

Wood-Mizer[®] Sawmill

Safety, Setup, Operation & Maintenance Manual

LT15

rev. A.00 - E3.02



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

December 2000

Form #852

Table of Contents

Section-Page

SECTION 1	INTRODUCTION	1-1
1.1	About This Manual.....	1-1
1.2	Customer and Sawmill Identification.....	1-2
1.3	Getting Service.....	1-4
	<i>General Contact Information.....</i>	<i>1-4</i>
	<i>Branches & Authorized Sales Centers.....</i>	<i>1-5</i>
1.4	Specifications.....	1-7
SECTION 2	SAFETY	2-1
2.1	Safety Symbols.....	2-1
2.2	Safety Instructions.....	2-2
SECTION 3	SAWMILL SETUP	3-1
3.1	Sawmill Setup.....	3-1
3.2	Replacing The Blade.....	3-5
3.3	Tensioning The Blade.....	3-6
3.4	Tracking The Blade.....	3-7
3.5	Starting The Engine.....	3-10
SECTION 4	SAWMILL OPERATION	4-1
4.1	Loading, Turning And Clamping Logs.....	4-1
4.2	Up/Down Operation.....	4-7
4.3	Blade Guide Arm Operation.....	4-9
4.4	Clutch Operation.....	4-10
4.5	Feed Operation.....	4-12
4.6	Cutting The Log.....	4-14
4.7	Edging.....	4-16
4.8	Blade Height Scale.....	4-17
4.9	Water Lube Operation.....	4-19
4.10	Loading & Transporting the Sawmill.....	4-22
SECTION 5	MAINTENANCE	5-1
5.1	Wear Life.....	5-1
5.2	Blade Guides.....	5-2
5.3	Sawdust Removal.....	5-3
5.4	Carriage Track, Wiper & Scrapers.....	5-4
5.5	Vertical Mast Rails.....	5-6
5.6	Miscellaneous.....	5-7
5.7	Blade Wheel Belts.....	5-8
5.8	Brake Adjustment (Rev. D4.00 - D7.00 Only).....	5-9
5.9	Drive Belt Adjustment.....	5-10
5.10	Clutch Adjustment.....	5-14
5.11	Up/Down System.....	5-17
5.12	Charging The Battery (D10/G15 Only).....	5-19

Table of Contents

Section-Page

	MAINTENANCE LOG	5-21
SECTION 6	TROUBLESHOOTING GUIDE	6-1
6.1	Sawing Problems	6-1
SECTION 7	SAWMILL ALIGNMENT	7-1
7.1	Routine Alignment Procedure	7-1
	<i>Blade Installation</i>	7-1
	<i>Blade Guide Arm Alignment</i>	7-2
	<i>Blade Guide Vertical Tilt Alignment</i>	7-4
	<i>Blade Guide Horizontal Tilt Adjustment</i>	7-6
	<i>Blade Guide Flange Spacing</i>	7-8
	<i>Side Support Alignment</i>	7-9
	<i>Blade Height Scale Adjustment</i>	7-11
7.2	Complete Alignment Procedure	7-12
	<i>Frame Setup</i>	7-12
	<i>Blade Installation</i>	7-13
	<i>Blade Wheel Alignment</i>	7-14
	<i>Blade Guide Installation</i>	7-20
	<i>Blade Guide Arm Alignment</i>	7-21
	<i>Blade Guide Deflection</i>	7-23
	<i>Blade Guide Vertical Tilt Alignment</i>	7-24
	<i>Blade Guide Horizontal Tilt Adjustment</i>	7-26
	<i>Blade Guide Flange Spacing</i>	7-28
	<i>Side Support Alignment</i>	7-29
	<i>Blade Height Scale Adjustment</i>	7-30
SECTION 8	SAWMILL ASSEMBLY	8-1
8.1	Overview	8-1
8.2	Leg Assembly	8-3
8.3	Bed Section Assembly.....	8-4
	<i>LT15BS Rev. A</i>	8-4
	<i>LT15BS Rev. B.00+</i>	8-5
	<i>LT15BS Retrofit</i>	8-6
8.4	Bed Extension Option.....	8-7
8.5	Clamp Assembly	8-8
8.6	Frame Leg Adjustment	8-10
8.7	Saw Carriage Assembly	8-11
8.8	Feed Rope Assembly	8-15
8.9	Engine Assembly.....	8-19
8.10	Battery Assembly	8-20
8.11	Auxiliary Bed Rail.....	8-22

INDEX

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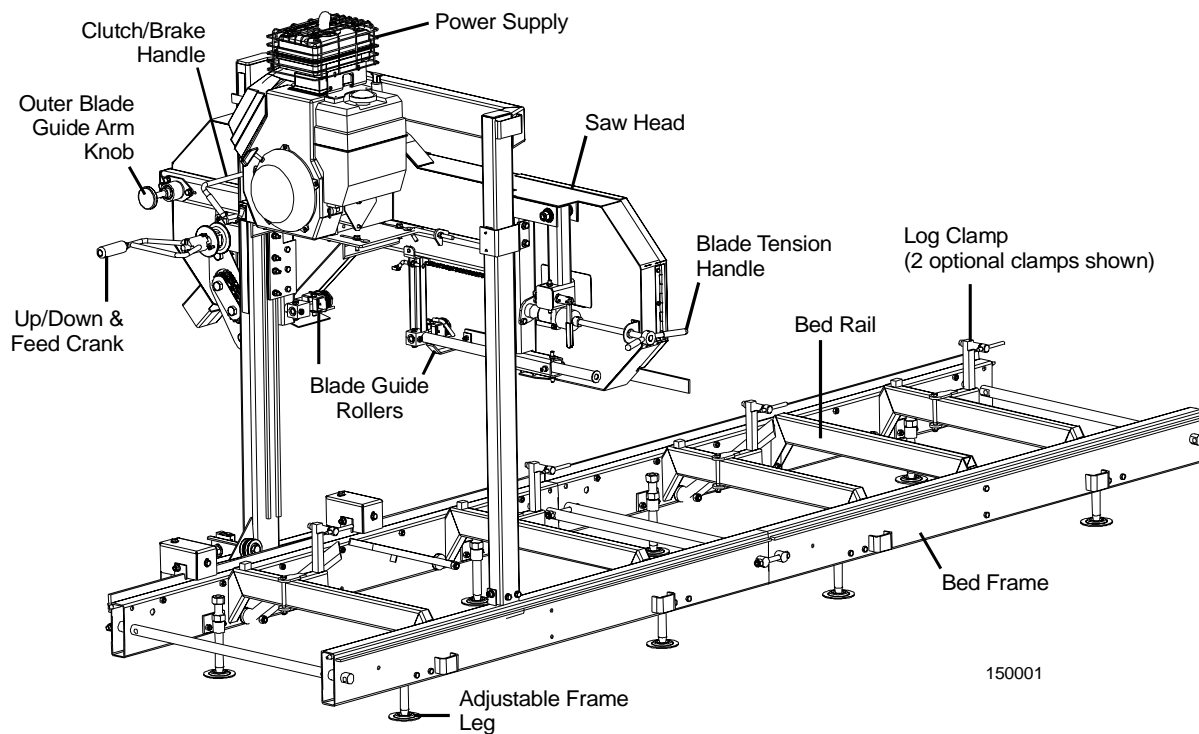
SECTION 1 INTRODUCTION

1.1 About This Manual

This manual is to replace or to be used with all previous information received on the Wood-Mizer® sawmill. All future mailings will be an addition to or a revision of individual sections of this manual as we obtain new information.

The information and instructions given in this manual do not amend or extend the limited warranties for the equipment given at the time of purchase.

For general information regarding Wood-Mizer and our “Forest to Final Form” products, please refer to the All Products Catalog in your support package.



*Wood-Mizer® is a registered trademark of Wood-Mizer Products, Inc.
Sawmill U.S. Patent Nos.: 4,878,411

1.2 Customer and Sawmill Identification

Each Wood-Mizer LT15 sawmill is identified with a model number, revision, and serial number (see the figure below).

MFG BY/FABRIQUÉ PAR: WOOD-MIZER PRODUCTS, INC. 8180 W. 10th St. Indianapolis, 46214-2400 U.S.A. 317/271-1542 Or 800/553-0182	
Model No.:	LT15 G13
Serial No.:	09970001
Rev.:	A1.00
Sawmill U.S. Patent Nos. 3,935,780 and 4,559,858; Brevet au Canada 1986 No. 1,211,684 Brevete 1986; Dry Kiln U.S. Patent Nos. 4,620,373 et 4,490,926. Other patents pending.	

SERIAL NUMBER TAG.

The model number includes the base model and the engine/motor configuration. The serial number contains the month and year of manufacture and a sequence number. The revision number helps identify the exact design of the equipment. See the figure for a description of the model, serial, and revision numbers.

Model Number	LT15 Basic Sawmill I.D.	G13 Engine/Motor Configuration
Serial Number	0997 Month/Year of Manufacture	0001 Manufacture Sequence
Revision Number	A1. Major Revision Code	00 Minor Revision Code

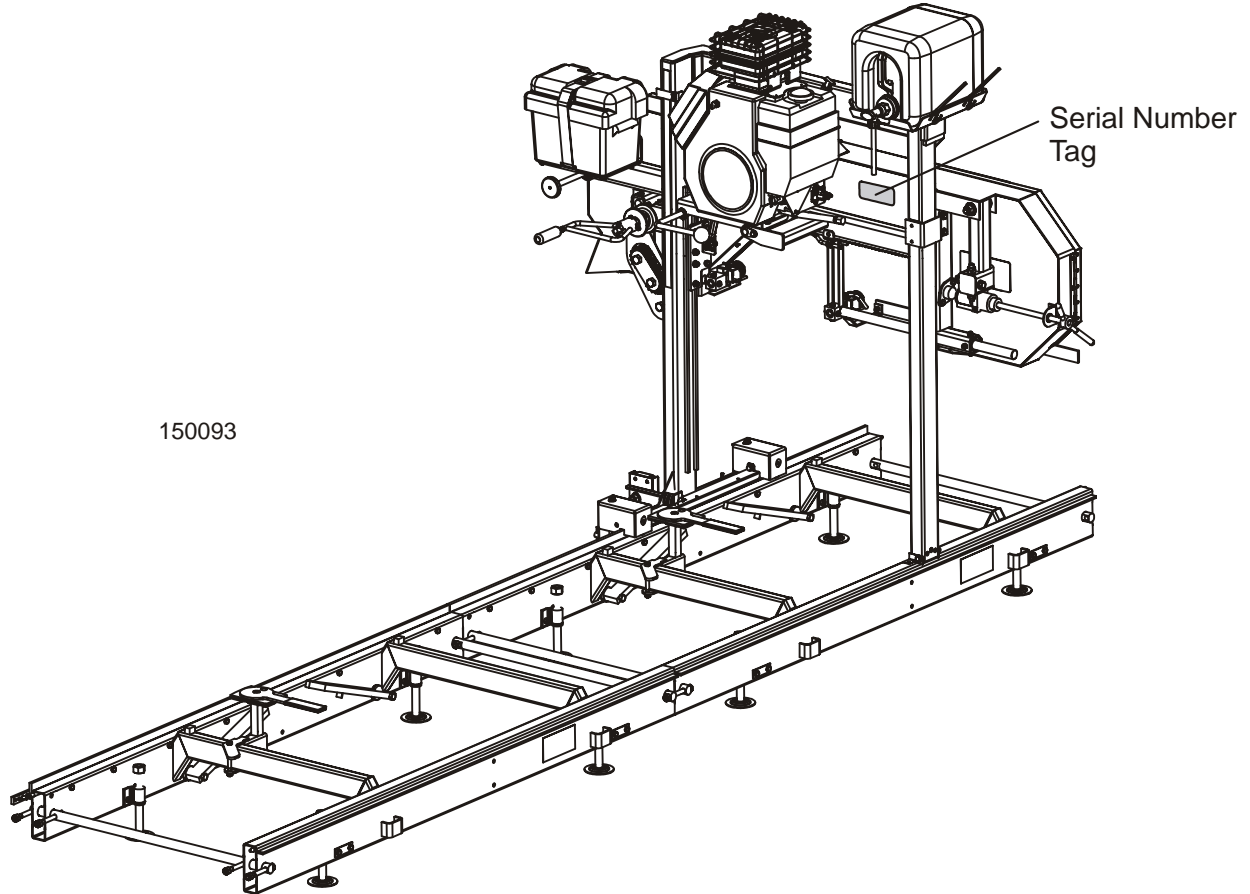
MODEL, SERIAL, AND REVISION NUMBER DESCRIPTION.

1

Introduction

Customer and Sawmill Identification

The serial number tag can be found at the following location.



SERIAL NUMBER TAG LOCATION.

1.3 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

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

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

Office Hours: All times are Eastern Standard Time.

Monday - Friday	Saturday (Indianapolis Office Only)	Sunday
8 a.m. to 5 p.m.	8 a.m. to 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. In most cases, items will ship on the day they are ordered. Second Day and Next Day shipping are available at additional cost.

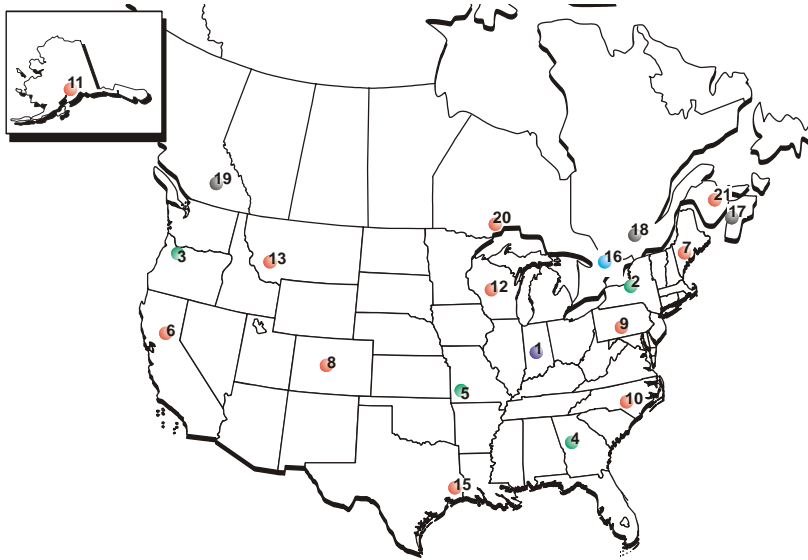
If your sawmill was purchased outside the United States or Canada, contact the distributor for service.

1

Introduction

Branches & Authorized Sales Centers

Branches & Authorized Sales Centers



UNITED STATES

1 World Headquarters
 8180 W. 10th Street
 Indianapolis, IN 46214-2400
 Phone (317) 271-1542
 Fax (317) 273-1011

Wood-Mizer Branches

2 Wood-Mizer Northeast
 8604 State Route 104
 Hannibal, NY 13074
 Phone (315) 564-5722
 Fax (315) 564-7160

3 Wood-Mizer Portland
 24435 N.E. Sandy Blvd.
 Wood Village, OR 97060
 Phone (503) 661-1939
 Fax (503) 667-2961

4 Wood-Mizer South
 74 Pine Road
 Newnan, GA 30263-5141
 Phone (770) 251-4894
 Fax (770) 251-4896

Authorized Sales Centers*

6 California
 6980 Camp Far West Road
 Sheridan, CA 95681
 Phone (530) 633-4316
 Fax (530) 533-2818
 E-mail fwfp@psyber.com

7 Maine
 541 Borough Road
 Chesterville, ME 04938
 Phone (207) 645-2072
 Fax (207) 645-3786
 E-mail woodmzer@megalink.net

8 New Mexico
 425 Bibb Industrial Drive
 Las Vegas, NM 87701
 Phone (888) 545-9663
 Fax (505) 454-6008
 E-mail djold@earthlink.net

CANADA

15 Canadian Headquarters
 217 Salem Road
 Manilla, ON KOM 2J0
 Phone (705) 357-3373
 Fax (705) 357-3443

Wood-Mizer Canada Branches

16 Wood-Mizer Canada East
 Box 173, 1082 #1 Hwy
 Aylesford, NS B0P 1C0
 Phone/Fax (902) 847-9369

17 Wood-Mizer Canada Quebec
 422 Rte. du Canton (Rte. 148)
 Chatham, QC J8G 1R1
 Phone (450) 562-2414
 Fax (450) 562-0314

18 Wood-Mizer Canada West
 4770 46th Avenue S.E.
 Salmon Arm, BC V1E 2W1
 Phone (250) 833-1944
 Fax (250) 833-1945

5 Wood-Mizer Missouri

9664 Lawrence 2130
 N.Mt. Vernon, MO 65712
 Phone (417) 466-9500
 Fax (417) 471-1327

9 Pennsylvania

HCR 75 (Off Old Road 522)
 Shade Gap, PA 17255
 Phone (814) 259-9976
 Fax (814) 259-3016
 E-mail parsons@innernet.net

10 North Carolina

28002 Canton Road
 Albemarle, NC 28001
 Phone (704) 982-1673
 Fax (704) 982-1619
 E-mail carolina@woodmizer.com

11 Alaska

HCO5 9821
 Palmer, AK 99645
 Phone (907) 746-3030
 Fax (907) 745-0508
 E-mail mvmiling@mtaonline.net

12 Wisconsin

2201 Highway O
 Mosinee, WI 54455
 Phone (715) 693-1929
 E-mail dsclass@dwave.net

13 Montana

51 Basin Creek Road
 Basin, MT 59631
 Phone (406) 225-4362
 Fax (207) 645-3786
 E-mail rockymountainwoodmizer@yahoo.com

14 Mississippi

123 Cable Bridge Road
 Perkinston, MS 39573
 Phone (601) 928-3022

 **Authorized Sales Centers*****19 Ontario North**

41 Rubin Drive
 Murillo, ON P0T 2T0
 Phone (807) 683-9243
 Fax (807) 767-1123

20 East New Brunswick

161 Ave. De L'Eglise
 St. Antoine, NB E4V 1M2
 Phone (506) 525-1007
 Fax (506) 525-2913

*Authorized Sales Centers offer limited services such as sawmill demos and training, routine service and sales of blades and common replacement parts

1 Introduction

Specifications

1.4 Specifications

Model: LT15 Rev. E1.00+

Dimensions:

Length: 13'-6 1/2"
 Width: 6'-3"
 Height (Ground To Mast): 5'-5"
 Height (Max Head Position): 6'-3"
 Bed Height (Ground To Bed): 10"
 Blade Length: 158"

Weights (Actual/Estimated):	G13	G15	G25	E10	D10	D18	D19
Basic Unit (Wet):	935 lbs	944 lbs	976 lbs		957 lbs	929 lbs	
With Trailer (requires 3rd bed section):	1518 lbs	1527 lbs	1559 lbs		1540 lbs	1512 lbs	

Trailer:

Axle Capacity: 1540 lbs
 Tire Capacity: 1045 lbs
 Tire Size: 5.3 x 12
 Weight: 408 lbs

Log Capacity:

Length: 11'-0"
 Diameter: 28"
 Max Clamp Width (from stop block): 24"
 Max Throat Width (guide to guide): 26"
 Max Cant Width (outer guide to stop block): 23"

Engine:	G13	G15	G25	E10	D10	D18	D19
Manufacturer:	Kohler	Kohler	Kohler	Lincoln	Yanmar	Kohler	Deutz
Fuel:	Gas	Gas	Gas	Electric	Diesel	Diesel	Diesel
Horsepower Rating:	13	15	25	10	10	16.8	19
Weight:	110	119	151		132	104	
Idle Speed:	1800 RPM	1800 RPM	1800 RPM	3495 RPM	1000 RPM		1500 RPM
High Throttle Speed (No Load):	3750 RPM	3750 RPM	3600 RPM	3495 RPM	3600 RPM		3600 RPM
Noise Level - @ operator position:	98 dBA	96 dBA	102 dBA				
Noise Level - 20 feet away:	77 dBA	86 dBA	94 dBA				
Blade Speed (No Load):	4940 sfpm	4940 sfpm					
Fuel Consumption (per hour):	0.4 gal.	0.5 gal.	0.9 gal.		0.2 gal.		
Cooling System:	Air	Air	Air	Air	Air	Water	Air
Drive Shaft O.D.:	1"	1"	1 1/8"	1 3/8"	1"	1 9/16"	1 1/8"
Drive Pulley O.D.:	5"	5"	5.6"	4.25"	5.6"	5.6"	5.6"
Drive Belt:	BX87	BX87	2/3VFL900	BX85	BX87	2/3VFL900	2/3VFL900
Blade Braking:	5 Seconds	5 Seconds	5 Seconds	5 Seconds	5 Seconds	5 Seconds	5 Seconds
Oil Capacity w/Filter:	2 qts.	2 qts.	2.1 qts.	N/A		1.7 qts.	
Battery:	N/A	12V 524/26A	12V 524/26A	N/A	12V 524/26A	12V 524/26A	12V 524/26A

Rates:

Hourly Production (Average range w/experienced operators/average size logs): up to 125 bdf.
 Optional Power Feed Rate: 95 fpm (forward & reverse)

Options:

Single/Lap Siding Option: 143 lbs
 6'-8" Bed Section: 175 lbs
 Pro Pack: 75 lbs
 Power Feed Option:
 Load Assist Kit Option:

Model: LT15 Rev. D4.00 - D7.00

Dimensions:

Length: 13'-6 1/2"
 Width: 6'-3"
 Height (Ground To Mast): 5'-5"
 Height (Max Head Position): 6'-3"
 Bed Height (Ground To Bed): 10"
 Blade Length: 158"

Weights (Actua/Estimated):	G13	G15
Basic Unit (Wet):	935 lbs	944 lbs
With Trailer (requires 3rd bed section):	#VALUE!	#VALUE!
Tongue Weight:	?	?

Trailer:

Axle Capacity: 1540 lbs
 Tire Capacity: 1045 lbs
 Tire Size: 5.3 x 12
 Weight: 408 lbs

Log Capacity:

Length: 11'-0"
 Diameter: 28"
 Max Clamp Width (from stop block): 24"
 Max Throat Width (guide to guide): 26"
 Max Cant Width (outer guide to stop block): 23"

Engine:	G13	G15
Manufacturer:	Kohler	Kohler
Fuel:	Gas	Gas
Horsepower Rating:	13	15
Weight:	110	119
Idle Speed:	1800 RPM	1800 RPM
High Throttle Speed (No Load):	3750 RPM	3750 RPM
Noise Level - @ operator position:	98 dBA	96 dBA
Noise Level - 20 feet away:	77 dBA	86 dBA
Blade Speed (No Load):	4940 sfpm	4940 sfpm
Fuel Consumption (per hour):	0.4 gal.	0.5 gal.
Cooling System:	Air	Air
Drive Shaft O.D.:	1"	1"
Drive Pulley O.D.:	5"	5"
Drive Belt:	BX82	BX82
Blade Braking:	5 Seconds	5 Seconds
Oil Capacity w/Filter:	2 qts.	2 qts.
Battery:	N/A	12V 524/26A

Rates:

Hourly Production (Average range w/experienced operators/average size logs): 75-125 bdft.

Options:

Single/Lap Siding Option: 143 lbs
 6'-8" Bed Section: ?
 Pro Pack: 75 lbs

1 Introduction

Specifications

Model: **LT15 Rev. A1.00-D3.00**

Dimensions:

Length: 11'-7 1/2"
 Width: 6'-3"
 Height (Ground To Mast): 5'-5"
 Height (Max Head Position): 6'-3"
 Bed Height (Ground To Bed): 10"
 Blade Length: 158"

Weights (Actual/Estimated):

	G13	G15
Basic Unit (Wet):	826 lbs	835 lbs

Log Capacity:

Length: 9'-0"
 Diameter: 28"
 Max Clamp Width (from stop block): 24"
 Max Throat Width (guide to guide): 26"
 Max Cant Width (outer guide to stop block): 23"

Engine:

	G13	G15
Manufacturer:	Kohler	Kohler
Fuel:	Gas	Gas
Horsepower Rating:	13	15
Weight:	110	119
Idle Speed:	1800 RPM	1800 RPM
High Throttle Speed (No Load):	3750 RPM	3750 RPM
Noise Level - @ operator position:	98 dBA	96 dBA
Noise Level - 20 feet away:	77 dBA	86 dBA
Blade Speed (No Load):	4940 sfpm	4940 sfpm
Fuel Consumption (per hour):	0.4 gal.	0.5 gal.
Cooling System:	Air	Air
Drive Shaft O.D.:	1"	1"
Drive Pulley O.D.:	5"	5"
Drive Belt:	BX81	BX81
Blade Braking:	5 Seconds	5 Seconds
Oil Capacity w/Filter:	2 qts.	2 qts.
Battery:	N/A	12V 524/26A

Rates:

Hourly Production (Average range w/experienced operators/average size logs): 75-125 bdf.

Options:

Single/Lap Siding Option: 143 lbs
 5'-9" Bed Section: 160 lbs
 Pro Pack: 75 lbs

Battery Specifications (Rev. D4.00+ Only)							
Group No.	Type No.	Performance Level		Approximate Weight	Maximum Overall Dimensions		
		Cranking Performance	Reserve Capacity	Wet	Length	Width	Height
26	524/26A	515CC	80	31.0 lb. (14.06 kg)	8.5 in. (216 mm)	6.75 in. (171 mm)	8.0 in. (203 mm)

SECTION 2 SAFETY

2.1 Safety Symbols

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



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



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



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



IMPORTANT! indicates vital information.

NOTE: gives helpful information.



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

2.2 Safety Instructions

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

OBSERVE SAFETY INSTRUCTIONS



IMPORTANT! Read the entire Operator's Manual before operating the 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.

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

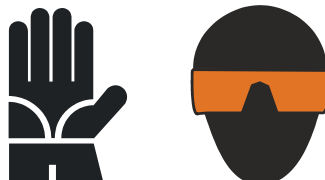


WEAR SAFETY CLOTHING



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

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



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



KEEP SAWMILL AND AREA AROUND SAWMILL CLEAN



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

HANDLE FUEL/LUBRICANTS SAFELY



DANGER! Due to the flammable nature of fuel and oil, never smoke, weld, grind or allow sparks near your engine or storage tanks, especially during times of fueling.

DANGER! Never allow fuel to spill on a hot engine during fueling operations or otherwise. The hot temperature of your engine could induce a fire or explosion.



WARNING! Store gasoline away from sawdust and other flammable materials. Failure to do so may result in serious injury.



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

DISPOSE OF SAWING BY-PRODUCTS PROPERLY



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

USE CAUTION WHEN WORKING WITH BATTERIES

DANGER! Batteries expel explosive gases. Keep sparks, flames, burning cigarettes, or other ignition sources away at all times. Always wear safety goggles and a face shield when working near batteries. Failure to do so will cause serious injury. ¹



WARNING! Battery posts, terminals and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm. Wash hands after handling.



WARNING! Charge the battery in a well ventilated area. Do not attempt to charge a frozen battery.

Use extreme care to avoid spilling or splashing electrolyte (which is dilute sulfuric acid) as it can destroy clothing and burn the skin. If electrolyte is spilled or splashed on clothing or the body, it should be neutralized immediately and then rinsed with clean water. A solution of baking soda, or household ammonia, and water may be used as a neutralizer.

Electrolyte splashed into the eyes is extremely dangerous. If this should happen, force the eye open and flood it with cool, clean water for approximately fifteen minutes. A doctor should be called immediately when the accident occurs and “on-the-spot” medical attention given if possible. If a doctor cannot come to the scene of the accident immediately, follow his instructions concerning actions to take. Do not add eye drops or other medication unless advised to do so by the doctor. Do not place a battery or acid within the reach of children. If acid (electrolyte) is taken internally drink large quantities of water or milk. Follow with milk of magnesia, beaten egg or vegetable oil. Call a physician immediately.

If electrolyte is spilled or splashed on any surface of the machine, it should be neutralized and rinsed with clean water.



CAUTION! Do not overcharge the battery. Overcharging may reduce the overall service life of the battery.

CAUTION! Be sure the battery is fully charged before transporting the sawmill. If the battery is not fully charged, excessive vibration could reduce the overall service life of the battery.

¹ Battery Council International, copyright 1987

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, resulting in serious personal injury.

WARNING! The sawmill weighs 1100 lbs. The center of gravity of the carriage is off-center toward the operator side. The higher the saw head from the bed frame, the more easily the mill can be tipped toward the operator side. A minimum of three people (four recommended) is required to safely load or unload the sawmill from a pickup truck.

WARNING! Keep all persons out of the area between the frame rails while loading and unloading the sawmill. Failure to do so may result in serious injury or death.

WARNING! Because the sawmill can easily rotate and tip over when lifted, do not lift the sawmill using ropes, cables or chains, etc. Doing so may result in machine damage, 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 do so may result in serious injury.

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 bracket properly installed. The saw head may tip and fall from the sawmill resulting in possible injury or damage to the machine.

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 do so will result in serious injury.

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

KEEP HANDS AWAY



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

DANGER! Engine components can become very hot during operation. Avoid contact with any part of a hot engine. The exhaust components of your engine are especially hot during and following operation. Contact with hot engine components can cause serious burns. Therefore, never touch or perform service functions on a hot engine. Allow the engine to cool sufficiently before beginning any service function.

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

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



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

WARNING! Always disengage the clutch/brake mechanism whenever the sawmill is not cutting. Failure to do so may result in serious injury.

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

WARNING! Always keep clear of exiting sawdust. Keep hands, feet and any other objects away from the sawdust chute when operating sawmill. Failure to do so may result in serious injury.

CAUTIONS FOR GAS OR DIESEL ENGINE OPERATION

DANGER! Operate your engine/machine only in well ventilated areas. The exhaust gases of your engine can cause nausea, delirium and potentially death unless adequate ventilation is present.

DANGER! Never operate an engine with a fuel or oil leak. The leaking fuel or oil could potentially come in contact with hot surfaces and ignite into flames.

WARNING! Do not operate engine without proper and operational spark arrester/muffler. Sparks emitted from the engine exhaust could ignite surrounding materials, causing serious injury or death.

USE PROPER PROCEDURE WHEN CONDUCTING ELECTRICAL SAFETY CHECKS AND MAINTENANCE



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



DANGER! ARC FLASH AND SHOCK HAZARD! Hazardous voltage inside the electric sawmill disconnect box, starter box, and at the motor can cause shock, burns, or death. Disconnect and lock out power supply before servicing! Keep all electrical component covers closed and securely fastened during mill operation. Wear appropriate Personal Protection Equipment.



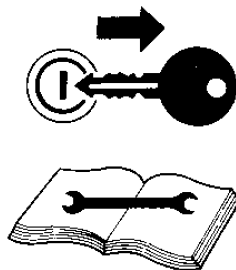
WARNING! Consider all electrical circuits energized and dangerous.

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

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

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

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



DANGER! Lockout procedures must be used during:

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

Maintenance hazards include:

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

Failure to lockout may result in:

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

To control maintenance dangers:

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

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

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

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

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

Always follow safe operations practices in the workplace.

SAWMILL LOCKOUT PROCEDURE

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

Purpose:

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

Responsibility:

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

Preparation For Lockout:

Sawmill must be locked out both electrically and pneumatically (lockout air valve).

Sequence of Lockout Procedure:

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

Restoring Equipment to Service

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

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.

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.

Owner's Responsibility

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

KEEP SAFETY LABELS IN GOOD CONDITION



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



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

USE CAUTION WHEN WORKING WITH HEAVY LOGS



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

UP/DOWN SYSTEM SAFETY

WARNING! Always secure the saw head with a 5/16" chain with at least 1900 lbs. working load capacity before adjusting the up/down chain. The saw head may fall, causing severe injury or death.

WARNING! Always secure the saw head with a 5/16" chain with at least 1900 lbs. working load capacity before adjusting the mast pads. The saw head may fall, causing severe injury or death.

SECTION 3 SAWMILL SETUP

3.1 Sawmill Setup

NOTE: The following setup procedure should be performed whenever the sawmill is moved or reassembled. If sawing problems occur and misalignment is suspected, [See Section 7](#) for complete alignment instructions. [See Section 8](#) for sawmill assembly instructions.

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

See Figure 3-1.

