

Wood-Mizer® Resaw

Safety, Setup, Operation & Maintenance Manual

HR1000 Resaw

Rev. A2.06

Safety is our #1 concern!

Form #1690

Models Effected:

HR1000EC25-1, Horizontal Resaw, 1 Head 460V 3PH
HR1000ECF25-1, Horizontal Resaw, 1 Head; Soft Start
HR1000EC25-2, Horizontal Resaw, 2 Head 460V 3PH
HR1000ECF25-2, Horizontal Resaw, 2 Head; Soft Start
HR1000EC25-3, Horizontal Resaw, 3 Head 460V 3PH
HR1000ECF25-3, Horizontal Resaw, 3 Head; Soft Start
HR1000EC25-4, Horizontal Resaw, 4 Head 460V 3PH
HR1000ECF25-4, Horizontal Resaw, 4 Head; Soft Start
HR1000EC25-5, Horizontal Resaw, 5 Head 460V 3PH
HR1000ECF25-5, Horizontal Resaw, 5 Head; Soft Start
HR1000EC25-6, Horizontal Resaw, 6 Head 460V 3PH
HR1000ECF25-6, Horizontal Resaw, 6 Head; Soft Start



WARNING! Read and understand this manual before using this machine.

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Wood-Mizer® LLC
Limited Product Warranty



Wood-Mizer LLC (“Warrantor”), an Indiana corporation with its principal place of business at 8180 West Tenth Street, Indianapolis, IN 46214-2400 USA, warrants to the purchaser (“Purchaser”) that for the time periods specifically stated herein and subject to the terms, conditions and limitations stated herein, the equipment manufactured by the Warrantor will be free from defects in material and workmanship attributable to Warrantor so long as, during the warranty periods stated herein, the equipment is installed, operated and maintained in accordance with the instructions provided by Warrantor.

PRODUCT	MODEL CLASS	LENGTH OF WARRANTY		EFFECTIVE DATE
		USA & CANADA	NON USA & CANADA	
Portable Sawmills, Resaws, Edgers	LT, LX, HR, EG	Two years	One year	Date of purchase
Portable Sawmills with Chassis	LT28, LT35, LT40, LT50, LT70, LX450	Two years, excluding the chassis, which chassis shall have a five year warranty	One year	
Industrial Sawmills, Resaws, Edgers	WM, HR, EG, TVS, SVS	One year	One year	Date of purchase or date of installation / training (if applicable), whichever occurs first, not to exceed 6 months from date of purchase
TITAN Industrial	WB, TV, HR, EG, EA, MR	One year	One year	
Material Handling	TWC, IC, TD, LD, GC, CR, CB, CC	One year	One year	
Blade Maintenance Equipment	BMS, BMT, BMST	One year	One year	Date of purchase
Options and Accessories	Various	One year*	One year*	
Moulders, Extractors, Kilns	MP, MD, KS, KD	One year	One year	
Slab Flatteners	MB	Two years	One year	
Pallet Equipment	PD, PC	One year	One year	
Log Splitters	FS	One year	One year	
Replacement Parts	Various	90 days	90 days	

* Warranty on Options will match the warranty on the primary equipment when purchased on same invoice.

Exclusions from 90 Day, Limited One Year and Two Year Warranty

Warrantor shall have no responsibility under this warranty for any wear components, including, but not limited to: belts, blade guides, blades, electric motor brushes, drum switches, filters, fuses, hoses, bearings (excluding cylindrical drive bearings), bushings, cable carriers, and spark plugs. All wear components are furnished “as is”, without any warranty from Warrantor. This limited warranty does not cover any defects caused by misuse, negligence, alterations, damage due to overload, abnormal conditions, excessive operation, accident, or lack of performance of normal maintenance services.

Several components which are used in the manufacture of the equipment but not manufactured by Warrantor such as cant hooks, power plants, laser sights, batteries, tires, and trailer axles have warranties provided by the original equipment manufacturer (written copies available upon request). Warrantor does not separately warrant such items. Components or equipment manufactured by third parties are not covered by this warranty. Warrantor, however, will provide reasonable assistance to the Purchaser to make claims against any warranties applicable to such component parts as provided by such original equipment manufacturers. Components or equipment manufactured by third parties are not covered by this Warranty.

Five Year Limited Chassis Warranty

The limited five year chassis warranty described above, DOES NOT extend to (a) any damage stemming from accident, improper towing, overload, abuse, misuse, abnormal conditions, negligence, excessive operation, or lack of maintenance, (b) rust caused by exposure to corrosive atmospheric conditions, or (c) the sawmill head, carriage, axle, brakes, or any hydraulic or electrical components attached to the chassis.

Warrantor’s Obligations as To Defects

In the event that the equipment fails to perform due to defective materials or workmanship attributable to Warrantor under normal use and service within the established warranty period, Purchaser’s sole and exclusive remedy and Warrantor’s sole liability shall be to replace or repair, in Warrantor’s sole and subjective discretion, any defective part at Warrantor’s principal place of business without cost to the Purchaser if such defect exists. The determination of whether a product is defective shall be made by Warrantor in Warrantor’s sole and subjective discretion. The Purchaser must notify Warrantor prior to shipping any defective part. Warrantor, at its sole discretion, may cover expenses incurred in shipping the defective part to Warrantor for evaluation; provided, however, that Warrantor will not be responsible for labor, travel time, mileage, removal, installation or incidental or consequential damages. However, any part in excess of 140 pounds must be returned by the Purchaser, to the Warrantor’s nearest authorized facility at the Purchaser’s expense, if return is requested by Warrantor. Warrantor shall have a reasonable time within which to replace or repair the defective part. If Warrantor determines that the product is not defective under the terms of this warranty in Warrantor’s sole and subjective discretion, then Purchaser shall be responsible for any expenses incurred by Warrantor in returning the equipment to the Purchaser.

Limitations and Disclaimers of Other Warranties

EXCEPT FOR THE EXPRESS WARRANTY PROVISIONS STATED ABOVE, WARRANTOR DISCLAIMS ALL WARRANTIES, EXPRESS AND/OR IMPLIED, INCLUDING WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF MERCHANTABILITY, AND FITNESS FOR A PARTICULAR PURPOSE, NONINFRINGEMENT AND TITLE. No representation or other affirmation of fact by representatives of Warrantor, whether verbal or in writing, including photographs, brochures, samples, models, or other sales aids, shall constitute a warranty or other basis for any legal action against Warrantor. There are no other representations, promises, agreements, covenants, warranties, guarantees, stipulations or conditions, express or implied, by Warrantor except as expressly set forth herein. THE ORIGINAL PURCHASER AND ANY INTENDED USER OR BENEFICIARY OF THIS EQUIPMENT, SHALL NOT BE ENTITLED TO RECOVER ANY INDIRECT, SPECIAL, PUNITIVE, EXEMPLARY, CONSEQUENTIAL, SPECIAL, OR INCIDENTAL DAMAGES OR LOSSES, INCLUDING BUT NOT LIMITED TO, DAMAGES OF LOST PRODUCTION, LOST REVENUE, LOST PRODUCT, LOST PROFITS, LOST BUSINESS, LOSS OF USE, LOSS OF GOODWILL, OR BUSINESS INTERRUPTION, FROM WARRANTOR FOR ANY REASON WHATSOEVER INCLUDING WITHOUT LIMITATION WARRANTY OR DEFECT IN THE PRODUCT REGARDLESS OF THE SOLE, JOINT AND/OR CONCURRENT NEGLIGENCE, BREACH OF CONTRACT, BREACH OF WARRANTY, STRICT LIABILITY IN TORT OR STATUTORY CLAIMS OR OTHER LEGAL FAULT OR RESPONSIBILITY OF EITHER WARRANTOR OR PURCHASER OR ITS EMPLOYEES OR AGENTS. Warrantor does not warrant that its equipment meets or complies with the requirements of any particular safety code or governmental requirements.

Defective items replaced under the terms of this warranty become the property of Warrantor.

Design Changes

Warrantor reserves the right to change the design of its products from time to time without notice and without obligation to make corresponding changes in or to its products previously manufactured.

Rights of Purchasers

The validity and effect of this limited warranty as well as its interpretation, operation and effect, shall be determined exclusively by the principles of law and equity of the State of Indiana, USA. This limited warranty gives Purchaser specific legal rights. Purchaser may also have other rights, which may vary from state to state. Some states may not allow limitations as to the duration of implied warranties or to the exclusion or limitation of incidental or consequential damages, so some of the limitations and exclusions detailed set forth above may not apply. In the event that any one or more of the provisions of this warranty shall be or become invalid, illegal or unenforceable in any respect, the validity, legality and enforceability of the remaining provisions of this warranty shall not be affected thereby.

Interpretations

This Warranty constitutes the entire warranty agreement between Warrantor and Purchaser and supersedes any prior understandings or agreements pertaining to the same subject matter. This warranty cannot be amended except in writing which refers to this warranty which is signed by both Warrantor and Purchaser.

SECTION 1 INTRODUCTION

1.1 About This Manual

This manual replaces any previous information received on your Wood-Mizer® equipment.

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

1.2 Getting Service

For contact information, sales, service, parts, and additional manuals, sign into your account on <https://woodmizer.com>, or call inside the USA: 1-800-553-0182 or from outside the USA: 317-271-1542



MH0255

FIG. 1-1

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 serious injury or death.



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



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

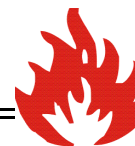
NOTICE indicates vital information.

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.



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



OBSERVE SAFETY INSTRUCTIONS

NOTICE Read the entire Operator's Manual before operating the HR1000. 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 HR1000. The HR1000 is not intended for use by or around children.

It is always the owner's responsibility to comply with all applicable federal, state and local laws, rules and regulations regarding the ownership, and operation of your Industrial HR1000. All Industrial HR1000 owners are encouraged to become thoroughly familiar with these applicable laws and comply with them fully while using the machine.

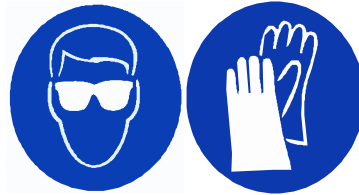


WEAR SAFETY CLOTHING



WARNING! Secure all loose clothing and jewelry before operating the HR1000. Failure to do so may result in serious injury or death.

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.



Always wear eye, ear, respiration, and foot protection when operating or servicing the HR1000.



KEEP HR1000 AND AREA AROUND HR1000 CLEAN



DANGER! Maintain a clean and clear path for all necessary movement around the HR1000 and lumber stacking areas. Failure to do so will result in serious injury.

DISPOSE OF SAWING BY-PRODUCTS PROPERLY

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

CHECK HR1000 BEFORE OPERATION



DANGER! Make sure all guards and covers are in place and secured before operating HR1000. Failure to do so may result in serious injury.



KEEP PERSONS AWAY



DANGER! Keep all persons out of the path of moving equipment and lumber when operating the HR1000. Failure to do so will result in serious injury.

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



WARNING! Allow blades to come to a complete stop before entering area protected by perimeter fence. Failure to do so will result in serious injury.

Use the tension release handle to push the blade wheel against the brake before opening the blade housing cover. Failure to do so will result in serious injury.

KEEP HANDS AWAY



DANGER! Always shut off the HR1000 before changing the blade. Failure to do so will result in serious injury.

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

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

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! Always stop the saw heads whenever the HR1000 is not cutting. Failure to do so may result in serious injury.

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

USE PROPER MAINTENANCE PROCEDURES



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

ARC FLASH AND SHOCK HAZARD! Hazardous voltage inside the HR1000 control box and at the motors can cause shock, burns, or death. Disconnect and lock out power supply before servicing! Keep all electrical component covers closed and securely fastened during HR1000 operation. Wear appropriate Personal Protection Equipment.



WARNING! Consider all electrical circuits energized and dangerous.

Disconnect and lock out power supply before servicing the HR1000! Failure to do so may result in serious injury.

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

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

Remove the blade before performing any service to the motors or HR1000. Failure to do so may result in serious injury.



2.3 Electrical Lockout Procedures

RULES FOR USING LOCKOUT PROCEDURE

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

LOCKOUT PROCEDURES MUST BE USED DURING, BUT NOT LIMITED TO:

- 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.

CHECKING INTERLOCK:

1. Perimeter guard is interlocked as a reminder to keep guard closed during operation. This perimeter guard interlock must be checked at the beginning of every shift.
2. Start HR1000 saw with perimeter guard closed.
3. Lower perimeter guard a few inches. Saw should shut off.
4. If saw does not shut off during test, take saw out of service and tag for repair.

HR1000 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

HR1000 saw 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 HR1000 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 HR1000. 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 HR1000 will not operate. Caution: Return operating controls to neutral position after the test.
6. The HR1000 is now locked out.

RESTORING EQUIPMENT TO SERVICE

1. When the job is complete and the HR1000 is ready for testing or normal service, check the HR1000 area to see that no one is exposed.
2. When the HR1000 is all clear, remove all locks. The energy isolating devices may be operated to restore energy to the HR1000.

PROCEDURE INVOLVING MORE THAN ONE PERSON

In the preceding steps, if more than one individual is required to lock out the HR1000, each shall place his own personal lock on the energy isolating devices.

RULES FOR USING LOCKOUT PROCEDURE

The HR1000 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 Industrial 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 HR1000 saw.

KEEP SAFETY LABELS IN GOOD CONDITION

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

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

SECTION 3 SPECIFICATIONS

3.1 Dimensions

The major dimensions of the MultiHead are provided.

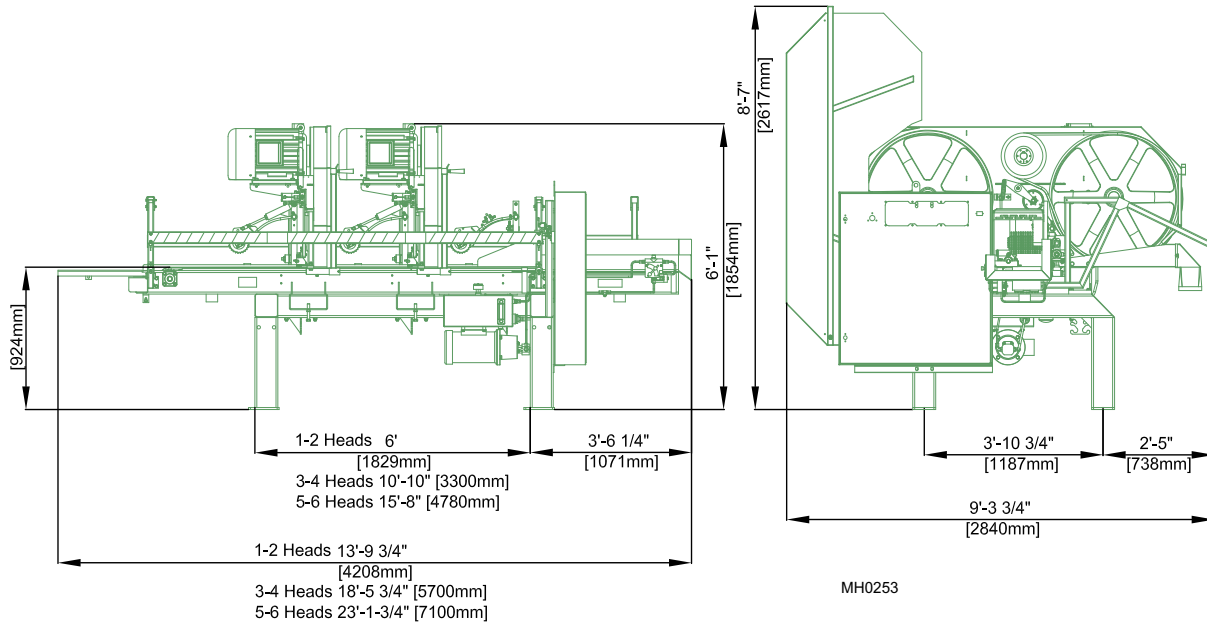


FIG. 3-1

3.2 Electrical Requirements



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



CAUTION! The resaw motors and transformer are pre-wired for 480 volt, 60 Hz power supplies. If you plan to use a 480 volt, 60 Hz mill with another type of power supply, you will need to rewire the motor to avoid damage to the saw-mill.

