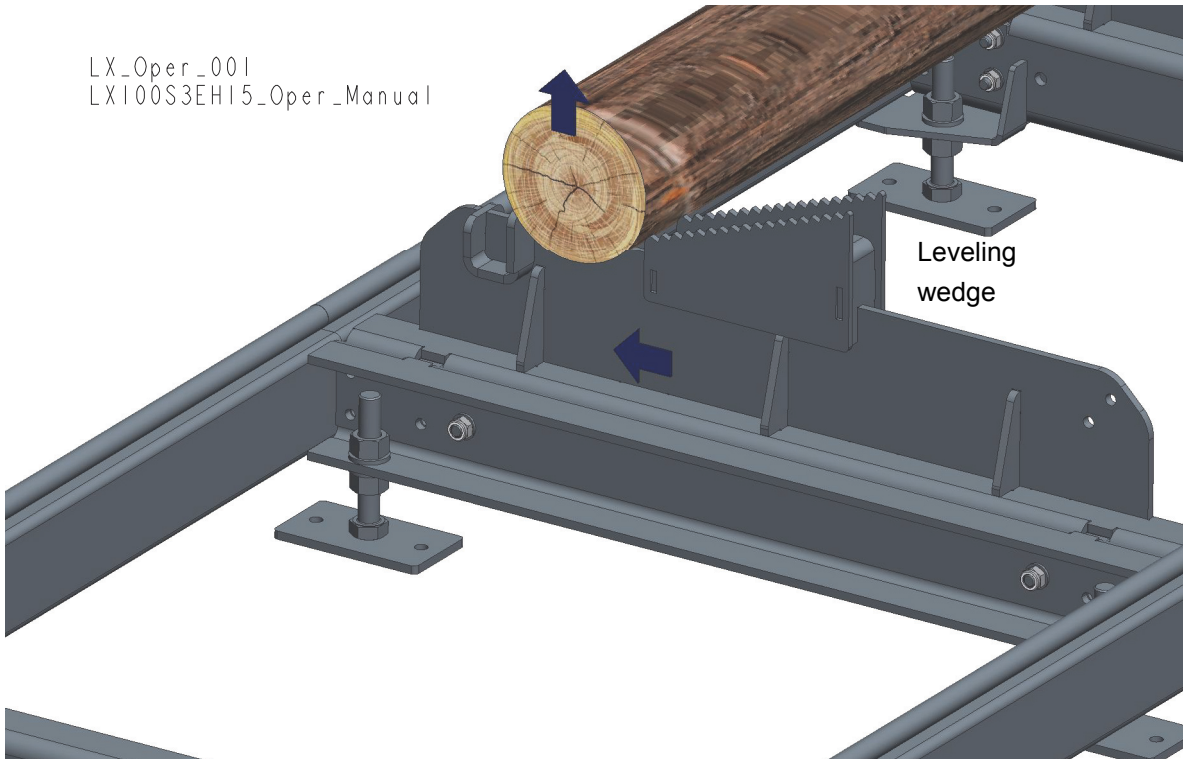
FIG. 3-13

3. Make sure the side supports are positioned low enough for the blade to pass over them. If they are not, back the clamps off slightly and push the side supports down until they are positioned below the height of your last on a given side of the log.

**To level a tapered log:**

Use the optional wedge to raise either end of a tapered log, if desired. Shim one end of the log until the heart of the log measures the same distance from the bed rails at each end of the log.

**See Figure 3-14.**



**FIG. 3-14**

### 3.7 Up/Down Operation

1. Install a blade, if needed, and check for correct tension ([See Section 3.3](#)).

**Set the saw head to the desired height (the blade height scale shows the height of the blade above bed rails).**

Use the up/down button or up/down switch (on the control panel) shown below to raise or lower the saw head.

See Figure 3-15. LX100E15.

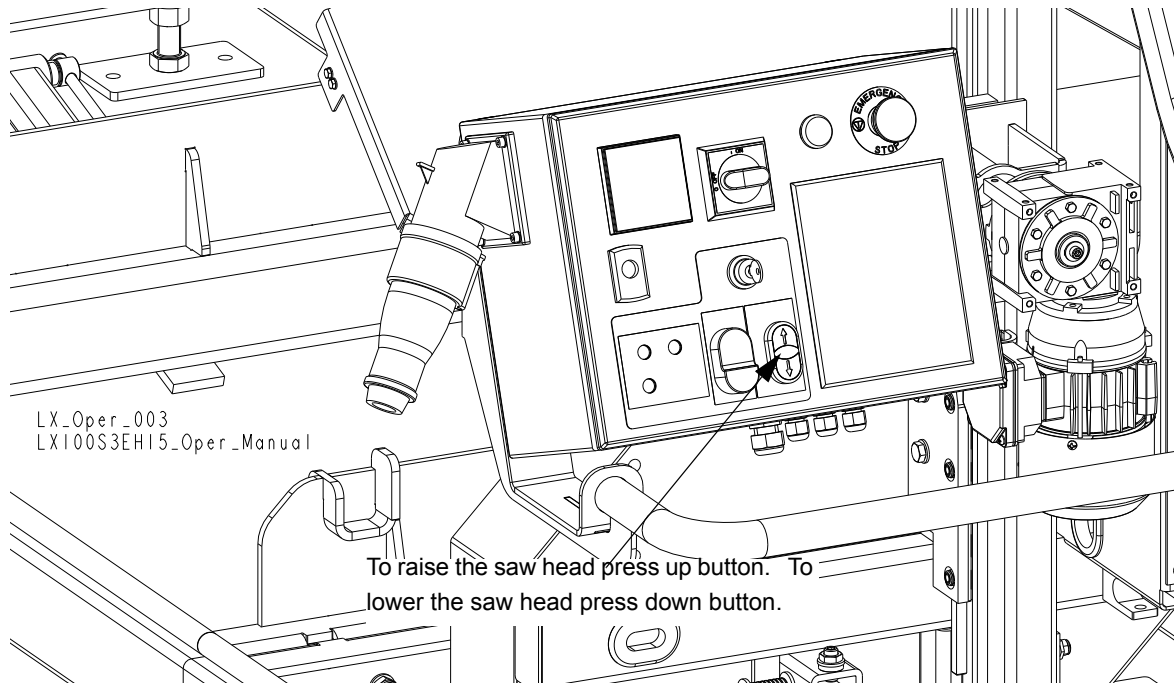


FIG. 3-15

See Figure 3-16. LX100E11S.

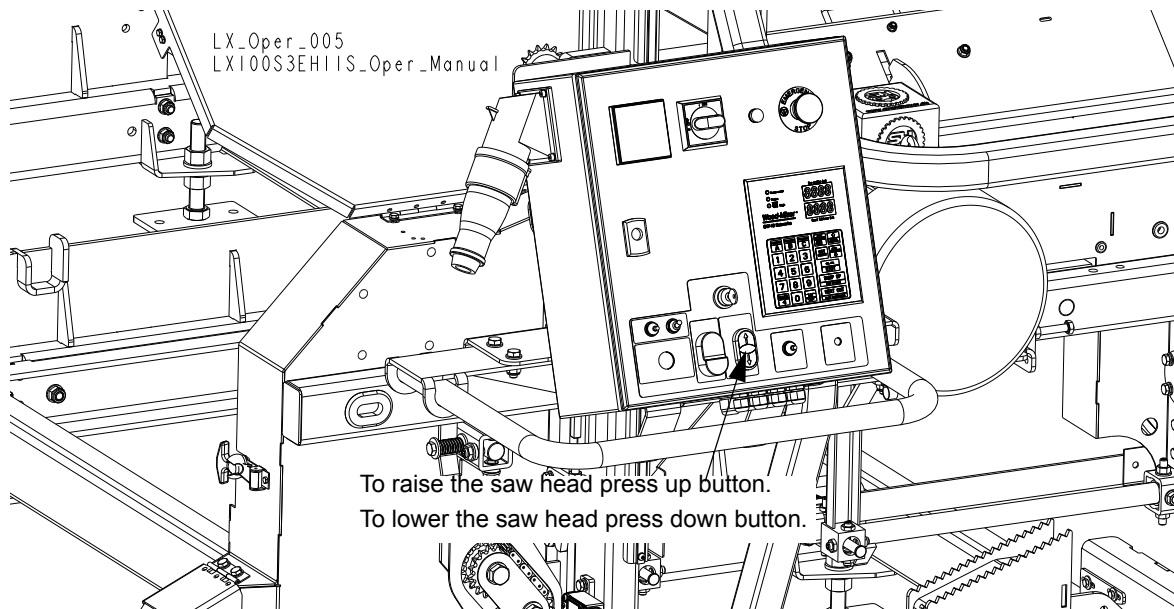


FIG. 3-16

See Figure 3-17. LX100EG25S.

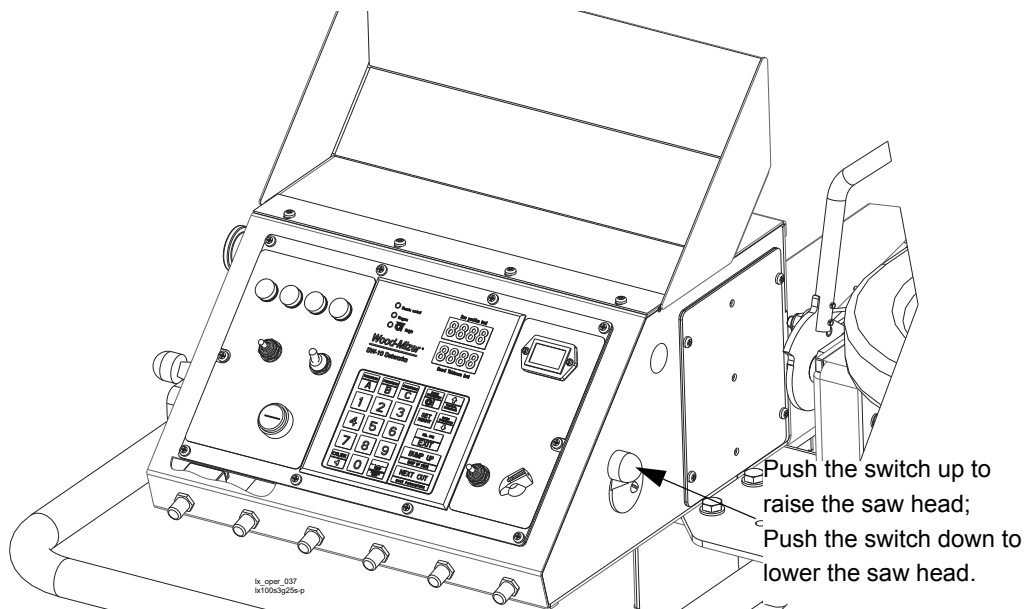


FIG. 3-17

**CAUTION!** DO NOT try to force the saw head above the 68 cm (27") mark or below the 2.54cm (1"). Failure to do so may result in up/down system damage.

### 3.8 Blade Guide Arm Operation

1. Look down the length of the log to see its maximum width. The outer blade guide roller should be adjusted to clear the widest section of the log by less than 1" (25.4 mm).
2. To adjust the outer blade guide use the blade guide arm handle shown below. Move the blade guide arm handle right to move the arm out. Move the blade guide arm handle down to move the arm in.

See Figure 3-18.

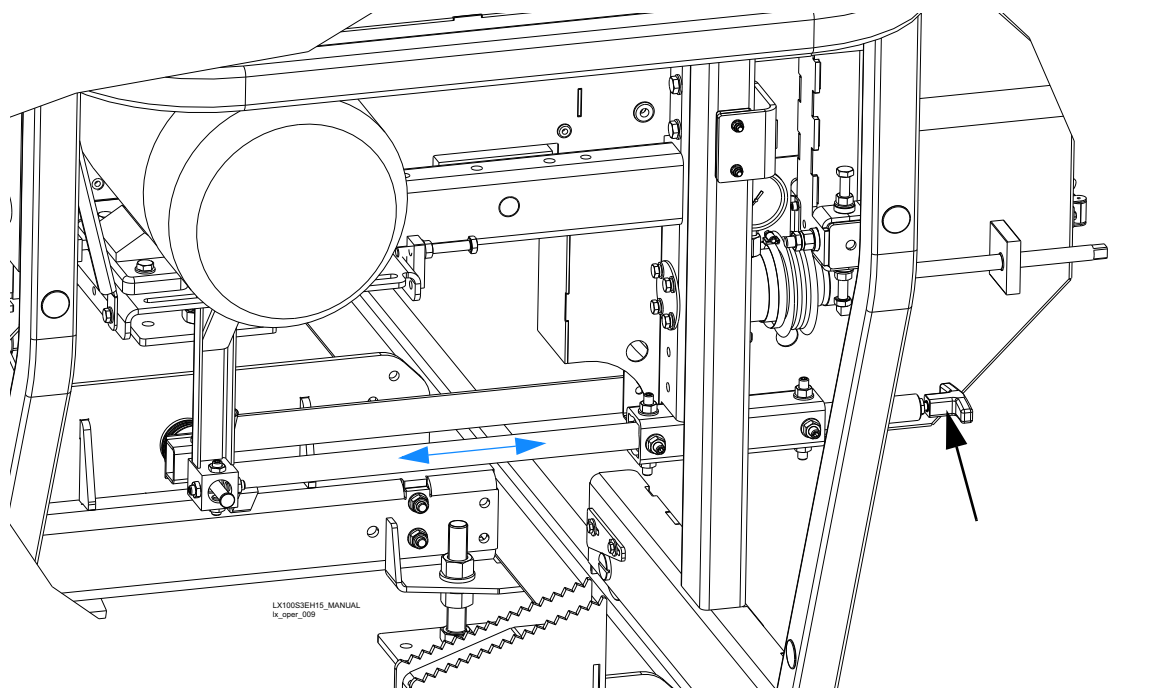


FIG. 3-18

### 3.9 Blade Drive Operation



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

Be sure the blade housing cover is closed and secured before starting the engine or motor. Use the rubber latches to fasten the blade housing cover shut. If the blade housing cover is not closed and secured, the safety switch located on it interrupts the ignition circuit and the motor/engine cannot be started. If during sawmill operation the cover will be opened, the engine/motor will be stopped.

