# Wood-Mizer® Sawmill

# Safety, Setup, Operation & Maintenance Manual

LX250 rev. A3.00



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

Form #2370

## **Original Instructions.**

Please keep for future reference.

	General Contact Information1-iv Branches & Authorized Sales CentersWood-Mizer Locations (North and South A	merica)1-v
SECTION	1 SAFETY	1-1
1.1	Safety Symbols1-1	
1.2	Safety Instructions1-1	
1.3	Electrical Lockout Procedures	
SECTION	2 SAWMILL ASSEMBLY	2-1
2.1	Tools required2-1	
2.2	Uncrating the mill2-1	
2.3	Assembling the Log Clamps and Side Supports2-5	
2.4	Assemble the bed2-7	
2.5	End Stop Assemblies2-10	
2.6	Adjusting/leveling the Bed2-11	
2.7	Levelling the Saw Head2-13	
2.8	Saw Carriage Assembly2-13	
2.9	Feed Drive Assembly	
SECTION	3 SAWMILL SETUP	3-1
3.1	Installing the Control Panel3-3	
3.2	Installing the Blade3-4	
3.3	Tensioning The Blade3-5	
3.4	Tracking The Blade3-6	
3.5	Sawblade3-9	
	Blade Guide Vertical Tilt Alignment	
	Blade Guide Flange Spacing 3-10	
SECTION	4 SAWMILL OPERATION	4-1
4.1	Power Feed4-1	
4.2	Up/Down Operation4-3	
4.3	Starting the Motor4-4	
4.4	Loading, Turning, & Clamping Logs4-5	
4.5	Blade Guide Arm Operation4-7	
4.6	Cutting The Log4-8	
4.7	Edging4-9	
4.8	Blade Height Scale4-10	
4.9	Water Lube Operation4-11	
4.10	Transporting the Sawmill	
SECTION	5 MAINTENANCE	5-1
5.1	Wear Life5-1	
5.2	Blade Guides	
5.3	Changing The Blade	

Table of Co	ntents	Section-Page
5.4	Sawdust Removal	}
5.5	Mast Track, Wipers, & Scrapers5-4	ļ
5.6	Vertical Mast Rails	
5.7		
5.8		
5.9	Up/Down System5-8	
5.10	Filling Blade Tensioner Cylinder with Oil	
SECTION	6 TROUBLESHOOTING GUIDE	6-1
6.1	Sawing Problems6-1	
SECTION	7 SAWMILL ALIGNMENT	7-1
7.1	Routine Alignment Procedure	
	Prepare the sawmill for alignment7-1	
	Blade Guide Arm Alignment7-2	
	Blade Guide Vertical Tilt Alignment	
	Blade Guide Horizontal Tilt Adjustment7-7	
	Blade Guide Flange Spacing	
	Blade Height Scale Adjustment7-9	
7.2	Complete Alignment Procedure	)
	Frame Setup7-10	
	Complete Blade Replacement7-11	
	Blade Wheel Alignment7-11	
	Blade Guide Re-installation7-15	
	Blade Guide Deflection7-16	
	Blade Guide Vertical Tilt Alignment7-17	
	Blade Guide Flange Spacing7-19	
	Blade Height Scale Adjustment	
SECTION	8 SPECIFICATIONS	8-1
8.1	Sawdust Extractor Specifications	3
8.2	Noise Level	ļ
	INDEX	I

### **Getting Service**

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 Koło, 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:

Country	Monday - Friday	Saturday	Sunday
Poland	7 a.m 3 p.m.	Closed	Closed
US	8 a.m 5 p.m.	8 a.m 12 p.m	Closed

Please have your vehicle identification number and your customer number ready when you call. Wood-Mizer will accept these methods of payment:

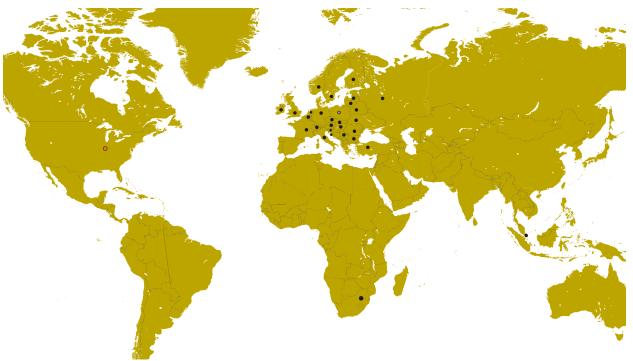
- Visa, Mastercard, or Discover
- COD
- Prepayment
- Net 15 (with approved credit)

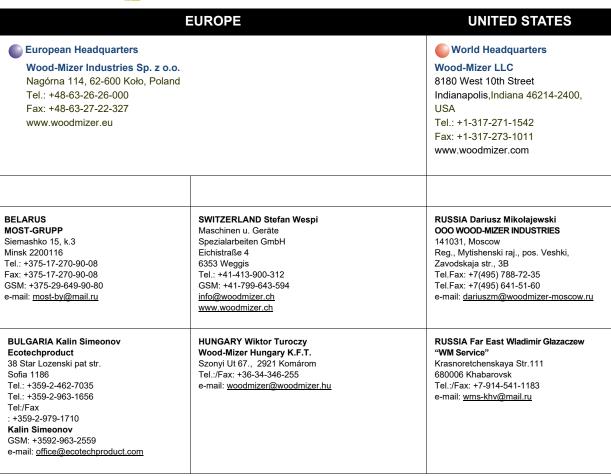
Be aware that shipping and handling charges may apply. Handling charges are based on size and quantity of order.

Technical data are subject to change without prior notice.

Actual product may differ from product images. Some illustrations show machines with optional equipment.

**Branches & Authorized Sales CentersWood-Mizer Locations (North and South America)** 





### CROATIA Krešimir Pregernik

Pregimex d.o.o.

S. Batušiæa 31, 10090 Zagreb Tel.:/Fax: +3851-38-94-668 Krešimir Pregernik

GSM: +3851-98-207-106

e-mail: Kresimir.Pregernik@gmail.com

#### ITALY Pasquale Felice Wood-Mizer Italia Srl Cda. Capoiaccio SN 86012 Cercemaggiore

Campobasso

Tel.:/Fax: +39-0874-798-357 GSM: +39-333-281-03-79 e-mail: wmitaliasrl@gmail.com

#### **SERBIA Dragan Markov** Wood-Mizer Balkan d.o.o.

Svetosavska GA 3/3; P. Fah 25 23 300 Kikinda

Tel.:/Fax: +381-230-25-754 Tel.:/Fax: +381-230-23-567 GSM: +381-63-568-658 e-mail: office@woodmizer.co.yu

#### **CZECH REPUBLIC Miroslav Greill**

Wood-Mizer CZ s.r.o.

Za Kasárny 946 339 01 Klatovy

Tel: +420-376-312-220 GMS: +420-608-111-104 Miroslav Greill GMS: + 420-602-439-799

E-mail: woodmizer@woodmizer.cz

#### **SLOVAKIA Wiktor Turoczy** Wood-Mizer Danubia s.r.o.

Hadovce 5, 94501 Komárno Tel.: +421-35-77-40-316 Fax: +421-35-7740-326 GSM: +421-905-930-972

e-mail: woodmizer@woodmizer.sk

#### CZECH REPUBLIC Lubomir Kudlik Wood-Mizer Moravia

Sovadinova 6 69002 Breclay

Tel.:/Fax: +420-519-322-443

Lubomir Kudlik

GSM: +420-602-734-792 e-mail: info@wood-mizer.net

#### **LATVIA Vilmars Jansons OBERTS Ltd**

Gaujas str. 32/2 LV-2167 Marupe, Rigas Raj. Tel.: +371-7-810-666 Fax: +371-7-810-655 Vilmars Jansons GSM: +371-92-06-966 **Andris Orols** 

GSM: +371-28-33-07-90 e-mail: andris@oberts.lv

Er-Ka Ahsap Profil Kerestecilik San. ve Tic. Ltd. Sti.

Adana Keresteciler Sitesi 191 sk No.41 ADANA

Tel.: +90-322-346-15-86 Fax: +90-322-345-17-07 GSM: +90-533-363-18-44 e-mail: info@erkaahsap.com.tr

#### **FINLAND Howard Blackbourn** Oy Falkberg Jordbruk Ab

Falkintie 220 25610 Ylonkyla Tel.: +358-2732-2253 Fax: +358-2732-2263 Howard Blackbourn GSM: +358-440-424-339 e-mail: falkberg@woodmizer.fi

#### LITHUANIA Andrius Zuzevicius **UAB Singlis**

Savanoriu pr. 187, 2053 Vilnius Tel.: +370-5-2-32-22-44 Fax: +370-5-2-64-84-15 GSM: +370-620-28-645 e-mail: andrius.z@singlis.lt

#### Dmitrij Gaiduk

GSM: +370-69-84-51-91 e-mail: dmitrijus.g@singlis.lt

#### **UKRAINE** Ivan Vinnicki MOST UKRAINA

bul. Myru 3, Bajkivtsi Ternoplskyj r-j Ternopolska oblast 47711 Ukraine

Tel/Fax: +38 (0352) 52 37 74 GSM: +38 (067) 352 54 34 GSM: +38 (067) 674 50 68 E-mail: most-ukraina@ukr.net

#### **FRANCE Tizoc Chavez**

Wood-Mizer France 556 chemin des Embouffus, ZAC des Basses Echarrieres 38440 SAINT JEAN DE BOURNAY Tel: +33-4 74 84 84 44

GSM: +33-607 52 02 82 Mail: tchavez@woodmizer.fr

#### NORWAY Tor Bakken Flaathe

Bakken Flaathe A/S Løkenvegen 5, 2034 Holter Tel: + 47-638 74 989 Sales: + 47- 412 80 076 Service: +47- 975 87 588 post@woodmizer.no www.woodmizer.no

#### **UNITED KINGDOM & IRELAND**

Wood-Mizer UK

Kenward Road, Yalding Kent ME18 6JP, UK Tel.: +44-1622-813-201

#### SLOVENIA Jan Fale FAMTEH d.o.o.

Gacnikova pot 2, 2390 Ravne na Koroskem Tel.: +386-2-62-04-232 Fax: +386-2-62-04-231 Jan Fale

GSM: +386-2-62-04-230 e-mail: jan.fale@famteh.si

#### Matjaz Kolar

Tel.: +386-2-62-04-232 GSM: +386-31-775-999 e-mail: matjaz.kolar@famteh.si

Hopfield Barn

Fax: +44-1622-815-534 e-mail: info@woodmizer.co.uk GERMANY\AUSTRIA Klaus Longmuss

Wood-Mizer GmbH

Dorfstraße 5, 29485 Schletau

Büro

Tel: +49-5883 988 010

Werkstatt

Tel: +49-5883 988 220 Ersatzteilservice

Tel: +49 58 83 - 98 80 250

Schärfservice

Tel: +49-58 83 - 98 80 270

E-mail:

info@woodmizer.de www.woodmizer.de Klaus Longmuss Tel.: +49-5883-9880-12

GSM: +49-17-298-55-892

e-mail: KLongmuss@woodmizer.de

Subagent:

SWEDEN Kjell Larsson

Mekwood AB

Slingan 14, 812 41 Gästrike-Hammarby

Tel.: +46-290-515-65 **Kjell Larsson** 

GSM: +46-706-797-965

e-mail: kjell.larsson@mekwood.se

**IRELAND** 

Wood-Mizer Ireland Stephen Brennan

Cum Lahardane Ballina County Mayo

Tel:+353 96 51345

E-mail: brennanmill@ericom.net

Subagents:

**DENMARK Kevin Christiansen** 

Kevin Christiansen's savværker PMV

Arnborgvej 40, 7330 Brande- Fasterholt

Mobile: +45 61468763 Mobile: +45-23495828 Info@woodmizer.dk www.woodmizer.dk

**ROMANIA Adrian Echert** SC WOOD-MIZER RO SRL

TRANSILVANIEI Nr. 5 Sibiu, Cisnadie 555300 Tel.:/Fax::+40-369-405-433 GSM: +40-745-707-323

e-mail: aechert@woodmizer.ro

Regional Manager - Asia Robert Moxham Regional Direction - Asia

Wood-Mizer Asia Manufacturing Co., Ltd. No.2, Gongyequ 40th Rd. Xitun District, Taichung City, 40768, Taiwan, R.O.C.

TEL: +886-4-2359 3022 FAX: +886-4-2359 3205 CELL: +886-9-0568 7708 EMAIL: RMoxham@woodmizer.com

www.woodmizerasia.com

Skype: r.g.moxham

NETHERLANDS Gerlo Breukers

Breukers Houtzagerij en Bosbouwmachines Hazenweg 5, 7481 PC Haaksbergen

Tel: +31-535741326 Mobile: +31-620419412 info@woodmizer.nl www.woodmizer.nl

Subagent:

ROMANIA M. Echert S.C. Echert Comprod s.r.l

Str. Schitului Nr. 6, Apt.7 etajul-1 725 70 Vatra Dornei, Romania Tel.:/Fax: +40-230-374-235 Tel.: +40-740-35-35-74

Regional Manager - Africa

Gavin Prowse Regional Sales Director - Africa Wood-Mizer Africa (Pty) Ltd.

Unit 1,Leader Park 20 Chariot Street Stormill Ext.5

Maraisburg, Johannesburg South Africa TEL: +27 11 473 1313 FAX: +27 11 473 2005

CELL: +27 71 398 8010 EMAIL: gprowse@woodmizer.com www.woodmizerafrica.com Skype: gavin.prowse

**USA World Headquarters** 

Serving North & South America, Oceania, East Asia

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

Phone: 317.271.1542 or 800.553.0182 Customer Service: 800.525.8100

Fax: 317.273.1011

Email: infocenter@woodmizer.com

Serving Canada

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

Canadian Headquarters

Phone: 705.878.5255 or 877.357.3373

Fax: 705.878.5355

Email: ContactCanada@woodmizer.com

**Brazil Headquarters** 

Serving Brazil

Wood-Mizer do Brasil Rua Dom Pedro 1, No: 205 Bairro: Sao Jose

Ivoti/RS CEP:93.900-000

Tel: +55 51 9894-6461/ +55 21 8030-3338/ +55 51 3563-4784

Email: info@woodmizer.com.br

**Europe Headquarters** 

Serving Europe, Africa, West Asia

Wood-Mizer Industries Sp z o.o.