The resaw identification plates including the required electrical information are shown below:

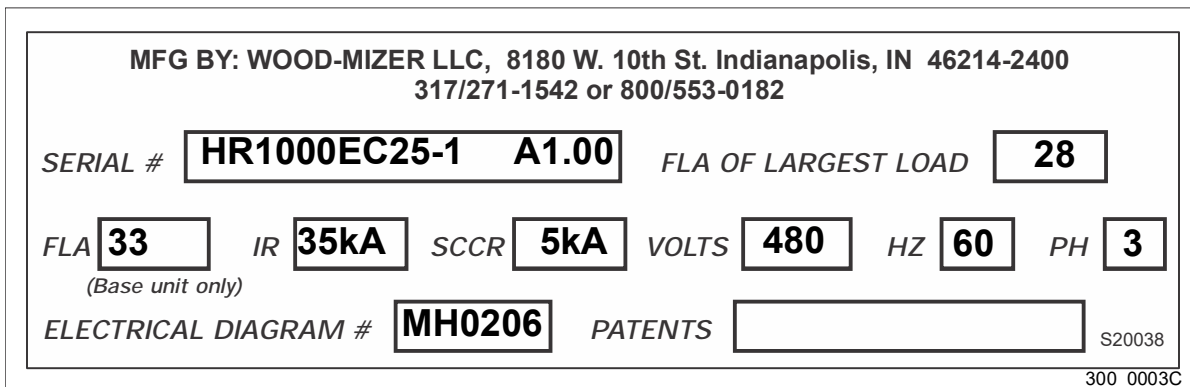


FIG. 3-2 HR1000EC25-1/HR1000ECF25-1 (1-HEAD) IDENTIFICATION PLATE

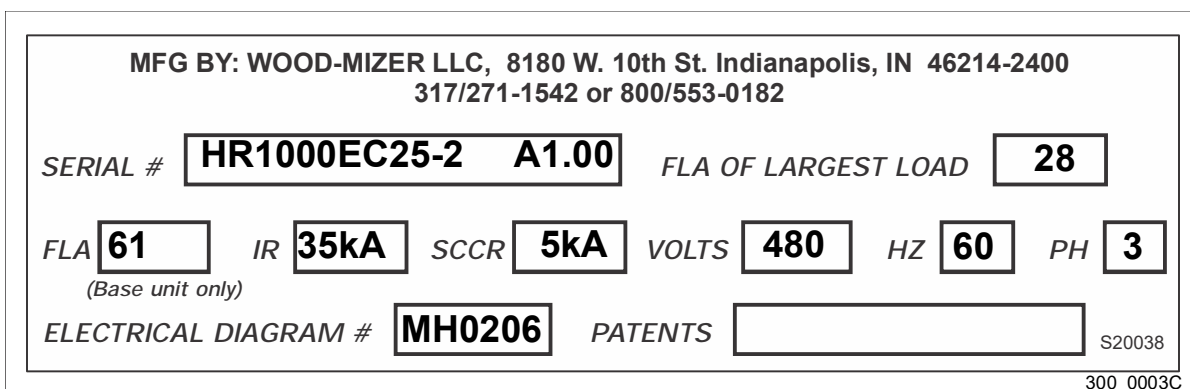


FIG. 3-3 HR1000EC25-2/HR1000ECF25-2 (2-HEAD) IDENTIFICATION PLATE

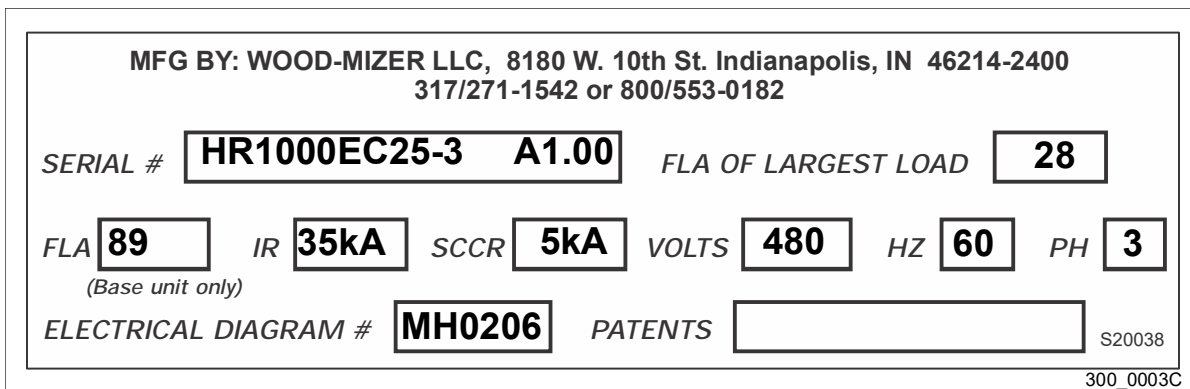


FIG. 3-4 HR1000EC25-3/HR1000ECF25-3 (3-HEAD) IDENTIFICATION PLATE

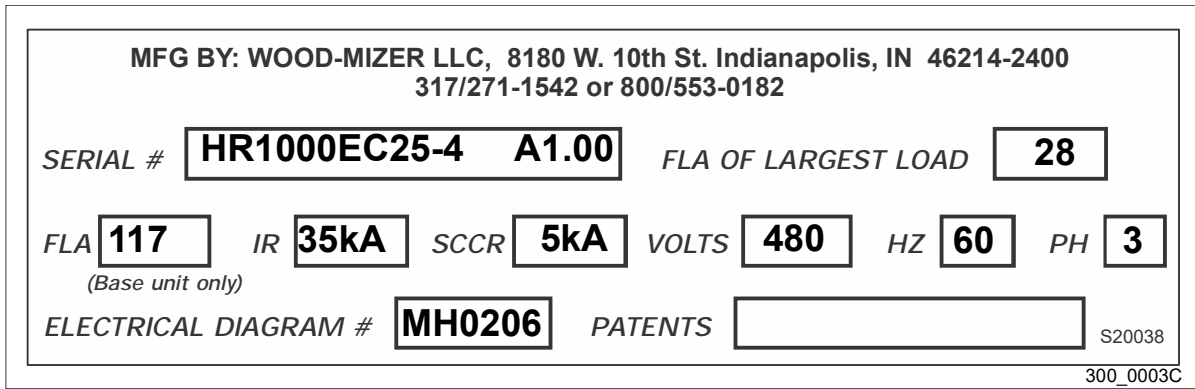


FIG. 3-5 HR1000EC25-4/HR1000ECF25-4 (4-HEAD) IDENTIFICATION PLATE

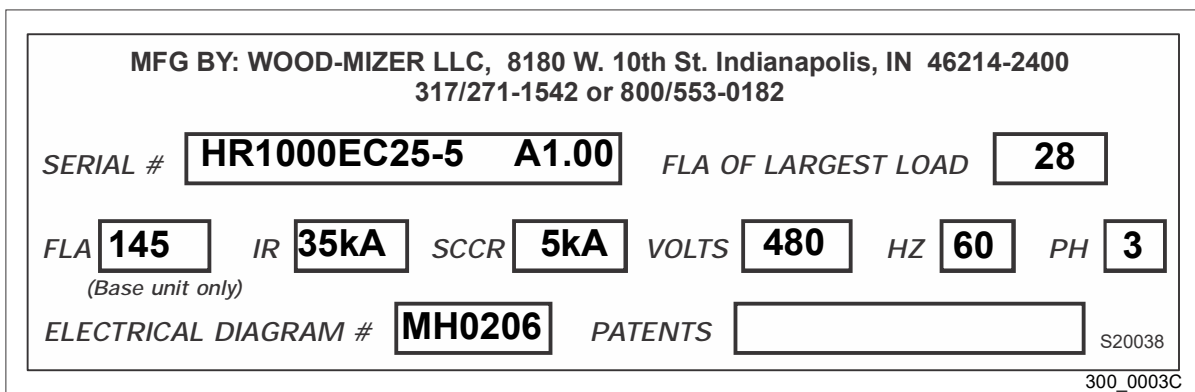


FIG. 3-6 HR1000EC25-5/HR1000ECF25-5 (5-HEAD) IDENTIFICATION PLATE

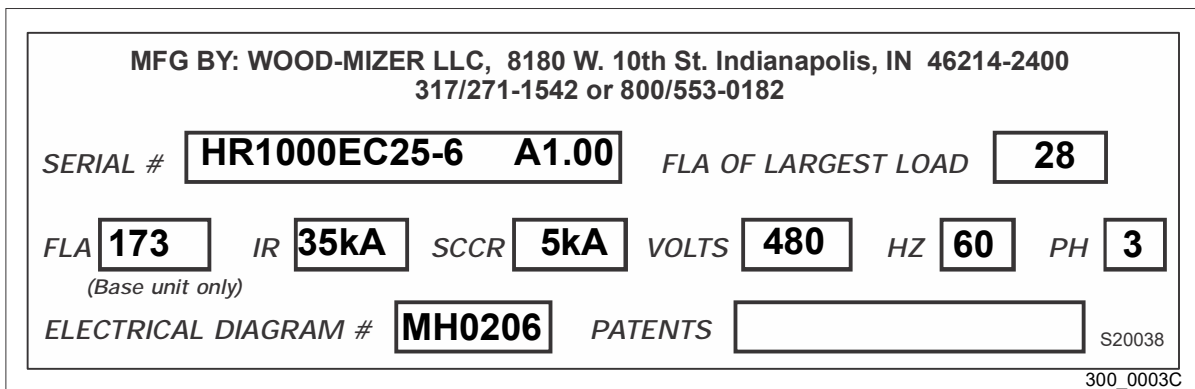


FIG. 3-7 HR1000EC25-6/HR1000ECF25-6 (6-HEAD) IDENTIFICATION PLATE

NOTICE The resaw is pre-wired for use with a 480 volt power supply. To operate the resaw with a 380 or 415 volt power supply, the resaw must be rewired. The incoming power line (L3) to the control transformer must be moved. The wire should be moved from the 480V terminal (labeled H4) to the 415V terminal (labeled H3) or the 380V terminal (labeled H2). [See the provided wiring schematics for transformer terminal identification.](#)

NOTE: Though the machine will operate at 400 Volts 50 Hertz without an additional power transformer, the motors will operate at lower horsepower (25 hp = 19.2 hp). A transformer will restore full horsepower.

NOTE: No transformer is required to operate the resaw on 400 Volts 50 Hertz.

To run at 240 volts, an additional power transformer is required. See Table 3-1 for transformers available from Wood-Mizer. All transformers are manufactured by Square D. Installation recommendations are provided for each voltage on the following pages.

Conversion From/To	No. of Heads	No. of Transformers Required	Part No.
240 to 480 volts	1	1	069712
	2-3	1	068057
	4	1	068058
	5-6	1	078216
400 to 480 volts ¹	1	1	069616
	2-3	1	068055
	4	1	068056
	5-6	1	078217
600 to 480 volts	1	1	068047
	2-3	1	078214
	4	1	078215
	5-6	1	078218

TABLE 3-1

¹ A transformer is not required to run on 400 Volts 50Hz but horsepower will be reduced. To restore horsepower use the transformer listed in the Table 3-1.

Resaw Amperage:

Motor HP	Power Supply			Required Amps/# of Heads					
	Volts	PH	Hz	1	2	3	4	5	6
25	230 ¹	3	50/60	80	150	210	270	340	400
25	380 ²	3	50	45	85	120	150	190	220
25	415 ³	3	50	40	75	105	135	170	200
25	460 ³	3	60	40	75	105	135	170	200

TABLE 3-2

¹ Transformer Required
² Transformer Suggested
³ No Transformer Required

3.3 Cutting Capacity

The cutting and blade sizes:

Cutting Length	18" (0.45 m) minimum 96" (2.45 m) maximum
Cutting Height	.25" - 12" (0.64 cm - 30.48 cm)
Cutting Width	.75" - 12" (1.91 cm - 30.48 cm) ¹
Blade Kerf	.070" - .084" (1.52 mm - 2.03 mm)
Blade Width	1" (2.54 cm) or 1.25" (3.18 cm)
Blade Length	17' - 1" (5.2 m)
Blade Thickness	.035" (0.89 mm), .042" (1.07 mm) or .045" (1.14 mm)
Distance Between Blades (Resaw w/2-6 Saw Heads)	29" (737 mm)
Feed Rate	0-100 ft/min (0-30 m/min)

TABLE 3-3

¹ 8" (20.32 cm) maximum if equipped with MGR.

3.4 Motor Specifications

Motor	HP	Type	RPM@60HZ	RPM@50HZ
Saw Head(s)	25	Totally Enclosed, Fan Cooled	1800	1800
Hydraulic Pump	5	Totally Enclosed, Fan Cooled	3450	2850

TABLE 3-4

3.5 Belt Sizes

Belt Description	Belt Size	Wood-Mizer Part No.
Drive Wheel Belt	5VX1320	007723
Idle Wheel Belt	5VX1080	033391

TABLE 3-5

3.6 Fluid Requirements

Hydraulic and water lube (optional bottle design) capacities and requirements.

Hydraulic Reservoir Capacity	4 to 5 gal.
Hydraulic Fluid	Conoco MV32 ¹
Hydraulic Filter	S28
Water Bottle Capacity	4 gal. (per saw)

TABLE 3-6

¹ Conoco MV32 Fluid replaces Univis HVI 26 Fluid (formerly named J26) used prior to 1/08. Fluids are interchangeable. Gallon cans of Conoco MV32 available from Wood-Mizer (Part No. 006397).

3.7 Air Service Requirements

Air Pressure	80 psi - 125 psi (Min/Max)
Air Volume	5 cfm
Fitting Required	1/8" NPT (1/4" NPT w/MGR)

TABLE 3-7

3.8 Vacuum Requirements

Vacuum	1000 CFM (per head)
Dust Port Size	6" OD

TABLE 3-8

3.9 Water Lube System

3-HEAD RESAW WATER LUBE SYSTEM

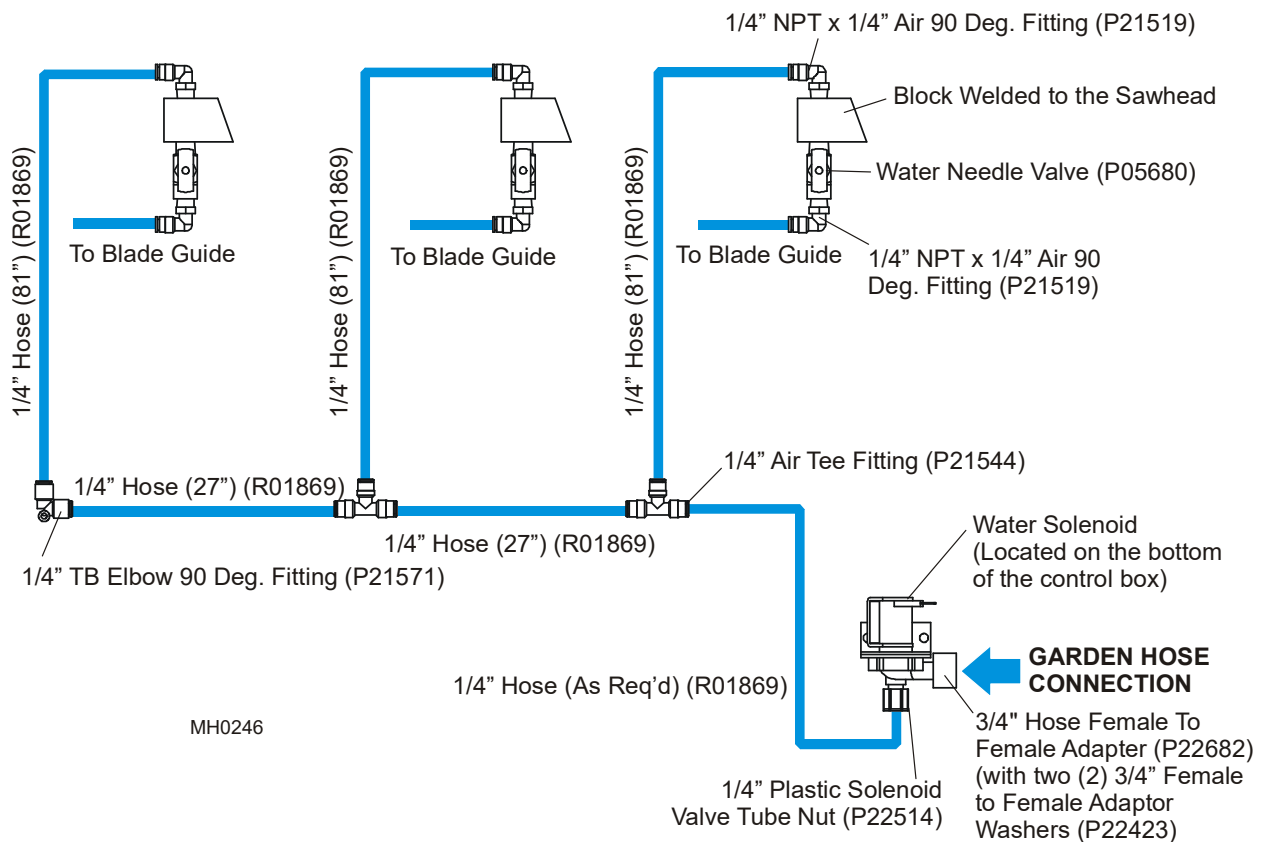


FIG. 3-8

Water Lube System Component List.

Part Description	Wood-Mizer Part Number
Fitting, 1/4" NPT x 1/4" Air 90 Deg.	P21519
Valve, Water Needle	P05680
Fitting, 1/4" Air Tee	P21544
Fitting, 1/4" TB Elbow 90 Deg.	P21571
Solenoid, Water Lube System	E22772
Adapter, 3/4" Hose Female To Female	P22682
Washer, 3/4" Female to Female Adaptor	P22423
Nut, 1/4" Plastic Solenoid Valve Tube	P22514

TABLE 3-9

Water Lube Hose Chart.