#### Sawmills equipped with electric motors:

1. Clear any loose objects from the area of the blade, motor, and drive belt.
2. Make sure the clamps and side supports are positioned low enough for the blade to pass over them. Make sure the log is clamped securely.
3. Start the motor as instructed in the motor manual.

See Figure 3-19. To engage the blade, perform the following steps:

- Turn the main switch on the electrical box to the ON position,
- Press AND HOLD the green safety button on the control box.

**NOTE:** Keep the safety button pressed all the time the blade is driven. If the safety button is released, the motor stops and it needs to be restarted.

- Press the START button on the control box to start the motor.

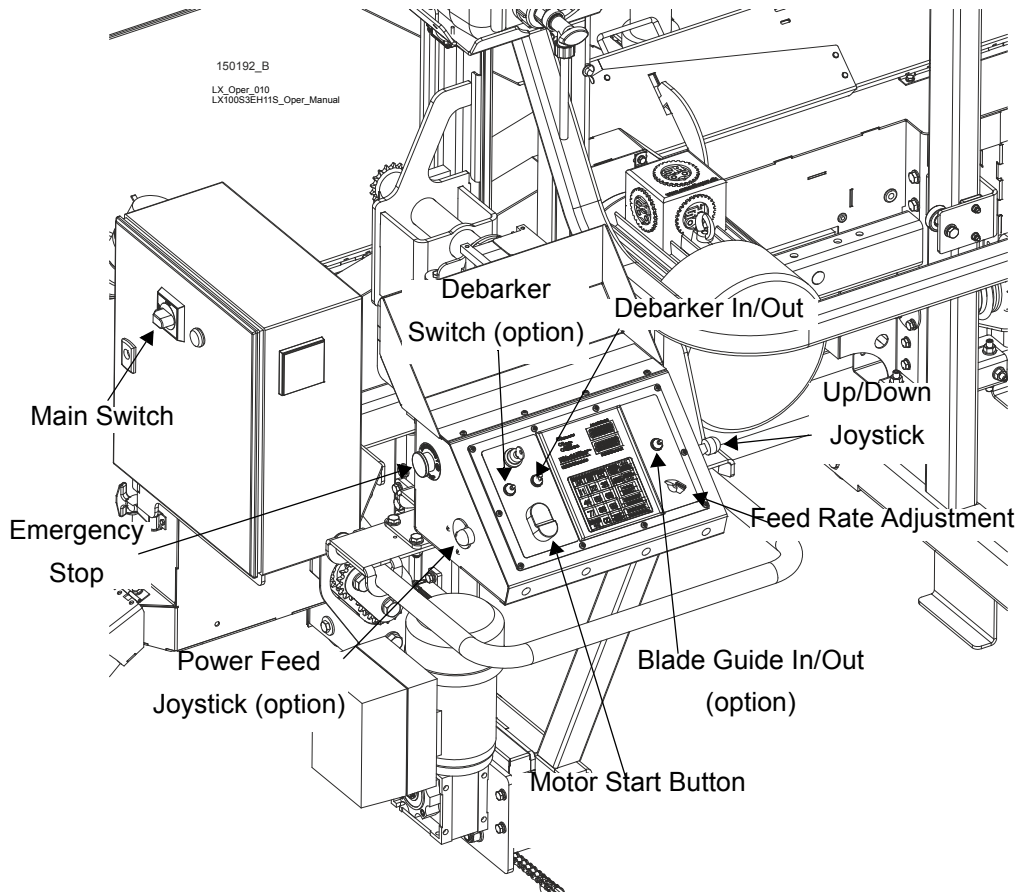


FIG. 3-19



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

**Sawmills equipped with gas engines:**

1. Clear any loose objects from the area of the blade, motor, and drive belt.
2. Make sure the clamps and side supports are positioned low enough for the blade to pass over them. Make sure the log is clamped securely.
3. Start the motor as instructed in the motor manual.



See Figure 3-20. To engage the blade, perform the following steps:

- Pull the tensioner handle all the way backward.

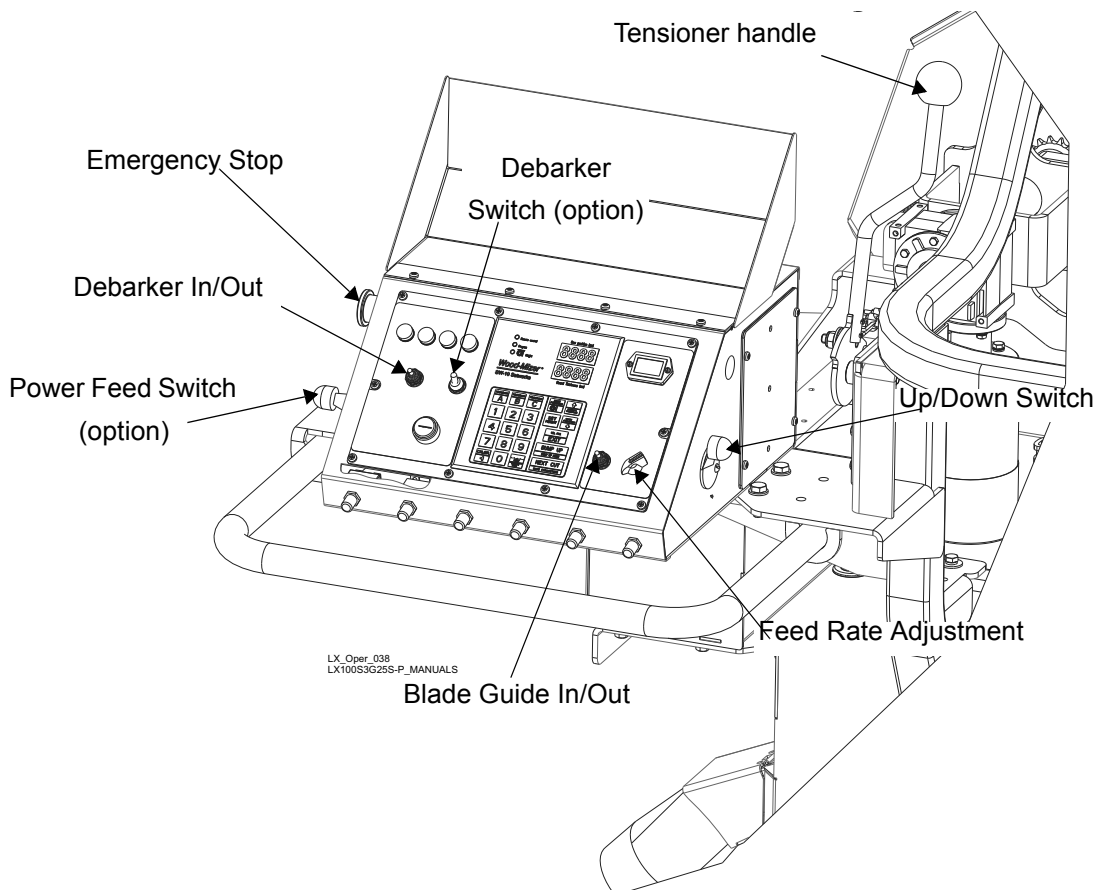


FIG. 3-20



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

### 3.10 Feed Operation

**HINT:** To get a straight cut in the first part of the board, feed the blade into the log at a slow speed. This stops the blade from flexing and dipping up or down. Use a slow speed until the whole width of the blade has entered the cut. Then increase the feed rate as desired. Maximum feed rate varies with width and hardness of the wood. Over-feeding results in blade and drive belt wear and also produces a wavy cut.



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

**HINT:** Try to stop the blade while the heel of the blade is still in the log. Then bring the saw head back without adjusting the blade up. This lets you keep the blade at the current height setting so you can make the next blade height adjustment more quickly.



### 3.10.1 Optional power feed system

The power feed system includes an electric motor with gear which moves the saw head using a steel strand. The speed at which the saw head travels forward is adjusted by the feed rate switch.

See Figure 3-21.

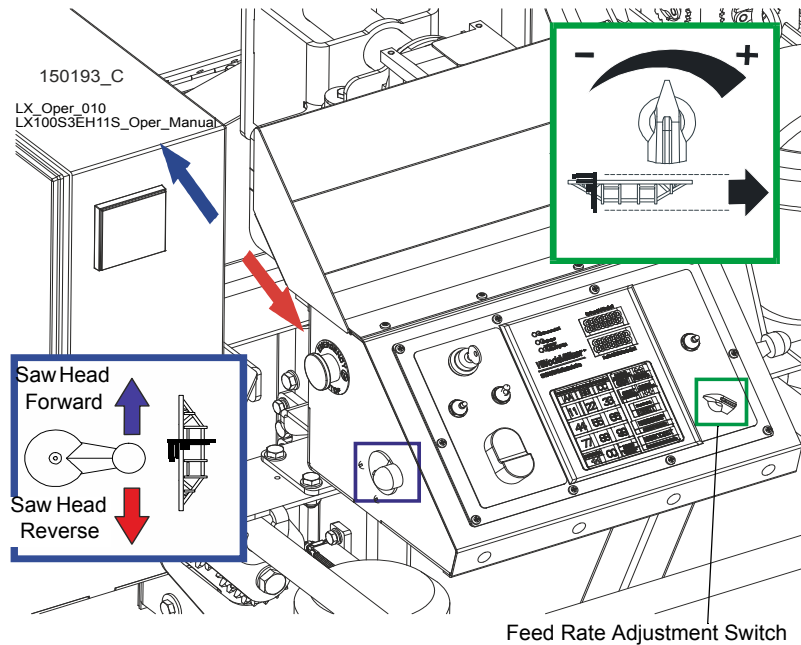


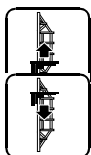
FIG. 3-21

#### Saw Head Feed Rate



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

#### Saw Head Forward and Reverse



The saw head forward/reverse switch controls the direction in which the saw head travels. Turn the switch upward to move the saw head forward. Turn the switch down to move the saw head backward.

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

#### Feed Rate



**HINT:** To get a straight cut in the first part of the log, feed the blade into the log at a slow speed. This stops the blade from flexing and dipping up or down. Turn the carriage feed rate switch to a slow speed until the whole width of the blade has entered the cut. Then use the saw head feed rate switch to increase the feed rate as desired. Maximum feed rate varies with width and hardness of the wood. Over-feeding results in motor and blade wear, and also produces a wavy cut.

1. Stop the saw head at the end of the cut by turning the saw head feed rate switch counterclockwise until the saw head stops moving.
2. Using the STOP button, disengage the blade. This will stop the blade. Remove the board from the log.



### 3.11 Cutting The Log

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

1. Once the log is placed where you want it and clamped firmly, position the blade close to the end of the log.
2. Use the blade height scale to determine where to make your first cut. ([See Section 3.13](#)) Set the blade to the desired height with the up/down buttons. Make sure that the blade will clear all side supports and clamps. Adjust the outer blade guide properly (See Section 3.8)
3. Make sure all covers and guards are in place and secured. Start the engine.
4. Start the water lube if necessary to prevent sap building on the blade ([See Section 3.14](#)).
5. Move the saw head forward ([See Section 3.10](#)). Feed the blade into the log slowly. Always try to cut at the fastest speed you can while keeping an accurate cut. Cutting too slowly will waste blade life and lower production.
6. As you get to the end of the log, slow down the feed rate. When the teeth exit the end of the log, release the emergency stop button on the control box. Remove the slab which were just cut from the log.
7. Return the saw head to the front of the mill. Always disengage the blade before returning the saw head for the next cut.
8. Repeat until the first side of the log is cut as desired. Set aside the usable flitches (boards with bark on one or both sides). They can be edged on the mill later.
9. Remove the leveling wedge if it was used. Release the clamps and turn the log 90 or 180 degrees. Make sure the flat on the log is placed flat against side supports if turned 90 degrees. Make sure it is placed on bed rails if turned 180 degrees. If the log was turned 90 degrees and has to be leveled on the bed rails, See Section 3.6 for more informations.
10. Repeat the steps above until the log is square. Then cut boards from the cant.