Nagorna 114

62-600 Kolo, Poland

Phone: +48.63.26.26.000

Fax: +48.63.27.22.327

**Branches & Authorized Sales Centers** 

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



### **SECTION 1 SAFETY**

### 1.1 Safety Symbols

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



**DANGER!** indicates an imminently hazardous situation which, if not avoided, will result in serious injury or death.



**WARNING!** suggests a potentially hazardous situation which, if not avoided, could result in serious injury or death.



**CAUTION!** refers to potentially hazardous situations which, if not avoided, may result in minor or moderate injury or damage to equipment.

**NOTICE:** indicates vital information.

**NOTE:** gives helpful information.

### 1.2 Safety Instructions

#### **OWNER'S RESPONSIBILITY**

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

**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**

**NOTICE:** 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.

Only 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.

1-1 WM doc 12/12/23 Safety

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





**WARNING!** Clean sawdust from all guards, vents, control boxes, or any area where sawdust may gather **after every shift**. Failure to do so may result in fire, causing death or serious injury.



#### WEAR SAFETY CLOTHING



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





**WARNING!** Always wear eye, ear, and foot protection when operating or servicing the sawmill. Failure to follow this may result in serious injury or death.





**WARNING!** Some woods require respiration protection when operating the sawmill. It is the sawyer's responsibility to know which woods require respiration protection. Failure to follow this may result in serious injury or death.

#### KEEP SAWMILL AND AREA AROUND SAWMILL CLEAN



**DANGER!** Maintain a clean and clear path for all necessary movement around the mill and lumber stacking areas. Failure to follow this will result in serious injury or death.

#### HANDLE LUBRICANTS SAFELY



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



#### DISPOSE OF SAWING BY-PRODUCTS PROPERLY

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

#### CAUTIONS FOR 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. Failure to follow this will result in serious injury or death.



**WARNING!** Keep all persons out of the area while loading and unloading the sawmill. Failure to follow this may result in serious injury or death.

#### CHECK SAWMILL BEFORE OPERATION



**DANGER!** Make sure all guards and covers are in place and secured before operating or towing the sawmill. Failure to follow this will result in serious injury or death.

Be sure the blade housing and pulley covers are in place and secure. Use the safety retainer pin and cable to fasten blade housing covers.



**WARNING!** Do not operate the sawmill without the retaining (stop bumper) bracket properly installed on the bed. The saw head may tip and fall from the



sawmill. Failure to follow this will result in serious injury or death.

#### **KEEP PERSONS AWAY**



**DANGER!** Keep all persons out of the path of moving equipment and logs when operating sawmill or loading and turning logs. Failure to follow this will result in serious injury or death.



**WARNING!** 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 follow this may result in serious injury or death.

#### **KEEP HANDS AWAY**



.DANGER! Always keep hands away from moving bandsaw blade. Failure to follow this will result in serious injury or death.



**DANGER!** 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. Failure to follow this will result in serious injury or death.



.WARNING! Always disengage the blade and shut off the sawmill motor before changing the blade. Failure to follow this may result in serious injury or death.



**WARNING!** Do not adjust the motor drive belt with the motor running. Failure to follow this may result in serious injury or death.



**WARNING!** Keep hands, feet, and other objects away from the sawdust chute when operating sawmill. Failure to follow this may result in serious injury or death.



#### **KEEP SAFETY LABELS IN GOOD CONDITION**

**NOTICE:** 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.

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

#### **USE CAUTION WHEN WORKING WITH HEAVY LOGS**



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

#### **UP/DOWN SYSTEM SAFETY**



**WARNING!** Secure the saw head with a chain rated at least 1900 lbs. working load capacity before adjusting the up/down chain to prevent falls. Failure to follow this may result in serious injury or death.

#### 1.3 Electrical Lockout Procedures

#### RULES FOR USING LOCKOUT PROCEDURE

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

#### LOCKOUT PROCEDURES MUST BE USED DURING:

#### Table 1:

Changing or adjusting blades Electrical maintenance

Unjamming operations Retrieval of tools/parts from work area

Cleaning Activities where guards or electrical panel

guard is open or removed

MAINTENANCE HAZARDS INCLUDE:

Table 2:

Blade contact Missiles (thrown blades/wood chips)

Pinch points Electrical

**Kickbacks** 

Mechanical repair

### **FAILURE TO LOCKOUT MAY RESULT IN:**

#### Table 3:

Cut Serious injury and death

Crush Amputation

Blindness Burn
Puncture Shock

Electrocution

#### **SEQUENCE OF LOCKOUT**

- 1. Notify all affected personnel that servicing or maintenance is required on a machine or equipment and that the machine or equipment must be shut down and locked out to perform the servicing or maintenance.
- 2. The authorized employee shall refer to the company procedure to identify the type and magnitude of the energy that the machine or equipment utilizes, shall understand the hazards of the energy, and shall know the methods to control the energy.
- **3.** If the machine or equipment is operating, shut it down by the normal stopping procedure (depress the stop button, open switch, close valve, etc.).

1-5 WM doc 12/12/23 Safety

- **4.** De-activate the energy isolating device(s) so that the machine or equipment is isolated from the energy source(s).
- **5.** Lock out the energy isolating device(s) with assigned individual lock(s).
- **6.** Stored or residual energy (such as that in capacitors, springs, elevated machine members, rotating flywheels, hydraulic systems, and air, gas, steam, or water pressure, etc.) must be dissipated or restrained by methods such as grounding, repositioning, blocking, bleeding down, etc.
- 7. Ensure that the equipment is disconnected from the energy source(s) by first checking that no personnel are exposed, then verify the isolation of the equipment by operating the push button or other normal operating control(s) or by testing to make certain the equipment will not operate.



**CAUTION!** Return operating control(s) to neutral or "off" position after verifying the isolation of the equipment.

8. The machine or equipment is now locked out.

#### RESTORING EQUIPMENT TO SERVICE

When the servicing or maintenance is completed and the machine or equipment is ready to return to normal operating condition, the following steps shall be taken.

- 1. Check the machine or equipment and the immediate area around the machine to ensure that nonessential items have been removed and that the machine or equipment components are operationally intact.
- 2. Check the work area to ensure that all personnel have been safely positioned or removed from the area.
- **3.** Verify that the controls are in neutral.
- **4.** Remove the lockout devices and re-energize the machine or equipment.

**NOTE:** The removal of some forms of blocking may require re-enervation of the machine before safe removal.

**5.** Notify affected personnel that the servicing or maintenance is completed and the machine or equipment is ready for use.

#### PROCEDURE INVOLVING MORE THAN ONE PERSON

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

**See Table 1-1.** See the table below for descriptions of the pictographic warning and informational decals placed on the LX250 sawmill.

TABLE 1-1

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

### TABLE 1-1

<b>→</b> 1000  1000	099221	CAUTION! Keep all persons away from work area when operating the machine.
0 0 096316	096316	CAUTION! Do not open or close the electric box when the switch is not in the "0" position.
<b>1</b>	096319	CAUTION! Disconnect power supply before opening the box.
096321	096321	Blade movement direction

### TABLE 1-1

Stands.	S12004G	CAUTION! Always wear safety goggles when operating the sawmill!
S. ESERGE	S12005G	CAUTION! Always wear protective ear muffs when operating the sawmill!
	501465	CAUTION! Always wear safety boots when operating the sawmill!
- Annal S	501467	Lubrication point
P11789b	P11789	Tracking the blade on the blade wheels

### TABLE 1-1

CE	P85070	CE certification marking
EAC	eac	Russian safety certification
S20097	S20097	Motor rotation direction
3-4 mm	P85066	Blade positioning

### SECTION 2 SAWMILL ASSEMBLY

CAREFUL PLANNING IS ESSENTIAL TO A SMOOTH ASSEMBLY.

READ THIS SECTION THOROUGHLY TO PLAN THE ASSEMBLY.

**NOTICE:** Do not unbolt all the shipping brackets at once. Remove the shipping brackets securing the sawmill to the pallet at each step to prevent inadvertent shifting of the parts.

### 2.1 Tools required

- Lifting device (fork lift, crane, etc.)
- Socket set, metric and imperial
- Open-end wrench set, metric and imperial
- Socket driver
- Utility knife
- Two (or more) blocks, **minimum 3-1/2" tall**, (nominal 4x4) to set the saw head on while assembling the bed.

### 2.2 Uncrating the mill

- 1. Remove any shipping straps or plastic coverings from the mill before beginning.
- 2. Ensure all shipping restraints for the saw head and mast are removed prior to performing the next step.



**WARNING!** Use a fork lift, crane, or other lifting device to remove the saw head from the packing crate. Failure to follow this may result in serious injury or death.

**3.** Securely attach lifting straps of your lifting device (fork lift, crane, etc.) to the top of the mast as shown in Figure 2-1.

**NOTICE:** Do not attempt to set the carriage down on any surface other than the bed rails. Equipment damage may occur.

### See Figure 2-1.

**NOTICE:** Do not catch wires between lifting strap and frame.

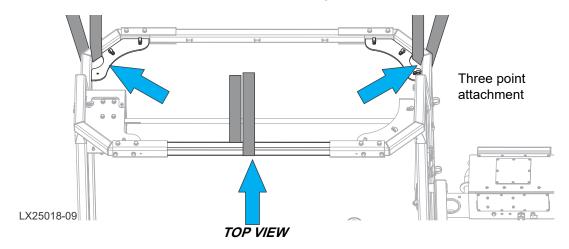


FIG. 2-1

**NOTICE:** Raise the saw head slowly to adjust for load shift. The saw head is heavier on the motor side.

4. Set the mast on the blocks called out in Section 2.1 Tools required. See Figure 2-2.



**CAUTION!** Use care to protect the adjustment screws at the bottom of the mast. See Figure 2-2.

### See Figure 2-2.

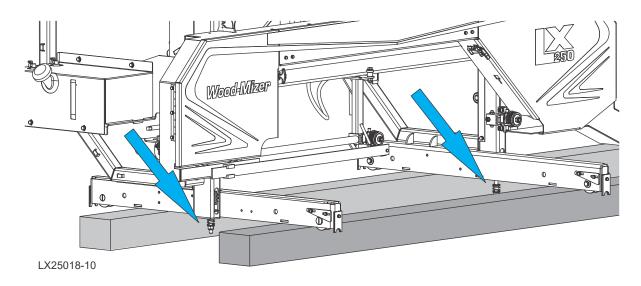


FIG. 2-2

### 5. Remove and inspect the parts boxes.



**WARNING!** Leave the blade in its box until you have reviewed the video on safe blade handling. Failure to follow this may result in serious injury or death.

### See Figure 2-3.



FIG. 2-3

**TABLE 1: PARTS BOX CONTENTS** 

Part #	Description	Qty
	Kohler Engine Manual	1
	Hardware bag	1
F05004-250	Bolt, M12x1.75x40mm HH FT CL10.9 Zinc	6
F05011-124	Washer, M12 FLAT Zinc	12
F05010-209	Nut, M12x1.75 Hex Nylock	6
115110	Shim, End Stop	4
115290	Chain, #40x460 Pitches (230")	2
115106	End Stop Right	2
115112	End Stop Left	2
015721	Tensioner Wldmt, Power Feed Chain ( <i>on End Stops</i> )	4
128014	Bed Shim, LX250 16Ga	22
128015	Bed Shim, LX250 16Ga	22
128016	Bed Shim, LX250 7Ga	11

The Power Feed motors and one motor mount are packaged separately. The second Power Feed motor mount is bolted on the exterior of the bed frame sections.

### See Figure 2-4.

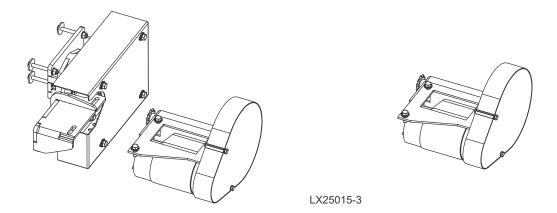


FIG. 2-4

The manual bag, located inside the saw head cover, also includes a belt tension gauge (016309) and a Blade Guide Alignment Tool (LTBGAT).

### See Figure 2-5.

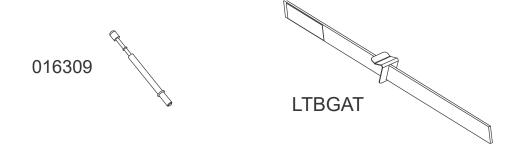


FIG. 2-5

## 2.3 Assembling the Log Clamps and Side Supports

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

### See Figure 2-9.

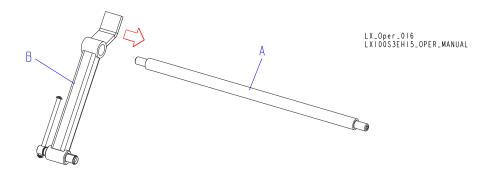


FIG. 2-1

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

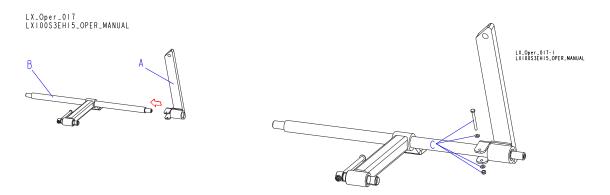


FIG. 2-2

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

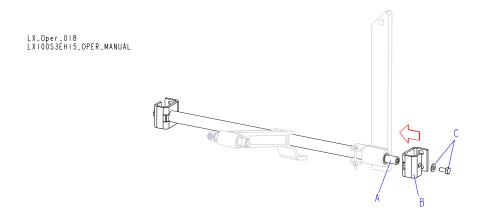


FIG. 2-3

**4.** Use the fasteners (C) to tighten the log clamp (A) to the cross rail (B). Next, use the fasteners (F) to tighten the side support (D) to the log clamp main rod (E) with such force that the set side support cannot change its position.

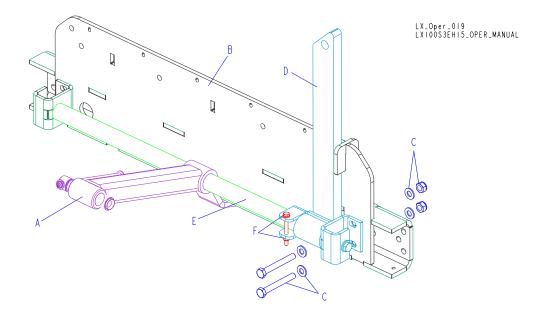
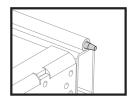


FIG. 2-4

#### 2.4 Assemble the bed

- Area must be firm and level.
- Allow maneuvering room for operators, sawdust removal, log loading, and board removal.