Hydraulic Hose Description	Hose Length	Wood-Mizer Part Number
1/4" Hose (between Sawheads)	27"	R01869
1/4" Hose (from Fitting to Welded Block on Sawhead)	81"	R01869
1/4" Hose (from Tee Fitting to Water Solenoid)	As Req'd	R01869

TABLE 3-10

3.10 Hydraulic System

Hydraulic Schematic

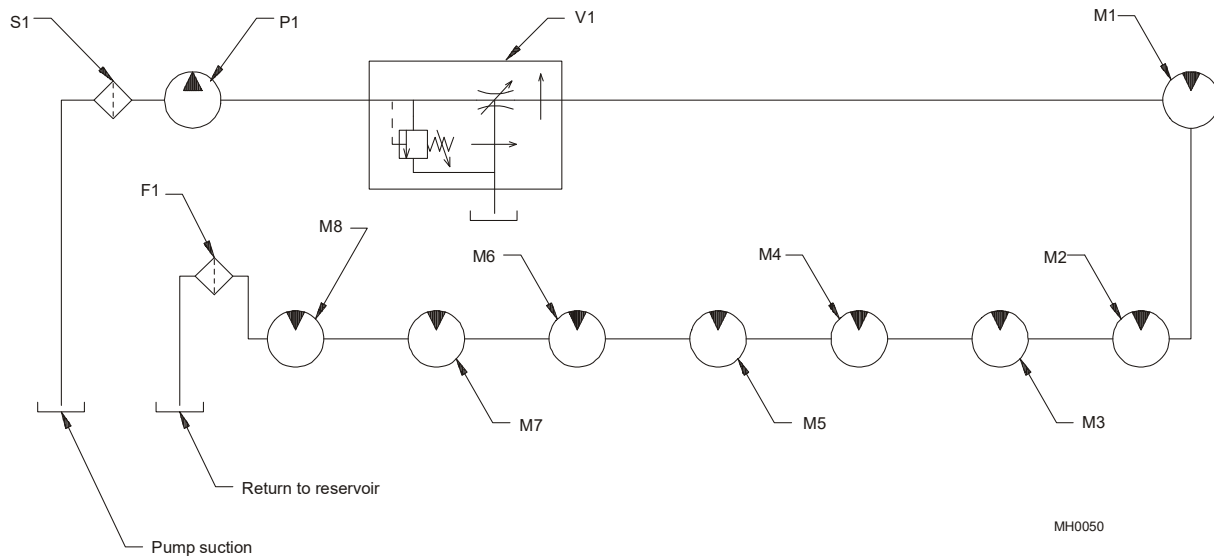


FIG. 3-9

Hydraulic Component List

Component	Manufacturer Part Number	Manufacturer	Wood-Mizer Part Number	Description
F1	SAF28G12	MFP	P20301	Filter, Hydraulic Fluid Cartridge
MI - M8	MG10-13-10AAAB	TRW Ross	P20206	Motor, Hydraulic
P1	1300096	J.S. Barnes	P20213	Pump, Hydraulic
S1	S15-100	Flo-Ezy	P20210	Filter, Suction Screen
V1	FCR51-3/8	Brand	P20743	Valve, Flow Control

TABLE 3-11

Hydraulic Hose Chart

Hydraulic Hose Description	Wood-Mizer Part Number
1/2" NPT x 34" Long Hydraulic Hose	P20249
1/2" NPT x 66" Long Hydraulic Hose	P20716
1/2" NPT x 76" Long Hydraulic Hose	P22626
1/2" NPT x 28" Long Hydraulic Hose	P05391
1/2" NPT x 78" Long Hydraulic Hose	P22299
1/2" NPT x 11' Long Hydraulic Hose (MGR Only)	P21545
1/2" NPT x 13' Long Hydraulic Hose (MGR Only)	P21126

TABLE 3-12

SECTION 4 OPERATION

4.1 Control Overview

1. Control Panel

The control panel includes switches to start and stop the feed track and each saw head.

NOTE: None of the controls will function if the perimeter fence is not in the raised position. The saw blades also must be tensioned with 50 psi of recommended settings to operate the control panel.

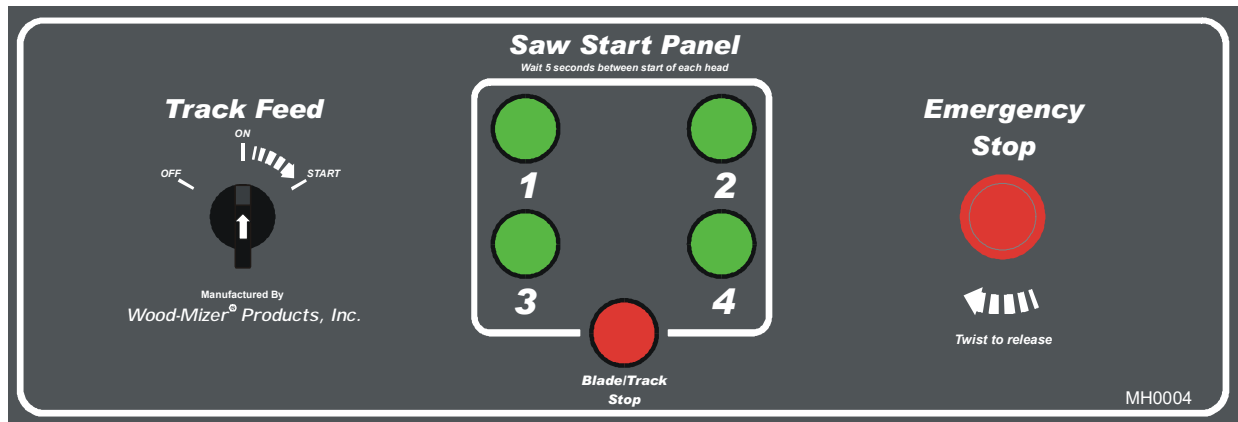


FIG. 4-1 CONTROL PANEL COMPONENTS.

2. Track Feed

To start the feed track, turn the switch to the START position and release. The switch will return to the ON position and the track will start. To stop the track, turn the switch to the OFF position.

3. Blade/Track Stop

Push the blade/track stop button to stop all saw and track feed motors. Use the track feed and saw start buttons to restart the resaw.

4. Emergency Stop

Push the emergency stop button to stop all saw and track feed motors. Turn the emergency stop clockwise to release the stop. The resaw will not restart until the emergency stop is released.

5. Remote Control Box

There are two controls at the outfeed end of the resaw. These controls allow the track to be started and stopped and saw motors to be shut down by an operator located at the end of the resaw.

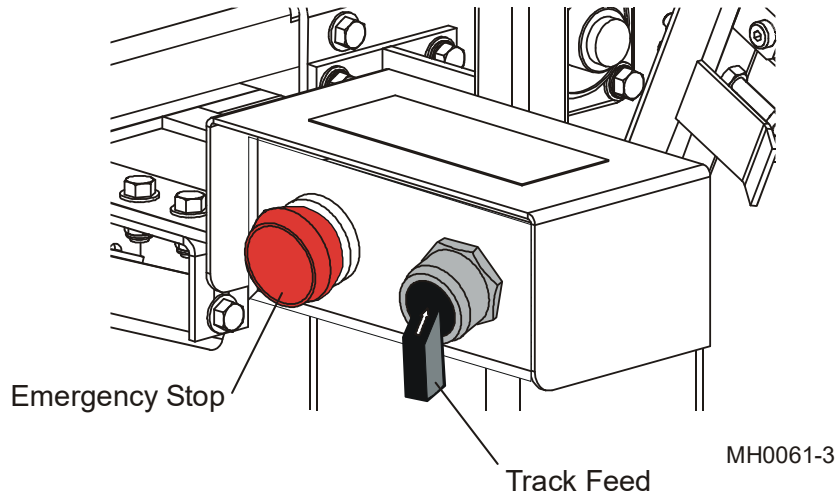


FIG. 4-2

- Push the emergency stop button to shut off all saw and track motors. The resaw must be restarted at the control panel. Twist the emergency stop clockwise to release the stop.
- The track feed switch can be used by the off-bearer to stop the feed track. Turn the lever to OFF to stop the track.
- Restart the track by turning the lever to START. When the switch is released, it will return to ON and the track will restart.

4.2 Hydraulic Overview

The hydraulic system has a cartridge filter, flow control valve, reservoir with in-line suction filter, pump motor, and hydraulic lines and fittings.

1. Hydraulic Fluid

Use a good grade of automatic transmission fluid (ATF) such as DEXRON II for most installations and climate conditions.

2. Filter (Cartridge)

The cartridge filter is a replaceable type S28 hydraulic filter.

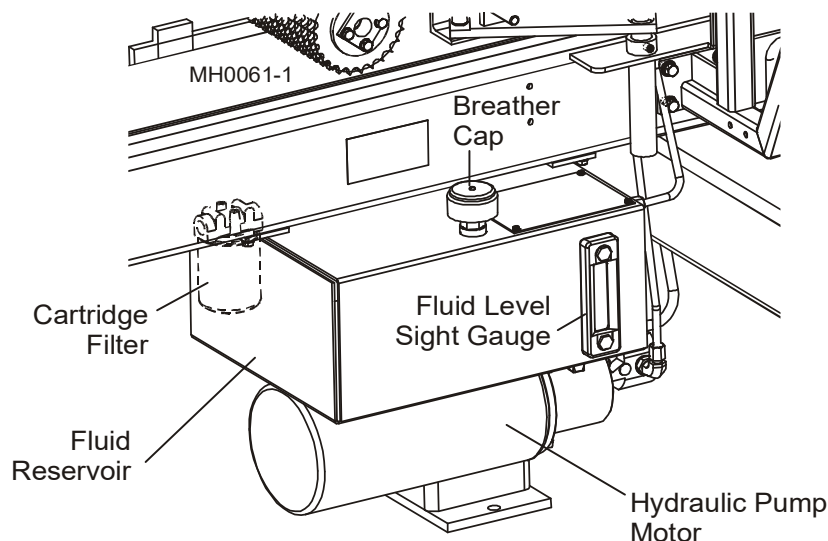


FIG. 4-3

3. Hydraulic Pump/Motor

The hydraulic pump is powered by a 4 horsepower electric motor. All adjustments are factory set.

4. Flow Control Valve

The flow control valve lever controls the Feed Rate (conveyor track speed). The valve provides feed rates from 0 to 100+ feet (30 m) per minute.

Adjust the Track Feed Rate by unscrewing the valve handle, pivoting the indicator to the desired speed, and retightening the handle.

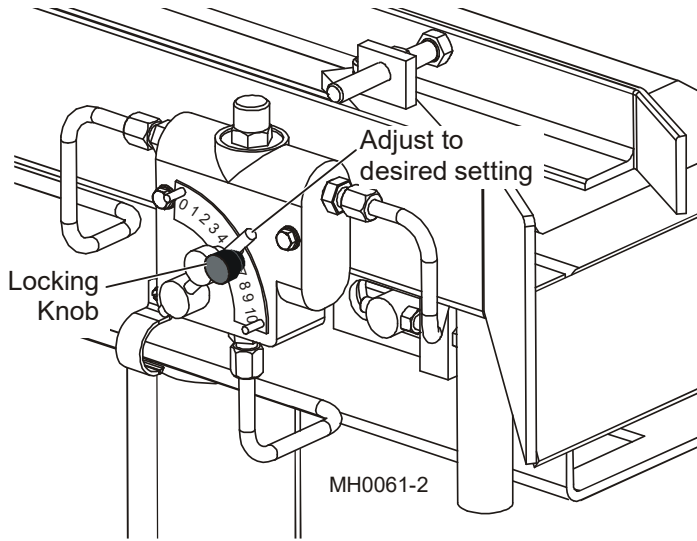


FIG. 4-4

4.3 Perimeter Fence Operation

To remove and install blades or perform any service that requires access to the moving parts of the, lower the perimeter fence.

Lowering the perimeter fence disables all electric functions of the resaw. This safety feature protects persons from accidental injury caused by moving parts or blades. When service is complete, return the perimeter fence to its raised position. This will enable the resaw to be started at the control panel.



WARNING! Allow blades to come to a complete stop before entering area protected by perimeter fence. Failure to do so will result in serious injury.

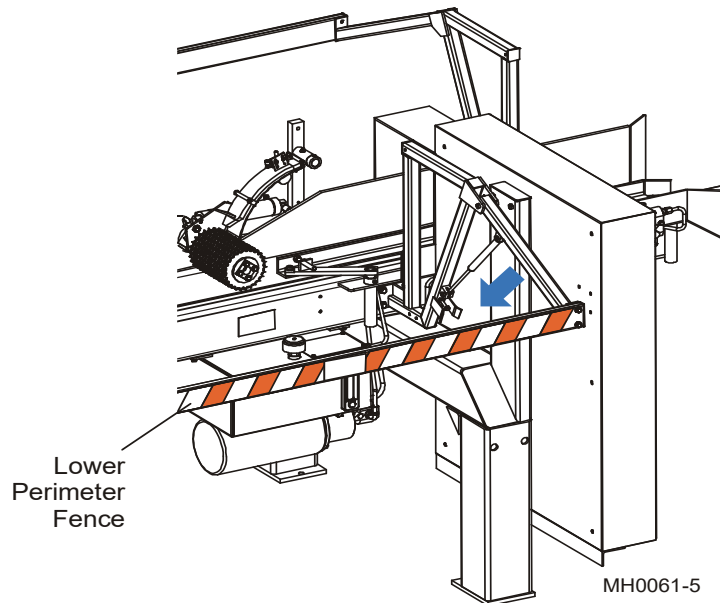


FIG. 4-5

4.4 Saw Blade Removal



WARNING! Allow blades to come to a complete stop before entering area protected by perimeter fence. Failure to do so will result in serious injury.

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.

1. Open the blade covers by pulling on the knob until the covers rest in the open position. The blade covers are counterbalanced for ease of operation.

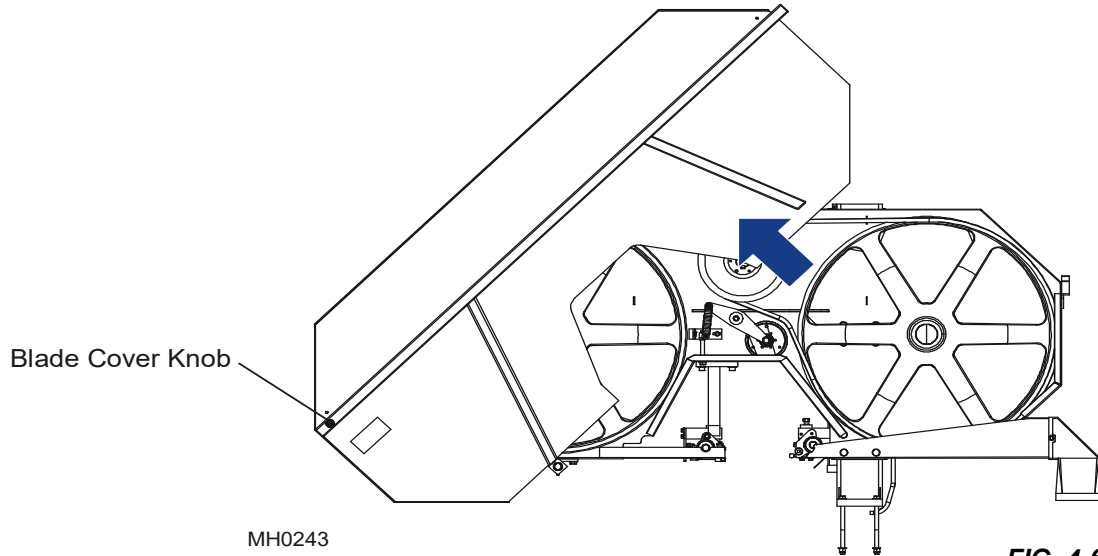


FIG. 4-6

2. Release the blade tension on all saw heads by turning the tensioner relief valve counterclockwise.

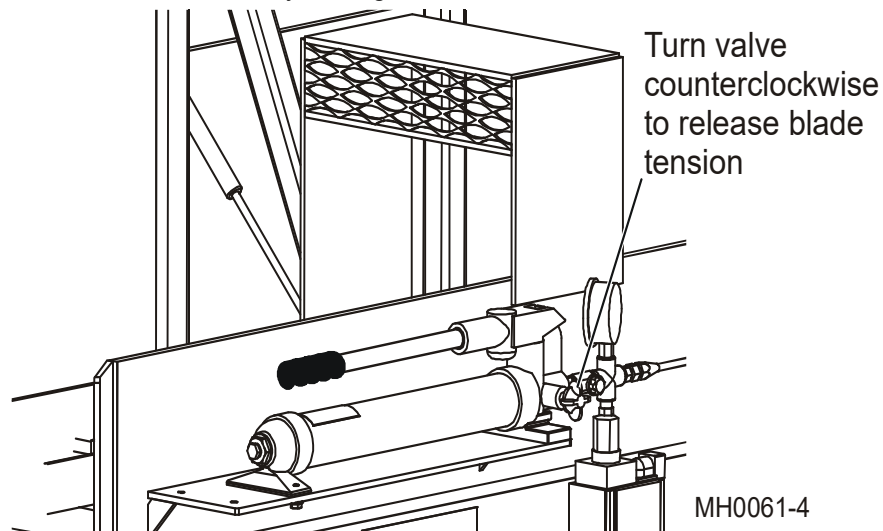


FIG. 4-7

3. Release the remainder of the tension from the blade to be removed by turning the check valve on the saw head clockwise. As the check valve is turned, pull up on the tension release lever. This will push the idle blade wheel against the wheel brake and create enough slack in the blade for removal.

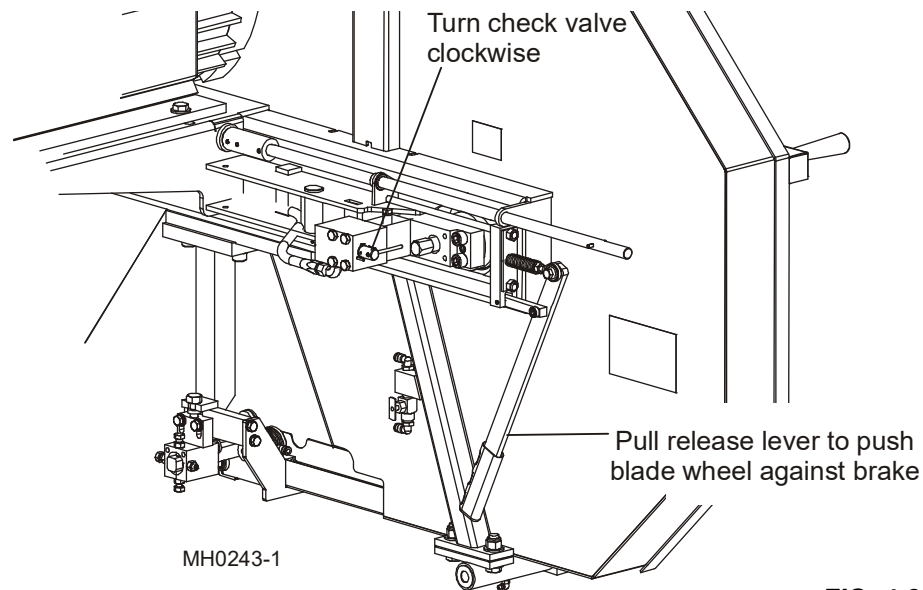


FIG. 4-8

4. Remove the blade, wipe it dry, and set aside.

4.5 Saw Blade Installation



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.