**Example:** Remember that the blade cuts a 1/16 - 1/8" (1.6 - 3.2mm) wide kerf. If you want 1" (25 mm) thick boards, lower the saw head 1 1/16 - 1 1/8" (27 - 29 mm) for each board.

### 3.12 Edging

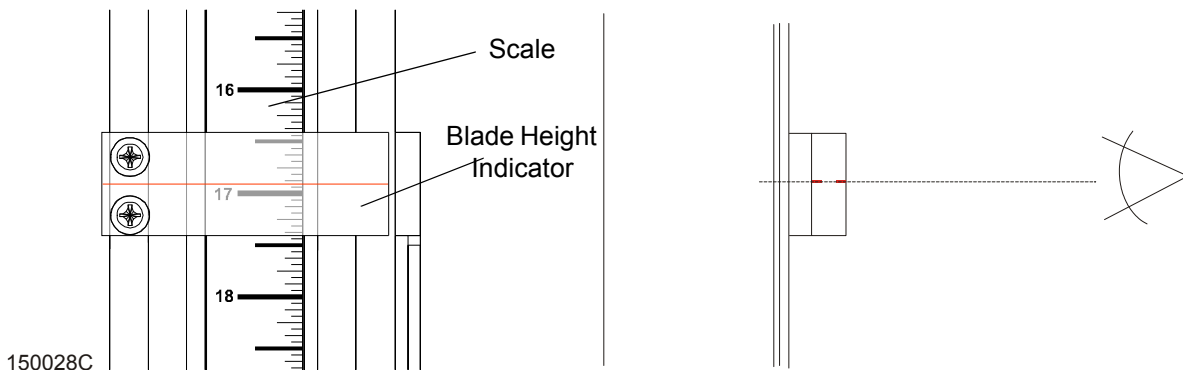
The following steps guide you through edging boards on the Wood-Mizer sawmill.

1. Raise the side supports to 1/2 height of the flitches or boards that need to be edged.
2. Stack the flitches on edge against side supports.
3. Clamp flitches against the side supports halfway up the flitch height. (Wider flitches should be placed to the clamp side. When they are edged, flip them over to edge the second side without having to pull them from the middle of the stack.)
4. Adjust the blade height to edge a few of the widest boards.
5. Loosen the clamps and turn the edged boards over to edge the other side.
6. Repeat steps 2-4.
7. Loosen the boards and remove the boards that have good clean edges on both sides. Repeat steps 2-5 until all boards will be edged.

### 3.13 Blade Height Scale

**See Figure 3-22.** The blade height scale is mounted on the vertical mast. It includes;

- a blade height indicator,
- centimeter scale (or quarter inch scale),



**FIG. 3-22**

#### Blade Height Indicator

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

## The Scale

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

**Example:** You want to cut 1" (25 mm) random width boards from a log. Position the blade for the first cut. Move the saw head to an even measurement on the scale. Make a trim cut. Return the saw head for the second cut and lower it 29mm below the original measurement (the extra 3 mm allows for saw kerf and shrinkage of the lumber).

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

## The Quarter Scale

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

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

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

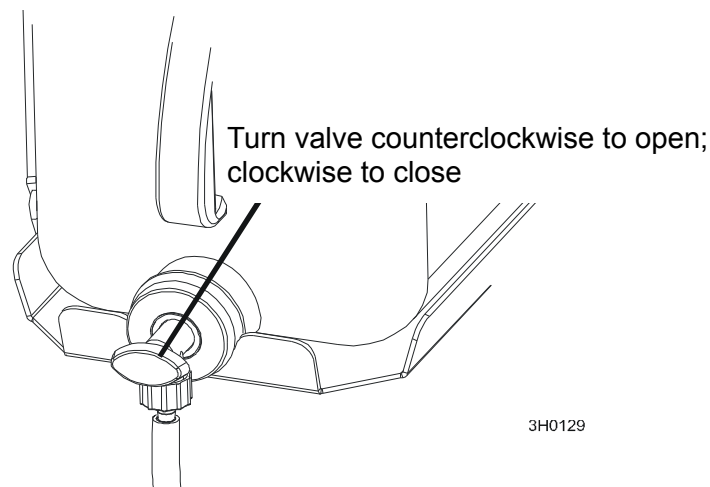
**TABLE 3-3**

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

### 3.14 Water Lube Operation


The Water Lube System keeps the blade clean. Water flows from a 5-gallon (18.9 liter) bottle through a hose to the blade guide where the blade enters the log. A valve in the bottle cap controls the amount of water flow.

**See Figure 3-23.** Open the valve on the water bottle to start water flow. A stream of water flows only when the blade is engaged.



**FIG. 3-23**

Use just enough water to keep the blade clean. This saves water, and lowers the risk of staining the boards with water. Usual flow will be 1-2 gallons (3.8-7.6 liters) per hour. A squirt of liquid dishwashing detergent in the water bottle will help clean the blade when cutting wood with a high sap content. Not all types of wood require the use of the Water Lube System.

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

Before removing the blade, engage the clutch/brake lever (DC sawmills). Let the blade spin with water running on it for about 15 seconds. This will clean the blade of sap buildup. Wipe the blade dry with a rag before storing or sharpening.

If you are sawing in freezing temperatures, remove the water lube bottle from the sawmill when done sawing and store it in a warm place. Blow any remaining water from the water lube hose.

### 3.15 Transporting The Sawmill

The assembled sawmill can be transported in an appropriately equipped pickup truck:

1. Move the saw head so it is positioned over the auxiliary bed.
2. Disassemble the frame into the segments.
3. Put segments on the bed of the truck.
4. Use belts to secure the saw head to the bed segment. Next using the lift truck load the saw head with the bed segment onto the truck.



**WARNING!** Keep all persons away from the saw head while loading and unloading the sawmill. Failure to do so may result in serious injury or death.

Secure the sawmill to the truck bed to prevent the sawmill from shifting while it is being transported.

# Wood-Mizer LT15/LX100 Short Interval Maintenance Schedule

(Check Engine And Option Manuals For Additional Maintenance Procedures)

PROCEDURE	MANUAL REFERENCE
<b>EVERY BLADE CHANGE</b>	
Check blade guide roller performance	<a href="#">SEE SECTION 4.2</a>
Remove excess sawdust from blade wheel housings and sawdust chute	<a href="#">SEE SECTION 4.2</a>
<b>EVERY 8 HOURS OF OPERATION</b>	
Clean and lubricate track	<a href="#">SEE SECTION 4.3</a>
Remove sawdust from track roller housings	<a href="#">SEE SECTION 4.3</a>

## WOOD-MIZER LT15/LX100 MAINTENANCE LOG

(Check Engine And Option Manuals For Additional Maintenance Procedures)

PROCEDURE	MANUAL REFERENCE	TOTAL HOURS OF OPERATION									
		<i>FILL IN THE DATE AND THE MACHINE HOURS AS YOU PERFORM EACH PROCEDURE. A SHADED BOX INDICATES MAINTENANCE IS NOT NEEDED AT THIS TIME.</i>									
		50 HRS	100 HRS	150 HRS	200 HRS	250 HRS	300 HRS	350 HRS	400 HRS	450 HRS	500 HRS
Clean & lubricate mast	See Section 4.4										
Check blade wheel belts for wear.	See Section 4.6										
Lubricate blade tensioner screw.	See Section 4.5										

## WOOD-MIZER LT15/LX100 MAINTENANCE LOG

(Check Engine And Option Manuals For Additional Maintenance Procedures)

PROCEDURE	MANUAL REFERENCE	TOTAL HOURS OF OPERATION									
		<i>FILL IN THE DATE AND THE MACHINE HOURS AS YOU PERFORM EACH PROCEDURE. A SHADED BOX INDICATES MAINTENANCE IS NOT NEEDED AT THIS TIME.</i>									
		550 HRS	600 HRS	650 HRS	700 HRS	750 HRS	800 HRS	850 HRS	900 HRS	950 HRS	1000 HRS
Clean & lubricate mast	See Section 4.4										
Check blade wheel belts for wear.	See Section 4.6										
Lubricate blade tensioner screw.	See Section 4.5										



## WOOD-MIZER LT15/LX100 MAINTENANCE LOG

(Check Engine And Option Manuals For Additional Maintenance Procedures)

PROCEDURE	MANUAL REFERENCE	TOTAL HOURS OF OPERATION									
		FILL IN THE DATE AND THE MACHINE HOURS AS YOU PERFORM EACH PROCEDURE. A SHADED BOX INDICATES MAINTENANCE IS NOT NEEDED AT THIS TIME.									
		1050 HRS	1100 HRS	1150 HRS	1200 HRS	1250 HRS	1300 HRS	1350 HRS	1400 HRS	1450 HRS	1500 HRS
Clean & lubricate mast	See Section 4.4										
Check blade wheel belts for wear.	See Section 4.6										
Lubricate blade tensioner screw.	See Section 4.5										

## WOOD-MIZER LT15/LX100 MAINTENANCE LOG

(Check Engine And Option Manuals For Additional Maintenance Procedures)

PROCEDURE	MANUAL REFERENCE	TOTAL HOURS OF OPERATION									
		FILL IN THE DATE AND THE MACHINE HOURS AS YOU PERFORM EACH PROCEDURE. A SHADED BOX INDICATES MAINTENANCE IS NOT NEEDED AT THIS TIME.									
		1550 HRS	1600 HRS	1650 HRS	1700 HRS	1750 HRS	1800 HRS	1850 HRS	1900 HRS	1950 HRS	2000 HRS
Clean & lubricate mast	See Section 4.4										
Check blade wheel belts for wear.	See Section 4.6										
Lubricate blade tensioner screw.	See Section 4.5										



## SECTION 4 MAINTENANCE

This section lists the maintenance procedures that need to be performed on LX100 sawmills.



**CAUTION!** Always disconnect and lock out power supply before performing any maintenance work, cleaning or servicing the sawmill. Failure to do so may result in serious injury.

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



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

This section lists only part of the maintenance procedures that need to be performed on LX100 sawmills. For remaining maintenance procedures see engine/motor manual and optional equipment manual.

### 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. This information is provided so that you may plan ahead in ordering replacement parts. Due to many variables which exist during sawmill operation actual part life may vary significantly.

Part Description	Estimated Life
Blade Wheel Belts (B57)	500 hours
Blade Guide Rollers	1000 hours
Drive Belt	1250 hours
Power Feed Chain	500 hours

**TABLE 4-1**

### 4.2 Sawdust Removal

Remove the excess sawdust from the blade wheel housing and sawdust chute every blade change.

### 4.3 Carriage Track & Rollers

See Figure 4-1.

1. Clean the track bar to remove any sawdust and sap buildup every eight hours of operation. (A)
2. Make sure the scrapers fit firmly against the rail. If not, loosen the mounting bolts (B) to adjust the scrapers.
3. Every 50 hours of operation remove the power feed drive wheel cover (C) (optional equipment) and remove any sawdust from the sprockets and cover.

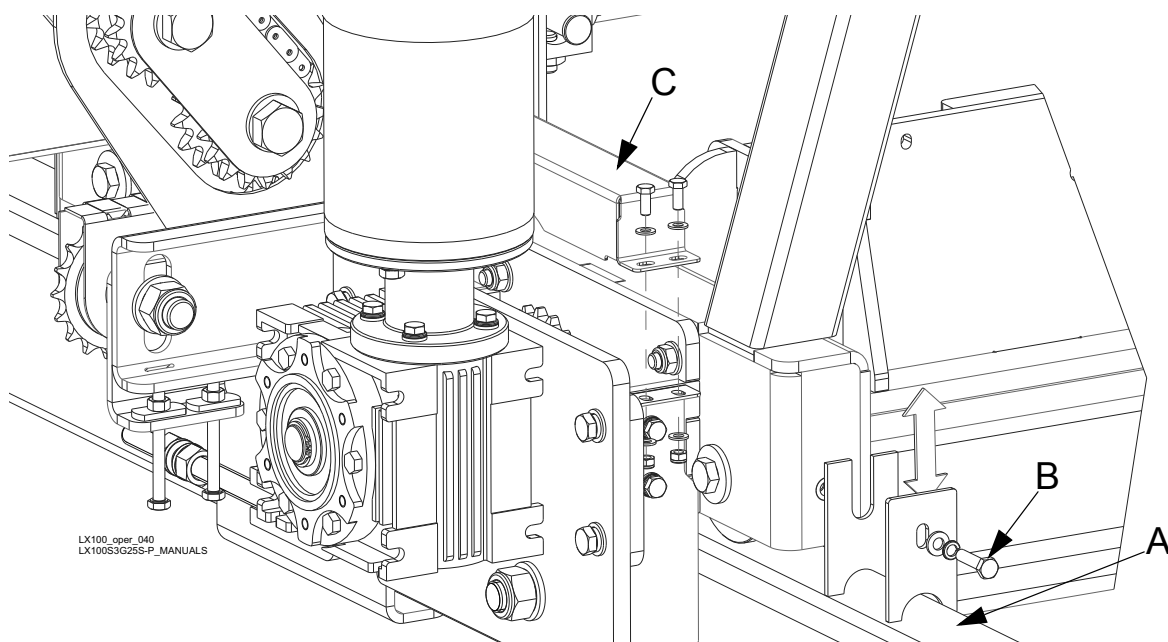


FIG. 4-1

### 4.4 Vertical Mast Rails

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



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

### 4.5 Miscellaneous Lubrication

1. Check tensioner screw bellows condition every 200 hours of operation (A) and if needed, lubricate the tensioner screw with a rolling bearing grease (e.g. LT4S or Shell Extreme Pressure Grease).