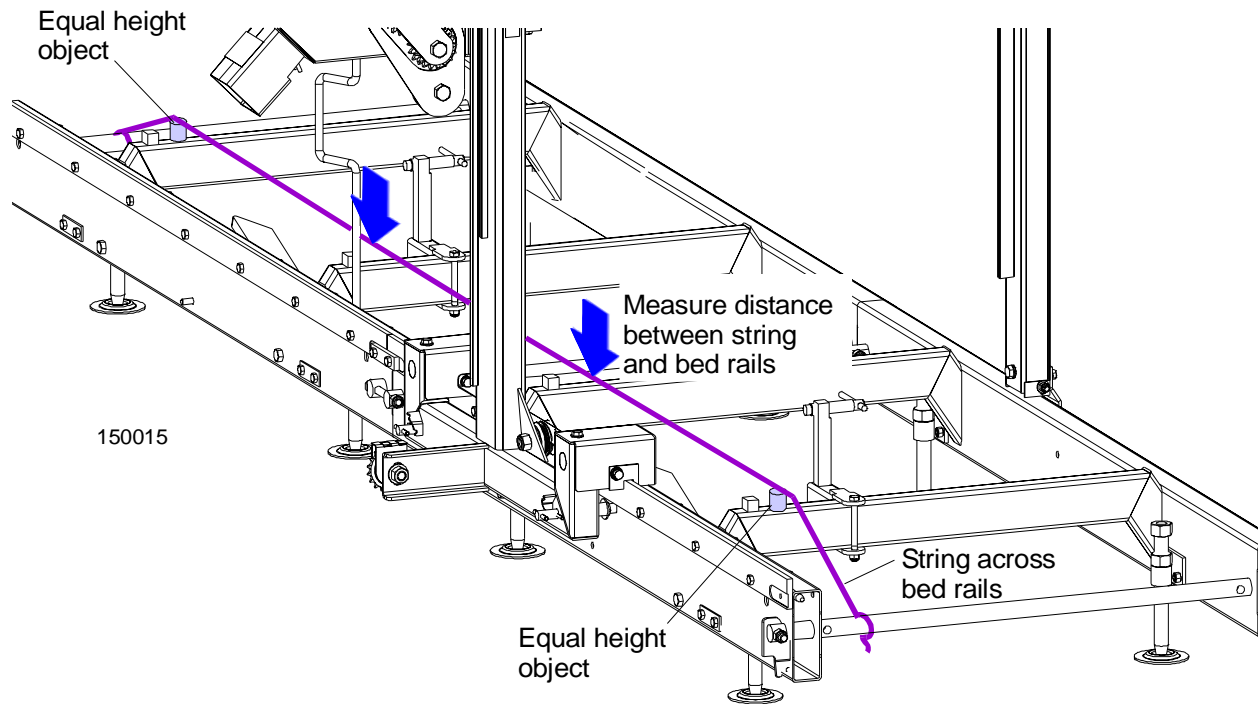


FIG. 3-1

4. Repeat the bed rail adjustment with the string at the other side of the sawmill frame.
5. Install a blade ([See Section 3.2](#) through [Section 3.2](#)) and move the saw carriage until the blade is positioned over the front bed rail.
6. Measure the distance from the bed rail to the bottom of the blade near the inside blade guide.
7. Measure the distance from the bed rail to the bottom of the blade near the outside blade guide.

See Figure 3-2. When the blade is parallel to the bed, it will measure the same distance from the bed rail at the inside and outside of the saw head. The up/down slide pads have two sets of four adjustment spacers that allow you to tilt the saw head up or down. Turn the saw head adjustment spacers in 1/4-turn increments to move the outside of the saw head up or down.

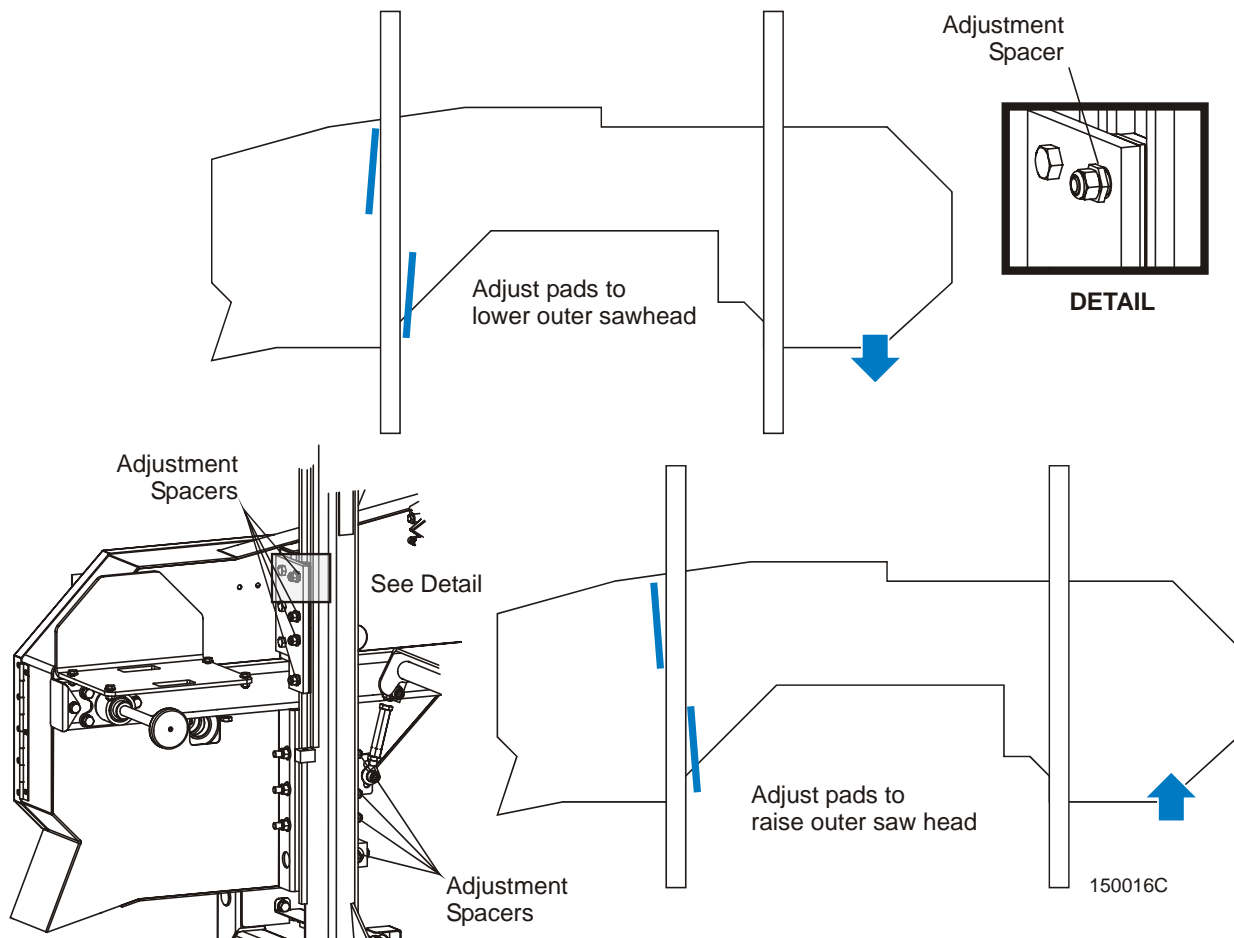


FIG. 3-2

Prior to mill operation, make sure both lock pins are in the operation position (lock pins seated in lower notches of pin rest brackets). To reposition pin, pull pin outward, rotate as desired, and release into proper position.

IMPORTANT (Rev. A1.00 - D5.00): Do not place lock pins in upper notches of lock pin rest brackets during operation or transportation. This position is for carriage assembly/disassembly only.

NOTE (Rev. D6.00+ Only): The pins are designed so if they are inadvertently left in the assembly position, they will move to the operation position when the carriage is moved.

See Figure 3-3.

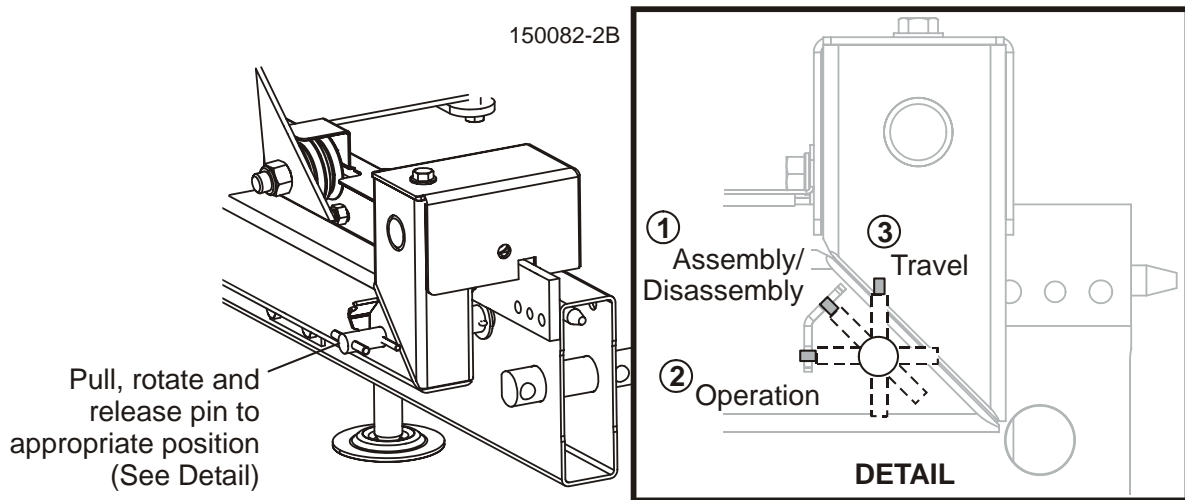


FIG. 3-3 REV. A1.00 - D5.00

3 Sawmill Setup

Sawmill Setup

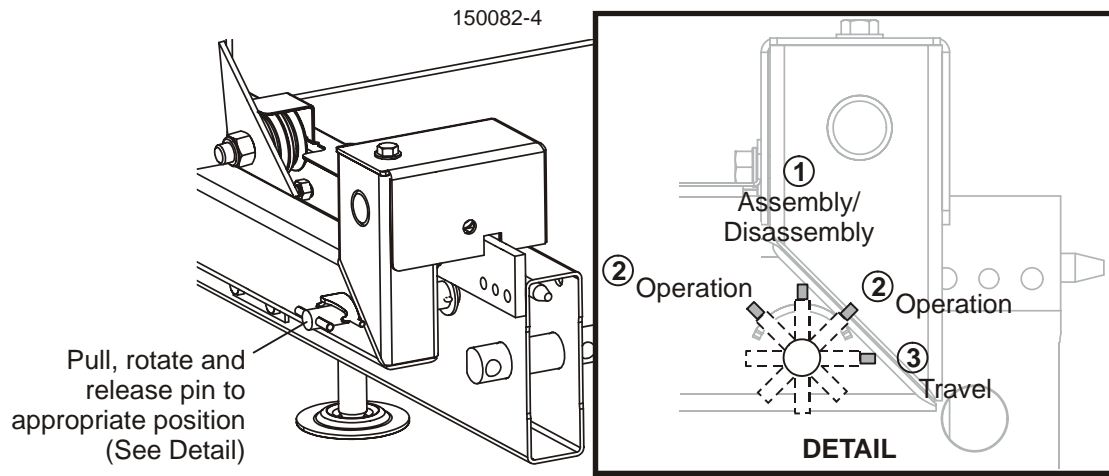


FIG. 3-3 REV. D6.00+

3.2 Replacing The Blade



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



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

Adjust the blade guide arm all the way open.

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

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. Install the blade so it is lying around the wheels.

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

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

3.3 Tensioning The Blade

See **Figure 3-4**. The blade tensioner is factory-set so proper blade tension is achieved when the rubber spring is compressed $3/16$ " (4.8 mm). A $3/16$ " washer is provided to indicate when the rubber spring has been compressed properly. To tension the blade, turn the blade tension handle clockwise to compress the rubber spring until the indicator bracket is even with the outside face of the washer. Check the blade tension occasionally when adjusting the cant control or while cutting. As the blade and belts heat up and stretch, the blade tension will change. Adjust the tension handle as necessary to keep the bushing aligned with the indicator.

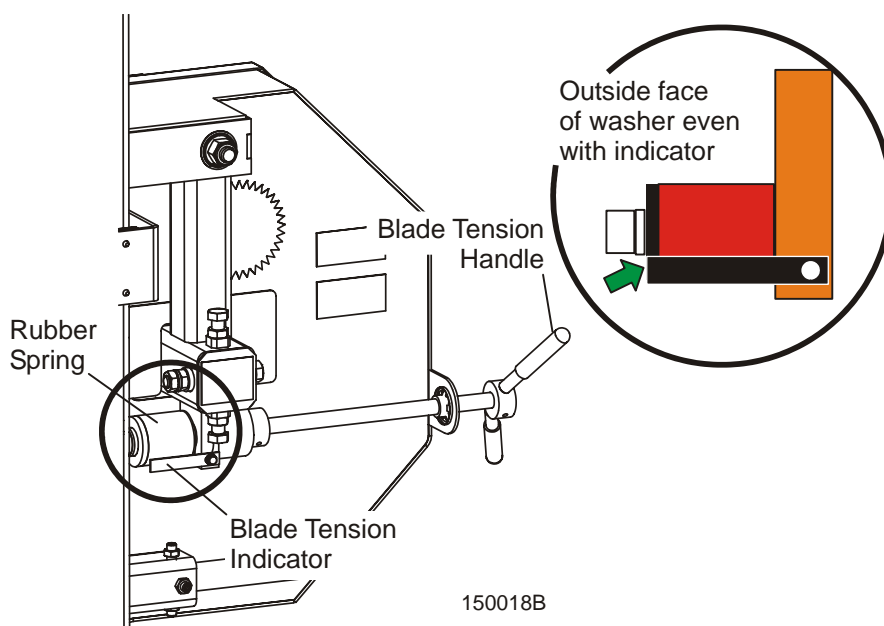


FIG. 3-4

NOTE: When the tensioner components are together before the spring begins to compress, the indicator bracket should be even with the inside face of the washer. Loosen the indicator mounting bolt and adjust the indicator even with the inside face of the washer if necessary.

3.4 Tracking The Blade

1. Make sure the blade housing covers are closed and all persons are clear of the open side of the saw head.
2. Start the engine.
3. Engage the blade, rotating the blade until the blade positions itself on the wheels.



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

4. Disengage the blade. Turn off the engine, remove the key and check the position of the blade on the blade wheels.

See **Figure 3-5**. Position 1 1/4" wide blades so the gullet is 1/8" (3.0 mm) out from the edge of the blade wheel ($\pm 1/32$ [.75 mm]).

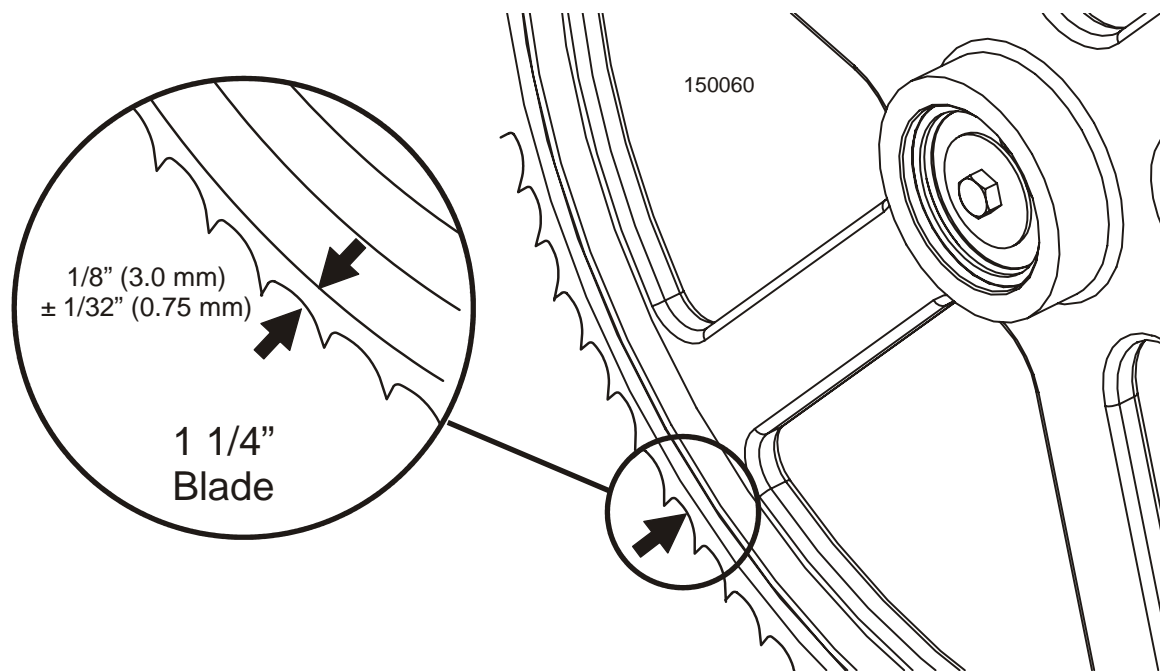


FIG. 3-5

3 Sawmill Setup

Tracking The Blade

See Figure 3-6. To adjust where the blade travels on the blade wheels, use the cant control.

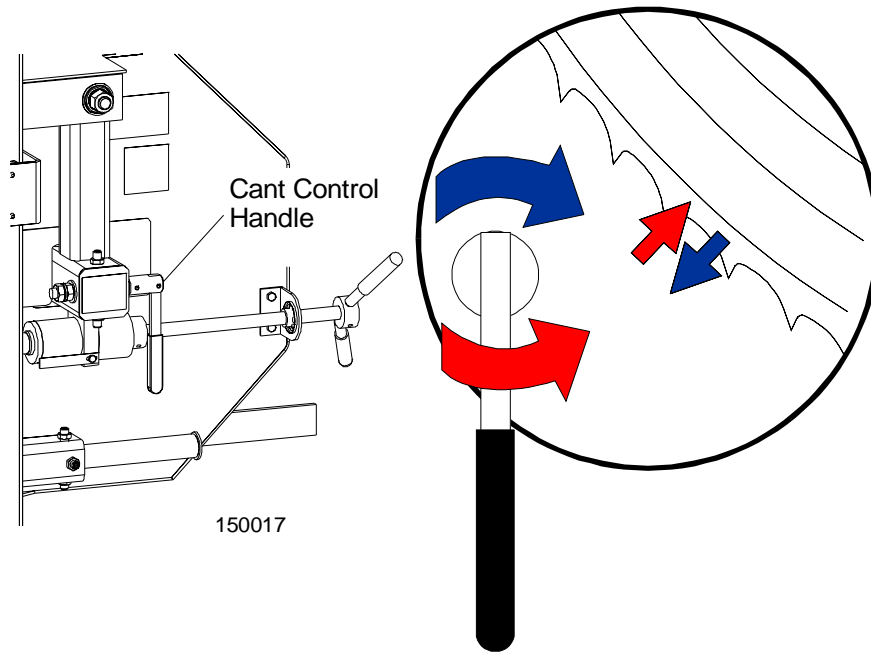


FIG. 3-6 REV. A.00 - B.00

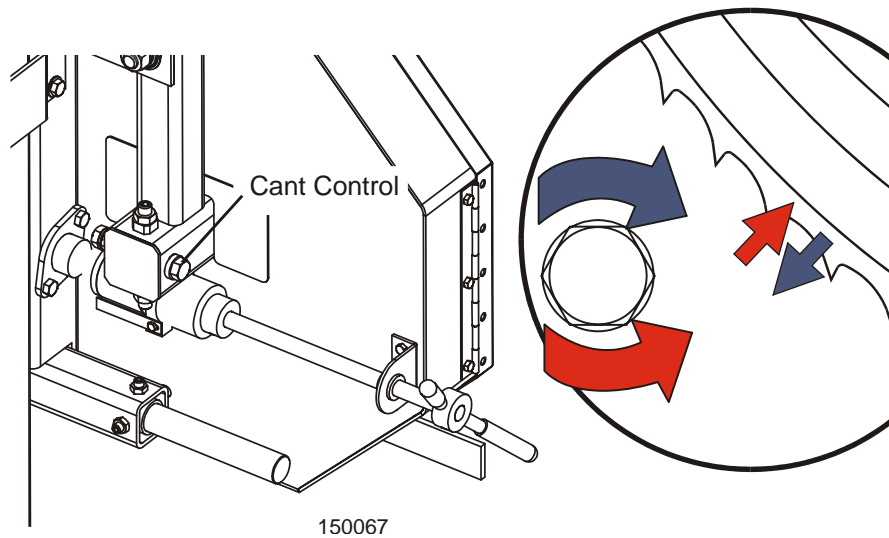


FIG. 3-6 REV. C.00+

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.

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



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



IMPORTANT! After aligning the blade on the wheels, always double-check the blade guide spacing and location. ([See Section 7](#) for more information.)

3.5 Starting The Engine

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



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

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



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

SECTION 4 SAWMILL OPERATION

4.1 Loading, Turning And Clamping Logs

To Load Logs

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



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

2. Adjust the log clamps all the way down and move them toward the loading side of the sawmill frame. **NOTE (Rev. D6.00 Only):** The clamps can be lifted and removed from the bracket assemblies to avoid damage to the clamp when loading a log.



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

3. Raise the side supports on the sawmill bed to prevent the log from falling off the side of the bed.
4. Place the optional loading ramps in the frame brackets that will evenly support the length of the log.

See Figure 4-1.

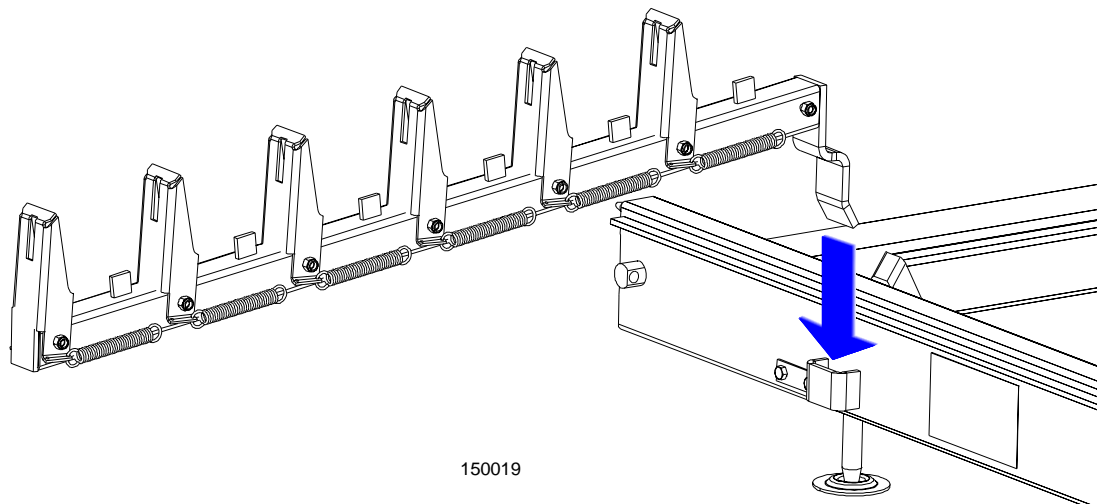


FIG. 4-1

5. Position the log at the foot of the ramps.
6. Use a cant hook to roll the log up the ramps and onto the sawmill bed. 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, (particularly if the optional bed extension is installed) it may tend to sag, resulting in inaccurately sawn lumber.

7. Remove the log ramps and set aside.



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

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

NOTE: Logs also may be loaded onto the mill with a tractor or other equipment specifically designed for that purpose.

To Turn Logs

4

Sawmill Operation

Loading, Turning And Clamping Logs

1. Use cant hooks to rotate the log on the sawmill bed. See *Log Turner Manual*.
2. Spin the log against the side supports until it is turned the way you want it for the first cut.

To Clamp Logs

1. **Rev. E3.02+ Only:** Press down on the clamp upright lock and adjust the upright up or down as necessary. Slide the clamp against the log and turn the locking handle to lock the clamp against the log.

See Figure 4-2.

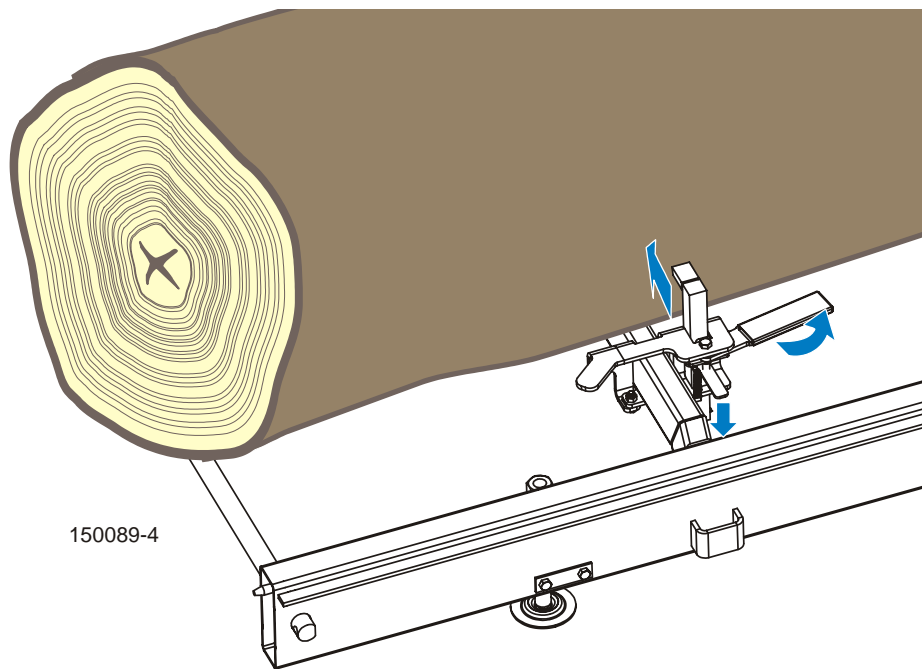


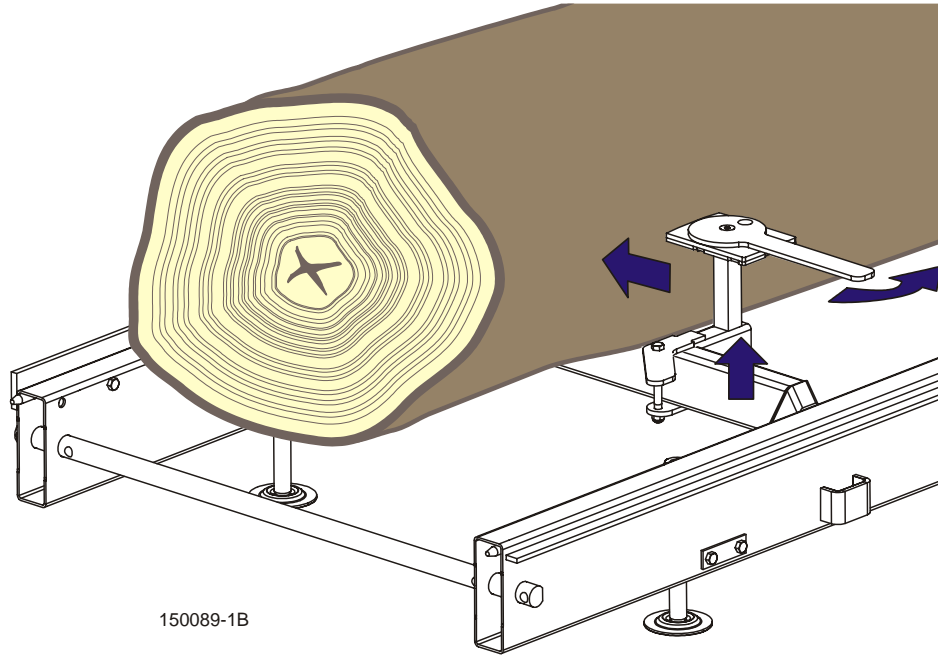
FIG. 4-2 REV. E3.02+

Rev. A1.00 - E3.01 Only: Position the clamps against the log, far enough down so they are below your first few cuts. Turn the clamp screws (Rev. A1.00 - D5.00) or pivot the clamp handle (Rev. D6.00 - E3.01) to clamp the log firmly against the side supports.

4 Sawmill Operation

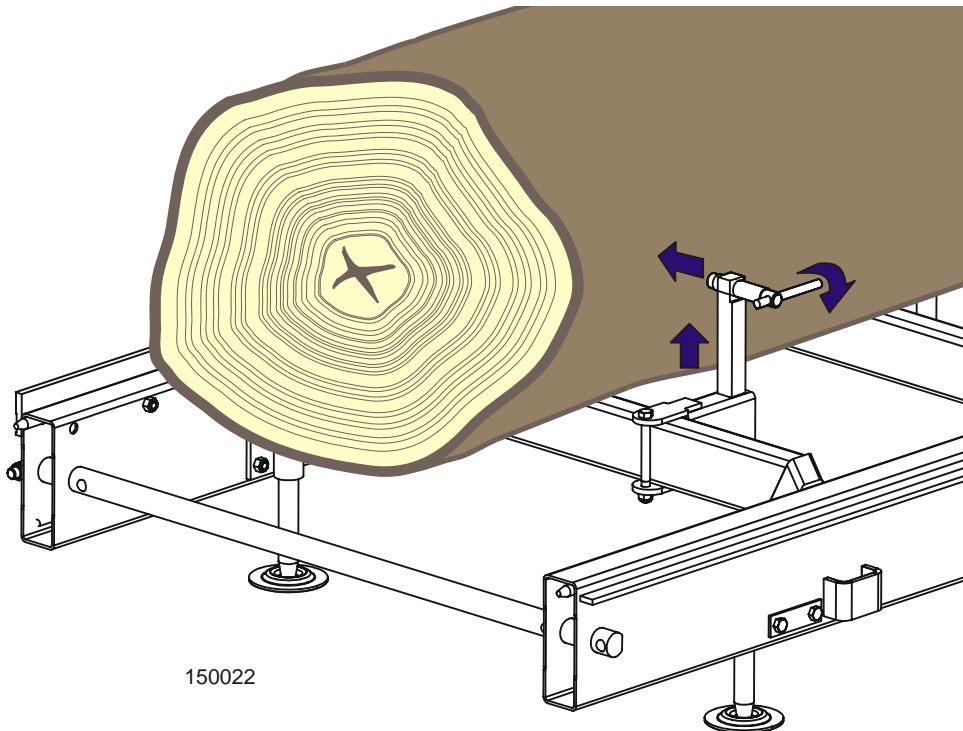
Loading, Turning And Clamping Logs

See Figure 4-3.



150089-1B

FIG. 4-3 REV. D6.00 - E3.01



150022

FIG. 4-3 REV. A1.00 - D5.00

2. Make sure the side supports 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.

To Level A Tapered Log

Use shims or the optional wedge to raise either end of a tapered log, if desired.

Shim one end of the log until the heart of the log measures the same distance from the bed rails at each end of the log.

See Figure 4-4.

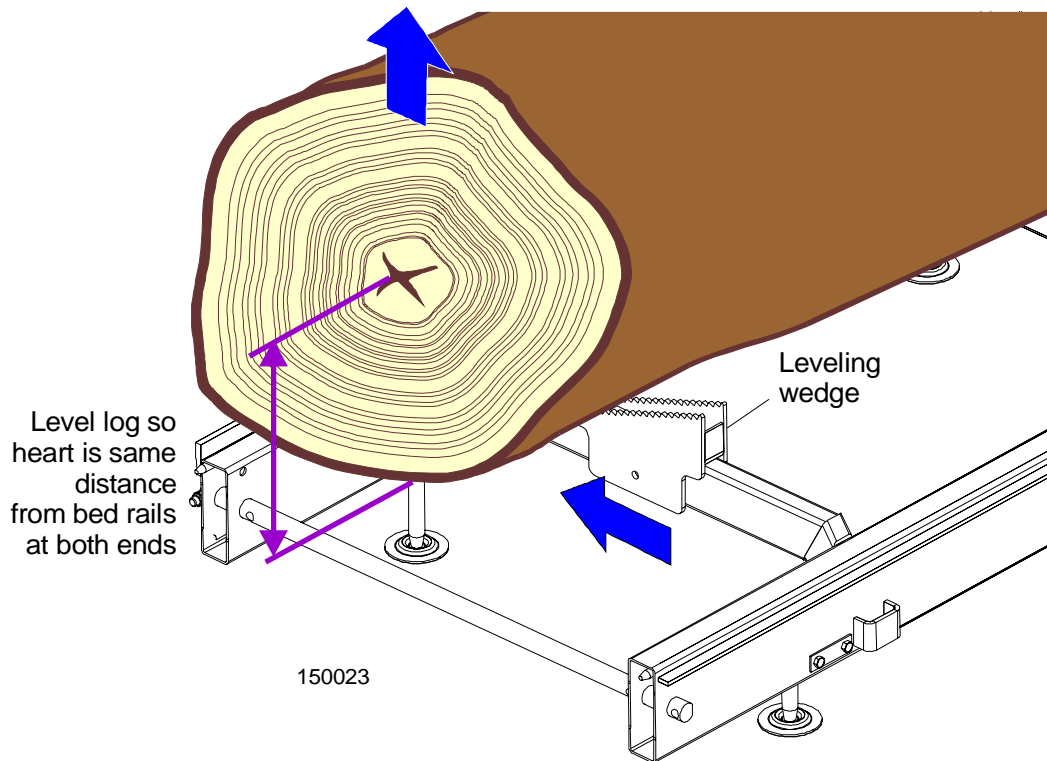


FIG. 4-4

4.2 Up/Down Operation

1. Install a blade, if needed, and check for correct blade tension. ([See Section 3.2](#)).
2. Set the cutting head to the desired height. (The blade height scale shows the height of the blade above the bed rails.)