1. Uncoil a blade and install it around the two blade wheels.
2. Check to ensure the teeth located between the blade guide assemblies point to the drive side of the machine.
3. Insert the blade between the guide rollers and guide blocks.

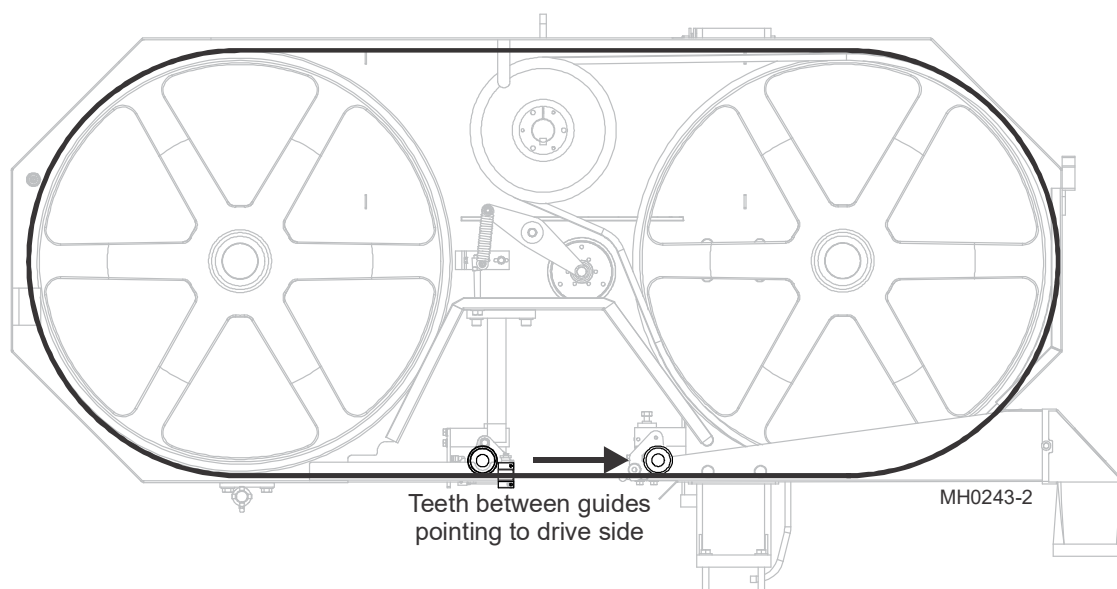


FIG. 4-9

4. Push the blade onto the wheels. 1 1/4" blades should be placed so the gullet is out from the front edge of the wheels 1/8" (+0, -1/16").
5. Check to ensure the back edge of the blade does not touch the back of the blade housing.

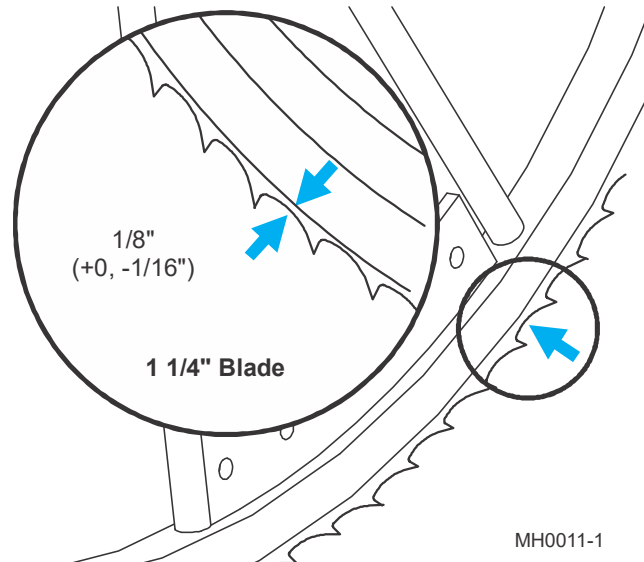


FIG. 4-10

TENSIONING ALL BLADES

1. Check blades for proper installation.
2. Turn the tensioner relief valve clockwise to close.
3. Pump the tensioner handle until the tension gauge indicates the desired setting.

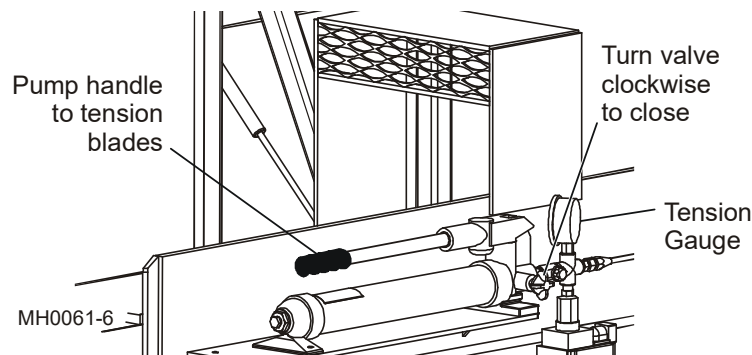


FIG. 4-11

Recommended tension setting for the blades you are using are listed below.

Blade Size	Acceptable Range*	Best
.035" x 1"	1500-1800 psi	1700 psi
.042" x 1"	1800-2100 psi	2000 psi
.035" x 1 1/4"	1800-2100 psi	2000 psi
.042" x 1 1/4"	2100-2400 psi	2300 psi

TABLE 4-1

NOTE: Tension the blades 200-300 pounds more than shown in the above table when first setting up the MultiHead. After starting the machine and the wheel tires and blades heat up, the blade tension will drop. Monitor the tension gauge during operation. Apply tension as necessary to maintain the recommended setting for the blades being used.



CAUTION! Remove tension from the blades when the HR1000 is not in use.

TENSIONING SELECTED BLADES

If operating the resaw with one or more heads not cutting, remove the blade from the saw heads that will not be used.

Follow Steps 1-2 as before to tension remaining blades. The tension assemblies of heads without blades will contact a stop bracket and allow the tensioning system to operate as if all the heads had blades installed.

SAW BLADE TRACKING

Once blades are installed and tensioned, they need to travel on the blade wheels properly.

1. Spin the blade wheels by hand several times to allow the blade to locate itself on the wheels.



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

2. After the blades have come to a complete stop, check that each blade is positioned properly on the blade wheels.

1" blades should be placed so the gullet is even with the front edge of the blade wheels (+0, -1/16"). 1 1/4" blades should be placed so the gullet is 1/8" (+0, -1/16") from the front edge of the wheels. Make sure the back edge of the blade does not touch the back of the blade housing.

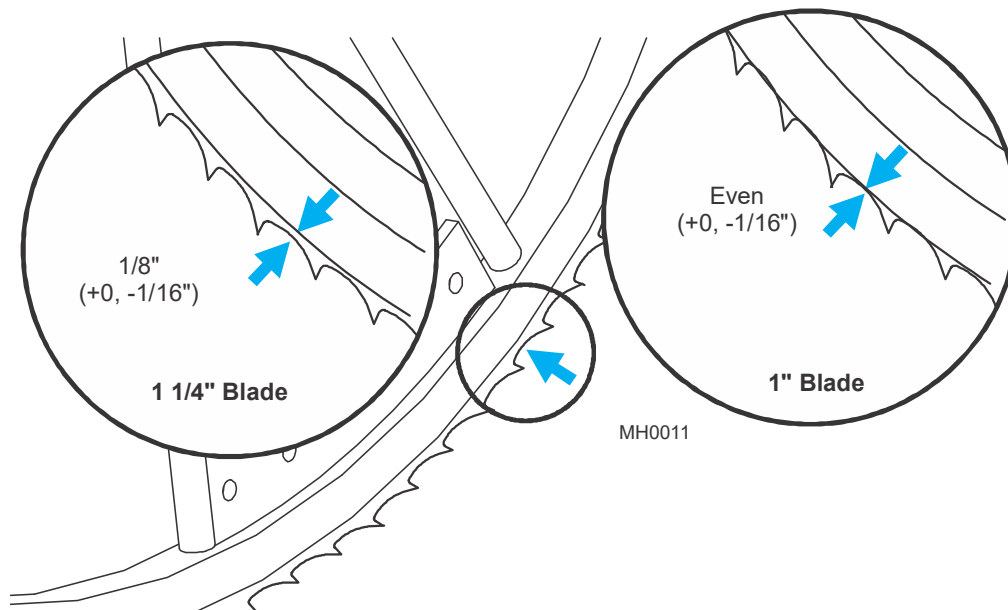


FIG. 4-12

3. If the blade is too far out on the idle side blade wheel, turn the adjustment lever clockwise one quarter turn.
4. If the blade is too far back on the idle side wheel, turn the lever counterclockwise one quarter turn.
5. Adjust blade tension if necessary.
6. Spin wheels by hand and recheck blade position on wheels.
7. Adjust the lever in quarter-turn increments until the blade is positioned correctly on the wheels.

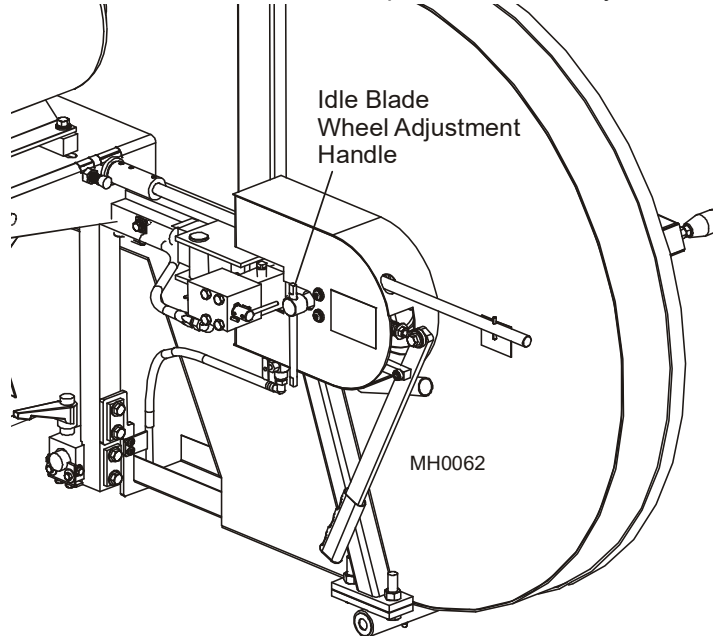


FIG. 4-13

8. After the blade is properly positioned on the blade wheels, check the position of the blade in relation to the blade guides.

NOTE The back edge of the blade should be 1/16" (1.5 mm) from the flange of the blade guide rollers and back disks. [See Section 6.2](#) of this manual if adjustment of the blade guide rollers is required.

9. Close all blade housing covers and raise the perimeter fence.



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

4.6 Saw Height Adjustment

Each individual saw head can be raised or lowered to determine the thickness of the finished stock. The saw heads should be adjusted so that the last blade the material passes through is closest to the feed track.

Example: Cutting cants into 1/2" (12.5 mm) pallet material. Assuming Resaw has six cutting heads, each head is adjusted in 9/16" (14.0 mm) increments up from the feed track. This allows 1/16" (1.5 mm) kerf for each blade.

The sixth saw head (last one the material will pass through) should be adjusted to 1/2" (12.5 mm) above the feed track. The fifth head should be adjusted to 1 1/16" (26.5 mm) above the track, fourth head 1 5/8" (40.5 mm), etc....

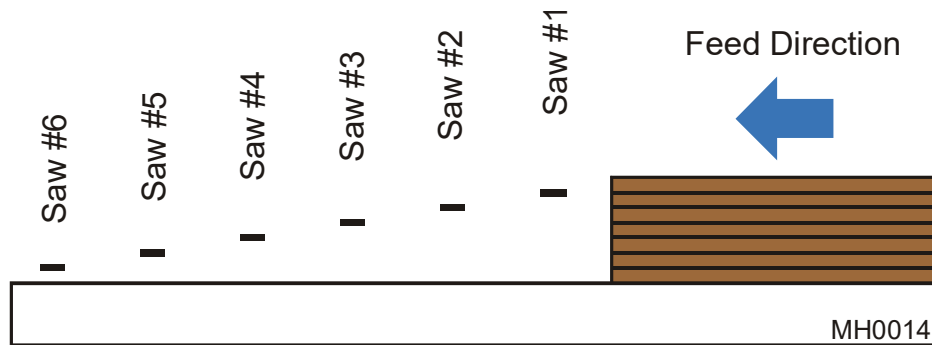


FIG. 4-14

1. Use the up/down crank handle to raise or lower each saw head.
 - Turning the crank clockwise will raise the saw head; counterclockwise will lower the saw head.

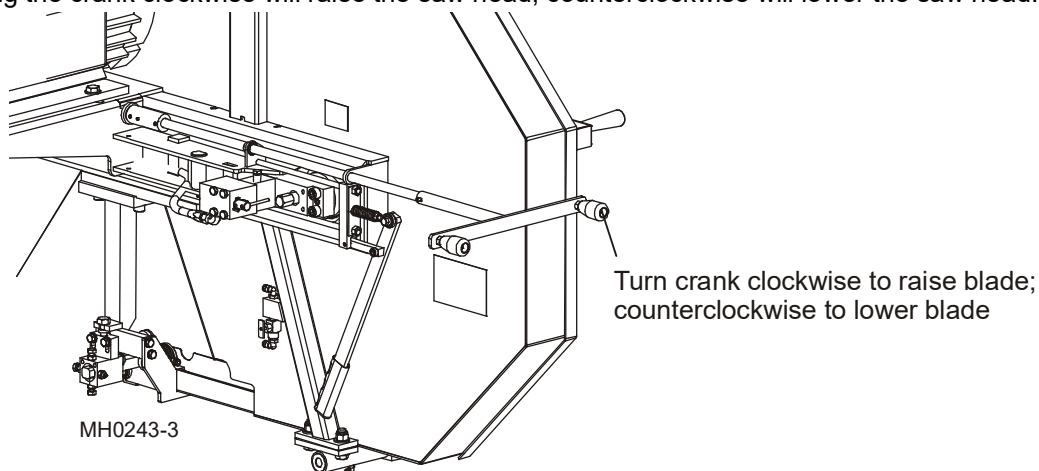


FIG. 4-15

2. Raise or lower the saw head until the desired setting is obtained on the scale located on the vertical upright supporting the saw head.

NOTE: The scale should be used to approximate the location of the blade above the track. Belt thickness, blade kerf, and other variables will cause actual finished thicknesses to vary. Test material should be run through the saw to check the resulting material thickness. Adjust the saw heads up or down as necessary to obtain the desired finished thickness.

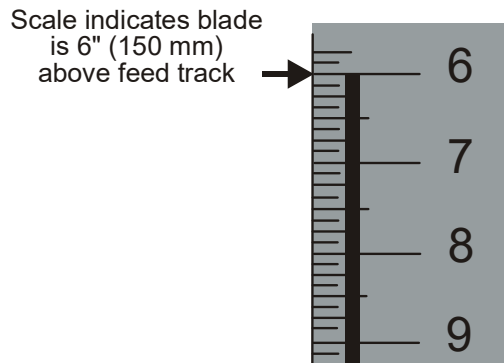


FIG. 4-16

4.7 Fence Adjustment

A fence is located at the infeed end of the MultiHead. The fence will help guide the cants straight down the track.

Before operating the MultiHead, you should adjust the fence for the width of material you will be cutting.

Example: If you are cutting 6" (150 mm) wide material, you should adjust the fence so it opens to a little over 6" (150 mm) from the inside wall of the track.

Loosen the locking nuts and adjust the stop bolts so the fence stops at 6 1/4" (155 mm) from the inside wall.

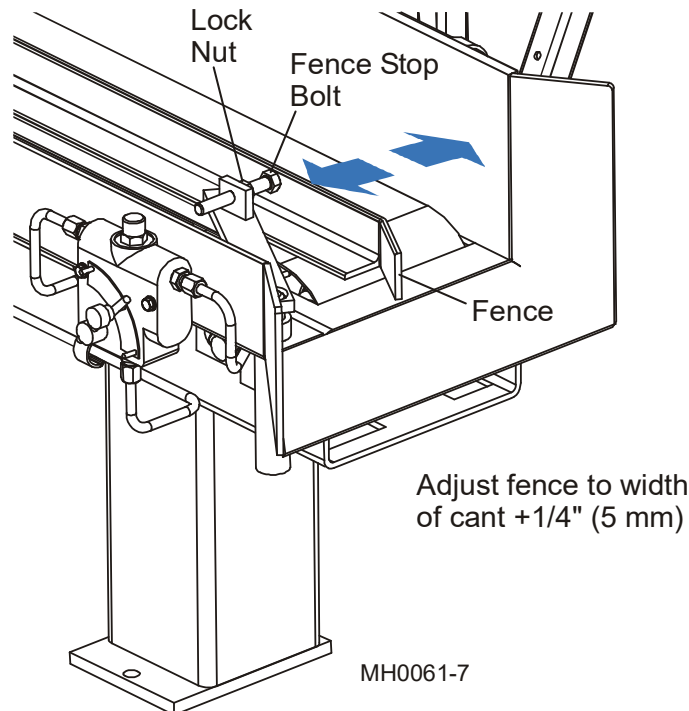


FIG. 4-17

4.8 Blade Guide Arm Adjustment

The outside blade guide arm can be adjusted in or out depending on the width of the material to be cut. The arm should be adjusted 1" (25 mm) wider than the material to be cut.

Example: If the material to be cut is 6" (150 mm) wide, adjust the blade guide arm so the area between the blade guides is 7" (175 mm) wide.

The outer blade guide can be adjusted in or out 2" (50 mm) without disassembling the blade guide arm from the saw head.