**NOTICE**: Observe the direction of the alignment pins in relation to the remaining bed sections. Plan the assembly such that the log supports are on the same side as the operator's station, and such that the section without a log support is at the head of the log bed.



**NOTE:** Ensure the bed is assembled in the final operating location. Once assembled, it should not be moved.

- 1. Unbolt the power feed unit from the shipping location; set it aside for later mounting.
- 2. Unbolt the 11 bed legs from the shipping crate.
- **3.** Ensure all shipping restraints are removed from the top section prior to performing the next step.



**WARNING!** Use a fork lift, crane, or other lifting device to remove the saw head from the packing crate. Failure to follow this may result in serious injury or death.

**NOTE:** The three sections of the bed have the same frame, but they can be distinguished as:

The head section has no clamp and no decal The center section has a clamp and no decal

The foot section has a clamp and a decal

**4.** Securely attach lifting straps to the top bed section and lift the bed section.

### See Figure 2-6.



FIG. 2-6

5. Loosely attach all bed feets while the bed is suspended.

### See Figure 2-7.

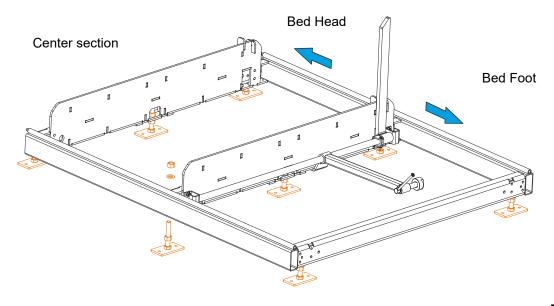


FIG. 2-7

- **6.** Set the bed section on its feet.
- 7. Repeat steps 2 through 6 for the next bed section.

#### **CONNECT BED SECTIONS**

- **8.** Align the rail pins.
- **9.** Draw the bed sections together and secure with fasteners from the hardware bag. See Fig. 2-8.

**NOTE:** If necessary to draw the bed segments tightly together, use a large C-clamp, a rubber mallet, or a sledge hammer with a wooden block.

#### See Figure 2-8.

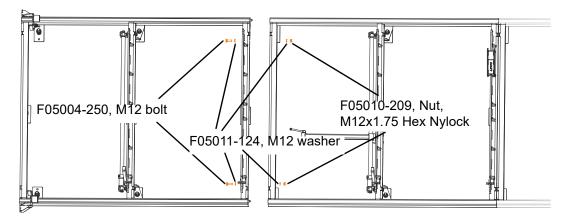


FIG. 2-8

**NOTE:** The top surface (round rails) touch before the square support tubes, leaving a small (1/8" +/-) gap. This is normal. Do not attempt to draw the square support tubes together. See Figure 2-9.

**NOTE:** Make sure the top surfaces (round rails) of the bed sections are smoothly aligned. It may be necessary to adjust one bed section up or down with bed shims until the surfaces are aligned.

### See Figure 2-9.

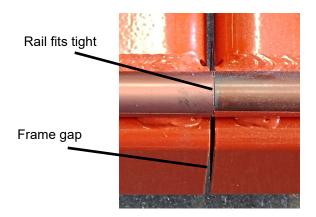


FIG. 2-9

- **10.** Recheck that the rail joints are tight and smooth.
- **11.** Tighten the bed section bolts.
- **12.** Level the bed sections as you go.

### See Figure 2-10.

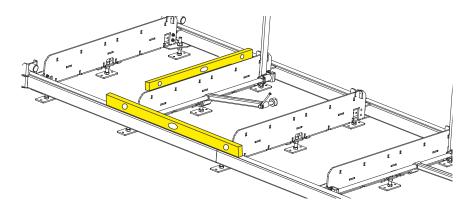


FIG. 2-10

**13.** Repeat steps 2 through step 12 for the last bed section.

### 2.5 End Stop Assemblies

**NOTICE:** The end stops (bumpers) are left/right oriented.

1. Mount the end stops to the frame with the shims between the frame and the end stops.

### See Figure 2-11.

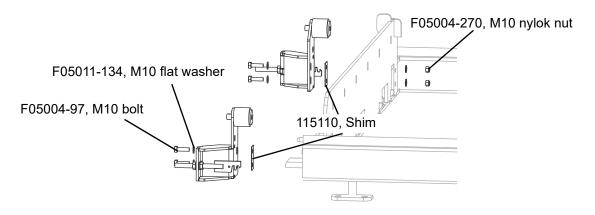


FIG. 2-11

### 2.6 Adjusting/leveling the Bed

**NOTE**: Adjusting/leveling the log bed is best done before the saw head is installed.

**1.** Adjust the frame legs so the sawmill appears level; use shims under the legs, if necessary.

#### See Figure 2-12.

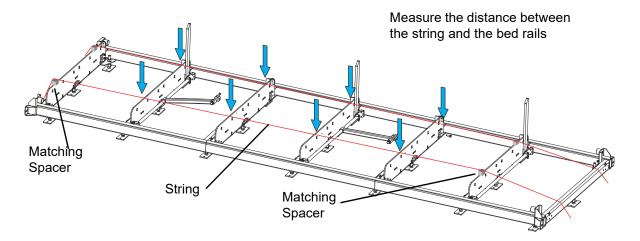


FIG. 2-12

**2.** Run a string from the front bed rail to the rear bed rail near the operator's side of the frame. See Figure 2-12.

- 3. Place IDENTICAL matching spacers between the string and the front and rear bed rails.
- 4. Measure the distance between the string and the other bed rails.
- 5. Adjust the frame legs until all bed rails measure the same distance from the string.
- 6. Repeat the bed rail adjustment with the string at the other side of the sawmill frame.

### 2.7 Levelling the Saw Head

To level the head in relation to the bed, loosen the screws shown in the figure below and move the marked plate left or right to adjust the mast vertically. (See the figure below.) Retighten the screws.

### See Figure 2-13.

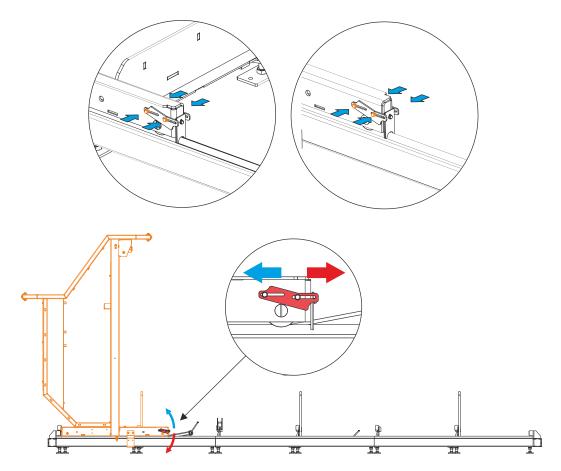


FIG. 2-13

### 2.8 Saw Carriage Assembly

- **1.** Check the orientation of the carriage before placing it on the bed frame; the operator is on the same side as the log supports.
- 2. Position the saw head over the end of the bed frame assembly.

- **3.** Carefully lower the saw head on the bed frame, sliding the saw head rollers onto the bed rail while maneuvering the saw head square to the bed to avoid jamming the track rollers.
- **4.** Remount the mast safety assemblies (right and left) from the transport position to the operating position. See Figure 2-14.

**NOTE:** There should be no more than an 1/8" clearance between the mast safety assembly and the bed rail.

**5.** Ensure the white rail wipers make firm contact with the rails: the wiper mounting plate should not set on the rail.

#### See Figure 2-14.

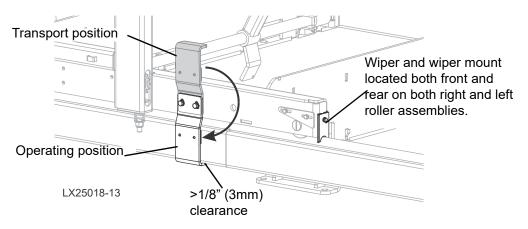


FIG. 2-14

### 2.9 Feed Drive Assembly

- **1.** Unpack the Power Feed drive assemblies from the boxes, and retrieve the mount assembly set aside in section 2.4, step 1.
- **2.** Thread the Power Feed chain through the sprockets.

### See Figure 2-15.

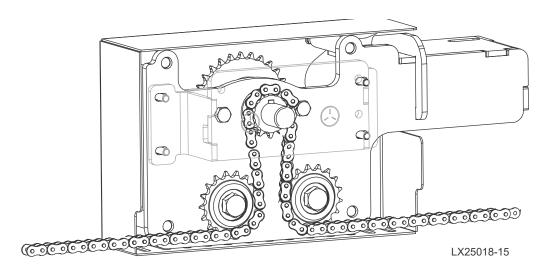


FIG. 2-15

3. Assemble the Power Feed mount (without cover) as shown in Fig 2-16.

### See Figure 2-16. T

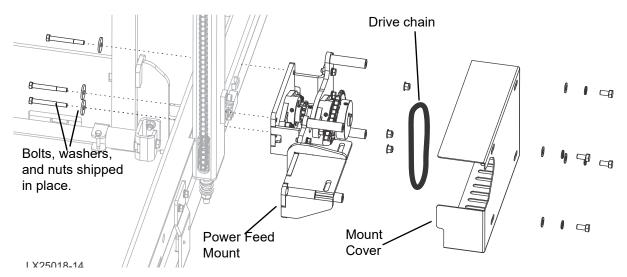


FIG. 2-16

- **4.** Attach the drive chain by simply hanging it on the drive sprocket.
- 5. Mount the Power Feed drive assembly.

**NOTE:** Catch the drive sprocket in the drive chain while mounting. It will be difficult to attach after the motor is in place.

#### See Figure 2-17.

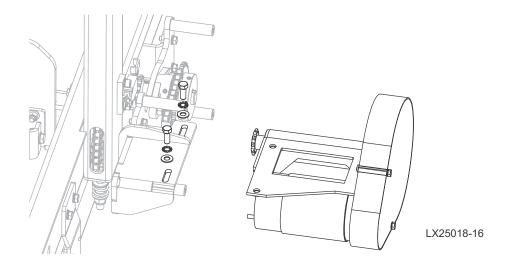


FIG. 2-17

- **6.** Slide the drive assembly in the mounting slots until the all loose slack in the drive chain has been taken up. **DO NOT OVER TIGHTEN THE DRIVE CHAIN.**
- **7.** Tighten the mounting screws.

NOTE: The following steps may be difficult due to the location of the motor terminals.

8. Attach the wiring harness to the motor.

**NOTICE**: The DC Power Feed motors will be wired differently for the left and right motors because the motors are mounted in a mirrored position.

- **a.** Remove the blue and green wires (with caps) from the transport position near the Power Feed motors.
- **b.** Slide the protective caps up the wires to expose the ring terminals.
- **c.** Unscrew the nut-with-star-washer (Keps<sup>TM</sup> nut) from the positive terminal on the motor.
- **d.** Place the wire ring terminals over the motor studs as shown in Fig. 2-18.

### See Figure 2-18.

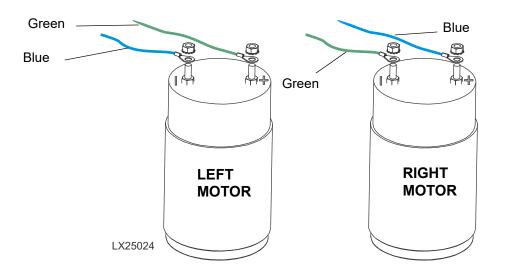


FIG. 2-18

- e. Tighten the nuts.
- **f.** Slide the protective caps over the terminals.
- 9. Install the Mount Cover. (See Fig. 2-16.)
- 10. Repeat steps 2 through 9 for the other side.

### **SECTION 3 SAWMILL SETUP**

The following setup procedure should be performed whenever the sawmill is moved or reassembled. If sawing problems occur and misalignment is suspected, <u>See Section</u> <u>SECTION 8</u> for complete alignment instructions.

See Section SECTION 3 for sawmill assembly instructions.

**NOTICE:** Set up conditions include:

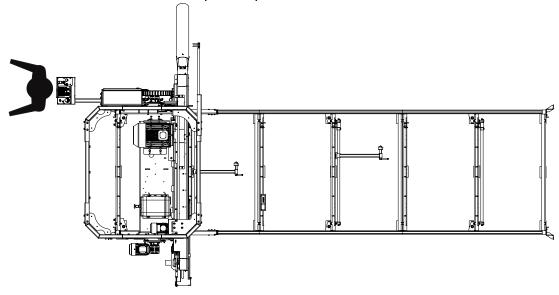
- Set up the sawmill on firm, level ground and level the sawmill.
- Use a sawdust collection system when operating under roof or indoors (electric only).
- When operating the sawmill outdoors, set up the sawmill placing the operator downwind to separate the operator from sawdust and/or engine exhaust gases.



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

- Clear the area. Inspect the sawing site for debris or uneven surfaces that may become a trip hazard. Ensure that eye, ear, and respiration protection are readily available. Ensure that the operator is wearing foot protection and proper work clothing.
- The sawmill must not be operated indoors without a sawdust collection system connected and started
- AC sawmills must not be used outdoors when it is raining or snowing. In such a case, they must be used and stored under roof or indoors.
- Gas sawmills must not be used indoors. Such sawmills can be operated outdoors without a sawdust collection system, but the operator should be positioned downwind. It will prevent the operator from being exposed to sawdust and engine exhaust gases.
- The sawmill can be operated in the temperature range of -15° C to 40° C.
- ■The intensity of light at the operator's work-place must be at least 300lx.

■ The sawmill's operator position is shown below.



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

#### See Table 3-1.

3-Phase Volts	Circuit Breaker	Suggested Wire Size
EB20S 230 VAC	63 A	10 mm <sup>2</sup> Maximum length: 15 m
EH15S 400 VAC	32 A	6 mm <sup>2</sup> Maximum length: 15 m
EH20S 400 VAC	32 A	6 mm <sup>2</sup> Maximum length: 15 m
EH25 400 VAC	64 A	6 mm <sup>2</sup> Maximum length: 15 m
EH25S 400 VAC	64 A	6 mm <sup>2</sup> Maximum length: 15 m
EJ15 200 VAC	63 A	6 mm <sup>2</sup> Maximum length: 15 m

TABLE 3-1



**IMPORTANT!** When starting the machine for the first time, check that main motor rotation direction is as indicated by the arrow located on the motor body. If the rotation direction is incorrect, invert the phases in the phase inverter in the

power socket (electric box). Setting the phases in the phase inverter correctly will ensure correct rotation directions of all sawmill motors.