See Figure 4-2.

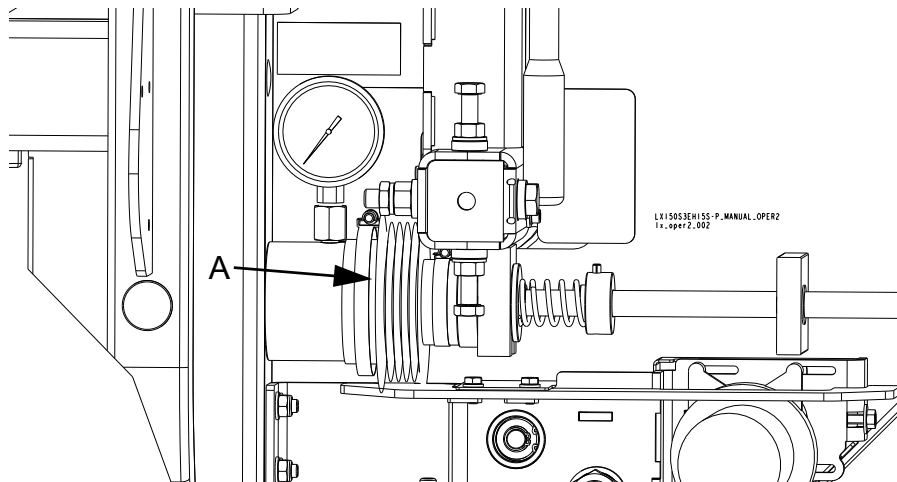


FIG. 4-2

#### 4.6 Blade Wheel Belts

1. Check the blade wheel belts for wear. Replace belts if necessary. Rotating the belts every 50 hours will increase the belt life. Use only B57 belts manufactured by Goodyear or Browning.
2. Periodically check all belts for wear. Replace any damaged or worn belts as needed.

50

#### 4.7 Up/Down and Feed System

1. Adjust the up/down chain tension. Measure the chain tension with the head all the way to the top of the vertical mast. Secure the saw head with the chain or spacers. Find the chain adjusting bolt at the bottom of the mast. Loosen the nut and move the sprocket down until the center of the chain will be deflected 2.5cm (0.787") with a 2.3 KG (5.5 lbf) (24.5 N), deflection force.



**WARNING!** Always secure the saw head with the chain or board. Unsecured saw head may fall, causing severe injury or death.

See Figure 4-3.

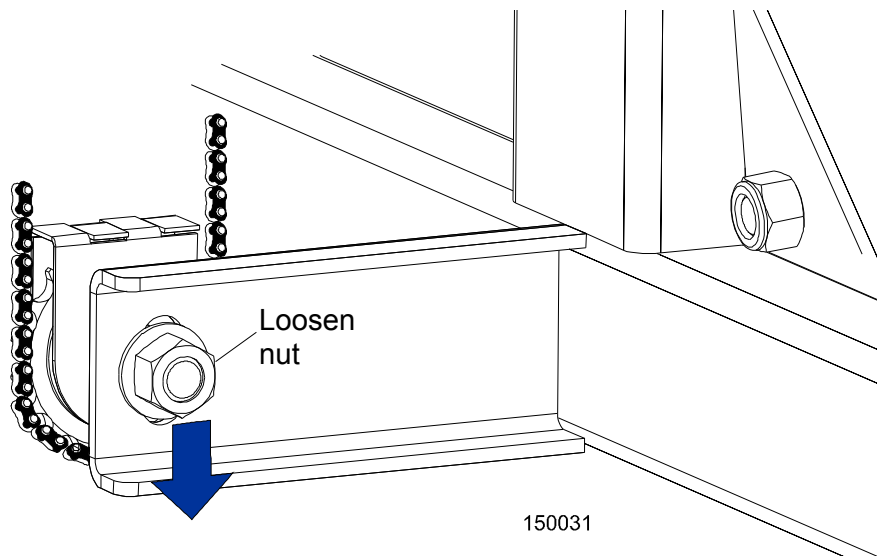


FIG. 4-3

#### 4.8 Miscellaneous Maintenance

- 50 **1.** Check the drive belt tension after the first 20 hours and every 50 hours thereafter. See Section 6.13 for drive belt adjustment instructions.
- 2.** Check the mill alignment every setup. (See Section 6, Alignment).
- 3.** Make sure all safety decals are clean and readable. Remove sawdust and dirt. Replace any damaged or unreadable decals immediately. Order decals from your Customer Service Representative.
- 100 **4.** Check the power feed and up/down chain every 100 hours. Replace if damaged.

#### 4.9 Safety Devices Inspection (Only CE Version)

##### *LX100 AC - Safety devices inspection*

Safety devices on the LX100 AC sawmill which must be checked before every shift:

- E-STOP button and its circuit inspection
- Circuit inspection with the E-STOP button pressed
- Blade cover safety switches and its circuit inspection
- Up/down limit switches inspection.

##### **1 E-STOP button and its circuit inspection (A)**

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

See Figure 4-4.

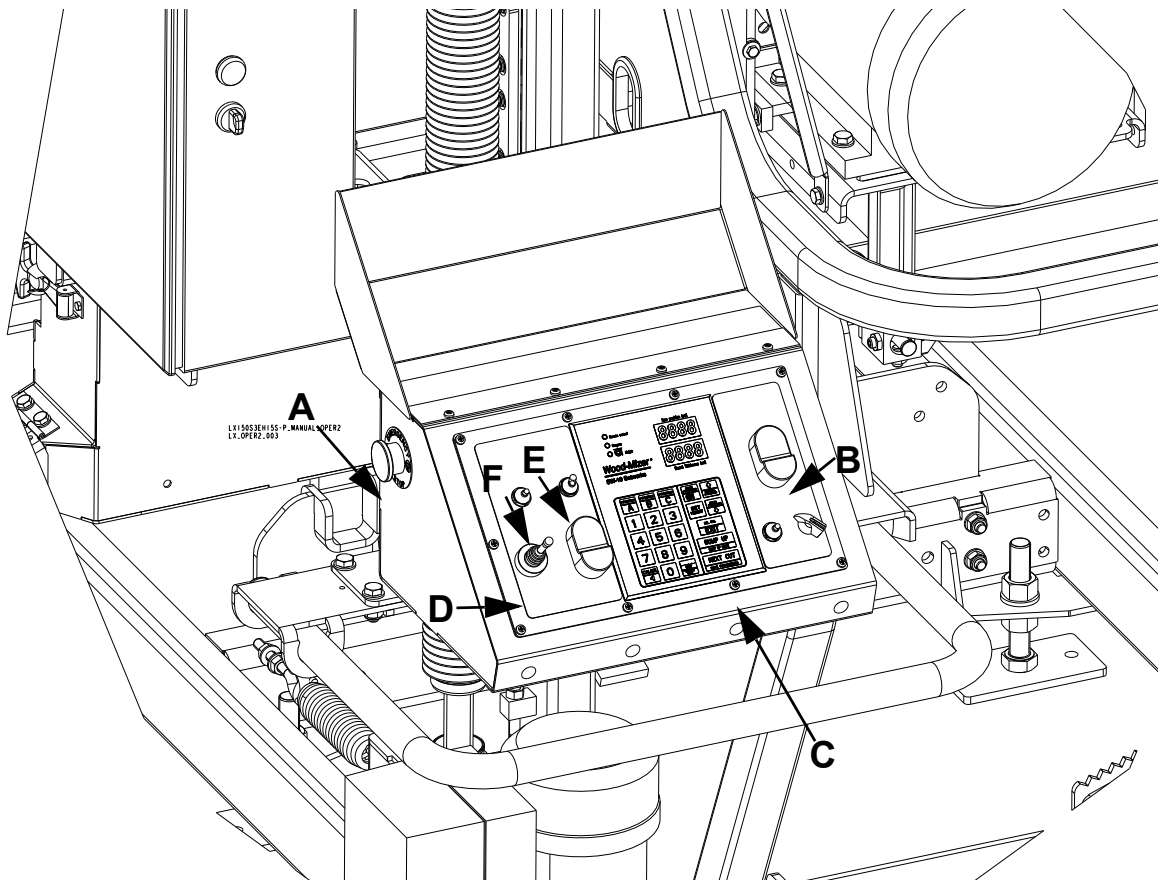


FIG. 4-4

## 2 Inspection of the control circuits with E-STOP button pressed (A)

- Turn on the blade motor;
- Press the E-STOP button located on the left side of the control box. The motor/engine should stop.
- With E-STOP button pressed try to move the saw head up and down (using the switch (B) and Setworks button (C)) and forward/backward using the power feed switch (D). Both systems should not start.
- With E-STOP button pressed, try to start the debarker blade motor (E) and move the debarker arm (F) in and out. The debarker should not start to work.

**3 Blade cover safety switch and its circuit inspection**

- Turn on the blade motor;
- Open the blade housing cover;
- The blade motor should stop;
- Try to start the motor; The blade motor should remain stopped;
- Close the blade housing cover;
- The blade motor should remain stopped until it is restarted with the START button.

**4 Up/down limit switches inspection.**

- Move the saw head up until the upper limit switch is activated. The saw head should be stopped. Now the saw head should move only downwards.
- Move the saw head down until the lower limit switch is activated. The saw head should be stopped. Now the saw head should move only upwards.

***LX100 DC - Safety devices inspection***

Safety devices on the LX100 DC sawmill which must be checked before every shift:

- E-STOP button and its circuit inspection
- Circuit inspection with the E-STOP button pressed
- Blade cover safety switches and its circuit inspection
- Up/down limit switches inspection.

**1 E-STOP button and its circuit inspection**

- Turn on the engine and start the blade;
- Press the E-STOP button (A) located on the left side of the control box. The engine should be stopped. The engine should remain stopped until the E-STOP button is released.



See Figure 4-5.