1. Loosen the mounting bolts.
2. Slide the arm in or out.
3. Retighten the mounting bolts.

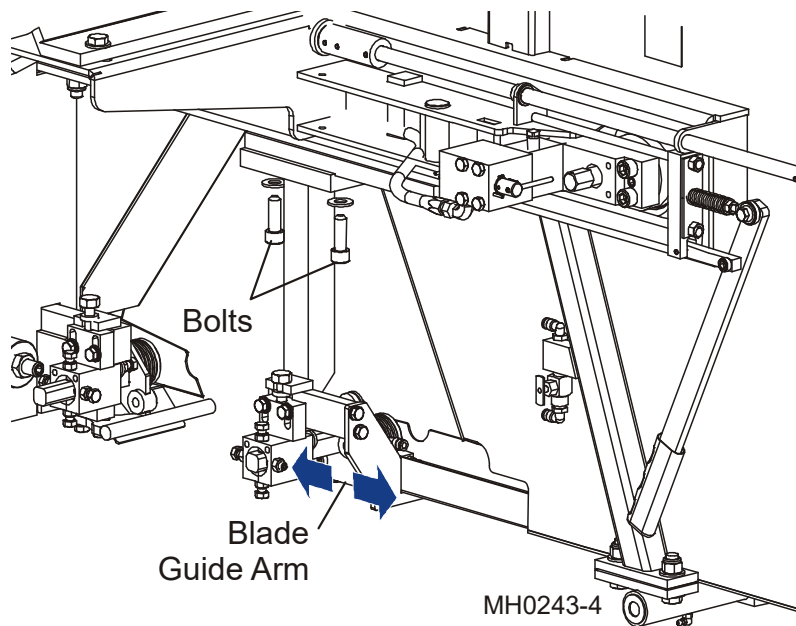


FIG. 4-18

Example: If the most common sizes being sawed are 4" (100 mm) and 6" (150 mm) the arm can be mounted in a set of holes so when the arm is pushed all the way in against the mounting slots, it is 5" (125 mm) from the inside guide. When sawing 6" (150 mm) material, loosen the mounting bolts and pull the blade guide arm all the way out against the mounting slots. The blade guide will now be 7" (175 mm) from the inside guide.

4. If the blade guide arm needs to be adjusted more than 2" (50 mm), remove the mounting bolts and move the blade guide arm to a different set of mounting holes.
5. Replace the mounting bolts.

4.9 Machine Start



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

1. Close all blade covers and replace any guards removed for service.
2. Check the feed track and remove all loose objects such as tools, wood, etc.
3. Check that all blades are properly tensioned.
4. Make sure all persons are clear and raise the perimeter fence to its upward position.

5. Check that the emergency stops at both ends of the machine are released.

NOTE: The machine will not start if:

There is not sufficient tension on the saw blades.

The perimeter fence is not raised.

The emergency stops at each end of the machine are not released.

START AND STOP SAW HEADS

1. Before starting the saw heads, ensure the main power switch servicing the machine is on.
2. Start each saw head motor beginning at the first saw head.
3. Push the button labeled "1" on the saw start panel. The motor on the nearest saw head should start and the blade start spinning.



CAUTION! Wait five (5) seconds between the start of each saw head motor to avoid high peak demand currents.

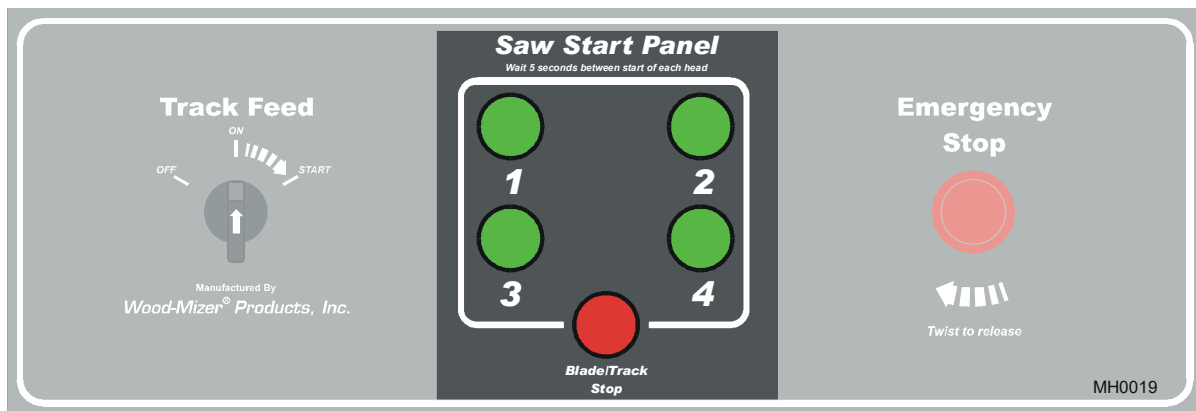


FIG. 4-19

4. Start the remaining saw head motors in succession (#2, #3...), waiting five seconds between starting each motor.
5. To stop the motors, push the emergency stop or the Blade/track Stop on the control panel. The saw motors also may be stopped by pushing the Emergency Stop button at the outfeed end of the resaw.
6. If either emergency stop is used to stop the saw head motors, rotate the switch clockwise to release the stop. The saw heads cannot be restarted until the Emergency Stop is released.

START AND STOP FEED TRACK AND FEED ROLLERS

After at least one saw head has been successfully started, the feed track can be started.

1. Turn the track feed switch on the control panel to the START position and release. The switch will return to the ON position and the track will start.

NOTE: The track can also be started in the same manner with the switch at the outfeed end of the resaw.

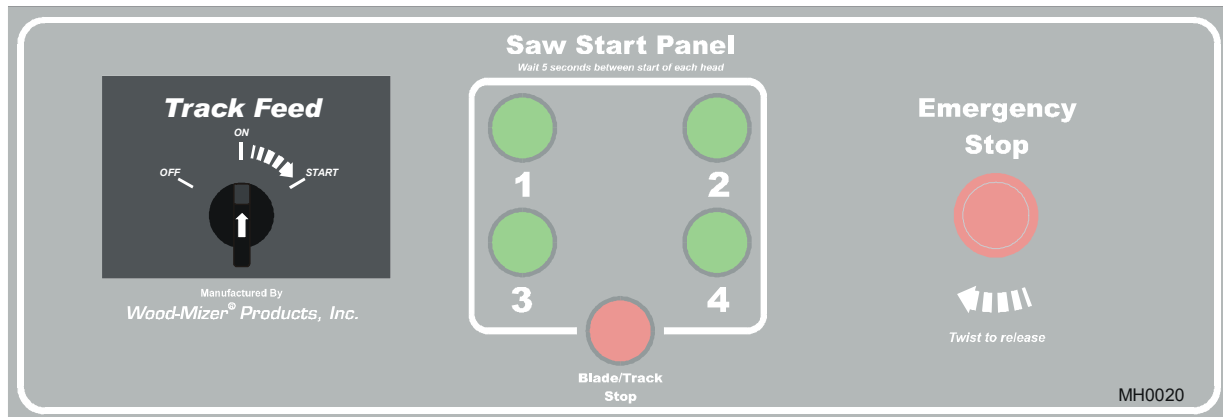


FIG. 4-20

2. Stop the feed track by pressing the blade/track stop button or the emergency stop on the control panel.

NOTE: The emergency stop at the outfeed end of the resaw will also stop the feed track.

Either emergency stop button will shut down the saw head motors as well as the feed track.

3. Turn the switch on the control panel or at the outfeed end of the resaw to the OFF position to stop the feed track **without stopping the saw blades**.

NOTE: The track cannot be started from either control until the one used to stop the track is returned to ON. Once the track feed switch is returned to the ON position, the track can be started with either control.

The track cannot be started until at least one saw head motor has been started.

ADJUST FEED TRACK RATE

The track feed rate valve allows the operator to adjust the feed rate from 0 to 100+ feet (30 m) per minute.

1. Turn the locking knob counterclockwise.
2. Rotate the valve handle to the desired feed setting.
3. Turn the locking knob clockwise to lock handle in position.

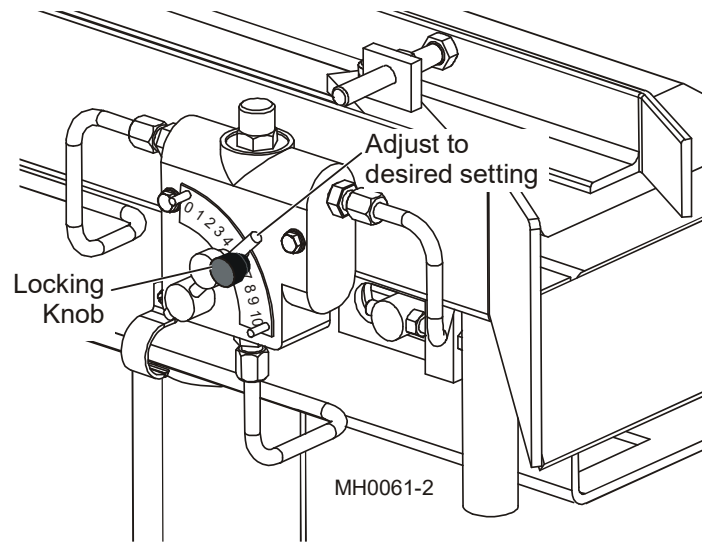


FIG. 4-21

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

- Width of material to be cut. Eight-inch material will require a slower feed rate than 1" material.
- Hardness of material to be cut. Some woods that are seasoned or naturally very hard will require slower feed rates.
- Sharpness of blades. Dull or improperly sharpened blades will require slower feed rates than sharp and properly maintained blades.
- Off-bearing capability. Your ability to feed end-to-end will also determine what feed rate you can use.

4.10 Machine Shutdown

STOP THE FEED TRACK DURING OPERATION

1. Locate track feed switch on the control panel or at the outfeed end of the resaw.
2. Turn the switch to the OFF position to stop the feed track.
3. Restart the track by turning the switch to the START position. When the switch is released, it will return to the ON position and the track will start.

NOTE: The track cannot be restarted until the switch used to stop the track is returned to the ON position. Once the track feed switch is returned to ON, the track can be restarted from either control.

The track cannot be started until at least one saw head motor is started.

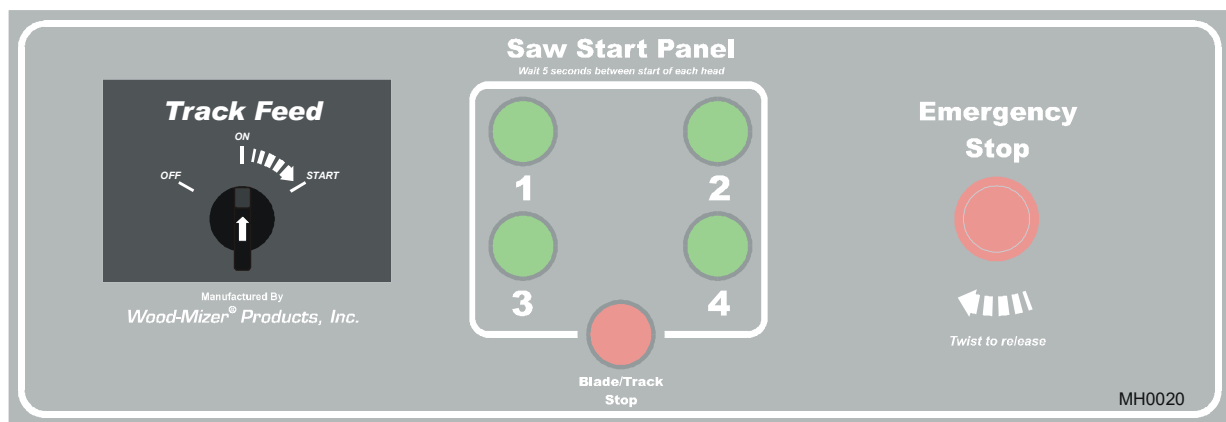


FIG. 4-22

The feed track can also be stopped by pressing the emergency stop button on the control panel or at the outfeed end of the resaw.

4. Press the emergency stop to stop the saw blade motors as well as the feed track.
5. Release the stop by turning the button clockwise. After the stop is released, the saw motors and track can be restarted.

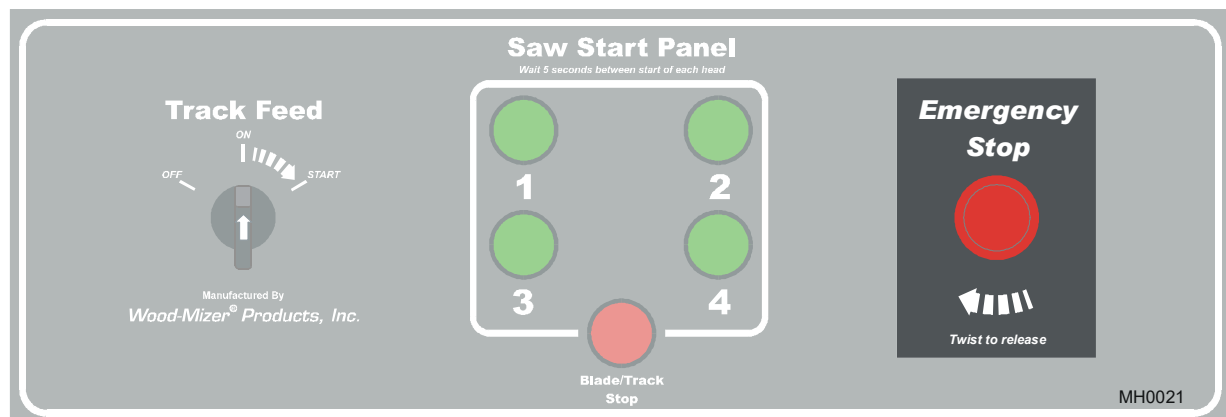


FIG. 4-23

The feed track will also stop when the blade/track stop button on the control panel is pressed.

6. Press the blade/track button to stop all saw blade motors and the feed track.
7. Restart the track with the track feed button as described above.

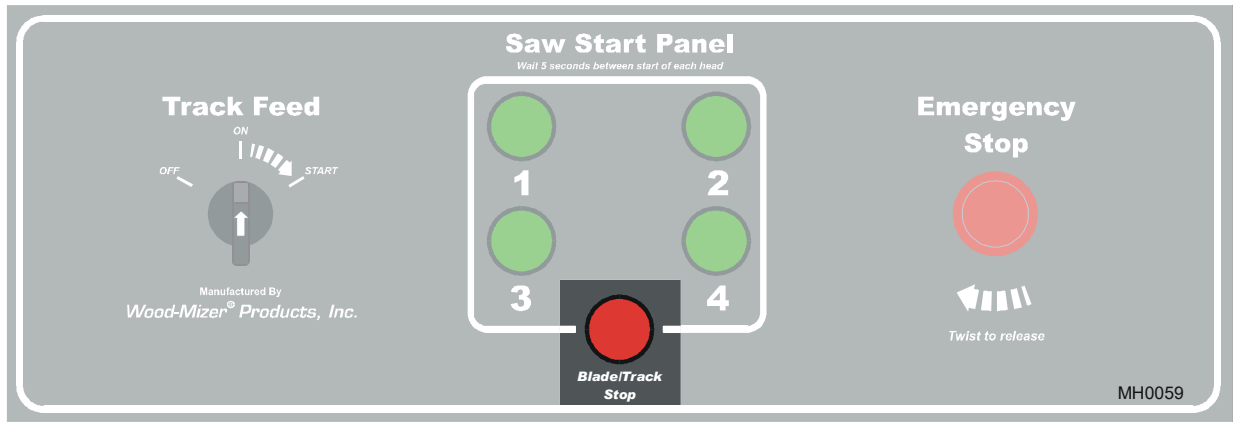



FIG. 4-24

The saw blade motors can be shut off with the blade/track stop button on the control panel.


The emergency stop button on the control panel and at the outfeed end of the resaw will also stop all saw blade motors. Turn the emergency stop clockwise to release the stop and restart the saw blade motors with the saw start panel buttons on the control panel.

4.11 Operation Procedure

1. Install blades if necessary.


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

2. Close blade covers and raise perimeter fence.

 **WARNING!** Allow blades to come to a complete stop before entering area protected by perimeter fence. Failure to do so will result in serious injury.

3. Tension blades to recommended setting.

4. Spin blade wheels by hand.

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

5. Check alignment of blades on the blade wheels and blade guides. Adjust as necessary.

6. Raise or lower each saw head to desired setting.

7. Adjust fence to width of material to be cut.

8. Adjust blade guide arm to width of material to be cut.

9. Adjust feed rate valve setting to desired track speed.

10. Perform pre-start check.



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

11. Start saw blade motors.



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



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



CAUTION! Wait five (5) seconds between start of each saw head motor to avoid high peak demand currents.

12. Place test material on feed track and start feed track.



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

13. Allow test material to pass through all blades.

14. Shut off saw blades and feed track. Measure finished material and adjust saw heads up or down as necessary. Repeat with test material until desired finished dimension is obtained.

15. Restart saw blades and feed track.

16. Feed material into first feed roller. Return unfinished material to be re-fed into the resaw.

NOTE: See merry-go-round instructions, if operating machine equipped with merry-go-round handling system.

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

18. Stop all saw motors and feed track if material jam occurs. Lower perimeter fence to service machine or remove jammed material.



WARNING! Allow blades to come to a complete stop before entering area protected by perimeter fence. Failure to do so will result in serious injury.

19. After operation is complete, shut off saw blade motors and feed track.

20. Release blade tension if done sawing for the day.



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

SECTION 5 MAINTENANCE

5.1 Blade Guides



WARNING! Disconnect and lock out power supply before servicing the HR1000! Failure to do so may result in serious injury.

1. Check the rollers for performance and wear **every blade change**.
 - Make sure the rollers are clean and spinning freely. If not, replace them. Replace any rollers which have worn smooth or have become cone shaped.
2. Inspect the blocks at **every blade change** for damage or wear.
 - If the block housing is bent or damaged, replace the block assembly. Also, replace the block assemblies before the blocks are worn to a point the blade may contact the lower step or housing.
3. Check the guide blocks are properly spaced from the blade **every 25 hours** of operation. Use the provided shim or a feeler gauge to check the blocks are adjusted .008" - .010" from the blade.
 - As the blocks wear, the front inside corner will wear more than the body of the block.
 - When the corner wears far enough, sawing performance will be affected even if the body of the block is adjusted properly to the blade. At this point, the block should be replaced.
 - Blocks can be ground or milled to a new flat surface and reuse them.
 - Develop a routine schedule for replacing the blade guide blocks based on sawing conditions and experience.