See **Figure 4-5**. Use the up/down crank to raise or lower the cutting head.

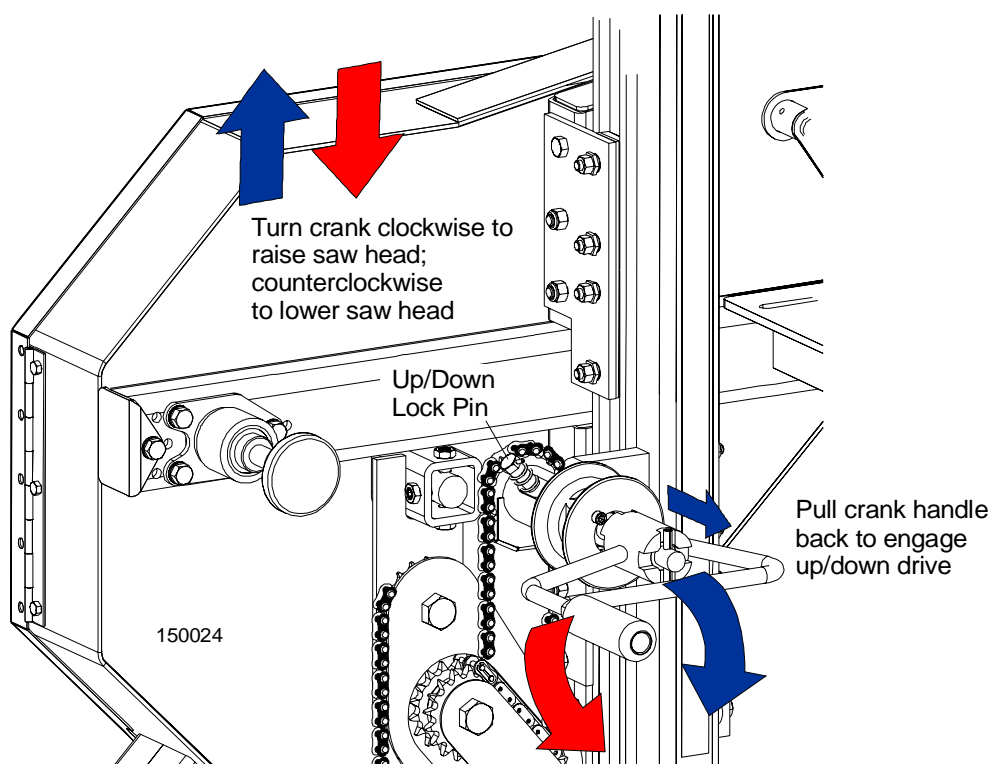


FIG. 4-5 UP/DOWN CRANK (REV. A.00 - A.01)

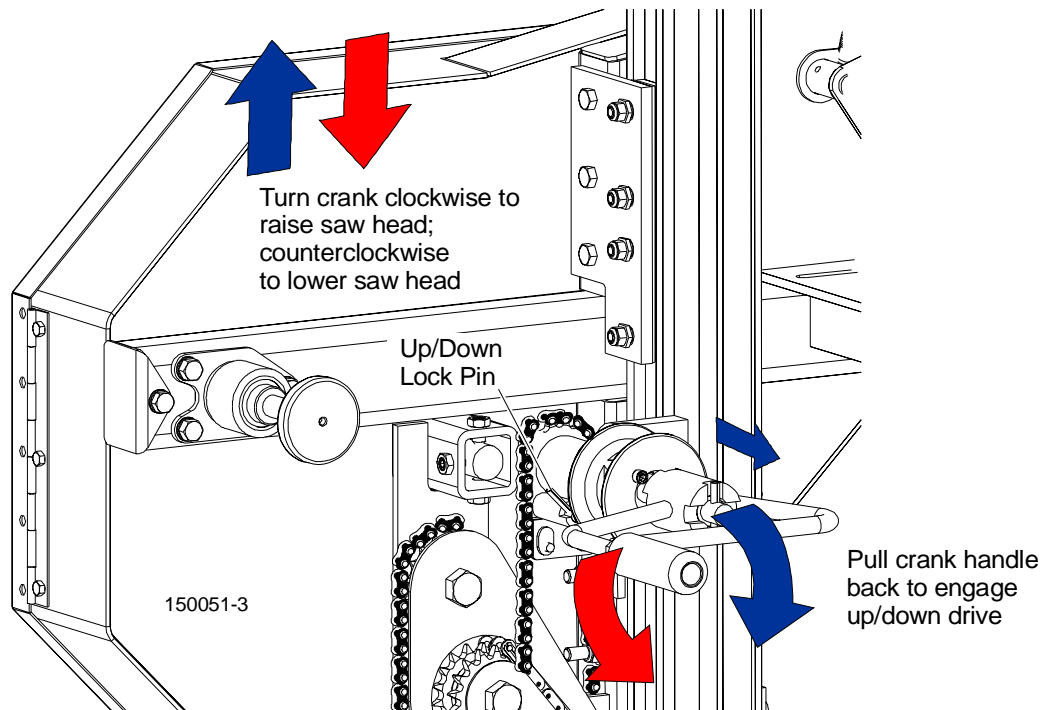


FIG. 4-5 UP/DOWN CRANK (REV. B.00+)

3. **Rev. A.00 - A.01:** Turn the up/down lock counterclockwise until it disengages the up/down shaft. **Rev. B.00+:** Pull the up/down lock out and rotate until the roll pin handle locks in the out position.
4. Pull back on the crank handle to engage the locking pins for up/down operation.
5. Turn the up/down crank clockwise to raise the saw head, counterclockwise to lower the saw head.
6. **Rev. A.00 - A.01:** Turn the up/down lock clockwise until it engages the up/down shaft. **Rev. B.00+:** Rotate the up/down lock to allow the spring-loaded pin to engage the up/down sprocket.



CAUTION! DO NOT try to force the carriage above the 27" (68 cm) mark or below the 1" (2.54 cm) mark. Damage to the up/down system may result.

4.3 Blade Guide Arm Operation

1. Look down the length of the log to see its maximum width. The outer blade guide should be adjusted to clear the widest section of the log by less than 1" (25.4 mm).
2. Use the blade guide arm knob to adjust the outer blade guide as necessary. Turn the blade guide arm knob clockwise to move the arm in. Turn the knob counterclockwise to move the arm out.

See Figure 4-6.

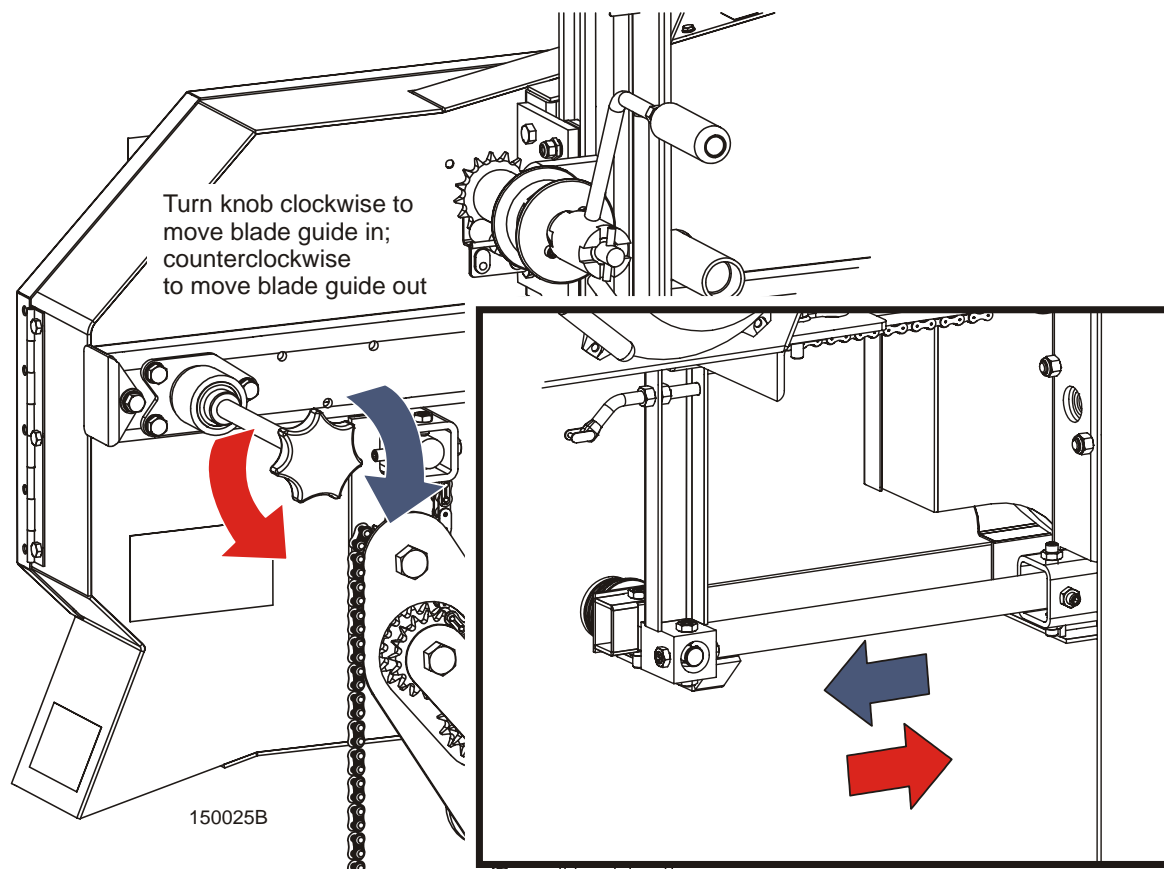



FIG. 4-6

4.4 Clutch Operation

1. Clear any loose objects from the area of the blade, motor, and drive belt.
2. Make sure the clamps and side supports are adjusted below the level of your first few cuts.
3. Start the engine as instructed in the option manual.

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

Be sure the blade housing and pulley covers are in place and secure before starting the engine or motor. Use the rubber latches to fasten the blade housing covers shut.

See Figure 4-7. The clutch lever is located next to the engine.

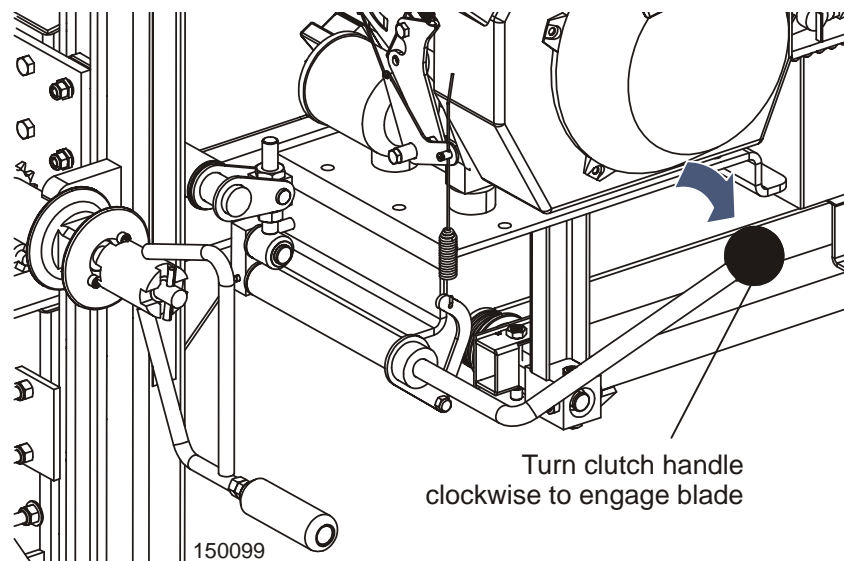


FIG. 4-7 REV. E1.00+

4

Sawmill Operation

Clutch Operation

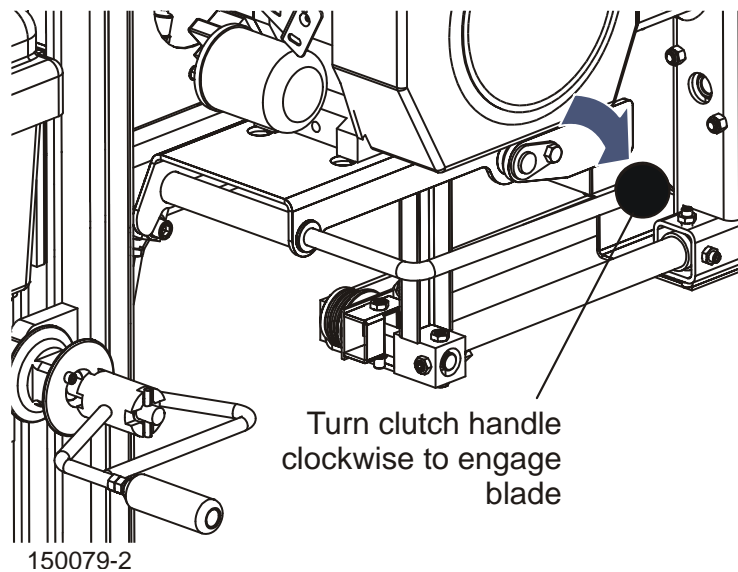


FIG. 4-7 D4.00 - D7.00

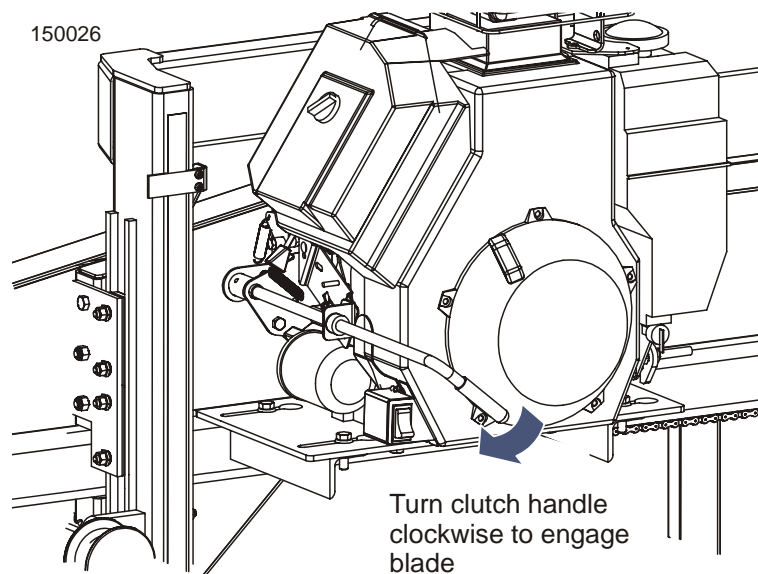


FIG. 4-7 REV. A1.00 - D3.00

4. To engage the blade, pull the clutch lever clockwise until it locks in the down position. This engages the drive mechanism and increases the engine speed to full throttle.
5. To disengage the blade, raise the clutch lever to the up position. This disengages the drive belt and returns the engine to idle.

4.5 Feed Operation

1. To move the carriage forward, push the crank handle in to engage the screw heads and rotate the feed crank clockwise.

See Figure 4-8.

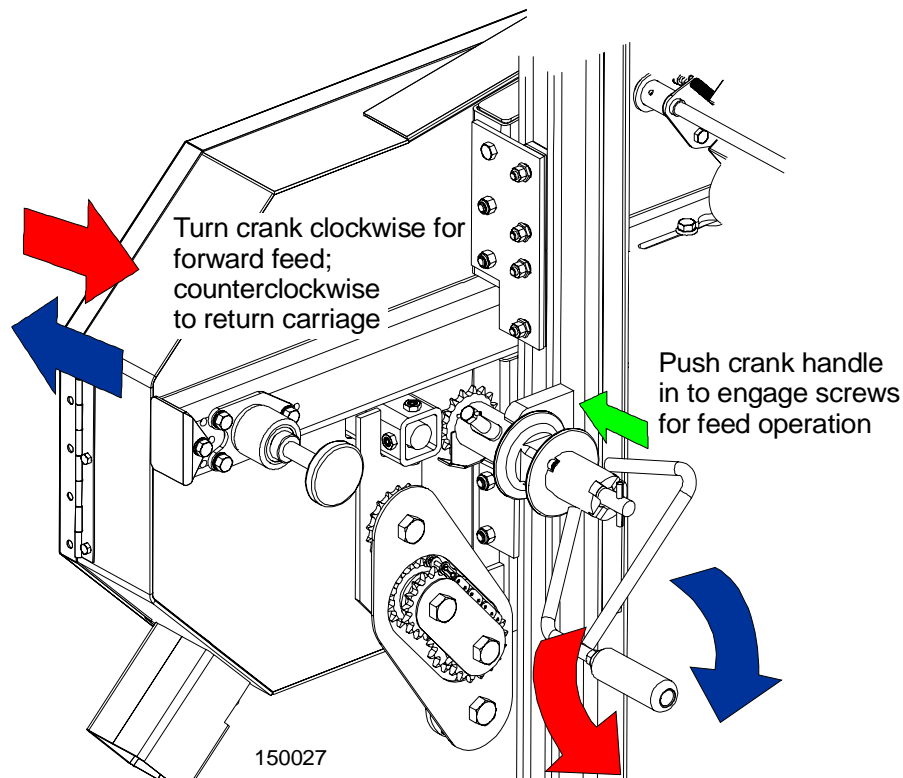


FIG. 4-8

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

2. Stop the carriage at the end of the cut. Throw the clutch lever up to stop the blade and drop the engine to idle. Remove the board from the top of the log. **Always disengage the blade before returning the carriage for the next cut.**
3. **CAUTION!** Be sure to stop the blade when returning the carriage. 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. Make sure that the blade does not catch on the end of the log. Raise the carriage slightly to make sure the blade clears the log when returned.

4

Sawmill Operation

Feed Operation

4. To move the carriage backward, rotate the feed crank counterclockwise or pull the saw head back.

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

4.6 Cutting The Log

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

1. Once the log is placed where you want it and clamped firmly, position the blade close to the end of the log.
2. Use the blade height scale to determine where to make your first cut ([See Section 4.8](#)). The blade height scale will help you to do this. Set the blade to the desired height with the up/down crank. Make sure that the blade will clear all side supports and the clamps. Adjust the outer blade guide to clear the widest section of the log by moving the blade guide arm knob.
3. Make sure all covers and guards are in place. Start the engine. Engage the clutchlever to start the blade spinning.
4. Start the water lube if necessary to prevent sap buildup on the blade. [See Section 4.9](#).
5. Feed the blade into the log slowly ([See Section 4.5](#)). 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!
6. As you get to the end of the log, slow down the feed rate. When the teeth exit the end of the log, Disengage the clutch/brake lever. Remove the slab that you have just cut from the log.
7. Use the feed crank to return the carriage to the front of the mill.
8. Repeat until the first side of the log is cut as desired. Set aside the usable flitches (boards with bark on one or both sides). You can edge them on the mill later.

4

Sawmill Operation

Cutting The Log

9. Remove the wedge if it was used. Remove the clamps and turn the log 90 or 180 degrees. Make sure the flat on the log is placed flat against side supports if turned 90 degrees. Make sure it is placed on bed rails if turned 180 degrees. If the log was turned 90 degrees and 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.
10. Repeat the steps used to cut the first side of the log until the log is square. Cut boards from the remaining cant by adjusting the blade height for the thickness of boards that you want.

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

4.7 Edging

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

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 4-9**. The blade height scale is attached to the carriage head frame. It includes:

- a blade height indicator
- an inch scale
- a magnetic quarter scale (after 3/99)

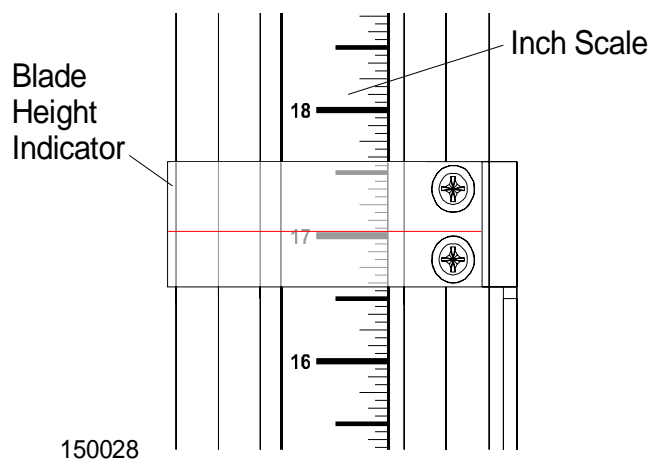


FIG. 4-9

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 carriage to an even measurement on the inch scale. Make a trim cut. Return the carriage 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.)

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

See Table 4-1. 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.

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 carriage for a second cut, lower the carriage 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 carriage for the second cut. Now, instead of having to measure down 1 1/8" (29 mm) on the inch scale, you can simply lower the blade so the indicator is aligned with the next 4/4 mark on the quarter scale. Turn the log 90 degrees and repeat.

4 Sawmill Operation

Water Lube Operation

4.9 Water Lube Operation

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

See Figure 4-10. Install the water bottle bracket at the top of the saw head mast.

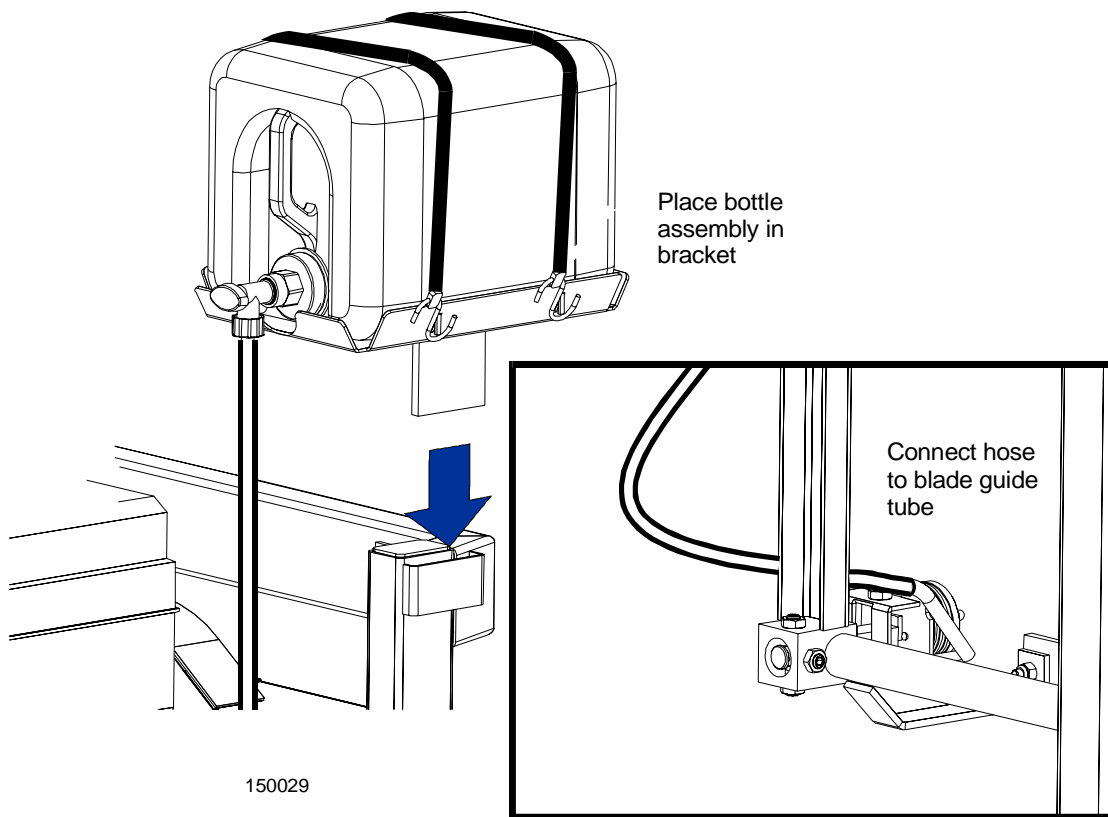


FIG. 4-10

See Figure 4-11.

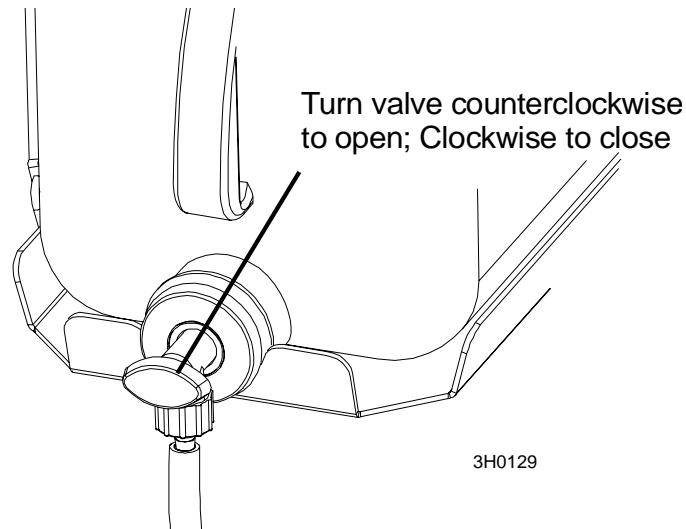


FIG. 4-11

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. Usual flow will be 1-2 gallons (3.8-7.6 liters) per hour.

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

For further lubrication benefits, add one 12oz. bottle of Wood-Mizer Lube Additive to 5 gallons 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! 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 do so can damage the equipment and may result in serious injury or death.

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.



Sawmill Operation

Water Lube Operation

4.10 Loading & Transporting the Sawmill

The assembled sawmill can be manually loaded into and transported in an appropriately equipped pickup truck:

WARNING! The sawmill weighs 1100 lbs. The center of gravity of the carriage is off-center toward the operator side. The higher the saw head from the bed frame, the more easily the mill can be tipped toward the operator side. A minimum of three people (four recommended) is required to safely load or unload the sawmill from a pickup truck.

1. Remove the leg assemblies or adjust them above the bottom of the bed frame.

WARNING! Before lifting, moving or transporting the sawmill, be sure the carriage lock pins are properly engaged. To prevent the carriage from unexpectedly sliding on the rails, the pin at the end of the sawmill must engage the hole in the bed frame. The other pin must be left in the operation position. Failure to do so may result in serious injury and/or machine damage.

See Figure 4-12. [See Section 8.7](#) for a detailed description of carriage lock pin operation.

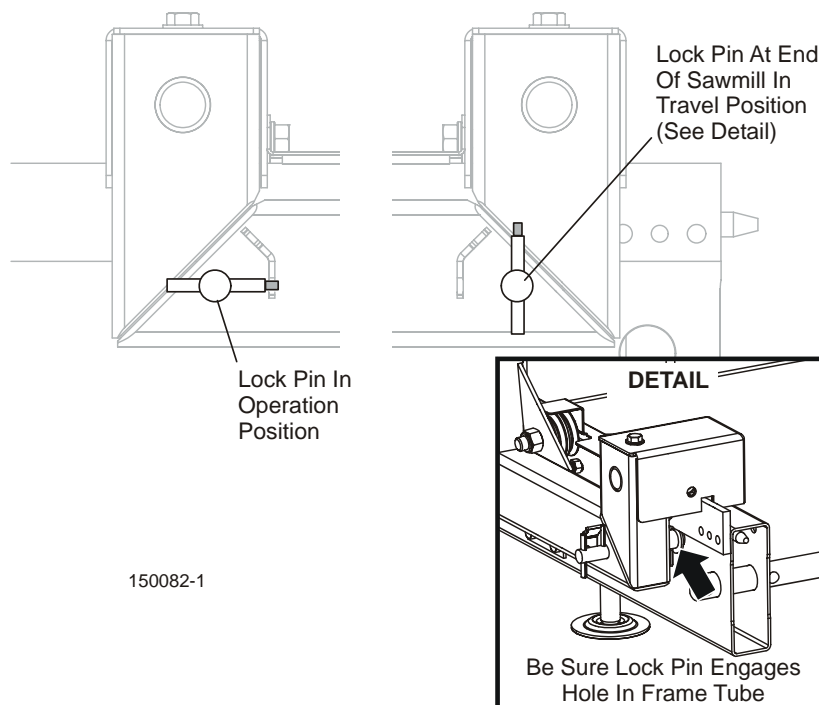
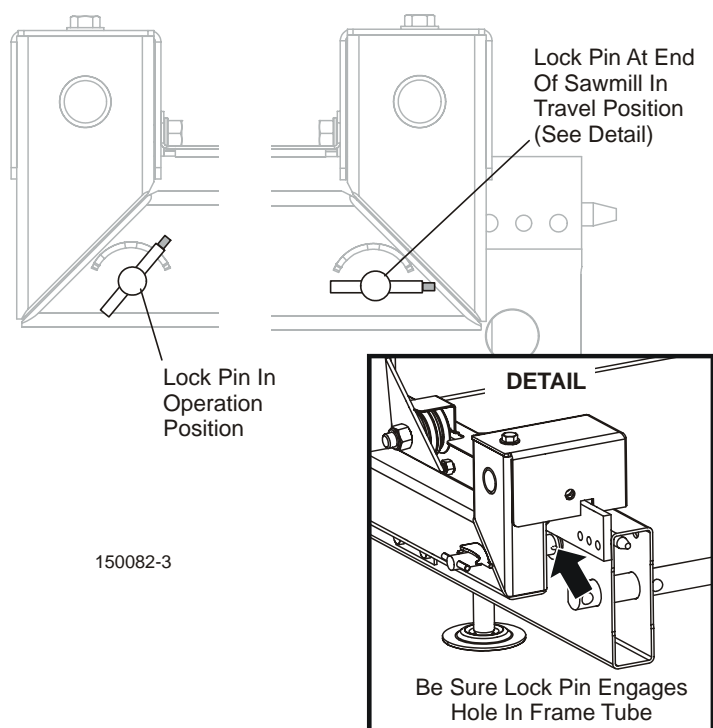


FIG. 4-12 REV. A1.00 - D5.00

4

Sawmill Operation*Loading & Transporting the Sawmill***FIG. 4-12 REV. D6.00+**

2. Adjust the saw head up just far enough so it will clear the sides of your truck bed when loaded. For most pickup trucks, a minimum of 18" between the blade and bed frame cross members should be adequate. Do not adjust the saw head so high that the sawmill will tip easily while being loaded.
3. Move the carriage to one end of the mill. Rotate and release the lock pin closest to the end of the mill. Be sure the lock pin engages the hole in the bed frame to secure the saw carriage in place. Check the other lock pin remains in the operation position.
4. To eliminate the possibility of damage and/or injury, remove the tailgate from your truck and set it aside.
5. Position the bed of the truck at the end of the frame opposite the carriage.



WARNING! Keep all persons out of the area between the frame rails while loading and unloading the sawmill. Failure to do so may result in serious injury or death.



WARNING! Because the sawmill can easily rotate and tip over when lifted, do not lift the sawmill using ropes, cables or chains, etc. Doing so may result in machine damage, serious injury or death.

6. Position two people at the sides of the frame, about two feet from the end. As they lift the frame, the third person should back the truck slowly under the sawmill until the end of the frame is resting firmly on the bed of the truck. *Remember that the operator side is heavier than the opposite side.*
7. With a person positioned on either side of the saw head, pull and rotate the lock pin from the travel position to the operation position. More people may be required to help push as the saw head gets more difficult to push up the incline. Push the saw carriage up the bed frame and have a third person engage the lock pin at the end of the sawmill to secure the carriage to the hole in the bed frame. Be sure to leave the other lock pin in the operation position.
8. Use three or more people to lift the end of the mill still on the ground and slide the sawmill into the truck bed.
9. Secure the sawmill to the truck bed to prevent the sawmill from shifting while it is being transported. If the sawmill extends beyond the truck bed, attach a red warning flag to the end of the sawmill.

SECTION 5 MAINTENANCE

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

See the [Maintenance Log](#) located after this section for a complete list of maintenance procedures and intervals. Keep track of machine maintenance by filling in the machine hours and the date you perform each procedure.



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

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! Before performing service near moving parts such as blades, pulleys, motors, belts and chains, first turn the key switch to the OFF (#0) position and remove the key. If the key is turned on and moving parts activated, serious injury may result.

1. For mills equipped with greaseable blade guides, lubricate the blade guide rollers every four hours of operation. Use one squeeze of a NLGI No. 2 grade lithium grease from a grease gun to lubricate the bearings and remove any sawdust.

See Figure 5-1.

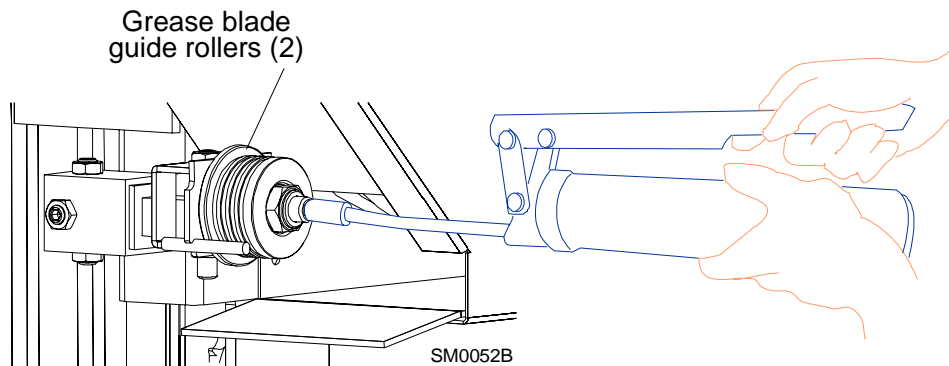


FIG. 5-1



CAUTION! Do not over-grease the blade guide bearings. Over-greasing will push the seals out of the bearings causing premature failure.