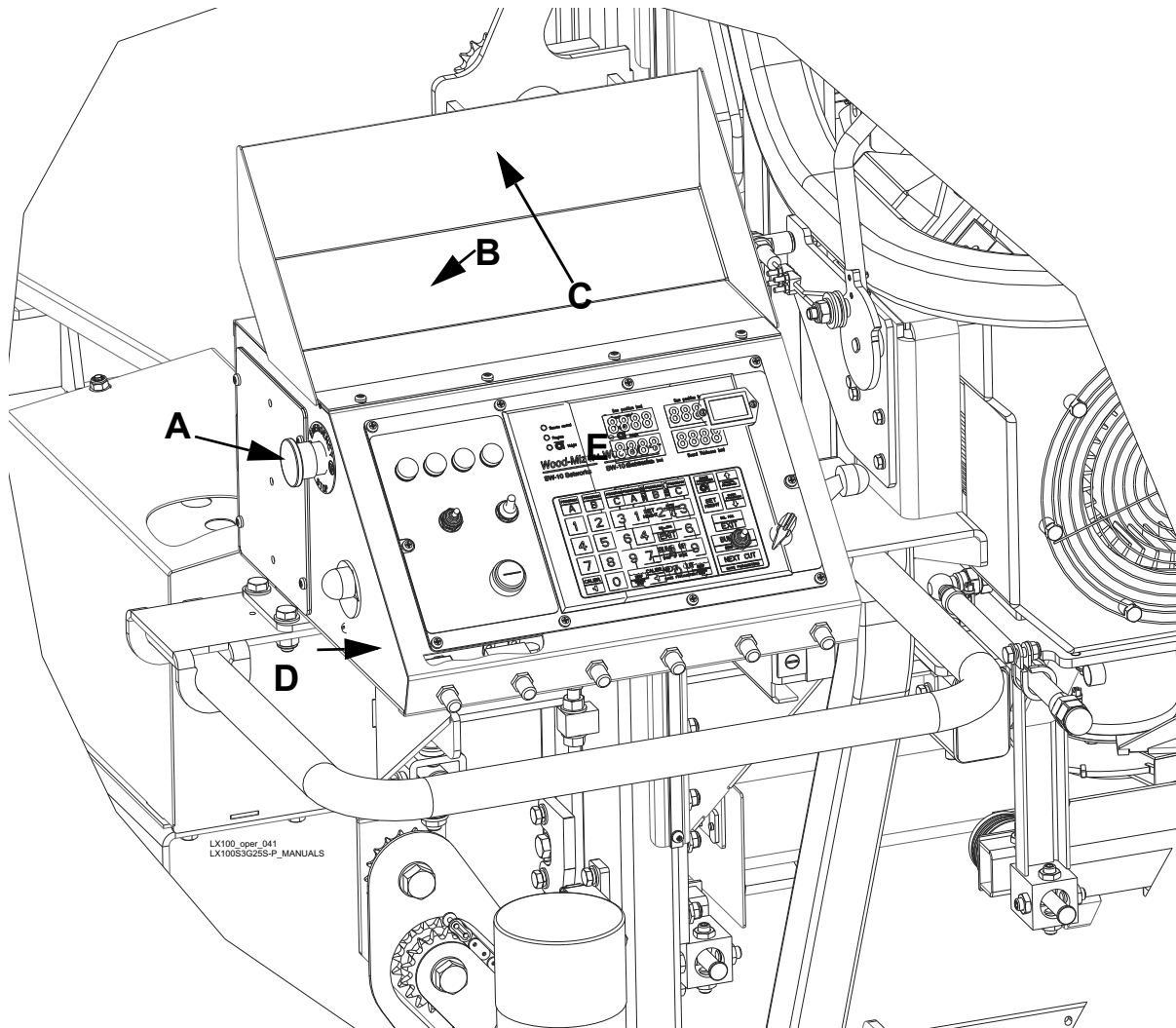


FIG. 4-5

### Inspection of the control circuits with E-STOP button pressed (A)

- Turn on the engine and start the blade;
- Press the E-STOP button located on the left side of the control box. The motor/engine should stop.
- With E-STOP button pressed try to move the saw head up and down (using the switch (B) and Setworks button (C)) and forward/backward using the power feed switch (D). Both systems should not start.
- With E-STOP button pressed, try to start the debarker blade motor (E) and move the debarker arm (F) in and out. The debarker should not start to work.

### 3 Blade cover safety switch and its circuit inspection

- Turn on the main engine;
- Open the blade housing cover.
- The motor/engine should stop.
- Try to start the engine; The engine should remain stopped.

**4 Up/down limit switches inspection.**

- Move the saw head up until the upper limit switch is activated. The saw head should be stopped. Now the saw head should move only downwards.
- Move the saw head down until the lower limit switch is activated. The saw head should be stopped. Now the saw head should move only upwards.



## SECTION 5 TROUBLESHOOTING GUIDE

### 5.1 Sawing Problems

<b>PROBLEM</b>	<b>CAUSE</b>	<b>SOLUTION</b>
<b>Blades Dull Quickly</b>	Dirty logs	Clean or debark logs, especially on entry side of the cut.
	When grinding, teeth heating too much and causing teeth to soften.	Grind just enough metal to restore sharpness to the teeth. Use water/coolant while sharpening blade.
	Poor sharpening techniques.	Make sure the tip is being sharpened completely (See Sharpener Manual).
<b>Blades Break Prematurely</b>	Rubber belts on blade wheels worn to a point that blade contacts metal pulley - look for shiny spots on edge of wheels.	Change blade wheel belts (B-57).
	Poor sharpening techniques.	See Sharpener Manual
	Tension too tight.	Tension blade to recommended specifications.
<b>Blade Does Not Track Right On Wheels</b>	Cant adjustment is incorrect.	Readjust (See Section 3.4).
	Flat/worn belts.	Replace B-57 belts
<b>Blade Guide Rollers Do Not Spin While Cutting</b>	Frozen bearings	Replace bearings
	Worn bearings	Replace bearings
<b>Drive Belts Wear Prematurely or Jump</b>	Engine/motor and drive pulleys out of alignment	Align pulleys

<b>PROBLEM</b>	<b>CAUSE</b>	<b>SOLUTION</b>
<b>Boards Thick Or Thin On Ends Or Middle Of Board</b>	Stress in log which causes log to not lay flat on the bed	After log has been squared, take equal cuts off opposing sides. Repeat cuts, keeping the heart in the middle of the cant, and making it your last cut.
	Set in teeth.	Resharpener and reset the blade.
<b>Height Adjustment Jumps or Stutters When Moving Up or Down</b>	Bed rails misaligned.	Realign sawmill.
	Mast needs lubrication.	Lubricate mast track surface
<b>Lumber Is Not Square</b>	Mast slide pads are not adjusted properly (the entire surface of the pad should touch the mast).	Adjust pads.
	Side supports not square to bed.	Adjust side support.
<b>Sawdust Builds Up On Track</b>	Blade not parallel to bed rails.	Adjust bed rails.
	Sawdust or bark between cant and bed rails.	Remove particles.
	Tooth set problem.	Resharpener and reset the blade.
<b>Wavy Cuts</b>	Excessive lubrication	Do not lubricate track with grease.
	Track is sticky.	Clean track with solvent and apply silicone spray.
<b>Wavy Cuts</b>	Excessive feed	Slow down feed rate.
	Improperly sharpened blade (This will be the problem 99% of the time).	Resharpener blade (See Sharpener Manual - read entire manual!)
	Blade guides improperly adjusted.	Adjust blade guides.
<b>Wavy Cuts</b>	Sap buildup on blade.	Use larger amount of water flow to the blade during cutting.
	Tooth set problem.	Resharpener and reset the blade.

## SECTION 6 ALIGNMENT

### 6.1 Pre-Alignment Procedures

Periodically check the sawmill alignment and adjust if necessary. This chapter explains how to align the entire sawmill. Care should be taken in performing these steps. Sawmill alignment determines the accuracy and squareness of your cuts.

**The sawmill alignment steps are:**

1. Prepare the sawmill for alignment
2. Adjust the blade parallel to the bed rails
3. Adjust the blade guide arm parallel to the saw head brace
4. Align blade guides to the blade
5. Adjust side supports square to the bed
6. Final adjustments.

To insure accurate alignment, the sawmill frame must be level and a blade properly installed.

[See SECTION 3 Setup & Operation](#) for setup information.

### 6.2 Preparing The Sawmill For Alignment

Before performing the following alignment procedures, setup the mill on firm, level ground. String the bed and adjust the legs so the frame is level ([See Section 2.5](#)) and ([See Section 3.1](#)).

### 6.3 Blade Installation and Alignment

Install a blade and apply the appropriate tension as shown in [Section 3.3](#).

1. Close the blade housing cover and make sure all persons are clear of the open side of the saw head.
2. Start the motor for a moment.

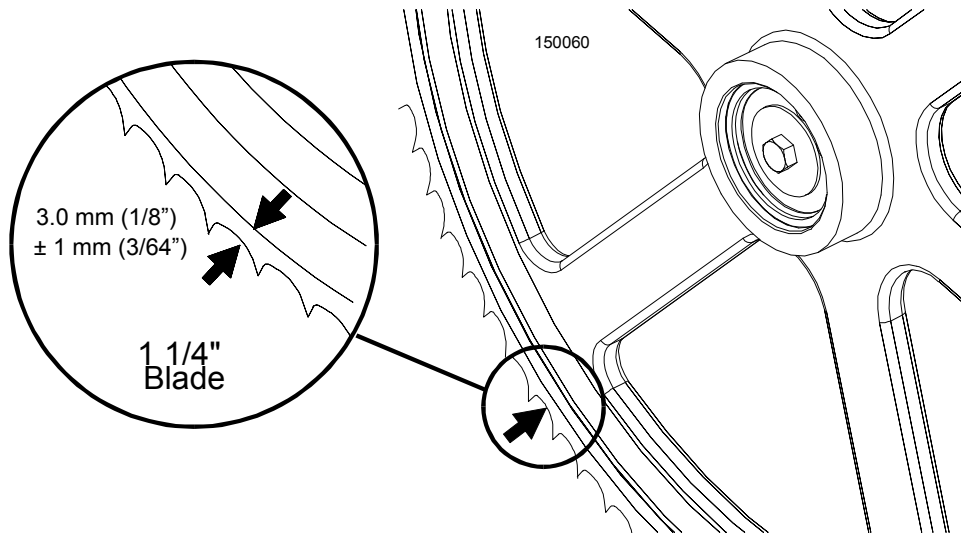


**WARNING!** Do not spin the blade wheels by hand. Spinning the blade wheels by hand may result in serious injury.

3. Turn off the motor, open the blade housing cover, remove the key from the key switch (or turn off the power supply using the switch on the electric box) and check the position of the blade on the blade wheels.

Check the vertical alignment of the idle-side blade wheel. The gullet of the blade should ride the same distance from the front edge of the wheel at the top and bottom of the wheel. If it does not, loosen and tighten the appropriate adjustment screws on the wheel shaft.

**See Figure 6-1.** The blade wheels should be adjusted so that the gullet of 1 1/4" blades ride 1/8" (3 mm) out from the front edge of the wheels ( $\pm 1/26$  [1 mm]). The gullet of 1 1/2" blades should ride 3/16" (4.5 mm) from the front edge of the wheels ( $\pm 1/26$  [1 mm]). Do not let the teeth ride on the wheels.



**FIG. 6-1**

To adjust where the blade travels on the idle-side and drive-side blade wheel, [See Section 6.4.](#)

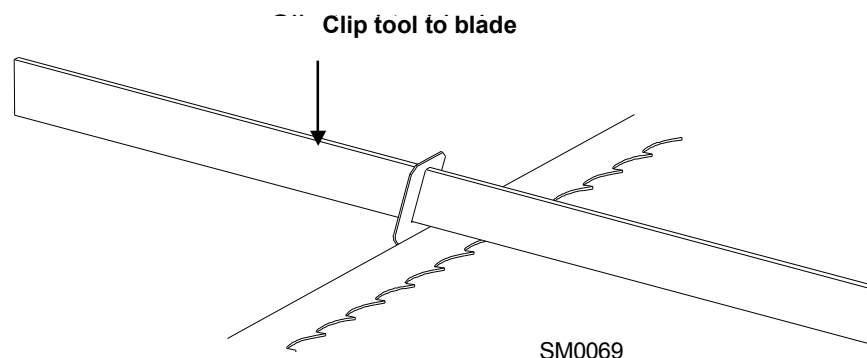
## 6.4 Blade Wheel Alignment

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

Use provided blade guide alignment tool to check the vertical alignment of each blade wheel.

1. Attach the tool to the blade near the inner blade guide mount. Be sure the tool does not rest on a tooth or burr, and is lying flat against the bottom of the blade.

**See Figure 6-2.**



**FIG. 6-2**

2. Move the saw head so the front end of the tool is positioned over the first bed rail. Measure from the bottom of the tool to the top surface of the bed rail.
3. Move the saw head so the rear of the tool is positioned over the bed rail. Again, measure from the bottom of the tool to the bed rail.
4. If the two measurements differ by more than  $1/16"$  (1.5 mm), adjust the vertical tilt of the drive-side blade wheel.

**See Figure 6-3.** Use the vertical adjustment screws to adjust the drive-side blade wheel. To tilt the wheel down, loosen the top adjustment screw  $1/2$  turn. Loosen the jam nut on the bottom adjustment screw and tighten the screw. Tighten the top and bottom jam nuts.

To tilt the wheel up, loosen the bottom adjustment screw  $1/2$  turn. Loosen the jam nut on the top adjustment screw and tighten the screw. Tighten the top and bottom jam nuts.