ADJUST THE TOP BLOCK DOWN

1. Loosen the clamp bolt and mounting bolt.
2. Turn the adjustment bolt clockwise.
3. Retighten the mounting bolt and clamp bolt.

ADJUST THE BOTTOM BLOCK UP

1. Loosen the clamp bolt and mounting bolt.
2. Use the provided adjustment tool to turn the adjustment screw clockwise.
3. Retighten the mounting bolt and clamp bolt.

NOTICE The blocks should be parallel to the blade. [See Section 6.2](#) for instructions about checking and adjusting the assembly level with the blade.

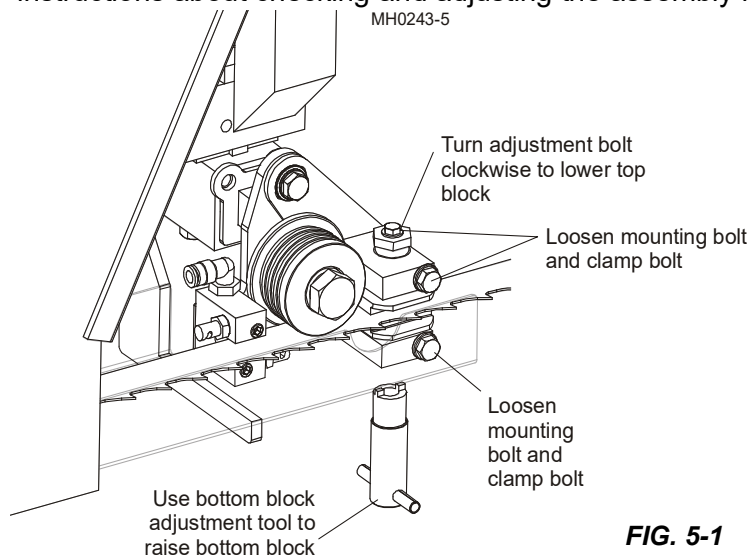


FIG. 5-1

5.2 Saw Head Up/Down Pad Adjustment

The saw heads slide up and down the mounting tubes on nylon pads assembled between the mounting tube and the saw head tube. If the fit between the tubes becomes so loose that the saw head vibrates excessively, the nylon pads can be adjusted.

1. Locate the six adjustment screws on the saw head tube.

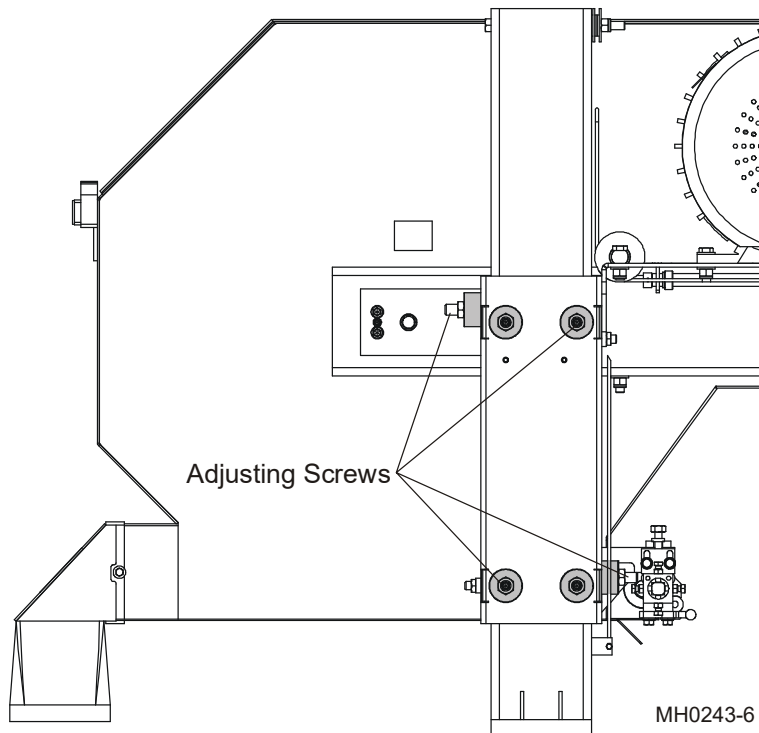


FIG. 5-2

2. Loosen the jam nuts at all six locations.
3. Turn each screw clockwise until it just bottoms out.
4. Recheck the fit of the saw head tube. Avoid adjusting the screws so tightly that the saw head becomes difficult to raise or lower.
5. Adjust the screws in quarter-turn increments until the desired adjustment is obtained.
6. Re-tighten jam nuts to maintain the adjustment.

5.3 Blade Height Indicator Adjustment

The blade height indicator on each saw head should indicate the distance from the bottom of the down-set teeth of the blade to the feed track.

1. If the scale shows a different reading than the actual measurement from the down-set tooth to the track, loosen the locking screw at the bottom of the indicator.
2. Raise or lower the indicator until it indicates the actual measurement between the down-set tooth and feed track.
3. Retighten the locking screw.

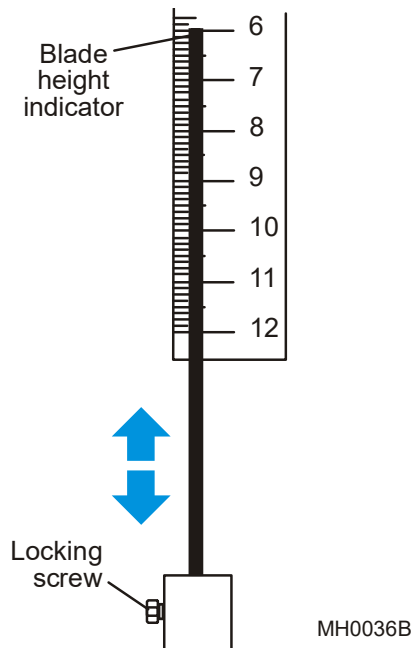


FIG. 5-3

5.4 Blade Tension Shutoff Switch Adjustment

The blade tension shutoff switch shuts down the MutliHead if any of the blades break. The switch is adjusted at the factory to shutoff if the blade tension pressure falls below a certain level.

5.5 Blade Wheel Belt Replacement

1. Inspect the belts around each blade wheel **every forty hours** of operation.
2. Check that the belts are not worn to a point that a tensioned blade touches the metal wheel.

NOTE: Operating the resaw with worn blade wheel belts will lead to premature blade breakage.

3. Replace the belts as necessary to prevent the blade from contacting the wheels.

5.6 Drive Belt Tension



CAUTION! Always keep proper tension on the drive belt. Keeping the drive belt too loose will ruin the belt.

1. Check the drive belt tension after the **first half hour** of operation, again after **four hours** of operation, and **every eight hours** of operation thereafter. The belt should have 7/16" (11 mm) deflection with 7 lbs. of deflection force.
2. To adjust the belt, locate the belt tensioner assembly inside the blade housing directly under the motor pulley.
3. Loosen the adjustment bolt jam nut and turn the bolt clockwise.
4. Retighten the jam nut.

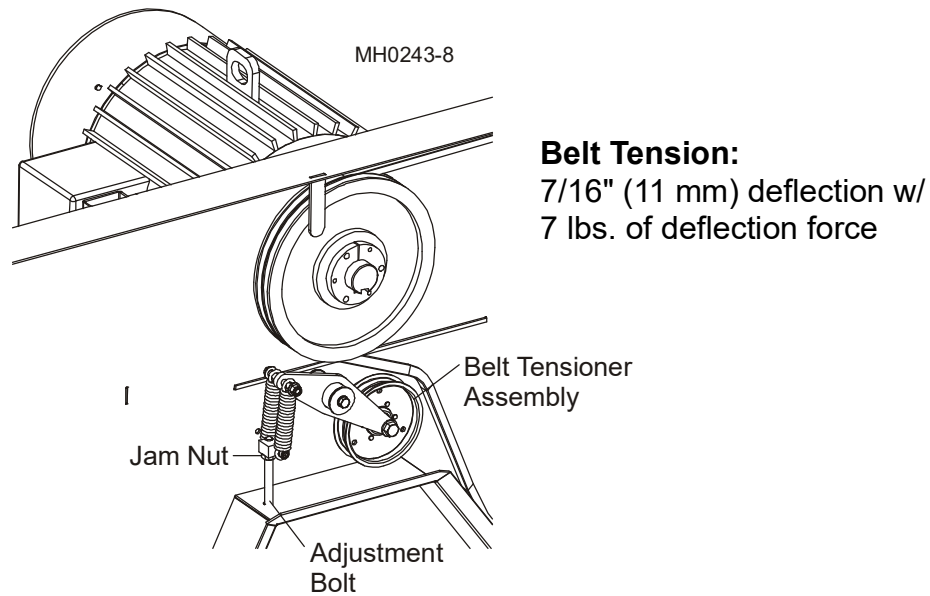


FIG. 5-4

5.7 Lubrication

BLADE WHEEL BEARING LUBRICATION

Lubricate the blade wheel hub bearings **every 750 hours** of operation with a high-quality synthetic grease such as Amoco Rycon #2 or Chevron SRI #2. To lubricate, follow these steps:

1. Remove the end seal from the hub cap.
2. Pump grease from a grease gun into the grease fitting until the new grease is seen exiting the hub bearings.
3. Replace the end seal.

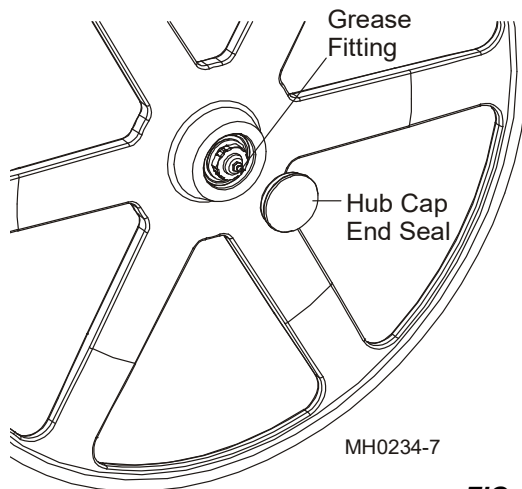


FIG. 5-5

ELECTRIC MOTOR LUBRICATION

The saw head and hydraulic pump motor bearings require lubrication **once a year**. One to two strokes of a medium consistency Polyurea-type grease from a grease gun is recommended.

FEED ROLLER PIVOT LUBRICATION

A grease fitting is located at the pivot point of each feed roller assembly. Grease each feed roller pivot with lithium grease **every forty hours** of operation.

NOTE: When adjusting the drive belt tension, be sure to maintain the alignment of the motor perpendicular to the drive belt to prevent premature belt wear.

FEED TRACK BEARING LUBRICATION

The feed track bearings are greased at the factory and should not require regreasing during the life of the bearing.

PERIMETER FENCE PIVOT LUBRICATION

A grease fitting is located at each pivot point of the perimeter fence. Grease each pivot with lithium grease **every forty hours**.

SAW HEAD MOUNTING TUBE LUBRICATION

Lubricate the tube that each saw head travels up and down with Teflon **every forty hours** of operation.

TENSION ASSEMBLY LUBRICATION

Apply dry graphite or a Teflon lubricant to the tension assembly and housing of each saw head **every forty hours** of operation.

UP/DOWN DRIVE LUBRICATION

The mechanism that raises and lowers each saw head includes a threaded drive rod located under the saw head motor. Apply a generous amount of Teflon lubricant to the threaded rod **every forty hours** of operation.

5.8 Feed Roller Assembly Rebuild

Check the feed roller assemblies for sprocket wear **every 480 hours** of operation. Each feed roller has individual sprockets which can be reassembled in a different order as necessary.

If sprocket wear is affecting roller performance, rebuild the roller as follows.

1. Use the lift handle to access the roller.
2. Unbolt the sprocket retaining plate.
3. Remove the bolts, washers and plate.
4. Remove the sprockets and spacer rings from the shaft weldment and reinstall in the desired order.
5. Reinstall the retaining plate, washers and bolts.
6. Store the lift handle separate from the machine; do not leave the handle in the feed roller shaft.

5.9 Feed Tube Sawdust Removal

A rake is supplied that can be fitted to the feed track to clear sawdust from the feed track tube. The rake should be used after **every eight hours** of operation.

1. Locate the modified link in the feed track. (It is shorter than the other links for easy identification.)
2. Raise the perimeter guard and restore power.
3. Turn the feed track on until the modified link starts around the drive sprocket and the gap before the modified link is at its widest.

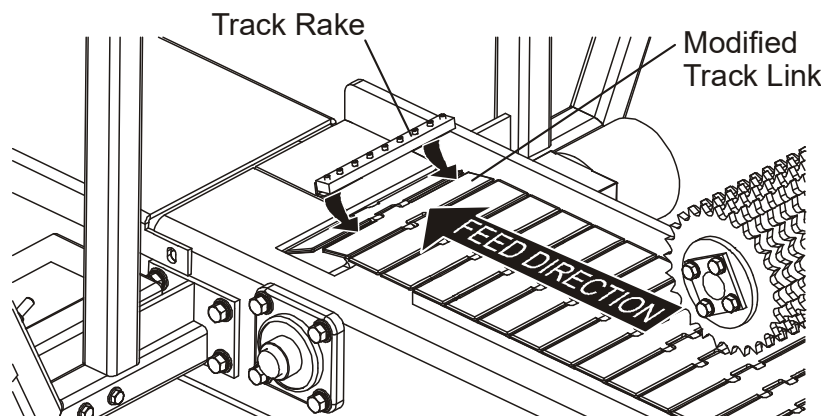


FIG. 5-6

4. Stop the feed track, lower the perimeter guard and slide the rake onto the modified link.
5. Raise all cutting heads so the rake will clear all blades and blade guides.
6. Raise the perimeter guard and turn the feed track on. The rake will travel through the feed tube and scrape sawdust out the end.
7. Stop the feed track just before the rake enters the drive end of the track tube.
8. Lower the perimeter guard and remove the track rake. **DO NOT** perform sawing operations until the rake is removed from the track.
9. Store the rake on the lip of the electrical junction box located at the drive end of the feed track.
10. Repeat use of the track rake after **every eight hours** of operation.

5.10 Hydraulic System Maintenance

Check the hydraulic tank fluid **every forty hours** of operation. The sight gauge on the tank should indicate a fluid level between LOW and HIGH. Add an all-season hydraulic fluid such as Conoco MV32 as needed to maintain proper fluid level.

1. If the fluid appears brown or cloudy, has an unusual 'burnt' odor, or if there is a sudden rise in oil temperature above 160°, completely drain the hydraulic tank and refill with new fluid.
2. Remove and clean the suction strainer from the end of the hydraulic tank.
3. Blow out any debris from the strainer and clean with a non-petroleum solvent before reinstalling to the tank.
4. Inspect the hydraulic lines and fittings for leaks **every forty hours** of operation or as fluid appears around the machine.
5. Replace the S28 cartridge filter on the back of the hydraulic fluid tank **every 480 hours** of operation.
6. Completely drain the reservoir and refill with new fluid **every 2080 hours** of operation. Also, remove and clean the suction strainer from the end of the hydraulic tank. Blow out any debris from the strainer and clean with a non-petroleum solvent before reinstalling to the tank.

5.11 Tensioner Screw Adjustment

A brass-tipped set screw is used to maintain a tight fit between the tensioner bar and its housing. If the tensioner fit becomes loose, the set screw should be tightened:

1. Locate the tensioner set screw and loosen the jam nut.
2. Turn the set screw clockwise until tight, then back out 1/4 turn.
3. Re-tighten the jam nut.

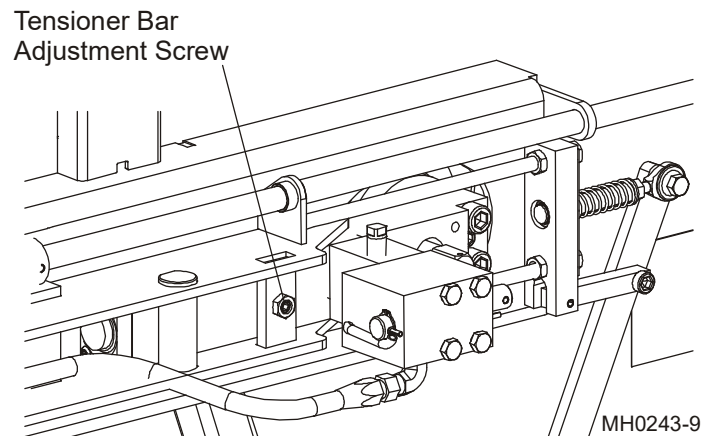


FIG. 5-7

The switch may need to be adjusted if the resaw does not shut off when a blade breaks or if different size blades are to be used.

Blade Used	Shutoff Switch Setting
.035" x 1"	1450 P.S.I.
.042" x 1"	1750 P.S.I.
.035" x 1 1/4"	1750 P.S.I.
.042" x 1 1/4"	2050 P.S.I.

TABLE 5-1

To adjust the shutoff switch:

1. Disconnect the incoming power supply.
2. Install a blade to each saw head.
3. Tension the blades to the recommended shutoff switch setting shown above.
4. Locate the shutoff switch under the blade tension gauge.
5. Loosen the switch cover screw and remove the cover.