2. Check the rollers for performance and wear every blade change. Make sure the rollers are clean and spinning freely. If not, replace them. Replace any rollers which have worn smooth or have become cone shaped.

5.3 Sawdust Removal



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



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

WARNING! Always keep clear of exiting sawdust. Keep hands, feet and any other objects away from the sawdust chute when operating sawmill. Failure to do so may result in serious injury.

WARNING! Always check to ensure the steel fingers inside the sawdust chute are in place before operating the sawmill. 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. Failure to have these fingers in place may result in serious injury.

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

5.4 Carriage Track, Wiper & Scrapers



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

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

See Figure 5-2.

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

8

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



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

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

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

25

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

Rev. B+ only: Clean and lubricate the felt track wipers. Unbolt the middle track cover and idle track wipers, remove from the sawmill and remove any sawdust buildup. Soak the felt wipers with Dexron III transmission fluid.

5 Maintenance

Carriage Track, Wiper & Scrapers

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

AR

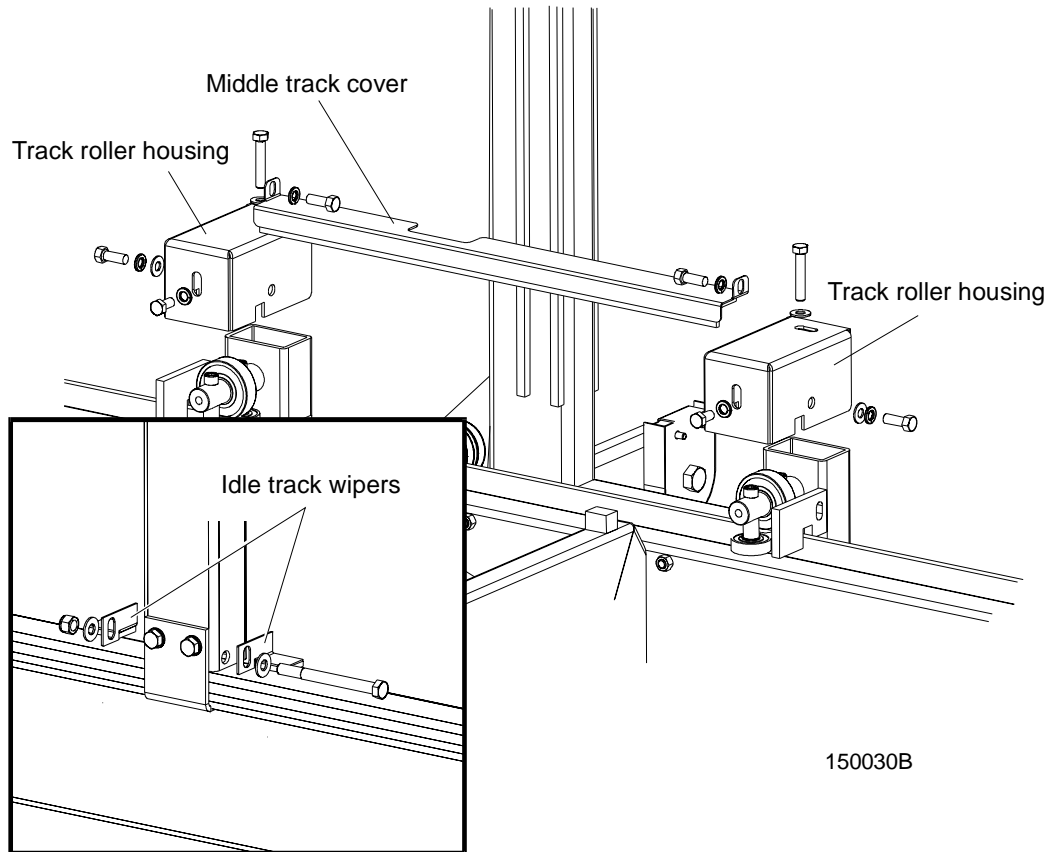


FIG. 5-2

5.5 Vertical Mast Rails



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



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



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

5.6 Miscellaneous

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

50



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.

50

3. Check the mill alignment every setup ([See Section 7](#)).

4. Lubricate the tensioner screw threads with a NLGI No. 2 grade lithium grease as needed.

AR

See Figure 5-3.

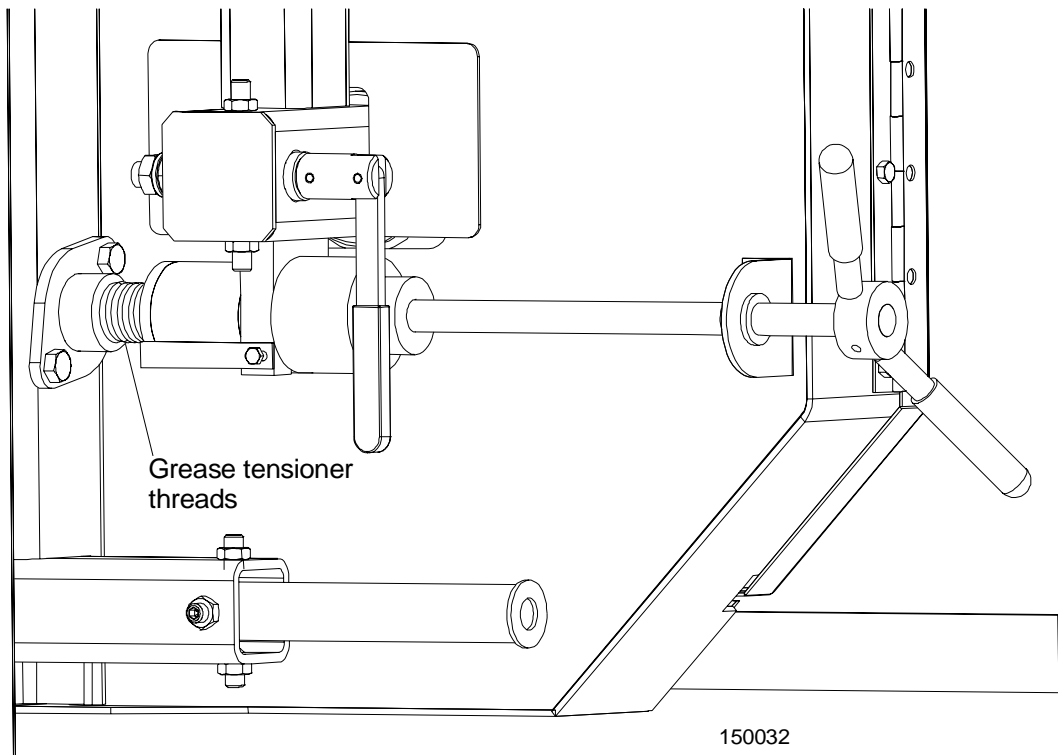


FIG. 5-3

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

5.7 Blade Wheel Belts



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



Rotate the blade wheel belts and check them for wear. Rotating the belts every 50 hours will provide longer belt life. Replace belts as necessary. Use only B57 belts manufactured by Goodyear or Browning.

5.8 Brake Adjustment (Rev. D4.00 - D7.00 Only)



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

See **Figure 5-4**. As the brake pads wear, the engine will drop further down when the clutch handle is disengaged. This may cause the drive belt to vibrate out of the engine pulley when disengaged. To avoid this, turn the brake adjustment bolt counterclockwise to prevent the engine from dropping too low. When the bolt cannot be adjusted any further, replace the brake pads.

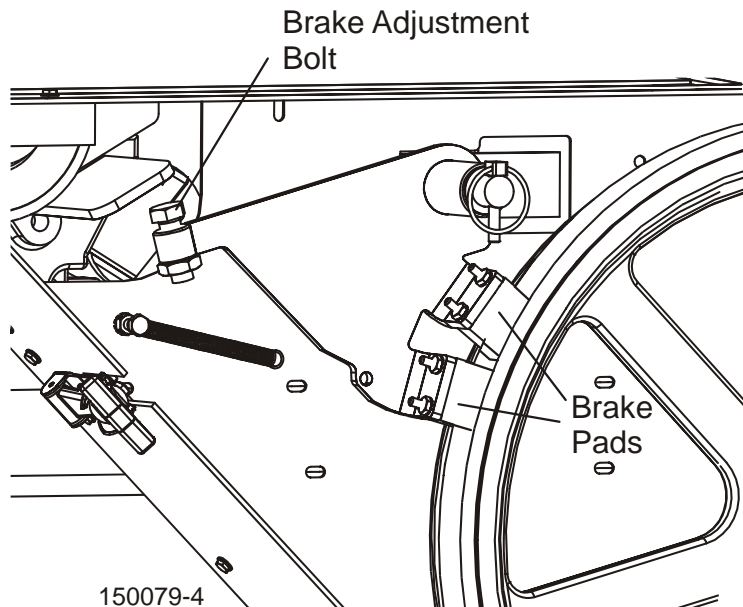


FIG. 5-4

5.9 Drive Belt Adjustment



WARNING! Disconnect and lockout power before performing any service to the electrical system. For battery-powered equipment, disconnect the negative battery terminal cable. Failure to do so may result in injury and/or electrical system damage.



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



WARNING! Do not for any reason adjust the engine drive belts or belt support bracket with the engine running. Doing so may result in serious injury.



Check the drive belt tension after the first 20 hours, and every 50 hours thereafter. The drive belt should have approximately 1/2" (13 mm) deflection with 7 lbs. of force (used belt) or 9 lbs. of force (new belt).

To adjust the drive belt tension (**Rev. E1.00+ Only**):

1. Loosen the drive belt jam and hex nuts. Turn the jam nut counterclockwise (as viewed from the top) to tighten the belt, clockwise to loosen the belt.

See Figure 5-5.

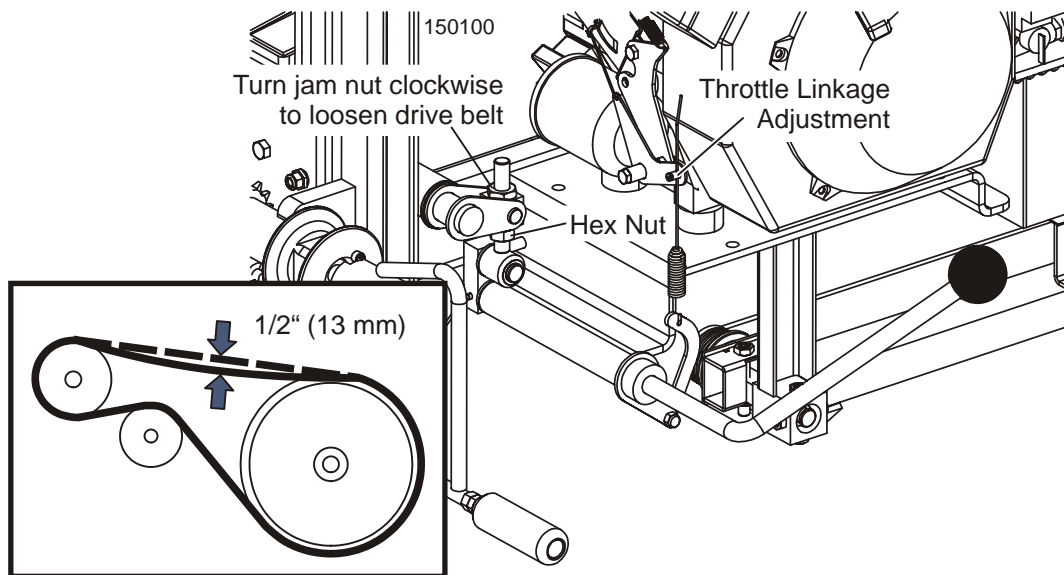


FIG. 5-5

- 2. GAS OPTION ONLY:** After tensioning the drive belt, check the throttle linkage and adjust if necessary. With the clutch handle engaged, the throttle linkage should move the throttle lever to full speed. To adjust, loosen the throttle linkage adjustment screw and slide the throttle linkage down. Retighten the screw.

To adjust the drive belt tension (**Rev. D4.00 - D7.00 Only**):

1. Loosen the drive belt turnbuckle jam nuts. Turn the turnbuckle counterclockwise (as viewed from the top) to tighten the belt, clockwise to loosen the belt.

See Figure 5-6.

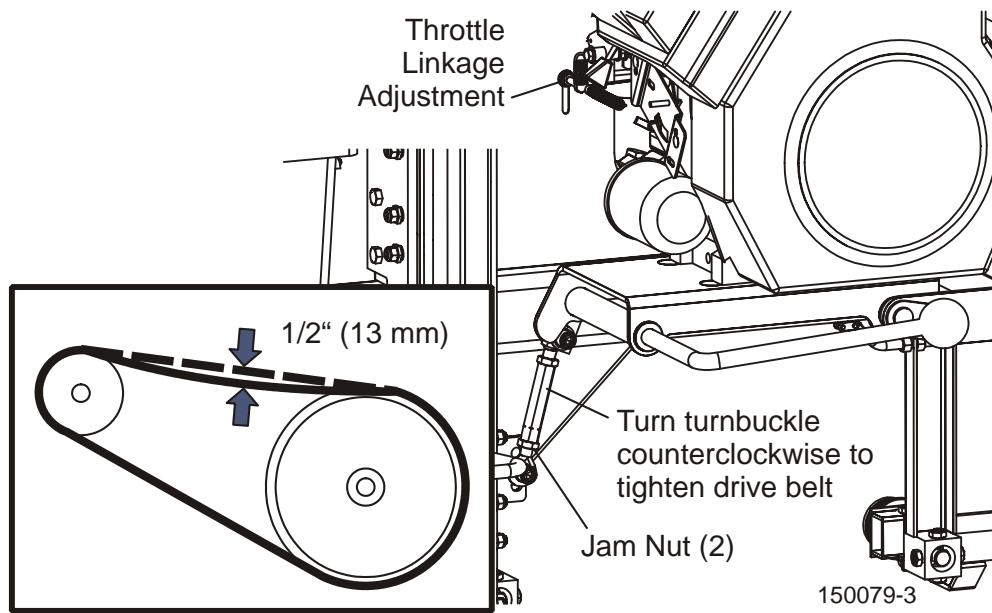


FIG. 5-6

2. After tensioning the drive belt, check the throttle linkage and adjust if necessary. With the clutch handle engaged, the throttle linkage should move the throttle lever to full speed. To adjust, loosen the throttle linkage adjustment nut and slide the bolt down. Retighten the nut.

To adjust the drive belt tension (**Rev. A1.00 - D3.00 Only**):

See Figure 5-7.

1. Turn the two jam nuts on the turnbuckle counterclockwise to tighten the belt, clockwise to loosen the belt. Retighten the jam nuts.
2. After tensioning the drive belt, check throttle cable tension and adjust if necessary. Make sure that the throttle linkage is not affecting the engine RPM while the clutch/brake handle is disengaged. Make sure the cable is not bent or kinked. The throttle cable should be tensioned just enough so that the engine revs as soon as the clutch/brake handle is engaged. **NOTE:** A properly adjusted throttle will extend the cable spring 1/4" to 3/8" (6.4 - 9.5 mm) when running and have a slight amount of slack in the cable when idling.

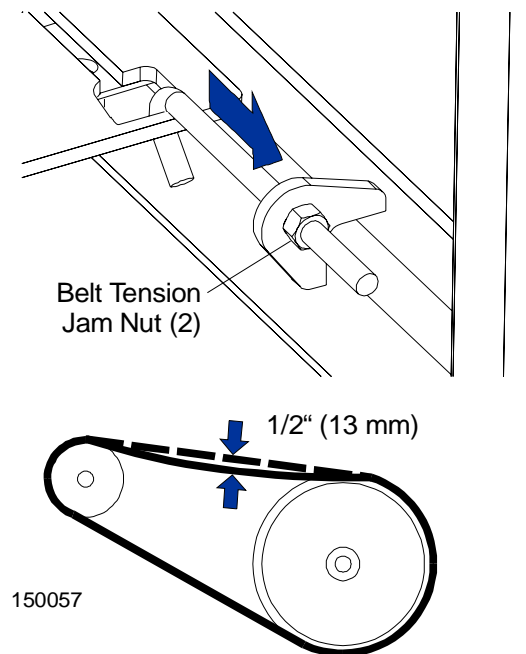


FIG. 5-7

3. After making adjustments to the drive belt, always check the brake adjustment ([See Section 5.8](#)).



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

5.10 Clutch Adjustment



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

NOTE: Clutch adjustment is only applicable to sawmills equipped with a mechanical clutch/brake (Rev. A1.00 - D3.00).



WARNING! Remove the blade from the sawmill before performing this procedure. If the sawmill is equipped with an electric-start engine, remove the key from the key switch. Failure to do so may result in serious injury.

If the clutch begins to slip, adjust the turnbuckle linkage.

Spring-Loaded Turnbuckle Adjustment (Rev. D3.00 Only)

See Figure 5-8.

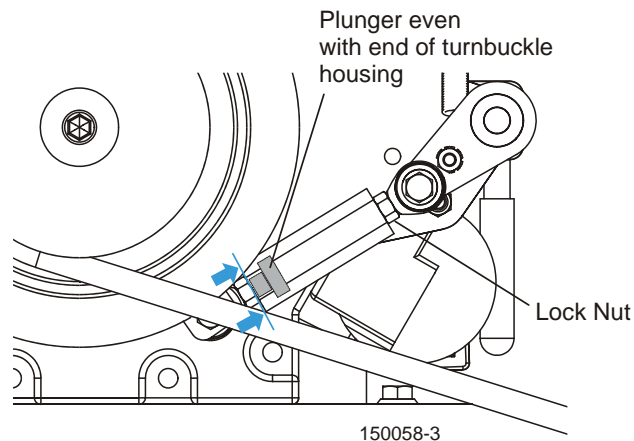


FIG. 5-8

1. With the engine off and blade removed, engage the clutch lever. Loosen the lock nut at the top of the turnbuckle assembly.

NOTE: Do not loosen the jam nut at the bottom of the assembly. Make sure the bottom jam nut is tightened up against the plunger.

5**Maintenance***Clutch Adjustment*

2. Turn the turnbuckle housing clockwise as viewed from the top. Turn the housing until it is aligned with the end of the plunger (easiest viewed by opening the drive-side blade housing cover and look through the hole in the housing where the engine pulley is located). This adjustment will provide approximately 45 lbs. of tension to the clutch.

3. Tighten the top lock nut to maintain the turnbuckle adjustment.

Turnbuckle Adjustment (Rev. A1.00 - D1.01)

NOTE: If the turnbuckle has been retrofitted with the spring-loaded style available 3/00, refer to the first procedure ([Previous Page](#)).

Turn the turnbuckle clockwise (as viewed from the top) to provide 45 lbs. of tension. Use a spring scale as described below to properly adjust the turnbuckle.

1. Disassemble the turnbuckle linkage from the mounting tab on the clutch.
2. Attach a spring scale to the mounting tab.
3. Pull the scale until it reads 45 lbs.
4. Use a marker to mark the location of the mounting tab on the clutch housing.
5. Remove the spring scale.
6. Reattach the throttle linkage to the clutch mounting tab.
7. Engage the clutch handle.
8. Check the location of the mounting tab in relation to the mark on the clutch housing.
9. Adjust the turnbuckle until the mounting tab aligns with the mark on the clutch housing.

5.11 Up/Down System

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

Adjust the up/down chain tension as needed. Measure chain tension with the head all the way to the top of the vertical mast. Secure the carriage with a chain at the top. Find the chain adjusting bolt at the bottom of the mast. Loosen the nut on the sprocket bolt and move the sprocket down until there is about 1" (2.5 cm) total deflection in the center of the chain with a 5 lb. (2.3 Kg) deflection force.

WARNING! Always secure the saw head with a 5/16" chain with at least 1900 lbs. working load capacity before adjusting the up/down chain. The cutting head may fall, causing severe injury or death.

Rev. D7.00+ Only: A chain tension adjustment bracket/bolt is provided on the sprocket assembly. Loosen the jam nut and tighten the adjustment bolt to pull the sprocket down and tension the chain. Retighten the jam nut and sprocket nut after tensioning the chain.

See Figure 5-9.

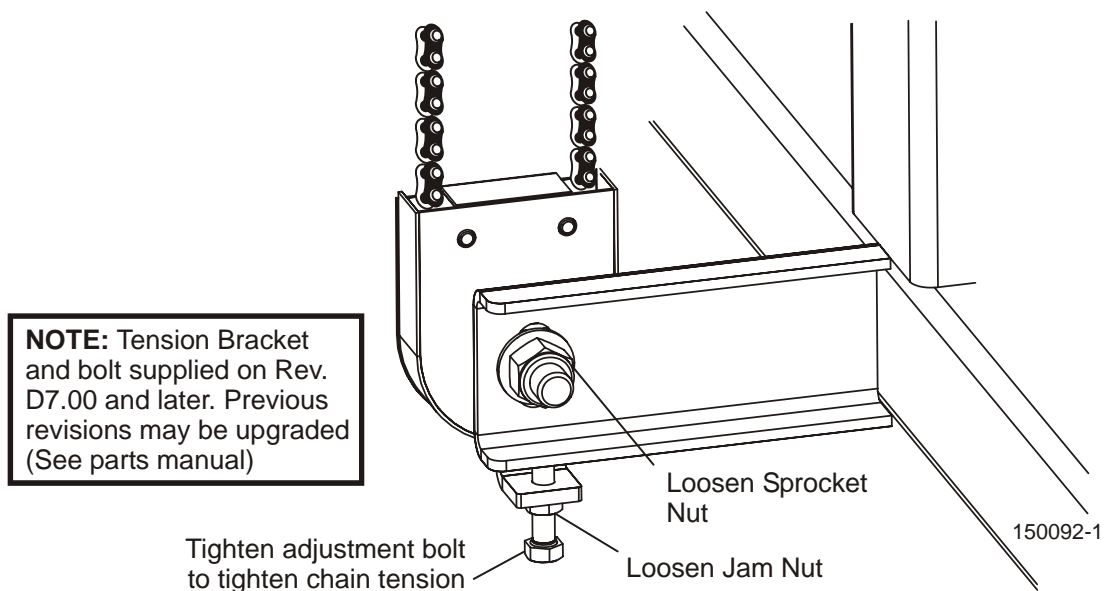


FIG. 5-9

See Figure 5-10. Refer to the following diagram for up/down chain routing instructions.

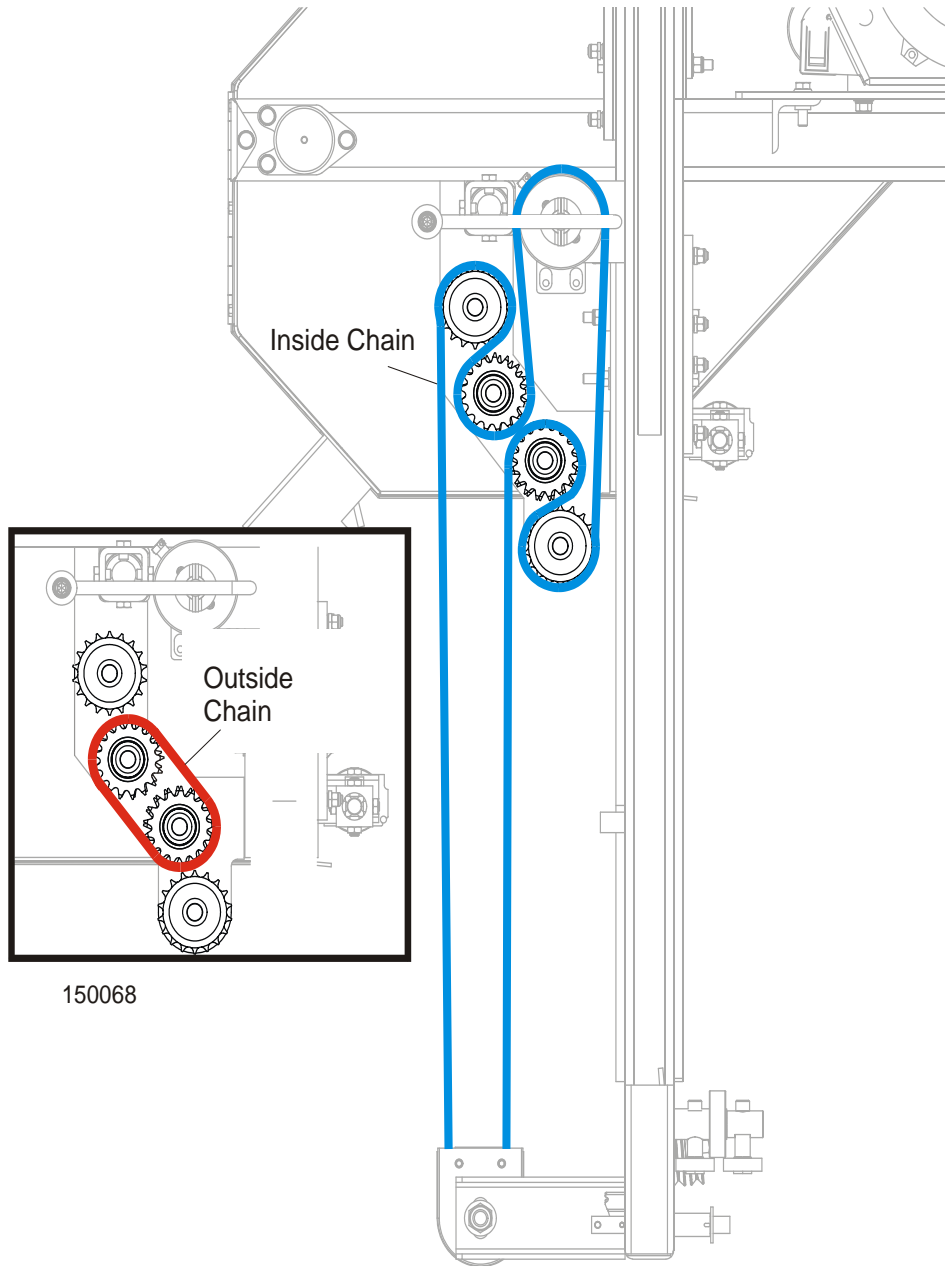


FIG. 5-10

5.12 Charging The Battery (D10/G15 Only)



DANGER! Batteries expel explosive gases. Keep sparks, flames, burning cigarettes, or other ignition sources away at all times. Always wear safety goggles and a face shield when working near batteries. Failure to do so will cause serious injury.¹



WARNING! Battery posts, terminals and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm. Wash hands after handling.



WARNING! Charge the battery in a well ventilated area. Do not attempt to charge a frozen battery.

Use extreme care to avoid spilling or splashing electrolyte (which is dilute sulfuric acid) as it can destroy clothing and burn the skin. If electrolyte is spilled or splashed on clothing or the body, it should be neutralized immediately and then rinsed with clean water. A solution of baking soda, or household ammonia, and water may be used as a neutralizer.

Electrolyte splashed into the eyes is extremely dangerous. If this should happen, force the eye open and flood it with cool, clean water for approximately fifteen minutes. A doctor should be called immediately when the accident occurs and “on-the-spot” medical attention given if possible. If a doctor cannot come to the scene of the accident immediately, follow his instructions concerning actions to take. Do not add eye drops or other medication unless advised to do so by the doctor. Do not place a battery or acid within the reach of children. If acid (electrolyte) is taken internally drink large quantities of water or milk. Follow with milk of magnesia, beaten egg or vegetable oil. Call a physician immediately.

If electrolyte is spilled or splashed on any surface of the machine, it should be neutralized and rinsed with clean water.



CAUTION! Do not overcharge the battery. Overcharging may reduce the overall service life of the battery.

¹ Battery Council International, copyright 1987

CAUTION! Be sure the battery is fully charged before transporting the sawmill. If the battery is not fully charged, excessive vibration could reduce the overall service life of the battery.

1. Turn the key to the OFF (#0) position and remove the key.
2. Remove the battery box lid.
3. Clean the battery terminals if necessary.
4. Connect the positive charger/jumper cable directly to the positive battery terminal.
5. Connect the negative charger/jumper cable to a grounded metal surface.
6. Follow the instructions supplied with your specific battery charger.



IMPORTANT: Be careful not to overcharge the battery, especially when using a high-rate or “boost” charger (40 amps or higher). These are intended to quickly charge a good battery that is discharged. They are not intended for unattended or long-term charging.

7. After the battery is completely recharged, remove the negative charger/jumper cable from ground.
8. Remove the positive charger/jumper cable from the battery.
9. Replace the battery box lid.

MAINTENANCE LOG

(Check Engine And Option Manuals For Additional Maintenance Procedures)

Lubricate Blade Guide Rollers (If Applicable)	See Section 5.2	Daily - Every 4 Hours	DAILY MAINTENANCE PROCEDURES
Check Blade Guide Roller Wear	See Section 5.2	Daily - Every Blade Change	
Remove Excess Sawdust From Blade Wheel Housings And Sawdust Chute	See Section 5.3	Daily - Every Blade Change	
Inspect Fingers Inside Sawdust Chute	See Section 5.3	Daily - Every Blade Change	
Clean Sawdust From Battery Box Lid & Track Cover	See Section 5.3	Daily - Every 8 Hours	
Clean And Lubricate Track	See Section 5.4	Daily - Every 8 Hours	
Remove Sawdust From Upper Track Roller Housings	See Section 5.4	Bi-Weekly - Every 25 Hours	

PROCEDURE	REFERENCE	TOTAL HOURS OF OPERATION FILL IN THE DATE AND THE MACHINE HOURS AS YOU PERFORM EACH PROCEDURE. A SHADED BOX INDICATES MAINTENANCE IS NOT NEEDED AT THIS TIME.									
		50 HRS	100 HRS	150 HRS	200 HRS	250 HRS	300 HRS	350 HRS	400 HRS	450 HRS	500 HRS
Clean & lube mast rails	See Section 5.5										
Grease pivot points and bearings/Oil chains	See Section 5.6										
Lubricate blade tensioner screw	See Section 5.6										
Rotate drive/idle blade wheel belts/Check for wear	See Section 5.7										
Check belt tensions	See Section 5.9										
Check up/down chain tension	See Section 5.11										

MAINTENANCE LOG

PROCEDURE	REFERENCE	TOTAL HOURS OF OPERATION									
		FILL IN THE DATE AND THE MACHINE HOURS AS YOU PERFORM EACH PROCEDURE. A SHADED BOX INDICATES MAINTENANCE IS NOT NEEDED AT THIS TIME.									
		550 HRS	600 HRS	650 HRS	700 HRS	750 HRS	800 HRS	850 HRS	900 HRS	950 HRS	1000 HRS
Clean & lube mast rails	See Section 5.5										
Grease pivot points and bearings/Oil chains	See Section 5.6										
Lubricate blade tensioner screw	See Section 5.6										
Rotate drive/idle blade wheel belts/Check for wear	See Section 5.7										
Check belt tensions	See Section 5.9										
Check up/down chain tension	See Section 5.11										

MAINTENANCE LOG

PROCEDURE	REFERENCE	TOTAL HOURS OF OPERATION									
		FILL IN THE DATE AND THE MACHINE HOURS AS YOU PERFORM EACH PROCEDURE. A SHADED BOX INDICATES MAINTENANCE IS NOT NEEDED AT THIS TIME.									
		1050 HRS	1100 HRS	1150 HRS	1200 HRS	1250 HRS	1300 HRS	1350 HRS	1400 HRS	1450 HRS	1500 HRS
Clean & lube mast rails	See Section 5.5										
Grease pivot points and bearings/Oil chains	See Section 5.6										
Lubricate blade tensioner screw	See Section 5.6										
Rotate drive/idle blade wheel belts/Check for wear	See Section 5.7										
Check belt tensions	See Section 5.9										
Check up/down chain tension	See Section 5.11										

MAINTENANCE LOG

PROCEDURE	REFERENCE	TOTAL HOURS OF OPERATION									
		FILL IN THE DATE AND THE MACHINE HOURS AS YOU PERFORM EACH PROCEDURE. A SHADED BOX INDICATES MAINTENANCE IS NOT NEEDED AT THIS TIME.									
		1550 HRS	1600 HRS	1650 HRS	1700 HRS	1750 HRS	1800 HRS	1850 HRS	1900 HRS	1950 HRS	2000 HRS
Clean & lube mast rails	See Section 5.5										
Grease pivot points and bearings/Oil chains	See Section 5.6										
Lubricate blade tensioner screw	See Section 5.6										
Rotate drive/idle blade wheel belts/Check for wear	See Section 5.7										
Check belt tensions	See Section 5.9										
Check up/down chain tension	See Section 5.11										

MAINTENANCE LOG

PROCEDURE	REFERENCE	TOTAL HOURS OF OPERATION									
		FILL IN THE DATE AND THE MACHINE HOURS AS YOU PERFORM EACH PROCEDURE. A SHADED BOX INDICATES MAINTENANCE IS NOT NEEDED AT THIS TIME.									
		2050 HRS	2100 HRS	2150 HRS	2200 HRS	2250 HRS	2300 HRS	2350 HRS	2400 HRS	2450 HRS	2500 HRS
Clean & lube mast rails	See Section 5.5										
Grease pivot points and bearings/Oil chains	See Section 5.6										
Lubricate blade tensioner screw	See Section 5.6										
Rotate drive/idle blade wheel belts/Check for wear	See Section 5.7										
Check belt tensions	See Section 5.9										
Check up/down chain tension	See Section 5.11										

MAINTENANCE LOG

PROCEDURE	REFERENCE	TOTAL HOURS OF OPERATION									
		FILL IN THE DATE AND THE MACHINE HOURS AS YOU PERFORM EACH PROCEDURE. A SHADED BOX INDICATES MAINTENANCE IS NOT NEEDED AT THIS TIME.									
		2550 HRS	2600 HRS	2650 HRS	2700 HRS	2750 HRS	2800 HRS	2850 HRS	2900 HRS	2950 HRS	3000 HRS
Clean & lube mast rails	See Section 5.5										
Grease pivot points and bearings/Oil chains	See Section 5.6										
Lubricate blade tensioner screw	See Section 5.6										
Rotate drive/idle blade wheel belts/Check for wear	See Section 5.7										
Check belt tensions	See Section 5.9										
Check up/down chain tension	See Section 5.11										

SECTION 6 TROUBLESHOOTING GUIDE

6.1 Sawing Problems



WARNING! Before performing service near moving parts such as blades, pulleys, motors, belts and chains, first turn the key switch to the OFF (#0) position and remove the key. If the key is turned on and moving parts activated, serious injury 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 (See Sharpener Manual)
Blades Break Prematurely	Poor sharpening techniques	See Sharpener Manual
	Rubber belts on blade wheels worn to a point that blade contacts metal pulley - look for shiny spots on edge of wheels	Change blade wheel belts (B-57)
	Tension too tight	Tension blade to recommended specifications
Blade Does Not Track Right on Drive Wheel	Cant adjustment is incorrect	Readjust
	Flat/worn belts	Replace B-57 belts
Blade Guides Do Not Spin While Cutting	Frozen bearings	Replace bearings
	Stiff bearings	Grease bearings
Drive Belts Wear Prematurely or Jump	Engine/motor and drive pulleys out of alignment	Align pulleys.