**WARNING!** If the blade or drive belt breaks, wait until all moving parts stop completely. Failure to do so may result in serious injury or death.



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



**CAUTION!** Press the emergency button located on the control box to stop the machine. Turn the emergency stop clockwise to release the stop button. The sawmill not restart until the emergency stop is not released.

## 3.1 Installing the Control Panel

The control panel is dismounted for transport purposes and must be mounted in the working position before using the machine.

1. Dismount the U-bolts and carefully take off the control panel.

#### See Figure 3-1.

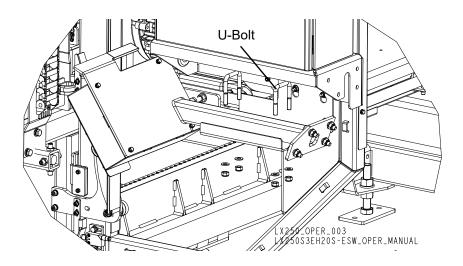


FIG. 3-1

2. Mount the control panel using the fasteners attached.

## See Figure 3-2.

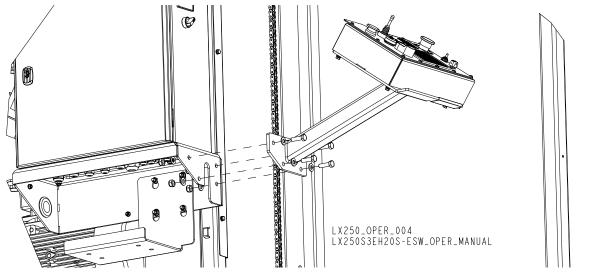


FIG. 3-2

# 3.2 Installing the Blade



**WARNING!** Wear gloves and eye protection when handling bandsaw blades. Failure to follow this may result in serious injury.



**WARNING!** Keep all other persons away from area when coiling, carrying, or changing a blade. Changing blades is safest when done by one person. Failure to follow this may result in serious injury.

- **1.** Open the blade housing cover.
- 2. Turn the blade tension bar with the ratchet until the blade wheel is moved in.

## See Figure 3-3.

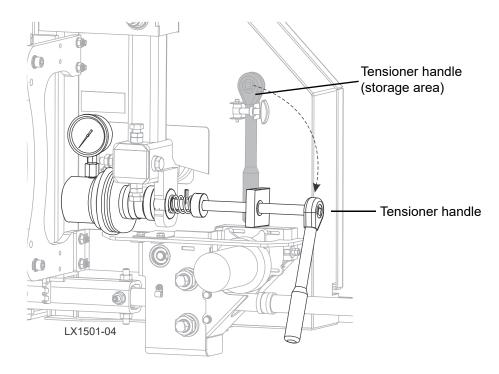


FIG. 3-3

3. Place the new blade around the blade wheels.

**NOTE:** When installing a blade, make sure the teeth are pointing the correct direction. The teeth should be pointing toward the operator side of the mill when you are looking at the blade below the blade guides.

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

# 3.3 Tensioning The Blade

**1.** Use the supplied handle to turn the tensioner handle clockwise until the tension gauge indicates tension values as shown in the table below. Blade length: 5460mm.

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

Blade Type	Blade Dimensions		Tensio	n range
	Width (mm)	Height (mm)	PSI	Bar
2732	1.07	32	1500-1600	105-110

TABLE 3-2

3732	1.14	32	1500-1600	105-110
2735	1.07	35	1600-1650	110-115
3738	1.14	38	2050-2100	140-145

**TABLE 3-2** 



**CAUTION!** Release the blade tension when the resaw is not in use (for example at the end of a shift). Tension the blade again before starting the motor.

#### See Figure 3-4.

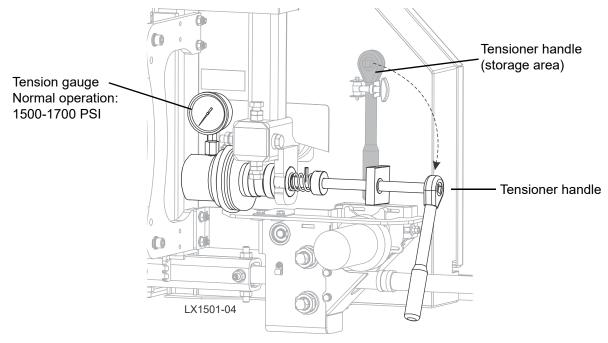


FIG. 3-4

2. Check the blade tension when adjusting the cant control or making other adjustments.

**NOTE:** Check the blade tension after prolong use. The blade and belts heat up and stretch, the blade tension will change.

3. Check the blade tension when there are changes in the ambient temperature.

# 3.4 Tracking The Blade



**DANGER!** Always be sure the blade is disengaged and all persons are out of the path of the blade. Failure to follow this will result in serious injury.



**WARNING!** Make sure all guards and covers are in place and secured before operating the sawmill. Failure to follow this may result in serious injury.

- 1. Open the blade housing covers.
- **2.** Turn the switch to the "H" position.



#### See Figure 3-5.

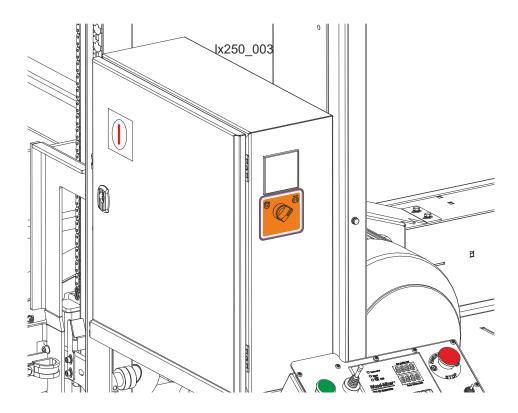


FIG. 3-5

- **3.** Manually spin one of the blade wheels until the blade positions itself on the blade wheels.
- **4.** Check that the blade is properly positioned on the blade wheels.
- **5.** Use the cant control to adjust where the blade travels on the blade wheels.

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

## See Figure 3-6.

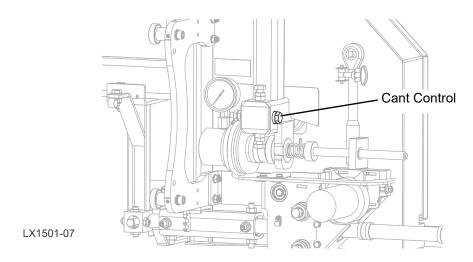
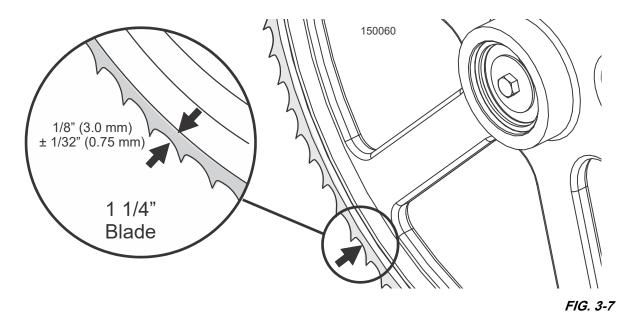


FIG. 3-6

**6.** Position 1 1/4" wide blades so the gullet is 1/8" (3.0 mm) out from the edge of the blade wheel (±1/32 [.75 mm]).

## See Figure 3-7.



- **7.** Adjust the blade tension if necessary to compensate for any changes that may have occurred while adjusting the cant control.
- **8.** Close the blade housing covers an ensure blade housing and pulley covers are in place and secure



**WARNING!** Make sure all guards and covers are in place and secured before operating the sawmill. Failure to follow this may result in serious injury or death.

**NOTICE:** After aligning the blade on the wheels, always double-check the blade guide spacing and location.

## 3.5 Sawblade

#### Blade Guide Vertical Tilt Alignment

The blade guides should be adjusted properly in the vertical plane. If the blade guides are tilted vertically, the blade will try to travel in the tilted direction.

A Blade Guide Alignment Tool (BGAT) is provided to help you measure the vertical tilt of the blade.

#### **OUTER BLADE GUIDE**

- 1. Open the adjustable blade guide arm 1/2" (13 mm) from fully open.
- **2.** Clip the alignment tool on the blade.
- **3.** Position the tool close to the outer blade guide assembly.

**NOTE:** Be sure the tool does not rest on a tooth or burr, and is lying flat against the bottom of the blade.

#### See Figure 3-8.

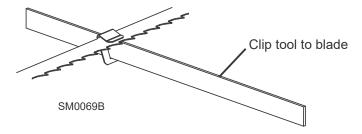


FIG. 3-8

- **4.** Move the carriage 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. Move the carriage so that the **back** end of the tool is positioned above the bed rail.

- 7. Measure the distance from the bed rail to the bottom edge of the tool.
- **8.** If the measurement from the tool to the bed rail is not equal within 1/32" (.75 mm), adjust the vertical tilt of the outer blade guide roller.

### See Figure 3-9.

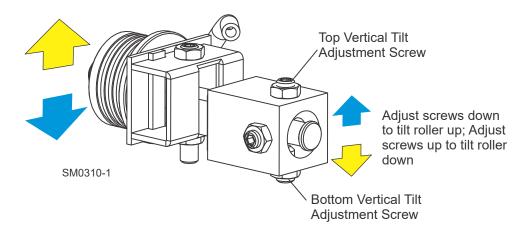


FIG. 3-9

- 9. Loosen one set screw at the side of the blade guide assembly.
- **10.** Loosen the jam nuts on the top and bottom vertical tilt adjustment screws.
  - **a.** To tilt the roller up, loosen the bottom screw and tighten top screw.
  - **b.** To tilt the roller down, loosen the top screw and tighten the bottom screw.
- **11.** Tighten the jam nuts and recheck the tilt of the blade.

#### INNER BLADE GUIDE

- **12.** Move the blade guide alignment tool close to the inner blade guide roller assembly and repeat the above steps.
- 13. Adjust the vertical tilt of the inner blade guide, if necessary.

### Blade Guide Flange Spacing

Each blade guide must be adjusted so the roller flange is the correct distance from the back edge of the blade. If the flange is too close to or too far from the blade, the sawmill will not cut accurately.

The blade guide rollers should also be slightly cocked. If the moving blade makes contact with the leading flange edge of the roller, momentum may cause the blade to slip over the flange. Contact with the trailing edge would force the blade upward onto the roller.

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

#### **OUTER BLADE GUIDE**

- 1. Ensure that the distance between the flange on the **outer blade guide roller** to the back edge of the blade measures to 1/8" (3.0 mm).
- 2. Adjust the roller back or forward if necessary.

### See Figure 3-10.

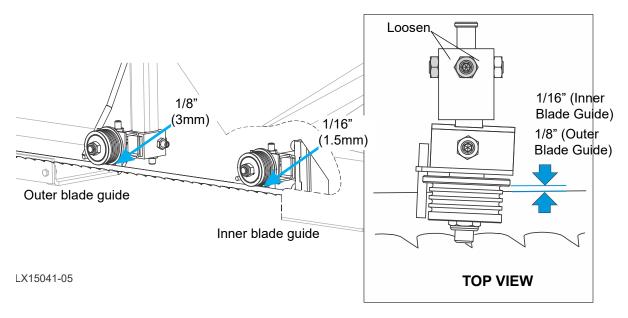


FIG. 3-10

- **3.** Loosen the top screw and one side screw.
- **4.** Gently tap the blade guide forward or backward until properly positioned.
- **5.** Retighten the screws and jam nuts.

#### **INNER BLADE GUIDE**

- **6.** Ensure that the distance between the flange on the **inner blade guide roller** to the back edge of the blade measures to 1/16" (1.5 mm). See Figure 3-10.
- **7.** Adjust the roller back or forward, as described above.

**IMPORTANT**: Make sure the blade screw in the top center of the C-frame is 1- 0.5 mm below the bottom of the blade. If not, loosen the nut and adjust the screw as necessary. Check the screw every blade change. Failing to maintain this adjustment will lead to early blade breakage.

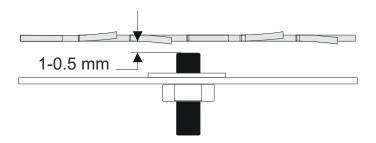


FIG. 3-10

## **SECTION 4 SAWMILL OPERATION**

### 4.1 Power Feed

The power feed system moves the mast forward and backward by using the two switches on the control panel illustrated below.

## See Figure 4-1.

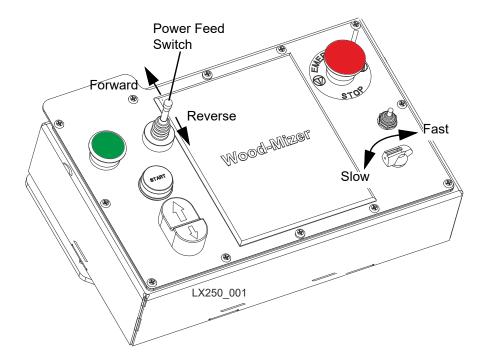


FIG. 4-1

#### SAW HEAD FORWARD AND REVERSE

The mast forward/reverse drum switch controls the direction in which the mast travels.

The middle position (as shown) is the neutral position. The power feed switch is designed to return to the neutral or "off" position when released from operating in the reverse position. If the switch remains engaged, manually move the switch to the neutral or "off" position and <u>See Section 5.6</u>.



**WARNING!** Ensure the power feed switch is in the neutral position before turning the key switch to the on (1) or accessory (3) position to prevent accidental mast movement. Failure to follow this will result in death or serious injury.

#### MAST FEED RATE

The mast feed rate switch controls the speed at which the mast travels forward. Turn the switch clockwise to increase speed. Turn it counterclockwise to reduce speed.

#### **USING THE POWER FEED**

- **1.** Use the forward/reverse drum switch and the feed rate switch to position the sawhead for the cut.
- 2. Start the motor to start the blade.
- **3.** Set the feed rate relative to the size and material you are cutting. If not known, set at the slowest rate.