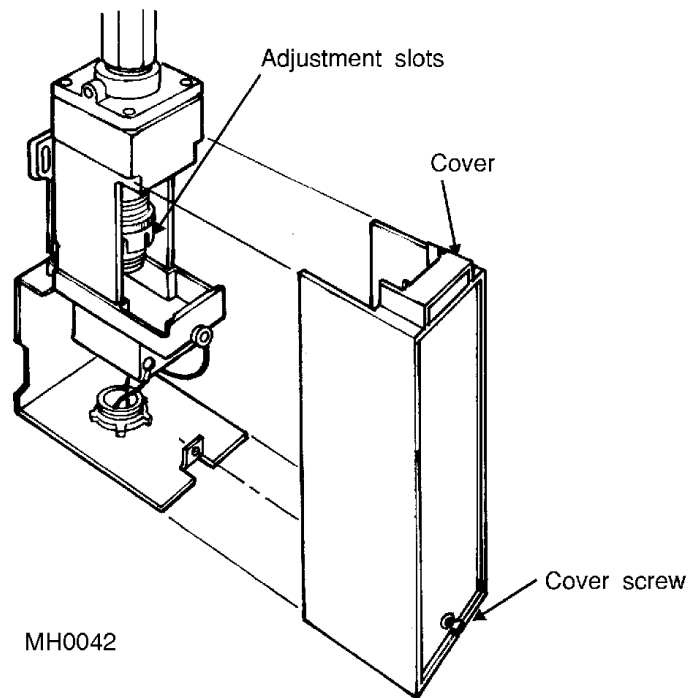


FIG. 5-8

6. Locate the adjustment dial slots.
7. Use a flat screwdriver in the slots to pry the adjustment dial to the right (clockwise as viewed from bottom).
8. Turn the adjustment dial until the shutoff switch is activated (indicated by a "click" sound).
9. Replace the shutoff switch cover.
10. Tighten the cover screw.

5.12 Routine Maintenance Schedule

The following table indicates recommended maintenance and lubrication intervals.

MAINTENANCE PROCEDURE	SECTION	8 HOURS	40 HOURS	480 HOURS	750 HOURS	2080 HOURS
Check Blade Guide Assemblies	See Section 5.1					
Drive Belt Tension (Check after first 1/2 hour, first 4 hours, and daily thereafter)	See Section 5.6					
Remove Feed Tube Sawdust	See Section 5.9					
Inspect Blade Wheel Belts	See Section 5.5					
Lubricate Feed Roller Pivots	See Section 5.7					
Inspect Hydraulic Fluid Level	See Section 5.10					
Inspect Hydraulic Lines and Fittings	See Section 5.10					
Lubricate Perimeter Fence Pivots	See Section 5.7					
Lubricate Saw Head Mounting Tube	See Section 5.7					
Lubricate Tensioner Assemblies	See Section 5.7					
Lubricate Up/Down Drive Rods	See Section 5.7					
Rebuild Feed Roller Assemblies	See Section 5.8					
Replace Hydraulic Fluid Filter	See Section 5.10					
Grease Blade Wheel Hub Bearings	See Section 5.7					
Lubricate Electric Motor Bearings	See Section 5.7					
Drain and Refill Hydraulic Tank Fluid	See Section 5.10					

TABLE 5-2

5.13 Periodic Maintenance

Good maintenance is essential to keep the resaw safe and in good operating condition. In addition to the routine maintenance listed above, periodic checks of the entire machine should be made.



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

MAINTENANCE PROCEDURE	SECTION
Check Blade Height Indicator Reading	See Section 5.3
Check Blade Tension Shutoff Switch Adjustment	See Section 5.11
Check Saw Head Up/Down Pad Adjustment	See Section 5.2
Check Tensioner Screw Adjustment	See Section 5.11
Clear Sawdust From Blade Housings, Motors, Feed Track Sprocket, Feed Track Idle Roller, And All Moving Parts	See Section 5.9
Check Electrical Cords/Conduits And Hydraulic Hoses For Abrasion	--

TABLE 5-3

5.14 Electrical Problems

HEAD WILL NOT START

- Check main disconnect is on
- Check both emergency stops
- Check perimeter switch
- Check pressure switch
- Check fuses
- Check internal thermostats
- Check all phases are on

CANNOT START TRACK

- Check at least one head is running
- Check other track switch
- Check fuses

SAW RUNS THEN SHUTS OFF

- Check motor temperature

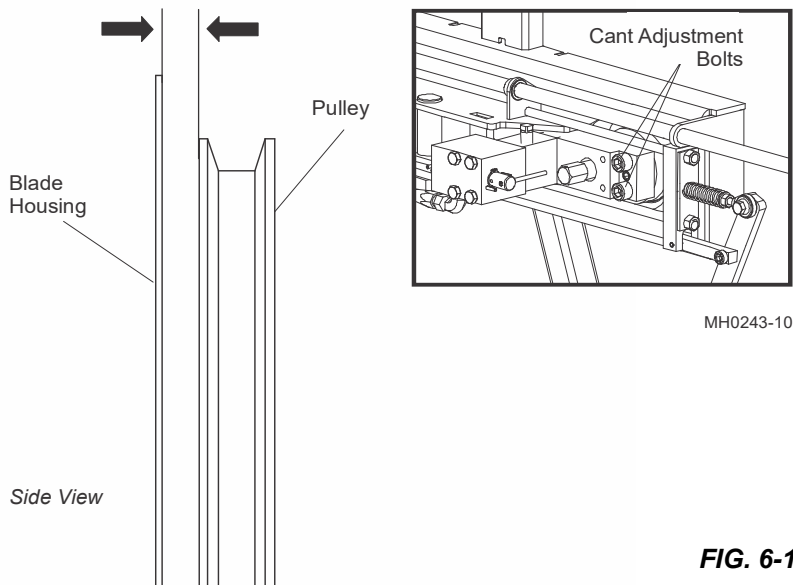
Motors have internal thermostats that shut off motor when it gets too hot. Motor will automatically reset when cool and can then be restarted.

SECTION 6 ALIGNMENT

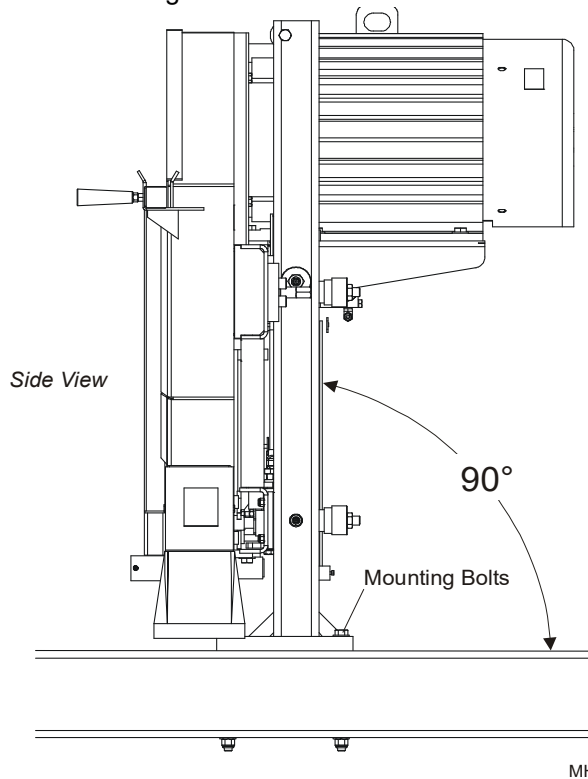
6.1 Preliminary Alignment

Preliminary alignment is necessary to ensure enough adjustment will be available during final alignment.

1. If a blade has been installed to the saw head, remove it. Preliminary alignment should be performed without a blade installed.
2. Use the cant adjustment bolt to vertically tilt the wheel so that the top and bottom of each wheel is an even distance away from the back of the blade housing.



3. Use a digital level to align the wheels 90° to the track. If adjustment is needed, loosen the mounting bolts and use shims between the base of the saw head mounting tube and frame to tilt the mast as needed.



4. Use a digital level to align the wheels 90° to the track. If adjustment is needed, use the mounting and adjusting bolts at the base of the saw head mounting tube to tilt the mast as needed.

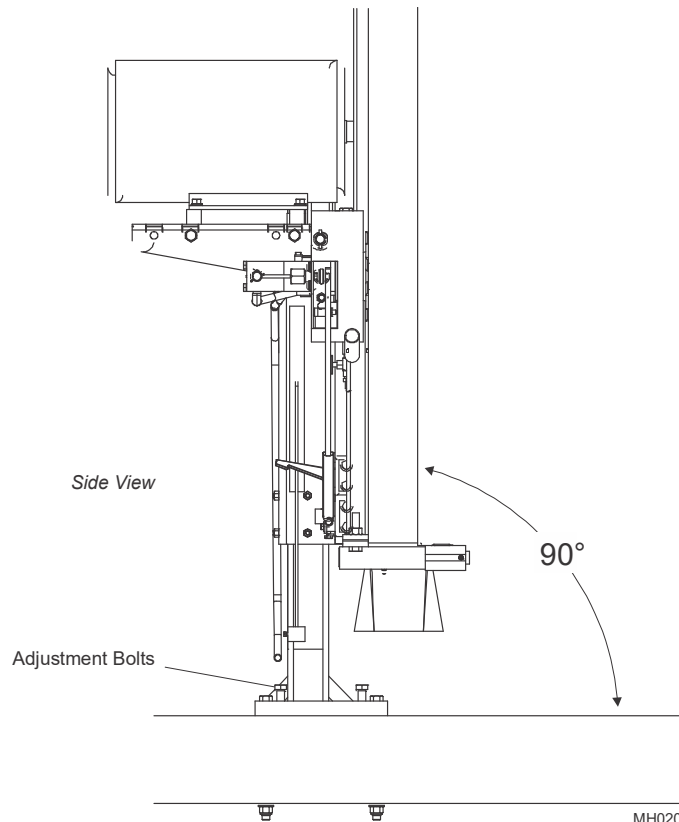


FIG. 6-3

5. Hold a straight edge or string across the midpoint of both blade wheels as shown in the following graphic.

NOTE: The straight edge should touch the outside edges of the wheels.

6. If it does not touch, use the cant screws to adjust as necessary.
 - To move the inside of the wheel out, tighten the cant screw.
 - To move the inside of the wheel back, loosen the cant screw.

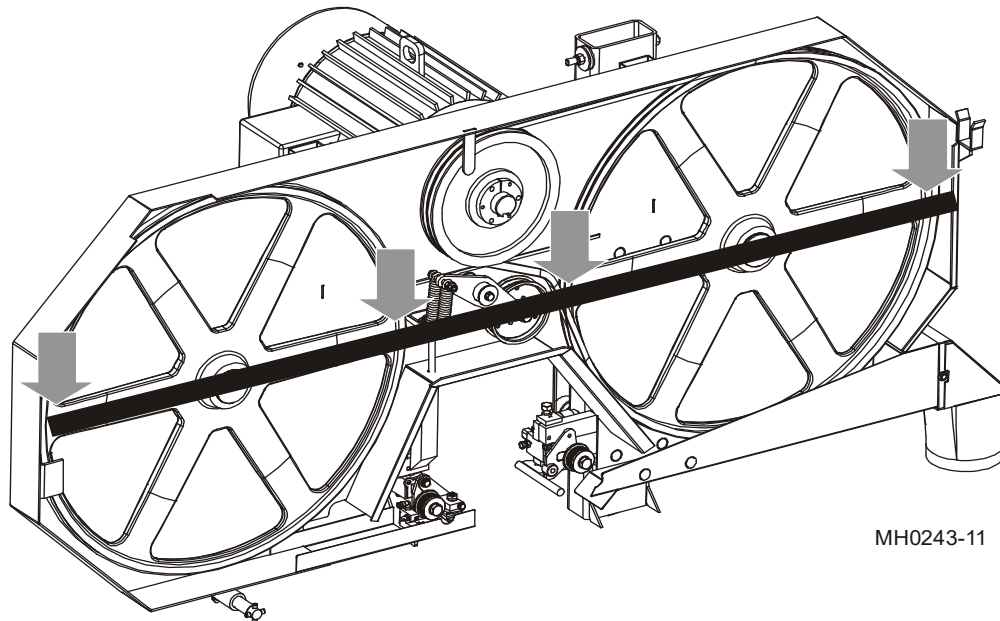




FIG. 6-4

6.2 Blade Guide Alignment

To reset factory blade guide alignment, follow the procedures listed in this section.

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

 **CAUTION!** Replace the blade wheel belts and the blade before realigning the blade guides. You cannot return the blade guides to their original factory-aligned positions using worn blade wheel belts.

PREPARE BLADE GUIDES FOR ALIGNMENT

1. Remove the deflector guard from the inner blade guide assembly to allow easier viewing of guide assembly.
2. Install new blade wheel belts and a new blade. Tension the blade and track it on the wheels ([See Section 5.4](#)).
3. Inspect the blade rollers and blocks as described in the Maintenance section ([See Section 5.1](#)). Repair or replace rollers and adjust blocks as directed.
4. Turn the top adjustment bolt on each blade guide assembly clockwise to raise the roller 1/16" (1.5 mm) from the blade.

BLADE DEFLECTION

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

1. Raise the saw head until the blade is 6" (150 mm) above the feed track. Measure the actual distance with a tape from the top of the feed track to the bottom of the blade.

Turn the top adjustment bolt counterclockwise to lower the assembly until the blade guide roller deflects the blade down until the bottom of the blade measures 5 3/4" (144 mm) from the feed track.

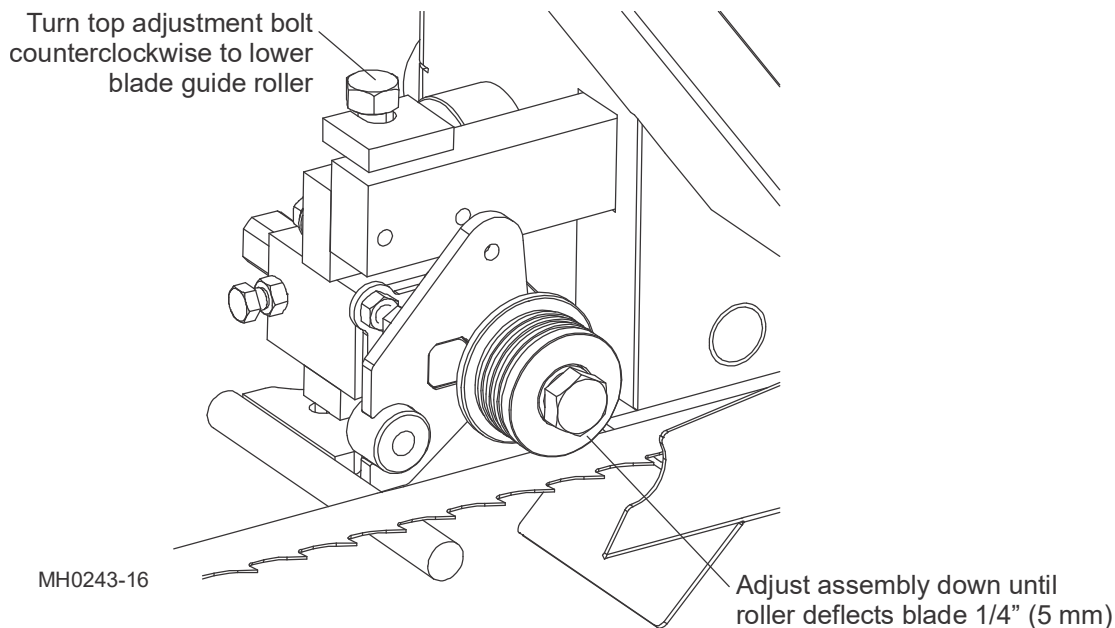


FIG. 6-5

NOTE: Before adjusting the top bolt, unload pressure on the bolt by turning 1/2 turn in the opposite direction it was last adjusted.

2. Repeat for the other blade guide.

BLADE GUIDE VERTICAL TILT ALIGNMENT

Use the blade guide alignment tool to check the vertical tilt of the inner blade guide:

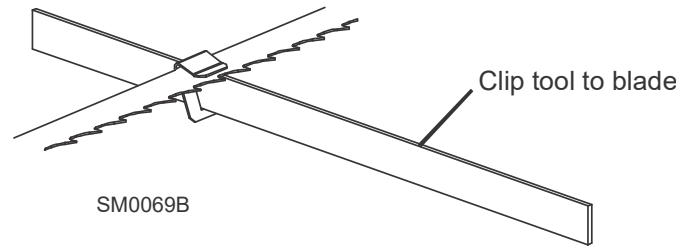


FIG. 6-6

1. Clip the blade guide alignment tool to the blade near the inner blade guide assembly. Make sure the tool does not rest on a tooth or a burr. The tool should rest flat against the bottom of the blade.
2. Measure the distance from the bottom edge of the tool to the feed track at the front end of the tool.
3. Measure the distance from the bottom edge of the tool to the feed track at the rear of the tool.

If the measurements at the front and rear of the tool are the same ($\pm 1/32$ " [0.8 mm]), the blade is not tilted and adjustment is not necessary.

If the measurement at the front of the tool is larger than the measurement at the rear of the tool, the blade guide is tilted up.

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.
5. Tighten the jam nuts and recheck the tilt of the blade.