PROBLEM	CAUSE	SOLUTION
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.	Resharpener and reset blade.
Height Adjustment Jumps or Stutters When Moving Up or Down.	Bed rails misaligned.	Realign sawmill.
	Up/down chain improperly adjusted.	Adjust up/down chain.
Lumber Is Not Square	Vertical wear pads are too tight.	Adjust pads.
	Vertical side supports not square to bed	Adjust side supports.
Sawdust Builds Up On Track	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	Resharpener and reset blade
Wavy Cuts	Excessive oiling	Do not oil track
	Track wipers worn	Adjust wipers to firmly contact track
Boards Thick Or Thin On Ends Or Middle Of Board.	Track is sticky	Clean track with solvent and apply silicone spray
	Excessive feed	Slow feed rate
Boards Thick Or Thin On Ends Or Middle Of Board.	Improperly sharpened blade (This will be the problem 99% of the time!)	Resharpener blade (See Sharpener Manual - read entire manual!)
	Blade guides improperly adjusted	Adjust blade guides.
Boards Thick Or Thin On Ends Or Middle Of Board.	Sap buildup on blade	Use Water Lube.
	Tooth set problem	Resharpener and reset blade

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 (sooner if you regularly transport the sawmill over rough terrain).

7.1 Routine Alignment Procedure

Level the frame and adjust the saw head as described in [Section 3.1 Sawmill Setup](#).

Blade Installation

1. Remove the blade and check the blade wheel belts. Remove any sawdust buildup from the surface of the belts. Replace worn belts if they do not keep the blade from contacting the blade wheel.
2. Install a clean blade and apply the appropriate tension ([See Section 3.3](#)).
3. Adjust the idle-side cant control to track the blade ([See Section 3.4](#)).
4. Close the blade housing cover and make sure all persons are clear of the saw head.
5. Start the engine.
6. Engage the blade, rotating the blade until the blade positions itself on the wheels.



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

7. Disengage the blade. Turn the engine off.

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. Adjust the blade guide arm in to 1/2" (15 mm) from fully closed.

See Figure 7-1. Use the inside top and bottom screws to adjust the arm up until the slide pad touches the saw head brace tube. Tighten the jam nuts.

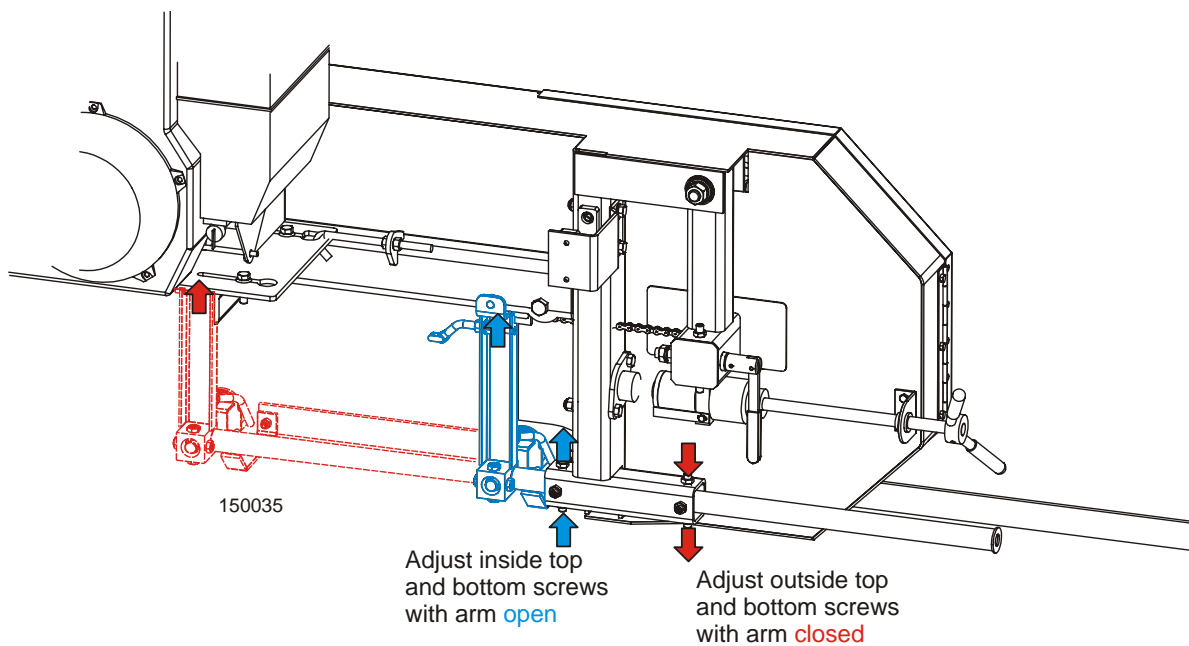


FIG. 7-1

2. Adjust the blade guide arm in all the way toward the other blade guide.
3. Use the outside top and bottom screws to adjust the arm up until the slide pad touches the saw head brace tube. Tighten the jam nuts.

NOTE: When adjusting the blade guide arm screws, be careful not to tighten the screws too much or put the arm in a bind. Operate the blade guide arm knob to ensure the arm moves easily in and out when the knob is turned.

7 Sawmill Alignment

Routine Alignment Procedure

See Figure 7-2. With the blade guide arm still all the way in toward the other blade guide, tighten all the side screws until they touch the arm. Back the screws off 1/4 turn and tighten the jam nuts.

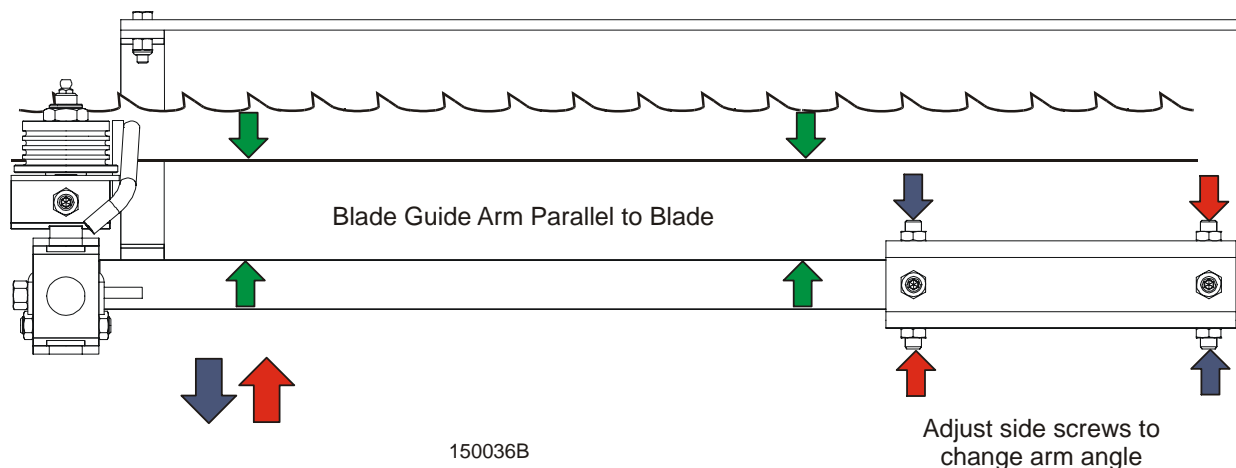


FIG. 7-2

4. Measure the distance between the blade guide arm and back edge of the blade. Adjust the appropriate side screws on the blade guide arm housing so the arm is measures the same distance from the blade at both ends of the arm.
5. To move the blade guide end of the arm toward the front of the sawmill, loosen jam nuts on the front inside screw and the rear outside screw. Turn the screws counterclockwise one full turn and tighten the jam nuts. Loosen the jam nuts on the front outside screw and the rear inside screw. Turn the screws clockwise until they touch the arm, back off 1/4" turn, and tighten the jam nuts.
6. To move the blade guide end of the arm toward the rear of the sawmill, loosen jam nuts on the front outside screw and the rear inside screw. Turn the screws counterclockwise one full turn and tighten the jam nuts. Loosen the jam nuts on the front inside screw and the rear outside screw. Turn the screws clockwise until they touch the arm, back off 1/4" turn, and tighten the jam nuts.

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" (15 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 7-3.

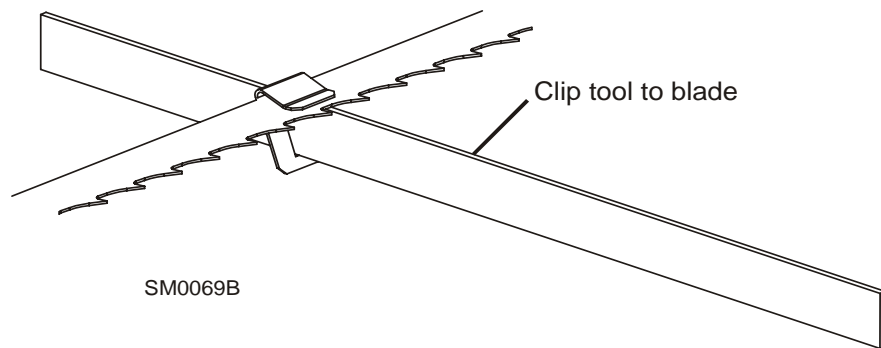


FIG. 7-3

3. Move the carriage 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 carriage 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.
6. Loosen one set screw at the side of the blade guide assembly.

7

Sawmill Alignment

Routine Alignment Procedure

See **Figure 7-4**. 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. Tighten the jam nuts and recheck the tilt of the blade.

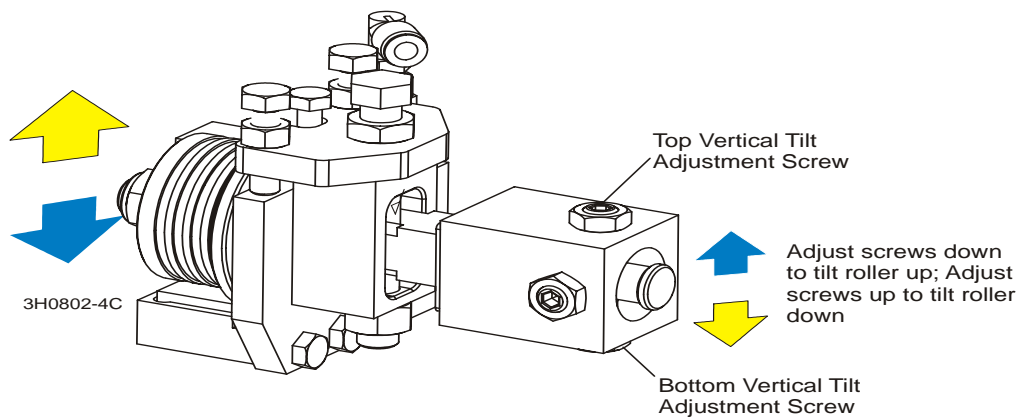


FIG. 7-4

7. 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 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.

8. Remove the blade guide alignment tool from the blade and adjust the blade guide arm halfway in.
9. Remove the clip from the blade guide alignment tool. Place the tool against the face of the outer blade guide roller.

See Figure 7-5.

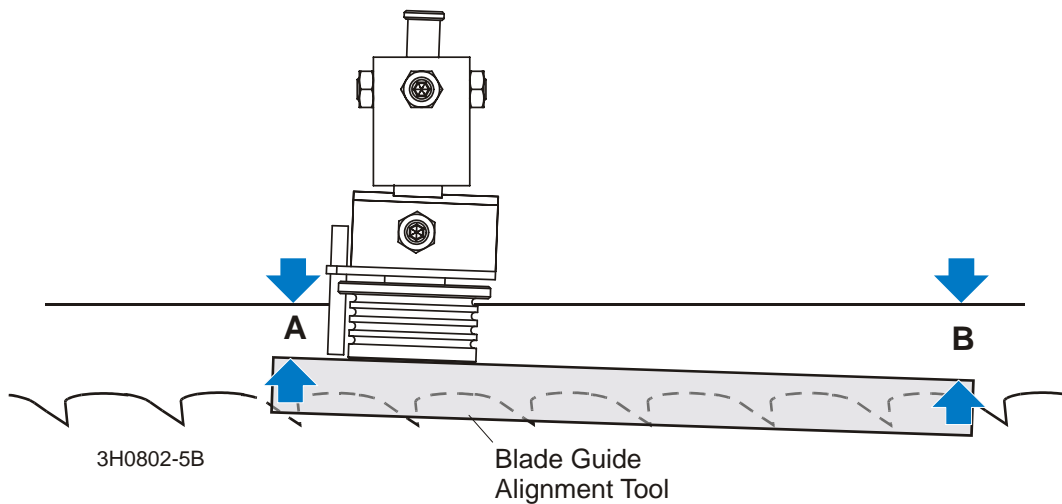


FIG. 7-5

10. Measure between the back edge of the blade and the tool at the end closest to the inner blade guide ("B").
11. Measure between the back edge of the blade and the other end of the tool ("A").

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

7 Sawmill Alignment

Routine Alignment Procedure

See **Figure 7-6**. 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. Tighten the jam nuts and recheck the tilt of the blade.

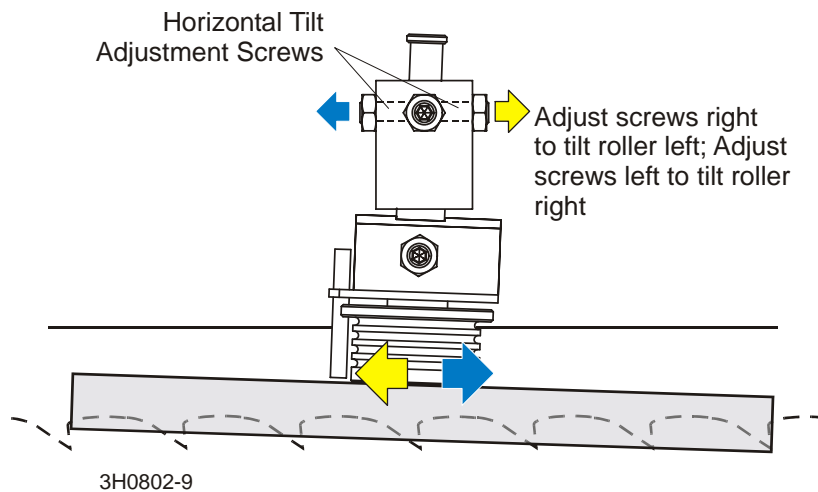


FIG. 7-6

12. Repeat the above steps for the inner blade guide roller assembly.

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

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.

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

1. Measure the distance between the flange on the inner blade guide roller to the back edge of the blade. This distance should measure 1/16" (1.5 mm). Adjust the roller back or forward if necessary.

See Figure 7-7. Loosen the top and one side screw shown. Tap the blade guide forward or backward until properly positioned. Retighten the screws and jam nuts.

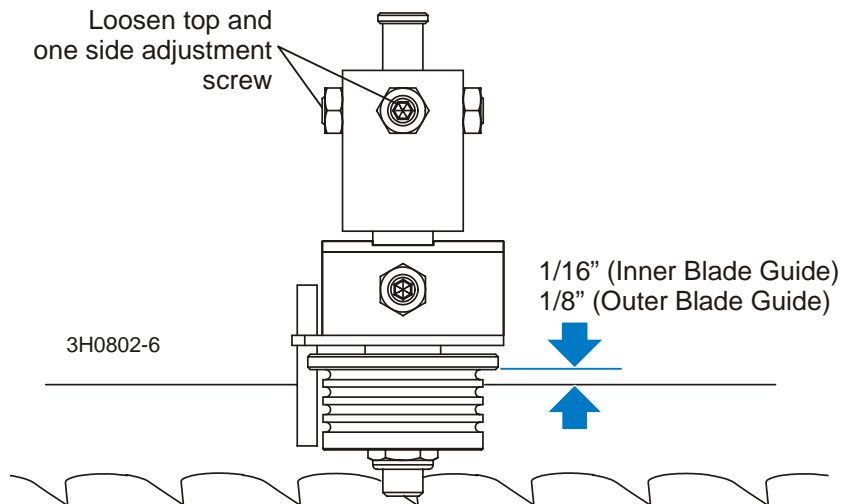


FIG. 7-7

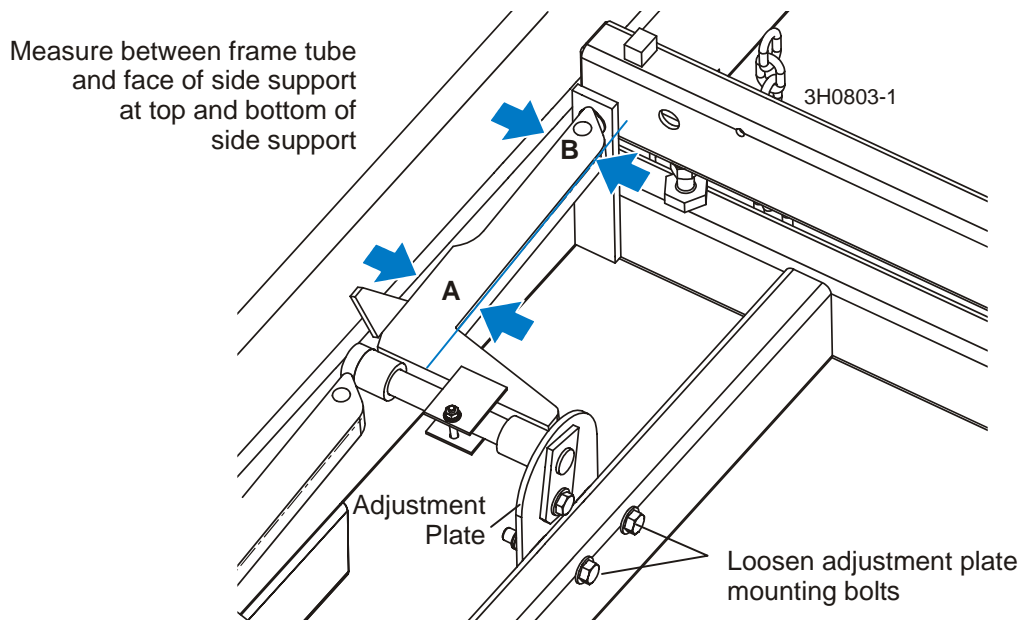
2. Measure the distance between the flange on the outer blade guide roller to the back edge of the blade. This distance should measure 1/8" (3.0 mm). Adjust the roller back or forward if necessary.

Side Support Alignment

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

1. Swing a side support down and measure between the face of the support and the main bed tube. The distance at the top of the side support ('B') should be equal to or no more than 1/32" (0.8 mm) greater than the distance at the base of the side support ('A'). Adjust the horizontal tilt of the side support if necessary.

See Figure 7-8. Loosen the two adjustment plate mounting bolts. Use a mallet to move the plate until the side support is parallel to the bed tube in the horizontal position. Retighten the mounting bolts.

**FIG. 7-8**

2. Repeat the horizontal check for the remaining side supports. Adjust as necessary.
3. Place square alignment tubes (Part No. S12831 - 2 required) across the bed rails. Swing a side support up so that it is vertical.
4. Pull back at the top of the support to eliminate slack as if a log were being clamped against it.
5. Place a square against the face of the side support. The side support should be square or slightly tilted forward 1/32" (0.8 mm). Adjust the vertical tilt of the side support if necessary.

See Figure 7-9. Loosen the top adjustment bolt, adjust the side support, and retighten the bolt. Turn the adjustment bolt counterclockwise to tilt the top of the side support forward.

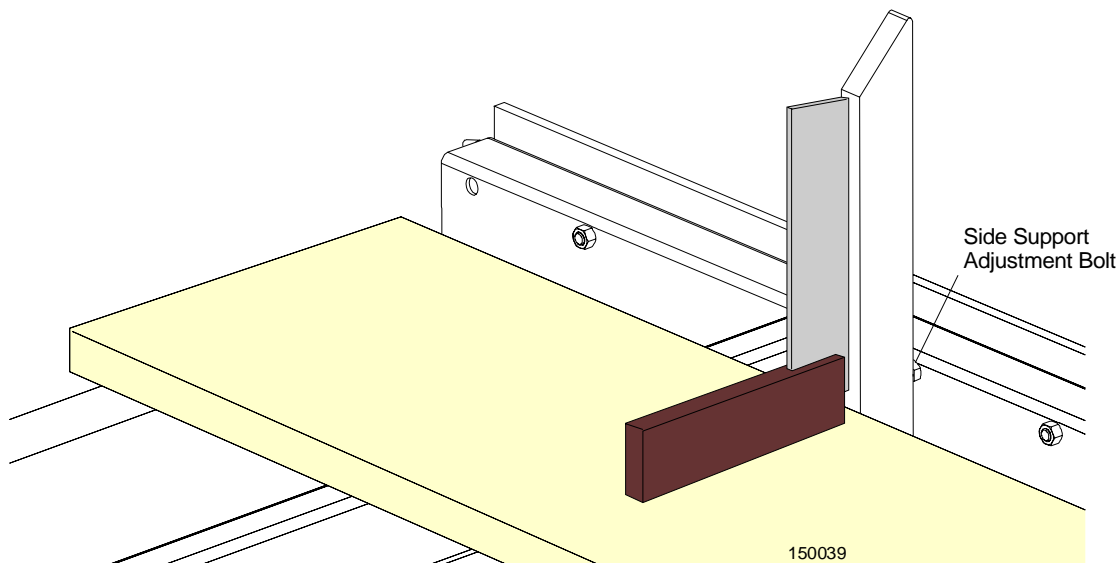


FIG. 7-9

6. Repeat the vertical check for the remaining side supports and adjust as necessary.

7 Sawmill Alignment

Routine Alignment Procedure

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 head so the blade is positioned directly above one of the bed rails. Measure from the bottom edge on a down-set tooth of the blade to the top of the bed rail, near the inner blade guide assembly.
2. View the blade height scale with eyes level with the indicator. The scale should indicate the actual distance from the blade to the bed rail. Adjust the indicator if necessary.

See Figure 7-10. Loosen the indicator bracket mounting bolts and adjust the bracket until the indicator is aligned with the correct mark on the scale (+0 -1/32 [0.8 mm]). Retighten the bracket 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.

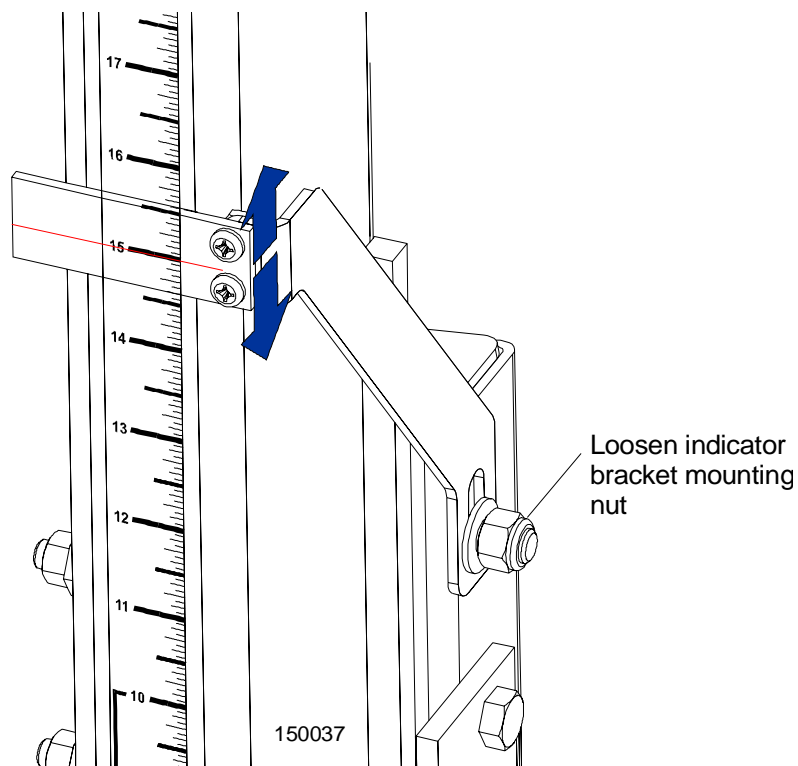


FIG. 7-10

7.2 Complete Alignment Procedure

Frame Setup

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

Level the frame and adjust the saw head as described in [Section 3.1 Sawmill Setup](#).

7 Sawmill Alignment

Complete Alignment Procedure

Blade Installation

1. Remove the blade and replace the blade wheel belts. New blade wheel belts are required to perform the complete alignment procedure.
2. Blow sawdust off of the blade guide assemblies. Remove sawdust from the blade housings.
3. Remove the blade guide assemblies and the blade.

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.

4. Adjust the outer blade guide arm in or out until the outer blade guide is approximately 24" from the inner blade guide.
5. Install a new blade and apply the appropriate tension ([See Section 3.3](#)).
6. Close the blade housing covers and make sure all persons are clear of the saw head.
7. Start the engine.
8. Engage the blade, rotating the blade until the blade positions itself on the wheels.



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

9. Disengage the blade. 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 travel in the tilted direction. If the blade wheels are tilted horizontally, the blade will not track properly on the wheels.

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

See Figure 7-11.

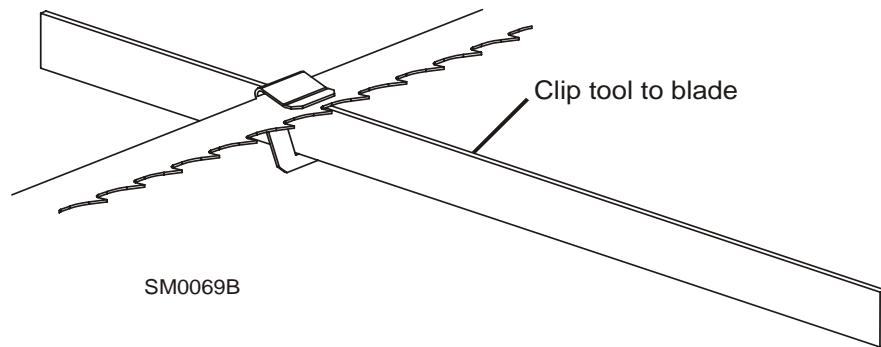


FIG. 7-11

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

7 Sawmill Alignment

Complete Alignment Procedure

See Figure 7-12. Use the vertical adjustment screws to adjust the drive-side blade wheel. To tilt the wheel, loosen the top adjustment screw one quarter turn. Loosen the jam nut on the bottom adjustment screw and tighten the screw. Tighten the top and bottom jam nuts.

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

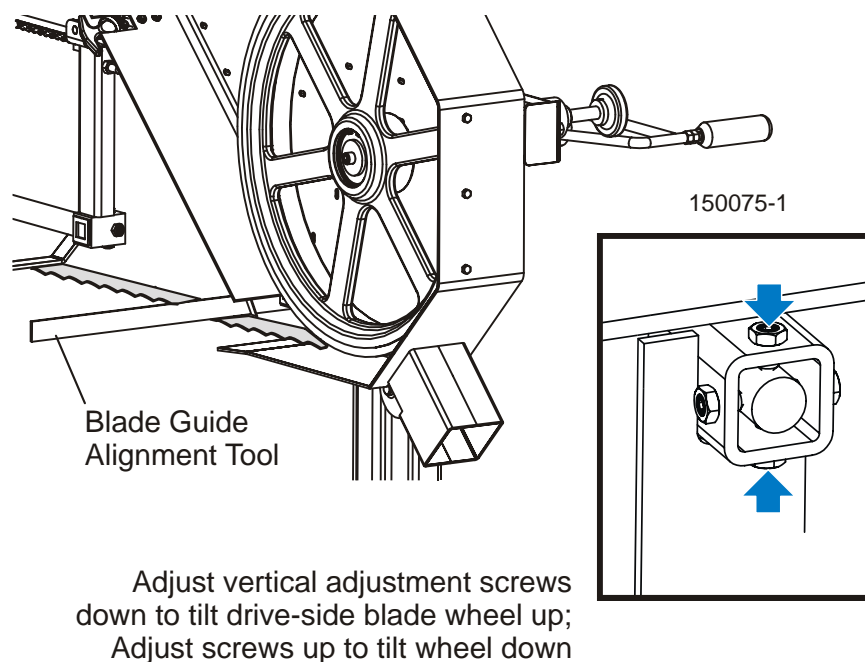


FIG. 7-12

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

See Figure 7-13. Use the vertical adjustment screws to adjust the idle-side blade wheel. To tilt the wheel up, loosen the bottom adjustment screw one quarter turn. Loosen the jam nut on the top adjustment screw and tighten the screw. Tighten the top and bottom jam nuts.

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

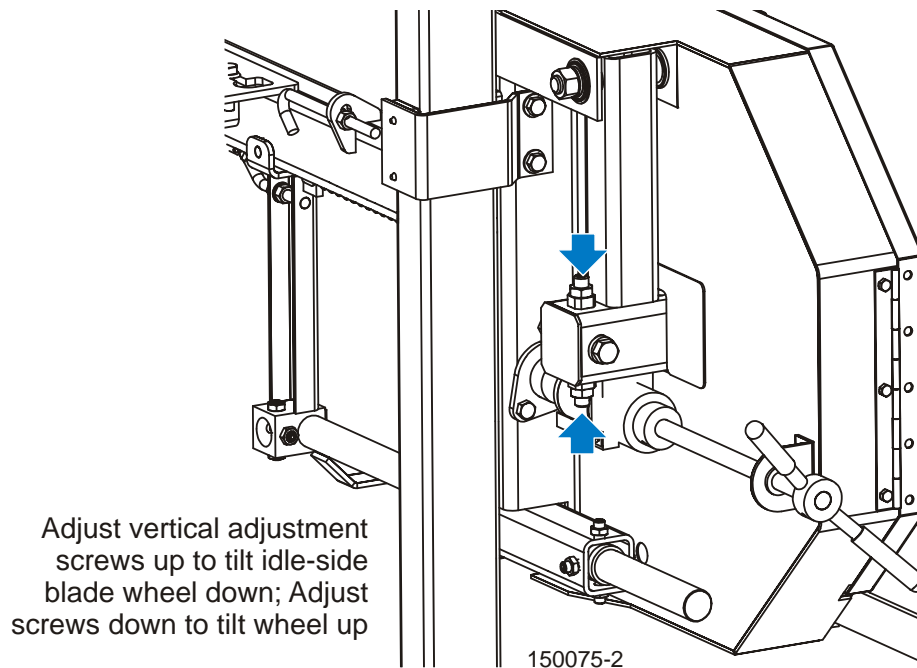


FIG. 7-13

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

7 Sawmill Alignment

Complete Alignment Procedure

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

See Figure 7-14. The horizontal tilt of the blade wheel should be adjusted so that the gullet of an 1-1/4" blade is 1/8" (3 mm) out from the front edge of the wheel ($\pm 1/32$ [0.75 mm]).