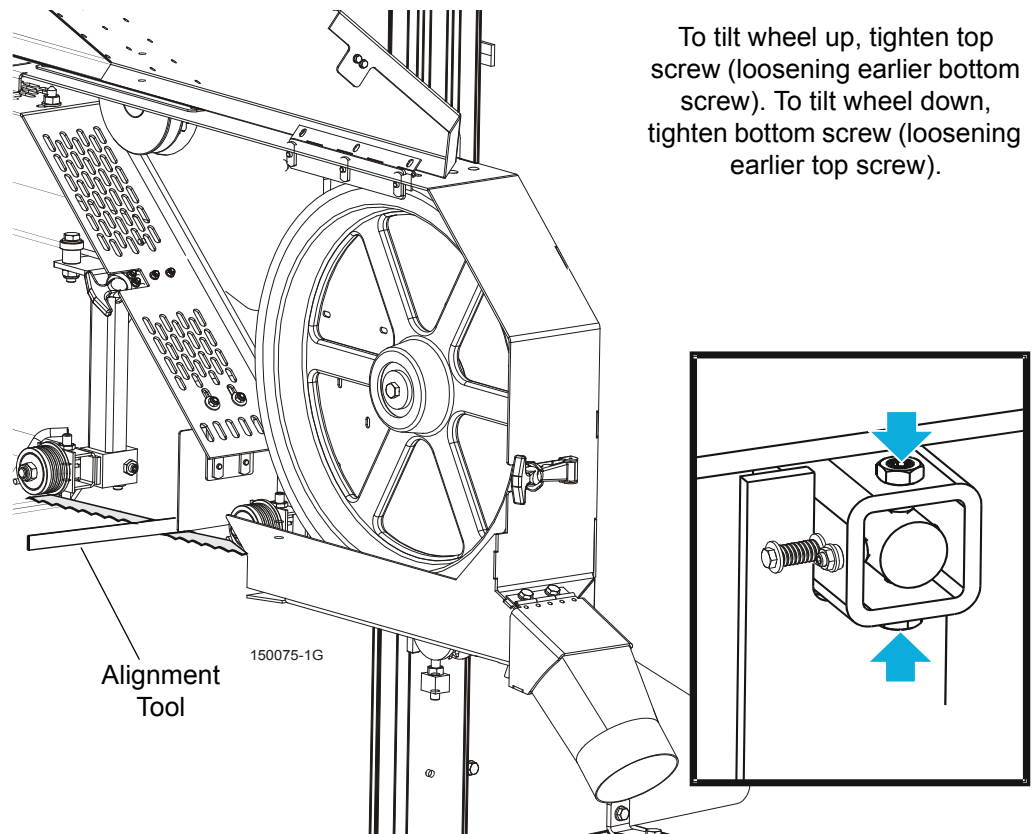


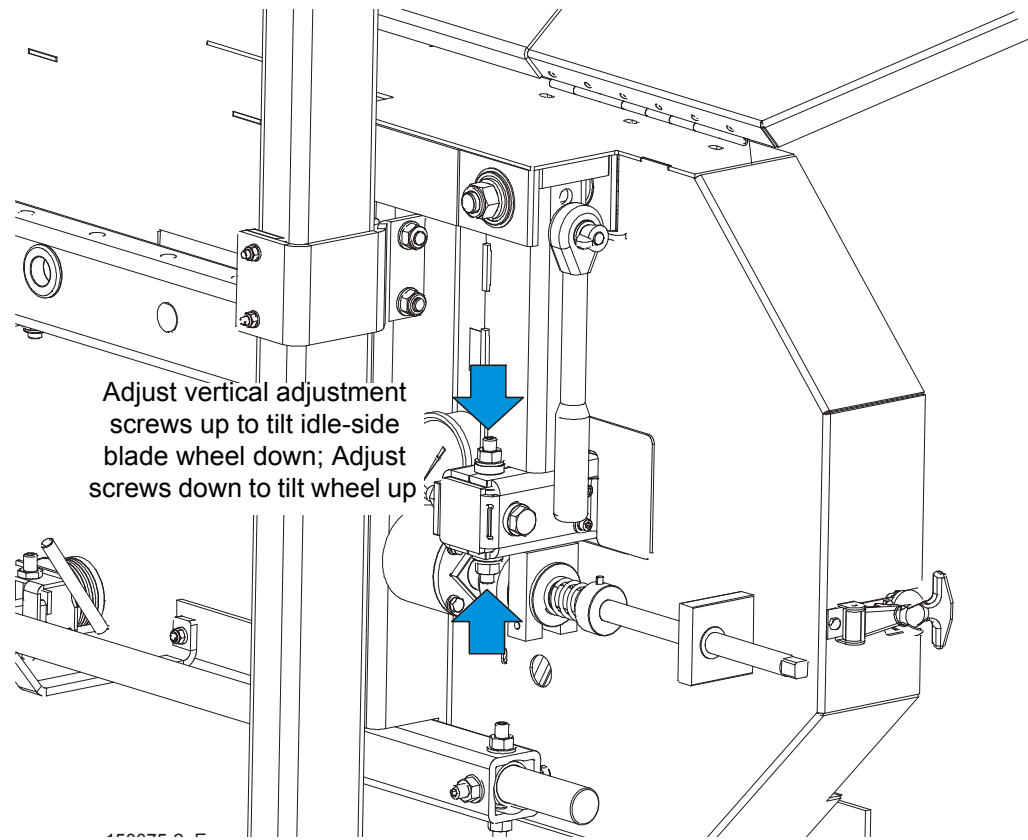
FIG. 6-3

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



**See Figure 6-4.** Use the vertical adjustment screws to adjust the idle-side blade wheel. To tilt the wheel up, loosen the bottom adjustment screw one quarter turn. Loosen the jam nut on the top adjustment screw and tighten the screw. Tighten the top and bottom jam nuts.

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



**FIG. 6-4**

8. Recheck the vertical tilt of the idle-side blade wheel with the blade guide alignment tool. Readjust the blade wheel as necessary until the front and rear of the tool are the same distance from the bed rail (within 1/16" [1.5 mm]).
9. Check the position of the blade on the idle-side blade wheel.

**See Figure 6-5.** The horizontal tilt of the blade wheel should be adjusted so that the gullet of an 1-1/4" blade is 1/8" (3 mm) out from the front edge of the wheel ( $\pm 1/32$  [0.75 mm]).

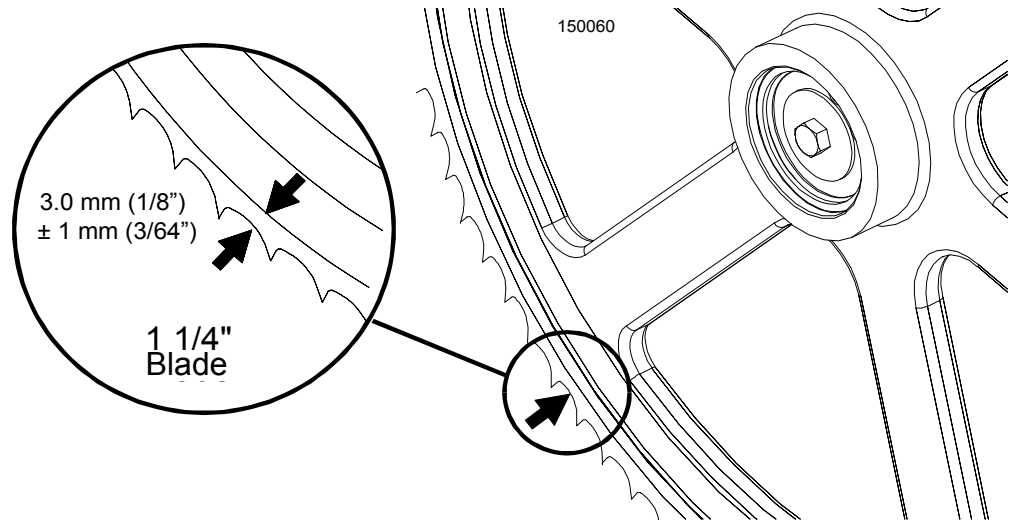


FIG. 6-5

**See Figure 6-6.** 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.

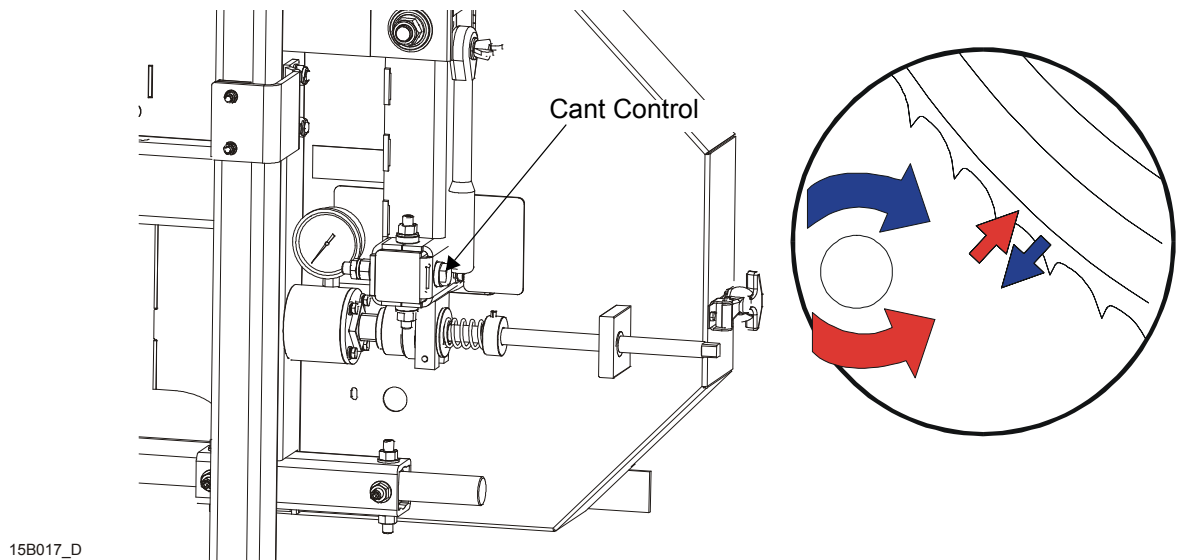
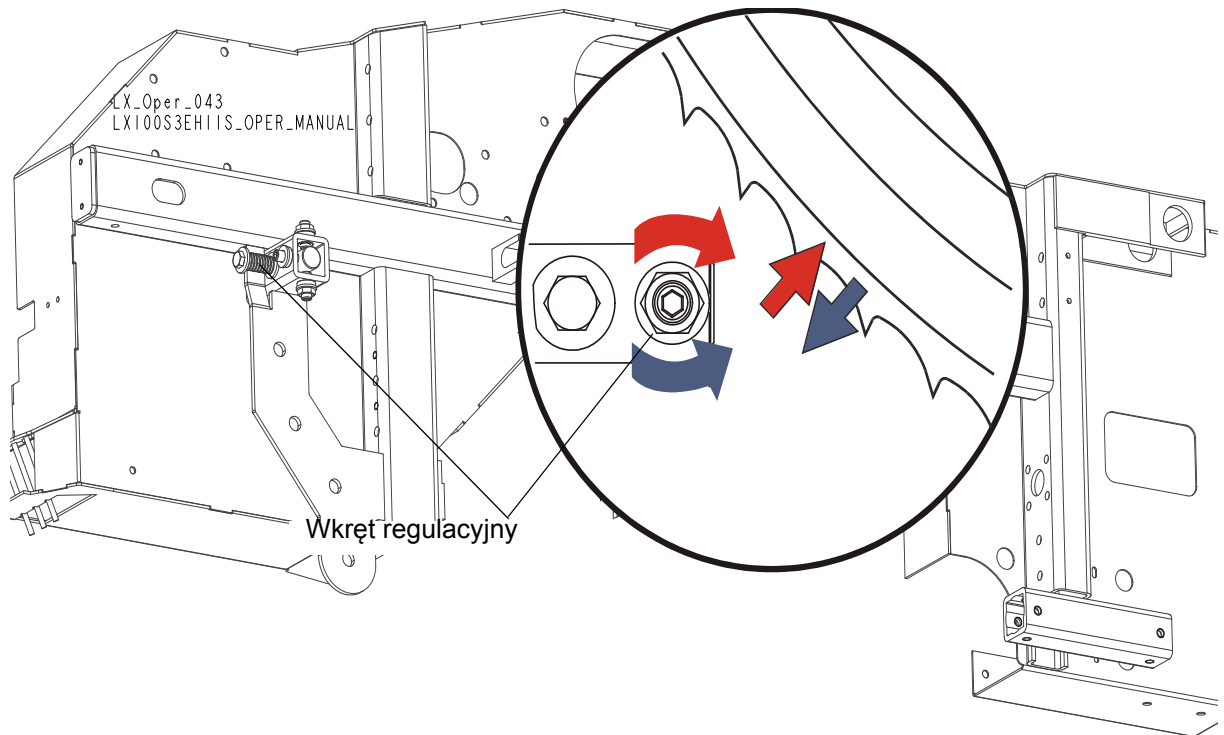


FIG. 6-6

10. 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 6-7.** Use the horizontal adjustment screw to adjust the drive-side blade wheel. Loosen the jam nut on the adjustment screw. Loosen adjustment screw to move blade out on wheel. Tighten

adjustment screw to move blade in on wheel. Tighten the jam nut.



**FIG. 6-7**

**NOTE:** It is not necessary to align the spring bolt (bolt M10x75 [WM# F81003-15] + spring + washer) shown in the figure above. When replacing the bolt or spring just screw in the bolt maximally.

## 6.5 Blade Guide Arm Alignment

Before aligning the blade guide arm, track the blade on the blade wheels as described in [Section 3.4](#). Move the cutting head so the blade is positioned over the first bed rail. Level the blade to the bed rail as shown in [Section](#). Adjust the blade guide rollers so they do not touch the blade.

### **Vertical Alignment**

1. Adjust the blade guide arm all the way out away from the other blade guide (maximum distance between the guide rollers).