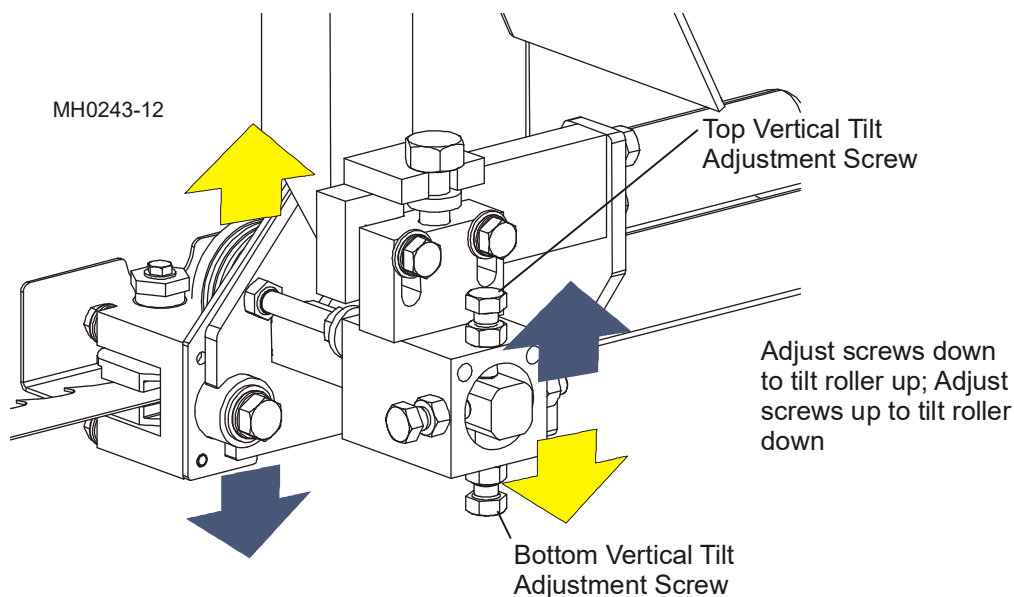


FIG. 6-7

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

BLADE GUIDE HORIZONTAL TILT ALIGNMENT

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 remove the clip from the tool. Place the tool against the face of the outer blade guide roller.

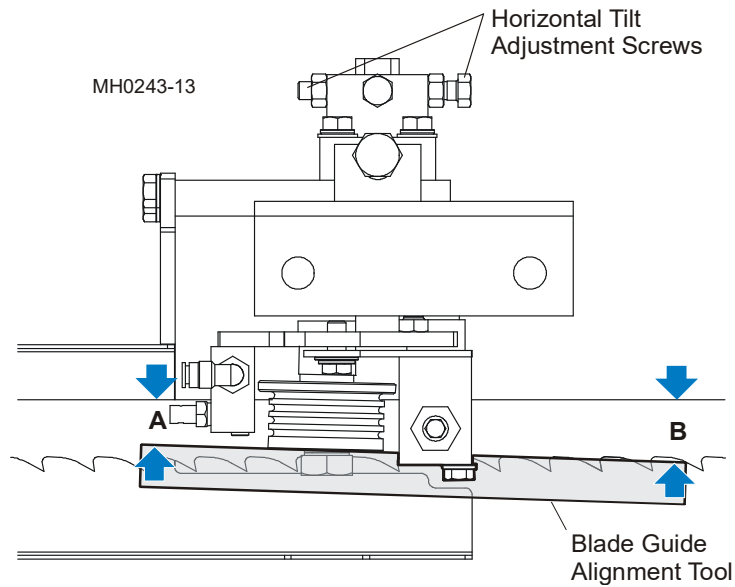


FIG. 6-8

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

The roller should be parallel to the blade ('A' = 'B').

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

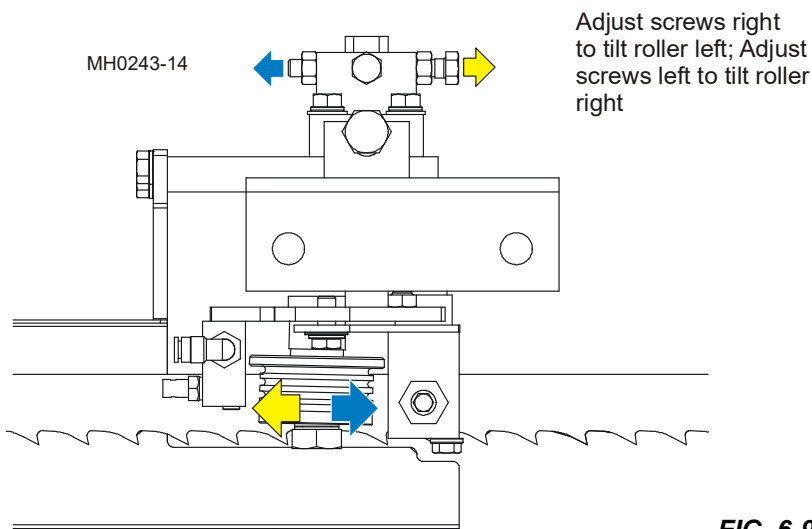


FIG. 6-9

6. 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.

NOTE: When adjusting blade guide spacing, loosen the top screw and one side 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 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.
2. Loosen the top and one side screw shown. Back the stop bolt out of the way if necessary.
3. Tap the blade guide forward or backward until properly positioned.
4. Retighten the screws and jam nuts.
5. Adjust the stop bolt against the blade guide assembly.

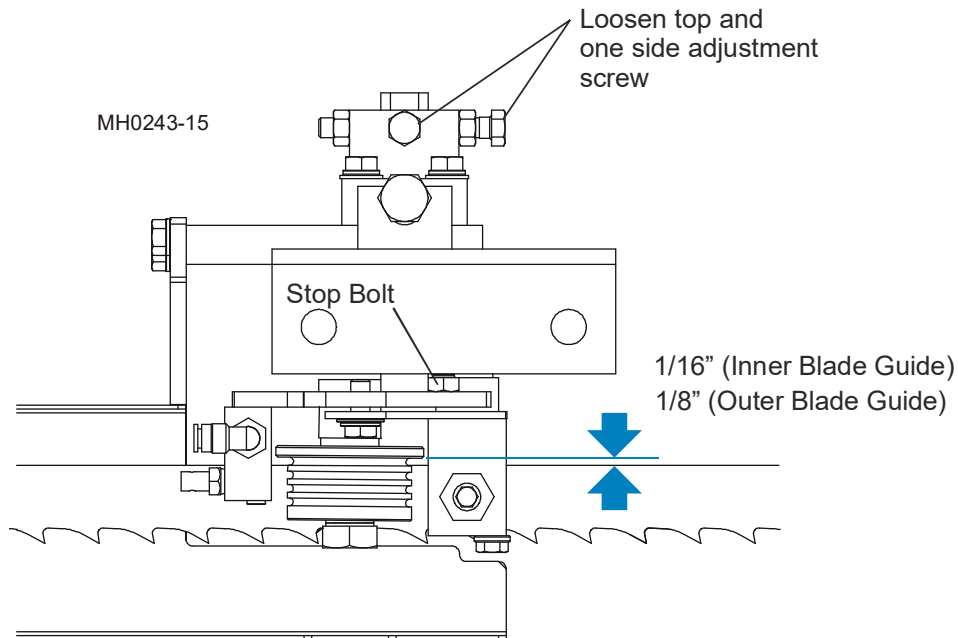


FIG. 6-10

6. 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.

BLADE GUIDE LEVEL

Perform the following adjustments to make sure the blade guide assembly is parallel to the blade.

1. Inspect the guide blocks and repair or replace as necessary. Remove the blade from the resaw.

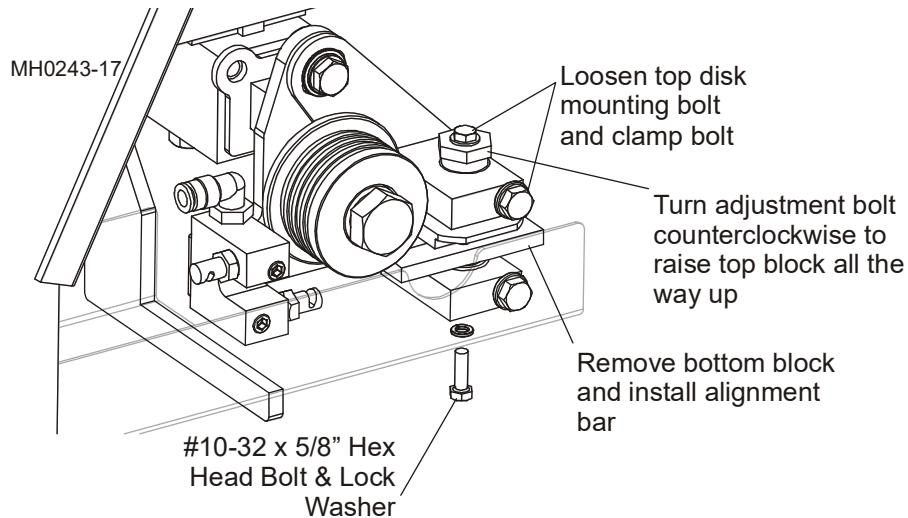


FIG. 6-11

2. Loosen the top block clamp bolt and mounting bolt. Turn the adjustment bolt counterclockwise to raise the top block all the way up. Remove the bottom guide block from each blade guide assembly and install the provided alignment bar.
3. Loosen the alignment bar mounting bolt. Use the provided bottom block adjustment tool to adjust the alignment bar up so the bar is close to, but not touching the bottom of the blade. Retighten the alignment bar mounting bolt
4. Check that the gap from the alignment bar to the blade is the same along entire length of the bar. Shine a flashlight behind the blade guide assembly to help you see the gap between the bar and the blade.

To adjust, loosen the block tilt clamp bolt to pivot the block assembly until the alignment bar is parallel to the blade. Retighten the clamp bolt. Repeat for the second blade guide assembly.

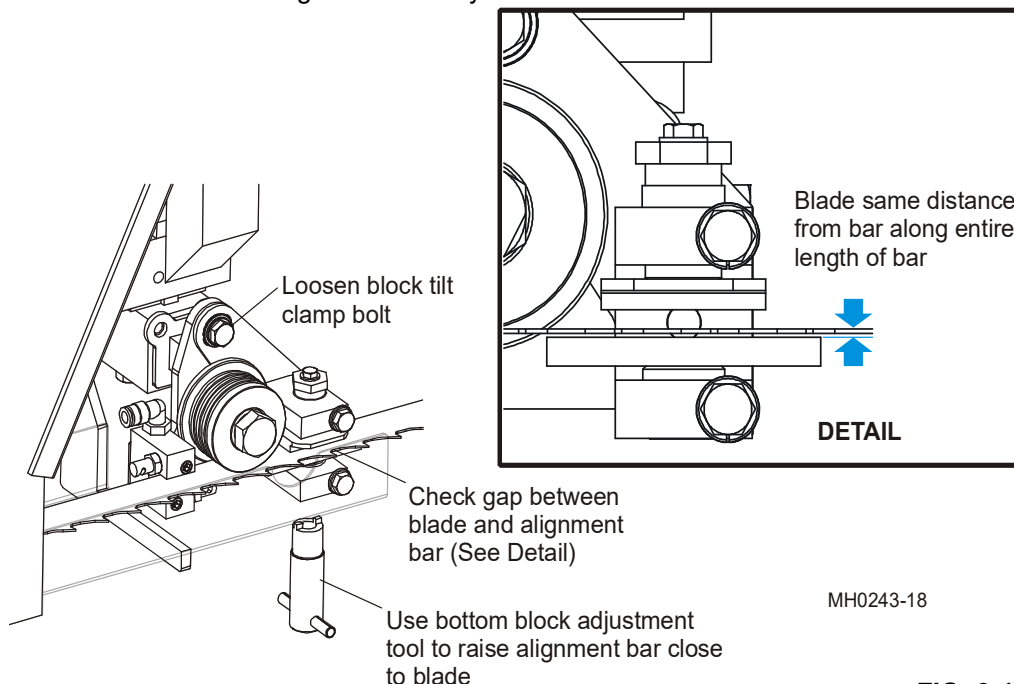


FIG. 6-12

BLADE BLOCK ADJUSTMENT

1. Remove the blade and remove the alignment bars from the blade guide assemblies.
2. Install new or reconditioned bottom guide blocks to both blade guide assemblies (leave mounting bolts loose).
3. Use the provided bottom block adjustment tool to lower the bottom block all the way down.
4. Install, tension and track the blade.

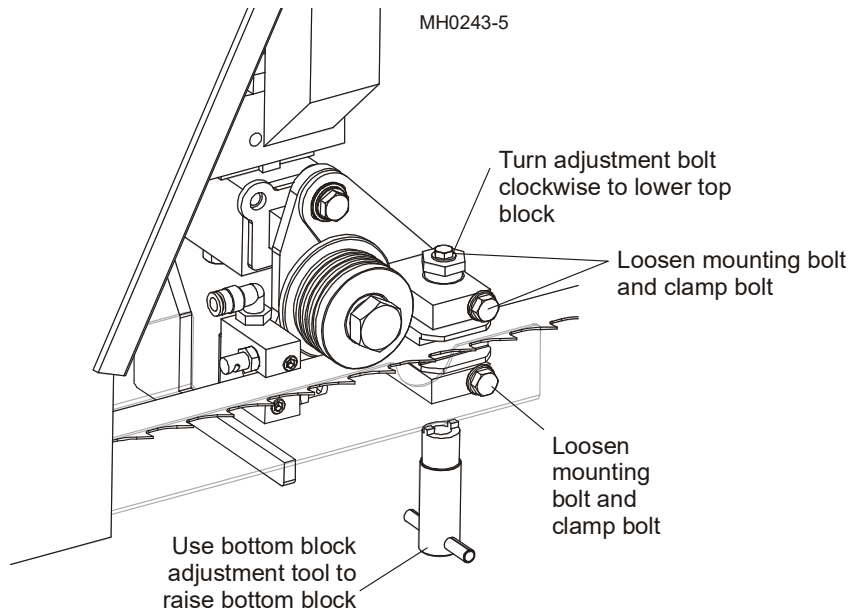


FIG. 6-13

5. Use the bottom block adjustment tool to raise the bottom block to .008" - .010" from the blade. Use the provided shim to set the distance from the block to the blade. Tighten the bottom block mounting bolt and clamp bolt.
6. Turn the top block adjustment bolt clockwise to lower the top block to .008" - .010" from the blade (using the shim as a guide). Tighten the top block mounting bolt and clamp bolt.
7. After tightening the clamp bolt, recheck the distance from the top block to the blade and readjust if necessary.

SAW HEAD TILT

1. After the blade guides are adjusted as described above, raise or lower the saw head so the blade is at an easy-to-measure distance from the track (e.g., 6" or 150 mm).
2. Measure from the bottom of the blade to the track at the inside and the outside of the throat. If the two measurements are exactly equal or up to 1/32" (0.75 mm) higher on the outside, the blade is parallel to the feed track and no adjustment is necessary.

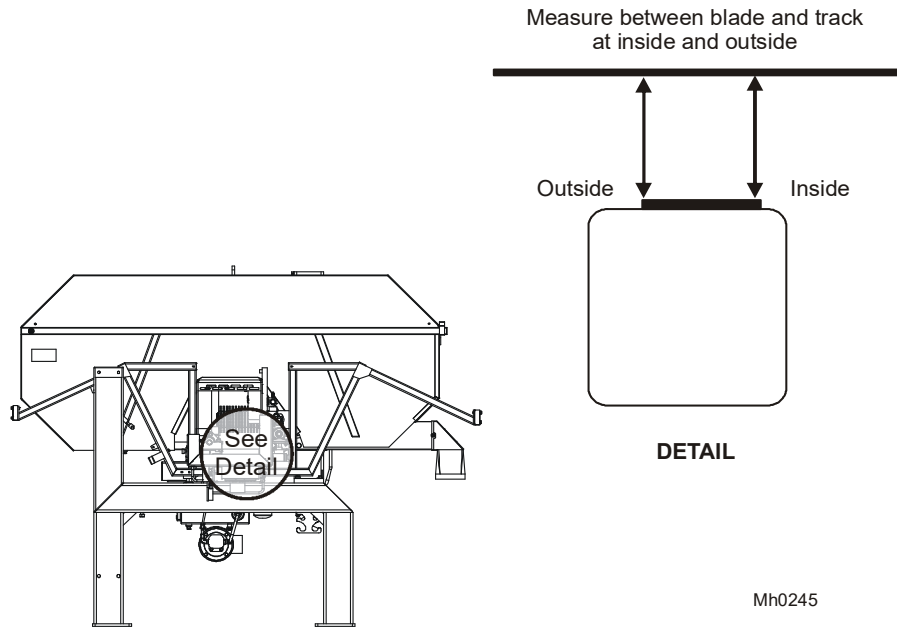


FIG. 6-14

3. If the outside dimension is less than the inside dimension, the outside of the saw head needs to be raised.
4. Locate the mounting bolts at the base of the saw head mounting tube.

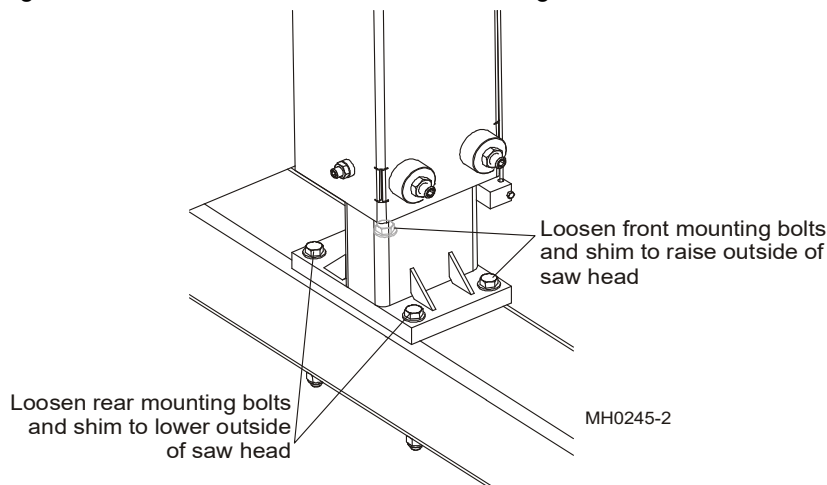


FIG. 6-15

5. To raise the outside of the saw head, loosen the two front mounting bolts and shim between the mounting plate and saw frame tube.
6. To lower the outside of the saw head, loosen the two rear mounting bolts and shim between the mounting plate and saw frame tube.
7. Retighten the mounting bolts.
8. Recheck the distance from the blade to the feed track at both sides of the track.
9. Repeat adjustments until the blade is the same distance from the feed track on both sides or up to 1/32" higher on the outside.

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