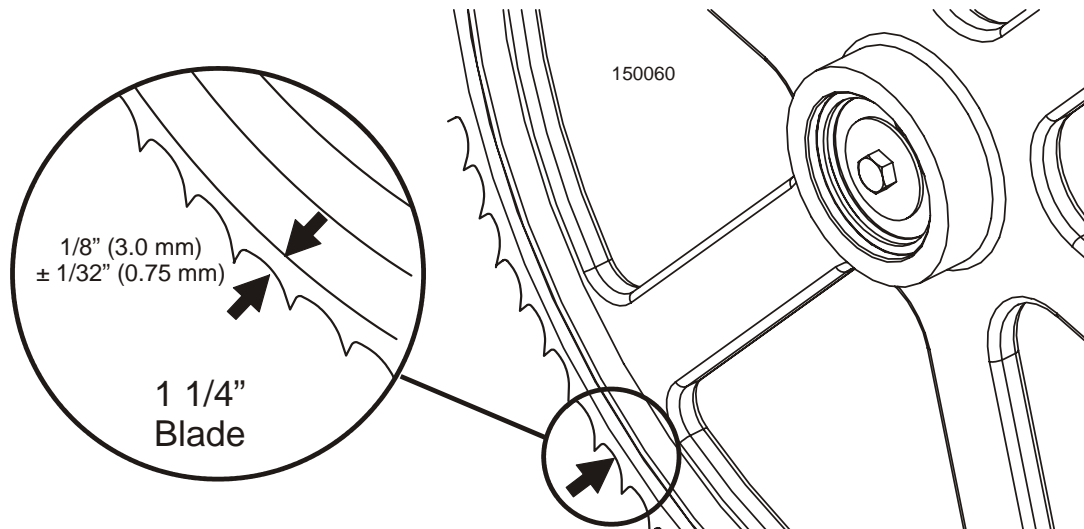


FIG. 7-14

See Figure 7-15. Use the cant control adjustment to adjust the idle-side blade wheel. If the blade is too far forward on the wheel, turn the cant control counterclockwise. If it is too far back on the wheel, turn the cant control clockwise.

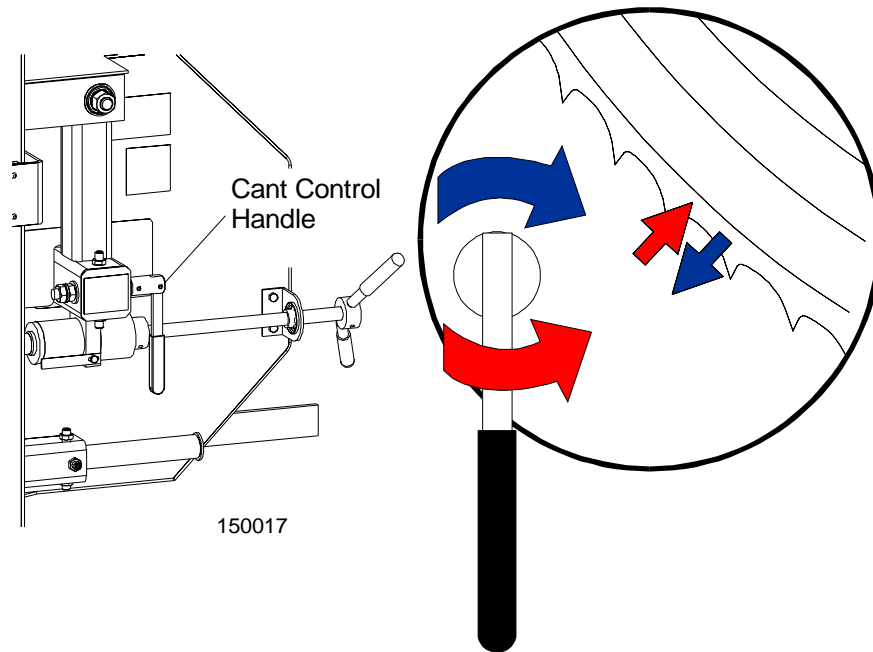


FIG. 7-15 REV. A.00 - B.00

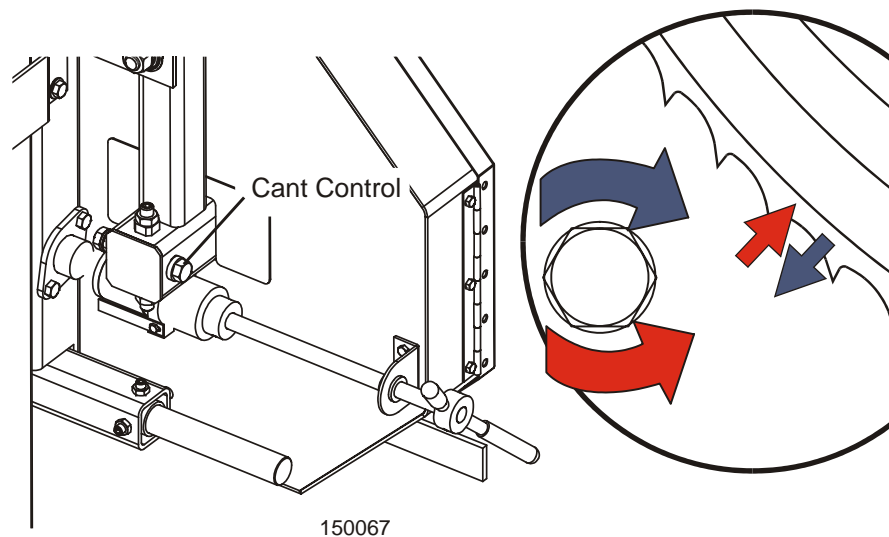


FIG. 7-15 REV. C.00+

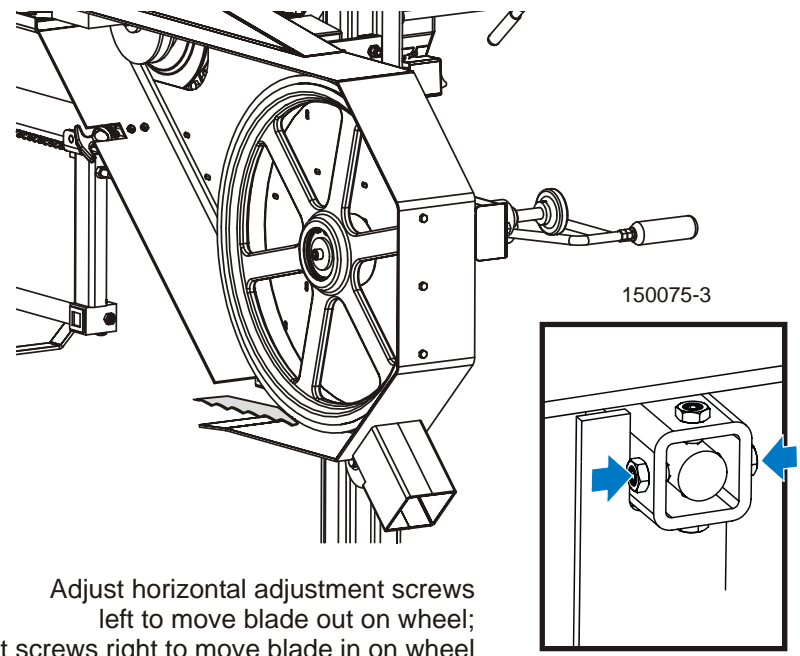
10. Check the position of the blade on the drive-side blade wheel. The blade should be positioned on the wheel as described for the idle-side blade wheel. Adjust the drive-side blade wheel if necessary.

See Figure 7-16. Use the horizontal adjustment screws to adjust the drive-side blade wheel. To move the blade back on the 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.

7 Sawmill Alignment

Complete Alignment Procedure

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 to. Tighten the left and right jam nuts.



Adjust horizontal adjustment screws
left to move blade out on wheel;
Adjust screws right to move blade in on wheel

FIG. 7-16

Blade Guide Installation

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

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

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

NOTE: Before 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. Install the outer blade guide assembly (with waterlube tube) to the mounting block on the blade guide arm. Position the assembly so the roller flange is 1/8" (3.0 mm) from the blade.
2. Install the inner blade guide assembly to the mounting block on the saw head. Position the assembly so the roller flange is 1/16" (1.5 mm) from the blade.

See Figure 7-17.

Tighten the two previously-loosened tilt adjustment screws to secure the blade guide assembly. 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.

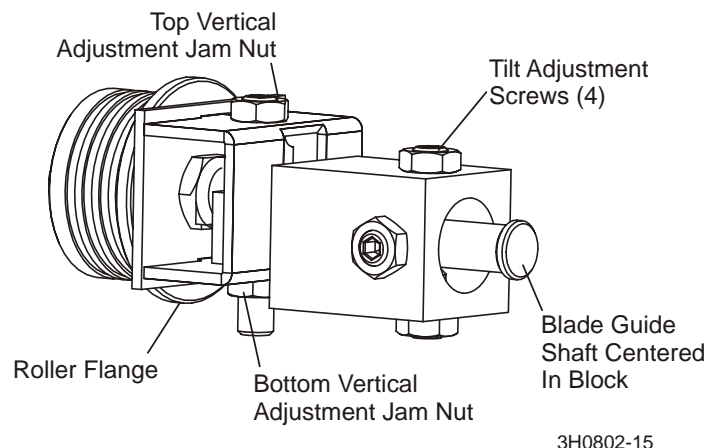


FIG. 7-17

7 Sawmill Alignment

Complete Alignment Procedure

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. Adjust the blade guide arm in to 1/2" (15 mm) from fully closed.

See Figure 7-18. Use the inside top and bottom screws to adjust the arm up until the slide pad touches the saw head brace tube. Tighten the jam nuts.

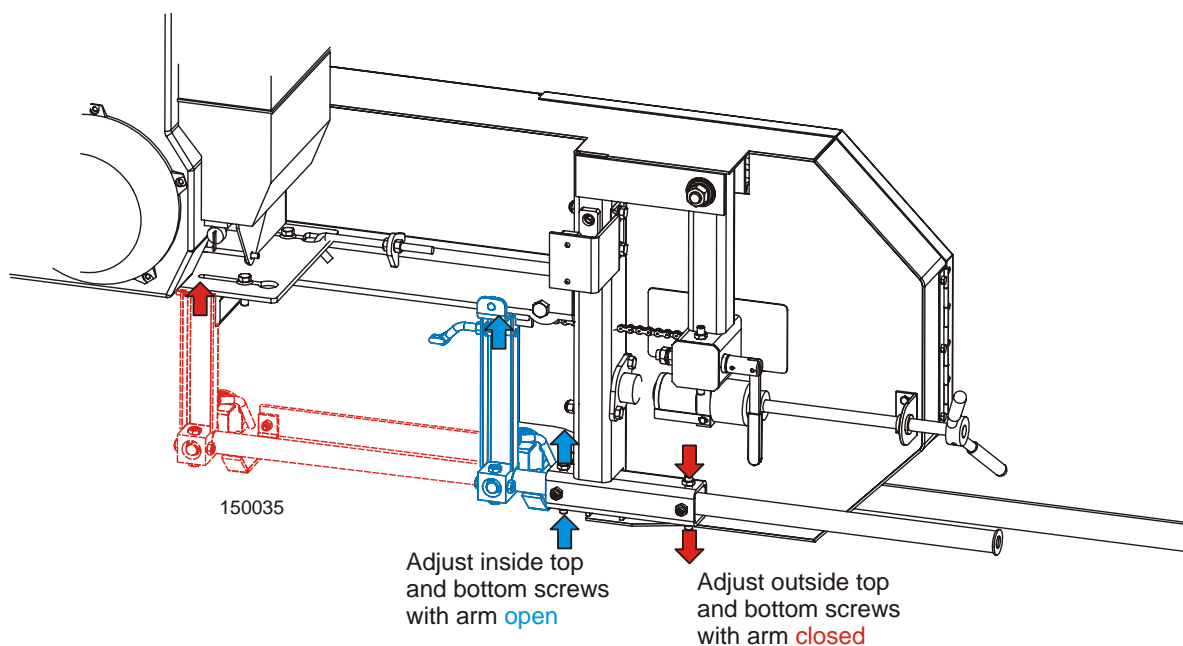


FIG. 7-18

2. Adjust the blade guide arm in all the way toward the other blade guide.
3. Use the outside top and bottom screws to adjust the arm up until the slide pad touches the saw head brace tube. Tighten the jam nuts.

NOTE: When adjusting the blade guide arm screws, be careful not to tighten the screws too much or put the arm in a bind. Operate the blade guide arm knob to ensure the arm moves easily in and out when the knob is turned.

See Figure 7-19. With the blade guide arm still all the way in toward the other blade guide, tighten all the side screws until they touch the arm. Back the screws off 1/4 turn and tighten the jam nuts.

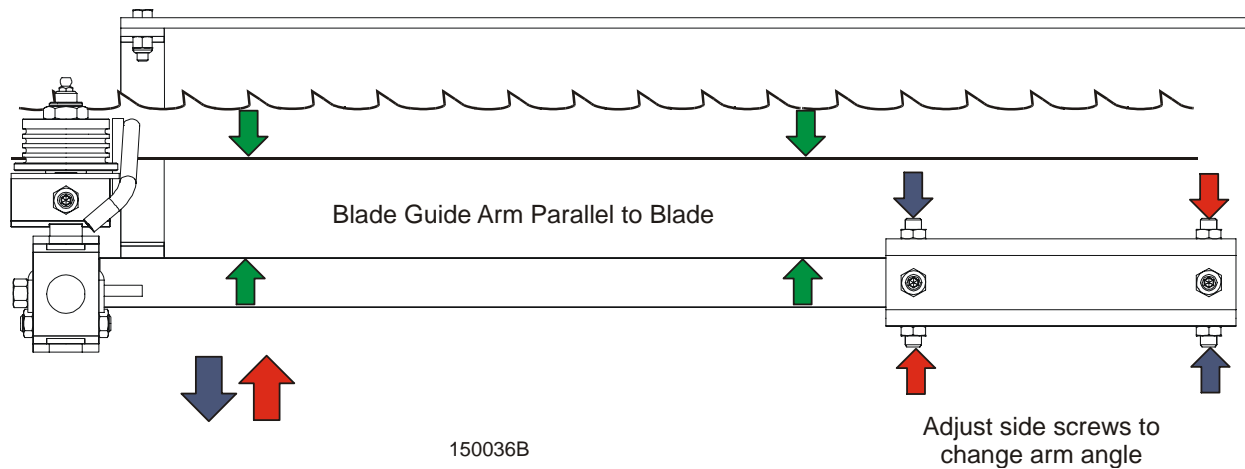


FIG. 7-19

4. Measure the distance between the blade guide arm and back edge of the blade. Adjust the appropriate side screws on the blade guide arm housing so the arm is measures the same distance from the blade at both ends of the arm.
5. To move the blade guide end of the arm toward the front of the sawmill, loosen jam nuts on the front inside screw and the rear outside screw. Turn the screws counterclockwise one full turn and tighten the jam nuts. Loosen the jam nuts on the front outside screw and the rear inside screw. Turn the screws clockwise until they touch the arm, back off 1/4" turn, and tighten the jam nuts.
6. To move the blade guide end of the arm toward the rear of the sawmill, loosen jam nuts on the front outside screw and the rear inside screw. Turn the screws counterclockwise one full turn and tighten the jam nuts. Loosen the jam nuts on the front inside screw and the rear outside screw. Turn the screws clockwise until they touch the arm, back off 1/4" turn, and tighten the jam nuts.

7 Sawmill Alignment

Complete Alignment Procedure

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 7-20.

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.

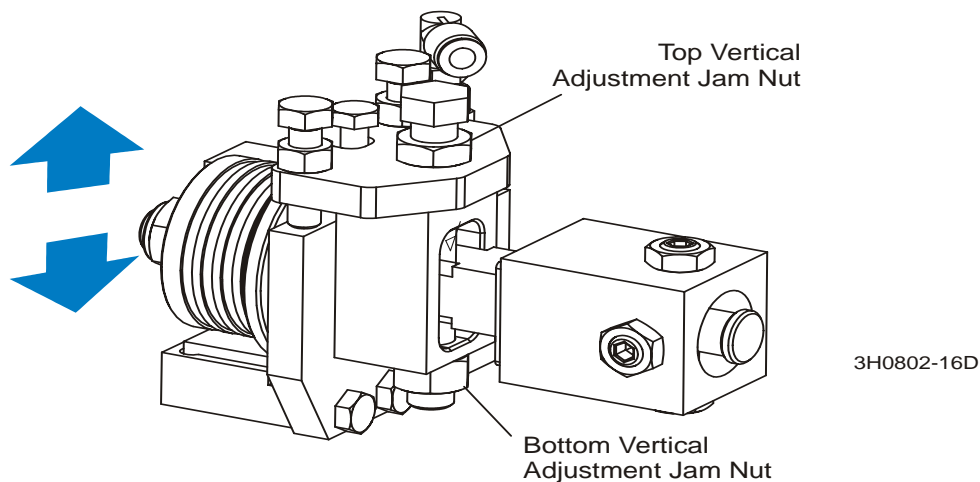


FIG. 7-20

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

See Figure 7-21.

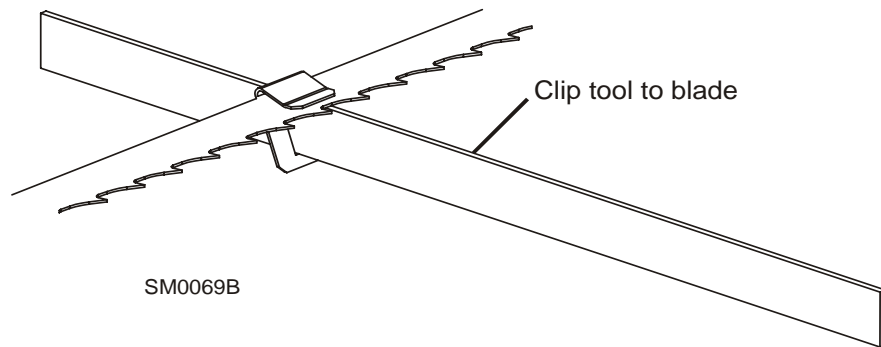


FIG. 7-21

3. Move the carriage 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 carriage 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.
6. Loosen one set screw at the side of the blade guide assembly.

7 Sawmill Alignment

Complete Alignment Procedure

See **Figure 7-22**. 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. Tighten the jam nuts and recheck the tilt of the blade.

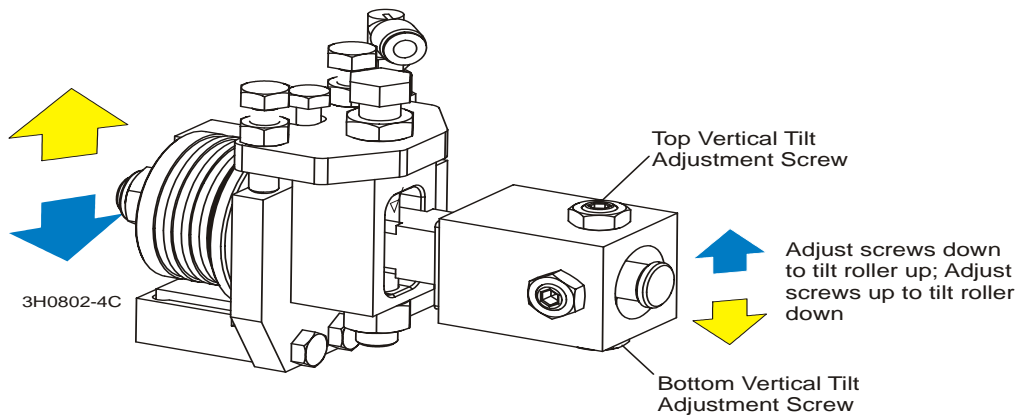


FIG. 7-22

7. 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.
8. After adjusting the vertical tilt of the blade guides, recheck the blade deflection and adjust 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.
2. Remove the clip from the blade guide alignment tool. Place the tool against the face of the outer blade guide roller.

See Figure 7-23.

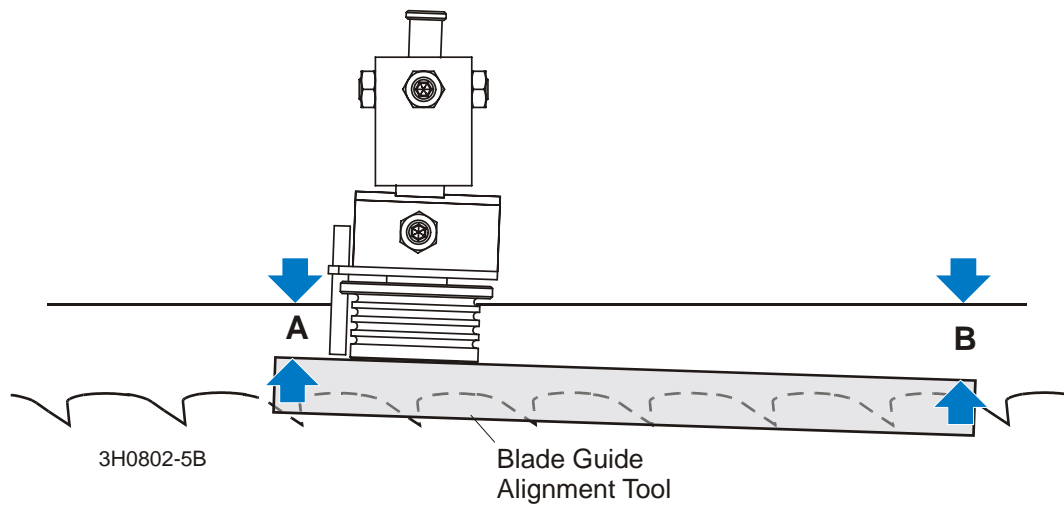


FIG. 7-23

3. Measure between the back edge of the blade and the tool at the end closest to the inner blade guide ("B").
4. Measure between the back edge of the blade and the other end of the tool ("A").

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

7 Sawmill Alignment

Complete Alignment Procedure

See Figure 7-24. 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. Tighten the jam nuts and recheck the tilt of the blade.

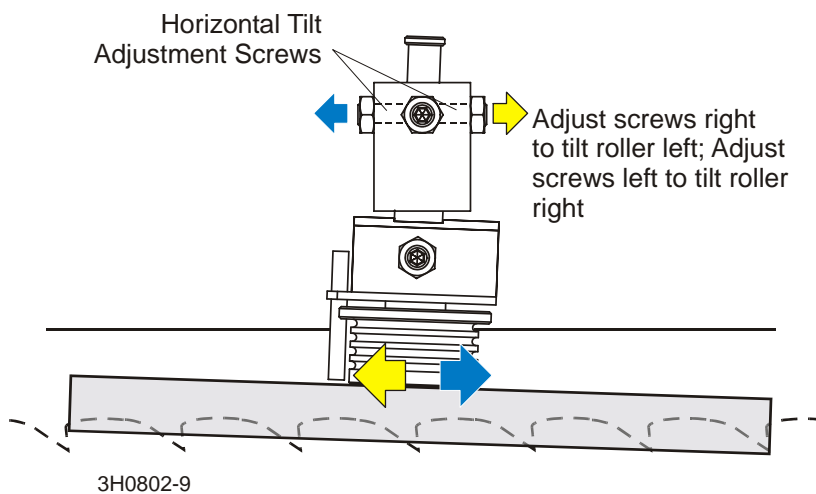


FIG. 7-24

5. Repeat the above steps for the inner blade guide roller assembly.

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

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.

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

1. Measure the distance between the flange on the inner blade guide roller to the back edge of the blade. This distance should measure 1/16" (1.5 mm). Adjust the roller back or forward if necessary.

See Figure 7-25. Loosen the top and one side screw shown. Tap the blade guide forward or backward until properly positioned. Retighten the screws and jam nuts.

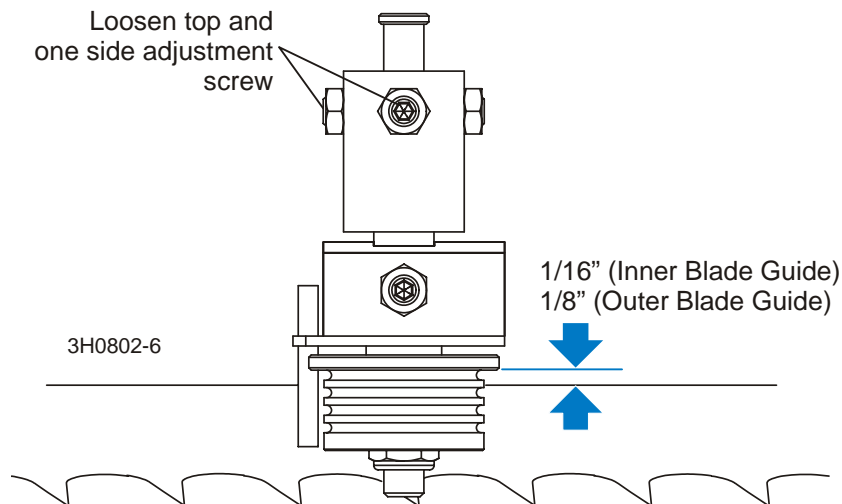


FIG. 7-25

2. Measure the distance between the flange on the outer blade guide roller to the back edge of the blade. This distance should measure 1/8" (3.0 mm). Adjust the roller back or forward if necessary.

7 Sawmill Alignment

Complete Alignment Procedure

Side Support Alignment

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

1. Place a flat board across the bed rails. Swing a side support up so that it is vertical.
2. Pull back at the top of the support to eliminate slack as if a log were being clamped against it.
3. Place a square against the face of the side support. The side support should be square or slightly tilted forward $1/32"$ (0.8 mm). Adjust the vertical tilt of the side support if necessary.

See Figure 7-26. Loosen the top adjustment bolt, adjust the side support, and retighten the bolt. Turn the adjustment bolt counterclockwise to tilt the top of the side support forward.

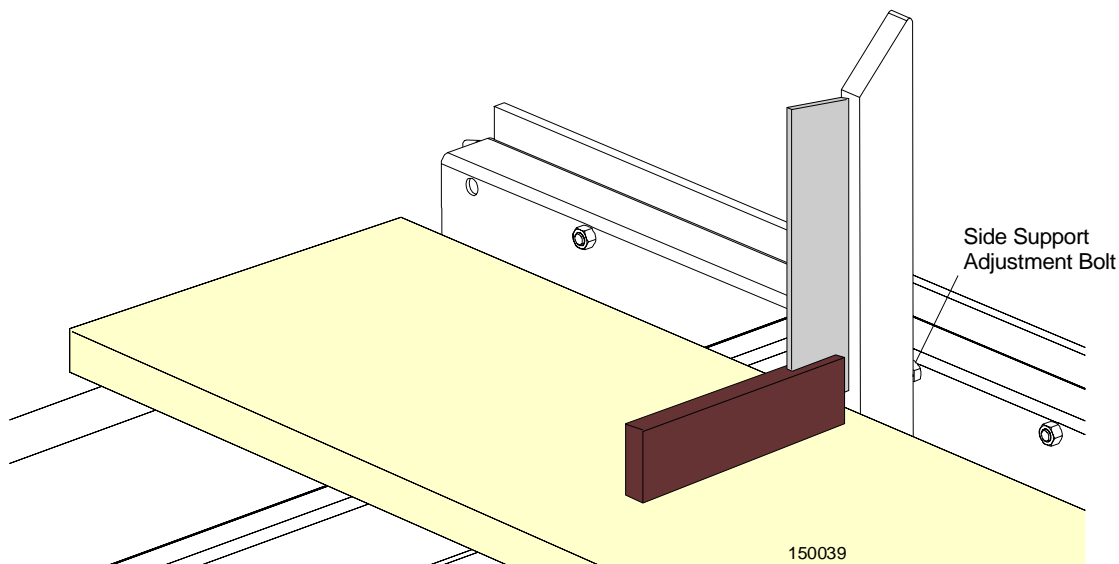


FIG. 7-26

4. Repeat the vertical check for the remaining side supports and adjust as necessary.

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 carriage so the blade is positioned directly above one of the bed rails. Measure from the bottom edge on a down-set tooth of the blade to the top of the bed rail, near the inner blade guide assembly.
2. View the blade height scale with eyes level with the indicator. The scale should indicate the actual distance from the blade to the bed rail. Adjust the indicator if necessary.

See Figure 7-27. Loosen the indicator bracket mounting nut. Adjust the bracket up or down until the indicator is aligned with the correct mark on the scale (+0 -1/32 [0.8 mm]). 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.

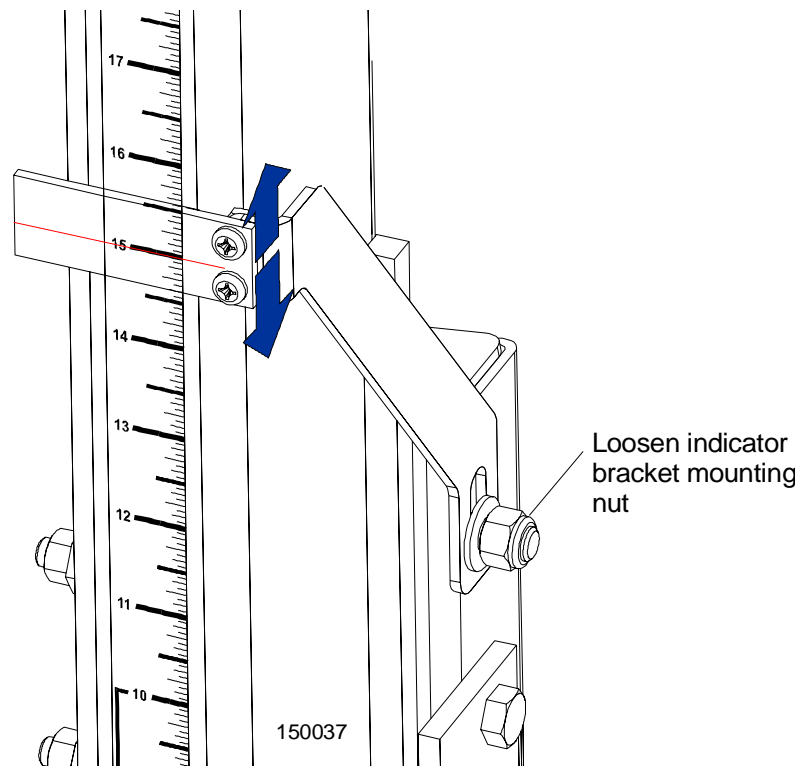


FIG. 7-27

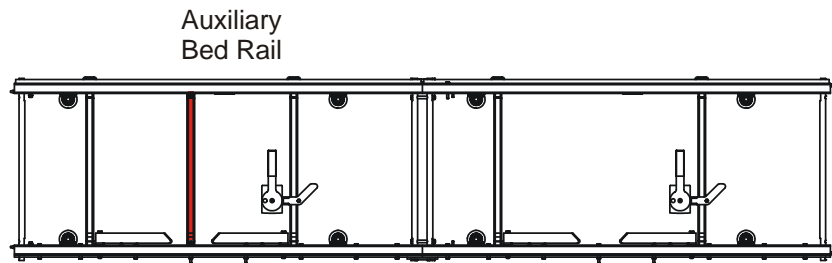
SECTION 8 SAWMILL ASSEMBLY

8.1 Overview

The standard LT15 is supplied with two bed sections, one head assembly, and an auxiliary bed rail.

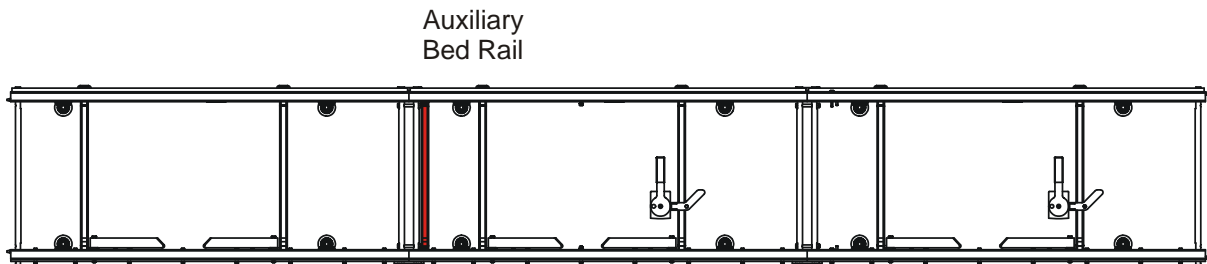
See Figure 8-1. The figure below shows the recommend bed setup for a standard LT15 (revision D4.00 and later). The auxiliary bed rail is installed to pre-existing holes between the two main bed rails of the second bed section to support shorter logs as shown below.