See Figure 6-8.

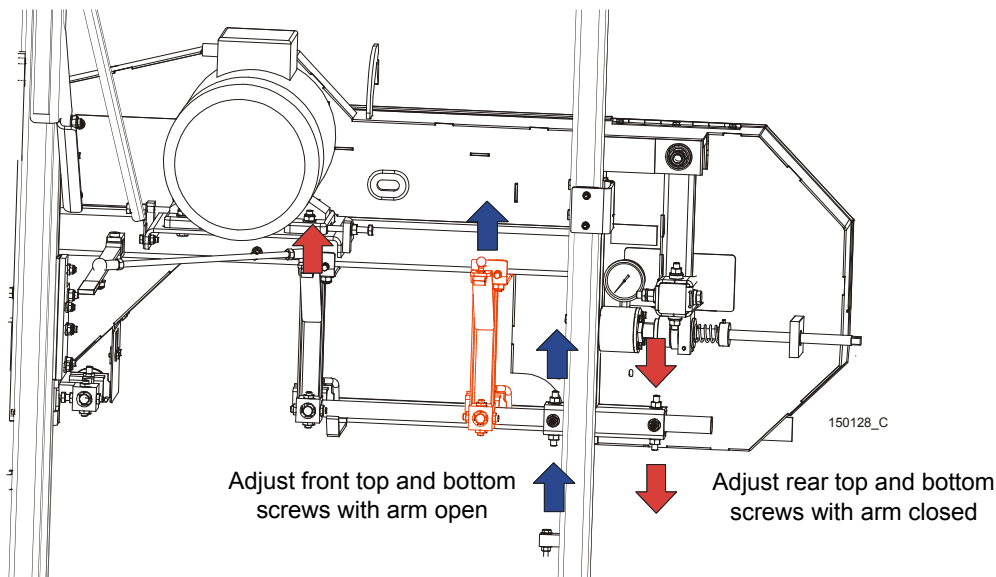


FIG. 6-8

2. Use the arm adjustment screws, marked with blue arrows in the figure above, to adjust the arm up until the slide pad touches the saw head brace tube. Tighten the jam nuts.
3. Adjust the blade guide arm in all the way toward the other blade guide (minimum distance between the guide rollers).
4. Use the arm adjustment screws, marked with red arrows in the figure above, to adjust the arm up until the slide pad touches the saw head brace tube. Tighten the jam nuts.

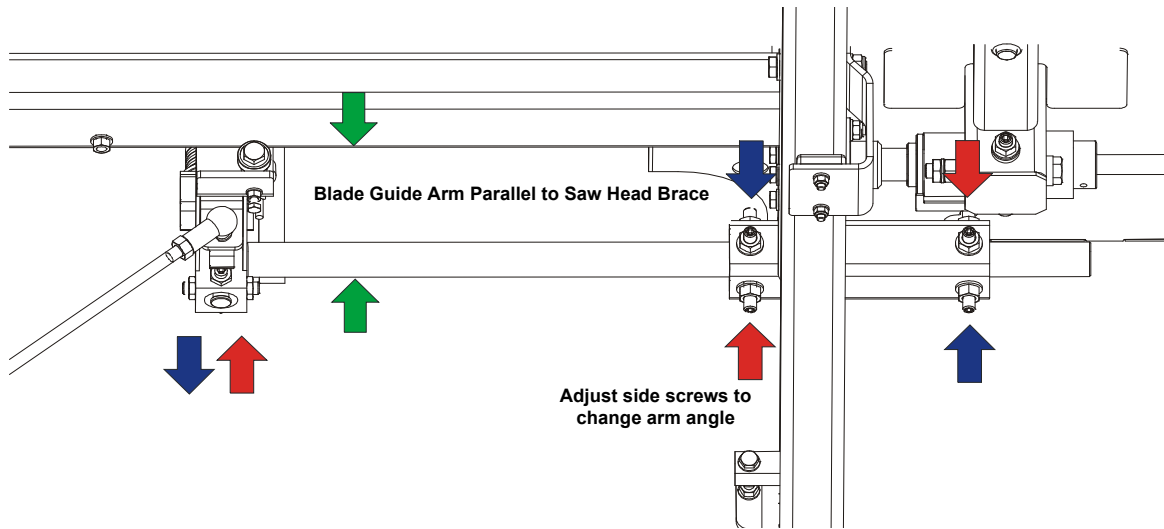
**NOTE:** When adjusting the blade guide arm screws, be careful not to damage their threads or deform the arm guide bushing. Operate the blade guide arm handle to ensure the arm moves easily left and right when the handle is moved.

### Horizontal Alignment

See Figure 6-9.

1. With the blade guide arm still all the way in toward the other blade guide, tighten all the side screws until they touch the arm. Back the screws off 1/4 turn and tighten the jam nuts.
2. Sight across the horizontal saw head brace to view the blade guide arm. Adjust all side screws on the blade guide arm housing so the arm is parallel to the saw head brace.
3. To move the blade guide end of the arm toward the front of the sawmill, loosen jam nuts on the front inside screw and the rear outside screw. Turn the screws counterclockwise one full turn and tighten the jam nuts. Loosen the jam nuts on the front outside screw and the rear inside screw. Turn the screws clockwise until they touch the arm, back off 1/4" turn, and tighten the jam nuts.
4. To move the blade guide end of the arm toward the rear of the sawmill, loosen jam nuts on the front

outside screw and the rear inside screw. Turn the screws counterclockwise one full turn and tighten the jam nuts. Loosen the jam nuts on the front inside screw and the rear outside screw. Turn the screws clockwise until they touch the arm, back off 1/4" turn, and tighten the jam nuts.



**FIG. 6-9**

## 6.6 Aligning The Blade Guides

Each Wood-Mizer sawmill has two blade guide assemblies that help the blade maintain a straight cut. The two blade guide assemblies are positioned on the saw 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 saw 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 saw 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

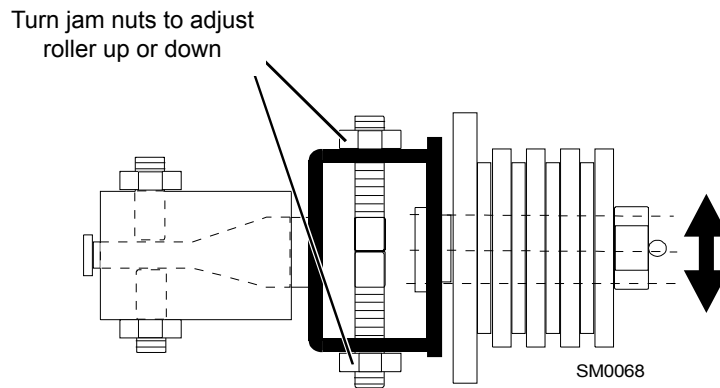
Perform the blade guide alignment after you have aligned the blade on the wheels and adjusted the blade and blade guide arm parallel to the bed rails. After blade guide alignment, check the scale indicator to make sure it is adjusted properly.

## 6.7 Blade Deflection

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

1. Raise the carriage until the blade is 15" (375 mm) above a bed rail. Measure the actual distance with a tape from the top of the rail to the bottom of the blade.

See Figure 6-10.



**FIG. 6-10**

2. Loosen the bottom jam nut and tighten the top jam nut until the blade guide deflects the blade down 1/4" (6 mm).
3. Repeat for the other blade guide.

**NOTE:** Be sure that the blade guard clears the blade on both guide assemblies. The guard on the outer guide assembly should be checked with the arm all the way in and all the way out.

## 6.8 Blade Guide Vertical Tilt Adjustment

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

1. Open the adjustable blade guide arm 1/2" (15 mm) from full open.
2. Clamp the alignment tool on the blade. Position the tool close to a blade guide roller. Be sure the tool does not rest on a tooth or burr, and is lying flat on the blade.

See Figure 6-11.

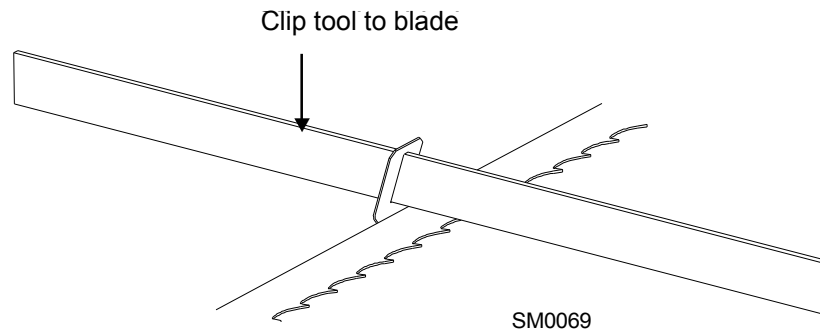


FIG. 6-11

3. Measure the distance from the bed rail to the bottom of the tool.
4. Move the saw head so that the front end of the tool is positioned above the bed rail.
5. Measure the distance from the bed rail to the bottom edge of the tool.
6. Use the set screws shown to tilt the blade guide until the measurement from the bed rail to the tool equals the first measurement taken at the center of the tool.

See Figure 6-12.

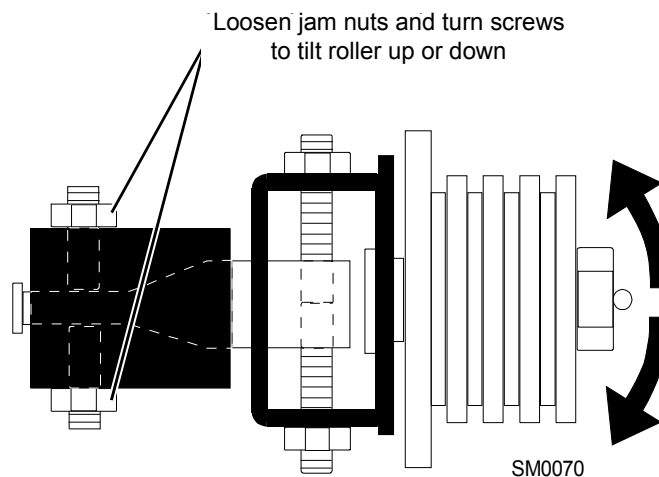


FIG. 6-12

7. Move the saw head forward so the back end of the tool is over the bed rail.
8. Use the set screws shown to adjust the blade guide tilt until the measurement from the bed rail to the tool equals the other two measurements taken.
9. Move the tool close to the other blade guide and repeat the previous steps.

**NOTE:** If major adjustments to blade guide tilt were made, remeasure the distance between the blade and the bed rails to ensure the correct 1/4" (6.0 mm) blade guide deflection. Adjust if necessary.

**NOTE:** After adjusting, start the blade motor for a moment. Then stop the blade and check the spacing again.

## 6.9 Blade Guide Spacing

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

1. Adjust the inner 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 6-13.

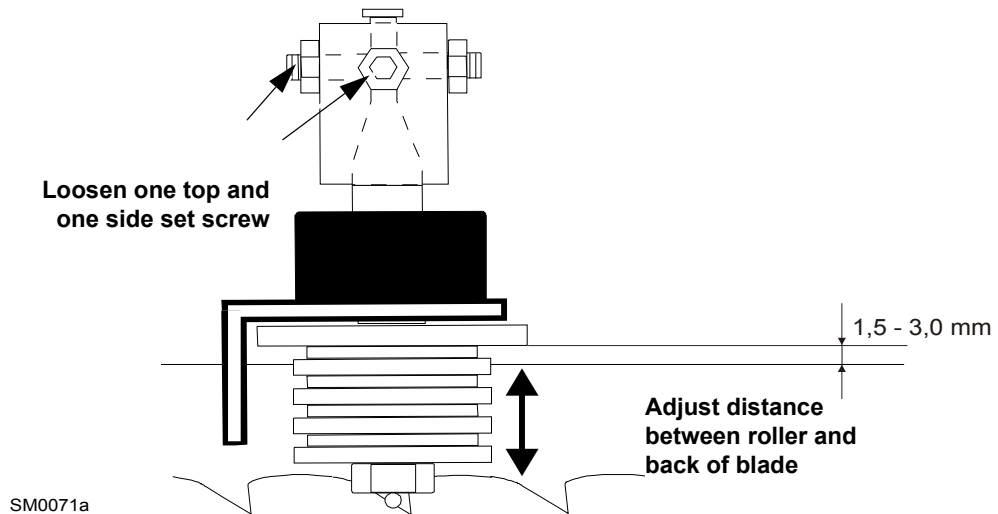


FIG. 6-13

3. Retighten the two set screws.
4. Adjust the outer 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.

**NOTE:** After adjusting the spacing of the rollers, start the blade motor for a moment. Then stop the blade and check the spacing again.



## 6.10 Horizontal Tilt Adjustment

1. Finally, both blade guides must be tilted horizontally. Adjust the blade guide arm half way in.

See Figure 6-14.