**HINT:** To get a straight cut in the first part of the board, feed the blade into the log at a slow speed. Turn the mast feed rate switch to a slow speed until the whole width of the blade has entered the cut. This stops the blade from flexing and dipping up or down. Then use the mast 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.

- **4.** Press feed switch forward to move forward.
- **5.** Stop the saw head at the end of the cut by releasing the feed switch, or by turning the mast feed rate switch counterclockwise until the saw head stops moving.
- **6.** Disengage the blade.
- **7.** Remove the board from the top of the log.



**CAUTION!** Be sure to stop the blade when returning the mast. 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.

- 8. Raise the saw head slightly to ensure the blade clears the log when returned.
- **9.** Return the saw head to the front of the mill by pushing the forward/reverse feed switch back.

**NOTICE:** The power feed motor will bypass the mast feed rate switch and the mast will automatically return at the fastest speed available.

# 4.2 Up/Down Operation



**CAUTION!** Ensure the blade is properly installed and tensioned before moving the sawhead.

- **1.** Use the up/down buttons located on the left side of the control panel to raise or lower the cutting head.
- 2. Hold the button until the cutting head reaches the desired height, then release.

## See Figure 4-2.

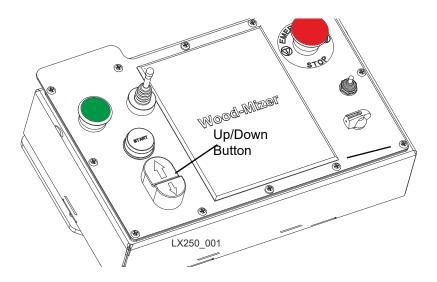


FIG. 4-2



**CAUTION!** DO NOT try to force the mast above the 35" (88 cm) mark or below the 1" (2.54 cm) mark. Damage to the up/down system may result.

# 4.3 Starting the Motor



**DANGER!** Make sure all guards and covers are in place and secured before starting the sawmill. Failure to do so may result in serious personal injury. Be sure the blade housing covers are closed and secured.



**WARNING!** Always wear proper and necessary safety equipment when performing service functions. Proper safety equipment includes eye protection, breathing protection, hand protection and foot protection.

To start the blade motor, turn on the power supply switch located on the electric box. When the power is on, the control light on the front wall of the electric box comes on. Turn the motor operation switch to "M" position. Press and hold the green safety button located on the control box. Press the START button. The drive motor starts. After a few seconds the sawmill is ready to operate.

To stop the motor, release the green safety button.

## See Figure 4-3.

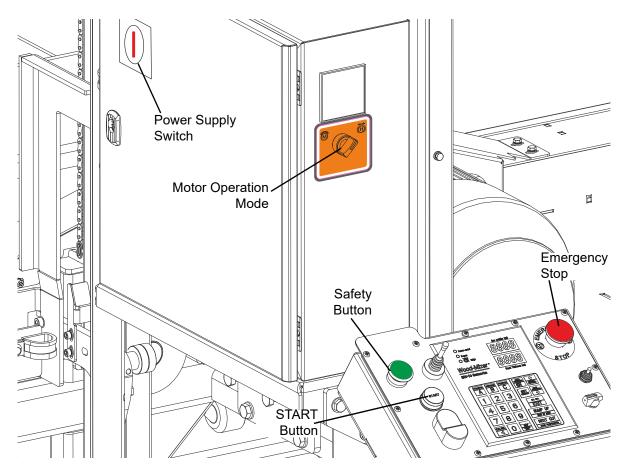


FIG. 4-3



**CAUTION!** Press the emergency stop button to stop the blade motor immediately. On LT15 sawmills, the emergency stop switch is located on the control box.

# 4.4 Loading, Turning, & Clamping Logs

#### **LOADING LOGS**

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



**CAUTION!** Be sure the log clamps are adjusted out of the path of the log before loading a log onto the bed. Failure to follow this may result in machine damage.

**NOTICE:** The saw mast may be moved without the engine started, but repeated operation in this manner may drain your battery.

- 2. Lower the log clamps.
- **3.** Raise the side supports on the sawmill bed to prevent the log from falling off the side of the bed.

**NOTICE:** Logs must be loaded onto the mill with a forklift or other equipment specifically designed for that purpose.

**4.** Position the log against the side supports.

**NOTE:** Position the log on the bed sections to maximize support of the log by the bed. If the log overhangs the bed, it may tend to sag, resulting in inaccurately sawn lumber.

#### **CLAMPING LOGS**



**CAUTION!** Make sure the side supports and clamp are positioned low enough for the blade to pass over them. If they are not, back the clamp off slightly and push the side supports down until they are positioned below the level of your first few cuts. Failure to follow this will result in machine damage.

- **1.** Slide the clamp against the log and turn the locking handle to lock the clamp against the log.
- 2. Tighten the clamp against the log with the locking handle.

## See Figure 4-4.

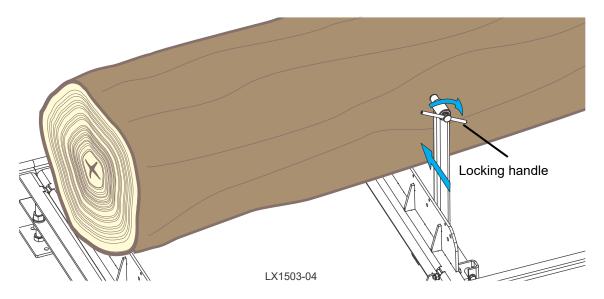


FIG. 4-4

#### LEVELING A TAPERED LOG

Use shims or the wedge to raise either end of a tapered log until the heart of the log measures the same distance from the bed rails at each end of the log.

#### See Figure 4-5.

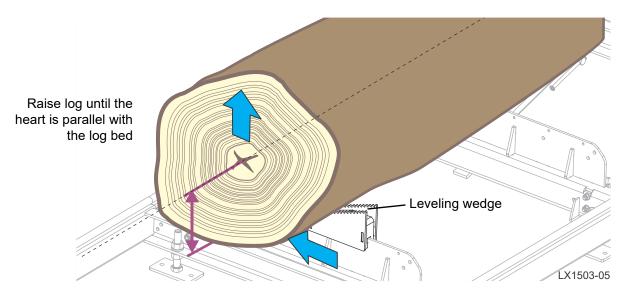
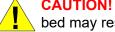


FIG. 4-5

#### **TURNING THE LOG**



**CAUTION!** Do not turn the log while on the log bed. Damage to the log bed may result.

Use a forklift to lift the log off of log bed. Once off of the log bed, it can be turned and replaced in the new orientation.

#### 4.5 **Blade Guide Arm Operation**

- 1. Set the outer blade guide to clear the widest section of the log by less than 1" (25.4 mm).
- 2. Use the blade guide toggle switch on the control panel to adjust the outer blade guide as necessary.
- 3. Push the switch to the left to move the arm in; push the switch to the right to move the arm out.

## See Figure 4-6.

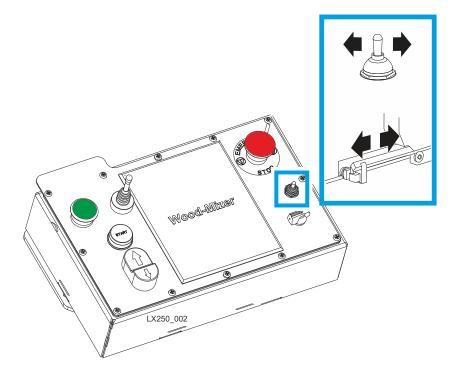


FIG. 4-6

- **4.** Use the blade guide toggle switch to readjust the outer blade guide as you are cutting in order to keep the guide within 1" (2.5 cm) of the log.
- 5. Adjust the arm out before returning the carriage.

# 4.6 Cutting The Log

- 1. Once the log is placed where you want it and clamped firmly, move the saw head to position the blade close to the end of the log.
- **2.** Use the blade height scale to determine where to make your first cut (<u>See Section 4.8</u>).
  - 1). Set the blade to the desired height with the up/down crank.
  - **2).** Ensure that the blade will clear all side supports and the clamps.
  - **3).** Adjust the outer blade guide to clear the widest section of the log by moving the blade guide arm knob.
- 3. Engage the clutch to start the blade spinning.

- **4.** Start the water lube if necessary to prevent sap buildup on the blade. <u>See Section 4.9</u>.
- **5.** Feed the blade into the log slowly (See Section 4.6).

Once the blade completely enters the log, increase the feed rate as desired. Always try to cut at the fastest speed you can while keeping an accurate cut. Cutting too slowly will waste blade life and lower production! As you get to the end of the log, slow down the feed rate.

- **6.** When the teeth exit the end of the log, disengage the clutch and remove the cut slab.
- 7. Return the mast to the front of the mill.
- 8. Repeat until the first side of the log is cut as desired.
- 9. Set aside the usable flitches (boards with bark on one or both sides) to edge them later.
- **10.** Remove the wedge if it was used.
- **11.** Remove the clamps and turn the log 90 or 180 degrees.
- **12.** Ensure the flat on the log is placed flat against side supports if turned 90 degrees or it is placed on bed rails if turned 180 degrees.

**NOTICE:** If the log was turned 90 degrees and you are using the wedge to compensate for taper in the log, use the wedge again on the second side of the log until the heart is parallel with the bed.

**13.** Repeat the steps used to cut the first side of the log until the log is square. Cut boards from the remaining cant by adjusting the blade height for the thickness of boards that you want.

**NOTICE:** Remember that the blade cuts a 1/16 - 1/8" (1.6-3.2 mm) wide kerf. If you want 1" (25.4 mm) thick boards, lower the mast 1 1/16 - 1 1/8" (27-28.6 mm) for each board.

# 4.7 Edging

- **1.** Raise the side supports to 1/2 the height of the flitches, or the boards that need to be edged.
- 2. Stack the flitches on edge against the side supports.
- 3. Clamp the 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 disturbing the other flitches or 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 clamps and remove the boards that have good clean edges on both sides. Clamp the remaining flitches and repeat steps 2-5.

## 4.8 Blade Height Scale

#### See Figure 4-7.

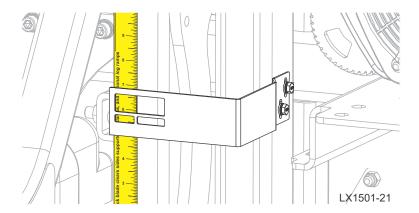


FIG. 4-7

#### THE INCH SCALE

The horizontal line on the blade height indicator shows how many inches 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 mast to an even measurement on the inch scale. Make a trim cut. Return the mast for the second cut and lower it 1 1/8" (29 mm) below the original measurement. (The extra 1/8" (3 mm) allows for saw kerf and shrinkage of the lumber.)

**NOTICE:** 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 before sawing.

#### THE QUARTER SCALE

The magnetic quarter scale has 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.

#### See Table 4-1.

Standard Quarter Scale		
Scale	Actual Board Thickness	
4/4	1" (25 mm)	
5/4	1 1/4" (32 mm)	
6/4	1 1/2" (38 mm)	
8/4	2" (51 mm)	

TABLE 4-1

To use the quarter scale, look at the blade height indicator.

Position the magnetic quarter scale over the inch scale. Align one of the quarter scale marks with the horizontal line on the indicator.

Make a trim cut. When you return the mast for a second cut, lower the mast to the next mark on the scale. This mark shows where the blade should be positioned to cut a certain thickness of lumber, without having to measure on the inch scale.

**Example:** You want to cut 1" (25 mm) (4/4) random width boards from a log. Position the blade for the first cut. Position the magnetic quarter scale so a 4/4 mark is aligned with the line on the indicator. Make a trim cut. Return the mast 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.

# 4.9 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. Normal flow is 1-2 gallons (3.8-7.6 liters) per hour.

## See Figure 4-8.

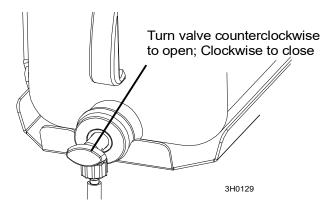


FIG. 4-8

Not all types of wood require the use of the Water Lube System. When it is needed, use just enough water to keep the blade clean. This saves water, and lowers the risk of staining the boards with water.

When changing blades, let the blade spin with water running on it for about 15 seconds before removing it. This will clean the blade of sap buildup. Dry blade with a rag before storing or sharpening.

For lubrication benefits, add one 12oz. (0.35L) bottle of Wood-Mizer Lube Additive to 5 gallons (18.9 liters) of water. Wood-Mizer Lube Additive enables some previously impossible timbers to be cut by significantly reducing resin buildup on the blade. It helps to reduce heat buildup, wavy cuts, and blade noise. This biodegradable and environmentally friendly pre-mix includes a water softener additive, so it works with hard water.



**WARNING!** Do not use flammable fuels or liquids such as diesel fuel. Failure to follow this can damage the equipment and may result in serious injury or death.

Use ONLY water and Wood-Mizer Lube Additive with the water lube accessory. If these types of liquids are necessary to clean the blade, remove it and clean with a rag.

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.

# 4.10 Transporting the Sawmill



**WARNING!** The LX250 sawmill is not intended to be portable. Failure to follow this can damage the equipment and may result in serious injury or death.

If it is necessary to move the sawmill, it should be dismantled in a reverse order as described in the assembly procedures. Transportation should be done in the same configuration as originally shipped to the customer.

## SECTION 5 MAINTENANCE



**WARNING!** Turn the key switch to the OFF (0) position and remove the key before performing service near moving parts such as blades, pulleys, motors, belts, and chains. If the key is turned on and moving parts activated, serious injury or death may result.



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

Be sure to refer to option and engine manuals for other maintenance procedures.

#### 5.1 **Wear Life**

See Table 5-1. This chart lists estimated life expectancy of common replacement parts if proper maintenance and operation procedures are followed. Due to the many variables which exist during sawmill operation, actual part life may vary significantly. This information is provided so that you may plan ahead in ordering replacement parts.

Part Description	Estimated Life
B57 Blade Wheel Belts	400 hours
Blade Guide Rollers	1000 hours
Drive Belt	1250 hours

TABLE 5-1

#### 5.2 **Blade Guides**



**WARNING!** Turn the key switch to the OFF (0) position and remove the key before performing service near moving parts such as blades, pulleys, motors, belts, and chains. If the key is turned on and moving parts activated, serious injury or death may result.

- 1. Check the rollers for performance and wear every blade change.
- 2. Replace any rollers which are not clean, not spinning freely, or have worn smooth or misshaped.