Also shown is the recommended bed setup of an LT15 when using the SLR Shingle/Lap Siding Option. A third bed section and relocation of the auxiliary bed rail are required to use the SLR option on the LT15. Holes need to be drilled in the bed frame to mount the auxiliary bed rail in this position.



Top View - Standard Two-Bed Setup

150076-1C



Top View - Three-Bed Setup For Use with SLR Option

FIG. 8-1

See Figure 8-2. Mills prior to revision D4.00 were also equipped with a bed extension kit. The auxiliary bed rail is still installed to pre-existing holes between the two main bed rails of the second bed section to support shorter logs. However, it is relocated to the end of the first bed section rather than the middle section to support the SLR as shown below.

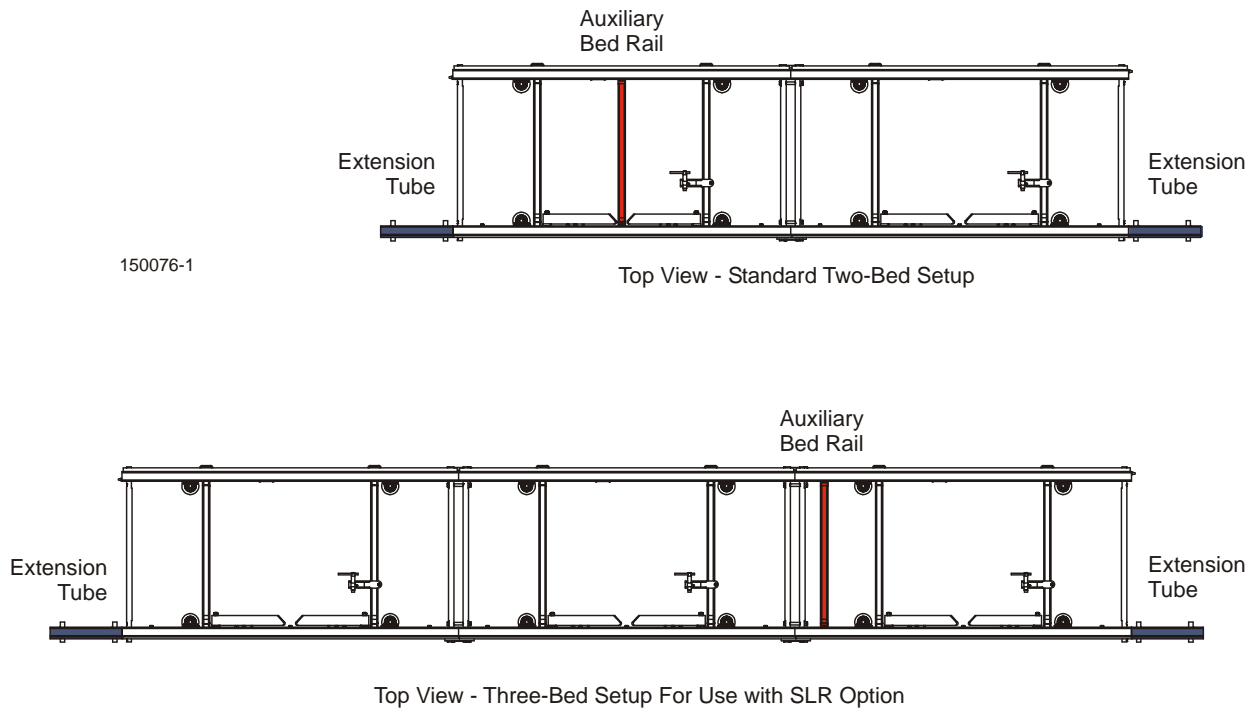


FIG. 8-2

8.2 Leg Assembly

Bolt four leg brackets to each bed section. Use two 3/8-16 x 2 3/4" hex head bolts and lock nuts to secure each leg bracket to the bed section. Be sure the nut on the bracket faces up. Thread a leg into each bracket.

See Figure 8-3.

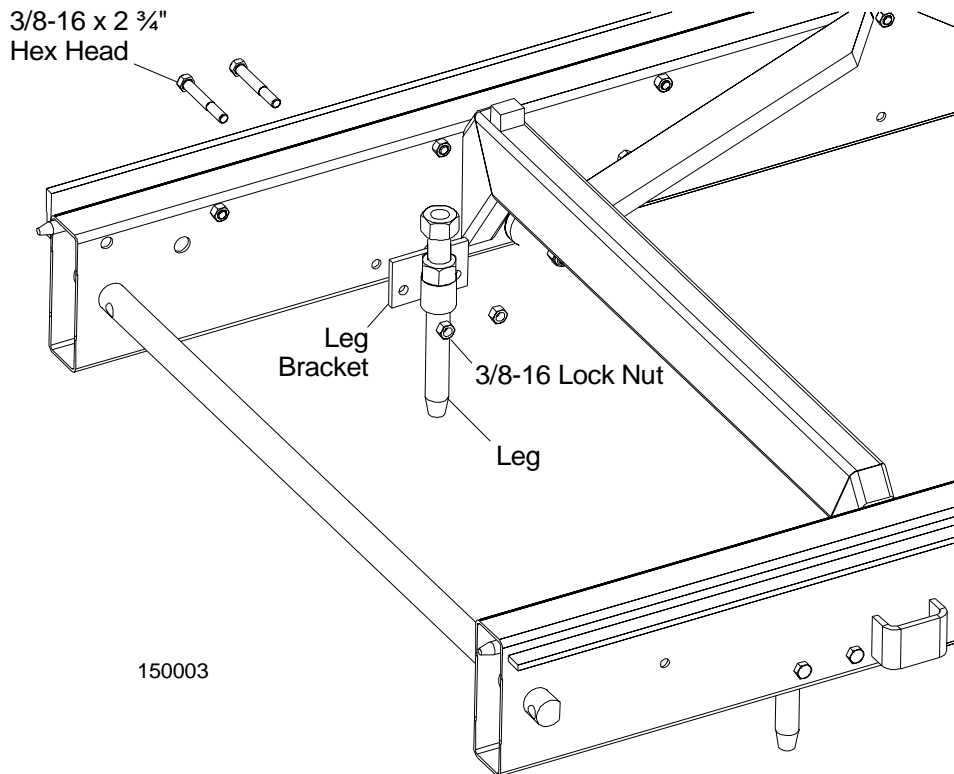


FIG. 8-3

8.3 Bed Section Assembly

Lay the bed sections end-to-end so the track portion of each section is on the same side. Slide the sections together and secure with four 1/2-13 x 4 1/2" hex head bolts and nylon lock nuts.

See Figure 8-4.

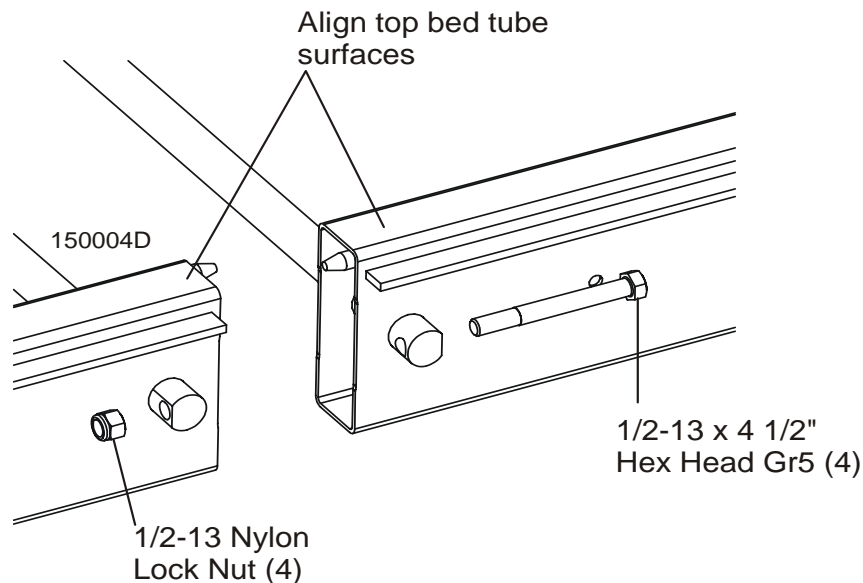


FIG. 8-4

Make sure the top surfaces of the outer side of the bed sections are aligned. It may be necessary to pry one bed section up or down until the surfaces are aligned, then tighten the bolts.

LT15BS

Rev. A

Place the frame mounting splice in the recessed area across the track sections and secure with two 3/8-16 x 1" hex head bolts. **NOTE:** It may be necessary to loosen the end bolts on each track rail to align the recessed areas so the mounting splice fits properly.

8 Sawmill Assembly

Bed Section Assembly

See Figure 8-5.

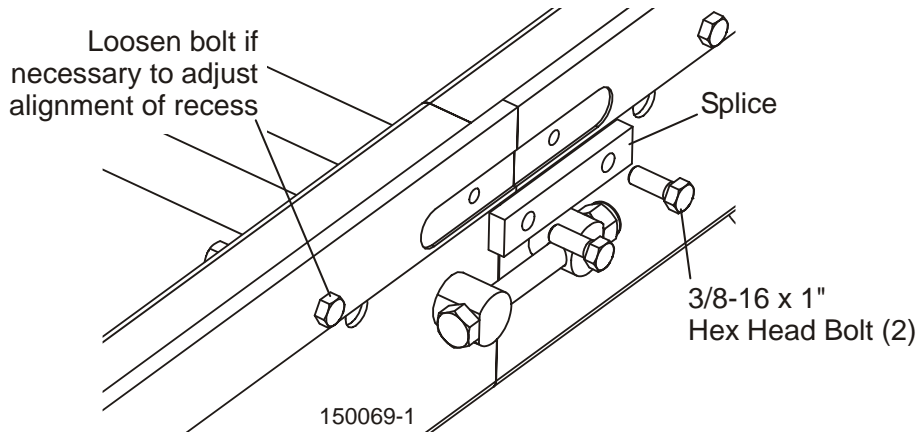


FIG. 8-5

LT15BS

Rev. B.00+

Insert the splice pins into the holes in the track rail and secure with two 3/8-16 x 1" hex head bolts.

See Figure 8-6.

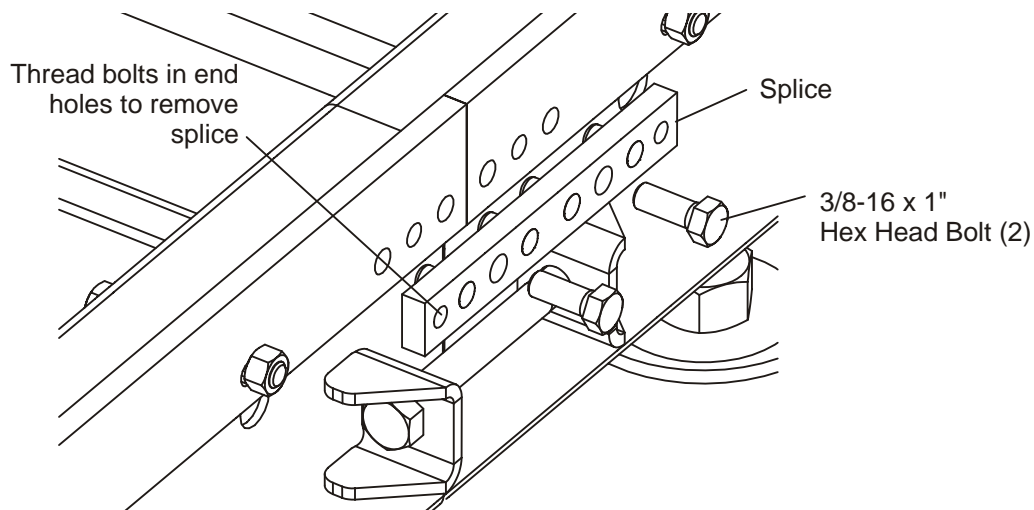


FIG. 8-6

TIP: The threaded holes at the end of the splice are provided to help remove the splice if you wish to disassemble the sawmill. Remove the two splice bolts from the middle holes and thread into the end holes. Evenly turn the bolts clockwise to push the splice pins out of the track rail holes.

LT15BS

Retrofit

See Figure 8-7. To connect a bed with old-style track rails (without pin holes) to a bed with new-style track rails (with pin holes), use the adaptor splice (Part No. 016173). Insert the splice pins into the holes in the new track rail. Secure with two 3/8-16 x 1" hex head bolts.

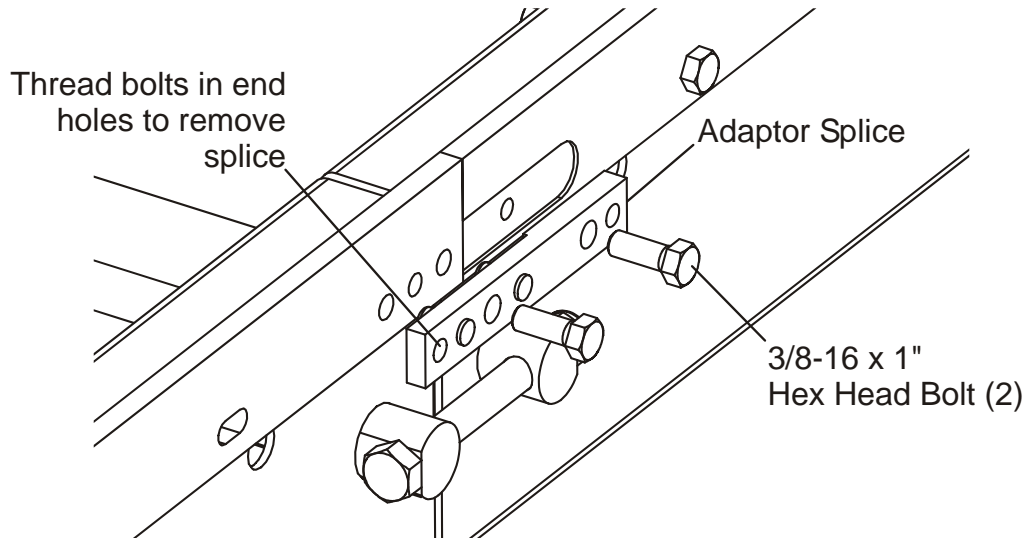


FIG. 8-7

8.4 Bed Extension Option

For mills prior to revision D4.00:

Installation of the bed extension option will allow you to saw logs up to 27" longer than the standard sawmill.

1. Assemble one of the extension tubes to one end of the sawmill, inserting the pinned end of the extension tube into the bed tube.
2. Secure the extension to the bed section with two 1/2-13 x 4 1/2" hex head bolts and nylon lock nuts.
3. Assemble the splice to the pin holes in the track rails and secure with two 3/8" lock washers and 3/8-16 x 1" hex head bolts.
4. Repeat at the other end of the sawmill with the second bed extension tube.

NOTE: To assemble the bed extension to LT15 Rev. A.00 without pin holes in the track rail, use the splice adaptor provided with the extension ([See Section 8.2](#)).

See Figure 8-8.

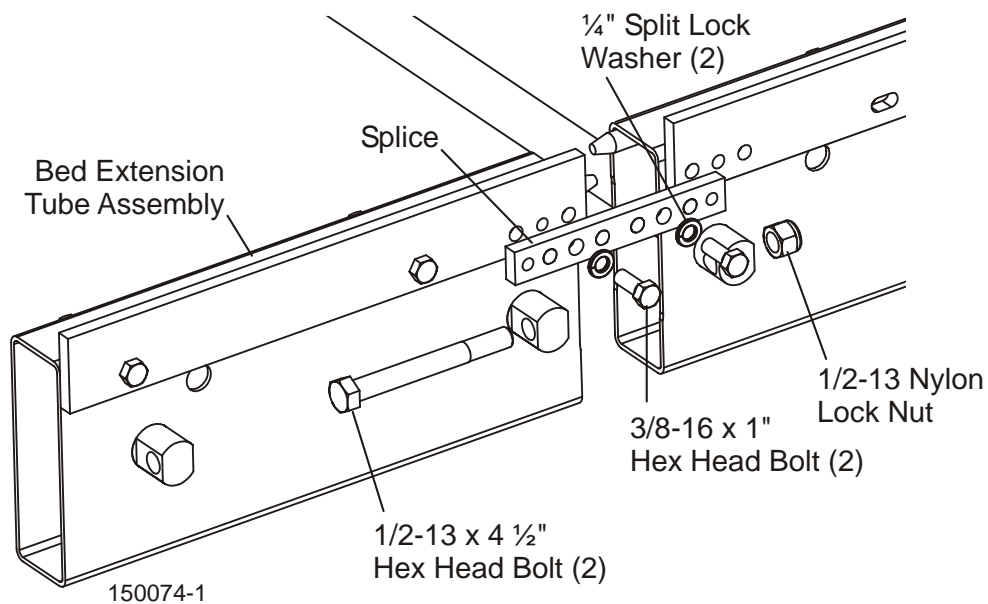


FIG. 8-8

8.5 Clamp Assembly

Rev. E3.02+ Only: Remove the bottom clamp plate from each clamp assembly. Assemble a log clamp to a bed rail on each bed section and reinstall the bottom clamp plate.

Rev. A1.00 - E3.01 Only: Assemble a log clamp to a bed rail on each bed section using a 3/8-16 x 4" hex head bolt and nylon lock nut.

See Figure 8-9.

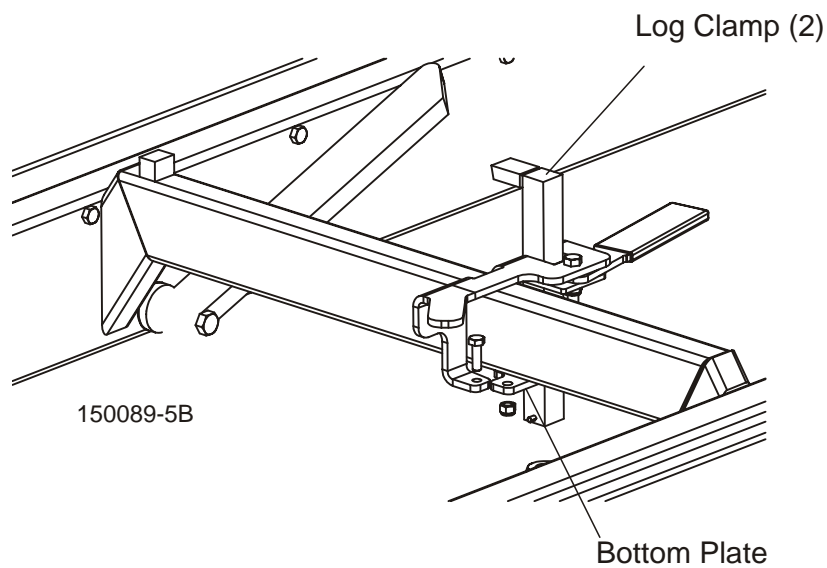


FIG. 8-9 REV. E3.02+

8 Sawmill Assembly

Clamp Assembly

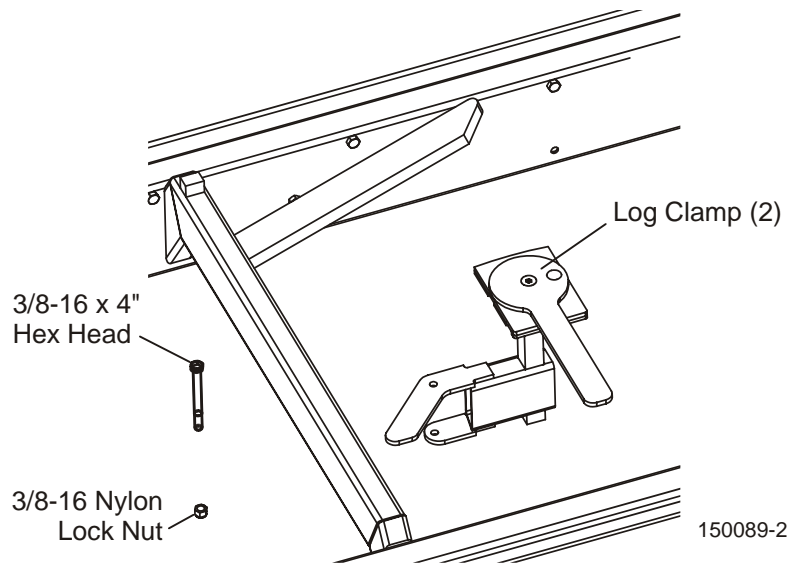


FIG. 8-9 REV. D6.00 - E3.01

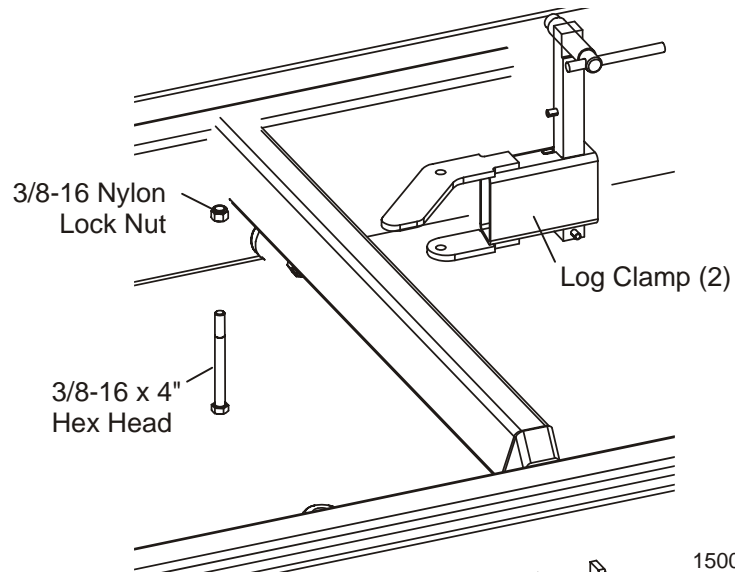


FIG. 8-9 REV. A1.00 - D5.00

8.6 Frame Leg Adjustment

1. Place a foot plate under each bed leg.
2. Use the leg wrench to adjust each leg until the nut is approximately 1 inch below the top of the bed tube.

See Figure 8-10.

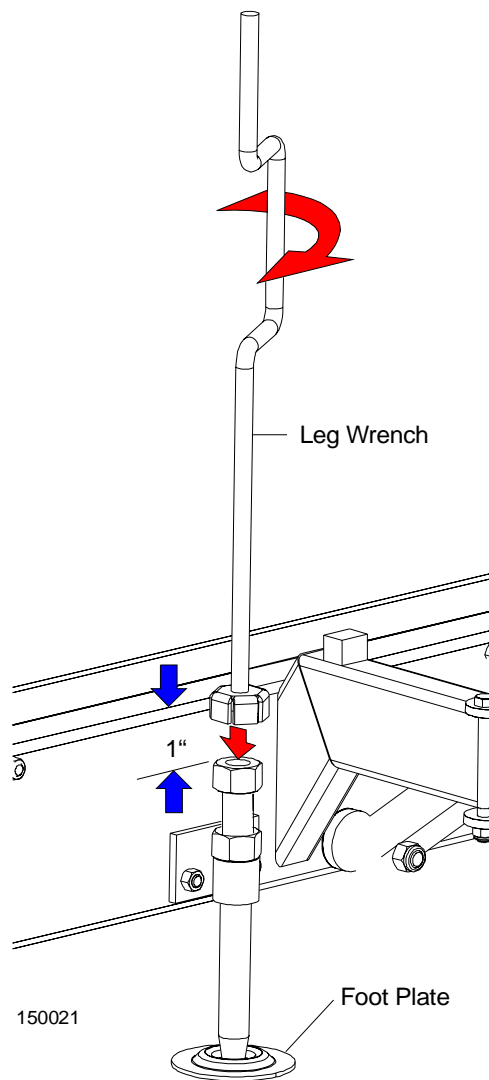


FIG. 8-10

8.7 Saw Carriage Assembly

The saw carriage is equipped with two lock pins at the bottom of the mast near the track rollers. These pins can be adjusted to three different positions:

1. **Assembly/Disassembly position (prior to Rev. E1.00 only).** To move the pins so they do not interfere with installing the carriage to the bed frame, rotate both pins so they rest in the upper notch on the pin bracket.
2. **Operation position.** This position allows the pins to catch the bottom of the track rail, preventing the saw head from tilting and disengaging the bed frame. **NOTE (Rev. D6.00+ Only):** The pins are designed so if they are inadvertently left in the assembly position, they will move to the operation position when the carriage is moved.
3. **Travel position.** To secure the saw head to the bed frame during travel, rotate the pin at the end of the sawmill so it is clear of the pin bracket. Be sure the pin engages the hole in the bed frame tube. The other pin should remain in the operation position to prevent the saw head from tilting.

See Figure 8-11.

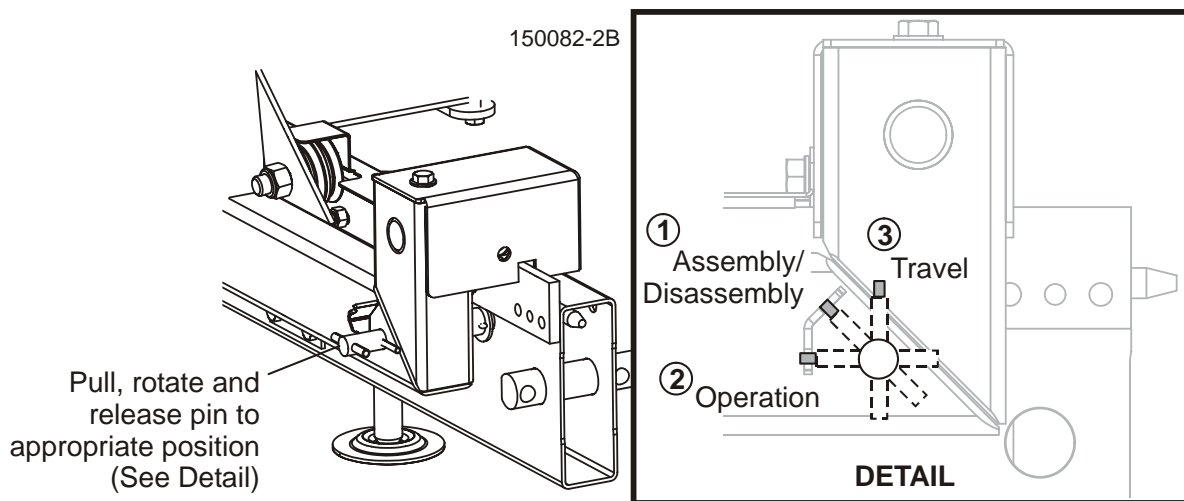


FIG. 8-11 REV. A1.00 - D5.00

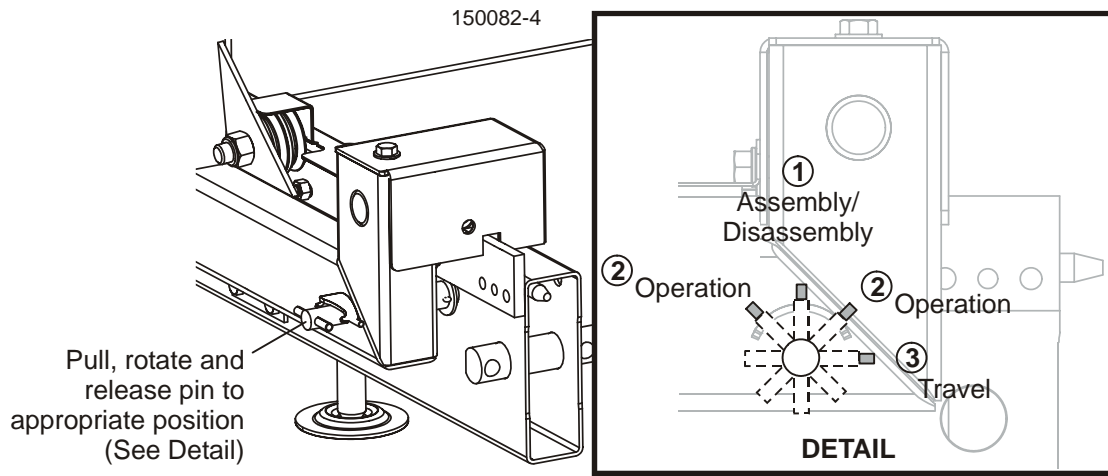


FIG. 8-11 REV. D6.00 - D7.00

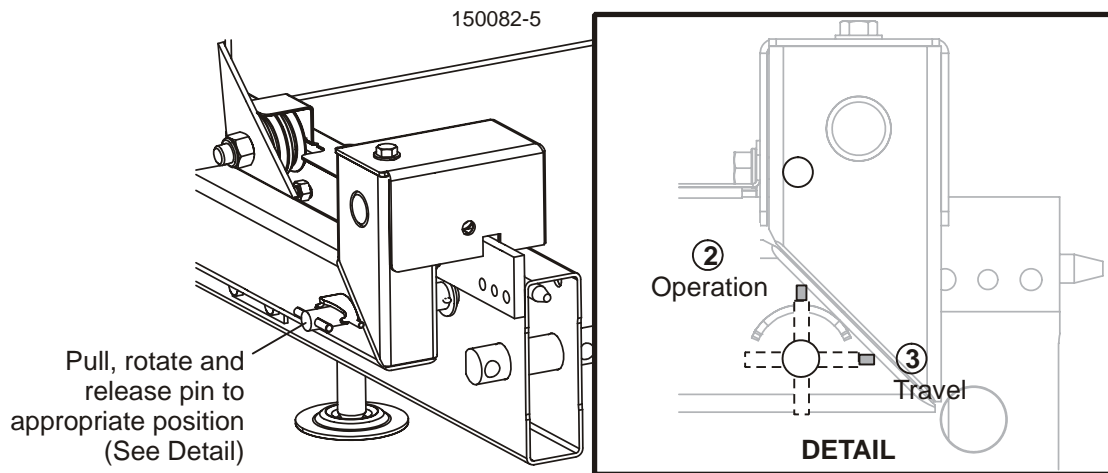


FIG. 8-11 REV. D7.00+

1. Before beginning saw carriage assembly, make sure both lock pins are in the assembly/disassembly position (lock pins seated in upper notches of pin rest brackets). To reposition pin, pull pin outward, rotate as desired, and release into proper position.
2. Position the saw head carriage at the end of the bed frame assembly. Carefully slide the saw head carriage rollers onto the bed frame track. Keep the carriage square to the bed to avoid putting the track rollers in a bind.

8 Sawmill Assembly

Saw Carriage Assembly

See Figure 8-12.

- Place both carriage lock pins in the operation position to secure carriage onto bed frame assembly.
- Locate the middle track cover and soak the felt wiper with Dexron III transmission fluid, 10W30 motor oil or 3-in-1 turbine oil. Remove the existing hex bolts and flat washers located on the inside of each track roller housing cover. Position the middle track cover between the two track roller housings so the opening in the cover is positioned over the feed rope pulleys. Replace the two hex head bolts and flat washers.
- Install a slotted track scraper to each track roller housing with a 3/8" flat washer and 3/8-16 x 3/4" hex head bolt.

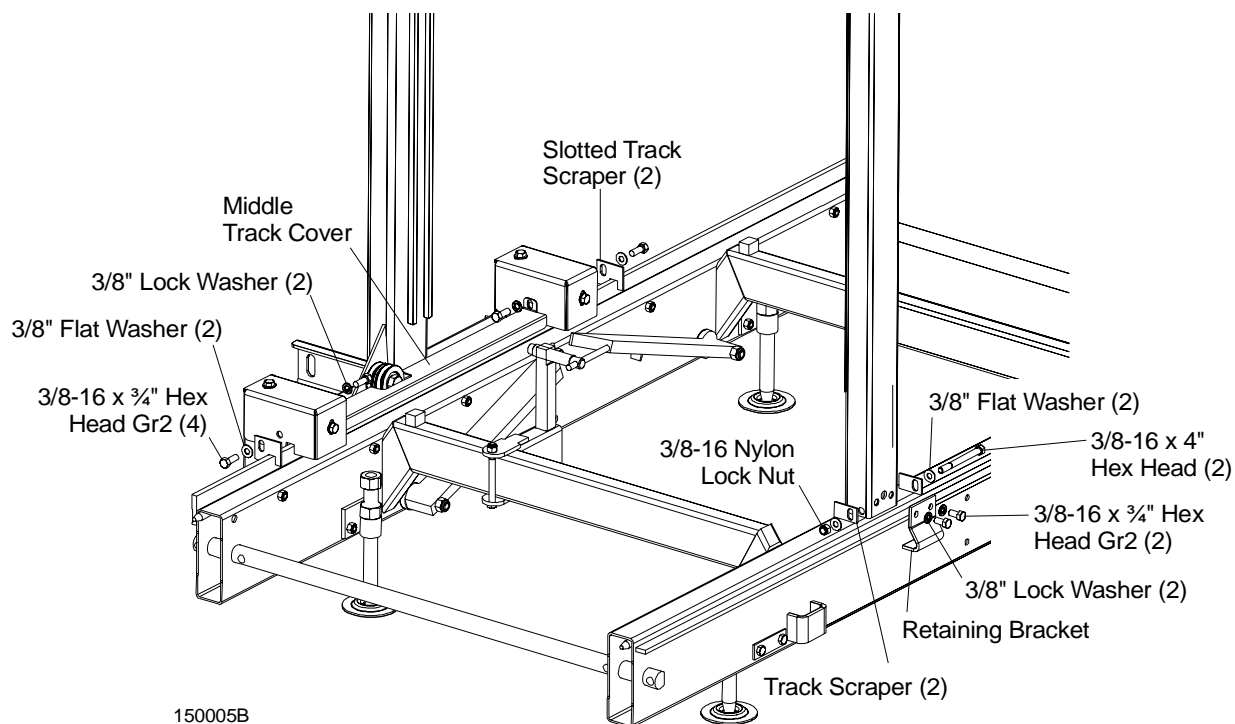


FIG. 8-12

- Assemble the retaining bracket to the idle side upright with two 3/8-16 x 3/4" hex head bolts and lock washers.