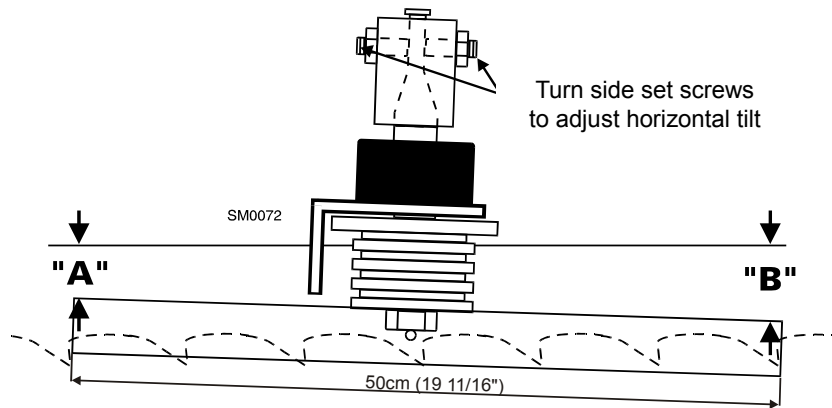


FIG. 6-14

2. Place Blade Guide Alignment Tool against the face of the outer blade guide roller.
3. Center the tool on the roller and measure between the back edge of the blade and the ruler at the end closest to the inner 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 parallel to the blade ( $A=B$ ) or tilted slightly to the left ( $A=B-1/4"$  [6 mm]). Use the side set screws to adjust the horizontal tilt of the roller.
6. Repeat Steps 3 - 7 for the inner blade guide roller.

**NOTE:** Once the blade guides have been adjusted, any cutting variances are most likely caused by the blade. See **Blade Handbook, Form #600**.

## 6.11 Side Supports

Logs and boards are clamped against the side supports when sawing. The side supports must be square to the bed to ensure square lumber.

1. Place a flat board across the bed rails.

See Figure 6-15.

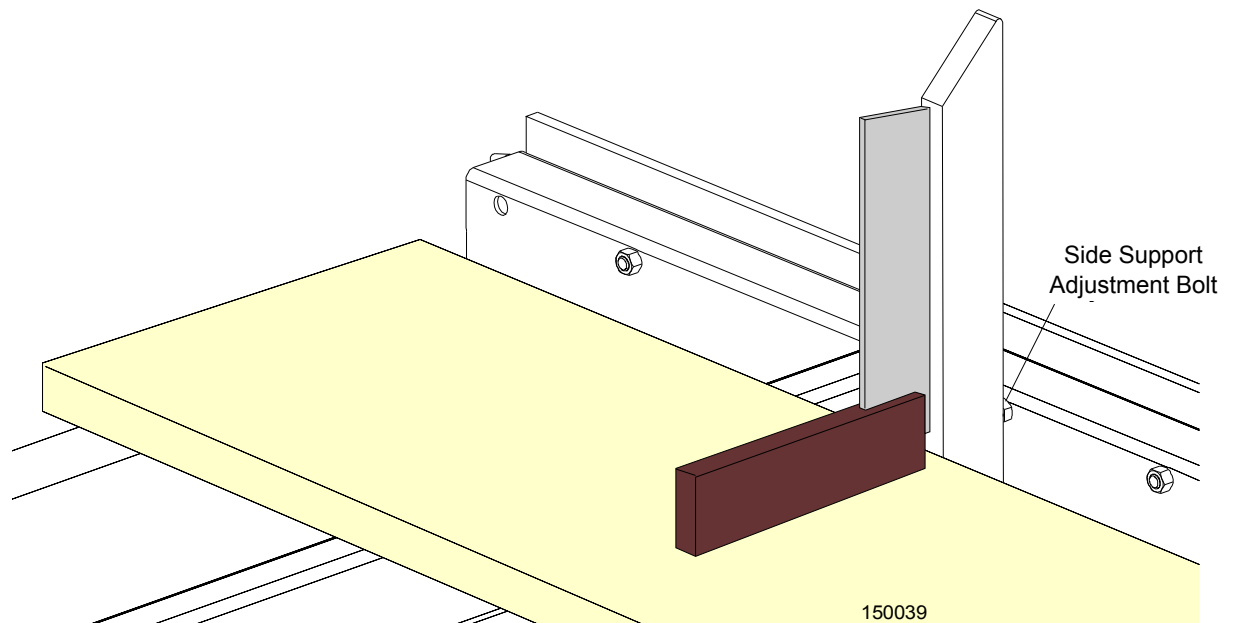


FIG. 6-15

2. Swing a side support up so that it is vertical.
3. Pull back at the top of the support to eliminate slack as if a log were being clamped against it.
4. Check the angle of each support with a square on the board.
5. The side support should be 90° to the bed rails. Turn the adjustment bolt counterclockwise to tilt the top of the side support forward.
6. Repeat for the remaining side supports.

## 6.12 Blade Height Scale Adjustment

After the entire sawmill has been aligned and all adjustments made, check that the blade height scale indicates the true distance from the blade to the bed rails.

1. The maximum distance between the scale and the scale indicator should be 5 mm. If it is different, loosen the indicator bracket mounting bolts and move the bracket in the horizontal plane until the correct distance is obtained. Retighten the bracket mounting bolts.
2. Move the saw head so the blade is positioned directly above one of the bed rails. Measure from the bottom edge on a down-set tooth of the blade to the top of the bed rail.

See Figure 6-16.

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LX100S3EH11S\_Oper\_Manual

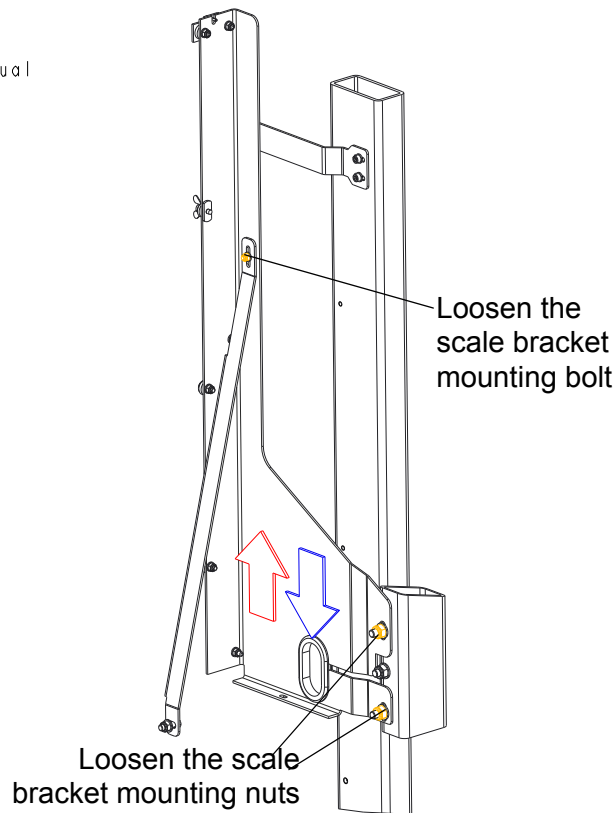


FIG. 6-16

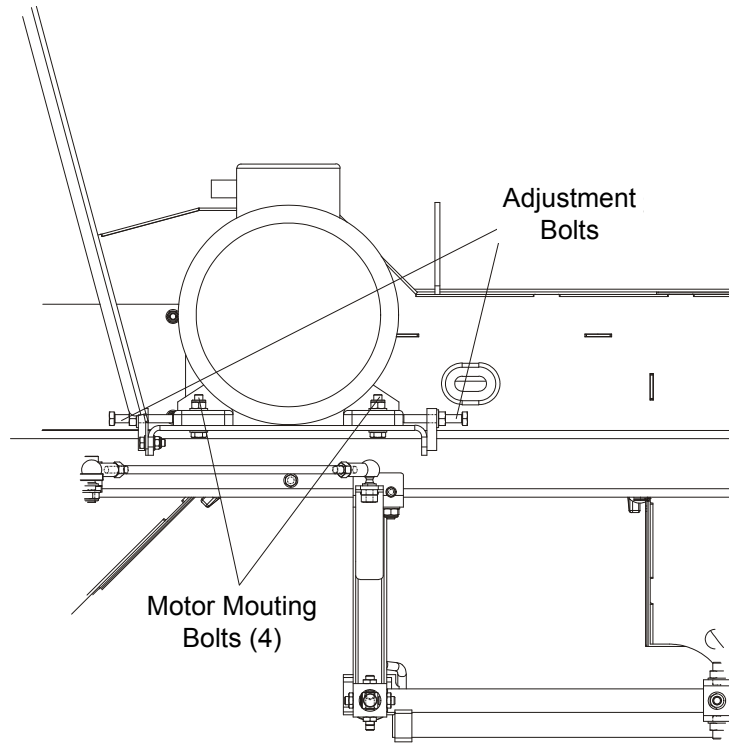
- Loosen the scale bracket mounting bolt and nuts, adjust the bracket until the indicator is aligned with the correct mark on the scale. Retighten the bracket mounting bolt and nuts.

For example, if the measurement from blade to bed rail was 14 3/4" (375 mm), make sure the indicator reads 14 3/4" (375 mm) on the scale.

## 6.13 Motor Drive Belt Adjustment

**See Figure 6-17.** Loosen the motor mounting bolts. Using the adjustment bolts shown below, adjust the drive belt until it has 7/16" (11 mm) deflection with a 8 lbs (3.6 kG) deflection force - in the case of E11 motor or 7/16" (11 mm) deflection with a 16 lbs (7.2 kG) deflection force - in the case of E15

motor. Tighten the four motor mounting bolts.



**FIG. 6-17**

## SECTION 7 MOTOR BRAKE

### 7.1 Motor Brake Maintenance

#### Maintenance intervals

<b>Service brakes</b>	<ul style="list-style-type: none"> <li>■ \otherwise every six months</li> <li>■ after 4000 operating hours at the latest</li> </ul>
-----------------------	---

*TABLE 7-1.*



**IMPORTANT!** Brakes with defective armature plates, cheese head screws, springs or flanges must be replaced completely.

Please observe the following for inspections and maintenance operations:

- Remove impurities through oil and grease using brake cleaning agents, if necessary, replace brake after finding out the cause of the contamination. Dirt deposits in the air gap between stator and armature plate impair the function of the brake and must be removed.
- After replacing the rotor, the original braking torque will not be reached until the run-in operation of the friction surfaces has been completed. After replacing the rotor, run-in armature plates and flanges have an increased initial rate of wear.

#### Checking the rotor thickness



**DANGER!** The motor must not be running when checking the rotor thickness.

- Remove the motor cover and seal ring (if mounted).
- Measure the rotor thickness with a caliper gauge. On brakes with friction plates, observe edging on outer diameter of friction plate.
- Compare measured rotor thickness with minimally permissible rotor thickness [See Table 12-2](#)
- Replace the complete rotor if necessary.

#### Check air gap

- Measure the air gap "sLü" between armature plate and rotor using a feeler gauge (see chapter 3.3).
- Compare the measured air gap to the maximum permissible air gap "sLümax." (see table below).

# 7

## Motor brake

### Motor Brake Maintenance

- If necessary, adjust air gap to "sLürated".

Brake Type	sLürated +0.1mm -0.05mm	sLümax Service Brake	Max. adjustment permissible wear	Rotor thickness		Excess of the adjuster nut h <sub>E</sub> max. [mm]
				min. <sup>1)</sup> [mm]	max. [mm]	
INTORQ BFK458-25	0,4 mm (1/64")	1,0 mm (3/64")	4,0 mm (5/32")	12 mm (15/32")	16 mm (5/8")	17 mm (43/64")

TABLE 12-2

## EC declaration of conformity according to EC Machinery Directive 2006/42/EC, Annex II, 1.A

We herewith declare,

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

That the following described machine in our delivered version complies with the appropriate basic safety and health requirements of the EC Machinery Directive 2006/42/EC based on its design and type, as brought into circulation by us. In case of alteration of the machine, not agreed by us, this declaration is no longer valid.

Designation of the machine:	<b>SAWMILL</b>
Model:	LX100
TYPE:	.....
No. of manufacturer:	.....
Applicable EC Directives:	EC Machinery Directive 2006/42/EC EC Electromagnetic Compatibility Directive 2004/108/EC
Applicable Harmonized Standards:	PN-EN ISO 12100:2012 PN-EN 1807-2:2013-08 PN-EN 953+A1:2009 PN-EN 349+A1:2010 PN-EN ISO 13849-1:2008 PN-EN 60204-1:2010 PN-EN ISO 13857:2010
Notified Body:	INSTYTUT TECHNOLOGII DREWNA Centrum Certyfikacji Wytrobów Przemysłu Drzewnego ul. Winiarska 1, 60-654 Poznań
Notification No	1583
Responsible for:	EC type examination
EC type-examination certificate no.	0483/2016
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Place/Date/Authorized Signature:	Koło, 18.10.2016 <i>Adam Kubiak</i>
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