#### 5.3 **Changing The Blade**



**WARNING!** Turn the key switch to the OFF (0) position and remove the key before performing service near moving parts such as blades. pulleys, motors, belts, and chains. If the key is turned on and moving parts activated, serious injury or death may result.



**WARNING!** Wear gloves and eye protection when handling bandsaw blades. Failure to follow this may result in serious injury.



**WARNING!** Keep all other persons away from area when coiling, carrying, or changing a blade. Changing blades is safest when done by one person. Failure to follow this may result in serious injury.

- 1. Open the blade housing cover.
- 2. Turn the blade tension bar with the ratchet until the blade wheel is moved in.

## See Figure 5-1.

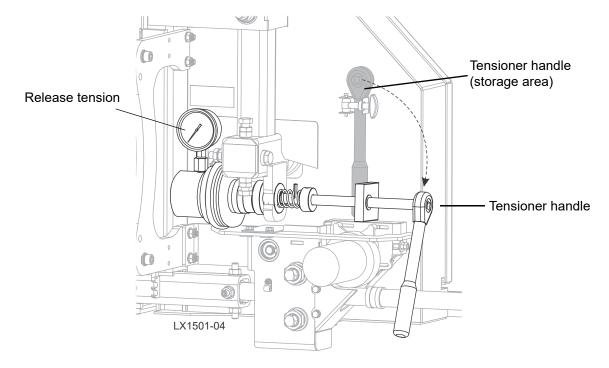


FIG. 5-1

3. Place the new blade around the blade wheels.

When installing a blade, make sure the teeth are pointing toward the operator side of the mill when you are looking at the blade below the blade guides.

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



## See Figure 5-2.

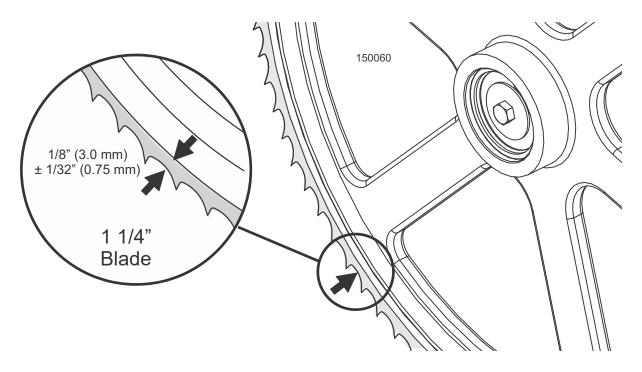


FIG. 5-2

5. Close the blade housing cover.

#### 5.4 **Sawdust Removal**



**WARNING!** Turn the key switch to the OFF (0) position and remove the key before performing service near moving parts such as blades, pulleys, motors, belts, and chains. If the key is turned on and moving parts activated, serious injury or death may result.



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



WARNING! Keep hands, feet and any other objects away from the sawdust chute when operating sawmill. Failure to follow this may result in serious injury or death.



WARNING! Ensure the steel fingers inside the sawdust chute are in place before operating the sawmill. Failure to have these fingers in place may result in serious injury or death.

The steel fingers have been designed to help prevent a broken blade or some other object from becoming a projectile and exiting the sawdust chute.

Remove sawdust buildup from rope feed pulleys and up/down chain sprockets as necessary.

## 5.5 Mast Track, Wipers, & Scrapers



**WARNING!** Turn the key switch to the OFF (0) position and remove the key before performing service near moving parts such as blades, pulleys, motors, belts, and chains. If the key is turned on and moving parts activated, serious injury or death may result.

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



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

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



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

2. Lubricate the rails by wiping them with Dexron III ATF transmission fluid.

Lubrication will help protect the rails from corrosive elements such as acid rain and/or moisture from nearby bodies of saltwater (if applicable). This lubrication is essential to maintain the integrity of the track rails and track rollers and to achieve long service life.

- **3.** Remove sawdust from the track roller housings and brush any sawdust buildup from the housings every twenty-five hours of operation.
- **4.** Check the track scrapers (2 per track roller housing) for a firm fit against the rail.

If a track scraper needs to be adjusted, loosen the screw, push the scraper downward until it fits firmly against the rail, and retighten the screw.

## See Figure 5-3.

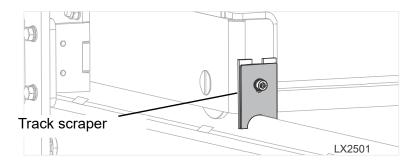


FIG. 5-3

## 5.6 Vertical Mast Rails



**WARNING!** Turn the key switch to the OFF (0) position and remove the key before performing service near moving parts such as blades, pulleys, motors, belts, and chains. If the key is turned on and moving parts activated, serious injury or death may result.

Wipe the vertical mast rails with Dexron III ATF transmission fluid every 50 hours of operation.



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

#### 5.7 Miscellaneous



**WARNING!** Turn the key switch to the OFF (0) position and remove the key before performing service near moving parts such as blades, pulleys, motors, belts, and chains. If the key is turned on and moving parts activated, serious injury or death may result.

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



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

- 2. Grease the clamps and side support pivots with a NLGI No. 2 grade lithium grease every fifty hours of operation.
  - 3. Check the mill alignment after every setup (See Section SECTION 7).
- 4. Make sure all safety warning decals are readable.

Remove sawdust and dirt covering warning decals. Replace any damaged or unreadable decals immediately. Order decals from your Customer Service Representative.

**5.** Replace the idle blade wheel belt as necessary. (Use only belts supplied by Wood-Mizer.)

## 5.8 Drive Belt Adjustment



**WARNING!** For electrical motors, disconnect and lockout power before performing any service to the electrical system. Failure to follow this may result in injury or death.



**WARNING!** Do not adjust the motor drive belts or belt support bracket with the motor running. Doing so may result in serious injury or death.

**See Table 5-2.** See the table below for drive belt tension specifications.

50	$\geq$

New Belt Installation		
Check After	Deflection	Force
20 hrs	5mm (3/16")	3.5kg (7,7 lbs.)

Subsequent Adjustment		
Check Every	Deflection	Force
50 hrs	5mm (3/16")	3kg (6,6 lbs.)

**TABLE 5-2** 

#### **ADJUST THE DRIVE BELT TENSION**

The drive belt tension should be adjusted by moving the motor mount plate. To make the adjustment, perform the following steps:

1. Loosen the engine mounting bolts and the jam nuts.

## See Figure 5-4.

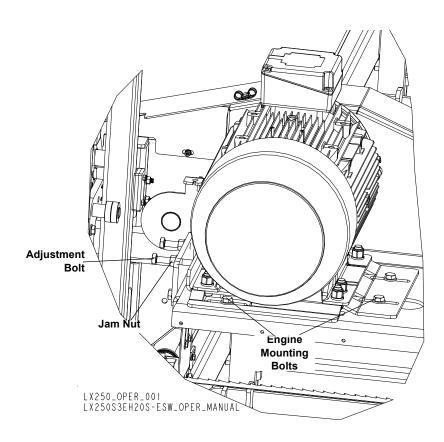


FIG. 5-4

**2.** Using the adjustment bolts, shown in the figure, adjust the belt tension to approximately 5 mm deflection with 3-3,5 kg of deflection force (Table 5-2).

## See Figure 5-5.

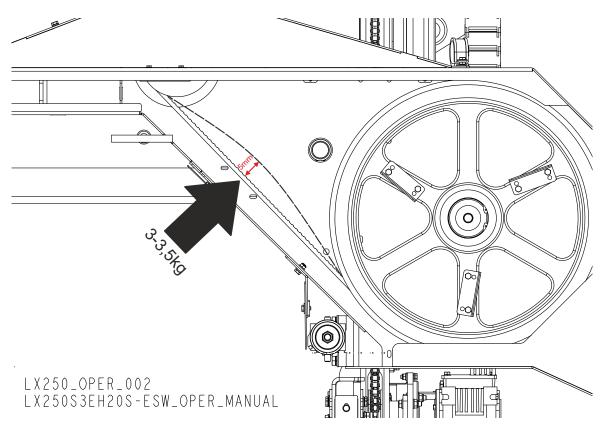
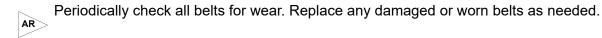


FIG. 5-5

3. Tighten the jam nuts and the motor mounting bolts.



# 5.9 Up/Down System



**WARNING!** Turn the key switch to the OFF (0) position and remove the key before performing service near moving parts such as blades, pulleys, motors, belts, and chains. If the key is turned on and moving parts activated, serious injury or death may result.

# AR> AL

## ADJUST THE UP/DOWN CHAIN AS NEEDED.

The up/down chain is adjusted to level the sawhead.

- **1.** Locate the chain adjusting bolt at the bottom of the mast.
- **2.** Loosen the adjustment nut provided on the bottom of the sprocket assembly and move the sprocket up/down until the sawhead is level.
- **3.** Repeat on the other side as necessary.

## See Figure 5-6.

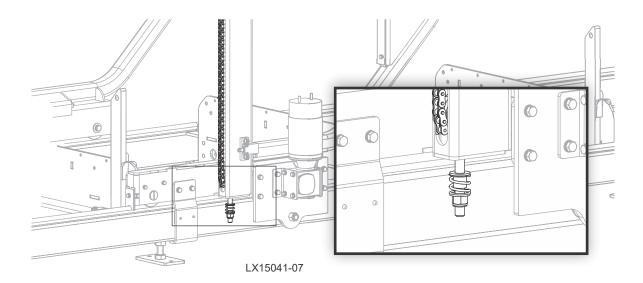
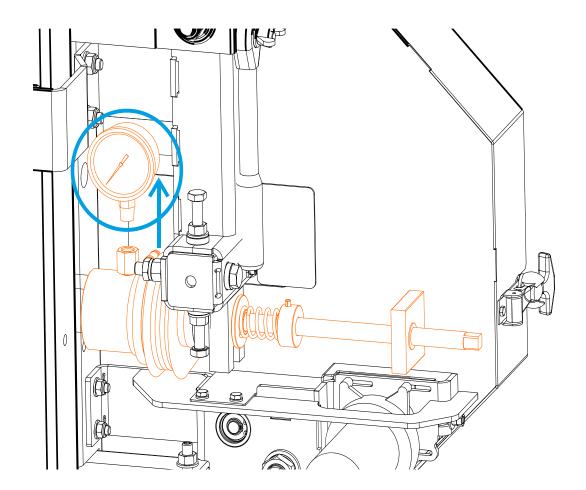


FIG. 5-6

# 5.10 Filling Blade Tensioner Cylinder with Oil

- 1. Loosen the blade tensioner completely.
- 2. Unscrew the oil pressure gauge.



**3.** Using an oiler equipped with a tube / hose, top up the oil level until the oil flows out of the cylinder.

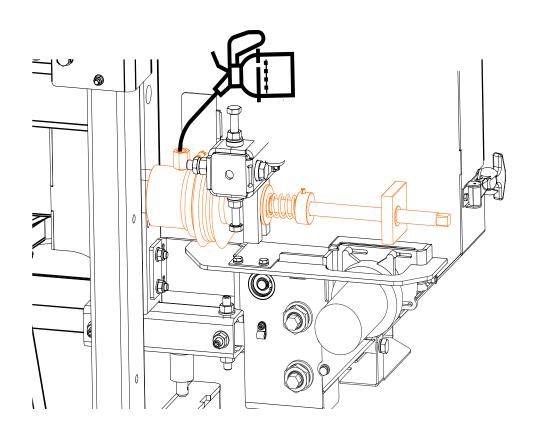


IMPORTANT! The cylinder needs to be filled with MOBIL DTE 10 Excel 32 Hydraulic Oil (#WM part number: °P12825).

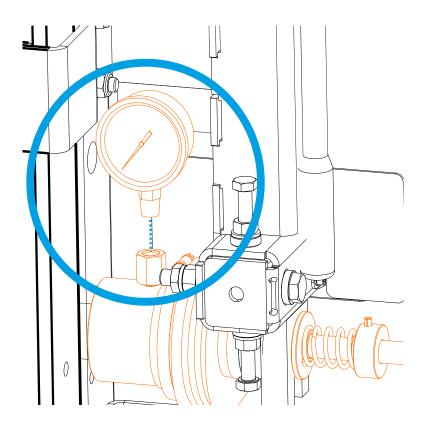


**IMPORTANT!** When topping up the oil level, make sure that the end of the oiler tube / hose is at the bottom of the cylinder.

**4.** Wait 5 minutes. If the oil level does not lower, move on to the next step. If the oil level lowers, top up the oil level until the oil flows out of the cylinder.



**5.** Seal the oil pressure gauge with Teflon tape and screw it back.



# **SECTION 6 TROUBLESHOOTING GUIDE**

# 6.1 Sawing Problems



**WARNING!** Turn the key switch to the OFF (0) position and remove the key before performing service near moving parts such as blades, pulleys, motors, belts, and chains. If the key is turned on and moving parts activated, serious injury or death may result.

PROBLEM	CAUSE	SOLUTION
Blades Dull Quickly	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: Read the instructions with your blade sharpening equipment carefully
Blades break prematurely	Poor sharpening techniques	Read the instructions with your blade sharpening equipment carefully
	Rubber belts on idle blade wheel worn to a point that blade contacts metal pulley - look for shiny spots on edge of wheels	Change idle blade wheel belts
	Tension too tight	Tension blade to recommended specifications
Blade does not track right on drive wheel	Cant adjustment is incorrect	Readjust
Blade guides do not spin while cutting	Frozen bearings	Replace bearings
Drive belts wear prematurely or jump	Engine/motor and drive pulleys out of alignment	Align pulleys
Boards thick or thin on ends or middle of board.	Stress in log which causes log to not lay flat on the bed.	After log has been squared, take equal cuts off opposing sides. Take a board off the top. Turn the log 180 degrees. Take a board off. Repeat, keeping the heart in the middle of the cant, and making it your last cut.
	Set in teeth.	Resharpen and reset blade.
	Bed rails misaligned.	Realign sawmill bed.
		TABLE 6-0

6-1 WMdoc121223 Troubleshooting Guide

PROBLEM	CAUSE	SOLUTION	
Height adjustment jumps or stutters when moving up or down.	Up/down chain improperly adjusted.	Adjust up/down chain.	
	Vertical wear pads are too tight.	Adjust pads.	
Lumber is not square	Vertical side supports not square to bed	Adjust side supports.	
	Blade not parallel to bed rails	Adjust bed rails parallel to blade.	
	Sawdust or bark between cant and bed rails	Remove particles	
	Tooth set problems	Resharpen and reset blade	
Sawdust builds up on track	Excessive oiling	Do not oil track	
	Track wipers worn	Adjust wipers to firmly contact track	
	Track is sticky	Clean track with solvent and apply silicone spray	
Wavy cuts	Excessive feed	Slow feed rate	
	Improperly sharpened blade (This will be the problem 99% of the time!)	Resharpen blade, following the sharpener's instructions carefully	
	Blade guides improperly adjusted	Adjust blade guides.	
	Sap buildup on blade	Use Water Lube.	
	Tooth set problem	Resharpen and reset blade	
		TARLE 6-0	

TABLE 6-0

### SECTION 7 SAWMILL ALIGNMENT

Two alignment procedures are available to realign the sawmill if necessary. The Routine Alignment instructions should be performed as necessary to solve sawing problems not related to blade performance. The Complete Alignment procedure should be performed approximately every 1500 hours of operation.