WARNING! Do not operate the sawmill without the retaining bracket properly installed. The saw head may tip and fall from the sawmill resulting in possible injury or damage to the machine.

7. Locate the track scrapers and soak the felt wipers with Dexron III transmission fluid, 10W30 motor oil or 3-in-1 turbine oil. Assemble the two track scrapers to the idle side upright with a 3/8-16 x 4" hex head bolt, two flat washers, and a nylon lock nut.

8.8 Feed Rope Assembly

1. Install a feed rope mounting bracket at each end of the bed assembly using a 1/2-13 x 2 1/4" hex head bolt, spacers, flat washers and nylon lock nut. Be sure to use the brackets so they are angled toward the end of the frames as shown ¹.

See Figure 8-13.

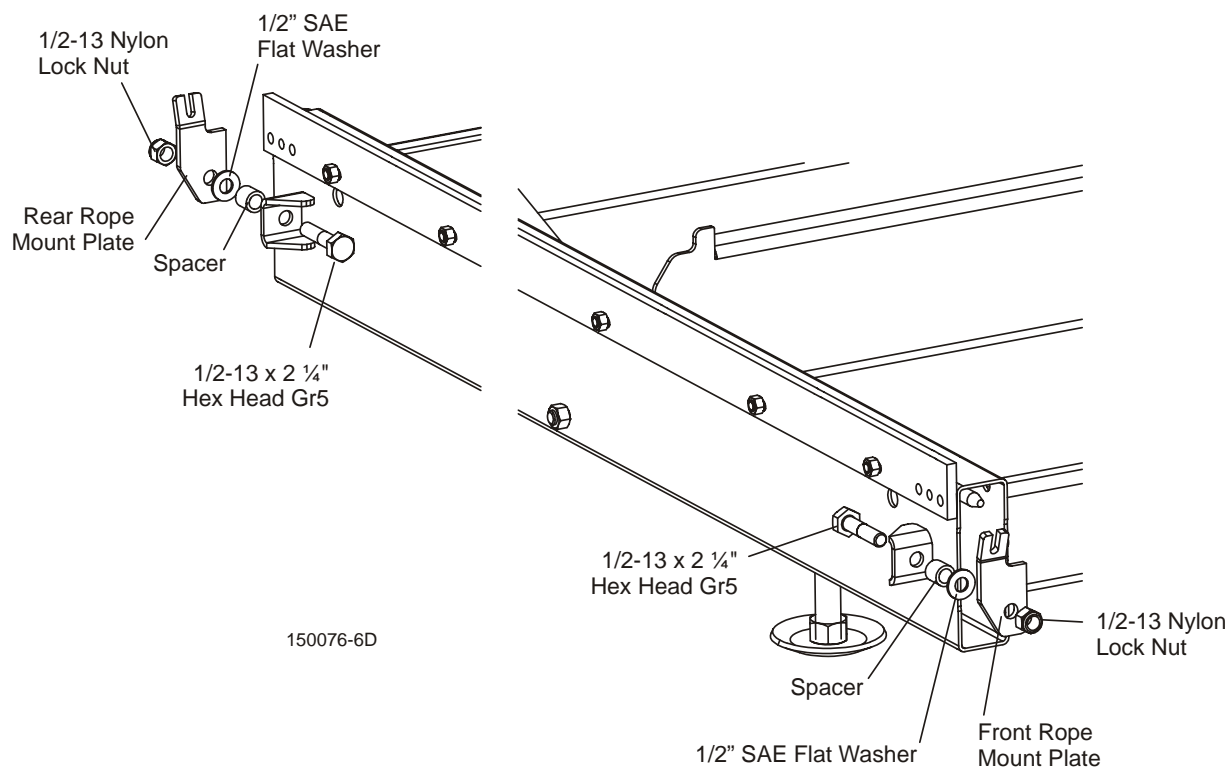


FIG. 8-13

¹ Washers added and bracket configuration modified 12/00 to allow maximum log capacity. Spacers replaces one flat washer at each end with bed Rev. F.00+ Only.

2. Tie a knot in one end of the feed rope. Slip the knotted end of the rope into the front rope mount plate. Route the rope between the saw head carriage and bed frame tube.

See Figure 8-14.

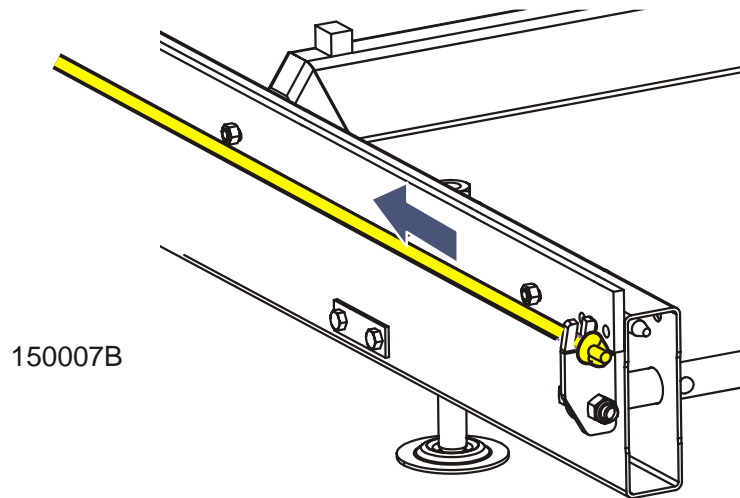


FIG. 8-14

3. Loop the rope counterclockwise around the inner groove of the lower feed pulley and route to the feed crank handle.

See Figure 8-15.

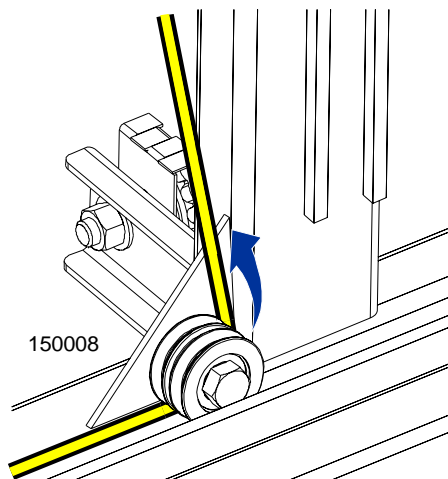


FIG. 8-15

8 Sawmill Assembly

Feed Rope Assembly

4. Loop the rope counterclockwise around the feed crank spool three times and route back down to the lower feed pulley.

See Figure 8-16.

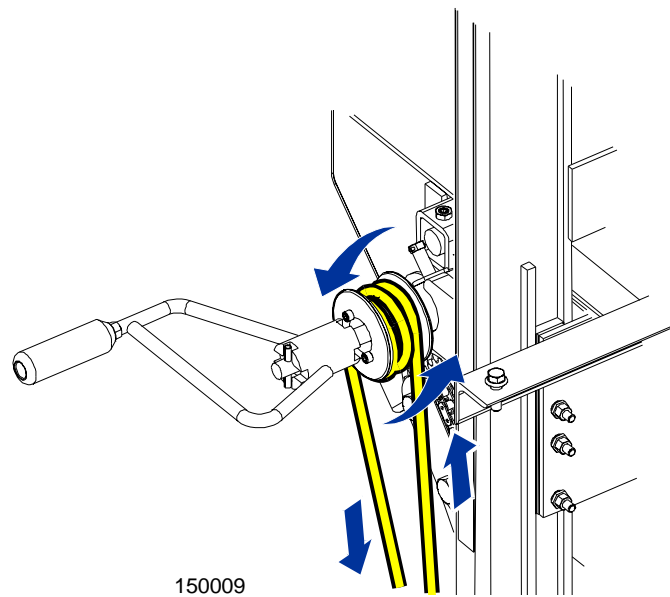


FIG. 8-16

5. Route the rope counterclockwise around the outer groove of the lower feed pulley.

See Figure 8-17.

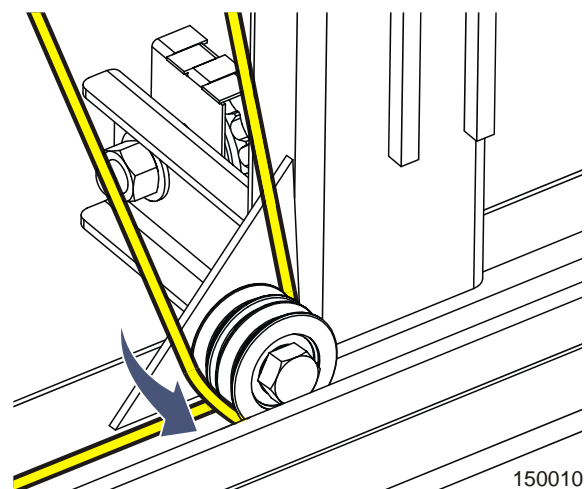


FIG. 8-17

6. Route the rope to the rear mounting bracket. Tie a knot in the end of the rope and insert into the mounting bracket. Position the knot in the rope so when installed to the rear bracket, the rope is tight.

See Figure 8-18.

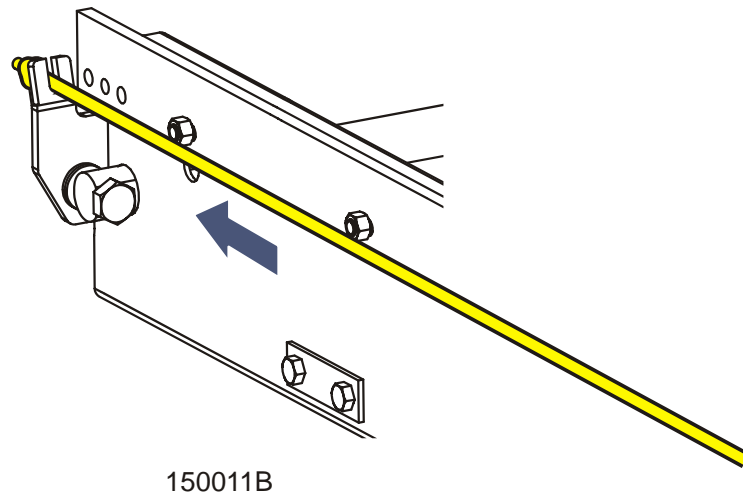


FIG. 8-18

8.9 Engine Assembly

For sawmills prior to revision D4.00:

1. Place the engine assembly in place on the saw head. Align the holes in the engine mount plate with the engine mounting bolts. Do not tighten the bolts until the drive belt is installed and properly tensioned. Hook the belt tension turnbuckle into the hole on the engine mount plate.

See Figure 8-19.

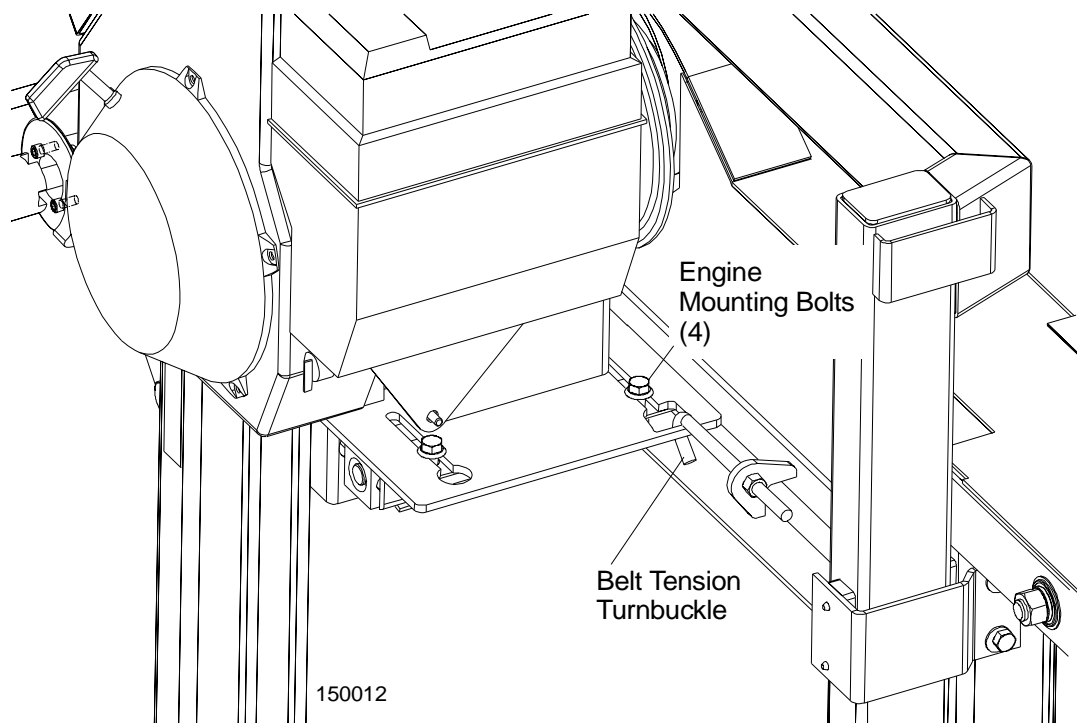


FIG. 8-19

2. Open the drive-side blade pulley housing and install the drive belt around the engine pulley and the inner groove of the drive-side blade pulley.
3. Adjust the jam nuts on the belt tension turnbuckle to move the engine out, tightening the drive belt. Adjust until the belt has approximately 1/2" deflection. Tighten the four engine mounting bolts.

8.10 Battery Assembly

Rev. E2.00+ Only

1. Install the battery box assembly to the saw head. Position the battery box bracket next to the saw head. Secure the battery box assembly with three 3/8-16 x 1 hex head bolts.

See Figure 8-20.

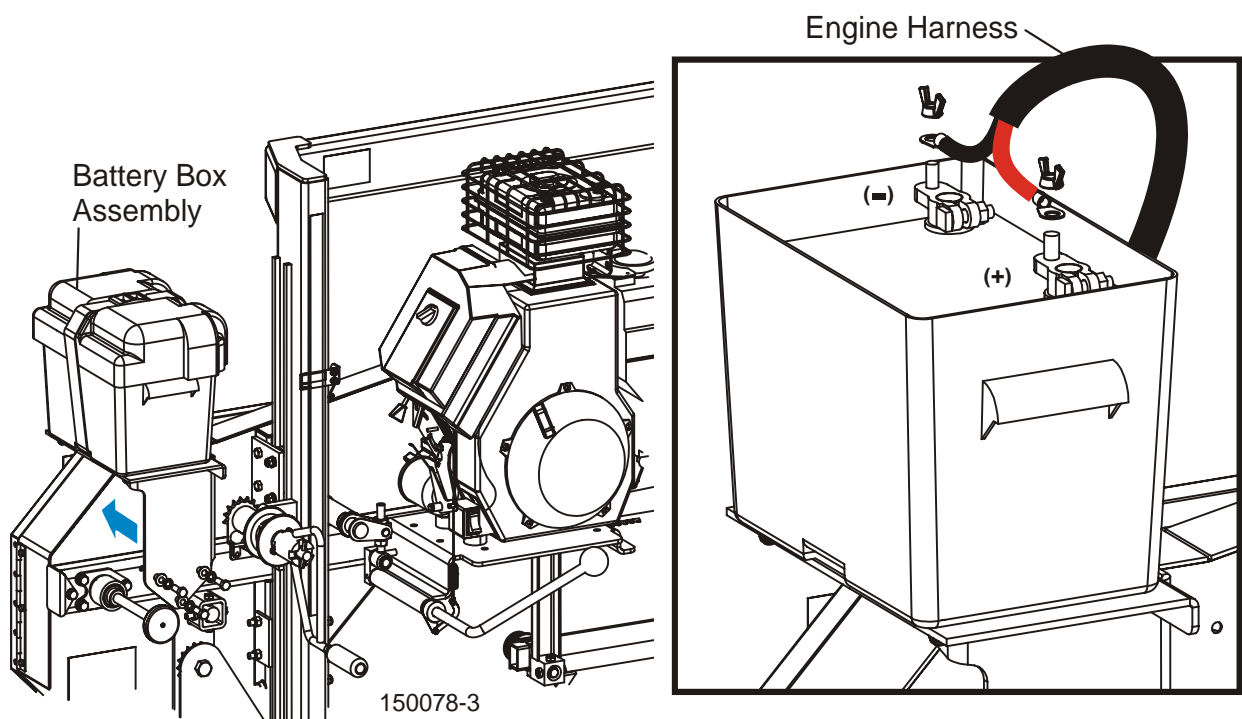


FIG. 8-20

Rev. A1.00 - E1.00 Only

1. Install the battery box assembly to the saw head. Position the battery box bracket above the bracket tab on the saw head. Slide the bracket down until the battery box assembly is firmly seated on the tab.

8 Sawmill Assembly

Battery Assembly

See Figure 8-21.

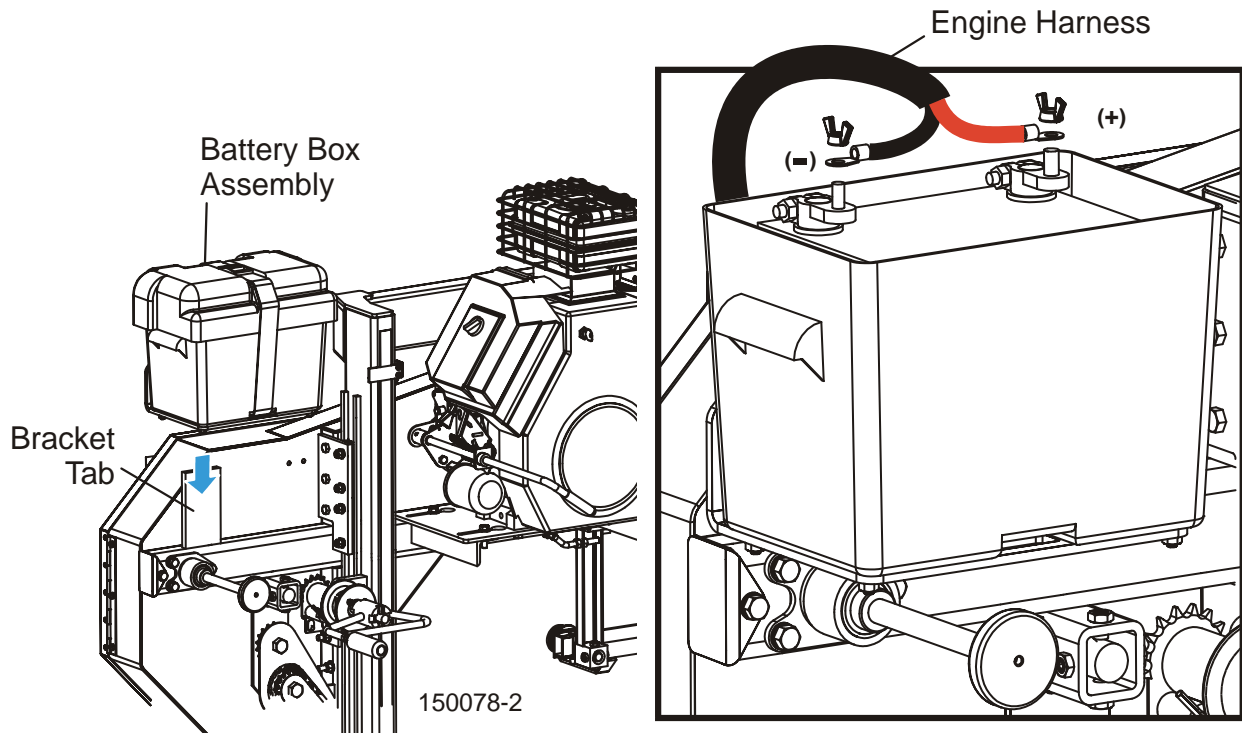


FIG. 8-21

2. Locate the wire harness connected to the engine starter. Route the harness between the engine and the saw head, toward the battery box.
3. Open the battery box lid and remove the wing nuts from the terminal clamp studs. Slide the red wire terminal onto the positive (+) terminal clamp stud. Replace the wing nut and tighten securely. Slide the black wire terminal onto the negative (-) terminal clamp stud. Replace the wing nut and tighten securely. Position the harness so it is located under the recess in the battery box lid. Replace the battery box lid.

8.11 Auxiliary Bed Rail

See **Figure 8-22**. Two auxiliary bed rails are supplied to help support various lengths of logs¹. Install the auxiliary bed rails to the bed frame as desired. A set of mounting holes is provided between the two main bed rails of each bed section.

1. Remove the existing track bolt and lock nut located between the two main bed rails.
2. Use three 3/8-16 x 2 3/4" hex head bolts, flat washers and lock nuts to secure the auxiliary bed rail to the bed section.
3. Use the 3/8-16 x 3 1/2" hex head bolt, flat washer and lock nut to secure the auxiliary bed rail at the previously removed track bolt hole.

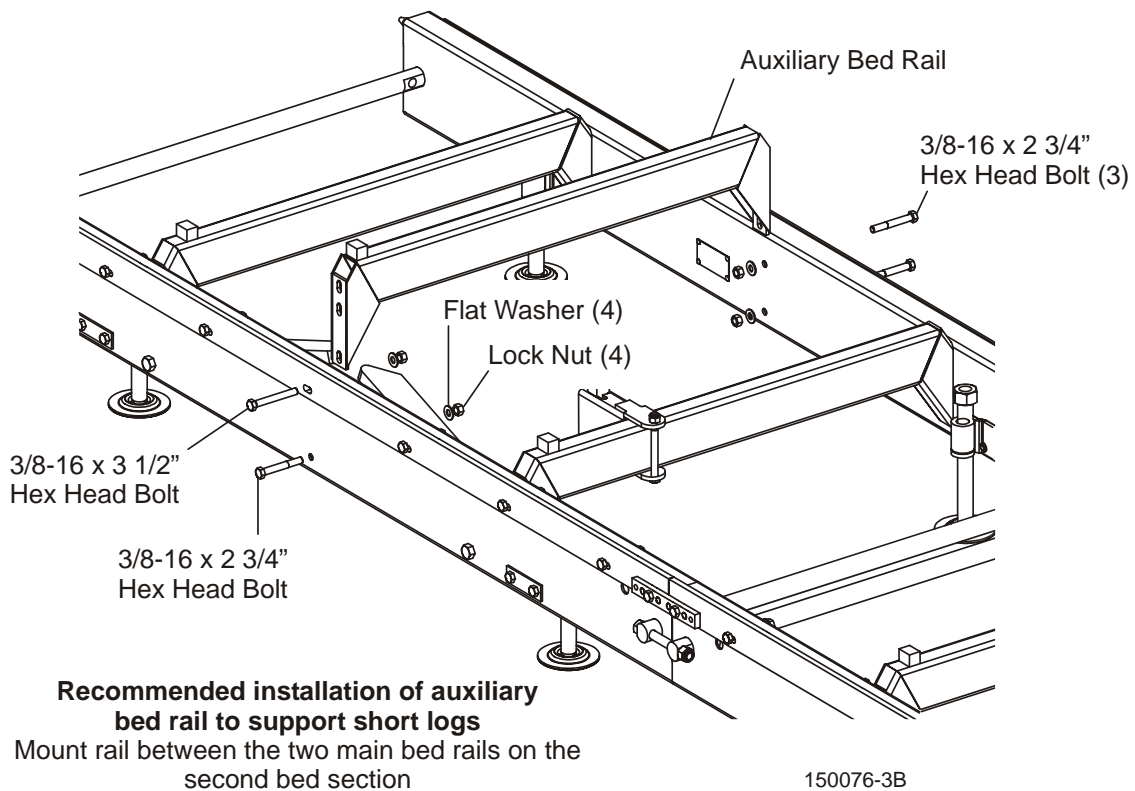


FIG. 8-22

¹ One auxiliary bed rail supplied prior to Rev. D7.00. Additional auxiliary bed rail kits may be purchased as required.

8

Sawmill Assembly

Auxiliary Bed Rail

See Figure 8-23. Use of the Shingle/Lap Siding Option requires three bed sections and an auxiliary bed rail. For mills revision D4.00 and later, the auxiliary bed rail should be installed near the end of the second (or middle) bed section. To install:

1. Locate and drill four $13/32$ " diameter holes through the bed section tubes (two on each side) as shown in the graphic below.
2. Install the auxiliary bed rail using the provided $3/8$ -16 x $2\ 3/4$ " hex head bolts and lock nuts.

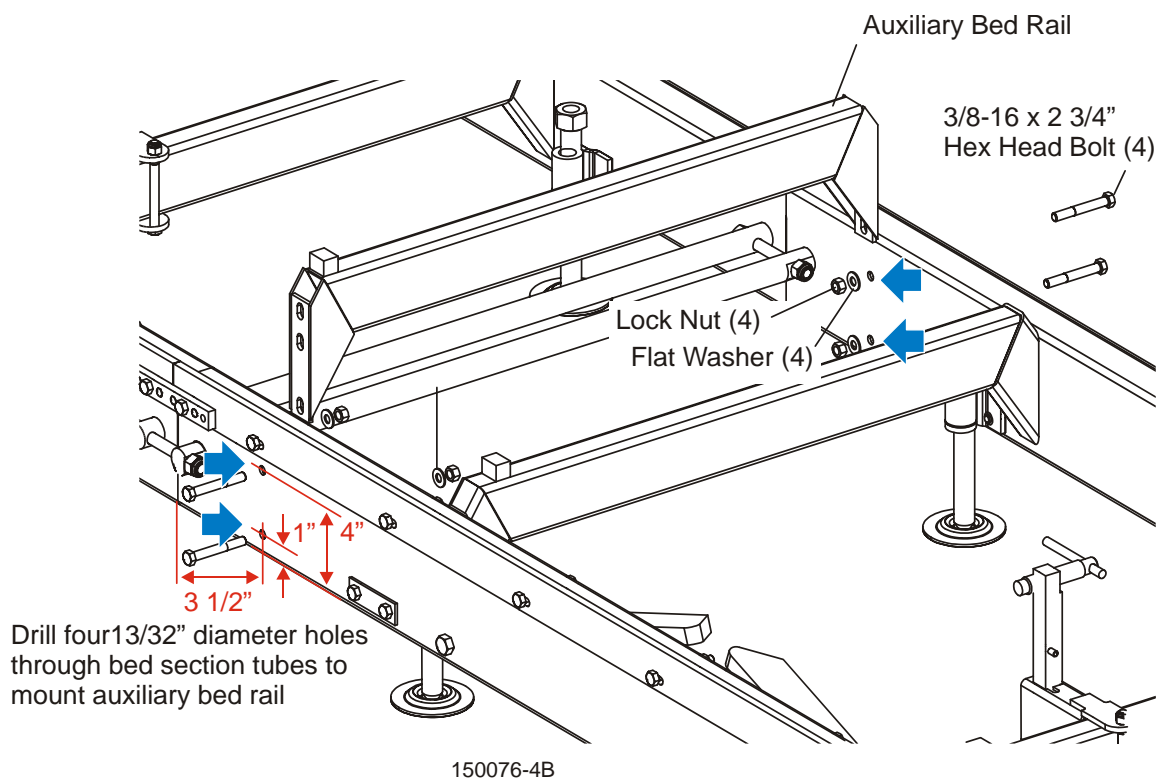


FIG. 8-23

See Figure 8-24. For mills prior to revision D4.00, the auxiliary bed rail should be installed near the end of the first bed section. To install:

1. Remove the existing track bolt and nut near the end of the bed section. Assemble the auxiliary bed rail to the existing hole and replace the track bolt and nut.
2. Be sure the auxiliary bed rail is square to the bed and adjusted so the top of the rail is even with the main bed rails. Clamp the auxiliary bed rail to the bed and mark the three other hole locations.

3. Remove the auxiliary bed rail and drill three 13/32" diameter holes through the bed tube at the marked positions.
4. Reinstall the auxiliary bed rail using the existing track bolt and nut and the three provided 3/8-16 x 2 3/4" hex head bolts and lock nuts.
5. Use the 3/8-16 x 3" hex head bolt, flat washer and lock nut to secure the auxiliary bed rail at the previously removed track bolt hole.

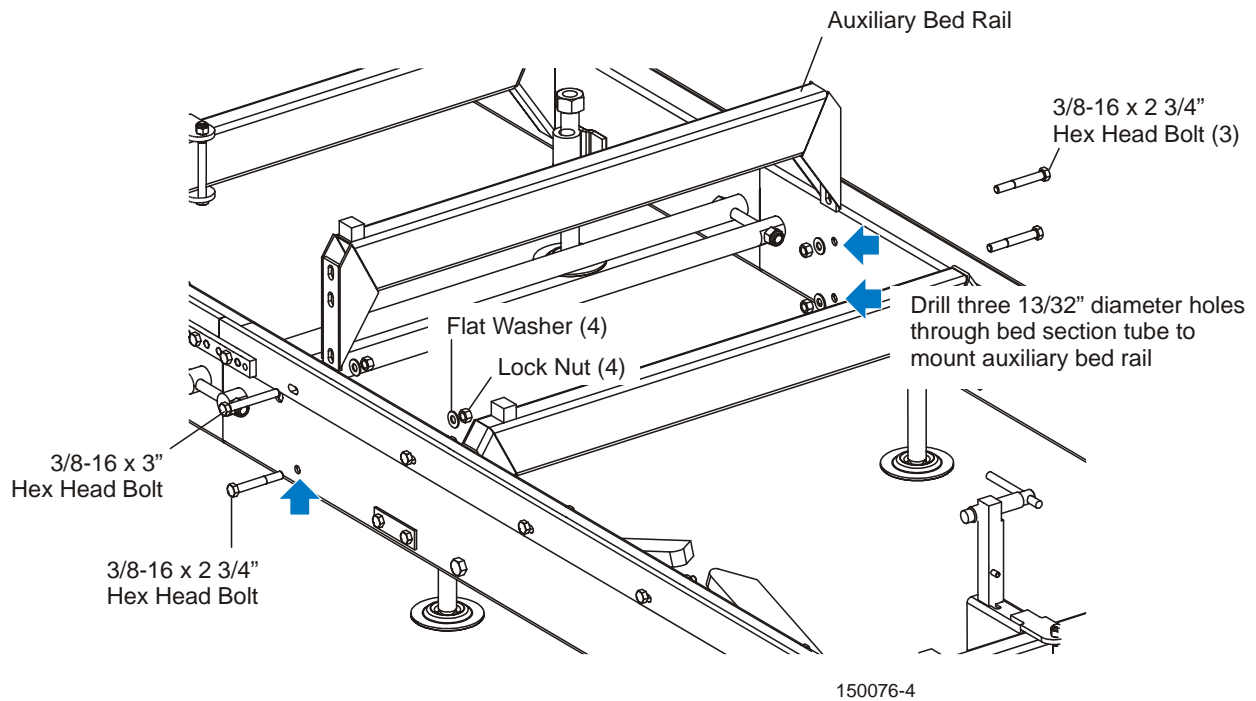


FIG. 8-24

INDEX

A

assembly
 auxiliary bed rail 8-22
 battery 8-20
 bed extension 8-7
 bed sections 8-4
 engine 8-19
 feed rope 8-15
 leg 8-3
 log clamp 8-8
 overview 8-1
 saw carriage 8-11

B

blade
 breakage, troubleshooting 6-1
 installation 3-5
 tensioning 3-6
 tracking 3-7

blade guide arm
 operation 4-9

C

chain
 maintenance 5-7
 up/down tension 5-17

clutch/brake lever
 operation 4-10

L

leveling logs 4-6

loading logs 4-1

M

maintenance
 blade guide 5-2
 blade wheel belts 5-8
 brake adjustment 5-9
 brake strap 5-9
 carriage track/wipers 5-4
 clutch adjustment 5-14
 drive belt 5-10
 mast rails 5-6
 miscellaneous 5-7
 part wear life 5-1
 sawdust removal 5-3
 up/down 5-17

O

operation
 carriage lock pins 8-11
 edging 4-16
 sawing 4-14

S

safety
 lockout procedure 2-12

scale
 blade height operation 4-17
 inch height 4-17
 quarter inch 4-18

service information
 branch locations 1-5
 customer & sawmill ID 1-2
 general contact info 1-4

setup
 stationary sawmill 3-1

T

tensioner

 maintenance 5-7

troubleshooting 6-1

 sawing problems 6-1

turning logs 4-2

U

up/down

 operation 4-7

W

water lube

 operation 4-19