**NOTICE:** These steps build on each other and should be performed in sequence.

### 7.1 Routine Alignment Procedure

Prepare the sawmill for alignment.

Adjust the blade parallel to the bed rails.

Adjust the blade guide arm parallel to the saw head main tube.

Align blade guide arm parallel to the blade.

Adjust side supports square to the bed.

Final adjustments.

#### Prepare the sawmill for alignment.

Before performing the setup procedures from Section 3: setup the mill on firm, level ground, level the bed, and adjust the legs so the entire frame is level.

#### **BLADE REPLACEMENT**

- 1. Remove the blade and check the blade wheel belts.
- 2. Remove any sawdust buildup from the surface of the belts.
- 3. Replace worn belts if they do not keep the blade from contacting the blade wheel.
- **4.** Perform subsections *3.2 Tensioning the Blade*, and *3.4 Tracking the Blade*.

### **Blade Guide Arm Alignment**

The blade guide arm moves the outer blade guide in and out. If the arm becomes loose, the blade guide will not deflect the blade properly, causing inaccurate cuts. A loose blade guide arm can also cause blade vibration.

- 1. Remove the front cover from the blade guide arm assembly (4 bolts on front).
- **2.** Remove the bottom cover (2 nuts and 2 flat washers)
- 3. Open the saw head door to gain access to the rear nuts of the 4 blade arm roller assemblies.

# ALIGN THE BLADE GUIDE ARM VERTICALLY (PARALLEL TO THE SAW HEAD MAIN TUBE)

- **4.** Adjust the blade guide arm to within 1/2" (13 mm) of fully retracted (blue/right position in Figure 7-1)
- **5.** Measure the distance between the saw head main tube and the blade guide arm. See Fig. 7-1.
- **6.** Fully extend the blade guide arm.
- **7.** Measure the distance between the saw head main tube and the blade guide arm. See Fig. 7-1.

### See Figure 7-1.

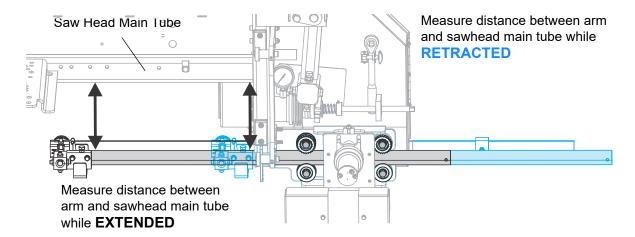


FIG. 7-1

- 8. Adjust the blade guide arm until the two measurements are the same.
  - **NOTE:** Start with the upper/lower roller assemblies on one side and move to the other if necessary.
    - a. Loosen (do not remove) the nut inside the saw head frame.
    - **b.** Loosen the nut between the saw head frame and the grooved rollers.
    - **c.** Turn the eccentric nut until the roller has move the appropriate distance.
    - **d.** Tighten the nut inside the saw head frame.
    - e. Tighten the nut between the saw head frame and the grooved rollers.

### See Figure 7-2. Saw head frame members are removed for illustration purposes only.

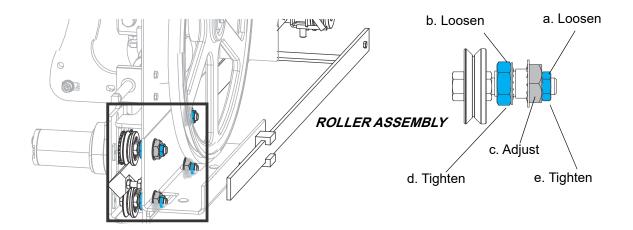


FIG. 7-2

### ALIGN THE BLADE GUIDE ARM HORIZONTALLY (PARALLEL TO THE BLADE)

- **9.** Fully extend the blade guide arm. See Fig.7-1.
- 10. Measure the distance between the blade and the blade guide arm near the blade guide.
- **11.** Measure the distance between the blade and the blade guide arm near the saw head frame.

### See Figure 7-3.

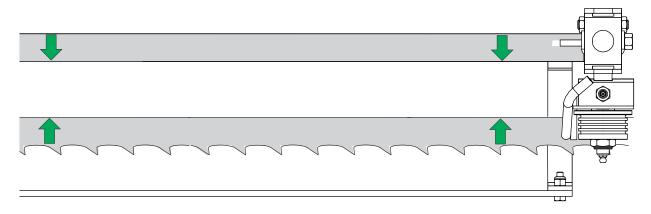


FIG. 7-3

**12.** Adjust the blade guide arm until the two measurements are the same.

**NOTE:** Start with the upper/lower roller assemblies on one side and move to the other if necessary.

Multiple trials may be needed to obtain the proper alignment.

- **a.** Loosen (do not remove) the nut inside the saw head frame.
- **b.** Adjust the roller assembly bolt (loosen/tighten as necessary) on the end of the roller assembly.
- **c.** Move the rollers the appropriate distance in or out until the measurements are the same.
- **d.** Tighten the nut inside the saw head.

#### See Figure 7-4.

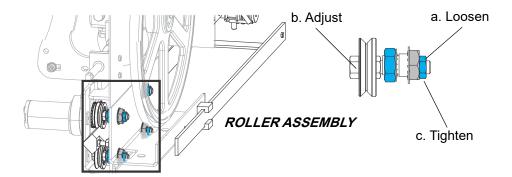


FIG. 7-4

**NOTICE:** Check the alignment of the blade guide arm drive motor sprocket with the roller sprockets. If your adjustments of the rollers misaligns the drive sprockets, loosen the motor mount bolts (located on the bottom of the mounting bracket) and move in or out as needed. Tighten the bolts.

**13.** Reassemble all blade guide arm covers removed in steps 1 and 2 of this section.

### Blade Guide Vertical Tilt Alignment

The blade guides should be adjusted properly in the vertical plane. If the blade guides are tilted vertically, the blade will try to travel in the tilted direction.

A Blade Guide Alignment Tool (BGAT) is provided to help you measure the vertical tilt of the blade.

**14.** Open the blade guide arm to within 1/2" (13 mm) of fully open.

**15.** Clip the alignment tool on the blade.

**NOTICE:** Position the tool close to the outer blade guide assembly. Be sure the tool does not rest on a tooth or burr, and is lying flat against the bottom of the blade.

### See Figure 7-5.

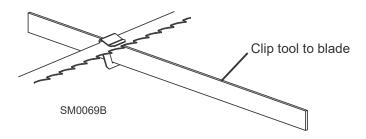


FIG. 7-5

- **16.** Move the mast so that the front end of the tool is positioned above the bed rail.
- **17.** Measure the distance from the bed rail to the bottom edge of the tool.
- **18.** Move the mast so that the back end of the tool is positioned above the bed rail.
- **19.** Measure the distance from the bed rail to the bottom edge of the tool.
- **20.** If the measurement from the tool to the bed rail is not equal within 1/32" (.75 mm), adjust the vertical tilt of the outer blade guide roller.

#### See Figure 7-6.

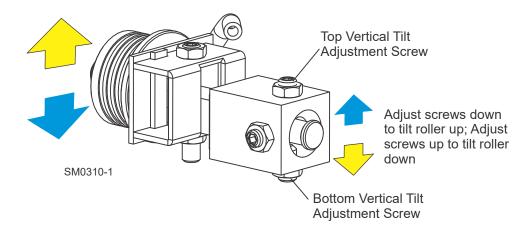


FIG. 7-6

**21.** Loosen one set screw at the side of the blade guide assembly.

22. Loosen the jam nuts on the top and bottom vertical tilt adjustment screws.

To tilt the roller up, loosen the bottom screw and tighten top screw. To tilt the roller down, loosen the top screw and tighten the bottom screw.

- 23. Tighten the jam nuts and recheck the tilt of the blade.
- **24.** Move the blade guide alignment tool close to the inner blade guide roller assembly and repeat the above steps.
- 25. Adjust the vertical tilt of the inner blade guide, if necessary.

#### Blade Guide Horizontal Tilt Adjustment

If the blade guides are tilted in the wrong direction horizontally, the back of the blade may contact the flange as the roller is spinning down, causing it to push the blade away from the guide roller.

**1.** Remove the blade guide alignment tool from the blade and adjust the blade guide arm halfway in.

### See Figure 7-7.

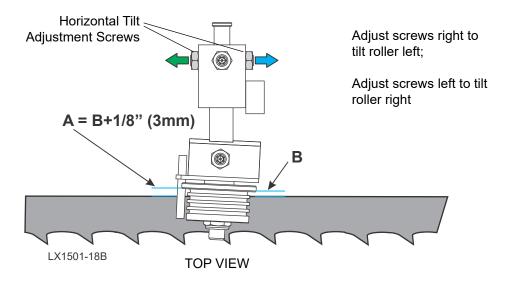


FIG. 7-7

- 2. Measure between the back edge of the blade and the blade guide roller at the left side of the blade guide ("A").
- **3.** Measure between the back edge of the blade and the blade guide roller at the right side of the blade guide ("B").

The roller should be tilted slightly to the left ('A' 1/8" [3 mm] less than 'B' ±1/8" [3 mm]).

4. Loosen the jam nuts on the horizontal tilt adjustment screws.

To tilt the roller left, loosen the right screw and tighten left screw. To tilt the roller right, loosen the left screw and tighten the right screw.

- 5. Tighten the jam nuts and recheck the tilt of the blade
- 6. Repeat the above steps for the other blade guide roller assembly.

#### Blade Guide Flange Spacing

Each blade guide must be adjusted so the roller flange is the correct distance from the back edge of the blade. If the flange is too close to or too far from the blade, the sawmill will not cut accurately.

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

#### **OUTER BLADE GUIDE**

- **1.** Ensure that the distance between the flange on the outer blade guide roller to the back edge of the blade measures to 1/8" (3.0 mm).
- 2. Adjust the roller back or forward if necessary.

### See Figure 7-8.

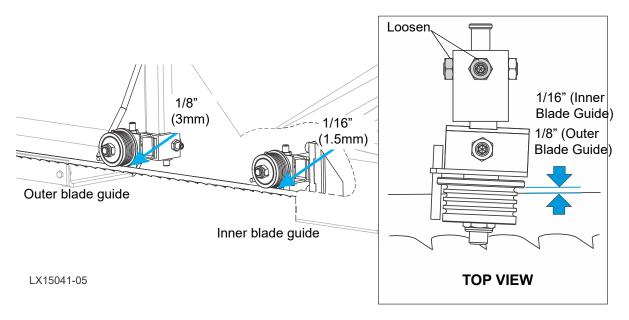


FIG. 7-8

- 3. Loosen the top screw and one side screw.
- **4.** Gently tap the blade guide forward or backward until properly positioned.
- **5.** Retighten the screws and jam nuts.

#### **INNER BLADE GUIDE**

- **6.** Ensure that the distance between the flange on the outer blade guide roller to the back edge of the blade measures to 1/16" (1.5 mm).
- 7. Adjust the roller back or forward, as described above.

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

#### 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.** Move the saw mast so the blade is positioned directly above one of the bed rails.
- 2. Measure from the bottom edge on a down-set tooth of the blade to the top of the bed rail, near the inner blade guide assembly.

If the scale does not indicate the actual distance from the blade to the bed rail when viewed level at the indicator, adjust the indicator.

### See Figure 7-9.

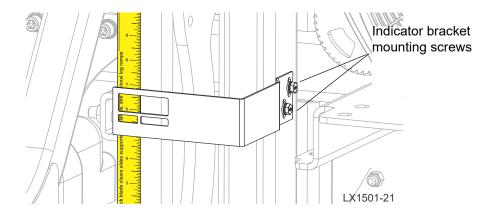


FIG. 7-9

- 3. Loosen the indicator bracket mounting screws.
- **4.** Adjust the bracket up or down until the indicator is aligned with the correct mark on the scale (+0 -1/32 [0.8 mm]).
- **5.** Retighten the indicator mounting screws.

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

### 7.2 Complete Alignment Procedure

The Complete Alignment procedure should be performed approximately every 1500 hours of operation (sooner if you regularly transport the sawmill over rough terrain).

**NOTICE:** The alignment procedures should be done in the order listed here, as each procedure builds on the previous procedure.

#### Frame Setup

Before performing the following alignment procedures, setup the mill on firm, level ground.

Level the frame and adjust the saw head.

#### Complete Blade Replacement

- 1. Open the sawhead and remove the saw blade.
- 2. Replace the blade wheel belts.

**NOTE:** New blade wheel belts are required to perform the complete alignment procedure.

- **3.** Blow sawdust off of the blade guide assemblies and blade housings.
- **4.** Remove the blade guide assemblies.

**NOTE:** To remove the blade guide assemblies and maintain the tilt adjustments, only loosen one side screw and the top screw. Leaving the other side screw and bottom screw in position will insure you will return the rollers to their original tilt adjustment.

- **5.** Adjust the outer blade guide arm until the outer blade guide is approximately 24" from the inner blade guide.
- **6.** Install a new blade and apply the appropriate tension.
- 7. Close the blade housing covers and make sure all persons are clear of the saw head.
- **8.** Start the engine.
- **9.** Engage the blade momentarily, rotating the blade until the blade positions itself on the wheels.
- **10.** Disengage the blade.
- **11.** Turn the engine off.

### **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 cut in the tilted direction. If the blade wheels are tilted horizontally, the blade will not track properly on the wheels.

#### **DRIVE-SIDE BLADE WHEEL**

**1.** Attach the Blade Guide Alignment Tool (p/n LTBGAT) to the blade as close to the wheel as possible without anything interfering with the tool.

**NOTICE:** Be sure the tool does not rest on a tooth or burr, and is lying flat against the bottom of the blade.

### See Figure 7-10.

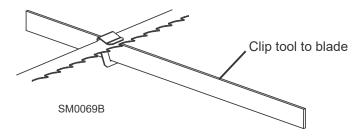
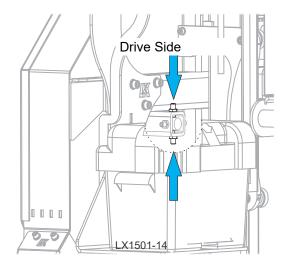


FIG. 7-10

- 2. Move the saw mast so the front end of the tool is positioned over the first bed rail.
- 3. Measure from the bottom of the tool to the top surface of the bed rail.
- 4. Move the saw mast so the rear of the tool is positioned over the bed rail.
- 5. Measure from the bottom of the tool to the top surface of the bed rail.
- **6.** 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 7-11.



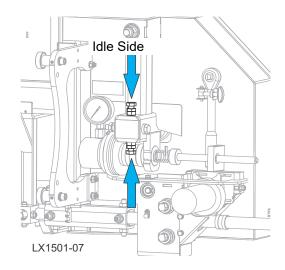


FIG. 7-11

- 7. Use the vertical adjustment screws to adjust the drive-side blade wheel.
  - 1). To tilt the wheel down, loosen the top adjustment screw one quarter turn.
  - 2). Loosen the jam nut on the bottom adjustment screw and tighten the screw.
  - 3). Tighten the top and bottom jam nuts.
  - **4).** To tilt the wheel up, loosen the bottom adjustment screw one quarter turn.
  - **5).** Loosen the jam nut on the top adjustment screw and tighten the screw.
  - 6). Tighten the top and bottom jam nuts
- **8.** Recheck the vertical tilt of the drive-side blade wheel with the blade guide alignment tool.
- **9.** 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]).

#### **IDLE-SIDE BLADE WHEEL**

- 1. Move the blade guild arm fully to the right.
- 2. Remove the tool from the blade and reattach it as close to the idle-side wheel as possible without anything interfering with the tool.

- 3. Measure from the tool to the bed rail at both ends of the tool.
- **4.** 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 in the same manner as in Step 7.
- **5.** 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]).

#### **BLADE TRACKING**

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

The horizontal tilt of the blade wheel should be adjusted so that the blade tracks with the gullet of an 1-1/4" blade at 1/8" (3 mm) out from the front edge of the wheel (±1/32 [0.75 mm]).

#### See Figure 7-12.

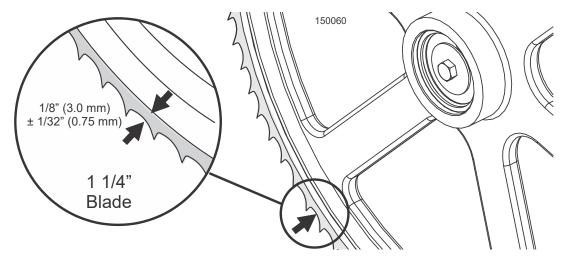
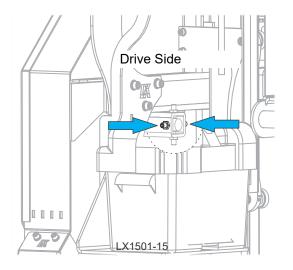


FIG. 7-12

7. Use the cant control adjustment to adjust the idle-side blade wheel.

If the blade is too far forward on the wheel, turn the cant control counterclockwise. If it is too far back on the wheel, turn the cant control clockwise.

### See Figure 7-13.



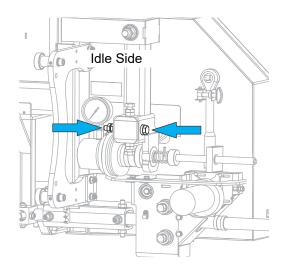


FIG. 7-13

**8.** If necessary, adjust the drive-side blade wheel to position the blade as shown in Figure 7-12.

**NOTE:** To move the blade back onto the blade drive wheel, loosen the right adjustment screw one quarter turn. Loosen the jam nut on the left adjustment screw and tighten the screw. Tighten the left and right jam nuts.

To move the blade out on the wheel, loosen the left adjustment screw one quarter turn. Loosen the jam nut on the right adjustment screw and tighten the screw. Tighten the left and right jam nuts.

### Blade Guide Re-installation

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

- 1. Position outer blade guide assembly (with waterlube tube) to the mounting block on the blade guide arm so the that roller flange is 1/8" (3.0 MM) from the blade.
- 2. Position the inner blade guide assembly to the mounting block on the saw head so that the roller flange is 1/16" (1.5 MM) from the blade.
- **3.** Tighten the two previously-loosened tilt adjustment screws to secure the blade guide assembly.

### See Figure 7-14.

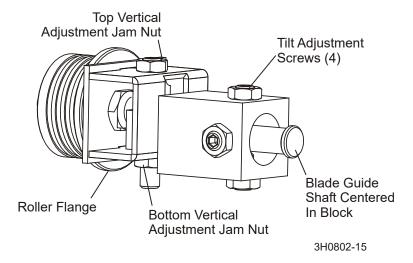


FIG. 7-14

**4.** Loosen the top vertical adjustment jam nut and tighten the bottom vertical adjustment jam nut to adjust the blade guide roller up so it **DOES NOT TOUCH THE BLADE**.

#### **Blade Guide Deflection**

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

- **1.** Raise the saw head 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.
- **2.** Make sure the two vertical adjustment set screws are threaded into the blade guide shaft until they touch each other.

See Figure 7-15.

Loosen the bottom jam nut and tighten the top jam nut until the blade guide deflects the blade down until the bottom of the blade measures 14 3/4" (370 mm) from the bed rail.

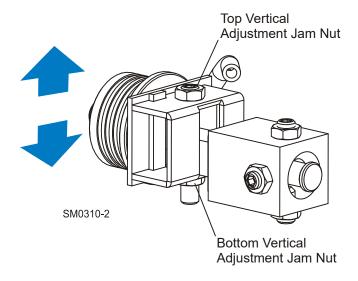


FIG. 7-15

**3.** Repeat for the other blade guide.

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

### Blade Guide Vertical Tilt Alignment

The blade guides should be adjusted properly in the vertical plane. If the blade guides are tilted vertically, the blade will try to travel in the tilted direction.

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" (13 mm) from full open.
- **2.** Clip the alignment tool on the blade. Position the tool close to the outer blade guide assembly. Be sure the tool does not rest on a tooth or burr, and is lying flat against the bottom of the blade.

### See Figure 7-16.

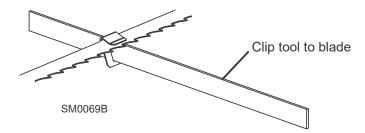


FIG. 7-16

- **3.** Move the mast so that the front end of the tool is positioned above the bed rail. Measure the distance from the bed rail to the bottom edge of the tool.
- **4.** Move the mast so that the back end of the tool is positioned above the bed rail. Measure the distance from the bed rail to the bottom edge of the tool.
- **5.** If the measurement from the tool to the bed rail is not equal within 1/32" (.75 mm), adjust the vertical tilt of the outer blade guide roller.

#### See Figure 7-17.

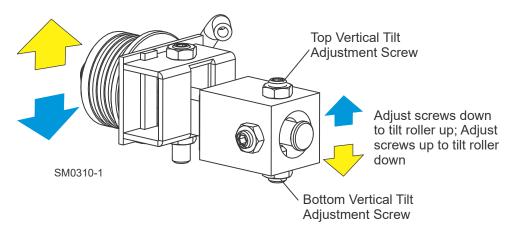


FIG. 7-17

- 6. Loosen one set screw at the side of the blade guide assembly.
- 7. Loosen the jam nuts on the top and bottom vertical tilt adjustment screws.

To tilt the roller up, loosen the bottom screw and tighten top screw. To tilt the roller down, loosen the top screw and tighten the bottom screw.

**8.** Tighten the jam nuts and recheck the tilt of the blade.

**9.** Move the blade guide alignment tool close to the inner blade guide roller assembly and repeat the above steps. Adjust the vertical tilt of the inner blade guide if necessary.

#### Blade Guide Flange Spacing

Each blade guide must be adjusted so the roller flange is the correct distance from the back edge of the blade. If the flange is too close to or too far from the blade, the sawmill will not cut accurately.

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

#### **OUTER BLADE GUIDE**

- **1.** Ensure that the distance between the flange on the outer blade guide roller to the back edge of the blade measures to 1/8" (3.0 mm).
- 2. Adjust the roller back or forward if necessary.

#### See Figure 7-18.

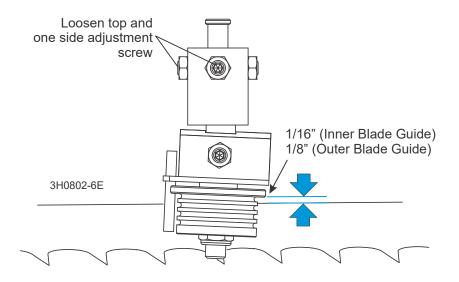


FIG. 7-18

- **3.** Loosen the top screw and one side screw.
- **4.** Gently tap the blade guide forward or backward until properly positioned.
- **5.** Retighten the screws and jam nuts.

#### INNER BLADE GUIDE

- **6.** Ensure that the distance between the flange on the outer blade guide roller to the back edge of the blade measures to 1/16" (1.5 mm). (See Figure 7-18.)
- **7.** Adjust the roller back or forward, as described above.

### 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. Move the saw mast so the blade is positioned directly above one of the bed rails.
- **2.** Measure from the bottom edge on a down-set tooth of the blade to the top of the bed rail, near the inner blade guide assembly.
- **3.** If the scale does not indicate the actual distance from the blade to the bed rail when viewed level at the indicator, adjust the indicator.

#### See Figure 7-19.

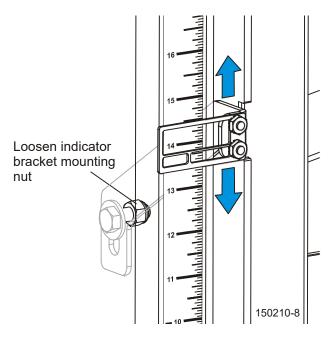


FIG. 7-19

- 4. Loosen the indicator bracket mounting nut.
- **5.** Adjust the bracket up or down until the indicator is aligned with the correct mark on the scale (+0 -1/32 [0.8 mm]).

**6.** Retighten the indicator mounting nut.

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

### **SECTION 8 SPECIFICATIONS**

Model: LX250

Dimensions:

**Blade:** 5460mm (215")

Weights:

**Basic Unit:** 1343kg (2960 lbs) **Shipping weight:** 1515kg (3340 lbs)

Log Capacity:

Length: 4m [156" (13')]
Bed extension: 1,85m (73")

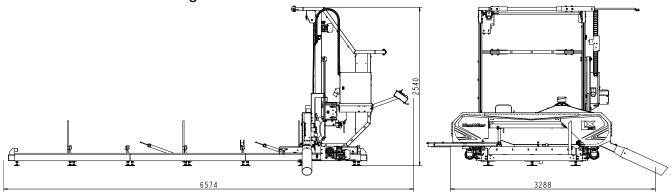
Log diameter: 1,4m (55")
Cut diameter: 1,38m (54.5")

Motor Type	Model No.	Specifications	Power
Motor EB20S	Sg160M-2B-HM-T	3 x 230V, 50 Hz	15 kW
Motor EH15S	PSg132 S2-HM	3 x 400V, 50 Hz	11 kW
Motor EH20S	3Sg160M-2B-HM-T	3 x 400V, 50 Hz	15 kW
Motor EH25	1LE10021DA434AA4-Z B16	3 x 400V, 50 Hz	18.5 kW
Motor EH25S	3Sg160L-2-T	3 x 400V, 50 Hz	18.5 kW
Motor EJ15	PSg132 S2-HM 200V	3 x 200V, 60 Hz	11 kW

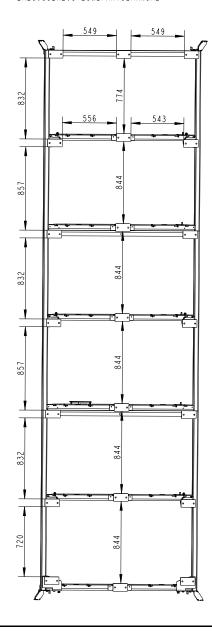


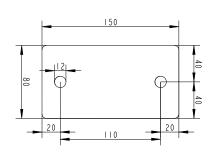
### **LX250 Dimensions**

All dimensions are given in millimeters.



LX250S3EH20S-ESW\_004 LX250S3EH20S-ESW\_PARTS\_MANUAL





# 8.1 Sawdust Extractor Specifications



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

See Table 8-1. The dust extractor specifications are given below.

Maximum Capacity	1200 m <sup>3</sup> /h
Collector Inlet Diameters (in front of fan)	150 mm
Motor Power	1,5 kW
Number of Sacks for Waste	1 pc
Total Capacity of Sacks	0.25 m <sup>3</sup>
Weight	110 kg
Conveying Speed When 10 m Long Hose Is Used	20 m/s

TABLE 8-1

Specifications WM doc 12/12/23 8-3

### 8.2 Noise Level

**See Table 8-2.** The average level of noise generated by the LX250 sawmill is given in the table below 12.

Sawmill	Noise Level:
LX250E20	$L_{pA}$ = 82,8 dB (A); $L_{WA}$ = 104,7 dB (A)

TABLE 8-2

8-4 WM doc 12/12/23 Specifications

<sup>1.</sup> 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.

<sup>2.</sup> The measured values refer to emission levels, not necessarily to noise levels in the workplace. Although there is a relation between emission 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.



Specifications WM doc 12/12/23 8-5

# **INDEX**

0
operation edging 4-9 sawing 4-8
P
power feed
operation 4-2 speed adjustment 4-1, 4-2
S
safety instructions 1-1 symbols 1-1
scale blade height operation 4-10 inch height 4-10 quarter inch 4-11
service information branch locations 1-v general contact info 1-iv
specifications engine/motor 8-4
T
troubleshooting 6-1 sawing problems 6-1
U  up/down operation 4-7



water lube operation 4-11